# LIFTING SLING FITTINGS

## Applications

**Lifting sling fittings are used for the manufacturing of steel chain, Green Pin Tycan® chain, synthetic or steel wire rope slings. With the lifting sling fittings, you can manufacture different configurations; for example, 1 and 2 leg slings or 3 and 4 leg slings. Depending on the type of sling, chain or steel wire rope the fittings have a safety factor of 4 or 5.**

## Range

Green Pin® offers a wide range of lifting sling fittings such as chain fittings, thimbles, wire rope clips, sleeves, sockets etc. With the wide range of lifting sling fittings, a complete sling from the top master link to the hooks can be assembled.

To complement the Green Pin® assortment, Royal Van Beest also offers a wide range of other (commercial) lifting components.

## Finish

The finish of the lifting components is either self-coloured, painted, electro-galvanized or hot dipped galvanized. You can find the finish per product on the product page itself.

## Certification

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

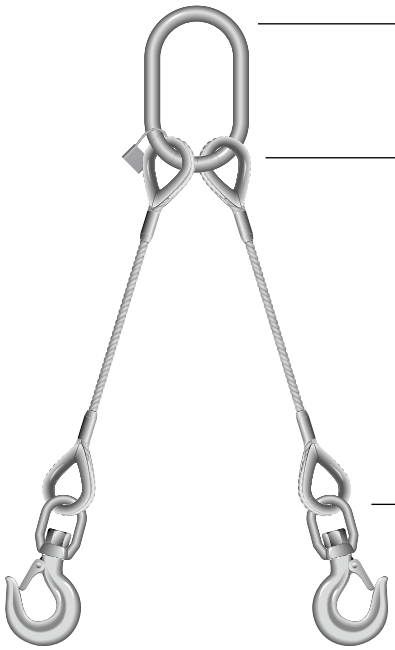
## Index

To create an easy overview that shows directly which products can be used per type of chain, this chapter has been split up in five subchapters.

Please find below which type of products can be found per subchapter.

## 3.1 For Wire Rope

In the wire rope subchapter, you will find the components which can be used to make a wire rope sling.



**Top Links (page 88)**
Master Links and Master Link Assemblies

**Sling accessories (page 98)**
Thimbles
Wire rope clips
Sleeves

**End-fittings (page 120)**
Sockets
Swivels
Hooks

**Accessories (page 142)**
Tags
Chip

## 3.2 For Grade 8 chain

In the grade 8 subchapter, you will find the components which can be used to make a grade 8 steel chain sling.

**Top Links (page 150)**
Master Links and Master Link Assemblies

**Connectors (page 152)**
Links

**Chain (page 153)**
Grade 8 steel chain

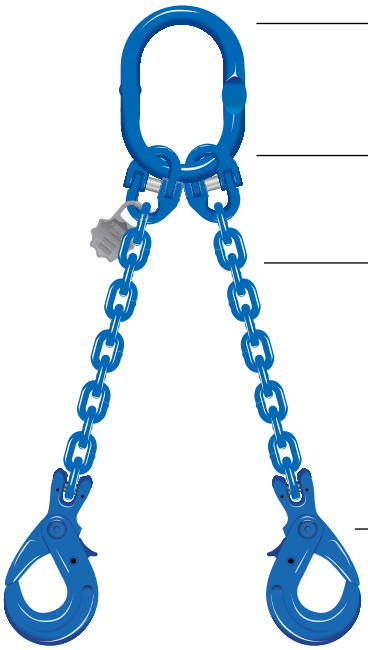
**Shorteners (page 154)**
Shortening hooks
Shortening clutches

**End-fittings (page 156)**
Hooks

**Accessories (page 167)**
Tags
Chip
Spareparts

## 3.3 For Grade 10 chain

In the grade 10 subchapter, you will find the components which can be used to make a grade 10 steel chain sling.



**Top Links (page 180)**
Master Links and Master Link Assemblies

**Connectors (page 184)**
Links

**Chain (page 185)**
Grade 10 steel chain

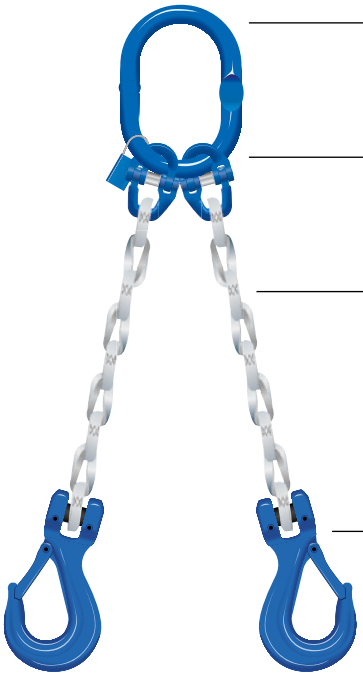
**Shorteners (page 186)**
Shortening hooks
Shortening clutches

**End-fittings (page 189)**
Hooks

**Accessories (page 195)**
Tags
Chip
Spareparts

## 3.4 For Green Pin Tycan® chain

In the Green Pin Tycan® subchapter, you will find the components which can be used to make a Green Pin Tycan® lifting fibre chain sling.



**Top Links (page 208)**
Master Links and Master Link Assemblies

**Connectors (page 212)**
Links

**Chain (page 214)**
Green Pin Tycan® fibre lifting chain

**Shorteners (page 215)**
Shortening hooks

**End-fittings (page 216)**
Hooks

**Accessories (page 219)**
Tags
Chip
Spareparts

## 3.5 For synthetic slings

In the synthetic sling subchapter, you will find the components which can be used to make a synthetic sling chain.

**Top Links (page 228)**
Master Links and Master Link Assemblies

**Connectors (page 230)**
Links

**End-fittings (page 231)**
Hooks

**Slings accesories (page 232)**
Thimbles

**Accessories (page 241)**
Tags
Chip
Spareparts

# LIFTING SLING FITTINGS FOR WIRE ROPE

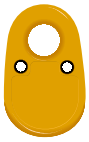
## Applications

**Green Pin® fittings for wire rope slings enable the assembly of a complete wire rope sling from the top master link to the hooks. Wire rope slings are often used for rigging and lifting applications that require heavy-duty slings that are abrasion-resistant but still flexible.**

Specific product information can be found on the page mentioned in the following product groups overview.

| Top links | | | | | |
|---|---|---|---|---|---|
| **MS** page 88 | **MTS** page 89 | **UMS** page 90 | **UMTS** page 91 | **UMSW** page 92 | **UMTSW** page 93 |
| **P-6810** page 94 | **P-6820** page 95 | **P-6815** page 96 | | | |
| **Sling accessories** | | | | | |
| **E-6110** page 98 | **G-6120** page 98 | **G-6128** page 99 | **E-6131/G-6131** page 100 | **S-6134** page 101 | **E-6135/G-6135** page 102 |
| **G-6170** page 103 | **G-6142** page 104 | **G-6151** page 104 | **P-6190** page 105 | **P-6195** page 105 | |

Table continues on next page

| | | | | | |
|---|---|---|---|---|---|
| **G-6240** page 109 | **E-6260** page 110 | **E-6220** page 111 | | | |
| **S-6500** page 113 | **A-6550** page 114 | | | | |
| End-fittings | | | | | |
| **G-6411** page 120 | **G-6412** page 121 | **G-6422** page 122 | **G-6413** page 123 | **G-6423** page 124 | **G-6419** page 125 |
| **G-6429** page 126 | **G-6416** page 127 | **S-6414** page 128 | **S-6415** page 129 | | |
| **G-7713** page 131 | **G-7723** page 131 | **G-7733** page 132 | **P-7740** page 132 | | |
| **CSO** page 135 | **CSE** page 135 | **P-6714A** page 136 | **P-6703A** page 137 | **XLO** page 138 | **GKO** page 138 |
| **XLE** page 139 | **GKE** page 139 | **P-6706A** page 140 | **P-6714C** page 141 | | |
| Accessories | | | | | |
| **TAG** page 142 |  **TAGRFID** page 143 | **CHIPRFID** page 143 | | | |

# Instructions for use

When chain fittings with a safety factor of 4 : 1 are used in combination with steel wire rope the WLL must be reduced by 20 %. This is the difference between a design factor of 4 : 1 (for chain slings) and 5 : 1 (for steel wire rope slings).

See table below:

| Working Load Limit (t) | | Minimum Breaking Load (t) |
|---|---|---|
| 4 : 1 Safety factor | 5 : 1 Safety factor | |
| 1.12 | 0.896 | 4.48 |
| 1.25 | 1 | 5 |
| 1.6 | 1.28 | 6.4 |
| 2 | 1.6 | 8 |
| 2.5 | 2 | 10 |
| 3.2 | 2.56 | 12.8 |
| 3.5 | 2.8 | 14 |
| 3.65 | 2.92 | 14.6 |
| 4.5 | 3.6 | 18 |
| 5.4 | 4.32 | 21.6 |
| 6.2 | 4.96 | 24.8 |
| 6.5 | 5.2 | 26 |
| 6.8 | 5.44 | 27.2 |
| 8.2 | 6.56 | 32.8 |
| 8.5 | 6.8 | 34 |
| 10 | 8 | 40 |
| 10.6 | 8.48 | 42.4 |
| 11 | 8.8 | 44 |
| 11.2 | 8.96 | 44.8 |
| 11.5 | 9.2 | 46 |
| 12.8 | 10.24 | 51.2 |
| 13 | 10.4 | 52 |
| 15.5 | 12.4 | 62 |
| 16 | 12.8 | 64 |
| 17 | 13.6 | 68 |
| 17.7 | 14.16 | 70.8 |
| 20 | 16 | 80 |
| 20.8 | 16.64 | 83.2 |
| 21.2 | 16.96 | 84.8 |
| 21.6 | 17.28 | 86.4 |
| 22 | 17.6 | 88 |
| 25 | 20 | 100 |
| 27.6 | 22.08 | 110.4 |
| 30 | 24 | 120 |
| 31.5 | 25.2 | 126 |
| 32.8 | 26.24 | 131.2 |
| 37 | 29.6 | 148 |
| 40 | 32 | 160 |
| 41.6 | 33.28 | 166.4 |
| 50 | 40 | 200 |
| 60 | 48 | 240 |
| 63 | 50.4 | 252 |
| 80 | 64 | 320 |
| 100 | 80 | 400 |
| 125 | 100 | 500 |

LIFTING SLING FITTINGS FOR WIRE ROPE

# MASTER LINKS & MASTER LINK ASSEMBLIES

## Applications

**Master links are the connection between the (crane) hook and wire rope fittings. The Green Pin® wire rope master links have a large opening to accommodate for larger lifting points and crane hooks. The welded master link designed for 1 or 2 legs and the master link assembly for 3 or 4 legs. A flat part on the link enables assembly with an omega link or with a thimble.**

More information about the range, certification and finish, please go to the introduction of chapter 3 lifting slings.

## Design

The Green Pin® Wider Master Link and Master Link Assembly are grade 10 master links with larger inside dimensions.

The Green Pin® DNV Master Link and Master Link Assembly are grade 8 master links and are perfect for offshore use. This welded master link is DNV-certified.

The Green Pin® Heavy Duty Master Link is a grade 8 master link for heavy-duty applications. The consistent Charpy V value of at least 42 J at -20 °C and 27 J at -40 °C throughout the entire master link, makes it compliant with offshore certification requirements. The master links are fully forged as a single piece.

Wire rope master links are generally marked with:

- manufacturer's symbol - e.g. GP
- size in mm and/ or inch - e.g. 25 and/or 1"
- traceability code - e.g. HA
- steel grade (specific products) - e.g. 8 or 10
- item code (specific products) - e.g. UMSW

As prescribed by the Machinery Directive 2006/42/EC our hooks, master links and connecting links are supplied with a CE Declaration of Incorporation (CE IIB), stating the products are in compliance with the requirements of the machinery directive. These products do not have a CE marking, since CE markings are only to be provided for machines, whereas hooks, master links and connecting links are components of machines, and not machines themselves. Providing components with a CE marking is an incorrect interpretation of the Machinery Directive.

Machinery definition according to Machinery Directive 2006/42/EC – Article 2 – definitions (a) and Machinery Regulation 2023/1230/EU

"An assembly of linked parts or components, at least one of which moves and which are joined together, intended for lifting loads and whose only power source is directly applied human effort."

"The maximum working load shall be prominently marked on the lifting machinery. The marking shall be legible, indelible and in an un-coded form. Where the maximum working load depends on the configuration of the lifting machinery, each operating position shall be provided with a load plate indicating, preferably in diagrammatic form or by means of tables, the working load permitted for each configuration."

This definition means that a sling is a Machine and that the hooks, master links and connecting links are not considered as a machine themselves, but as components of a machine. The CE and the WLL markings in consequence, are mandatory only on the assembled sling tag as the sling is the machine according to MD 2006/42/EC. This rule is still valid with the new Machine Regulation 2023/1230 which will replace the MD cited previously within early 2027.

## Instructions for use

Master links and master link assemblies, should be inspected before use to ensure that:
- all markings are legible.
- Master links and master link assemblies with the correct WLL has been selected with respect to the sling design.
- Master links and master link assemblies are free from nicks, gouges, and cracks.
- Master links and master link assemblies are not heat treated, modified, repaired, or reshaped by machining or bended. (This may affect their Working Load Limit).
- Master links and master link assemblies are not distorted or unduly worn.

Master links and master link assemblies 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 issues such as wear, misuse and overloading, which may lead to deformation and alteration of the material structure. Inspection should take place at least every six months, and more frequently when the links are used in severe operating conditions.

### Symmetry of loading

The WLL values mentioned are based on symmetrical loading of the sling. 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 angle to the vertical. The loading can be assumed to be symmetric if all the following conditions are met:
- the load is less than 80% of marked WLL, and
- sling leg angles to the vertical are all more than 15°, and
- sling leg angles to the vertical are all within 15° to each other, and
- in the case of three- and four-leg slings, the plane angles are within 15° of each other.

If one of the above parameters is not met, the loading should be considered to be asymmetric, and the lift should be referred to a competent engineer to establish the safe rating for the sling. Alternatively, in the case of asymmetric loading, the sling should be derated to half the marked WLL. If the load tends to tilt during the lift, it should be lowered, and the attachments changed by repositioning the attachment points or by using compatible shortening devices. The safety factor of 4 or 5 on the individual components is designed for safety only. Never exceed the indicated WLL.

Use the below reduction table if a multi leg sling for wire rope fittings 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:

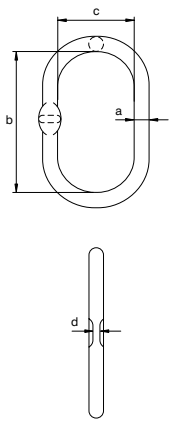
| Types of chain sling | Number of legs used | Factor to apply to marked WLL |
|---|---|---|
| Two-leg | 1 | 1/2 |
| Three- and four-leg | 2 | 2/3 |
| Three- and four-leg | 1 | 1/3 |

# Green Pin® Master Link EN 1677-4 GR8

## Grade 8 master link EN 1677-4

Scan for additional product details

MS




- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN 1677-4, ASTM A952/952M and ASME B30.9
- **Finish:** painted white*
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** from 50 t without flat part. For use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

| diameter | diameter chain 1 leg | diameter chain 2 legs | | working load limit | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|---|---|---|
| a | | ß ≤ 45° | 45° < ß ≥ 60° | | b | c | d | |
| mm | mm | mm | mm | t | mm | mm | mm | kg |
| 13 | 6/7 | 6 | 6/7 | 1.6 | 115 | 60 | 7 | 0.40 |
| 16 | 8 | 7/8 | 8 | 3.2 | 120 | 70 | 7 | 0.60 |
| 18 | 10 | 10 | 10 | 4.5 | 135 | 75 | 9 | 0.84 |
| 20 | 13 | - | 13 | 6.2 | 150 | 82 | 11 | 1.10 |
| 22 | 16 | 13 | 16 | 8.2 | 170 | 90 | 14 | 1.60 |
| 25 | 18 | - | 18 | 10.6 | 190 | 103 | 14 | 2.30 |
| 28 | 20 | 16 | 19 | 12.8 | 209 | 120 | 17 | 3.10 |
| 30 | 20/22 | 18 | 20/22 | 15.5 | 235 | 125 | 17 | 4 |
| 36 | - | 19/20 | - | 20 | 270 | 145 | 22 | 6.60 |
| 38 | 26 | 22 | 26 | 25 | 250 | 150 | 22 | 7.10 |
| 45 | 32 | 26 | 32 | 37 | 300 | 200 | 22 | 12.1 |
| 50 | - | 32 | - | 50 | 380 | 200 | - | 18 |
| 55 | - | - | - | 63 | 360 | 200 | - | 21 |
| 70 | - | - | - | 100 | 500 | 250 | - | 44 |
| 80 | - | - | - | 125 | 503 | 280 | - | 60.7 |

CAD INFO

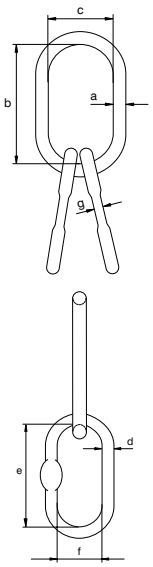
* Could be (for some sizes) delivered with a yellow or red finish

# Green Pin® Master Link Assembly EN 1677-4 GR8

Scan for additional product details

## Grade 8 master link assembly EN 1677-4

MTS




- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN 1677-4, ASTM A952/952M and ASME B30.9
- **Finish:** painted white*
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** from 60 t without flat part. For use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

| diameter | diameter chain 3/4 legs | | working load limit | length inside | width inside | diameter | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| a | ß ≤ 45° | 45° < ß ≥ 60° | | b | c | d | e | f | g | |
| mm | mm | mm | t | mm | mm | mm | mm | mm | mm | kg |
| 16 | 6 | 6/7 | 2.5 | 120 | 70 | 13 | 115 | 60 | 7 | 1.20 |
| 18 | 6/7 | 8 | 3.5 | 135 | 75 | 16 | 120 | 70 | 7 | 3.10 |
| 22 | 8 | 10 | 6.5 | 170 | 90 | 18 | 135 | 75 | 9 | 3.30 |
| 25 | 10 | 13 | 8.5 | 190 | 103 | 20 | 150 | 82 | 11 | 4.50 |
| 28 | - | - | 10 | 209 | 120 | 20 | 150 | 82 | 11 | 5.40 |
| 30 | 13 | 16 | 13 | 235 | 125 | 22 | 170 | 90 | 14 | 7.20 |
| 36 | 16 | 18/19 | 17 | 270 | 145 | 25 | 190 | 103 | 14 | 11.2 |
| 38 | - | 20 | 20.8 | 250 | 150 | 28 | 209 | 120 | 17 | 13.3 |
| 45 | 18/20 | 22 | 30 | 300 | 200 | 36 | 270 | 145 | 22 | 25.3 |
| 50 | 22 | 26 | 40 | 380 | 200 | 38 | 250 | 150 | 22 | 32.2 |
| 55 | 26 | 32 | 50 | 360 | 200 | 38 | 250 | 150 | 22 | 35.2 |
| 60 | - | - | 60 | 430 | 220 | 45 | 300 | 200 | 45 | 54.2 |
| 70 | 32 | - | 80 | 500 | 250 | 55 | 360 | 200 | 55 | 86 |
| 80 | - | - | 100 | 503 | 250 | 55 | 360 | 200 | 55 | 103 |

CAD INFO

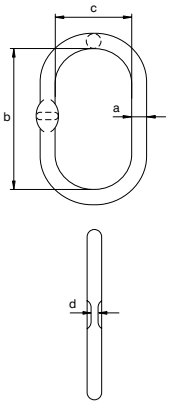
* Could be (for some sizes) delivered with a yellow or red finish

# Green Pin® Master Link GR10

## Grade 10 master link

Scan for additional product details

UMS




- **Material:** alloy steel, grade 10, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** follows the EN1677 with values for grade 10 and conforms to ASTM A952/A952M and ASME B30.9
- **Finish:** painted blue
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

| diameter | diameter chain 1 leg | diameter chain 2 legs | | working load limit | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|---|---|---|
| a mm | mm | ß ≤ 45° mm | 45° < ß ≤ 60° mm | t | b mm | c mm | d mm | kg |
| 13 | 6 | 6 | 6 | 2 | 115 | 60 | 7 | 0.40 |
| 16 | 8 | - | 8 | 3.2 | 120 | 70 | 7 | 0.60 |
| 18 | 10 | 8 | 10 | 5.4 | 135 | 75 | 9 | 0.84 |
| 22 | 13 | 10 | 13 | 8.2 | 170 | 90 | 11 | 1.60 |
| 25 | 16 | 13 | 16 | 11.2 | 190 | 103 | 14 | 2.17 |
| 30 | 18/20 | 16 | 18/20 | 16 | 235 | 125 | 17 | 4 |
| 38 | 22 | 20/22 | 22 | 27.6 | 250 | 150 | 22 | 7.10 |

CAD

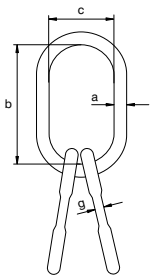
Scan for additional product details

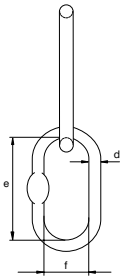
# Green Pin® Master Link Assembly GR10

## Grade 10 master link assembly

- **Material:** alloy steel, grade 10, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** follows the EN1677 with values for grade 10 and conforms to ASTM A952/A952M and ASME B30.9
- **Finish:** painted blue
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

UMTS




| diameter | diameter chain 3/4 legs | | working load limit | length inside | width inside | diameter | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| a mm | ß ≤ 45° mm | 45° < ß ≤ 60° mm | t | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 18 | 6 | 6 | 3.65 | 135 | 75 | 16 | 120 | 70 | 7 | 1.97 |
| 22 | 8 | 8/10 | 6.8 | 170 | 90 | 18 | 135 | 75 | 9 | 3.30 |
| 28 | 10 | 13 | 11 | 209 | 120 | 20 | 150 | 82 | 11 | 5.40 |
| 36 | 13 | 16 | 17.7 | 270 | 145 | 25 | 190 | 103 | 14 | 11.2 |
| 38 | 16 | 18/19 | 21.2 | 250 | 150 | 30 | 235 | 125 | 17 | 15.1 |
| 50 | 20 | 22 | 41.6 | 380 | 200 | 38 | 250 | 150 | 22 | 32.2 |

CAD

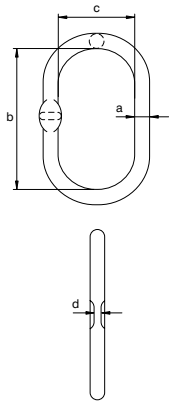
# Green Pin® Wider Master Link GR10

## Grade 10 wider master link

Scan for additional product details

- **Material:** alloy steel, grade 10, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Standard:** follows the EN1677 with values for grade 10 and conforms to ASTM A952/A952M and ASME B30.9
- **Finish:** painted blue
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes

UMSW




| working load limit | diameter | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | kg |
| 4.1 | 17 | 160 | 90 | 9 | 0.85 |
| 6.7 | 19 | 160 | 90 | 9 | 1.08 |
| 11.5 | 25 | 210 | 115 | 13 | 2.43 |
| 17 | 33 | 270 | 140 | 17 | 5.40 |
| 27.7 | 38 | 275 | 150 | 21 | 7.50 |
| 45 | 50 | 380 | 200 | 50 | 17.7 |
| 64 | 56 | 400 | 200 | 56 | 23.5 |

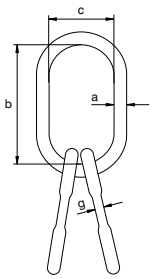
CAD

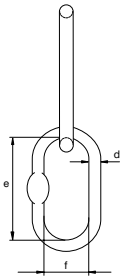
# Green Pin® Wider Master Link Assembly GR10

## Grade 10 wider master link assembly

Scan for additional product details

UMTSW




- **Material:** alloy steel, grade 10, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Standard:** follows the EN1677 with values for grade 10 and conforms to ASTM A952/A952M and ASME B30.9
- **Finish:** painted blue
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [a] CE IIB
- **Article code:** scan QR code to see article codes

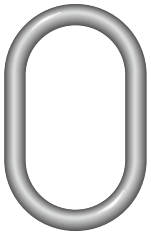
| working load limit | diameter | length inside | width inside | diameter | length inside | width inside | thickness | weight each |
|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 4.3 | 19 | 160 | 90 | 14 | 120 | 70 | 9 | 1.96 |
| 6.7 | 23 | 180 | 100 | 17 | 160 | 90 | 9 | 3.50 |
| 28.1 | 40 | 300 | 160 | 33 | 270 | 140 | 17 | 19.8 |
| 38.3 | 45 | 340 | 180 | 38 | 275 | 150 | 21 | 27.8 |
| 75 | 60 | 400 | 200 | 50 | 380 | 200 | 50 | 62.5 |

CAD

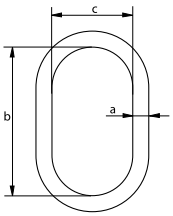
# Green Pin® DNV Master Link

## Grade 8 master link

Scan for additional product details



P-6810




- **Material:** alloy steel, grade 8
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** DNV 2.7-1, EN 12079-2 and EN 1677-4
- **Finish:** painted silver
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [b] DNV 2.7-1 [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** size WLL 75 t and 100 t have a temperature range of -20 °C up to +200 °C

| working load limit | diameter | length inside | width inside | weight each |
|---|---|---|---|---|
| t | a mm | b mm | c mm | kg |
| 4.1 | 16 | 150 | 75 | 0.68 |
| 7 | 22 | 270 | 140 | 2.28 |
| 9.3 | 26 | 270 | 140 | 3.11 |
| 14.5 | 28 | 270 | 140 | 3.78 |
| 19.5 | 28 | 200 | 110 | 3 |
| 19 | 32 | 270 | 140 | 5.02 |
| 26 | 36 | 270 | 140 | 6.46 |
| 30.5 | 40 | 280 | 155 | 8.46 |
| 45 | 45 | 320 | 175 | 12.2 |
| 51 | 50 | 350 | 195 | 16.5 |
| 75 | 65 | 410 | 220 | 33 |
| 100 | 75 | 450 | 250 | 49 |

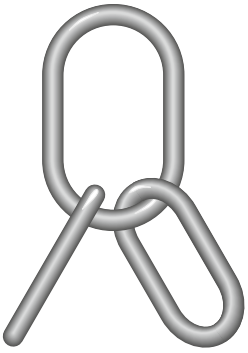
CAD INFO

TYPE APPROVED PRODUCT DNV DNV.COM/AF

# Green Pin® DNV Master Link Assembly

## Grade 8 master link assembly

Scan for additional product details

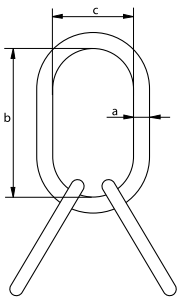


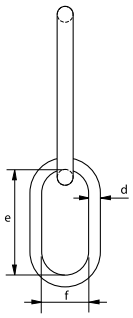
- **Material:** alloy steel, grade 8
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** DNV 2.7-1, EN 12079-2 and EN 1677-4
- **Finish:** painted silver
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [b] MPI [b] DNV 2.7-1 [a] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** size WLL 75 t and 100 t have a temperature range of -20 °C up to +200 °C

| working load limit | diameter | length inside | width inside | diameter | length inside | width inside | weight each |
|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | kg |
| 4.1 | 16 | 150 | 75 | 14.5 | 125 | 60 | 1.62 |
| 7 | 22 | 270 | 140 | 22 | 162 | 90 | 5.22 |
| 9.3 | 26 | 270 | 140 | 22 | 162 | 90 | 6.05 |
| 14.5 | 28 | 270 | 140 | 22 | 162 | 90 | 6.73 |
| 19 | 32 | 270 | 140 | 28 | 200 | 110 | 10.9 |
| 26 | 36 | 270 | 140 | 28 | 200 | 110 | 12.4 |
| 30.5 | 40 | 280 | 155 | 32 | 270 | 140 | 18.5 |
| 40 | 45 | 320 | 175 | 36 | 270 | 140 | 25.1 |
| 51 | 50 | 350 | 195 | 45 | 320 | 175 | 40.9 |
| 75 | 65 | 410 | 220 | 50 | 350 | 195 | 66.1 |
| 100 | 75 | 450 | 250 | 65 | 410 | 220 | 115 |

CAD INFO

**P-6820**



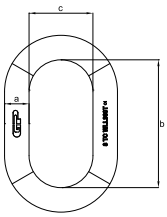

TYPE APPROVED PRODUCT DNV DNV.COM/AF

# Green Pin® Heavy Duty Master Link

## Grade 8 weldless heavy duty master link

Scan for additional product details

P-6815




- **Material:** alloy steel, grade 8
- **Safety Factor:** MBL equals 5 x WLL
- **Standard:** ASME B30.26
- **Finish:** painted silver and green
- **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 | length inside | width inside | weight each |
|---|---|---|---|---|
| t | a mm | b mm | c mm | kg |
| 131 | 90 | 460 | 300 | 77 |
| 157 | 100 | 500 | 300 | 102 |
| 250 | 115 | 600 | 400 | 164 |
| 300 | 115 | 600 | 300 | 155 |
| 400 | 115 | 490 | 250 | 132 |

CAD

# THIMBLES

## Applications

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

More information about the range, certification and finish, please go to the introduction of chapter 3 lifting slings.

## Design

Royal Van Beest offers different type of thimble designs:

- Thimbles generally to DIN 6899, DIN 3090, EN 13411-1, US Federal Specification FF-T-276b type III;
- Thimbles according to DIN 3091;
- Standard commercial thimbles;
- Heavy duty stub-end thimbles;
- Penant line type;
- Tubular type.

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

## Instructions for use

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

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

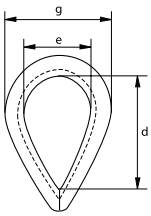
Before use, check if the thimble is free from impurities, sharp edges, cracks or other irregularities which may damage the wire rope and therefore affect the performance of the wire rope.

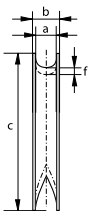
C

# Thimbles

## Standard commercial

E-6110




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

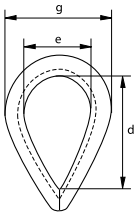
| diameter rope | width groove | width overall | length | length inside | width inside | thickness back | width | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 4 | 4 | 7 | 25 | 16 | 11 | 2.5 | 19 | 0.50 |
| 5 | 5 | 8 | 31 | 22 | 16 | 3 | 25 | 0.80 |
| 6 | 6 | 10 | 37 | 26 | 19 | 3.5 | 30 | 1.40 |
| 8 | 8 | 12 | 51 | 34 | 24 | 5 | 38 | 2.80 |
| 9 | 9 | 13 | 57 | 38 | 29 | 5.5 | 44 | 3 |
| 10 | 10 | 16 | 64 | 42 | 32 | 5.5 | 49 | 4.80 |
| 12 | 12 | 18 | 76 | 51 | 38 | 6.5 | 57 | 8 |
| 14 | 14 | 20 | 82 | 57 | 40 | 8 | 62 | 10 |
| 16 | 16 | 22 | 89 | 60 | 42 | 9 | 66 | 15 |
| 18 | 18 | 26 | 102 | 67 | 45 | 10 | 73 | 22 |
| 20 | 20 | 28 | 115 | 76 | 51 | 11 | 81 | 25 |
| 22 | 22 | 30 | 127 | 83 | 54 | 12.5 | 87 | 32 |
| 24 | 24 | 32 | 138 | 90 | 64 | 14 | 100 | 46 |
| 26 | 26 | 36 | 152 | 102 | 68 | 14.5 | 107 | 66 |
| 28 | 28 | 38 | 165 | 110 | 73 | 16 | 115 | 77 |
| 30 | 30 | 42 | 178 | 120 | 79 | 17 | 125 | 80 |
| 32 | 32 | 44 | 203 | 143 | 93 | 18 | 141 | 130 |

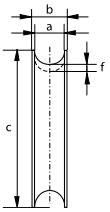
C

# Thimbles

## Heavy duty stub-end

G-6120




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

| diameter rope | width groove | width overall | length | length inside | width inside | thickness back | width | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 8 | 9 | 13 | 51 | 35 | 22 | 4 | 44 | 0.50 |
| 10 | 11 | 15 | 64 | 47 | 30 | 4 | 54 | 0.80 |
| 12 | 13 | 18 | 76 | 57 | 35 | 5 | 62 | 1.40 |
| 14 | 15 | 21 | 89 | 65 | 45 | 6 | 76 | 2.80 |
| 16 | 18 | 22 | 102 | 75 | 50 | 6 | 83 | 3 |
| 18 | 20 | 28 | 114 | 85 | 53 | 7 | 91 | 4.80 |
| 20 | 22 | 30 | 127 | 94 | 60 | 8 | 102 | 8 |
| 22 | 24 | 31 | 140 | 107 | 65 | 9 | 110 | 10 |
| 24 | 26 | 34 | 152 | 114 | 70 | 9.5 | 118 | 15 |
| 28 | 30 | 39 | 178 | 130 | 80 | 10 | 134 | 22 |
| 32 | 34 | 41 | 203 | 157 | 100 | 10 | 162 | 25 |
| 36 | 38 | 48 | 229 | 175 | 115 | 11 | 182 | 32 |
| 40 | 42 | 51 | 254 | 198 | 120 | 12 | 188 | 46 |
| 44 | 46 | 62 | 280 | 214 | 130 | 14 | 210 | 66 |
| 50 | 53 | 65 | 305 | 220 | 140 | 18 | 248 | 77 |
| 56 | 57 | 68 | 356 | 245 | 150 | 23 | 262 | 80 |
| 64 | 67 | 85 | 407 | 286 | 185 | 20 | 280 | 130 |

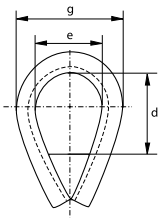
C

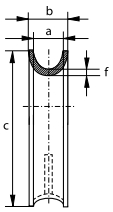
# Thimbles

## Heavy duty stub-end reinforced with welded fillet plate

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

**G-6128**



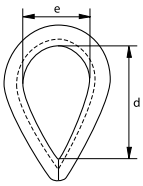

| width groove | width overall | length | length inside | width inside | thickness back | width | weight per piece |
|---|---|---|---|---|---|---|---|
| a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 35 | 55 | 220 | 100 | 80 | 10 | 150 | 3.20 |
| 40 | 65 | 245 | 120 | 90 | 12 | 160 | 5.10 |
| 50 | 80 | 290 | 125 | 110 | 16 | 200 | 9.20 |
| 62 | 100 | 360 | 160 | 140 | 20 | 250 | 17.4 |
| 72 | 115 | 390 | 175 | 160 | 20 | 265 | 19.4 |
| 85 | 125 | 470 | 245 | 190 | 20 | 300 | 29 |
| 100 | 150 | 540 | 290 | 200 | 25 | 370 | 39 |
| 115 | 165 | 570 | 300 | 210 | 25 | 380 | 52 |

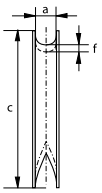
For shackle

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

C

E-6131
G-6131




# Thimbles

## Generally to DIN 6899 (B)

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

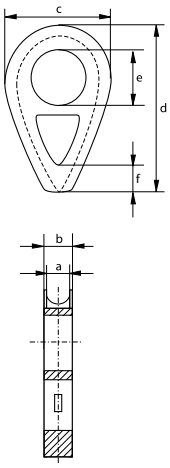
| diameter rope | width groove | length | length inside | width inside | thickness back | weight per 100 pcs |
|---|---|---|---|---|---|---|
| mm | a mm | c mm | d mm | e mm | f mm | kg |
| 2.5 | 3 | 22 | 19 | 12 | 1.6 | 0.60 |
| 3.5 | 4 | 26 | 21 | 13 | 1.6 | 0.80 |
| 4 | 5 | 32 | 23 | 14 | 1.9 | 1 |
| 5 | 6 | 38 | 25 | 16 | 2.4 | 2 |
| 6 | 7 | 44 | 28 | 18 | 2.4 | 2 |
| 7 | 8 | 51 | 32 | 20 | 2.8 | 2.70 |
| 9 | 10 | 57 | 38 | 24 | 3.1 | 4.10 |
| 11 | 12 | 64 | 45 | 28 | 3.3 | 6.90 |
| 13 | 13 | 70 | 48 | 30 | 3.3 | 7.20 |
| 13 | 14 | 76 | 51 | 32 | 3.7 | 10.2 |
| 15 | 16 | 83 | 58 | 36 | 3.8 | 16.4 |
| 16 | 17 | 89 | 61 | 38 | 4.7 | 19 |
| 17 | 18 | 95 | 64 | 40 | 4.7 | 20.3 |
| 18 | 20 | 102 | 72 | 45 | 5.7 | 27.3 |
| 20 | 22 | 114 | 80 | 50 | 5.7 | 30.8 |
| 22 | 24 | 127 | 90 | 56 | 6.5 | 44.8 |
| 24 | 26 | 140 | 99 | 62 | 6.8 | 59.2 |
| 26 | 28 | 152 | 112 | 70 | 8 | 72 |
| 28 | 30 | 165 | 120 | 75 | 8 | 104 |
| 30 | 32 | 178 | 128 | 80 | 8 | 115 |
| 32 | 34 | 203 | 152 | 95 | 8.5 | 153 |
| 34 | 36 | 216 | 160 | 100 | 8.5 | 176 |
| 36 | 38 | 229 | 176 | 110 | 8.5 | 176 |
| 38 | 40 | 241 | 184 | 115 | 10.5 | 292 |
| 40 | 42 | 254 | 192 | 120 | 10.5 | 320 |
| 42 | 45 | 305 | 240 | 150 | 10.5 | 364 |

C

# Thimbles

## According to DIN 3091

S-6134

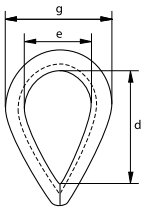


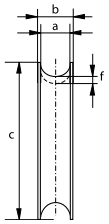

- **Material:** cast mild steel, (GTW 40)
- **Standard:** according to DIN 3091
- **Finish:** self-coloured
- **Certification:** 2.1 CE IIB
- **Note:** the diameter (e) of the timble for diameter wire rope 72 mm is 140 mm

| diameter rope | width groove | width overall | width | length | diameter | length | weight per 100 pcs |
|---|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | f mm | kg |
| 8 | 9 | 15 | 40 | 56 | 14 | - | 18 |
| 10 | 11 | 17.5 | 50 | 70 | 18 | - | 32 |
| 12 | 13 | 20 | 60 | 84 | 21 | - | 52 |
| 14 | 16 | 23.5 | 70 | 98 | 25 | - | 80 |
| 16 | 18 | 26 | 80 | 130 | 28 | 16 | 90 |
| 18 | 20 | 28.5 | 90 | 145 | 31 | 18 | 121 |
| 20 | 22 | 31 | 100 | 161 | 35 | 20 | 161 |
| 22 | 24 | 33.5 | 110 | 177 | 38 | 22 | 211 |
| 24 | 26 | 36 | 120 | 193 | 41 | 24 | 271 |
| 26 | 29 | 39.5 | 130 | 209 | 44 | 26 | 355 |
| 28 | 31 | 42 | 140 | 224 | 47 | 28 | 420 |
| 32 | 35 | 47 | 160 | 256 | 53 | 32 | 630 |
| 36 | 40 | 53 | 180 | 288 | 59 | 36 | 884 |
| 40 | 44 | 58 | 200 | 320 | 65 | 40 | 1100 |
| 44 | 48 | 63 | 220 | 352 | 70 | 44 | 1500 |
| 48 | 53 | 69 | 240 | 384 | 76 | 48 | 2000 |
| 52 | 57 | 74 | 260 | 416 | 81 | 52 | 2500 |
| 56 | 62 | 80 | 280 | 448 | 86 | 56 | 3200 |
| 64 | 70 | 90 | 320 | 512 | 95 | 64 | 4600 |
| 72 | 79 | 101 | 360 | 576 | 140 | 72 | 6600 |

C

E-6135
G-6135




# Thimbles

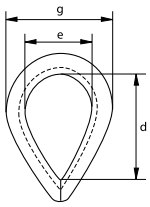
## Generally to DIN 3090

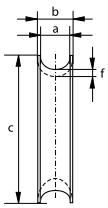
- **Material:** mild steel
- **Standard:** generally to DIN 3090
- **Finish:** for diameter 4 and 6 mm electro-galvanized
  other diameters hot dipped galvanized
- **Certification:** 2.1 CE IIB

| diameter wire rope | width groove | width overall | length | length inside | width inside | thickness back | width | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 4 | 5 | 8 | 35 | 20 | 10 | 2.1 | 25 | 1.40 |
| 6 | 7 | 10 | 50 | 30 | 15 | 2.6 | 33 | 3 |
| 8 | 9 | 13 | 68 | 40 | 20 | 4 | 43 | 7.10 |
| 10 | 11 | 15 | 77 | 50 | 25 | 5 | 47 | 17 |
| 12 | 13 | 19 | 100 | 60 | 30 | 6 | 63 | 24 |
| 14 | 16 | 22 | 110 | 70 | 35 | 8 | 70 | 31 |
| 16 | 18 | 25 | 125 | 80 | 40 | 8 | 80 | 50 |
| 18 | 20 | 27 | 142 | 90 | 45 | 9 | 90 | 62 |
| 20 | 22 | 30 | 155 | 100 | 50 | 10 | 102 | 90 |
| 22 | 24 | 33 | 165 | 110 | 55 | 10 | 107 | 100 |
| 24 | 26 | 35 | 180 | 120 | 60 | 10 | 120 | 130 |
| 26 | 29 | 36 | 190 | 130 | 65 | 12 | 122 | 220 |
| 28 | 31 | 37 | 197 | 140 | 70 | 12 | 128 | 240 |
| 32 | 35 | 43 | 225 | 160 | 80 | 15 | 145 | 216 |
| 36 | 40 | 60 | 250 | 180 | 90 | 15 | 170 | 430 |
| 40 | 44 | 66 | 290 | 200 | 100 | 20 | 190 | 570 |
| 44 | 48 | 72 | 315 | 220 | 110 | 20 | 205 | 850 |
| 48 | 53 | 77 | 350 | 240 | 120 | 20 | 220 | 1120 |
| 52 | 57 | 88 | 380 | 260 | 130 | 25 | 235 | 1530 |
| 56 | 62 | 95 | 405 | 280 | 140 | 25 | 270 | 2148 |
| 60 | 66 | 105 | 430 | 300 | 150 | 25 | 285 | 2300 |
| 64 | 70 | 110 | 485 | 320 | 160 | 30 | 310 | 3500 |

C

G-6170




# Thimbles

## Generally to EN 13411-1

- **Material:** mild steel
- **Standard:** generally to EN 13411-1 formerly BS 464
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 CE IIB

| diameter rope | | width groove | width overall | length | length inside | width inside | thickness back | width | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|---|
| inch | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 3/16 | 5 | 6 | 9.5 | 47 | 27 | 18 | 3 | 32 | 3.50 |
| 1/4 | 7 | 7 | 11 | 51 | 33 | 20.5 | 3.5 | 36 | 2.80 |
| 5/16 | 8 | 8 | 12.7 | 52 | 33 | 22 | 4 | 38 | 5.70 |
| 3/8 | 10 | 10 | 14.3 | 64 | 38 | 25 | 6.3 | 47.6 | 8 |
| 7/16 | 11 | 13 | 17.5 | 73 | 41 | 29 | 7.9 | 52 | 14.2 |
| 1/2 | 13 | 14 | 20.6 | 79 | 45 | 32 | 7.9 | 58.8 | 18 |
| 9/16 | 14 | 15 | 20.6 | 88 | 56 | 38 | 7.9 | 64 | 18.9 |
| 5/8 | 16 | 16 | 22.2 | 96 | 59 | 41 | 8.7 | 74.5 | 22.4 |
| 11/16 | 17 | 19 | 28.6 | 108 | 67 | 45 | 9.5 | 79.4 | 39.7 |
| 3/4 | 19 | 21 | 28.6 | 124 | 73 | 51 | 11.1 | 92 | 45.6 |
| 7/8 | 22 | 22 | 31.7 | 131 | 83 | 56 | 12.7 | 102 | 61.5 |
| 15/16 | 24 | 25 | 33.4 | 146 | 92 | 64 | 12.7 | 110 | 106 |
| 1 | 25 | 27 | 35 | 162 | 108 | 70 | 14.3 | 119 | 97.3 |
| 1 1/8 | 29 | 29 | 38 | 178 | 112 | 76 | 15.9 | 133 | 151 |
| 1 1/4 | 32 | 33 | 41.3 | 197 | 133 | 95 | 15.9 | 152 | 204 |
| 1 3/8 | 35 | 38 | 47.6 | 228 | 152 | 105 | 19 | 175 | 318 |
| 1 1/2 | 38 | 41 | 52 | 254 | 165 | 114 | 23.8 | 197 | 363 |
| 1 5/8 | 41 | 47 | 57 | 280 | 188 | 120 | 24 | 205 | 499 |
| 1 3/4 | 44 | 51 | 57 | 286 | 178 | 127 | 25.4 | 228 | 556 |
| 1 7/8 | 48 | 60 | 66.6 | 317 | 190 | 133 | 28.6 | 248 | - |
| 2 | 51 | 64 | 69.8 | 330 | 203 | 140 | 30.1 | 257 | - |
| 2 1/8 | 54 | 64 | 69.8 | 330 | 203 | 140 | 30.1 | 257 | - |
| 2 1/4 | 57 | 67 | 76.2 | 356 | 246 | 160 | 31.7 | 296 | - |
| 2 1/2 | 64 | 75 | 93 | 420 | 255 | 170 | 43 | 300 | - |

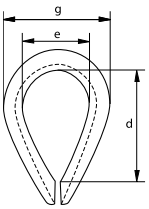
C

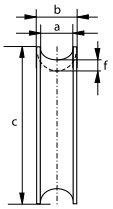
# Thimbles

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

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

**G-6142**




| diameter rope | width groove | width overall | length | length inside | width inside | thickness back | width | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 6 | 7 | 10 | 56 | 41 | 22 | 1.5 | 38 | 2.70 |
| 8 | 8 | 12.6 | 64 | 48 | 27 | 2 | 46 | 5.10 |
| 9 | 10 | 17.2 | 73 | 54 | 26 | 2.5 | 54 | 9.10 |
| 11 | 12 | 18 | 83 | 60 | 32 | 3 | 60 | 13.9 |
| 13 | 13.6 | 21.4 | 92 | 70 | 38 | 4 | 70 | 19.9 |
| 14 | 15 | 23 | 92 | 70 | 38 | 4 | 68 | 20.5 |
| 16 | 16.8 | 24.5 | 103 | 83 | 44 | 4 | 78 | 29.8 |
| 19 | 19.8 | 31.8 | 127 | 95 | 51 | 6 | 97 | 60.8 |
| 22 | 24 | 36 | 140 | 108 | 57 | 6 | 108 | 80.4 |
| 25 | 27 | 39 | 156 | 114 | 63 | 6 | 125 | 109 |
| 28 - 32 | 34 | 46 | 178 | 130 | 73 | 6 | 148 | 147 |
| 32 - 35 | 36 | 56 | 228 | 165 | 89 | 10 | 173 | 366 |
| 35 - 38 | 39 | 63 | 228 | 158 | 89 | 12 | 181 | 478 |
| 41 | 42 | 66 | 285 | 203 | 101 | 12 | 206 | 731 |
| 45 | 45 | 69 | 309 | 228 | 114 | 12 | 216 | 778 |
| 48 - 51 | 54 | 78 | 380 | 305 | 152 | 12 | 250 | 1150 |
| 57 | 60 | 92 | 435 | 356 | 178 | 16 | 301 | 1935 |
| 64 | 70 | 110 | 465 | 360 | 178 | 20 | 310 | 2640 |
| 76 | 85 | 125 | 550 | 410 | 180 | 20 | 330 | 3850 |

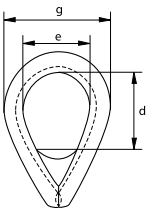
C

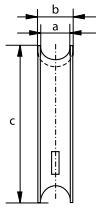
# Thimbles

## Pennant line type

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

**G-6151**




| diameter wire rope | width groove | width overall | length | length inside | width inside | width | weight each |
|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | g | |
| mm | mm | mm | mm | mm | mm | mm | kg |
| 16 | 17 | 22 | 102 | 50 | 50 | 75 | 0.40 |
| 18 | 19 | 25 | 114 | 50 | 53 | 85 | 0.50 |
| 20 | 21 | 29 | 127 | 60 | 60 | 100 | 0.80 |
| 22 | 23 | 33 | 140 | 60 | 65 | 110 | 0.90 |
| 24 | 25 | 34 | 152 | 70 | 70 | 115 | 1 |
| 28 | 30 | 38 | 178 | 75 | 80 | 135 | 1.70 |
| 30 | 33 | 44 | 203 | 80 | 100 | 155 | 2.50 |
| 36 | 38 | 49 | 229 | 110 | 115 | 175 | 4 |
| 40 | 41 | 52 | 254 | 120 | 120 | 190 | 4.50 |
| 44 | 46 | 60 | 279 | 120 | 130 | 210 | 7 |
| 50 | 52 | 65 | 305 | 140 | 145 | 245 | 8.30 |
| 56 | 60 | 72 | 356 | 155 | 155 | 260 | 12.5 |
| 64 | 70 | 84 | 432 | 200 | 190 | 310 | 19.5 |
| 76 | 81 | 119 | 483 | 235 | 230 | 350 | 29 |
| 82 | 92 | 130 | 559 | 240 | 255 | 395 | 35 |
| 90 | 105 | 145 | 610 | 275 | 280 | 430 | 42 |
| 120 | 120 | 155 | 660 | 295 | 285 | 450 | 58 |

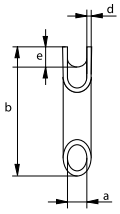
C

# Thimbles

## Tubular type

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

**P-6190**




| diameter wire rope | diameter | length | width inside | thickness | height | weight each |
|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | kg |
| 10 | 12 | 90 | 23 | 4 | 8 | 0.23 |
| 12 | 15 | 105 | 27 | 5 | 10 | 0.40 |
| 14 | 17 | 115 | 27 | 5 | 10 | 0.50 |
| 16 | 19 | 120 | 32 | 5 | 12 | 0.60 |
| 18 | 22 | 140 | 35 | 5 | 15 | 0.75 |
| 22 | 25 | 180 | 45 | 6 | 16 | 1.40 |
| 24 | 28 | 180 | 45 | 7 | 16 | 1.75 |
| 26 | 30 | 195 | 47 | 7 | 18 | 2 |
| 32 | 35 | 215 | 60 | 7 | 22 | 2.50 |
| 38 | 45 | 260 | 70 | 7 | 27 | 3.50 |
| 44 | 50 | 280 | 75 | 7 | 28 | 4.20 |

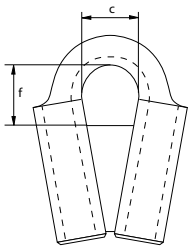
C

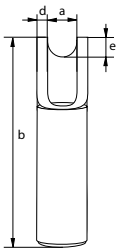
# Thimbles

## Tubular type with welded plate

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

**P-6195**




| diameter wire rope | width groove | length | width inside | thickness | height | length inside | weight each |
|---|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | f mm | kg |
| 10 | 12 | 84 | 23 | 4 | 8 | 24 | 0.26 |
| 12 | 15 | 95 | 27 | 5 | 10 | 31 | 0.42 |
| 14 | 17 | 100 | 27 | 5 | 10 | 38 | 0.48 |
| 16 | 19 | 112 | 32 | 5 | 12 | 46 | 0.61 |
| 18 | 22 | 125 | 35 | 5 | 15 | 47 | 0.95 |
| 22 | 25 | 150 | 45 | 6 | 16 | 61 | 1.33 |
| 24 | 28 | 157 | 45 | 7 | 16 | 56 | 1.67 |
| 26 | 30 | 170 | 47 | 7 | 18 | 68 | 1.96 |
| 32 | 35 | 190 | 60 | 7 | 22 | 73 | 2.43 |
| 36 | 40 | 212 | 70 | 9 | 26 | 80 | 4.32 |
| 38 | 45 | 228 | 70 | 7 | 27 | 94 | 3.67 |

LIFTING SLING FITTINGS FOR WIRE ROPE

# WIRE ROPE CLIPS

## Applications

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

More information about the range, certification and finish, please go to the introduction of chapter 3 lifting slings.

## Design

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

Wire rope clips are generally marked with:

- manufacturer's symbol - e.g. GP
- wire rope diameter in mm or inches - e.g. 13 or $^1/_2$"
- traceability code - e.g. A1

## Instructions for use

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

- all markings are legible;
- a wire rope clip with the correct dimensions has been selected;
- the nuts or any other locking system cannot vibrate out of position;
- the wire rope clip is free from nicks, gouges and cracks;

Never modify, repair or reshape a wire rope clip by machining, welding, heating or bending as this may affect their performance.

The wire rope clip should be fitted to the wire rope as shown in below figures. The bridge of the wire rope clip should always be placed on the load bearing part of the rope. The U-bolt of the clip should be placed on the rope tail, also known as the dead end of the rope. Turn back enough wire rope length so that the required minimum number of clips can be installed according to the instructions below.

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

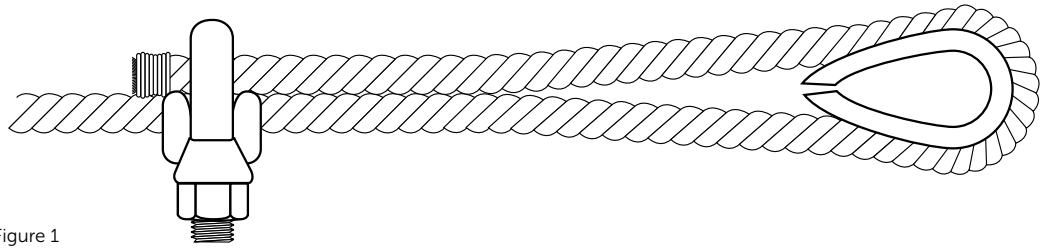


Figure 1

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

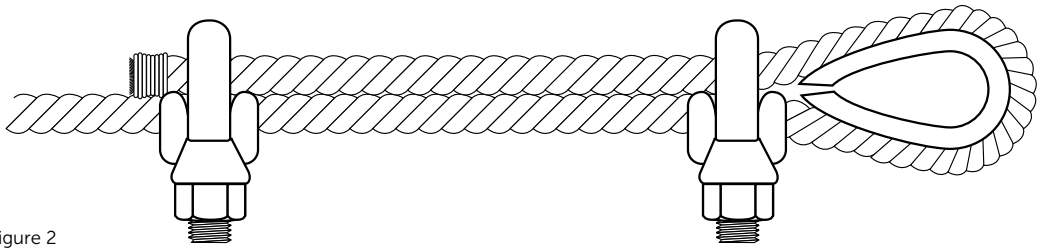


Figure 2

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

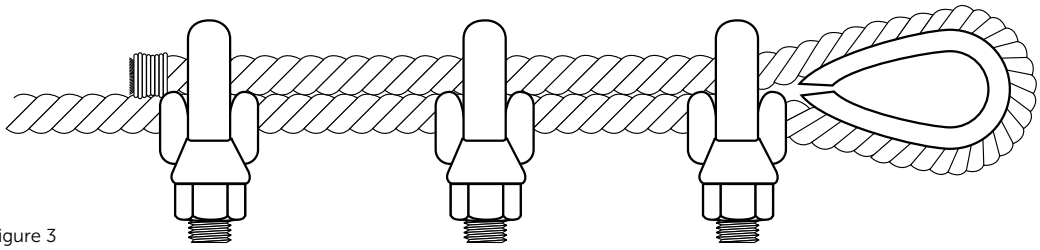


Figure 3

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

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

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

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

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

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

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

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

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

Suitable applications of wire rope clips to EN 13411-5 standards include suspending static loads and single use lifting operations which have been assessed by a competent person taking into account appropriate safety factors.

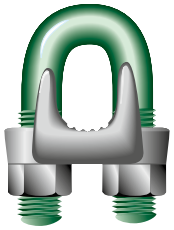
Wire rope clips should not be used in following applications:
- hoist ropes in mines;
- rope drives for cranes in steel works and rolling mills;
- permanent fastening of ropes in other rope drives;
- rope terminations for load suspension devices in the operation of lifting appliances, except in the case of lifting tackles where these are produced for a special application and used only once.

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

# Green Pin® Wire Rope Clip

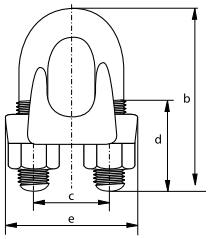
## Wire rope clip generally to EN 13411-5 Type B

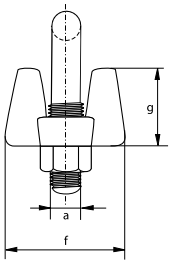
Scan for additional product details



- **Material:** bridge: drop forged high tensile steel SAE 1045
  U-bolt: SAE 1015
- **Standard:** EN 13411-5 Type B
  formerly U.S. Federal Specification FF-C-450D
- **Finish:** hot dipped galvanized
  U-bolt and/or nuts for diameter bow 5, 6, 8 and 10 are electro-galvanized
- **Certification:** 2.1 2.2 CE IIB
- **Article code:** scan QR code to see article codes

G-6240




| diameter wire rope | diameter | length bow | width inside | length thread | length base | thickness base | height base | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 3 - 4 | 5 | 24 | 12 | 11 | 24 | 21 | 10 | 3 |
| 5 | 6 | 31 | 15 | 13 | 29 | 24 | 13 | 7 |
| 6 - 7 | 8 | 34 | 19 | 13 | 37 | 30 | 18 | 8.40 |
| 8 | 10 | 45 | 22 | 19 | 43 | 33 | 19 | 12.4 |
| 9 - 10 | 11 | 49 | 26 | 19 | 49 | 42 | 25 | 21 |
| 11 | 12 | 60 | 30 | 25 | 58 | 46 | 26 | 33.2 |
| 12 - 13 | 13 | 61 | 30 | 25 | 58 | 48 | 31 | 33.1 |
| 14 - 15 | 14 | 72 | 33 | 32 | 63 | 52 | 31 | 45.6 |
| 16 | 14 | 74 | 33 | 32 | 64 | 54 | 36 | 45.8 |
| 18 - 20 | 16 | 86 | 38 | 37 | 72 | 57 | 38 | 64.3 |
| 22 | 19 | 98 | 45 | 41 | 80 | 62 | 40 | 96.4 |
| 24 - 26 | 19 | 108 | 48 | 46 | 88 | 67 | 47 | 115 |
| 28 - 30 | 19 | 117 | 51 | 51 | 91 | 73 | 48 | 127 |
| 32 - 34 | 22 | 130 | 59 | 54 | 105 | 79 | 56 | 197 |
| 36 | 22 | 140 | 60 | 59 | 108 | 79 | 58 | 206 |
| 38 - 40 | 22 | 147 | 66 | 60 | 112 | 85 | 64 | 254 |
| 41 - 42 | 25 | 161 | 70 | 67 | 121 | 92 | 67 | 322 |
| 44 - 46 | 29 | 174 | 78 | 70 | 134 | 97 | 76 | 418 |
| 48 - 52 | 32 | 195 | 86 | 78 | 150 | 113 | 85 | 602 |
| 56 - 58 | 32 | 213 | 98 | 81 | 162 | 116 | 100 | 776 |
| 62 - 65 | 32 | 227 | 105 | 87 | 168 | 119 | 113 | 862 |
| 68 - 72 | 32 | 243 | 112 | 91 | 174 | 127 | 124 | 1015 |
| 75 - 78 | 38 | 271 | 121 | 98 | 194 | 135 | 136 | 1272 |

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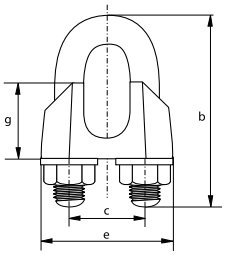
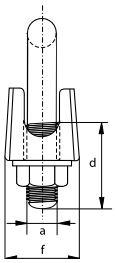
E-6260




# Wire Rope Clip

## Generally to EN 13411-5 Type A

- **Material:** bridge: malleable steel
  U-bolt: mild steel
- **Standard:** EN 13411-5 Type A
  formerly DIN 1142
- **Finish:** electro-galvanized
- **Certification:** 2.1 CE IIB

| diameter wire rope | diameter | length bow | width inside | length thread | length base | thickness base | height base | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 5 | 5 | 25 | 12 | 14 | 25 | 13 | 13 | 2.30 |
| 6.5 | 6 | 32 | 14 | 17 | 30 | 16 | 14 | 3.90 |
| 8 | 8 | 41 | 18 | 20 | 39 | 20 | 18 | 8.40 |
| 10 | 8 | 46 | 20 | 24 | 40 | 20 | 21 | 8.40 |
| 12 | 10 | 56 | 24 | 28 | 50 | 25 | 24 | 17 |
| 13 | 12 | 64 | 29 | 29 | 55 | 28 | 29 | 26.1 |
| 14 | 12 | 66 | 28 | 31 | 59 | 30 | 28 | 28.6 |
| 16 | 14 | 76 | 34 | 35 | 64 | 32 | 35 | 42 |
| 19 | 14 | 83 | 37 | 36 | 68 | 33 | 40 | 49 |
| 22 | 16 | 96 | 41 | 40 | 74 | 34 | 44 | 67 |
| 26 | 20 | 111 | 46 | 50 | 84 | 38 | 51 | 111 |
| 30 | 20 | 127 | 54 | 55 | 95 | 41 | 59 | 140 |
| 34 | 22 | 141 | 60 | 60 | 105 | 45 | 67 | 202 |
| 40 | 24 | 159 | 68 | 65 | 117 | 49 | 77 | 268 |

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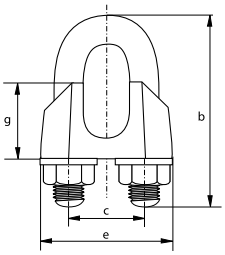
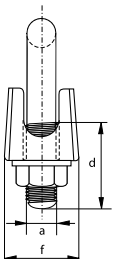
# Wire Rope Clip

## Generally to DIN 741

E-6220




- **Material:** bridge: cast
  U-bolt: mild steel
- **Standard:** formerly DIN 741
- **Finish:** electro-galvanized
- **Certification:** 2.1 CE IIB

| diameter wire rope | diameter | length bow | width inside | length thread | length base | thickness base | height base | weight per 100 pcs |
|---|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 3 | 4 | 20 | 9 | 12 | 21 | 10 | 10 | 1 |
| 5 | 5 | 24 | 11 | 13 | 23 | 11 | 10 | 1.40 |
| 6 | 5 | 28 | 13 | 15 | 26 | 12 | 11 | 1.60 |
| 8 | 6 | 34 | 16 | 19 | 30 | 14 | 15 | 3.30 |
| 10 | 8 | 42 | 19 | 22 | 34 | 18 | 17 | 6 |
| 11 | 8 | 44 | 20 | 22 | 36 | 19 | 18 | 7 |
| 13 | 10 | 55 | 24 | 30 | 42 | 23 | 21 | 11.8 |
| 14 | 10 | 57 | 25 | 30 | 44 | 23 | 22 | 12.4 |
| 16 | 12 | 63 | 29 | 33 | 50 | 26 | 26 | 19 |
| 19 | 12 | 75 | 32 | 38 | 54 | 29 | 30 | 23.6 |
| 22 | 14 | 85 | 37 | 44 | 61 | 33 | 34 | 36.6 |
| 26 | 14 | 95 | 41 | 45 | 65 | 35 | 37 | 41 |
| 30 | 16 | 110 | 48 | 50 | 74 | 37 | 43 | 62 |
| 34 | 16 | 120 | 52 | 55 | 80 | 42 | 50 | 74.4 |
| 40 | 16 | 140 | 58 | 60 | 88 | 45 | 55 | 108 |
| 45 | 18 | 163 | 65 | 75 | 97 | 49 | 60 | 134 |
| 50 | 20 | 170 | 72 | 77 | 106 | 51 | 65 | 174 |

## LIFTING SLING FITTINGS FOR WIRE ROPE

# SLEEVES

## Applications

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

## Design

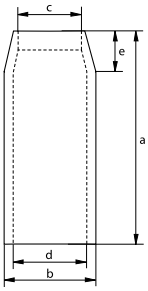
Aluminium wire rope sleeves are manufactured according to EN 13411-3. For safety during fabrication and application they are of seamless construction. Prescon carbon steel sleeves are manufactured from carbon steel. The sleeves are of seamless construction and fit industry standard dies.

## Instructions for use

For Aluminium sleeves, please refer to EN 13411-3. Prescon sleeves are recommended for use with 6 x 19 or 6 x 37 IPS or XIP (EIP), RRL, FC, or IWRC wire rope. After creating a loop end multiple progressive pressings are required to prevent flash, which will develop into a permanent mark or possibly a crack in the sleeve. A light oil lubricant should be applied to each die before pressing. The sleeve must be cleaned after the swaging operation to stimulate effective colour change. Colour change is not an indication for proper swaging, only an indication that the sleeve has been pressed. Proper swaging practices are the sling manufacturer's responsibility. Before using sleeves with other type lay, construction or grade of wire rope, it is recommended that the termination be proof loaded to prove the adequacy of the assembly. Regular inspection of the swaging machine, dies etc. must be conducted to ensure that the equipment continues to meet required standards.

C

S-6500




# Prescon sleeves

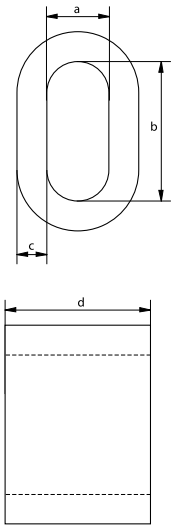
## For wire rope

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

| diameter wire rope | length | diameter outside | diameter inside | diameter inside | length | diameter outside pressed | weight per 100 pcs |
|---|---|---|---|---|---|---|---|
| mm | a mm | b mm | c mm | d mm | e mm | mm | kg |
| 6 | 25.4 | 16.7 | 8.3 | 11.9 | 7.1 | 12.7 | 2.15 |
| 8 | 38.1 | 23 | 11.1 | 15.5 | 11.1 | 18.5 | 6.50 |
| 10 | 38.1 | 23 | 11.9 | 16.7 | 11.1 | 18.5 | 5.50 |
| 11 | 51 | 31 | 14.3 | 21.4 | 15.1 | 24.9 | 11.3 |
| 13 | 51 | 31 | 15.9 | 23 | 15.1 | 24.9 | 12.5 |
| 14 | 70 | 37 | 17.5 | 26.2 | 17.9 | 30.5 | 19.5 |
| 16 | 70 | 37 | 19.1 | 27.8 | 17.9 | 30.5 | 25.9 |
| 19 | 81 | 43.6 | 23.4 | 32.5 | 21.8 | 35.8 | 39.9 |
| 22 | 90 | 51.6 | 26.2 | 38.9 | 25.4 | 41.4 | 62 |
| 25 | 102 | 58 | 29.4 | 43.7 | 28.6 | 47.8 | 85 |
| 28 | 122 | 64 | 32.5 | 49.2 | 31.8 | 53 | 118 |
| 32 | 132 | 71 | 36.5 | 55 | 35.7 | 58 | 154 |
| 34 - 35 | 148 | 76 | 39.7 | 60 | 39.7 | 62 | 195 |
| 37 - 38 | 159 | 83 | 42.9 | 66.7 | 42.9 | 67 | 227 |
| 44 - 45 | 184 | 102 | 49.2 | 79 | 50 | 77 | 367 |
| 50 - 52 | 216 | 111 | 57 | 92 | 57 | 89 | 510 |
| 56 - 57 | 243 | 128 | 64 | 102 | 64 | 103 | 862 |
| 62 - 64 | 267 | 140 | 70 | 114 | 71 | 113 | 1043 |
| 68 - 70 | 292 | 146 | 76 | 121 | 79 | 118 | 1270 |
| 75 - 76 | 305 | 152 | 83 | 127 | 86 | 124 | 1334 |
| 87 - 89 | 356 | 178 | 98 | 148 | 100 | 145 | 2105 |
| 93 - 95 | 381 | 191 | 103 | 160 | 108 | 156 | 2495 |
| 100 - 102 | 406 | 206 | 111 | 173 | 114 | 180 | 3130 |
| 112 - 114 | 457 | 232 | 124 | 194 | 129 | 187 | 4536 |

C

A-6550




# Aluminium sleeves

## For wire rope

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

| size | diameter | width | thickness | length | weight per 1000 pcs |
|---|---|---|---|---|---|
| | a mm | b mm | c mm | d mm | kg |
| 1 | 1.2 | 2.4 | 0.65 | 5 | 0.10 |
| 1.5 | 1.7 | 3.4 | 0.75 | 6 | 0.21 |
| 2 | 2.2 | 4.4 | 0.85 | 7 | 0.24 |
| 2.5 | 2.7 | 5.4 | 1.05 | 9 | 0.50 |
| 3 | 3.3 | 6.6 | 1.25 | 11 | 0.84 |
| 3.5 | 3.8 | 7.6 | 1.5 | 13 | 1.32 |
| 4 | 4.4 | 8.8 | 1.7 | 14 | 2 |
| 4.5 | 4.9 | 9.8 | 1.9 | 16 | 2.61 |
| 5 | 5.5 | 11 | 2.1 | 18 | 5 |
| 6 | 6.6 | 13.2 | 2.5 | 21 | 5 |
| 6.5 | 7.2 | 14.4 | 2.7 | 23 | 7.55 |
| 7 | 7.8 | 15.6 | 2.9 | 25 | 9.53 |
| 8 | 8.8 | 17.6 | 3.3 | 28 | 15 |
| 9 | 9.9 | 19.8 | 3.7 | 32 | 19.8 |
| 10 | 10.9 | 21.8 | 4.1 | 35 | 25 |
| 11 | 12.1 | 24.2 | 4.5 | 39 | 35.8 |
| 12 | 13.2 | 26.4 | 4.9 | 42 | 45.8 |
| 13 | 14.2 | 28.4 | 5.4 | 46 | 59.7 |
| 14 | 15.3 | 30.6 | 5.8 | 49 | 73.5 |
| 16 | 17.5 | 35 | 6.7 | 56 | 111 |
| 18 | 19.6 | 39.2 | 7.6 | 63 | 159 |
| 20 | 21.7 | 43.4 | 8.4 | 70 | 220 |
| 22 | 24.3 | 48.6 | 9.2 | 77 | 280 |
| 24 | 26.4 | 52.8 | 10 | 84 | 376 |
| 26 | 28.5 | 57 | 10.9 | 91 | 481 |
| 28 | 31 | 62 | 11.7 | 98 | 603 |
| 30 | 33.1 | 66.2 | 12.5 | 105 | 735 |
| 32 | 35.2 | 70.4 | 13.4 | 112 | 897 |
| 34 | 37.8 | 75.6 | 14.2 | 119 | 1080 |
| 36 | 39.8 | 79.6 | 15 | 126 | 1275 |
| 38 | 41.9 | 83.8 | 15.8 | 133 | 1490 |
| 40 | 44 | 88 | 16.6 | 140 | 1734 |
| 42 | 46.2 | 92.4 | 17.5 | 147 | 1940 |
| 44 | 48.4 | 96.8 | 18.3 | 154 | 2314 |
| 46 | 50.6 | 101.2 | 19.2 | 161 | 2557 |
| 48 | 52.8 | 105.6 | 20 | 168 | 3010 |
| 50 | 55 | 110 | 20.8 | 175 | 3400 |
| 52 | 57.2 | 114.4 | 21.6 | 182 | 3813 |
| 54 | 59.4 | 118.8 | 22.5 | 189 | 4120 |
| 56 | 61.6 | 123.2 | 23.3 | 196 | 4772 |
| 58 | 63.8 | 127.6 | 24.2 | 203 | 5200 |
| 60 | 66 | 132 | 25 | 210 | 5880 |

## EN 13411-3 Table A.2 - Ferrule size numbers

| Rope diameter | | | Ferrule size number | | | |
|---|---|---|---|---|---|---|
| | | | Case 1 | Case 2 | Case 3 | Case 4 |
| | | | single layer round strand ropes with FC and cable laid ropes | single layer round strand ropes with IWRC and rotation-resistant round strand ropes | single layer round strand ropes with IWRC, rotation-resistant ropes and parallel-closed ropes | spiral strands 2 ferrules |
| Nominal | Measured | | | | | |
| d | from | to | | | | |
| mm | mm | mm | C* ≥ 0,283 | C* ≤ 0,487 | 0,487< C* ≤ 0,613 | C* ≤ 0,613 |
| 2.5 | 2.5 | 2.7 | 2.5 | 3 | - | - |
| 3 | 2.8 | 3.2 | 3 | 3.5 | - | - |
| 3.5 | 3.3 | 3.7 | 3.5 | 4 | - | - |
| 4 | 3.8 | 4.3 | 4 | 4.5 | - | 5 |
| 4.5 | 4.4 | 4.8 | 4.5 | 5 | - | 6 |
| 5 | 4.9 | 5.4 | 5 | 6 | - | 6.5 |
| 6 | 5.5 | 5.9 | 6 | 6.5 | - | 7 |
| | 6 | 6.4 | | | 7 | |
| 6.5 | 6.5 | 6.9 | 6.5 | 7 | 8 | 8 |
| 7 | 7 | 7.4 | 7 | 8 | 9 | 9 |
| 8 | 7.5 | 7.9 | 8 | 9 | 9 | 10 |
| | 8 | 8.4 | | | 10 | |
| 9 | 8.5 | 8.9 | 9 | 10 | 10 | 11 |
| | 9 | 9.5 | | | 11 | |
| 10 | 9.6 | 9.9 | 10 | 11 | 11 | 12 |
| | 10 | 10.5 | | | 12 | |
| 11 | 10.6 | 10.9 | 11 | 12 | 12 | 13 |
| | 11 | 11.6 | | | 13 | |
| 12 | 11.7 | 11.9 | 12 | 13 | 13 | 14 |
| | 12 | 12.6 | | | 14 | |
| 13 | 12.7 | 12.9 | 13 | 14 | 14 | 16 |
| | 13 | 13.7 | | | 16 | |
| 14 | 13.8 | 13.9 | 14 | 16 | 16 | 18 |
| | 14 | 14.7 | | | 18 | |
| 16 | 14.8 | 15.9 | 16 | 18 | 18 | 20 |
| | 16 | 16.8 | | | 20 | |
| 18 | 16.9 | 17.9 | 18 | 20 | 20 | 22 |
| | 18 | 18.9 | | | 22 | |
| 20 | 19 | 19.9 | 20 | 22 | 22 | 24 |
| | 20 | 21 | | | 24 | |
| 22 | 21.1 | 21.9 | 22 | 24 | 24 | 26 |
| | 22 | 23.1 | | | 26 | |
| 24 | 23.2 | 23.9 | 24 | 26 | 26 | 28 |
| | 24 | 25.2 | | | 28 | |
| 26 | 25.3 | 25.9 | 26 | 28 | 28 | 30 |
| | 26 | 27.3 | | | 30 | |
| 28 | 27.4 | 27.9 | 28 | 30 | 30 | 32 |
| | 28 | 29.4 | | | 32 | |
| 30 | 29.5 | 29.9 | 30 | 32 | 32 | 34 |
| | 30 | 31.5 | | | 34 | |
| 32 | 31.6 | 31.9 | 32 | 34 | 34 | 36 |
| | 32 | 33.6 | | | 36 | |
| 34 | 33.7 | 33.9 | 34 | 36 | 36 | 38 |
| | 34 | 35.7 | | | 38 | |
| 36 | 35.8 | 35.9 | 36 | 38 | 38 | 40 |
| | 36 | 37.8 | | | 40 | |
| 38 | 37.9 | 37.9 | 38 | 40 | 40 | 44 |
| | 38 | 39.9 | | | 44 | |
| 40 | 40 | 42 | 40 | 44 | 48 | 48 |
| 44 | 42.1 | 43.9 | 44 | 48 | 48 | 48 |
| | 44 | 46.2 | | | 52 | 52 |
| 48 | 46.3 | 47.9 | 48 | 52 | 52 | 52 |
| | 48 | 50.4 | | | 56 | 56 |
| 52 | 50.5 | 51.9 | 52 | 56 | 56 | 60 |
| | 52 | 54.6 | | | 60 | |
| 56 | 54.7 | 55.9 | 56 | 60 | - | - |
| | 56 | 58.8 | | | - | - |
| 60 | 58.9 | 59.9 | 60 | - | - | - |
| | 60 | 63 | | - | - | - |

* for metallic cross-sectional area factor C refer to EN 12385 parts 4, 5 & 10

## LIFTING SLING FITTINGS FOR WIRE ROPE

# SOCKETS

## Applications

**Sockets are used as a connection to attach steel wire rope to a fixed point. This may be an anchoring system for tubes or pipes, anchor wires for dredging materials, anchor cables for oil platforms, fastening points for towing cables or for fastening cables in constructions such as bridges, roofs etc. Sockets are designed for in-line use only. Sockets are the strongest steel wire rope end fittings available. If they are assembled in the proper way they meet or exceed the breaking strength of the steel wire rope.**

## Design

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

These sockets are generally marked with:

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

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

## Socket Lock Socketing Resin

To offer a complete assortment, Green Pin®'s parent company, Royal Van Beest, is the distributor of Socket Lock Socketing Resin. Socket Lock Socketing Resin is designed for speltering wire rope. Socket Lock is developed with a unique formula that uses polyester fibres to thicken the resin and provide a homogenous (consistent) resin cone throughout. Unlike traditional products, which use large grain silica to thicken the resin, the fibres of the innovative Socket Lock Socketing Resin will suspend within the mixed resin and provide a consistent resin cone from top to bottom. The consistency of the resin cone prevents the formation of surface cracking once the resin is hardened. The formula is developed to ensure the resin flows easily and can optimally penetrate the bottom of the socket. This will result in an excellent resin cone, providing the end user with a high-quality socket termination. Socket Lock Socketing Resin kits are now available from stock at Green Pin® and can be ordered in kit sizes of 250, 500, 1000 and 2000 cc.

Additionally, Green Pin® also has the Socket Lock Socketing Booster Pack available. The booster packs are used for cold temperature socketing and are required when ambient temperatures are below +16 °C (+60 °F). For instructions for use, please consult the Green Pin® website: www.greenpin.com/socketlock.

# Instructions for use

## 1) Open spelter sockets – closed spelter sockets

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

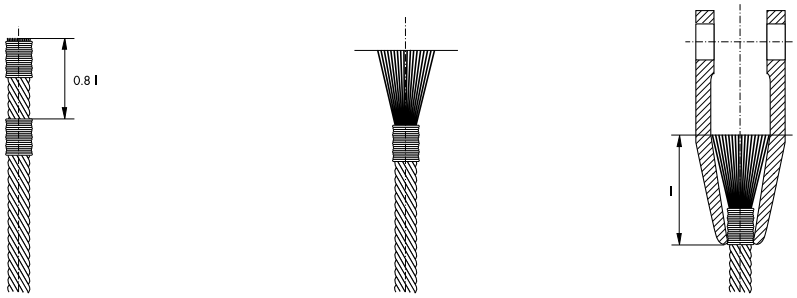



Figure 1

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

## 2) Open wedge sockets

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

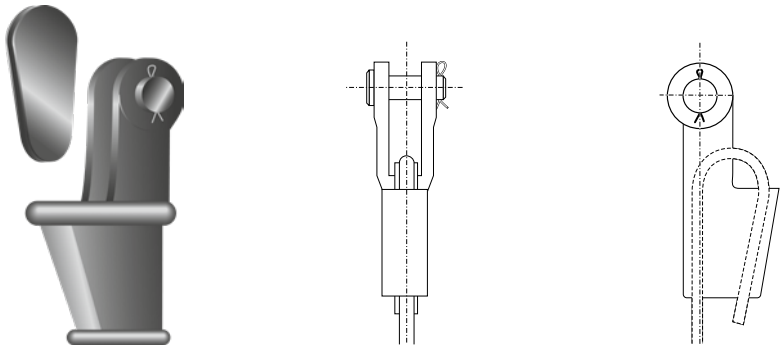


Figure 2

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

- before use always inspect the socket, the wedge and the pin;
- use only with standard 6-8 strand wire rope;
- in case of use with non-rotating wire rope there is a risk of core slippage or loss of rope lay. Instruction from the wire rope manufacturer must be followed to prevent this by; for example welding, brazing or seizing the dead end before introduction in the socket. The minimum tail length is 20 times the wire rope diameter. Furthermore, the wire rope construction must be checked for suitability of bending around the radius of the wedge. Additional measures might be necessary to prevent distortion;
- always be sure that socket and wedge have the correct size for the wire rope diameter;
- the loaded part of the steel wire rope should be mounted in the centre line of the pin;
- when installing the wire rope, always pre-load the wedge with the wire rope in place;
- never weld the tail; the tail should have a length of at least 6 times the wire rope diameter with a minimum of 150 mm. Secure the dead end of the rope with a wire rope clip as shown in figure 3;
- before applying the first load always use a hammer to seat the wedge and rope into the socket as deep as possible;
- check the assembly regularly; re-tighten or re-position if necessary;
- never side load a wedge socket as it has not been designed for that purpose;
- load may slip if the connection is not properly installed;
- the efficiency of a wire rope - wedge socket connection is 80% of the minimum breaking load of the wire, but is limited to the minimum breaking load of the socket;
- only use the original wedge supplied by the manufacturer of the socket and be sure it is suitable for the diameter of the rope used;
- never use a wedge from any other supplier than the original socket supplier as the dimensions will not match.

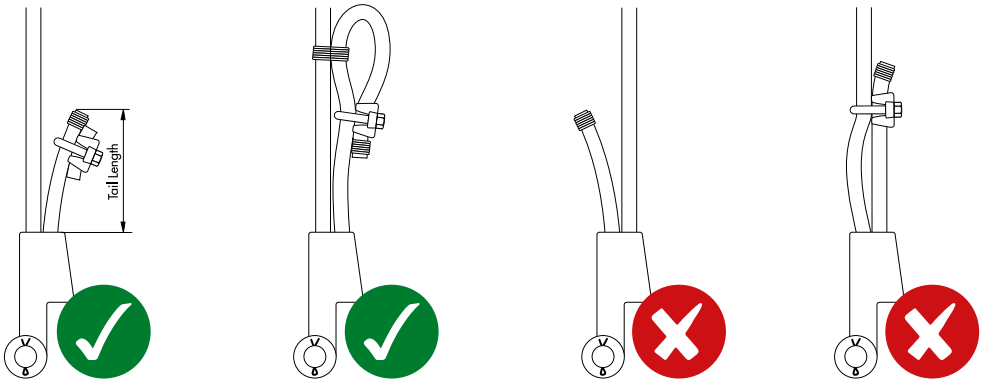



Figure 3

### 3) Open Long wedge sockets

Verify whether the wedge, socket and wire rope clip match to the wire rope size. In case of the long wedge sockets (G-6419 and G-6429) the correct wire rope size shall be verified using the "GO" and "NO GO" hole (see Figure 4);

- The wire rope MUST pass through the "GO" hole in the wedge;
- The wire rope shall NOT pass through the "NO-GO" hole in the wedge.

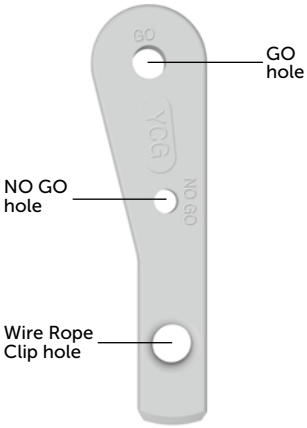



Figure 4

In case of the long wedge sockets (G-6419 and G-6429) mount the corresponding Wire Rope Clip (G-6240) on the dead end section, providing a grip for the tail of the wire rope (see Figure 5 below). The tail length of the wire rope has to be at least 6 times the wire rope diameter with a minimum of 150 mm.

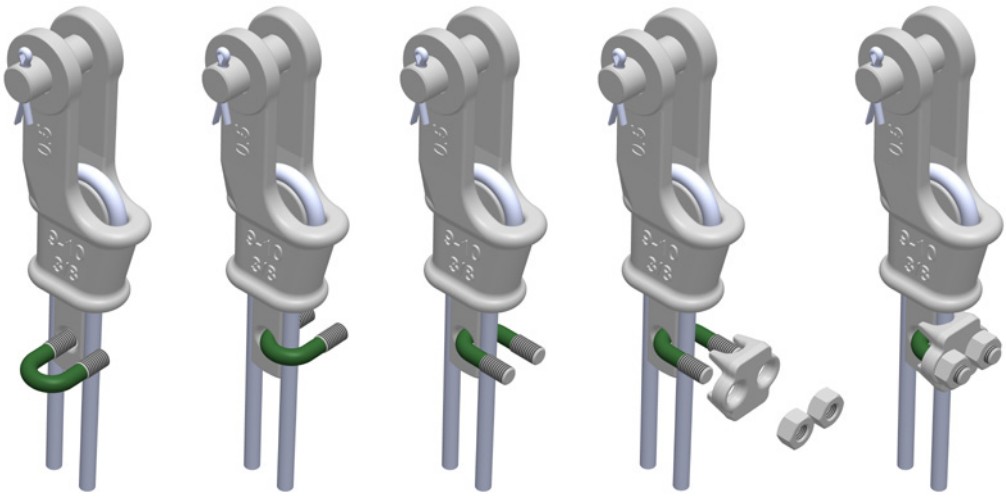


Figure 5

### 4) Swage sockets

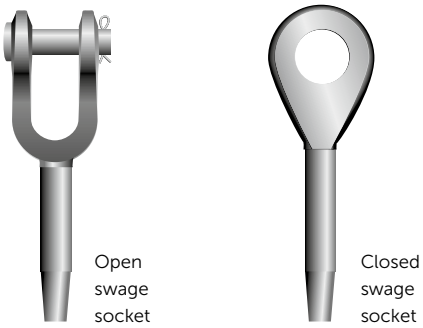



Figure 6

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

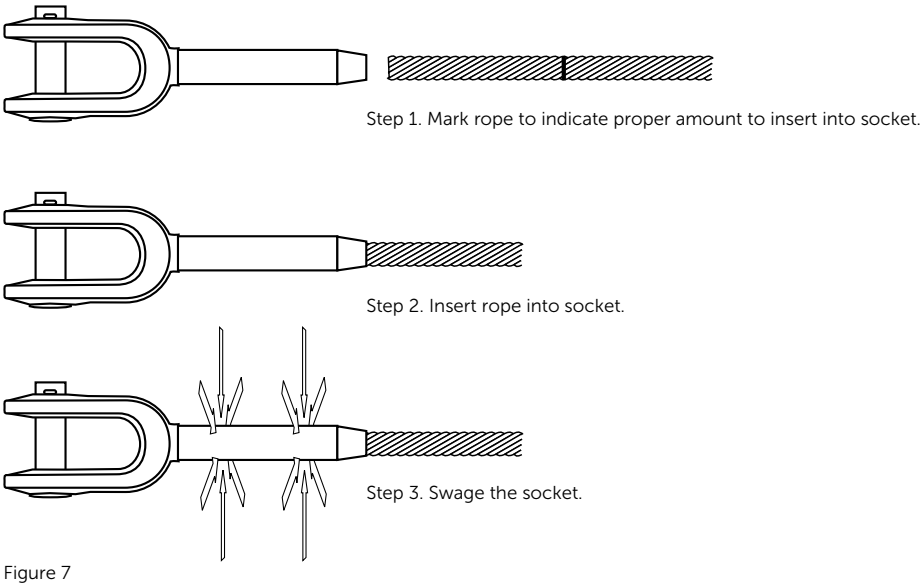



Figure 7

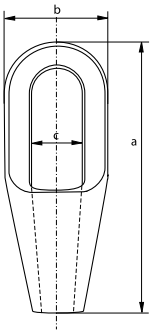
INFO For more instructions on swaging we refer to the swaging instruction (PI-03-14 in the FAQ section) on our website.

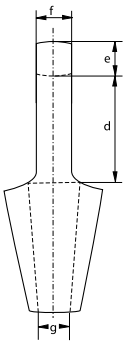
Sockets must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure. Inspection should take place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

# Green Pin® Closed Spelter Socket

Scan for additional product details

G-6411




- **Material:** high tensile steel, quenched and tempered
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

| number | minimum breaking load | diameter wire rope | length | width | width inside bow | length inside bow | thickness bow | thickness bow | opening | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 296 | 8 | 6 - 7 | 101 | 37 | 22 | 40 | 11 | 13 | 9 | 0.27 |
| 297 | 12 | 8 - 10 | 119 | 43 | 25 | 48 | 14 | 17.5 | 12 | 0.43 |
| 298 | 20 | 11 - 13 | 140 | 52 | 30 | 58 | 18 | 23.5 | 15 | 0.76 |
| 299 | 25 | 14 - 16 | 162 | 68 | 37 | 66 | 21 | 26 | 17.5 | 1.52 |
| 200 | 45 | 18 - 19 | 194 | 76 | 42 | 78 | 27 | 32 | 21.5 | 2.31 |
| 201 | 70 | 20 - 22 | 224 | 92 | 47 | 90 | 33 | 38 | 24 | 4.31 |
| 204 | 85 | 23 - 26 | 253 | 104 | 57 | 103 | 36 | 44 | 28 | 6.03 |
| 207 | 105 | 27 - 30 | 282 | 114 | 63 | 116 | 39 | 51 | 32 | 7.99 |
| 212 | 136 | 31 - 36 | 312 | 127 | 70 | 130 | 43 | 57 | 38 | 10.9 |
| 215 | 150 | 37 - 39 | 358 | 136 | 79 | 155 | 51 | 63 | 41 | 13.8 |
| 217 | 170 | 40 - 42 | 390 | 146 | 83 | 171 | 54 | 70 | 44 | 17.4 |
| 219 | 225 | 43 - 48 | 443 | 171 | 93 | 198 | 55 | 76 | 51 | 26.9 |
| 222 | 280 | 49 - 54 | 502 | 193 | 100 | 224 | 62 | 82 | 57 | 38.8 |
| 224 | 360 | 55 - 60 | 548 | 216 | 112 | 247 | 73 | 92 | 63 | 54.7 |
| 226 | 425 | 61 - 68 | 597 | 241 | 140 | 270 | 79 | 102 | 73 | 70.8 |
| 227 | 460 | 69 - 75 | 644 | 273 | 159 | 286 | 79 | 124 | 79 | 102 |
| 228 | 560 | 76 - 80 | 686 | 292 | 171 | 298 | 83 | 133 | 86 | 123 |
| 229 | 625 | 81 - 86 | 743 | 311 | 184 | 311 | 102 | 146 | 92 | 152 |
| 230 | 720 | 87 - 93 | 788 | 330 | 197 | 330 | 102 | 159 | 99 | 178 |
| 231 | 875 | 94 - 102 | 845 | 362 | 216 | 356 | 108 | 178 | 108 | 233 |
| 233 | 1200 | 108 - 115 | 1000 | 405 | 235 | 425 | 125 | 190 | 125 | 329 |
| 240 | 1300 | 120 - 130 | 1150 | 450 | 260 | 525 | 125 | 200 | 143 | 453 |

CAD

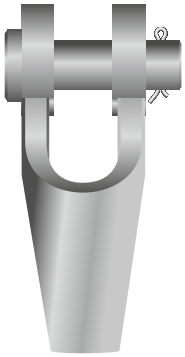
## Socket Lock Socketing Resin

It is advised to use the Socket Lock Socketing Resin in combination with the Green Pin® Spelter Sockets. Go to **www.greenpin.com/socketlock** for more information about the Socket Lock Socketing Resin. To offer a complete assortment, Green Pin®'s parent company, Royal Van Beest, is the official distributor of Socket Lock Socketing Resin. Green Pin® can supply the Socket Lock resin kit sizes 250, 500, 1000 and 2000 cc from stock.

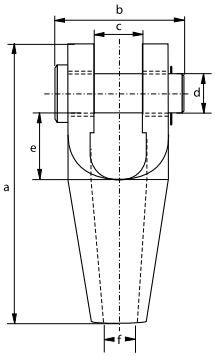
# Green Pin® Open Spelter Socket CP

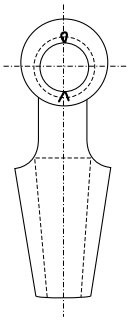
## Open spelter socket with cotter pin

Scan for additional product details



G-6412



- **Material:** high tensile steel, quenched and tempered
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

| number | minimum breaking load | diameter wire rope | length | width | width inside | diameter pin | length inside | opening | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | kg | kg |
| 196 | 8 | 6 - 7 | 109 | 51 | 19 | 16 | 33 | 9 | 0.9 | 0.47 |
| 197 | 12 | 8 - 10 | 124 | 62 | 21 | 21 | 34 | 12 | 0.17 | 0.71 |
| 198 | 20 | 11 - 13 | 143 | 66 | 26 | 25 | 37 | 15 | 0.26 | 1.04 |
| 199 | 25 | 14 - 16 | 172 | 82 | 33 | 30 | 49 | 18 | 0.47 | 1.83 |
| 100 | 45 | 18 - 19 | 205 | 95 | 38 | 35 | 58 | 21 | 0.74 | 3.09 |
| 104 | 60 | 20 - 22 | 235 | 110 | 44 | 41 | 68 | 24 | 1.19 | 4.68 |
| 108 | 85 | 23 - 26 | 275 | 130 | 51 | 51 | 75 | 28 | 2.15 | 8.35 |
| 111 | 105 | 27 - 30 | 306 | 144 | 57 | 57 | 85 | 32 | 2.95 | 11.4 |
| 115 | 136 | 31 - 36 | 338 | 155 | 63 | 64 | 95 | 38 | 4.02 | 15.5 |
| 118 | 150 | 37 - 39 | 394 | 178 | 76 | 70 | 127 | 41 | 5.54 | 23.2 |
| 120 | 170 | 40 - 42 | 418 | 187 | 76 | 76 | 127 | 44 | 6.89 | 27.4 |
| 125 | 225 | 43 - 48 | 468 | 213 | 89 | 89 | 133 | 51 | 10.6 | 42.4 |
| 128 | 280 | 49 - 54 | 552 | 240 | 101 | 95 | 180 | 57 | 13.7 | 63.9 |
| 130 | 360 | 55 - 60 | 598 | 270 | 113 | 108 | 196 | 63 | 19.9 | 91.1 |
| 132 | 425 | 61 - 68 | 654 | 303 | 127 | 121 | 212 | 73 | 28.1 | 127 |
| 135 | 460 | 69 - 75 | 696 | 349 | 133 | 127 | 215 | 79 | 35.6 | 164 |
| 138 | 560 | 76 - 80 | 737 | 371 | 146 | 133 | 219 | 86 | 41.5 | 199 |
| 140 | 625 | 81 - 86 | 788 | 391 | 159 | 140 | 228 | 92 | 48.5 | 235 |
| 142 | 720 | 87 - 93 | 852 | 411 | 171 | 152 | 242 | 99 | 59.8 | 294 |
| 144 | 875 | 94 - 102 | 914 | 447 | 191 | 178 | 254 | 108 | 89 | 393 |
| 146 | 1200 | 108 - 115 | 1160 | 489 | 206 | 193 | 368 | 125 | 114 | 642 |

CAD

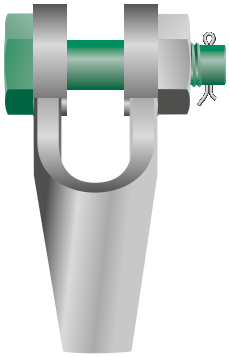
## Socket Lock Socketing Resin

It is advised to use the Socket Lock Socketing Resin in combination with the Green Pin® Spelter Sockets. Go to **www.greenpin.com/socketlock** for more information about the Socket Lock Socketing Resin. To offer a complete assortment, Green Pin®'s parent company, Royal Van Beest, is the official distributor of Socket Lock Socketing Resin. Green Pin® can supply the Socket Lock resin kit sizes 250, 500, 1000 and 2000 cc from stock.

# Green Pin® Open Spelter Socket BN

## Open spelter socket with safety bolt

Scan for additional product details

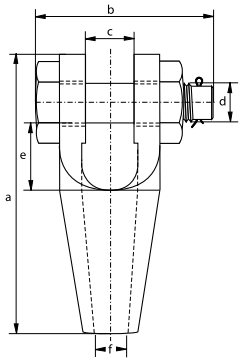


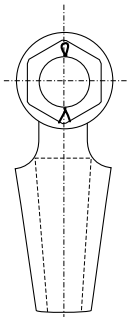
G-6422

- **Material:** high tensile steel, quenched and tempered
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

| number | minimum breaking load | diameter wire rope | length | width | width inside | diameter pin | length inside | opening | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | kg | kg |
| 196 | 8 | 6 - 7 | 109 | 69 | 19 | 16 | 33 | 9 | 0.15 | 0.53 |
| 197 | 12 | 8 - 10 | 124 | 83 | 21 | 20 | 35 | 12 | 0.32 | 0.86 |
| 198 | 20 | 11 - 13 | 143 | 101 | 26 | 25 | 37 | 15 | 0.61 | 1.40 |
| 199 | 25 | 14 - 16 | 172 | 124 | 33 | 30 | 49 | 18 | 1.08 | 2.43 |
| 100 | 45 | 18 - 19 | 205 | 138 | 38 | 35 | 58 | 21 | 1.59 | 3.93 |
| 104 | 60 | 20 - 22 | 235 | 148 | 44 | 41 | 68 | 24 | 2.3 | 5.74 |
| 108 | 85 | 23 - 26 | 275 | 176 | 51 | 50 | 76 | 28 | 4.06 | 10.3 |
| 111 | 105 | 27 - 30 | 306 | 193 | 57 | 57 | 85 | 32 | 5.51 | 14.0 |
| 115 | 136 | 31 - 36 | 338 | 210 | 63 | 63 | 95 | 38 | 7.44 | 18.9 |
| 118 | 150 | 37 - 39 | 394 | 230 | 76 | 70 | 127 | 41 | 9.40 | 27.1 |
| 120 | 170 | 40 - 42 | 418 | 244 | 76 | 77 | 126 | 44 | 12.1 | 32.7 |

CAD



## Socket Lock Socketing Resin

It is advised to use the Socket Lock Socketing Resin in combination with the Green Pin® Spelter Sockets. Go to **www.greenpin.com/socketlock** for more information about the Socket Lock Socketing Resin. To offer a complete assortment, Green Pin®'s parent company, Royal Van Beest, is the official distributor of Socket Lock Socketing Resin. Green Pin® can supply the Socket Lock resin kit sizes 250, 500, 1000 and 2000 cc from stock.

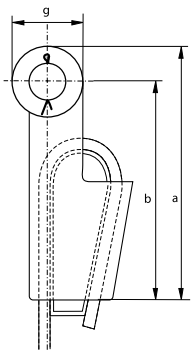
# Green Pin® Open Wedge Socket CP

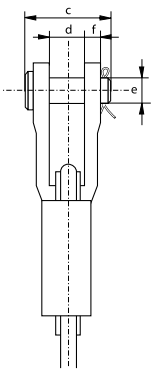
## Open wedge socket with cotter pin

Scan for additional product details

- **Material:** high tensile steel, quenched and tempered
- **Standard:** generally to EN 13411-6
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

G-6413




| number | minimum breaking load | diameter wire rope | length | length to center pin | width | width inside | diameter pin | thickness side plates | diameter eye | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg | kg |
| 0.25 | 8 | 7 - 8 | 128 | 110 | 51 | 18 | 16 | 9 | 36 | 0.09 | 0.83 |
| 0.5 | 12 | 9 - 10 | 165 | 142 | 62 | 20.5 | 21 | 11 | 46 | 0.17 | 1.58 |
| 1 | 20 | 11 - 13 | 175 | 146 | 66 | 25 | 25 | 12 | 57 | 0.26 | 2.50 |
| 2 | 25 | 14 - 16 | 211 | 176 | 82 | 31 | 30 | 15 | 70 | 0.47 | 4.42 |
| 3 | 40 | 18 - 19 | 252 | 212 | 95 | 38 | 35 | 16 | 80 | 0.74 | 7.76 |
| 4 | 55 | 20 - 22 | 288 | 240 | 110 | 44 | 41 | 19 | 95 | 1.19 | 11.3 |
| 5 | 75 | 24 - 26 | 329 | 274 | 130 | 51 | 51 | 22 | 110 | 2.16 | 16.5 |
| 6 | 90 | 27 - 29 | 375 | 310 | 144 | 57 | 57 | 25 | 130 | 2.95 | 21.8 |
| 7 | 110 | 30 - 32 | 423 | 350 | 155 | 63 | 64 | 28 | 146 | 4.02 | 31 |
| 8 | 125 | 34 - 36 | 474 | 400 | 163 | 69 | 64 | 28 | 148 | 4.22 | 39.6 |
| 9 | 150 | 37 - 39 | 527 | 450 | 178 | 76 | 70 | 30 | 153 | 5.54 | 49.4 |
| 10 | 170 | 40 - 42 | 580 | 500 | 187 | 76 | 76 | 33 | 160 | 6.88 | 68.1 |
| 11 | 225 | 43 - 48 | 650 | 550 | 213 | 89 | 89 | 39 | 186 | 10.6 | 94.1 |

CAD

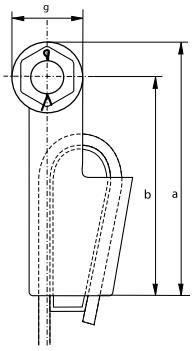
# Green Pin® Open Wedge Socket BN

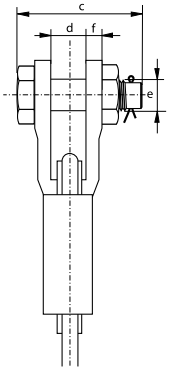
## Open wedge socket with safety bolt

Scan for additional product details

G-6423

- **Material:** high tensile steel, quenched and tempered
- **Standard:** generally to EN 13411-6
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes




| number | minimum breaking load | diameter wire rope | length | length to center pin | width | width inside | diameter pin | thickness side plates | diameter eye | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg | kg |
| 0.25 | 8 | 7 - 8 | 128 | 110 | 69 | 18 | 16 | 9 | 36 | 0.15 | 0.90 |
| 0.5 | 12 | 9 - 10 | 165 | 142 | 83 | 20.5 | 20 | 11 | 46 | 0.32 | 1.72 |
| 1 | 20 | 11 - 13 | 175 | 146 | 101 | 25 | 25 | 12 | 57 | 0.61 | 2.86 |
| 2 | 25 | 14 - 16 | 211 | 176 | 124 | 31 | 30 | 15 | 70 | 1.08 | 5.03 |
| 3 | 40 | 18 - 19 | 252 | 212 | 138 | 38 | 35 | 16 | 80 | 1.59 | 8.61 |
| 4 | 55 | 20 - 22 | 288 | 240 | 148 | 44 | 41 | 19 | 95 | 2.25 | 12.4 |
| 5 | 75 | 24 - 26 | 329 | 274 | 176 | 51 | 50 | 22 | 110 | 4.06 | 18.4 |
| 6 | 90 | 27 - 29 | 375 | 310 | 193 | 57 | 57 | 25 | 130 | 5.51 | 24.3 |
| 7 | 110 | 30 - 32 | 423 | 350 | 210 | 63 | 63 | 28 | 146 | 7.44 | 34.4 |
| 8 | 125 | 34 - 36 | 474 | 400 | 216 | 69 | 65 | 28 | 148 | 7.79 | 43.2 |
| 9 | 150 | 37 - 39 | 527 | 450 | 230 | 76 | 70 | 30 | 153 | 9.4 | 53.2 |
| 10 | 170 | 40 - 42 | 580 | 500 | 244 | 76 | 77 | 33 | 160 | 12.1 | 73.3 |

CAD

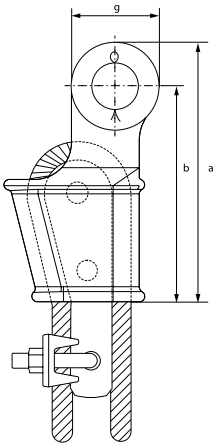
Scan for additional product details

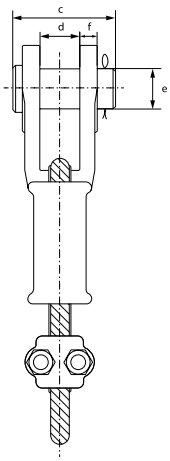
# Green Pin® Open Long Wedge Socket CP

## Open wedge socket with longer wedge, wire rope clip and cotter pin

G-6419

- **Material:** high tensile steel
- **Standard:** generally to EN 13411-6
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes




| number | minimum breaking load | diameter wire rope | length | length to center pin | width | width inside | diameter pin | thickness side plates | diameter eye | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg | kg |
| 0.5 | 12 | 9 - 10 | 165 | 142 | 62 | 20.5 | 21 | 11 | 46 | 0.17 | 1.88 |
| 1 | 20 | 11 - 13 | 175 | 146 | 66 | 25 | 25 | 12 | 57 | 0.26 | 3.02 |
| 2 | 25 | 14 - 16 | 211 | 176 | 82 | 31 | 30 | 15 | 70 | 0.47 | 5.16 |
| 3 | 40 | 18 - 19 | 252 | 212 | 95 | 38 | 35 | 16 | 80 | 0.74 | 8.80 |
| 4 | 55 | 20 - 22 | 288 | 240 | 110 | 44 | 41 | 19 | 95 | 1.19 | 12.8 |
| 5 | 75 | 24 - 26 | 329 | 274 | 130 | 51 | 51 | 22 | 110 | 2.16 | 18.30 |
| 6 | 90 | 27 - 29 | 375 | 310 | 144 | 57 | 57 | 25 | 130 | 2.95 | 23.7 |
| 7 | 110 | 30 - 32 | 423 | 350 | 155 | 63 | 64 | 28 | 146 | 4.02 | 33.9 |

CAD

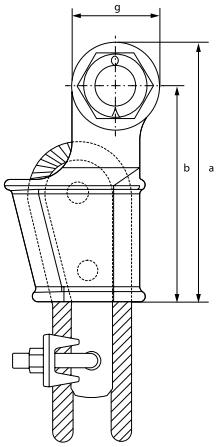
# Green Pin® Open Long Wedge Socket BN

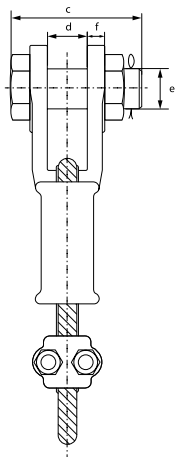
## Open wedge socket with longer wedge, wire rope clip and safety bolt

Scan for additional product details

G-6429

- **Material:** high tensile steel
- **Standard:** generally to EN 13411-6
- **Finish:** hot dipped galvanized
- **Temperature Range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes




| number | minimum breaking load | diameter wire rope | length | length to center pin | width | width inside | diameter pin | thickness side plates | diameter eye | weight pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg | kg |
| 0.5 | 12 | 9 - 10 | 165 | 142 | 83 | 20.5 | 20 | 11 | 46 | 0.32 | 2.02 |
| 1 | 20 | 11 - 13 | 175 | 146 | 101 | 25 | 25 | 12 | 57 | 0.61 | 3.88 |
| 2 | 25 | 14 - 16 | 211 | 176 | 124 | 31 | 30 | 15 | 70 | 1.08 | 5.77 |
| 3 | 40 | 18 - 19 | 252 | 212 | 138 | 38 | 35 | 16 | 80 | 1.59 | 9.65 |
| 4 | 55 | 20 - 22 | 288 | 240 | 148 | 44 | 41 | 19 | 95 | 2.25 | 13.8 |
| 5 | 75 | 24 - 26 | 329 | 274 | 176 | 51 | 50 | 22 | 110 | 4.06 | 20.2 |
| 6 | 90 | 27 - 29 | 375 | 310 | 193 | 57 | 57 | 25 | 130 | 5.51 | 26.3 |
| 7 | 110 | 30 - 32 | 423 | 350 | 210 | 63 | 63 | 28 | 146 | 7.44 | 37.4 |

CAD

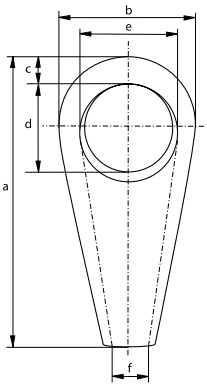
# Green Pin® Short Bow Socket

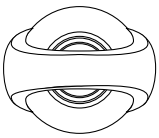
## Closed spelter socket

Scan for additional product details

- **Material:** cast alloy steel
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes

G-6416



| minimum breaking load | rope size | length | width | thicknes bow | length eye | width eye | opening | weight each |
|---|---|---|---|---|---|---|---|---|
| t | mm | a mm | b mm | c mm | d mm | e mm | f mm | kg |
| 140 | 31-36 | 262 | 132 | 38 | 83 | 75 | 39 | 7 |
| 160 | 37-42 | 305 | 152 | 40 | 103 | 92 | 44 | 10 |
| 200 | 43-48 | 356 | 178 | 48 | 120 | 112 | 51 | 16 |
| 250 | 49-54 | 390 | 200 | 54 | 132 | 120 | 57 | 21 |
| 320 | 55-60 | 440 | 220 | 62 | 148 | 135 | 64 | 28 |
| 400 | 61-68 | 498 | 250 | 68 | 165 | 150 | 73 | 44 |
| 500 | 69-75 | 540 | 274 | 75 | 178 | 164 | 79 | 68 |
| 600 | 76-80 | 585 | 295 | 76 | 195 | 175 | 89 | 70 |
| 700 | 81-86 | 625 | 320 | 82 | 216 | 194 | 92 | 81 |
| 800 | 87-93 | 670 | 350 | 92 | 220 | 202 | 99 | 112 |
| 900 | 94-102 | 700 | 375 | 100 | 235 | 215 | 108 | 112 |
| 1000 | 108-115 | 800 | 420 | 110 | 270 | 240 | 120 | 182 |

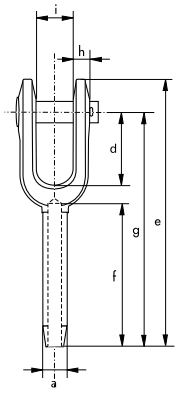
# Green Pin® Open Swage Socket CP

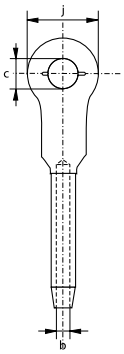
## Open type swage socket with cotter pin

Scan for additional product details

- **Material:** drop forged steel C-1035
- **Finish:** self-coloured
- **Certification:** 2.1
- **Article code:** scan QR code to see article codes

S-6414




| diameter rope | diameter before swage | diameter after swage | | diameter inside | diameter pin | length | length | length | length | thickness | width inside | width eye | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | min | max | | | | | | | | | | |
| | a | a | a | b | c | d | e | f | g | h | i | j | |
| mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 6 | 13 | 10.9 | 11.7 | 7 | 17 | 38 | 121 | 54 | 102 | 8 | 17 | 35 | 0.25 |
| 8 | 20 | 17.2 | 18 | 9 | 21 | 44 | 159 | 81 | 135 | 10 | 21 | 41 | 0.57 |
| 10 | 20 | 17.2 | 18 | 10 | 21 | 44 | 159 | 81 | 135 | 10 | 21 | 41 | 0.56 |
| 11 | 25 | 22 | 23.1 | 12 | 25 | 51 | 198 | 108 | 169 | 13 | 25 | 51 | 1.11 |
| 13 | 25 | 22 | 23.1 | 14 | 25 | 51 | 198 | 108 | 169 | 13 | 25 | 51 | 1.10 |
| 14 | 32 | 28.3 | 29.5 | 15 | 30 | 57 | 243 | 135 | 206 | 16 | 32 | 63 | 2.11 |
| 16 | 32 | 28.3 | 29.5 | 17 | 30 | 57 | 243 | 135 | 206 | 16 | 32 | 63 | 2.06 |
| 19 | 39 | 34.7 | 36.1 | 20 | 35 | 70 | 297 | 162 | 254 | 19 | 38 | 76 | 3.68 |
| 22 | 43 | 37.8 | 39.4 | 24 | 41 | 83 | 346 | 189 | 295 | 23 | 44 | 86 | 5.38 |
| 25 | 50 | 44.2 | 45.7 | 27 | 51 | 95 | 397 | 216 | 340 | 26 | 51 | 102 | 5.45 |
| 28 | 57 | 50.5 | 52.1 | 30 | 57 | 108 | 444 | 243 | 381 | 30 | 57 | 114 | 12 |
| 32 | 64 | 56.9 | 58.4 | 34 | 64 | 121 | 494 | 270 | 419 | 30 | 63 | 127 | 16.3 |
| 35 | 71 | 63.2 | 65 | 37 | 64 | 133 | 540 | 297 | 460 | 33 | 63 | 133 | 20.5 |
| 38 | 78 | 69.6 | 71.4 | 40 | 70 | 146 | 591 | 324 | 502 | 37 | 76 | 146 | 29.5 |
| 44 | 86 | 75.9 | 77.7 | 47 | 89 | 171 | 689 | 378 | 584 | 43 | 89 | 178 | 42.2 |
| 51 | 100 | 88.6 | 90.4 | 54 | 95 | 203 | 798 | 432 | 679 | 46 | 102 | 203 | 65.8 |
| 57 | 113 | 100.3 | 102.1 | 60 | 108 | 171 | 835 | 486 | 705 | 65 | 114 | 222 | 93.4 |
| 63 | 125 | 110.5 | 112.3 | 67 | 108 | 171 | 879 | 498 | 749 | 65 | 114 | 222 | 103 |
| 76 | 151 | 133.1 | 134.9 | 80 | 133 | 219 | 1045 | 603 | 905 | 76 | 146 | 241 | 181 |

INFO

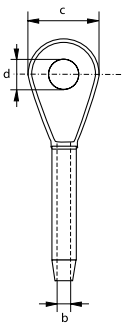
# Green Pin® Closed Swage Socket

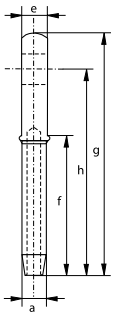
## Closed type

- **Material:** drop forged steel C-1035
- **Finish:** self-coloured
- **Certification:** 2.1
- **Article code:** scan QR code to see article codes

Scan for additional product details

S-6415




| diameter rope | diameter before swage | diameter after swage | | diameter inside | diameter | diameter eye | thickness | length | length | length | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | min | max | | | | | | | | |
| | a | a | a | b | c | d | e | f | g | h | |
| mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg |
| 6 | 13 | 10.9 | 11.7 | 7 | 37 | 19 | 13 | 54 | 111 | 89 | 0.15 |
| 8 | 20 | 17.2 | 18 | 9 | 43 | 22 | 17 | 81 | 140 | 114 | 0.35 |
| 10 | 20 | 17.2 | 18 | 10 | 43 | 22 | 17 | 81 | 140 | 114 | 0.33 |
| 11 | 25 | 22 | 23.1 | 12 | 51 | 27 | 22 | 108 | 176 | 146 | 0.66 |
| 13 | 25 | 22 | 23.1 | 14 | 51 | 27 | 22 | 108 | 176 | 146 | 0.62 |
| 14 | 32 | 28.3 | 29.5 | 15 | 63 | 32 | 29 | 135 | 222 | 184 | 1.35 |
| 16 | 32 | 28.3 | 29.5 | 17 | 63 | 32 | 29 | 135 | 222 | 184 | 1.31 |
| 19 | 39 | 34.7 | 36.1 | 20 | 76 | 37 | 33 | 162 | 264 | 219 | 2.30 |
| 22 | 43 | 37.8 | 39.4 | 24 | 89 | 43 | 38 | 189 | 308 | 257 | 3.40 |
| 25 | 50 | 44.2 | 45.7 | 27 | 102 | 52 | 44 | 216 | 349 | 292 | 4.97 |
| 28 | 57 | 50.5 | 52.1 | 30 | 114 | 59 | 51 | 243 | 387 | 324 | 7.20 |
| 32 | 64 | 56.9 | 58.4 | 34 | 127 | 65 | 57 | 270 | 438 | 365 | 10.5 |
| 35 | 71 | 63.2 | 65 | 37 | 133 | 65 | 57 | 297 | 479 | 400 | 13.3 |
| 38 | 78 | 69.6 | 71.4 | 40 | 140 | 71 | 63 | 324 | 518 | 432 | 17.7 |
| 44 | 86 | 75.9 | 77.7 | 47 | 171 | 91 | 76 | 378 | 610 | 508 | 25.3 |
| 51 | 100 | 88.6 | 90.4 | 54 | 197 | 97 | 83 | 432 | 698 | 584 | 41 |
| 57 | 113 | 100.3 | 102.1 | 60 | 219 | 110 | 102 | 486 | 756 | 632 | 55.3 |
| 63 | 125 | 110.5 | 112.3 | 67 | 219 | 110 | 102 | 498 | 791 | 667 | 64.4 |
| 76 | 151 | 133.1 | 134.9 | 80 | 235 | 135 | 137 | 603 | 959 | 816 | 114 |

INFO

## LIFTING SLING FITTINGS FOR WIRE ROPE

# SWIVELS

## Applications

**Thrust bearing swivels are used to prevent wire rope or chain from transferring their normal twisting motion to the item being lifted. Green Pin® swivels without bearings are not designed to rotate under load, but are intended as positioning devices only. For rotation under load, thrust bearing swivels should be used. Our swivels can be supplied with two types of end fittings.**

## Design

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

Each swivel is generally marked with:

- Working Load Limit - e.g. 2.4 t
- manufacturer's symbol - e.g. GP
- traceability code - e.g. A1
- CE conformity code (conformité Européenne) - CE

## Instructions for use

Swivels should be inspected before use to ensure that:

- all markings are legible;
- a swivel with the correct WLL has been selected;
- the bolt, nut or any other locking system cannot vibrate out of position;
- swivels are free from nicks, gouges and cracks;
- swivels are not distorted or unduly worn.

Also:

- swivels must be used for in-line lifting only;
- swivels may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a swivel by machining, welding, heating or bending as this may affect the WLL.

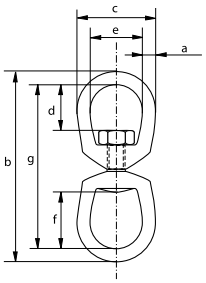
The WLL should be applied in-line. Avoid overloads. Side loading is not allowed since the swivels are not designed for this purpose. Never replace a swivel pin or nut with a pin other than the one designed for the purpose, as otherwise the swivel may not be suitable for the load imposed. Swivels must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by issues such as wear, misuse and overloading, which may lead to deformation and alteration of the material structure. Inspection should take place at least every six months and more frequently when the swivels are used in severe operating conditions.

Scan for additional product details

# Green Pin® EE Swivel

## Swivel with eye-eye end-fitting

G-7713




- **Material:** high tensile steel, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Standard:** US Federal Spec. RR-C-271, Type VII, Class 2
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** for WLL 8.2 t and 20.5 t swivels both eye parts are equipped with a nut

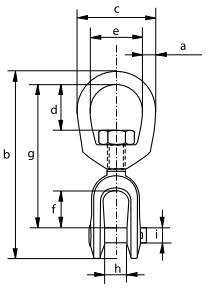
| working load limit | diameter | length outside | width outside | length inside | width inside | length inside | length | weight each |
|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 0.4 | 6 | 87 | 32 | 18 | 19 | 27 | 75 | 0.10 |
| 0.6 | 8 | 107 | 41 | 21 | 25 | 32 | 91 | 0.18 |
| 1.12 | 10 | 131 | 51 | 24 | 32 | 38 | 111 | 0.30 |
| 1.63 | 13 | 164 | 64 | 33 | 38 | 51 | 138 | 0.60 |
| 2.4 | 16 | 198 | 76 | 40 | 45 | 61 | 166 | 1 |
| 3.3 | 19 | 221 | 89 | 45 | 51 | 67 | 183 | 1.79 |
| 4.54 | 22 | 257 | 102 | 53 | 57 | 78 | 213 | 2.55 |
| 5.7 | 25 | 298 | 114 | 59 | 64 | 86 | 248 | 4.06 |
| 8.2 | 32 | 357 | 143 | 68 | 80 | 68 | 293 | 8.48 |
| 20.5 | 38 | 541 | 198 | 110 | 122 | 110 | 465 | 25.7 |

CAD

# Green Pin® JE Swivel CP

## Swivel with jaw-eye end-fitting and cotter pin

G-7723




- **Material:** high tensile steel, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Standard:** US Federal Spec. RR-C-271, Type VII, Class 3
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Article code:** scan QR code to see article codes

| working load limit | diameter | length | width outside | length inside | width inside | length inside | length | width inside | diameter pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | kg |
| 0.4 | 6 | 88 | 32 | 18 | 19 | 22 | 67 | 12 | 6 | 0.09 |
| 0.6 | 8 | 99 | 41 | 21 | 25 | 23 | 75 | 13 | 8 | 0.16 |
| 1.12 | 10 | 122 | 51 | 24 | 32 | 27 | 92 | 16 | 10 | 0.32 |
| 1.63 | 13 | 154 | 64 | 33 | 38 | 33 | 115 | 21 | 13 | 0.57 |
| 2.4 | 16 | 184 | 76 | 40 | 45 | 38 | 135 | 26 | 16 | 0.98 |
| 3.3 | 19 | 211 | 89 | 45 | 51 | 45 | 154 | 31 | 19 | 1.88 |
| 4.54 | 22 | 244 | 102 | 53 | 57 | 52 | 178 | 31 | 23 | 2.43 |
| 5.7 | 25 | 297 | 114 | 59 | 64 | 72 | 218 | 47 | 29 | 4.02 |
| 8.2 | 32 | 335 | 143 | 68 | 80 | 72 | 240 | 57 | 35 | 7.43 |
| 20.5 | 38 | 534 | 198 | 110 | 122 | 116 | 381 | 78 | 51 | 22.1 |

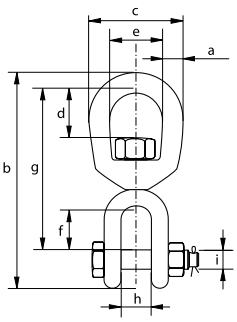
CAD

Scan for additional product details

# Green Pin® JE Swivel BN

## Swivel with jaw-eye end-fitting and safety bolt

G-7733




- **Material:** high tensile steel, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Standard:** US Federal Spec. RR-C-271, Type VII, Class 3
- **Finish:** hot dipped galvanized
- **Certification:** 2.1 2.2 CE IIA
- **Article code:** scan QR code to see article codes

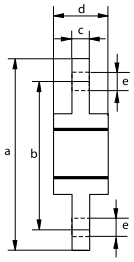
| working load limit | diameter | length outside | width outside | length inside | width inside | length inside | length | width inside | diameter pin | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | kg |
| 0.6 | 8 | 99 | 41 | 21 | 25 | 23 | 75 | 13 | 8 | 0.16 |
| 1.12 | 10 | 122 | 51 | 24 | 32 | 27 | 92 | 16 | 10 | 0.32 |
| 1.63 | 13 | 154 | 64 | 33 | 38 | 33 | 115 | 21 | 13 | 0.57 |
| 2.4 | 16 | 184 | 76 | 40 | 45 | 38 | 135 | 26 | 16 | 0.98 |
| 3.3 | 19 | 211 | 89 | 45 | 51 | 45 | 154 | 31 | 19 | 1.88 |
| 4.54 | 22 | 244 | 102 | 52 | 57 | 53 | 178 | 31 | 22 | 2.43 |
| 5.7 | 25 | 297 | 114 | 59 | 64 | 72 | 218 | 47 | 28 | 4.02 |

CAD

# Green Pin® Thrust Bearing EE Swivel

## Swivel with eye-eye end-fitting and thrust bearings

P-7740




- **Material:** carbon steel
- **Safety factor:** MBL equals 5 x WLL
- **Finish:** painted black
- **Certification:** 2.1 2.2 MTC [a] CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** equipped with two thrust ball bearings to enable rotation under load

| working load limit | length | length | thickness | diameter | diameter hole | weight each |
|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | kg |
| 1 | 174 | 128 | 12.5 | 49 | 21 | 1.40 |
| 2 | 223 | 173 | 19 | 68 | 22 | 3.50 |
| 3 | 278 | 210 | 26 | 79 | 29 | 6.40 |
| 5 | 290 | 222 | 26 | 89 | 31 | 7.90 |
| 8 | 366 | 276 | 40 | 106 | 43 | 15.2 |
| 10 | 390 | 300 | 40 | 118 | 49 | 19.1 |
| 15 | 457 | 355 | 40 | 128 | 49 | 26.6 |
| 20 | 474 | 372 | 40 | 118 | 51 | 25 |
| 30 | 612 | 472 | 64 | 138 | 59 | 50 |
| 40 | 760 | 600 | 68 | 168 | 65 | 92 |

# HOOKS

## Applications

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

## Design

There are different types of hooks with specific designs to suit various purposes.

Hooks attachment options to sling:
- Hook with an eye at the top
- Hook with a swivel eye at the top

Hook designs:
- Self-locking hook
- Sling hook
- Sliding Choker Hook

Hooks are generally marked with:

| | |
|---|---|
| • Working Load Limit (specific products) | - e.g. 5.4 t |
| • manufacturer's symbol | - e.g. GP |
| • traceability code | - e.g. H-AB or HA |
| • steel grade | - e.g. 4 or 8 |
| • size in mm and/or inch (specific products) | - e.g. 13 and/or $^1/_2$" |
| • item code (specific products) | - e.g. CSO |
| • origin (specific products) | - e.g. France |

### Examples of do's and don'ts

A hook cannot be used as a clamp.

Don't use hooks without latch, as an exception is the foundry hook.

Hook body and latch may not be bent. This is a sign the hook is overloaded.

## Instructions for use

Wire rope hooks, should be inspected before use to ensure that:

- all markings are legible.
- a hook with the correct WLL has been selected with respect to the sling design.
- hooks are free from nicks, gouges, and cracks.
- hooks are not heat treated, modified, repaired, or reshaped by machining or bended. (This may affect their Working Load Limit).
- hooks are not distorted or unduly worn. (Maximum allowable wear is 10 % of the original diameter)
- the latch of the hook(s) is present and functional.
- the hook is never side-, tip- or back- loaded.
- the hook is supporting the load correctly.
- the latch should not be supporting any load.
- only use the hook for in-line lifting.

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 issues such as wear, misuse and overloading, 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 links are used in severe operating conditions.

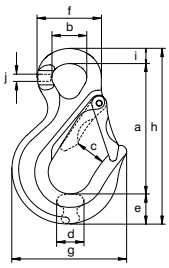
Scan for additional product details

# Green Pin® Sling Hook E EN 1677-2 GR8

## Grade 8 eye sling hook EN 1677-2

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN1677-2 and ASTM A952/A952M
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 * MTC [a] MPI [b] * DGUV * CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** from 8.2 t without flat part. For use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

CSO




| for chain diameter | working load limit | length | diameter inside eye | width opening | thickness | width | diameter eye outside | width outside | length outside | width | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 5/6 | 1.12 | 86 | 23 | 26 | 15 | 19 | 43 | 72 | 114 | 10 | 6 | 0.28 |
| 7/8 | 2 | 103 | 26 | 30 | 20 | 24 | 51 | 87 | 139 | 12 | 8 | 0.56 |
| 10 | 3.2 | 129 | 36 | 33 | 24 | 28 | 65 | 106 | 171 | 15 | 10 | 1.08 |
| 13 | 5.4 | 152 | 41 | 37 | 32 | 39 | 77 | 133 | 209 | 18 | 12 | 1.90 |
| 16 | 8.2 | 191 | 52 | 43 | 40 | 43 | 94 | 165 | 255 | 21 | 17 | 3.50 |
| 18/20 | 12.8 | 237 | 61 | 61 | 49 | 61 | 115 | 208 | 326 | 28 | 21 | 7.04 |
| 22 | 15.5 | 280 | 72 | 75 | 54 | 64 | 132 | 242 | 375 | 30 | 23 | 9.95 |
| 26** | 21.6 | 251 | 48 | 73 | 55 | 86 | 111 | 236 | 363 | 32 | 32 | 14.1 |
| 32** | 32.8 | 292 | 58 | 87 | 67 | 104 | 139 | 286 | 435 | 39 | 39 | 21.7 |

* Excluding sizes 26 mm and 32 mm
** Different design

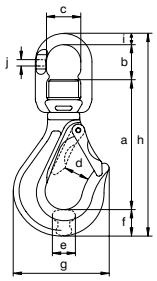
INFO CAD

# Green Pin® Sling Hook SE EN 1677-2 GR8

## Grade 8 swivel sling hook EN 1677-2

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN1677-2 and ASTM A952/A952M
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [a] MPI [b] DGUV CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** equipped with thrust needle roller bearings to enable rotation under load and need to be used with rotating resistant wires. For use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

CSE




| for chain diameter | working load limit | length | length inside | width inside | width opening | thickness | width | width outside | length outside | diameter | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 5/6 | 1.12 | 100 | 33 | 32 | 26 | 15 | 20 | 72 | 164 | 12 | 6 | 0.54 |
| 7/8 | 2 | 126 | 40 | 37 | 30 | 20 | 25 | 87 | 204 | 14 | 8 | 1 |
| 10 | 3.2 | 158 | 47 | 48 | 33 | 24 | 29 | 106 | 250 | 16 | 11 | 1.90 |
| 13 | 5.4 | 189 | 59 | 58 | 37 | 32 | 39 | 133 | 308 | 21 | 14 | 3.40 |
| 16 | 8.2 | 221 | 67 | 73 | 44 | 40 | 44 | 165 | 356 | 25 | 17 | 6.35 |
| 18/20 | 12.8 | 263 | 87 | 82 | 61 | 49 | 62 | 209 | 437 | 25 | 21 | 10.4 |

INFO CAD

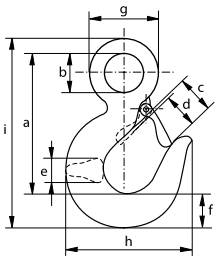
# Green Pin® Hook E GR8

## Grade 8 large eye hook with safety latch

Scan for additional product details

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** generally to EN 1677-2
- **Finish:** painted red
- **Temperature range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

P-6714A



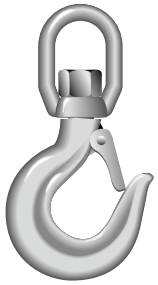

| working load limit | length | diameter eye inside | opening hook | opening hook | thickness | width | diameter eye outside | width outside | length outside | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | kg |
| 1.25 | 81 | 19 | 24 | 20 | 16 | 19 | 37 | 70 | 109 | 0.30 |
| 1.6 | 91 | 23 | 26 | 22 | 18 | 22 | 46 | 79 | 124 | 0.44 |
| 2.5 | 105 | 27 | 32 | 27 | 20 | 27 | 52 | 93 | 145 | 0.63 |
| 3.2 | 124 | 32 | 34 | 30 | 24 | 30 | 62 | 109 | 169 | 1.08 |
| 5.4 | 147 | 39 | 44 | 37 | 31 | 36 | 74 | 127 | 201 | 1.56 |
| 8.2 | 190 | 50 | 55 | 48 | 37 | 48 | 96 | 168 | 261 | 3.95 |
| 12.8 | 230 | 64 | 64 | 53 | 48 | 61 | 126 | 198 | 322 | 7.75 |
| 16 | 254 | 71 | 70 | 60 | 58 | 69 | 139 | 223 | 357 | 10.8 |
| 22 | 316 | 89 | 91 | 77 | 63 | 81 | 169 | 283 | 437 | 16.9 |

CAD

Scan for additional product details

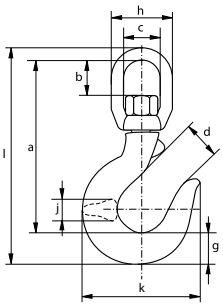
# Green Pin® Hook SE GR8

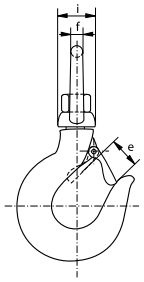
## Grade 8 swivel eye hook with safety latch



P-6703A

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Finish:** painted red
- **Temperature range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes
- **Note:** for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84




| working load limit | length | length inside | width inside | opening hook | opening hook | diameter | width | width | width | thickness | width outside | length outside | 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 |
| 1.25 | 118 | 28 | 31 | 24 | 20 | 11 | 19 | 53 | 30 | 16 | 70 | 147 | 0.49 |
| 1.6 | 145 | 35 | 40 | 26 | 22 | 14 | 22 | 68 | 37 | 18 | 79 | 181 | 0.95 |
| 2.5 | 167 | 43 | 47 | 32 | 27 | 17 | 27 | 81 | 43 | 20 | 93 | 210 | 1.48 |
| 3.2 | 180 | 47 | 47 | 34 | 30 | 17 | 31 | 81 | 43 | 24 | 109 | 228 | 1.78 |
| 5.4 | 217 | 54 | 64 | 44 | 37 | 21 | 36 | 106 | 64 | 31 | 127 | 275 | 3.70 |
| 8.2 | 275 | 69 | 78 | 55 | 45 | 26 | 48 | 130 | 77 | 37 | 168 | 349 | 7.36 |
| 11.5 | 310 | 68 | 82 | 58 | 53 | 22 | 60 | 150 | 82 | 43 | 198 | 398 | 9.69 |
| 16 | 352 | 84 | 92 | 66 | 58 | 24 | 67 | 154 | 92 | 52 | 222 | 452 | 14.9 |
| 22 | 434 | 107 | 115 | 87 | 78 | 29 | 80 | 191 | 108 | 64 | 283 | 552 | 26 |
| 31.5 | 512 | 117 | 132 | 97 | 87 | 34 | 94 | 222 | 132 | 80 | 339 | 655 | 46 |

CAD

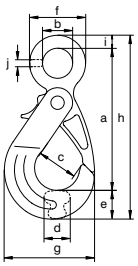
Scan for additional product details

# Green Pin® Self Locking Hook E EN 1677-3 GR8

## Grade 8 eye self locking hook EN 1677-3

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN1677-3 and ASTM A952/A952M
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [a] MPI [b] DGUV CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** from 12.8 t without flat part
  for use of this component in a wire rope sling the safety factor must be 5 : 1,
  see the table on page 84

XLO




| for chain diameter | working load limit | length | diameter inside eye | width opening | thickness | width | width outside | width outside | length | width | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 5/6 | 1.12 | 113 | 24 | 32 | 16 | 24 | 47 | 75 | 148 | 11 | 6 | 0.51 |
| 7/8 | 2 | 136 | 30 | 43 | 24 | 28 | 57 | 91 | 178 | 14 | 8 | 0.91 |
| 10 | 3.2 | 168 | 36 | 48 | 32 | 34 | 68 | 111 | 218 | 16 | 10 | 1.79 |
| 13 | 5.4 | 201 | 47 | 63 | 37 | 43 | 87 | 141 | 264 | 20 | 13 | 3.36 |
| 16 | 8.2 | 251 | 60 | 75 | 43 | 56 | 111 | 182 | 332 | 26 | 16 | 7 |
| 18/20 | 12.8 | 283 | 70 | 90 | 52 | 62 | 126 | 203 | 373 | 28 | 21 | 9.22 |

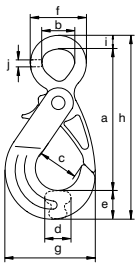
CAD INFO

# Green Pin® Self Locking Hook E GR8

## Grade 8 eye self locking hook

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 MTC [a] MPI [b] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** GK hooks are more compact than XL hooks
  for use of this component in a wire rope sling the safety factor must be 5 : 1,
  see the table on page 84

GKO




| for chain diameter | working load limit | length | diameter inside eye | width opening | thickness | width | width outside | width outside | length | width | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 7/8 | 2 | 112 | 26 | 32 | 17 | 24 | 48 | 75 | 147 | 11 | 9 | 0.53 |
| 10 | 3.2 | 136 | 31 | 44 | 24 | 28 | 60 | 91 | 179 | 15 | 10 | 0.96 |
| 13 | 5.4 | 174 | 40 | 48 | 32 | 33 | 76 | 111 | 226 | 18 | 12 | 1.86 |
| 16 | 8.2 | 209 | 50 | 63 | 37 | 42 | 93 | 141 | 273 | 22 | 16 | 3.49 |
| 18/20 | 12.8 | 254 | 61 | 75 | 44 | 55 | 116 | 184 | 337 | 28 | 20 | 7.33 |
| 22 | 15.5 | 288 | 72 | 90 | 52 | 61 | 132 | 205 | 379 | 30 | 21 | 9.91 |

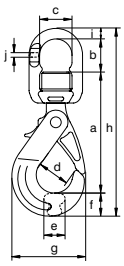
CAD INFO

Scan for additional product details

# Green Pin® Self Locking Hook SE EN 1677-3 GR8

## Grade 8 swivel self locking hook EN 1677-3

XLE




- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Standard:** EN1677-3 and ASTM A952/A952M
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 MTC [a] MPI [b] DGUV CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** equipped with thrust needle roller bearings to enable rotation under load and need to be used with rotating resistant wires
  for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

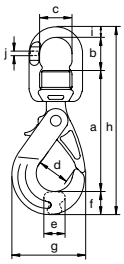
| for chain diameter | working load limit | length | length inside | width inside | width opening | thickness | width | width outside | length | diameter | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 5/6 | 1.12 | 123 | 33 | 32 | 32 | 16 | 24 | 75 | 191 | 12 | 6 | 0.78 |
| 7/8 | 2 | 149 | 41 | 37 | 43 | 24 | 28 | 91 | 232 | 14 | 8 | 1.39 |
| 10 | 3.2 | 186 | 47 | 48 | 48 | 32 | 34 | 112 | 283 | 16 | 11 | 2.56 |
| 13 | 5.4 | 214 | 60 | 58 | 63 | 37 | 44 | 141 | 337 | 21 | 14 | 4.56 |
| 16 | 8.2 | 273 | 67 | 73 | 75 | 43 | 56 | 182 | 420 | 25 | 17 | 9.50 |
| 18/20 | 12.8 | 304 | 87 | 82 | 90 | 52 | 62 | 205 | 478 | 25 | 22 | 12.7 |

CAD INFO

# Green Pin® Self Locking Hook SE GR8

## Grade 8 swivel self locking hook

GKE




- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 4 x WLL
- **Finish:** painted yellow (J), red (R) or white
- **Temperature range:** -40 °C up to +200 °C
- **Certification:** 2.1 2.2 MTC [a] MPI [b] CE IIB
- **Article code:** scan QR code to see article codes
- **Note:** equipped with thrust needle roller bearings to enable rotation under load and need to be used with rotating resistant wires
  GK hooks are more compact than XL hooks
  for use of this component in a wire rope sling the safety factor must be 5 : 1, see the table on page 84

| for chain diameter | working load limit | length | length inside | width inside | width opening | thickness | width | width outside | length | diameter | thickness | weight each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | j mm | kg |
| 7/8 | 2 | 123 | 33 | 32 | 32 | 17 | 24 | 75 | 191 | 12 | 6 | 0.77 |
| 10 | 3.2 | 149 | 41 | 37 | 44 | 24 | 28 | 91 | 231 | 14 | 8 | 1.38 |
| 13 | 5.4 | 186 | 47 | 48 | 48 | 32 | 33 | 111 | 282 | 16 | 11 | 2.56 |
| 16 | 8.2 | 214 | 60 | 58 | 63 | 37 | 42 | 141 | 336 | 21 | 14 | 4.58 |
| 18/20 | 12.8 | 272 | 67 | 73 | 75 | 45 | 55 | 184 | 418 | 25 | 17 | 9.51 |

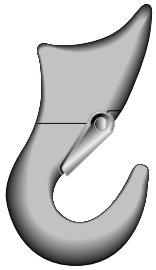
CAD INFO

# Green Pin® Alloy Sliding Choker Hook

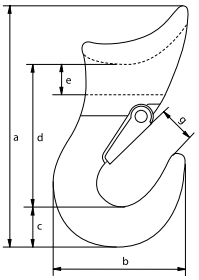
## Grade 8 sliding choker hook with safety latch

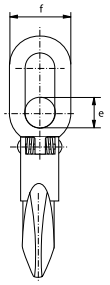
Scan for additional product details

- **Material:** alloy steel, grade 8, quenched and tempered
- **Safety factor:** MBL equals 5 x WLL
- **Finish:** painted red
- **Temperature range:** -20 °C up to +200 °C
- **Certification:** 2.1 2.2 3.1 CE IIA
- **Article code:** scan QR code to see article codes



P-6706A




| working load limit | diameter rope | length | width | thickness | length | diameter | thickness | opening hook | weight each |
|---|---|---|---|---|---|---|---|---|---|
| t | mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | kg |
| 0.8 | 6 - 11 | 112 | 63 | 19 | 65 | 14 | 30 | 16 | 0.40 |
| 1.6 | 10 - 13 | 143 | 82 | 26 | 83 | 17 | 30 | 18 | 0.76 |
| 2.5 | 14 - 16 | 170 | 98 | 30 | 97 | 19 | 33 | 24 | 1.28 |
| 3.2 | 16 - 20 | 196 | 115 | 36 | 110 | 22 | 40 | 27 | 1.91 |
| 5.4 | 22 - 26 | 260 | 142 | 46 | 145 | 36 | 60 | 35 | 4.20 |

CAD

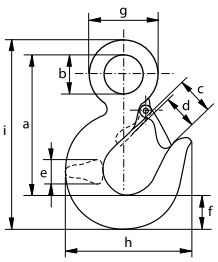
C

# Eye hook

## Grade 4 large eye hook with safety latch

- **Material:** carbon steel, grade 4
- **Safety factor:** MBL equals 5 x WLL
- **Finish:** painted green
- **Certification:** 2.1 2.2 3.1 CE IIA

**P-6714C**




| working load limit | length | diameter eye inside | opening hook | opening hook | thickness | width | diameter eye outside | width outside | length outside | weight each |
|---|---|---|---|---|---|---|---|---|---|---|
| t | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | i mm | kg |
| 0.8 | 81 | 19 | 24 | 20 | 16 | 19 | 37 | 70 | 109 | 0.29 |
| 1 | 91 | 23 | 26 | 22 | 18 | 22 | 46 | 79 | 124 | 0.44 |
| 1.6 | 105 | 27 | 32 | 27 | 20 | 27 | 52 | 93 | 145 | 0.64 |
| 2 | 124 | 32 | 34 | 30 | 24 | 30 | 62 | 109 | 169 | 1.08 |
| 3.2 | 147 | 39 | 44 | 37 | 31 | 36 | 74 | 127 | 201 | 1.81 |
| 5 | 190 | 50 | 55 | 48 | 37 | 48 | 96 | 168 | 261 | 3.75 |

CAD

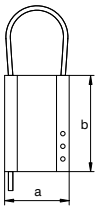
# Green Pin® ID Tag

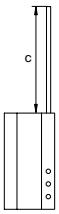
## Aluminium identification tag

Scan for additional product details

- **Material:** aluminium
- **Finish:** see table below
- **Certification:** 2.1

TAG




| partnumber | finish | width | length | length | weight each |
|---|---|---|---|---|---|
| | | a mm | b mm | c mm | kg |
| TAGVIERGE | self-coloured | 51 | 76 | 220 | 0.07 |
| TAGJ | anodized yellow | 51 | 76 | 220 | 0.07 |
| TAGGREEN | anodized green | 51 | 76 | 220 | 0.07 |
| TAGRED | anodized red | 51 | 76 | 220 | 0.07 |
| TAGBLUE | anodized blue | 51 | 76 | 220 | 0.07 |
| TAGDEMI | self-coloured | 51 | 38 | 220 | 0.04 |
| TAGB without wire rope | self-coloured | 51 | 76 | | 0.06 |

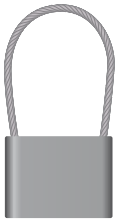
TAGVIERGE

TAGJ

TAGGREEN

TAGRED

TAGBLUE

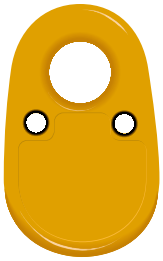


TAGDEMI

Scan for additional product details

# Green Pin® RFID Tag

## Accessory for radio-frequency identification of slings

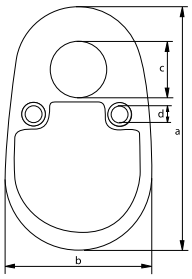


TAGRFID

- **Material:** stainless steel
- **Standard:** RF Protocol ISO 15693 Operating Frequency HF - 13.56 MHz with individual serial number
- **Finish:** polymer
- **Temperature range:** -40 °C up to +125 °C
- **Certification:** 2.1
- **Note:** IP68; water and ice proof

| length | width | diameter | diameter | weight per 100 pcs |
|---|---|---|---|---|
| a mm | b mm | c mm | d mm | kg |
| 53 | 33 | 12 | 4 | 1.80 |

RFID INFO

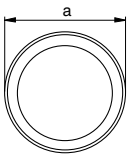
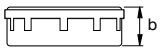



# Green Pin® RFID Chip

## Accessory for radio-frequency identification of slings

CHIPRFID

- **Material:** polymer
- **Standard:** RF Protocol ISO 15693 Operating Frequency HF - 13.56 MHz with individual serial number
- **Temperature range:** -40 °C up to +125 °C
- **Certification:** 2.1
- **Note:** IP68; water and ice proof

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

RFID INFO