Catalogue 2016

GP Green Pin

EXCEL®

Key Icons

Certificates

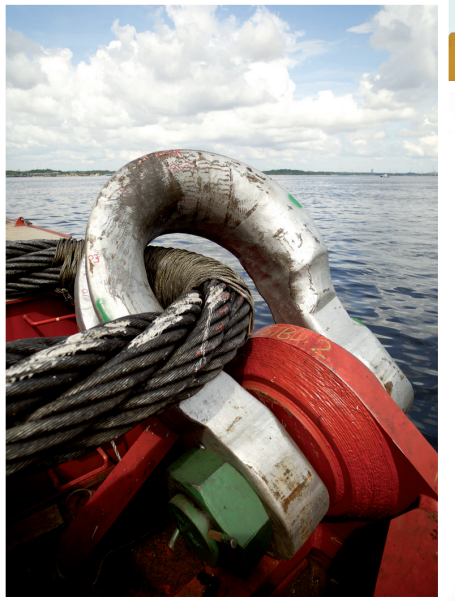
Depending on the type of product and certificate availability for a certain product, the below mentioned certificates are used in this catalogue.
For more information see page 9.

Type 2.1	**Works certificate to EN 10204**	2.1
Type 2.2	**Works certificate to EN 10204**	2.2
Type 3.1	**Inspection certificate to EN 10204**	3.1
Type MTC a	**Manufacturer test certificate**	MTC [a]
Type MTC b	**Manufacturer test certificate**	MTC [b]
Type LROS	**Proofload Statement**	LROS
Type MPI a	**Non-destructive testing report**	MPI [a]
Type MPI b	**Non-destructive testing report**	MPI [b]
Type US a	**Non-destructive testing report**	US [a]
Type US b	**Non-destructive testing report**	US [b]
Type DNV 2.7-1 a	**DNV Type Approval certificate to DNV 2.7-1**	DNV 2.7-1 [a]
Type DNV 2.7-1 b	**DNV Type Approval certificate to DNV 2.7-1**	DNV 2.7-1 [b]
Type DNV 2.22	**DNV Type Approval certificate to DNV 2.22**	DNV 2.22
Type DGUV	**DGUV Type test certificate to EN 1677**	DGUV
Type CE	**CE declaration of conformity**	CE
Type BL	**Break Load test certificate**	BL

Conditions
Certificate types 2.1, 2.2, 3.1, MTC a, DNV 2.7-1 a, DNV 2.7-1 b, DNV 2.22, DGUV and CE can be supplied at no extra charge. For all other certificates, additional costs will be charged.

Other

RFID Tag	RFID
CAD drawings	CAD
More info	INFO



GreenPin®

your reliable partner

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Website : www.vanbeest.com

Dear Customer,

For over 90 years the production of high tensile shackles has been our core business and competence.
Dirk van Beest founded the Van Beest company in 1922, initially as a supplier of iron works to the dredging industry, which was strongly developed in the Sliedrecht area.

From the very beginning, the company has been forging shackles. Its ironwork expertise gave the Van Beest shackle an edge over the competition. This was the start of a network of professional shackle users that now stretches across the globe.
In 2007 Van Beest acquired EXCEL®. Under this brand grade 8 and grade 10 lifting chain accessories are produced in our factory in France. The designs and quality standards of our products are the result of continuous developments and improvements, initiated by requirements put forward over the years by our customers in markets throughout the world.
Our shackles are branded Green Pin®, our chain fittings are branded EXCEL®, and we are the sole proprietors of these two brands.

Production

At Van Beest we continuously invest in our factories in order to improve their efficiency and output. Over the years Van Beest engineers have developed several new production lines of high quality output. The highly automated machines in our two factories are custom built to Van Beest's requirements and thus to those of our customers.

Our engineers are focused on reaching a high quality level in every step of the production process. This guarantees a high quality output of the factory to be supplied to our customers.
Each individual Green Pin® shackle and EXCEL® hook is marked with the steel grade and a traceability code. But quality is not only a matter of the product itself; it stretches across the entire organization. Since 1993 our company has been ISO certified by Lloyds; currently we are ISO 9001-2008 certified.

Accessories

Our products are used worldwide by professionals in many different environments such as offshore, general industry, construction, mining, shipping, transportation, renewable energy and fishing.
A Green Pin® shackle or an EXCEL® hook is usually the final connection. To serve our customers best, we have added a wide range of other steel wire rope- and chain accessories which complement our range of high quality products. These accessories are designed by Van Beest engineers and carefully sourced from certified suppliers to ensure they represent the same high quality as the products made in our own factories.

Distribution

Green Pin® shackles and EXCEL® hooks are inspected and stored at our main warehouse in Sliedrecht, 30 km from Rotterdam. Rotterdam is the main seaport to Europe and has sailing connections to all major business centres across the world. Our warehouse in Sliedrecht is equipped with the latest computer software, enabling us to make maximum use of our storage facilities.

In over 90 countries worldwide Green Pin® shackles and EXCEL® hooks are available from stock at our dedicated distributors, who understand the needs of their home markets and add their expertise to offer a good solution to any end user of our Green Pin® and EXCEL® products. We will be pleased to advise you of the Green Pin® or EXCEL® supplier nearest to you.

We trust this catalogue will be a helpful business tool for you to select the best suitable items for your lifting job. This catalogue contains a lot of information, but if you have any further questions our skilled salespeople and technicians are always at your service. Please do not hesitate to contact us for any questions related to shackles, hooks or wire rope- and chain accessories in general.

Kind regards,

Sales Team
Van Beest

For general business terms and conditions see page 286


Lloyd's Register LRQA

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Van Beest B.V.
Industrieweg 6
3361 HJ Sliedrecht
The Netherlands

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standard:

ISO 9001 : 2008

The Quality Management System is applicable to:

Sales, design and manufacturing of shackles (Green Pin ®) and stockholding of wire rope and chain fittings.

Approval Certificate No: IQA932625

Original Approval : 6 August 1993
Current Certificate : 1 September 2014
Certificate Expiry : 31 August 2017

Issued by: Lloyd's Register Nederland B.V. for and on behalf of Lloyd's Register Quality Assurance Limited

ISO 9001

Member of AWRF Associated Wire Rope Fabricators

Van Beest B.V., manufacturer and supplier of wire rope and chain fitings.
Registered trade marks 'Green Pin' and 'Excel'. Member of Van Beest International.

Two brands: Green Pin® and EXCEL®

In the 1970's, the trade name Green Pin® was launched to emphasize product quality, recognition and demand worldwide. Our Green Pin® shackles are manufactured in our production unit in Sliedrecht, The Netherlands.
It is a genuine "Made in Holland" product.
Currently, not only shackles are sold under the name Green Pin®, but also other items, such as sockets, turnbuckles, wire rope clips, loadbinders, etc.

In 2007 Van Beest acquired the brand EXCEL®. Under this brand grade 8 and grade 10 lifting hooks are produced in our French factory. The EXCEL® range of chain accessories is very complete. Everything you need to make a chain assembly is in the program. From the master link to the hook, whether this should be an eye-, swivel-, or clevis hook. And not only in grade 8, but almost every product can also be supplied in grade 10 or stainless steel.

Over the last few years Van Beest improved the EXCEL® range and expanded it with new types and sizes.
Please check the EXCEL® section in this catalogue for details.

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Member of Van Beest International

VAN BEEST B.V., leading supplier of a complete range of accessories for steel wire rope, chain and synthetic rope worldwide.
Registered trade marks:

Associated Wire Rope Fabricators

Memberships

Van Beest is a member of several organizations which promote common interests in our industry. Companies with similar interests come together to share ideas and solutions for industry issues. These organizations spread (technical) information via publications, internet and meetings, and represent the interests of their members on a collective basis. Some of them also organize trade missions, seminars, workshops, member meetings and collective participation in exhibitions worldwide.

Distributors

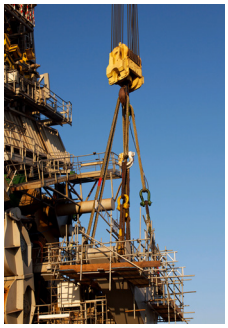
In over 90 countries worldwide Green Pin® shackles and EXCEL® hooks are available from stock at our dedicated distributors, who understand the needs of their home markets and add their expertise to offer a good solution to any end user of our Green Pin® and EXCEL® products.
We will be pleased to advise you of the Green Pin® or EXCEL® supplier nearest to you.

Please contact us at: sales@vanbeest.nl

References

Some companies that use our products in projects:

- Acergy
- Aker Marine Contractors
- Allseas
- Alstom
- Bechtel Corporation
- Bouygues
- Caterpillar
- Damen Shipyards Group
- Dockwise Ltd.
- Heerema Marine Contractors
- Hyundai Heavy Industries Co., Ltd.
- IHC Merwede
- Jumbo Shipping
- Keppel Offshore & Marine
- Maersk Drilling
- McDermott
- Petrobras
- Saipem
- Siemens
- Subsea 7
- Technip



General

In case you do not use the products yourself but are reselling these as part of a manufactured product, please take our general cautions and warnings into account and make these known to your customers as well. In any case, we do not accept any responsibility or liability, nor can we be held responsible for any misuse or damage with, by or at your customers due to negligent use.

Definitions

Material

Various raw materials are used for the production of shackles, hooks and other lifting devices, depending on the use of the finished product. For shackles for example, depending on the specific use, the following raw materials may be used:

- mild steel, untreated, grade 3;
- high tensile steel, untreated, or normalized, grade 4;
- high tensile steel, quenched and tempered, grade 6;
- alloy steel, quenched and tempered, grade 8.

For EXCEL® hooks, the following raw materials may be used:
- alloy steel, quenched and tempered, grade 8;
- alloy steel, quenched and tempered, grade 10;
- stainless steel AISI316L or AISI316, grade 5.

Load

Following terms are used to define a load:
- Working Load Limit or WLL: the maximum load the product is designed to support, in general use and in in-line lifting.
- Proof Load or PL: this is the load applied on proof testing the product. At this load the product may not show visual deformation. For information about the proof load applied, we refer to the separate paragraph on testing.
- Minimum Breaking Load or MBL: the minimum load at which the product may fail or no longer support the load. Where applicable the MBL is specified.
- Shock Load: a sudden impact of the load on the lifting product. Shock loads are to be avoided at all times since they increase the stress on the product significantly and may affect its product life.

The unit that is used in this catalogue to indicate WLL, PL and MBL is t, which stands for metric ton.

Safety factor

This indicates the ratio between the MBL and the WLL.
For the standard range of Green Pin® shackles for example, the safety factor is 6:1, meaning that the shackle may only break once it is overloaded by a factor of at least 6 times its designed WLL.

For the standard range of EXCEL® hooks, the safety factor is 4:1.

Product dimensions

All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.

Finish

Products can have following finish:
- Self coloured: the product is delivered in the condition as it has been forged or machined and has undergone no specific finish treatment.
- Electro-galvanized: the finished product is electro-galvanized according to the customary standards. The thickness of the galvanization is at least 5 μm.
- Hot dipped galvanized: the finished product is hot dipped galvanized according to the customary standards. The thickness of the coating is at least 70 μm.
- Painted: the finished product is painted in a specific colour.
- Polished: stainless steel products are polished.

Standard

These refer to the specific standards indicated for the product.

Temperature range

This indicates the temperature range at which the product can be used. Beyond the advised temperature range the WLL of a product may be affected.

Abbreviations

The following abbreviations are used in this catalogue:
C Carbon steel
A Alloy steel
R Stainless steel
S Self coloured
P Painted
E Electro-galvanized
G Hot dipped galvanized

Certificates

Depending on the type of product and certificate availability for a certain product, below mentioned certificates can be provided.

Type 2.1	2.1	**Works certificate to EN 10204** Statement of compliance with the order.
Type 2.2	2.2	**Works certificate to EN 10204** Statement of compliance with the order, stating the results of non-specific inspection.
Type 3.1	3.1	**Inspection certificate to EN 10204** Statement of compliance with the order, stating the results of material specific inspection. This includes chemical composition and mechanical properties at component level.
Type MTC a	MTC [a]	**Manufacturer test certificate** Statement of compliance with the order, stating the results of proof load testing samples of a production batch. Products are not individually tested.
Type MTC b	MTC [b]	**Manufacturer test certificate** Statement of compliance with the order, stating the results of individual proof load testing.
Type LROS	LROS	**Proofload Statement** Statement of witness of proof load testing and visual examination by a surveyor from Lloyds Register, stating the results of individual proof load testing.
Type MPI a	MPI [a]	**Non-destructive testing report** Statement of compliance with the order, stating the results of Magnetic Particle Inspection (M.P.I.) in accordance with EN 10228-1 on samples of a production batch. Products are not individually tested.
Type MPI b	MPI [b]	**Non-destructive testing report** Statement of compliance with the order, stating the results of individual Magnetic Particle Inspection (M.P.I.) in accordance with EN 10228-1.
Type US a	US [a]	**Non-destructive testing report** Statement of compliance with the order, stating the results of Ultrasonic Inspection (U.S.) in accordance with EN 10228-3 on samples of a production batch. Products are not individually tested.
Type US b	US [b]	**Non-destructive testing report** Statement of compliance with the order, stating the results of individual Ultrasonic Inspection (U.S.) in accordance with EN 10228-3.
Type DNV 2.7-1 a	DNV 2.7-1 [a]	**DNV Type Approval certificate to DNV 2.7-1** Green Pin® Standard Shackles, Green Pin® Polar Shackles, DNV Master links and DNV Master link assemblies are DNV type approved to certification Note 2.7-1, lifting sets for offshore containers. DNV Type approval certificates S-7593 and S-7732.
Type DNV 2.7-1 b	DNV 2.7-1 [b]	**DNV Type Approval certificate to DNV 2.7-1** Statement of compliance with the order, of Green Pin® Standard Shackles and Green Pin® Polar Shackles, DNV type approved to certification Note 2.7-1, lifting sets for offshore containers. Stating the results of proof load testing samples of a production batch. Products are not individually tested.
Type DNV 2.22	DNV 2.22	**DNV Type Approval certificate to DNV 2.22** Green Pin® Standard Shackles and Green Pin® Polar Shackles are DNV type approved to DNV Standard for Certification No 2.22, Lifting Appliances – Application – Loose gear for offshore cranes. DNV Type approval certificate S-7925.
Type DGUV	DGUV	**DGUV Type test certificate to EN 1677** Many EXCEL® chain sling components have a DGUV type test certificate. Tests are based on GS-OA-15-05:2012-05: Principles for the testing and certification of chains and chain components. These components are Type approved to EN818-2 or EN1677 and are entitled to be marked H94.
Type CE	CE	**CE declaration of conformity** CE Declaration of Conformity in accordance with annex IIA of the machine directive 2006/42/EC and the latest amendments.
Type BL	BL	**Break Load test certificate** A certificate with the actual breaking load experienced on tested samples.

Conditions

Certificate types 2.1, 2.2, 3.1, MTC a, DNV 2.7-1 a, DNV 2.7-1 b, DNV 2.22, DGUV and CE can be supplied at no extra charge. For all other certificates, additional costs will be charged.

Free of Charge:

2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] | DNV 2.7-1 [b] | DNV 2.22 | DGUV | CE

With additional Charges:

MTC [b] | LROS | MPI [a] | MPI [b] | US [a] | US [b] | BL

On request the proof load test certificates can be supplied surveyed by an official classification society, such as LROS, DNV GL, BV, ABS or any other officially certified inspection body.

Specific details of certificate availability can be found in each product chapter.

Please verify your certification requirements with Van Beest at time of order.

CAD drawings

Van Beest products are used in a wide variety of applications; from a simple lift to move an item from A to B in a workplace, to very complex lifting systems for offshore applications. In the latter case, engineers use computer programs like AutoCAD to develop a 2D or 3D specification of the entire system.

For standard products engineers normally use a CAD drawing library. The use of these kinds of libraries saves considerable design time and costs. And of course it prevents mistakes that may occur whilst copying data from a product catalogue into the design program.

To help the engineers, Van Beest has made CAD drawings available in various formats through a webportal. These drawings can be integrated in almost every design program. Further details can be obtained through our website: www.vanbeest.com/cad

CAD

In the product chapters the CAD icon indicates that cad drawings are available.

RFID

RFID

Van Beest offers an identification solution with an easily accessible RFID (Radio Frequency Identification) chip in our range of Green Pin® Shackles. In the product chapters the RFID icon indicates that the products can be equipped with a countersunk RFID chip.

For more information see page 45.

More information

INFO

For some products we provide detailed technical information on our website.
In the product chapters the INFO icon indicates there is extra information on this product available at www.vanbeest.com/faq

General cautions and warnings

All WLL's indicated in this catalogue or in other Van Beest literature or publications are only applicable to recently supplied, new and unused products, which are used under normal conditions.
Should extreme circumstances or shock loading possibly occur during use, this must be taken into account when specifying the products to be used.

The WLL should be applied in in-line lifting. Overloads must be avoided. Side loads should be avoided too, as the products are not designed for this purpose and the application of a side load may significantly decrease product life. The WLL of the product represents the limit in static use. In case of dynamic use (breaking, accelerations, shocks), the effective stress on the product increases significantly which can lead to product failure.

Products must be regularly inspected in accordance with the safety standards valid in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the products are used in severe operating conditions.

Van Beest is constantly improving products to make sure they meet the latest industry standards. Therefore some dimensions or product markings may differ from those stated in this catalogue. The characteristics mentioned in this catalogue or in other Van Beest literature or publications are given merely as an indication. Van Beest reserves the right to make any suitable modification to any product, even after acceptance of the customer order. The essential characteristics and performances of the products shall not be negatively affected by such modifications. Any critical dimensions or characteristics should be verified with our engineering department before ordering the product.

Van Beest products are typically used to transfer loads during lifting, lashing, towing or other operations. Usually the fittings are combined with steel wire rope, chain or synthetic rope to form a lifting sling. In order to safely use the products following verifications must be done:

Verification before first use

Before first use of the sling it should be ensured that:
- the sling meets the exact requirements specified in the order;
- the valid manufacturer certificate and CE declaration are at hand;
- the identification and the WLL mentioned on the sling correspond to the information stated on the certificate;
- full details of the sling (components, diameter, number of legs, angle, grade) are recorded in the register of lifting equipment;
- the users of the sling have received appropriate instruction and training.

Verification before each use

Before each use the sling should be visually inspected for obvious damage or deterioration. If faults are found during this inspection, the sling should be withdrawn from service and referred to a competent person for thorough examination. Some parts can be replaced or the complete sling can be discarded.

A thorough inspection should be carried out by a competent person at intervals not exceeding six months and more frequently when the slings are used in severe operation conditions. Records of such inspections should be maintained.
Slings should be thoroughly cleaned to remove any oil, dirt or rust prior to inspection. Any cleaning method which does not damage the material is acceptable. Avoid the use of acids, overheating, removal of metal or movement of metal which may cover cracks or surface defects.

The sling should be inspected throughout its full length to detect any evidence of wear, distortion or external damage.

Any replacement component or part of the sling should be in accordance with the appropriate European Standard or the safety standards given in the country of use for that component or part.
If a chain link in one of the legs of a chain sling is damaged, then the entire chain leg should be replaced. The repair of a link in a welded chain sling should exclusively be carried out by the chain manufacturer using the adequate welding process. Components showing any defects should be discarded and replaced.
When replacing a mechanically assembled component, always use a replacement component that meets the certification requirements of the sling.

Handling of the load

- It is important to check the sling before lifting. Check if the manufacturer of the load indicates any specific instructions for the lifting of the load.
  Before starting the lift, make sure that the load is free to move and is not bolted down. Also check if no loose objects could fall down from the load. The path between the current location of the load and the new one must be free.
- The weight of the load must be known in order to select a sling with the correct WLL. If the weight of the load is not marked, the information should be obtained from the consignment notes, manuals or drawings, or assessed by calculation.
- Please observe the centre of gravity of the load. To prevent any tilting or toppling, the following conditions should be met:
  - for single leg slings and endless slings the lifting point should be positioned directly above the centre of gravity.
  - for two leg slings the lifting points should be positioned on both sides of, and higher than, the centre of gravity.
  - for three and four leg slings the lifting points should be distributed in a plane around the centre of gravity. Distribute the weight evenly over the lifting points, which should be placed higher than the centre of gravity.
- When using multi leg slings make sure that the angles between the lifting points and sling legs are within the range marked on the sling. The angle ß, which is the angle between the sling leg and the vertical, should never exceed 60°. Details about load reductions for slings at certain angles can be found in the tables corresponding to the relevant chain grade.
- Use below reduction table if a multi leg sling is not used for the purpose for which it has been designed, for example a lift with less legs than the number of legs of the sling:

Types of chain sling	Number of legs used	Factor to apply to marked WLL
Two-leg	1	1/2
Three- and four-leg	2	2/3
Three- and four-leg	1	1/3

- The sling should at least have a WLL equal to or greater than the weight to be lifted.
- Ensure that the load to be moved is able to resist both the vertical and horizontal force without being damaged.
- A suspended load should not be left unattended.
- Riggers should be aware of the risks and dangers of shock loading which may break the sling.
  The load should always be lifted and lowered slowly.

Method of connection

A sling is usually attached to the load with endfittings such as hooks and/or links.
The components should be used for in-line loading only in order to avoid bending.
The lifting points fixed on the load should be seated well in the load bearing part of the hook (never on the tip of the hook or wedged in the opening of the hook).
We refer to the detailed warnings of each component in the product chapters.

Symmetry of loading

The WLL values mentioned in our catalogue for each grade have been determined on the basis that the loading of the sling is symmetrical. This means that when the load is lifted the sling legs are symmetrically distributed in the plane and all legs of the sling have the same angles to the vertical.
For chain slings refer to EN818-6:2000+A1:2008 for more details.

The loading can be assumed to be symmetric if all of the following conditions are met:

- the load is less than 80% of marked WLL and
- sling leg angles to the vertical are all more than 15° and
- sling leg angles to the vertical are all within 15° to each other and
- in the case of three- and four- leg slings, the plane angles are within 15° of each other.

If one of the above parameters is not met, the loading should be considered to be asymmetric and the lift should be referred to a competent engineer to establish the safe rating for the sling. Alternatively, in the case of asymmetric loading, the sling should be derated to half the marked WLL.

If the load tends to tilt during the lift, it should be lowered and the attachments changed by repositioning the attachment points or by using compatible shortening devices.

The safety factor of 5 or 6 on the individual components is designed for safety only. Never exceed the indicated WLL.

Safety of lift

Hands and other body parts should be kept away from the chain to prevent injuries.
The load should be lifted slowly until the sling leg is taut. As soon as the load is slightly raised, check that it is secure and has the desired position. Refer to ISO 12480-1 for planning and management of the lifting operation and for a safe way of executing it. Never move the load over people during the lift.

Lowering the load
The point of destination of the load should be prepared and should be adapted to the weight and shape of the load. The access to this site must be clear of any unnecessary obstacles and people. The load should be lowered carefully. Avoid trapping the sling beneath the load as this may cause damage to the load or sling. Before taking the tension off the sling legs, the load should be checked to ensure that it is properly supported and stable.
The sling should be removed by hand and not with the lifting device.
The load should not be rolled off the sling as this may damage the sling.

Storage of slings
When not in use slings should be kept on a properly designed rack. They should not be left lying on the ground where they may be damaged.
If the slings are left suspended from a crane hook, the sling hooks should be engaged in an upper link to reduce the risk of sling legs swinging freely or snagging.
If the slings are out of use for some time they should be cleaned, dried and protected from corrosion, e.g. lightly oiled.

Maintenance
Slings must be regularly inspected in accordance with the safety standards valid in the country of use.

A competent engineer should examine the sling, observing following:
- The sling markings (ID, WLL) must be legible;
- There may be no distortion of the upper or lower end fittings;
- Sling leg stretch and wear may not exceed the tolerances.

If the identification tag of the sling is missing and the necessary information is not marked on the sling itself, the sling should be withdrawn from service.

If any parts should be replaced, like the load pin or the latch of a hook, only use the original spare kits of Van Beest B.V. If a load pin is misused, damaged or distorted, it must be replaced by the correct EXCEL® spare kit.

Limitations in use
- Never modify components by welding, heat treating, grinding or any other process. It could alter their mechanical and/or chemical characteristics;
- Consult Van Beest if the sling is to be exposed to highly concentrated chemicals. Van Beest products may not be used under chemical influences such as acids or alkaline solutions;
- The rating of lifting accessories in European Standards assumes the absence of exceptionally hazardous conditions. This concerns offshore activities, lifting of persons and lifting of potentially dangerous loads. In such cases the degree of hazard should be assessed by a competent engineer and the WLL adjusted accordingly;
- If a product is used under extreme temperature conditions, the WLL must be reduced. We refer to the relevant product chapter in this catalogue for guidance on use at extreme temperatures.

Conversion factors

To convert from	to	multiply by
Length		
mm	inch	0.0393701
inch	mm	25.4
Mass		
US tons	metric tons	0.9071847
metric tons	US tons	1.1023113
metric tons	pounds	2204.6226218
pounds	metric tons	0.0004536
metric tons	kilogram	1000
kilogram	metric tons	0.001
metric tons	kilo Newton	9.8066500
kilo Newton	metric tons	0.1019716
pounds	kilogram	0.4535924
kilogram	pounds	2.2046226
Torque		
Newton meter	foot pound-force	0.7375621
foot pound-force	Newton meter	1.3558180

Table of contents

Applications

Shackles are used in lifting operations and static systems as removable links to connect (steel) wire rope, chain and other fittings. Screw pin shackles are used mainly for non-permanent applications. Safety bolt shackles are used for long-term or permanent applications or where the load may slide on the pin causing rotation of the pin.

Chain- or dee shackles are mainly used on one-leg systems whereas anchor- or bow shackles are mainly used on multi-leg systems.

Range

Van Beest offers a wide range of bow and dee shackles for a wide variety of applications. The range stretches from WLL 0.33 t to 1550 t. This provides our customers with a very extensive range to choose a shackle that suits their application best. Most of the shackles are directly available from stock. Furthermore, shackles can be supplied to many standards such as the US Federal Specification RR-C-271, EN 13889, British Standard 3032, DIN 82101, DIN 82016 etc.
Additionally we offer a wide range of general commercial shackles, which are not suitable for lifting but merely for fixing purposes.

Design

All Van Beest shackles have a specific design for a specific application.

Some examples are:
- Green Pin® Super shackles which are made out of grade 8 steel. They are designed to be used in confined spaces. The higher material strength is used to reduce the physical dimensions of the product whilst maintaining its WLL and functionality of the product;
- Green Pin® Polar shackles are for use in extreme climatic conditions with material properties guaranteed up to temperatures of -40°C;
- Green Pin® Sling shackles are designed to provide a better radius to the sling it lifts. A bigger radius increases the life span of the sling significantly;
- Another example of functional design is a shackle pin with a square sunken hole. Because of the flat head there is less risk of the shackle getting caught in a net or a line.

These are all examples of highly functional designs, to optimize the use of the Van Beest shackles in daily use.

Shackles used for lifting applications are generally marked with:

- Working Load Limit	■ e.g. WLL 25 T
- manufacturer's symbol	■ e.g. GP
- traceability code	■ e.g. HA indicating a particular batch
- steel grade	■ e.g. 4, 6, 8
- CE conformity code (Conformité Européenne)	■ CE

Van Beest Green Pin® shackles meet all relevant requirements of the Machinery Directive 2006/42/EC and its latest amendments.

Finish

Shackles supplied by Van Beest can be hot dipped galvanized, electro-galvanized, painted or self coloured, depending on the type of shackle and its application.

You can find the finish of each type of shackle in the product section further on.

Certification

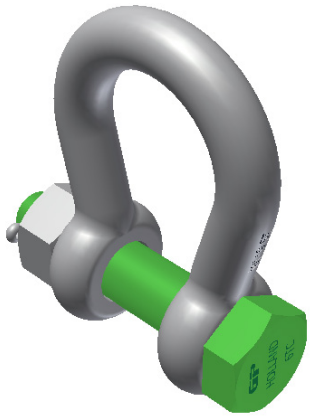
Upon request at time of order, all load rated shackles can be supplied with any of the following documents or certificates:

Free of Charge:

2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] | DNV 2.7-1 [b] | DNV 2.22 | CE

With additional Charges:

MTC [b] | MPI [a] | MPI [b] | US [a] | US [b] | BL



On request the proof load test certificates can be supplied surveyed by an official classification society, such as LROS, DNV GL, BV, ABS or any other officially certified inspection body.

Please verify your certification requirements with Van Beest at time of order.

Green Pin® standard shackles and Green Pin® Polar shackles are DNV type approved. These shackles carry two DNV type approval certificates that show compliance with:

- DNV 2.7-1 Offshore Containers
- EN 12079-2 Offshore containers and associated lifting sets
- EN 13889 Forged steel shackles for general lifting purposes
- IMO/MSC Circular 860
- US Federal Specification RR-C-271
- DNV Standard for Certification No. 2.7-3 Portable Offshore Units
- DNV Standard for Certification No. 2.22 Lifting Appliances

The certificates S-7593 and S-7925 confirm that Green Pin® standard shackles and Green Pin® Polar shackles meet the requirements set in the latest version of the above mentioned DNV standards.

Testing

Generally load rated products are Proofload tested, and certificates can be supplied upon request.
For specific information on certificates we refer to the separate paragraph on certification.

Green Pin® shackles are Proofload tested at the following loads:

working load limit	Green Pin® standard shackles polar shackles heavy duty shackles proof load	Green Pin® super shackles proof load	Green Pin® sling shackles proof load
t	t	t	t
0.33	0.66		
0.5	1		
0.75	1.5		
1	2		
1.5	3		
2	4		
3.25	6.5		
3.3		6.6	
4.75	9.5		
5		10	
6.5	13		
7		14	14
8.5	17		
9.5	19	19	
12	24		
12.5		25	25
13.5	27		
15		30	
17	34		
18		36	36
21		42	
25	50		
30		60	60
35	70		
40		80	80
42.5	85		
55	110	110	110
75			112.5
85	170	170	
120	180	240	
125			187.5
150	225	225	225
175		262.5	
200	300		300
250	375		375
300	450		450
400	600		532
500	750		665
600	900		798
700	1050		931
800	1200		1064
900	1350		1197
1000	1500		1330
1250	1875		1663
1500	2250		
1550			2061.5

Instructions for use

Select the correct type and WLL of shackle and WLL for the particular application. If extreme circumstances or shock loading may occur, this must be well taken into account when selecting the correct shackle. Please note that commercial shackles are not to be used for lifting applications.

Shackles should be inspected before use to ensure that:

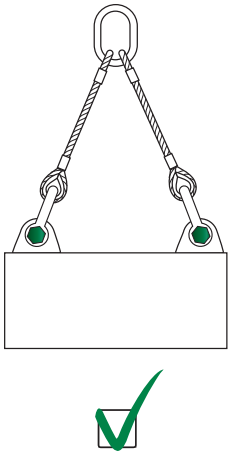
- all markings are legible;
- the body and pin are both of the same brand and type;
- the body and pin are both of the correct size;
- never use a safety bolt type shackle without using a securing pin;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the threads of the pin and the body are undamaged;
- the body and the pin are not distorted or unduly worn;
- the body and pin are free from nicks, gouges, cracks and corrosion;
- shackles may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a shackle by machining, welding, heating or bending as this will affect the WLL.

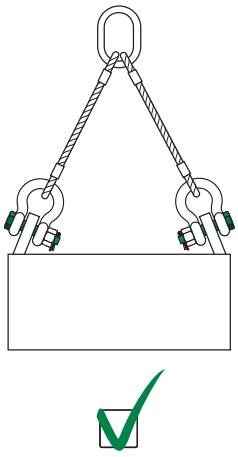
Assembly

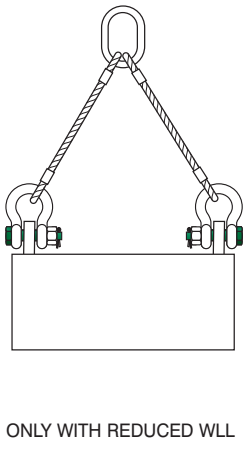
Ensure that the pin is correctly screwed into the shackle eye: tighten it hand-tight, then secure it using a wrench or other suitable tool so that the collar of the pin is fully seated against the shackle eye. Ensure that the pin is of the correct length so that it penetrates the full depth of the threaded eye and the collar of the pin seats against the surface of the shackle eye.

Incorrect seating of the pin may be caused by a bent pin, too tight fitting thread or misalignment of the pin holes. Do not use the shackle under these circumstances. Never replace a shackle pin except with one of the same brand, type, make and size to ensure the shackle maintains its original WLL.

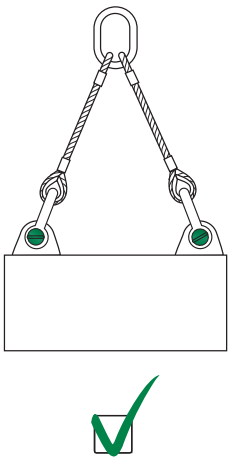
Make sure that the shackle is supporting the load correctly, i.e. along the axis of the shackle body centerline. Avoid bending loads, unstable loads and overloads.

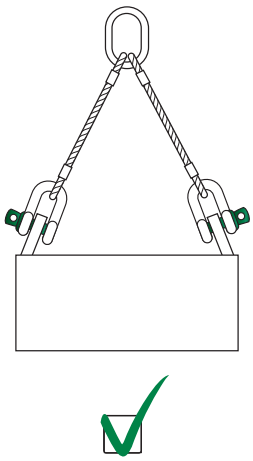


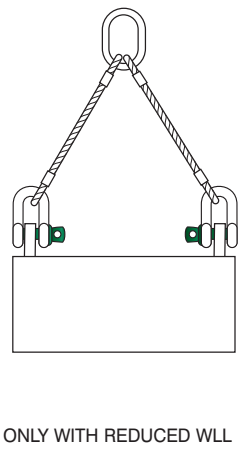




ONLY WITH REDUCED WLL



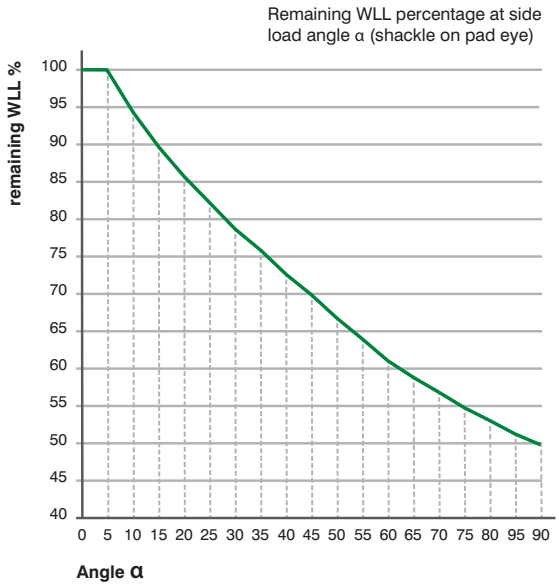


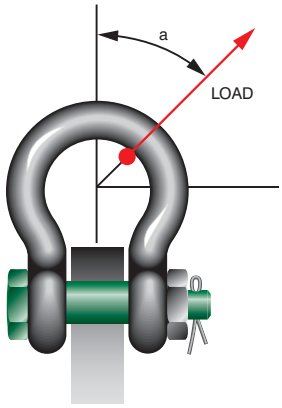


ONLY WITH REDUCED WLL

Side loads

Side loads should be avoided, as the products are not designed for this purpose. If side loads cannot be avoided, the WLL of the shackle must be reduced:

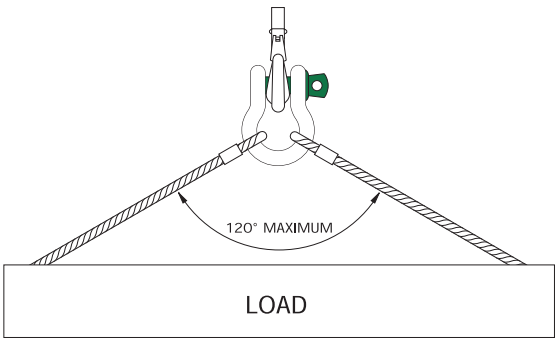




This graph is valid for all Green Pin® shackles, except P-6033 (Sling shackles). If you want to apply a side load on a Green Pin® Sling shackle, please contact Van Beest.

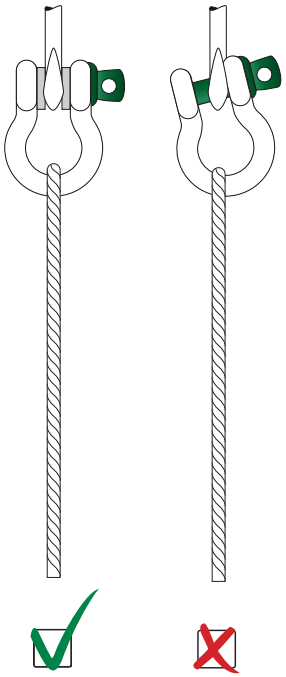
In-line lifting is considered to be a load perpendicular to the pin and in the plane of the bow. The load angles in the graph represent the deviating angles from in-line loading.

When connecting shackles to multi-leg slings, consider the effect of the angle between the legs of the sling. As the angle increases, so does the load in the sling leg and consequently in any shackle attached to that leg.



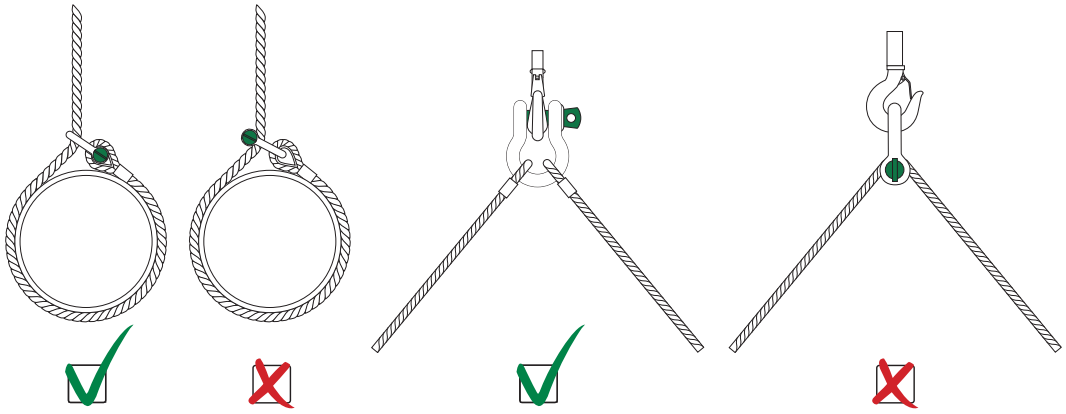
When a shackle is used to connect two slings to the hook of a lifting device, a bow type shackle must be used. The slings must be connected to the shackle body, and the shackle pin must be placed in the hook. The angle between the slings should not exceed 120°. If symmetrically loaded the shackle may be used to the full WLL.

To avoid eccentric loading of the shackle a loose spacer may be used on either end of the shackle pin. Do not reduce the width between the shackle jaws by welding washers or spacers to the inside of the shackle eyes or by narrowing the jaws, as this will affect the WLL of the shackle.



When a shackle is attached to the top block of a set of wire rope blocks the load on this shackle is increased by the value of the hoisting effect.

Avoid applications where the load moves over the shackle pin; the pin may rotate and possibly be unscrewed. If moving of the load cannot be avoided, or when the shackle is to be left in place for a prolonged period or where maximum pin security is required, use a shackle with a safety bolt, nut and cotter pin.



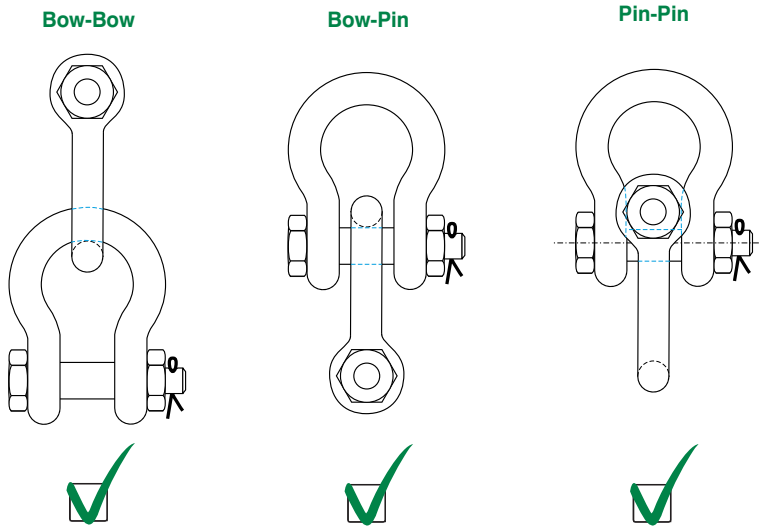
Shackles should not be immersed in acidic solutions or exposed to acidic fumes or other chemicals that are potentially harmful for the shackle.

Point loading

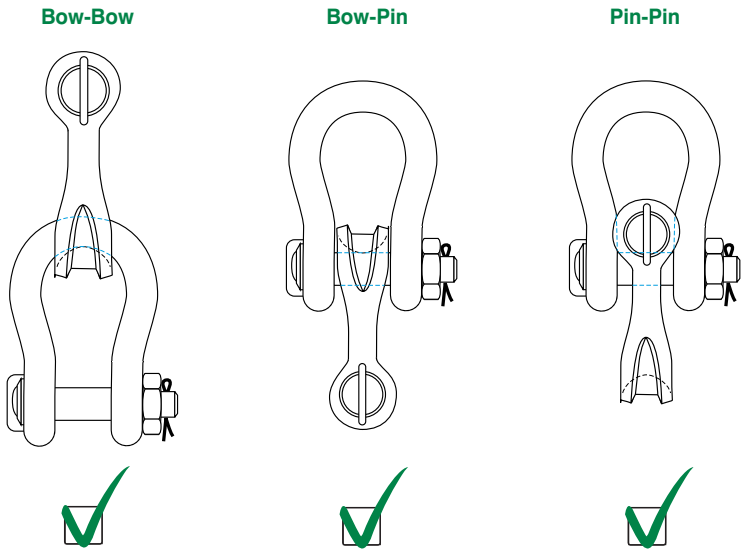
Shackles are used in lifting- and static systems as removable links to connect (steel) wire rope, chain and other fittings. Most of the times the load bearing component that connects to a shackle is of a rounded shape. Point loading of shackles during lifting operations is allowed but the minimum dimension of the rounded component to be lifted should be equal to or bigger than the bow size of the shackle being used. The maximum load of the configuration is limited by the component with the lowest WLL.

Increasing the contact area by using bigger diameters and/or pad eyes can be an advantage. Sharp edges should be avoided.

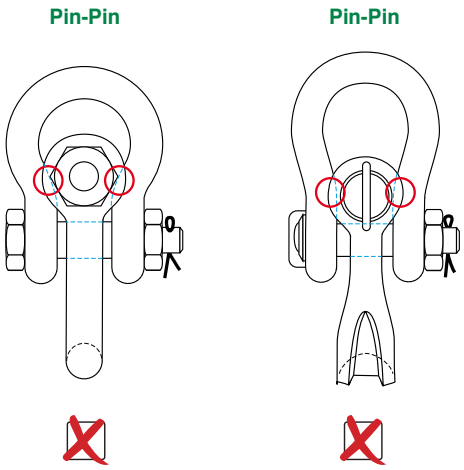
Green Pin® shackles can also be used in below configurations. The maximum load of the configuration is limited by the component with the lowest WLL.



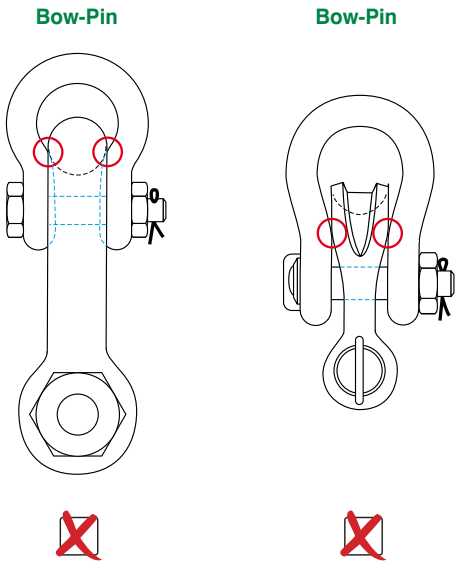
The crown of a Green Pin® Sling shackle is wider than that of a standard shackle, thus creating a bigger bearing surface. This improves the lifetime of the sling. Green Pin® Sling shackles can also be used in bellow configurations. The maximum load of the configuration is limited by the component with the lowest WLL.



Pin- Pin configuration:
When the shackle eyes touch and the pins do not bear properly, the configuration should not be used.



Bow- Pin configuration:
When the shackle body of the inner shackle touches the shackle eyes of the outer shackle and body and pin do not bear properly, the configuration should not be used.



Temperature

If extreme temperature situations occur, the following load reductions must be taken into account:

Temperature	Reduction for elevated temperatures New Working Load Limit
up to 200°C	100% of original Working Load Limit
200 - 300°C	90% of original Working Load Limit
300 - 400°C	75% of original Working Load Limit
> 400°C	not allowed

The rating of shackles to EN 13889 assumes the absence of exceptionally hazardous conditions. Exceptionally hazardous conditions include offshore activities, the lifting of persons and the lifting of potentially dangerous loads such as molten metals, corrosive materials or fissile materials. In such cases a competent person should assess the degree of hazard and the WLL should be reduced accordingly.

Inspection

Shackles must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the shackles are used in severe operating conditions.

Green Pin® Standard Shackles

bow shackles with screw collar pin

- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and
  meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 2, Grade A
  from 2 t and upward these shackles comply with ASME B30.26
- **Finish** : hot dipped galvanized
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] * | DNV 2.7-1 [b] * | DNV 2.22 | CE

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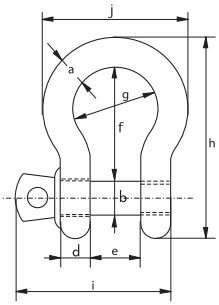
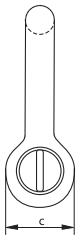




working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.33	5	6	12	5	9.5	22	16	36	29.5	26	0.02
0.5	7	8	16.5	7	12	29	20	48.5	38	34	0.05
0.75	9	10	20	9	13.5	32	22	56	46.5	40	0.1
1	10	11	22.5	10	17	36.5	26	63.5	54	46	0.14
1.5	11	13	26.5	11	19	43	29	74	59.5	51	0.19
2	13.5	16	34	13	22	51	32	89	73	58	0.36
3.25	16	19	40	16	27	64	43	110	89	75	0.63
4.75	19	22	46	19	31	76	51	129	103	89	1.01
6.5	22	25	52	22	36	83	58	144	119	102	1.5
8.5	25	28	59	25	43	95	68	164	137	118	2.21
9.5	28	32	66	28	47	108	75	185	153	131	3.16
12	32	35	72	32	51	115	83	201	170	147	4.31
13.5	35	38	80	35	57	133	92	227	186	162	5.55
17	38	42	88	38	60	146	99	249	203	175	7.43
25	45	50	103	45	74	178	126	300	243	216	12.84
35	50	57	111	50	83	197	138	331	272	238	18.15
42.5	57	65	130	57	95	222	160	377	310	274	26.29
55	65	70	145	65	105	260	180	433	344	310	37.6

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
	a	b	c	d	e	f	g	h	i	j	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.33	3/16	1/4	1/2	3/16	3/8	7/8	5/8	1 13/32	1 5/32	1 1/32	0.05
0.5	1/4	5/16	21/32	9/32	15/32	1 5/32	25/32	1 29/32	1 1/2	1 11/32	0.11
0.75	5/16	3/8	25/32	11/32	17/32	1 1/4	7/8	2 7/32	1 27/32	1 9/16	0.22
1	3/8	7/16	7/8	13/32	21/32	1 7/16	1 1/32	2 1/2	2 1/8	1 13/16	0.3
1.5	7/16	1/2	1 1/32	7/16	3/4	1 11/16	1 5/32	2 29/32	2 11/32	2	0.42
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	2 7/8	2 9/32	0.79
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 1/2	2 15/16	1.38
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/16	3 1/2	2.22
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	4 11/16	4 1/32	3.31
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 13/32	4 21/32	4.86
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 1/32	5 5/32	6.97
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	6 11/16	5 25/32	9.49
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 5/16	6 3/8	12.24
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	8	6 7/8	16.37
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 9/16	8 1/2	28.31
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	10 23/32	9 3/8	40.01
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	12 7/32	10 25/32	57.96
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13 17/32	12 7/32	82.89

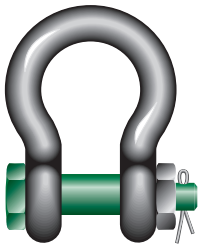
RFID CAD

* For shackles ≥ WLL 2 t

Green Pin® Standard Shackles

bow shackles with safety bolt

- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and
  meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 3, Grade A
  from 2 t and upward these shackles comply with ASME B30.26
- **Finish** : hot dipped galvanized
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] * | DNV 2.7-1 [b] * | DNV 2.22 | CE



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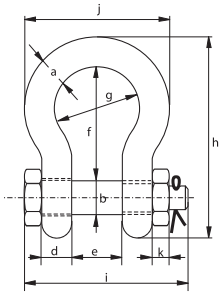
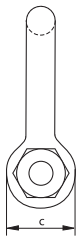




working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.5	7	8	16.5	7	12	29	20	48.5	42	34	4	0.06
0.75	9	10	20	9	13.5	32	22	56	50	40	5	0.11
1	10	11	22.5	10	17	36.5	26	63.5	60	46	8	0.16
1.5	11	13	26.5	11	19	43	29	74	67	51	11	0.22
2	13.5	16	34	13	22	51	32	89	82	58	13	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	0.74
4.75	19	22	46	19	31	76	51	129	114	89	19	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	2.58
9.5	28	32	66	28	47	108	75	185	166	131	27	3.66
12	32	35	72	32	51	115	83	201	178	147	30	4.91
13.5	35	38	80	35	57	133	92	227	197	162	33	6.54
17	38	42	88	38	60	146	99	249	202	175	19	8.19
25	45	50	103	45	74	178	126	300	249	216	23	14.22
35	50	57	111	50	83	197	138	331	269	238	26	19.53
42.5	57	65	130	57	95	222	160	377	301	274	29	28.33
55	65	70	145	65	105	260	180	433	330	310	32	39.59
85	75	83	162	73	127	329	190	527	380	340	39	62

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.5	1/4	5/16	21/32	9/32	15/32	1 5/32	25/32	1 29/32	1 21/32	1 11/32	5/32	0.13
0.75	5/16	3/8	25/32	11/32	17/32	1 1/4	7/8	2 7/32	1 31/32	1 9/16	3/16	0.25
1	3/8	7/16	7/8	13/32	21/32	1 7/16	1 1/32	2 1/2	2 3/8	1 13/16	5/16	0.34
1.5	7/16	1/2	1 1/32	7/16	3/4	1 11/16	1 5/32	2 29/32	2 5/8	2	7/16	0.48
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.92
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.62
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.59
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	3.9
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	5.69
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	8.06
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	10.81
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	14.42
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	3/4	18.06
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 13/16	8 1/2	29/32	31.34
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	10 19/32	9 3/8	1 1/32	43.77
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	11 27/32	10 23/32	1 5/32	62.46
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13	12 7/32	1 1/4	87.27
85	3	3 1/4	6 3/8	2 7/8	5	12 15/16	7 15/32	20 3/4	14 31/32	13 3/8	1 17/32	136.69

RFID | CAD

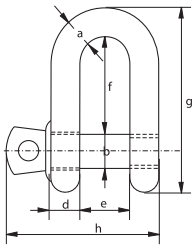
* For shackles ≥ WLL 2 t

Green Pin® Standard Shackles

dee shackles with screw collar pin

- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889, ASME B30.26 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 3, Grade A
- **Finish** : hot dipped galvanized
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] * | DNV 2.7-1 [b] * | DNV 2.22 | CE

G-4151



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	weight each
	a	b	c	d	e	f	g	h	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.33	5	6	12	5	9.5	19	33	29.5	0.02
0.5	7	8	16.5	7	12	22	41.5	38	0.05
0.75	9	10	20	9	13.5	26	50	46.5	0.09
1	10	11	22.5	10	17	32	59	54	0.14
1.5	11	13	26.5	11	19	37	68	59.5	0.19
2	13.5	16	34	13	22	43	81	73	0.32
3.25	16	19	40	16	27	51	97	89	0.54
4.75	19	22	46	19	31	59	112	103	0.87
6.5	22	25	52	22	36	73	134	119	1.34
8.5	25	28	59	25	43	85	154	137	2.08
9.5	28	32	66	28	47	90	167	153	2.77
12	32	35	72	32	51	94	180	170	3.72
13.5	35	38	80	35	57	115	209	186	5.14
17	38	42	88	38	60	127	230	203	6.85
25	45	50	103	45	74	149	271	243	11.45
35	50	57	111	50	83	171	305	272	16.86
42.5	57	65	130	57	95	190	345	310	24.61
55	65	70	145	65	105	203	376	344	32.65

In inch

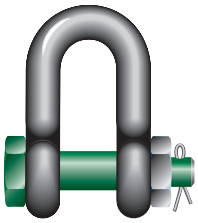
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	weight each
	a	b	c	d	e	f	g	h	
t	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.33	3/16	1/4	15/32	3/16	3/8	3/4	1 5/16	1 5/32	0.04
0.5	1/4	5/16	21/32	9/32	15/32	7/8	1 5/8	1 1/2	0.11
0.75	5/16	3/8	25/32	11/32	17/32	1 1/32	1 31/32	1 27/32	0.2
1	3/8	7/16	7/8	13/32	21/32	1 1/4	2 5/16	2 1/8	0.3
1.5	7/16	1/2	1 1/32	7/16	3/4	1 15/32	2 11/16	2 11/32	0.42
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	2 7/8	0.7
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	3 1/2	1.19
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 12/32	4 1/16	1.92
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	4 11/16	2.95
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	5 13/32	4.59
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	6 1/32	6.1
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	6 11/16	8.2
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	7 5/16	11.33
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	8	15.1
25	1 3/4	2	4 1/16	1 25/32	2 29/32	5 7/8	10 21/32	9 9/16	25.23
35	2	2 1/4	4 3/8	1 31/32	3 9/32	6 23/32	12	10 23/32	37.17
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	7 15/32	13 19/32	12 7/32	54.26
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	8	14 13/16	13 17/32	71.98

RFID CAD

* For shackles ≥ WLL 2 t

Green Pin® Standard Shackles

dee shackles with safety bolt



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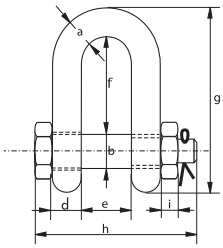


- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889, ASME B30.26 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 3, Grade A
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] * | DNV 2.7-1 [b] * | DNV 2.22 | CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	13.5	16	34	13	22	43	81	82	13	0.39
3.25	16	19	40	16	27	51	97	98	17	0.67
4.75	19	22	46	19	31	59	112	114	19	1.08
6.5	22	25	52	22	36	73	134	130	22	1.66
8.5	25	28	59	25	43	85	154	150	25	2.46
9.5	28	32	66	28	47	90	167	166	27	3.4
12	32	35	72	32	51	94	180	178	30	4.51
13.5	35	38	80	35	57	115	209	197	33	6.1
17	38	42	88	38	60	127	230	202	19	7.63
25	45	50	103	45	74	149	271	249	23	12.88
35	50	57	111	50	83	171	305	269	26	17.35
42.5	57	65	130	57	95	190	345	301	29	25.94
55	65	70	145	65	105	203	376	330	32	35.33
85	75	83	162	73	127	229	427	380	39	52.97

In inch

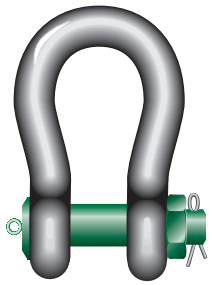
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	3 7/32	1/2	0.85
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	3 27/32	21/32	1.48
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 13/32	4 1/2	3/4	2.39
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	5 1/8	7/8	3.66
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	5 29/32	31/32	5.42
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	6 17/32	1 1/16	7.5
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	7	1 3/16	9.95
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	7 3/4	1 5/16	13.45
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	7 15/16	3/4	16.82
25	1 3/4	2	4 1/16	1 25/32	2 29/32	5 7/8	10 21/32	9 13/16	29/32	28.4
35	2	2 1/4	4 3/8	1 31/32	3 9/32	6 23/32	12	10 19/32	1 1/32	38.25
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	7 15/32	13 19/32	11 27/32	1 5/32	57.19
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	8	14 13/16	13	1 1/4	77.89
85	3	3 1/4	6 3/8	2 7/8	5	9 1/32	16 13/16	14 31/32	1 17/32	116.77

RFID | CAD

* For shackles ≥ WLL 2 t

Green Pin® Heavy Duty Shackles

bow shackles with safety bolt



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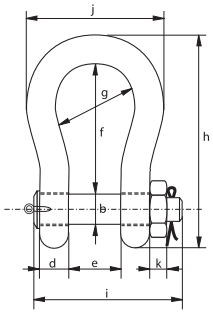

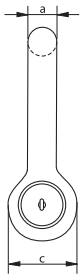

- **Material** : bow and pin alloy steel, Grade 8 quenched and tempered
- **Safety Factor** : MBL equals 5 x WLL
- **Finish** : shackle bow painted silver, pin painted green (120 tons shackle is hot dipped galvanized)
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | MTC [b] * | LROS * | MPI [a] | US [a] | CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
120	95	95	208	91	147	400	238	647	440	428	50	110
150	105	108	238	102	169	410	275	688	490	485	60	160
200	120	130	279	113	179	513	290	838	520	530	60	235
250	130	140	299	118	205	554	305	904	560	565	65	285
300	140	150	325	123	205	618	305	996	575	585	70	340
400	170	175	376	164	231	668	325	1114	690	665	70	560
500	180	185	398	164	256	718	350	1190	720	710	70	685
600	200	205	444	189	282	718	375	1243	810	775	70	880
700	210	215	454	204	308	718	400	1263	870	820	70	980
800	210	220	464	204	308	718	400	1270	870	820	70	1100
900	220	230	485	215	328	718	420	1296	920	860	70	1280
1000	240	240	515	215	349	718	420	1336	940	900	70	1460
1250	260	270	585	230	369	768	450	1456	1025	970	70	1990
1500	280	290	625	230	369	818	450	1556	1025	1010	70	2400

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	17 5/16	16 27/32	1 31/32	243
150	4 1/8	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	19 9/32	19 3/32	2 3/8	353
200	4 23/32	5 1/8	10 31/32	4 7/16	7 1/16	20 3/16	11 13/32	33	20 15/32	20 7/8	2 3/8	518
250	5 1/8	5 1/2	11 25/32	4 21/32	8 1/16	21 13/16	12	35 19/32	22 1/16	22 1/4	2 9/16	628
300	5 1/2	5 29/32	12 25/32	4 27/32	8 1/16	24 11/32	12	39 7/32	22 5/8	23 1/32	2 3/4	750
400	6 11/16	6 7/8	14 13/16	6 15/32	9 3/32	26 5/16	12 25/32	43 27/32	27 5/32	26 3/16	2 3/4	1235
500	7 3/32	7 9/32	15 21/32	6 15/32	10 3/32	28 9/32	13 25/32	46 27/32	28 11/32	27 15/16	2 3/4	1510
600	7 7/8	8 1/16	17 15/32	7 7/16	11 3/32	28 9/32	14 3/4	48 15/16	31 7/8	30 1/2	2 3/4	1940
700	8 9/32	8 15/32	17 7/8	8 1/32	12 1/8	28 9/32	15 3/4	49 23/32	34 1/4	32 9/32	2 3/4	2161
800	8 9/32	8 21/32	18 9/32	8 1/32	12 1/8	28 9/32	15 3/4	50	34 1/4	32 9/32	2 3/4	2425
900	8 21/32	9 1/16	19 3/32	8 15/32	12 29/32	28 9/32	16 17/32	51 1/32	36 7/32	33 27/32	2 3/4	2822
1000	9 7/16	9 7/16	20 9/32	8 15/32	13 3/4	28 9/32	16 17/32	52 19/32	37	35 7/16	2 3/4	3219
1250	10 1/4	10 5/8	23 1/32	9 1/16	14 17/32	30 1/4	17 23/32	57 5/16	40 11/32	38 3/16	2 3/4	4387
1500	11 1/32	11 13/32	24 19/32	9 1/16	14 17/32	32 7/32	17 23/32	61 1/4	40 11/32	39 3/4	2 3/4	5291

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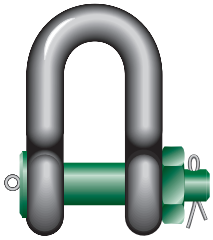
* For shackles ≥ WLL 150 t

Green Pin® Heavy Duty Shackles

dee shackles with safety bolt



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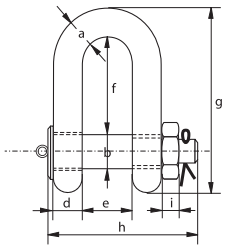


- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 5 x WLL
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1 MTC [a] MPI [a] US [a] CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
120	95	95	208	95	147	274	521	440	50	110

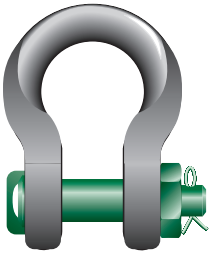
In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight each
	a	b	c	d	e	f	g	h		
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
120	3 3/4	3 3/4	8 3/16	3 3/4	5 25/32	10 25/32	20 1/2	17 5/16	1 31/32	243

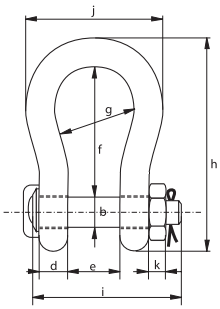
RFID CAD

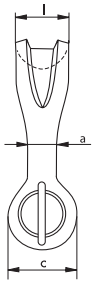
Green Pin® Sling Shackles

bow shackles with safety bolt



P-6033





- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 5 x WLL
- **Finish** : shackle bow painted silver, pin painted green
- **Temperature Range** : -20 °C up to +200 °C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [b] * | LROS * | MPI [b] * | US [b] * | CE

working load limit	diameter body	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	bearing surface	weight each
	a	b	c	d	e	f	g	h	i	j	k	l	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
7	22	22	46	19	32	96	64	153	115	110	19	41	2
12.5	28	28	61	25	44	121	82	197	151	146	24	54	4
18	35	35	69	30	54	148	102	239	175	180	29	64	7
30	40	42	90	35	69	165	126	279	211	200	34	79	13
40	55	51	109	45	84	199	140	331	252	235	38	97	21
55	60	57	115	55	90	240	160	389	299	270	45	100	30
75	68	70	125	54	110	290	185	473	327	317	54	120	48
125	85	80	154	85	137	366	220	583	426	390	64	150	92
150	94	95	179	89	147	391	253	645	435	434	50	170	140
200	110	105	199	100	158	481	280	759	470	482	50	205	205
250	126	120	227	110	179	542	300	859	519	530	60	240	264
300	135	134	245	122	195	601	350	947	575	620	70	265	360
400	160	160	293	145	231	576	370	985	675	690	80	320	580
500	170	180	328	160	263	681	450	1131	748	790	90	339	780
600	190	200	348	170	289	741	490	1234	809	865	100	370	980
700	200	215	392	190	315	751	540	1284	879	901	100	400	1360
800	218	230	420	200	342	851	554	1426	942	947	110	420	1430
900	242	255	466	220	368	851	580	1488	1023	1023	120	440	1650
1000	260	270	490	240	399	851	614	1532	1103	1107	120	460	2970
1250	285	300	510	260	452	931	650	1666	1227	1182	150	530	3700
1550	285	320	550	280	483	950	680	1710	1300	1253	150	560	4000

In inch

working load limit	diameter body	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	bearing surface	weight each
	a	b	c	d	e	f	g	h	i	j	k	l	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
7	7/8	7/8	1 13/16	3/4	1 9/32	3 25/32	2 17/32	6	4 17/32	4 5/16	3/4	1 5/18	4.41
12.5	1 1/8	1 1/8	2 3/8	1	1 3/4	4 3/4	3 1/4	7 3/4	5 15/16	5 3/4	15/16	2 1/8	8.82
18	1 3/8	1 3/8	2 23/32	1 3/16	2 1/8	5 13/16	4 1/32	9 13/32	6 7/8	7 3/32	1 5/32	2 17/32	18
30	1 9/16	1 21/32	3 17/32	1 3/8	2 23/32	6 1/2	4 31/32	10 31/32	8 5/16	7 7/8	1 11/32	3 1/8	29
40	2 5/32	2	4 9/32	1 25/32	3 5/16	7 27/32	5 1/2	13 1/32	9 29/32	9 1/4	1 1/2	3 13/16	46
55	2 3/8	2 1/4	4 17/32	2 5/32	3 17/32	9 7/16	6 5/16	15 5/16	11 25/32	10 5/8	1 25/32	3 15/16	66
75	2 11/16	2 3/4	4 29/32	2 1/8	4 11/32	11 13/32	7 9/32	18 5/8	12 7/8	12 15/32	2 1/8	4 23/32	106
125	3 11/32	3 5/32	6 1/16	3 11/32	5 13/32	14 13/32	8 21/32	22 15/16	16 25/32	15 11/32	2 17/32	5 29/32	203
150	3 11/16	3 3/4	7 1/16	3 1/2	5 25/32	15 13/32	9 31/32	25 13/32	17 1/8	17 3/32	1 31/32	6 11/16	309
200	4 11/32	4 1/8	7 27/32	3 15/16	6 7/32	18 15/16	11 1/32	29 7/8	18 1/2	18 31/32	1 31/32	8 1/16	452
250	4 31/32	4 23/32	8 15/16	4 11/32	7 1/16	21 11/32	11 13/16	33 13/16	20 7/16	20 7/8	2 3/8	9 7/16	582
300	5 5/16	5 9/32	9 21/32	4 13/16	7 11/16	23 21/32	13 25/32	37 9/32	22 5/8	24 13/32	2 3/4	10 7/16	794
400	6 5/16	6 5/16	11 17/32	5 23/32	9 3/32	22 11/16	14 9/16	38 25/32	26 9/16	27 5/32	3 5/32	12 19/32	1279
500	6 11/16	7 3/32	12 29/32	6 5/16	10 11/32	26 13/16	17 23/32	44 17/32	29 7/16	31 3/32	3 17/32	13 11/32	1720
600	7 15/32	7 7/8	13 11/16	6 11/16	11 3/8	29 3/16	19 9/32	48 19/32	31 27/32	34 1/16	3 15/16	14 9/16	2161
700	7 7/8	8 15/32	15 7/16	7 15/32	12 13/32	29 9/16	21 1/4	50 9/16	34 19/32	35 15/32	3 15/16	15 3/4	2998
800	8 19/32	9 1/16	16 17/32	7 7/8	13 15/32	33 1/2	21 13/16	56 5/32	37 3/32	37 9/32	4 11/32	16 17/32	3153
900	9 17/32	10 1/32	18 11/32	8 21/32	14 1/2	33 1/2	22 27/32	58 19/32	40 9/32	40 9/32	4 23/32	17 5/16	3638
1000	10 1/4	10 5/8	19 9/32	9 7/16	15 23/32	33 1/2	24 3/16	60 5/16	43 7/16	43 19/32	4 23/32	18 1/8	6548
1250	11 7/32	11 13/16	20 3/32	10 1/4	17 25/32	36 21/32	25 19/32	65 19/32	48 5/16	46 17/32	5 29/32	20 7/8	8157
1550	11 7/32	12 19/32	21 21/32	11 1/32	19 1/32	37 13/32	26 25/32	67 5/16	51 3/16	49 11/32	5 29/32	22 1/16	8818

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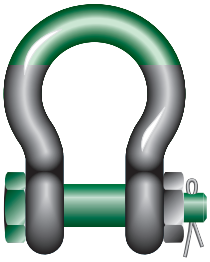
* For shackles ≥ WLL 75 t

Green Pin® Super Shackles

bow shackles with safety bolt



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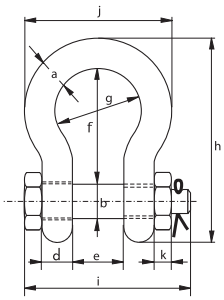
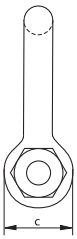




- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : ASME B30.26 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 3, Grade B
- **Finish** : hot dipped galvanized (175 ton shackle is painted)
- **Temperature Range** : -20 °C up to +200 °C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3.3	13.5	16	34	13	22	51	32	89	82	58	13	0.40
5	16	19	40	16	27	64	43	110	98	75	17	0.73
7	19	22	46	19	31	76	51	129	114	89	19	1.19
9.5	22	25	52	22	36	83	58	144	130	102	22	1.73
12.5	25	28	59	25	43	95	68	164	150	118	25	2.56
15	28	32	66	28	47	108	75	185	166	131	27	3.6
18	32	35	72	32	51	115	83	201	178	147	30	4.95
21	35	38	80	35	57	133	92	227	197	162	33	6.62
30	38	42	88	38	60	146	99	249	217	175	34	8.11
40	45	50	103	45	74	178	126	300	260	216	40	15
55	57	57	117	57	83	197	138	341	303	252	46	23
85	70	70	143	70	105	260	180	437	363	320	56	44
120	83	83	162	83	127	329	190	535	425	356	66	72
150*	95	95	208	91	147	400	238	647	511	428	50	112
175*	105	108	238	102	169	410	275	688	561	485	60	160

* = round headed bolt

In inch

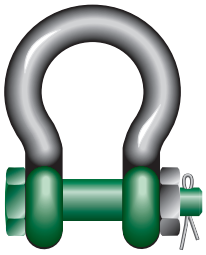
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
3.3	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.88
5	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.61
7	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.62
9.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	3.81
12.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	5.64
15	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	7.94
18	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	10.91
21	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	14.59
30	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	8 17/32	6 7/8	1 5/16	17.88
40	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	10 1/4	8 1/2	1 9/16	33.07
55	2	2 1/4	4 19/32	2 1/4	3 9/32	7 3/4	5 7/16	13 7/16	11 15/16	9 29/32	1 25/32	50.71
85	2 1/2	2 3/4	5 5/8	2 3/4	4 1/8	10 1/4	7 3/32	17 7/32	14 9/32	12 19/32	2 7/32	97
120	3	3 1/4	6 3/8	3 9/32	5	12 15/16	7 15/32	21 1/16	16 23/32	14 1/32	2 5/8	158.73
150*	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	20 1/8	16 27/32	1 31/32	246.92
175*	4	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	22 3/32	19 3/32	2 3/8	352.74

* = round headed bolt

RFID CAD

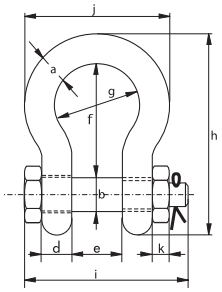
Green Pin® Polar Shackles

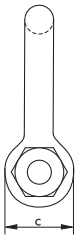
bow shackles with safety bolt, for use under extreme climatic conditions



G-5163

- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 8 x WLL
  for shackles with WLL 55 and 85 tons the MBL equals 6 x WLL
- **Standard** : EN 13889, ASME B30.26 and
  meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 3, Grade A
- **Finish** : hot dipped galvanized
- **Temperature Range** : -60°C up to +200°C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | DNV 2.7-1 [a] | DNV 2.7-1 [b] | DNV 2.22 | CE





working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	13.5	16	34	13	22	51	32	89	82	58	13	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	0.74
4.75	19	22	46	19	31	76	51	129	114	89	19	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	2.58
9.5	28	32	66	28	47	108	75	185	166	131	27	3.66
12	32	35	72	32	51	115	83	201	178	147	30	4.91
13.5	35	38	80	35	57	133	92	227	197	162	33	6.54
17	38	42	88	38	60	146	99	249	202	175	19	8.19
25	45	50	103	45	74	178	126	300	249	216	23	14.22
35	50	57	116	50	83	197	138	334	269	238	26	19.85
42.5	57	65	130	57	95	222	160	377	301	274	29	28.33
55	65	70	145	65	105	260	180	433	330	310	32	39.59
85	75	83	162	73	127	329	190	527	380	340	39	62

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.92
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.62
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.59
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	3.9
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	5.69
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	8.06
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	10.81
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	14.42
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	3/4	18.06
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 13/16	8 1/2	29/32	31.34
35	2	2 1/4	4 9/16	1 31/32	3 9/32	7 3/4	5 7/16	13 5/32	10 19/32	9 3/8	1 1/32	43.77
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	11 27/32	10 25/32	1 5/32	62.46
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13	12 7/32	1 1/4	87.27
85	3	3 1/4	6 3/8	2 7/8	5	12 15/16	7 15/32	20 3/4	14 31/32	13 3/8	1 17/32	136.69

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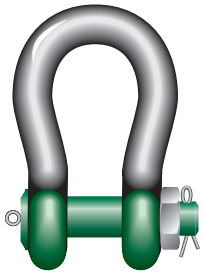
TYPE APPROVED PRODUCT CERTIFICATION NOTE 2.7-1 CERTIFICATE NO. S-7593

TYPE APPROVED PRODUCT CERTIFICATION NOTE 2.22 CERTIFICATE NO. S-7925

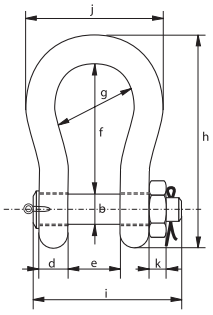
Green Pin® Heavy Duty Polar Shackles

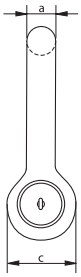
bow shackles with safety bolt, for use under extreme climatic conditions

- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 5 x WLL
- **Finish** : shackle bow painted silver, pin painted green (120 tons shackle is hot dipped galvanized)
- **Temperature Range** : -40 °C up to +200 °C
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [a] | MTC [b] * | LROS * | MPI [a] | US [a] | CE



P-6031





working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
120	95	95	208	91	147	400	238	647	440	428	50	110
150	105	108	238	102	169	410	275	688	490	485	60	160
200	120	130	279	113	179	513	290	838	520	530	60	235
250	130	140	299	118	205	554	305	904	560	565	65	285
300	140	150	325	123	205	618	305	996	575	585	70	340
400	170	175	376	164	231	668	325	1114	690	665	70	560
500	180	185	398	164	256	718	350	1190	720	710	70	685
600	200	205	444	189	282	718	375	1243	810	775	70	880
700	210	215	454	204	308	718	400	1263	870	820	70	980
800	210	220	464	204	308	718	400	1270	870	820	70	1100
900	220	230	485	215	328	718	420	1296	920	860	70	1280
1000	240	240	515	215	349	718	420	1336	940	900	70	1460
1250	260	270	585	230	369	768	450	1456	1025	970	70	1990
1500	280	290	625	230	369	818	450	1556	1025	1010	70	2400

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	17 5/16	16 27/32	1 31/32	243
150	4 1/8	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	19 9/32	19 3/32	2 3/8	353
200	4 23/32	5 1/8	10 31/32	4 7/16	7 1/16	20 3/16	11 13/32	33	20 15/32	20 7/8	2 3/8	518
250	5 1/8	5 1/2	11 25/32	4 21/32	8 1/16	21 13/16	12	35 19/32	22 1/16	22 1/4	2 9/16	628
300	5 1/2	5 29/32	12 25/32	4 27/32	8 1/16	24 11/32	12	39 7/32	22 5/8	23 1/32	2 3/4	750
400	6 11/16	6 7/8	14 13/16	6 15/32	9 3/32	26 5/16	12 25/32	43 27/32	27 5/32	26 3/16	2 3/4	1235
500	7 3/32	7 9/32	15 21/32	6 15/32	10 3/32	28 9/32	13 25/32	46 27/32	28 11/32	27 15/16	2 3/4	1510
600	7 7/8	8 1/16	17 15/32	7 7/16	11 3/32	28 9/32	14 3/4	48 15/16	31 7/8	30 1/2	2 3/4	1940
700	8 9/32	8 15/32	17 7/8	8 1/32	12 1/8	28 9/32	15 3/4	49 23/32	34 1/4	32 9/32	2 3/4	2161
800	8 9/32	8 21/32	18 9/32	8 1/32	12 1/8	28 9/32	15 3/4	50	34 1/4	32 9/32	2 3/4	2425
900	8 21/32	9 1/16	19 3/32	8 15/32	12 29/32	28 9/32	16 17/32	51 1/32	36 7/32	33 27/32	2 3/4	2822
1000	9 7/16	9 7/16	20 9/32	8 15/32	13 3/4	28 9/32	16 17/32	52 19/32	37	35 7/16	2 3/4	3219
1250	10 1/4	10 5/8	23 1/32	9 1/16	14 17/32	30 1/4	17 23/32	57 5/16	40 11/32	38 3/16	2 3/4	4387
1500	11 1/32	11 13/32	24 19/32	9 1/16	14 17/32	32 7/32	17 23/32	61 1/4	40 11/32	39 3/4	2 3/4	5291

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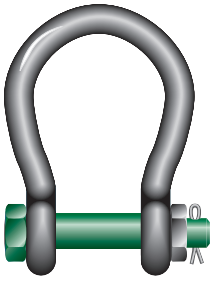
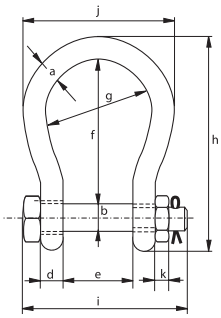
* For shackles ≥ WLL 150 t

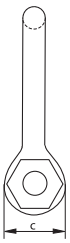
Green Pin® Wide Mouth Shackles

bow shackles with safety bolt



G-4263





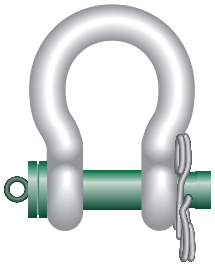
- **Material** : bow and pin alloy steel, Grade 8, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20 °C up to +200 °C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
4.75	22	25	52	22	63	112	88	173	157	132	22	2.08
6.5	25	28	59	25	75	135	105	204	183	155	25	3.14
8.5	28	32	66	28	82	148	115	225	205	171	27	4.36
9.5	32	35	72	32	90	162	126	248	224	190	30	5.95
12	35	38	79	35	100	180	140	274	245	210	33	7.87
16	38	42	88	38	106	216	159	319	248	235	19	12.5
25	45	50	103	45	127	248	175	370	296	265	23	16.7
30	50	57	118	50	146	273	207	411	332	307	26	25
55	65	70	145	65	165	314	213	487	391	343	32	45
75	83	83	164	83	184	330	254	537	460	420	39	70

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
4.75	7/8	1	2 1/16	7/8	2 15/32	4 13/32	3 15/32	6 13/16	6 3/16	5 3/16	7/8	4.59
6.5	1	1 1/8	2 5/16	31/32	2 15/16	5 5/16	4 1/8	8 1/32	7 7/32	6 3/32	31/32	6.92
8.5	1 1/8	1 1/4	2 19/32	1 3/32	3 7/32	5 13/16	4 17/32	8 27/32	8 1/16	6 23/32	1 1/16	9.61
9.5	1 1/4	1 3/8	2 27/32	1 1/4	3 17/32	6 3/8	4 31/32	9 3/4	8 13/16	7 15/32	1 3/16	13.12
12	1 3/8	1 1/2	3 1/8	1 3/8	3 15/16	7 3/32	5 1/2	10 25/32	9 21/32	8 9/32	1 5/16	17.35
16	1 1/2	1 5/8	3 15/32	1 1/2	4 3/16	8 1/2	6 1/4	12 9/16	9 3/4	9 1/4	3/4	27.56
25	1 3/4	2	4 1/16	1 25/32	5	9 3/4	6 7/8	14 9/16	11 21/32	10 7/16	29/32	36.82
30	2	2 1/4	4 21/32	1 31/32	5 3/4	10 3/4	8 5/32	16 3/16	13 1/16	12 3/32	1 1/32	55.12
55	2 1/2	2 3/4	5 23/32	2 9/16	6 1/2	12 3/8	8 3/8	19 3/16	15 13/32	13 1/2	1 1/4	105.82
75	3 1/4	3 1/4	6 15/32	3 9/32	7 1/4	13	10	21 5/32	18 1/8	16 17/32	1 17/32	154.32

RFID CAD



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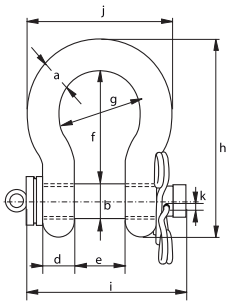
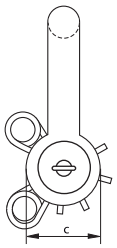




Green Pin® ROV Release

release shackles with spring pins

- **Material** : bow and pin alloy steel, Grade 8, Polar quality, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : body painted white, pin painted green
- **Temperature Range** : -60°C up to +200°C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : for in-line use only.
  supplied without wires; design your own wiring plan

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	22	25	52	22	36	83	58	144	130	102	5.5	1.7
9.5	28	32	66	28	47	108	75	185	166	131	6.5	3.4
12	32	35	72	32	51	115	83	201	184	147	6.5	4.7
17	38	42	88	38	60	146	99	249	202	175	6.5	8
25	45	50	103	45	74	178	126	300	243	216	8.5	13.6
35	50	57	116	50	83	197	138	334	269	238	8.5	19.1
42.5	57	65	130	57	95	222	160	377	301	274	8.5	28.3
55	65	70	145	65	105	260	180	433	329	310	8.5	38
85	75	83	162	75	127	329	190	527	375	340	8.5	60

In inch

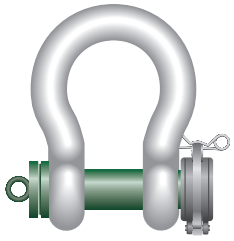
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
6.5	7/8	1	2 1/32	7/8	1 7/16	3 9/32	2 9/32	5 11/16	5 1/8	4	7/32	3.75
9.5	1 1/8	1 1/4	2 19/32	1 1/8	1 7/8	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1/4	7.5
12	1 1/4	1 3/8	2 13/16	1 9/32	2	4 17/32	3 9/32	7 29/32	7 1/4	5 25/32	1/4	10.36
17	1 1/2	1 5/8	3 1/2	1 17/32	2 11/32	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	1/4	17.64
25	1 3/4	2	4 1/32	1 25/32	2 29/32	7	4 15/16	11 13/16	9 19/32	8 17/32	11/32	30.0
35	2	2 1/4	4 9/16	1 31/32	3 9/32	7 3/4	5 7/16	13 5/32	10 19/32	9 3/8	11/32	42.1
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 9/32	14 13/16	11 7/8	10 25/32	11/32	62.4
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 3/32	12 15/16	12 3/16	11/32	83.8
85	3	3 1/4	6 11/32	2 15/16	5	12 15/16	7 1/2	20 3/4	14 3/4	13 3/8	11/32	132.3

CAD INFO

Green Pin® ROV Shackles

release shackles with locking clamp

- **Material** : bow and pin alloy steel, Grade 8, Polar quality, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
  for shackles with WLL 120 t and up the MBL equals 5x WLL
- **Finish** : body painted white, pin painted green
- **Temperature Range** : -60°C up to +200°C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : supplied without wires; design your own wiring plan



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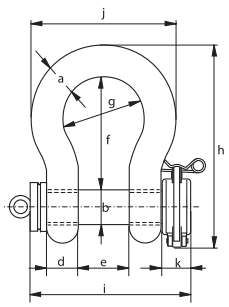
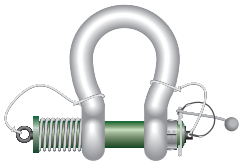


working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	width locking clamp	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	22	25	52	22	36	83	58	164	140	102	45	2.27
9.5	28	32	66	28	47	108	75	200	172	131	48	4.25
12	32	35	72	32	51	115	83	213	184	147	48	5.36
17	38	42	88	38	60	146	99	266	209	175	48	9.27
25	45	50	103	45	74	178	126	309	243	216	48	14.62
35	50	57	116	50	83	197	138	350	269	238	48	20.75
42.5	57	65	130	57	95	222	160	377	301	274	48	28.33
55	65	70	145	65	105	260	180	440	329	310	48	41
85	75	83	162	75	127	329	190	527	375	340	48	61
120	95	95	208	91	147	400	238	647	440	428	60	110
150	105	108	238	102	169	410	275	688	490	485	60	160
200	120	130	279	113	179	513	290	838	520	530	60	235
250	130	140	299	118	205	554	305	904	560	565	60	285

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	width locking clamp	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
6.5	7/8	1	2 1/32	7/8	1 7/16	3 9/32	2 9/32	6 7/16	5 17/32	4	1 25/32	5.00
9.5	1 1/8	1 1/4	2 19/32	1 1/8	1 7/8	4 1/4	2 15/16	7 7/8	6 3/4	5 5/32	1 29/32	9.37
12	1 1/4	1 3/8	2 13/16	1 9/32	2	4 17/32	3 9/32	8 3/8	7 1/4	5 25/32	1 29/32	11.82
17	1 1/2	1 5/8	3 1/2	1 17/32	2 11/32	5 3/4	3 29/32	10 1/2	8 1/4	6 7/8	1 29/32	20.44
25	1 3/4	2	4 1/32	1 25/32	2 29/32	7	4 15/16	12 5/32	9 19/32	8 17/32	1 29/32	32.23
35	2	2 1/4	4 9/16	1 31/32	3 9/32	7 3/4	5 7/16	13 25/32	10 19/32	9 3/8	1 29/32	45.75
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 9/32	14 13/16	11 7/8	10 25/32	1 29/32	62.5
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 11/32	12 15/16	12 3/16	1 29/32	90.4
85	3	3 1/4	6 11/32	2 15/16	5	12 15/16	7 1/2	20 3/4	14 3/4	13 3/8	1 29/32	134.5
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 1/2	17 11/32	16 7/8	2 11/32	243
150	4 1/8	4 1/4	9 3/8	4	6 5/8	16 5/32	10 13/16	27 3/32	19 5/16	19 1/8	2 11/32	353
200	4 23/32	5 1/8	11	4 7/16	7 1/32	20 3/16	11 7/16	33	20 1/2	20 7/8	2 11/32	518
250	5 1/8	5 1/2	11 25/32	4 5/8	8 3/32	21 13/16	12	35 19/32	22 1/32	22 1/4	2 11/32	628

CAD INFO



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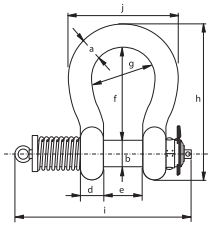


Green Pin® ROV Shackles

spring release shackles

- **Material** : bow and pin alloy steel, Grade 8, Polar quality, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : body painted white, pin painted green
- **Temperature Range** : -40˚C up to +200˚C
- **Certification** : 2.1 2.2 3.1 MTC a CE
- **Note** : for in-line use only.
  this shackle is assembled with wire rope slings and monkey's fist
  for size starting from WLL 42.5 up to and including 150 t a special compression tool (sold separately) is required to assemble the shackle.

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
12	32	35	72	32	51	115	83	201	291	147	5.24
13.5	35	38	80	35	57	133	92	227	301	162	7
17	38	42	88	38	60	146	99	249	360	175	9.25
25	45	50	103	45	74	178	126	300	370	216	15.5
35	50	57	116	50	83	197	138	334	400	238	20.4
42.5	57	65	130	57	95	222	160	377	460	274	39
55	65	70	145	65	105	260	180	433	490	310	42
85	75	83	162	75	127	329	190	527	587	340	67
120	95	95	208	91	147	399	238	646	687	428	123
150	105	108	238	102	169	410	275	688	727	485	168

In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
	a	b	c	d	e	f	g	h	i	j	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
12	1 1/4	1 3/8	2 13/16	1 9/32	2	4 17/32	3 9/32	7 29/32	11 1/2	5 25/32	11.55
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	11 7/8	6 11/32	15.43
17	1 1/2	1 5/8	3 1/2	1 17/32	2 11/32	5 3/4	3 29/32	9 13/16	14 5/32	6 7/8	20.39
25	1 3/4	2	4 1/32	1 25/32	2 29/32	7	4 15/16	11 13/16	14 9/16	8 17/32	34.2
35	2	2 1/4	4 9/16	1 31/32	3 9/32	7 3/4	5 7/16	13 5/32	15 3/4	9 3/8	45
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 9/32	14 13/16	18 1/8	10 25/32	86
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 3/32	19 5/16	12 3/16	92.6
85	3	3 1/4	6 11/32	2 15/16	5	12 15/16	7 1/2	20 3/4	23 1/8	13 3/8	147.7
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 23/32	9 3/8	25 7/16	27 1/32	16 7/8	271
150	4 1/8	4 1/4	9 3/8	4	6 5/8	16 5/32	10 13/16	27 3/32	28 19/32	19 1/8	370

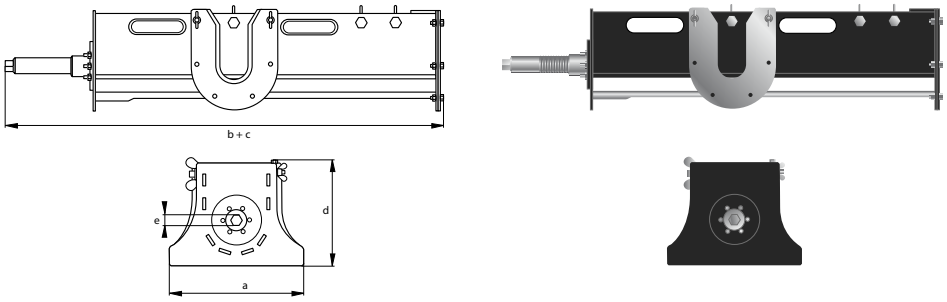
CAD INFO

Compression Tool

for ROV spring release shackles

- **Material** : mild steel
- **Finish** : black painted
- **Note** : required for ROV spring release shackle (type P-5367), for sizes WLL 42.5 t and up
- **Certification** : 2.1

P-5368

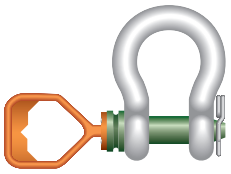


for shackle WLL	diameter bow	diameter pin	width	length closed position	length opened position	height	width	weight each
t	a mm	b mm	a mm	b mm	c mm	d mm	e mm	kg
42.5	57	65						
55	65	70	300	1000	1500	225	24	34
85	75	83						
120	95	95	340	1100	1750	285	24	42
150	105	108						

In inch

for shackle WLL	diameter bow	diameter pin	width	length closed position	length opened position	height	width	weight each
t	a inch	b inch	a inch	b inch	c inch	d inch	e inch	lbs
42.5	2 1/4	2 9/16						
55	2 1/2	2 3/4	11 13/16	39 3/8	59 1/16	8 7/8	15/16	75
85	3	3 1/4						
120	3 3/4	3 3/4	13 3/8	43 5/16	68 29/32	11 1/4	15/16	92.6
150	4 1/8	4 1/4						

Watch the DEMO on our YouTube channel



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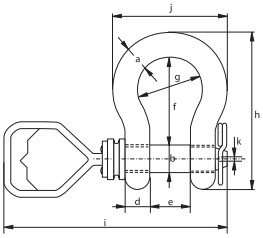


Green Pin® ROV Shackles

release & retrieve shackles with tapered pin and D-handle

- **Material** : bow and pin alloy steel, Grade 8, Polar quality, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : body painted white, pin painted green
- **Temperature Range** : -60˚C up to +200˚C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : supplied without wires; design your own wiring plan

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
tons	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	22	25	52	22	36	83	58	144	345	102	3.5	1.50
9.5	28	32	66	28	47	108	75	185	381	131	5.5	3.16
12	32	35	72	32	51	115	83	201	393	147	6.5	4.31
17	38	42	88	38	60	146	99	249	417	175	8.5	7.43
25	45	50	103	45	74	178	126	300	464	216	8.5	12.84
35	50	57	111	50	83	197	138	331	484	238	8.5	18.15
42.5	57	65	130	57	95	222	160	377	516	274	7.5	26.29
55	65	70	145	65	105	260	180	433	545	310	7.5	37.60

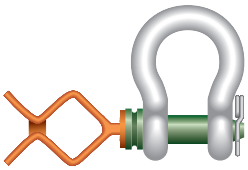
In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
tons	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	7/8	1	2 1/16	7/8	1 7/16	3 9/32	2 9/32	5 21/32	13 19/32	4 1/32	1/8	3.31
9.5	1 1/8	1 1/4	2 19/32	1 1/8	1 7/8	4 1/4	2 15/16	7 9/32	15	5 5/32	7/32	6.97
12	1 1/4	1 3/8	2 27/32	1 9/32	2	4 17/32	3 9/32	7 29/32	15 15/32	5 25/32	1/4	9.49
17	1 1/2	1 5/8	3 15/32	1 17/32	2 11/32	5 3/4	3 29/32	9 13/16	16 13/32	6 7/8	11/32	16.37
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 15/16	11 13/16	18 9/32	8 1/2	11/32	28.31
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	19 1/16	9 3/8	11/32	40.01
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 9/32	14 27/32	20 5/16	10 25/32	9/32	57.96
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 9/32	17 1/16	21 15/32	12 7/32	9/32	82.89

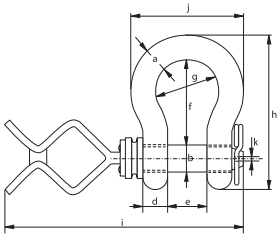
INFO

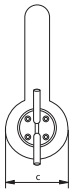
Green Pin® ROV Shackles

release & retrieve shackles with tapered pin and fishtail-handle



P-5361F





- **Material** : bow and pin alloy steel, Grade 8, Polar quality, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : body painted white, pin painted green
- **Temperature Range** : -60˚C up to +200˚C
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : supplied without wires; design your own wiring plan

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
tons	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	22	25	52	22	36	83	58	144	419	102	3.5	1.50
9.5	28	32	66	28	47	108	75	185	455	131	5.5	3.16
12	32	35	72	32	51	115	83	201	467	147	6.5	4.31
17	38	42	88	38	60	146	99	249	491	175	8.5	7.43
25	45	50	103	45	74	178	126	300	538	216	8.5	12.84
35	50	57	111	50	83	197	138	331	558	238	8.5	18.15
42.5	57	65	130	57	95	222	160	377	590	274	7.5	26.29
55	65	70	145	65	105	260	180	433	619	310	7.5	37.60

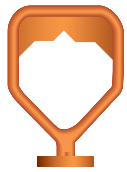
In inch

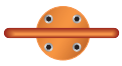
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	diameter	weight each
	a	b	c	d	e	f	g	h	i	j	k	
tons	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6.5	7/8	1	2 1/16	7/8	1 7/16	3 9/32	2 9/32	5 21/32	16 1/2	4 1/32	1/8	3.31
9.5	1 1/8	1 1/4	2 19/32	1 1/8	1 7/8	4 1/4	2 15/16	7 9/32	17 29/32	5 5/32	7/32	6.97
12	1 1/4	1 3/8	2 27/32	1 9/32	2	4 17/32	3 9/32	7 29/32	18 3/8	5 25/32	1/4	9.49
17	1 1/2	1 5/8	3 15/32	1 17/32	2 11/32	5 3/4	3 29/32	9 13/16	19 11/32	6 7/8	11/32	16.37
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 15/16	11 13/16	21 3/16	8 1/2	11/32	28.31
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	21 31/32	9 3/8	11/32	40.01
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 9/32	14 27/32	23 7/32	10 25/32	9/32	57.96
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 9/32	17 1/16	24 3/8	12 7/32	9/32	82.89

INFO

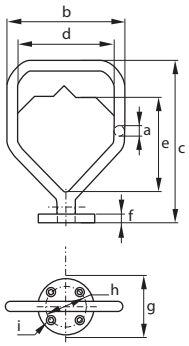
Green Pin® D-handle

- **Material** : casted steel
- **Finish** : painted orange
- **Certification** : 2.1





P-5396D



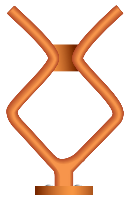
diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a	b	c	d	e	f	g	h	i	
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
19	153	215	115	110	10	70	48	8.5	1.70

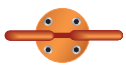
In inch

diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a	b	c	d	e	f	g	h	i	
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3/4	6 1/32	8 15/32	4 17/32	4 11/32	13/32	2 3/4	1 7/8	11/32	3.75

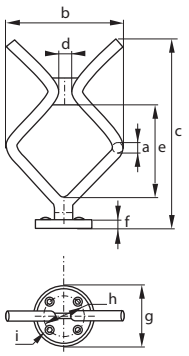
Green Pin® Fishtail-handle

- **Material** : casted steel
- **Finish** : painted orange
- **Certification** : 2.1





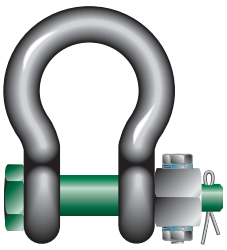
P-5396F

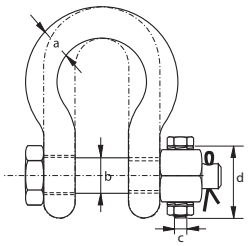


diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a	b	c	d	e	f	g	h	i	
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
19	178	289	21	133	10	70	48	8.5	1.92

In inch

diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a	b	c	d	e	f	g	h	i	
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3/4	7	11 3/8	13/16	5 1/4	13/32	2 3/4	1 7/8	11/32	4.23



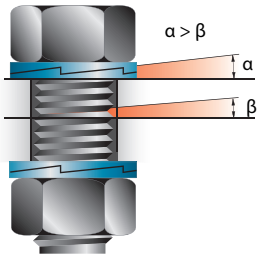


Green Pin® Fixed Nut Shackles

Shackles can also be used in more permanent constructions.
These can be subject to dynamic loads and/or extreme vibrations. In such applications there is a risk that, over time, the nut starts moving over the thread. To avoid this risk we offer our range of Green Pin® Fixed Nut Shackles.

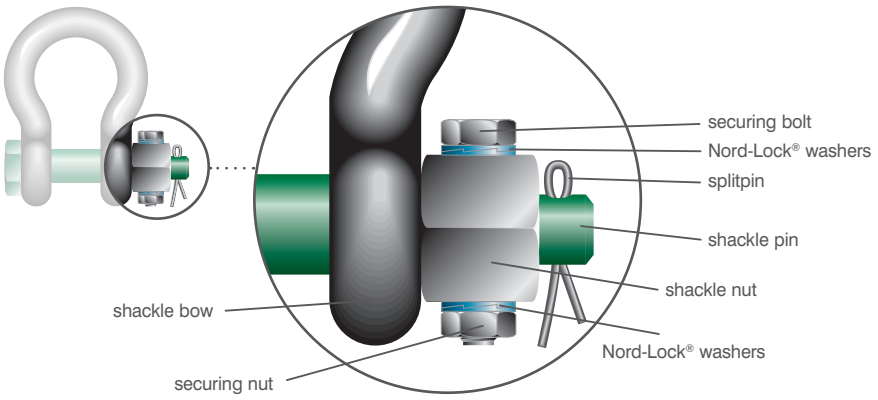
Green Pin® Standard, Polar and Super shackles can be equipped with an extra AISI 316 securing bolt which is drilled through the nut and shackle pin.
This securing bolt is fastened with two sets of Nord-Lock® washers and a securing nut. This will keep the shackle nut in position. The Nord-Lock wedge-locking washers lock when subjected to extreme vibration or dynamic loads.

Green Pin® Fixed Nut Shackles are available on request.



Green Pin® Fixed Nut Shackles
G-4143 - Green Pin® Fixed Nut Standard Shackles, bow shackles with safety bolt and fixed nut
G-4133 - Green Pin® Fixed Nut Standard Shackles, dee shackles with safety bolt and fixed nut
G-5143 - Green Pin® Fixed Nut Polar Shackles, bow shackles with safety bolt and fixed nut
G-5243 - Green Pin® Fixed Nut Super Shackles, bow shackles with safety bolt and fixed nut

G-4143 Safety bow WLL	G-4133 Safety dee WLL	G-5143 Polar WLL	G-5243 Super WLL	diameter body	diameter pin	securing bolt thread	securing bolt length	torque
t	t	t	t	a mm	b mm	c mm	d mm	Nm
2	2	2	3.3	13.5	16	M6	35	9.2
3.25	3.25	3.25	5	16	19	M6	40	9.2
4.75	4.75	4.75	7	19	22	M6	45	9.2
6.5	6.5	6.5	9.5	22	25	M8	50	22
8.5	8.5	8.5	12.5	25	28	M8	55	22
9.5	9.5	9.5	15	28	32	M10	60	43
12	12	12	18	32	35	M10	65	43
13.5	13.5	13.5	21	35	38	M10	70	43
17	17	17	30	38	42	M8	75	22
25	25	25	40	45	50	M8	90	22
35	35	35		50	57	M10	100	43
			55	57	57	M10	100	43
42.5	42.5	42.5		57	65	M12	110	75
55	55	55		65	70	M12	120	75
			85	70	70	M12	120	75
85	85	85		75	83	M12	140	75
			120	83	83	M12	140	75



Green Pin® Shackles with RFID

All lifting equipment requires regular inspection. Tracking and filing reports on paper can be a time consuming task. Van Beest now offers a solution with an easily accessible RFID (Radio Frequency Identification) chip in our range of Green Pin® Shackles.

This RFID chip responds to a radio-signal that is transmitted by a reader. Each chip has a unique number and this number links the individual shackle to a record in an inspection management system.

The chips are impact resistant and durable and they are countersunk into the end of the shackle pin.
The chips are NFC (Near Field Communication) compatible, allowing users to scan, identify and track the shackles with the latest generation of NFC compatible smartphones.

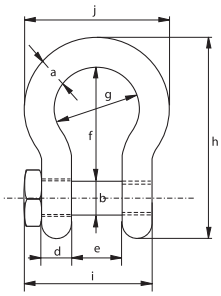
Van Beest offers the option of RFID implementation in all Green Pin® shackles with a minimum pin diameter of 28mm.

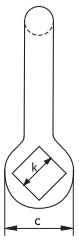
RF Protocol	:	ISO 15693
Operating Frequency	:	HF – 13.56 MHz

Green Pin® Trawling Shackles

bow shackles with square headed screw pin

G-4164





- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Grade A
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1 MTC [a] CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	width bolt head	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	13.5	16	34	13	22	51	32	89	57.5	58	22	0.34
3.25	16	19	40	16	27	64	43	110	71	75	27	0.63
4.75	19	22	46	19	31	76	51	129	82	89	32	1
6.5	22	25	52	22	36	83	58	144	93	102	32	1.44
8.5	25	28	59	25	43	95	68	164	108	118	36	2.21
9.5	28	32	66	28	47	108	75	185	120	131	41	3.18
12	32	35	72	32	51	115	83	201	137	147	50	4.32
13.5	35	38	80	35	57	133	92	227	149	162	50	5.67
17	38	42	88	38	60	146	99	249	164	175	60	7.36
25	45	50	103	45	74	178	126	300	192	216	60	12.38

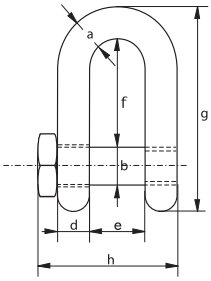
In inch

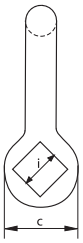
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	width bolt head	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	2 1/4	2 9/32	7/8	0.75
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	2 25/32	2 15/16	1 1/16	1.39
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	3 7/32	3 1/2	1 1/4	2.21
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	3 21/32	4 1/32	1 1/4	3.17
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	4 1/4	4 21/32	1 13/32	4.86
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	4 23/32	5 5/32	1 5/8	7.01
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	5 13/32	5 25/32	1 31/32	9.52
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	5 7/8	6 3/8	1 31/32	12.49
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	6 15/32	6 7/8	2 3/8	16.23
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/26	7 9/16	8 1/2	2 3/8	27.29

Green Pin® Trawling Shackles

dee shackles with square headed screw pin

G-4154





- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Grade A
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1 MTC [a] CE

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	width bolt head	weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	13.5	16	34	13	22	43	81	57.5	22	0.32
3.25	16	19	40	16	27	51	97	71	27	0.58
4.75	19	22	46	19	31	59	112	82	32	0.92
6.5	22	25	52	22	36	73	134	93	32	1.33
8.5	25	28	59	25	43	85	154	108	36	2.03
9.5	28	32	66	28	47	90	167	120	41	2.88
12	32	35	72	32	51	94	180	137	50	3.96
13.5	35	38	80	35	57	115	209	149	50	5.24
17	38	42	88	38	60	127	230	164	60	6.8
25	45	50	103	45	74	149	271	192	60	11.22

In inch

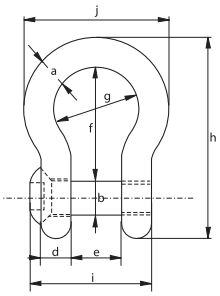
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	width bolt head	weight each
	a	b	c	d	e	f	g	h	i	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	2 1/4	7/8	0.7
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	2 25/32	1 1/16	1.28
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 13/32	3 7/32	1 1/4	2.03
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	3 21/32	1 1/4	2.93
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	4 1/4	1 13/32	4.48
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	4 23/32	1 5/8	6.35
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	5 13/32	1 31/32	8.72
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	5 7/8	1 31/32	11.56
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	6 15/32	2 3/8	15
25	1 3/4	2	4 1/16	1 25/32	2 29/32	5 7/8	10 21/32	7 9/16	2 3/8	24.74

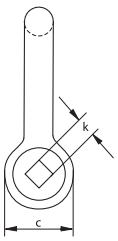
Green Pin® Sunken Hole Shackles

bow shackles with square sunken hole screw pin

G-4169

- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Grade A
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : key for unscrewing the pin must be ordered separately





P-4170

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	size hole	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	13.5	16	34	13	22	51	32	89	51	58	11	0.31
3.25	16	19	40	16	27	64	43	110	63	75	11	0.56
4.75	19	22	46	19	31	76	51	129	74	89	11	0.98
6.5	22	25	52	22	36	83	58	144	85	102	13	1.46
8.5	25	28	59	25	43	95	68	164	99	118	13	2.18
9.5	28	32	66	28	47	108	75	185	110	131	17	3.06
12	32	35	72	32	51	115	83	201	122	147	17	4.24
13.5	35	38	80	35	57	133	92	227	135	162	17	5.59
17	38	42	88	38	60	146	99	249	145	175	17	7.37

In inch

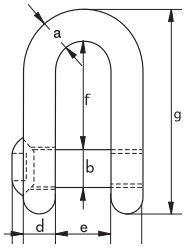
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	size hole	weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	2	2 9/32	7/16	0.68
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	2 15/32	2 15/16	7/16	1.23
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	2 29/32	3 1/2	7/16	2.16
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	3 11/32	4 1/32	1/2	3.22
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	3 29/32	4 21/32	1/2	4.81
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	4 11/32	5 5/32	21/32	6.75
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	4 13/16	5 25/32	21/32	9.35
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	5 5/16	6 3/8	21/32	12.32
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	5 23/32	6 7/8	21/32	16.25

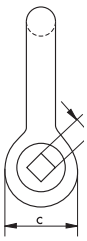
Green Pin® Sunken Hole Shackles

dee shackles with square sunken hole screw pin

- **Material** : bow and pin high tensile steel, Grade 6, quenched and tempered
- **Safety Factor** : MBL equals 6 x WLL
- **Standard** : EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Grade A
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1 MTC [a] CE
- **Note** : key for unscrewing the pin must be ordered separately

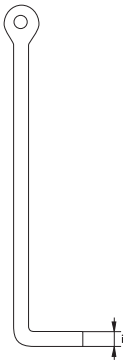
G-4159





working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	size hole	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
2	13.5	16	34	13	22	43	81	51	11	0.34
3.25	16	19	40	16	27	51	97	63	11	0.6
4.75	19	22	46	19	31	59	112	74	11	0.98
6.5	22	25	52	22	36	73	134	85	13	1.26
8.5	25	28	59	25	43	85	154	99	13	2.14
9.5	28	32	66	28	47	90	167	110	17	3.05
12	32	35	72	32	51	94	180	122	17	3.56
13.5	35	38	80	35	57	115	209	135	17	5.17
17	38	42	88	38	60	127	230	145	17	6.84

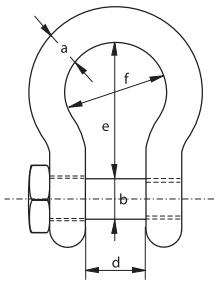
P-4170

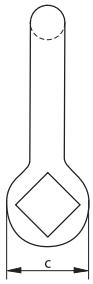


In inch

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	size hole	weight each
t	a inch	b inch	c inch	d inch	e inch	f inch	g inch	h inch	i inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	2	7/16	0.75
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	2 15/32	7/16	1.33
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 13/32	2 29/32	7/16	2.15
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	3 11/32	1/2	2.77
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	3 29/32	1/2	4.72
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	4 11/32	21/32	6.72
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	4 13/16	21/32	7.84
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	5 5/16	21/32	11.4
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	5 23/32	21/32	15.08

P-3764





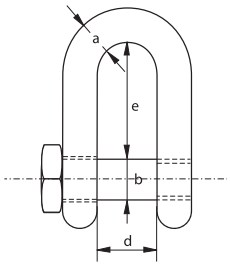
Fishing Shackles

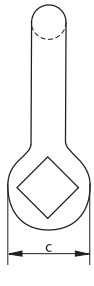
bow shackles with square head screw pin

- **Material** : mild steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight each
	a	b	c	d	e	f	
tons	mm	mm	mm	mm	mm	mm	kg
1.5	13	16	32	25	48	36	0.37
2.5	16	20	40	32	64	48	0.71
3	20	22	48	38	79	60	1.24
4	22	25	53	44	87	66	1.68
5	25	28	60	51	100	75	2.42
6.5	28	32	67	56	114	86	3.42
8	32	36	71	64	126	96	4.85
9	36	38	76	70	140	105	6.32

P-3754



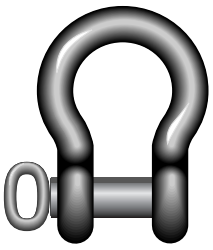


Fishing Shackles

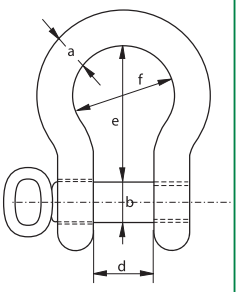
dee shackles with square head screw pin

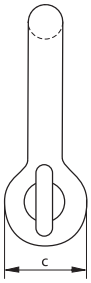
- **Material** : mild steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	a	b	c	d	e	
tons	mm	mm	mm	mm	mm	kg
1.5	13	16	32	25	48	0.36
2.5	16	20	40	32	64	0.69
3	20	22	48	38	75	1.18
4	22	25	53	44	83	1.61
5	25	28	60	51	100	2.35
6.5	28	32	67	56	104	3.22
8	32	36	71	64	120	4.63
9	36	38	76	70	131	5.96



S-1165





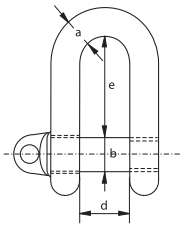
Mooring Shackles

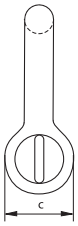
bow shackles with screw pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : self coloured
- **Note** : not to be used for lifting applications
- **Certification** : 2.1

diameter bow a mm	diameter pin b mm	diameter eye c mm	width inside d mm	length inside e mm	width bow f mm	weight each kg
32	32	74	64	134	96	4.2
38	38	89	76	160	114	7.8
45	45	104	90	189	135	12.5
50	50	111	100	210	155	17.4
65	65	145	130	273	195	35.6

S-3351
G-3351





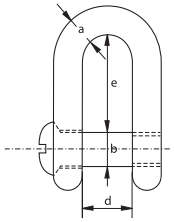
Shackles generally to DIN 82101 type A

dee shackles with screw collar pin

- **Material** : bow and pin high tensile steel, Grade 4
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : generally to DIN 82101 type A
- **Finish** : hot dipped galvanized or self coloured
- **Certification** : 2.1 2.2 CE
- **Note** : shackle no. 0.1 is electro-galvanized and will not have any markings as it is too small

no.	working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	t	a mm	b mm	c mm	d mm	e mm	kg
0.1	0.1	5	5	10	7	15.5	0.02
0.16	0.16	6	6	12	8	18	0.02
0.25	0.25	8	8	16	11	24	0.05
0.4	0.4	10	10	20	14	30	0.1
0.6	0.63	12	12	24	17	36	0.18
1	1	13	16	32	21	49	0.3
1.6	1.6	16	20	40	27	61	0.57
2	2	20	22	44	30	67	0.98
2.5	2.5	22	24	48	33	73	1.3
3	3.15	25	27	54	38	83.5	1.85
4	4	28	30	60	42	91	2.53
5	5	32	36	72	47	111	4
6	6.3	36	39	78	53	119.5	5.3
8	8	41	45	90	60	139.5	7.9
10	10	44	48	96	66	147	10
12	12	49	52	104	73	158	13.5
16	16	55	60	120	81	185	19.2
20	20	61	68	136	90	211	28
25	25	67	72	144	100	221	34

S-3352
G-3352

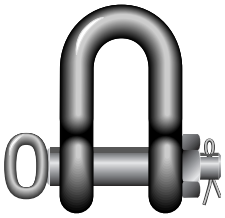


Shackles generally to DIN 82101 type B

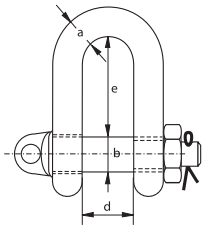
dee shackles with counter sunk screw pin

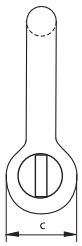
- **Material** : bow and pin high tensile steel, Grade 4
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : generally to DIN 82101 type B
- **Finish** : hot dipped galvanized or self coloured
- **Certification** : 2.1 2.2 CE
- **Note** : shackle no. 0.1 is electro-galvanized and will not have any markings as it is too small

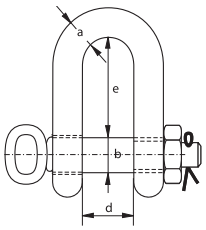
no.	working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	t	a mm	b mm	c mm	d mm	e mm	kg
0.1	0.1	5	5	10	7	15.5	0.01
0.16	0.16	6	6	12	8	18	0.02
0.25	0.25	8	8	16	11	24	0.05
0.4	0.4	10	10	20	14	30	0.09
0.6	0.63	12	12	24	17	36	0.17
1	1	13	16	32	21	49	0.29
1.6	1.6	16	20	40	27	61	0.54
2	2	20	22	44	30	67	0.98
2.5	2.5	22	24	48	33	73	1.23
3	3.15	25	27	54	38	83.5	1.8
4	4	28	30	60	42	91	2.6
5	5	32	36	72	47	111	3.8
6	6.3	36	39	78	53	119.5	5.2
8	8	41	45	90	60	139.5	7.6
10	10	44	48	96	66	147	9.7

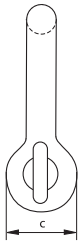


S-3356
G-3356









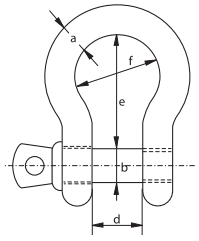
Shackles generally to DIN 82101 type C

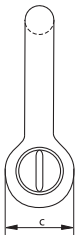
dee shackles with safety bolt

- **Material** : bow and pin high tensile steel, Grade 4
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : generally to DIN 82101 type C
- **Finish** : hot dipped galvanized or self coloured
- **Certification** : 2.1 2.2 CE
- **Note** : with screw collar pin : up to size no. 25
  with hand-grip : from size no. 32

no.	working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	t	a mm	b mm	c mm	d mm	e mm	kg
0.4	0.4	10	10	20	14	30	0.11
0.6	0.63	12	12	24	17	36	0.2
1	1	13	16	32	21	49	0.37
1.6	1.6	16	20	40	27	61	0.69
2	2	20	22	44	30	67	1.13
2.5	2.5	22	24	48	33	73	1.5
3	3.15	25	27	54	38	83.5	2.15
4	4	28	30	60	42	91	2.93
5	5	32	36	72	47	111	4.7
6	6.3	36	39	78	53	119.5	6.33
8	8	41	45	90	60	139.5	8.6
10	10	44	48	96	66	147	10.8
12	12.5	49	52	104	73	158	14.4
16	16	55	60	120	81	185	20.5
20	20	61	68	136	90	211	27.9
25	25	67	72	144	100	221	36
32	32	74	80	160	110	246	49
40	40	75	90	180	125	276	70
50	50	88	100	200	140	307	100
63	63	96	110	220	155	339	140
80	80	110	125	250	175	385.5	200
100	100	125	140	280	200	430	280

G-3161



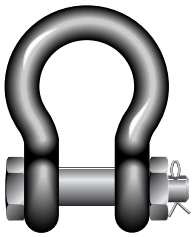


Yellow Pin Shackles

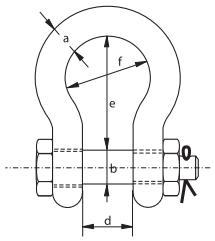
bow shackles with screw collar pin

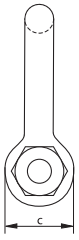
- **Material** : bow and pin high tensile steel, Grade 6
- **Standard** : generally to US Fed. Spec. RR-C-271
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 CE
- **Note** : import quality

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.33	5	6	14	9.5	22	15	0.03
0.5	6	8	16	12	29	20	0.05
0.75	8	10	19	13.5	31	21	0.08
1	10	11	23	17	37	26	0.14
1.5	11	13	27	19	43	29	0.2
2	13	16	30	20	48	33	0.33
3.25	16	19	38	27	60	43	0.62
4.75	19	22	46	32	71	50	1.07
6.5	22	25	53	36	84	58	1.62
8.5	25	28	61	43	95	68	2.28
9.5	28	32	68	46	108	74	3.36
12	32	35	76	51	119	82	4.31
13.5	35	38	84	57	133	92	6.14
17	38	42	92	60	146	98	7.81
25	45	50	106	73	177	127	12.61



G-3163





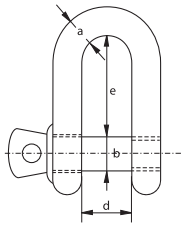
Yellow Pin Shackles

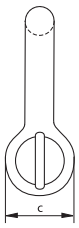
bow shackles with safety bolt

- **Material** : bow and pin high tensile steel, Grade 6
- **Standard** : generally to US Fed. Spec. RR-C-271
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 CE
- **Note** : import quality

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
2	13	16	30	20	48	33	0.36
3.25	16	19	38	27	60	43	0.7
4.75	19	22	46	32	71	50	1.1
6.5	22	25	53	36	84	58	1.61
8.5	25	28	61	43	95	68	2.42
9.5	28	32	68	46	108	74	3.35
12	32	35	76	51	119	82	5.32
13.5	35	38	84	57	133	92	7.19
17	38	42	92	60	146	98	9.44
25	45	50	106	73	177	127	13.8

G-3151



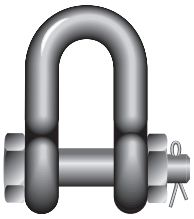


Yellow Pin Shackles

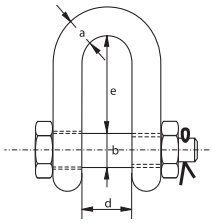
dee shackles with screw collar pin

- **Material** : bow and pin high tensile steel, Grade 6
- **Standard** : generally to US Fed. Spec. RR-C-271
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 CE
- **Note** : import quality

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
0.33	5	6	12	9.5	19	0.03
0.5	6	8	16	12	22	0.04
0.75	8	10	19	13.5	26	0.08
1	10	11	23	17	32	0.13
1.5	11	13	27	19	37	0.2
2	13	16	30	20	41	0.28
3.25	16	19	38	27	51	0.57
4.75	19	22	46	32	60	1.19
6.5	22	25	53	36	71	1.43
8.5	25	28	61	43	81	2.16
9.5	28	32	68	46	90	3.06
12	32	35	76	51	100	4.11
13.5	35	38	84	57	111	5.28
17	38	42	92	60	122	6.69
25	45	50	106	73	146	12.14



G-3153



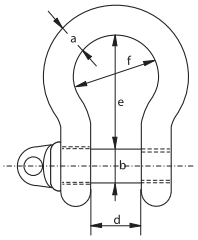
Yellow Pin Shackles

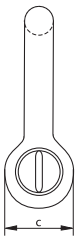
dee shackles with safety bolt

- **Material** : bow and pin high tensile steel, Grade 6
- **Standard** : generally to US Fed. Spec. RR-C-271
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 CE
- **Note** : import quality

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
2	13	16	30	20	41	0.33
3.25	16	19	38	27	51	0.62
4.75	19	22	46	32	60	1.02
6.5	22	25	53	36	71	1.49
8.5	25	28	61	43	81	2.26
9.5	28	32	68	46	90	3.2
12	32	35	76	51	100	4.91
13.5	35	38	84	57	111	5.84
17	38	42	92	60	122	8.4
25	45	50	106	73	146	11.9

S-2761
E-2761
G-2761





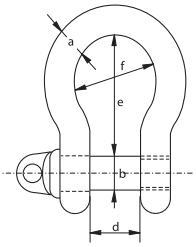
Shackles generally to B.S. 3032 table 3

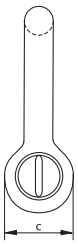
large bow shackles with screw collar pin

- **Material** : bow and pin alloy steel, EN14a
- **Safety Factor** : MBL equals 4 x WLL
- **Standard** : generally to B.S. 3032 table 3
- **Finish** : hot dipped galvanized, electro-galvanized or self coloured
- **Certification** : 2.1 2.2 CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.15	6	10	19	13	28	19	0.12
0.45	10	13	25	16	41	25	0.18
0.75	13	16	32	22	54	32	0.37
1.25	16	19	38	28	70	41	0.72
2	19	22	44	35	86	51	1.20
2.75	22	25	51	41	98	57	1.85
3.75	25	28	57	44	108	64	2.61
4.75	28	32	63	51	124	73	3.78
5.75	32	35	70	57	137	83	5.17
7.25	35	38	76	63	152	89	6.46
8.5	38	44	89	70	168	98	8.34
9.5	42	48	94	76	187	111	11.1
11.5	44	51	102	86	206	121	14.5
13	48	54	108	92	222	130	17.8
15	51	57	114	98	238	140	25.5
18.5	57	63	127	105	257	152	34.4
20	60	67	133	111	273	162	36.8
25	67	73	146	121	302	178	45
30	73	79	159	133	330	197	62.2
35	79	86	171	146	359	213	81.8
40	86	92	184	159	387	229	95
50	95	102	203	171	429	254	131
65	108	117	235	197	483	286	194
80	117	127	254	216	533	308	274

S-2765
E-2765
G-2765





Shackles generally to B.S. 3032 table 4

small bow shackles with screw collar pin

- **Material** : bow and pin alloy steel, EN14a
- **Safety Factor** : MBL equals 4 x WLL
- **Standard** : generally to B.S. 3032 table 4
- **Finish** : hot dipped galvanized, electro-galvanized or self coloured
- **Certification** : 2.1 2.2 CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	kg
0.2	6	10	19	13	25	16	0.11
0.5	10	13	25	16	38	22	0.17
1	13	16	32	22	51	29	0.35
1.5	16	19	38	28	64	38	0.66
2	19	22	44	35	76	44	1.06
3	22	25	51	38	89	51	1.68
4	25	28	57	44	102	60	2.47
5	28	32	63	51	114	67	3.48
6.25	32	35	70	57	127	76	4.79
7.5	35	38	76	60	140	83	5.95
9.25	38	44	89	67	152	89	7.55
10.5	41	48	95	73	165	98	9.79
12.5	44	51	102	79	178	105	12.5
14.25	48	54	108	86	191	114	15.3
16.5	51	57	114	92	203	121	21.8
18.5	54	60	121	95	216	127	28.9
20	57	63	127	105	229	137	30.9
25	63	70	140	114	254	152	37.8
30	70	79	159	127	279	168	52.6
35	76	86	171	137	305	184	69.5
40	79	89	178	143	318	191	78.1
50	89	98	203	159	356	213	109
65	102	114	229	184	406	244	163
80	114	127	254	206	457	273	235

S-2751
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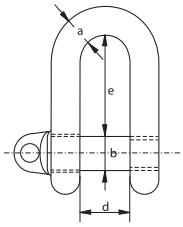
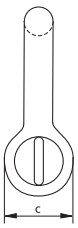




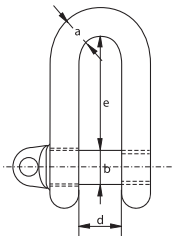
Shackles generally to B.S. 3032 table 2

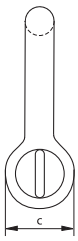
large dee shackles with screw collar pin

- **Material** : bow and pin alloy steel, EN14a
- **Safety Factor** : MBL equals 4 x WLL
- **Standard** : generally to B.S. 3032 table 2
- **Finish** : hot dipped galvanized, electro-galvanized or self coloured
- **Certification** : 2.1 2.2 CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
t	a mm	b mm	c mm	d mm	e mm	kg
0.25	6	10	19	13	25	0.11
0.5	10	13	25	19	38	0.17
0.75	13	16	32	28	54	0.35
1.5	16	19	38	32	64	0.66
2	19	22	44	38	73	1.02
3	22	25	51	44	83	1.57
3.75	25	28	57	51	95	2.3
5	28	32	64	54	105	3.2
6	32	35	70	60	114	4.3
7	35	38	76	67	127	5.4
9.5	38	45	83	70	137	6.8
11.25	42	48	89	76	146	8.7
13	44	51	95	83	156	11
14.25	48	54	108	92	178	14.3
16.25	51	57	114	98	187	20
18	54	60	121	105	197	26.4
20	57	64	127	108	210	28.3
25	64	73	146	121	235	35
30	70	79	159	133	260	49
35	76	86	171	146	279	63.6
40	79	89	178	149	292	71.7
50	89	102	203	171	330	101
65	102	114	229	191	375	151
80	114	127	254	219	419	215

S-2755
E-2755
G-2755





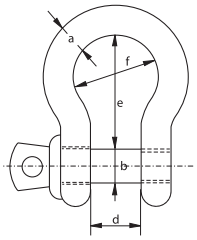
Shackles generally to B.S. 3032 table 1

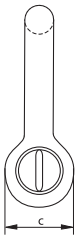
small dee shackles with screw collar pin

- **Material** : bow and pin alloy steel, EN14a
- **Safety Factor** : MBL equals 4 x WLL
- **Standard** : generally to B.S. 3032 table 1
- **Finish** : hot dipped galvanized, electro-galvanized or self coloured
- **Certification** : 2.1 2.2 CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
0.3	6	10	19	9.5	22	0.1
0.6	10	13	25	16	35	0.16
1	13	16	32	22	48	0.31
1.75	16	19	38	25	57	0.59
2.5	19	22	44	32	70	0.98
3.5	22	25	51	35	83	1.55
4.5	25	28	57	38	92	2.2
5.5	28	32	64	44	105	3.1
7	32	35	70	48	114	4.2
8	35	38	83	54	127	5.1
10.75	38	45	89	60	140	6.6
13	42	48	95	64	149	8.1
14.75	44	51	102	70	162	10.5
16.75	48	54	108	73	171	13.3
19	51	57	114	76	184	19.2
20	54	60	121	83	197	22.4
25	60	70	140	92	219	25.3
30	64	73	146	98	229	31.5
35	70	79	159	108	254	47
40	73	83	165	111	264	60.2
50	83	95	190	127	298	68.5
65	92	108	216	140	333	98
80	102	117	235	156	368	147

S-1161
E-1161





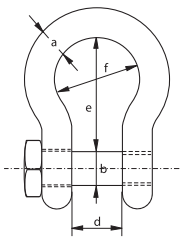
Commercial Shackles

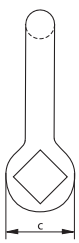
bow shackles with screw collar pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	kg
5	5	10	10	20	15	1.4
6	6	12	12	24	18	2.4
8	8	16	16	32	24	5.4
10	10	20	20	40	30	10.6
11	11	22	22	44	33	16.4
12	12	24	24	48	36	19.4
14	14	28	28	56	42	44
16	16	32	32	64	48	44.2
19	19	38	38	76	57	82.8
22	22	44	44	88	66	116
25	25	50	50	100	75	168
28	28	56	56	112	84	232
32	32	64	64	128	96	382
38	38	76	76	152	114	623
45	45	90	90	180	135	1120
50	50	100	100	200	150	1536
57	57	114	114	228	171	2276
65	65	130	130	260	195	3375

S-1164





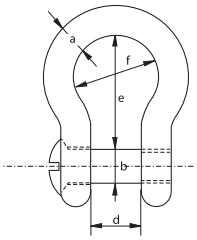
Commercial Shackles

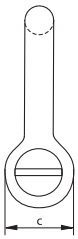
bow shackles with square head screw pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	kg
6	6	12	12	24	18	2.7
8	8	16	16	32	24	6.4
10	10	20	20	40	30	12.5
11	11	22	22	44	33	16.6
12	12	24	24	48	36	21.6
14	14	28	28	56	42	34.3
16	16	32	32	64	48	51.2
19	19	38	38	76	57	100
22	22	44	44	88	66	133
25	25	50	50	100	75	195
28	28	56	56	112	84	275
32	32	64	64	128	96	410
38	38	76	76	152	114	686

S-1162
E-1162





Commercial Shackles

bow shackles with counter sunk screw pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	kg
8	8	16	16	32	24	6
10	10	20	20	40	30	11.6
11	11	22	22	44	33	15.5
12	12	24	24	48	36	20.1
14	14	28	28	56	42	31.9
16	16	32	32	64	48	47.6
19	19	38	38	76	57	93.1
22	22	44	44	88	66	124
25	25	50	50	100	75	182

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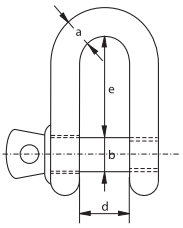
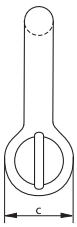
E-1151





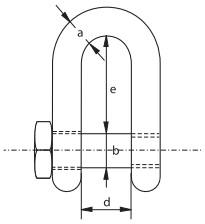
Commercial Shackles

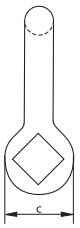
dee shackles with screw collar pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a	b	c	d	e	
mm	mm	mm	mm	mm	kg
5	5	10	10	20	1.4
6	6	12	12	24	2.2
8	8	16	16	32	5.2
10	10	20	20	40	11.8
11	11	22	22	44	14
12	12	24	24	48	20.5
14	14	28	28	56	29.4
16	16	32	32	64	42.6
19	19	38	38	76	72.6
22	22	44	44	88	108
25	25	50	50	100	185
28	28	56	56	112	226
32	32	64	64	128	358
38	38	76	76	152	602
45	45	90	90	180	1080
50	50	100	100	200	1480
57	57	114	114	228	2192
65	65	130	130	260	3252

S-1154





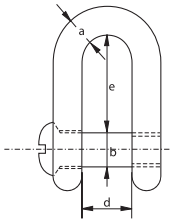
Commercial Shackles

dee shackles with square head screw pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a	b	c	d	e	
mm	mm	mm	mm	mm	kg
6	6	12	12	24	2.6
8	8	16	16	32	6.17
10	10	20	20	40	12
11	11	22	22	44	16
12	12	24	24	48	20.8
14	14	28	28	56	33.1
16	16	32	32	64	49.4
19	19	38	38	76	96.4
22	22	44	44	88	128
25	25	50	50	100	188
28	28	56	56	112	265
32	32	64	64	128	395
38	38	76	76	152	661

S-1152
E-1152

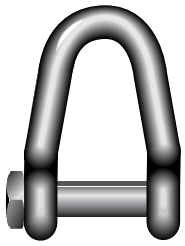


Commercial Shackles

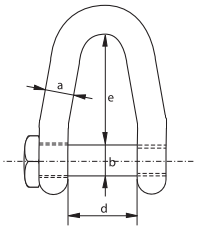
dee shackles with counter sunk screw pin

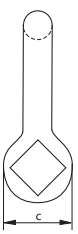
- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
8	8	16	16	32	5.72
10	10	20	20	40	9.6
11	11	22	22	44	14.9
12	12	24	24	48	19.3
14	14	28	28	56	30.7
16	16	32	32	64	45.8
19	19	38	38	76	89.5
22	22	44	44	88	119
25	25	50	50	100	175



S-1170





Commercial Shackles

danlino V shackles with square head screw pin

- **Material** : mild steel, untreated, Grade 3
- **Finish** : self coloured
- **Certification** : 2.1
- **Note** : not to be used for lifting applications

diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
32	32	64	78	120	470

Applications

Thimbles are used to protect steel wire rope, fibre rope or synthetic rope.
They are available in various models and sizes. All indicated types of thimbles in this catalogue can be used in combination with the above mentioned types of ropes.

Range

Van Beest offers a wide range of thimbles, from standardized models to various types of commercial thimbles.

Design

Thimbles can be cold-rolled, hot-rolled or die-cast, depending on the specific type of thimble.

Finish

The finish can be self coloured, painted, electro-galvanized or hot dipped galvanized.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

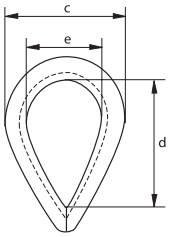
Instructions for use

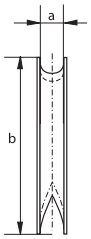
Thimbles must be regularly inspected in accordance with the standards given in the country of use.
This is required because the products in use may be affected by wear, misuse, overloading which may lead to deformation and/or alteration of the steel structure.

Make sure that the (wire) rope fits properly into the groove of the thimble you use.
The nominal size of the thimble represents the diameter of the (wire) rope for which it is intended to be used.
If there is no thimble available with a nominal size that meets the size of your (wire) rope, the next larger size of thimble must be used.

Before use, check if the thimble is free from impurities, sharp edges, cracks or other irregularities which may damage the wire rope and therefore affect the performance of the wire rope.

E-6110





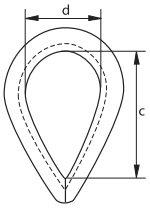
Thimbles

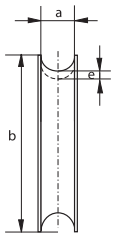
standard commercial

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter rope	width groove	length	width	length inside	width inside	weight per 100 pcs
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
3	3	24	18	15	10	0.4
4	4	25	19	16	11	0.5
5	5	31	22	22	16	0.6
6	6	37	29	26	19	1.5
7	7	44	32	32	22	2
8	8	51	38	34	24	2.6
9	9	57	42	38	29	6.5
10	10	64	44	42	32	4.8
11	11	70	51	48	35	7.5
12	12	76	57	51	38	8.5
14	14	82	60	57	40	10
16	16	89	64	60	42	12.6
18	18	102	69	67	45	22
20	20	115	79	76	51	26.8
22	22	127	89	83	54	33
24	24	140	102	88	64	39.5
26	26	152	105	102	68	66
28	28	165	115	110	73	77
30	30	178	121	115	79	99
32	32	203	133	140	93	119

G-6120





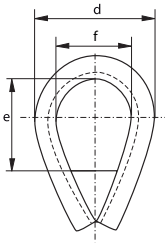
Thimbles

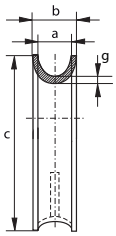
heavy duty stub-end

- **Material** : mild steel
- **Finish** : hot dipped galvanized
- **Certification** : 2.1

diameter rope	width groove	length	length inside	width inside	thickness back	weight per 100 pcs
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
8	8	51	35	22	4	5.2
10	10	64	47	30	4	9.8
12	12	76	57	35	5	14.8
14	14	89	65	45	6	19.2
16	16	102	76	50	6	25
18	18	114	86	53	8	38.6
20	20	127	94	60	9	55.6
22	22	140	107	65	10	93
24	24	152	114	70	10	85.2
28	28	178	130	80	10.5	150
32	32	203	157	100	10.5	161
36	36	229	177	115	12	363
40	40	254	198	120	12	376
44	44	279	214	130	15	608
50	50	305	215	140	20	960
56	56	356	245	160	20	1400
64	64	407	275	180	20	1700

G-6128





Thimbles

Heavy Duty Stub-end, reinforced with welded fillet plate

- **Material** : mild steel
- **Finish** : hot dipped galvanized
  reinforced with a welded fillet plate
- **Certification** : 2.1

width groove a mm	width overall b mm	length c mm	width d mm	length inside e mm	width inside f mm	thickness back g mm	weight per piece kg
35	55	220	150	100	80	10	3.2
40	65	245	160	120	90	12	5.1
50	80	290	200	125	110	16	9.2
62	100	360	250	160	140	20	17.4
72	115	390	265	175	160	20	19.4
85	125	470	300	245	190	20	29
100	150	540	370	290	200	25	39
115	165	570	380	300	210	25	52

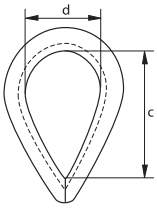
for shackle:

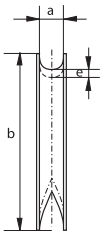
Group	Working load limit WLL t	width groove a mm							
		35	40	50	62	72	85	100	115
G-4161		17, 25	25	35, 42.5	55	85			
G-4163		17, 25	25	35, 42.5	55	85			
G-4151		17, 25	25	35, 42.5	55	85			
G-4153		17, 25	25	35, 42.5	55	85			
P- 6036							120, 150	150, 200	
G-6038							120, 150	150, 200	
P- 6033		30	30	40, 55	75	125	125		
G-5263		30, 40	40		85	120	150, 175	175	
G-5163		17, 25	25	35, 42.5	55	85			
P- 6031							120, 150	150, 200	
G-4263		4.75 ~ 25	6.5 ~ 25	9.5 ~ 30	16 ~ 55	25 ~ 75	30 ~ 75	55, 75	75
P- 5363		17, 25	25	35, 42.5	55	85			
P- 5365		17, 25	25	35, 42.5	55	85	120, 150	150, 200	
P- 5367		17, 25	25	35, 42.5	55	85	120, 150	150	
G-4164		17, 25	25						
G-4154		17, 25	25						
G-4169		17							
G-4159		17							

Thimbles

generally to DIN 6899 (B)

E-6131
G-6131

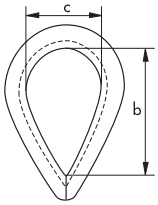


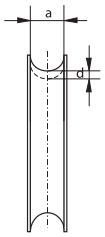


- **Material** : mild steel
- **Standard** : generally to DIN 6899 (B)
- **Finish** : thimbles for rope diameters up to and including 6 mm are electro-galvanized, other diameters are hot dipped galvanized
- **Certification** : 2.1

diameter rope	width groove	length	length inside	width inside	thickness back	weight per 100 pcs
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
2.5	3	22	19	12	1.6	0.6
3.5	4	26	21	13	1.6	0.8
4	5	32	23	14	1.9	1
5	6	38	25	16	2.4	2
6	7	44	28	18	2.4	2
7	8	51	32	20	2.8	2.7
9	10	57	38	24	3.1	4.1
11	12	64	45	28	3.3	6.9
13	13	70	48	30	3.3	7.2
13	14	76	51	32	3.7	10.2
15	16	83	58	36	3.8	16.4
16	17	89	61	38	4.7	19
17	18	95	64	40	4.7	20.3
18	20	102	72	45	5.7	27.3
20	22	114	80	50	5.7	30.8
22	24	127	90	56	6.5	44.8
24	26	140	99	62	6.8	59.2
26	28	152	112	70	8	72
28	30	165	120	75	8	104
30	32	178	128	80	8	115
32	34	203	152	95	8.5	153
34	36	216	160	100	8.5	176
36	38	229	176	110	8.5	176
38	40	241	184	115	10.5	292
40	42	254	192	120	10.5	320
42	45	305	240	150	10.5	364
47	50	360	265	160	12	535
57	60	380	275	170	12	790
63	65	420	300	180	13	830
72	75	460	350	200	15	1200
87	90	500	370	210	18	2600
97	100	550	380	220	20	3050

G-6133





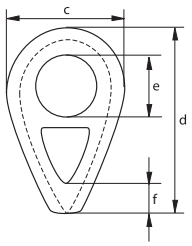
Thimbles

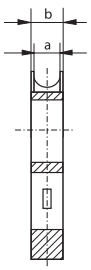
generally to DIN 83311

- **Material** : mild steel
- **Standard** : generally to DIN 83311
- **Finish** : hot dipped galvanized
- **Certification** : 2.1

nominal size	width groove	length inside	width inside	thickness back	weight per 100 pcs
	a	b	c	d	
	mm	mm	mm	mm	kg
0.4	8	36	20	3	4.5
0.6	11	50	28	4	9.5
1	13	60	32	5	18
1.6	15	68	38	6	24
2	17	76	42	7	38
2.5	19	85	48	8	50
3	21	95	53	9	70
4	24	110	60	10	110
5	28	125	70	10.5	141
6	30	135	75	12	254
8	34	150	85	13	282
10	38	170	95	15	418
12	42	190	105	16	513
16	46	205	115	16	550
20	50	225	125	18	930
25	56	250	140	20	1303
31	62	280	155	21	1363
40	68	306	170	23	1930

S-6134





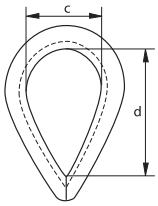
Thimbles

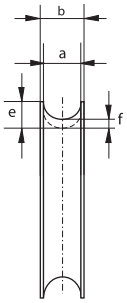
according to DIN 3091

- **Material** : cast mild steel, (GTW 40)
- **Standard** : according to DIN 3091
- **Finish** : self coloured
- **Certification** : 2.1

diameter rope	width groove	width overall	width	length	diameter	length	weight per 100 pcs
	a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	mm	kg
8	9	15	40	66	14	-	14
10	11	17.5	50	82	18	-	21
12	13	20	60	98	21	-	39
14	16	23.5	70	114	25	-	73
16	18	26	80	130	28	16	83
18	20	28.5	90	145	31	18	113
20	22	31	100	161	35	20	148
22	24	33.5	110	177	38	22	193
24	26	36	120	193	41	24	254
26	29	39.5	130	209	44	26	355
28	31	42	140	224	47	28	387
32	35	47	160	256	53	32	437
36	40	53	180	288	59	36	870
40	44	58	200	320	65	40	1300
44	48	63	220	352	70	44	1700
48	53	69	240	384	76	48	2000
52	57	74	260	416	81	52	2500
56	62	80	280	448	86	56	3200
64	70	90	320	512	95	64	4600
72	79	101	360	576	104	72	6600
80	88	112	400	640	112	80	9000

E-6135
G-6135





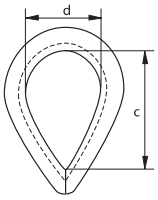
Thimbles

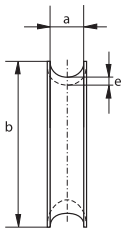
generally to DIN 3090

- **Material** : mild steel
- **Standard** : generally to DIN 3090
- **Finish** : for diameter 4 and 6 mm electro-galvanized
  other diameters hot dipped galvanized
- **Certification** : 2.1

diameter wire rope	width groove	width overall	width inside	length inside	thickness	thickness back	weight per 100 pcs
	a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	mm	kg
4	5	9	10	20	5.1	2.1	1.4
6	7	12	15	30	7.1	2.6	3
8	9	13	20	40	11	4	7.1
10	11	16	25	50	14	5	17
12	13	19	30	60	16	6	24
14	16	22	35	70	17	7	31
16	18	25	40	80	19	8	50
18	20	27	45	90	21	9	62
20	22	32	50	100	23	10	90
22	24	33	55	110	24	10	100
24	26	37	60	120	27	11	130
26	29	46	65	130	30	12	220
28	31	50	70	140	33	12	240
32	35	55	80	160	38	14	216
36	40	60	90	180	42	16	430
40	44	65	100	200	46	18	570
44	48	70	110	220	53	20	850
48	53	75	120	240	58	22	1120
52	57	80	130	260	64	25	1530
56	62	85	140	280	67	25	2148
60	66	90	150	300	70	25	2300
64	70	95	160	320	78	30	3500
68	75	100	170	340	81	30	3700
72	79	105	180	360	84	30	4100
76	84	115	190	380	87	30	4600
80	88	120	200	400	90	30	5400

G-6170





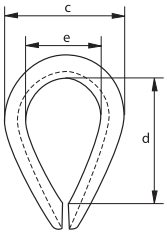
Thimbles

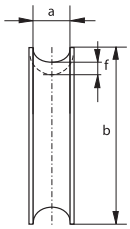
generally to EN13411-1

- **Material** : mild steel
- **Standard** : generally to EN13411-1 formerly BS 464
- **Finish** : hot dipped galvanized
- **Certification** : 2.1

diameter rope		width groove	length	length inside	width inside	thickness back	weight per 100 pcs
		a	b	c	d	e	
inch	mm	mm	mm	mm	mm	mm	kg
3/16	5	5.5	44	28	19	3	3.5
1/4	7	6	48	30	20	3.5	2.8
5/16	8	8	54	33	22	4	5.7
3/8	10	10	64	38	25	4.8	8
7/16	11	13	73	41	29	4.8	14.2
1/2	13	14	80	44	32	5.6	18
9/16	15	15	80	44	32	5.6	18.9
5/8	16	17	98	59	41	7.9	22.4
11/16	17	19	108	67	44	7.9	39.7
3/4	19	20	124	73	51	9.5	45.6
13/16	21	21	124	73	51	9.5	62.4
7/8	22	23	133	83	57	9.5	61.5
15/16	24	25	146	92	64	10.3	106
1	25	27	162	108	70	10.3	97.3
1 1/8	28	29	178	111	76	12.7	151
1 1/4	32	33	197	133	95	12.7	204
1 3/8	35	38	229	152	105	15.9	318
1 1/2	38	41	254	165	114	17.5	363
1 5/8	42	46	254	165	114	17.5	499
1 3/4	45	51	286	178	127	25.4	556
1 7/8	47	60	318	191	133	28.6	-
2	50	64	330	203	140	28.6	-
2 1/8	54	64	330	203	140	28.6	-
2 1/4	57	67	356	216	146	30.2	-
2 1/2	65	70	413	241	159	31.8	-
2 3/4	70	86	502	273	203	41.3	-

G-6142





Thimbles

generally to US Fed. Spec. FF-T-276b type III

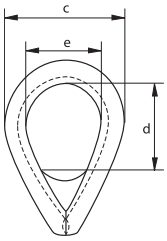
- **Material** : mild steel
- **Standard** : generally to US Federal Specification FF-T-276b type III and generally to EN 13411-1
- **Finish** : hot dipped galvanized
- **Certification** : 2.1

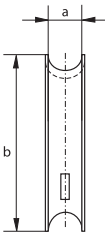
diameter rope	width groove	length	width	length inside	width inside	thickness back	weight per 100 pcs
	a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	mm	kg
6	7	55.5	38	41	22	1.6	2.7
8	9	63.5	46	47.5	27	2	5.1
9	10	73	54	54	28.5	2.8	9.1
11	12	82.5	60	60	32	3.2	13.9
13	13.5	92	70	70	38	3.6	19.9
14	15	92	68	70	38	3.6	20.5
16	16.5	108	79	82.5	44.5	4	29.8
19	20	127	97	95	51	5.5	60.8
22	24	140	108	108	57	5.5	80.4
25	27	156	125	114	63.5	6.3	109
28 - 32	30	178	149	130	73	6.3	147
32 - 35	33	205	173	159	89	12.7	366
35 - 38	36.5	229	181	165	89	12.7	478
41	43.5	286	206	203	102	12.7	731
45	47	310	216	229	114	12.7	778
48 - 51	50	384	264	305	152	12.7	1150
57	59.5	435	302	356	178	12.7	1935
64	66	464	311	378	178	19	2640
76	78.5	514	356	419	200	19	3850

In inch

diameter rope	width groove	length	width	length inside	width inside	thickness back	weight per 100 pcs
	a	b	c	d	e	f	
inch	inch	inch	inch	inch	inch	inch	lbs
1/4	9/32	2 3/16	1 1/2	1 5/8	7/8	1/16	5.9
5/16	11/32	2 1/2	1 13/16	1 7/8	1 1/16	5/64	11.2
3/8	13/32	2 7/8	2 1/8	2 1/8	1 1/8	7/64	20.1
7/16	15/32	3 1/4	2 3/8	2 3/8	1 1/4	1/8	30.6
1/2	17/32	3 5/8	2 3/4	2 3/4	1 1/2	9/64	43.9
9/16	19/32	3 5/8	2 11/16	2 3/4	1 1/2	9/64	45.2
5/8	21/32	4 1/4	3 1/8	3 1/4	1 3/4	5/32	65.7
3/4	25/32	5	3 13/16	3 3/4	2	7/32	134
7/8	15/16	5 1/2	4 1/4	4 1/4	2 1/4	7/32	177
1	1 1/16	6 1/8	4 15/16	4 1/2	2 1/2	1/4	241
1 1/8 - 1 1/4	1 3/16	7	5 7/8	5 1/8	2 7/8	1/4	324
1 1/4 - 1 3/8	1 5/16	8 1/16	6 13/16	6 1/4	3 1/2	1/2	807
1 3/8 - 1 1/2	1 7/16	9	7 1/8	6 1/2	3 1/2	1/2	1054
1 5/8	1 23/32	11 1/4	8 1/8	8	4	1/2	1612
1 3/4	1 27/32	12 3/16	8 1/2	9	4 1/2	1/2	1715
1 7/8 - 2	1 31/32	15 1/8	10 3/8	12	6	1/2	2535
2 1/4	2 11/32	17 1/8	11 7/8	14	7	1/2	4266
2 1/2	2 19/32	18 1/4	12 1/4	14 7/8	7	3/4	5820
3	3 3/32	20 1/4	14	16 1/2	7 7/8	3/4	8488

G-6151





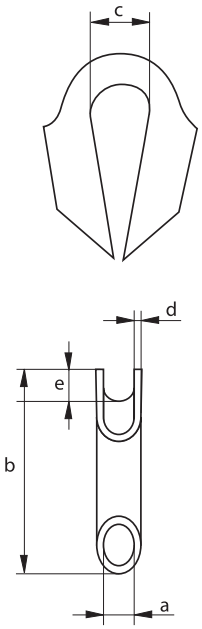
Thimbles

pennant line type

- **Material** : mild steel
- **Finish** : hot dipped galvanized
  produced with a welded fillet plate
- **Certification** : 2.1

diameter wire rope	width groove	length	width	length inside	width inside	weight each
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
16	17	102	75	50	50	0.4
18	19	114	85	50	53	0.5
20	21	127	100	60	60	0.8
22	23	140	110	60	65	0.9
24	25	152	115	70	70	1
28	30	178	135	75	80	1.7
30	33	203	155	80	100	2.5
36	38	229	175	110	115	4
40	41	254	190	120	120	4.5
44	46	279	210	120	130	7
50	52	305	225	140	140	8.3
56	60	356	240	150	150	12.5
64	70	432	290	185	180	19.5
76	81	483	320	225	220	29
82	92	559	375	280	240	35
90	105	610	410	280	250	42
120	130	660	450	280	280	58

P-6190



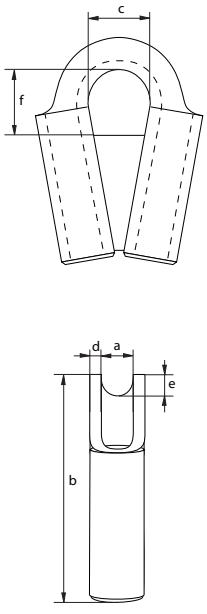
Thimbles

tubular type

- **Material** : mild steel
- **Finish** : painted
- **Certification** : 2.1

diameter wire rope	diameter	length	width inside	thickness	height	weight each
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
10	12	90	23	4	8	0.23
12	15	105	27	5	10	0.4
14	17	115	27	5	10	0.5
16	19	120	32	5	12	0.6
18	22	140	35	5	15	0.75
22	25	180	45	6	16	1.4
24	28	180	45	7	16	1.75
26	30	195	47	7	18	2
32	35	215	60	7	22	2.5
36	40	212	70	9	36	3
38	45	260	70	7	27	3.5
44	50	280	75	7	28	4.2

P-6195



Thimbles

tubular type, with welded plate

- **Material** : mild steel
- **Finish** : painted
- **Certification** : 2.1

diameter wire rope	width groove	length	width inside	thickness	height	length inside	weight each
	a	b	c	d	e	f	
	mm	mm	mm	mm	mm	mm	kg
10	12	84	23	4	8	24	0.26
12	15	95	27	5	10	31	0.42
14	17	100	27	5	10	38	0.48
16	19	112	32	5	12	46	0.61
18	22	125	35	5	15	47	0.99
22	25	150	45	6	16	61	1.33
24	28	157	45	7	16	56	1.67
26	30	170	47	7	18	68	1.96
32	35	190	60	7	22	73	2.43
36	40	212	70	9	26	80	4.32
38	45	228	70	7	27	94	3.67

Applications

Wire rope clips are used on wire rope eye-loop connections or complete loops, end-to-end connections where socketing or splicing is not feasible or when a temporary joint is required.

Range

Van Beest offers a wide range of wire rope clips, specifically standardized models such as EN13411-5 and DIN wire rope clips.

Design

Green Pin® wire rope clips are drop forged and have a bridge with grooves to tighten the wire rope properly in the clip; the DIN wire rope clips have a malleable base, without grooves.

Wire rope clips are generally marked with:

- manufacturer's symbol — e.g. GP
- wire rope diameter in mm or inches — e.g. 13 or 1/2"
- traceability code — e.g. A1

Finish

The finish can be electro-galvanized or hot dipped galvanized.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Wire rope clips should be inspected before use to ensure that:

- all markings are legible;
- a wire rope clip with the correct dimensions has been selected;
- the nuts or any other locking system cannot vibrate out of position;
- the wire rope clip is free from nicks, gouges and cracks;
- never modify, repair or reshape a wire rope clip by machining, welding, heating or bending as this may affect their performance.

The wire rope clip should be fitted to the wire rope as shown in below figures.
The bridge of the wire rope clip should always be placed on the load bearing part of the rope. The U-bolt of the clip should be placed on the rope tail, also known as the dead end of the rope.

Turn back enough wire rope length so that the required minimum number of clips can be installed according to the instructions below.

The first clip must be placed one bridge width from the turned-back rope tail or dead end of the rope, according to figure 1. Tighten the nuts to the specified torque.

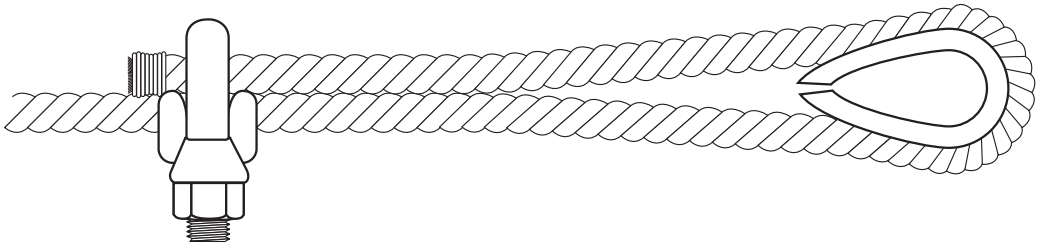


Figure 1

The second clip must be placed immediately against the thimble. Take care that the correct tightening of the clip does not damage the outer wires of the wire rope (figure 2). Tighten the nuts firmly but not yet to the specified torque.

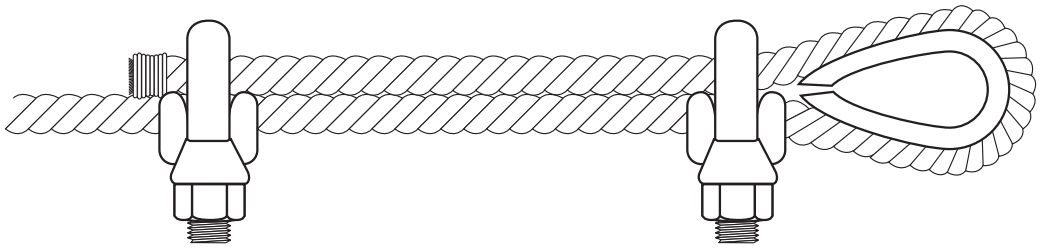


Figure 2

The following clips should be placed on the wire rope between the first and second clip in such a way that they are separated by at least 1½ times the clip-width with a maximum of 3 times the clip-width, according to figure 3.

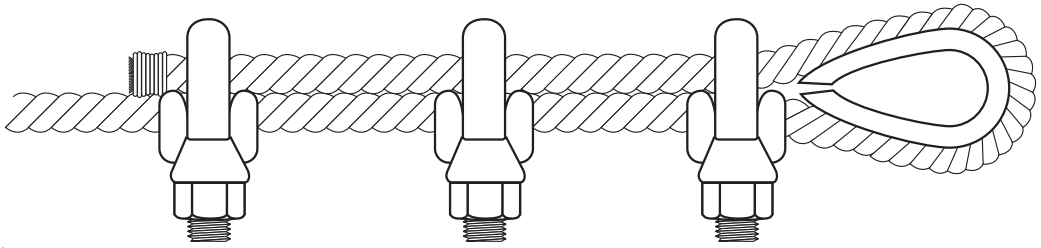


Figure 3

Apply light tension on the rope and tighten all nuts evenly, alternating until reaching the specified torque.

After assembly and before the rope is taken into service, the nuts must be tightened further to the prescribed torque. After the load has been applied to the assembly for the first time, the torque value must be checked and corrected if necessary. Re-tightening of the nuts must be done at 10.000 cycles (heavy usage), 20.000 cycles (moderate usage) or 50.000 cycles (light usage). If cycles are unknown, a competent person could fix a time period, e.g. every 3 months, 6 months, annually.

The torque values and the minimum number of clips to be applied for a particular rope size are given in the following tables.

diameter wire rope	diameter wire rope	min. no of clips required	length of rope to turn back	torque value	torque value
inch	mm		mm	Nm	Ft.Lbs
1/8	3 - 4	2	85	6.1	4.5
3/16	5	2	95	10.2	7.5
1/4	6 - 7	2	120	20.3	15
5/16	8	3	133	40.7	30
3/8	9 - 10	3	165	61	45
7/16	11 - 12	3	178	88	65
1/2	13	3	292	88	65
9/16	14 - 15	3	305	129	95
5/8	16	3	305	129	95
3/4	18 - 20	4	460	176	130
7/8	22	4	480	305	225
1	24 - 26	5	660	305	225
1 1/8	28 - 30	6	860	305	225
1 1/4	32 - 34	7	1120	488	360
1 3/8	36	7	1120	488	360
1 1/2	38 - 40	8	1370	488	360
1 5/8	41 - 42	8	1470	583	430
1 3/4	44 - 46	8	1550	800	590
2	48 - 52	8	1800	1017	750
2 1/4	56 - 58	8	1850	1017	750
2 1/2	62 - 65	9	2130	1017	750
2 3/4	68 - 72	10	2540	1017	750
3	75 - 78	10	2690	1627	1200

Table 1, Green Pin® wire rope clips generally to EN 13411-5 Type B, required number and torque value

diameter wire rope	min. no of clips required	torque value	torque value
mm		Nm	Ft.Lbs
5	3	2	1.5
6.5	3	3.5	2.6
8	4	6	4.4
10	4	9	6.6
12	4	20	14.8
13	4	33	24.3
14	4	33	24.3
16	4	49	36
19	5	68	50
22	5	107	79
26	5	147	108
30	6	212	156
34	6	296	218
40	6	363	268

Table 2, Wire rope clips generally to EN 13411-5 Type A, required number and torque value

The efficiency of a wire rope termination made with wire rope clips depends on the correct placement of the clips on the rope and on correct fitting and tightening of the clips. With inadequately tightened nuts or with an insufficient number of wire rope clips the rope end may slide through the clips during use.

The fitting of the clips on the ropes may be affected by various circumstances, such as:
- the nut may be tight on the thread, yet not tight against the bridge;
- contamination of the thread by dirt, oil or corrosion products, which may prevent correct tightening of the nut.

Forged wire rope clips provide greater bearing surface and more consistent strength than malleable cast iron clips.

Suitable applications of wire rope clips to EN13411-5 standards include suspending static loads and single use lifting operations which have been assessed by a competent person taking into account appropriate safety factors.

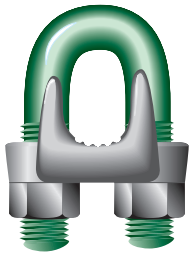
Wire rope clips should not be used in following applications:

- hoist ropes in mines;
- rope drives for cranes in steel works and rolling mills;
- permanent fastening of ropes in other rope drives;
- rope terminations for load suspension devices in the operation of lifting appliances, except in the case of lifting tackles where these are produced for a special application and used only once.

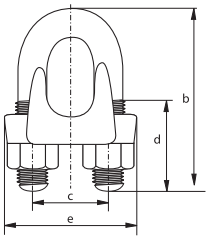
Wire rope clips must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the products are used in severe operating conditions.

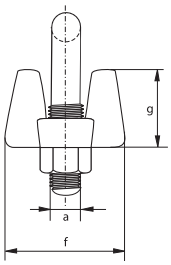
Green Pin® wire rope clips

generally to EN 13411-5 Type B



G-6240



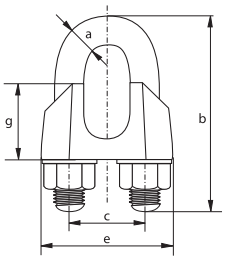


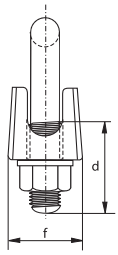
- **Material** : Bridge : drop forged high tensile steel SAE 1045
  U-bolt : SAE 1015
- **Standard** : EN 13411-5 Type B
  Formerly U.S. Federal Specification FF-C-450D
- **Finish** : Hot dipped galvanized
  U-bolt and/or nuts for diameter bow 5, 6, 8 and 10 are electro galvanized
- **Certification** : 2.1

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	mm	kg
4	5	24	12	11	24	21	10	2
5	6	31	15	13	29	24	13	4
7	8	34	19	13	37	30	18	8
8	10	45	22	19	43	33	19	13
10	11	49	26	19	49	42	25	19
11	12	60	30	25	58	46	26	33
13	13	61	30	25	58	48	31	34
15	14	72	33	32	63	52	31	45
16	14	74	33	32	64	54	36	45
20	16	86	38	37	72	57	38	68
22	19	98	45	41	80	62	40	108
26	19	108	48	46	88	67	47	113
30	19	117	51	51	91	73	48	140
34	22	130	59	54	105	79	56	207
36	22	140	60	59	108	79	58	234
40	22	147	66	60	112	85	64	254
42	25	161	70	67	121	92	67	329
46	29	174	78	70	134	97	76	441
52	32	195	86	78	150	113	85	603
58	32	213	98	81	162	116	100	707
65	32	227	105	87	168	119	113	806
72	32	243	112	91	174	127	124	1015
78	38	271	121	98	194	135	136	1472

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a	b	c	d	e	f	g	
inch	inch	inch	inch	inch	inch	inch	inch	lbs
1/8	3/16	15/16	15/32	7/16	15/16	13/16	13/32	4.4
3/16	1/4	1 7/32	19/32	1/2	1 5/32	15/16	1/2	8.8
1/4	5/16	1 11/32	3/4	1/2	1 15/32	1 3/16	23/32	17.6
5/16	13/32	1 25/32	7/8	3/4	1 11/16	1 5/16	3/4	28.7
3/8	7/16	1 15/16	1 1/32	3/4	1 15/16	1 21/32	31/32	42
7/16	15/32	2 3/8	1 3/16	31/32	2 9/32	1 13/16	1 1/32	73
1/2	1/2	2 13/32	1 3/16	31/32	2 9/32	1 7/8	1 7/32	75
9/16	9/16	2 27/32	1 5/16	1 1/4	2 15/32	2 1/16	1 7/32	99
5/8	9/16	2 29/32	1 5/16	1 1/4	2 17/32	2 1/8	1 13/32	99
3/4	5/8	3 3/8	1 1/2	1 15/32	2 27/32	2 1/4	1 1/2	150
7/8	3/4	3 27/32	1 25/32	1 5/8	3 5/32	2 7/16	1 9/16	238
1	3/4	4 1/4	1 7/8	1 13/16	3 15/32	2 5/8	1 7/8	249
1 1/8	3/4	4 19/32	2	2	3 19/32	2 7/8	1 7/8	309
1 1/4	7/8	5 1/8	2 5/16	2 1/8	4 1/8	3 1/8	2 7/32	456
1 3/8	7/8	5 1/2	2 3/8	2 5/16	4 1/4	3 1/8	2 9/32	516
1 1/2	7/8	5 25/32	2 19/32	2 3/8	4 13/32	3 11/32	2 17/32	560
1 5/8	31/32	6 11/32	2 3/4	2 5/8	4 3/4	3 5/8	2 5/8	725
1 3/4	1 5/32	6 27/32	3 1/16	2 3/4	5 9/32	3 13/16	3	972
2	1 1/4	7 11/16	3 3/8	3 1/16	5 29/32	4 7/16	3 11/32	1329
2 1/4	1 1/4	8 3/8	3 27/32	3 3/16	6 3/8	4 9/16	3 15/16	1559
2 1/2	1 1/4	8 15/16	4 1/8	3 7/16	6 5/8	4 11/16	4 7/16	1777
2 3/4	1 1/4	9 9/16	4 13/32	3 19/32	6 27/32	5	4 7/16	2238
3	1 1/2	10 21/32	4 3/4	3 27/32	7 5/8	5 5/16	5 11/32	3245

E-6260





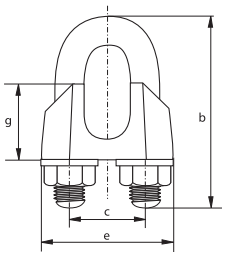
Wire rope clips

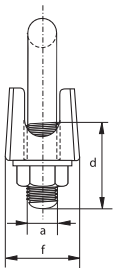
generally to EN 13411-5 Type A

- **Material** : Bridge : malleable steel
  U-bolt : mild steel
- **Standard** : EN 13411-5 Type A
  Formerly DIN 1142
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	mm	kg
5	5	25	12	14	25	13	13	2
6.5	6	32	14	17	30	16	14	4
8	8	41	18	20	39	20	18	8.2
10	8	46	20	24	40	20	21	8.4
12	10	56	24	28	50	25	24	17
13	12	64	29	29	55	28	29	27.5
14	12	66	28	31	59	30	28	28.6
16	14	76	34	35	64	32	35	43
19	14	83	37	36	68	33	40	49
22	16	96	41	40	74	34	44	68
26	20	111	46	50	84	38	51	111
30	20	127	54	55	95	41	59	140
34	22	141	60	60	105	45	67	202
40	24	159	68	65	117	49	77	268

E-6220





Wire rope clips

generally to DIN 741

- **Material** : Bridge : casted
  U-bolt : mild steel
- **Standard** : formerly DIN 741
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	mm	kg
3	4	20	9	12	21	10	10	1.4
5	5	24	11	13	23	11	10	1.5
6	5	28	13	15	26	12	11	1.6
8	6	34	16	19	30	14	15	4.1
10	8	42	19	22	34	18	17	6
11	8	44	20	22	36	19	18	7
13	10	55	24	30	42	23	21	11.8
14	10	57	25	30	44	23	22	12.4
16	12	63	29	33	50	26	26	21
19	12	75	32	38	54	29	30	23.6
22	14	85	37	44	61	33	34	23.8
26	14	95	41	45	65	35	37	41
30	16	110	48	50	74	37	43	62
34	16	120	52	55	80	42	50	75
40	16	140	58	60	88	45	55	104
45	18	163	65	75	97	49	60	134
50	20	170	72	77	106	51	65	175

Applications

Sleeves are used to create loop ends on wire rope slings.
They are available in two types and in various sizes.

Range

Van Beest offers sleeves in aluminium and carbon steel.

Design

Aluminium wire rope sleeves are manufactured according to DIN 3093 A. For safety during fabrication and application they are of seamless construction.
Prescon carbon steel sleeves are manufactured from carbon steel. They include the Swaging Verification System, in which the colour intensity changes after swaging. This system helps the sling manufacturer to determine whether or not the sleeve has been pressed.
The sleeves are of seamless construction and fit industry standard dies.

Finish

Aluminium sleeves are self coloured.

The smaller dimensions of Prescon sleeves (up to and including 16 mm) are colour coded, larger dimensions are self coloured.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

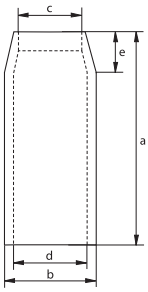
Instructions for use

For Aluminium sleeves, please refer to EN13411-3

Prescon sleeves are suitable for:
- 6 x 19 and 6 x 37 IWRC right regular lay EIPS steel wire rope
- 6 x 19 and 6 x 37 FC IPS right regular lay steel wire rope

After creating a loop end multiple progressive pressings are required to prevent flash, which will develop into a permanent mark or possibly a crack in the sleeve.
A light oil lubricant should be applied to each die before pressing. The sleeve must be cleaned after the swaging operation to stimulate effective colour change.
Colour change is not an indication for proper swaging, only an indication that the sleeve has been pressed.
Proper swaging practices are the sling manufacturer's responsibility. Before using sleeves with other type lay, construction or grade of wire rope, it is recommended that the termination be proof loaded to prove the adequacy of the assembly.
Regular inspection of the swaging machine, dies etc. must be conducted to ensure that the equipment continues to meet required standards.

S-6500



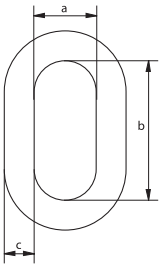
Prescon sleeves

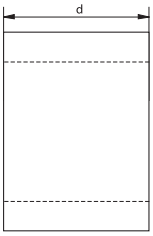
for wire rope

- **Material** : special carbon steel
- **Finish** : up to and including size 16 mm colour coded sizes above 16 mm self coloured
- **Certification** : 2.1

diameter wire rope	length	diameter outside	diameter inside	diameter inside	length	diameter outside pressed	weight per 100 pcs
	a	b	c	d	e		
mm	mm	mm	mm	mm	mm	mm	kg
6	25.4	16.7	8.3	11.9	7.1	12.7	2.15
8	38.1	23	11.1	15.5	11.1	18.5	6.5
10	38.1	23	11.9	16.7	11.1	18.5	5.5
11	51	31	14.3	21.4	15.1	24.9	11.3
13	51	31	15.9	23	15.1	24.9	12.5
14	70	37	17.5	26.2	17.9	30.5	19.5
16	70	37	19.1	27.8	17.9	30.5	25.9
19	81	43.6	23.4	32.5	21.8	35.8	39.9
22	90	51.6	26.2	38.9	25.4	41.4	62
25	102	58	29.4	43.7	28.6	47.8	85
28	122	64	32.5	49.2	31.8	53	118
32	132	71	36.5	55	35.7	58	154
34 - 35	148	76	39.7	60	39.7	62	195
37 - 38	159	83	42.9	66.7	42.9	67	227
44 - 45	184	102	49.2	79	50	77	367
50 - 52	216	111	57	92	57	89	510
56 - 57	243	128	64	102	64	103	862
62 - 64	267	140	70	114	71	113	1043
68 - 70	292	146	76	121	79	118	1270
75 - 76	305	152	83	127	86	124	1334
87 - 89	356	178	98	148	100	145	2105
93 - 95	381	191	103	160	108	156	2495
100 -102	406	206	111	173	114	180	3130
112 -114	457	232	124	194	129	187	4536

A-6550





Aluminium sleeves

for wire rope

- **Material** : aluminium
- **Standard** : EN 13411-3 formerly DIN 3093 A
- **Finish** : self coloured
- **Certification** : 2.1

diameter wire rope	diameter	width	thickness	length	weight per 1000 pcs
	a	b	c	d	
mm	mm	mm	mm	mm	kg
1	1.2	2.4	0.65	5	0.1
1.5	1.7	3.4	0.75	6	0.21
2	2.2	4.4	0.85	7	0.24
2.5	2.7	5.4	1.05	9	0.5
3	3.3	6.6	1.25	11	0.84
3.5	3.8	7.6	1.5	13	1.32
4	4.4	8.8	1.7	14	2
4.5	4.9	9.8	1.9	16	2.61
5	5.5	11	2.1	18	5
6	6.6	13.2	2.5	21	5
6.5	7.2	14.4	2.7	23	7.55
7	7.8	15.6	2.9	25	9.53
8	8.8	17.6	3.3	28	15
9	9.9	19.8	3.7	32	19.8
10	10.9	21.8	4.1	35	25
11	12.1	24.2	4.5	39	35.8
12	13.2	26.4	4.9	42	45.8
13	14.2	28.4	5.4	46	59.7
14	15.3	30.6	5.8	49	73.5
16	17.5	35	6.7	56	111
18	19.6	39.2	7.6	63	159
20	21.7	43.4	8.4	70	220
22	24.3	48.6	9.2	77	280
24	26.4	52.8	10	84	376
26	28.5	57	10.9	91	481
28	31	62	11.7	98	603
30	33.1	66.2	12.5	105	735
32	35.2	70.4	13.4	112	897
34	37.8	75.6	14.2	119	1080
36	39.8	79.6	15	126	1275
38	41.9	83.8	15.8	133	1490
40	44	88	16.6	140	1734
42	46.2	92.4	17.5	147	1940
44	48.4	96.8	18.3	154	2314
46	50.6	101.2	19.2	161	2557
48	52.8	105.6	20	168	3010
50	55	110	20.8	175	3400
52	57.2	114.4	21.6	182	3813
54	59.4	118.8	22.5	189	4120
56	61.6	123.2	23.3	196	4772
58	63.8	127.6	24.2	203	5200
60	66	132	25	210	5880

Notes

Applications

Sockets are used as a connection to attach steel wire rope to a fixed point. This may be an anchoring system for tubes or pipes, anchor wires for dredging materials, anchor cables for oil platforms, fastening points for towing cables or for fastening cables in constructions such as bridges, roofs etc.

Sockets are designed for in-line use only.

Sockets are the strongest steel wire rope end fittings available. If they are assembled in the proper way they meet or exceed the breaking strength of the steel wire rope.

Range

Van Beest offers a wide range of Green Pin® socket types in various sizes and shapes.

Design

Green Pin® open- and closed spelter sockets and Green Pin® open wedge sockets are made from cast high tensile steel.

These sockets are generally marked with:

- manufacturer's symbol	■ e.g. GP
- wire rope diameter in mm and inches	■ e.g. 20-22 and $^{7}/_{8}$"
- traceability code	■ e.g. A01
- socket number	■ e.g. 104

Swage sockets are drop forged from special bar quality carbon steel C-1035 and spheroidized annealed to make them suitable for cold swaging.

Finish

Green Pin® open- and closed spelter sockets and open wedge sockets are galvanized.
Swage sockets are self coloured.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

1) Open spelter sockets – closed spelter sockets

In the past melted zinc was poured into the sockets to fix the steel wire rope; nowadays resins are used for this purpose.

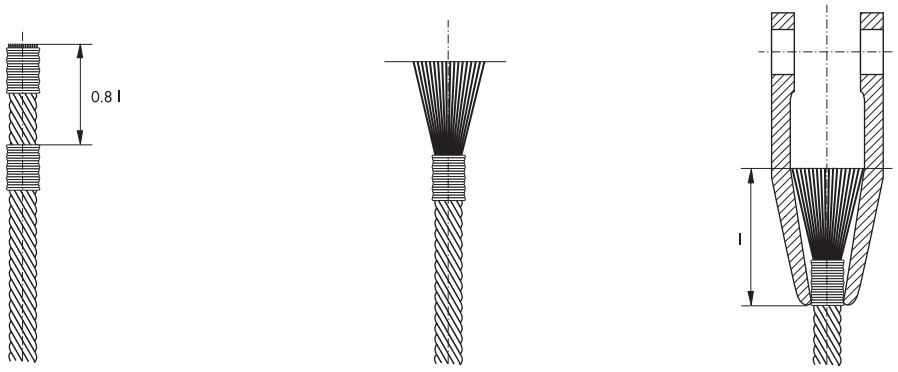


Figure 1

- brooming is done after the wire rope has been placed into the socket;
- when using resins always exactly follow the instructions given by the manufacturer carefully;
- socketing must be done by specialists in a certified sling shop.

2) Open wedge sockets

The wedge and body act as a vice which grips the wire rope and locks it in place. Green Pin® wedge sockets may be used within the range of wire rope diameters as shown in the table further on in the catalogue.

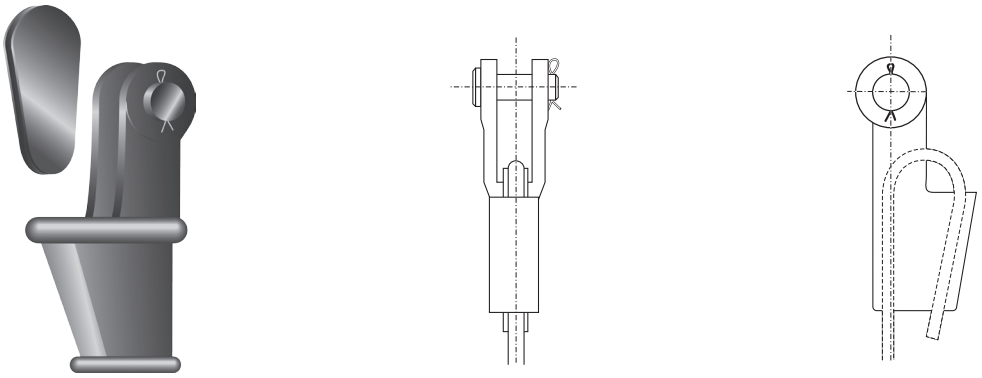


Figure 2

When using open wedge sockets the following precautions should be taken:

- before use always inspect the socket, the wedge and the pin;
- use only with standard 6-8 strand wire rope;
- always be sure that socket and wedge have the correct size for the wire rope diameter;
- the loaded part of the steel wire rope should be mounted in the centre line of the pin;
- when installing the wire rope, always pre-load the wedge with the wire rope in place;
- never weld the tail; the tail should have a length of at least 6 times the wire rope diameter with a minimum of 150 mm. Secure the dead end of the rope with a wire rope clip as shown in figure 3;
- before applying the first load always use a hammer to seat the wedge and rope into the socket as deep as possible;
- check the assembly regularly; re-tighten or re-position if necessary;
- never side load a wedge socket as it has not been designed for that purpose;
- load may slip if the connection is not properly installed;
- the efficiency of a wire rope - wedge socket connection is 80% of the minimum breaking load of the wire, but is limited to the minimum breaking load of the socket;
- only use the original wedge supplied by the manufacturer of the socket and be sure it is suitable for the diameter of the rope used;
- never use a wedge from any other supplier than the original socket supplier as the dimensions will not match

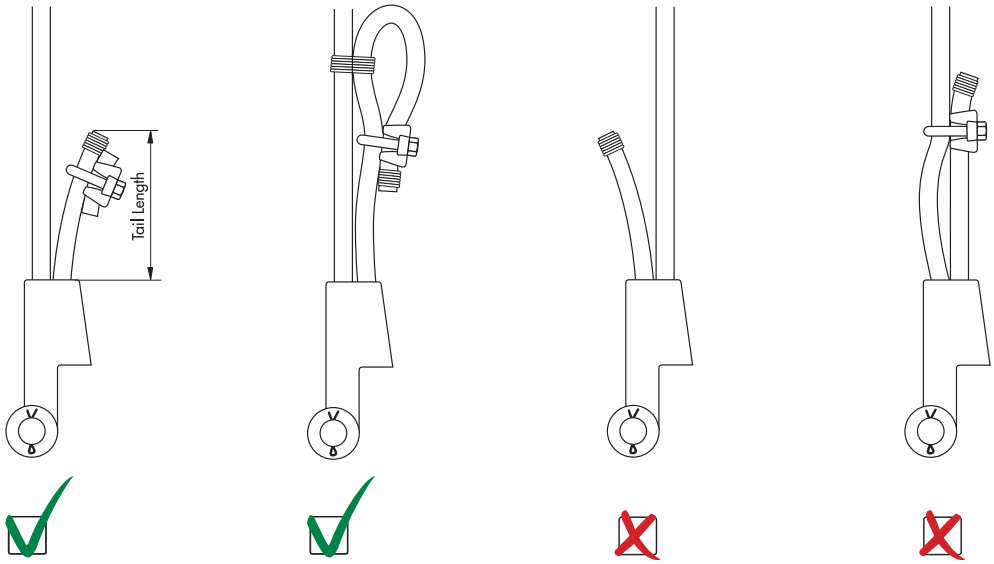


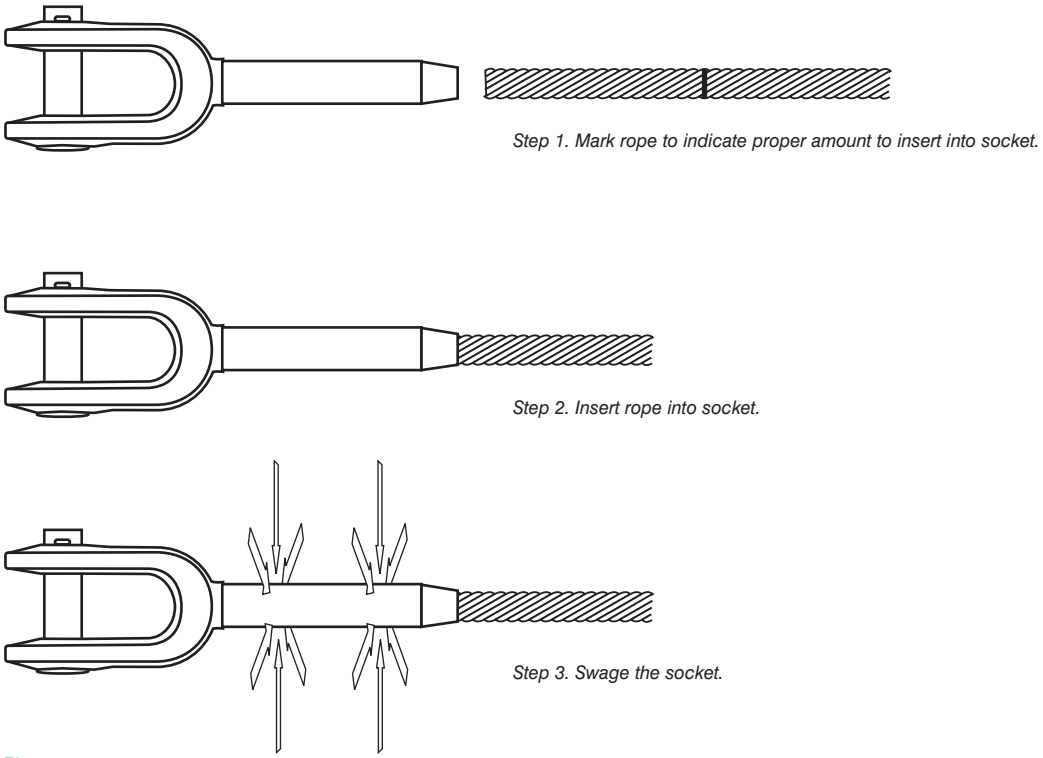
Figure 3

3) Swage sockets

Open swage socket *Closed swage socket*

Figure 4

Swage Sockets are recommended for use on 6 x 19 or 6 x 37 IPS or XIP (EIP), XXIP (EEIP), RRL, FC, or IWRC wire ropes. They are also approved for use on galvanized bridge rope. Before using swage socket assemblies, it is recommended that the termination be proof loaded to prove the adequacy of the assembly.
Always swage under supervision of a specialist from a certified sling shop.



Step 1. Mark rope to indicate proper amount to insert into socket.

Step 2. Insert rope into socket.

Step 3. Swage the socket.

Figure 5

INFO For more instructions on swaging we refer to the swaging instruction PI-03-14 in the FAQ section on our website.

Sockets must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure. Inspection should take place at least every six months and more frequently when the sockets are used in severe operating conditions.

Green Pin® sockets

closed spelter socket

G-6411

- **Material** : high tensile steel
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20°C up to +200°C
- **Certification** : 2.1 2.2 3.1

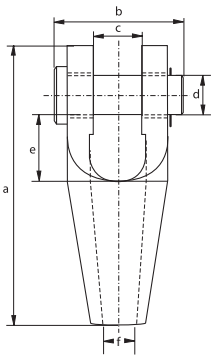
number	minimum breaking load	diameter wire rope	length	width	width inside bow	length inside bow	thickness bow	thickness bow	opening	weight each
			a	b	c	d	e	f	g	
	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
296	8	6 - 7	101	37	22	40	11	13	9	0.3
297	12	8 - 10	119	43	25	48	14	17.5	12	0.5
298	20	11 - 13	140	52	30	58	18	23.5	15	0.75
299	25	14 - 16	162	68	37	66	21	26	17.5	1.5
200	40	18 - 19	194	76	42	78	27	32	21.5	2.1
201	55	20 - 22	224	92	47	90	33	38	24	3.6
204	75	23 - 26	253	104	57	103	36	44	28	5.8
207	90	27 - 30	282	114	63	116	39	51	32	7
212	125	31 - 36	312	127	70	130	43	57	38	10.5
215	150	37 - 39	358	136	79	155	51	63	41	13
217	170	40 - 42	390	146	83	171	54	70	44	17
219	225	43 - 48	443	171	93	198	55	76	51	26
222	280	49 - 54	502	193	100	224	62	82	57	37.5
224	360	55 - 60	548	216	112	247	73	92	63	50
226	425	61 - 68	597	241	140	270	79	102	73	65
227	460	69 - 75	644	273	159	286	79	124	79	94
228	560	76 - 80	686	292	171	298	83	133	86	115
229	625	81 - 86	743	311	184	311	102	146	92	145
230	720	87 - 93	788	330	197	330	102	159	99	168
231	875	94 - 102	845	362	216	356	108	178	108	210
233	1200	108 - 115	1000	405	235	425	125	190	125	330
240	1300	120 - 130	1150	450	260	525	125	200	143	500

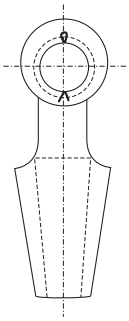
In inch

number	minimum breaking load	diameter wire rope	length	width	width inside bow	length inside bow	thickness bow	thickness bow	opening	weight each
			a	b	c	d	e	f	g	
	t	inch	inch	inch	inch	inch	inch	inch	inch	kg
296	8	1/4	3 31/32	1 1/2	7/8	1 19/32	7/16	1/2	11/32	0.66
297	12	3/8	4 11/16	1 23/32	1	1 29/32	9/16	11/16	15/32	1.10
298	20	7/16 - 1/2	5 17/32	2 1/32	1 3/16	2 9/32	23/32	15/16	19/32	1.54
299	25	9/16 - 5/8	6 11/32	2 11/16	1 1/2	2 19/32	13/16	1 1/32	11/16	3.31
200	40	3/4	7 5/8	3	1 11/16	3 3/32	1 3/32	1 9/32	27/32	4.63
201	55	7/8	8 13/16	3 5/8	1 7/8	3 9/16	1 5/16	1 17/32	15/16	7.94
204	75	1	9 31/32	4 3/32	2 1/4	4 1/32	1 7/16	1 3/4	1 1/8	12.79
207	90	1 1/8	11 1/8	4 1/2	2 1/2	4 9/16	1 9/16	2	1 9/32	15.43
212	125	1 1/4 - 1 3/8	12 9/32	5	2 3/4	5 1/8	1 23/32	2 1/4	1 17/32	23.1
215	150	1 1/2	14 3/32	5 11/32	3 1/8	6 3/32	2	2 1/2	1 5/8	28.7
217	170	1 5/8	15 11/32	5 3/4	3 9/32	6 23/32	2 1/8	2 3/4	1 3/4	37.5
219	225	1 3/4 - 1 7/8	17 1/2	6 23/32	3 11/16	7 25/32	2 5/32	3	2	57.3
222	280	2 - 2 1/8	19 25/32	7 19/32	3 15/16	8 13/16	2 7/16	3 1/4	2 1/4	82.7
224	360	2 1/4 - 2 3/8	21 19/32	8 17/32	4 3/8	9 3/4	2 7/8	3 5/8	2 1/2	110.2
226	425	2 1/2 - 2 5/8	23 17/32	9 17/32	5 17/32	10 5/8	3 1/8	4	2 7/8	143.3
227	460	2 3/4 - 2 7/8	25 11/32	10 3/4	6 1/4	11 9/32	3 1/8	4 7/8	3 1/8	207.2
228	560	3 - 3 1/8	27	11 17/32	6 23/32	11 3/4	3 9/32	5 1/4	3 3/8	254
229	625	3 1/4 - 3 3/8	29 1/4	12 1/4	7 1/4	12 1/4	4	5 3/4	3 5/8	320
230	720	3 1/2 - 3 5/8	31	13	7 3/4	13	4	6 1/4	3 29/32	370
231	875	3 3/4 - 4	33 9/32	14 1/4	8 17/32	14	4 1/4	7	4 1/4	463
233	1200	4 1/4 - 4 1/2	39 3/8	15 15/16	9 9/32	16 3/4	4 29/32	7 1/2	4 29/32	728
240	1300	4 3/4 - 5	45 9/32	17 3/4	10 1/4	20 11/16	4 29/32	7 7/8	5 5/8	1102

CAD

G-6412





Green Pin® sockets

open spelter socket

- **Material** : high tensile steel
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20°C up to +200°C
- **Certification** : 2.1 2.2 3.1

number	minimum breaking load	diameter wire rope	length	width	width inside	diameter pin	length inside	opening	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	kg
196	8	6 - 7	109	51	19	16	33	9	0.4
197	12	8 - 10	124	62	21	21	34	12	0.7
198	20	11 - 13	143	66	26	25	37	15	1
199	25	14 - 16	172	82	33	30	49	18	1.8
100	40	18 - 19	205	95	38	35	58	21	3
104	55	20 - 22	235	110	44	41	68	24	4.6
108	75	23 - 26	275	130	51	51	75	28	8
111	90	27 - 30	306	144	57	57	85	32	11
115	125	31 - 36	338	155	63	64	95	38	16
118	150	37 - 39	394	178	76	70	127	41	22
120	170	40 - 42	418	187	76	76	127	44	27
125	225	43 - 48	468	213	89	89	134	51	41
128	280	49 - 54	552	240	101	95	181	57	64
130	360	55 - 60	598	270	113	108	196	63	88
132	425	61 - 68	654	303	127	121	213	73	125
135	460	69 - 75	696	349	133	127	216	79	155
138	560	76 - 80	737	371	146	133	220	86	187
140	625	81 - 86	788	391	159	140	228	92	230
142	720	87 - 93	852	411	171	152	242	99	265
144	875	94 - 102	914	447	191	178	254	108	400
146	1200	108 - 115	1160	489	206	193	369	125	660
150	1300	120 - 130	1310	603	225	250	390	143	735

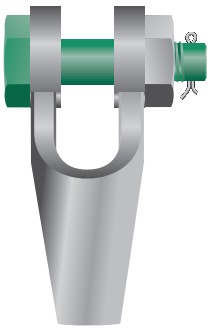
In inch

number	minimum breaking load	diameter wire rope	length	width	width inside	diameter pin	length inside	opening	weight each
	t	inch	a inch	b inch	c inch	d inch	e inch	f inch	lbs
196	8	1/4	4 9/32	2	3/4	5/8	1 5/16	11/32	0.88
197	12	3/8	4 7/8	2 7/16	13/16	13/16	1 11/32	15/32	1.54
198	20	7/16 - 1/2	5 5/8	2 19/32	1 1/32	1	1 1/2	19/32	2.20
199	25	9/16 - 5/8	6 3/4	3 1/4	1 5/16	1 3/16	1 15/16	23/32	3.97
100	40	3/4	8 3/32	3 3/4	1 17/32	1 3/8	2 9/32	13/16	6.61
104	55	7/8	9 9/32	4 5/16	1 3/4	1 5/8	2 11/16	15/16	10.14
108	75	1	10 13/16	5 1/8	2	2	2 15/16	1 1/8	17.64
111	90	1 1/8	12 1/32	5 11/16	2 1/4	2 1/4	3 11/32	1 9/32	24.3
115	125	1 1/4 - 1 3/8	13 5/16	6 3/32	2 1/2	2 17/32	3 3/4	1 17/32	35.3
118	150	1 1/2	15 17/32	7	3	2 3/4	5	1 5/8	48.5
120	170	1 5/8	16 1/2	7 11/32	3	3	5	1 3/4	59.5
125	225	1 3/4 - 1 7/8	18 7/16	8 3/8	3 17/32	3 17/32	5 9/32	2	90.4
128	280	2 - 2 1/8	21 3/4	9 1/2	3 31/32	3 3/4	7 1/8	2 1/4	141.1
130	360	2 1/4 - 2 3/8	23 9/16	10 5/8	4 7/16	4 1/4	7 23/32	2 1/2	194
132	425	2 1/2 - 2 5/8	25 3/4	11 15/16	5	4 3/4	8 3/8	2 7/8	276
135	460	2 3/4 - 2 7/8	27 3/8	13 3/4	5 1/4	5	8 17/32	3 1/8	342
138	560	3 - 3 1/8	29	14 19/32	5 3/4	5 1/4	8 11/16	3 3/8	412
140	625	3 1/4 - 3 3/8	31	15 3/8	6 1/4	5 17/32	9	3 5/8	507
142	720	3 1/2 - 3 5/8	33 9/16	16 3/16	6 23/32	5 31/32	9 9/16	3 29/32	584
144	875	3 3/4 - 4	35 31/32	17 5/8	7 17/32	7	10	4 1/4	882
146	1200	4 1/4 - 4 1/2	45 11/16	19 9/32	8 1/8	7 19/32	14 17/32	4 29/32	1455
150	1300	4 3/4 - 5	51 19/32	23 3/4	8 7/8	9 7/8	15 11/32	5 5/8	1620

CAD

Green Pin® sockets

open spelter socket with safety bolt



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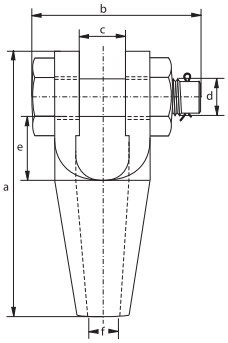
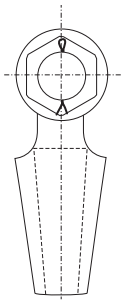




- **Material** : high tensile steel
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20°C up to +200°C
- **Certification** : 2.1 2.2 3.1

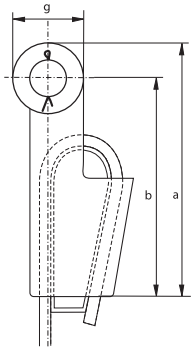
number	minimum breaking load	diameter wire rope	length	width	width inside	dia-meter pin	length inside	opening	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	kg
196	8	6 - 7	109	69	19	16	33	9	0.4
197	12	8 - 10	124	83	21	20	35	12	0.8
198	20	11 - 13	143	101	26	25	37	15	1.3
199	25	14 - 16	172	124	33	30	49	18	2.3
100	40	18 - 19	205	138	38	35	58	21	3.7
104	55	20 - 22	235	148	44	41	68	24	4.6
108	75	23 - 26	275	176	51	50	76	28	9.7
111	90	27 - 30	306	193	57	57	85	32	13.6
115	125	31 - 36	338	210	63	63	96	38	16
118	150	37 - 39	394	230	76	70	127	41	26.9
120	170	40 - 42	418	244	76	77	126	44	32

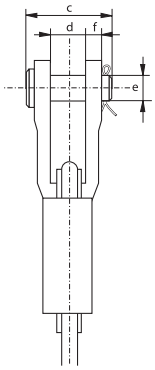
In inch

number	minimum breaking load	diameter wire rope	length	width	width inside	dia-meter pin	length inside	opening	weight each
	t	inch	a inch	b inch	c inch	d inch	e inch	f inch	lbs
196	8	1/4	4 9/32	2 23/32	3/4	5/8	1 5/16	11/32	0.88
197	12	3/8	4 7/8	3 9/32	13/16	25/32	1 3/8	15/32	1.76
198	20	7/16 - 1/2	5 5/8	3 31/32	1 1/32	1	1 1/2	19/32	2.87
199	25	9/16 - 5/8	6 3/4	4 7/8	1 5/16	1 3/16	1 15/16	23/32	5.07
100	40	3/4	8 3/32	5 7/16	1 17/32	1 3/8	2 9/32	13/16	8.16
104	55	7/8	9 9/32	5 13/16	1 3/4	1 5/8	2 11/16	15/16	10.14
108	75	1	10 13/16	6 29/32	2	1 31/32	3	1 1/8	21.38
111	90	1 1/8	12 1/32	7 19/32	2 1/4	2 1/4	3 11/32	1 9/32	30.0
115	125	1 1/4 - 1 3/8	13 5/16	8 9/32	2 1/2	2 1/2	3 25/32	1 17/32	35.3
118	150	1 1/2	15 17/32	9 3/32	3	2 3/4	5	1 5/8	59.3
120	170	1 5/8	16 1/2	9 5/8	3	3 1/32	4 15/16	1 3/4	70.5

CAD

G-6413





Green Pin® sockets

open wedge socket

- **Material** : high tensile steel
- **Standard** : generally to EN 13411-6
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20°C up to +200°C
- **Certification** : 2.1 2.2 3.1

number	minimum breaking load	diameter wire rope	length	length to center pin	width	width inside	dia-meter pin	thick-ness side plates	diameter eye	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.25	8	7 - 8	128	110	51	18	16	9	36	0.8
0.5	12	9 - 10	165	142	62	20.5	21	11	46	1.5
1	20	11 - 13	175	146	66	25	25	12	57	2.4
2	25	14 - 16	211	176	82	31	30	15	70	4
3	40	18 - 19	252	212	95	38	35	16	80	7.4
4	55	20 - 22	288	240	110	44	41	19	95	11
5	75	24 - 26	329	274	130	51	51	22	110	16
6	90	27 - 29	375	310	144	57	57	25	130	22
7	110	30 - 32	423	350	155	63	64	28	146	31
8	125	34 - 36	474	400	163	69	64	28	148	39
9	150	37 - 39	527	450	178	76	70	30	153	48
10	170	40 - 42	580	500	187	76	76	33	160	64
11	225	43 - 48	650	550	226	89	89	39	186	96
12	280	49 - 52	745	640	240	101	95	46	194	130
13	360	54 - 58	785	660	275	114	108	54	230	180
14	425	60 - 68	970	835	300	127	121	60	250	275
15	460	72 - 76	1150	1000	355	146	133	76	270	440
16	625	81 - 86	1252	1100	375	159	140	79	300	510

In inch

number	minimum breaking load	diameter wire rope	length	length to center pin	width	width inside	dia-meter pin	thick-ness side plates	diameter eye	weight each
	t	inch	a inch	b inch	c inch	d inch	e inch	f inch	g inch	lbs
0.25	8	5/16	5 1/32	4 5/16	2	23/32	5/8	11/32	1 7/16	1.76
0.5	12	3/8	6 1/2	5 19/32	2 7/16	13/16	13/16	7/16	1 13/16	3.31
1	20	1/2	6 7/8	5 3/4	2 19/32	1	1	15/32	2 1/4	5.29
2	25	5/8	8 5/16	6 29/32	3 1/4	1 1/4	1 3/16	19/32	2 3/4	8.82
3	40	3/4	9 15/16	8 11/32	3 3/4	1 17/32	1 3/8	5/8	3 5/32	16.31
4	55	7/8	11 11/32	9 1/2	4 5/16	1 3/4	1 5/8	3/4	3 3/4	24.3
5	75	1	12 15/16	10 25/32	5 1/8	2	2	7/8	4 5/16	35.3
6	90	1 1/8	14 3/4	12 3/16	5 11/16	2 1/4	2 1/4	1	5 1/8	48.5
7	110	1 1/4	16 11/16	13 25/32	6 3/32	2 1/2	2 17/32	1 1/8	5 3/4	68.3
8	125	1 3/8	18 11/16	15 3/4	6 3/8	2 23/32	2 17/32	1 1/8	5 13/16	86.0
9	150	1 1/2	20 3/4	17 3/4	7	3	2 3/4	1 3/16	6	105.8
10	170	1 5/8	22 13/16	19 23/32	7 11/32	3	3	1 5/16	6 9/32	141.1
11	225	1 3/4 - 1 7/8	25 19/32	21 11/16	8 29/32	3 17/32	3 17/32	1 9/16	7 5/16	212
12	280	2	29 5/16	25 3/16	9 1/2	3 31/32	3 3/4	1 13/16	7 5/8	287
13	360	2 1/4	30 7/8	25 31/32	10 13/16	4 1/2	4 1/4	2 1/8	9 3/32	397
14	425	2 1/2	38 5/32	32 7/8	11 13/16	5	4 3/4	2 11/32	9 7/8	606
15	460	3	45 9/32	39 3/8	13 31/32	5 3/4	5 1/4	3	10 5/8	970
16	625	3 1/4 - 3 3/8	49 5/16	43 5/16	14 3/4	6 1/4	5 17/32	3 1/8	11 13/16	1124

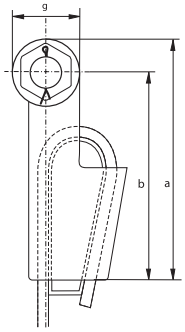
CAD

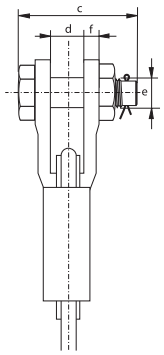
Green Pin® sockets

open wedge socket with safety bolt

G-6423

- **Material** : high tensile steel
- **Standard** : generally to EN 13411-6
- **Finish** : hot dipped galvanized
- **Temperature Range** : -20°C up to +200°C
- **Certification** : 2.1 2.2 3.1





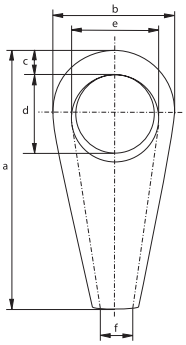
number	minimum breaking load	diameter wire rope	length	length to center pin	width	width inside	dia-meter pin	thick-ness side plates	diameter eye	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.25	8	7 - 8	128	110	69	18	16	9	36	0.8
0.5	12	9 - 10	165	142	83	20.5	20	11	46	1.5
1	20	11 - 13	175	146	101	25	25	12	57	2.4
2	25	14 - 16	211	176	124	31	30	15	70	4.8
3	40	18 - 19	252	212	138	38	35	16	80	8.3
4	55	20 - 22	288	240	148	44	41	19	95	11
5	75	24 - 26	329	274	176	51	50	22	110	17.9
6	90	27 - 29	375	310	193	57	57	25	130	21
7	110	30 - 32	423	350	210	63	63	28	146	33
8	125	34 - 36	474	400	216	69	65	28	148	42
9	150	37 - 39	527	450	230	76	70	30	153	52
10	170	40 - 42	580	500	244	76	77	33	160	73

In inch

number	minimum breaking load	diameter wire rope	length	length to center pin	width	width inside	dia-meter pin	thick-ness side plates	diameter eye	weight each
	t	inch	a inch	b inch	c inch	d inch	e inch	f inch	g inch	lbs
0.25	8	5/16	5 1/32	4 5/16	2 23/32	23/32	5/8	11/32	1 7/16	1.76
0.5	12	3/8	6 1/2	5 19/32	3 9/32	13/16	25/32	7/16	1 13/16	3.31
1	20	1/2	6 7/8	5 3/4	3 31/32	1	1	15/32	2 1/4	5.29
2	25	5/8	8 5/16	6 29/32	4 7/8	1 1/4	1 3/16	19/32	2 3/4	10.58
3	40	3/4	9 15/16	8 11/32	5 7/16	1 17/32	1 3/8	5/8	3 5/32	18.3
4	55	7/8	11 11/32	9 1/2	5 13/16	1 3/4	1 5/8	3/4	3 3/4	24.3
5	75	1	12 15/16	10 25/32	6 29/32	2	1 31/32	7/8	4 5/16	39.5
6	90	1 1/8	14 3/4	12 3/16	7 19/32	2 1/4	2 1/4	1	5 1/8	46.3
7	110	1 1/4	16 11/16	13 25/32	8 9/32	2 1/2	2 1/2	1 1/8	5 3/4	72.8
8	125	1 3/8	18 11/16	15 3/4	8 17/32	2 23/32	2 9/16	1 1/8	5 13/16	92.6
9	150	1 1/2	20 3/4	17 3/4	9 3/32	3	2 3/4	1 3/16	6	114.6
10	170	1 5/8	22 13/16	19 23/32	9 5/8	3	3 1/32	1 5/16	6 9/32	160.9

CAD

G-6416



Short bow sockets

closed spelter socket

- **Material** : cast alloy steel
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

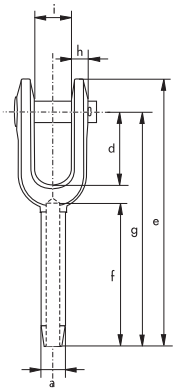
minimum breaking load	rope size	length	width	thickness bow	length eye	width eye	opening	weight each
t	inch	a mm	b mm	c mm	d mm	e mm	f mm	kg
160	1 1/2 - 1 5/8	300	147	38	103	92	44	11
200	1 3/4 - 1 7/8	348	178	42	120	112	51	15
250	2 - 2 1/8	390	200	54	132	120	57	22
320	2 1/4 - 2 3/8	440	220	62	148	135	63	27
400	2 1/2 - 2 5/8	468	250	68	165	150	73	40
500	2 3/4 - 2 7/8	540	274	75	175	164	79	54
600	3 - 3 1/8	585	295	76	195	175	86	75
700	3 1/4 - 3 3/8	625	320	82	216	194	92	81
800	3 1/2 - 3 5/8	670	350	92	220	202	99	115
900	3 3/4 - 4	700	375	100	235	215	105	130
1000	4 1/4 - 4 1/2	800	410	110	270	240	115	180

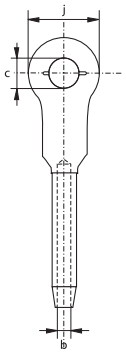
Green Pin® swage sockets

open type

- **Material** : drop forged steel C-1035
- **Finish** : self coloured
- **Certification** : 2.1

S-6414





diameter rope	diameter before swage	diameter after swage min	diameter after swage max	diameter inside	diameter pin	length	length	length	length	thickness	width inside	width eye	weight each
	a	a	a	b	c	d	e	f	g	h	i	j	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	13	10.9	11.7	7	17	38	121	54	102	8	17	35	0.25
8	20	17.2	18.0	9	21	44	159	81	135	10	21	41	0.57
10	20	17.2	18.0	10	21	44	159	81	135	10	21	41	0.56
11	25	22.0	23.1	12	25	51	198	108	169	13	25	51	1.11
13	25	22.0	23.1	14	25	51	198	108	169	13	25	51	1.08
14	32	28.3	29.5	15	30	57	243	135	206	16	32	63	2.11
16	32	28.3	29.5	17	30	57	243	135	206	16	32	63	2.06
19	39	34.7	36.1	20	35	70	297	162	254	19	38	76	3.68
22	43	37.8	39.4	24	41	83	346	189	295	23	44	86	5.38
25	50	44.2	45.7	27	51	95	397	216	340	26	51	102	5.45
28	57	50.5	52.1	30	57	108	444	243	381	30	57	114	12
32	64	56.9	58.4	34	64	121	494	270	419	30	63	127	16.2
35	71	63.2	65.0	37	64	133	540	297	460	33	63	133	20.5
38	78	69.6	71.4	40	70	146	591	324	502	37	76	146	29.5
44	86	75.9	77.7	47	89	171	689	378	584	43	89	178	42.2
51	100	88.6	90.4	54	95	203	798	432	679	46	102	203	65.8
57	113	100.3	102.1	60	108	171	835	486	705	65	114	222	93.4
63	125	110.5	112.3	67	108	171	879	498	749	65	114	222	103
76	151	133.1	134.9	80	133	219	1045	603	905	76	146	241	181

In inch

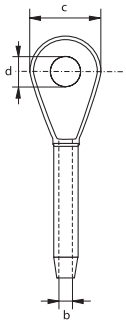
diameter rope	diameter before swage	diameter after swage min	diameter after swage max	diameter inside	diameter pin	length	length	length	length	thickness	width inside	width eye	weight each
	a	a	a	b	c	d	e	f	g	h	i	j	
inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
1/4	0.495	0.428	0.460	0.272	11/16	1 1/2	4 3/4	2 1/8	4	5/16	11/16	1 3/8	0.57
5/16	0.770	0.678	0.710	0.339	13/16	1 3/4	6 1/4	3 3/16	5 5/16	13/32	13/16	1 5/8	1.25
3/8	0.770	0.678	0.710	0.406	13/16	1 3/4	6 1/4	3 3/16	5 5/16	13/32	13/16	1 5/8	1.20
7/16	0.982	0.865	0.910	0.484	1	2	7 13/16	4 1/4	6 11/16	1/2	1	2	2.45
1/2	0.982	0.865	0.910	0.547	1	2	7 13/16	4 1/4	6 11/16	1/2	1	2	2.40
9/16	1.257	1.115	1.160	0.609	1 3/16	2 1/4	9 9/16	5 5/16	8 1/8	5/8	1 1/4	2 1/2	4.80
5/8	1.257	1.115	1.160	0.672	1 3/16	2 1/4	9 9/16	5 5/16	8 1/8	5/8	1 1/4	2 1/2	4.50
3/4	1.545	1.365	1.420	0.796	1 3/8	2 3/4	11 11/16	6 3/8	10	3/4	1 1/2	3	7.80
7/8	1.700	1.490	1.550	0.938	1 5/8	3 1/4	13 5/8	7 7/16	11 5/8	15/16	1 3/4	3 3/8	11.8
1	1.975	1.740	1.800	1.062	2	3 3/4	15 5/8	8 1/2	13 3/8	1 1/32	2	4	17.8
1 1/8	2.245	1.990	2.050	1.188	2 1/4	4 1/4	17 1/2	9 9/16	15	1 3/16	2 1/4	4 1/2	28.9
1 1/4	2.525	2.240	2.300	1.328	2 1/2	4 3/4	19 7/16	10 5/8	16 1/2	1 3/16	2 1/2	5	36.2
1 3/8	2.800	2.490	2.560	1.453	2 1/2	5 1/4	21 1/4	11 11/16	18 1/8	1 5/16	2 1/2	5 1/4	47.7
1 1/2	3.075	2.740	2.810	1.578	2 3/4	5 3/4	23 1/4	12 3/4	19 3/4	1 7/16	3	5 3/4	64.4
1 3/4	3.385	2.990	3.060	1.859	3 1/2	6 3/4	27 1/8	14 7/8	23	1 11/16	3 1/2	7	93.4
2	3.935	3.490	3.560	2.109	3 3/4	8	31 7/16	17	26 3/4	1 13/16	4	8	148
2 1/4	4.450	3.950	4.020	2.360	4 1/4	6 3/4	32 7/8	19 1/8	27 3/4	2 9/16	4 1/2	8 3/4	173
2 1/2	4.930	4.350	4.420	2.657	4 1/4	6 3/4	34 5/8	19 5/8	29 1/2	2 9/16	4 1/2	8 3/4	233
3	5.960	5.240	5.310	3.166	5 1/4	8 5/8	41 1/8	23 3/4	35 5/8	3	5 3/4	9 1/2	382

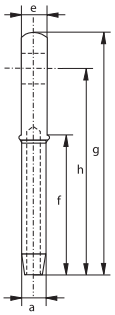
INFO

Green Pin® swage sockets

closed type

S-6415





- **Material** : drop forged steel C-1035
- **Finish** : self coloured
- **Certification** : 2.1

diameter rope	diameter before swage	diameter after swage min	diameter after swage max	diameter inside	diameter	diameter eye	thickness	length	length	length	weight each
	a	a	a	b	c	d	e	f	g	h	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	13	10.9	11.7	7	37	19	13	54	111	89	0.15
8	20	17.2	18.0	9	43	22	17	81	140	114	0.35
10	20	17.2	18.0	10	43	22	17	81	140	114	0.33
11	25	22.0	23.1	12	51	27	22	108	176	146	0.66
13	25	22.0	23.1	14	51	27	22	108	176	146	0.62
14	32	28.3	29.5	15	63	32	29	135	222	184	1.35
16	32	28.3	29.5	17	63	32	29	135	222	184	1.31
19	39	34.7	36.1	20	76	37	33	162	264	219	2.3
22	43	37.8	39.4	24	89	43	38	189	308	257	3.40
25	50	44.2	45.7	27	102	52	44	216	349	292	4.97
28	57	50.5	52.1	30	114	59	51	243	387	324	7.17
32	64	56.9	58.4	34	127	65	57	270	438	365	10.4
35	71	63.2	65.0	37	133	65	57	297	479	400	13.3
38	78	69.6	71.4	40	140	71	63	324	518	432	17.7
44	86	75.9	77.7	47	171	91	76	378	610	508	23.6
51	100	88.6	90.4	54	197	97	83	432	698	584	40.8
57	113	100.3	102.1	60	219	110	102	486	756	632	55.3
63	125	110.5	112.3	67	219	110	102	498	791	667	64.4
76	151	133.1	134.9	80	235	135	137	603	959	816	114

In inch

diameter rope	diameter before swage	diameter after swage min	diameter after swage max	diameter inside	diameter	diameter eye	thickness	length	length	length	weight each
	a	a	a	b	c	d	e	f	g	h	
inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
1/4	0.495	0.428	0.460	0.272	1 7/16	3/4	1/2	2 1/8	4 3/8	3 1/2	0.35
5/16	0.770	0.678	0.710	0.339	1 11/16	7/8	11/16	3 3/16	5 1/2	4 1/2	0.77
3/8	0.770	0.678	0.710	0.406	1 11/16	7/8	11/16	3 3/16	5 1/2	4 1/2	0.73
7/16	0.982	0.865	0.910	0.484	2	1 1/16	7/8	4 1/4	6 15/16	5 3/4	1.47
1/2	0.982	0.865	0.910	0.547	2	1 1/16	7/8	4 1/4	6 15/16	5 3/4	1.38
9/16	1.257	1.115	1.160	0.609	2 1/2	1 1/4	1 1/8	5 5/16	8 3/4	7 1/4	2.90
5/8	1.257	1.115	1.160	0.672	2 1/2	1 1/4	1 1/8	5 5/16	8 3/4	7 1/4	2.80
3/4	1.545	1.365	1.420	0.796	3	1 7/16	1 5/16	6 3/8	10 3/8	8 5/8	5.16
7/8	1.700	1.490	1.550	0.938	3 1/2	1 11/16	1 1/2	7 7/16	12 1/8	10 1/8	7.40
1	1.975	1.740	1.800	1.062	4	2 1/16	1 3/4	8 1/2	13 3/4	11 1/2	11.2
1 1/8	2.245	1.990	2.050	1.188	4 1/2	2 5/16	2	9 9/16	15 1/4	12 3/4	16
1 1/4	2.525	2.240	2.300	1.328	5	2 9/16	2 1/4	10 5/8	17 1/4	14 3/8	22.7
1 3/8	2.800	2.490	2.560	1.453	5 1/4	2 9/16	2 1/4	11 11/16	18 7/8	15 3/4	29
1 1/2	3.075	2.740	2.810	1.578	5 1/2	2 13/16	2 1/2	12 3/4	20 3/8	17	37.5
1 3/4	3.385	2.990	3.060	1.859	6 3/4	3 9/16	3	14 7/8	24	20	55.7
2	3.935	3.490	3.560	2.109	7 3/4	3 13/16	3 1/4	17	27 1/2	23	90
2 1/4	4.450	3.950	4.020	2.360	8 5/8	4 5/16	4	19 1/8	29 3/4	24 7/8	125
2 1/2	4.930	4.350	4.420	2.657	8 5/8	4 5/16	4	19 5/8	31 1/8	26 1/4	142
3	5.960	5.240	5.310	3.166	9 1/4	5 5/16	5 3/8	23 3/4	37 3/4	32 1/8	252

INFO

Applications

Turnbuckles are used for rigging or tensioning wires, ropes, rods etc. They are designed for in-line rigging, tensioning or lashing.

Range

Van Beest offers a wide range of turnbuckles:
- Load rated Green Pin® turnbuckles;
- Open body rigging screws generally to DIN 1480;
- Rigging screws with welding ends;
- Closed body rigging screws;
- Special turnbuckles for lashing (hamburgers).

Design

Green Pin® turnbuckles are manufactured to ASTM F1145-92, formerly U.S. Fed. Spec. FF-T-791.
Green Pin® turnbuckles are drop forged.

Green Pin® turnbuckles are available with following end fittings: eye/eye, hook/hook, hook/eye, jaw/jaw and jaw/eye. All fittings are interchangeable. Locking nuts are supplied with all sizes.

Green Pin® turnbuckles are generally marked with:

- Working Load Limit	■ e.g. 2.36 t
- manufacturer's symbol	■ e.g. GP
- thread diameter	■ e.g. $^3/_4$"
- traceability code	■ e.g. A1
- thread	■ L (lefthanded) and R (righthanded)

Rigging screws generally to DIN 1480 are available with welding ends and in hook/eye, eye/eye, hook/hook and jaw/jaw combinations.

Closed body rigging screws are available in jaw/jaw, jaw/eye and eye/eye combinations.

Finish

Load rated Green Pin® turnbuckles and closed body rigging screws are hot dipped galvanized. Rigging screws to DIN 1480 are electro-galvanized. Lashing turnbuckles are self coloured.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Turnbuckles must be used for in-line applications only.
Special attention should be paid to prevent overloading.
During tensioning, avoid forces on the turnbuckle that may lead to deformation. Should a turnbuckle start to deform, the tension should be decreased immediately and any deformed parts should be replaced. Should extreme circumstances or shock loading, possibly occur during use, this must be taken into account when selecting the correct products to be used for the application.

For the rigging of wires, ropes, rods etc., Green Pin® turnbuckles are recommended to be used.
The WLL should be applied in in-line lifting only and overloading is not permitted.
Nor should side loads be applied, as the products have not been designed for this purpose.

Open body rigging screws are used for tensioning wires and ropes for less demanding applications (for example rope railings).

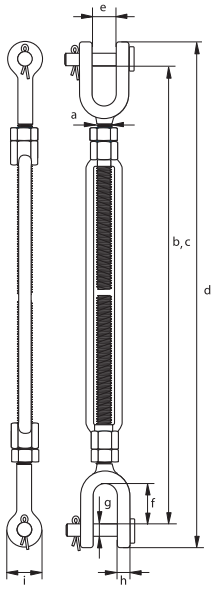
Turnbuckles must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the steel structure.

Safe use of turnbuckles

Turnbuckles should be inspected before use to ensure that:
- all markings are legible;
- the threads of the body and the end fittings are of the same type;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the threads of the body and the end fittings are undamaged;
- the body and end fittings are not distorted or unduly worn;
- the body and end fittings are free from nicks, gouges and cracks.

Make sure that the end fittings are correctly screwed into the body. Always use the locking nuts provided to prevent the turnbuckles from unscrewing.
Never replace an end fitting by anything other than one designed for the purpose, otherwise the turnbuckle may not be suitable for the loads imposed.

G-6313



Green Pin® turnbuckles Jaw - Jaw with cotter pin

generally to ASTM F1145-92

mm inch

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2.36	3/4	6	14 17/32	19 3/16	17 5/16	15/16	1 17/32	5/8	5/8	1 5/8	5.71
2.36	3/4	9	17 17/32	25 3/16	20 1/4	15/16	1 17/32	5/8	5/8	1 5/8	6.90
2.36	3/4	12	20 1/2	31 5/32	23 1/4	15/16	1 17/32	5/8	5/8	1 5/8	7.54
2.36	3/4	18	26 11/32	43 5/32	29 1/8	15/16	1 17/32	5/8	5/8	1 5/8	9.94
3.27	7/8	12	22 3/32	32 17/32	25 1/8	1 3/32	1 11/16	3/4	3/4	1 29/32	10.87
3.27	7/8	18	28 1/32	44 9/16	31 3/32	1 3/32	1 11/16	3/4	3/4	1 29/32	14.13
4.54	1	6	17 5/8	21 13/16	20 15/16	1 1/4	1 31/32	7/8	25/32	2 1/8	11.42
4.54	1	12	23 9/16	33 13/16	26 7/8	1 1/4	1 31/32	7/8	25/32	2 1/8	14.18
4.54	1	18	29 17/32	46	32 7/8	1 1/4	1 31/32	7/8	25/32	2 1/8	18.52
4.5	1	24	35 9/16	57 7/8	38 29/32	1 1/4	1 31/32	7/8	25/32	2 1/8	19.62
6.9	1 1/4	12	25 1/4	35 31/32	29 7/16	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	24.7
6.9	1 1/4	18	31 5/8	48 11/32	35 13/16	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	30.0
6.9	1 1/4	24	37 7/8	60 19/32	42 3/32	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	33.1
9.71	1 1/2	12	26 9/16	37 3/32	31 3/4	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	37.5
9.71	1 1/2	18	32 1/2	48 31/32	37 5/8	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	42.5
9.71	1 1/2	24	38 19/32	61 1/16	43 3/4	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	45.6
12.7	1 3/4	18	36 29/32	51 13/16	43	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	55.1
12.7	1 3/4	24	42 7/8	63 13/16	48 15/16	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	63.3
16.8	2	24	45 5/16	65 25/32	52 11/16	2 1/2	3 11/16	2	1 19/32	4 3/16	100.1
27.2	2 1/2	24	49 13/32	72 3/32	58 9/32	2 15/16	4 1/2	2 1/4	1 5/8	5 5/8	194.0
34	2 3/4	24	53 3/32	74 3/32	63 5/32	3 9/16	4 5/16	2 3/4	1 5/8	6 3/16	216.1

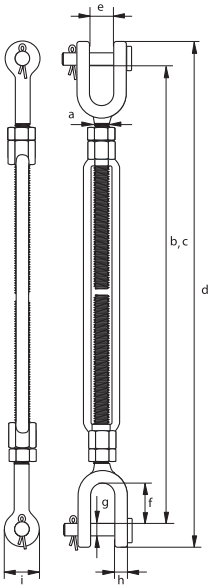
CAD

Green Pin® turnbuckles Jaw - Jaw with cotter pin

generally to ASTM F1145-92

mm inch

G-6313

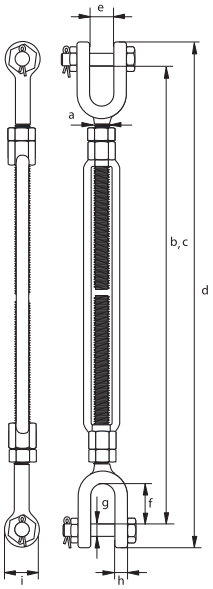


- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	kg
2.36	3/4	6	369	487	439	24	38	16	16	41	2.59
2.36	3/4	9	444	640	514	24	38	16	16	41	3.13
2.36	3/4	12	520	792	590	24	38	16	16	41	3.42
2.36	3/4	18	670	1096	740	24	38	16	16	41	4.51
3.27	7/8	12	561	826	638	27	42	19	19	48	4.93
3.27	7/8	18	713	1132	790	27	42	19	19	48	6.41
4.54	1	6	447	554	532	31	50	22	20	54	5.18
4.54	1	12	598	859	683	31	50	22	20	54	6.43
4.54	1	18	750	1168	835	31	50	22	20	54	8.4
4.5	1	24	903	1470	988	31	50	22	20	54	8.9
6.9	1 1/4	12	641	914	748	44	71	29	26	68	11.2
6.9	1 1/4	18	803	1228	910	44	71	29	26	68	13.6
6.9	1 1/4	24	962	1539	1069	44	71	29	26	68	15
9.71	1 1/2	12	675	942	806	52	71	35	28	80	17
9.71	1 1/2	18	825	1244	956	52	71	35	28	80	19.3
9.71	1 1/2	24	980	1551	1111	52	71	35	28	80	20.7
12.7	1 3/4	18	938	1316	1092	60	86	41	33	90	25
12.7	1 3/4	24	1089	1621	1243	60	86	41	33	90	28.7
16.8	2	24	1151	1671	1338	63	93	51	40	107	45.4
27.2	2 1/2	24	1255	1831	1480	75	114	57	41	143	88
34	2 3/4	24	1348	1882	1604	90	110	70	41	158	98

CAD

G-6323



Green Pin® turnbuckles Jaw - Jaw with safety bolt

generally to ASTM F1145-92

mm inch

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.54	3/8	6	10 3/4	16 1/8	11 31/32	15/32	13/16	9/32	11/32	13/16	1.21
1	1/2	6	11 31/32	17 5/32	13 17/32	5/8	1 1/32	13/32	7/16	1	2.12
1	1/2	9	14 29/32	23 5/32	16 1/2	5/8	1 1/32	13/32	7/16	1	2.60
1	1/2	12	17 15/16	29 1/8	19 1/2	5/8	1 1/32	13/32	7/16	1	3.31
1.59	5/8	6	13 5/8	18 1/2	16	23/32	1 9/32	1/2	9/16	1 5/16	3.86
1.59	5/8	9	16 19/32	24 1/2	18 29/32	23/32	1 9/32	1/2	9/16	1 5/16	4.72
1.59	5/8	12	19 5/8	30 7/16	21 15/16	23/32	1 9/32	1/2	9/16	1 5/16	5.36
2.36	3/4	6	14 17/32	19 3/16	17 5/16	15/16	1 17/32	5/8	5/8	1 5/8	5.95
2.36	3/4	9	17 17/32	25 3/16	20 1/4	15/16	1 17/32	5/8	5/8	1 5/8	7.12
2.36	3/4	12	20 1/2	31 5/32	23 1/4	15/16	1 17/32	5/8	5/8	1 5/8	7.87
2.36	3/4	18	26 11/32	43 5/32	29 1/8	15/16	1 17/32	5/8	5/8	1 5/8	10.03
3.27	7/8	12	22 3/32	32 17/32	25 1/8	1 3/32	1 11/16	3/4	3/4	1 29/32	11.51
3.27	7/8	18	28 1/32	44 9/16	31 3/32	1 3/32	1 11/16	3/4	3/4	1 29/32	14.46
4.54	1	6	17 5/8	21 13/16	20 15/16	1 1/4	1 31/32	7/8	25/32	2 1/8	12.21
4.54	1	12	23 9/16	33 13/16	26 7/8	1 1/4	1 31/32	7/8	25/32	2 1/8	15.34
4.54	1	18	29 17/32	46	32 7/8	1 1/4	1 31/32	7/8	25/32	2 1/8	18.52
4.5	1	24	35 9/16	57 7/8	38 29/32	1 1/4	1 31/32	7/8	25/32	2 1/8	19.62
6.9	1 1/4	12	25 5/16	36 1/32	29 7/16	1 3/4	2 25/32	1 1/8	1 1/32	2 11/16	26.2
6.9	1 1/4	18	31 23/32	48 7/8	35 13/16	1 3/4	2 25/32	1 1/8	1 1/32	2 11/16	30
6.9	1 1/4	24	37 15/16	60 11/16	42 3/32	1 3/4	2 25/32	1 1/8	1 1/32	2 11/16	31.3
9.71	1 1/2	12	26 9/16	37 3/32	31 3/4	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	40.8
9.71	1 1/2	18	32 1/2	48 31/32	37 5/8	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	42.5
9.71	1 1/2	24	38 19/32	61 1/16	43 3/4	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	48.5
12.7	1 3/4	18	36 29/32	51 13/16	43	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	66.1
12.7	1 3/4	24	42 7/8	63 13/16	48 15/16	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	72.8
16.8	2	24	45 13/32	65 7/8	52 11/16	2 1/2	3 11/16	1 31/32	1 19/32	4 3/16	110
27.2	2 1/2	24	49 13/32	72 3/32	58 9/32	2 15/16	4 1/2	2 1/4	1 5/8	5 5/8	203
34	2 3/4	24	53 3/32	74 3/32	63 5/32	3 9/16	4 5/16	2 3/4	1 5/8	6 3/16	240

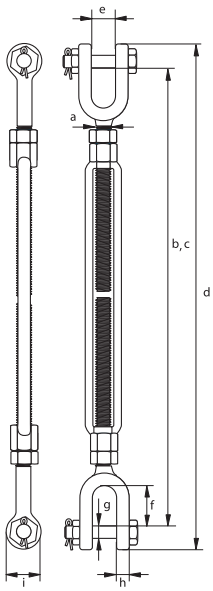
CAD

Green Pin® turnbuckles Jaw - Jaw with safety bolt

generally to ASTM F1145-92

mm inch

G-6323



- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.54	3/8	6	273	409	304	12	21	7	9	21	0.55
1	1/2	6	304	435	343	16	26	10	11	25	0.96
1	1/2	9	379	588	418	16	26	10	11	25	1.18
1	1/2	12	455	740	494	16	26	10	11	25	1.50
1.59	5/8	6	346	469	406	18	32	13	14	33	1.75
1.59	5/8	9	421	622	480	18	32	13	14	33	2.14
1.59	5/8	12	498	774	557	18	32	13	14	33	2.43
2.36	3/4	6	369	487	439	24	38	16	16	41	2.7
2.36	3/4	9	444	640	514	24	38	16	16	41	3.23
2.36	3/4	12	520	792	590	24	38	16	16	41	3.57
2.36	3/4	18	670	1096	740	24	38	16	16	41	4.55
3.27	7/8	12	561	826	638	27	42	19	19	48	5.22
3.27	7/8	18	713	1132	790	27	42	19	19	48	6.56
4.54	1	6	447	554	532	31	50	22	20	54	5.54
4.54	1	12	598	859	683	31	50	22	20	54	6.96
4.54	1	18	750	1168	835	31	50	22	20	54	8.4
4.5	1	24	903	1470	988	31	50	22	20	54	8.9
6.9	1 1/4	12	643	916	748	44	71	28	26	68	11.9
6.9	1 1/4	18	805	1230	910	44	71	28	26	68	13.6
6.9	1 1/4	24	964	1541	1069	44	71	28	26	68	14.2
9.71	1 1/2	12	675	942	806	52	71	35	28	80	18.5
9.71	1 1/2	18	825	1244	956	52	71	35	28	80	19.3
9.71	1 1/2	24	980	1551	1111	52	71	35	28	80	22
12.7	1 3/4	18	938	1316	1092	60	86	41	33	90	30
12.7	1 3/4	24	1089	1621	1243	60	86	41	33	90	33
16.8	2	24	1153	1673	1338	63	93	50	40	107	50
27.2	2 1/2	24	1255	1831	1480	75	114	57	41	143	92
34	2 3/4	24	1348	1882	1604	90	110	70	41	158	109

CAD

Green Pin® Polar turnbuckles Jaw - Jaw with safety bolt

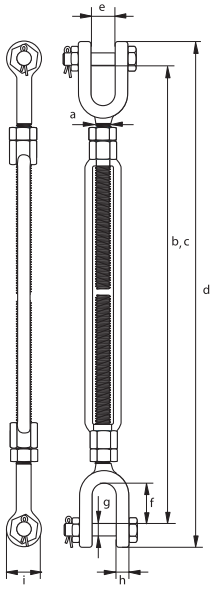
generally to ASTM F1145-92

mm inch

G-6333

- **Material** : drop forged alloy steel, Grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 2.2 3.1
- **Note** : jaw ends up to and including 5/8" are fitted with bolts and nuts, sizes 3/4" and up are equipped with bolts, nuts and cotter pins

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
1	1/2	12	17 15/16	29 1/8	19 1/2	5/8	1 1/32	13/32	7/16	1	3.31
1.59	5/8	12	19 5/8	30 7/16	21 15/16	23/32	1 9/32	1/2	9/16	1 5/16	5.11
2.36	3/4	18	26 11/32	43 5/32	29 1/8	15/16	1 17/32	5/8	5/8	1 5/8	10.08
3.27	7/8	18	28 1/32	44 9/16	31 3/32	1 3/32	1 11/16	3/4	3/4	1 29/32	14.33
4.54	1	18	29 17/32	46	32 7/8	1 1/4	1 31/32	7/8	25/32	2 1/8	18.52
6.9	1 1/4	18	31 23/32	48 7/8	35 13/16	1 3/4	2 25/32	1 1/8	1 1/32	2 11/16	30
9.71	1 1/2	18	32 1/2	48 31/32	37 5/8	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	46.5
12.7	1 3/4	18	36 29/32	51 13/16	43	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	66.1



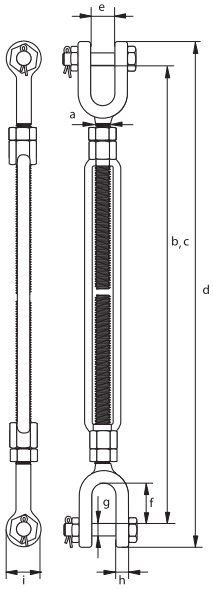
CAD

Green Pin® Polar turnbuckles Jaw - Jaw with safety bolt

generally to ASTM F1145-92

mm inch

G-6333



- **Material** : drop forged alloy steel, Grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Temperature Range** : -40°C up to +200°C
- **Certification** : 2.1 2.2 3.1
- **Note** : jaw ends up to and including 5/8" are fitted with bolts and nuts, sizes 3/4" and up are equipped with bolts, nuts and cotter pins

working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
	a		b	c	d	e	f	g	h	i	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	kg
1	1/2	12	455	740	494	16	26	10	11	25	1.50
1.59	5/8	12	498	774	557	18	32	13	14	33	2.32
2.36	3/4	18	670	1096	740	24	38	16	16	41	4.57
3.27	7/8	18	713	1132	790	27	42	19	19	48	6.5
4.54	1	18	750	1168	835	31	50	22	20	54	8.4
6.9	1 1/4	18	805	1230	910	44	71	28	26	68	13.6
9.71	1 1/2	18	825	1244	956	52	71	35	28	80	21.1
12.7	1 3/4	18	938	1316	1092	60	86	41	33	90	30

CAD

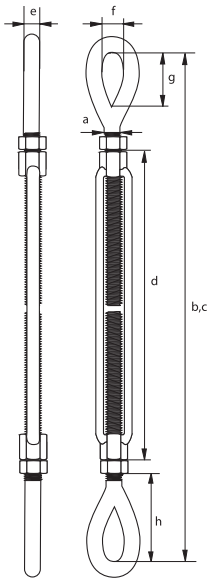
Green Pin® turnbuckles Eye - Eye

generally to ASTM F1145-92

mm inch

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

G-6311



working load limit	diameter thread	take up	length closed position	length open position	length	diameter	width inside	length inside	length closed position	weight each
	a		b	c	d	e	f	g	h	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.54	3/8	6	11 17/32	16 7/8	7 3/16	13/32	1/2	1 5/32	1 15/16	1.06
1	1/2	6	12 25/32	17 15/16	7 19/32	15/32	23/32	1 7/16	2 9/32	1.79
1	1/2	9	15 3/4	23 15/16	10 5/8	15/32	23/32	1 7/16	2 1/4	2.36
1	1/2	12	18 3/4	29 29/32	13 5/8	15/32	23/32	1 7/16	2 1/4	2.84
1.59	5/8	6	14 15/16	19 13/16	8	9/16	13/16	1 25/32	3 1/8	2.93
1.59	5/8	9	17 15/16	25 13/16	11 1/32	9/16	13/16	1 25/32	3 3/32	3.55
1.59	5/8	12	20 29/32	31 13/16	14	9/16	13/16	1 25/32	3 3/32	4.32
2.36	3/4	6	16 9/32	20 15/16	8 7/16	11/16	1 1/32	2 1/8	3 17/32	4.48
2.36	3/4	9	19 5/16	26 15/16	11 1/2	11/16	1 1/32	2 1/8	3 17/32	5.45
2.36	3/4	12	22 3/16	32 15/16	14 7/16	11/16	1 1/32	2 1/8	3 1/2	6.39
2.36	3/4	18	28 1/4	45	20 7/16	11/16	1 1/32	2 1/8	3 17/32	8.69
3.27	7/8	12	23 25/32	34 1/4	14 13/16	25/32	1 9/32	2 3/8	3 31/32	9.5
3.27	7/8	18	29 3/4	46 7/32	20 13/16	25/32	1 9/32	2 3/8	3 31/32	12.15
4.54	1	6	19 5/8	23 25/32	9 1/4	15/16	1 1/2	3	4 5/8	9.59
4.54	1	12	25 9/16	35 25/32	15 1/4	15/16	1 1/2	3	4 19/32	12.68
4.54	1	18	31 17/32	47 27/32	21 1/4	15/16	1 1/2	3	4 19/32	16.03
4.5	1	24	37 1/2	59 25/32	27 1/4	15/16	1 1/2	3	4 9/16	16.58
6.9	1 1/4	12	28	38 25/32	15 5/32	1 5/32	1 7/8	3 19/32	5 23/32	20.46
6.9	1 1/4	18	33 15/16	50 11/16	21 5/32	1 5/32	1 7/8	3 19/32	5 11/16	24.5
6.9	1 1/4	24	39 31/32	60 7/32	27 5/32	1 5/32	1 7/8	3 19/32	5 11/16	26.7
9.71	1 1/2	12	29 3/4	40 9/32	15 25/32	1 9/32	2 5/32	4 5/32	6 1/8	31.3
9.71	1 1/2	18	36 1/32	52 9/16	21 25/32	1 9/32	2 5/32	4 5/32	6 9/32	34.8
9.71	1 1/2	24	41 15/16	64 13/32	27 25/32	1 9/32	2 5/32	4 5/32	6 3/16	37.7
12.7	1 3/4	18	40 5/32	54 15/16	22 23/32	1 17/32	2 3/8	4 23/32	7 3/4	51
12.7	1 3/4	24	46 1/8	67 1/16	28 23/32	1 17/32	2 3/8	4 23/32	7 23/32	58
16.8	2	24	49 25/32	70 1/4	29 7/16	1 13/16	2 23/32	5 25/32	9 3/32	89.7
27.2	2 1/2	24	56 5/16	76 5/32	31 9/16	2	3 5/32	6 1/2	10 25/32	141
34	2 3/4	24	57 3/32	78 9/32	31 9/16	2 1/4	3 5/16	7	11 3/16	194

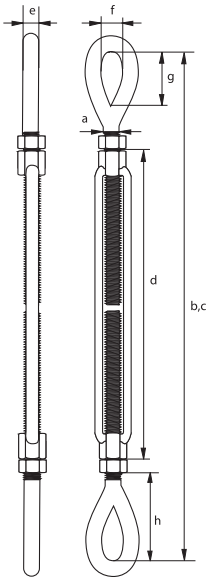
CAD

Green Pin® turnbuckles Eye - Eye

generally to ASTM F1145-92

mm inch

G-6311



- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	length	diameter	width inside	length inside	length closed position	weight each
	a		b	c	d	e	f	g	h	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	kg
0.54	3/8	6	292	428	183	10	13	29	49	0.48
1	1/2	6	325	455	193	12	18	36	58	0.81
1	1/2	9	400	608	270	12	18	36	57	1.07
1	1/2	12	476	760	346	12	18	36	57	1.29
1.59	5/8	6	380	503	203	14	21	45	79	1.33
1.59	5/8	9	455	656	280	14	21	45	78	1.61
1.59	5/8	12	531	808	356	14	21	45	78	1.96
2.36	3/4	6	413	532	214	17	26	54	89	2.03
2.36	3/4	9	490	685	291	17	26	54	89	2.47
2.36	3/4	12	564	837	367	17	26	54	88	2.9
2.36	3/4	18	718	1143	519	17	26	54	89	3.94
3.27	7/8	12	604	870	377	20	32	61	101	4.31
3.27	7/8	18	756	1174	529	20	32	61	101	5.51
4.54	1	6	498	604	234	24	37	76	118	4.35
4.54	1	12	649	909	387	24	37	76	117	5.75
4.54	1	18	801	1215	539	24	37	76	117	7.27
4.5	1	24	952	1518	692	24	37	76	116	7.52
6.9	1 1/4	12	712	985	385	29	47	91	145	9.28
6.9	1 1/4	18	862	1287	537	29	47	91	144	11.1
6.9	1 1/4	24	1015	1592	690	29	47	91	144	12.1
9.71	1 1/2	12	756	1023	401	32	55	106	156	14.2
9.71	1 1/2	18	916	1335	553	32	55	106	160	15.8
9.71	1 1/2	24	1065	1636	706	32	55	106	158	17.1
12.7	1 3/4	18	1020	1396	577	38	61	120	197	23.1
12.7	1 3/4	24	1171	1703	730	38	61	120	196	26.3
16.8	2	24	1264	1784	748	46	69	147	230	40.7
27.2	2 1/2	24	1430	1934	802	51	80	165	274	64
34	2 3/4	24	1450	1988	802	57	84	178	284	88

CAD

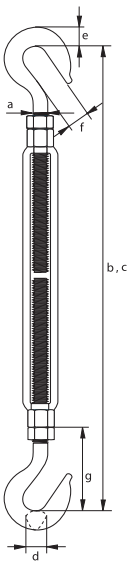
Green Pin® turnbuckles Hook - Hook

generally to ASTM F1145-92

mm inch

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

G-6312



working load limit	diameter thread	take up	length closed position	length open position	thickness hook	thickness hook	opening hook	length closed position	weight each
	a		b	c	d	e	f	g	
t	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.54	3/8	6	10 15/16	16 11/32	1/2	5/8	19/32	1 11/16	1.17
1	1/2	6	12	17 1/8	5/8	7/8	5/8	1 29/32	2.05
1	1/2	9	14 15/16	23 1/8	5/8	7/8	5/8	1 7/8	2.56
0.68	1/2	12	17 31/32	29 3/32	1/2	3/4	5/8	1 7/8	2.95
1.02	5/8	6	14	18 7/8	5/8	29/32	13/16	2 5/8	2.16
1.59	5/8	9	17	24 7/8	25/32	15/16	13/16	2 19/32	4.32
1.02	5/8	12	19 31/32	30 13/16	5/8	29/32	13/16	2 19/32	3.77
2.36	3/4	6	15 1/2	20 1/8	7/8	1 3/32	15/16	3 1/8	3.37
1.36	3/4	9	18 7/16	26 1/8	25/32	1 3/32	15/16	3 3/32	4.14
2.36	3/4	12	21 7/16	32 1/8	7/8	1 3/32	15/16	3 3/32	7.21
2.36	3/4	18	27 3/8	44 3/8	7/8	1 3/32	15/16	3 3/32	9.92
2.27	1	6	18 7/8	23 3/32	1 1/32	1 3/8	1 1/4	4 9/32	8.53
4.54	1	12	24 19/32	34 7/8	1 1/32	1 3/8	1 1/4	4 5/32	14.64
2.27	1	18	30 19/32	46 29/32	1 1/32	1 3/8	1 1/4	4 5/32	13.23
2.27	1	24	36 17/32	58 3/4	1 1/32	1 3/8	1 1/4	4 1/8	16.58

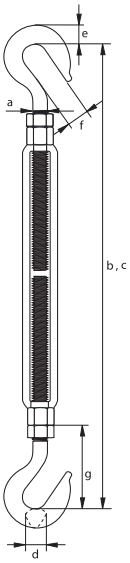
CAD

Green Pin® turnbuckles Hook - Hook

generally to ASTM F1145-92

mm inch

G-6312



- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

working load limit	diameter thread	take up	length closed position	length open position	thickness hook	thickness hook	opening hook	length closed position	weight each
	a		b	c	d	e	f	g	
t	inch	inch	mm	mm	mm	mm	mm	mm	kg
0.54	3/8	6	278	415	13	16	15	42	0.53
1	1/2	6	305	434	16	22	16	48	0.93
1	1/2	9	380	587	16	22	16	47	1.16
0.68	1/2	12	456	739	13	19	16	47	1.34
1.02	5/8	6	356	479	16	23	21	67	0.98
1.59	5/8	9	431	632	20	24	21	66	1.96
1.02	5/8	12	507	784	16	23	21	66	1.71
2.36	3/4	6	393	511	22	27	24	79	1.53
1.36	3/4	9	468	664	20	27	24	78	1.88
2.36	3/4	12	544	816	22	27	24	78	3.27
2.36	3/4	18	696	1122	22	27	24	78	4.5
2.27	1	6	479	586	26	35	31	109	3.87
4.54	1	12	625	886	26	35	31	106	6.64
2.27	1	18	778	1191	26	35	31	106	6
2.27	1	24	928	1495	26	35	31	105	7.52

CAD

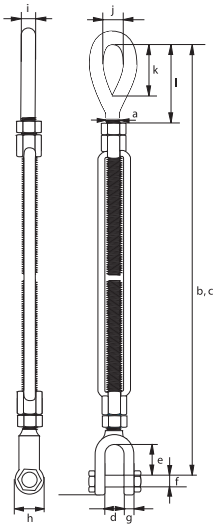
Green Pin® turnbuckles Eye - Jaw

generally to ASTM F1145-92

mm inch

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1
- **Note** : jaw ends up to and including 5/8" are fitted with bolts and nuts, sizes 3/4" and up are equipped with pins and cotters.

G-6315



working load limit	diameter thread	take up	length closed position	length open position	opening jaw	length inside jaw	diameter pin jaw	thickness eye jaw	diameter eye jaw	diameter eye	width inside eye	length inside eye	length closed position	weight each
	a		b	c	d	e	f	g	h	i	j	k	l	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.54	3/8	6	11 5/32	16 1/2	15/32	13/16	5/16	11/32	13/16	13/32	1/2	1 5/32	1 15/16	1.15
1	1/2	6	12 3/8	17 19/32	5/8	1 1/32	13/32	7/16	1	15/32	23/32	1 7/16	2 9/32	1.94
1	1/2	9	15 11/32	23 9/16	5/8	1 1/32	13/32	7/16	1	15/32	23/32	1 7/16	2 1/4	2.49
1	1/2	12	18 11/32	29 9/16	5/8	1 1/32	13/32	7/16	1	15/32	23/32	1 7/16	2 1/4	3.02
1.59	5/8	6	14 9/32	19 5/32	23/32	1 9/32	1/2	9/16	1 5/16	9/16	13/16	1 25/32	3 1/8	3.42
1.59	5/8	9	17 9/32	25 5/32	23/32	1 9/32	1/2	9/16	1 5/16	9/16	13/16	1 25/32	3 3/32	4.06
1.59	5/8	12	20 1/4	31 5/32	23/32	1 9/32	1/2	9/16	1 5/16	9/16	13/16	1 25/32	3 3/32	4.78
2.36	3/4	6	15 3/8	20 3/32	15/16	1 17/32	5/8	5/8	1 5/8	11/16	1 1/32	2 1/8	3 17/32	5.03
2.36	3/4	9	18 3/8	26 3/32	15/16	1 17/32	5/8	5/8	1 5/8	11/16	1 1/32	2 1/8	3 17/32	6.22
2.36	3/4	12	21 11/32	32 3/32	15/16	1 17/32	5/8	5/8	1 5/8	11/16	1 1/32	2 1/8	3 1/2	6.5
2.36	3/4	18	27 5/16	44 3/32	15/16	1 17/32	5/8	5/8	1 5/8	11/16	1 1/32	2 1/8	3 17/32	7.28
3.27	7/8	12	22 15/16	33 3/8	1 3/32	1 11/16	3/4	3/4	1 29/32	25/32	1 9/32	2 3/8	3 31/32	9.59
3.27	7/8	18	28 29/32	45 13/32	1 3/32	1 11/16	3/4	3/4	1 29/32	25/32	1 9/32	2 3/8	3 31/32	12.04
4.54	1	6	18 5/8	22 25/32	1 1/4	1 31/32	7/8	25/32	2 1/8	15/16	1 1/2	3	4 5/8	10.27
4.54	1	12	24 9/16	34 25/32	1 1/4	1 31/32	7/8	25/32	2 1/8	15/16	1 1/2	3	4 19/32	13.1
4.54	1	18	30 17/32	46 27/32	1 1/4	1 31/32	7/8	25/32	2 1/8	15/16	1 1/2	3	4 19/32	17.59
4.5	1	24	36 17/32	58 13/16	1 1/4	1 31/32	7/8	25/32	2 1/8	15/16	1 1/2	3	4 9/16	18.41
6.9	1 1/4	12	26 5/8	37 3/8	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	1 5/32	1 7/8	3 19/32	5 23/32	22.9
6.9	1 1/4	18	32 25/32	49 17/32	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	1 5/32	1 7/8	3 19/32	5 11/16	24.3
6.9	1 1/4	24	38 15/16	61 21/32	1 3/4	2 25/32	1 5/32	1 1/32	2 11/16	1 5/32	1 7/8	3 19/32	5 11/16	28.4
9.71	1 1/2	12	28 5/32	38 23/32	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	1 9/32	2 5/32	4 5/32	6 1/8	28.9
9.71	1 1/2	18	34 9/32	50 25/32	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	1 9/32	2 5/32	4 5/32	6 9/32	32.4
9.71	1 1/2	24	40 9/32	60 3/4	2 1/32	2 25/32	1 3/8	1 1/8	3 5/32	1 9/32	2 5/32	4 5/32	6 3/16	39.2
12.7	1 3/4	18	38 9/16	53 13/32	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	1 17/32	2 3/8	4 23/32	7 3/4	49.2
12.7	1 3/4	24	44 1/2	65 7/16	2 11/32	3 3/8	1 5/8	1 5/16	3 9/16	1 17/32	2 3/8	4 23/32	7 23/32	60.6
16.8	2	24	47 9/16	68 1/32	2 1/2	3 11/16	2	1 19/32	4 3/16	1 13/16	2 23/32	5 25/32	9 3/32	94.6
27.2	2 1/2	24	52 7/8	74 25/32	2 15/16	4 1/2	2 1/4	1 5/8	5 5/8	2	3 5/32	6 1/2	10 25/32	150
34	2 3/4	24	55 3/32	76 29/32	3 9/16	4 5/16	2 3/4	1 5/8	6 3/16	2 1/4	3 5/16	7	11 3/16	200

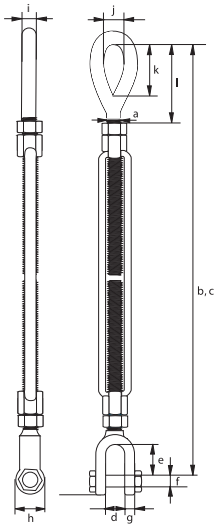
CAD

Green Pin® turnbuckles Eye - Jaw

generally to ASTM F1145-92

mm inch

G-6315



- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1
- **Note** : jaw ends up to and including 5/8" are fitted with bolts and nuts, sizes 3/4" and up are equipped with pins and cotters.

working load limit	diameter thread	take up	length closed position	length open position	opening jaw	length inside jaw	diameter pin jaw	thickness eye jaw	diameter eye jaw	diameter eye	width inside eye	length inside eye	length closed position	weight each
	a		b	c	d	e	f	g	h	i	j	k	l	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.54	3/8	6	283	418	12	21	8	9	21	10	13	29	49	0.52
1	1/2	6	315	446	16	26	10	11	25	12	18	36	58	0.88
1	1/2	9	390	598	16	26	10	11	25	12	18	36	57	1.13
1	1/2	12	466	751	16	26	10	11	25	12	18	36	57	1.37
1.59	5/8	6	363	486	18	32	13	14	33	14	21	45	79	1.55
1.59	5/8	9	438	639	18	32	13	14	33	14	21	45	78	1.84
1.59	5/8	12	514	790	18	32	13	14	33	14	21	45	78	2.17
2.36	3/4	6	391	510	24	38	16	16	41	17	26	54	89	2.28
2.36	3/4	9	467	663	24	38	16	16	41	17	26	54	89	2.82
2.36	3/4	12	542	815	24	38	16	16	41	17	26	54	88	2.95
2.36	3/4	18	694	1120	24	38	16	16	41	17	26	54	89	3.30
3.27	7/8	12	583	848	27	42	19	19	48	20	32	61	101	4.35
3.27	7/8	18	735	1153	27	42	19	19	48	20	32	61	101	5.46
4.54	1	6	473	579	31	50	22	20	54	24	37	76	118	4.66
4.54	1	12	624	884	31	50	22	20	54	24	37	76	117	5.94
4.54	1	18	776	1190	31	50	22	20	54	24	37	76	117	7.98
4.5	1	24	928	1494	31	50	22	20	54	24	37	76	116	8.35
6.9	1 1/4	12	677	950	44	71	29	26	68	29	47	91	145	10.4
6.9	1 1/4	18	833	1258	44	71	29	26	68	29	47	91	144	11
6.9	1 1/4	24	989	1566	44	71	29	26	68	29	47	91	144	12.9
9.71	1 1/2	12	716	983	52	71	35	28	80	32	55	106	156	13.1
9.71	1 1/2	18	871	1290	52	71	35	28	80	32	55	106	160	14.7
9.71	1 1/2	24	1023	1594	52	71	35	28	80	32	55	106	158	17.8
12.7	1 3/4	18	979	1356	60	86	41	33	90	38	61	120	197	22.3
12.7	1 3/4	24	1130	1662	60	86	41	33	90	38	61	120	196	27.5
16.8	2	24	1208	1728	63	93	51	40	107	46	69	147	230	42.9
27.2	2 1/2	24	1343	1899	75	114	57	41	143	51	80	165	274	68
34	2 3/4	24	1399	1953	90	110	70	41	158	57	84	178	284	91

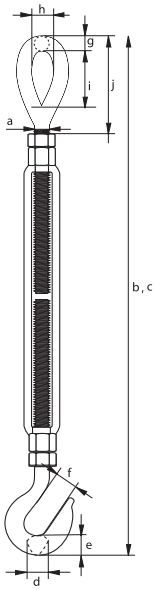
CAD

Green Pin® turnbuckles Eye - Hook

generally to ASTM F1145-92

- **Material** : drop forged high tensile steel SAE 1035 or 1045
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to ASTM F1145-92
  formerly U.S. Federal Specification FF-T-791b
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2 3.1

G-6314



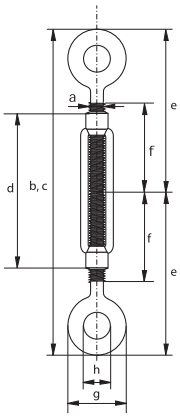
working load limit	diameter thread	take up	length closed position	length open position	thickness hook	thickness hook	opening hook	diameter eye	width inside eye	length inside eye	length closed position	weight each
	a		b	c	d	e	f	g	h	i	j	
t	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.54	3/8	6	285	422	13	16	15	10	13	29	49	0.47
1	1/2	6	315	445	16	22	16	12	18	36	58	0.82
1	1/2	9	390	598	16	22	16	12	18	36	57	1.06
0.68	1/2	12	466	750	13	19	16	12	18	36	57	1.28
1.02	5/8	6	368	491	16	23	21	14	21	45	79	1.31
1.59	5/8	9	443	644	20	24	21	14	21	45	78	1.56
1.02	5/8	12	519	796	16	23	21	14	21	45	78	1.71
2.36	3/4	6	403	521	22	27	24	17	26	54	89	2.04
1.36	3/4	9	479	675	20	27	24	17	26	54	89	4.49
2.36	3/4	12	554	827	22	27	24	17	26	54	88	2.3
2.36	3/4	18	707	1133	22	27	24	17	26	54	89	2.85
2.27	1	6	488	595	26	35	31	24	36	75	118	3.87
4.54	1	12	636	897	26	35	31	24	36	75	117	5.09
2.27	1	18	789	1202	26	35	31	24	36	75	117	6
2.27	1	24	939	1506	26	35	31	24	36	75	116	7.52

In inch

working load limit	diameter thread	take up	length closed position	length open position	thickness hook	thickness hook	opening hook	diameter eye	width inside eye	length inside eye	length closed position	weight each
	a		b	c	d	e	f	g	h	i	j	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.54	3/8	6	11 1/4	16 5/8	1/2	5/8	19/32	13/32	1/2	1 5/32	1 15/16	1.04
1	1/2	6	12 3/8	17 9/16	5/8	7/8	5/8	15/32	23/32	1 7/16	2 9/32	1.81
1	1/2	9	15 11/32	23 9/16	5/8	7/8	5/8	15/32	23/32	1 7/16	2 1/4	2.34
0.68	1/2	12	18 11/32	29 17/32	1/2	3/4	5/8	15/32	23/32	1 7/16	2 1/4	2.82
1.02	5/8	6	14 1/2	19 11/32	5/8	29/32	13/16	9/16	13/16	1 25/32	3 1/8	2.89
1.59	5/8	9	17 1/2	25 11/32	25/32	15/16	13/16	9/16	13/16	1 25/32	3 3/32	3.44
1.02	5/8	12	20 7/16	31 5/16	5/8	29/32	13/16	9/16	13/16	1 25/32	3 3/32	3.77
2.36	3/4	6	15 7/8	20 17/32	7/8	1 3/32	15/16	11/16	1 1/32	2 1/8	3 17/32	4.5
1.36	3/4	9	18 7/8	26 9/16	25/32	1 3/32	15/16	11/16	1 1/32	2 1/8	3 17/32	9.9
2.36	3/4	12	21 13/16	32 9/16	7/8	1 3/32	15/16	11/16	1 1/32	2 1/8	3 1/2	5.07
2.36	3/4	18	27 13/16	44 5/8	7/8	1 3/32	15/16	11/16	1 1/32	2 1/8	3 17/32	6.28
2.27	1	6	19 1/4	23 7/16	1 1/32	1 3/8	1 1/4	15/16	1 7/16	2 15/16	4 5/8	8.53
4.54	1	12	25 1/32	35 5/16	1 1/32	1 3/8	1 1/4	15/16	1 7/16	2 15/16	4 19/32	11.22
2.27	1	18	31 1/32	47 5/16	1 1/32	1 3/8	1 1/4	15/16	1 7/16	2 15/16	4 19/32	13.23
2.27	1	24	36 15/16	59 5/16	1 1/32	1 3/8	1 1/4	15/16	1 7/16	2 15/16	4 9/16	16.58

CAD

E-6351



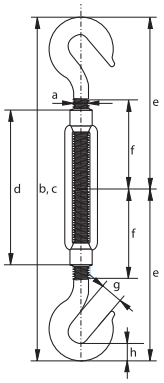
Rigging screws Eye - Eye

according to DIN 1480

- **Material** : drop forged mild steel
- **Standard** : DIN 1480
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length end fitting	length thread	diameter eye outside	diameter eye inside	weight each
a	b	c	d	e	f	g	h	
mm	mm	mm	mm	mm	mm	mm	mm	kg
5	114	170	70	57	35	16	8	0.07
6	160	246	110	80	55	20	9	0.11
8	168	248	110	84	57	22	10	0.2
10	210	300	125	105	68	31	14	0.28
12	222	305	125	110	70	35	16	0.43
14	244	334	140	123	75	40	18	0.61
16	300	416	170	143	88	47	22	1
20	334	466	200	165	105	52	24	1.6
22	372	527	220	185	118	60	27	2.2
24	410	587	255	208	135	65	27	2.8
30	440	605	255	220	135	71	31	4.1
33	490	690	295	245	148	88	36	6
36	554	740	295	277	158	94	38	8.5
42	600	800	330	300	170	110	49	11

E-6352



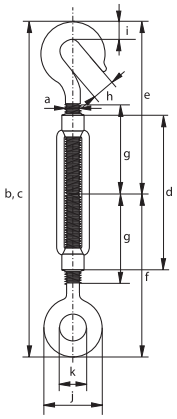
Rigging screws Hook - Hook

according to DIN 1480

- **Material** : drop forged mild steel
- **Standard** : DIN 1480
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length end fitting	length thread	opening hook	thickness hook	weight each
a	b	c	d	e	f	g	h	
mm	mm	mm	mm	mm	mm	mm	mm	kg
6	184	270	110	92	55	8	15	0.11
8	200	280	110	100	57	10.5	15	0.2
10	234	323	125	117	68	13	11	0.28
12	260	343	125	130	70	16	13	0.43
14	278	368	140	139	75	18	15	0.61
16	322	438	170	161	88	20	17	1
20	382	514	200	191	105	21	21	1.6
22	456	601	220	228	118	24	28	2.2
24	496	673	255	248	135	26	33	2.8
30	550	715	255	275	135	34	35	4.1
33	600	799	295	300	148	38	40	6
36	640	825	295	320	158	46	45	8.3

E-6354



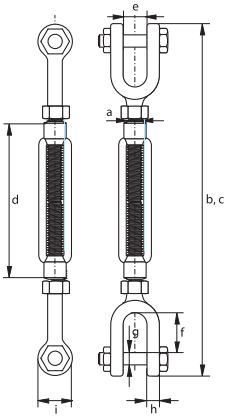
Rigging screws Eye - Hook

according to DIN 1480

- **Material** : drop forged mild steel
- **Standard** : DIN 1480
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length end fitting	length end fitting	length thread	opening hook	thickness hook	diameter eye outside	diameter eye inside	weight each
a	b	c	d	e	f	g	h	i	j	k	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	125	180	70	56	57	35	7	12	16	8	0.07
6	172	258	110	77	80	55	8	15	20	9	0.11
8	184	264	110	85	84	57	10.5	15	22	10	0.2
10	222	311	125	106	105	68	13	11	31	14	0.28
12	241	324	125	117	111	70	16	13	35	16	0.43
14	261	351	140	124	122	75	18	15	40	18	0.61
16	311	427	170	144	150	88	20	17	47	22	1
20	358	490	200	170	167	105	21	21	52	24	1.6
22	414	559	220	200	186	118	24	28	60	27	2.2
24	453	630	255	215	205	135	26	33	65	27	2.8
30	495	660	255	240	220	135	34	35	71	31	4.1
33	545	744	295	260	245	148	38	40	88	36	6
36	597	782	295	275	277	158	46	45	94	38	8.4

E-6353



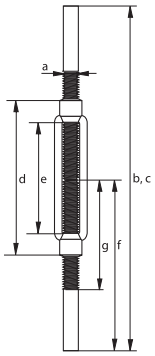
Rigging screws Jaw - Jaw

according to DIN 1480

- **Material** : drop forged mild steel
- **Standard** : DIN 1480
- **Finish** : electro-galvanized
- **Note** : supplied with locking nuts
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
a	b	c	d	e	f	g	h	i	
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	191	277	110	7.5	12	M 6	5	13	0.16
8	194	274	110	8.5	12	M 6	6	14	0.21
10	236	325	125	11	16	M 8	8	18	0.38
12	266	349	125	13	20	M 10	10	24	0.66
14	316	406	140	16	30	M 12	12	28	1.15
16	374	490	170	18	38	M 12	12	32	1.45
20	438	570	200	20	42	M 16	16	38	2.61
22	466	611	220	22	44	M 18	18	40	3.24
24	514	691	255	24	46	M 20	20	42	4.35
30	544	709	255	30	50	M 24	22	46	6.48

E-6355



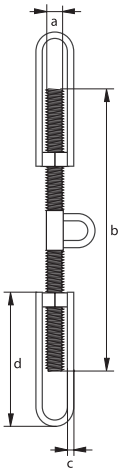
Rigging screws with Welding Ends

according to DIN 1480

- **Material** : drop forged mild steel
- **Standard** : DIN 1480
- **Finish** : Body : electro-galvanized
  Welding ends : self coloured
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length body inside	length stub-ends	length thread	weight per 100 pcs
a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	kg
6	240	326	110	86	120	65	9.3
8	240	320	110	80	120	65	14
10	300	389	125	89	150	75	29
12	300	383	125	83	150	75	40
14	330	420	140	90	165	85	66
16	400	516	170	116	200	100	89
20	440	572	200	132	220	120	160
22	440	585	220	145	220	130	227
24	520	697	255	177	260	150	282
30	520	685	255	165	260	160	423
36	600	780	295	185	300	180	710

S-6330



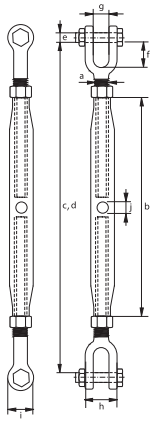
Turnbuckles (hamburgers)

for deck lashing

- **Material** : mild steel
- **Finish** : self coloured
- **Certification** : 2.1

minimum breaking load	diameter thread	length thread	diameter bow	length bow	weight each
	a	b	c	d	
t	mm	mm	mm	mm	kg
13	24	400	16	210	2.8
13	24	500	16	260	3.8
18	27	400	18	210	4.4
18	27	500	18	260	5.5
20	30	400	20	210	5
20	30	500	20	260	6.3
21	36	400	20	210	7
21	36	500	20	260	8.8

G-6343

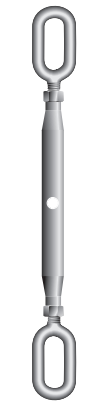


Closed body rigging screws

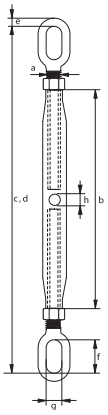
Jaw - Jaw

- **Material** : mild steel
- **Safety factor** : MBL equals 5 x WLL,
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2
- **Note** : end fittings of 6 and 8 mm rigging screws are electro-galvanized

working load limit	diameter thread	length body	length closed position	length open position	diameter pin	length inside	opening jaw	width jaw	diameter jaw eye	diameter hole	weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.2	6	100	170	250	5	16	7	20	13	6	0.15
0.32	8	108	199	279	6	22	9	24	14	8	0.26
0.5	10	125	222	312	8	22	10.5	28	19	8	0.45
0.7	12	195	315	470	10	27	13	34	23	10	0.85
1.2	16	230	388	568	12	33	18	42	29	11	1.51
1.5	20	270	449	654	16	38	20	51	33	12	2.62
2.2	22	295	490	715	20	45	25	55	38	12	3.94
3.2	24	325	538	793	22	52	30	70	46	12	5.16
4.8	33	370	680	965	30	70	38	82	60	14	11.6
6	39	400	707	1002	33	70	45	85	76	15	14.2
8.5	45	400	761	1011	39	86	50	94	85	16	20.8
11	48	400	780	1005	45	97	58	98	92	16	24



G-6340



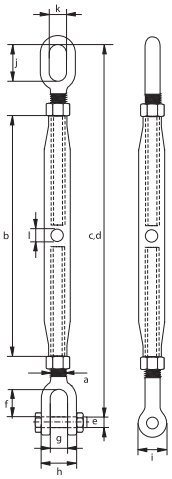
Closed body rigging screws

Eye - Eye

- **Material** : mild steel
- **Safety factor** : MBL equals 5 x WLL,
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2
- **Note** : end fittings of 6 and 8 mm rigging screws are electro-galvanized

working load limit	diameter thread	length body	length closed position	length open position	diameter	length eye inside	width eye inside	diameter hole	weight each
	a	b	c	d	e	f	g	h	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.2	6	100	160	240	5.5	11	11	6	0.12
0.32	8	108	175	255	6	12	12	8	0.19
0.5	10	125	205	300	8.5	13	13	8	0.34
0.7	12	195	320	480	11	30	15	10	0.77
1.2	16	230	380	555	12	40	20	11	1.31
1.5	20	270	455	660	16	50	24	12	2.36
2.2	22	295	495	720	16	50	24	12	2.94
3.2	24	325	540	790	19	56	28	12	3.86
4.8	33	370	660	940	29	70	35	14	8.95
6	39	400	720	1020	35	80	40	15	11
8.5	45	400	721	879	31	49	49	16	13.4
11	48	400	767	1032	37	52	52	16	17.9

G-6345



Closed body rigging screws

Eye - Jaw

- **Material** : mild steel
- **Safety factor** : MBL equals 5 x WLL,
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2
- **Note** : end fittings of 6 and 8 mm rigging screws are electro-galvanized

working load limit	diameter thread	length body	length closed position	length open position	diameter pin	length jaw inside	opening jaw	width jaw	diameter jaw eye	length eye inside	width eye inside	diameter hole	weight each
	a	b	c	d	e	f	g	h	i	j	k	l	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.2	6	100	165	247	5	16	7	20	13	11	11	6	0.14
0.32	8	108	187	267	6	22	9	24	14	12	12	8	0.24
0.5	10	125	214	306	8	22	10.5	28	19	13	13	8	0.53
0.7	12	195	317	475	10	27	13	34	23	30	15	10	0.83
1.2	16	230	384	562	12	33	18	42	29	40	20	11	1.49
1.5	20	270	452	657	16	38	20	51	33	50	24	12	2.54
2.2	22	295	493	717	20	45	25	55	38	50	24	12	3.34
3.2	24	325	539	791	22	52	30	70	46	56	28	12	4.65
4.8	33	370	670	952	30	70	38	82	60	70	35	14	10.5
6	39	400	714	1011	33	70	45	85	76	80	40	15	12.8
8.5	45	400	741	945	39	86	50	94	85	49	49	16	20.8
11	48	400	774	1018	45	97	58	98	92	52	52	16	24

Applications

Connecting links are used in the manufacturing of chain slings.
Master links and master link assemblies are used in the manufacturing of 1, 2, 3 and 4-leg slings.

Range

Van Beest supplies a range of connecting links for chain diameter 6-32 mm, as well as a range of master links and master link assemblies.

DNV master links are DNV type approved to certification note 2.7-1, lifting sets for offshore containers, certification no. S-7732.

Van Beest can also offer other types of links in grade 8, grade 10 and stainless steel.
Please refer to the EXCEL® section in this catalogue for more information.

Design

Connecting links are supplied unassembled, ready for immediate use. The assembly of the parts is a quick and easy job.

MS master links (up to 37 t) and type MTS master link assemblies (up to 50 t) are supplied with a flat part for easy connection of the master link to the sling.

All master links and connecting links are suitable for lifting purposes.

Connecting links and master links are generally marked with:

- manufacturer's symbol	■ e.g. GP or EXCEL
- size in mm	■ e.g. 13
- traceability code	■ e.g. HA
- steel grade	■ e.g. 8

DNV master links are designed for use in lifting sets for offshore containers

Finish

All master links and connecting links are painted.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

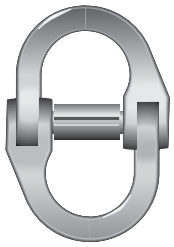
Connecting links, master links and master link assemblies should be inspected before use to ensure that:

- all markings are legible;
- the link and the assemblies are both made of the same steel grade;
- a link with the correct WLL has been selected with respect to the sling design. For further details we refer to EN 818 standard for Chain Slings;
- during the assembly of connecting links, we advise the use of a lubricant on the pin;
- the pin, bush or any other locking system cannot vibrate out of position;
- links, assemblies and connecting links are free from nicks, gouges and cracks;
- links, assemblies and connecting links may not be heat treated as this may affect their Working Load Limit.

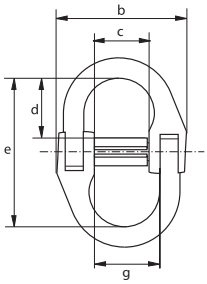
Master links, master link assemblies and connecting links must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the links are used in severe operating conditions.

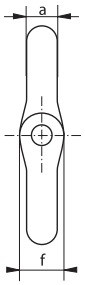
Green Pin® connecting links

for connecting Grade 8 chain-slings



P-6860Y
P-6860R



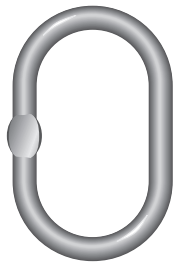


- **Material** : Grade 8, alloy steel
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-1
- **Finish** : painted yellow or red
- **Certification** : 2.1 2.2 3.1

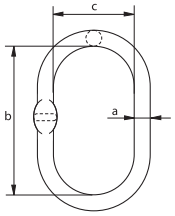
working load limit	for chain diameter	diameter	width outside	width inside	length inside	length inside	diameter eye	width inside	weight each
		a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
1.12	6	8	42	11	20	52	11	15	0.09
2	7-8	9	53	14	20	55	13	19	0.15
3.2	10	10	66	18	23	64	18	23	0.32
5.4	13	14	83	21	32	85	24	28	0.65
8.2	16	17	103	25	40	105	28	34	1.21
12.8	18-20	21	120	33	50	129	33	42	2.03
15.5	22	23	143	40	55	140	37	51	2.95
21.6	26	26	160	45	60	153	43	57	4.22
32.8	32	39	197	52	68	174	55	68	8.2

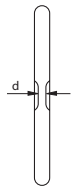
EXCEL®

EXCEL® Master links, grade 8



MS



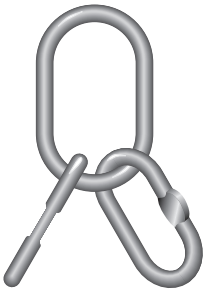


- **Material** : Grade 8, alloy steel
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-4
- **Finish** : painted yellow or red
- **Certification** : 2.1 2.2 3.1 MTC b
- **Note** : from 50 t without flat part

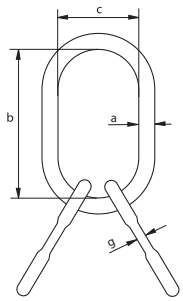
working load limit	diameter	length inside	width inside	thickness	weight each
	a	b	c	d	
t	mm	mm	mm	mm	kg
1.6	13	100	60	7	0.33
3.2	16	120	70	7	0.56
4.5	18	135	75	9	0.8
6.2	20	150	90	9	1.11
8.2	22	150	90	11	1.36
10.6	25	170	95	13	1.96
12.8	28	200	120	13	2.92
15.5	30	200	120	17	3.4
20	36	250	150	17	6.1
25	38	250	150	21	6.8
30	44	280	170	21	10.8
37	45	300	200	23	11.7
50	50	300	200	-	14.75
63	55	350	200	-	20
100	70	400	250	-	39
125	80	400	250	-	52

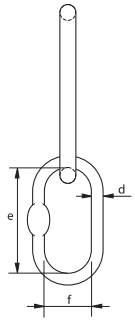
EXCEL®

EXCEL® Master link assemblies, grade 8



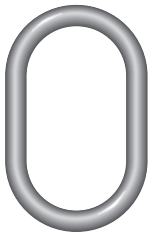
MTS



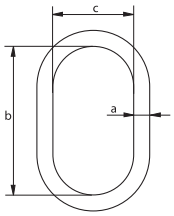


- **Material** : Grade 8, alloy steel
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-4
- **Finish** : painted yellow or red
- **Certification** : 2.1 2.2 3.1 MTC b
- **Note** : from 60 t without flat part

working load limit	diameter	length inside	width inside	diameter	length inside	width inside	thickness	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
2.5	16	120	70	13	100	60	7	1.16
3.5	18	135	75	16	100	60	6	1.75
6.5	22	150	90	18	120	70	9	2.8
8.5	25	170	95	20	120	70	11	3.82
10	28	200	120	20	120	70	11	4.7
13	30	200	120	22	135	75	14	5.85
17	36	250	150	25	135	75	14	9.35
20	38	250	150	28	170	95	17	11.75
27	45	280	170	33	200	120	17	18.5
30	45	300	200	36	200	120	21	22
40	50	300	200	38	150	90	21	24
50	55	300	200	38	150	90	23	27
60	58	350	200	42	150	90	-	34
80	70	400	250	55	300	150	-	72
100	80	400	250	58	300	150	-	92



P-6810

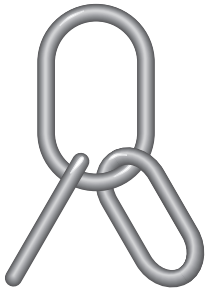


Master links DNV, grade 8

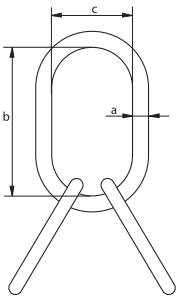
- **Material** : alloy steel, Grade 8
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : DNV 2.7-1, EN 12079-2 and EN 1677-4
- **Finish** : painted orange
- **Certification** : 2.1 2.2 3.1 DNV 2.7-1 [a]

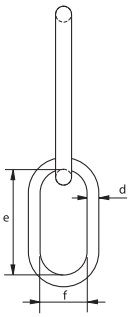
TYPE APPROVED PRODUCT
CERTIFICATION NOTE 2.7-1
CERTIFICATE NO. S-7732

working load limit	diameter	length inside	width inside	weight each
	a	b	c	
t	mm	mm	mm	kg
4.1	16	150	75	0.72
5.8	22	270	140	2.3
8.83	26	270	140	3.3
11.8	28	270	140	3.8
14.5	28	200	110	3
17.1	32	270	145	5.1
23	36	270	140	6.5
28.1	40	280	155	8.5
38.3	45	320	175	12.2
45	50	350	195	16.6
65	60	410	222	29.2
85	70	455	255	44.3



P-6820





Master link assemblies DNV, grade 8

- **Material** : alloy steel, Grade 8
- **Safety Factor** : MBL equals 5 x WLL
- **Standard** : DNV 2.7-1, EN 12079-2 and EN 1677-4
- **Finish** : painted orange
- **Certification** : 2.1 2.2 3.1 DNV 2.7-1 [a]

TYPE APPROVED PRODUCT
CERTIFICATION NOTE 2.7-1
CERTIFICATE NO. S-7732

working load limit	diameter	length inside	width inside	diameter	length inside	width inside	weight each
	a	b	c	d	e	f	
t	mm	mm	mm				kg
4.1	16	150	75	14	130	65	1.7
5.8	22	270	140	16	150	75	3.6
8.83	26	270	140	20	140	70	5.3
11.8	28	270	140	20	140	70	5.9
17.1	32	270	140	26	190	102	9.7
23	36	270	140	28	190	100	11.9
28.1	40	280	155	32	200	110	16.4
38.3	45	320	175	36	225	125	23.5
45	50	350	195	40	260	130	32.3
65	60	410	220	50	350	195	62
85	70	450	250	60	410	220	100

Applications

Thrust bearing swivels are used to prevent wire rope or chain from transferring their normal twisting motion to the item being lifted.
Green Pin® swivels are not designed to rotate under load, but are intended as positioning devices only.
For rotation under load, thrust bearing swivels should be used. Our swivels can be supplied with two types of end fittings.

Range

Van Beest offers two types of swivels:
• Green Pin® swivels, ranging from WLL 0.39 up to 20.5 tons, with eye-eye or jaw-eye terminals;
• Thrust bearing swivels, ranging from WLL 1 up to 40 tons, with eye-eye terminals.

Van Beest can also offer other types of swivels in grade 8 and grade 10.
Please refer to the EXCEL® section in this catalogue for more information.

Design

Green Pin® swivels are drop forged. Thrust bearing swivels are machined from carbon steel. The range of thrust bearing swivels we supply are fitted with grease nipples to ensure long life and smooth operation. The greasing schedule must be adjusted to the frequency and intensity of use.

Each swivel is generally marked with:

- Working load limit	■ e.g. 2.4 t
- manufacturer's symbol	■ e.g. GP
- size in inch	■ e.g. $^{5}/_{8}$"
- traceability code	■ e.g. HA

Finish

Green Pin® eye-eye and jaw-eye swivels are hot dipped galvanized.
Thrust bearing swivels are painted.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Swivels should be inspected before use to ensure that:

- all markings are legible;
- a swivel with the correct WLL has been selected;
- the bolt, nut or any other locking system cannot vibrate out of position;
- swivels are free from nicks, gouges and cracks;
- swivels may not be heat treated as this may affect their WLL.

The WLL should be applied in-line. Avoid overloads. Side loading is not allowed since the swivels are not designed for this purpose.

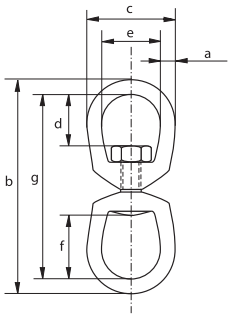
Never replace a swivel pin or nut with a pin other than the one designed for the purpose, as otherwise the swivel may not be suitable for the load imposed.

Swivels must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the swivels are used in severe operating conditions.

Green Pin® swivels

Eye - Eye

G-7713



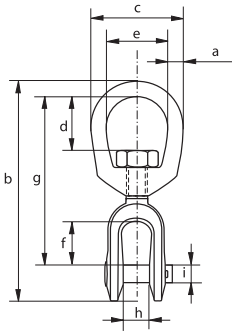
- **Material** : high tensile steel, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : US Federal Spec. RR-C-271, Type VII, Class 2
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2

working load limit	diameter	length outside	width outside	length inside	width inside	length inside	length	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.39	6	87	32	18	19	27	75	0.1
0.57	8	106	41	21	25	32	90	0.18
1.02	10	129	51	24	32	38	109	0.3
1.6	13	164	64	33	38	51	138	0.6
2.4	16	199	76	40	44	60	167	1
3.3	19	221	89	44	51	67	183	1.82
4.5	22	257	102	52	57	78	213	2.55
5.7	25	295	114	59	64	89	245	4.06
8.2	32	337	143	68	80	94	273	7.43
20.5	38	501	178	102	102	150	425	20.8

Green Pin® swivels

Jaw - Eye

G-7723



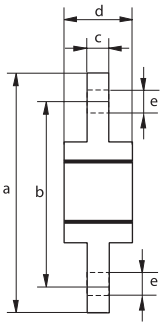
- **Material** : high tensile steel, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : US Federal Spec. RR-C-271, Type VII, Class 3
- **Finish** : hot dipped galvanized
- **Certification** : 2.1 2.2

working load limit	diameter	length	width outside	length inside	width inside	length inside	length	width inside	diameter pin	weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.39	6	84	32	18	19	22	67	12	6	0.09
0.57	8	98	41	21	25	22	75	13	8	0.16
1.02	10	121	51	24	32	27	92	16	10	0.32
1.6	13	154	64	33	38	33	114	19	13	0.57
2.4	16	186	76	40	44	38	135	24	16	1.12
3.3	19	211	89	44	51	44	154	29	19	1.76
4.5	22	242	102	52	57	52	178	30	22	2.66
5.7	25	290	114	59	64	71	217	44	29	4.02
8.2	32	329	143	68	80	71	230	52	35	7.14
20.5	38	501	178	106	102	113	364	73	50	24.8

Green Pin® Thrust bearing swivels

Eye - Eye

P-7740



- **Material** : carbon steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted black
- **Certification** : 2.1 2.2 MTC [a]

working load limit	length	length	thickness	diameter	diameter hole	weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
1	174	128	12.5	49	21	1.4
2	223	173	19	68	22	3.5
3	278	210	26	79	29	6.4
5	290	222	26	89	31	7.9
8	366	276	40	106	43	15.2
10	390	300	40	118	49	19.1
15	457	355	40	128	49	26.6
20	474	372	40	118	51	25
30	612	472	64	138	59	50
40	760	600	68	168	65	-

Applications

Hooks are used in lifting systems as a connection between the load to be lifted and the wire rope or chain slings.

Range

Van Beest offers a range of hooks, from drop forged carbon steel eye hooks to drop forged alloy steel swivel hooks, which are quenched and tempered.

Van Beest can also offer other types of lifting hooks in grade 8, grade 10 and stainless steel.
Please refer to the EXCEL® section in this catalogue for more information.

Design

There are different types of hooks with specific designs to suit various purposes. Eye hooks and swivel hooks are designed to be used with wire rope or chain. Pipe line hooks are designed for easy handling of tubes.

Most types of hooks are supplied with a safety latch.

All types of hooks are generally marked with:

- Working Load Limit	■ e.g. 5.4 t
- manufacturer's symbol	■ e.g. GP
- traceability code	■ e.g. H-AB
- steel grade	■ e.g. 4 or 8

Finish

Grade 8 hooks are painted red, grade 4 hooks are painted green.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Hooks should be inspected before use to ensure that:

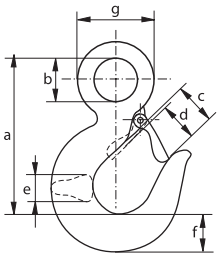
- all markings are legible;
- a hook with the correct WLL has been selected. For further details we refer to EN 818 standard for Chain Slings;
- the latch is present;
- the latch is functional;
- the bolt, nut or any other locking system cannot vibrate out of position;
- the hook is never side-, tip- or back- loaded;
- swivel hooks may not rotate under load;
- always make sure that the hook is supporting the load correctly;
- the latch should not be supporting any load;
- hooks are free from nicks, gouges and cracks;
- hooks may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a hook by machining, welding, heating or bending as this may affect the WLL.

Hooks must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the hooks are used in severe operating conditions.

Green Pin® large eye hooks, Grade 4

with safety latch

P-6714C



- **Material** : carbon steel, Grade 4
- **Safety factor** : MBL equals 5 x WLL
- **Standard** : generally to EN 1677-5
- **Finish** : painted green
- **Certification** : 2.1 2.2 3.1

working load limit	length	diameter eye inside	width opening	width opening	thickness	width	diameter eye outside	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.8	81	19	24	20	16	19	37	0.27
1	91	22	26	22	18	22	45	0.4
1.6	105	27	32	27	20	27	52	0.64
2	124	32	34	30	24	31	62	1.08
3.2	147	39	44	37	31	36	74	1.68
5	190	50	55	48	37	48	96	3.75

In inch

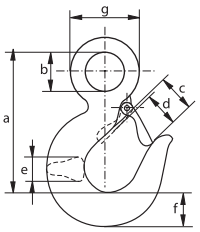
working load limit	length	diameter eye inside	width opening	width opening	thickness	width	diameter eye outside	weight each
t	a inch	b inch	c inch	d inch	e inch	f inch	g inch	lbs
0.8	3 3/16	3/4	15/16	25/32	5/8	3/4	1 1/2	0.6
1	3 19/32	7/8	1 1/32	7/8	23/32	7/8	1 25/32	0.88
1.6	4 1/8	1 3/32	1 9/32	1 3/32	25/32	1 3/32	2 1/32	1.32
2	4 7/8	1 9/32	1 11/32	1 3/16	15/16	1 1/4	2 7/16	2.16
3.2	5 25/32	1 9/16	1 3/4	1 1/2	1 1/4	1 7/16	2 29/32	3.7
5	7 1/2	1 31/32	2 5/32	1 29/32	1 1/2	1 29/32	3 25/32	7.94

Green Pin® large eye hooks, Grade 8

with safety latch

- **Material** : alloy steel, Grade 8
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-2
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1

P-6714A



working load limit	length	diameter eye inside	width opening	width opening	thickness	width	diameter eye outside	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
1.25	81	19	24	20	16	19	37	0.3
1.6	91	22	26	22	18	22	45	0.44
2.5	105	27	32	27	20	27	52	0.63
3.2	124	32	34	30	24	31	62	1.27
5.4	147	39	44	37	31	36	74	1.76
8.2	190	50	55	48	37	48	96	3.6
12.8	230	64	64	53	48	61	126	7.7
16	254	70	70	60	58	69	139	10.8
22	316	89	91	77	63	81	169	16.7

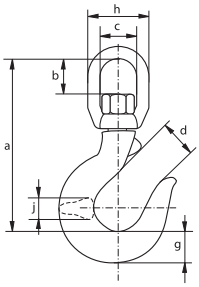
In inch

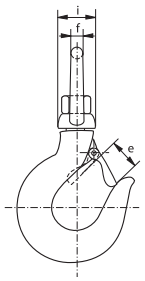
working load limit	length	diameter eye inside	width opening	width opening	thickness	width	diameter eye outside	weight each
t	a inch	b inch	c inch	d inch	e inch	f inch	g inch	lbs
1.25	3 3/16	3/4	15/16	25/32	5/8	3/4	1 1/2	0.66
1.6	3 19/32	7/8	1 1/32	7/8	23/32	7/8	1 25/32	0.97
2.5	4 1/8	1 3/32	1 9/32	1 3/32	25/32	1 3/32	2 1/32	1.39
3.2	4 7/8	1 9/32	1 11/32	1 3/16	15/16	1 1/4	2 7/16	2.80
5.4	5 25/32	1 9/16	1 3/4	1 1/2	1 1/4	1 7/16	2 29/32	3.88
8.2	7 1/2	1 31/32	2 5/32	1 29/32	1 1/2	1 29/32	3 25/32	7.94
12.8	9 3/32	2 17/32	2 17/32	2 3/32	1 29/32	2 3/8	4 15/16	16.98
16	10	2 3/4	2 3/4	2 11/32	2 9/32	2 23/32	5 1/2	23.8
22	12 7/16	3 17/32	3 19/32	3 1/32	2 1/2	3 3/16	6 5/8	36.8

Green Pin® swivel hooks, Grade 8

with safety latch

P-6703A





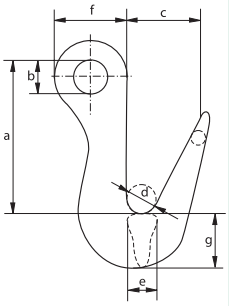
- **Material** : alloy steel, Grade 8
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1

working load limit	length	length inside	width inside	width opening	width opening	diameter	width	width	width	thickness	weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
1.25	118	28	31	24	20	11	19	52	30	16	0.49
1.6	145	35	40	26	22	14	23	68	37	18	0.95
2.5	167	43	47	32	27	17	27	81	43	20	1.48
3.2	180	47	47	34	30	17	31	81	43	24	1.79
5.4	217	54	64	44	37	21	37	106	64	31	3.8
8.2	276	69	78	55	48	26	48	130	77	37	7.4
11.5	310	68	82	58	53	22	60	136	82	43	9.7
16	352	84	92	66	58	24	67	154	92	52	14.9
22	434	107	115	87	78	29	80	191	108	64	27
31.5	512	117	132	97	87	34	94	222	132	80	46

In inch

working load limit	length	length inside	width inside	width opening	width opening	diameter	width	width	width	thickness	weight each
	a	b	c	d	e	f	g	h	i	j	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
1.25	4 5/8	1 1/8	1 1/4	15/16	25/32	7/16	3/4	2 1/32	1 3/16	5/8	1.08
1.6	5 23/32	1 3/8	1 19/32	1 1/32	7/8	9/16	29/32	2 11/16	1 1/2	23/32	2.09
2.5	6 9/16	1 23/32	1 7/8	1 9/32	1 3/32	11/16	1 3/32	3 3/16	1 23/32	25/32	3.26
3.2	7 3/32	1 7/8	1 7/8	1 11/32	1 3/16	11/16	1 1/4	3 3/16	1 23/32	15/16	3.95
5.4	8 9/16	2 1/8	2 17/32	1 3/4	1 1/2	13/16	1 1/2	4 5/32	2 17/32	1 1/4	8.38
8.2	10 7/8	2 23/32	3 3/32	2 5/32	1 15/16	1 1/32	1 29/32	5 1/8	3 1/32	1 1/2	16.31
11.5	12 3/16	2 11/16	3 1/4	2 9/32	2 3/32	7/8	2 11/32	5 11/32	3 1/4	1 23/32	21.38
16	13 7/8	3 5/16	3 5/8	2 19/32	2 9/32	15/16	2 5/8	6 1/32	3 5/8	2 1/32	32.8
22	17 1/8	4 3/16	4 17/32	3 7/16	3 3/32	1 5/32	3 5/32	7 17/32	4 1/4	2 17/32	59.5
31.5	20 5/32	4 19/32	5 3/16	3 13/16	3 7/16	1 11/32	3 23/32	8 3/4	5 3/16	3 5/32	101.4

P-6731

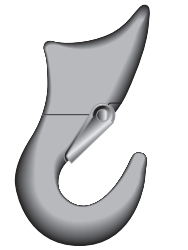


Green Pin® pipe line hooks

for handling large cylindrical shapes like pipe lines, tubes etc.

- **Material** : alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1

working load limit at hook top	working load limit at hook bottom	length	diameter eye inside	width opening	diameter	thickness	diameter eye outside	width	weight each
		a	b	c	d	e	f	g	
t	t	mm	mm	mm	mm	mm	mm	mm	kg
2	7.5	167	35	74	30	31	73	57	2.65



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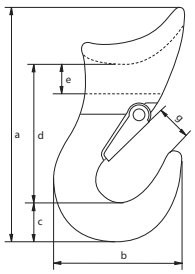
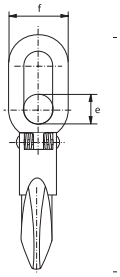




Green Pin® sliding choker hooks, Grade 8

with safety latch

- **Material** : alloy steel, Grade 8
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1

working load limit	diameter rope	length	width	thickness	length	diameter	thickness	opening	weight each
		a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.8	6 - 11	112	63	19	65	14	30	16	0.4
1.6	10 - 13	143	82	26	83	17	30	19	0.8
2.5	14 - 16	170	98	30	97	19	33	25	1.2
3.2	16 - 20	196	115	36	110	22	40	28	1.9
5.4	22 - 26	260	142	46	145	36	60	35	4.2

Applications

Eye bolts and eye nuts are used for lifting machines, appliances or any other objects which cannot be lifted by hand or by fork lift truck.

Range

Van Beest offers a wide range of lifting eye bolts and eye nuts, from M6 up to M100, with WLLs from 0.07 t up to 40 t.

Van Beest can also offer other types of eye bolts and nuts in grade 8 and stainless steel.
Please refer to the EXCEL® section in this catalogue for more information.

Design

Eye bolts and eye nuts are drop forged from C15 steel. The threading is standard metric.

Each eye bolt and eye nut is generally marked with:

- Working Load Limit	■ e.g. 0.7 t, valid for in-line lifting;
- manufacturer's symbol	■ e.g. Bs
- thread diameter	■ e.g. M16
- traceability code	■ e.g. A1
- steel grade	■ C15
- CE conformity code	■ CE

Finish

The eye bolts and eye nuts can be self coloured, electro-galvanized or hot dipped galvanized.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

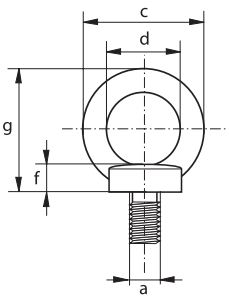
Instructions for use

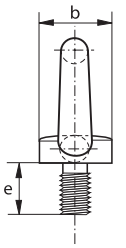
Eye bolts and eye nuts should be inspected before use to ensure that:

- all markings are legible;
- an eye bolt or eye nut with the correct WLL has been selected;
- WLLs are valid for in-line lifting only and have to be reduced for non-axial loading. For further details please refer to the standard: DIN 580 for eye bolts or DIN 582 for eye nuts;
- when used as a lifting device, the eye bolt or eye nut should always be fully screwed into the load in such a way that it fits properly against the load;
- make sure the thread is undamaged and clean;
- eye bolts and eye nuts are free from nicks, gouges and cracks;
- never grind, machine or cut an eyebolt or eye nut;
- eye bolts or eye nuts may not be heat treated as this may affect their WLL;
- never modify, repair or reshape an eye bolt or eye nut by machining, welding, heating or bending as this may affect the WLL.

Products must be regularly inspected in accordance with the safety standards valid in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the products are used in severe operating conditions.

E-8140





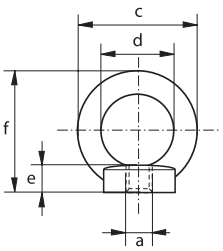
Eye bolts

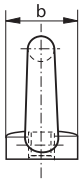
generally to DIN 580

- **Material** : carbon steel, C15
- **Safety factor** : MBL equals 6 x WLL
- **Standard** : generally to DIN 580
- **Finish** : electro-galvanized
- **Certification** : 2.1 2.2 CE

working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	height	weight per 100 pcs
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.07	M 6 x 1.00	20	36	20	13	6	36	5.1
0.14	M 8 x 1.25	20	36	20	13	6	36	5.5
0.23	M 10 x 1.50	25	45	25	17	8	45	10.3
0.34	M 12 x 1.75	30	54	30	20.5	10	53	16.9
0.49	M 14 x 2.00	35	63	35	27	12	60	29.9
0.7	M 16 x 2.00	35	63	35	27	12	62	30.7
0.9	M 18 x 2.50	40	72	40	30	14	71	42.8
1.2	M 20 x 2.50	40	72	40	30	14	71	42.4
1.5	M 22 x 2.50	45	81	45	35	14	80	62.8
1.8	M 24 x 3.00	50	90	50	36	18	90	90.8
2.5	M 27 x 3.00	50	90	50	36	18	90	88.3
3.2	M 30 x 3.50	65	108	60	45	22	109	159
4.3	M 33 x 3.50	65	108	60	45	22	110	167
4.6	M 36 x 4.00	75	126	70	54	26	128	235
6.1	M 39 x 4.00	75	126	70	54	26	130	266
6.3	M 42 x 4.50	85	144	80	63	30	147	403
8	M 45 x 4.50	85	144	80	63	35	150	521
8.6	M 48 x 5.00	100	166	90	68	35	168	632
11.5	M 56 x 5.50	110	184	100	78	38	187	879
16	M 64 x 6.00	120	206	110	90	42	208	1240
21	M 72 x 6.00	150	260	140	100	50	260	2293
28	M 80 x 6.00	170	296	160	112	55	298	3200
40	M 100 x 6.00	190	330	180	130	60	330	4800

E-8142



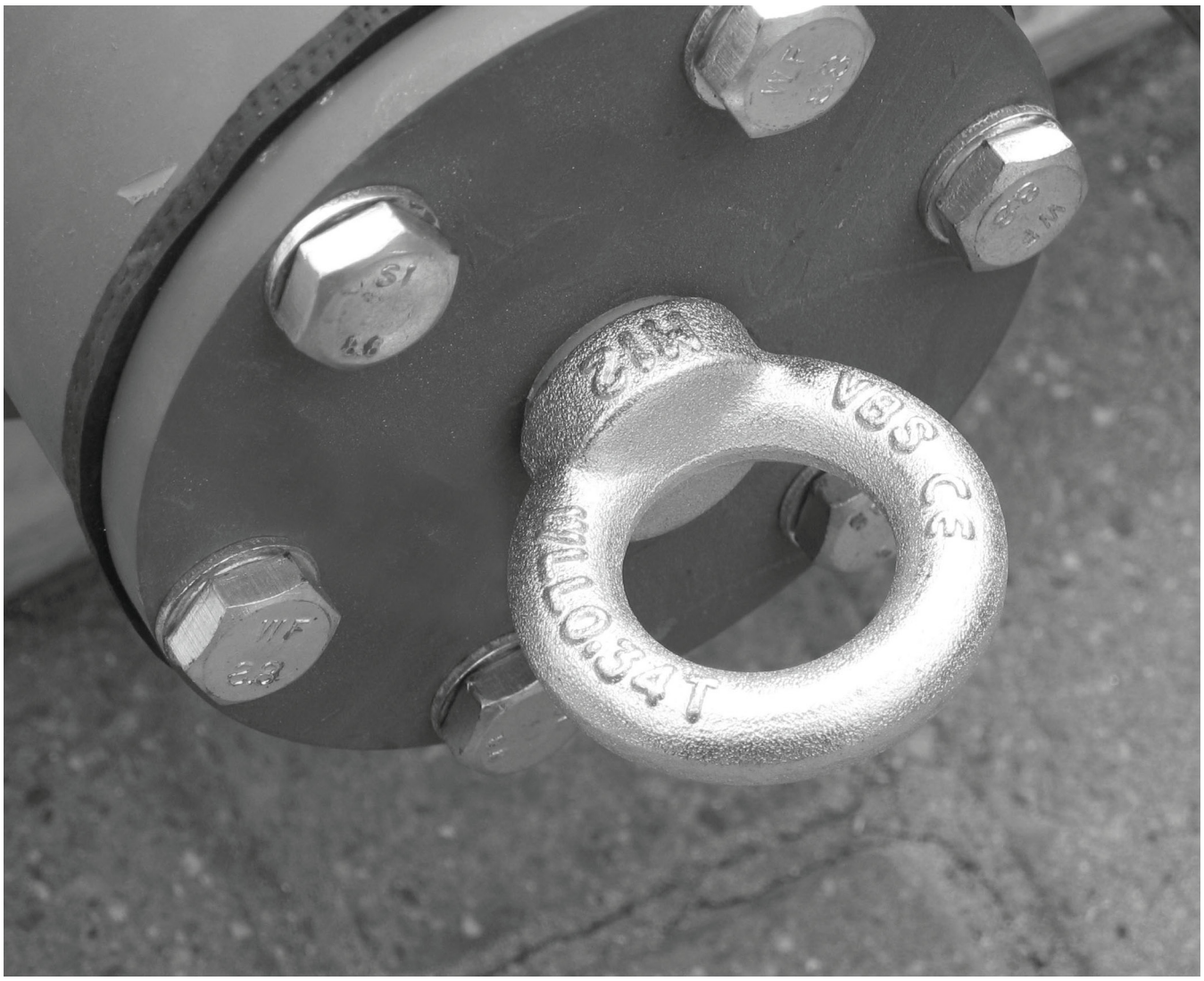


Eye nuts

generally to DIN 582

- **Material** : carbon steel, C15
- **Safety factor** : MBL equals 6 x WLL
- **Standard** : generally to DIN 582
- **Finish** : electro-galvanized
- **Certification** : 2.1 2.2 CE

working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	thickness base	height	weight per 100 pcs
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.07	M 6 x 1.00	20	36	20	8.5	36	5.1
0.14	M 8 x 1.25	20	36	20	8.5	36	5.2
0.23	M 10 x 1.50	25	45	25	10	45	9.4
0.34	M 12 x 1.75	30	54	30	11	53	16
0.49	M 14 x 2.00	35	63	35	13	60	25.5
0.7	M 16 x 2.00	35	63	35	13	62	24
0.9	M 18 x 2.50	40	72	40	16	71	36
1.2	M 20 x 2.50	40	72	40	16	71	35.2
1.5	M 22 x 2.50	45	81	45	18	80	51.7
1.8	M 24 x 3.00	50	90	50	20	90	75.4
2.5	M 27 x 3.00	50	90	50	20	90	102
3.2	M 30 x 3.50	65	108	60	25	109	125
4.3	M 33 x 3.50	65	108	60	25	110	131
4.6	M 36 x 4.00	75	126	70	30	128	208
6.1	M 39 x 4.00	75	126	70	30	130	210
6.3	M 42 x 4.50	85	144	80	35	147	305
8	M 45 x 4.50	85	144	80	35	150	407
8.6	M 48 x 5.00	100	166	90	40	168	502
8.6	M 52 x 5.00	110	184	100	45	187	830
11.5	M 56 x 5.50	110	184	100	45	187	669
16	M 64 x 6.00	120	206	110	50	208	930
21	M 72 x 6.00	150	260	140	60	260	1500


VBS CE
M10 34T

Applications

Green Pin® loadbinders are used for easy and efficient tightening of chain in lashing applications.
Green Pin® loadbinders are designed in such a way that they can effortlessly be operated using one hand.

Range

Van Beest offers four types of loadbinders: two ratchet types, a lever type and a spring type. Loadbinders are available for various chain sizes, ranging from 8 up to 16 mm. The ratchet types can be supplied with two hooks or two eyes as end fittings.

Design

Green Pin® loadbinders are designed with an ergonomic, easy-to-use handle for simple, single-hand use, and are manufactured from drop forged or cast steel. One ratchet type is equipped with standard chain eye grab hooks, the other type has an improved version of these hooks to reduce chain wear substantially. It is also fitted with a pin to keep the chain in place.
The latter type is designed to meet requirements of standard EN 12195-3.

Each loadbinder is generally marked with:

- Lashing Capacity	■ e.g. 10 t
- minimum breaking load	■ e.g. 21.2 t
- manufacturer's symbol	■ e.g. GP
- chain diameter in mm and inches	■ e.g. 13mm and $^1/_2$"
- traceability code	■ e.g. A1
- warning	■ not for lifting or hoisting applications

Finish

Green Pin® loadbinders are painted either red or green.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

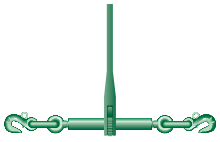
Loadbinders should be inspected before use to ensure that:

- all markings are legible;
- a loadbinder with the correct Lashing Capacity has been selected. For further details we refer to EN 12195-3, standard for Lashing Chains;
- loadbinders should never be used for lifting or hoisting applications;
- the loadbinder should never be side loaded, since loadbinders are suitable for in-line use only;
- the handle or any other locking system cannot vibrate out of position;
- the loadbinder must be hooked to the chain in such a way that you can operate the loadbinder whilst standing on the ground;
- never use a loadbinder while standing on the load;
- always keep yourself out of the path of the moving handle;
- if the handle of the lever type loadbinder cannot reach the correct locked position, never use a cheater pipe. In that case a ratchet type loadbinder must be used;
- in the locked position of a lever type loadbinder the bottom side of the loadbinder should touch the chain link. In this position secure the handle to the chain using the loose end of the chain or a piece of rope or soft wire;
- if the handle of a lever type loadbinder is released by hand, make sure you use an open hand under the handle and push upward. Do not close your hand around the handle. Move the handle with caution since it may whip as it comes free;
- loadbinders are free from nicks, gouges and cracks;
- loadbinders may not be heat treated as this may affect their Lashing Capacity;
- never modify, repair or reshape a loadbinder by machining, welding, heating or bending as this may affect the Lashing Capacity.

Loadbinders must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure. Inspection should take place at least every six months and more frequently when the loadbinders are used in severe operating conditions. Regularly lubricate all moving parts of a loadbinder to extend product life and reduce wear.

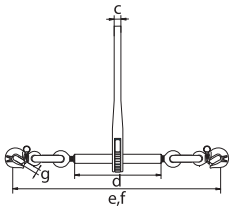
Green Pin® ratchet type loadbinders

with hooks, according to EN 12195-3

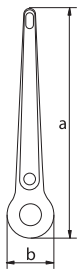


P-7170

- **Material** : drop forged, Grade 8
- **Safety factor** : MBL equals 2 x Lashing Capacity
- **Standard** : EN 12195-3
- **Finish** : painted red
- **Certification** : 2.1 2.2
- **Note** : Stf = 3000 daN



chain size	length	diameter	thickness	length barrel	length open	length closed	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8	387	65	15	255	735	575	11	160	4	5	8	4.9
10	387	65	15	255	760	595	13	165	6.3	7.9	12.6	5.4
13	387	65	15	260	840	690	16	150	10	12.5	21.2	7.7
16	387	65	15	260	840	690	19	150	16	20	32.2	10.2

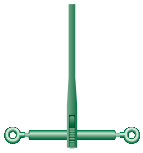


In inch

chain size	length	diameter	thickness	length barrel	length open	length closed	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
inch	inch	inch	inch	inch	inch	inch	inch	inch	t	t	t	lbs
5/16	15 1/4	2 9/16	19/32	10 1/32	28 29/32	22 5/8	7/16	6 9/32	4	5	8	10.80
3/8	15 1/4	2 9/16	19/32	10 1/32	29 29/32	23 7/16	1/2	6 1/2	6.3	7.9	12.6	11.90
1/2	15 1/4	2 9/16	19/32	10 1/4	33 3/32	27 5/32	5/8	5 29/32	10	12.5	21.2	16.98
5/8	15 1/4	2 9/16	19/32	10 1/4	33 3/32	27 5/32	3/4	5 29/32	16	20	32.2	22.5

Green Pin® ratchet type loadbinders

without hooks, according to EN 12195-3



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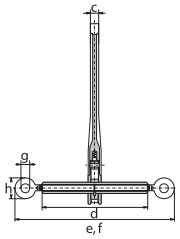
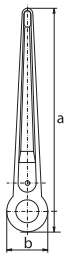




- **Material** : drop forged, Grade 8
- **Safety factor** : MBL equals 2 x Lashing Capacity
- **Standard** : EN 12195-3
- **Finish** : painted red
- **Certification** : 2.1 2.2
- **Note** : Stf = 3000 daN

chain size	length	diameter	thickness	length barrel	length open	length closed	diameter eye inside	diameter eye outside	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g	h					
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8	387	65	15	255	534	374	18	50	160	4	5	8	3.3
10	387	65	15	255	543	379	20	55	164	6.3	7.9	12.6	3.4
13	387	65	15	260	564	414	26	66	150	10	12.5	21.2	4
16	387	65	15	260	564	420	30	71	144	16	20	32.2	4.1

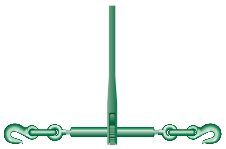
In inch

chain size	length	diameter	thickness	length barrel	length open	length closed	diameter eye inside	diameter eye outside	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g	h					
inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	t	t	t	lbs
5/16	15 1/4	2 9/16	19/32	10 1/32	21 1/32	14 23/32	23/32	1 31/32	6 9/32	4	5	8	7.28
3/8	15 1/4	2 9/16	19/32	10 1/32	21 3/8	14 29/32	25/32	2 5/32	6 7/16	6.3	7.9	12.6	7.50
1/2	15 1/4	2 9/16	19/32	10 1/4	22 3/16	16 5/16	1 1/32	2 19/32	5 29/32	10	12.5	21.2	8.82
5/8	15 1/4	2 9/16	19/32	10 1/4	22 3/16	16 9/16	1 3/16	2 25/32	5 11/16	16	20	32.2	9.04

Green Pin® ratchet type loadbinders

with hooks

- **Material** : drop forged/cast steel
- **Safety factor** : MBL equals 3.5 x Lashing Capacity
- **Finish** : painted red or green
- **Certification** : 2.1 2.2



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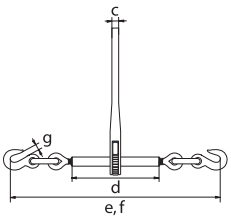
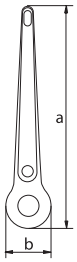




chain size	length handle	diameter	thickness	length barrel	length open	length closed	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8 - 10	385	65	15	255	735	575	12	160	2.45	4.9	8.62	4.32
10 - 13	385	65	15	255	760	595	16	165	4.175	8.35	14.97	5.73
13 - 16	385	65	15	260	840	690	18	150	5.9	11.8	20.865	7.85

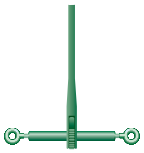
In inch

chain size	length handle	diameter	thickness	length barrel	length open	length closed	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
inch	inch	inch	inch	inch	inch	inch	inch	inch	t	t	t	lbs
$^{5}/_{16}$ - $^{3}/_{8}$	15 $^{5}/_{32}$	2 $^{9}/_{16}$	$^{19}/_{32}$	10 $^{1}/_{32}$	28 $^{29}/_{32}$	22 $^{5}/_{8}$	$^{15}/_{32}$	6 $^{9}/_{32}$	2.45	4.9	8.62	9.52
$^{3}/_{8}$ - $^{1}/_{2}$	15 $^{5}/_{32}$	2 $^{9}/_{16}$	$^{19}/_{32}$	10 $^{1}/_{32}$	29 $^{29}/_{32}$	23 $^{7}/_{16}$	$^{5}/_{8}$	6 $^{1}/_{2}$	4.175	8.35	14.97	12.63
$^{1}/_{2}$ - $^{5}/_{8}$	15 $^{5}/_{32}$	2 $^{9}/_{16}$	$^{19}/_{32}$	10 $^{1}/_{4}$	33 $^{3}/_{32}$	27 $^{5}/_{32}$	$^{23}/_{32}$	5 $^{29}/_{32}$	5.9	11.8	20.865	17.31

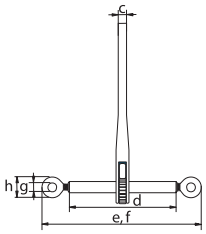
Green Pin® ratchet type loadbinders

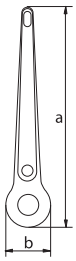
without hooks

- **Material** : drop forged/cast steel
- **Safety factor** : MBL equals 3.5 x Lashing Capacity
- **Finish** : painted red or green
- **Certification** : 2.1 2.2



P-7150R
P-7150G





chain size	length handle	diameter	thick-ness	length barrel	length open	length closed	diameter eye inside	diameter eye outside	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g	h					
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8 - 10	385	65	15	255	534	374	18	50	160	2.45	4.9	8.62	3.27
10 - 13	385	65	15	255	543	379	20	55	164	4.175	8.35	14.97	4.75
13 - 16	385	65	15	260	564	412	26	66	152	5.9	11.8	20.865	6.65

In inch

chain size	length handle	diameter	thick-ness	length barrel	length open	length closed	diameter eye inside	diameter eye outside	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g	h					
inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	t	t	t	lbs
5/16 - 3/8	15 5/32	2 9/16	19/32	10 1/32	21 1/32	14 23/32	23/32	1 31/32	6 9/32	2.45	4.9	8.62	7.21
3/8 - 1/2	15 5/32	2 9/16	19/32	10 1/32	21 3/8	14 29/32	25/32	2 5/32	6 7/16	4.175	8.35	14.97	10.47
1/2 - 5/8	15 5/32	2 9/16	19/32	10 1/4	22 3/16	16 1/4	1 1/32	2 19/32	5 31/32	5.9	11.8	20.865	14.66

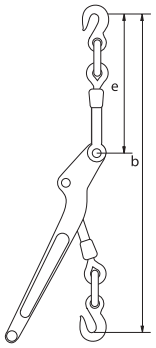
Green Pin® lever type loadbinders

with hooks

P-7110

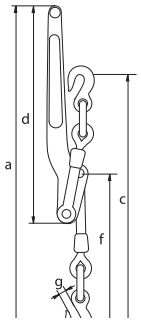
- **Material** : drop forged/cast steel
- **Safety factor** : MBL equals 3.5 x Lashing Capacity
- **Finish** : painted green
- **Certification** : 2.1 2.2

chain size	length	length open	length closed	length handle	length	length	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8 - 10	610	592	488	408	287	287	12	104	2.45	4.9	8.62	2.81
10 - 13	768	680	550	458	325	325	16	130	4.175	8.35	14.97	5.08



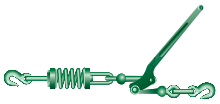
In inch

chain size	length	length open	length closed	length handle	length	length	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
inch	inch	inch	inch	inch	inch	inch	inch	inch	t	t	t	lbs
5/16 - 3/8	24	23 5/16	19 1/4	16 3/32	11 5/16	11 5/16	15/32	4 3/32	2.45	4.9	8.62	6.19
3/8 - 1/2	30 3/16	26 3/4	21 11/16	18 1/32	12 25/32	12 25/32	5/8	5 1/8	4.175	8.35	14.97	5.08



Green Pin® spring type loadbinders

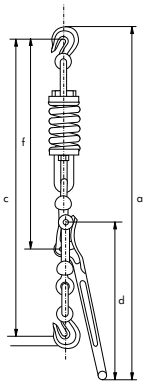
with hooks



P-7120

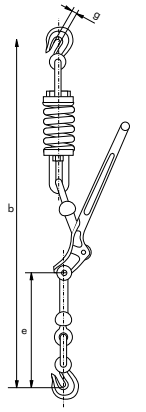
- **Material** : drop forged/cast steel
- **Safety factor** : 8-10 mm: MBL equals 3.5 x Lashing Capacity
  10-13 mm: MBL equals 3 x Lashing Capacity
- **Finish** : painted green
- **Certification** : 2.1 2.2

chain size	length	length open	length closed	length handle	length	length	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
8 - 10	873	836	739	392	285	450	13	97	2.45	4.9	8.575	7.2
10 - 13	940	903	791	438	330	475	15	112	4.175	8.35	12.525	9.0



In inch

chain size	length	length open	length closed	length handle	length	length	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
	a	b	c	d	e	f	g					
mm	mm	mm	mm	mm	mm	mm	mm	mm	t	t	t	kg
5/16 - 3/8	34 11/32	32 29/32	29 3/32	15 7/16	11 1/4	17 3/4	1/2	3 13/16	2.45	4.9	8.575	15.87
3/8 - 1/2	37	35 9/16	31 1/8	17 9/32	13	18 23/32	19/32	4 3/8	4.175	8.35	12.525	19.84



Applications

Short link and long link commercial grade 3 chain is for general purpose use. These types of chain may not be used for lifting purposes.

Range

Van Beest supplies a wide range of commercial chain, generally to DIN 763 and DIN 766 ranging from 3 up to 20 mm.

Van Beest can also offer lifting chain in grade 8, grade 10 and stainless steel.
Please refer to the EXCEL® section in this catalogue for more information.

Design

Chain supplied by Van Beest generally follows DIN 763 for the long link chain or DIN 766 for short link chain.
It is made of mild steel grade 3.
These types of chain are not suitable for lifting purposes.

Finish

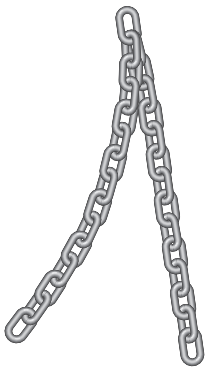
All chain is available in self coloured, electro-galvanized or hot dipped galvanized condition.

Instructions for use

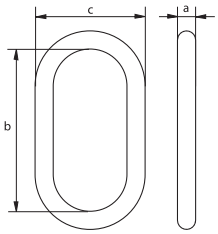
Chain should be inspected before use to ensure that:

- DIN 766 and DIN 763 chain may not be used for lifting purposes;
- chain is designed for in-line use only;
- chain is free from nicks, gouges and cracks;
- chain may not be heat treated as this may affect the performance;
- never modify, repair or reshape chain by machining, welding, heating or bending as this may affect the Lashing Capacity.

Chain must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the chain is used in severe operating conditions.



S-7660
E-7661
G-7662



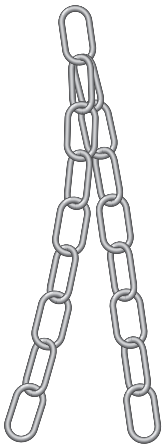
Short link chain

generally to DIN 766 and DIN 5685-3, commercial quality

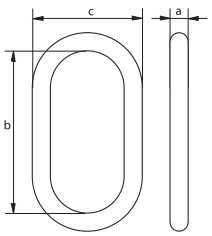
Not to be used for lifting applications!

- **Material** : mild steel, Grade 3
- **Standard** : generally to DIN 766 and DIN 5685-3
- **Finish** : self coloured, electro-galvanized or hot dipped galvanized
- **Certification** : 2.1

diameter	length inside	width outside	weight per m
a	b	c	
mm	mm	mm	kg
3	16	11	0.17
4	16	14	0.32
5	18.5	17	0.5
6	18.5	20	0.75
7	22	23	1
8	24	26	1.35
9	27	30	1.8
10	28	34	2.25
11	31	36	2.7
13	36	44	3.8
16	45	54	5.8
18	50	60	7.3
20	56	67	9



S-7630
E-7631
G-7632



Long link chain

generally to DIN 763 and DIN 5685-1, commercial quality

Not to be used for lifting applications!

- **Material** : mild steel, Grade 3
- **Standard** : generally to DIN 763 and DIN 5685-1
- **Finish** : self coloured, electro-galvanized or hot dipped galvanized
- **Certification** : 2.1

diameter	length inside	width outside	weight per m
a	b	c	
mm	mm	mm	kg
3	26	13	0.14
4	32	16	0.27
5	36	20	0.43
6	42	24	0.63
7	48	28	0.86
8	54	32	1.1
10	66	40	1.75
13	82	50	2.95
16	100	60	4.45
20	125	75	7

Applications

Plate lifting clamps are used for lifting and transportation of all kinds of steel plates and beams.

Range

Van Beest offers a wide range of lifting clamps for horizontal and/or vertical lifting of steel plates and beams ranging from WLL 0.75 t up to 20 t.
They can handle steel plates with a thickness up to 150 mm.
Upon request other types of clamps can be manufactured.

Design

Four different designs have been developed:

- type E for lifting and vertical transportation of steel plates;
- type EH for horizontal transportation of steel plates;
- type EU a universal type for transportation in all directions;
- type ESV for transportation of steel beams.

Type E, EH and EU are also available as ES, EHS and EUS versions, which have an increased opening.

All types of lifting clamps are generally marked with:

• Working Load Limit	■ e.g. 3000 kg
• manufacturer's identification symbol	■ Logo
• jaw opening in mm	■ e.g. 0-28mm
• serial number	■ e.g. E 1234567
• CE conformity code	■ CE

Finish

The plate lifting clamps are made of carbon and alloy steel and are painted.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Plate lifting clamps should be inspected before use to ensure that:

- all markings are legible;
- a clamp with the correct WLL has been selected;
- always make sure that the clamp is supporting the load correctly;
- the WLL should be applied in-line;
- overloads are not permitted;
- the locking lever or any other locking system cannot vibrate out of position;
- plate lifting clamps are free from nicks, gouges and cracks;
- clamps may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a clamp by machining, welding, heating or bending as this may affect the WLL.

INFO

For more detailed instructions for use, we refer to the instructions in the FAQ section on our website:
PI-03-15 for Green Pin® Plate lifting clamp, types EH/EHS (P-6635 and P-6636)
PI-03-16 for Green Pin® Plate lifting clamp, types E/ES/EU/EUS (P-6615, P-6616, P-6625 and P-6626)
PI-03-17 for Green Pin® lifting clamp, type ESV (P-6685)

Plate lifting clamps must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the clamps are used in severe operating conditions.

E - ES

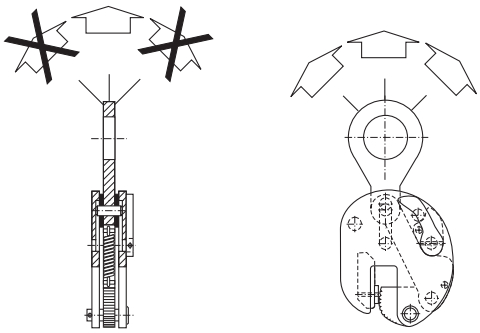


Plate lifting clamps type E and ES.
Do not side load the lifting eye.

EU - EUS

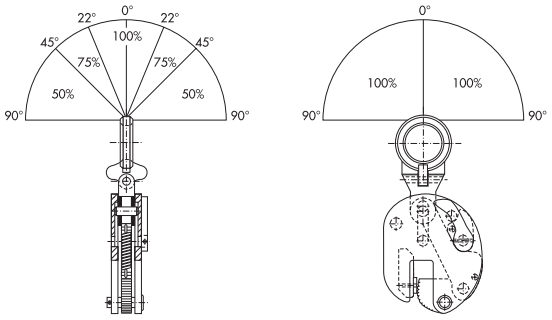


Plate lifting clamps type EU and EUS.
Load reduction should be applied as per load direction angle and corresponding remaining percentage of the Working Load Limit.

EH - EHS
100% WLL

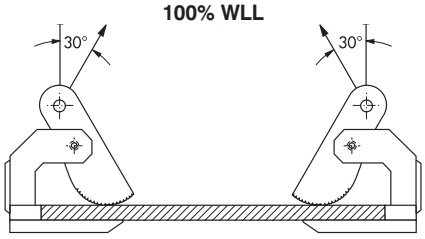
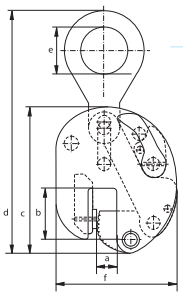
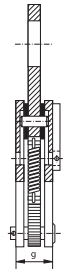


Plate lifting clamps type EH and EHS.
Full load may be applied up to a load direction angle of maximum 30°. Do not use larger angles.

P-6615





Green Pin® plate lifting clamp, type E

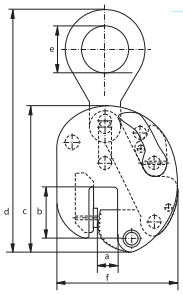
for lifting and vertical transportation

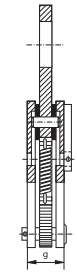
- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

type	working load limit	width opening	length opening	length	length	diameter inside eye	width	thickness	weight each
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.75 E	0.75	0 - 14	45	115	210	30	104	36	1.5
1 E	1	0 - 22	72	200	337	57	170	44	6.6
1.5 E	1.5	0 - 22	72	200	337	57	170	52	7.1
2 E	2	0 - 28	87	237	430	70	218	65	14.7
3 E	3	0 - 28	87	237	430	70	218	77	15.9
4 E	4	0 - 32	115	293	500	86	226	69	19.5
6 E	6	0 - 32	115	293	500	86	226	85	23.2
7.5 E	7.5	0 - 42	120	350	560	80	305	90	35
9 E	9	0 - 52	125	380	620	88	274	90	48
12 E	12	0 - 75	135	480	760	90	410	130	90
15 E	15	0 - 75	135	480	760	90	410	130	90
20 E	20	0 - 75	160	550	890	100	490	140	132

INFO

P-6616





Green Pin® plate lifting clamp, with enlarged opening, type ES

for lifting and vertical transportation

- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

type	working load limit	width opening	length opening	length	length	diameter inside eye	width	thickness	weight each
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.75 ES	0.75	12 - 24	45	115	210	30	114	36	1.5
1 ES	1	18 - 38	72	200	337	57	186	44	6
1.5 ES	1.5	18 - 38	72	200	337	57	186	52	7.1
2 ES	2	23 - 50	87	237	430	70	240	65	13.2
3 ES	3	23 - 50	87	237	430	70	240	77	14.2
4 ES	4	26 - 58	115	293	500	86	252	69	21
6 ES	6	26 - 58	115	293	500	86	252	85	24.2
7.5 ES	7.5	30 - 72	120	350	560	80	335	90	35
9 ES	9	48 - 100	125	380	620	88	274	90	48
12 ES	12	75 - 150	135	480	760	90	485	130	90
15 ES	15	75 - 150	135	480	760	90	485	130	94
20 ES	20	75 - 150	160	550	890	100	565	140	132

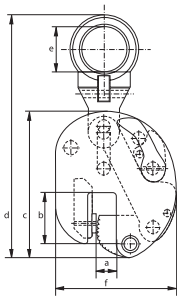
INFO

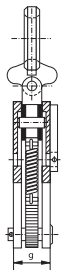
Green Pin® plate lifting clamp, type EU

for lifting and transportation in all directions

- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

P-6625





type	working load limit	width opening	length opening	length	length	diameter inside eye	width	thickness	weight each
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.75 EU	0.75	0 - 14	45	115	220	31	104	36	1.6
1.5 EU	1.5	0 - 22	72	200	327	68	170	52	7.9
3 EU	3	0 - 28	87	237	450	80	218	77	15.2
6 EU	6	0 - 32	115	293	480	80	226	85	26
7.5 EU	7.5	0 - 42	120	350	580	80	305	90	35
9 EU	9	0 - 52	125	380	700	90	274	90	48
12 EU	12	0 - 75	135	480	780	115	410	130	82

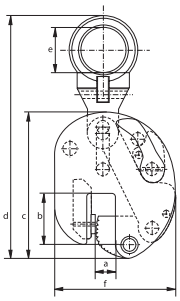
INFO

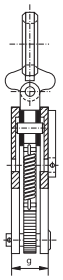
Green Pin® plate lifting clamp, with enlarged opening, type EUS

for lifting and transportation in all directions

- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

P-6626

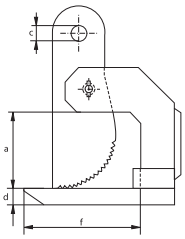


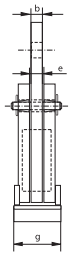


type	working load limit	width opening	length opening	length	length	diameter inside eye	width	thickness	weight each
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.75 EUS	0.75	12 - 24	45	115	220	31	114	36	1.6
1.5 EUS	1.50	18 - 38	72	200	327	68	186	52	7.9
3 EUS	3	23 - 50	87	237	430	80	240	78	15
6 EUS	6	26 - 58	115	293	480	80	252	95	26
7.5 EUS	7.5	30 - 72	120	350	580	80	335	100	35
9 EUS	9	48 - 100	125	380	700	90	384	100	52
12 EUS	12	75 - 150	135	480	780	115	485	140	94

INFO

P-6635





Green Pin® plate lifting clamp, type EH

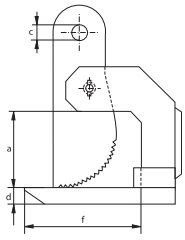
for lifting and horizontal transportation

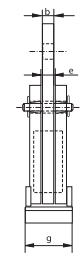
- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

type	working load limit per set	width opening	thickness	diameter eye	thickness	width	length	width	weight per set
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
1.5 EH	1.5	0 - 22	18	16.2	12	16	70	60	4
3 EH	3	0 - 60	16	23	25	18	155	80	8
4 EH	4	0 - 60	20	42	25	22	155	80	8.4
6 EH	6	0 - 60	20	42	25	22	155	100	10
8 EH	8	0 - 60	25	42	25	27	155	120	20
10 EH	10	0 - 60	25	42	30	27	155	120	28
14 EH	14	0 - 60	30	48	35	32	155	130	36
18 EH	18	0 - 60	30	48	40	32	155	150	48.2

INFO

P-6636





Green Pin® plate lifting clamp, with enlarged opening, type EHS

for lifting and horizontal transportation

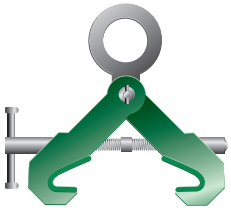
- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC b CE

type	working load limit per set	width opening	thickness	diameter eye	thickness	width	length	width	weight per set
	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
3 EHS	3	0 - 100	16	23	25	18	155	80	12.4
4 EHS	4	0 - 100	20	42	25	22	155	80	17.6
6 EHS	6	0 - 100	20	42	25	22	155	100	20
8 EHS	8	0 - 100	25	42	25	27	155	120	26
10 EHS	10	0 - 100	25	42	30	27	155	120	32
14 EHS	14	0 - 100	30	48	40	32	155	130	21
18 EHS	18	0 - 100	30	48	40	32	155	150	52

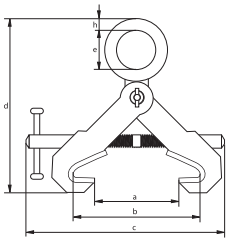
INFO

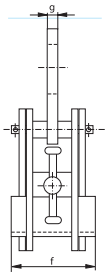
Green Pin® lifting clamp, type ESV

for lifting and transportation of steel beams



P-6685





- **Material** : carbon and alloy steel
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE

type	working load limit	width jaw opening	width jaw opening	length	height	diameter eye inside	width	thickness	width	weight each
		a	b	c	d	e	f	g	h	
	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
2 ESV	2	0 - 160	60 - 200	270	210 - 250	65	120	16	22	5.1
3 ESV	3	0 - 160	60 - 200	270	250 - 290	65	120	16	22	5.3
4 ESV	4	0 - 250	80 - 310	400	285 - 370	70	125	20	28	8.6
5 ESV	5	0 - 260	90 - 320	400	355 - 445	80	125	20	36	11.1
6 ESV	6	0 - 340	85 - 420	480	360 - 510	80	125	20	36	14

INFO

Green Pin® plate lifting clamp

spare parts

P-6651 lifting eye

P-6652 lock lever assembly

S-6653 lock spring

P-6654 cam assembly

S-6655 cam pin

S-6656 pivot

S-6657 eye pin

P-6658 universal eye component

Applications

Blocks are used in lifting systems, to change load direction or to drag a load. Blocks and the wire ropes they contain make a connection between a load and a lifting device.

Range

Van Beest offers a wide range of blocks, from single sheave snatch blocks to multiple-sheave malleable iron blocks for use with wire- or fibre rope. Blocks are available for head loads ranging from 0.4 tons up to 15 tons.

Other types of blocks can be offered upon special request.

Design

There are different types of blocks with specific designs to suit particular purposes. Some types are equipped with bronze bushes, other types are fitted with conical roller bearings. Which type to use depends on the frequency of use and the line speed.
Snatch blocks can be opened up to fit the wire rope easily. There is no need to thread the wire rope through the block.

All types are generally marked as follows:

- Working Load Limit	■ e.g. 8 t
- manufacturer's symbol	■ e.g. GP
- wire rope diameter in mm and inches	■ e.g. 20-22mm $^{3}/_{4}$ - $^{7}/_{8}$ inch
- serial number	■ e.g. 1234567
- CE conformity code	■ CE

Finish

Blocks can be either painted or hot dipped galvanized.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Blocks should be inspected before use to ensure that:

- all markings are legible;
- a block with the correct WLL has been selected;
- the WLL applies to static loads only, the possible occurrence of shock loading must be taken into account when selecting a block;
- the block may never be side loaded but may only be used for in-line use;
- always make sure that the hook, eye or shackle of the block is supporting the load correctly;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the sheaves are functional and rotate easily;
- blocks are free from nicks, gouges and cracks;
- blocks may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a block by machining, welding, heating or bending as this may affect the WLL.

Blocks must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the blocks are used in severe operating conditions.

Loads on blocks

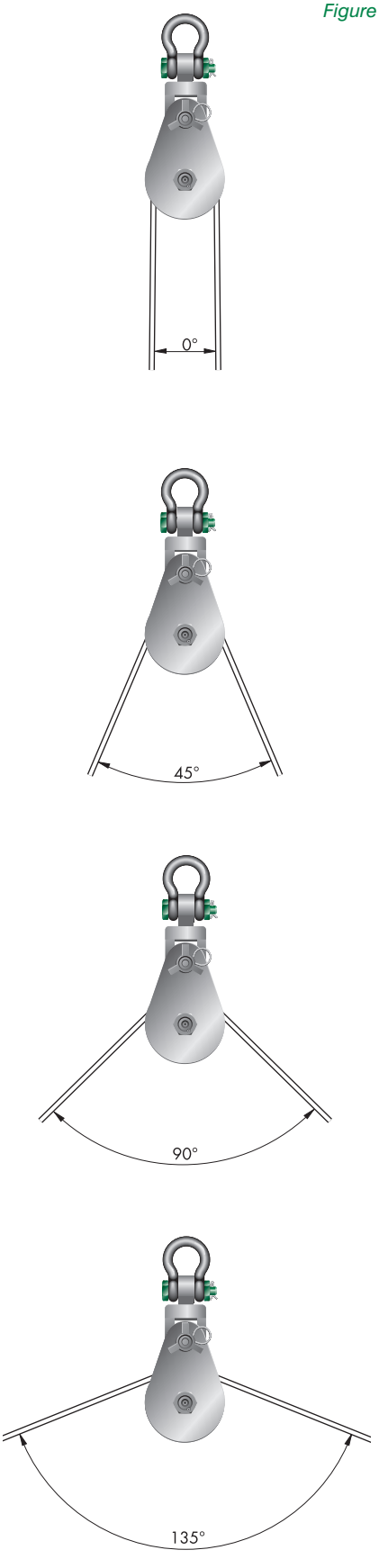
The WLLs of our blocks are the maximum loads to be applied to the blocks and their connecting fittings.

The load on a sheave or block varies with the angle between the lead and load line. See figure 1. When the two lines are parallel, 1 t on the lead line results in a load of 2 t on the fitting. As the working angle between the lines increases, the load on the fitting is reduced by the angle factor as per table 1. All loads shown ignore frictional losses in the lifting system.

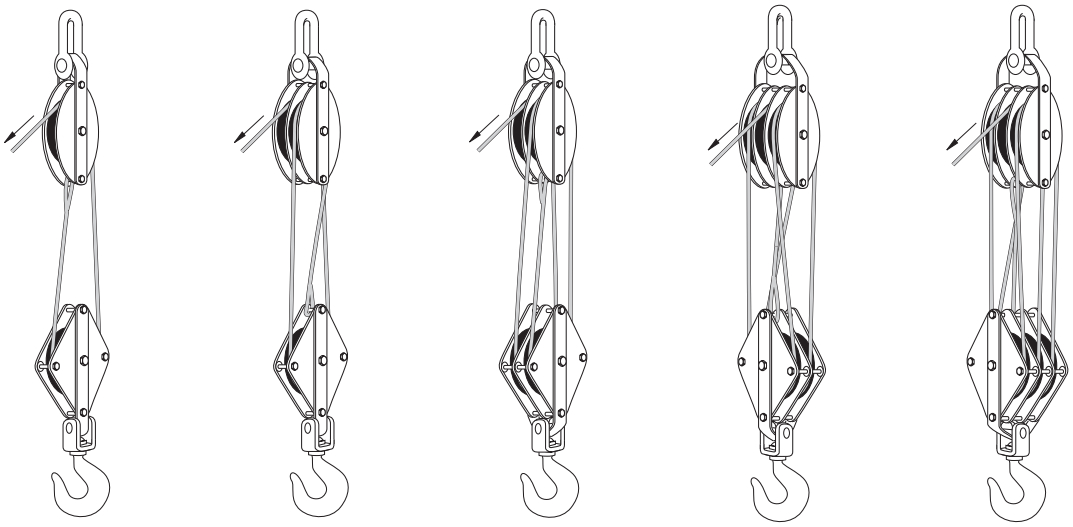
working angle	angle factor
0°	2
10°	1.99
20°	1.97
30°	1.93
40°	1.87
45°	1.84
50°	1.81
60°	1.73
70°	1.64
80°	1.53
90°	1.41
100°	1.29
110°	1.15
120°	1
130°	0.84
135°	0.76
140°	0.68
150°	0.52
160°	0.35
170°	0.17
180°	0

Table 1

Figure 1



Lifting with multiple line parts



2 parts of line *3 parts of line* *4 parts of line* *5 parts of line* *6 parts of line*

Method of reeving tackle blocks will vary with the application.
With heavy lifting systems where blocks with multiple sheaves are needed the number of blocks has to be determined. This is done for a given load that needs to be lifted, by calculating the number of parts of line as follows:

L = load to be lifted in t
P = single line pull in t
R = ratio

$$R = \frac{L}{P}$$

number of parts of line	bronze bushed sheaves	roller bearing sheaves
1	0.96	0.98
2	1.87	1.98
3	2.75	2.88
4	3.59	3.81
5	4.39	4.71
6	5.16	5.60
7	5.90	6.47
8	6.60	7.32
9	7.27	8.16
10	7.91	8.98
11	8.52	9.79
12	9.11	10.6

Table 2

Example:
L = 16 t
P = 3 t
How many parts of line are needed?

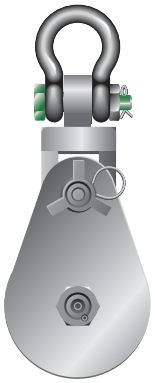
$$R = \frac{L}{P} = \frac{16}{3} = 5.3$$

Refer to ratio 5.3 in table 2 or the next larger number nearest to it, and then check the column under the header “number of parts of line”
For blocks with roller bearing sheaves this results in 6 parts of line that should be used to lift a 16 t load with a line pull of 3 t.

Green Pin® Snatch blocks

type 601S, with Green Pin® Shackle

mm inch



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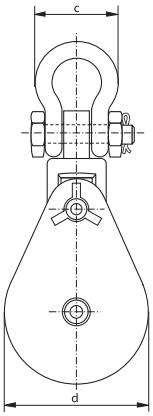
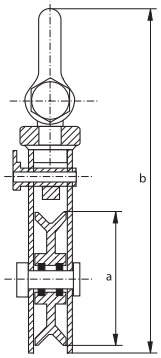




- **Material** : carbon steel, fitted with conical roller bearings, except for blocks with WLL 2 t and 4 t, these are equipped with bronze bushes
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE
- **Note** : Working Load Limit is on the headfitting

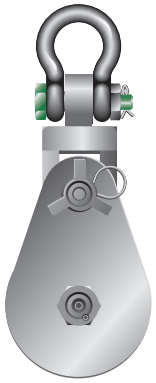
working load limit	diameter wire rope	diameter outside sheave	length	width	width outside	weight each
		a	b	c	d	
t	inch	inch	inch	inch	inch	lbs
2	9/32 - 3/8	3	11 9/16	3	3 1/4	8.60
4	3/8 - 1/2	4 1/2	14 9/32	4	4 23/32	14.11
4	1/2 - 9/16	6	16 7/16	4	6 9/32	18.52
8	9/16 - 5/8	6	18 25/32	4 5/8	6 9/32	31.5
12	9/16 - 5/8	6	21 7/8	5 25/32	6 9/32	44.1
8	3/4 - 7/8	6	18 25/32	4 5/8	6 9/32	31.1
12	3/4 - 7/8	6	21 7/8	5 25/32	6 9/32	44.1
15	1	6	23 1/32	6 7/8	6 9/32	52.9
4	3/8 - 1/2	8	18 13/16	4	8 9/32	24.3
12	9/16 - 5/8	8	22 13/16	5 25/32	8 9/32	59.5
8	3/4 - 7/8	8	20 23/32	4 5/8	8 9/32	39.7
12	3/4 - 7/8	8	22 13/16	5 25/32	8 9/32	61.7
15	1	8	25 7/16	6 7/8	8 9/32	66.1
8	9/16 - 5/8	10	22 29/32	4 5/8	10 1/4	57.3
8	3/4 - 7/8	10	22 29/32	4 5/8	10 1/4	57.3
12	3/4 - 7/8	10	26 3/4	5 25/32	10 1/4	77.2
15	1	10	27 3/4	6 7/8	10 1/4	92.6
8	3/4 - 7/8	12	24 3/32	4 5/8	12 3/16	68.3
12	3/4 - 7/8	12	29 5/16	5 25/32	12 3/16	116.8
15	1	12	30 5/16	6 7/8	12 3/16	121.3
8	3/4 - 7/8	14	26 1/32	4 5/8	14 5/32	68.3
12	3/4 - 7/8	14	30 9/32	5 25/32	14 5/32	132.3
15	1	14	31 3/8	6 7/8	14 5/32	138.9
8	3/4 - 7/8	16	27	4 5/8	16 5/32	77.2
12	3/4 - 7/8	16	32 9/32	5 25/32	16 5/32	147.7
15	1	16	33 3/8	6 7/8	16 5/32	154.3
8	3/4 - 7/8	18	29 31/32	4 5/8	18 1/8	92.6
12	3/4 - 7/8	18	34 9/16	5 25/32	18 1/8	165.3
15	1	18	35 11/32	6 7/8	18 1/8	172.0

Green Pin® Snatch blocks

type 601S, with Green Pin® Shackle

mm inch

- **Material** : carbon steel, fitted with conical roller bearings, except for blocks with WLL 2 t and 4 t, these are equipped with bronze bushes
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE
- **Note** : Working Load Limit is on the headfitting



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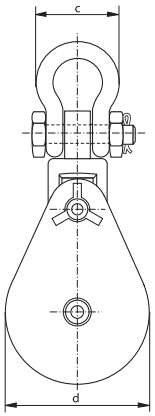
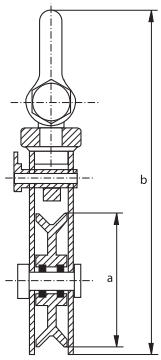




working load limit	diameter wire rope	diameter outside sheave	length	width	width outside	weight each
		a	b	c	d	
t	mm	mm	mm	mm	mm	kg
2	7 - 9	75	293	75	82	3.9
4	10 - 12	115	363	102	120	6.4
4	12 - 14	152	417	102	160	8.4
8	14 - 16	152	477	118	160	14.3
12	14 - 16	152	555	147	160	20
8	20 - 22	152	477	118	160	14.1
12	20 - 22	152	555	147	160	20
15	24 - 26	152	585	175	160	24
4	10 - 12	203	478	102	210	11
12	14 - 16	203	580	147	210	27
8	20 - 22	203	526	118	210	18
12	20 - 22	203	580	147	210	28
15	24 - 26	203	646	175	210	30
8	14 - 16	254	582	118	260	26
8	20 - 22	254	582	118	260	26
12	20 - 22	254	680	147	260	35
15	24 - 26	254	705	175	260	42
8	20 - 22	305	612	118	310	31
12	20 - 22	305	745	147	310	53
15	24 - 26	305	771	175	310	55
8	20 - 22	357	662	118	360	31
12	20 - 22	357	770	147	360	60
15	24 - 26	357	798	175	360	63
8	20 - 22	406	712	118	410	35
12	20 - 22	406	820	147	410	67
15	24 - 26	406	848	175	410	70
8	20 - 22	457	762	118	460	42
12	20 - 22	457	878	147	460	75
15	24 - 26	457	898	175	460	78

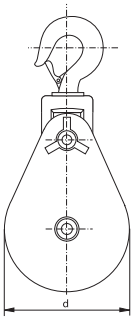
Green Pin® Snatch blocks

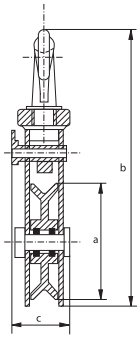
type 601H, with hook

mm inch

P-6952

- **Material** : carbon steel, fitted with conical roller bearings, except for blocks with WLL 2 t and 4 t, these are equipped with bronze bushes
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE
- **Note** : Working Load Limit is on the headfitting





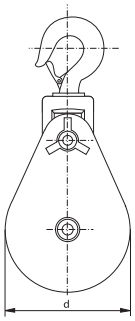
working load limit	diameter wire rope	diameter outside sheave	length	thickness	width outside	weight each
		a	b	c	d	
t	inch	inch	inch	inch	mm	lbs
2	9/32 - 3/8	3	11 17/32	2 1/4	3 1/4	8.82
4	3/8 - 1/2	4 1/2	13 17/32	3 9/32	4 23/32	13.45
4	1/2 - 9/16	6	15 1/8	3 9/32	6 9/32	13.23
8	3/4 - 7/8	6	17 9/16	4 1/4	6 9/32	26
12	3/4 - 7/8	6	22 17/32	5	6 9/32	50.7
15	1	6	23 1/8	5	6 9/32	50.7
4	3/8 - 15/32	8	17 5/32	3 9/32	8 9/32	17.64
8	3/4 - 7/8	8	19 17/32	4 1/4	8 9/32	37.3
12	3/4 - 7/8	8	24 1/2	5	8 9/32	55.1
15	1	8	25 1/8	5	8 9/32	57.3
8	3/4 - 7/8	10	21 17/32	4 1/4	10 1/4	41.9
12	3/4 - 7/8	10	26 1/2	5	10 1/4	61.7
15	15/16 - 1 1/32	10	27 1/8	5	10 1/4	61.7
8	3/4 - 7/8	12	23 17/32	4 1/4	12 3/16	50.7
12	3/4 - 7/8	12	28 1/2	5	12 3/16	68.3
15	1	12	29 1/8	5	12 3/16	68.3
8	3/4 - 7/8	14	25 17/32	4 1/4	14 5/32	68.3
12	3/4 - 7/8	14	30 1/2	5	14 5/32	72.8
15	1	14	31 1/8	5	14 5/32	72.8
8	3/4 - 7/8	16	27 17/32	4 1/4	16 5/32	79.4
12	3/4 - 7/8	16	32 1/2	5	16 5/32	79.4
15	1	16	33 1/8	5	16 5/32	79.4
8	3/4 - 7/8	18	29 1/2	4 1/4	18 1/8	88.2
10	3/4 - 7/8	18	34 1/2	5	18 1/8	92.6
15	1	18	35 1/8	5	18 1/8	94.8

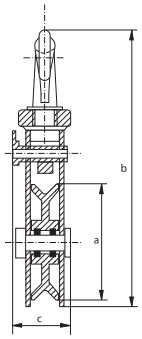
Green Pin® Snatch blocks

type 601H, with hook

mm inch

P-6952





- **Material** : carbon steel, fitted with conical roller bearings, except for blocks with WLL 2 t and 4 t, these are equipped with bronze bushes
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE
- **Note** : Working Load Limit is on the headfitting

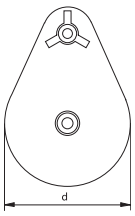
working load limit	diameter wire rope	diameter outside sheave	length	thickness	width outside	weight each
		a	b	c	d	
t	mm	mm	mm	mm	mm	kg
2	7 - 9	75	292	57	82	4
4	10 - 12	115	343	83	120	6.1
4	12 - 14	152	384	83	160	6
8	20 - 22	152	445	108	160	11.8
12	20 - 22	152	572	127	160	23
15	24 - 26	152	587	127	160	23
4	10 - 12	203	435	83	210	8
8	20 - 22	203	495	108	210	16.9
12	20 - 22	203	622	127	210	25
15	24 - 26	203	638	127	210	26
8	20 - 22	254	546	108	260	19
12	20 - 22	254	673	127	260	28
15	24 - 26	254	689	127	260	28
8	20 - 22	305	597	108	310	23
12	20 - 22	305	724	127	310	31
15	24 - 26	305	740	127	310	31
8	20 - 22	357	648	108	360	31
12	20 - 22	357	775	127	360	33
15	24 - 26	357	791	127	360	33
8	20 - 22	406	699	108	410	36
12	20 - 22	406	825	127	410	36
15	24 - 26	406	841	127	410	36
8	20 - 22	457	749	108	460	40
10	20 - 22	457	876	127	460	42
15	24 - 26	457	892	127	460	43

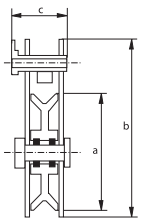
Green Pin® Snatch blocks

type 601T

- **Material** : carbon steel, fitted with conical roller bearings, except for blocks with WLL 4 t, these are equipped with bronze bushes
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 MTC [b] CE
- **Note** : Working Load Limit is on the headfitting

P-6953



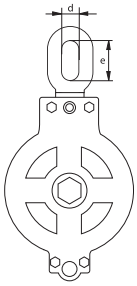


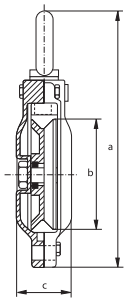
working load limit	diameter wire rope	diameter outside sheave	length	thickness	width outside	weight each
		a	b	c	d	
t	mm	mm	mm	mm	mm	kg
4	10 - 12	115	213	83	120	4
8	20 - 22	152	305	108	160	9
8	20 - 22	203	357	108	210	12
8	20 - 22	254	406	108	260	16

In inch

working load limit	diameter wire rope	diameter outside sheave	length	thickness	width outside	weight each
		a	b	c	d	
t	inch	inch	inch	inch	inch	lbs
4	3/8 - 1/2	4 1/2	8 3/8	3 9/32	4 23/32	8.82
8	3/4 - 7/8	6	12	4 1/4	6 9/32	19.84
8	3/4 - 7/8	8	14 1/32	4 1/4	8 9/32	26.5
8	3/4 - 7/8	10	15	4 1/4	10 1/4	35.3

P-6916





American pattern cargo blocks

with eye, one sheave

- **Material** : carbon steel
  sheave with taper roller bearing
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted
- **Certification** : 2.1 2.2 CE
- **Note** : Working Load Limit is on the headfitting

working load limit	diameter wire rope	length	diameter	thickness	width inside	length inside	weight each
		a	b	c	d	e	
t	mm	mm	mm	mm	mm	mm	kg
4	10 - 13	437	156	82	35	75	11
6	20 - 22	512	200	104	35	75	20
6	20 - 22	610	260	130	40	85	27
10	20 - 22	750	305	165	54	125	40
10	20 - 24	840	355	165	54	125	55
20	32 - 35	1040	410	190	73	170	100
32	26 - 28	1018	430	192	73	170	125
40	26 - 28	1095	460	210	73	170	150

Applications

General hardware items, such as carabine hooks, quick links and s-hooks, are suitable for many different applications in various market segments like agriculture, industry, transportation, etc.

Range

Van Beest offers a wide range of general hardware products such as:
- Quick links;
- Carabine hooks;
- Split pins;
- Spring pins;
- Linch pins;
- RFID tags;
- Chain repair links;
- S-hooks.

Design

General hardware items are designed for multiple purpose usage.

Finish

Most general hardware items are electro-galvanized.

Certification

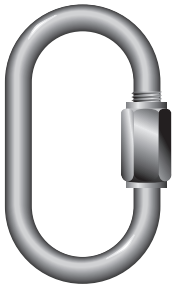
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

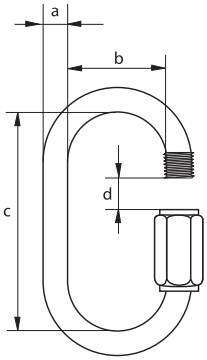
Items should be inspected before use to ensure that:

- the item is not used for lifting, general hardware items are not suitable for lifting applications;
- items are free from nicks, gouges and cracks;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect its performance.

It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the products are used in severe operating conditions.



E-7300

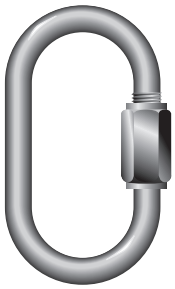


Quick links

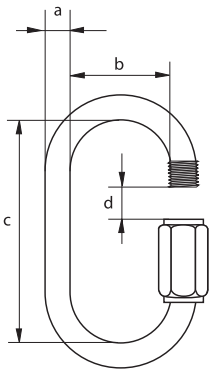
standard type

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	width inside	length inside	opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
3.5	10	29	5	240	0.9
4	11	32	5	300	1.3
5	13	39	6	540	2
6	14	46	7	750	3.3
7	16	51	8	1125	5.3
8	17	59	10	1500	7.5
9	17	64	11	2000	10.3
10	20	70	12	2400	13
12	23	83	14	3600	25
14	26	97	17	5000	35
16	29	112	20	6000	50



E-7310

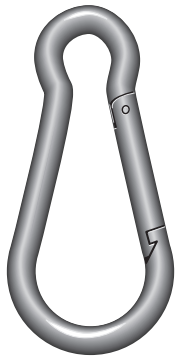


Quick links

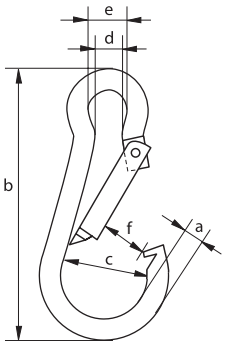
with enlarged opening

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	width inside	length inside	opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
4	12	45	11	800	1.4
5	14	52	13	1250	2.5
6	16	58	14	1750	4.2
7	17	65	16	2500	6.7
8	19	73	17	3250	9.4
9	20	79	19	4000	13.1
10	22	88	20	5000	17.5
12	25	102	23	6250	28.2
14	28	114	26	10000	45.6
16	31	129	29	12500	60.7



E-7200

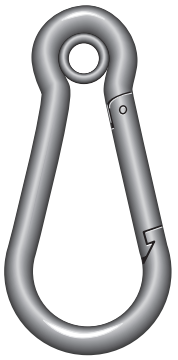


Carabine hooks

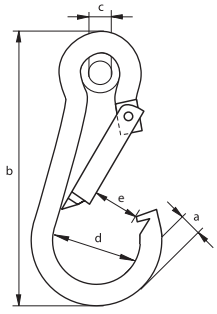
standard type

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	width	width inside	width inside	width opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg	kg
4	40	14	5	7	6	-	0.6
5	50	16	7	8	6	100	0.8
6	60	18	7	9	7	120	2.4
7	70	22	9	10	8	180	2.6
8	80	24	11	12	9	300	4.4
9	90	26	11	12	10	330	6.4
10	100	30	12	15	11	460	12.1
11	120	36	14	18	15	600	12.5
12	140	40	16	20	19	680	24.7
13	160	44	20	22	24	800	25
14	180	48	20	22	28	860	35
15	200	60	20	22	35	1370	57.2



E-7210

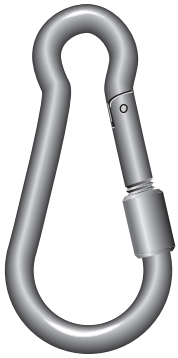


Carabine hooks

with pressed thimble

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	diameter inside thimble	width	width opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg	kg
4	40	4	14	6	-	0.8
5	50	5	16	6	100	1.6
6	60	6	18	7	120	2.6
7	70	7	22	8	180	4.4
8	80	10	24	9	300	6.4
9	90	12	26	10	330	9.3
10	100	13	30	11	460	12.5
11	120	13	36	15	600	19.5
12	140	15	40	19	680	25
13	160	17	44	24	800	35
14	180	17	48	28	860	50



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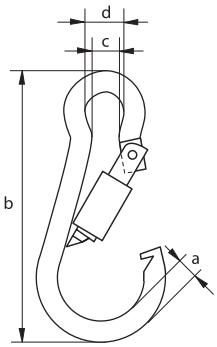
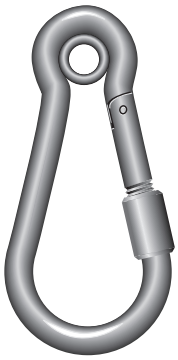


Carabine hooks

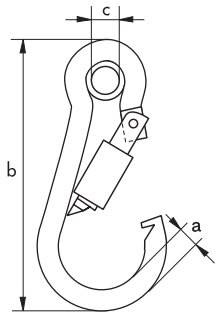
with screw nut

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	width inside	width inside	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
4	40	4	7	-	1.7
5	50	5	7	100	1.9
6	60	6	8	120	2.7
7	70	7	10	180	4.5
8	80	10	12	300	6.5
9	90	12	12	330	10.3
10	100	13	15	460	13.4
11	120	13	16	600	19
12	140	15	19	680	26.5
13	160	17	28	800	37
14	180	17	28	860	52



E-7230

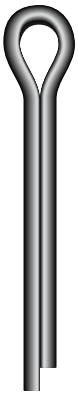


Carabine hooks

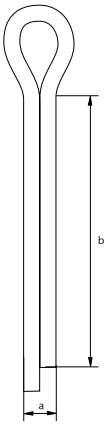
with pressed thimble and screw nut

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	diameter inside thimble	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	kg	kg
4	40	4	-	0.8
5	50	5	100	1.6
6	60	6	120	2.6
7	70	7	180	4.4
8	80	9	300	6.4
9	90	10	330	9.3
10	100	11	460	12.5
11	120	12	600	19.5
12	140	13	680	25
13	160	15	800	35
14	180	17	860	50



E-7950



Split pins

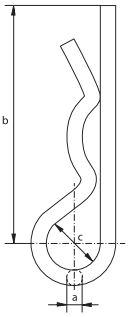
standard type

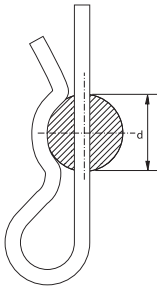
- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	weight per 100 pcs
a mm	b mm	kg
2.5	20	0.08
4	32	0.3
5	36	0.6
6	45	1.2
8	63	2.8
8	80	4.4
8	100	4.4
8	125	5.5
8	150	6.6
10	71	5
10	90	6
10	100	6.6
10	120	4.4
12	140	7
12	160	7
12	180	7
13	110	12.1
16	160	16
16	200	20
20	230	30
20	265	17.6

Split pin	for shackle								
	G-4163	G-4153	P-6036	G-6038	P-6033	G-5263	G-5163	P-6031	G-4263
a x b	WLL	WLL	WLL	WLL	WLL	WLL	WLL	WLL	WLL
mm	t	t	t	t	t	t	t	t	t
2.5 x 20	0.5 0.75 1 1.5								
4 x 32	2 3.25	2 3.25				3.3 5	2 3.25		
5 x 36	4.75 6.5	4.75 6.5			7	7 9.5	4.75 6.5		4.75
6 x 45	8.5 9.5 12	8.5 9.5 12			12.5 18	12.5 15 18	8.5 9.5 12		6.5 8.5 9.5
8 x 63	13.5 17	13.5 17				21 30	13.5 17		12 16
8 x 80					30 40				
10 x 71	25 35	25 35				40 55	25 35		25 30
10 x 90	42.5 55	42.5 55				85	42.5 55		55
10 x 100	85	85			55 75	120	85		75
10 x 120					125				
12 x 140					150 200				
12 x 160					250				
12 x 180					300				
13 x 110			120 150	120		150 175		120 150	
16 x 160			200 250 300					200 250 300	
16 x 200			400 500					400 500	
20 x 230			600 700 800					600 700 800	
20 x 265			900 1000					900 1000	

E-7930





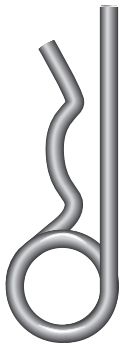
Spring pins

single type

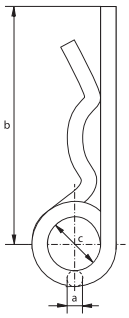
- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

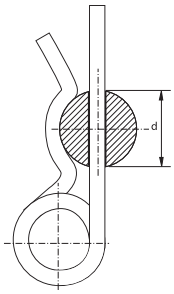
diameter	length	diameter	diameter	weight per 100 pcs
a mm	b mm	c mm	d mm	kg
2	50	10	9 - 14	0.3
3	60	18	10 - 16	0.9
4	60	20	16 - 20	1.6
5	85	24	20 - 28	3.3
6	105	30	28 - 40	6.2
7	105	30	28 - 45	8.3
8	110	28	30 - 45	10.5

Spring pin	for shackle					
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263
a x b mm	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t
2 x 50	2	2		3.3	2	
3 x 60	3.25	3.25		5	3.25	
4 x 60	4.75 6.5	4.75 6.5	7	7 9.5	4.75 6.5	4.75
5 x 85	8.5 9.5 12	8.5 9.5 12	12.5 18	12.5 15 18	8.5 9.5 12	6.5 8.5 9.5
6 x 105	13.5 17	13.5 17		21 30	13.5 17	12 16
7 x 105	25	25	30 40	40	25	25



E-7931





Spring pins

double type

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

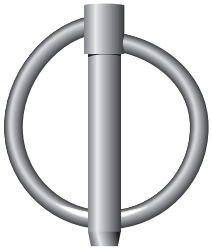
diameter	length	diameter	diameter	weight per 100 pcs
a mm	b mm	c mm	d mm	 kg
2	50	10	8 - 14	0.4
3	62	16	14 - 20	1.4
4	78	23	17 - 24	3
5	92	26	18 - 30	5.3
6	120	30	24 - 36	9.6
7	130	30	24 - 40	13.5
7	150	30	45 - 56	13.5
8	130	30	24 - 45	17.8

Spring pin	for shackle								
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263	G-4263	P-5363	P-5365
a x b mm	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t
2 x 50	2	2		3.3	2				6.5
3 x 62	3.25	3.25		5	3.25				9.5 ~ 120
4 x 78	4.75 6.5 8.5	4.75 6.5 8.5	7	7 9.5 12.5	4.75 6.5 8.5	4.75	4.75	6.5	
5 x 92	9.5 12	9.5 12	12.5 18	15 18	9.5 12	6.5 8.5 9.5	6.5 8.5 9.5	9.5 12	150 ~ 250
6 x 120	13.5 17	13.5 17		21 30	13.5 17	12 16	12 16	17	
7 x 150	35 42.5 55	35 42.5 55	55 75	55 85	35 42.5 55	30 50	30 50	35 42.5 55 85	
8 x 130	25	25	30 40	40	25	25	25	25	

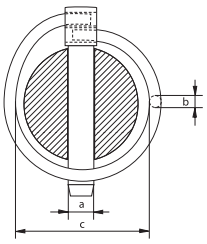
Linch pins

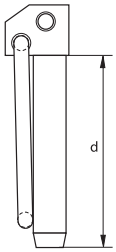
with round spring ring

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1



E-7940



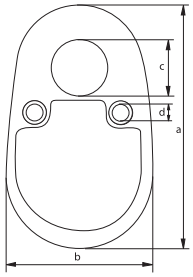


diameter pin	diameter spring ring	width inside spring ring	length pin	weight per 100 pcs
a	b	c	d	
mm	mm	mm	mm	kg
4.5	2	41	42	2
6	3.4	41	42	2.8
7	3.4	41	42	3
8	3.4	41	42	3.5
9	3.4	41	42	3.8
10	3.4	41	42	4.4
11	3.4	41	42	4.6

Linch pin	for shackle					
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263
diameter	WLL	WLL	WLL	WLL	WLL	WLL
mm	t	t	t	t	t	t
4.5	4.75	4.75	7	7	4.75	4.75
	6.5	6.5		9.5	6.5	6.5
	8.5	8.5		12.5	8.5	8.5
6	9.5	9.5	12.5	15	9.5	9.5
	12	12	18	18	12	
8	13.5	13.5	30	21	13.5	12
	17	17		30	17	16

Green Pin® RFID Tag

TAGRFID

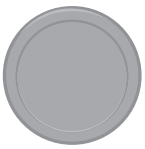


- **Material** : stainless steel
- **Finish** : polymer
- **Certification** : 2.1
- **Note** : contains a high frequency 13.56 MHz iCode ISO 15693 compliant chip with individual serial number

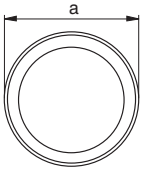
length	width	diameter	diameter	weight per 100 pcs
a mm	b mm	c mm	d mm	kg
53	33	12	4	1.8

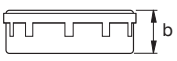
RFID

RFID chip



CHIPRFID

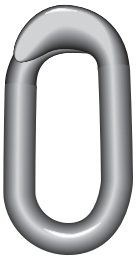




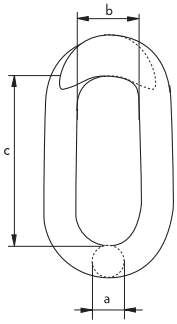
- **Material** : polymer
- **Standard** : RF Protocol ISO 15693
  Operating Frequency HF - 13.56 MHz
- **Finish** : yellow
- **Certification** : 2.1

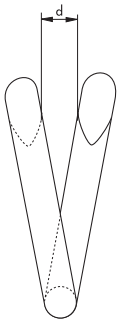
diameter	thickness	weight per 100 pcs
a mm	b mm	kg
6	2	0.02

RFID



E-7910



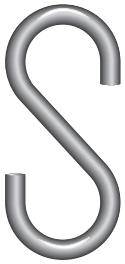


Chain repair links

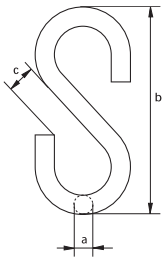
commercial quality

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	width inside	length inside	opening	weight per 100 pcs
a	b	c	d	
mm	mm	mm	mm	kg
3	6.5	16.5	4	0.4
4	8	20	5.5	0.8
4.5	9	22	6	1.1
5	9.5	23	6	1.2
5.5	10.5	26	6	1.8
6	10.5	29	7	2.1
6.5	11.5	30	8	3.2
7	13.5	32	8.5	3.9
8	15	37	9	5.6
9	16.5	37.5	9	7.6
10	17	37.5	9	9.5
12	25	50	12	10



E-7920



S-hooks

standard type

- **Material** : mild steel
- **Finish** : electro-galvanized
- **Certification** : 2.1

diameter	length	opening	weight per 100 pcs
a	b	c	
mm	mm	mm	kg
3	25	6	0.3
4	35	8	0.8
5	45	9	1.3
6	55	10	2.4
7	65	17	4.3
8	75	20	6.9

Applications

In circumstances where corrosion may cause problems, the use of stainless steel products is recommended.

Range

Van Beest offers a wide range of stainless steel items like shackles, thimbles, wire rope clips, eye bolts, rigging screws etc.

Van Beest can also offer other stainless steel chain fittings.
Please refer to the EXCEL® section in this catalogue for more information.

Design

Stainless steel items supplied by Van Beest are all manufactured from stainless steel quality AISI 316, except for product groups R-7856, R-7850, R-7852 and R-7854 which are manufactured from AISI 304.

Most stainless steel items have an equivalent in a regular steel quality, we refer to the specific chapters for further details.

Finish

All stainless steel items are polished.

Instructions for use

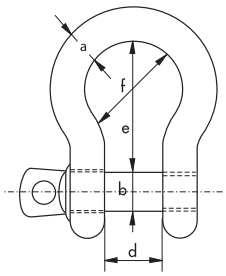
We refer to the previous product chapters in this catalogue for details on use of a specific item.

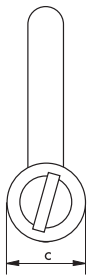
In general, items should be inspected before use to ensure that:

- all markings are legible;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the item is free from nicks, gouges and cracks;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect the strength.

Stainless steel products must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure.
Inspection should take place at least every six months and more frequently when the products are used in severe operating conditions.

R-7825



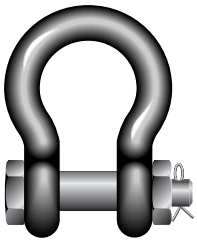


Shackles

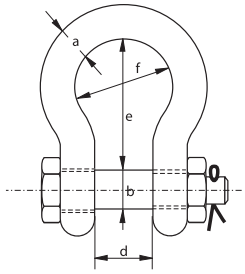
bow shackles with screw pin

- **Material** : AISI 316
- **Safety factor** : MBL equals 6 x WLL
- **Standard** : generally to DIN 82103
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL, CE and manufacturer identification symbol (VBS), except for 4 mm as it is too small

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	f mm	kg
-	4	4	8	8	16	12	1.2
0.12	5	5	10	10	20	15	1.8
0.15	6	6	12	12	24	18	2.7
0.3	8	8	16	16	32	24	6.3
0.4	10	10	20	20	40	30	12.3
0.6	12	12	24	24	48	36	20.5
1	16	16	32	32	64	48	48
1.5	20	20	40	40	80	60	97
2	22	22	44	44	88	66	146
3	25	25	50	50	100	75	211
3.6	28	28	54	56	116	86	285



R-7827



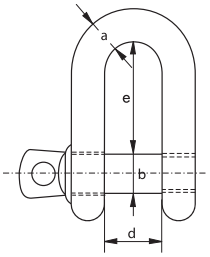
Shackles

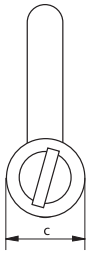
bow shackles with safety bolt

- **Material** : AISI 316
- **Safety factor** : MBL equals 6 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL, CE, traceability code and manufacturer identification symbol (VBS)

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	f mm	kg
0.3	8	8	16	16	32	24	7.4
0.4	10	10	19	20	40	30	14.5
0.6	12	12	24	25	49	36	23
1	16	16	31	32	64	48	56.6
1.5	19	19	38	38	80	60	99.5
2	22	22	43	44	85	66	146
3	25	25	49	50	100	75	218

R-7821



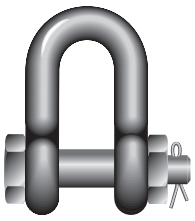


Shackles

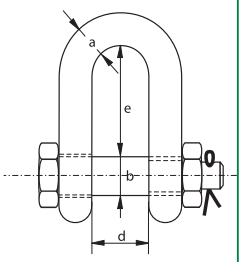
dee shackles with screw pin

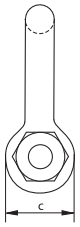
- **Material** : AISI 316
- **Safety factor** : MBL equals 6 x WLL
- **Standard** : generally to DIN 82102
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL, CE and manufacturer identification symbol (VBS), except for 4 mm as it is too small

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	kg
-	4	4	8	8	16	0.9
0.12	5	5	10	10	20	1.6
0.15	6	6	12	12	24	2.6
0.3	8	8	16	16	32	5.6
0.4	10	10	20	20	40	13
0.6	12	12	24	24	48	20
1	16	16	32	32	64	48
1.5	20	20	40	40	80	78
2	22	22	44	44	88	127
3	25	25	50	50	100	184
3.6	28	28	54	56	106	250



R-7823





Shackles

dee shackles with safety bolt

- **Material** : AISI 316
- **Safety factor** : MBL equals 6 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL, CE, traceability code and manufacturer identification symbol (VBS)

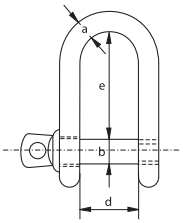
working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	kg
0.3	8	8	16	16	32	7.1
0.4	10	10	19	20	40	14
0.6	12	12	24	25	48	23.6
1	16	16	31	32	64	54.5
1.5	19	19	38	38	76	96
2	22	22	43	44	85	142
3	25	25	49	50	95	209

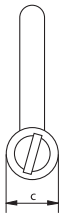
Shackles

long dee type

R-7829

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

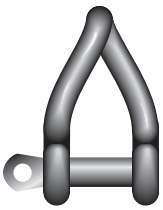




diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
4	4	8	8	30	1
5	5	10	10	37	2
6	6	12	12	45	4
8	8	16	16	60	9
10	10	20	20	75	20
12	12	24	24	90	32

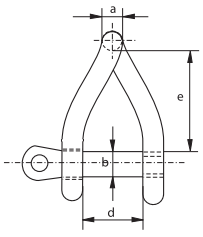
Shackles

short twisted type



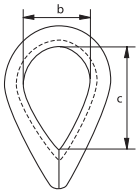
R-7822

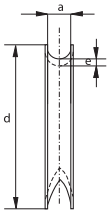
- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1



diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
5	5	10	10	36	2
6	6	12	12	42	4
8	8	16	16	56	9
10	9.5	19	20	60	11
12	12	24	24	72	32

R-7860





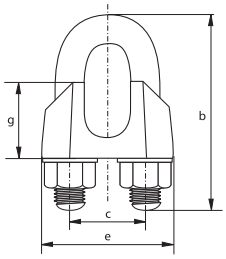
Thimbles

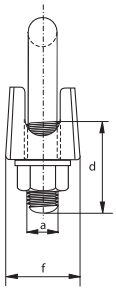
heavy type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

width groove	width inside	length inside	length	thickness	weight per 100 pcs
a	b	c	d	e	
mm	mm	mm	mm	mm	kg
2	9	15	23	1	0.2
2.5	9.5	15.7	24	1	0.2
3	10	16	25	1	0.3
4	11	17	28	1	0.5
5	13	20	32	1	0.5
6	16	25	39	1.2	0.8
7	18	28	40	1.2	1
8	20	32	49	1.4	1.2
10	26	40	55	1.9	3.4
12	28	45	70	2	4.5
14	34	56	80	2.2	7.3
16	37	62	85	2.5	12.2
18	42	65	95	2.5	15.1
20	45	78	115	3	19
22	50	88	125	3	22.3
24	58	96	135	4	40.5
26	66	105	140	4	49.7

R-7863





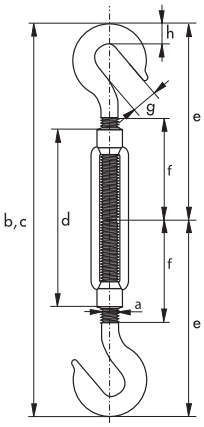
Wire rope clips

generally to DIN 741

- **Material** : Bridge : AISI 316
  Nuts : AISI 316
  U-bolt: AISI 316
- **Standard** : formerly DIN 741
- **Finish** : polished
- **Certification** : 2.1

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	mm	kg
3	4	20	9	12	21	10	10	1.4
4	4	22	9	12	21	10	10	1.4
5	5	24	11	13	23	11	10	1.5
6	5	28	13	15	26	12	11	2.1
8	6	34	16	19	30	14	15	3.5
10	8	42	19	22	34	18	17	6.1
13	10	55	24	30	42	23	21	13
16	12	63	29	33	50	26	26	21
19	12	75	32	38	54	29	30	26
22	14	85	37	44	61	33	34	40
26	14	95	41	45	65	35	37	44

R-7837



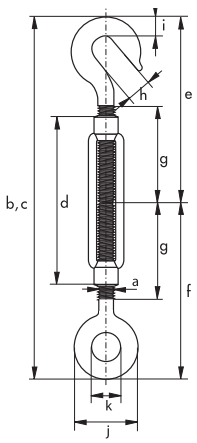
Open body rigging screws

Hook - Hook

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length	length	opening hook	thickness	weight each
a	b	c	d	e	f	g	h	
mm	mm	mm	mm	mm	mm	mm	mm	kg
M 5	120	170	70	58	33	8	5	0.04
M 6	150	210	90	73	43	9	6	0.08
M 8	200	290	120	98	56	11	8	0.16
M 10	240	355	150	117	71	12	9	0.27
M 12	310	470	200	157	95	14	11	0.51
M 16	390	590	250	186	116	16	15	1.2
M 20	440	675	300	214	139	18	19	1.9

R-7838



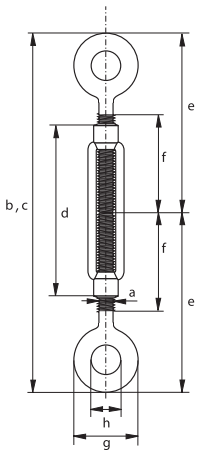
Open body rigging screws

Hook - Eye

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length	length	length	opening hook	thickness	diameter eye outside	diameter eye inside	weight each
a	b	c	d	e	f	g	h	i	j	k	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
M 5	120	170	70	58	56	33	8	5	17	8	0.04
M 6	150	210	90	73	71	43	9	6	21	10	0.08
M 8	200	290	120	98	95	56	11	8	28	14	0.16
M 10	240	355	150	117	118	71	12	9	34	16	0.27
M 12	310	470	200	157	154	95	14	11	40	18	0.51
M 16	390	590	250	186	190	116	16	15	54	26	1.2
M 20	440	675	300	214	220	139	18	19	64	30	1.9

R-7839



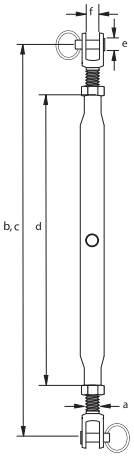
Open body rigging screws

Eye - Eye

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter thread	length closed position	length open position	length body	length	length	diameter eye outside	diameter eye inside	weight each
a	b	c	d	e	f	g	h	
mm	mm	mm	mm	mm	mm	mm	mm	kg
M 5	120	170	70	56	33	17	8	0.04
M 6	150	210	90	71	43	21	10	0.08
M 8	200	290	120	95	56	28	14	0.16
M 10	240	355	150	118	71	34	16	0.27
M 12	310	470	200	154	95	40	18	0.51
M 16	390	590	250	190	116	54	26	1.2
M 20	440	675	300	220	139	64	30	1.9

R-7830

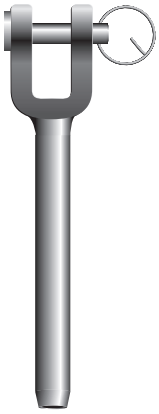


Closed body rigging screws

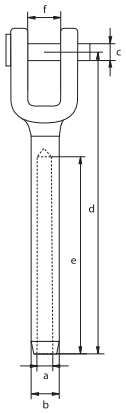
Jaw - Jaw

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter thread	length open	length closed	length body	diameter pin	width jaw inside	weight per 100 pcs
a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	kg
M 5	190	125	80	5.2	6	6.5
M 6	210	155	95	6.2	7.5	8.1
M 8	240	180	105	8.7	10	15.9
M 10	270	220	125	9.7	12	29.9
M 12	360	255	150	12.7	14	53.2
M 14	385	270	165	12.7	14	64
M 16	450	320	190	16	16	116
M 20	450	355	210	19	20	145



R-7834

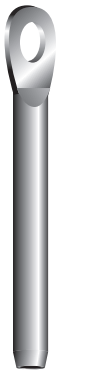


Fork terminals

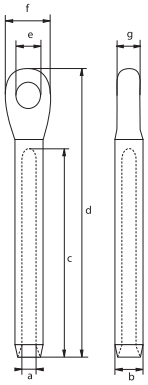
swage type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter wire rope	diameter inside	diameter outside	diameter pin	length	length inside	width jaw	weight per 100 pcs
	a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	mm	kg
3	3.3	6.3	5.2	65	32	7.5	2.3
4	4.3	7.5	6.2	77	40	10	4.9
5	5.3	9	8.7	88	57	12	7.2
6	6.6	12.5	9.7	106	63	14	13.9
7	7.5	14.2	12.6	116	70	14.5	18.1
8	8.3	16	14.6	145	85	16	21.6
9.5	10	17	16.5	150	87	17	48
10	10.5	17.8	16.5	150	89	17	52
12	12.5	20	19	204	105	25	67



R-7835



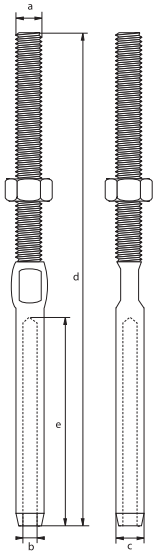
Eye terminals

swage type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter wire rope	diameter inside	diameter outside	length inside	length	diameter eye inside	diameter eye outside	thickness eye	weight per 100 pcs
	a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	mm	kg
3	3.3	6.5	36	62	8	14	4	1.3
4	4.3	7.5	39	71	10	19	6	2.3
5	5.3	9	50	88	12	23	7	4
6	6.3	12.5	62	104	12.5	28	8	8.8
8	8.3	16	85	126	14.5	32	10	15.4
10	10.3	17.5	90	150	16.4	36	12	22.8

R-7836

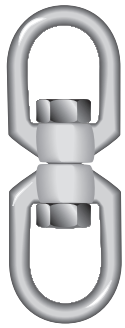


Threaded terminals

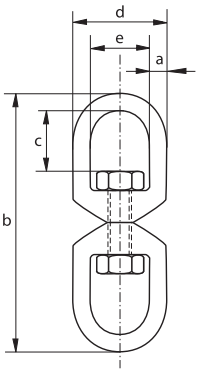
swage type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter wire rope	thread	diameter inside	diameter outside	length	length inside	weight per 100 pcs
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
3	M 6	3.3	6.3	100	39	2.7
4	M 8	4.3	7.5	117	45	5.4
5	M 10	5.3	9	130	51	7.8
6	M 12	6.3	12	162	64	15.1
8	M 16	8.3	16	195	76	23.2
10	M 20	10.3	18	230	89	59



R-7877



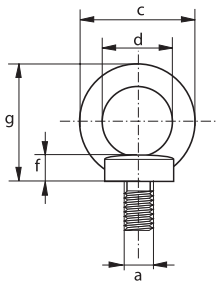
Swivels

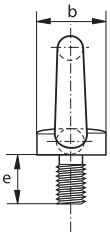
Eye - Eye

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	length	length inside	width outside	width inside	weight per 100 pcs
a	b	c	d	e	
mm	mm	mm	mm	mm	kg
5	60	13	23	13	3.4
6	65	15	26	15	5.1
8	90	22	35	20	13.1
10	115	27	44	24	26
13	154	35	57	32	58
16	188	45	71	39	105
19	229	50	84	41	220

R-7840





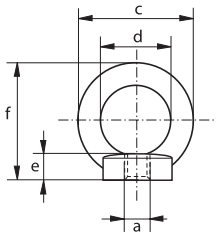
Eye bolts

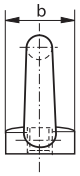
generally to DIN 580

- **Material** : AISI 316
- **Standard** : generally to DIN 580
- **Finish** : polished
- **Certification** : 2.1

diameter thread	diameter base	diameter eye outside	diameter eye inside	length thread	thickness base	height	weight per 100 pcs
a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	kg
M 6	20	36	20	13	6	36	3
M 8	20	36	20	13	6	36	6
M 10	25	45	25	17	8	45	10.3
M 12	30	54	30	20.5	10	53	17.7
M 16	35	63	35	27	12	62	28
M 20	40	72	40	30	14	71	45
M 24	50	90	50	36	18	90	74

R-7842



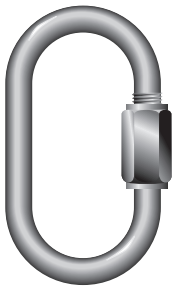


Eye nuts

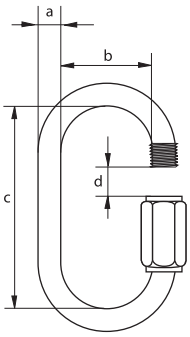
generally to DIN 582

- **Material** : AISI 316
- **Standard** : generally to DIN 582
- **Finish** : polished
- **Certification** : 2.1

diameter thread	diameter base	diameter eye outside	diameter eye inside	thickness base	height	weight per 100 pcs
a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	kg
M 6	20	36	20	8.5	36	4.2
M 8	20	36	20	8.5	36	5.2
M 10	25	45	25	10	45	9.4
M 12	30	54	30	11	53	14.8
M 16	35	63	35	13	62	23.7



R-7873

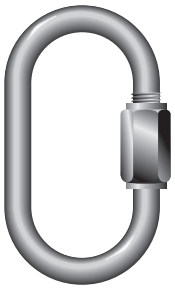


Quick links

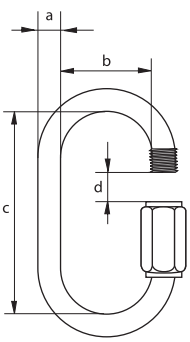
standard type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	width inside	length inside	opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
3.5	10	29	5	155	0.9
4	12	32	5.5	450	1.2
5	13	39	6.5	585	2
6	14	46	7.5	790	3.3
7	16	51	8.5	1085	5.3
8	17	59	10.5	1380	7.5
9	17	64	11.5	1790	10.3
10	20	70	12.5	2085	13.7
12	23	83	14.5	2265	22.5



R-7874

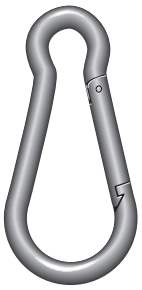


Quick links

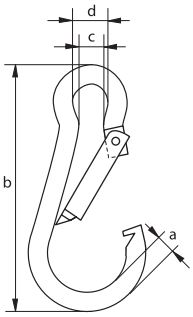
with enlarged opening

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	width inside	length inside	opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
3.5	10	40	10	155	1.2
5	14	52	14	585	2.6
6	16	60	16	790	4
8	18	74	18	1380	9.1
10	20	85	20	2085	15.9
12	23	98	23	2265	30.4
14	27	116	26	2540	40.2



R-7872

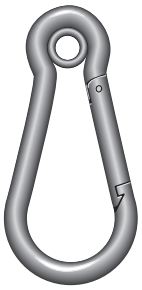


Carabine hooks

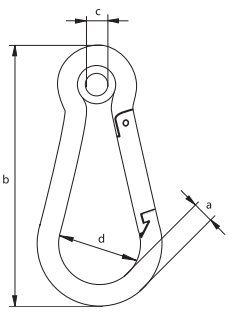
standard type

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	length	width inside	width inside	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
4	40	5	7	70	0.8
5	50	7	8	110	1.5
6	60	7	9	132	2.6
7	70	9	10	198	2.6
8	80	11	12	330	4.4
9	90	11	12	363	6.4
10	100	12	15	506	12.2
11	120	14	18	660	12.5
12	140	16	20	748	25
13	160	20	22	880	35
14	180	20	22	946	35



R-7875

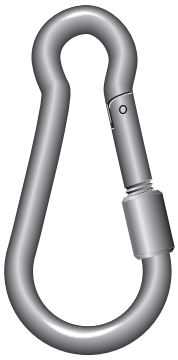


Carabine hooks

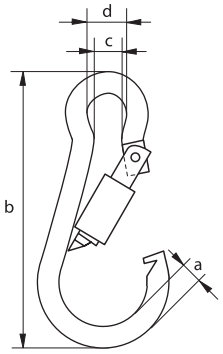
with pressed thimble

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	length	diameter inside thimble	width	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
4	40	5	14	70	0.9
5	50	5	16	110	1.6
6	60	5	18	132	2.8
7	70	7	22	198	4.4
8	80	10	24	330	6.4
9	90	10	26	363	9.3
10	100	13	30	506	12.5
11	120	13	36	660	18.7
12	140	15	40	748	25
13	160	17	44	880	35
14	180	17	48	946	50



R-7876

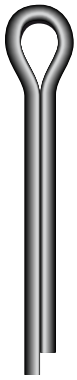


Carabine hooks

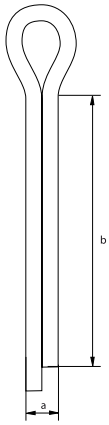
with screw nut

- **Material** : AISI 316
- **Finish** : polished
- **Certification** : 2.1

diameter	length	width inside	width inside	minimum breaking load	weight per 100 pcs
a	b	c	d		
mm	mm	mm	mm	kg	kg
4	40	5	7	70	0.8
5	50	7	8	110	1.7
6	60	7	9	132	2.6
7	70	9	10	198	4.4
8	80	11	12	330	6.4
9	90	11	12	363	9.3
10	100	12	15	506	12.7
11	120	14	18	660	19.5
12	140	16	20	748	25
13	160	20	22	880	35
14	180	20	22	946	50



R-7856



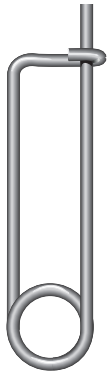
Split pins

standard type

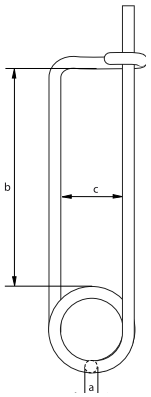
- **Material** : AISI 304
- **Finish** : polished
- **Certification** : 2.1

diameter a mm	length b mm	weight per 100 pcs kg
2.5	20	0.08
4	32	0.3
5	36	0.6
6	45	1.2
8	63	2.8
8	80	4.4
10	71	5
10	90	6
10	100	6.6
10	120	4.4
12	140	7
12	160	7
12	180	7
13	110	12.1
16	160	16

Split pin	for shackle										
	G-4163	G-4153	P-6036	G-6038	P-6033	G-5263	G-5163	P-6031	G-4263	R-7827	R-7823
a x b mm	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t
2.5 x 20	0.5 0.75 1									0.4 0.6	0.4 0.6
	1.5										
4 x 32	2 3.25	2 3.25				3.3 5	2 3.25			1 1.5	1 1.5
5 x 36	4.75 6.5	4.75 6.5			7	7 9.5	4.75 6.5		4.75	2 3	2 3
6 x 45	8.5 9.5 12	8.5 9.5 12			12.5 18	12.5 15 18	8.5 9.5 12		6.5 8.5 9.5		
8 x 63	13.5 17	13.5 17				21 30	13.5 17		12 16		
8 x 80					30 40						
10 x 71	25 35	25 35				40 55	25 35		25 30		
10 x 90	42.5 55	42.5 55				85	42.5 55		55		
10 x 100	85	85			55 75	120	85		75		
10 x 120					125						
12 x 140					150 200						
12 x 160					250						
12 x 180					300						
13 x 110			120 150	120		150 175		120 150			
16 x 160			200 250 300					200 250 300			



R-7850



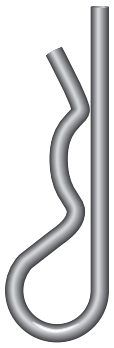
Safety pins

double type

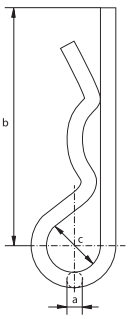
- **Material** : AISI 304
- **Finish** : polished
- **Certification** : 2.1

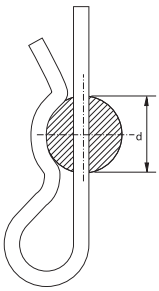
diameter	length inside	width inside	weight per 100 pcs
a	b	c	
mm	mm	mm	kg
2	38	16	0.5
3	53	20	1.8
4	59	21	3.9
5	95	22	6.9
6	114	38	12.5

Safety pin	for shackle					
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263
diameter	WLL	WLL	WLL	WLL	WLL	WLL
mm	t	t	t	t	t	t
2	4.75 6.5	4.75 6.5	7	7 9.5	4.75 6.5	4.75 6.5
3	8.5 9.5 12	8.5 9.5 12	12.5 18	12.5 15 18	8.5 9.5 12	8.5 9.5 12
4	13.5 17 25	13.5 17 25	30	21 30 40	13.5 17 25	16 25
5	35 42.5	35 42.5	40 55	55	35 42.5	30
6	55 85	55 85	75 125	85 120	55 85	65 75



R-7852





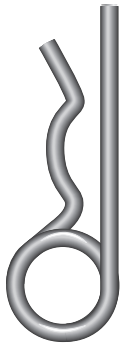
Spring pins

single type

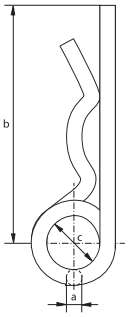
- **Material** : AISI 304
- **Finish** : polished
- **Certification** : 2.1

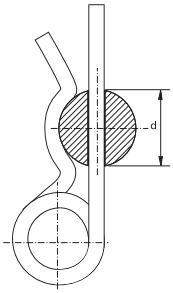
diameter a mm	length b mm	diameter c mm	diameter d mm	weight per 100 pcs kg
2	50	10	9 - 14	0.3
3	60	18	10 - 16	0.9
4	60	20	16 - 20	1.6
5	85	24	20 - 28	3.3
6	105	30	28 - 40	6.2
7	105	30	28 - 45	8.3
8	110	28	30 - 45	10.5

Spring pin	for shackle					
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263
diameter mm	WLL t	WLL t	WLL t	WLL t	WLL t	WLL t
2	2	2		3.3	2	
3	3.25	3.25		5	3.25	
4	4.75 6.5	4.75 6.5	7	7 9.5	4.75 6.5	4.75
5	8.5 9.5 12	8.5 9.5 12	12.5 18	12.5 15 18	8.5 9.5 12	6.5 8.5 9.5
6	13.5 17	13.5 17		21 30	13.5 17	12 16
7	25	25	30 40	40	25	25



R-7854





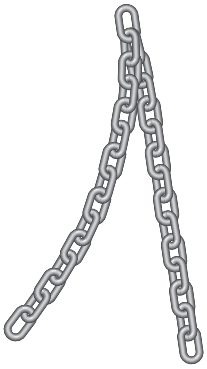
Spring pins

double type

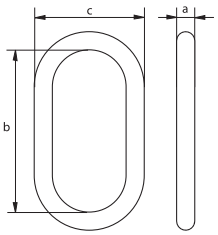
- **Material** : AISI 304
- **Finish** : polished
- **Certification** : 2.1

diameter	length	diameter	diameter	weight per 100 pcs
a	b	c	d	
mm	mm	mm	mm	kg
2	50	10	8 - 14	0.4
3	62	16	14 - 20	1.4
4	78	23	17 - 24	3
5	92	26	18 - 30	5.3
6	120	30	24 - 36	9.6
7	130	30	24 - 40	13.5
8	130	30	24 - 45	17.8

Spring pin	for shackle							
	G-4163	G-4153	P-6033	G-5263	G-5163	G-4263	P-5363	P-5365
diameter	WLL	WLL	WLL	WLL	WLL	WLL	WLL	WLL
mm	t	t	t	t	t	t	t	t
2	2	2		3.3	2			6.5
3	3.25	3.25		5	3.25			9.5 ~ 120
4	4.75 6.5 8.5	4.75 6.5 8.5	7	7 9.5 12.5	4.75 6.5 8.5	4.75	6.5	
5	9.5 12	9.5 12	12.5 18	15 18	9.5 12	6.5 8.5 9.5	9.5 12	150 ~120
6	13.5 17	13.5 17		21 30	13.5 17	12 16	17	
8	25	25	30 40	40	25	25	25	



R-7880

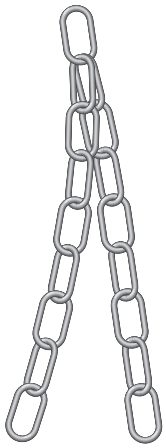


Short link chain

generally to DIN 766 and DIN 5685-3

- **Material** : AISI 316
- **Standard** : generally to DIN 766 and DIN 5685-3
- **Certification** : 2.1

diameter	length inside	width outside	weight per m
a	b	c	
mm	mm	mm	kg
3	16	11	0.17
4	16	14	0.32
5	18.5	17	0.5
6	18.5	20	0.75
8	24	26	1.35
10	28	34	2.25



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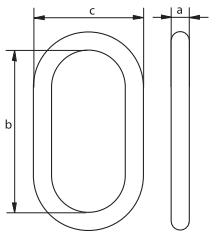


Long link chain

generally to DIN 763 and DIN 5685-1

- **Material** : AISI 316
- **Standard** : generally to DIN 763 and DIN 5685-1
- **Certification** : 2.1

diameter	length inside	width outside	weight per m
a	b	c	
mm	mm	mm	kg
3	26	12	0.14
4	32	16	0.27
5	36	20	0.43
6	42	24	0.63
7	48	28	0.86
8	54	32	1.1
10	66	40	1.75

EXCEL® Grade 8 products

Applications
EXCEL® Grade 8 chain components are designed to be used in the manufacturing of grade 8 chain slings.

Range
Van Beest offers a wide range of grade 8 chain components that enables the assembly of a complete sling from the top master link to the hooks.
The range extends from 6 mm to 32 mm ($^1/_4$" to 1 $^1/_4$").

Design
EXCEL® Grade 8 chain components are manufactured from drop forged alloy steel.
Most master links, eye- and swivel hooks have a flat part to facilitate easy assembly with the omega link. All EXCEL® swivel hooks are equipped with needle roller thrust bearings.

These components are generally marked with:

- manufacturer's identification symbol	■ EXCEL
- chain diameter in mm and/or inch	■ e.g. 13 and/or $^1/_2$"
- traceability code	■ e.g. HA
- steel grade	■ 8
- item code	■ e.g. MJ
- origin	■ FRANCE

Finish
EXCEL® grade 8 components are powder coated yellow or red.

Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

DGUV Type Approval
More than 150 EXCEL® products are DGUV Type Approved (Deutsche Gesetzliche Unfallversicherung). This allows us to H-stamp the components with our unique H number (H94).

Tests are based on GS-OA-15-05:2012-05: Principles for the testing and certification of chains and chain components. These components are Type approved to EN818-2 or EN1677

DGUV

On the product pages the DGUV icon indicates that this product group is approved, or see our website for the complete list of approved products and their certificates.

Testing
Proofloads for grade 8 products are applied as per following table and certificates can be supplied upon request.

for chain diameter		Working Load Limit (WLL)	Proofload (PL)	Minimum Breaking (MBL)
mm	inch	t	t	t
5	$^3/_{16}$	0.8	2	3.2
6	$^7/_{32}$	1.12	2.8	4.48
7	$^1/_4$	1.57	3.93	6.28
8	$^5/_{16}$	2	5	8
10	$^3/_8$	3.2	8	12.8
13	$^1/_2$	5.4	13.5	21.6
16	$^5/_8$	8.2	20.5	32.8
20	$^3/_4$	12.8	32	51.2
22	$^7/_8$	15.5	38.75	62
26	1	21.6	54	86.4
32	1 $^1/_4$	32.8	82	131.2

Instructions for use
All grade 8 components should be inspected before use to ensure that:

- all markings are legible;
- items with the correct WLL have been selected. For further details, we refer to EN818 standard for chain slings;
- all components of the sling must be of the same steel grade;
- items should be used for in-line lifting only;
- the bolt, nut or any other locking system cannot vibrate out of position;
- items are not distorted or unduly worn;
- all items are free from nicks, gouges, cracks and corrosion;
- items may not be heat treated as this may affect their WLL;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect the WLL.

INFO

For a detailed explanation on the correct (dis)assembly of clevis fittings, we refer to the instruction PI-03-06 in the FAQ section on our website.

Temperature

If extreme temperature situations occur, the following load reductions must be taken into account:

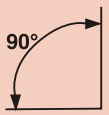
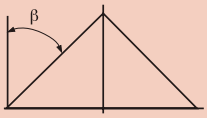
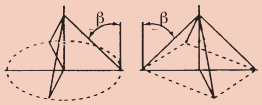
Temperature °Celsius	Reduction for elevated temperatures New Working Load Limit
-40 °C up to 200 °C	100 % of original WLL
200 – 300 °C	90 % of original WLL
300 – 400 °C	75 % of original WLL
> 400 °C	not allowed

If a sling has been temporarily used under extreme temperature conditions with the appropriate WLL reduction, there is no need to continue to reduce the WLL once it is used again in standard conditions. If a sling has accidentally been exposed to excessive temperatures, for example due to exposure to a fire, the chain sling should be withdrawn from service.

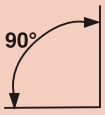
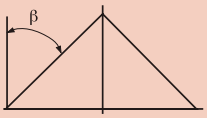
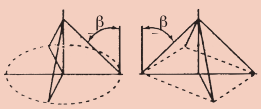
Inspection

The components must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc. which may lead to deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and more frequently when the components are used in severe operating conditions.

Working Load Limit table for Grade 8 Chain Slings to EN 818-4

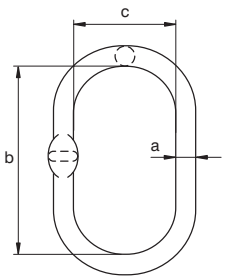
Chain Ø							
		1 leg sling	2 leg sling		3 or 4 leg sling		Endless sling
			0°<ß ≤ 45°	45°<ß ≤ 60°	0°<ß ≤ 45°	45°<ß ≤ 60°	
			Safety factor 1.4	Safety factor 1.0	Safety factor 2.1	Safety factor 1.5	Safety factor 1.6
mm	inch	t	t	t	t	t	t
5	3/16	0.8	1.12	0.8	1.60	1.18	1.25
6	7/32	1.12	1.60	1.12	2.36	1.70	1.80
7	1/4	1.50	2.12	1.50	3.15	2.24	2.50
8	5/16	2.00	2.80	2.00	4.25	3.00	3.15
10	3/8	3.15	4.25	3.15	6.70	4.75	5.00
13	1/2	5.30	7.50	5.30	11.20	8.00	8.50
16	5/8	8.00	11.20	8.00	17.00	11.80	12.50
20	3/4	12.50	17.00	12.50	26.50	19.00	20.00
22	7/8	15.00	21.20	15.00	31.50	22.40	23.60
26	1	21.20	30.00	21.20	45.00	31.50	33.50
32	1 1/4	31.50	45.00	31.50	67.00	47.50	50.00

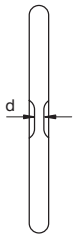
Working Load Limit table for Grade 8 Chain Slings generally to ASME B30.9

Chain Ø									
		1 leg sling	2 leg sling			3 or 4 leg sling			Endless sling
			0°<ß ≤ 30°	30°<ß ≤ 45°	45°<ß ≤ 60°	0°<ß ≤ 30°	30°<ß ≤ 45°	45°<ß ≤ 60°	
			Safety factor 1.73	Safety factor 1.4	Safety factor 1.0	Safety factor 2.6	Safety factor 2.1	Safety factor 1.5	Safety factor 1.6
mm	inch	t	t	t	t	t	t	t	t
5	3/16	0.8	1.38	1.12	0.8	2.10	1.60	1.18	1.25
6	7/32	1.12	1.94	1.60	1.12	2.90	2.36	1.70	1.80
7	1/4	1.50	2.60	2.12	1.50	3.90	3.15	2.24	2.50
8	5/16	2.00	3.46	2.80	2.00	5.20	4.25	3.00	3.15
10	3/8	3.15	5.45	4.25	3.15	8.20	6.70	4.75	5.00
13	1/2	5.30	9.20	7.50	5.30	13.80	11.20	8.00	8.50
16	5/8	8.00	13.80	11.20	8.00	20.80	17.00	11.80	12.50
20	3/4	12.50	21.60	17.00	12.50	32.50	26.50	19.00	20.00
22	7/8	15.00	26.00	21.20	15.00	39.00	31.50	22.40	23.60
26	1	21.20	36.70	30.00	21.20	55.00	45.00	31.50	33.50
32	1 1/4	31.50	54.50	45.00	31.50	82.00	67.00	47.50	50.00

EXCEL®

MS





EXCEL® Master link, grade 8

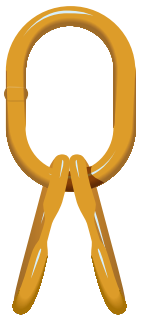
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-4
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MTC [b]
- **Note** : from 50 t without flat part

diameter chain 1 leg	diameter chain 2 legs		working load limit	dia-meter	length inside	width inside	thick-ness	weight each
	ß ≤ 45°	ß ≤ 60°		a	b	c	d	
mm	mm	mm	t	mm	mm	mm	mm	kg
6-7	6	6-7	1.6	13	100	60	7	0.33
8	7-8	8	3.2	16	120	70	7	0.56
10	10	10	4.5	18	135	75	9	0.8
13	-	13	6.2	20	150	90	9	1.11
16	13	16	8.2	22	150	90	11	1.36
18	-	18	10.6	25	170	95	13	1.96
20	16	19	12.8	28	200	120	13	2.92
20-22	18	20-22	15.5	30	200	120	17	3.4
-	19-20	-	20	36	250	150	17	6.1
26	22	26	25	38	250	150	21	6.8
-	26	-	30	44	280	170	21	10.8
32	-	32	37	45	300	200	23	11.7
-	32	-	50	50	300	200	-	14.75
-	-	-	63	55	350	200	-	20
-	-	-	100	70	400	250	-	39
-	-	-	125	80	400	250	-	52

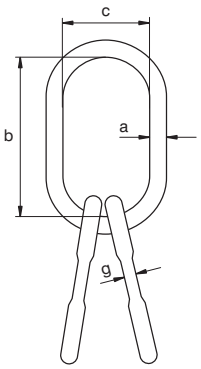
In inch

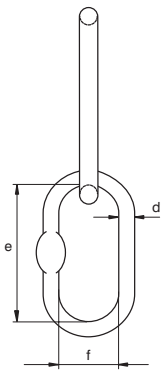
diameter chain 1 leg	diameter chain 2 legs			working load limit	dia-meter	length inside	width inside	thick-ness	weight each
	ß ≤ 30°	ß ≤ 45	ß ≤ 60		a	b	c	d	
inch	inch	inch	inch	t	inch	inch	inch	inch	lbs
7/32 - 1/4	-	7/32	7/32 - 1/4	1.6	1/2	3 15/16	2 3/8	9/32	0.73
3/8	7/32 - 1/4	1/4 - 5/16	5/16	3.2	5/8	4 23/32	2 3/4	9/32	1.23
3/8	5/16	3/8	3/8	4.5	23/32	5 5/16	2 15/16	11/32	1.76
1/2	3/8	-	1/2	6.2	25/32	5 29/32	3 17/32	11/32	2.45
5/8	-	1/2	5/8	8.2	7/8	5 29/32	3 17/32	7/16	2.99
3/4	1/2	-	3/4	10.6	31/32	6 11/16	3 3/4	1/2	4.32
3/4	-	5/8	3/4	12.8	1 3/32	7 7/8	4 23/32	1/2	6.44
3/4 - 7/8	5/8	3/4	3/4 - 7/8	15.5	1 3/16	7 7/8	4 23/32	21/32	7.5
-	3/4	3/4	-	20	1 13/32	9 27/32	5 29/32	21/32	13.5
1	3/4	7/8	1	25	1 1/2	9 27/32	5 29/32	13/16	15
-	7/8	1	-	30	1 23/32	11 1/32	6 11/16	13/16	23.8
1 1/4	1	-	1 1/4	37	1 25/32	11 13/16	7 7/8	29/32	25.8
-	-	1 1/4	-	50	1 31/32	11 13/16	7 7/8	-	32.5
-	1 1/4	-	-	63	2 5/32	13 25/32	7 7/8	-	44.1
-	-	-	-	100	2 3/4	15 3/4	9 27/32	-	86
-	-	-	-	125	3 5/32	15 3/4	9 27/32	-	115

EXCEL® Master link assembly, grade 8



MTS





- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : generally to EN 1677-4
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MTC [b]
- **Note** : from 60 t without flat part

diameter chain 3/4 legs		working load limit	dia-meter	length inside	width inside	dia-meter	length inside	width inside	thick-ness	weight each
ß ≤ 45° mm	ß ≤ 60° mm	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
6	6-7	2.5	16	120	70	13	100	60	7	1.16
6-7	8	3.5	18	135	75	16	100	60	6	1.75
8	10	6.5	22	150	90	18	120	70	9	2.8
10	13	8.5	25	170	95	20	120	70	11	3.82
-	-	10	28	200	120	20	120	70	11	4.7
13	16	13	30	200	120	22	135	75	14	5.85
16	18-19	17	36	250	150	25	135	75	14	9.35
-	20	20	38	250	150	28	170	95	17	11.75
18-20	22	27	45	280	170	33	200	120	17	18.5
-	-	30	45	300	200	36	200	120	21	22
22	26	40	50	300	200	38	150	90	21	24
26	32	50	55	300	200	38	150	90	23	27
-	-	60	58	350	200	42	150	90	-	34
32	-	80	70	400	250	55	300	150	-	72
-	-	100	80	400	250	58	300	150	-	92

In inch

diameter chain 3/4 legs			working load limit	dia-meter	length inside	width inside	dia-meter	length inside	width inside	thick-ness	weight each
ß ≤ 30 inch	ß ≤ 45° inch	ß ≤ 60° inch	t	a inch	b inch	c inch	d inch	e inch	f inch	g inch	lbs
-	7/32	7/32 - 1/4	2.5	5/8	4 23/32	2 3/4	1/2	3 15/16	2 3/8	9/32	2.56
7/32	7/32 - 1/4	5/16	3.5	23/32	5 5/16	2 15/16	5/8	3 15/16	2 3/8	1/4	3.86
1/4 - 5/16	5/16	3/8	6.5	7/8	5 29/32	3 17/32	23/32	4 23/32	2 3/4	11/32	6.17
3/8	3/8	1/2	8.5	31/32	6 11/16	3 3/4	25/32	4 23/32	2 3/4	7/16	8.42
-	-	-	10	1 3/32	7 7/8	4 23/32	25/32	4 23/32	2 3/4	7/16	10.4
-	1/2	5/8	13	1 3/16	7 7/8	5 29/32	7/8	5 5/16	2 15/16	9/16	12.9
1/2	5/8	3/4	17	1 13/32	9 27/32	5 29/32	31/32	5 5/16	2 15/16	9/16	20.6
-	-	3/4	20	1 1/2	9 27/32	5 29/32	1 3/32	6 11/16	3 3/4	21/32	25.9
5/8 - 3/4	3/4	7/8	27	1 25/32	11 1/32	6 11/16	1 5/16	7 7/8	4 23/32	21/32	40.8
3/4	-	-	30	1 25/32	11 13/16	7 7/8	1 13/32	7 7/8	4 23/32	13/16	48.5
3/4 - 7/8	7/8	1	40	1 31/32	11 13/16	7 7/8	1 1/2	9 27/32	3 17/32	13/16	52.9
-	1	1 1/4	50	2 5/32	11 13/16	7 7/8	1 1/2	9 27/32	3 17/32	29/32	59.5
1	-	-	60	2 9/32	13 25/32	7 7/8	1 21/32	9 27/32	3 17/32	-	75
-	1 1/4	-	80	2 3/4	15 3/4	9 27/32	2 5/32	11 13/16	5 29/32	-	159
1 1/4	-	-	100	3 5/32	15 3/4	9 27/32	2 9/32	11 13/16	5 29/32	-	203

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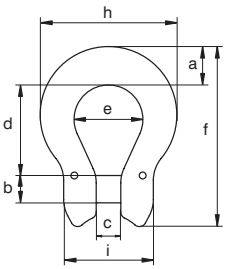
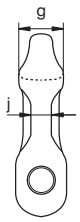
EXCEL® Omega link EN1677-1, grade 8

CO





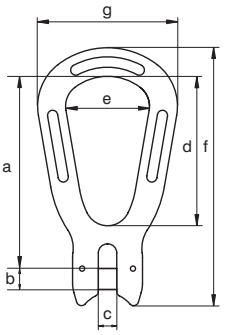
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV

for chain diameter		working load limit	width	diameter pin	width	length inside	width bow	length outside	thick-ness	width outside	width outside	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	14	6	7	26	20	53	13	41	28	6	0.07
6	7/32	1.12	14	8	7	25	20	53	13	41	28	6	0.07
7-8	1/4 - 5/16	2	20	9	9	34	24	71	16	55	32	8	0.20
10	3/8	3.2	19	13	12	40	31	82	17	63	42	11	0.28
13	1/2	5.4	25	16	15	51	40	106	20	84	54	14	0.64
16	5/8	8.2	32	20	19	64	48	132	25	104	68	17	1.28
18-20	3/4	12.8	38	24	23	80	59	163	30	126	82	22	2.25

EXCEL®

EXCEL® Pear shaped link, grade 8

MP



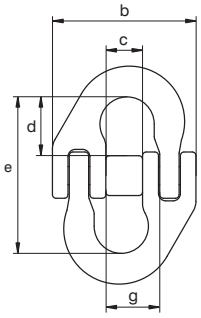
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-4
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]

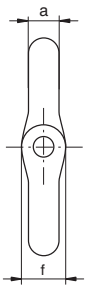
for chain diameter		working load limit	length	diameter pin	width	length inside	width inside	length	width outside	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	85	6	7	64	33	109	55	0.14
6	7/32	1.12	84	8	7	64	33	109	55	0.14
7-8	1/4 - 5/16	2	101	9	9	77	40	132	69	0.34
10	3/8	3.2	125	13	12	97	50	165	84	0.77
13	1/2	5.4	161	16	15	125	66	213	110	1.62
16	5/8	8.2	198	20	19	154	84	262	140	2.72
18-20	3/4	12.8	253	24	23	198	104	331	166	4.28

EXCEL® Connecting link EN1677-1, grade 8

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 | 2.2 | 3.1 | MPI [b] | DGUV

MJ





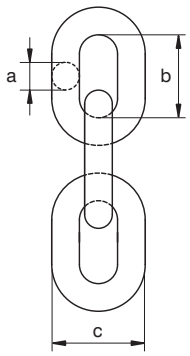
for chain diameter		working load limit	diameter	width outside	width inside	length inside	length inside	diameter eye	width inside	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	8	42	11	20	52	11	15	0.09
7-8	1/4 - 5/16	2	9	53	14	20	55	13	19	0.15
10	3/8	3.2	10	66	18	23	64	18	23	0.28
13	1/2	5.4	14	83	21	32	85	24	28	0.63
16	5/8	8.2	17	103	25	40	105	28	34	1.16
18-20	3/4	12.8	21	120	33	50	129	33	42	1.95
22	7/8	15.5	23	143	40	55	140	37	51	2.94
26	1	21.6	26	160	45	60	153	46	57	4.12
32	1 1/4	32.8	39	197	52	68	174	56	67	8.3

INFO

Lifting chain EN818-2, grade 8

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 818-2
- **Finish** : painted black
- **Certification** : 2.1 | 2.2 | 3.1 | MTC [b] | DGUV

CHAIN

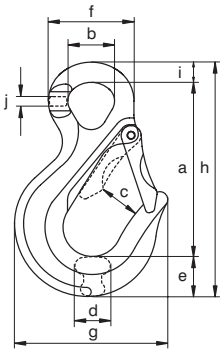


diameter		working load limit	length inside	width outside	links per meter	length per drum	weight per mtr
a			b	c			
mm	inch	t	mm	mm		m	kg
6	7/32	1.12	18	22	55.56	600	0.78
7	1/4	1.5	21	26	47.62	500	1.14
8	5/16	2	24	30	41.67	350	1.5
10	3/8	3.15	30	36	33.33	250	2.27
13	1/2	5.3	39	47	25.64	150	3.74
16	5/8	8	48	58	20.83	100	5.54
20	3/4	12.5	60	72	16.67	60	8.94
22	7/8	15	66	79	15.15	50	11.57
26	1	21.2	78	93	12.82	30	15.26
32	1 1/4	31.5	96	112	10.42	50	22.61

EXCEL®

EXCEL® Eye sling hook EN1677-2, grade 8

CSO



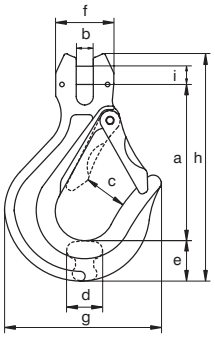
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-2
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : from 8.2 t without flat part

for chain diameter		working load limit	length	dia-meter inside eye	width opening	thick-ness	width	dia-meter eye outside	width outside	length outside	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5-6	3/16 - 7/32	1.12	84	23	26	15	20	43	72	114	10	6	0.28
7-8	1/4 - 5/16	2	103	26	30	20	24	51	87	139	12	8	0.56
10	3/8	3.2	128	35	33	24	29	65	106	172	15	10	1.09
13	1/2	5.4	152	41	37	32	39	77	133	209	18	12	1.98
16	5/8	8.2	190	52	44	40	44	94	165	255	21	16	3.55
18-20	3/4	12.8	237	60	61	49	62	115	208	327	28	21	7.1
22	7/8	15.5	280	72	75	54	65	132	242	375	30	23	9.9
26	1	21.6	259	70	73	70	75	144	235	371	37	37	13.3
32	1 1/4	32.8	299	66	87	78	89	150	281	430	42	42	21.6

EXCEL®

EXCEL® Clevis sling hook EN1677-2, grade 8

CSC

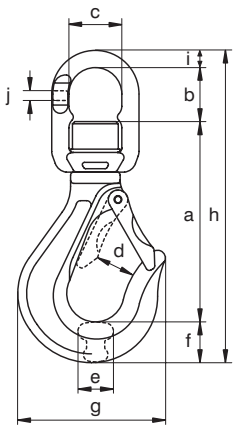


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-2
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV

for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length outside	dia-meter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	76	7	26	15	20	28	72	108	6	0.29
6	7/32	1.12	75	7	26	15	20	28	72	108	8	0.29
7-8	1/4 - 5/16	2	95	9	30	20	24	32	87	136	9	0.58
10	3/8	3.2	113	12	33	24	29	42	106	164	13	1.1
13	1/2	5.4	138	15	37	32	39	54	133	208	16	2.12
16	5/8	8.2	161	19	44	40	44	68	165	240	20	3.67
18-20	3/4	12.8	198	23	61	49	62	82	208	305	24	7.32
22	7/8	15.5	236	25	75	54	65	97	242	350	28	10.63

EXCEL® Swivel sling hook EN1677-2, grade 8

CSE

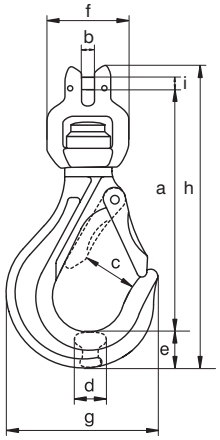


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-2
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : equipped with needle roller thrust bearing

for chain diameter		working load limit	length	length inside	width inside	width opening	thick-ness	width	width outside	length outside	dia-meter	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5-6	3/16 - 7/32	1.12	100	33	32	26	15	20	72	164	12	6	0.55
7-8	1/4 - 5/16	2	126	39	37	30	20	24	87	200	14	8	1
10	3/8	3.2	159	47	48	33	24	29	106	250	16	11	1.9
13	1/2	5.4	189	59	58	37	32	39	133	307	21	14	3.39
16	5/8	8.2	216	68	73	44	40	44	165	352	25	17	6.25
18-20	3/4	12.8	263	87	82	61	49	62	208	437	25	22	10.5

EXCEL® Swivel sling hook with clevis EN1677-2, grade 8

CSECA



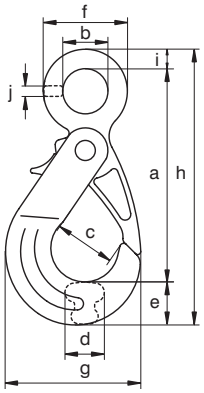
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-2
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : equipped with needle roller thrust bearing

for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	126	7	26	15	20	56	72	159	6	0.56
6	7/32	1.12	125	7	26	15	20	56	72	159	8	0.56
7/8	1/4 - 5/16	2	153	9	30	20	24	65	87	194	9	0.99
10	3/8	3.2	188	12	33	24	29	79	106	240	13	1.95
13	1/2	5.4	224	15	37	32	39	96	133	294	16	3.54
16	5/8	8.2	270	19	44	40	44	121	165	350	20	6.61

EXCEL®

EXCEL® Eye self locking hook EN1677-3, grade 8

XLO



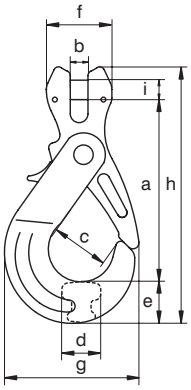
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-3
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : from 12.8 t without flat part

for chain diameter		working load limit	length	diameter inside eye	width opening	thick-ness	width	width outside	width outside	length	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5-6	3/16 - 7/32	1.12	111	24	32	16	26	47	77	147	11	7	0.51
7-8	1/4 - 5/16	2	134	29	43	23	29	57	92	176	14	7	0.91
10	3/8	3.2	168	35	47	32	35	69	111	219	17	10	1.79
13	1/2	5.4	199	46	61	37	45	87	142	264	20	13	3.36
16	5/8	8.2	247	59	74	43	56	111	185	328	26	16	7
18-20	3/4	12.8	282	69	88	51	63	126	207	374	28	20	9.22

EXCEL®

EXCEL® Clevis self locking hook EN1677-3, grade 8

XLC

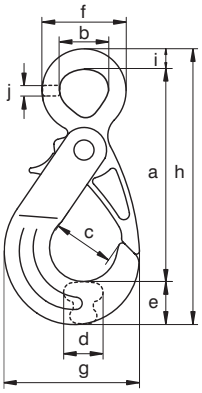


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-3
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV

for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	92	7	32	16	26	28	77	131	6	0.49
6	7/32	1.12	92	7	32	16	26	28	77	131	8	0.49
7-8	1/4 - 5/16	2	116	9	43	23	29	32	92	161	9	0.91
10	3/8	3.2	143	12	47	32	35	42	111	200	13	1.77
13	1/2	5.4	167	15	61	37	45	54	142	242	16	3.33
16	5/8	8.2	201	19	74	43	56	68	185	293	20	6.75
18-20	3/4	12.8	232	23	88	51	63	82	207	341	24	9.57

EXCEL® Eye self locking hook, grade 8

GKO

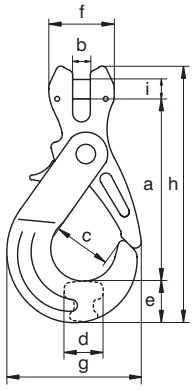


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 MPI [b]

for chain diameter		working load limit	length	diameter inside eye	width opening	thick-ness	width	width outside	width outside	length	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
7-8	1/4 - 5/16	2	113	24	32	17	25	48	77	151	13	9	0.53
10	3/8	3.2	134	30	43	24	29	59	92	180	17	10	0.94
13	1/2	5.4	170	39	47	32	34	75	111	225	20	12	1.86
16	5/8	8.2	207	49	61	37	46	93	142	273	22	15	3.49
18-20	3/4	12.8	257	60	74	43	57	117	185	341	28	21	7.33
22	7/8	15.5	290	71	88	52	62	133	207	383	31	21	9.91

EXCEL® Clevis self locking hook, grade 8

GKC



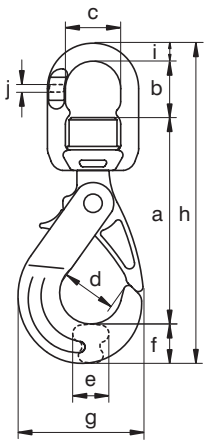
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 MPI [b]

for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
7-8	1/4 - 5/16	2	85	9	32	17	25	32	77	136	9	0.55
10	3/8	3.2	116	12	43	24	29	42	92	168	13	1.02
13	1/2	5.4	153	15	47	32	34	54	111	218	16	2.01
16	5/8	8.2	166	19	62	37	46	66	142	247	20	3.7
18-20	3/4	12.8	215	23	74	43	57	80	185	312	24	7.59
22	7/8	15.5	242	25	88	52	62	98	207	353	28	10.3

EXCEL®

EXCEL® Swivel self locking hook EN1677-3, grade 8

XLE



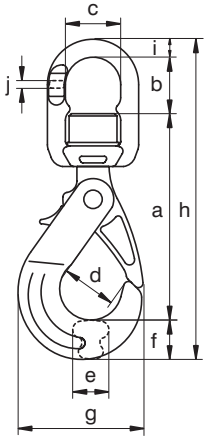
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-3
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : equipped with needle roller thrust bearing

for chain diameter		working load limit	length	length inside	width inside	width opening	thick-ness	width	width outside	length	diameter	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5-6	3/16 - 7/32	1.12	122	32	32	32	16	26	77	192	12	6	0.78
7-8	1/4 - 5/16	2	148	39	37	43	23	29	92	231	14	8	1.39
10	3/8	3.2	183	46	48	47	32	35	111	282	16	11	2.56
13	1/2	5.4	214	57	58	61	37	45	142	336	21	14	4.56
16	5/8	8.2	269	65	73	74	39	56	185	416	25	17	9.37
18-20	3/4	12.8	303	87	82	88	51	63	207	480	25	22	12.7

EXCEL®

EXCEL® Swivel self locking hook, grade 8

GKE

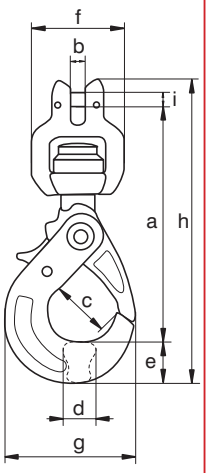


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 MPI [b]
- **Note** : equipped with needle roller thrust bearing

for chain diameter		working load limit	length	length inside	width inside	width opening	thick-ness	width	width outside	length	diameter	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
7-8	1/4 - 5/16	2	122	33	32	32	17	25	77	192	12	6	0.77
10	3/8	3.2	148	40	37	43	24	29	92	231	14	8	1.38
13	1/2	5.4	185	47	48	47	32	34	111	282	16	11	2.56
16	5/8	8.2	213	60	58	61	37	46	142	339	21	14	4.58
18-20	3/4	12.8	268	62	73	74	43	57	185	417	25	17	9.51
22	7/8	15.5	305	88	82	90	52	62	207	480	25	22	12.85

EXCEL® Swivel clevis self locking hook EN1677-3, grade 8

XLBA

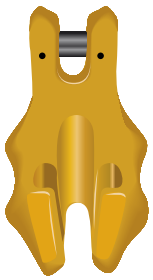


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-3
- **Finish** : painted red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : equipped with needle roller thrust bearing

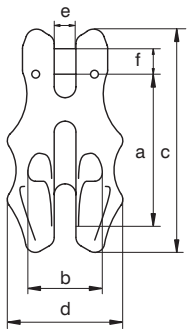
for chain diameter		working load limit	length	width	width opening	thickness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.8	148	7	32	17	27	56	77	188	6	0.7
6	7/32	1.12	148	7	32	17	27	56	77	188	8	0.8
7-8	1/4 - 5/16	2	176	9	43	24	31	65	92	221	9	1.4
10	3/8	3.2	214	12	47	32	37	79	111	271	13	2.6
13	1/2	5.4	250	15	61	37	47	96	142	325	16	4.7
16	5/8	8.2	319	19	74	43	67	121	185	411	20	9.8

EXCEL®

EXCEL® Shortening clutch EN1677-1, grade 8



GC



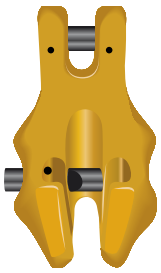
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width inside	length	width outside	width	diameter pin	weight each
			a	b	c	d	e	f	
mm	inch	t	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	54	22	75	42	7	8	0.23
7-8	1/4 - 5/16	2	69	30	94	50	9	9	0.44
10	3/8	3.2	79	37	116	63	12	13	0.87
13	1/2	5.4	105	48	149	79	15	16	1.76
16	5/8	8.2	129	60	185	100	19	20	3.44
18-20	3/4	12.8	140	75	205	111	23	24	4.02

INFO

EXCEL®

EXCEL® Shortening clutch with locking EN1677-1, grade 8



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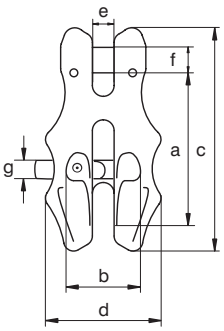
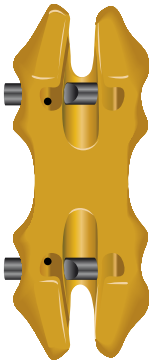


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]

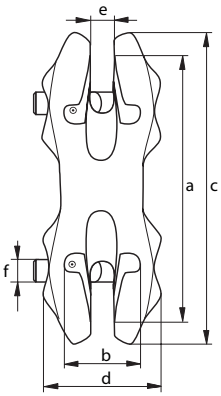
for chain diameter		working load limit	length	width inside	length	width outside	width	diameter pin	diameter pin	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	54	22	75	42	7	8	7	0.25
8	5/16	2	69	30	94	50	9	9	8	0.45
10	3/8	3.2	79	37	116	63	12	13	12	0.87
13	1/2	5.4	105	48	149	79	15	16	16	1.76
16	5/8	8.2	129	60	185	100	19	20	20	3.1
20	3/4	12.8	140	75	205	111	23	24	20	3.7

INFO

EXCEL® Shortening clutch with double locking, EN 1677-1, grade 8



GDV



- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width inside	length	width outside	width	diameter pin	weight each
			a	b	c	d	e	f	
mm	inch	t	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	99	23	120	42	7	7	0.49
8	5/16	2	112	30	140	50	9	8	0.77
13	1/2	5.4	178	49	208	79	15	16	2.85

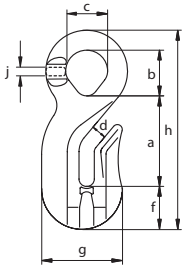
INFO

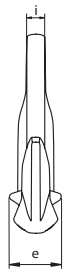
EXCEL®

EXCEL® Eye grab hook EN1677-1, grade 8

CRO

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV





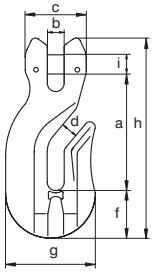
for chain diameter		working load limit	length	inside length eye	inside width eye	opening	thick-ness	width	width outside	length outside	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	41	24	23	8	24	20	42	94	9	6	0.25
7-8	1/4 - 5/16	2	53	27	26	10	33	23	53	115	10	8	0.45
10	3/8	3.2	65	38	36	12	40	29	66	146	14	10	0.91
13	1/2	5.4	83	42	41	15	56	40	88	183	16	12	1.99
16	5/8	8.2	103	44	41	18	66	43	96	211	20	20	2.49
20	3/4	12.8	130	37	37	22	75	48	128	241	26	26	4.3
22	7/8	15.5	120	44	44	25	77	57	132	247	26	26	8.5
26	1	21.6	158	46	46	30	100	82	177	320	32	32	14.7
32	1 1/4	32.8	210	57	57	38	91	88	215	395	39	39	18

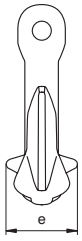
EXCEL®

EXCEL® Clevis grab hook EN1677-1, grade 8

CRC

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Standard** : EN 1677-1
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]

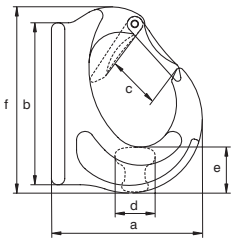




for chain diameter		working load limit	length	width	width outside	opening	thick-ness	width	width outside	length outside	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	52	7	28	7	24	19	42	86	8	0.28
7-8	1/4 - 5/16	2	64	9	32	10	33	23	53	104	9	0.45
10	3/8	3.2	75	12	42	12	40	29	66	127	13	0.88
13	1/2	5.4	103	15	54	15	56	40	88	173	16	2.17
16	5/8	8.2	127	19	68	18	65	43	96	208	20	2.81

EXCEL® Excavator hook, grade 8

GH



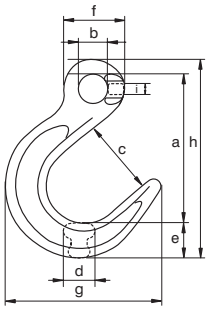
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J)
- **Certification** : 2.1 2.2 3.1 MPI [b]
- **Note** : welding must be done in accordance with DIN 5817 resp. 15429, by a qualified welder according to EN 287-1

working load limit	width	length	width opening	thickness	width	length	width	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.75	59	71	22	14	21	82	20	0.24
1	72	78	25	19	28	108	26	0.52
2	92	85	33	20	28	114	34	0.7
3	105	104	33	26	32	129	34	1.15
4	121	130	38	27	37	148	38	1.66
5	138	150	43	28	46	167	44	2.36
8	145	148	43	42	53	173	51	3.32
10	178	197	60	47	61	225	67	6.44
15	185	226	65	62	70	251	80	9.7

INFO

EXCEL® Eye foundry hook, grade 8

CFO



- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : from 8.2 t without flat part

for chain diameter		working load limit	length	diameter eye inside	width opening	thick-ness	width	diameter eye outside	width outside	length	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.12	93	18	47	17	22	38	97	125	7	0.33
7-8	1/4 - 5/16	2	124	24	63	22	30	51	129	166	9	0.78
10	3/8	3.2	157	33	79	28	36	66	160	208	11	1.5
13	1/2	5.4	190	44	93	36	46	85	198	256	14	3
16	5/8	8.2	205	35	95	45	52	88	204	284	24	4.2
18-20	3/4	12.8	235	40	111	53	55	92	228	315	25	7.8
22	7/8	15.5	265	46	123	66	71	110	258	268	32	9.9
26	1	21.6	305	54	133	65	81	120	277	420	33	13.8
32	1 1/4	32.8	327	60	155	84	96	131	333	459	35	24.5

EXCEL® Lifting Points

Applications

EXCEL® lifting points are screwed into or welded on a load, machine or any other object which cannot be lifted by hand or by fork lift truck.

Range

Van Beest offers a wide range of lifting points in alloy steel: fixed, articulated, pivoting and/or rotating.

Design

EXCEL® lifting points are made of grade 8 alloy steel, apart from the forged welding base of the PAS, which is made of welding quality steel.
Compared to the DIN 580 and 582 carbon steel lifting eyes, the alloy steel lifting eyes offer a higher Working Load value for an equivalent size. ADA articulated lifting eyes can be loaded in all directions, providing full safety when used under different angles.

EXCEL® grade 8 components are generally marked as follows:

- Working Load Limit	■ e.g. 1.5 t
- manufacturer's identification symbol	■ EXCEL
- thread diameter in mm or inch	■ e.g. M16 or $^{5}/_{8}$"-11UNC
- traceability code	■ e.g. HA
- steel grade	■ 8 (only on AL, EL, ADA and PAS)
- item code	■ EL, AL, ADA or OL
- origin	■ FRANCE
- CE conformity code	■ CE

Finish

EXCEL® grade 8 lifting points are powder coated in red. All the lifting points are supplied with a protective cover over the thread.
Do not remove the cover until use.

Certification

Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use

Lifting points should be inspected before use to ensure that:

- all markings are legible;
- lifting points with the correct WLL have been selected;
- lifting points and the other components are of the same steel grade;
- lifting points should never be side loaded;
- always make sure that the lifting point is supporting the load correctly;
- lifting points should be seated well down in the hook;
- lifting points should be well fixed in the load (same thread, well positioned);
- lifting points are not distorted or unduly worn;
- lifting points are free from nicks, gouges, cracks and corrosion;
- lifting points may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a lifting point by machining, welding, heating or bending as this may affect the WLL.

The WLL of the lifting points must be derated when used above 200°C. Please refer to the paragraph on temperature at the beginning of this chapter.

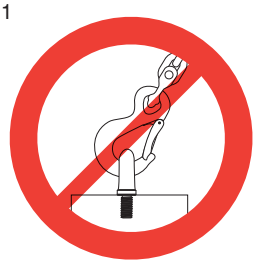
Assembly

The thread length should be adapted to the material of the load. For hard materials, the thread length must not be smaller than 1.5 times the diameter (e.g. M20, minimum length 30 mm). For soft materials like aluminium or brass, a length of 3 times the diameter is needed. For soft materials, consider using a longer length and through-hole mounting with a nut and washer on the other side. The nut on the bolt should at least be class 8, but class 10 or 12 is recommended.

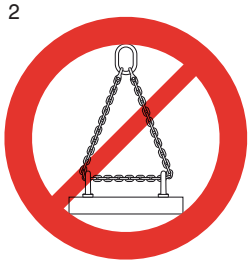
The bolt thread and the tapped hole in the load must be compatible and both in a good state. The tapping should be at least 20 % deeper than the thread length.
The surface should be flat and perpendicular to the thread enable full contact with the lifting point.

The material to which the lifting point is attached should be strong enough to withstand lifting forces without any deformation. The lifting points must perfectly fit on the material of the load to be lifted. Full contact between the lifting point and the surface is required.

1

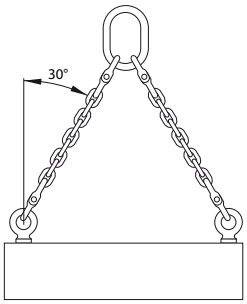


2



1) The lifting points should match the size of the hook, so that they can be correctly positioned into the hook.

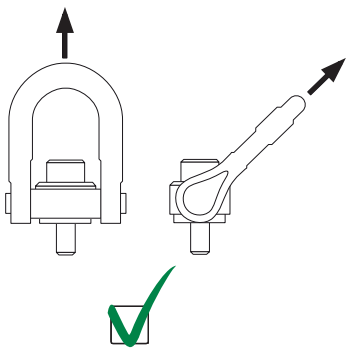
2) Never use a sling as a loop between two lifting points.
Consider the center of gravity of the load to position the lifting points (symmetric to the center). The tapping must be positioned at a distance of at least 3 times the diameter of the bolt from the edge of the load.

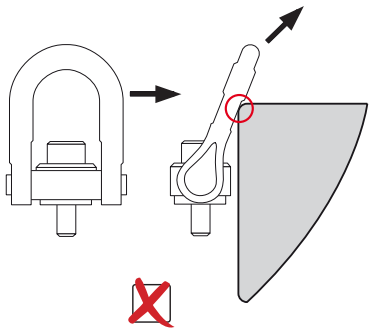


For the AL, EL and OL lifting points, the application angle may be up to 30° from the vertical. Above 30°, the WLL decreases significantly.
We recommend the use of pivoting and rotating hoist rings (ADA) when the angle is above 30°.

Fasten these lifting points by hand and without the use of any tools or leverage. The lifting point has to be tightened just so deep that the lower edge connects to the surface of the load.

For the ADA pivoting and rotating hoist rings, tighten the threaded bolt to recommended torque (see product table). Periodically check the torque because the bolts may come loose during use.
Check if the hoist ring can pivot and rotate freely in all directions.





The maximum work load per hoist ring depends on the angle of inclination and should be calculated using the following formula :

$$WLL = \frac{W}{N \cdot \cos ß}$$

W = load weight in kg
N = number of legs or hoist rings
ß = angle of inclination to the vertical of the leg

INFO

For welding instructions for transport rings type PAS we refer to instruction PI-03-01 in the FAQ section on our website.

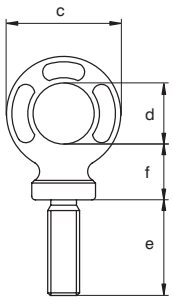
Inspection

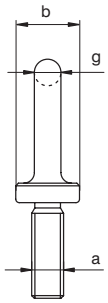
It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is necessary because the products in use may be affected by wear, misuse, overloading, etc. which may lead to deformation and alteration of the material structure. Inspection by a competent person should take place at least every six months and more frequently when the components are used in severe operating conditions.

EXCEL® Eye bolt, grade 8

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI [b] CE

AL

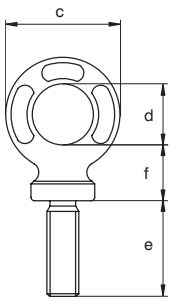


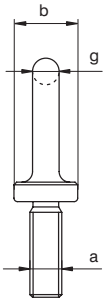


working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.2	M 6 x 1.00	20	34	20	20	17	7	0.05
0.4	M 8 x 1.25	20	34	20	24	17	7	0.07
0.7	M10 x 1.50	20	38	22	30	19	8	0.08
1	M12 x 1.75	25	47	26	36	23	10	0.14
1.2	M14 x 2.00	30	57	29	40	28	14	0.25
1.5	M16 x 2.00	36	65	35	55	30	14	0.39
2	M18 x 2.50	36	65	35	54	30	14	0.38
2.5	M20 x 2.50	40	73	39	59	34	16	0.58
3	M22 x 2.50	42	82	44	64	38	19	1.01
4	M24 x 3.00	55	95	54	84	40	20	1.12
5	M27 x 3.00	55	95	54	84	40	20	1.18
6	M30 x 3.50	60	108	59	100	49	24	1.84
7	M33 x 3.50	60	108	59	100	49	24	2.01
8	M36 x 4.00	65	118	67	118	45	25	2.44
9	M39 x 4.00	65	118	67	118	45	25	2.62
10	M42 x 4.50	70	139	79	135	56	31	5.41
15	M45 x 4.50	70	139	79	135	56	31	4.16
18	M48 x 5.00	95	181	97	150	68	43	8.22
20	M52 x 5.00	95	181	97	150	68	43	8.55
25	M56 x 5.50	95	181	97	150	68	43	8.85
30	M60 x 5.50	95	181	97	150	68	43	9.16
36	M64 x 6.00	95	181	97	150	68	43	9.55

EXCEL®

ALDIN





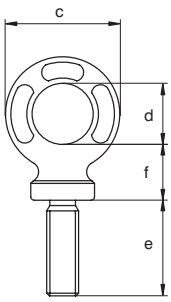
EXCEL® Eye bolt length as DIN580, grade 8

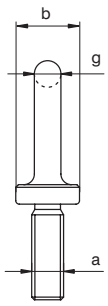
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI [b] CE

working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.2	M 6 x 1.00	20	34	20	13	17	7	0.05
0.4	M 8 x 1.25	20	34	20	13	17	7	0.05
0.7	M10 x 1.50	20	38	22	17	19	8	0.08
1	M12 x 1.75	25	47	26	21	23	10	0.13
1.2	M14 x 2.00	30	57	29	27	28	14	0.24
1.5	M16 x 2.00	36	64	35	27	30	14	0.34
2	M18 x 2.50	36	65	35	30	30	14	0.36
2.5	M20 x 2.50	40	73	39	30	34	16	0.52
3	M22 x 2.50	42	82	44	35	38	19	0.74
4	M24 x 3.00	55	95	54	36	40	20	0.99
5	M27 x 3.00	55	95	54	38	40	20	1.03
6	M30 x 3.50	60	108	59	45	49	24	1.66
7	M33 x 3.50	60	108	59	45	49	24	1.66
8	M36 x 4.00	65	118	67	54	45	25	2.01
9	M39 x 4.00	65	118	67	55	45	25	2.08
10	M42 x 4.50	70	139	79	63	56	31	3.37
15	M45 x 4.50	70	139	79	65	56	31	3.47
18	M48 x 5.00	95	181	97	68	68	43	7.17
20	M52 x 5.00	95	181	97	78	68	43	7.53
25	M56 x 5.50	95	181	97	78	68	43	7.52
30	M60 x 5.50	95	181	97	78	68	43	7.78
36	M64 x 6.00	95	181	97	90	68	43	8.42

EXCEL® Eye bolt, grade 8, UNC

ALUNC





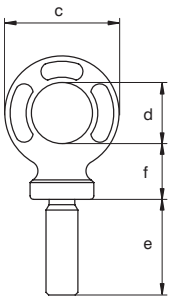
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI b CE

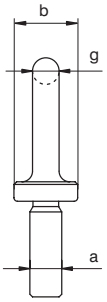
working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
	a	b	c	d	e	f	g	
t	inch	mm	mm	mm	mm	mm	mm	kg
0.2	1/4 - 20UNC	20	34	20	20	17	7	0.05
0.7	3/8 - 16UNC	20	38	22	30	19	8	0.08
1	1/2 - 13UNC	25	47	26	36	23	10	0.14
1.5	5/8 - 11UNC	36	65	35	55	30	14	0.38
2.5	3/4 - 10UNC	40	73	39	59	34	16	0.55
3	7/8 - 9UNC	42	82	44	64	38	19	0.81
4	1 - 8UNC	55	95	54	84	40	20	1.14
5	1 1/8 - 7UNC	55	95	54	84	40	20	1.21
6	1 1/4 - 7UNC	60	108	59	100	49	24	1.91
8	1 1/2 - 6UNC	65	118	67	118	45	25	2.52

EXCEL®

EXCEL® Eye bolt without thread, grade 8

ALB



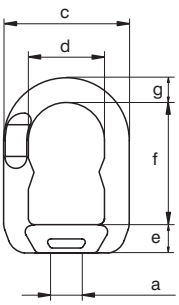


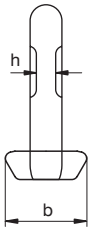
- **Material** : alloy steel, grade 8, quenched and tempered
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : final WLL of product must be determined after machining

diameter	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	kg
12	22	34	20	20	18	7	0.07
12	22	34	20	24	17	7	0.07
15	24	38	22	30	19	8	0.11
16	28	47	26	36	23	10	0.19
19	34	57	29	40	28	14	0.3
22	40	64	35	51	32	14	0.48
22	41	65	35	54	30	14	0.48
26	45	73	39	59	34	16	0.55
29	47	82	44	64	38	19	0.94
30	58	95	54	80	42	20	1.4
31	61	95	54	84	40	20	1.36
39	66	108	60	94	52	24	2.48
41	67	108	59	100	49	24	2.5
41	71	118	67	117	47	25	3
42	71	118	67	118	46	25	3
51	77	139	79	134	58	32	5
52	77	139	79	135	56	31	5.5
72	102	181	97	150	68	43	11.3

EXCEL® Eye nut, grade 8

EL



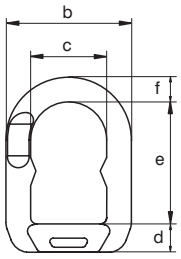


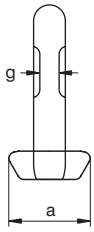
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI [b] CE

working load limit	diameter thread	diameter base	width	width inside	thickness base	length inside	diameter	thickness	weight each
t	a	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
0.2	M 6 x 1.00	31	51	30	14	44	11	6	0.15
0.4	M 8 x 1.25	31	51	30	14	44	11	6	0.15
0.7	M10 x 1.50	31	51	30	14	44	11	6	0.15
1	M12 x 1.75	39	56	32	15	48	12	6	0.29
1.2	M14 x 2.00	39	56	32	15	48	12	6	0.29
1.5	M16 x 2.00	44	65	37	16	60	14	8	0.38
2	M18 x 2.50	44	65	37	16	60	14	8	0.38
2.5	M20 x 2.50	44	65	37	16	60	14	8	0.38
3	M22 x 2.50	52	79	48	21	75	16	11	0.63
4	M24 x 3.00	52	79	48	21	75	16	11	0.63
5	M27 x 3.00	52	79	48	21	75	16	11	0.63
6	M30 x 3.50	66	96	58	25	88	21	14	1.11
7	M33 x 3.50	66	96	58	25	88	21	14	1.11
8	M36 x 4.00	84	121	73	39	100	25	17	2.22
9	M39 x 4.00	84	121	73	39	100	25	17	2.22
10	M42 x 4.50	84	121	73	39	100	25	17	2.22
15	M45 x 4.50	90	132	82	42	121	25	22	2.73
18	M48 x 5.00	90	132	82	42	121	25	22	2.73

EXCEL® Eye nut without thread, grade 8

ELB



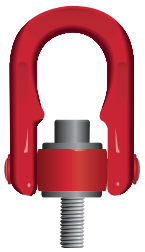


- **Material** : alloy steel, grade 8, quenched and tempered
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : final WLL of product must be determined after machining

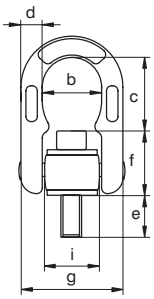
diameter base	width	width inside	thickness base	length inside	diameter	thickness	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
31	51	30	15	44	11	6	0.16
39	56	32	17	48	12	6	0.24
44	65	37	18	60	14	8	0.42
52	79	48	23	75	16	11	0.72
66	96	58	28	88	21	14	1.22
84	121	73	42	100	25	17	2.56
90	132	82	45	121	25	22	3.27

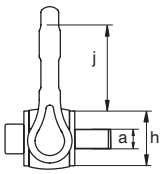
EXCEL®

EXCEL® Rotating hoist ring, grade 8



ADA



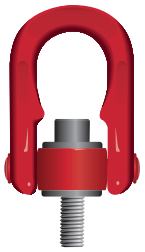


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Temperature Range** : up to +250°C
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : WLL indicated hereunder are given in the worst conditions of use, i.e. 90°

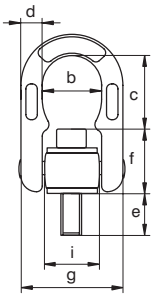
working load limit	diameter thread	width inside	length inside	dia-meter	length	thick-ness base	width outside	dia-meter base	dia-meter base	length inside	Hex Key	Torque value	weight each
	a	b	c	d	e	f	g	h	i	j			
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm	kg
0.4	M 8 x 1.25	35	41	13	18	35	68	34	38	43	6	6.5	0.43
0.7	M10 x 1.5	35	39	13	18	37	68	34	38	43	8	13	0.44
1	M12 x 1.75	35	36	13	22	39	68	34	38	43	10	22	0.46
1.3	M14 x 2.0	35	35	13	22	42	68	34	38	43	12	35	0.47
1.6	M16 x 2.0	35	42	13	28	43	68	34	38	52	14	55	0.52
2	M18 x 2.5	35	40	13	28	45	68	34	38	52	14	80	0.54
2.5	M20 x 2.5	35	38	13	32	47	68	34	38	52	17	110	0.59
3	M22 x 2.5	53	57	20	33	69	105	49	56	71	17	150	1.88
4	M24 x 3.0	53	55	20	39	71	105	49	56	71	19	190	1.93
5	M27 x 3.0	53	61	20	45	65	105	49	56	71	19	280	1.96
6.3	M30 x 3.5	53	61	20	45	65	105	49	56	71	19	380	2.03
7	M33 x 3.5	71	87	30	54	83	146	68	77	98	19	520	5.28
10	M36 x 4.0	71	87	30	54	84	146	68	77	98	19	600	5.35
10	M39 x 4.0	71	87	30	63	84	146	68	77	98	19	870	5.45
12.5	M42 x 4.5	71	87	30	63	84	146	68	77	98	19	1000	5.56

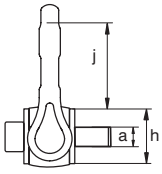
EXCEL®

EXCEL® Rotating hoist ring UNC, grade 8



ADAUNC

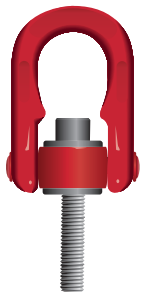




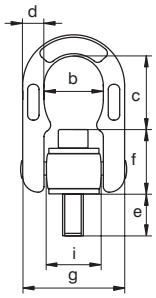
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Temperature Range** : up to +250°C
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : WLL indicated hereunder are given in the worst conditions of use, i.e. 90°

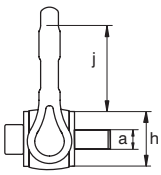
working load limit	diameter thread	width inside	length inside	dia-meter	length	thick-ness base	width outside	dia-meter base	dia-meter base	length inside	Hex Key	Torque value	weight each
	a	b	c	d	e	f	g	h	i	j			
t	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm	kg
0.4	$^{5}/_{16}$ - 18 UNC	35	41	13	18	35	68	34	38	43	6	6.5	0.43
0.6	$^{3}/_{8}$ - 16 UNC	35	39	13	18	37	68	34	38	43	8	13	0.44
1	$^{1}/_{2}$ - 13 UNC	35	36	13	24	39	68	34	38	43	10	22	0.46
1.7	$^{5}/_{8}$ - 11 UNC	35	42	13	31	43	68	34	38	52	13	55	0.54
2.5	$^{3}/_{4}$ - 10 UNC	35	38	13	31	47	68	34	38	52	16	110	0.55
3.5	$^{7}/_{8}$ - 9 UNC	53	57	20	37	69	105	49	56	71	19	150	1.88
4.5	1 - 8 UNC	53	55	20	43	71	105	49	56	71	19	190	1.93

EXCEL® Rotating hoist ring longer length, grade 8



ADAL





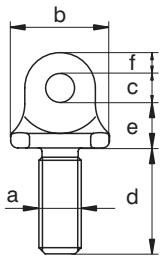
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : painted red
- **Temperature Range** : up to +250°C
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : WLL indicated hereunder are given in the worst conditions of use, i.e. 90°

working load limit	diameter thread	width inside	length inside	dia-meter	length	thick-ness base	width outside	dia-meter base	dia-meter base	length inside	Hex Key	Torque value	weight each
	a	b	c	d	e	f	g	h	i	j			
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm	kg
0.4	M 8 x 1.25	35	41	13	52	35	68	34	38	43	6	6.5	0.46
0.4	M 8 x 1.25	35	41	13	92	35	68	34	38	43	6	6.5	0.47
0.7	M10 x 1.5	35	39	13	62	37	68	34	38	43	8	13	0.47
0.7	M10 x 1.5	35	39	13	125	37	68	34	38	43	8	13	0.5
1	M12 x 1.75	35	36	13	62	39	68	34	38	43	10	22	0.49
1	M12 x 1.75	35	36	13	125	39	68	34	38	43	10	22	0.53
1.6	M16 x 2.0	35	42	13	92	43	68	34	38	52	14	55	0.6
1.6	M16 x 2.0	35	42	13	172	43	68	34	38	52	14	55	0.71
2.5	M20 x 2.5	35	38	13	112	47	68	34	38	52	17	110	0.75
2.5	M20 x 2.5	35	38	13	172	47	68	34	38	52	17	110	0.87
4	M24 x 3.0	53	55	20	112	71	105	49	56	71	19	190	2.16
4	M24 x 3.0	53	55	20	172	71	105	49	56	71	19	190	2.33
5	M27 x 3.0	53	61	20	90	65	105	49	56	71	19	280	2.2
6.3	M30 x 3.5	53	61	20	90	65	105	49	56	71	19	380	2.27
6.3	M30 x 3.5	53	61	20	240	65	105	49	56	71	19	380	3.05
10	M36 x 4.0	71	87	30	110	84	146	68	77	98	19	600	5.72
12.5	M42 x 4.5	71	87	30	120	84	146	68	77	98	19	1000	6.07

EXCEL®

EXCEL® Small lifting eye, grade 8

OL



- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 MPI [b] CE

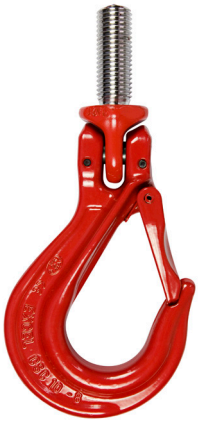
working load limit	diameter thread	diameter base	diameter eye inside	length	thickness base	width	Can be combined with	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm		kg
0.5	M 8 x 1.25	28	8	30	13	6	XLC05, XLC0, CO5,	0.05
0.9	M10 x 1.50	28	8	30	13	6	CO6, MP5, MP6,	0.05
1.25	M12 x 1.75	28	8	30	13	6	CSC5, CSC6	0.06
1.5	M14 x 2.00	32	9	46	16	10	XLC1, CO7/8, MP7/8, CSC7/8	0.12
1.9	M16 x 2.00	32	9	46	16	10		0.14
2.25	M18 x 2.50	32	9	46	16	10		0.15
3.12	M20 x 2.50	41	13	56	19	11	XLC2, CO10, MP10,	0.25
3.8	M22 x 2.50	41	13	56	19	11	CSC10	0.28
5	M24 x 3.00	54	16	68	28	12	XLC3, CO13, MP13,	0.53
6.25	M27 x 3.00	54	16	68	28	12	CSC13	0.58
8	M30 x 3.50	60	20	92	33	13	XLC4, CO16, MP16, CSC16	0.94
9	M33 x 3.50	60	20	92	33	13		1.03
10	M36 x 4.00	60	20	92	33	13		1.12
12.5	M39 x 4.00	75	24	105	39	19	XLC5, CO18/20,	1.9
15	M42 x 4.50	75	24	105	39	19	MP18/20, CSC18/20	2.02

Example combinations with OL:

OL + XLC

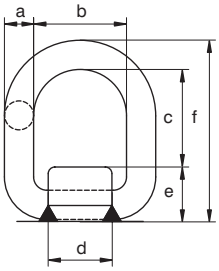
OL + CO

OL + MP



OL + CSC

PAS



Weld-on transport ring

- **Material** : base: mild steel, ring: alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted red
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : welding must be done in accordance with DIN 5817 resp. 15429, by a qualified welder according to EN 287-1

working load limit	diameter	width inside	length inside	length base	height base	length	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
1.2	13	40	42	35	28	83	0.4
3.2	18	45	48	42	33	99	0.77
5.4	22	55	57	49	42	121	1.42
8.2	26	70	67	64	50	143	2.5
12.8	28	85	90	78	55	173	3.7
15.5	34	99	93	90	63	190	5.67

INFO

EXCEL® Swivels

Applications
Swivels are used to prevent wire rope or chain from transferring their normal twisting motion to the item being lifted. EXCEL® swivels are designed to rotate under load.

Range
The EXCEL® product line offers two types of swivels. Both are equipped with needle bearings.

Design
EXCEL® swivels are drop forged. They do not need grease during use.

These components are generally marked as follows:

- manufacturer's symbol	■ EXCEL
- chain diameter in mm and/or inch	■ e.g. 13 and/or 1/2"
- traceability code	■ e.g. HA
- steel grade	■ 8
- item code	■ e.g. ECA
- origin	■ FRANCE

Finish
EXCEL® swivels are powder coated in red.

Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

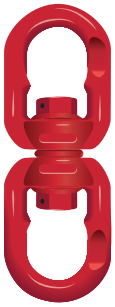
Instructions for use
Swivels should be inspected before use to ensure that:

- all markings are legible;
- a swivel with the correct WLL has been selected. For further details we refer to the EN818 standard for chain slings;
- swivels and the other components are all of the same steel grade;
- swivels must be used for in-line lifting only;
- the bolt, nut or any other locking system cannot vibrate out of position;
- swivels are not distorted or unduly worn;
- swivels are free from nicks, gouges, cracks and corrosion;
- swivels may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a swivel by machining, welding, heating or bending as this may affect the WLL.

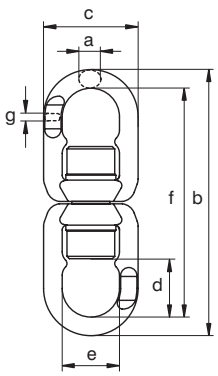
It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc. which may result in deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and more frequently when the swivels are used in severe operating conditions.

Assembly
The clevis ends can be connected directly to the lifting chain. For eye ends, a connector like a connecting link must be used.

EXCEL® Needle bearing swivel, Eye-Eye, grade 8



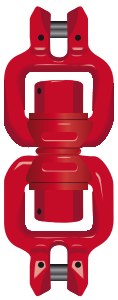
ELR



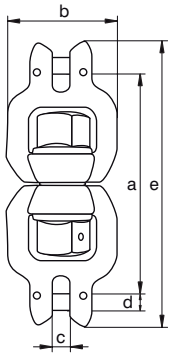
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted red (R)
- **Certification** : 2.1 2.2 3.1 MTC [b]
- **Note** : equipped with two needle roller thrust bearings to enable rotation under load

for chain diameter		working load limit	diameter	length outside	width outside	length inside	width inside	length	thickness	weight each
			a	b	c	d	e	f	g	
mm		t	mm	mm	mm	mm	mm	mm	mm	kg
5-6	3/16 - 7/32	1.12	11	150	56	33	32	126	6	0.61
7-8	1/4 - 5/16	2	14	181	65	40	37	153	8	1.07
10	3/8	3.2	18	226	79	47	48	195	11	1.9
13	1/2	5.4	20	268	96	59	58	227	14	3.17
16	5/8	8.2	23	331	121	67	73	281	17	6.44
18-20	3/4	12.8	28	378	132	88	82	328	22	7.75

EXCEL® Needle bearing swivel, Clevis-Clevis, grade 8



ECA



- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted red (R)
- **Certification** : 2.1 2.2 3.1 MPI [b]
- **Note** : equipped with two needle roller thrust bearings

for chain diameter		working load limit	length inside	width outside	width	diameter pin	length outside	weight each
			a	b	c	d	e	
mm	inch	t	mm	mm	mm	mm	mm	kg
5	3/16	0.8	111	56	7	6	137	0.27
6	7/32	1.12	109	56	7	8	137	0.27
7-8	1/4 - 5/16	2	129	65	9	9	162	1.08
10	3/8	3.2	161	80	12	13	207	1.94
13	1/2	5.4	180	96	15	16	240	3.3
16	5/8	8.2	246	121	19	20	317	6.85

EXCEL® Webbing components

Applications
When using a web sling, make sure to combine it with fittings suitable for use with textile slings.

Range
Van Beest offers various types of hooks and connectors designed to suit web slings.

Design
Webbing items supplied by Van Beest are made from grade 8 alloy steel.

These components are generally marked with:

- manufacturer's symbol	■ EXCEL
- chain diameter in mm and/or inch	■ e.g. 13 and/or $^{1}/_{2}$"
- traceability code	■ e.g. HA
- steel grade	■ 8
- item code	■ e.g. CST
- origin	■ FRANCE

Finish
EXCEL® webbing hooks and connectors are powder coated in yellow or red.

Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

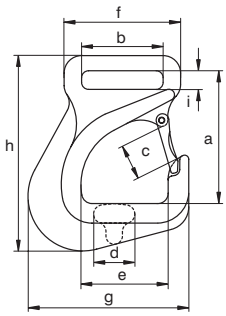
Instructions for use
All webbing products should be inspected before use to ensure that:

- all markings are legible;
- items with the correct WLL have been selected. For further details we refer to the EN818 standard for chain slings;
- all items of the sling are all of the same steel grade;
- for the web slings we refer to the user manual supplied by the manufacturer of these slings;
- items are not distorted or unduly worn;
- all items are free from nicks, gouges, cracks and corrosion;
- items may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a an item by machining, welding, heating or bending as this may affect the WLL.

It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc. which may lead to deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and even more frequently when the components are used in severe operating conditions.

EXCEL® Flat web sling hook, grade 8

CST

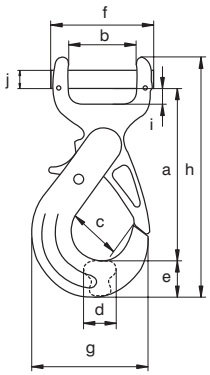


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow
- **Certification** : 2.1 2.2 3.1 MPI [b]

working load limit	length	inside width eye	width opening	thickness	width inside	width outside	width outside	length outside	width inside	weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3	132	79	34	40	75	113	148	199	25	2.63

EXCEL® Flat web sling self locking hook, grade 8

XLS

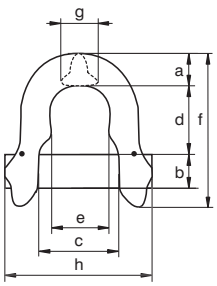


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow
- **Certification** : 2.1 2.2 3.1 MPI [b]

working load limit	length	width	width opening	thickness	width	width outside	width outside	length outside	length inside	diameter pin	weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	161	62	47	32	35	94	111	222	18	16	2.11

EXCEL®

COS



EXCEL® Round web sling connector, grade 8

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow
- **Certification** : 2.1 2.2 3.1 MPI [b]

working load limit	width	diameter pin	width	length inside	width inside	length outside	thickness	width outside	weight each
	a	b	c	d	e	f	g	h	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
2	14	9	33	35	23	66	15	59	0.18
3.2	18	13	44	45	30	86	20	75	0.37
5.4	22	16	57	59	38	107	25	94	0.72
8.2	28	20	70	72	48	133	31	117	1.35

Example combinations with COS:

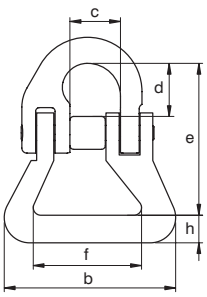
MS + CO + COS

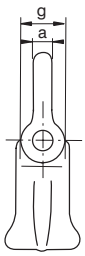
COS + XLC

COS + CSC

EXCEL® Round web sling connecting link, grade 8

MJS

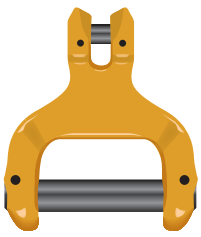




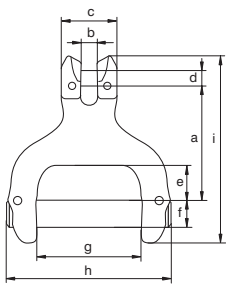
- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J) or red (R)
- **Certification** : 2.1 2.2 3.1

for chain diameter		working load limit	diameter	width outside	width inside	length inside	length	width inside	diameter eye	thick-ness	weight each
			a	b	c	d	e	f	g	h	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
7-8	$^{1}/_{4}$ - $^{5}/_{16}$	2	9	66	19	21	61	40	14	14	0.31
10	$^{3}/_{8}$	3.2	12	76	25	24	74	45	19	15	0.51
13	$^{1}/_{2}$	5.4	16	87	30	30	91	51	24	19	1.01

EXCEL® Flat web sling to chain connector, grade 8



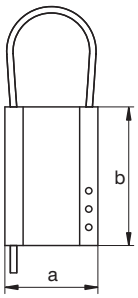
COC

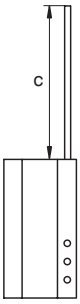


- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted yellow (J)
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width	width outside	dia-meter pin	length inside	diameter pin	width	width outside	length outside	width	width each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
7-8	$^{1}/_{4}$ - $^{5}/_{16}$	2	65	9	32	9	20	16	60	94	107	32	0.68

EXCEL®





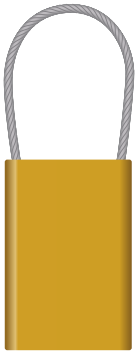
TAG

EXCEL® Identification tag

- **Material** : aluminium
- **Finish** : see table below
- **Certification** : 2.1

partnumber	finish	width	length	length	weight each
		a mm	b mm	c mm	kg
TAGVIERGE	self coloured	51	76	222	0.07
TAGJ	anodized yellow	51	76	222	0.07
TAGGREEN	anodized green	51	76	222	0.07
TAGRED	anodized red	51	76	222	0.07
TAGDEMI	self coloured	51	38	260	0.04
TAGB w/out wire rope	self coloured	51	76	0	0.06

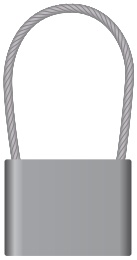
TAGVIERGE



TAGJ

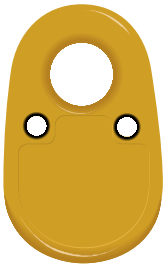
TAGGREEN

TAGRED

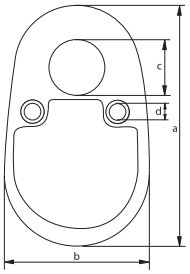


TAGDEMI

EXCEL®



TAGRFID



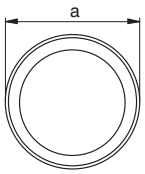
EXCEL® RFID Tag

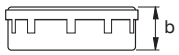
- **Material** : stainless steel
- **Finish** : polymer
- **Certification** : 2.1
- **Note** : contains a high frequency 13.56 MHz iCode ISO 15693 compliant chip with individual serial number

length	width	diameter	diameter	weight each
a mm	b mm	c mm	d mm	kg
53	33	12	4	0.02

RFID

CHIPRFID





RFID chip

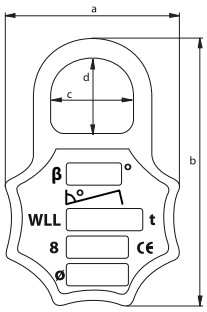
- **Material** : polymer
- **Standard** : RF Protocol ISO 15693
  Operating Frequency HF - 13.56 MHz
- **Finish** : yellow
- **Certification** : 2.1

diameter	thickness	weight per 100 pcs
a mm	b mm	kg
6	2	0.02

RFID

EXCEL®

TAGF



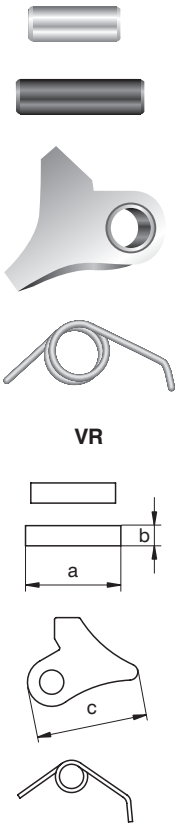
EXCEL® Forged identification tag, for grade 8 slings

- **Material** : drop forged mild steel
- **Finish** : electro galvanized
- **Certification** : 2.1

width	length	width inside	length inside	weight each
a mm	b mm	c mm	d mm	kg
75	115	35	32	0.28

RFID

EXCEL®



VR

EXCEL® Replacement kit for self locking hooks for grade 8 and grade 10

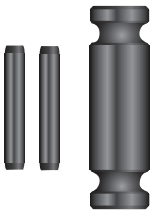
- **Material** : steel
- **Finish** : self coloured
- **Certification** : 2.1
- **Note** : plastic tube included, to make assembly easier

partnumber	length pin	diameter pin	width	weight each
	a mm	b mm	c mm	kg
VR1	22	6	28	0.02
VR2	26	6	31	0.03
VR3	32	8	37	0.05
VR4	40	10	47	0.1
VR5	55	10	58	0.2

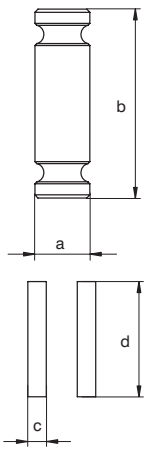
partnumber	for fitting										
	GKO	XLO	UXLO	GKC	XLC	UXLC	GKE	XLE	UXLE	XLBA	XLS
VR1	GKO1	XLO0	UXLO0	GKC1	XLC0	UXLC0	GKE1	XLE0	UXLE0	XLBA0	
VR2	GKO2	XLO1	UXLO1	GKC2	XLC1	UXLC1	GKE2	XLE1	UXLE1	XLBA1	
VR2						UXLC07					
VR3	GKO3	XLO2	UXLO2	GKC3	XLC2	UXLC2	GKE3	XLE2	UXLE2	XLBA2	XLS60
VR4	GKO4	XLO3	UXLO3	GKC4	XLC3	UXLC3	GKE4	XLE3	UXLE3	XLAB3	
VR5	GKO5	XLO4	UXLO4	GKC5	XLC4	UXLC4	GKE5	XLE4	UXLE4	XLAB4	
VR5	GKO6	XLO5	UXLO5	GKC6	XLC5	UXLC5	GKE6	XLE5	UXLE5		

INFO

EXCEL®



AC



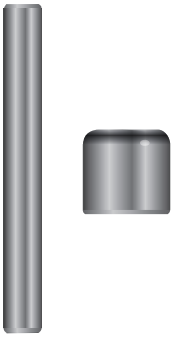
EXCEL® Spare kit for clevis fittings, grade 8

- **Material** : alloy steel, grade 8, quenched and tempered
- **Finish** : self coloured
- **Certification** : 2.1 3.1
- **Note** : AC7 is suitable for 8 mm clevis components and fits 7 mm hoist chain

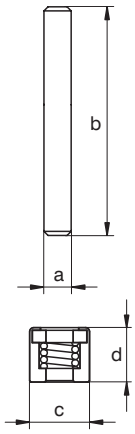
partnumber	diameter pin	length pin	diameter pin	length pin	weight each
	a mm	b mm	c mm	d mm	kg
AC5	6	28	3	14	0.01
AC6	8	28	3	14	0.01
AC7	8	32	3	22	0.02
AC7/8	9	32	3	22	0.02
AC10	13	41	4	24	0.04
AC13	16	53	4	32	0.08
AC16	20	66	5	35	0.16
AC18/20	24	80	6	45	0.28
AC22	28	95	8	50	0.45

partnumber	for fitting											
	MP	CO	CSC	CSECA	XLC	GKC	GC	GCV	CRC	XLBA	ECA	COC
AC5	MP5	CO5	CSC5	CSECA5	XLC05		GC5	GCV5		XLBA05	ECA5	
AC6	MP6	CO6	CSC6	CSECA6	XLC0		GC6	GCV6	CRC6	XLBA0	ECA6	
AC7	MP7/8	CO7/8	CSC7/8	CSECA7/8	XLC1	GKC1	GC7/8		CRC7/8	XLBA1		COC60
AC7/8	MP7/8	CO7/8	CSC7/8	CSECA7/8	XLC1	GKC1	GC7/8	GCV8	CRC7/8	XLBA1	ECA7/8	COC60
AC10	MP10	CO10	CSC10	CSECA10	XLC2	GKC2	GC10	GCV10	CRC10	XLBA2	ECA10	
AC13	MP13	CO13	CSC13	CSECA13	XLC3	GKC3	GC13	GCV13	CRC13	XLBA3	ECA13	
AC16	MP16	CO16	CSC16	CSECA16	XLC4	GKC4	GC16	GCV16	CRC16	XLBA4	ECA16	
AC18/20	MP18/20	CO18/20	CSC18/20		XLC5	GKC5	GC18/20	GCV20				
AC22			CSC22			GKC6						

EXCEL® Spare kit for connecting link, grade 8



RMJ

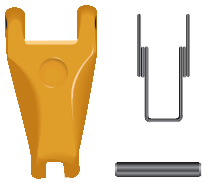


- **Material** : alloy steel, grade 8, quenched and tempered
- **Finish** : self coloured
- **Certification** : 2.1 3.1

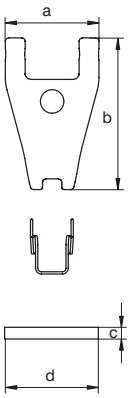
partnumber	diameter	width	diameter pin	length pin	weight each
	a mm	b mm	c mm	d mm	kg
RMJ6	5	43	11	10	0.01
RMJ7/8	6	54	13	14	0.02
RMJ10	8	66	15	18	0.04
RMJ13	10	84	20	21	0.1
RMJ16	12	105	23	25	0.15
RMJ18/20	15	122	27	32	0.25
RMJ22	17	145	29	39	0.38
RMJ26	20	162	32	44	0.54
RMJ32	24	198	37	50	1

partnumber	for fitting	
	MJ	MJS
RMJ6	MJ6	
RMJ7/8	MJ7/8	MJS7/8
RMJ10	MJ10	MJS10
RMJ13	MJ13	MJS13
RMJ16	MJ16	
RMJ18/20	MJ18/20	
RMJ22	MJ22	
RMJ26	MJ26	
RMJ32	MJ32	

EXCEL®



LF



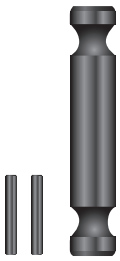
EXCEL® Forged latch for grade 8

- **Material** : steel
- **Finish** : painted yellow (J) or red (R), LF7 and LF8 are self coloured
- **Certification** : 2.1

partnumber	width	length	diameter pin	length pin	weight each
	a	b	c	d	
	mm	mm	mm	mm	kg
LF0J or R	24	44	4	24	0.03
LF1J or R	31	59	5	30	0.07
LF2J or R	41	65	5	40	0.11
LF3J or R	41	79	6	40	0.18
LF4J or R	46	81	6	45	0.22
LF5J or R	50	100	8	50	0.33
LF6J or R	55	119	10	55	0.55
LF7	51	117	8	68	0.19
LF8	60	141	8	74	0.34

partnumber	for fitting					
	CSO	CSC	CSE	CSECA	GH	CST
LF0J or R	CSO5/6	CSC5 CSC6	CSE5/6	CSECS5 CSECA6	GH0.75	
LF1J or R	CSO7/8	CSC7/8	CSE7/8	CSECA7/8	GH1-GH2-GH3	CST75
LF2J or R	CSO10	CSC10	CSE10	CSECA10	GH4	
LF3J or R	CSO13	CSC13	CSE13	CSECA13	GH5-GH8	
LF4J or R	CSO16	CSC16	CSE16	CSECA16		
LF5J or R	CSO18/20	CSC18/20	CSE18/20		GH10	
LF6J or R	CSO22	CSC22			GH15	
LF7	CSO26					
LF8	CSO32					

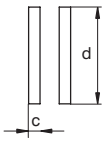
EXCEL® Spare kit for clevis for web sling connector



RCOS

- **Material** : alloy steel, grade 8, quenched and tempered
- **Finish** : self coloured
- **Certification** : 2.1 3.1

partnumber	diameter pin	length pin	diameter pin	length pin	weight each
	a	b	c	d	
	mm	mm	mm	mm	kg
RCOS7/8	9	58	3	22	0.03
RCOS10	13	74	4	24	0.08
RCOS13	16	94	4	32	0.15
RCOS16	20	116	5	35	0.25



partnumber	for fitting		
	COS	XLS	COC
RCOS7/8	COS60		
RCOS10	COS90		
RCOS13	COS150	XLS60	COC60
RCOS16	COS240		

EXCEL® Grade 10 products

Applications
Grade 10 products offer a lifting capacity which is 25 % greater than products in a comparable grade 8 chain size. For many applications a smaller chain size can be chosen to manufacture lighter and easier to handle chain slings.

Range
Van Beest offers a wide range of grade 10 items to assemble a complete sling, from the top master link to the hooks. The range extends from 6 mm up to 20 mm. ($^{7}/_{32}$" up to $^{3}/_{4}$").

Design
Grade 10 EXCEL® items are manufactured from alloy steel.

These components are generally marked with:

- manufacturer's identification symbol	■ EXCEL
- chain diameter in mm and/or inch	■ e.g. 13 and/or $^{1}/_{2}$"
- traceability code	■ e.g. HA
- steel grade	■ 10
- item code	■ e.g. UMJ
- origin	■ FRANCE

Finish
EXCEL® grade 10 hooks are powder coated in blue.

Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

DGUV Type Approval
More than 150 EXCEL® products are DGUV Type Approved (Deutsche Gesetzliche Unfallversicherung). This allows us to H-stamp the components with our unique H number (H94).

Tests are based on GS-OA-15-05:2012-05: Principles for the testing and certification of chains and chain components. These components are Type approved to EN818-2 or EN1677

DGUV

On the product pages the DGUV icon indicates that this product group is approved, or see our website for the complete list of approved products and their certificates.

Testing
Proofloads for grade 10 products are applied as per following table and certificates can be supplies upon request.

for chain diameter		Working Load Limit (WLL)	Proofload (PL)	Minimum Breaking (MBL)
mm	inch	t	t	t
6	$^{7}/_{32}$	1.4	3.5	5.6
	$^{9}/_{32}$	1.95	4.88	7.8
8	$^{5}/_{16}$	2.6	6.5	10.4
10	$^{3}/_{8}$	4	10	16
13	$^{1}/_{2}$	6.8	17	27.2
16	$^{5}/_{8}$	10.3	25.75	41.2
20	$^{3}/_{4}$	16	40	64

Instructions for use :
All grade 10 components should be inspected before use to ensure that:

- all markings are legible;
- items with the correct WLL have been selected. For further details we refer to the EN818 standard for chain slings;
- master links and the other items of the sling are all identifiable as being of the same steel grade;
- items should be used for in-line lifting only, this in order to avoid bending;
- the bolt, nut or any other locking system cannot vibrate out of position;
- items are not distorted or unduly worn;
- all items are free from nicks, gouges, cracks and corrosion;
- items may not be heat treated as this may affect their WLL;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect the WLL.

INFO

For a detailed explanation on the correct (dis)assembly of clevis fittings, we refer to the instruction PI-03-06 in the FAQ section on our website.

Temperature

If extreme temperature situations are applicable, the following load reduction must be taken into account:

Temperature °Celsius	Reduction for elevated temperatures New Working Load Limit
-40 °C up to 200 °C	100 % of original WLL
200 – 300 °C	90 % of original WLL
300 – 400 °C	75 % of original WLL
> 400 °C	not allowed

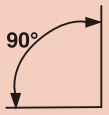
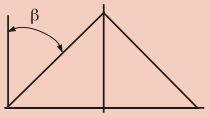
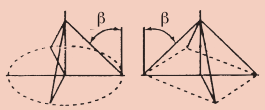
EXCEL® grade 10 chain can be used at temperatures ranging from -40 °C up to 200 °C.

If a sling has been temporarily used under extreme temperature conditions with the appropriate WLL reduction, there is no need to continue to reduce the WLL once it is used again in standard conditions. If a sling has accidentally been exposed to excessive temperatures, for example due to exposure to a fire, the chain sling should be withdrawn from service.

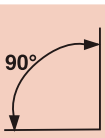
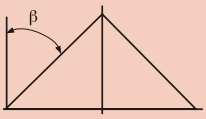
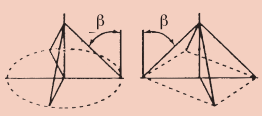
Inspection

It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc. which may lead to deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and more frequently when the components are used in severe operating conditions.

Working Load Limit table for Grade 10 Chain Slings generally to EN 818-4

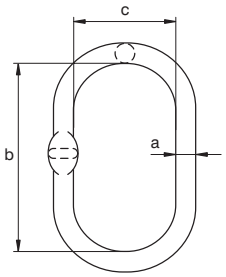
Chain Ø							
		1 leg sling	2 leg sling		3 or 4 leg sling		Endless sling
			0°<ß ≤ 45°	45°<ß ≤ 60°	0°<ß ≤ 45°	45°<ß ≤ 60°	
			Safety factor 1.4	Safety factor 1.0	Safety factor 2.1	Safety factor 1.5	Safety factor 1.6
mm	inch	t	t	t	t	t	t
6	7/32	1.40	1.95	1.40	2.95	2.10	2.24
8	5/16	2.60	3.69	2.60	5.50	3.90	4.16
10	3/8	4.00	5.65	4.00	8.50	6.00	6.40
13	1/2	6.80	9.60	6.80	14.20	10.20	10.88
16	5/8	10.30	14.50	10.30	21.80	15.45	16.48
20	3/4	16.00	22.40	16.00	33.60	24.00	25.60
22	7/8	19.00	26.50	19.00	40.00	28.00	30.40

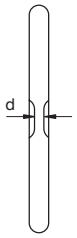
Working Load Limit table for Grade 10 Chain Slings generally to ASME B30.9

Chain Ø									
		1 leg sling	2 leg sling			3 or 4 leg sling			Endless sling
			0°<ß ≤ 30°	30°<ß ≤ 45°	45°<ß ≤ 60°	0°<ß ≤ 30°	30°<ß ≤ 45°	45°<ß ≤ 60°	
			Safety factor 1.73	Safety factor 1.4	Safety factor 1.0	Safety factor 2.6	Safety factor 2.1	Safety factor 1.5	Safety factor 1.6
mm	inch	t	t	t	t	t	t	t	t
6	7/32	1.40	2.40	1.95	1.40	3.65	2.95	2.10	2.24
	9/32	1.95	3.35	2.75	1.95	5.07	4.14	2.92	3.12
8	5/16	2.60	4.52	3.69	2.60	6.76	5.50	3.90	4.16
10	3/8	4.00	6.90	5.65	4.00	10.40	8.50	6.00	6.40
13	1/2	6.80	11.77	9.60	6.80	17.68	14.20	10.20	10.88
16	5/8	10.30	17.82	14.50	10.30	26.78	21.80	15.45	16.48
20	3/4	16.00	27.60	22.40	16.00	41.60	33.60	24.00	25.60
22	7/8	19.00	32.80	26.50	19.00	49.40	40.00	28.00	30.40

EXCEL®

UMS





EXCEL® Master link, grade 10

- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MTC [b]

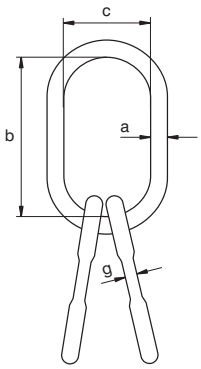
diameter chain 1 leg	diameter chain 2 legs		working load limit	dia-meter	length inside	width inside	thick-ness	weight each
	ß ≤ 45°	ß ≤ 60°		a	b	c	d	
mm	mm	mm	t	mm	mm	mm	mm	kg
6	6	6	2	13	100	60	7	0.33
8	-	8	3.2	16	120	70	7	0.56
10	8	10	5.4	18	135	75	9	0.8
13	10	13	8.2	22	170	90	11	1.47
16	13	16	11.2	25	190	105	13	2.17
20	16	20	16	30	235	125	17	3.82
22	20-22	22	27.6	40	290	160	21	9

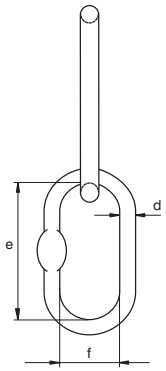
In inch

diameter chain 1 leg	diameter chain 2 legs			working load limit	dia-meter	length inside	width inside	thick-ness	weight each
	ß ≤ 30°	ß ≤ 45°	ß ≤ 60°		a	b	c	d	
inch	inch	inch	inch	t	inch	inch	inch	inch	lbs
7/32	-	7/32	7/32	2	1/2	3 15/16	2 3/8	9/32	0.73
9/32 - 5/16	7/32	-	9/32 - 5/16	3.2	5/8	4 23/32	2 3/4	9/32	1.23
3/8	9/32 - 5/16	9/32 - 5/16	3/8	5.4	23/32	5 5/16	2 15/16	11/32	1.76
1/2	3/8	3/8	1/2	8.2	7/8	6 11/16	3 17/32	7/16	3.24
5/8	-	1/2	5/8	11.2	31/32	7 15/32	4 1/8	1/2	4.78
3/4	-	5/8	3/4	16	1 3/16	9 1/4	4 29/32	21/32	8.42
7/8	3/4	3/4 - 7/8	7/8	27.6	1 9/16	11 13/32	6 5/16	13/16	19.8

EXCEL® Master link assembly, grade 10

UMTS





- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MTC [b]

diameter chain 3/4 legs		working load limit	dia-meter	length inside	width inside	dia-meter	length inside	width inside	thick-ness	weight each
ß ≤ 45°	ß ≤ 60°		a	b	c	d	e	f	g	
mm	mm	t	mm	mm	mm	mm	mm	mm	mm	kg
6	6	3.5	18	135	75	16	100	60	7	1.75
8	8-10	6.5	22	170	90	18	120	70	9	2.91
10	13	11	28	210	115	20	120	70	11	4.74
13	16	17.5	36	270	150	25	135	75	13	9.6
16	18-19	21.2	38	285	160	30	170	95	16	13.38
20	22	41.6	50	300	200	38	150	90	21	24.5

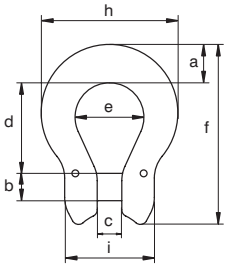
In inch

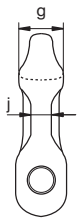
diameter chain 3/4 legs			working load limit	dia-meter	length inside	width inside	dia-meter	length inside	width inside	thick-ness	weight each
ß ≤ 30°	ß ≤ 45°	ß ≤ 60°		a	b	c	d	e	f	g	
inch	inch	inch	t	inch	inch	inch	inch	inch	inch	inch	lbs
-	7/32	7/32	3.5	23/32	5 5/16	2 15/16	5/8	3 15/16	2 3/8	9/32	3.86
9/32 - 5/16	9/32 - 5/16	9/32 - 3/8	6.5	7/8	6 11/16	3 17/32	23/32	4 23/32	2 3/4	11/32	6.42
3/8	3/8	1/2	11	1 3/32	8 9/32	4 17/32	25/32	4 23/32	2 3/4	7/16	10.5
1/2	1/2	5/8	17.5	1 13/32	10 5/8	5 29/32	31/32	5 5/16	2 15/16	1/2	21.2
-	5/8	3/4	21.2	1 1/2	11 7/32	6 5/16	1 3/16	6 11/16	3 3/4	5/8	29.5
3/4	3/4	7/8	41.6	1 31/32	11 13/16	7 7/8	1 1/2	5 29/32	3 17/32	13/16	53.9

EXCEL®

EXCEL® Omega link, grade 10

UCO





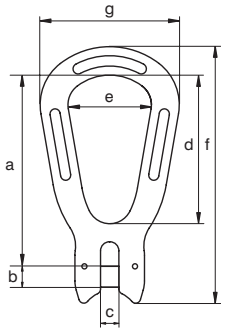
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV

for chain diameter		working load limit	width	diameter pin	width	length inside	width bow	length outside	thick-ness	width outside	width outside	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	14	8	7	25	20	53	13	41	28	6	0.07
	9/32	1.95	21	10	9	34	24	72	16	58	32	8	0.18
8	5/16	2.6	21	10	9	34	24	72	16	58	32	8	0.18
10	3/8	4	21	13	12	40	31	84	19	67	42	11	0.28
13	1/2	6.8	28	16	15	51	40	109	23	90	54	14	0.64
16	5/8	10.3	35	20	19	64	48	135	27	110	68	17	1.21

EXCEL®

EXCEL® Pear shaped link, grade 10

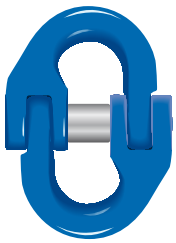
UMP



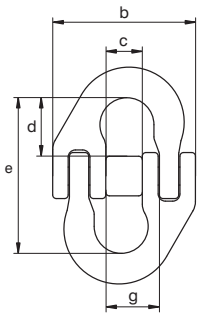
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

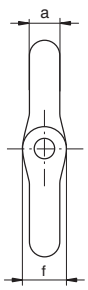
for chain diameter		working load limit	length inside	diameter pin	width	length nside	width inside	length	width outside	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	84	8	7	64	33	109	55	0.14
	9/32	1.95	88	10	9	70	40	121	69	0.28
8	5/16	2.6	88	10	9	70	40	121	69	0.28
10	3/8	4	109	13	12	86	49	151	84	0.63
13	1/2	6.8	147	16	15	116	66	200	110	1.4
16	5/8	10.3	198	20	19	154	84	262	140	2.72

EXCEL® Connecting link, grade 10



UMJ





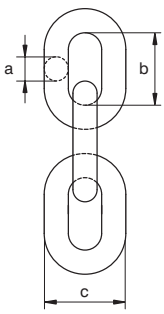
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV

for chain diameter		working load limit	diameter	width outside	width inside	length inside	length inside	diameter eye	width inside	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	8	42	11	20	52	11	15	0.09
8	5/16	2.6	9	53	14	20	55	16	19	0.18
10	3/8	4	12	66	18	23	64	18	23	0.31
13	1/2	6.8	16	83	21	32	85	24	28	0.68
16	5/8	10.3	19	103	25	40	105	28	34	1.27
20	3/4	16	23	122	33	49	128	38	42	2.27

INFO

Lifting chain, grade 10

UCHAIN



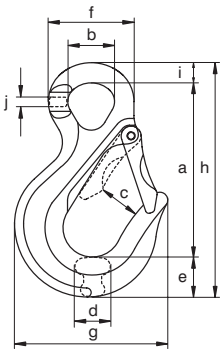
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MTC [b]

diameter		working load limit	length inside	width outside	links per meter	length per drum	weight per mtr
a			b	c			
mm	inch	t	mm	mm		m	kg
6	7/32	1.4	18	22	55.56	200	0.8
8	5/16	2.5	24	30	41.67	200	1.5
10	3/8	4	30	36	33.33	200	2.3
13	1/2	6.7	39	48	25.64	100	3.9
16	5/8	10	48	58	20.83	100	5.8
20	3/4	16	60	72	16.67	50	8.9

EXCEL®

EXCEL® Eye sling hook, grade 10

UCSO



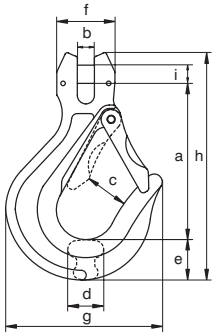
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI b DGUV
- **Note** : from 10 t without flat part

for chain diameter		working load limit	length	diameter inside eye	width opening	thickness	width	diameter eye outside	width outside	length	width	thickness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	84	23	26	15	20	43	72	114	10	6	0.28
8	9/32 - 5/16	2.6	103	26	30	20	24	51	87	139	12	8	0.52
10	3/8	4	128	35	33	24	29	65	106	172	15	10	1.09
13	1/2	6.8	152	41	37	32	39	77	133	209	18	12	1.94
16	5/8	10.3	190	52	44	40	44	94	165	255	21	16	3.51
20	3/4	16	237	60	61	49	62	115	208	327	28	21	7.1

EXCEL®

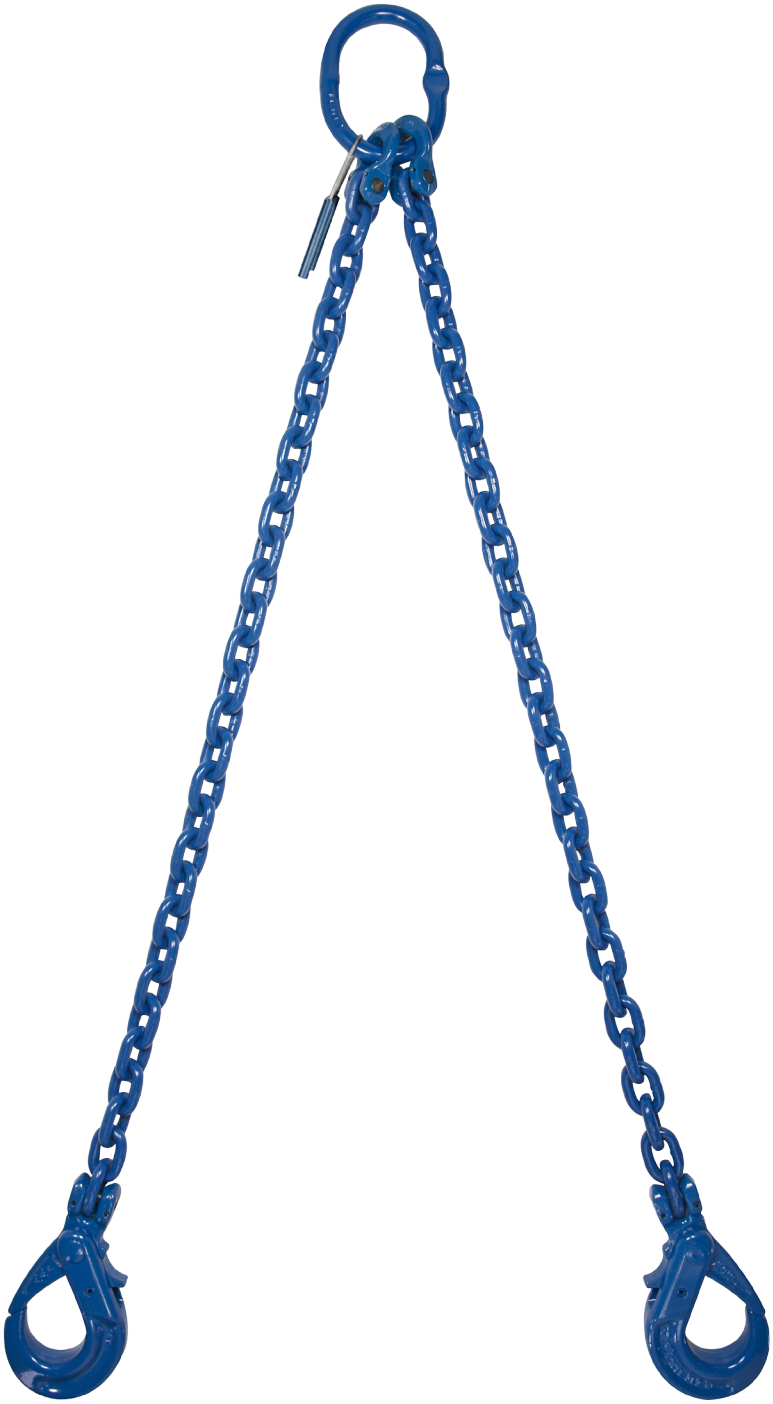
EXCEL® Clevis sling hook, grade 10

UCSC



- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI b DGUV

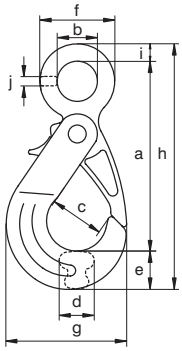
for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length outside	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	75	7	26	15	20	28	72	108	8	0.29
	9/32	1.95	95	9	30	20	24	32	85	133	10	0.58
8	5/16	2.6	95	9	30	20	24	32	87	136	10	0.58
10	3/8	4	113	12	33	24	29	42	106	164	13	1.11
13	1/2	6.8	138	15	37	32	39	54	133	208	16	2.12
16	5/8	10.3	161	19	44	40	44	68	165	240	20	3.78
20	3/4	16	198	22	61	49	62	82	208	305	24	7.49



EXCEL®

EXCEL® Eye self locking hook, grade 10

UXLO



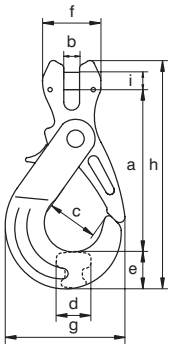
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI b DGUV

for chain diameter		working load limit	length	diameter inside eye	width opening	thick-ness	width	width outside	width outside	length	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	111	24	32	16	26	47	77	147	11	7	0.51
8	9/32 - 5/16	2.6	134	29	43	23	29	57	92	176	14	7	0.91
10	3/8	4	168	35	47	32	35	69	111	219	17	10	1.79
13	1/2	6.8	199	46	61	37	45	87	142	264	20	13	3.36
16	5/8	10.3	247	59	74	43	56	111	185	328	26	16	7
20	3/4	16	283	70	90	52	61	126	205	372	28	20	9.22

EXCEL®

EXCEL® Clevis self locking hook, grade 10

UXLC

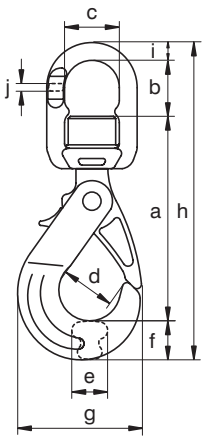


- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI b DGUV

for chain diameter		working load limit	length	width	width opening	thickness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	92	7	32	16	26	28	77	131	8	0.49
	9/32	1.95	116	9	43	23	29	32	92	161	10	0.91
8	5/16	2.6	116	9	43	23	29	32	92	161	10	0.91
10	3/8	4	143	12	47	32	35	42	111	200	13	1.77
13	1/2	6.8	167	15	61	37	45	54	142	242	16	3.33
16	5/8	10.3	201	19	74	43	54	68	185	293	20	6.75
20	3/4	16	234	23	90	52	61	82	205	339	24	9.57

EXCEL® Swivel self locking hook, grade 10

UXLE



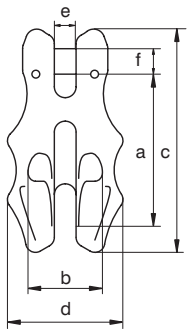
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b] DGUV
- **Note** : equipped with needle roller thrust bearing

for chain diameter		working load limit	length	length inside	width inside	width opening	thick-ness	width	width outside	length	dia-meter	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	122	32	32	32	16	26	77	192	12	6	0.78
8	9/32 - 5/16	2.6	148	39	37	43	23	29	92	231	14	8	1.39
10	3/8	4	183	46	48	47	32	35	111	282	16	11	2.56
13	1/2	6.8	214	57	58	61	37	45	142	336	21	14	4.56
16	5/8	10.3	269	65	73	74	39	56	185	416	24	17	9.37
20	3/4	16	304	87	82	90	52	61	205	476	24	21	12.7

EXCEL®

EXCEL® Shortening clutch, grade 10

UGC

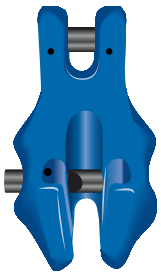


- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

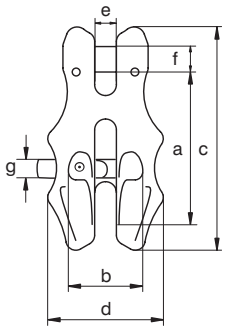
for chain diameter		working load limit	length	width inside	length	width outside	width	diameter pin	weight each
			a	b	c	d	e	f	
mm	inch	t	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	54	22	75	42	7	8	0.23
8	5/16	2.6	69	30	94	50	9	10	0.45
10	3/8	4	79	37	116	63	12	13	0.9
13	1/2	6.8	105	48	149	79	15	16	1.8
16	5/8	10.3	129	60	185	100	19	20	3.1
20	3/4	16	146	75	215	111	23	24	4

EXCEL®

EXCEL® Shortening clutch with locking, grade 10



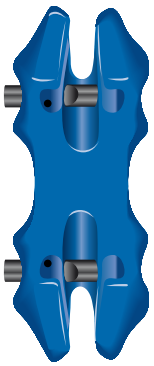
UGCV



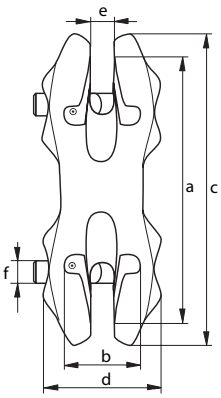
- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width inside	length outside	width outside	width	diameter pin	diameter pin	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	54	22	75	42	7	8	7	0.23
8	5/16	2.6	69	30	94	50	9	10	8	0.44
10	3/8	4	79	37	116	63	12	13	12	0.76
13	1/2	6.8	105	48	149	79	15	16	16	1.67
16	5/8	10.3	129	60	185	100	19	20	20	3.1
20	3/4	16	146	75	215	111	23	24	20	4

EXCEL® Shortening clutch with double locking, grade 10



UGDV



- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width inside	length	width outside	width	diameter pin	weight each
			a	b	c	d	e	f	
mm	inch	t	mm	mm	mm	mm	mm	mm	kg
6	$^{7}/_{32}$	1.4	99	23	120	42	7	7	0.49
8	$^{5}/_{16}$	2.6	112	30	140	50	9	8	0.77
13	$^{1}/_{2}$	6.7	178	49	208	79	15	16	2.85

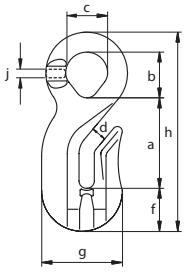
EXCEL®

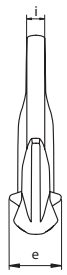
EXCEL® Eye grab hook, Grade 10

UCRO

- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	inside length eye	inside width eye	opening	thick-ness	width	width outside	length outside	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	41	24	23	8	24	20	42	94	9	6	0.25
8	5/16	2.6	53	27	26	10	33	23	53	115	10	8	0.45
10	3/8	4	65	38	36	12	40	29	66	146	14	10	0.91
13	1/2	6.8	83	42	41	15	56	40	88	183	16	12	1.99
16	5/8	10.3	103	44	41	18	66	43	96	211	20	20	2.49
20	3/4	16	138	64	60	24	75	50	124	280	21	21	5.8





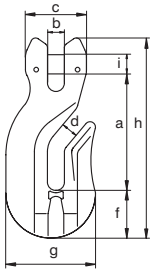
EXCEL®

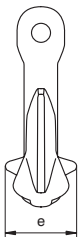
EXCEL® Clevis grab hook, grade 10

UCRC

- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 2.2 3.1 MPI [b]

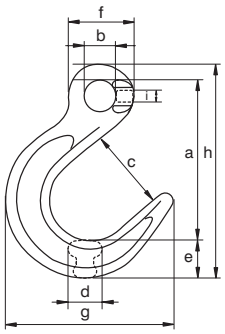
for chain diameter		working load limit	length	width	width outside	opening	thick-ness	width	width outside	length outside	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	52	7	28	7	24	19	42	86	8	0.28
8	5/16	2.6	64	9	32	10	33	23	53	104	10	0.46
10	3/8	4	75	12	42	12	40	29	66	127	13	0.91
13	1/2	6.8	103	15	54	15	56	40	88	173	16	2.17
16	5/8	10.3	127	19	68	18	65	43	96	208	20	2.81
20	3/4	16	163	23	80	24	75	50	124	258	24	5.95





EXCEL® Eye foundry hook, grade 10

UCFO

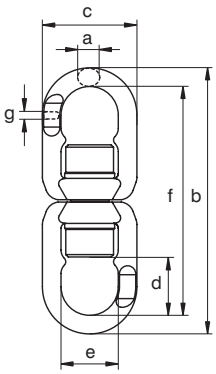


- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 | 2.2 | 3.1 | MPI [b] | DGUV

for chain diameter		working load limit	length	diameter eye inside	width opening	thick-ness	width	diameter eye outside	width outside	length	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	93	18	48	17	22	38	97	124	6	0.33
8	9/32 - 5/16	2.6	124	25	63	22	29	50	129	165	8	0.78
10	3/8	4	157	33	80	28	36	65	161	208	10	1.5
13	1/2	6.8	190	44	96	36	46	84	198	256	13	3

EXCEL® Needle bearing swivel, Eye-Eye, grade 10

UELR

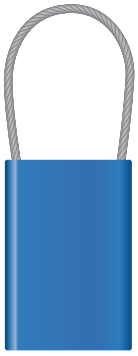


- **Material** : alloy steel, grade 10, quenched and tempered
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : painted blue
- **Certification** : 2.1 | 2.2 | 3.1 | MPI [b]
- **Note** : equipped with two needle roller thrust bearings to enable rotation under load

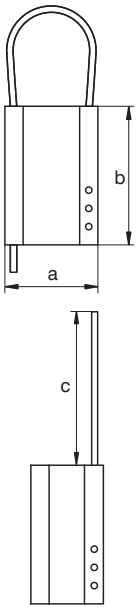
for chain diameter		working load limit	diameter	length outside	width outside	length inside	width inside	length	thick-ness	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	1.4	11	150	56	33	32	126	6	0.61
8	9/32 - 5/16	2.6	14	181	65	40	37	153	8	1.07
10	3/8	4	18	226	79	47	48	195	11	1.9
13	1/2	6.8	20	268	96	59	58	227	14	3.17
16	5/8	10.3	23	331	121	67	73	281	17	6.44
20	3/4	16	28	378	132	88	82	328	22	7.75

EXCEL® Identification tag

- **Material** : aluminium
- **Finish** : anodized blue
- **Certification** : 2.1



TAG

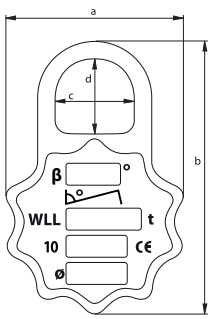


width	length	length	weight each
a	b	c	
mm	mm	mm	kg
51	76	222	0.07

EXCEL® Forged identification tag, for grade 10 slings

- **Material** : drop forged mild steel
- **Finish** : electro galvanized
- **Certification** : 2.1

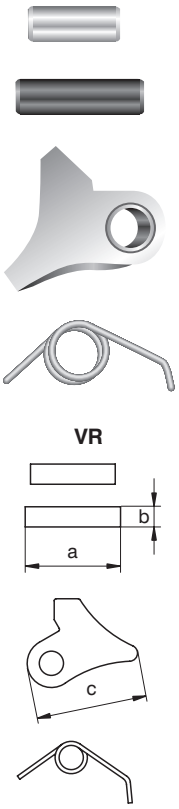
UTAGF



width	length	width inside	length inside	weight each
a	b	c	d	
mm	mm	mm	mm	kg
79	121	35	32	0.30

RFID

EXCEL® Replacement kit for self locking hooks for grade 8 and grade 10



VR

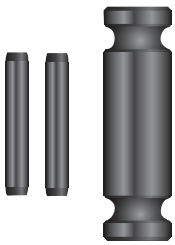
- **Material** : steel
- **Finish** : self coloured
- **Certification** : 2.1
- **Note** : plastic tube included, to make assembly easier

partnumber	length pin	diameter pin	width	weight each
	a mm	b mm	c mm	kg
VR1	22	6	28	0.02
VR2	26	6	31	0.03
VR3	32	8	37	0.05
VR4	40	10	47	0.1
VR5	55	10	58	0.2

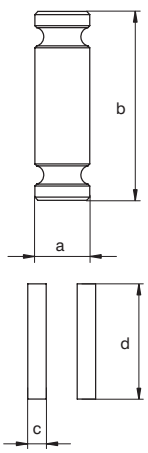
partnumber	for fitting										
	GKO	XLO	UXLO	GKC	XLC	UXLC	GKE	XLE	UXLE	XLBA	XLS
VR1	GKO1	XLO0	UXLO0	GKC1	XLC0	UXLC0	GKE1	XLE0	UXLE0	XLBA0	
VR2	GKO2	XLO1	UXLO1	GKC2	XLC1	UXLC1	GKE2	XLE1	UXLE1	XLBA1	
VR2						UXLC07					
VR3	GKO3	XLO2	UXLO2	GKC3	XLC2	UXLC2	GKE3	XLE2	UXLE2	XLBA2	XLS60
VR4	GKO4	XLO3	UXLO3	GKC4	XLC3	UXLC3	GKE4	XLE3	UXLE3	XLAB3	
VR5	GKO5	XLO4	UXLO4	GKC5	XLC4	UXLC4	GKE5	XLE4	UXLE4	XLAB4	
VR5	GKO6	XLO5	UXLO5	GKC6	XLC5	UXLC5	GKE6	XLE5	UXLE5		

INFO

EXCEL® Spare kit for clevis fittings, grade 10



UAC



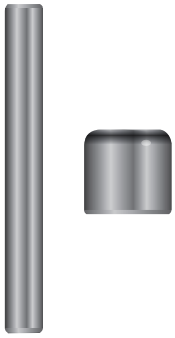
- **Material** : alloy steel, grade 10, quenched and tempered
- **Finish** : self coloured
- **Certification** : 2.1 3.1

partnumber	diameter pin	length pinRMJI	diameter pin	length pin	weight each
	a mm	b mm	c mm	d mm	kg
UAC6	8	28	3	14	0.01
UAC7	10	32	3	22	0.02
UAC8	10	32	3	22	0.02
UAC10	13	41	4	24	0.04
UAC13	16	53	4	32	0.08
UAC16	20	66	5	35	0.16
UAC20	24	80	6	45	0.28

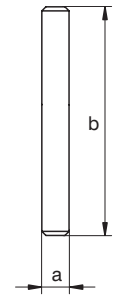
partnumber	for fitting					
	UMP	UCO	UCSC	UXLC	UGC	UGCV
UAC6	UMP6	UCO6	UCSC6	UXLC0	UGC6	UGCV6
UAC7	UMP7	UCO7	UCSC7	UXLC07		
UAC8	UMP8	UCO8	UCSC8	UXLC1	UGC8	UGCV8
UAC10	UMP10	UCO10	UCSC10	UXLC2	UGC10	UGCV10
UAC13	UMP13	UCO13	UCSC13	UXLC3	UGC13	UGCV13
UAC16	UMP16	UCO16	UCSC16	UXLC4	UGC16	UGCV16
UAC20			UCSC20	UXLC5	UGC20	UGCV20

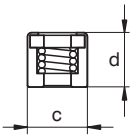
EXCEL®

EXCEL® Spare kit for connecting link, grade 10



URMJ





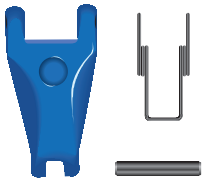
- **Material** : alloy steel, grade 10, quenched and tempered
- **Finish** : self coloured
- **Certification** : 2.1 3.1

diameter pin	length pin	diameter pin	length pin	weight each
a	b	c	d	
mm	mm	mm	mm	kg
5	43	11	10	0.01
6	54	13	14	0.02
8	66	15	18	0.02
10	84	20	21	0.05
12	105	23	25	0.1
15	122	27	32	0.15

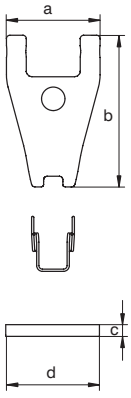
partnumber	for fitting
	UMJ
URMJ6	UMJ6
URMJ8	UMJ8
UMJ10	UMJ10
URMJ13	UMJ13
URMJ16	UMJ16
URMJ20	UMJ20

EXCEL®

EXCEL® Forged latch for grade 10



ULF



- **Material** : steel
- **Finish** : painted blue
- **Certification** : 2.1

partnumber	width	length	diameter pin	length pin	weight each
	a	b	c	d	
	mm	mm	mm	mm	kg
ULF0	24	44	4	24	0.03
ULF1	31	59	5	30	0.07
ULF2	41	65	5	40	0.11
ULF3	41	79	6	40	0.18
ULF4	46	81	6	45	0.2
ULF5	50	100	8	50	0.4

Partnumber	for fitting	
	UCSO	UCSC
ULF0	UCSO6	UCSC6
ULF1		UCSC7
ULF1	UCSO8	UCSC8
ULF2	UCSO10	UCSC10
ULF3	UCSO13	UCSC13
ULF4	UCSO16	UCSC16
ULF5	UCSO20	UCSC20

Notes

EXCEL® Stainless steel products

Applications
In circumstances where corrosion can cause problems, the use of stainless steel products is recommended.

Range
Van Beest offers a wide range of stainless steel items in order to assemble a complete sling from the top master link to the hooks.
The range extends from up to 6 mm to 13 mm ($^{7}/_{32}$" to $^{1}/_{2}$").

Design
EXCEL® stainless steel items are manufactured from stainless steel quality AISI 316 or 316L. The master links, eye hooks and eye nuts have a flat part to make the assembly with the omega link (COI) easier.
CSEI swivel hooks are equipped with a stainless steel washer, they are not designed to rotate under load.

These components are generally marked with:

- manufacturer's symbol	■ EXCEL
- chain diameter in mm and/or inch	■ e.g. 13 and/or $^{1}/_{2}$"
- traceability code	■ e.g. HA
- steel grade	■ 5
- item code	■ e.g. MJI
- origin	■ FRANCE

Finish
Stainless steel items are polished.

Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Testing
Proofloads for stainless steel products are applied as per following table and certificates can be supplied upon request.

for chain diameter		Working Load Limit (WLL)	Proofload (PL)	Minimum Breaking (MBL)
mm	inch	t	t	t
5	$^{3}/_{16}$	0.5	1.25	2
6	$^{7}/_{32}$	0.7	1.75	2.8
7-8	$^{1}/_{4}$. $^{5}/_{16}$	1.2	3	4.8
10	$^{3}/_{8}$	1.6	4	6.4
13	$^{1}/_{2}$	2.7	6.75	10.8

Instructions for use
All stainless steel items should be inspected before use to ensure that:

- all markings are legible;
- items with the correct WLL have been selected. For further details we refer to the EN818 standard for chain slings;
- master links and the other items of the sling are all made of stainless steel suitable for lifting purposes;
- items should be used for in-line lifting only;
- the bolt, nut or any other locking system cannot vibrate out of position;
- items are not distorted or unduly worn;
- all items are free from nicks, gouges and cracks;
- items may not be heat treated as this may affect their WLL;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect the WLL.

INFO

For a detailed explanation on the correct (dis)assembly of clevis fittings, we refer to the instruction PI-03-06 in the FAQ section on our website.

Temperature

If extreme temperature situations occur, the following load reduction must be taken into account:

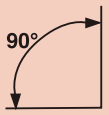
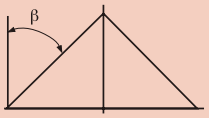
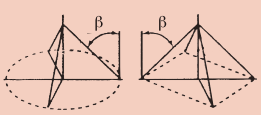
Temperature °Celsius	Reduction for elevated temperatures New Working Load Limit
-40 °C up to 200 °C	100 % of original WLL
200 - 300 °C	75 % of original WLL
300 - 400 °C	50 % of original WLL
> 400 °C	not allowed

If a sling has been temporarily used under extreme temperature conditions with the appropriate WLL reduction, there is no need to continue to reduce the WLL once it is used again in standard conditions. If a sling has accidentally been exposed to excessive temperatures, for example due to exposure to a fire, the chain sling should be withdrawn from service.

Inspection

It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc. which may lead to deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and more frequently when the components are used in severe operating conditions.

Working Load Limit table for stainless steel chain slings generally to EN 818-4

Chain Ø						
		1 leg sling	2 leg sling		3 or 4 leg sling		Endless sling
			0°<ß ≤ 45°	45°<ß ≤ 60°	0°<ß ≤ 45°	45°<ß ≤ 60°	
			Safety factor 1.4	Safety factor 1.0	Safety factor 2.1	Safety factor 1.5	Safety factor 1.6
mm	inch	t	t	t	t	t	t
6	7/32	0.70	1.00	0.70	1.47	1.05	1.12
8	5/16	1.20	1.70	1.20	2.50	1.80	1.92
10	3/8	1.60	2.25	1.60	3.36	2.40	2.56
13	1/2	2.70	3.80	2.70	5.70	4.05	4.32

Additional instructions for lifting points

- lifting points should never be side loaded;
- always make sure that the lifting point is supporting the load correctly;
- lifting point should be seated well down in the hook;
- lifting point should be well fixed in the load (same thread, well positioned).

Assembly

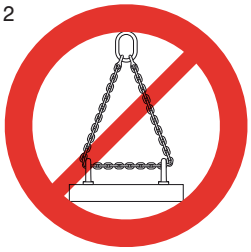
The thread length should be adapted to the material of the load. For hard materials, the thread length must not be smaller than 1.5 times the diameter (e.g. M20, minimum length 30 mm). For soft materials like Aluminium or brass, a length of 3 times the diameter is needed. For soft materials, consider using a longer length and through-hole mounting with a nut and washer on the other side. The nut on the bolt should at least be class 5.

The bolt thread and the tapped hole in the load must be compatible and both in a good state. The tapping should be at least 20 % deeper than the thread length.
The surface should be flat and perpendicular to the thread enable full contact with the lifting point.

The material to which the lifting point is attached should be strong enough to withstand lifting forces without any deformation. The lifting points must perfectly fit on the material of the load to be lifted. Full contact between the lifting point and the surface is required.

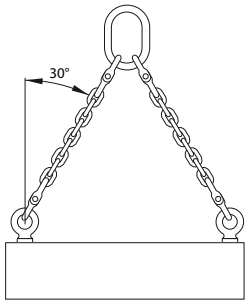
1

2



1) The lifting points should match the size of the hook, so that they can be correctly positioned into the hook.

2) Never use a sling as a loop between two lifting points.
Consider the center of gravity of the load to position the lifting points (symmetric to the center). The tapping must be positioned at a distance of at least 3 times the diameter of the bolt from the edge of the load.



For the ALI and ELI lifting points, the application angle may be up to 30° from the vertical. Above 30°, the WLL decreases significantly.

Fasten these lifting points by hand and without the use of any tools or leverage. The lifting point has to be tightened just so deep that the lower edge connects to the surface of the load.

INFO

For welding instructions for transport rings PASI we refer to the instruction PI-03-02 in the FAQ section on our website.

Corrosion resistance table for stainless steel AISI 316L

This table offers a general guideline only. The material must always be tested for your specific conditions.

Acetic acid <20%	S
Ammonia (100%)	S
Ammonium chloride <1%	S
Ammonium nitrate 10% - 50%	S
Ammonium sulphate <10%	L
Benzene	S
Calcium hypochlorite (100%)	U
Citric acid <10%	S
Copper sulphate <10%	S
Ethanol	S
Gasoline	S
Hydrochloric acid (all concentrations)	U

Hydrogen cyanide 100%	L
Hydrogen peroxide <35%	S
Hydrogen sulphide 100%	S
Mineral oil	S
Nitric acid <10%	S
Potassium sulphate <10%	S
Sodium chloride <5%	S
Sodium hypochlorite <20%	L
Sodium nitrate 10% - 40%	S
Sodium sulphate <10%	S
Zinc chloride <10%	S
Zinc sulphate <10%	S

Abbreviations used
S = satisfactory, no or very little corrosion
L = limited resistance, exposure time must be limited, some corrosion might occur
U = unsatisfactory, not suitable for use

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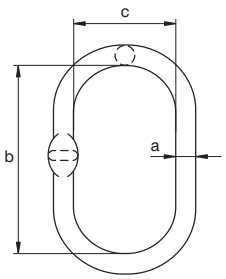
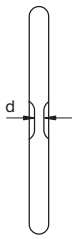
MSI





EXCEL® Stainless steel master link

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MTC [b]

diameter chain 1 leg	diameter chain 2 legs		working load limit	diameter	length inside	width inside	thick-ness	weight each
	ß ≤ 45°	ß ≤ 60°		a	b	c	d	
mm	mm	mm	t	mm	mm	mm	mm	kg
6	6	6	1	13	110	60	6	0.34
8	6	8	1.25	16	110	60	6	0.53
10	8	10	2	18	135	75	8	0.82
13	10	13	3.2	22	160	90	10	1.45
16	13	16	5	26	180	100	13	2.29

In inch

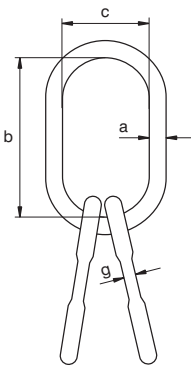
diameter chain 1 leg	diameter chain 2 legs		working load limit	diameter	length inside	width inside	thick-ness	weight each
	ß ≤ 45°	ß ≤ 60°		a	b	c	d	
inch	inch	inch	t	inch	inch	inch	inch	lbs
7/32	7/32	7/32	1	1/2	4 11/32	2 3/8	1/4	0.75
5/16	7/32	5/16	1.25	5/8	4 11/32	2 3/8	1/4	1.17
3/8	5/16	3/8	2	23/32	5 5/16	2 15/16	5/16	1.81
1/2	3/8	1/2	3.2	7/8	6 5/16	3 3/4	13/32	3.20
5/8	1/2	5/8	5	1 1/32	7 3/32	3 15/16	9/16	5.05

EXCEL® Stainless steel master link assembly

MTSI

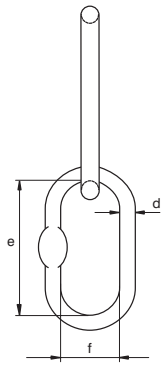
- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MTC [b]

diameter chain 3/4 legs		working load limit	diameter	length inside	width inside	diameter	length inside	width inside	thick-ness	weight each
ß ≤ 45°	ß ≤ 60°		a	b	c	d	e	f	g	
mm	mm	t	mm	mm	mm	mm	mm	mm	mm	kg
6	6	1.6	18	135	75	13	54	25	6	1.17
8	8	2.65	22	160	90	16	70	34	8	2.17
10	10	4.25	26	180	100	18	85	40	8	3.34
13	13	6.7	32	200	110	22	115	50	13	5.99



In inch

diameter chain 3/4 legs		working load limit	diameter	length inside	width inside	diameter	length inside	width inside	thick-ness	weight each
ß ≤ 45°	ß ≤ 60°		a	b	c	d	e	f	g	
inch	inch	t	inch	inch	inch	inch	inch	inch	inch	lbs
7/32	7/32	1.6	23/32	5 5/16	2 15/16	1/2	2 1/8	31/32	1/4	2.58
5/16	5/16	2.65	7/8	6 5/16	3 17/32	5/8	2 3/4	1 11/32	5/16	4.78
3/8	3/8	4.25	1 1/32	7 3/32	3 15/16	23/32	3 11/32	1 9/16	5/16	7.36
1/2	1/2	6.7	1 1/4	7 7/8	4 11/32	7/8	4 17/32	1 31/32	1/2	13.2



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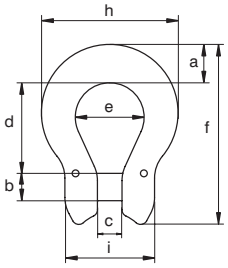
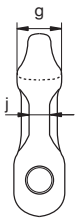
EXCEL® Stainless steel omega link

COI



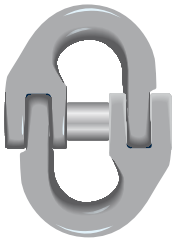


- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1

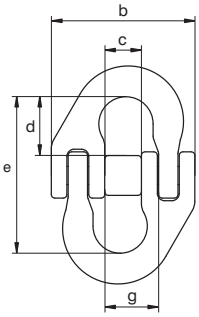
for chain diameter		working load limit	width	diameter pin	width	length inside	width bow	length outside	thick-ness	width outside	width outside	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.5	14	6	7	26	20	53	13	41	28	6	0.07
6	7/32	0.7	14	8	7	25	20	53	13	41	28	6	0.07
7-8	1/4 - 5/16	1.2	20	9	9	34	24	71	16	55	32	8	0.18
10	3/8	1.6	19	13	12	40	31	82	17	63	42	11	0.28
13	1/2	2.7	25	16	15	51	40	106	20	84	54	14	0.64

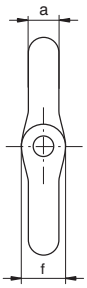
EXCEL®

EXCEL® Stainless steel connecting link



MJI



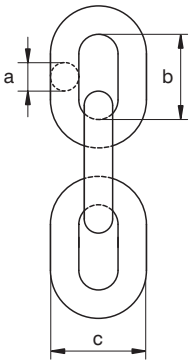


- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1

for chain diameter		working load limit	diameter	width outside	width inside	length inside	length inside	diameter eye	width inside	weight each
			a	b	c	d	e	f	g	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	0.7	8	42	11	20	52	11	15	0.09
7-8	1/4 - 5/16	1.2	9	53	14	20	55	13	19	0.16
10	3/8	1.6	10	66	18	23	64	18	23	0.28
13	1/2	2.7	14	83	21	32	85	24	28	0.64

INFO

CHAINI



Stainless steel lifting chain

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MTC [b]

diameter		working load limit	length inside	width outside	links per meter	length per drum	weight per mtr
a			b	c			
mm	inch	t	mm	mm		m	kg
6	7/32	0.7	18	21	55.56	100	0.78
8	5/16	1.2	24	29	41.67	100	1.3
10	3/8	1.6	30	34	33.33	100	2.14
13	1/2	2.7	39	45	25.64	100	3.64

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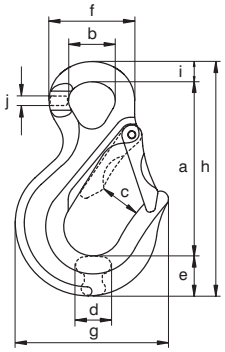
CSOI



EXCEL® Stainless steel eye sling hook

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	diameter inside eye	width opening	thick-ness	width	diameter eye outside	width outside	length	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	0.7	84	23	26	15	20	43	72	114	10	6	0.28
7-8	1/4 - 5/16	1.2	103	26	30	20	24	51	87	139	12	8	0.56
10	3/8	1.6	128	35	33	24	29	65	106	172	15	10	1.09
13	1/2	2.7	152	41	37	32	39	77	133	209	18	12	1.98

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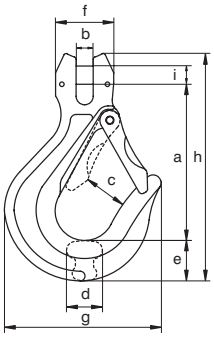
EXCEL® Stainless steel clevis sling hook

CSCI



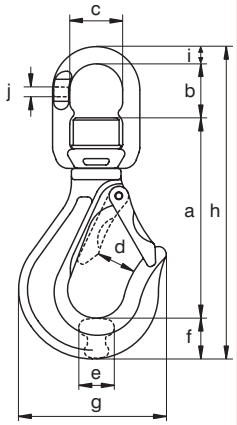
- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI [b]

for chain diameter		working load limit	length	width	width opening	thick-ness	width	width outside	width outside	length	diameter pin	weight each
			a	b	c	d	e	f	g	h	i	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
5	3/16	0.5	76	7	26	15	20	28	72	108	6	0.29
6	7/32	0.7	75	7	26	15	20	28	72	108	8	0.29
7-8	1/4 - 5/16	1.2	95	9	30	20	24	32	87	136	9	0.58
10	3/8	1.6	113	12	33	24	29	42	106	164	13	1.1
13	1/2	2.7	138	15	37	32	39	54	133	208	16	1.86

EXCEL®

EXCEL® Stainless steel swivel sling hook

CSEI



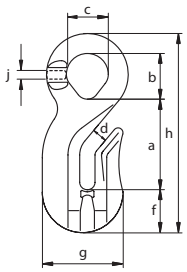
- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI [b]
- **Note** : equipped with a stainless steel washer

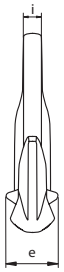
for chain diameter		working load limit	length	length inside	width inside	width opening	thick-ness	width	width outside	length outside	dia-meter	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	0.7	100	33	32	26	15	20	72	164	12	6	0.55
7-8	1/4 - 5/16	1.2	126	40	37	30	20	24	87	200	14	8	1
10	3/8	1.6	159	47	47	33	24	29	106	250	16	11	1.9
13	1/2	2.7	189	59	58	37	32	39	133	307	21	14	3.42

EXCEL® Stainless steel Eye grab hook

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI b

CROI



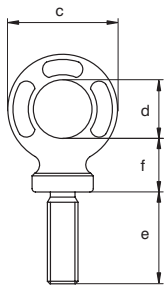


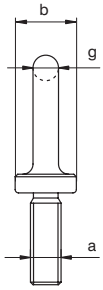
for chain diameter		working load limit	length	inside length eye	inside width eye	opening	thick-ness	width	width outside	length	width	thick-ness	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	7/32	0.7	41	24	23	8	24	20	42	94	9	6	0.25
7-8	1/4 - 5/16	1.2	53	27	26	10	33	23	53	115	10	8	0.32
10	3/8	1.6	65	38	36	12	40	29	66	146	14	10	0.53
13	1/2	2.7	83	42	41	15	56	40	88	183	16	12	1.96

EXCEL® Stainless steel eye bolt

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI b CE

ALI



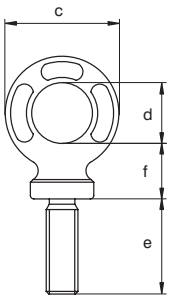


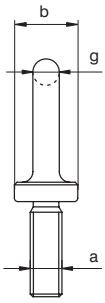
working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.12	M 6 x 1.00	20	34	20	20	17	7	0.05
0.2	M 8 x 1.25	20	34	20	24	17	7	0.05
0.4	M10 x 1.50	20	38	22	30	19	8	0.08
0.6	M12 x 1.75	25	47	26	36	23	10	0.14
0.8	M14 x 2.00	30	57	29	40	28	14	0.26
1	M16 x 2.00	36	65	35	55	30	14	0.37
1.5	M18 x 2.50	36	65	35	55	30	14	0.49
2	M20 x 2.50	40	73	39	59	34	16	0.55
2.5	M22 x 2.50	42	82	44	64	38	19	0.78
3	M24 x 3.00	55	95	54	84	40	20	1.12

EXCEL®

EXCEL® Stainless steel eye bolt length as DIN580

ALDINI





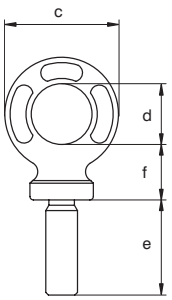
- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI [b] CE

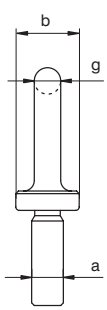
working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	mm	kg
0.2	M 8 x 1.25	20	34	20	13	17	7	0.05
0.4	M10 x 1.50	20	38	22	17	19	8	0.07
0.6	M12 x 1.75	25	47	26	21	23	10	0.13
0.8	M14 x 2.00	30	57	29	27	28	14	0.24
1	M16 x 2.00	36	65	35	27	30	14	0.34
1.5	M18 x 2.50	36	65	35	30	30	14	0.35
2	M20 x 2.50	40	73	39	30	34	16	0.52
2.5	M22 x 2.50	42	82	44	35	38	19	0.71
3	M24 x 3.00	55	95	54	36	40	20	0.98

EXCEL®

EXCEL® Stainless steel eye bolt without thread

ALBI





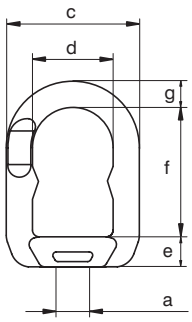
- **Material** : AISI 316L, grade 5
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI [b] CE
- **Note** : final WLL of product must be determined after machining

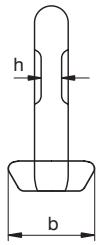
diameter	diameter base	diameter eye outside	diameter eye inside	length	thickness base	diameter	weight each
a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	kg
12	22	34	20	24	17	7	0.07
15	24	38	22	30	19	8	0.11
16	28	47	26	36	23	10	0.17
19	34	57	29	40	28	14	0.3
22	41	65	35	55	30	14	0.48
26	45	73	39	59	34	16	0.58
29	47	82	44	64	38	19	0.95
30	58	95	54	84	40	20	1.41

EXCEL® Stainless steel eye nut

ELI

- **Material** : AISI 316L, grade 5
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI b CE



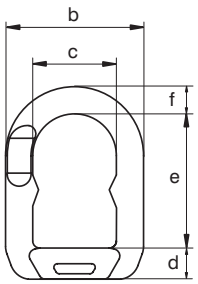


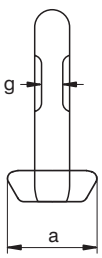
working load limit	diameter thread	diameter base	width	width inside	thickness base	length inside	diameter	thickness	weight each
	a	b	c	d	e	f	g	h	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.12	M 6 x 1.00	31	51	30	14	44	11	6	0.15
0.2	M 8 x 1.25	31	51	30	14	44	11	6	0.15
0.4	M10 x 1.50	31	51	30	14	44	11	6	0.15
0.6	M12 x 1.75	39	56	32	15	48	12	6	0.23
0.8	M14 x 2.00	39	56	32	15	48	12	6	0.23
1	M16 x 2.00	44	65	37	17	60	14	8	0.37
1.5	M18 x 2.50	44	65	37	17	60	14	8	0.37
2	M20 x 2.50	44	65	37	17	60	14	8	0.37
2.5	M22 x 2.50	52	79	48	21	75	16	11	0.63
3	M24 x 3.00	52	79	48	21	75	16	11	0.63
3.5	M27 x 3.00	52	79	48	21	75	16	11	0.63

EXCEL® Stainless steel eye nut without thread

ELBI

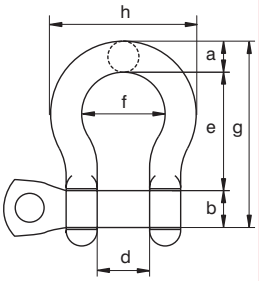
- **Material** : AISI 316L, grade 5
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 MPI b CE
- **Note** : final WLL of product must be determined after machining





diameter base	width	width inside	thickness base	length inside	diameter	thickness	weight each
a	b	c	d	e	f	g	
mm	mm	mm	mm	mm	mm	mm	kg
31	51	30	15	44	11	6	0.15
39	56	32	17	48	12	6	0.23
44	65	37	18	60	14	8	0.37
52	79	48	23	75	16	11	0.63

MLVI

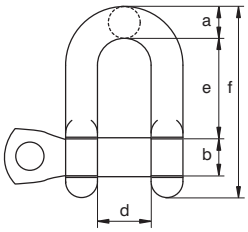


Stainless steel bow shackle with screw pin

- **Material** : AISI 316, grade 5
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL and CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	length	width	weight each
	a	b	c	d	e	f	g	h	
t	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.4	8	8	16	16	32	25	56	41	0.06
0.6	10	10	19	20	40	28	67	48	0.12
0.9	12	12	24	25	48	36	79	59	0.2
1.5	13	16	31	24	52	35	87	60	0.32
2.5	16	20	38	28	64	42	108	71	0.58
3	19	22	44	32	72	50	125	87	0.96
4	22	25	50	37	74	60	145	101	1.46
6	25	30	57	40	94	67	157	115	2.09

MDVI

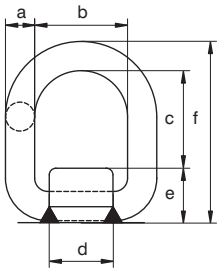


Stainless steel dee shackle with screw pin

- **Material** : AISI 316, grade 5
- **Safety factor** : MBL equals 5 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : marked with WLL and CE

working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	length	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.4	8	8	16	16	32	52	0.06
0.6	10	10	19	20	40	64	0.11
0.9	12	12	24	25	48	78	0.19
1.5	13	16	31	24	52	90	0.3
2.5	16	20	38	28	64	110	0.57
3	19	22	44	32	72	124	0.9
4	22	25	50	37	74	134	1.33
6	25	30	57	40	94	162	1.98

PASI



Stainless steel weld-on transport ring

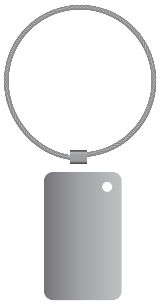
- **Material** : AISI 316, grade 5
- **Safety factor** : MBL equals 4 x WLL
- **Finish** : polished
- **Certification** : 2.1 2.2 3.1 CE
- **Note** : regarding the selection of welding material, respecting parent and PASI materials, please refer to EN 3581 for manual metal arc welding and to EN ISO 14343 for arc welding

working load limit	diameter	width inside	length inside	length base	height base	length	weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.75	13	40	42	35	28	83	0.4
1.25	18	45	48	42	33	99	0.8
3.2	22	55	57	49	42	121	1.4
5	26	70	67	64	50	143	2.5

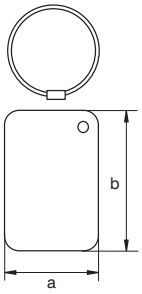
INFO

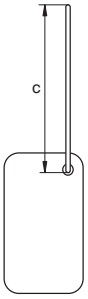
EXCEL®

EXCEL® Stainless steel identification tag



TAGI



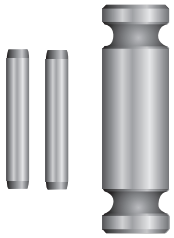


- **Material** : AISI 316, grade 5
- **Finish** : polished
- **Certification** : 2.1

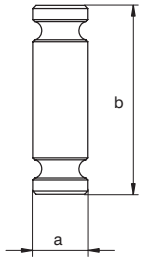
width	length	length	weight each
a	b	c	
mm	mm	mm	kg
50	80	305	0.07

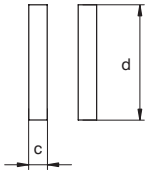
EXCEL®

EXCEL® Stainless steel spare kit for clevis fittings



ACI





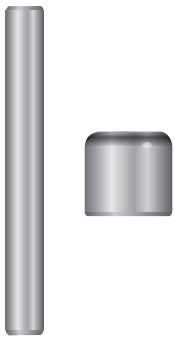
- **Material** : AISI 316L, grade 5
- **Finish** : polished
- **Certification** : 2.1 3.1

partnumber	diameter pin	length pin	diameter pin	length pin	weight each
	a	b	c	d	
	mm	mm	mm	mm	kg
AC5I	6	28	3	14	0.01
AC6I	8	28	3	14	0.01
AC7/8I	9	32	3	22	0.02
AC10I	13	41	4	24	0.04
AC13I	16	53	4	32	0.08

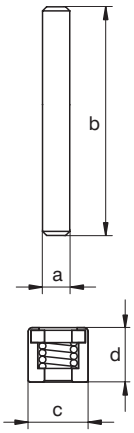
partnumber	for fitting	
	COI	CSCI
AC5I	CO5I	CSC5I
AC6I	CO6I	CSC6I
AC7/8I	CO7/8I	CSC7/8I
AC10I	CO10I	CSC10I
AC13I	CO13I	CSC13I

EXCEL® Spare kit for connecting link, stainless steel

- **Material** : AISI 316L, grade 5
- **Finish** : polished
- **Certification** : 2.1 3.1



RMJI

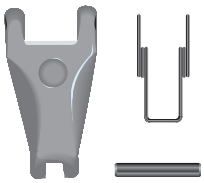


partnumber	diameter pin	length pin	diameter	width	weight each
	a mm	b mm	c mm	d mm	kg
RMJ6I	5	43	11	10	0.01
RMJ7/8I	6	54	13	14	0.02
RMJ10I	8	66	15	18	0.02
RMJ13I	10	84	20	21	0.08

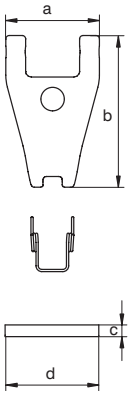
partnumber	for fitting
	MJI
RMJ6I	MJ6I
RMJ7/8I	MJ7/8I
RMJ10I	MJ10I
RMJ13I	MJ13I

EXCEL® Stainless steel forged latch

- **Material** : AISI 316L, grade 5
- **Finish** : polished
- **Certification** : 2.1



LFI



partnumber	width	length	diameter pin	length pin	weight each
	a mm	b mm	c mm	d mm	kg
LF0I	24	44	4	24	0.04
LF1I	31	59	5	30	0.05
LF2I	41	65	5	40	0.1
LF3I	41	79	6	40	0.2

for fitting		
CSOI	**CSCI**	**CSEI**
CSO6I	CSC5I CSC6I	CSE6I
CSO7/8I	CSC7/8I	CSE7/8I
CSO10I	CSC10I	CSE10I
CSO13I	CSC13I	CSE13I

Lashing

Applications
Lashing items are suitable for many different lashing purposes, but may never be used for lifting.

Range
Van Beest offers a range of S and SO hooks from 0.2 t to 6 t and a clevis lashing hook with a lashing capacity (LC) of 4 t to 30 t.

Design
Lashing items are designed to be used for cargo lashing during transportation. Lashing should be done securely and in accordance with the safety rules. These products are not suitable for lifting applications.

These components are generally marked with:

- lashing capacity	■ e.g. 2 t
- manufacturer's identification symbol	■ EXCEL
- traceability code	■ e.g. HA
- origin	■ FRANCE

Finish
EXCEL® lashing items are painted red.

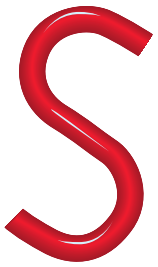
Certification
Specific details of certificate availability can be found on each product page.
Please verify your certification requirements with Van Beest at time of order.

Instructions for use
Items should be inspected before use to ensure that:

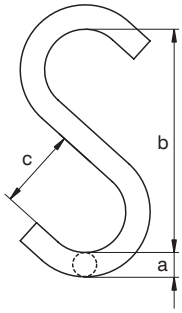
- all markings are legible;
- the item is not used for lifting;
- items should be used for in-line loading only;
- items are not distorted or unduly worn;
- items are free from nicks, gouges, cracks and corrosion;
- never modify, repair or reshape an item by machining, welding, heating or bending as this may affect the lashing capacity.

INFO For a detailed explanation on the correct (dis)assembly of clevis fittings, we refer to the instruction PI-03-06 in the FAQ section on our website.

Inspection
It is required that the products are regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading, etc which may lead to deformation and alteration of the material structure.
Inspection by a competent person should take place at least every six months and more frequently when the items are used in severe operating conditions.



S

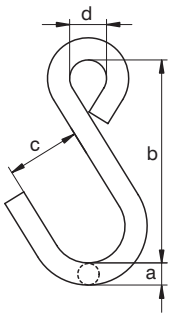


S-Hook

- **Material** : high tensile steel
- **Safety factor** : MBL equals 4 x LC
- **Finish** : painted red
- **Certification** : 2.1 2.2

lashing capacity	diameter	length	width	weight each
	a	b	c	
t	mm	mm	mm	kg
0.2	10	80	30	0.11
0.3	13	100	40	0.24
0.5	16	130	50	0.47
0.75	18	170	60	0.8
1	20	185	64	1.02
1.2	22	200	69	1.4
1.5	24	230	80	1.95
2	32	270	90	3.5
3	36	325	98	5.16
4	40	350	112	7.48
5	45	400	130	10.81
6	51	450	150	16.2

SO

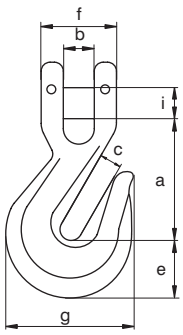


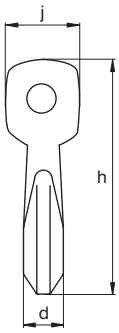
S Eye Hook

- **Material** : high tensile steel
- **Safety factor** : MBL equals 4 x LC
- **Finish** : painted red
- **Certification** : 2.1 2.2

lashing capacity	diameter	length	width	width inside	weight each
	a	b	c	d	
t	mm	mm	mm	mm	kg
0.2	10	80	30	16	0.11
0.3	13	100	40	21	0.25
0.5	16	130	50	25	0.48
0.75	18	160	59	34	0.76
1	20	180	65	42	1.07
1.2	22	195	69	37	1.4
1.5	24	220	79	40	1.79
2	32	260	90	46	3.8
3	36	320	99	52	5.35
4	40	360	115	59	7.85
5	45	390	126	68	10.95
6	51	450	150	77	15.2

CAC





Clevis lashing hook

- **Material** : alloy steel, grade 8, quenched and tempered
- **Safety factor** : MBL equals 2 x LC
- **Finish** : painted red
- **Certification** : 2.1 2.2

for chain diameter		lashing capacity	length	width	width	thickness	width	width outside	width outside	length outside	diameter pin	width outside	weight each
			a	b	c	d	e	f	g	h	i	j	
mm	inch	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
8	5/16	4	66	10	10	16	23	38	56	107	9	19	0.34
10	3/8	6.3	82	13	13	25	31	46	77	137	12	27	0.85
13	1/2	10	113	17	17	30	43	61	106	185	16	36	1.98
16	5/8	16	130	20	20	38	49	69	120	215	20	40	2.95
18/20	3/4	25	152	24	34	40	58	88	142	254	21	44	5.12
22	7/8	30	178	28	27	54	66	101	164	295	24	58	8.92

1 Shackles

14 Blocks

15 General Hardware

16 Stainless Steel Products

17 EXCEL® Grade 8 products

EXCEL® Lifting Points

EXCEL® Swivels

EXCEL® Webbing components

Spare Parts

18 EXCEL® Grade 10 products

19 EXCEL® Stainless steel products

20 Lashing

A

C

E

F

G

K

L

M

O

P

Q

R

S

T

W

Y

A

C

E

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R

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T

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V

X

Version: AL 5/2012

General conditions of Sale of the private company with limited liability Van Beest BV, established in Sliedrecht

Article 1 General

These General Conditions are applicable to all agreements concluded by Van Beest B.V. (hereinafter referred to as: "Van Beest") with third parties (hereinafter referred to as: the "client").
The trading conditions of the client are not accepted by Van Beest.

Article 2 Offers

2.1 Quotations made by or on behalf of Van Beest are without obligation and are based on data, drawings et cetera provided by the client, if any.

2.2 The prices stated by Van Beest are based on the price determining factors valid at the time of the quotation , including government levies and wages, calculated according to the usual working times adhered to by Van Beest. If one or more of these cost price factor changes before the offer is accepted, - including changes due to fluctuations in the exchange rate of foreign currency - even if this is a result of foreseeable circumstances, Van Beest is entitled to modify the price quoted accordingly. Van Beest will inform the client accordingly in that case.

Article 3 Agreements

3.1 Orders accepted by agents, representatives, commercial travellers and intermediaries will only become valid after they have been confirmed in writing by Van Beest, i.e. by a document signed by both parties, or by letter, fax, e-mail, or any other instrument as agreed by both parties.

3.2 All drawings, calculations, plans, systems, stamps and moulds, methods and other data will remain the property of Van Beest and may not be disclosed to third parties by the client without the prior written permission of Van Beest.

3.3 Price increases caused by production activities being delayed and/or made more difficult through no fault of Van Beest or as a result of an increase in one or more cost price factors, even if such increase has occurred due to foreseeable circumstances, or as a result of government regulations coming into force, will be for the account of the client.

The client will be entitled to make modifications to the goods to be delivered after the conclusion of the agreement as well, but these will only be implemented if Van Beest judges that the production process so allows and provided that the client has stated in writing that he will pay all extra costs associated therewith.

Article 4 Prices and Payment

4.1 The prices quoted by Van Beest in catalogues, price lists, et cetera are without obligation and may be modified without prior notification. Prices do not include turnover tax and are based on "ex works" Incoterms current on the date of the quotation.

4.2 All amounts due are payable within 30 days of the date of the invoice, unless agreed otherwise. Claims for a reduction or settlement will not be accepted. Any costs in connection with effecting payments via banks, conversion of currency, credit costs, etc. are at all times for the account of the client.

4.3 In the event of late payment the client owes interest, as from the due date of the invoice, equal to 3 points above the percentage of the current statutory interest in the Netherlands as referred to in Sections 6:119a and 6:120 Paragraph 2 of the Dutch Civil Code, while Van Beest will be entitled to suspend the fulfilment of its obligations by the amount of time by which the payment has been delayed.
Once Van Beest has passed on its claim for collection by third parties, the client will owe extra judicial costs of 15% over and above the amount due, including interest, without prejudice to the costs which the client is required to pay by law.

Article 5 Delivery

5.1 The delivery time commences as from the latest of the following dates:
a. the day of signing of Van Beest's written order confirmation;
b. the date of receipt of the instalment due under the order;
c. the date of receipt of the technical data, documents and/or securities to be provided to Van Beest by the client.

5.2 Exceeding the delivery date does not entitle the client to compensation nor give it the right to demand cancellation of the agreement or to suspend fulfilment of its own obligations.

5.3 In the case of mass production by Van Beest or its suppliers of products which deviate from the standard products in the production range, Van Beest will be entitled to maintain a margin in respect of the delivered products of 5% above or below the number of products ordered.

Article 6 Risk and Retention of Title

6.1 The risk with regard to damage, theft, loss, etc. of the products passes to the client at the moment when the products are delivered at the client.

6.2 The ownership of the products manufactured by Van Beest and delivered to the client will be transferred to the client once he has paid all that Van Beest is owed in respect of deliveries or services, including the interest and costs, or once he has provided satisfactory security for the fulfilment of his obligations. For as long as this is not the case Van Beest will remain entitled to repossess the products it has delivered. All costs connected therewith will be for the account of the client. The client is not entitled to deliver products to third parties that have not been paid for, except in the normal course of business.

Article 7 Security

7.1 Notwithstanding the agreed conditions of payment, Van Beest will be entitled at all times to demand security from the client for the fulfilment of his obligations before commencing delivery or before continuing a delivery that has already commenced.

Article 8 Guarantee and Complaints

8.1 Van Beest guarantees that the products it sells and delivers meet the specifications applicable to these products, as stated in the Van Beest catalogue. Only specifications expressly agreed in writing apply to products not included in the Van Beest catalogue. The guarantee will in no event be valid for more than three months as from the date of delivery to the client.

8.2 Defects caused by normal wear and tear, inappropriate and/or improper use, or insufficient maintenance, will in no event be covered by the guarantee.

8.3 Van Beest will supply the following test certificates at additional costs:
- dock regulations certificate certificates of classification societies ABS, DNV, Bureau Veritas, R.I.N.A., Germanischer Lloyd, A.I.B.-Vinçotte, and Lloyd's Register of Shipping.

8.4 The client is obliged to inspect the goods delivered - or have them inspected - immediately upon arrival. Complaints regarding the quality or quantity, or other deviations and/or damage must be submitted by the client in detail to Van Beest within 14 days of receipt of the goods, in writing, by post, telex, fax or e-mail. Complaints will no longer be accepted once the client has processed the delivered products or has them delivered to third parties.

8.5 Should Van Beest consider a complaint to be well-founded, it is only obliged to replace the defective product free of charge; Van Beest will in no event be obliged to compensate any consequential loss or damage suffered by the client, howsoever named.

Article 9 Non-attributable Failure

9.1 Where the non-fulfilment of an agreement by Van Beest is caused by circumstances beyond the control of Van Beest - even though such circumstances could have been foreseen at the time when the agreement was concluded - such as war or kindred risks, terrorism, mobilisation, revolt, strike, sit-ins or blockades, boycotts, disruptions in public utilities, government measures, and shortcoming by suppliers, the consequences will not be attributed to Van Beest. In such cases the parties will consult in order to agree a possible adjustment or suspension of the agreement. If no consensus is reached and it is no longer possible to perform the agreement , the agreement may be cancelled by either party.

Article 10 Liability for Damage

10.1 Van Beest will compensate any damage suffered by the Client, provided the client is able to prove that the damage is caused by a defect in a product supplied by Van Beest. Financial loss, such as loss of profit, lost earnings, costs in connection with delays in or interruption of the production or any other consequential loss will in no event be eligible for compensation save in the event of deliberate intent or recklessness on the part of Van Beest.

10.2 Damage to goods belonging to the client and personal injury will be compensated to a maximum of the amount for which Van Beest receives compensation from its insurer.

10.3 The client will indemnify Van Beest against all third-party claims in connection with products supplied to the client by Van Beest, save where such loss is for the account of Van Beest by agreement.

10.4 Van Beest accepts no liability whatsoever for any advice it provides without express agreement, save in the event of deliberate intent or recklessness on the part of Van Beest.

10.5 All claims for compensation will lapse after 5 years, as from the date when the client has become aware of the loss.

Article 11 Cancellation

11.1 Should the client wish to cancel an agreement, giving reasons , he will be obliged to purchase all goods ordered and/or already wholly or partially processed by Van Beest, at the agreed price and to pay Van Beest a compensation equal to 15% of the amount of the order, plus exchange loss, if any, on the part of Van Beest.

Article 12 Taxes

12.1 All taxes and duties imposed on Van Beest in the case of export, including import duties, are for the account of the client.

Article 13 Intellectual Property Rights

13.1 The client will indemnify Van Beest against all third-party claims arising from the alleged violation of any intellectual property rights these third parties are entitled to.

13.2 The client is not allowed to use the trade name and the brand or designation "Green Pin®" and/or "EXCEL®" for its own business activities or to associate these with other than "Green Pin®" and/or "EXCEL®" products, without the written permission of Van Beest. Furthermore the client undertakes to inform Van Beest immediately of any infringement by third parties of this trade name or brand.

Article 14 Termination

14.1 In the event that the client is declared bankrupt, his goods are attached, the client applies for a moratorium or fails to fulfil any obligation towards Van Beest, Van Beest will be entitled to terminate any agreement concluded with the client that has not yet been performed or not fully, by a statement in writing.

Article 15 Applicable Law; Disputes

15.1 All agreements with Van Beest are governed exclusively by Dutch Law. The provisions of the Vienna Sales Convention (CISG) are expressly excluded.

15.2 Disputes arising from any agreement concluded with Van Beest will be submitted to the judgement of the District Court of Dordrecht, with the exception of the right of Van Beest to summon the client before the court that has jurisdiction according to Dutch law and subject to the competence of the subdistrict court in accordance with the rules of the Dutch law of civil procedure.

Table of contents

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Member of Van Beest International

Van Beest is a leading supplier of a complete range of accessories for steel wire rope, chain and synthetic rope worldwide. Registered trade names: Green Pin® and Excel®.

www.vanbeest.com