

GREEN PIN®

PRODUCT CATALOGUE

METRIC



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 15.

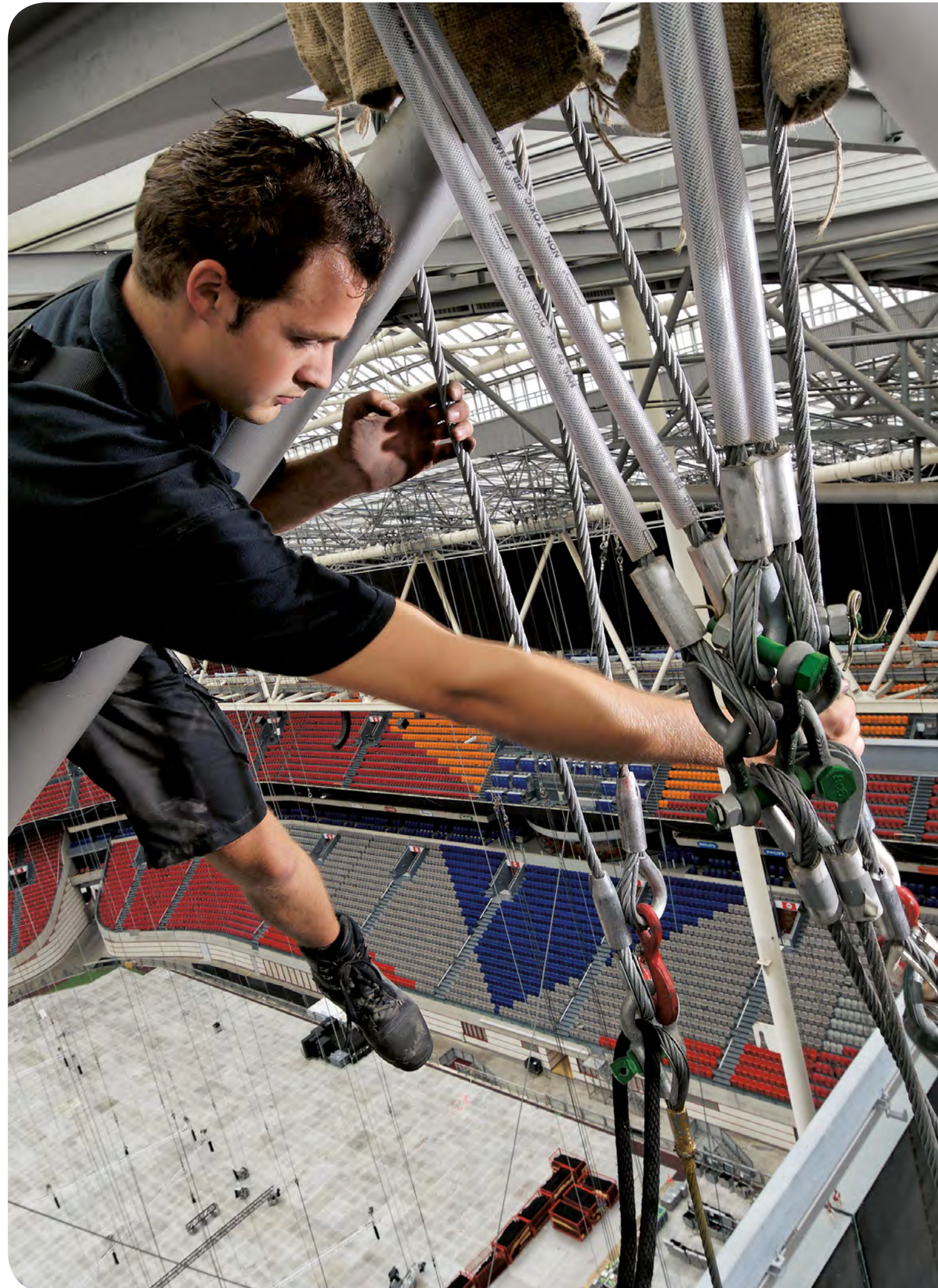
Type 2.1	Works certificate to EN 10204	2.1
Type 2.2	Works certificate to EN 10204	2.2
Type 3.1	Inspection certificate to EN 10204	3.1
Type MTC a	Manufacturer test certificate	MTC ^a
Type MTC b	Manufacturer test certificate	MTC ^b
Type LROS	Proofload Statement	LROS
Type MPI a	Non-destructive testing report	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	Type Approval certificate to DNV - ST - E271/E273	DNV 2.7-1 ^a
Type DNV 2.7-1 b	Type Approval certificate to DNV - ST - E271/E273	DNV 2.7-1 ^b
Type DNV CG3	Certificate Proof load witnessed and issued by DNV	DNV CG3
Type DNV 0377	Type Approval certificate to DNV - ST 0377 (former DNV 2.22)	DNV 0377
Type DNV 0378	Type Approval certificate to DNV - ST 0378 (former DNV 2.22)	DNV 0378
Type NYTEK / NS 9415	Type Approval certificate to NYTEK-regulation and NS 9415	DNV NS 9415
Type DGUV	DGUV Type approval certificate to EN 1677	DGUV
Type CE IIA	CE declaration of conformity	CE IIA
Type CE IIB	CE declaration of incorporation	CE IIB
Type BL	Break Load test certificate	BL
Type ABS PDA	Certificate of Product Design Assessment Approval	ABS PDA
Type ABS MA	Certificate of Manufacturing Assessment Approval	ABS MA

Conditions

Certificate types 2.1, 2.2, 3.1, MTC a, DNV 2.7-1 a, DNV 2.7-1 b, DNV 0377, DNV 0378, DGUV, ABS PDA, ABS MA and CE can be supplied at no extra charge. For all other certificates, additional costs will be charged.

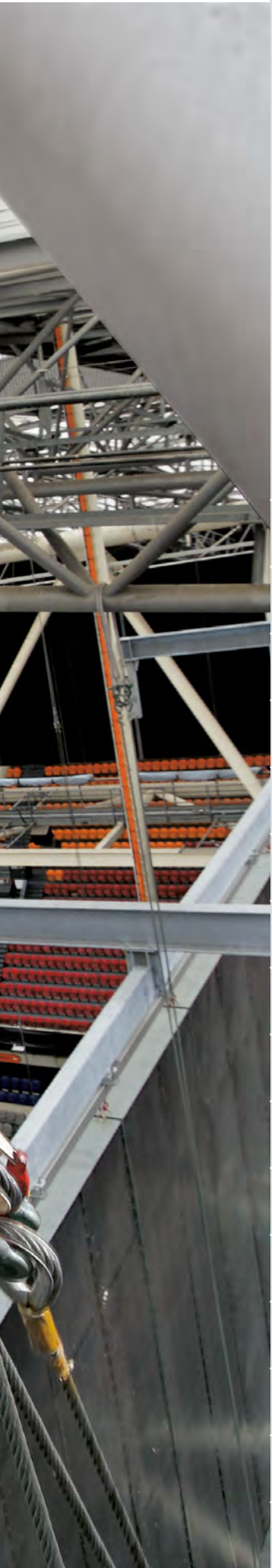
Other

RFID Tag	RFID
CAD drawings	CAD
More info	INFO
Complementary product	C





	Introduction	4	
1	Shackles	22	1
2	ROV Shackles & Hooks	66	2



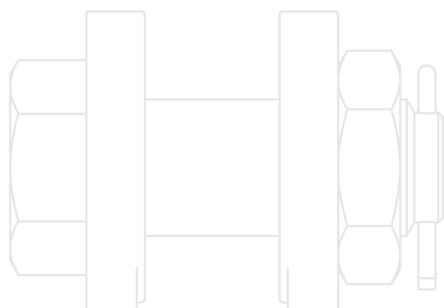
WELCOME TO THE WORLD OF GREEN PIN®



THE CENTREPIECE OF RIGGING

Welcome to the world of Green Pin[®], the leading brand for premium quality lifting and lashing equipment. Leading, but modest. We know our role, the place of our Green Pin[®] products in your bigger picture. And that is right in the centre of your rigging. The centre of safety. The centre of reliability. And the centre of responsibility. Because we know that Green Pin[®] products are often part of extremely large and complex projects.

Being part of project that come with great risks and great interests to people and products at the same time, great responsibility is required. Taking that responsibility is key to Green Pin[®]. We want to reassure our customers by always providing products of the highest quality, as we have done for over a hundred years. Our quality is always 100%, but guaranteeing a 99% availability of our products is just as essential to us.



ALWAYS IN THE CENTRE OF RIGGING

Green Pin® combines innovative, high-quality products with the quickest delivery and the best customer support. The best lifting and lashing equipment developed with a clear vision of what you need. Produced with raw materials from trustworthy suppliers, at our state-of-the-art production facilities. Facilities that produce products with minimal margins of error compared to other production methods. These Green Pin® products are available all over the world by one of our 900 distributors. We make sure that we are always ready to meet the demands of the most complex lifting projects in the world.



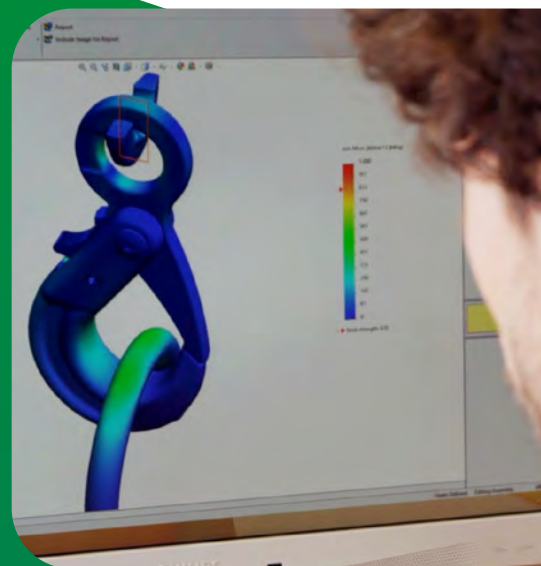
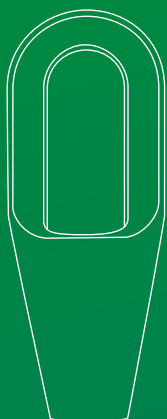
**OVER 1000 DISTRIBUTORS IN
MORE THAN 100 COUNTRIES
STOCK GREEN PIN® PRODUCTS**

RELY ON THE BEST EQUIPMENT AND SUPPORT. GUARANTEED

The core, of the Green Pin® brand is quality. Green Pin® products are better designed, developed, engineered, produced, packed, delivered, and serviced. When it comes to quality, Green Pin® will not settle for less than best in breed. So, all our raw materials come from highest qualified suppliers who guarantee full traceability. Our steel is sourced from leading, fully certified European mills. Green Pin® is all about quality. That quality is the centrepiece of our brand, and our promise to you is we will never let you down. You can trust us to be the centrepiece of your rigging.

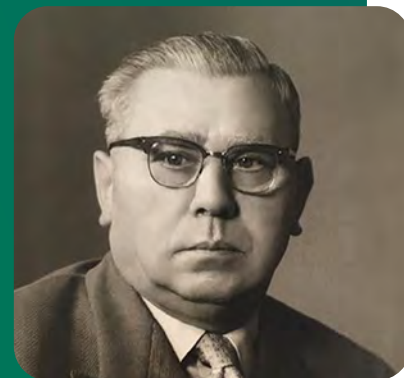
YOU GET THE BEST

- ⊕ CAD-drawings and technical documentation that are distinguishing by their accuracy;
- ⊕ A technical helpdesk that provides comprehensive answers swiftly;
- ⊕ Technical training to provide insights into the benefits of our products and the different ways to apply them.



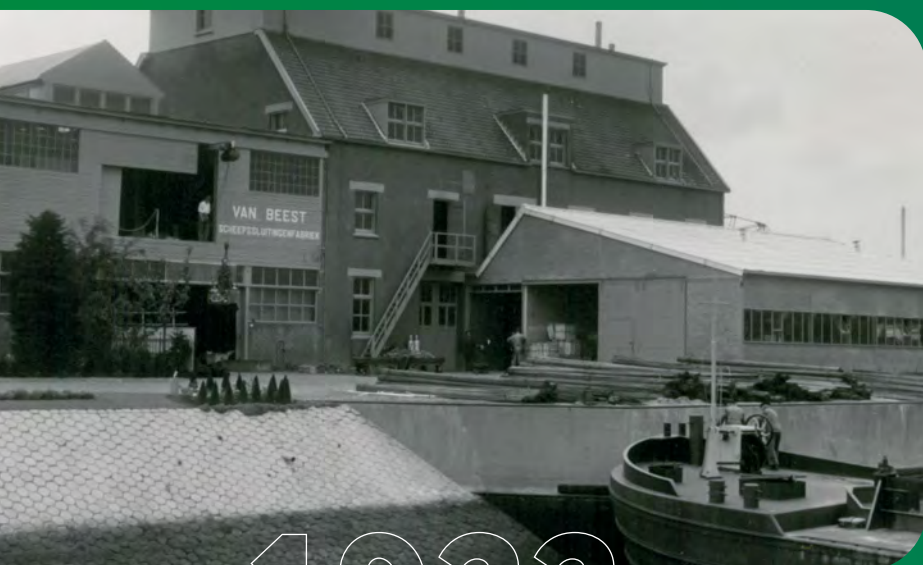


THE GREEN PIN® HISTORY



Green Pin® can trace its origins back to 1922. In Sliedrecht, which is located right at the heart of the Dutch maritime industry, blacksmith Dirk van Beest started producing components for dredging. He developed the shackles that would later be branded as Green Pin®. Van Beest's company grew quickly, in line with the expansion of the Dutch dredging and maritime industry.

Today, Green Pin® is part of the Royal Van Beest Group and is headquartered in The Netherlands with branches in the United States, France, Germany, Spain and Brazil.



1922




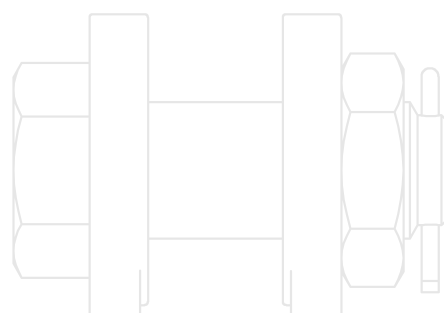
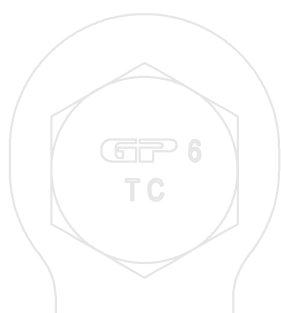
2022



COMPLEMENTARY PRODUCTS

In addition to the Green Pin® product range of chain and rope fittings, Green Pin®'s corporate parent Royal Van Beest offers complementary products (such as wire rope thimbles, sleeves, general hardware, etc.) to make a lifting assembly complete.

These products are all produced to the specifications indicated in this catalogue and are subject to the quality control of Royal Van Beest. Complementary products are highlighted on the product pages of the catalogue with this icon .



PROUD MEMBER OF

We are a member of several organizations who 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 through publications, internet, 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.



Member of



Associated Wire Rope Fabricators



WEB SLING & TIE DOWN ASSOCIATION



AVAILABLE WORLDWIDE

We believe Green Pin® products should be available to everyone on earth within 72 hours. That's why Green Pin works with the most and the best distributors on this planet. To find the distributor nearest to you, please contact us at: info@greenpin.com



REFERENCES

Some companies that use our products in projects:

- ADNOC
- Aker Marine Contractors
- Allseas
- BAE Systems
- Bechtel Corporation
- BHP Billiton
- Bluestream Offshore
- Bluewater
- Boskalis
- Bouygues
- BP
- Buckner Heavylift Cranes
- Caterpillar
- Chevron
- Codelco
- ConocoPhillips
- Delmar Systems
- EDF
- Eiffage
- Equinor
- ExxonMobil
- Fluor
- Fugro
- General Electric
- Heerema Marine Contractors
- Hyundai Heavy Industries
- InterMoor
- Jumbo
- Kiewit
- Lamprell
- Liebherr
- Mammoet / ALE
- Manitou
- McDermott
- Nordex
- NOV
- NPCC
- Oceaneering
- Pacific Drilling
- Rio Tinto
- Saipem
- Sapura Energy
- Saudi Aramco
- Schlumberger
- Shell
- Siemens
- SpaceX
- Subsea 7
- Tata
- TechnipFMC
- TotalEnergies
- Transocean
- US Steel
- Van Oord
- Vestas
- Vinci
- Wood Group

INSIGHTFUL AND HANDS-ON GREEN PIN® TRAINING

Green Pin® seminars and webinars give you the chance to improve your knowledge and discover new features about Green Pin® products and instruct you on how to operate them safely and properly. The training also provides you with insights into the engineering and production technology that goes into manufacturing them.

All sessions are interactive: they allow you to ample opportunities to ask any questions you have, or put forward any challenges that you have faced in the past to knowledgeable presenters.

Organized online via webinar, via a hybrid set-up, or face-to-face at a Green Pin® location or an external venue, there's always a seminar to be found or to be created that fits your schedule and location. In case you want to use the training for accreditation points we can supply you with an official Green Pin® certificate of participation.



Available Green Pin® training

Green Pin® seminars and webinars are available in several pre-defined formats as shown in the table below. However, completely customized training can also be made. Such sessions allow us to focus on precisely those challenges that you and your colleagues have questions about.

E-mail info@greenpin.com for any inquiries.

Green Pin® Training	What will you learn?	Industry focus	Duration
Shackles	The complete resource on Green Pin® shackles. Topics include the product range, production method, design, testing, instructions for use, certifications and inspection.	All	Two parts of 1 hour each
ROV Shackles and Hooks	An overview of all the shackles and hooks specially designed for Remotely Operated Vehicles, includes many pointers for the most effective use of the products.	Subsea, Offshore	1 hour
Aquaculture Range	Overview of all products specially designed for fishing and aquaculture. Extremely safe products and designed for long use underwater.	Fishing, Aquaculture	1 hour
Chain Fittings	Overview of complete chain fittings range, production method, design, testing, instructions for use, certifications and inspection.	All	Two parts of 1 hour each
Catch Shackle	Reducing the number of injuries and possible deaths by preventing objects from falling with the Catch shackle when assembly or disassembly during installation at a height.	Onshore and Offshore installations	45 min
Fixed Nut Shackles	The benefits, functionality and applications of this extremely secure way of fastening a shackle bolt for permanent use.	Multiple but mostly Marine, Offshore	1 hour
Heavy Duty Master Links	Overview of the range and features that make this forged master link unique in its class.	Offshore	1 hour
Green Pin Tycan® Chain	The complete resource on Green Pin Tycan® fibre chain for lashing and lifting; topics include the product range, design, testing, instructions for use, certifications, inspections and project examples.	All	1 hour
Power Sling® Shackles	Improving rigging safety and saving wire rope costs with the most innovative heavy-lifting shackle in the industry. The session covers this and other benefits, design features, certifications and application instruction.	Offshore, Wind	1 hour
General introduction	The benefits of Green Pin®, usage in various industries and a general overview of the assortment.	All	1 hour
Royal Van Beest Group	Background on Green Pin®'s corporate parent, the Royal Van Beest Group: its history, current operations, subsidiary companies and their products.	All	1 hour
Tailormade webinars	A tailormade session focused on your specific topic of interest or zooming in on a technical challenge you have faced with our type of products (conditions apply).	-	-

INTRODUCTION

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. 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;
- Alloy steel, quenched and tempered, grade 10;
- Stainless steel AISI316L, AISI316 or Duplex 1.4462, grade 5.

Load

Following terms are used to define a load:

- Working Load Limit or WLL: the maximum load the product is designed to sustain, 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 sustain 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 tonne.

Safety factor

This indicates the ratio between the MBL and the WLL. For example, the standard range of Green Pin® shackles has a the safety factor of 6:1. This means that the shackle may only fail to retain the load, when the load is in exceedance of at least 6 times its designed WLL. Green Pin® chain fittings generally have a safety factor of 4:1 (lifting eyes have a safety factor of 5:1).

Product dimensions

All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification. You can find the most up to date information including CAD-drawings on [greenpin.com/products](https://www.greenpin.com/products).

Finish

Products can have the 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:

Product class abbreviations (for example, G-4161)

C	Carbon steel
A	Alloy steel
R	Stainless steel
S	Self-coloured
P	Painted
E	Electro-galvanized
G	Hot dipped galvanized

Product name abbreviations (for example, Green Pin® Bow Shackle BN)

BN	Bolt & Nut or safety bolt	HH	Hook-Hook
CL	Clevis	HK	Hook
CP	Cotter Pin	H-type	Horizontal
D	D-Handle	JJ	Jaw-Jaw
E	Eye	ROV	Remotely Operated Vehicle
EE	Eye-Eye	RT	Recessed Trigger
EJ	Eye-Jaw	S	Shackle
EH	Eye-Hook	S/S	Stainless Steel
F	Fishtail handle	SC	Screw Collar or Screw Pin
FN	Fixed Nut	SCL	Swivel Clevis
FP	Flush Pin	SE	Swivel Eye
GR5	Grade 5	SQ	Square headed Screw Pin
GR8	Grade 8	U-type	Universal (Horizontal and Vertical)
GR10	Grade 10	V-type	Vertical

Certificates

Our company is ISO certified by Lloyd's; currently we are ISO 9001-2015 certified. 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 DNV PL	DNV PL	Proofload Statement Statement of witness of proof load testing and visual examination by a surveyor from DNV, stating the results of individual proof load testing. For P-6043, these shackles are proof load tested with presence of a DNV surveyor.
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.

Table continues on next page

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	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 DNV standards DNV-ST-E271-2.71 Offshore containers and DNV-ST-E273 Portable offshore units. DNV Type approval certificates TAS000033J and TAS00003F7.
Type DNV 2.7-1 b	DNV 2.7-1 ^b	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 DNV standards DNV-ST-E271-2.71 Offshore containers and DNV-ST-E273 Portable offshore units. Stating the results of proof load testing samples of a production batch. Products are not individually tested.
Type DNV 0377	DNV 0377	Type Approval certificate to DNV 0377 Green Pin Power Sling® shackles are DNV Type approved to DNV Standard DNV-ST-0377 Standard for shipboard lifting appliances. DNV Type approval certificate TAS000018M. Former DNV Certification No 2.22, Lifting Appliances – Application – Loose gear for offshore cranes.
Type DNV 0378	DNV 0378 DNV CG3	Type Approval certificate to DNV 0378 Green Pin® Standard Shackles, Green Pin Polar® Shackles and Green Pin Power Sling® shackles are DNV Type approved to DNV Standard DNV-ST-0378 – Standard for offshore and platform lifting appliances. DNV Type approval certificates TAS00001H7 and TAS000018M. Former DNV Certification No 2.22, Lifting Appliances – Application – Loose gear for offshore cranes.
Type NYTEK / NS 9415	DNV NS 9415	Type Approval certificate to NYTEK-regulation and NS 9415 Green Pin® products, (G-4139, G-8310, G-4863, G-4163BG and G-6870), are primarily used for Aquaculture applications. These products and the Royal Van Beest management system are certified by DNV for compliance with NYTEK-regulation and NS 9425 standard. DNV approval certificate PRONO 121.
Type DGUV	DGUV	DGUV Type test certificate to EN 1677 Many Green Pin® chain sling components have a DGUV type approval 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 EN 818-2 or EN 1677 and are entitled to be marked H94.
Type CE IIA	CE IIA	CE Declaration of Conformity CE Declaration of Conformity in accordance with annex IIA of the Machinery Directive 2006/42/EC and the latest amendments.
Type CE IIB	CE IIB	CE Declaration of Incorporation CE Declaration of Incorporation in accordance with annex IIB of the Machinery Directive 2006/42/EC and the latest amendments.
Type BL	BL	Break Load test certificate A certificate with the actual breaking load results on tested samples.
Type ABS PDA	ABS PDA	Certificate of Product Design Assessment Approval The Green Pin® Standard Shackles G-4161, G-4163, G-4151, G-4153; The Green Pin Polar® Shackles G-5163 and the Green Pin Super® Shackles G-5261 and G-5263 are ABS Type Approved. Intended service: Loose Gear Items. Use on Lifting Equipment. ABS PDA certificates 23-2397435-PDA, 23-2397436-PDA and 23-2397437-PDA.
Type ABS MA	ABS MA	Certificate of Manufacturing Assessment Approval ABS MA certificate 18-RO 3524956.

Conditions

Certificate types 2.1, 2.2, 3.1, MTC a, DNV 2.7-1 a, DNV 2.7-1 b, DNV 0377, DNV 0378, DNV NS 9415, DGUV, ABS PDA, ABS MA 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 0377 DNV 0378 DNV NS 9415 DGUV CE IIA CE IIB ABS PDA ABS MA

With additional charges:

MTC^b LROS MPI^a MPI^b US^a US^b DNV CG3 BL

On request the proof load test certificates can be supplied surveyed by an official classification society, such as LROS, DNV, 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 at the time of order. For more information and specifications, see the table below for an overview of the different test methods.

Test method	Test type	Test description	Document
Visual inspection	Non Destructive	The products are inspected and approved by our QC-department. The products are inspected and approved by our QC-department, stating the results of non-specific inspection.	2.1 2.2
Material specific inspection	Destructive	The material of the products is inspected. This includes chemical composition and mechanical properties at component level.	3.1
Proof Load test	Non Destructive	Samples of a production batch of products are proof load tested. Products are not individually tested. All products of a production batch are individually proof load tested.	MTC ^a MTC ^b
Magnetic Particle inspection	Non Destructive	Samples of a production batch of products are Magnetic Particle Inspection (M.P.I.) tested in accordance with EN 10228-1. Products are not individually tested. All products of a production batch are individually Magnetic Particle Inspection (M.P.I.) tested in accordance with EN 10228-1.	MPI ^a MPI ^b
Ultrasonic inspection	Non Destructive	Samples of a production batch of products are Ultrasonic Inspection (U.S.) tested in accordance with EN 10228-3. Products are not individually tested. All products of a production batch are individually Ultrasonic Inspection (U.S.) tested in accordance with EN 10228-3.	US ^a US ^b
Break Load test	Destructive	Samples of a production batch are break load tested.	BL

CAD drawings

Green Pin® 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 Aided Design (CAD) software to develop a 2D or 3D specification of the entire system.

For standard products engineers normally use a CAD drawing library. The use of this kind 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 engineers, Green Pin® has made CAD drawings available in various formats (e.g. STEP, IGS, CATIA, etc.) on the Green Pin® website (www.greenpin.com). These drawings can be integrated in almost every design program. Further details can be obtained through our website: www.greenpin.com/cad.

CAD

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

RFID

RFID

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

For more information see page 24.

INFO

More information

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

General cautions and warnings

All WLL's indicated in this catalogue or in other Green Pin® literature or publications are only applicable to recently-supplied, new and unused products used under prescribed operating conditions. Any extreme circumstances or shock loading that occur during use 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.

Green Pin® 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 Green Pin® literature or publications are given merely as an indication. Green Pin® 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.

Green Pin® products are typically used to transfer loads during lifting, lashing or towing. These fittings are usually combined with steel wire rope, chain or synthetic rope or chain (Green Pin Tycan® chain) to form a lifting sling. You must therefore conduct the following verifications to safely use the products:

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 β , 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 the below reduction table if a multi leg sling is not used for the purpose for which it has been designed, for example for a lifting operation with fewer 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 lead to failure of 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 EN 818-6:2000+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 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 the 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. Use original Green Pin® spare kits to replace parts (such as a load pin or the latch of a hook) or if a load pin is misused, damaged or distorted.

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 Green Pin® if the sling is to be exposed to highly concentrated chemicals. Green Pin® 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 tonnes	metric tonnes	0.9071847	
metric tonnes	US tonnes	1.1023113	
metric tonnes	pounds	2204.6226218	
pounds	metric tonnes	0.0004536	
metric tonnes	kilogram	1000	
kilogram	metric tonnes	0.001	
metric tonnes	kilo Newton	9.8066500	
kilo Newton	metric tonnes	0.1019716	
pounds	kilogram	0.4535924	
kilogram	pounds	2.2046226	
Temperature			
Celcius	Fahrenheit	1.8 + 32	
Fahrenheit	Celcius	$(-32) * 0.5555556$	
Torque			
Newton meter	foot pound-force	0.7375621	
foot pound-force	Newton meter	1.3558180	

SHACKLES



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 and fixed nut 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

Green Pin® offers a wide range of bow and dee shackles for a variety of applications. The range stretches from WLL 0.33 t to 3000 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, ISO 2415, British Standard 3032, DIN 82101 etc. Additionally we offer a wide range of general commercial shackles, which are not suitable for lifting but merely for fixing purposes. Van Beest offers a wide range of other shackles to complement the Green Pin® assortment.

Design

All Green Pin® shackles have a specific design for a specific application. Please find below some examples of highly functional designs, to optimize the use of the Green Pin® shackles in daily use:

- Green Pin Super® Shackles which are made from 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;
- Green Pin Polar® Shackles are for use in extreme climatic conditions with material properties generally guaranteed up to temperatures of -60 °C;
- Green Pin Power Sling® Shackles are designed to provide a better bending efficiency for the sling. A larger radius increases the life span of the sling significantly;
- Another example of a 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.

How to recognize a genuine Green Pin® shackle?

- Marking in the shackle body and pin (from dia 13 mm and up)
- Steel grade (for example 6)
- CE conformity code
- Diameter bow (inch)
- Green Pin® logo (GP)
- Holland marking
- Working Load Limit (WLL in metric tonnes)
- Traceability code (2 letters)
- Green powder coated pin



Green Pin® Shackles meet all requirements of the Machinery Directive 2006/42/EC and its latest amendments.

Finish

Shackles supplied by Green Pin® are either 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 0377 DNV 0378 DNV NS 9415 CE IIA CE IIB ABS PDA ABS MA

With additional charges:

MTC^a MPI^a MPI^b US^a US^b DNV CG3 BL

On request the proof load test certificates can be supplied surveyed by an official classification society, such as LROS, DNV, BV, ABS or any other officially certified inspection body. Please verify your certification requirements with Green Pin[®] at the time of order.

Green Pin[®] Bow Shackles, Green Pin[®] Dee Shackles and Green Pin Polar[®] Shackles are DNV type approved. These shackles carry two DNV type approval certificates that show compliance with:

- DNV-ST-E271-2.71 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 ST-E273 Portable Offshore Units
- DNV Standard No. 0378 Offshore and Platform Lifting Appliances
- ASME B30.26
- ISO 2415

The Green Pin Power Sling[®] Shackles are DNV type approved. This DNV type approval certificate is in compliance with:

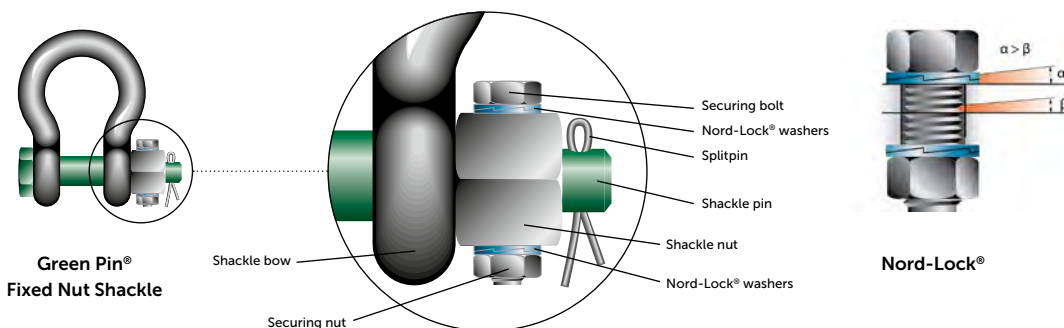
- DNV Standard for Certification No. 0377 Standard for Shipboard Lifting Appliances
- DNV Standard for Certification No. 0378 Offshore and Platform Lifting Appliances

Green Pin[®] Shackles G-4161, G-4163, G-4151, G-4153, G-5163, G-5261 and G-5263 are ABS Type Approved. The shackles have a Product Design Assessment Approval and a Manufacturer Assessment Approval Certificate. The shackles are type approved to be used as lifting gear or to be used as lifting device.

Type approval certificates can be found on greenpin.com.

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 may start to move over the thread. We offer our range of Green Pin[®] Fixed Nut Shackles to avoid this risk. All Green Pin[®] shackles with bolt and nut can be equipped with an extra AISI 316 securing bolt that is assembled 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.

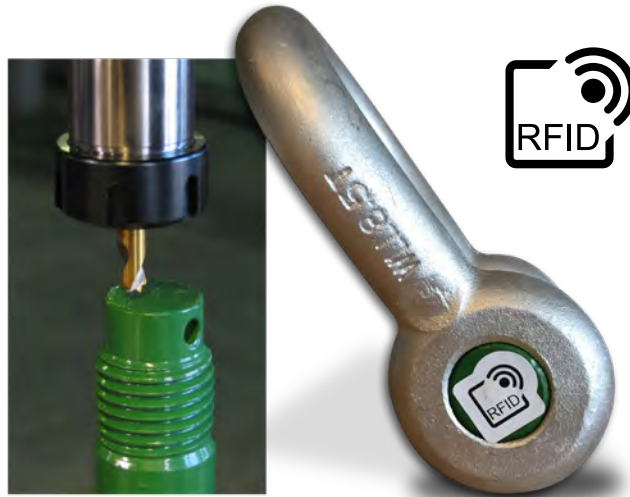


Green Pin® Shackles with RFID

All lifting equipment requires regular inspection. Tracking and filing reports on paper can be a time consuming task. Green Pin® 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.

Green Pin® offers the option of RFID implementation in all Green Pin® shackles. For detailed technical information please go to www.greenpin.com/FAQ.

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



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 (bow-pin configuration) at the following loads:

working load limit	Green Pin® Bow or Dee Shackles Polar® Shackles Heavy Duty Shackles BigMouth® Bow Shackle proof load	Green Pin Super® Shackles proof load	Green Pin® Sling Shackles proof load	Green Pin Power Sling® Shackle proof load	Green Pin® Web Sling Shackle proof load	Green Pin BigMouth® Dee Shackle proof load
t	t	t	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				8.13	
3.3		6.6				
4.6						9.2
4.75	9.5				11.88	
5		10				
6.5	13				16.25	
7		14	14			
8.5	17				21.25	
8.6						17.2
9.5	19	19				
12	24					
12.5		25	25			
13.5	27					
15		30				
15.5						31
16	32					
17	34					
18		36	36			
21		42				
25	50					
30	60	60	60			
35	70					
40		80	80			
42.5	85					
55	110	110	110			
75	150		150			
85	170	170				
120	240	240				
125			250	250		
150	300	300	300	300		
175		350				
200	400		300	400		
250	500		375	500		
300	600		450	600		
400	600		532	800		
500	750		750	1000		
600	900		900	900		
700	1050		931	1050		
800	1200		1064	1200		
900	1350		1350	1350		
1000	1500		1330	1500		
1250	1875		1663	1875		
1500	2250					
1550			2061.5	2325		

Instructions for use

Select the correct type and WLL of the shackle for the particular application. If extreme circumstances or shock loading may occur, this must be 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:

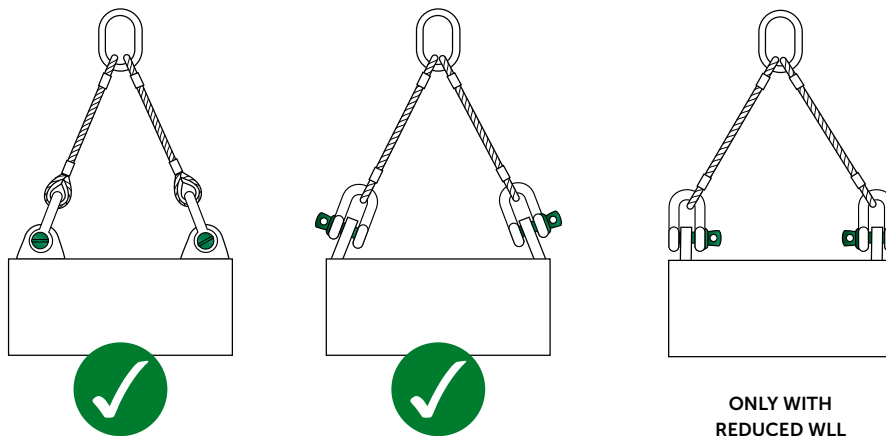
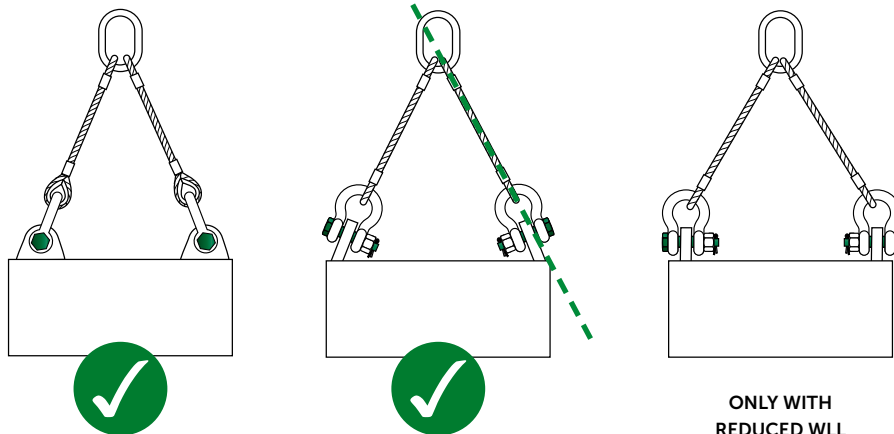
- all markings are legible;
- the body and pin are both of the same brand and type;
- the body and pin are both of the correct size;
- never use a safety bolt type shackle without using a securing pin;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the threads 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 touches the surface of the shackle eye.

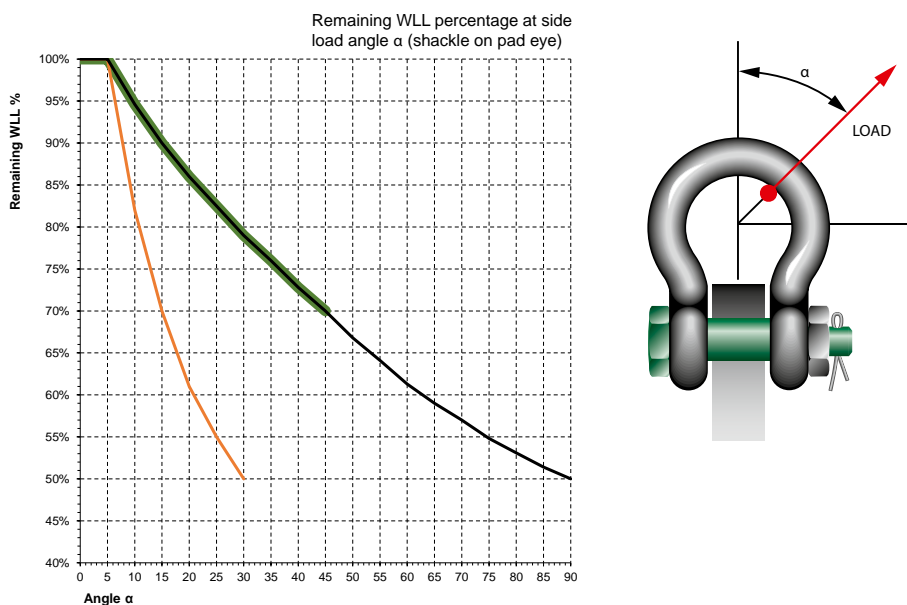
Incorrect positioning of the pin may be caused by a bent pin, too tight fitting thread or misalignment of the pin holes. Do not use the shackle under these circumstances. Never replace a shackle pin except with one of the same brand, type, make and size to ensure the shackle maintains its original WLL.

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.



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:

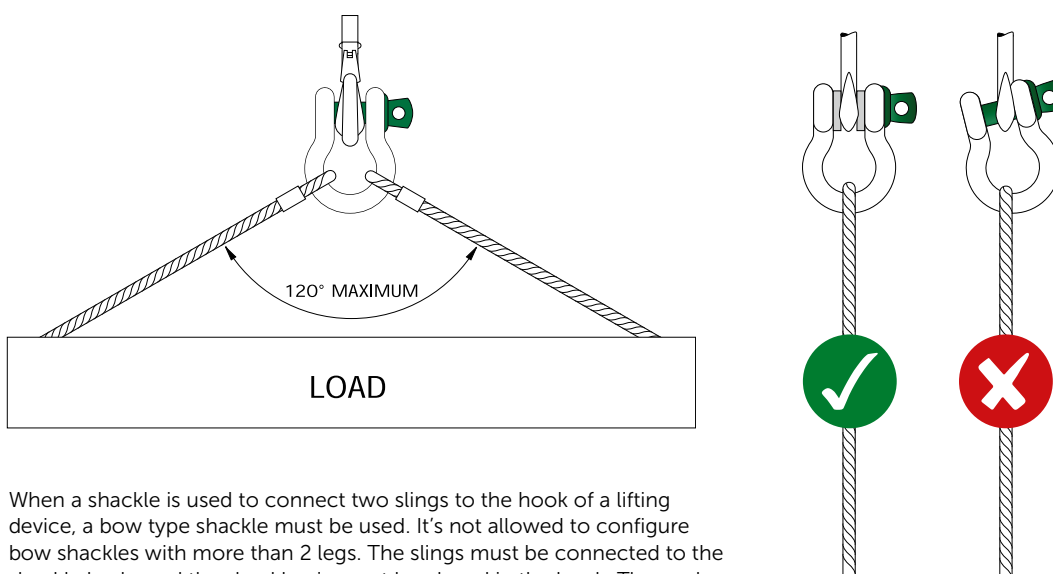


This black curve is valid for almost all Green Pin® shackles, except for ROV Shackles (P-5363 and P-5367) which are for in-line use only. The green curve is valid for Green Pin® Sling Shackles (P-6033, P-6013 and P-6065) and the orange curve is valid for the Green Pin Power Sling® Shackles (P-6043).

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

Maximum loading angle

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. It's not allowed to configure bow shackles with more than 2 legs. 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.

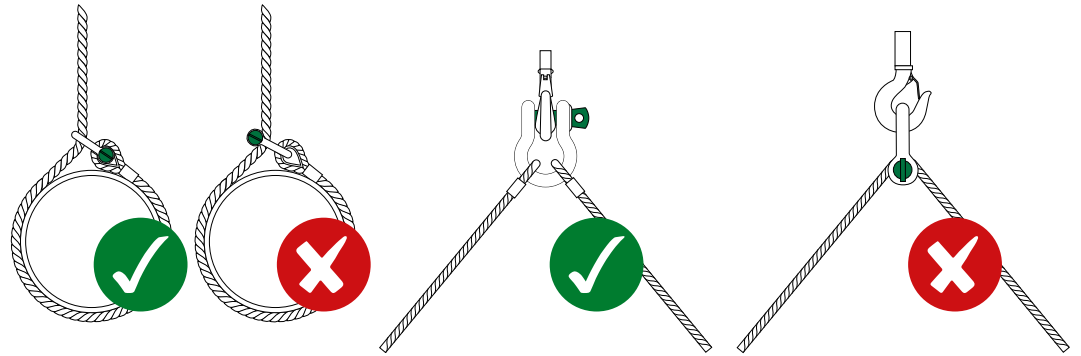
Avoiding eccentric loading

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.

Avoiding pin rotation

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 or a shackle with a fixed nut.

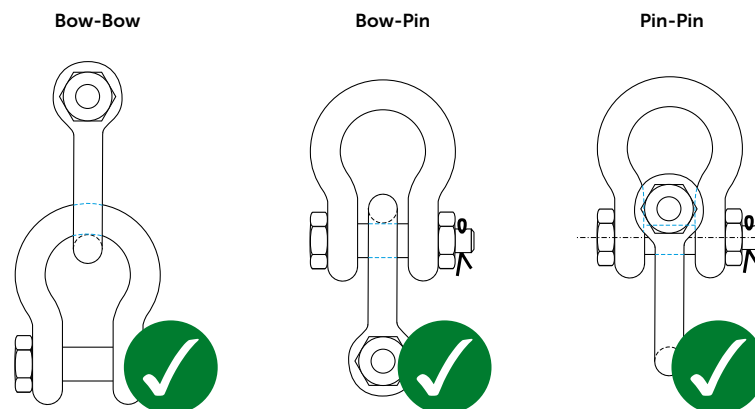


Chemicals

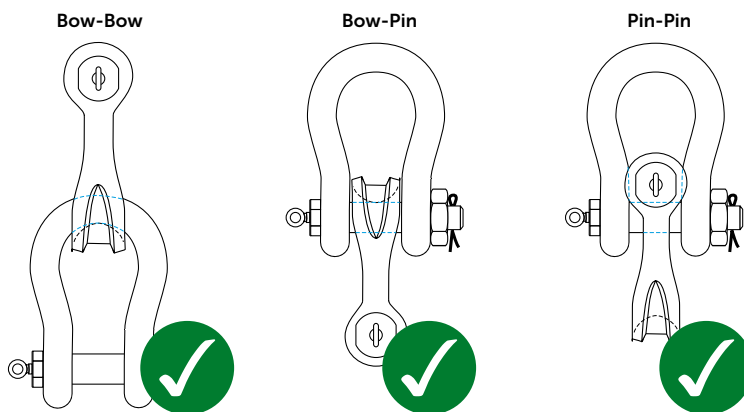
Shackles should not be immersed in acidic solutions or exposed to acidic fumes or other chemicals that are potentially harmful to the shackle.

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. 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 shall 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.

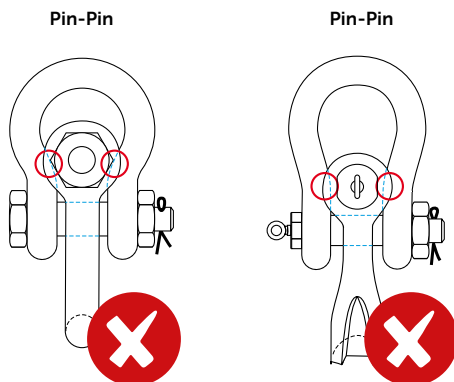


The crown of a Green Pin® Sling Shackle (P-6033) is wider than that of a standard shackle, thus creating a larger bearing surface. This improves the lifetime of the sling. Green Pin® Sling shackles can also be used in below configurations. The maximum load of the configuration is limited by the component with the lowest WLL. For information about point loading of the Green Pin Power Sling® Shackle (P-6043) please contact sales@vanbeest.eu.



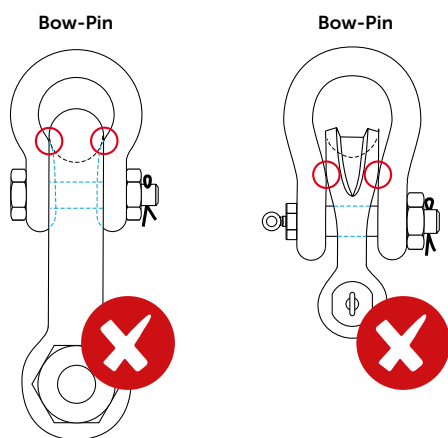
Pin- Pin configuration

When the shackle eyes touch and the pins do not bear properly, the configuration shall 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 shall not be used.



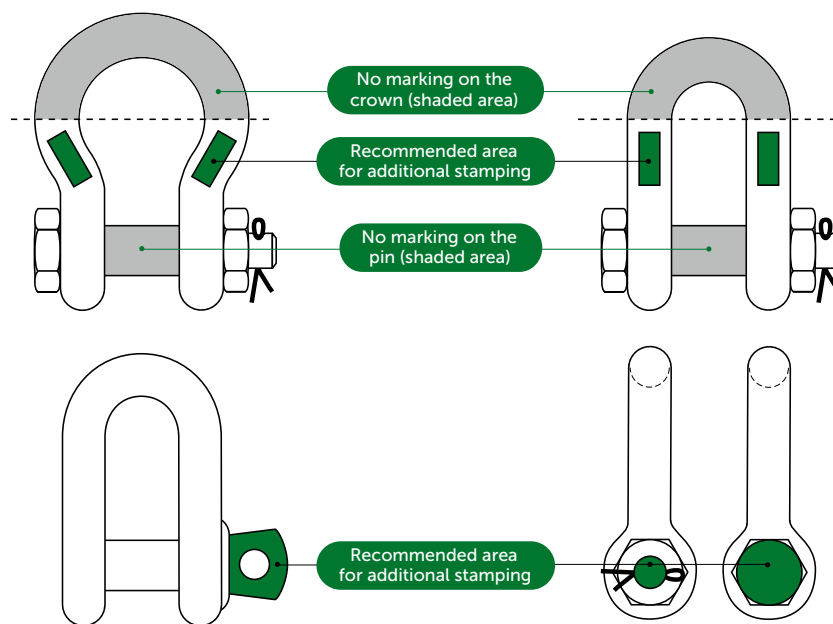
Contact Royal Van Beest, to check if a certain configuration is possible.

Additional markings

It is possible to add additional stamping on Green Pin® shackles, but make sure that you follow the recommendations below. If the recommendations are followed, the performance of the shackles is guaranteed.

- permanent identification marks or symbols are to be made by dot peen marking or with stamps having rounded profiles (low-stress stamps);
- laser markings are allowed as long as the heat of the laser does not influence in a negative way the material structure and properties. The laser marking must be legibly and indelibly marked in a place where the markings will not be removed by use;
- the number of marks on a shackle is to be kept to a minimum;
- the use of fractions and oblique strokes is to be avoided and a dot or hyphen is preferable to a dividing line;
- values of WLL are, generally, to be marked to one place of decimals (except for 0.25 and 0.75) up to 100 t and in integers thereafter. The word "tonnes" may be abbreviated to "t";
- recommended sizes of marks are
 - Diameter of the part to be marked > recommended size of the mark;
 - less than 12.5 mm > 3.0 mm;
 - 12.5 to 26 mm > 4.5 mm;
 - over 26 mm > 6.0 mm.

Typical arrangements of marks can be found in the following illustrations.



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 and regulations 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 (follow the local rules in the country of use) and more frequently when the shackles are used in severe operating conditions.





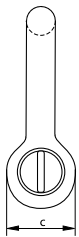
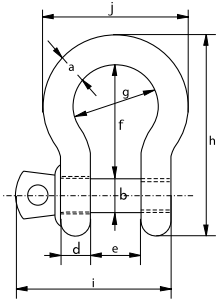
Green Pin® Bow Shackle SC

Standard bow shackle with screw collar pin

Scan for additional product details



G-4161



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, 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*](#) [DNV 0378](#) [CE IIA](#) [ABS PDA](#) [ABS MA](#)
- **Article code:** scan QR code to see article codes

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
0.33	5	6	12	5	9.5	22	16	36	29.5	26	0.02
0.5	7	8	16	7	12	29	20	48	38	34	0.05
0.75	9	10	20	9	13.5	32	22	56	46.5	40	0.10
1	10	11	23	10	17	37	26	64	54	46	0.14
1.5	11	13	25	11	19	43	29	73	59.5	51	0.19
2	13.5	16	34	13	22	51	32	90	73	59	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	1.50
8.5	25	28	59	25	43	95	68	164	137	118	2.21
9.5	28	32	67	28	47	108	75	186	153	131	3.16
12	32	35	73	32	51	115	83	201	170	147	4.31
13.5	35	38	79	35	57	133	92	227	186	162	5.58
17	38	42	88	38	60	146	99	249	203	175	7.43
25	45	50	104	45	74	178	126	300	243	216	12.5
35	50	57	112	50	83	197	138	332	272	238	17.2
42.5	57	65	132	57	95	222	160	378	310	274	26.3
55	65	70	145	65	105	260	180	433	344	310	37.6

CAD RFID INFO

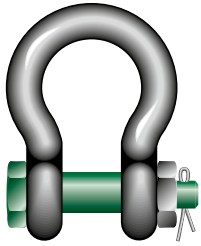




Green Pin® Bow Shackle BN

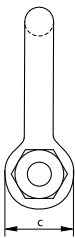
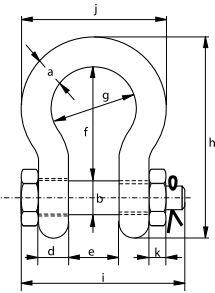
Standard bow shackle with safety bolt

Scan for additional product details



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, 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 0378](#) [CE IIA](#) [ABS PDA](#) [ABS MA](#)
- **Article code:** scan QR code to see article codes

G-4163



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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
0.5	7	8	16	7	12	29	20	48	42	34	4	0.06
0.75	9	10	20	9	13.5	32	22	56	50	40	5	0.11
1	10	11	23	10	17	37	26	64	60	46	8	0.16
1.5	11	13	25	11	19	43	29	73	67	51	11	0.22
2	13.5	16	34	13	22	51	32	90	80	59	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	115	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	67	28	47	108	75	186	166	131	27	3.66
12	32	35	73	32	51	115	83	201	184	147	30	4.91
13.5	35	38	79	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	104	45	74	178	126	300	243	216	23	14
35	50	57	112	50	83	197	138	332	269	238	26	18.8
42.5	57	65	132	57	95	222	160	378	301	274	29	28.3
55	65	70	145	65	105	260	180	433	329	310	32	39.6
85	75	83	167	75	127	330	190	530	381	340	39	62

CAD RFID INFO



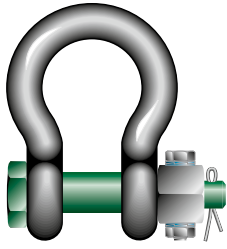
* For shackles ≥ WLL 2 t



Green Pin® Bow Shackle FN

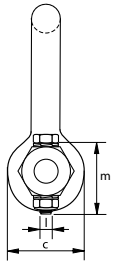
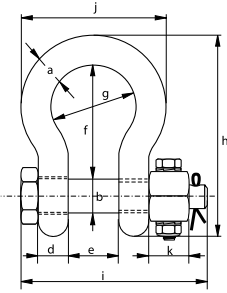
Standard bow shackle with safety bolt and fixed nut

Scan for additional product details



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, 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 CE IIA
- **Article code:** scan QR code to see article codes

G-4143



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width bow	thickness nut	securing bolt thread	securing bolt length	torque	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	Nm	kg
2	13.5	16	34	13	22	51	32	90	80	59	13	M6	35	8.4	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	M6	40	8.4	0.74
4.75	19	22	46	19	31	76	51	129	115	89	19	M6	45	8.4	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	M8	50	20	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	M8	55	20	2.58
9.5	28	32	67	28	47	108	75	186	166	131	27	M10	60	39	3.66
12	32	35	73	32	51	115	83	201	184	147	30	M10	65	39	4.80
13.5	35	38	79	35	57	133	92	227	197	162	33	M10	70	39	6.54
17	38	42	88	38	60	146	99	249	202	175	19	M8	75	20	8.19
25	45	50	104	45	74	178	126	300	243	216	23	M8	90	20	14
35	50	57	112	50	83	197	138	332	269	238	26	M10	100	39	19.9
42.5	57	65	132	57	95	222	160	378	301	274	29	M12	110	68	28.3
55	65	70	145	65	105	260	180	433	329	310	32	M12	120	68	39.6
85	75	83	167	75	127	330	190	530	381	340	39	M12	140	68	62

CAD RFID INFO





Green Pin® Dee Shackle SC

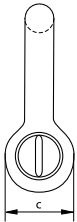
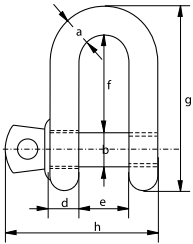
Standard dee shackle with screw collar pin

Scan for additional product details



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 2, grade A, from 2 t 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 0378 CE IIA ABS PDA ABS MA
- **Article code:** scan QR code to see article codes

G-4151



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
0.33	5	6	12	5	9.5	19	33	29.5	0.02
0.5	7	8	16	7	12	22.5	41.5	38	0.05
0.75	9	10	20	9	13.5	27	51	46.5	0.09
1	10	11	23	10	17	32	59	54	0.14
1.5	11	13	25	11	19	37	67	59.5	0.19
2	13.5	16	34	13	22	43	82	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	67	28	47	90	168	153	2.77
12	32	35	73	32	51	94	180	170	3.72
13.5	35	38	79	35	57	115	209	186	5.44
17	38	42	88	38	60	127	230	203	6.85
25	45	50	104	45	74	149	271	243	11.5
35	50	57	112	50	83	171	306	272	16.9
42.5	57	65	132	57	95	190	346	310	24.6
55	65	70	145	65	105	203	376	344	32.7

CAD RFID INFO

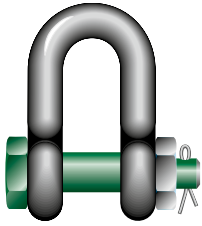




Green Pin® Dee Shackle BN

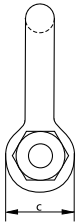
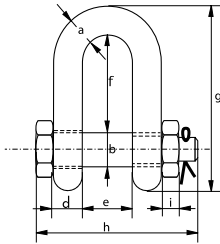
Standard dee shackle with safety bolt

Scan for additional product details



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, 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[®] DNV 2.7-1[®] * DNV 2.7-1[®] * DNV 0378 CE IIA ABS PDA ABS MA
- **Article code:** scan QR code to see article codes

G-4153



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	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	82	80	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	115	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	67	28	47	90	168	166	27	3.40
12	32	35	73	32	51	94	180	184	30	4.51
13.5	35	38	79	35	57	115	209	197	33	6.10
17	38	42	88	38	60	127	230	202	19	7.63
25	45	50	104	45	74	149	271	243	23	12.9
35	50	57	112	50	83	171	306	269	26	17.4
42.5	57	65	132	57	95	190	346	301	29	25.9
55	65	70	145	65	105	203	376	329	32	35.3
85	75	83	167	75	127	229	429	381	39	53

CAD RFID INFO



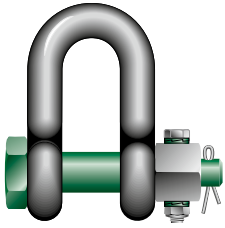
* For shackles \geq WLL 2 t



Green Pin® Dee Shackle FN

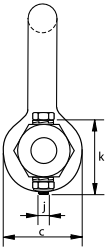
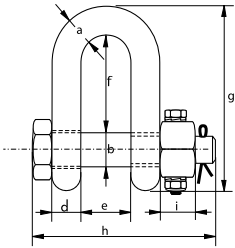
Standard dee shackle with safety bolt and fixed nut

Scan for additional product details



- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, 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 CE IIA
- **Article code:** scan QR code to see article codes

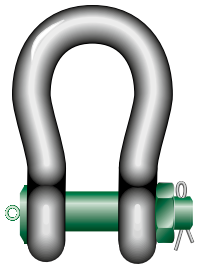
G-4133



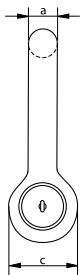
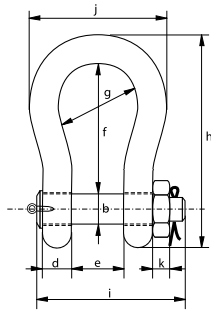
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	securing bolt thread	securing bolt length	torque	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	Nm	kg
2	13.5	16	34	13	22	43	82	80	13	M6	35	8.4	0.39
3.25	16	19	40	16	27	51	97	98	17	M6	40	8.4	0.67
4.75	19	22	46	19	31	59	112	115	19	M6	45	8.4	1.08
6.5	22	25	52	22	36	73	134	130	22	M8	50	20	1.66
8.5	25	28	59	25	43	85	154	150	25	M8	55	20	2.46
9.5	28	32	67	28	47	90	168	166	27	M10	60	39	3.40
12	32	35	73	32	51	94	180	184	30	M10	65	39	4.51
13.5	35	38	79	35	57	115	209	197	33	M10	70	39	6.10
17	38	42	88	38	60	127	230	202	19	M8	75	20	7.63
25	45	50	104	45	74	149	271	243	23	M8	90	20	13.3
35	50	57	112	50	83	171	306	269	26	M10	100	39	18.5
42.5	57	65	132	57	95	190	346	301	29	M12	110	68	25.9
55	65	70	145	65	105	203	376	329	32	M12	120	68	35.3
85	75	83	167	75	127	229	429	381	39	M12	140	68	53

CAD RFID INFO





P-6036



Green Pin® Heavy Duty Bow Shackle BN

High load capacity bow shackle with safety bolt

- **Material:** bow and pin alloy steel, grade 8 quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** shackle bow painted silver, pin painted green
- **Temperature range:** -40 °C up to +200 °C ≤ WLL 600 t
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional**^{***}: MTC^b * LROS^{**} MPI^a US^a
- **Article code:** scan QR code to see article codes

Scan for
additional
product
details



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight pin	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg	kg
120	95	95	204	95	147	400	238	644	453	428	50	28.1	114
150	105	108	235	105	169	410	275	686	496	485	50	39.2	155
200	120	130	270	120	179	513	290	833	564	530	71	69.2	235
250	130	140	284	130	205	554	305	896	614	565	71	85.5	295
300	140	150	308	140	205	618	305	987	644	585	81	102	366
400	170	175	376	164	231	669	325	1115	698	665	70	151	620
500	180	185	398	164	256	719	350	1191	728	710	70	173	720
600	200	205	444	189	282	719	375	1244	810	775	70	228	975
700	210	215	454	204	308	718	400	1263	870	820	70	265	1075
800	210	220	464	204	308	718	400	1270	870	820	70	276	1100
900	220	230	485	215	328	718	420	1296	920	860	70	319	1250
1000	240	240	515	215	349	718	420	1336	940	900	70	351	1460
1250	260	270	585	230	369	768	450	1456	1025	970	70	481	1940
1500	280	290	625	230	369	818	450	1556	1025	1010	70	556	2305

CAD RFID

* Standard certification for shackles ≥ WLL 400 t

** For shackles ≥ WLL 120 t and ≤ WLL 600 t available with or without LROS.
For shackles ≥ WLL 700 t available with LROS

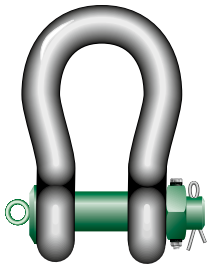
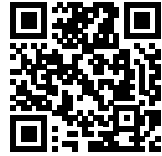
*** With additional charges



Green Pin® Heavy Duty Bow Shackle FN

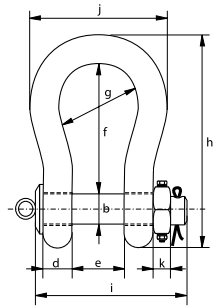
High load capacity bow shackle with safety bolt and fixed nut

Scan for additional product details



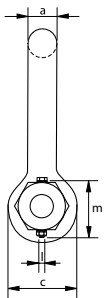
P-6016

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** shackle bow painted silver, pin painted green
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional:** MTC^b LROS MPI^a US^a
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length bow	length bolt	width	thickness nut	securing bolt thread	securing bolt length	torque	weight pin	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	Nm	kg	kg
120	95	95	204	95	147	400	238	644	453	428	50	M12	150	68	28.1	110
150	105	108	235	105	169	410	275	686	496	485	50	M12	160	68	39.2	155

CAD RFID INFO



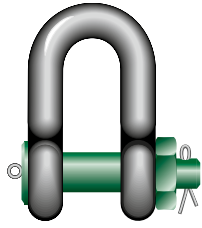
* With additional charges



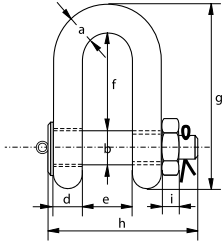
Green Pin® Heavy Duty Dee Shackle BN

High load capacity dee shackle with safety bolt

Scan for additional product details



P-6038

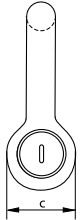


- **Material:** bow and pin alloy steel, grade 8 quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** painted
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional:** MTC^a LROS MPI^a US^a
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight pin	weight each
t	a	b	c	d	e	f	g	h	i	kg	kg
120	95	95	204	95	147	274	520	440	50	28.1	110

CAD RFID



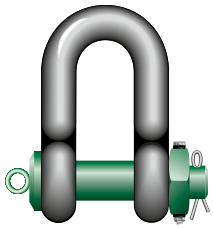
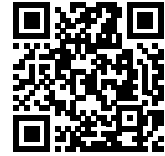
* With additional charges



Green Pin® Heavy Duty Dee Shackle FN

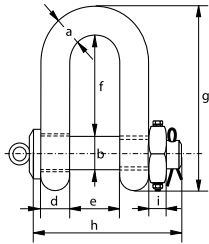
High load capacity dee shackle with safety bolt and fixed nut

Scan for additional product details



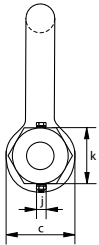
- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** painted
- **Temperature range:** -40 °C up to +200 °C ≤ WLL 600 t
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional:** MTC^b LROS MPI^a US^a
- **Article code:** scan QR code to see article codes

P-6018



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	securing bolt thread	securing bolt length	torque	weight pin	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	Nm	kg	kg
120	95	95	204	95	147	274	520	440	50	M12	150	68	28.1	97

CAD RFID INFO

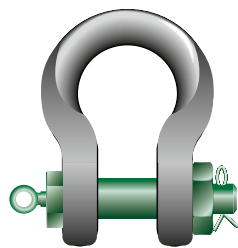


* With additional charges

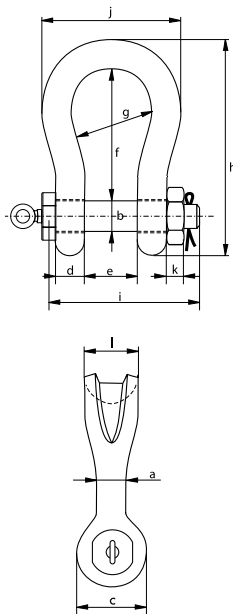


Green Pin® Sling Shackle BN

High load capacity bow shackle with safety bolt



P-6033



- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26 \leq WLL 600 t
- **Finish:** shackle bow painted silver, pin painted green
(WLL 7 t up to 55 t shackles are hot dipped galvanized)
- **Temperature Range:** -40 °C up to +200 °C \leq WLL 600 t
-20 °C up to +200 °C \geq WLL 700 t
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional*****: MTC^b * LROS ** MPI^a US^b
- **Article code:** scan QR code to see article codes

Scan for additional product details



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 pin	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	l mm	kg	kg
7	22	22	46	19	32	96	64	153	115	110	19	41	0.99	1.97
12.5	28	28	61	25	44	120	82	197	151	146	24	54	1.82	4.27
18	35	35	69	30	54	148	102	239	171	180	29	64	2.35	6.85
30	40	42	90	35	69	165	126	279	207	200	34	79	4.23	12.5
40	55	51	109	45	84	199	140	331	252	235	38	97	4.32	20.3
55	60	57	115	55	90	240	160	389	294	270	45	100	4.6	30.4
75	68	70	126	54	110	290	185	473	317	331	40	120	11.4	45
125	85	80	156	85	137	366	220	583	413	390	40	150	18.6	92
150	94	95	181	89	147	391	253	648	445	449	50	170	27.3	140
200	110	105	201	100	158	481	280	759	480	500	50	205	36.9	205
250	126	120	229	110	179	542	300	860	535	552	60	240	54.3	264
300	136	134	246	134	195	601	350	946	590	620	70	265	79.4	360
400	160	160	295	145	231	576	370	995	687	710	80	320	127	583
500	170	180	330	160	263	681	450	1161	762	850	90	340	176	862
600	190	200	360	170	289	741	490	1264	827	930	100	370	234	1134
700	200	215	392	190	315	751	540	1284	879	901	100	400	290	1142
800	218	230	420	200	342	851	554	1426	942	947	110	420	350	1418
900	242	255	466	220	368	851	580	1488	1023	1023	120	440	464	1810
1000	260	270	490	240	399	851	614	1532	1103	1107	120	460	559	2385
1250	285	300	510	260	452	931	650	1666	1227	1182	150	530	782	3110
1550	285	320	550	280	483	950	680	1710	1300	1253	150	560	918	3655

CAD RFID

* Standard certification for shackles \geq WLL 400 t

** For shackles \geq WLL 75 t and \leq WLL 600 t available with or without LROS.
For shackles \geq WLL 700 t available with LROS

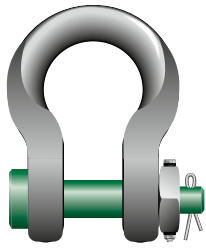
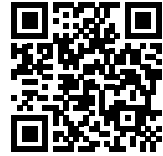
*** With additional charges



Green Pin® Sling Shackle FN

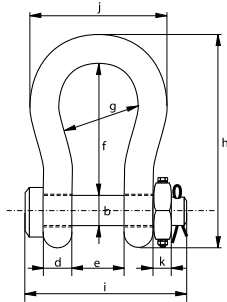
High load capacity bow shackle with safety bolt and fixed nut

Scan for additional product details



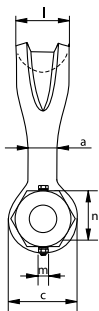
P-6013

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26 ≤ WLL 600 t
- **Finish:** shackle bow painted silver, pin painted green (WLL 7 t up to 55 t shackles are hot dipped galvanized)
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA **Optional**:** MTC^b LROS^c MPI^a US^d
- **Article code:** scan QR code to see article codes



working load limit	diameter body	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length bow	length bolt	width	thickness nut	bearing surface	securing bolt thread	securing bolt length	torque	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	n	Nm	kg
7	22	22	46	19	32	96	64	153	115	110	19	41	M6	45	8.4	1.97
12.5	28	28	61	25	44	120	82	197	151	146	24	54	M8	50	20	4.27
18	35	35	69	30	54	148	102	239	171	180	29	64	M10	65	39	6.85
30	40	42	90	35	69	165	126	279	207	200	34	79	M6	75	8.4	12.5
40	55	51	109	45	84	199	140	331	252	235	38	97	M8	90	20	20.3
55	60	57	115	55	90	240	160	389	294	270	45	100	M10	100	39	30.4
75	68	70	126	54	110	290	185	473	317	317	40	120	M12	120	68	45
125	85	80	156	85	137	366	220	583	413	390	40	150	M12	130	68	92
150	94	95	181	89	147	391	253	648	445	449	50	170	M12	140	68	140

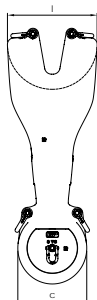
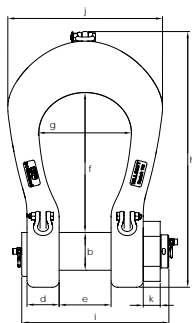
CAD RFID INFO



* For shackles ≥ WLL 75 t and ≤ WLL 150 t available with or without LROS
 ** With additional charges



P-6043



Green Pin Power Sling® Shackle BN

High load capacity, grade 8 shackle with safety bolt

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** shackle bow painted silver, pin painted green
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC[®] DNV PL MPI[®] US[®] DNV 0377 DNV 0378 CE IIA
- **Article code:** scan QR code to see article codes

Scan for additional product details



working load limit	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	bearing surface	weight pin	weight each
t	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	l mm	kg	kg
125	81	165	89	134	365	220	632	382	370	36	205	17.3	97
150	95	182	90	144	390	250	703	408	420	42	248	26.1	134
200	105	204	100	154	480	276	838	446	474	47	290	35.4	196
250	120	238	110	174	540	300	938	503	513	60	314	54.8	273
300	134	260	121	189	600	350	1032	550	604	60	345	71.9	371
400	160	305	140	224	620	370	1123	635	653	70	392	114	562
500	180	340	152	255	680	450	1239	699	763	70	440	157	783
600	200	365	170	280	741	490	1354	768	818	70	475	212	1003
700	215	405	190	320	751	540	1415	849	893	70	512	271	1276
800	230	430	200	347	851	554	1547	904	917	70	536	328	1484
900	255	476	215	373	851	580	1599	963	972	70	560	426	1808
1000	270	500	232	405	851	614	1643	1030	1022	70	590	508	2132
1250	300	570	245	436	930	650	1813	1114	1144	70	670	673	2891
1550	320	590	270	469	950	680	1890	1220	1210	70	704	827	3517

CAD RFID INFO





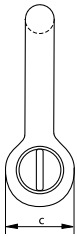
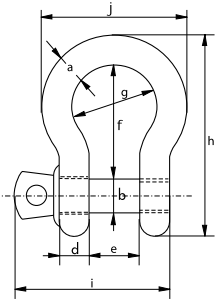
Green Pin Super® Bow Shackle SC

Grade 8 bow shackle with screw pin



G-5261

- **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 2, grade B
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC³ CE IIA ABS PDA * ABS MA *
- **Article code:** scan QR code to see article codes

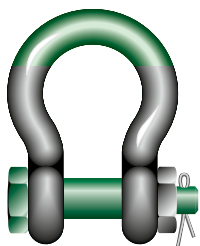


working load limit	diameter body	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
3.3	13.5	16	34	13	22	51	32	90	73	59	0.36
5	16	19	40	16	27	64	43	110	89	75	0.63
7	19	22	46	19	31	76	51	129	103	89	1.01
9.5	22	25	52	22	36	83	58	144	119	102	1.50
12.5	25	28	59	25	43	95	68	164	137	118	2.21
15	28	32	67	28	47	108	75	186	153	131	3.16
18	32	35	73	32	51	115	83	201	170	147	4.31
21	35	38	79	35	57	133	92	227	186	162	5.58
30	38	42	88	38	60	146	99	249	203	175	7.43
40	45	50	104	45	74	178	126	300	243	216	12.5
55	57	57	119	57	83	197	138	341	286	252	17.2
85*	70	70	145	70	105	260	180	437	354	320	37.6

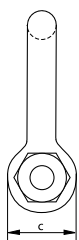
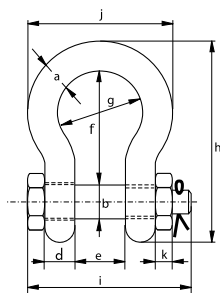
CAD RFID INFO



* Excluded from ABS Type Approval



G-5263



Green Pin Super® Bow Shackle BN

Grade 8 bow shackle with safety bolt

- **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 (150 t and upward are painted)
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC* LROS* CE IIA ABS PDA* ABS MA*
- **Article code:** scan QR code to see article codes

Scan for additional product details



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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
3.3	13.5	16	34	13	22	51	32	90	80	59	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	115	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	67	28	47	108	75	186	166	131	27	3.60
18	32	35	73	32	51	115	83	201	184	147	30	4.95
21	35	38	79	35	57	133	92	227	197	162	33	6.62
30	38	42	88	38	60	146	99	249	202	175	19	8.11
40	45	50	104	45	74	178	126	300	243	216	23	14.8
55	57	57	119	57	83	197	138	342	283	252	26	24.2
85	70	70	145	70	105	260	180	438	339	320	32	45.1
120	83	83	164	83	127	329	190	537	397	356	39	72
150*	95	95	204	95	147	400	238	644	453	428	50	112
175*	105	108	235	105	169	410	275	686	496	485	50	160

CAD RFID INFO



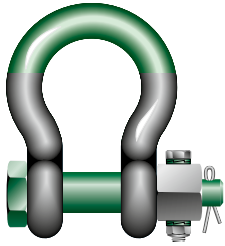
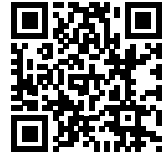
- * For shackles WLL 150 t and WLL 175 t available with and without LROS
- * With round headed bolt
- * Excluded from ABS Type Approval



Green Pin Super® Bow Shackle FN

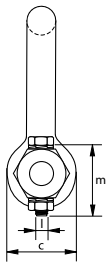
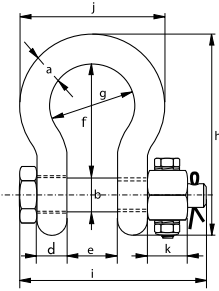
Grade 8 bow shackle with safety bolt and fixed nut

Scan for additional product details



G-5243

- **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 (150 t and upward are painted)
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC³ LROS * CE IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	securing bolt thread	securing bolt length	torque	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	l mm	m mm	Nm	kg
3.3	13.5	16	34	13	22	51	32	90	80	59	13	M6	35	8.4	0.44
5	16	19	40	16	27	64	43	110	98	75	17	M6	40	8.4	0.79
7	19	22	46	19	31	76	51	129	115	89	19	M6	45	8.4	1.26
9.5	22	25	52	22	36	83	58	144	130	102	22	M8	50	20	1.88
12.5	25	28	59	25	43	95	68	164	150	118	25	M8	55	20	2.78
15	28	32	67	28	47	108	75	186	166	131	27	M10	60	39	3.87
18	32	35	73	32	51	115	83	201	184	147	30	M10	65	39	5.26
21	35	38	79	35	57	133	92	227	197	162	33	M10	70	39	6.94
30	38	42	88	38	60	146	99	249	202	175	19	M8	75	20	8.79
40	45	50	104	45	74	178	126	300	243	216	23	M8	90	20	15
55	57	57	119	57	83	197	138	342	283	252	26	M10	100	39	22
85	70	70	145	70	105	260	180	438	339	320	32	M12	120	68	42
120	83	83	164	83	127	330	190	537	397	356	39	M12	140	68	70
150*	95	95	204	95	147	400	238	644	453	428	50	M12	150	68	112
175*	105	108	235	105	169	410	275	686	496	485	50	M12	160	68	160

CAD RFID INFO

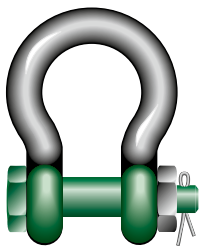
* For shackles WLL 150 t and WLL 175 t available with and without LROS
 * With round headed bolt



Green Pin Polar® Bow Shackle BN

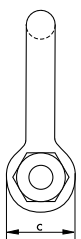
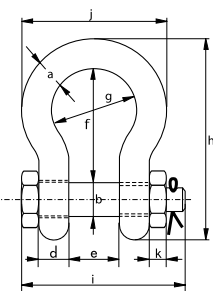
Grade 8 bow shackle with safety bolt
for use under low temperatures

Scan for
additional
product
details



G-5163

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 7 x WLL
for shackles with WLL 55 t and 85 t the MBL equals 6 x WLL
- **Standard:** ISO 2415, 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](#) [DNV 2.7-1^a](#) [DNV 2.7-1^b](#) [DNV 0378](#) [CE IIA](#) [ABS PDA](#) [ABS MA](#)
- **Article code:** scan QR code to see article codes



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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
2	13.5	16	34	13	22	51	32	90	80	59	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	115	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	67	28	47	108	75	186	166	131	27	3.66
12	32	35	73	32	51	115	83	201	184	147	30	4.91
13.5	35	38	79	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	104	45	74	178	126	300	243	216	23	14.2
35	50	57	112	50	83	197	138	332	269	238	26	19.9
42.5	57	65	132	57	95	222	160	378	301	274	29	28.3
55	65	70	145	65	105	260	180	433	329	310	32	39.6
85	75	83	167	75	127	330	190	530	381	340	39	62

[CAD](#) [RFID](#) [INFO](#)

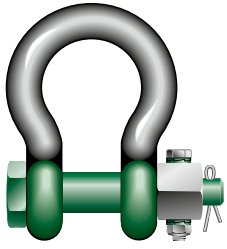




Green Pin Polar® Bow Shackle FN

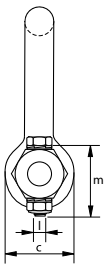
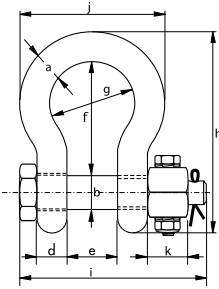
Grade 8 bow shackle with safety bolt and fixed nut for use under low temperatures

Scan for additional product details



G-5143

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 7 x WLL
for shackles with WLL 55 t and 85 t the MBL equals 6 x WLL
- **Standard:** ISO 2415, 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 CE IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	securing bolt thread	securing bolt length	torque	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	Nm	kg
2	13.5	16	34	13	22	51	32	90	80	59	13	M6	35	8.4	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	M6	40	8.4	0.74
4.75	19	22	46	19	31	76	51	129	115	89	19	M6	45	8.4	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	M8	50	20	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	M8	55	20	2.58
9.5	28	32	67	28	47	108	75	186	166	131	27	M10	60	39	3.66
12	32	35	73	32	51	115	83	201	184	147	30	M10	65	39	4.91
13.5	35	38	79	35	57	133	92	227	197	162	33	M10	70	39	6.54
17	38	42	88	38	60	146	99	249	202	175	19	M8	75	20	8.19
25	45	50	104	45	74	178	126	300	243	216	23	M8	90	20	14.2
35	50	57	112	50	83	197	138	332	269	238	26	M10	100	39	19.9
42.5	57	65	132	57	95	222	160	378	301	274	29	M12	110	68	28.3
55	65	70	145	65	105	260	180	433	329	310	32	M12	120	68	39.6
85	75	83	167	75	127	330	190	530	381	340	39	M12	140	68	62

CAD RFID INFO

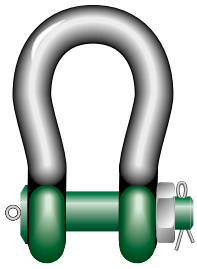




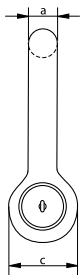
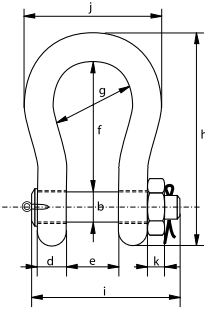
Green Pin Polar® Heavy Duty Bow Shackle BN

High load capacity, grade 8 bow shackle with safety bolt for use under low temperatures

Scan for additional product details



P-6031



- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** shackle bow painted silver, pin painted green
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIIA **Optional*****: MTC^b * LROS^{**} MPI^a US^a
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight pin	weight each
t	a	b	c	d	e	f	g	h	i	j	k	kg	kg
120	95	95	204	95	147	400	238	644	453	428	50	28.1	110
150	105	108	235	105	169	410	275	686	496	485	50	39.2	160
200	120	130	270	120	179	513	290	833	564	530	71	69.2	235
250	130	140	284	130	205	554	305	896	614	565	71	85.5	285
300	140	150	308	140	205	618	305	987	644	585	81	102	368
400	170	175	376	164	231	668	325	1114	690	665	70	151	560
500	180	185	398	164	256	718	350	1190	720	710	70	173	716
600	200	205	444	189	282	718	375	1243	810	775	70	228	975
700	210	215	454	204	308	718	400	1263	870	820	70	265	1075
800	210	220	464	204	308	718	400	1270	870	820	70	276	1100
900	220	230	485	215	328	718	420	1296	920	860	70	319	1250
1000	240	240	515	215	349	718	420	1336	940	900	70	351	1460
1250	260	270	585	230	369	768	450	1456	1025	970	70	481	1940
1500	280	290	625	230	369	818	450	1556	1025	1010	70	556	2305

CAD RFID

* Standard certification for shackles \geq WLL 400 t

** For shackles between WLL 120 t and WLL 600 t available with and without LROS.
For shackles WLL 700 t and up available with LROS

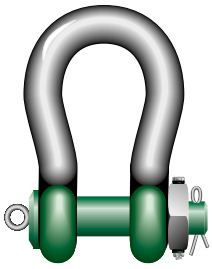
*** With additional charges



Green Pin Polar® Heavy Duty Bow Shackle FN

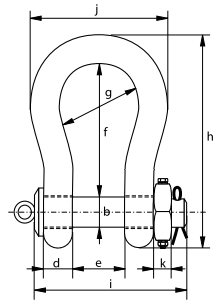
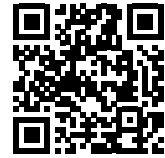
High load capacity, grade 8 bow shackle with safety bolt and fixed nut for use under low temperatures

Scan for additional product details



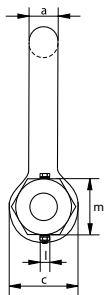
P-6011

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** shackle bow painted silver, pin painted green
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a LROS^{*} CE IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	securing bolt thread	securing bolt length	torque	weight pin	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	Nm	kg	kg
120	95	95	204	95	147	400	238	644	453	428	50	M12	150	68	28.1	110
150	105	108	235	105	169	410	275	686	496	485	50	M12	160	68	39.2	160

CAD RFID INFO



* For shackles ≥ WLL 120 t available with or without LROS



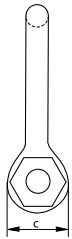
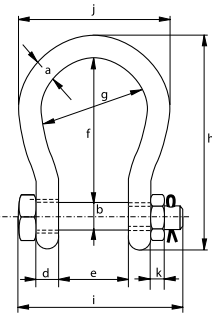
Green Pin BigMouth® Bow Shackle BN

Grade 8 bow shackle with safety bolt and wider shackle mouth

Scan for additional product details



G-4263



- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ASME B30.26
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC[®] CE IIA
- **Article code:** scan QR code to see article codes

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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k 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	10.2
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	389	343	32	45
75	83	83	164	83	184	330	254	537	455	420	39	70

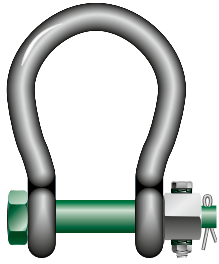
CAD RFID



Green Pin BigMouth® Bow Shackle FN

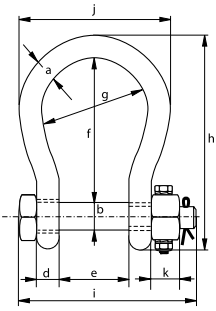
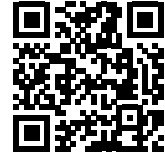
Grade 8 bow shackle with safety bolt, fixed nut and wider shackle mouth

Scan for additional product details

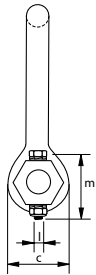


G-4243

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ASME B30.26
- **Finish:** hot dipped galvanized
- **Temperature range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	securing bolt thread	securing bolt length	torque	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	Nm	kg
4.75	22	25	52	22	63	112	88	173	157	132	22	M8	50	20	2.08
6.5	25	28	59	25	75	135	105	204	183	155	25	M8	55	20	3.14
8.5	28	32	66	28	82	148	115	225	205	171	27	M10	60	39	4.36
9.5	32	35	72	32	90	162	126	248	224	190	30	M10	65	39	5.95
12	35	38	79	35	100	180	140	274	245	210	33	M10	70	39	7.87
16	38	42	88	38	106	216	159	319	248	235	19	M8	75	20	10.2
25	45	50	103	45	127	248	175	370	296	265	23	M8	90	20	16.7
30	50	57	118	50	146	273	207	411	332	307	26	M10	100	39	25
55	65	70	145	65	165	314	213	487	389	343	32	M12	120	68	45
75	83	83	164	83	184	330	254	537	455	420	39	M12	140	68	70



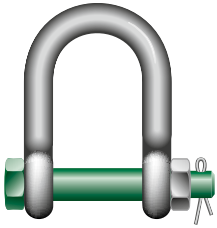
CAD RFID INFO



Green Pin BigMouth® Dee Shackle BN

Dee shackle with a longer inside length, wider mouth and safety bolt

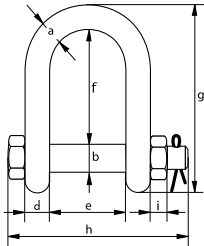
Scan for additional product details



- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC[®] CE IIIA
- **Article code:** scan QR code to see article codes

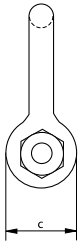


G-4553



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thickness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
4.6	19	22	46	19	70	116	169	154	19	1.50
8.6	25	28	59	25	83	140	208	190	25	3.13
15.5	38	42	88	38	115	178	281	257	19	9.42

CAD

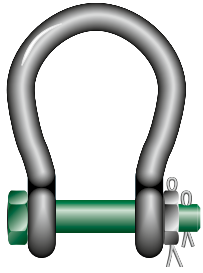




Green Pin BigMouth® Towing Shackle BN

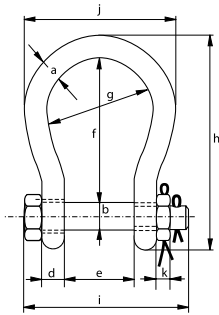
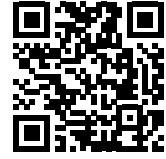
Grade 8 towing bow shackle with safety bolt and wider shackle mouth

Scan for additional product details



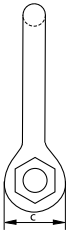
G-4463

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** for towing only, not for lifting applications



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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
22	38	42	88	38	106	216	159	319	248	235	19	10.2
30	45	50	103	45	127	248	175	370	296	265	24	16.7
40	50	57	118	50	146	273	207	411	338	307	27	25
55	65	70	145	65	165	314	213	487	389	343	33	45
100	83	83	164	83	184	330	254	540	455	420	40	70

CAD

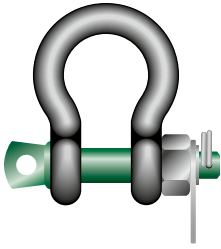




Green Pin® Catch Shackle BN

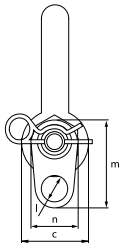
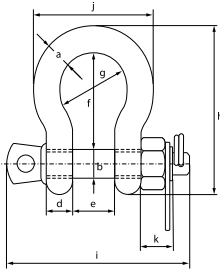
Standard bow shackle with safety bolt which enables all components to be tethered

Scan for additional product details



G-4163H

- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Type IVA, Class 3, Grade A and comply with ASME B30.26
- **Finish:** hot dipped galvanized
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC³ DNV 2.7-1³ DNV 2.7-1³ CE IIA ABS PDA ABS MA
- **Article code:** scan QR code to see article codes
- **Note:** supplied without wires



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length bow	length bolt	width bolt	thickness nut	diameter hole	height	width	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	m	n	kg
2	13.5	16	34	13	22	51	32	89	102	58	19	15	48.4	27	0.47
3.25	16	19	40	16	27	64	43	110	122	75	23	15	53.7	31.8	0.81
4.75	19	22	46	19	31	76	51	129	143	89	26	15	60.1	36.5	1.32
6.5	22	25	52	22	36	83	58	144	160.5	102	29	15	65.5	41.3	1.92
8.5	25	28	59	25	43	95	68	164	183	118	32	15	70.5	46	2.77
9.5	28	32	66	28	47	108	75	185	201	131	34	15	74	50.8	3.91

CAD INFO

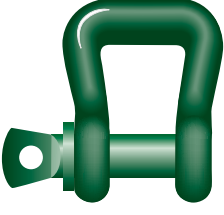


Scan for additional product details



Green Pin® Web Sling Shackle SC

Shackle for synthetic web slings with screw collar pin

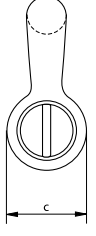
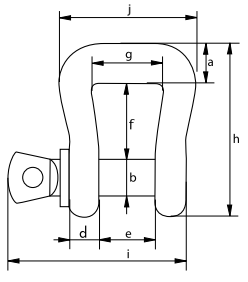


- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** EN1677-1 and ASME B30.26
- **Finish:** painted green
- **Temperature Range:** -40 °C up to 200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width inside	length	length bolt	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
3.25	20	19	40	16	27	38	35	87	89	68	0.66
4.75	24	22	46	19	31	48	46	106	103	85	1.10
6.5	27	25	52	22	36	72	62	137.5	119	108.5	1.79
8.5	31	28	59	25	43	83.5	79	158	137	133.5	2.74

CAD

P-5461



Green Pin® Theatre Shackle SC

Matte black bow shackle with screw collar pin

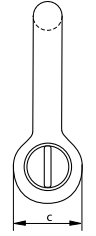
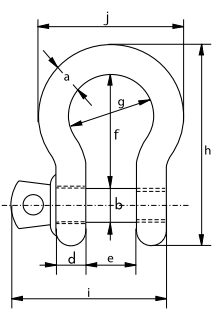


- **Material:** bow and pin high tensile steel, grade 6, quenched and tempered
- **Safety Factor:** MBL equals 6 x WLL
- **Standard:** ISO 2415, EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 2, grade A, from 2 t and upward these shackles comply with ASME B30.26
- **Finish:** black
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIA
- **Article code:** scan QR code to see article codes

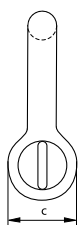
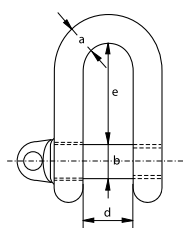


working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
0.33	5	6	12	5	9.5	22	16	36	29.5	26	0.02
0.5	7	8	16	7	12	29	20	48	38	34	0.05
0.75	9	10	20	9	13.5	32	22	56	46.5	40	0.10
1	10	11	23	10	17	37	26	64	54	46	0.14
1.5	11	13	25	11	19	43	29	73	59.5	51	0.19
2	13.5	16	34	13	22	51	32	90	73	59	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	1.50
8.5	25	28	59	25	43	95	68	164	137	118	2.21

G-4161T



C

S-3351
G-3351

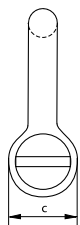
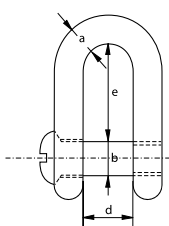
Shackles generally to DIN 82101 type A

Dee shackle 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 IIA
- **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	0.10
0.6	0.63	12	12	24	17	36	0.18
1	1	13	16	32	21	49	0.30
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	1.30
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	5.30
8	8	41	45	90	60	139.5	7.90
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

C

S-3352
G-3352

Shackles generally to DIN 82101 type B

Dee shackle 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 IIA
- **Note:** shackle no. 0.1 is electro-galvanized and will not have any markings as it is too small

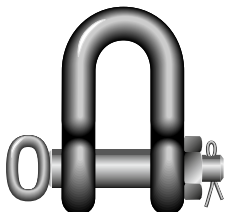
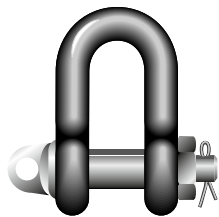
no.	working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	t	a mm	b mm	c mm	d mm	e mm	kg
0.4	0.4	10	10	20	14	30	0.09
0.6	0.63	12	12	24	17	36	0.17
1	1	13	16	32	21	49	0.29
1.6	1.6	16	20	40	27	61	0.54
2	2	20	22	44	30	67	0.98
2.5	2.5	22	24	48	33	73	1.23
3	3.15	25	27	54	38	83.5	1.80
4	4	28	30	60	42	91	2.60
5	5	32	36	72	47	111	3.80
6	6.3	36	39	78	53	119.5	5.20
8	8	41	45	90	60	139.5	7.60
10	10	44	48	96	66	147	9.70

C

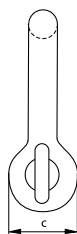
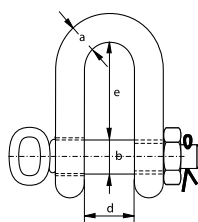
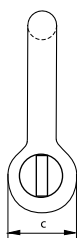
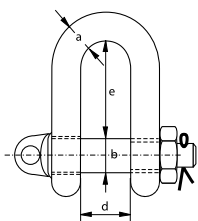
Shackles generally to DIN 82101 type C

Dee shackle 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 IIA
- **Note:** with screw collar pin : up to size no. 25
with hand-grip : from size no. 32



S-3356
G-3356

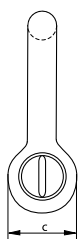
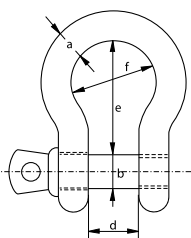


no.	working load limit	diameter bow	diameter pin	diameter eye	width inside	length inside	weight each
	t	a mm	b mm	c mm	d mm	e mm	kg
0.4	0.4	10	10	20	14	30	0.11
0.6	0.63	12	12	24	17	36	0.20
1	1	13	16	32	21	49	0.37
1.6	1.6	16	20	40	27	61	0.69
2	2	20	22	44	30	67	1.13
2.5	2.5	22	24	48	33	73	1.50
3	3.15	25	27	54	38	83.5	2.15
4	4	28	30	60	42	91	2.93
5	5	32	36	72	47	111	4.70
6	6.3	36	39	78	53	119.5	6.33
8	8	41	45	90	60	139.5	8.60
10	10	44	48	96	66	147	10.8
12	12	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

C



G-3161



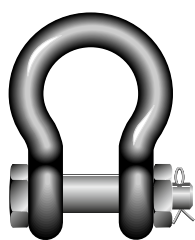
Yellow Pin Shackles

Bow shackle with screw collar pin

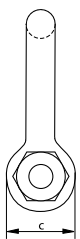
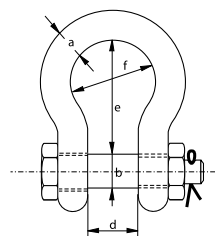
- **Material:** bow and pin high tensile steel, grade 6
- **Standard:** generally to US Fed. Spec. RR-C-271
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Note:** import quality

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
0.33	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	0.20
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	12.6

C



G-3163



Yellow Pin Shackles

Bow shackle 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 IIA
- **Note:** import quality

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
2	13	16	30	20	48	33	0.36
3.25	16	19	38	27	60	43	0.70
4.75	19	22	46	32	71	50	1.10
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

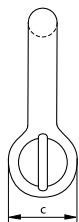
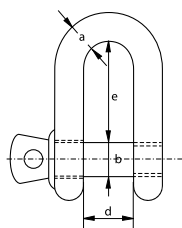
C

Yellow Pin Shackles

Dee shackle with screw collar pin



G-3151



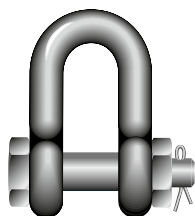
- **Material:** bow and pin high tensile steel, grade 6
- **Standard:** generally to US Fed. Spec. RR-C-271
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Note:** import quality

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
0.33	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	0.20
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	12.1

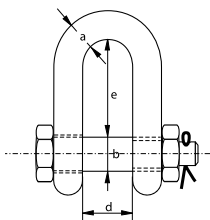
C

Yellow Pin Shackles

Dee shackle with safety bolt



G-3153



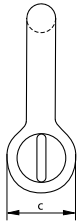
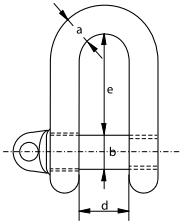
- **Material:** bow and pin high tensile steel, grade 6
- **Standard:** generally to US Fed. Spec. RR-C-271
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Note:** import quality

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
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	3.20
12	32	35	76	51	100	4.91
13.5	35	38	84	57	111	5.84
17	38	42	92	60	122	8.40
25	45	50	106	73	146	11.9

C



S-2751
G-2751



Shackles generally to B.S. 3032 table 2

Large dee shackle with screw collar pin

- **Material:** bow and pin alloy steel, EN 14a
- **Safety Factor:** MBL equals 4 x WLL
- **Standard:** generally to B.S. 3032 table 2
- **Finish:** hot dipped galvanized or self-coloured
- **Certification:** 2.1 2.2 CE IIA

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	2.30
5	28	32	64	54	105	3.20
6	32	35	70	60	114	4.30
7	35	38	76	67	127	5.40
9.5	38	45	89	70	137	6.80
11.25	42	48	95	76	146	8.70
13	44	51	102	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

C

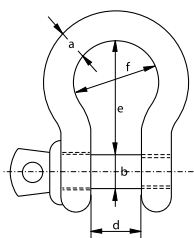
Commercial Shackles

Bow shackle with screw collar pin

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



E-1161



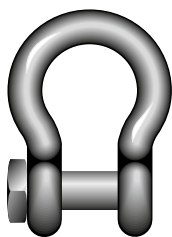
diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg
5	5	10	10	20	15	1.40
6	6	12	12	24	18	2.40
8	8	16	16	32	24	5.40
10	10	20	20	40	30	10.6
11	11	22	22	44	33	16.4
12	12	24	24	48	36	19.4
14	14	28	28	56	42	44
16	16	32	32	64	48	44.2
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

C

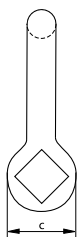
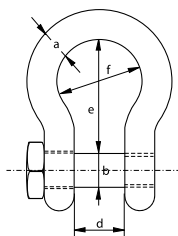
Commercial Shackles

Bow shackle 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



S-1164

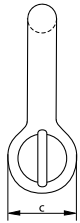
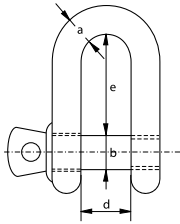


diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg
6	6	12	12	24	18	2.70
8	8	16	16	32	24	6.40
10	10	20	20	40	30	12.5
11	11	22	22	44	33	16.6
12	12	24	24	48	36	21.6
14	14	28	28	56	42	34.3
16	16	32	32	64	48	51.2
19	19	38	38	76	57	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

C



E-1151



Commercial Shackles

Dee shackle with screw collar pin

- **Material:** mild steel, untreated, grade 3
- **Finish:** electro-galvanized
- **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
5	5	10	10	20	1.40
6	6	12	12	24	2.20
8	8	16	16	32	5.20
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

C

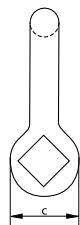
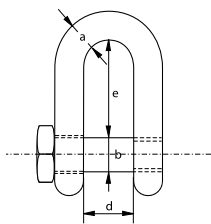
Commercial Shackles

Dee shackle 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



S-1154



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
6	6	12	12	24	2.60
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

ROV SHACKLES & HOOKS



Applications

Green Pin® ROV shackles and hooks are used in sub-sea lifting operations. These products are more specialized than others. More fit to the extreme conditions under water. Like our subsea shackles and hooks for ROV operations. Green Pin® offers an ocean of possibilities with our range of specialized components. Designed and produced with the right subsea mindset. For more control. For more precision. And for more possibilities.

Range

Green Pin® offers a wide range of ROV shackles and hooks for a variety of applications. The range stretches from WLL 6.5 t to 300 t. This provides our customers with a very extensive range to choose a shackle or hook that suits their application best.

Design

Green Pin® offers four types of ROV release shackles and two types of combined release & retrieve shackles. Showpieces in this range are the Green Pin® Guided Pin ROV Shackle (for release and retrieve operations) and the Green Pin® Locking Clamp ROV (Sling) Shackle (for release operations only). ROV release shackles are available with spring pins, locking clamps or spring loaded.

Next to the shackles Green Pin® also offers two types of ROV hooks: the Green Pin® ROV Eye Hook and Green Pin® ROV Shank Hook. Both hooks can be used for release operations while the shank hook can be used for retrieve operations as well. Each hook has a wire rope attached to the latch to make operation with an ROV arm easier.

These shackles and hooks are generally marked with:

- Working Load Limit - e.g. WLL 25 T
- manufacturer's symbol - e.g. GP
- traceability code - e.g. HA indication a particular batch
- steel grade - e.g. 8
- CE conformity code (Conformité Européenne) - e.g. CE
- Origin - e.g. Holland or France

Finish

All shackle bodies and hooks are finished with a white coating for optimized visibility in poor light conditions. The pins are finished in the instantly recognizable and characteristic 'Green Pin®' colour.

Certification

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

Instructions for use

For instructions for use, assembly, etc. we refer to chapter 1 shackles for the ROV shackles, and chapter 3 for the ROV hooks. For shackles P-5363 and P-5367 the side load table is not applicable as these shackles are not allowed to be side loaded.

To keep stored ROV products in a good condition it is best to lightly oil the shackles and hooks after rinsing them with fresh water and drying.

ROV shackles and 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 (follow the local rules in the country of use) and more frequently when the shackles and hooks are used in severe operating conditions.

For most ROV products is a specific user manual available, please find the digital user manuals on greenpin.com/faq.



Green Pin® ROV Shank Hook E GR8

Release & retrieve ROV eye shank hook (grade 8)

Scan for additional product details

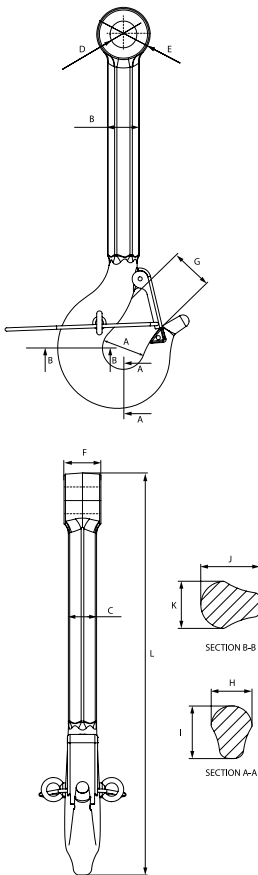


P-6740

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Finish:** painted white
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a MPI^b US^b CE IIA
- **Article code:** scan QR code to see article codes

working load limit	diameter	thickness shank	thickness shank	diameter eye inside	diameter eye outside	width eye	opening hook	thickness	width	thickness	width	length	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	l mm	kg
12	63	47	42	40	80	38	52	45	58	67	53	600	10.2
16	71	56	50	45	90	45	61	53	67	80	63	650	14.7
22	80	63.4	56	55	110	51	69	60	75	90	74	682	31
32	90	73	64	60	120	54	77	67	90	110	82	812	32
55	125	102	90	75	150	74	105	95	118	140	112	919	70
80	140	115	101	90	180	94	118	106	137	175	125	1049	104

CAD RFID





Green Pin® ROV Hook E GR8

Release ROV eye hook (grade 8)

Scan for additional product details



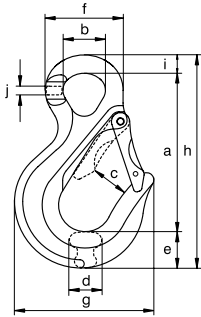
- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Finish:** painted white
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MPI[®]
- **Article code:** scan QR code to see article codes



CSOROV

working load limit	length	diameter eye inside	opening hook	thickness	width	diameter eye outside	width outside	length outside	width	thickness	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
8.2	191	52	43	40	43	94	165	255	21	16.5	3.47
12.8	237	61	61	49	61	115	208	326	28	21	7.14
15.5	280	72	75	54	64	132	242	375	30	23	10.2

CAD RFID

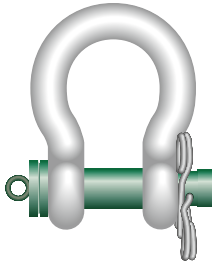




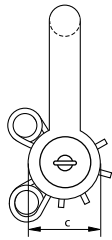
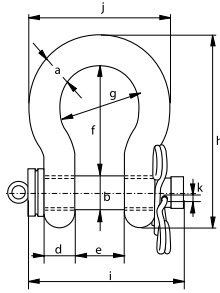
Green Pin® Spring Pin ROV Shackle

Release ROV shackle (grade 8) with spring pins

Scan for additional product details



P-5363



- **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[®] CE IIA
- **Article code:** scan QR code to see article codes
- **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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
6.5	22	25	52	22	36	83	58	144	130	102	5.5	1.70
9.5	28	32	66	28	47	108	75	185	166	131	6.5	3.40
12	32	35	72	32	51	115	83	201	184	147	6.5	4.70
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

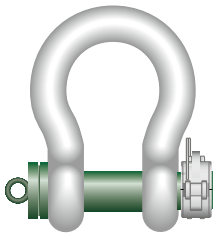
CAD RFID INFO



Green Pin® Locking Clamp ROV Shackle

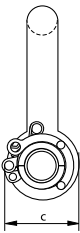
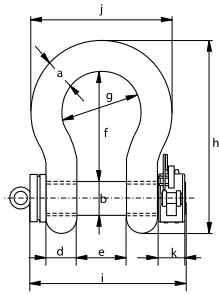
Release ROV shackle (grade 8) with locking clamp

Scan for additional product details



- **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 (-40 °C up to +200 °C for WLL 120 t and up)
- **Certification:** 2.1 2.2 3.1 MTC^a MTC^b * LROS * CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** supplied without wires; design your own wiring plan

P-5365



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 pin	weight each
t	a	b	c	d	e	f	g	h	i	j	k	kg	kg
6.5	22	25	52	22	36	83	58	164	140	102	45	0.9	2.17
9.5	28	32	66	28	47	108	75	200	172	131	48	1.6	4.25
12	32	35	72	32	51	115	83	213	184	147	48	1.9	5.36
17	38	42	88	38	60	146	99	266	209	175	48	3.4	9.27
25	45	50	103	45	74	178	126	309	243	216	48	5	14.6
35	50	57	116	50	83	197	138	350	269	238	48	6.5	20.7
42.5	57	65	130	57	95	222	160	377	301	274	48	10.2	28.3
55	65	70	145	65	105	260	180	440	329	310	48	12	41
85	75	83	162	75	127	329	190	527	375	340	48	17.5	61
120	95	95	208	91	147	400	238	647	440	428	60	29.6	110
150	105	108	238	102	169	410	275	688	490	485	60	38.6	160
200	120	130	279	113	179	513	290	838	520	530	60	60.6	235
250	130	140	299	118	205	554	305	904	560	565	60	74.9	285

CAD RFID INFO

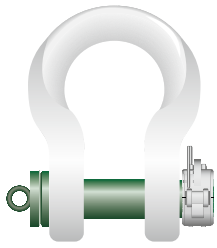
* For shackles ≥ WLL 150 t



Green Pin® Locking Clamp ROV Sling Shackle

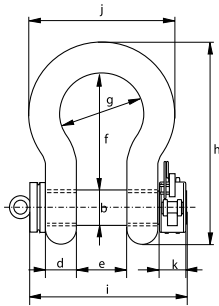
Release ROV Sling shackle (grade 8) with locking clamp

Scan for additional product details



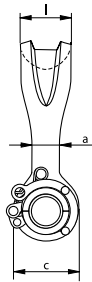
P-6065

- **Material:** bow and pin alloy steel, grade 8, quenched and tempered
- **Safety Factor:** MBL equals 5 x WLL
- **Finish:** shackle bow painted white, pin painted green
- **Temperature Range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC^a CE IIIA **Optional:** LROS MPI^b US^c
- **Article code:** scan QR code to see article codes



working load limit	diameter body	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	width locking clamp	bearing surface	weight pin	weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	kg	kg
12.5	28	28	61	25	44	121	82	197	143	146	31	54	1.2	4.27
18	35	35	69	30	54	148	102	239	184	180	31	64	1.9	6.85
30	40	42	90	35	69	165	126	279	210	200	40	79	3.5	12.5
40	55	51	109	45	84	199	140	331	256	235	40	97	5.4	20.3
55	60	57	115	55	90	240	160	389	289	270	40	100	7	30.4
75	68	70	125	54	110	290	185	473	317	317	40	120	11.6	45
125	85	80	154	85	137	366	220	583	413	390	40	150	18.1	92
150	94	95	179	89	147	391	253	645	445	434	55	170	29.1	140
200	110	105	199	100	158	481	280	759	480	482	55	205	37	205
250	126	120	227	110	179	542	300	859	523	530	55	240	49.4	264
300	135	134	245	122	195	601	350	947	563	620	55	265	66.5	360

CAD RFID INFO



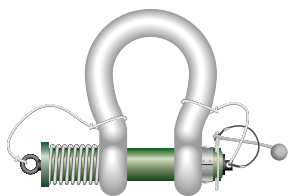
* With additional charges



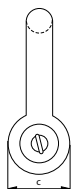
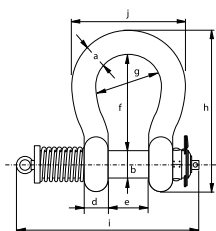
Green Pin® Spring Release ROV Shackle

Release ROV shackle (grade 8) with spring

- **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 MTC^b * LROS * CE IIA
- **Article code:** scan QR code to see article codes
- **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 t up to and including 150 t a special compression tool (sold separately) is required to assemble the shackle.



P-5367



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight pin	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg	kg
12	32	35	72	32	51	115	83	201	291	147	2	5.24
13.5	35	38	80	35	57	133	92	227	301	162	2.4	7
17	38	42	88	38	60	146	99	249	360	175	3.5	9.25
25	45	50	103	45	74	178	126	300	370	216	5.2	15.5
35	50	57	116	50	83	197	138	334	400	238	7.1	20.4
42.5	57	65	130	57	95	222	160	377	460	274	11.3	39
55	65	70	145	65	105	260	180	433	490	310	13.8	42
85	75	83	162	75	127	329	190	527	587	340	23.3	67
120	95	95	208	91	147	399	238	646	687	428	37.4	123
150	105	108	238	102	169	410	275	688	727	485	49.2	168

* For shackles ≥ WLL 150 t

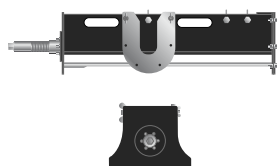
CAD RFID INFO



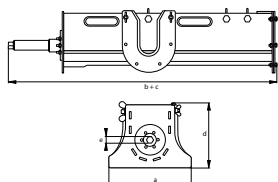
Green Pin® Compression Tool

Tool to wind up spring release shackle (sizes WLL 42.5 t and up)

- **Material:** mild steel
- **Finish:** black painted
- **Certification:** 2.1
- **Article code:** scan QR code to see article codes
- **Note:** required for ROV spring release shackle (type P-5367), for sizes WLL 42.5 t and up



P-5368



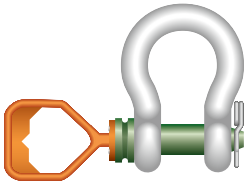
for shackle WLL	diameter bow	diameter pin	width	length closed position	length opened position	height	width	weight each
t	mm	mm	a mm	b mm	c mm	d mm	e mm	kg
42.5	57	65	300	1000	1500	225	24	34
55	65	70						
85	75	83						
120	95	95	340	1100	1750	285	24	42
150	105	108						

CAD INFO



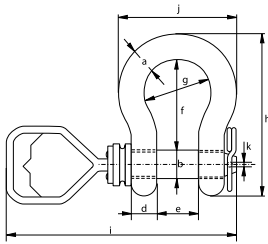
Green Pin® Tapered Pin ROV Shackle D

Release & retrieve ROV shackle (grade 8) with tapered pin and D-handle

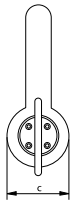


P-5361D

- **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[®] CE IIA
- **Article code:** scan QR code to see article codes
- **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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
6.5	22	25	52	22	36	83	58	144	345	102	3.5	3.79
9.5	28	32	67	28	47	108	75	185	381	131	5.5	5.38
12	32	35	72	32	51	115	83	201	393	147	6.5	6.50
17	38	42	88	38	60	146	99	249	417	175	8.5	8.19
25	45	50	103	45	74	178	126	300	464	216	8.5	14.2
35	50	57	111	50	83	197	138	331	484	238	8.5	19.9
42.5	57	65	130	57	95	222	160	377	516	274	7.5	28.3
55	65	70	145	65	105	260	180	433	545	310	7.5	39.6

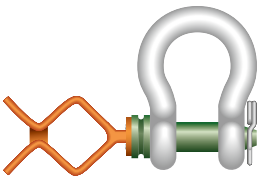


CAD INFO



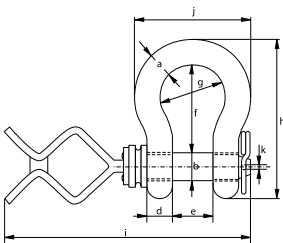
Green Pin® Tapered Pin ROV Shackle F

Release & retrieve ROV shackle (grade 8) with tapered screw pin and Fishtail handle

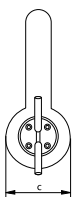


P-5361F

- **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[®] CE IIA
- **Article code:** scan QR code to see article codes
- **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
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
6.5	22	25	52	22	36	83	58	144	419	102	3.5	4.06
9.5	28	32	66	28	47	108	75	185	455	131	5.5	3.66
12	32	35	72	32	51	115	83	201	467	147	6.5	4.91
17	38	42	88	38	60	146	99	249	491	175	8.5	8.19
25	45	50	103	45	74	178	126	300	538	216	8.5	14.2
35	50	57	111	50	83	197	138	331	558	238	8.5	19.9
42.5	57	65	130	57	95	222	160	377	590	274	7.5	28.3
55	65	70	145	65	105	260	180	433	619	310	7.5	39.6



CAD INFO



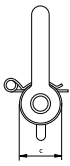
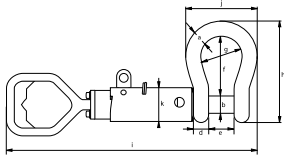
Green Pin® Guided Pin ROV Shackle D

Release & retrieve ROV shackle (grade 8) with guiding tube and D-handle



P-5362D

- **Material:** shackle body 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 IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt		width	guide diameter	weight each
									close	open			
t	a	b	c	d	e	f	g	h	i		j	k	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	
12	32	35	72	32	51	115	83	201	569	652	147	83	10
17	38	42	88	38	60	146	99	249	612	710	175	83	13
25	45	50	103	45	74	178	126	300	683	802	216	83	19
35	50	57	111	50	83	197	138	331	711	844	238	83	24
55	65	70	145	65	105	260	180	433	824	994	310	102	45

CAD INFO



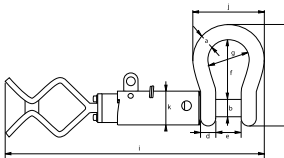
Green Pin® Guided Pin ROV Shackle F

Release & retrieve ROV shackle (grade 8) with guiding tube and Fishtail handle



P-5362F

- **Material:** shackle body 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 IIA
- **Article code:** scan QR code to see article codes



working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt		width	guide diameter	weight each
									close	open			
t	a	b	c	d	e	f	g	h	i		j	k	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	
12	32	35	72	32	51	115	83	201	643	726	147	83	10
17	38	42	88	38	60	146	99	249	686	784	175	83	13
25	45	50	103	45	74	178	126	300	757	876	216	83	19
35	50	57	111	50	83	197	138	331	785	918	238	83	24
55	65	70	145	65	105	260	180	433	898	1068	310	102	45

CAD INFO



Green Pin® D-handle

Accessory for Green Pin® ROV Shackle

- **Material:** cast steel
- **Finish:** painted orange
- **Certification:** 2.1
- **Article code:** scan QR code to see article codes

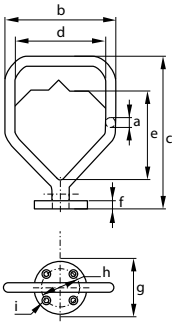
Scan for additional product details



P-5396D

diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
19	153	215	115	110	10	70	48	8.5	1.72

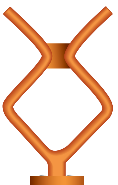
CAD



Green Pin® Fishtail handle

Accessory for Green Pin® ROV Shackle

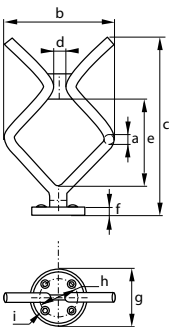
- **Material:** cast steel
- **Finish:** painted orange
- **Certification:** 2.1
- **Article code:** scan QR code to see article codes



P-5396F

diameter	width	length	width	length inside	thickness	diameter	diameter	diameter	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
19	178	289	21	133	10	70	48	8.5	1.93

CAD



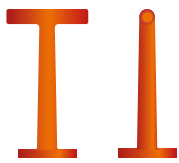
Scan for additional product details



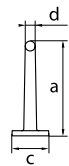
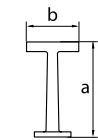
Green Pin® T-handle

Accessory for Green Pin® ROV Shackle

- Material: cast steel
- Finish: painted orange
- Certification: 2.1
- Article code: scan QR code to see article codes



P-5396T



diameter	width	length	length inside	thickness	diameter	diameter	diameter	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
19	100	181	152	10	70	48	8.5	0.99

CAD



Green Pin® Monkey fist

Accessory for Green Pin® ROV Shackle

- Material: polymer
- Finish: painted orange
- Article code: scan QR code to see article codes



F-5396M







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