# Kito Chain Italia

## Product catalogue

LiftingPlus

Hijsen met visie

Chain grade 8 / 10

liftingplus.nl

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## Kito Chain Italia - product catalogue


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# Grade 10 Lifting Line

LiftingPlus

Hijsen met visie

# VIS

## THE GRADE 10 LIFTING CHAINS AND ACCESSORIES LINE

### VIS 400 Gr.10

PAS 1061 / EN 818-2 + 25% of loads

### VIS 200 Gr.10

EN 818-2 + 25% of loads

### VIS Accessories Gr.10

EN1677 + 25% of loads

**EN Chains and fittings complying with the European Machine Directive 2006/42/EC**

| | UNIT WORKING LOAD | UNIT PROOF LOAD | UNIT BREAKING LOAD | ELONGATION |
|---|---|---|---|---|
| VIS 400<br>VIS 200 | 250 N/mm² | 625 N/mm² | 1000 N/mm² | 20% min. |

| MARKING | VIS 400 | VIS 200 | VIS COMPONENTS |
|---|---|---|---|
| | VIS400 10 | VIS200 10 | "code" 10 |
| Usage temperature range(1) | -40°C÷ 380°C | - 29°C÷205°C | -40°C÷ 400°C |
| FINISHING COLOR | GREEN PAINTED | BLUE PAINTED | GREY PAINTED |
| Sling's identificationtag ! | | | - |

(1) For reduction of working load limits at various temperatures, please check the table 1 page 56

# Components

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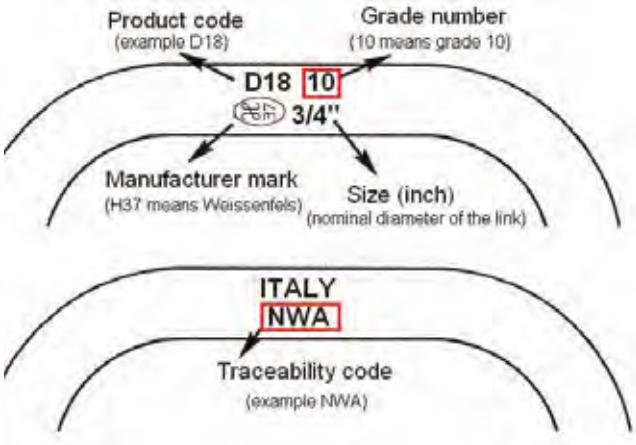
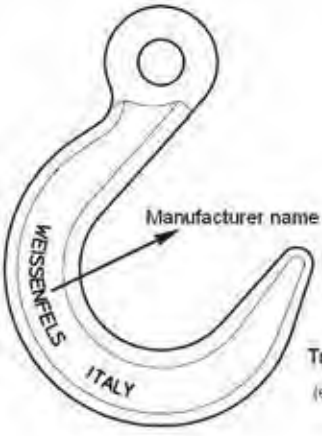
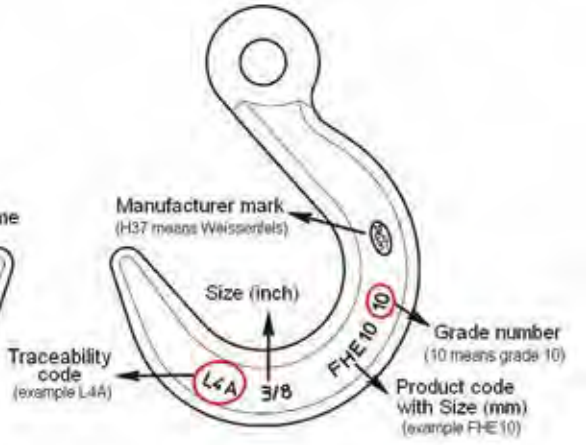
Our fittings and master links feature technical specifications outperforming the standards available on the market. This is achieved through our vertically integrated manufacturing process, covering all phases from the raw material production of forgings, up to issuing the finished product test certificate.



# VIS GR.10

## A RANGE OF SOLUTIONS FOR LIFTING WITH CHAINS

| VIS 400 | VIS 200 | D 1 leg | D 2 legs | E 1 leg | E 2 legs | L 1 leg | L 2 legs | CMLS 1 leg | DCR1 1 leg | DCR2 2 legs | DG1 1 leg | DG2 2 legs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ø mm | | Article | | | | | | | | | | |
| 6 | | D13 | D13 | - | - | L13 | L13 | CM22L13S | D13CR1 | D13CR2 | D13GI1 | D13GI2 |
| 7 | | D13 | D16 | - | E14 | L13 | L13 | CM22L13S | D16CR1 | D18CR2 | D16GI1 | D18GI2 |
| 8 | | D16 | D18 | E14 | E16 | L13 | L16 | CM22L13S | D16CR1 | D18CR2 | D16GI1 | D18GI2 |
| 10 | | D18 | D22 | E16 | E20 | L13 | L20 | CM26L16S | D18CR1 | D22CR2 | D18GI1 | D22GI2 |
| 13 | | D22 | D26 | E20 | E26 | L16 | L22 | - | D22CR1 | D26CR2 | D22GI1 | D26GI2 |
| 16 | | D26 | D32 | E26 | E32 | L20 | L26 | - | D26CR1 | D32CR2 | D26GI1 | D32GI2 |
| 19 - 20 | | D32 | D38 | E32 | - | L26 | - | - | D32CR1 | D36CR2 | - | - |
| - | 22 | D38 | D45 | - | - | L26 | - | - | D36CR1 | D45CR2 | - | - |
| - | 26 | D38 | D50 | - | - | - | - | - | - | - | - | - |

| VIS 400 | VIS 200 | CMLD 2 legs | CMLD 3-4 legs | TN 2 legs | TN 3-4 legs | DL 3-4 legs | DE 3-4 legs | DCR4 3-4 legs | DG4 3-4 legs |
|---|---|---|---|---|---|---|---|---|---|
| ø mm | | Article | | | | | | | |
| 6 | | CM22L13D | CM22L13D | - | - | D18L13 | - | D18L13CR | D18L13GI |
| 7 | | CM22L13D | CM26L16D | - | - | D18L13 | D18E14 | D22L16CR | D22L16GI |
| 8 | | CM22L13D | CM26L16D | - | TN26 | D22L16 | D22E16 | D22L16CR | D22L16GI |
| 10 | | CM26L16D | CM32L20D | TN26 | TN32 | D26L20 | D26E20 | D26L20CR | D26L20GI |
| 13 | | CM32L20D | CM40L22D | TN32 | TN40 | D32L22 | D32E26 | D32L22CR | D32L22GI |
| 16 | | CM40L22D | - | TN40 | TN45 | D38L26 | D38E32 | D36L26CR | D38L26GI |
| 19 - 20 | | - | - | TN45 | - | D50L32 | E50D38 | D50L32CR | - |
| - | 22 | - | - | - | - | D56L36 | D56D45 | D50L36CR | - |
| - | 26 | - | - | - | - | D60L40 | D60D50 | - | - |

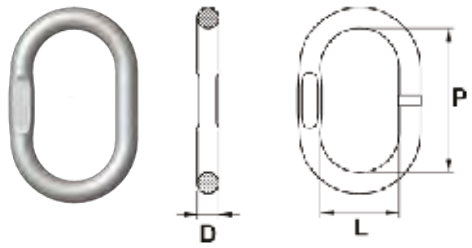
| VIS 400 | VIS 200 | WLK | SHE | SKE | SKS | SKB | GSE | GIE | FHE |
|---|---|---|---|---|---|---|---|---|---|
| ø mm | | Article | | | | | | | |
| 6 | | WLK6 | SHE6 | SKE6 | SKS6 | SKB6 | GSE6 | GIE6 | - |
| 7 | | WLK7 | SHE7-8 | SKE7-8 | SKS7-8 | SKB7-8 | GSE7-8 | GIE7-8 | FHE7-8 |
| 8 | | WLK8 | SHE7-8 | SKE7-8 | SKS7-8 | SKB7-8 | GSE7-8 | GIE7-8 | FHE7-8 |
| 10 | | WLK10 | SHE10 | SKE10 | SKS10 | SKB10 | GSE10 | GIE10 | FHE10 |
| 13 | | WLK13 | SHE13 | SKE13 | SKS13 | SKB13 | GSE13 | GIE13 | FHE13 |
| 16 | | WLK16 | SHE16 | SKE16 | SKS16 | SKB16 | GSE16 | GIE16 | FHE16 |
| 19 - 20 | | WLK19-20 | SHE19-20 | SKE19-20 | SKS19-20 | SKB19-20 | GSE19-20 | - | FHE19-20 |
| - | 22 | WLK22 | SHE22 | SKE22 | SKS22 | SKB22 | GSE22 | - | - |
| - | 26 | WLK26 | SHE26 | - | - | - | GSE26 | - | - |

| VIS 400 | VIS 200 | SHC | SKC | GSC | GSC-S | | CCH | WCL | CR |
|---|---|---|---|---|---|---|---|---|---|
| ø mm | | Article | | | | | | | |
| 6 | | SHC6 | SKC6 | GSC6 | GSC6-S | - | - | - | CR6 |
| 7 | | SHC7-8 | SKC7-8 | GSC7-8 | GSC7-8-S | - | CCH7-8 | - | CR7-8 |
| 8 | | SHC7-8 | SKC7-8 | GSC7-8 | GSC7-8-S | - | CCH7-8 | WCL8 | CR7-8 |
| 10 | | SHC10 | SKC10 | GSC10 | GSC10-S | - | CCH10 | WCL10 | CR10 |
| 13 | | SHC13 | SKC13 | GSC13 | - | GSC13-S | CCH13 | WCL13 | CR13 |
| 16 | | SHC16 | SKC16 | GSC16 | - | GSC16-S | - | WCL16 | CR16 |
| 19 - 20 | | SHC19-20 | SKC19-20 | GSC19-20 | GSC19-20-S | - | - | - | CR19-20 |
| - | 22 | SHC22 | SKC22 | GSC22 | GSC22-S | - | - | - | CR22 |
| - | 26 | - | - | - | - | - | - | - | - |

# Series D

## Oblong master link

ASTM A 952 - EN 1677-4



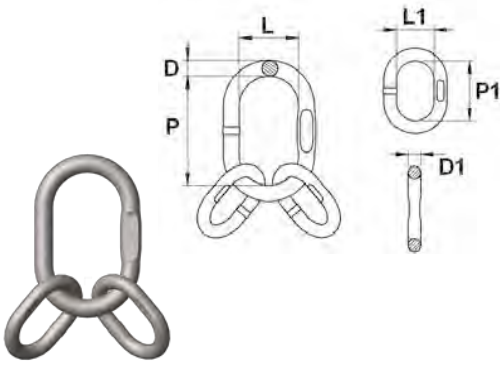

| ARTICLE // | MATCHING CHAIN // | | DIMENSIONI | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|
| | 1 leg | 2 legs | D | P | L | Approx | max |
| | mm | | mm | | | kg | t |
| **D13** | 6-7 | 6 | 13 | 110 | 60 | 0,34 | 2,4 |
| **D16** | 8 | 7 | 16 | 110 | 60 | 0,53 | 3,4 |
| **D18** | 10 | 8 | 19 | 135 | 75 | 0,92 | 5,05 |
| **D22** | 13 | 10 | 23 | 160 | 90 | 1,6 | 6,95 |
| **D26** | 16 | 13 | 27 | 180 | 100 | 2,5 | 12 |
| **D32** | 19-20 | 16 | 33 | 200 | 110 | 4,2 | 18 |
| **D38** | 22 | 19-20 | 38 | 275 | 150 | 7,5 | 27,7 |
| **D45** | 26 | 22 | 45 | 340 | 180 | 12,8 | 36 |
| **D50** | - | 26 | 50 | 350 | 190 | 16,5 | 47 |
| **D60** | - | - | 56 | 400 | 200 | 23,3 | 60 |
| **D70** | - | - | 70 | 460 | 250 | 43 | 102 |

***DF13÷DF32:** • Line with flat section available on request

# Series DL

## Master link assembly

ASTM A 952 - EN 1677-4



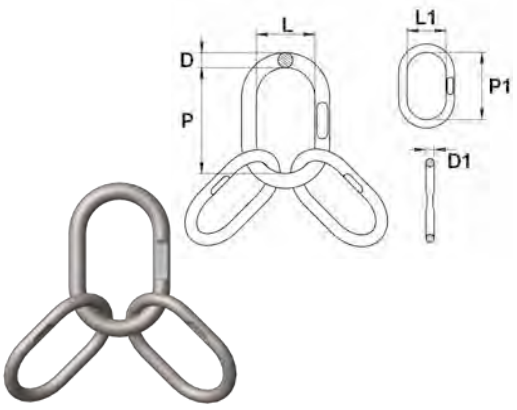

| ARTICLE // | MATCHING CHAIN // | DIMENSION | | | | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|---|---|
| | 3-4 legs | D | P | L | D1 | P1 | L1 | Approx | max |
| | | mm | | | | | | kg | t |
| D18L13 | 6-7 | 19 | 135 | 75 | 13 | 60 | 38 | 1,38 | 5,05 |
| D22L16 | 8 | 23 | 160 | 90 | 16 | 70 | 34 | 2,38 | 6,95 |
| D26L20 | 10 | 27 | 180 | 100 | 19 | 85 | 40 | 3,81 | 10,4 |
| D32L22 | 13 | 33 | 200 | 110 | 23 | 115 | 50 | 6,57 | 18 |
| D38L26 | 16 | 38 | 275 | 150 | 27 | 140 | 65 | 11,45 | 27,7 |
| D50L32 | 19-20 | 50 | 350 | 190 | 33 | 150 | 70 | 23 | 41,55 |
| D56L36 | 22 | 56 | 350 | 250 | 36 | 170 | 75 | 31 | 50,25 |
| D60L40 | 26 | 56 | 400 | 200 | 40 | 170 | 80 | 34,3 | 60 |

***D18LF13÷D38LF26:** • Line with flat section available on request

# Series DE

## Master link assembly

ASTM A 952 - EN 1677-4




| ARTICLE // | MATCHING CHAIN // | DIMENSION | | | | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|---|---|
| | 3-4 legs | D | P | L | D1 | P1 | L1 | Approx | max |
| | | mm | | | | | | kg | t |
| D18E14 | 7 | 19 | 135 | 75 | 15 | 120 | 70 | 1,94 | 5,05 |
| D22E16 | 8 | 23 | 160 | 90 | 17 | 140 | 80 | 3,12 | 6,95 |
| D26E20 | 10 | 27 | 180 | 100 | 20 | 160 | 95 | 4,92 | 10,4 |
| D32E26 | 13 | 33 | 200 | 110 | 27 | 190 | 110 | 9,5 | 18 |
| D38E32 | 16 | 38 | 275 | 150 | 33 | 230 | 130 | 17 | 27,7 |
| E50D38 | 19-20 | 50 | 350 | 250 | 38 | 275 | 150 | 32,6 | 41,55 |
| D56D45 | 22 | 56 | 350 | 250 | 45 | 340 | 180 | 48,1 | 50,25 |
| D60D50 | 26 | 56 | 400 | 200 | 50 | 350 | 190 | 56,4 | 60 |

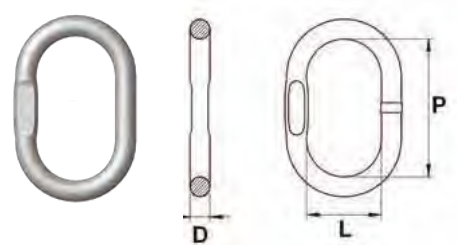
***D18EF14÷D38EF32**: • Line with flat section available on request

(1) WLL for Master link or Master link assembly only, for WLL of chain slings please refer to table 5 page 58

# Series E

## Oblong master link

ASTM A 952 - EN 1677-4



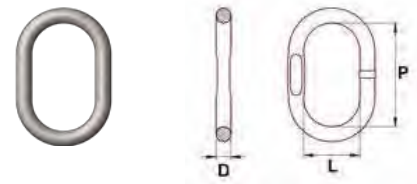

| ARTICLE / | MATCHING CHAIN | | DIMENSION | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|
| | 1 leg 1 tratta | 2 legs 2 tratte | D | P | L | Approx | max |
| | mm | | mm | | | kg | t |
| E 14 | 8 | 7 | 15 | 120 | 70 | 0,50 | 3,4 |
| E 16 | 10 | 8 | 17 | 140 | 80 | 0,75 | 4,5 |
| E 20 | 13 | 10 | 20 | 160 | 95 | 1,21 | 6,95 |
| E 22 | - | - | 23 | 160 | 110 | 1,69 | 8,4 |
| E 26 | 16 | 13 | 27 | 190 | 110 | 2,65 | 12 |
| E 32 | 19-20 | 16 | 33 | 230 | 130 | 4,78 | 18 |
| E 50 | 22-26 | 22-26 | 50 | 350 | 250 | 17,60 | 41,55 |

*EF13÷EF32: ● Line with flat section available on request

# Series L

## Transition link

EN 1677-4



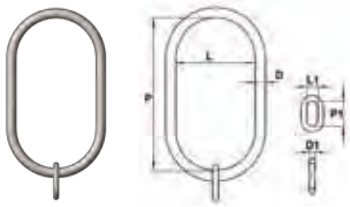

| ARTICLE / | MATCHING CHAIN // | | DIMENSION | | | WEIGHT | WLL (1) |
|---|---|---|---|---|---|---|---|
| | 1 leg | 2 legs | D | P | L | Approx | max |
| | mm | | mm | | | kg | t |
| L13 | 6-7-8-10 | 6-7 | 13 | 60 | 38 | 0,21 | 4 |
| L16 | 13 | 8 | 16 | 70 | 34 | 0,36 | 6,7 |
| L20 | 16 | 10 | 19 | 85 | 40 | 0,65 | 10 |
| L22 | 19 | 13 | 23 | 115 | 50 | 1,17 | 14 |
| L26 | 20-22 | 16 | 27 | 140 | 65 | 1,97 | 19 |

# Series CMLS

(For crane hook up to no.25 DIN 15401)

## Master link assembly for 1 leg

EN 1677-4




| ARTICLE | MATCHING CHAIN // | DIMENSION | | | | | | WEIGHT | WLL (1) |
|---|---|---|---|---|---|---|---|---|---|
| | 1 leg 1 tratta | D | P | L | D1 | P1 | L1 | Approx | max |
| | mm | mm | | | | | | kg | t |
| CM22L13S | 6 7 8 | 23 | 340 | 180 | 13 | 60 | 38 | 3,4 | 2,5 |
| CM26L16S | 10 | 27 | 340 | 180 | 16 | 70 | 34 | 4,7 | 4 |

# Series CMLD

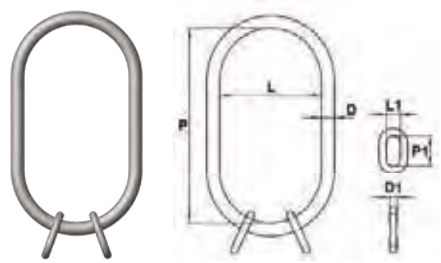
(For crane hook up to no.25 DIN 15401)

# / Series TN

(For crane hook up to no.40 DIN 15401)

## Master link assembly for 2-4 legs

EN 1677-4




| ARTICLE | MATCHING CHAIN | | DIMENSION | | | | | | WEIGHT | WLL (1) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2 legs | 3-4 legs | D | P | L | D1 | P1 | L1 | Approx | max |
| | mm | | mm | | | | | | kg | t |
| CM22L13D | 6 7 8 | 6 | 23 | 340 | 180 | 13 | 60 | 38 | 3,5 | 3,55 |
| CM26L16D | 10 | 7 8 | 27 | 340 | 180 | 16 | 70 | 34 | 5,1 | 5,6 |
| CM32L20D | 13 | 10 | 33 | 340 | 180 | 19 | 85 | 40 | 8 | 9,5 |
| CM40L22D | 16 | 13 | 40 | 340 | 180 | 23 | 115 | 50 | 12,3 | 14 |
| TN26 | 10 | 8 | 27 | 430 | 220 | 19 | 85 | 40 | 6,6 | 5,6 |
| TN32 | 13 | 10 | 33 | 430 | 220 | 19 | 85 | 40 | 9,4 | 9,5 |
| TN40 | 16 | 13 | 40 | 430 | 220 | 27 | 140 | 65 | 16,1 | 14 |
| TN45 | 19-20 | 16 | 45 | 430 | 220 | 27 | 140 | 65 | 19,6 | 22,4 |



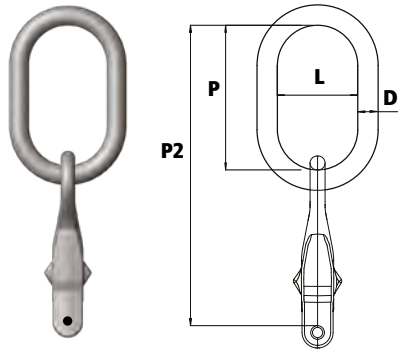
(1) WLL for Master link or Master link assembly only, for WLL of chain slings please refer to table 5 page 58

# Series DG1

## Master link assembly with integrated shortening hook (series GIE) for 1 leg

EN 1677-4

Can be certified according to ASTM A 952



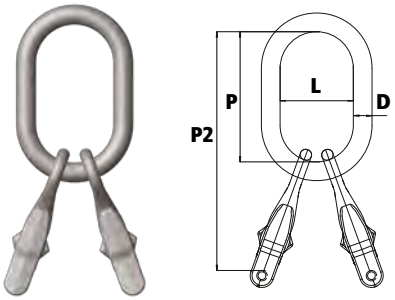

| ARTICLE | MATCHING CHAIN | DIMENSION | | | | WEIGHT | WLL |
|---|---|---|---|---|---|---|---|
| | 1 leg | D | P | P2 | L | Approx | max |
| | mm | mm | | | | kg | t |
| D13GI1 | 6 | 13 | 110 | 198 | 60 | 0,61 | 1,4 |
| D16GI1 | 7<br>8 | 16 | 110 | 227 | 60 | 1,14 | 2,5 |
| D18GI1 | 10 | 19 | 135 | 283 | 75 | 2,12 | 4 |
| D22GI1 | 13 | 23 | 160 | 345 | 90 | 4,17 | 6,7 |
| D26GI1 | 16 | 27 | 180 | 412 | 100 | 7,40 | 10 |

# Series DG2

## Master link assembly with integrated shortening hooks (series GIE) for 2 legs

EN 1677-4

Can be certified according to ASTM A 952



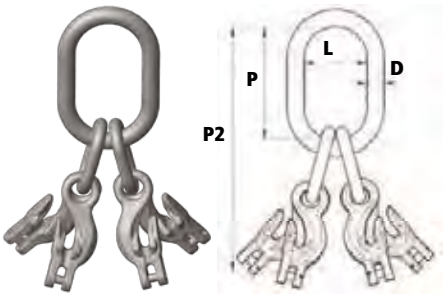

| ARTICLE | MATCHING | DIMENSION | | | | WEIGHT | WLL |
|---|---|---|---|---|---|---|---|
| | 2 legs | D | P | P2 | L | Approx | max<br>up to 45° |
| | mm | mm | | | | kg | t |
| D13GI2 | 6 | 13 | 110 | 198 | 60 | 0,88 | 2 |
| D18GI2 | 7<br>8 | 19 | 135 | 252 | 75 | 2,15 | 3,55 |
| D22GI2 | 10 | 23 | 160 | 308 | 90 | 4 | 5,6 |
| D26GI2 | 13 | 27 | 180 | 365 | 100 | 7,64 | 9,5 |
| D32GI2 | 16 | 33 | 200 | 432 | 110 | 14,0 | 14 |

# Series DG4

## Master link assembly with integrated shortening hooks (series GIE) for 3-4 legs

EN 1677-4

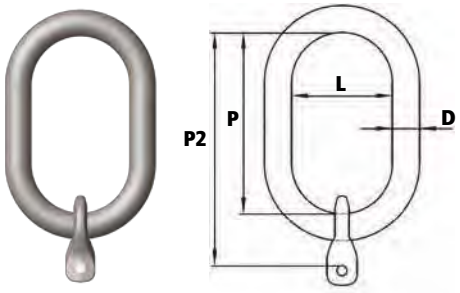
Can be certified according to ASTM A 952




| ARTICLE | MATCHING CHAIN | DIMENSION | | | | WEIGHT | WLL |
|---|---|---|---|---|---|---|---|
| | 3-4 legs | D | P | P2 | L | Approx | max<br>up to 45° |
| | | mm | | | | kg | t |
| D18L13GI | 6 | 19 | 135 | 283 | 75 | 2,46 | 3 |
| D22L16GI | 7<br>8 | 23 | 160 | 347 | 90 | 4,8 | 5,3 |
| D26L20GI | 10 | 27 | 180 | 413 | 100 | 8,6 | 8,4 |
| D32L22GI | 13 | 33 | 200 | 500 | 110 | 16,8 | 14 |
| D38L26GI | 16 | 38 | 275 | 647 | 150 | 31,0 | 21,2 |

# Series DCR1

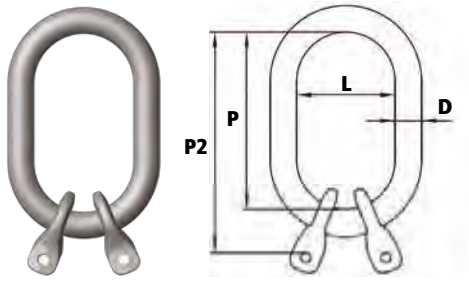
**Master link assembly with integrated chain coupling ring (series CR) for 1 leg**
EN 1677-4




| ARTICLE // | MATCHING CHAIN // | DIMENSION | | | | WEIGHT // | WLL |
|---|---|---|---|---|---|---|---|
| | 1 leg | D | P | P2 | L | Approx | max |
| | mm | mm | | | | kg | t |
| D13CR1 | 6 | 13 | 110 | 141 | 60 | 0,43 | 1,4 |
| D16CR1 | 7<br>8 | 16 | 110 | 151 | 60 | 0,77 | 2,5 |
| D18CR1 | 10 | 19 | 135 | 185 | 75 | 1,36 | 4 |
| D22CR1 | 13 | 23 | 160 | 223 | 90 | 2,45 | 6,7 |
| D26CR1 | 16 | 27 | 180 | 256 | 100 | 4 | 10 |
| D32CR1 | 19-20 | 33 | 200 | 295 | 110 | 7,1 | 16 |
| D36CR1 | 22 | 36 | 260 | 362 | 140 | 10 | 19 |

# Series DCR2

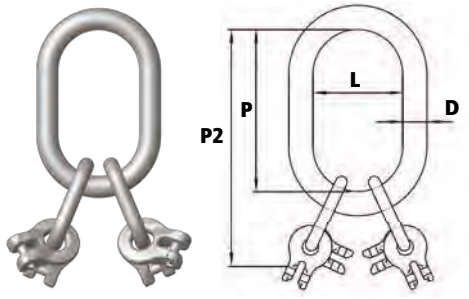
**Master link assembly with 2 integrated chain coupling rings (series CR) for 2 legs**
EN 1677-4




| ARTICLE | MATCHING CHAIN | DIMENSION | | | | WEIGHT | WLL |
|---|---|---|---|---|---|---|---|
| | 2 legs | D | P | P2 | L | Approx | max<br>up to 45° |
| | mm | mm | | | | kg | t |
| D13CR2 | 6 | 13 | 110 | 141 | 60 | 0,52 | 2 |
| D18CR2 | 7<br>8 | 19 | 135 | 176 | 75 | 1,40 | 3,55 |
| D22CR2 | 10 | 23 | 160 | 210 | 90 | 2,47 | 5,6 |
| D26CR2 | 13 | 27 | 180 | 244 | 100 | 4,20 | 9,5 |
| D32CR2 | 16 | 33 | 200 | 276 | 110 | 7,26 | 14 |
| D36CR2 | 19-20 | 36 | 260 | 355 | 140 | 12,2 | 22,4 |
| D45CR2 | 22 | 45 | 340 | 443 | 180 | 20,22 | 26,5 |

# Series DCR4

**Master link assembly with 4 integrated chain coupling rings (series CR) for 3-4 legs**
EN 1677-4



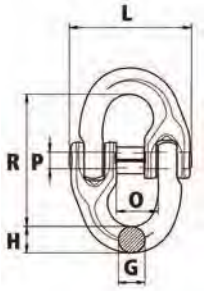

| ARTICLE // | MATCHING CHAIN // | DIMENSION | | | | WEIGHT // | WLL |
|---|---|---|---|---|---|---|---|
| | 3-4 legs | D | P | P2 | L | Approx | max<br>up to 45° |
| | | mm | | | | kg | t |
| D18L13CR | 6 | 19 | 135 | 225 | 75 | 1,7 | 3 |
| D22L16CR | 7<br>8 | 23 | 160 | 272 | 90 | 3,3 | 5,3 |
| D26L20CR | 10 | 27 | 180 | 314 | 100 | 5,5 | 8,4 |
| D32L22CR | 13 | 33 | 200 | 378 | 110 | 9,9 | 14 |
| D36L26CR | 16 | 36 | 260 | 475 | 140 | 16,4 | 21,2 |
| D50L32CR | 19-20 | 50 | 350 | 595 | 190 | 34,7 | 33,6 |
| D50L36CR | 22 | 50 | 350 | 622 | 190 | 39,9 | 40 |

# Series WLK

## Connecting link

EN 1677-1

Can be certified according to ASTM A 952

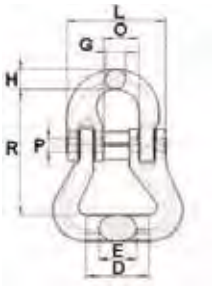



| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|
| | | | G | H | O | R | PxL | Approx | max |
| | mm | | mm | | | | | kg | t |
| WLK6 | 6 | 20 | 7,6 | 7,8 | 14 | 44 | 4,8x39 | 0,07 | 1,4 |
| WLK7 | 7 | 30 | 9 | 10 | 17 | 51 | 6x47 | 0,12 | 1,9 |
| WLK8 | 8 | 20 | 10 | 11,5 | 18 | 61,5 | 6,3x53 | 0,19 | 2,5 |
| WLK10 | 10 | 40 | 12,6 | 13,8 | 22,5 | 72 | 8x63 | 0,38 | 4 |
| WLK13 | 13 | 20 | 16,7 | 19 | 27,5 | 88 | 10x79 | 0,73 | 6,7 |
| WLK16 | 16 | 12 | 21 | 21 | 33 | 103 | 14x106 | 1,43 | 10 |
| WLK19-20 | 19-20 | 8 | 23,5 | 29,5 | 41,5 | 115 | 16x126 | 2,65 | 16 |
| WLK22 | 22 | 5 | 27 | 29 | 48,5 | 135 | 16x150 | 3,75 | 19 |
| WLK26 | 26 | 3 | 30 | 32 | 56 | 171 | 19x165 | 5,7 | 26,5 |

# Series WCL

## Webbing coupling link

EN 1677-1



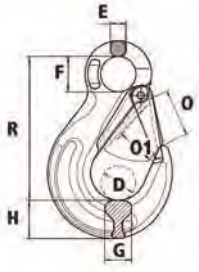

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | G | H | O | R | PxL | | max |
| | mm | | mm | | | | | | | kg | t |
| WCL8 | 8 | 20 | 30 | 18 | 10 | 11,5 | 18 | 66 | 6,3x53 | 0,3 | 2,5 |
| WCL10 | 10 | 20 | 40 | 22 | 12,6 | 12,6 | 22,5 | 81 | 8x63 | 0,6 | 4 |
| WCL13 | 13 | 12 | 50 | 27,5 | 16,7 | 19 | 27,5 | 104 | 10x79 | 1,1 | 6,7 |
| WCL16 | 16 | 10 | 65 | 40 | 21 | 21 | 33 | 112,5 | 14x106 | 2 | 10 |

# Series SHE

## Safety eye sling hook

EN 1677-2

Can be certified according to ASTM A 952



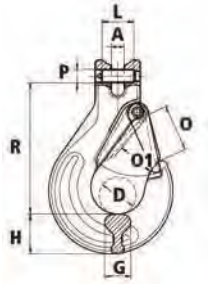

| ARTICLE // | CHAIN | PCS/PACK | DIMENSIONS | | | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | 0 | O1 | R | Approx | max |
| | mm | | mm | | | | | | | | kg | t |
| SHE6 | 6 | 10 | 18 | 10 | 20 | 16,5 | 21 | 25 | 19 | 84,5 | 0,34 | 1,4 |
| SHE7-8 | 7-8 | 20 | 24 | 11 | 25 | 19 | 27 | 32 | 25 | 106 | 0,56 | 2,5 |
| SHE10 | 10 | 20 | 30 | 16 | 34 | 26 | 33 | 40 | 31 | 131 | 1,20 | 4 |
| SHE13 | 13 | 10 | 38 | 19 | 43 | 33 | 42 | 48 | 39 | 164 | 2,35 | 6,7 |
| SHE16 | 16 | 4 | 44 | 25 | 50 | 40 | 50 | 55 | 45 | 182,5 | 3,72 | 10 |
| SHE19-20 | 19-20 | 1 | 53 | 27 | 55 | 48 | 54 | 61 | 54 | 205 | 5,95 | 16 |
| SHE22 | 22 | 1 | 60 | 30 | 60 | 50 | 61 | 71 | 61 | 225 | 7,87 | 19 |
| SHE26 | 26 | 1 | 72 | 36 | 70 | 60 | 69 | 84 | 73 | 265 | 12,8 | 26,5 |

# Series SHC

## Safety clevis sling hook

EN 1677-2

Can be certified according to ASTM A 952



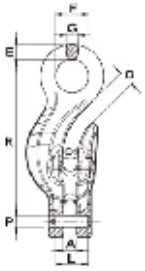

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | D | G | H | 0 | O1 | R | PxL | Approx | max |
| | mm | | mm | | | | | | | | kg | t |
| SHC6 | 6 | 10 | 7 | 18 | 16,5 | 20 | 25 | 19 | 69 | 7,4x16,5 | 0,27 | 1,4 |
| SHC7-8 | 7-8 | 20 | 9 | 25 | 19 | 28 | 32 | 26 | 94,5 | 9,6x23 | 0,61 | 2,5 |
| SHC10 | 10 | 20 | 11,5 | 30 | 25 | 33 | 39 | 31 | 109 | 12,5x29,5 | 1,12 | 4 |
| SHC13 | 13 | 10 | 14,5 | 38 | 30 | 40 | 48 | 39 | 135 | 16x37 | 2 | 6,7 |
| SHC16 | 16 | 4 | 17,5 | 44 | 37 | 47 | 55 | 45 | 155 | 20x52 | 3,4 | 10 |
| SHC19-20 | 19-20 | 1 | 23 | 52 | 51 | 52 | 61 | 53 | 183 | 24x73 | 6,8 | 16 |
| SHC22 | 22 | 1 | 24,5 | 60 | 50 | 62 | 71 | 61 | 212 | 27x71 | 9 | 19 |

# Series GIE

## Integrated eye grab shortening hook

EN 1677-1 / DIN5692

Can be certified accordir



No WLL reduction

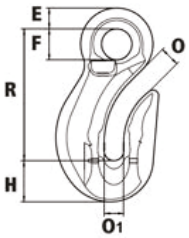
| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | E | F | G | O | O1 | R | PxL | Approx | max |
| | mm | | mm | | | | | | | | kg | t |
| GIE6 | 6 | 20 | 6,5 | 10,3 | 18 | 7,7 | 8 | 8 | 88,5 | 7,4x16,5 | 0,27 | 1,4 |
| GIE7-8 | 7-8 | 16 | 9,1 | 13,5 | 24 | 9,6 | 9,2 | 9 | 117 | 9,6x23 | 0,61 | 2,5 |
| GIE10 | 10 | 10 | 11,5 | 16 | 31 | 12 | 13,7 | 13,5 | 148 | 12,5x29,5 | 1,22 | 4 |
| GIE13 | 13 | 7 | 14,5 | 20 | 37 | 15,5 | 16,2 | 15,5 | 185 | 16x37 | 2,55 | 6,7 |
| GIE16 | 16 | 4 | 17,5 | 26,5 | 48 | 20,5 | 21,4 | 20 | 232 | 20x52 | 4,9 | 10 |

# Series GSE

## Eye grab shortening hook

EN 1677-1 / DIN5692

Can be certified according to ASTM A 952



No WLL reduction

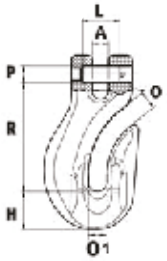
| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | E | F | H | O | O1 | R | Approx | max |
| | mm | | mm | | | | | | kg | t |
| GSE6 | 6 | 20 | 9,5 | 12,5 | 17,5 | 7 | 7,5 | 56 | 0,23 | 1,4 |
| GSE7-8 | 7-8 | 16 | 13 | 16,5 | 23,5 | 9,5 | 10,5 | 74,5 | 0,54 | 2,5 |
| GSE10 | 10 | 10 | 16 | 21 | 29 | 13,5 | 13,5 | 93 | 1,06 | 4 |
| GSE13 | 13 | 8 | 20,5 | 27,5 | 38,5 | 15,5 | 16,5 | 121 | 2,39 | 6,7 |
| GSE16 | 16 | 4 | 25 | 33,5 | 48 | 18,5 | 19,5 | 148,5 | 4,48 | 10 |
| GSE19-20 | 19-20 | 1 | 27 | 41 | 57,5 | 26 | 24 | 177 | 6,6 | 16 |
| GSE22 | 22 | 1 | 30 | 42 | 62 | 26 | 26 | 193 | 8,35 | 19 |
| GSE26 | 26 | 1 | 33 | 55 | 71 | 30,5 | 30,5 | 228 | 13,5 | 26,5 |

# Series GSC

## Clevis grab shortening hook

EN 1677-1 / DIN5692

Can be certified according to ASTM A 952



No WLL reduction

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | H | O | O1 | R | PxL | Approx | max |
| | mm | | mm | | | | | | kg | t |
| GSC6 | 6 | 20 | 7 | 17,5 | 7 | 7,5 | 51 | 7,4x16,5 | 0,25 | 1,4 |
| GSC7-8 | 7-8 | 16 | 9 | 23,5 | 9,5 | 10,5 | 66 | 9,6x23 | 0,60 | 2,5 |
| GSC10 | 10 | 10 | 11,5 | 29 | 12,5 | 13,5 | 82 | 12,5x29,5 | 1,14 | 4 |
| GSC13 | 13 | 7 | 14,5 | 39 | 16,5 | 15,5 | 106 | 16x37 | 2,10 | 6,7 |
| GSC16 | 16 | 4 | 17,5 | 46 | 22 | 20 | 130 | 20x52 | 3,80 | 10 |
| GSC19-20 | 19-20 | 1 | 22 | 57 | 26 | 24 | 162 | 24x73 | 7,35 | 16 |
| GSC22 | 22 | 1 | 25 | 63 | 29,5 | 27 | 178 | 27x71 | 9,53 | 19 |

# Series GSC-S

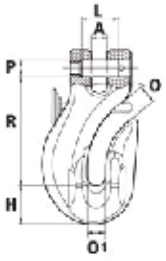
## Clevis grab shortening hook with safety catch

EN 1677-1 / DIN5692

Can be certified according to ASTM A 952

6-7-8-10mm
19-20-22mm

13-16mm



No WLL reduction

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | H | O | O1 | R | PxL | Approx | max |
| | mm | | mm | | | | | | kg | t |
| GSC6-S | 6 | 20 | 7 | 17,5 | 7 | 7,5 | 51 | 7,4x16,5 | 0,25 | 1,4 |
| GSC7-8-S | 7-8 | 16 | 9 | 23,5 | 9,5 | 10,5 | 66 | 9,6x23 | 0,60 | 2,5 |
| GSC10-S | 10 | 10 | 11,5 | 29 | 12,5 | 13,5 | 82 | 12,5x29,5 | 1,14 | 4 |
| GSC13-S | 13 | 7 | 14,5 | 39 | 16,5 | 15,5 | 106 | 16x37 | 2,10 | 6,7 |
| GSC16-S | 16 | 4 | 17,5 | 46 | 22 | 20 | 130 | 20x52 | 3,80 | 10 |
| GSC19-20-S | 19-20 | 1 | 22 | 57 | 26 | 24 | 162 | 24x73 | 7,35 | 16 |
| GSC22-S | 22 | 1 | 25 | 63 | 29,5 | 27 | 178 | 27x71 | 9,53 | 19 |

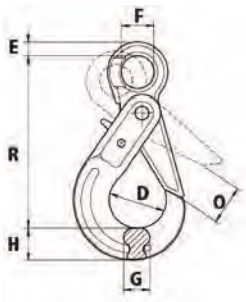
• Suitable for use with lashing systems in accordance with EN 12195-3

# Series SKE

## Eye self locking hook

EN 1677-3

Can be certified according to ASTM A 952



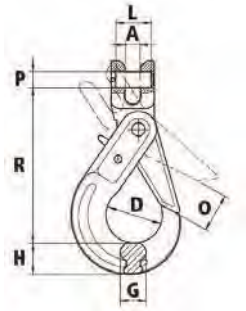

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS . | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | O (min) | R | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SKE6 | 6 | 18 | 35 | 11 | 21 | 16 | 20,5 | 28 | 110 | 0,53 | 1,4 |
| SKE7-8 | 7-8 | 24 | 43,5 | 12 | 27 | 20 | 26 | 34 | 136 | 0,89 | 2,5 |
| SKE10 | 10 | 14 | 56 | 15 | 34,5 | 24,5 | 30 | 45 | 168,5 | 1,58 | 4 |
| SKE13 | 13 | 6 | 69 | 20 | 40 | 34,5 | 40 | 51,5 | 205 | 3,16 | 6,7 |
| SKE16 | 16 | 4 | 80 | 27 | 50 | 35,5 | 50 | 60 | 251,5 | 6,05 | 10 |
| SKE19-20 | 19-20 | 1 | 101 | 30 | 60 | 46 | 61 | 77 | 306 | 11 | 16 |
| SKE22 | 22 | 1 | 110 | 32 | 70 | 51 | 67 | 84 | 340 | 15 | 19 |

# Series SKC

## Clevis self locking hook

EN 1677-3

Can be certified according to ASTM A 952



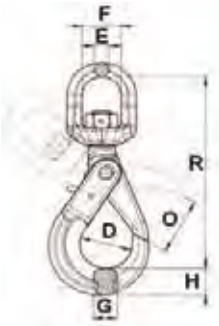

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | D | G | H | O (min) | R | PxL | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SKC6 | 6 | 18 | 6,7 | 35 | 16 | 20,5 | 28 | 94 | 7,4x16,5 | 0,50 | 1,4 |
| SKC7-8 | 7-8 | 24 | 8,5 | 43,5 | 20 | 26 | 34 | 123 | 9,6X23 | 0,96 | 2,5 |
| SKC10 | 10 | 14 | 12 | 56 | 24,5 | 30 | 45 | 143,5 | 12,5x29,5 | 1,60 | 4 |
| SKC13 | 13 | 6 | 15 | 69 | 34,5 | 40 | 51,5 | 179,5 | 16x37 | 3,13 | 6,7 |
| SKC16 | 16 | 3 | 19 | 80 | 35,5 | 50 | 60 | 217 | 20x52 | 5,80 | 10 |
| SKC19-20 | 19-20 | 1 | 22 | 101 | 46 | 61 | 77 | 272 | 24x73 | 11,4 | 16 |
| SKC22 | 22 | 1 | 25 | 110 | 51 | 67 | 84 | 300 | 27x71 | 15,2 | 19 |

# Series SKS

## Eye swivel self locking hook

EN 1677-3

Can be certified according to ASTM A 952




| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | O (min) | R | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SKS6 | 6 | 14 | 35 | 13 | 35 | 16 | 20,5 | 28 | 160 | 0,8 | 1,4 |
| SKS7-8 | 7-8 | 12 | 43,5 | 13 | 35 | 20 | 26 | 34 | 181 | 1,1 | 2,5 |
| SKS10 | 10 | 6 | 56 | 16 | 42 | 24,5 | 30 | 45 | 218 | 2 | 4 |
| SKS13 | 13 | 3 | 69 | 20 | 49 | 34,5 | 40 | 51,5 | 269 | 4 | 6,7 |
| SKS16 | 16 | 1 | 80 | 24 | 60 | 35,5 | 50 | 60 | 321 | 7,3 | 10 |
| SKS19-20 | 19-20 | 1 | 101 | 32 | 78 | 46 | 61 | 77 | 407 | 14,7 | 16 |
| SKS22 | 22 | 1 | 110 | 35 | 86 | 51 | 67 | 84 | 448 | 19,9 | 19 |

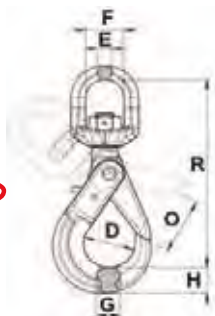
# Series SKB

## Eye swivel self locking hook with bearing to rotate when loading

EN 1677-3

Can be certified according to ASTM A 952

Swivels while loaded




| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | O (min) | R | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SKB6 | 6 | 14 | 35 | 13 | 35 | 16 | 20,5 | 28 | 160 | 0,8 | 1,4 |
| SKB7-8 | 7-8 | 12 | 43,5 | 13 | 35 | 20 | 26 | 34 | 181 | 1,1 | 2,5 |
| SKB10 | 10 | 6 | 56 | 16 | 42 | 24,5 | 30 | 45 | 218 | 2 | 4 |
| SKB13 | 13 | 3 | 69 | 20 | 49 | 34,5 | 40 | 51,5 | 269 | 4 | 6,7 |
| SKB16 | 16 | 1 | 80 | 24 | 60 | 35,5 | 50 | 60 | 321 | 7,3 | 10 |
| SKB19-20 | 19-20 | 1 | 101 | 32 | 78 | 46 | 61 | 77 | 407 | 14,7 | 16 |
| SKB22 | 22 | 1 | 110 | 35 | 86 | 51 | 67 | 84 | 448 | 19,9 | 19 |

## Clevis C hook

EN1677-1

Can be certified according to ASTM A 952

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | G | H | O | R | PxL | Approx | max |
| | mm | | mm | | | | | | kg | t |
| CCH7-8 | 7-8 | 20 | 9,5 | 23 | 27,5 | 20 | 90 | 9,6x23 | 0,58 | 2,5 |
| CCH10 | 10 | 12 | 12 | 28 | 38,5 | 29 | 129 | 12,5x29,5 | 1,46 | 4 |
| CCH13 | 13 | 5 | 15 | 35 | 51 | 41 | 166 | 16x37 | 3 | 6,7 |

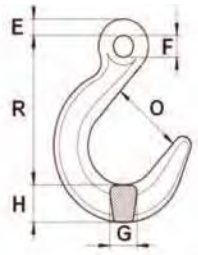
# Series FHE

## Eye foundry hook

EN 1677-1

Can be certified according to ASTM A 952

Certificabile secondo ASTM A 952




| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | E | F | G | H | O | R | Approx | max |
| | mm | | mm | | | | | | kg | t |
| FHE7-8 | 7-8 | 18 | 13,5 | 18 | 26 | 31 | 63 | 122,5 | 1,13 | 2,5 |
| FHE10 | 10 | 8 | 16 | 22 | 32 | 36 | 77 | 149 | 2 | 4 |
| FHE13 | 13 | 6 | 19 | 27 | 39 | 43 | 88 | 173,5 | 3,3 | 6,7 |
| FHE16 | 16 | 4 | 24 | 32 | 45 | 50 | 100 | 205 | 5,3 | 10 |
| FHE19-20 | 19-20 | 1 | 27 | 38 | 51 | 61 | 115 | 237 | 7,7 | 16 |

# Series CR

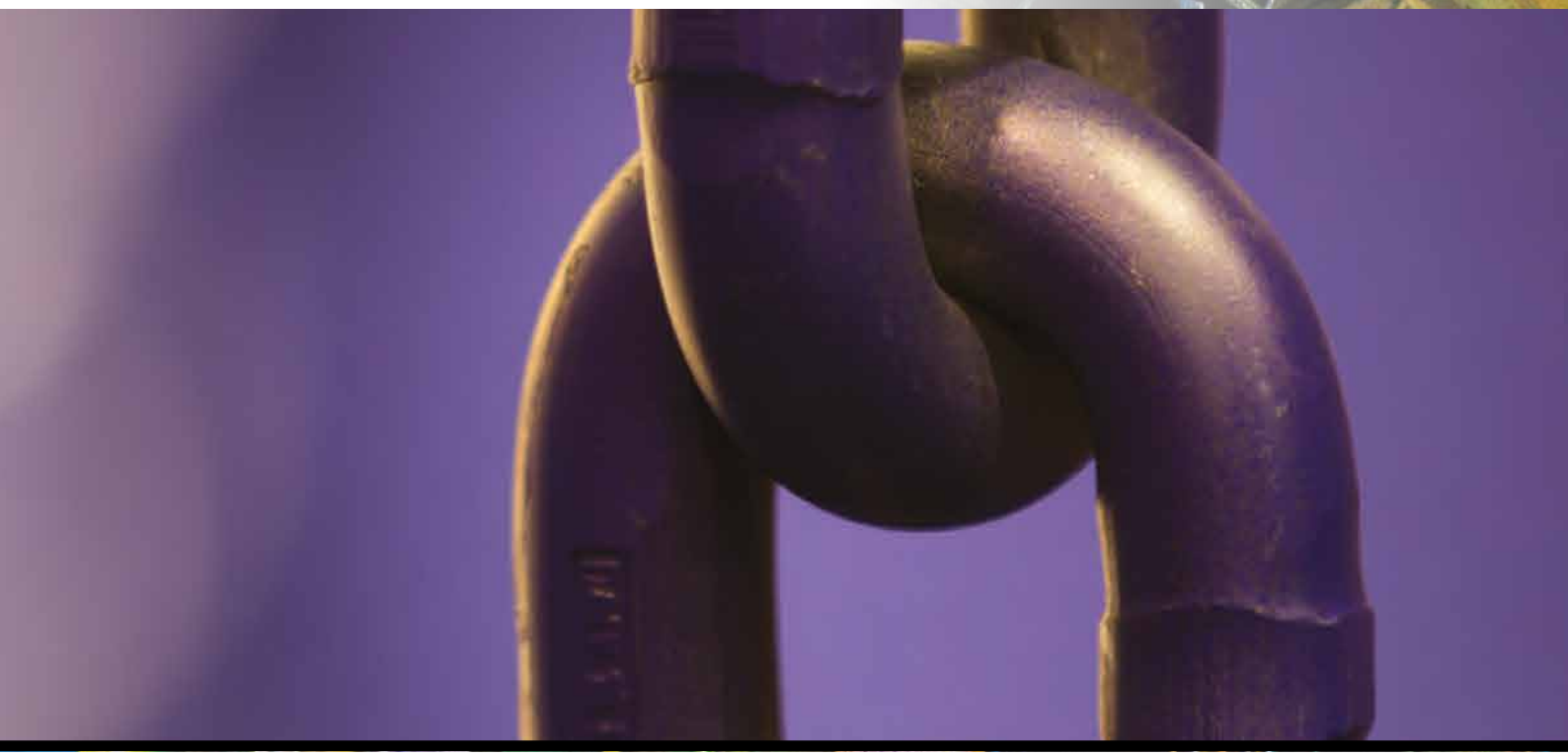
## Coupling ring

EN1677-1

Can be certified according to ASTM A 952

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | E | F | G | R | PxL | Approx | max |
| | mm | | mm | | | | | | kg | t |
| CR6 | 6 | 10 | 7 | 10,3 | 17,5 | 8,4 | 30,5 | 7,4x16,5 | 0,09 | 1,4 |
| CR7-8 | 7-8 | 10 | 9 | 15,3 | 23,5 | 11,2 | 42 | 9,6x23 | 0,24 | 2,5 |
| CR10 | 10 | 10 | 11,5 | 17,5 | 28 | 14 | 49,5 | 12,5x29,5 | 0,46 | 4 |
| CR13 | 13 | 6 | 14,5 | 21 | 33 | 17 | 64 | 16x37 | 0,85 | 6,7 |
| CR16 | 16 | 4 | 17,5 | 25 | 40 | 20 | 76 | 20x52 | 1,53 | 10 |
| CR19-20 | 19-20 | 1 | 22,5 | 32 | 50 | 24 | 95,5 | 24x73 | 2,9 | 16 |
| CR22 | 22 | 1 | 24,5 | 36 | 50 | 27 | 102,5 | 27x71 | 3,65 | 19 |

# Chains



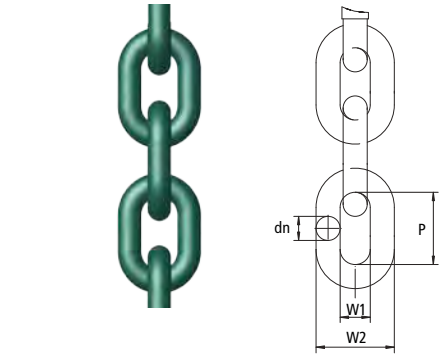
LiftingPlus
Hijsen met visie

# VIS GR.10
# LIFTING CHAINS

## VIS 400

**PAS 1061 - EN 818-2 + 25% of loads**

TEMPERATURE RANGE **-40°C / +380°C**

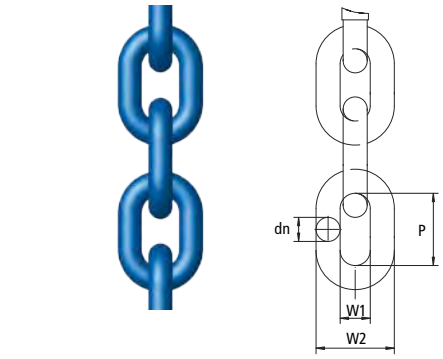


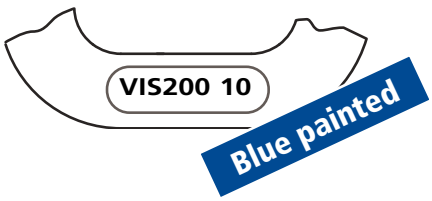
| ARTICLE // | CHAIN // | DIMENSION | | | WLL | BF | WEIGHT // |
|---|---|---|---|---|---|---|---|
| | dn | p | W1 (min) | W2 (max) | max | | |
| | mm | mm | | | t | kN | kg/m |
| VIS400-6 | 6 | 18 | 7,8 | 22,2 | 1,4 | 56,5 | 0,89 |
| VIS400-7 | 7 | 21 | 9,1 | 25,9 | 1,9 | 77 | 1,24 |
| VIS400-8 | 8 | 24 | 10,4 | 29,6 | 2,5 | 101 | 1,6 |
| VIS400-10 | 10 | 30 | 13 | 37 | 4 | 157 | 2,45 |
| VIS400-13 | 13 | 39 | 16,9 | 48,1 | 6,7 | 265 | 4,22 |
| VIS400-16 | 16 | 48 | 20,8 | 59,2 | 10 | 402 | 6,28 |
| VIS400-19 | 19 | 57 | 24,7 | 70,3 | 14 | 567 | 9,1 |
| VIS400-20 | 20 | 60 | 26 | 74 | 16 | 628 | 9,94 |

## VIS 200

**EN 818-2 + 25% of loads**

TEMPERATURE RANGE **-29°C / +205°C**

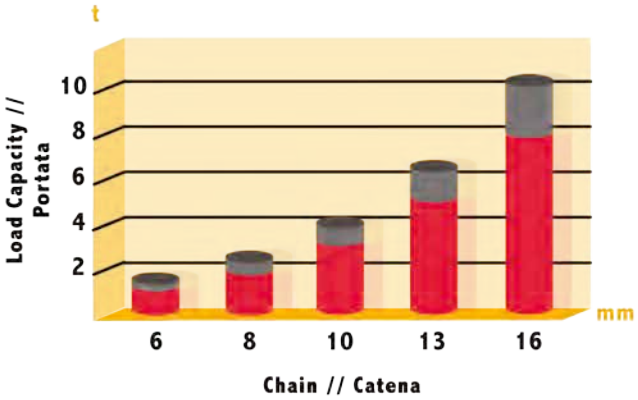


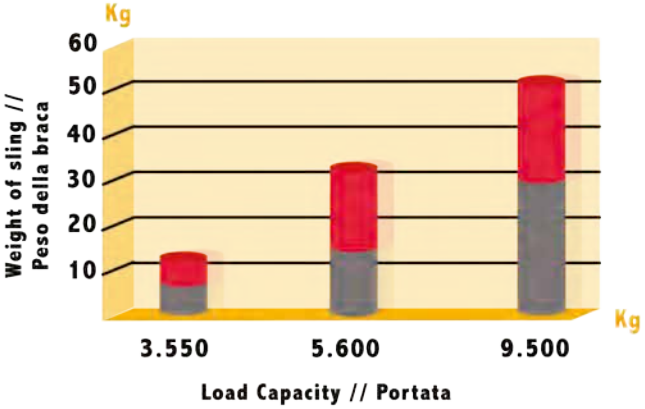




| ARTICLE | CHAIN | DIMENSION | | | WLL | BF | WEIGHT |
|---|---|---|---|---|---|---|---|
| | dn | p | W1 (min) | W2 (max) | max | | |
| | mm | mm | | | t | kN | kg/m |
| VIS200-6 | 6 | 18 | 7,8 | 22,2 | 1,4 | 56,5 | 0,83 |
| VIS200-7 | 7 | 21 | 9,1 | 25,9 | 1,9 | 77 | 1,17 |
| VIS200-8 | 8 | 24 | 10,4 | 29,6 | 2,5 | 101 | 1,51 |
| VIS200-10 | 10 | 30 | 13 | 37 | 4 | 157 | 2,30 |
| VIS200-13 | 13 | 39 | 16,9 | 48,1 | 6,7 | 265 | 4,00 |
| VIS200-16 | 16 | 48 | 20,8 | 59,2 | 10 | 402 | 6,00 |
| VIS200-19 | 19 | 57 | 24,7 | 70,3 | 14 | 567 | 8,40 |
| VIS200-20 | 20 | 60 | 26 | 74 | 16 | 628 | 8,90 |
| VIS200-22 | 22 | 66 | 28,6 | 81,4 | 19 | 760 | 11,4 |
| VIS200-26 | 26 | 78 | 33,8 | 96,2 | 26,5 | 1060 | 16,0 |

• VIS 200 can be certified according to ASTM A973 • VIS 200 è certificabile secondo ASTM A973.

# VIS GR.10 VERSUS CLASSIC GR.8



EN Increase in load capacity up to 25%

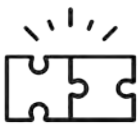
Reduction of sling's weight up to 40%
(according to use, thanks to the use of smaller diameters)

Favorable performance / price ratio

Better wear-resistance is granted by improved hardness, enabling longer performances

The clear identification of the chain slings type is achieved through its tag, different in shape and colour

Spare parts of VIS Gr. 10 can be used also on accessories of CLASSIC GR.8 line



The VIS Gr.10 fittings are compatible with the CLASSIC Gr.8 chains.

New shortening hook: no reduction of WLL

# Grade 8 Lifting Line

LiftingPlus

Hijsen met visie

# CLASSIC GR.8
## THE CLASSIC RANGE

### CLASSIC EN Gr.8

EN 818-2 / ASTM A391

### CLASSIC W8 Gr.8

B-Mn Steel

### CLASSIC Accessories Gr.8

EN 1677-4 / ASTM A 952

**EN** Chains and fittings complying with the European Machine Directive 2006/42/EC

| CLASSIC EN CLASSIC W8 | UNIT WORKING LOAD O | UNIT PROOF LOAD | UNIT BREAKING LOAD | ELONGATION |
|---|---|---|---|---|
| | 200 N/mm² | 500 N/mm² | 800 N/mm² | 20% min. |

| MARKING | CHAIN CLASSIC EN | CHAIN CLASSIC W8 | CLASSIC ACCESSORIES |
|---|---|---|---|
| | H37-8 | W8 | "code" 8 |
| Usage temperature range(1) | -40°C÷ **400°C** | - 29°C÷**205°C** | -40°C÷ **400°C** |
| SURFACE FINISHING | BLACK PAINTED | BLACK PAINTED | RED PAINTED |
| | ZINC PLATED | ZINC PLATED | |

(1) For reduction of working load limits at various temperatures, please check the table 1 page 56

# Components

LiftingPlus
Hijsen met visie

# CLASSIC GR.8

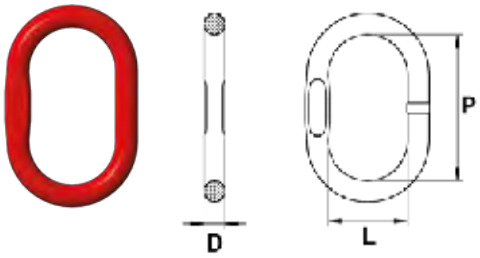
## THE CLASSIC RANGE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | |
| **EN** | **W** | | **T** | | **W** | **T** | **W8** |
| | 1 leg | 2 legs | 1 leg | 2 legs | 3-4 legs | 3-4 legs | |
| ø mm | Article | | | | | | ø mm |
| 6 | W76-8 | W76-8 | - | - | W7-8 | - | 6 |
| 7 | W76-8 | W87-8 | T87-8 | T87-8 | W7-8 | T7-8 | 7 |
| 8 | W87-8 | W108-8 | T87-8 | T108-8 | W8-8 | T8-8 | 8 |
| 10 | W108-8 | W1310-8 | T108-8 | T1310-8 | W10-8 | T10-8 | 10 |
| 13 | W1310-8 | W1613-8 | T1310-8 | T1613-8 | W13-8 | T13-8 | 13 |
| 16 | W1613-8 | W1816-8 | T1613-8 | T2016-8 | W16-8 | T16-8 | 16 |
| 19-20 | W2018-8 | W2220-8 | T2016-8 | T2220-8 | W20-8 | T20-8 | - |
| 22 | W2220-8 | - | T2220-8 | T2622-8 | W22-8 | T22-8 | - |
| 26 | - | - | T2622-8 | T3226-8 | W26-8 | T26-8 | - |
| 32 | - | W4036-8 | T3226-8 | - | 8D70L50 | - | - |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| **EN** | **WA30** | **SNE** | **FHE** | **WA80** | **SNC** | **WA60** | **WA40** | **WA90** | **W8** |
| ø mm | Article | | | | | | | | ø mm |
| 6 | WA29-S | SNE6 | - | WA79-S | SNC6 | WA58 | - | - | 6 |
| 7 | WA30-S | SNE7-8 | FHE7-8 | WA80-S | SNC7-8 | WA60 | WA40 | WA90 | 7 |
| 8 | WA30-S | SNE7-8 | FHE7-8 | WA80-S | SNC7-8 | WA59 | WA40 | WA90 | 8 |
| 10 | WA31-S | SNE10 | FHE10 | WA81-S | SNC10 | WA61 | WA41 | WA91 | 10 |
| 13 | WA32-S | SNE13 | FHE13 | WA82-S | SNC13 | WA62 | WA42 | WA92 | 13 |
| 16 | WA33-S | SNE16 | FHE16 | WA83-S | SNC16 | WA63 | WA43 | WA93 | 16 |
| 19-20 | WA34-S | - | FHE19-20 | WA84-S | - | WA64 | WA44 | WA94 | - |
| 22 | WA35-S | - | - | WA85-S | - | WA65 | WA45 | WA95 | - |
| 26 | WA36-S | - | - | - | - | WA66 | - | - | - |
| 32 | - | - | - | - | - | WA67 | - | - | - |

# Series W (EN 1677-4) / Series T (ASTM A 952/EN 1677-4)

## Oblong master link



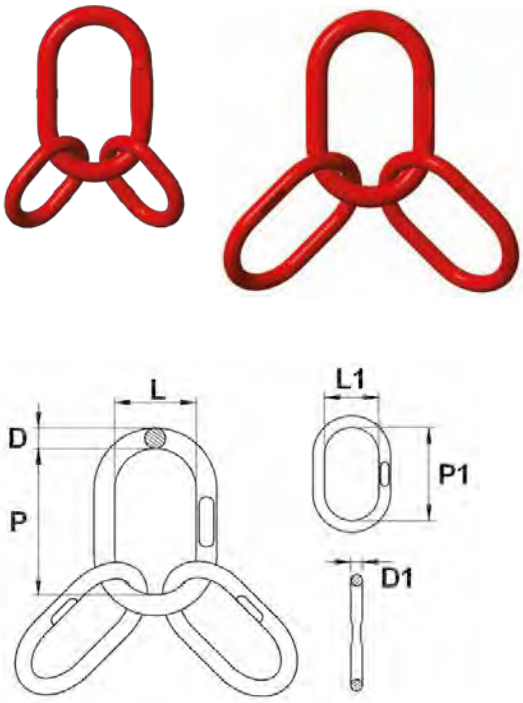

| ARTICLE // | MATCHING CHAIN // | | DIMENSION | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|
| | 1 leg | 2 legs | D | P | L | Approax | max |
| | mm | | mm | | | kg | t |
| W76-8 | 6-7 | 6 | 13 | 110 | 60 | 0,34 | 1,6 |
| W87-8 | 8 | 7 | 16 | 110 | 60 | 0,53 | 2,12 |
| W108-8 | 10 | 8 | 19 | 135 | 75 | 0,92 | 3,15 |
| W1310-8 | 13 | 10 | 23 | 160 | 90 | 1,60 | 5,3 |
| W1613-8 | 16 | 13 | 27 | 180 | 100 | 2,50 | 8 |
| W1816-8 | 18 | 16 | 33 | 200 | 110 | 4,20 | 11,2 |
| W2018-8 | 19-20 | 18 | 36 | 260 | 140 | 6,34 | 14 |
| W2220-8 | 22 | 19-20 | 40 | 300 | 160 | 8,96 | 17 |
| W4036-8 | 36-40 | 32-36 | 56 | 400 | 200 | 23,3 | 56,8 |
| 8D70 | - | - | 70 | 460 | 250 | 43,0 | 81,5 |
| T87-8 | 7-8 | 7 | 15 | 120 | 70 | 0,50 | 2,75 |
| T108-8 | 10 | 8 | 17 | 140 | 80 | 0,75 | 3,55 |
| T1310-8 | 13 | 10 | 20 | 160 | 95 | 1,21 | 5,5 |
| T1613-8 | 16 | 13 | 27 | 190 | 110 | 2,65 | 9,45 |
| T2016-8 | 20 | 16 | 33 | 230 | 130 | 4,78 | 14,2 |
| T2220-8 | 22 | 20 | 38 | 275 | 150 | 7,50 | 22,3 |
| T2622-8 | 26 | 22 | 45 | 340 | 180 | 12,82 | 33,4 |
| T3226-8 | 32 | 26 | 50 | 350 | 190 | 16,50 | 40,8 |

***S87-8÷S2016-8:**

- Line with flat section available on request

# Series W (EN 1677-4) / Series T (ASTM A 952/EN 1677-4)

## Master link assembly




| ARTICLE // | MATCHING CHAIN // | DIMENSION | | | | | | WEIGHT // | WLL (1) |
|---|---|---|---|---|---|---|---|---|---|
| | 3-4 tratte 3-4 legs | D | P | L | D1 | P1 | L1 | Approx | max |
| | mm | mm | | | | | | kg | t |
| W7-8 | 6-7 | 19 | 135 | 75 | 13 | 60 | 38 | 1,35 | 3,15 |
| W8-8 | 8 | 23 | 160 | 90 | 16 | 70 | 34 | 2,32 | 4,25 |
| W10-8 | 10 | 27 | 180 | 100 | 19 | 85 | 40 | 3,81 | 6,7 |
| W13-8 | 13 | 33 | 200 | 110 | 23 | 115 | 50 | 6,57 | 11,2 |
| W16-8 | 16 | 36 | 260 | 140 | 27 | 140 | 65 | 10,3 | 17 |
| W18-8 | 18 | 40 | 340 | 180 | 33 | 150 | 70 | 16,5 | 21,2 |
| W20-8 | 19-20 | 45 | 340 | 180 | 33 | 150 | 70 | 19,3 | 26,5 |
| W22-8 | 22 | 50 | 350 | 190 | 36 | 170 | 75 | 25,1 | 31,5 |
| W26-8 | 26 | 56 | 400 | 200 | 40 | 170 | 80 | 34,3 | 45 |
| 8D70L50 | 32 | 70 | 460 | 250 | 50 | 200 | 100 | 64 | 81,5 |
| T7-8 | 7 | 20 | 160 | 95 | 15 | 120 | 70 | 2,21 | 4,15 |
| T8-8 | 8 | 23 | 160 | 110 | 17 | 140 | 80 | 3,19 | 5,35 |
| T10-8 | 10 | 27 | 190 | 110 | 20 | 160 | 95 | 5,07 | 9,4 |
| T13-8 | 13 | 33 | 230 | 130 | 27 | 190 | 110 | 10,08 | 14,2 |
| T16-8 | 16 | 38 | 275 | 150 | 33 | 230 | 130 | 17,06 | 22,3 |
| T20-8 | 20 | 45 | 340 | 180 | 38 | 275 | 150 | 27,8 | 33,4 |
| T22-8 | 22 | 50 | 350 | 190 | 45 | 340 | 180 | 42,2 | 40,3 |
| T26-8 | 26 | 56 | 400 | 200 | 50 | 350 | 190 | 56,4 | 56,8 |

***S7-8÷S16-8:**

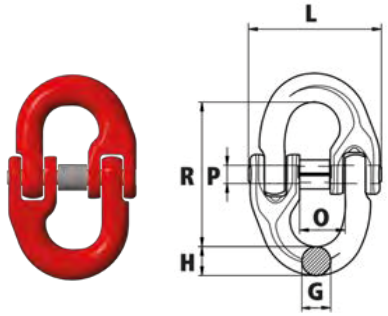
- Line with flat section available on request

# Series WA58÷WA67

## Connecting link

EN 1677-1

Can be certified according to ASTM A 952

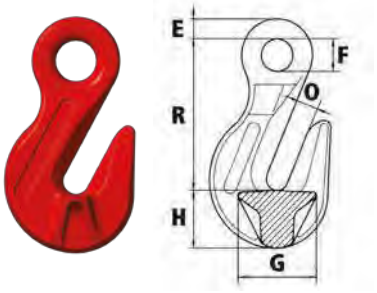



| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | WEIGHT / | WLL |
|---|---|---|---|---|---|---|---|---|---|
| | | | G | H | O | R | PxL | Approx | max |
| | mm | | mm | | | | | kg | t |
| WA58 | 6 | 20 | 7,6 | 7,8 | 14 | 44 | 4,8x39 | 0,07 | 1,12 |
| WA60 | 7 | 30 | 9 | 10 | 17 | 51 | 6x47 | 0,12 | 1,5 |
| WA59 | 8 | 20 | 10 | 11,5 | 18 | 61,5 | 6,3x53 | 0,19 | 2 |
| WA61 | 10 | 40 | 12,6 | 13,8 | 22,5 | 72 | 8x63 | 0,38 | 3,15 |
| WA62 | 13 | 20 | 16,7 | 19 | 27,5 | 88 | 10x79 | 0,73 | 5,3 |
| WA63 | 16 | 12 | 21 | 21 | 33 | 103 | 14x106 | 1,43 | 8 |
| WA64 | 20 | 8 | 23,5 | 29,5 | 41,5 | 115 | 16x123 | 2,65 | 12,5 |
| WA65 | 22 | 5 | 27 | 29 | 48,5 | 135 | 16x150 | 3,75 | 15 |
| WA66 | 26 | 4 | 31,5 | 31,5 | 60 | 147 | 18x159 | 4,10 | 21,2 |
| WA67 | 32 | 1 | 32 | 40 | 80 | 194 | 25x195 | 8,05 | 31,5 |

# Series WA40÷WA45

## Eye grab shortening hook

EN 1677-1



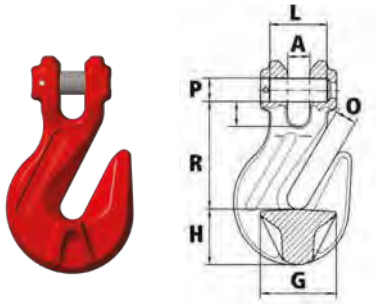

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | WEIGHT // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | E | F | G | H | O | R | Approx | max |
| | mm | | mm | | | | | | kg | t |
| WA40 | 7-8 | 40 | 10 | 15,5 | 30 | 24 | 10 | 60 | 0,3 | 2 |
| WA41 | 10 | 16 | 12 | 20,5 | 44 | 32 | 13 | 80 | 0,6 | 3,15 |
| WA42 | 13 | 10 | 16 | 25 | 53 | 38 | 17 | 104 | 1,3 | 5,3 |
| WA43 | 16 | 8 | 20 | 31 | 64 | 45 | 20 | 114 | 2,2 | 8 |
| WA44 | 20 | 1 | 24 | 36 | 85 | 53 | 23 | 135 | 4 | 12,5 |
| WA45 | 22 | 1 | 25 | 41 | 97 | 62 | 27 | 158 | 5,8 | 15 |

Can be certified according to ASTM A 952

# Series WA90÷WA95

## Clevis grab shortening hook

EN 1677-1



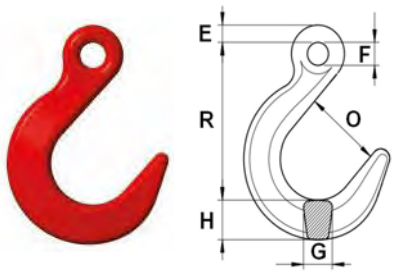

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | WEIGHT // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | G | H | O | R | PxL | Approx | max |
| | mm | | mm | | | | | | kg | t |
| WA90 | 7-8 | 40 | 9 | 30 | 24 | 10 | 50 | 9x23 | 0,3 | 2 |
| WA91 | 10 | 16 | 13 | 44 | 31 | 13 | 72 | 13x31,5 | 0,75 | 3,15 |
| WA92 | 13 | 10 | 17 | 53 | 38 | 17 | 88 | 16x42 | 1,4 | 5,3 |
| WA93 | 16 | 7 | 21 | 64 | 44 | 20 | 102 | 21x51,5 | 2,5 | 8 |
| WA94 | 20 | 5 | 24 | 85 | 53 | 24 | 117 | 24x61,5 | 4,3 | 12,5 |
| WA95 | 22 | 1 | 26 | 97 | 62 | 27 | 139 | 26x72 | 6,4 | 15 |

Can be certified according to ASTM A 952

# Series FHE

## Eye foundry hook

EN 1677-1




| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | WEIGHT // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | E | F | G | H | O | R | Approx | max |
| | mm | | mm | | | | | | kg | t |
| FHE7-8 | 7-8 | 18 | 13,5 | 18 | 26 | 31 | 63 | 122,5 | 1,13 | 2 |
| FHE10 | 10 | 8 | 16 | 22 | 32 | 36 | 77 | 149 | 2 | 3,15 |
| FHE13 | 13 | 6 | 19 | 27 | 39 | 43 | 88 | 173,5 | 3,3 | 5,3 |
| FHE16 | 16 | 4 | 24 | 32 | 45 | 50 | 100 | 205 | 5,3 | 8 |
| FHE19-20 | 19-20 | 1 | 27 | 38 | 51 | 61 | 115 | 237 | 7,7 | 12,5 |

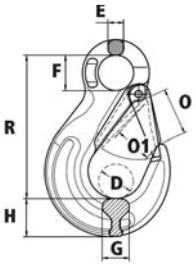
Can be certified according to ASTM A 952

# Series WA29-S÷WA36-S

## Safety eye sling hook

EN 1677-2

Can be certified according to ASTM A 952



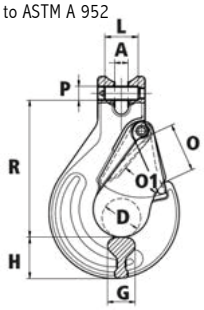

| ARTICLE // | CHAIN // | PCS/PACK // | DIMENSION | | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | 0 | O1 | R | Approx | max |
| | mm | | mm | | | | | | | | kg | t |
| WA29-S | 6 | 10 | 18 | 10 | 20 | 16,5 | 21 | 25 | 19 | 84,5 | 0,34 | 1,12 |
| WA30-S | 7-8 | 20 | 24 | 11 | 25 | 19 | 27 | 32 | 25 | 106 | 0,56 | 2 |
| WA31-S | 10 | 20 | 30 | 16 | 34 | 26 | 33 | 40 | 31 | 131 | 1,20 | 3,1 |
| WA32-S | 13 | 10 | 38 | 19 | 43 | 33 | 42 | 48 | 39 | 164 | 2,35 | 5,3 |
| WA33-S | 16 | 4 | 44 | 25 | 50 | 40 | 50 | 55 | 45 | 182,5 | 3,72 | 8 |
| WA34-S | 20 | 1 | 53 | 27 | 55 | 48 | 54 | 61 | 54 | 205 | 5,95 | 12, |
| WA35-S | 22 | 1 | 60 | 30 | 60 | 50 | 61 | 71 | 61 | 225 | 7,87 | 15 |
| WA36-S | 26 | 1 | 72 | 36 | 70 | 60 | 69 | 84 | 73 | 265 | 12,8 | 21, |

# Series WA79-S÷WA85-S

## Safety clevis sling hook

EN 1677-2

Can be certified according to ASTM A 952



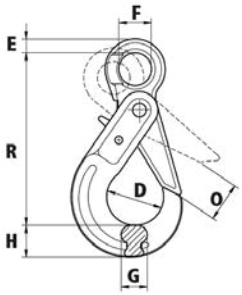

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | | WEIGHT/PCS. | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | D | G | H | 0 | O1 | R | PxL | Approx | max |
| | mm | | mm | | | | | | | | kg | t |
| WA79-S | 6 | 10 | 7 | 18 | 16,5 | 20 | 25 | 19 | 69 | 7,4x16,5 | 0,27 | 1,12 |
| WA80-S | 7-8 | 20 | 9 | 25 | 19 | 28 | 32 | 26 | 94,5 | 9,6x23 | 0,61 | 2 |
| WA81-S | 10 | 20 | 11,5 | 30 | 25 | 33 | 39 | 31 | 109 | 12,5x29,5 | 1,12 | 3,15 |
| WA82-S | 13 | 10 | 14,5 | 38 | 30 | 40 | 48 | 39 | 135 | 16x37 | 2 | 5,3 |
| WA83-S | 16 | 4 | 17,5 | 44 | 37 | 47 | 55 | 45 | 155 | 20x52 | 3,4 | 8 |
| WA84-S | 20 | 1 | 23 | 52 | 51 | 52 | 61 | 53 | 183 | 24x73 | 6,8 | 12,5 |
| WA85-S | 22 | 1 | 24,5 | 60 | 50 | 62 | 71 | 61 | 212 | 27x71 | 9 | 15 |

# Series SNE

## Eye self locking hook

EN 1677-3

Can be certified according to ASTM A 952



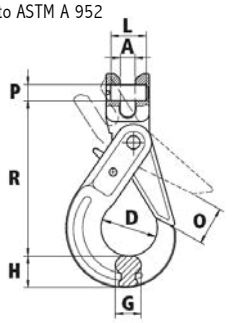

| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | E | F | G | H | O (min) | R | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SNE6 | 6 | 18 | 35 | 11 | 21 | 16 | 20,5 | 28 | 110 | 0,53 | 1,12 |
| SNE7-8 | 7-8 | 24 | 43,5 | 12 | 27 | 20 | 26 | 34 | 136 | 0,89 | 2 |
| SNE10 | 10 | 14 | 56 | 15 | 34,5 | 24,5 | 30 | 45 | 168,5 | 1,58 | 3,15 |
| SNE13 | 13 | 6 | 69 | 20 | 40 | 34,5 | 40 | 51,5 | 205 | 3,16 | 5,3 |
| SNE16 | 16 | 4 | 80 | 27 | 50 | 35,5 | 50 | 60 | 251,5 | 6,05 | 8 |

# Series SNC

## Clevis self locking hook

EN 1677-3

Can be certified according to ASTM A 952




| ARTICLE | CHAIN | PCS/PACK | DIMENSION | | | | | | | WEIGHT/PCS. // | WLL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | D | G | H | O (min) | R | PxL | Approx | max |
| | mm | | mm | | | | | | | kg | t |
| SNC6 | 6 | 18 | 6,7 | 35 | 16 | 20,5 | 28 | 94 | 7,4x16,5 | 0,50 | 1,12 |
| SNC7-8 | 7-8 | 24 | 8,5 | 43,5 | 20 | 26 | 34 | 123 | 9,6X23 | 0,96 | 2 |
| SNC10 | 10 | 14 | 12 | 56 | 24,5 | 30 | 45 | 143,5 | 12,5x29,5 | 1,60 | 3,15 |
| SNC13 | 13 | 6 | 15 | 69 | 34,5 | 40 | 51,5 | 179,5 | 16x37 | 3,13 | 5,3 |
| SNC16 | 16 | 3 | 19 | 80 | 35,5 | 50 | 60 | 217 | 20x52 | 5,80 | 8 |

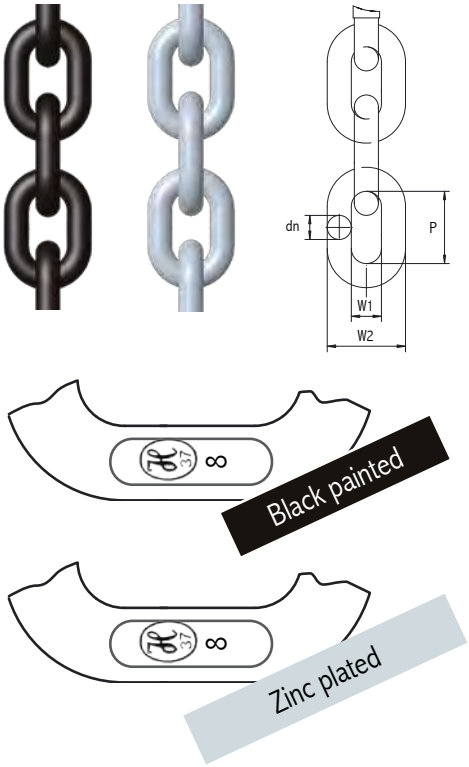
# Chains

LiftingPlus
Hijsen met visie

liftingplus.nl

# CLASSIC GR.8
## LIFTING CHAINS

### CLASSIC EN

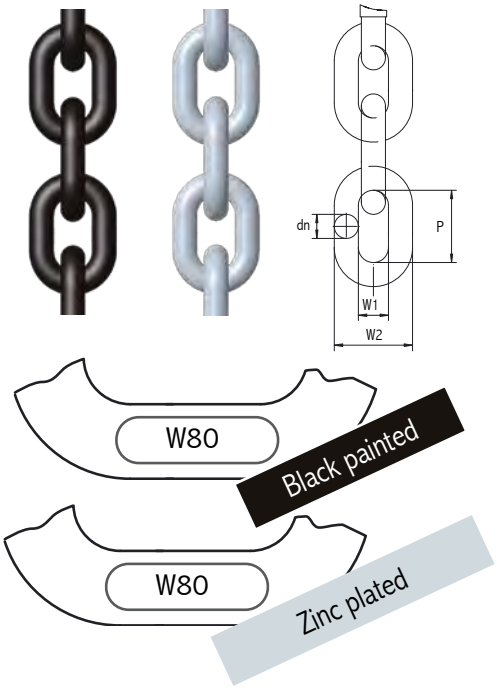



**EN 818-2** Temperature range **-40°C ÷ +400°C**

| ARTICLE | | CHAIN | | | | WLL | BF | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| Painted | Zinc plated[1] | dn | p | W1 (min) | W2 (max) | max | | |
| | | mm | mm | | | t | kN | kg/m |
| CLSEN-6 | CLSEN-6-Z | 6 | 18 | 7,8 | 22,2 | 1,12 | 45,2 | 0,83 |
| CLSEN-7 | CLSEN-7-Z | 7 | 21 | 9,1 | 25,9 | 1,5 | 61,6 | 1,17 |
| CLSEN-8 | CLSEN-8-Z | 8 | 24 | 10,4 | 29,6 | 2 | 80,4 | 1,51 |
| CLSEN-10 | CLSEN-10-Z | 10 | 30 | 13 | 37 | 3,15 | 126 | 2,25 |
| CLSEN-13 | CLSEN-13-Z | 13 | 39 | 16,9 | 48,1 | 5,3 | 212 | 3,90 |
| CLSEN-16 | CLSEN-16-Z | 16 | 48 | 20,8 | 59,2 | 8 | 322 | 5,79 |
| CLSEN-18 | - | 18 | 54 | 23,4 | 66,6 | 10 | 407 | 7,20 |
| CLSEN-19 | - | 19 | 57 | 24,7 | 70,3 | 11,2 | 454 | 8,39 |
| CLSEN-20 | - | 20 | 60 | 26 | 74 | 12,5 | 503 | 8,90 |
| CLSEN-22 | - | 22 | 66 | 28,6 | 81,4 | 15 | 608 | 11,20 |
| CLSEN-26 | - | 26 | 78 | 33,8 | 96,2 | 21,2 | 849 | 15,50 |
| CLSEN-32* | - | 32 | 96 | 41,6 | 118 | 31,5 | 1.290 | 24,10 |

(1) Lanthane (zinc plated + top coat)
* Self coloured
• CLASSIC EN can be certified according to ASTM A391

### CLASSIC W8

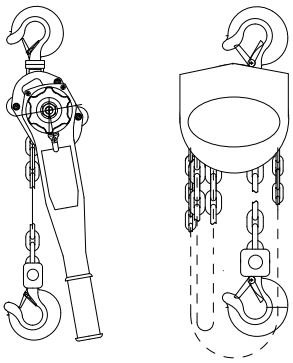



**B-Mn Steel** Temperature range **-29°C ÷ +205°C**

| ARTICLE | | CHAIN | DIMENSION | | | WLL | BF | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| Painted | Zinc plated | dn | p | W1 (min) | W2 (max) | max | | |
| | | mm | mm | | | t | kN | kg/m |
| CLS8W-6 | CLS8W-6-C | 6 | 18 | 7,8 | 22,2 | 1,12 | 45,2 | 0,80 |
| CLS8W-7 | CLS8W-7-C | 7 | 21 | 9,1 | 25,9 | 1,5 | 61,6 | 1,10 |
| CLS8W-8 | CLS8W-8-C | 8 | 24 | 10,4 | 29,6 | 2 | 80,4 | 1,43 |
| CLS8W-10 | CLS8W-10-C | 10 | 30 | 13 | 37 | 3,15 | 126 | 2,20 |
| CLS8W-13 | CLS8W-13-C | 13 | 39 | 16,9 | 48,1 | 5,3 | 212 | 3,77 |
| CLS8W-16 | CLS8W-16-C | 16 | 48 | 20,8 | 59,2 | 8 | 322 | 5,63 |
| CLS8W-18 | - | 18 | 54 | 23,4 | 66,6 | 10 | 407 | 7,09 |
| CLS8W-20 | - | 20 | 60 | 26 | 74 | 12,5 | 503 | 8,90 |

# Hoist Chains

## QUENCHED AND TEMPERED CHAINS



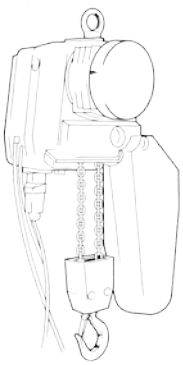
### Series T

**EN** For manual chain hoists and for light application in motor-driven chain hoists. Surface finish: zinco crom.

### Series V

**EN** For manual chain hoists and for light application in motor-driven chain hoists. Surface finish: zinco crom. Higher wear resistance than T series 25% higher WLL than T series.

## CASE HARDENED CHAINS



### Series DAT

**EN** For power-driven chain hoists . Moderate wear resistance. Surface finish: zinco crom.

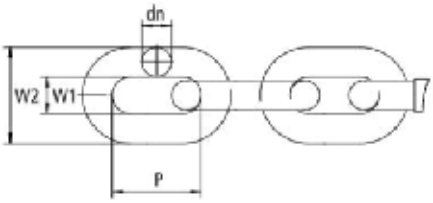
### Series DT

**EN** For power-driven chain hoists. Higher wear resistance than DAT series due to higher surface hardness and greater case depth. Surface finish: zinco crom.

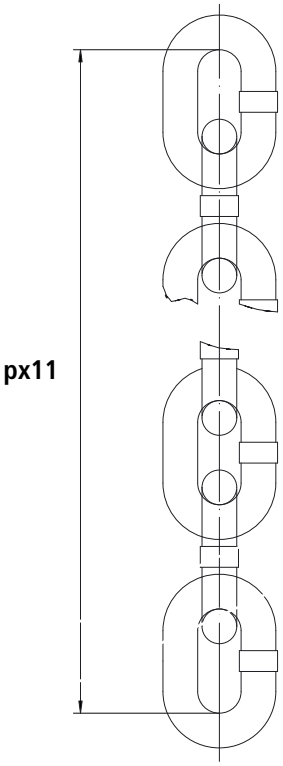
For the use of hoist chain please refer also to ISO 7592

# HOIST CHAINS: DIMENSIONS

| dn | P Pitch | W Width | | Pitch on 11 links | Weight |
|---|---|---|---|---|---|
| mm | mm | W1 (min) mm | W2 (max) mm | p x11 mm | kg/m approx |
| 4 | 12 | 4,8 | 13,6 | 132 | 0,35 |
| 5 | 15 | 6,0 | 17 | 165 | 0,54 |
| 5 | 18,5 | 6,0 | 16,9 | 203,5 | 0,5 |
| 5,6 | 17 | 7,0 | 20 | 187 | 0,68 |
| 6 | 18 | 7,2 | 20,4 | 198 | 0,78 |
| 6 | 18,5 | 7,2 | 20,2 | 203,5 | 0,8 |
| 6,3 | 19 | 7,8 | 22 | 209 | 0,86 |
| 6,3 | 19,1 | 7,6 | 20,8 | 210,1 | 0,85 |
| 7 | 21 | 8,4 | 23,8 | 231 | 1,1 |
| 7 | 22 | 8,4 | 23,6 | 242 | 1,1 |
| 7,1 | 20,2 | 8 | 23,2 | 222,2 | 1,1 |
| 7,1 | 21 | 8,8 | 25 | 231 | 1,1 |
| 7,9 | 23 | 9 | 25,9 | 253 | 1,35 |
| 8 | 24 | 9,6 | 27,2 | 264 | 1,4 |
| 9 | 27 | 10,8 | 30,6 | 297 | 1,8 |




| dn | P Pitch | W Width | | Pitch on 11 links | Weight |
|---|---|---|---|---|---|
| mm | mm | W1 (min) mm | W2 (max) mm | p x11 mm | kg/m approx |
| 9,5 | 28,6 | 11,4 | 31,3 | 314,6 | 1,9 |
| 10 | 28 | 12 | 34 | 308 | 2,2 |
| 10 | 30 | 12 | 34 | 330 | 2,2 |
| 11 | 31 | 13,2 | 37,4 | 341 | 2,7 |
| 11 | 33 | 13,2 | 37,4 | 363 | 2,7 |
| 11,1 | 33,3 | 13,1 | 36,4 | 366,3 | 2,65 |
| 11,2 | 34 | 14 | 39 | 374 | 2,7 |
| 12 | 36 | 14,4 | 40,8 | 396 | 3,1 |
| 12,5 | 38 | 15,6 | 44 | 418 | 3,4 |
| 12,7 | 36 | 14,7 | 41,4 | 396 | 3,55 |
| 13 | 36 | 15,6 | 44,2 | 396 | 3,8 |
| 13 | 39 | 15,6 | 44,2 | 429 | 3,7 |
| 14 | 41 | 16,8 | 47,6 | 451 | 4,25 |
| 14 | 42 | 16,8 | 47,6 | 462 | 4,3 |
| 16 | 45 | 19,2 | 54,4 | 495 | 5,7 |
| 16 | 48 | 19,2 | 54,4 | 528 | 5,6 |




Further sizes available on request

# HOIST CHAINS: MECHANICAL PROPERTIES

**ISO 4301-1 mechanism group**

## Series T

EN 818-7

**Grade 8**
Marking **T**
Usage temperature: from -40°C to +200°C.
Surface hardness 360HV min.
Total ultimate elongation 10% min.

| dn mm | WLL M1 (200N/mm²) t | WLL M2/M3 (160N/mm²) t | Proof Force (500N/mm²) kN min. | Breaking Force (800N/mm²) kN min. |
|---|---|---|---|---|
| 4 | 0,5 | 0,4 | 12,6 | 20,1 |
| 5 | 0,8 | 0,63 | 19,6 | 31,4 |
| 5,6 | 1 | 0,8 | 25 | 40 |
| 6 | 1,1 | 0,9 | 28,3 | 45,2 |
| 6,3 | 1,25 | 1 | 31,5 | 50 |
| 7 | 1,5 | 1,2 | 38,5 | 61,6 |
| 7,1 | 1,6 | 1,3 | 40 | 63 |
| 7,9 | 2 | 1,6 | 49 | 78 |
| 8 | 2 | 1,6 | 50,3 | 80,4 |
| 9 | 2,5 | 2 | 63,6 | 102 |
| 9,5 | 2,9 | 2,3 | 71 | 113 |
| 10 | 3,2 | 2,5 | 78,5 | 126 |
| 11 | 3,8 | 3,1 | 95 | 152 |
| 11,1 | 3,9 | 3,15 | 97 | 155 |
| 11,2 | 4 | 3,2 | 100 | 160 |
| 12 | 4,5 | 3,6 | 113 | 181 |
| 12,5 | 5 | 4 | 125 | 200 |
| 12,7 | 5,1 | 4,1 | 127 | 203 |
| 13 | 5,3 | 4,2 | 133 | 212 |
| 14 | 6 | 5 | 154 | 246 |
| 16 | 8 | 6,3 | 201 | 322 |

Can be certified according to JIS B 8812 and DIN 5684

## Series V

EN 818-7 +25% load

**Grade 10**
Marking **V**
Usage temperature: from -40°C to +150°C.
Surface hardness 430HV min.
Total ultimate elongation 10% min.

| dn mm | WLL M1 (200N/mm²) t | WLL M2/M3 (160N/mm²) t | Proof Force (625N/mm²) kN min. | Breaking Force (1000N/mm²) kN min. |
|---|---|---|---|---|
| 4 | 0,63 | 0,4 | 16 | 25 |
| 5 | 1 | 0,63 | 25 | 40 |
| 5,6 | 1,25 | 0,8 | 31,5 | 50 |
| 6 | 1,44 | 0,9 | 36 | 56,5 |
| 6,3 | 1,6 | 1 | 40 | 63 |
| 7 | 1,96 | 1,2 | 48,1 | 77 |
| 7,1 | 2 | 1,3 | 50 | 80 |
| 8 | 2,5 | 1,6 | 63 | 100 |
| 9 | 3,2 | 2 | 80 | 128 |
| 10 | 4 | 2,5 | 100 | 160 |
| 11,2 | 5 | 3,2 | 125 | 200 |
| 12,5 | 6,3 | 4 | 160 | 250 |
| 14 | 8 | 5 | 200 | 315 |

Can be certified according to JIS B 8812

# Series DAT

EN 818-7

**Grade 8**
Marking **DAT**
Usage temperature: from -20°C to +200°C.
Surface hardness:
500HV min. for Ø till 11 mm ; 450HV min. for Ø >11mm.
Case depth:
3÷5% for Ø <8mm ; 2÷4% for Ø 8mm and greater.
Total ultimate elongation 10% min.

| dn mm | WLL M2/M3 (160N/mm²) t | WLL M4 (140N/mm²) t | Proof Force (500N/mm²) kN min. | Breaking Force (800N/mm²) kN min. |
|---|---|---|---|---|
| 4 | 0,4 | 0,35 | 12,6 | 20,1 |
| 5 | 0,63 | 0,55 | 19,6 | 31,4 |
| 5,6 | 0,8 | 0,7 | 25 | 40 |
| 6 | 0,9 | 0,8 | 28,3 | 45,2 |
| 6,3 | 1 | 0,9 | 31,5 | 50 |
| 7 | 1,2 | 1 | 38,5 | 61,6 |
| 7,1 | 1,3 | 1,1 | 40 | 63 |
| 7,9 | 1,6 | 1,4 | 49 | 78 |
| 8 | 1,6 | 1,4 | 50,3 | 80,4 |
| 9 | 2 | 1,8 | 63,6 | 102 |
| 9,5 | 2,3 | 2 | 71 | 113 |
| 10 | 2,5 | 2,2 | 78,5 | 126 |
| 11 | 3,1 | 2,7 | 95 | 152 |
| 11,1 | 3,15 | 2,7 | 97 | 155 |
| 11,2 | 3,2 | 2,8 | 100 | 160 |
| 12 | 3,6 | 3,2 | 113 | 181 |
| 12,5 | 4 | 3,5 | 125 | 200 |
| 12,7 | 4,1 | 3,6 | 127 | 203 |
| 13 | 4,2 | 3,7 | 133 | 212 |
| 14 | 5 | 4,4 | 154 | 246 |
| 16 | 6,3 | 5,6 | 201 | 322 |

Can be certified according to JIS B 8812 and DIN 5684

# Series DT

EN 818-7

**Grade 8**
Marking **DT**
Usage temperature: from -10°C to +200°C.
Surface hardness:
550HV min. for Ø till 11 mm ; 500HV min. for Ø >11mm.
Case depth:
4÷6% for Ø <8mm ; 3÷5% for Ø 8mm and greater. Total ultimate elongation 5% min.

| dn mm | WLL M2/M3 (100N/mm²) t | WLL M4 (90N/mm²) t | Proof Force (500N/mm²) kN min. | Breaking Force (800N/mm²) kN min. |
|---|---|---|---|---|
| 4 | 0,25 | 0,23 | 12,6 | 20,1 |
| 5 | 0,4 | 0,36 | 19,6 | 31,4 |
| 5,6 | 0,5 | 0,45 | 25 | 40 |
| 6 | 0,56 | 0,52 | 28,3 | 45,2 |
| 6,3 | 0,64 | 0,57 | 31,5 | 50 |
| 7 | 0,75 | 0,70 | 38,5 | 61,6 |
| 7,1 | 0,81 | 0,72 | 40 | 63 |
| 7,9 | 1 | 0,9 | 49 | 78 |
| 8 | 1 | 0,9 | 50,3 | 80,4 |
| 9 | 1,25 | 1,1 | 63,6 | 102 |
| 9,5 | 1,4 | 1,3 | 71 | 113 |
| 10 | 1,6 | 1,4 | 78,5 | 126 |
| 11 | 1,9 | 1,7 | 95 | 152 |
| 11,1 | 2 | 1,75 | 97 | 155 |
| 11,2 | 2 | 1,8 | 100 | 160 |
| 12 | 2,2 | 2 | 113 | 181 |
| 12,5 | 2,5 | 2,2 | 125 | 200 |
| 12,7 | 2,6 | 2,3 | 127 | 203 |
| 13 | 2,6 | 2,4 | 133 | 212 |
| 14 | 3 | 2,8 | 154 | 246 |
| 16 | 4 | 3,6 | 201 | 322 |

Can be certified according to JIS B 8812 and DIN 5684

# Technical Chains

LiftingPlus

Hijsen met visie

liftingplus.nl

**EN** With many decades of know-how in the production of High-Tech chains, we offer a wide range of chains, featuring different combinations of working loads and resistances to wear, for a wide range of applications. Just to mention some: transport chains for flat and toothed sprocket wheels, bucket elevator chains with shackles, tie-downs chains and many more.
Conveyor chains are manufactured using NiCrMo alloy steel. Our case hardened chains feature high surface-hardness, that provides high-level wear resistance, while still performing with high level of breaking strengths. The correct combination of these elements provides for an excellent fatigue resistance.

Conveyor chains can be supplied in matched calibrated pairs. The perfect parallelism of the system is granted by the strict tolerances of the chain lengths. Conveyor chains for the food industry can only be supplied in compatible plated finishes, for example, hexavalent-free chromium.

# Offshore

LiftingPlus
Hijsen met visie

**EN** With many decades of know-how in the production of High-Tech chains, we offer a wide range of chains, featuring different combinations of working loads and resistances to wear, for a wide range of applications. Just to mention some: transport chains for flat and toothed sprocket wheels, bucket elevator chains with shackles, tie-downs chains and many more.
Conveyor chains are manufactured using NiCrMo alloy steel. Our case hardened chains feature high surface-hardness, that provides high-level wear resistance, while still performing with high level of breaking strengths. The correct combination of these elements provides for an excellent fatigue resistance.

Conveyor chains can be supplied in matched calibrated pairs. The perfect parallelism of the system is granted by the strict tolerances of the chain lengths. Conveyor chains for the food industry can only be supplied in compatible plated finishes, for example, hexavalent-free chromium.

## WELDED LINKS FOR OFFSHORE CONTAINERS

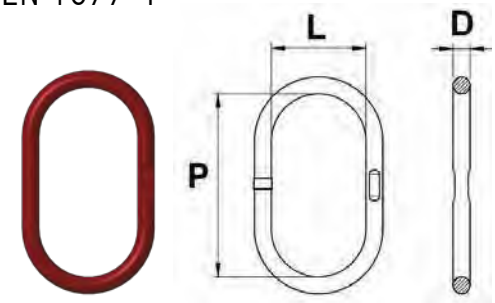
DNV·GL

KITO CHAIN ITALIA SRL

**EN** Type approved according to **DNV 2.7-1** and **EN 12079-2**, Certificate **Nr: S-8072**
Specially designed for use on offshore containers
Manufactured with special alloy steels having good resilience (42J min.) at low temperatures (-40°C)

# Series F

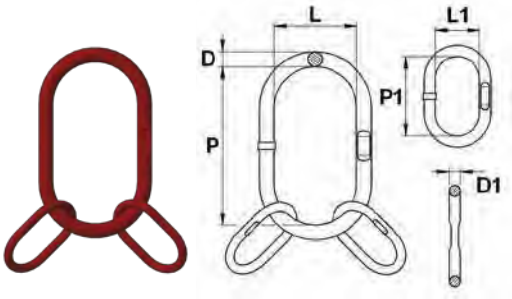
**Master link**
EN 1677-4




| ARTICLE | DIMENSION | | | WEIGHT | WLL (1) |
|---|---|---|---|---|---|
| | D | P | L | Approx | max |
| | mm | | | kg | t |
| F22 | 23 | 270 | 140 | 2,5 | 5,8 |
| F25 | 25 | 270 | 140 | 3,0 | 8,83 |
| F28 | 27 | 270 | 140 | 3,5 | 11,8 |
| F32 | 33 | 270 | 140 | 5,4 | 17,1 |
| F36 | 36 | 270 | 140 | 6,5 | 23 |
| F40 | 40 | 275 | 150 | 8,3 | 28,1 |
| **F45** | 45 | 340 | 180 | 12,8 | 38,3 |
| **F50** | 50 | 350 | 190 | 16,5 | 45 |
| **F60** | 60 | 430 | 230 | 29,1 | 65 |
| **F70** | 70 | 480 | 260 | 44,6 | 85 |

# Series FM

**Quad assembly**
EN 1677-4




| ARTICLE | DIMENSION | | | | | | WEIGHT | WLL (1) |
|---|---|---|---|---|---|---|---|---|
| | D | P | L | D1 | P1 | L1 | Approx | max |
| | mm | | | | | | kg | t |
| F22M16 | 23 | 270 | 140 | 17 | 140 | 80 | 4,0 | 5,8 |
| F25M18 | 25 | 270 | 140 | 19 | 135 | 75 | 4,8 | 8,83 |
| F28M20 | 27 | 270 | 140 | 20 | 135 | 75 | 5,7 | 11,8 |
| F32M26 | 33 | 270 | 140 | 27 | 180 | 100 | 10,4 | 17,1 |
| F36M30 | 36 | 270 | 140 | 30 | 190 | 110 | 13,1 | 23 |
| F40M32 | 40 | 275 | 150 | 33 | 200 | 110 | 16,7 | 28,1 |
| F45M36 | 45 | 340 | 180 | 36 | 225 | 125 | 24,0 | 38,3 |
| F50F40 | 50 | 350 | 190 | 40 | 275 | 150 | 33,1 | 45 |
| F60F50 | 60 | 430 | 230 | 50 | 350 | 190 | 62,1 | 65 |
| F70M56 | 70 | 480 | 260 | 56 | 400 | 200 | 91,2 | 85 |

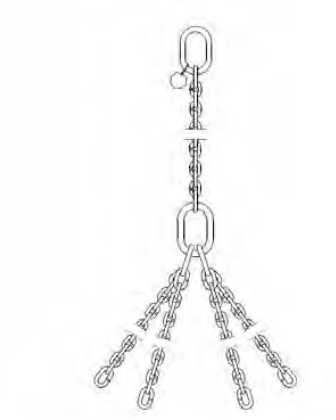
(1) WLL for Master link or Quad assembly only, for WLL of slings please refer to DNV 2.7-1 (Table 8-1) and norm EN 12079-2 (Table A 1)

# LIFTING SETS FOR OFFSHORE CONTAINERS (WELDED CHAIN SLINGS)

EN Individual or Type approved according to **DNV 2.7-1** and **EN 12079-2**
Specially designed for use on offshore containers
Welded chain slings available in different lengths (on custom request)
Manufactured with special alloy steels having good resilience (42J min.) at low temperatures (-20°C)

## Series 5L-OF

**4 legged sling with forerunner**
EN 818-4



| ARTICLE | CHAIN | TOP LINK | 45° TO THE VERTICAL | 30° TO THE VERTICAL |
|---|---|---|---|---|
| | dn | | For containers with rating up to | For containers with rating up to |
| | mm | Article | kg | kg |
| 5L-10-16-OF | 10 - 16 | F25 | - | 3150 |
| 5L-10-18-OF | 10 - 18 | F25 | - | 3300 |
| 5L-13-16-OF | 13 - 16 | F25 | 3150 | - |
| 5L-13-18-OF | 13 - 18 | F28 | 5200 | 5200 |
| 5L-13-19-OF | 13 - 19 | F28 | 6450 | 6450 |
| 5L-13-20-OF | 13 - 20 | F32 | - | 7450 |
| 5L-16-20-OF | 16 - 20 | F32 | 7450 | - |

Available, on request, with further angles smaller than 45° from the vertical

## Series 4L-OF / Series 2x2L-OF (used in pairs as 4-leg sling)

**4 legged sling**
EN 818-4

| ARTICLE | ARTICLE | CHAIN | 45° TO THE VERTICAL | 30° TO THE VERTICAL |
|---|---|---|---|---|
| | Two 2-legged slings used in pairs as 4-leg sling | dn | For containers with rating up to | For containers with rating up to |
| | | mm | kg | kg |
| 4L-10-OF | 2x2L-10-OF | 10 | - | 3300 |
| 4L-13-OF | 2x2L-13-OF | 13 | 6450 | 8650 |
| 4L-16-OF | 2x2L-16-OF | 16 | 12000 | 16900 |
| 4L-18-OF | 2x2L-18-OF | 18 | 17450 | 23200 |
| 4L-19-OF | 2x2L-19-OF | 19 | 20800 | 25000 |
| 4L-20-OF | 2x2L-20-OF | 20 | 23750 | - |

Available, on request, with further angles smaller than 45° from the vertical

## Series 1L-OF

**Single leg sling**
EN 818-4

| ARTICLE | CHAIN | FOR CONTAINERS WITH RATING UP |
|---|---|---|
| | dn | |
| | mm | kg |
| 1L-16-OF | 16 | 3150 |
| 1L-18-OF | 18 | 5200 |
| 1L-19-OF | 19 | 6450 |
| 1L-20-OF | 20 | 7450 |

## Series 2L-OF

**2 legged sling**
EN 818-4

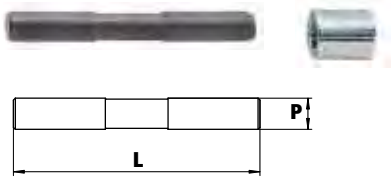
| ARTICLE | CHAIN | 45° TO THE VERTICAL | 30° TO THE VERTICAL |
|---|---|---|---|
| | dn | For containers with rating up to | For containers with rating up to |
| | mm | kg | kg |
| 2L-13-OF | 13 | 2700 | 4400 |
| 2L-16-OF | 16 | 6500 | 8750 |
| 2L-18-OF | 18 | 9000 | 12400 |
| 2L-19-OF | 19 | 10800 | 15200 |
| 2L-20-OF | 20 | 12850 | 18050 |

Available, on request, with further angles smaller than 45° from the vertical

# Spare parts

## Series VCP

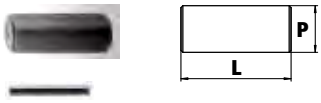
Spare set for connecting link




| Article | PxL | For accessoy | |
|---|---|---|---|
| | mm | VIS | CLASSIC |
| VCP6 | 4,8x39 | WLK6 | WA58 |
| VCP7 | 6x47 | WLK7 | WA60 |
| VCP8 | 6,3x53 | WLK8 WCL8 | WA59 |
| VCP10 | 8x63 | WLK10 WCL10 | WA61 |
| VCP13 | 10x79 | WLK13 WCL13 | WA62 |
| VCP16 | 14x106 | WLK16 WCL16 | WA63 |
| VCP19-20 | 16x126 | WLK19-20 | WA64 |
| VCP22 | 16x150 | WLK22 | WA65 |
| VCP26A | 19x165 | WLK26 | - |
| VCP26 | 18x159 | - | WA66 |
| VCP32 | 25x195 | - | WA67 |

## Series VLP

Kit of pin for clevis hook

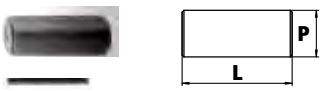



| Article | PxL | For accessoy | |
|---|---|---|---|
| | mm | VIS | CLASSIC |
| VLP6 | 7,4x16,5 | GSC6 GSC6-S SHC6 SKC6 GIE6 CR6<br>D13CR1 D13CR2 D18L13CR<br>D13GI1 D13GI2 D18L13GI | WA79-S SNC6 |
| VLP7-8 | 9,6x23 | GSC7-8 GSC7-8-S SHC7-8 SKC7-8<br>CCH7-8 GIE7-8 CR7-8<br>D16CR1 D18CR2 D22L16CR<br>D16GI1 D18GI2 D22L16GI | WA80-S SNC7-8 |
| VLP10 | 12,5x29,5 | GSC10 GSC10-S SHC10 SKC10<br>CCH10 GIE10 CR10<br>D18CR1 D22CR2 D26L20CR<br>D18GI1 D22GI2 D26L20GI | WA81-S SNC10 |
| VLP13 | 16x37 | GSC13 GSC13-S SHC13 SKC13<br>CCH13 GIE13 CR13<br>D22CR1 D26CR2 D32L22CR<br>D22GI1 D26GI2 D32L22GI | WA82-S SNC13 |
| VLP16 | 20x52 | GSC16 GSC16-S SHC16 SKC16<br>GIE16 CR16<br>D26CR1 D32CR2 D36L26CR<br>D26GI1 D32GI2 D38L26GI | WA83-S SNC16 |
| VLP19-20 | 24x73 | GSC19-20 SHC19-20 CR19-20<br>D32CR1 D36CR2 D50L32CR | WA84-S |
| VLP22 | 27x71 | GSC22 SHC22 CR22<br>D36CR1 D45CR2 D50L36CR | WA85-S |

# Series WCP

## only for CLASSIC

Kit of pin for clevis hook




| Article | PxL | For accessoy |
|---|---|---|
| | mm | CLASSIC |
| WCP7-8 | 9x23 | WA90 |
| WCP10 | 13x31,5 | WA91 |
| WCP13 | 16x42 | WA92 |
| WCP16 | 21x51,5 | WA93 |
| WCP19-20 | 24x61,5 | WA94 |
| WCP22 | 26x72 | WA95 |

# Series FSL

Safety latch kit for sling hooks

| Article | For accessoy | |
|---|---|---|
| | VIS | CLASSIC |
| FSL6 | SHE6 SHC6 | WA29-S WA79-S |
| FSL7-8 | SHE7-8 SHC7-8 | WA30-S WA80-S |
| FSL10 | SHE10 SHC10 | WA31-S WA81-S |
| FSL13 | SHE13 SHC13 | WA32-S WA82-S |
| FSL16 | SHE16 SHC16 | WA33-S WA83-S |
| FSL19-20 | SHE19-20 SHC19-20 | WA34-S WA84-S |
| FSL22 | SHE22 SHC22 | WA35-S WA85-S |
| FSL26 | SHE26 | WA36-S |

# Series LDN

Locking system kit for self locking hook

| Article | For accessory | |
|---|---|---|
| | VIS | CLASSIC |
| LDN6 | SKB6 SKC6 SKE6 SKS6 | SNC6 SNE6 |
| LDN7-8 | SKB7-8 SKC7-8 SKE7-8 SKS7-8 | SNC7-8 SNE7-8 |
| LDN10 | SKB10 SKC10 SKE10 SKS10 | SNC10 SNE10 |
| LDN13 | SKB13 SKC13 SKE13 SKS13 | SNC13 SNE13 |
| LDN16 | SKB16 SKC16 SKE16 SKS16 | SNC16 SNE16 |
| LDN19-20 | SKB19-20 SKC19-20 SKE19-20 SKS19-20 | - |
| LDN22 | SKB22 SKC22 SKE22 SKS22 | - |

# Series VSP (only for VIS) / Series VGP (only for VIS)

Safety pin kit for shortening hooks

| Article | For accessory |
|---|---|
| VSP6 | GSC6-S |
| VSP7-8 | GSC7-8-S |
| VSP10 | GSC10-S |
| VSP19-20 | GSC19-20-S |
| VSP22 | GSC22-S |

| Article // | For accessory |
|---|---|
| VGP13 | GSC13-S |
| VGP16 | GSC16-S |

Neutral tag marked CE

| | Tag Gr.10 | Tag Gr.8 | Connecting set tag/accessory |
|---|---|---|---|
| 1 leg | Article **T10E1** | Article **T08E1** | Article **ø2x200 mm** |
| 2/3/4 legs | Article **T10E4** | Article **T08E4** | Article **ø2x200 mm** |

# USE AND MAINTENANCE MANUAL

LiftingPlus
Hijsen met visie

liftingplus.nl

## General precautions and recommendations

Load-lifting operations must always be carried out with due care and attention because they can constitute a threat to the safety of operators and to persons present in the vicinity of the equipment being used. For this reason, persons using lifting components must be properly trained and skilled. Prohibited or improper use must always be avoided and the condition of components to be used must always be checked prior to use. Failure to observe even just one of the safety instructions given in this document can cause loss of control of the load with consequent injury or damage to persons or things. The precautions for use and maintenance do not cover all possible methods for use or all probable or possible use situations; nevertheless, reading and understanding this information is essential for safe use of lifting accessories.

## Terms and definitions

For a better understanding of the terms and abbreviations used in this catalogue, brief definitions are given below.
**Sling:** An assembly consisting of one or more sections of chain slings, together with accessories at top and bottom ends for attaching loads to the hook of a crane or any other type of lifting device.
**Working Load Limit (WLL):** maximum weight that the sling is certified to support, under normal lifting conditions.
**Manufacturing Proof Load (MPF):** the force applied during manufacture, to test the entire sling or any part of it.
**Breaking Factor (BF):**
the maximum force that the component or chain can withstand during the destructive, static tensile stress test.
**Effective length (EL):** this is the length of a lifting sling with no load attached, measured between the lifting components at the points where the load is applied.
**Skilled person:** a designated person who is properly trained (see para. 6.2 of EN ISO9001-2008), has the necessary knowledge and practical experience and has received the instructions needed to carry out the required inspections.
**Inspection:** visual inspection of the condition of the sling to identify any obvious damage or wear which could adversely affect its operating capabilities.
**Thorough examination:** a visual examination performed by a skilled person who, if necessary, uses other means such as non destructive tests, in order to identify any damage or wear which could adversely affect the operating capabilities of the sling.

## Component selection and limitations of use

The technical performances indicated in the catalogue relate exclusively to new products, or products that can be considered efficient, following the user manual. Therefore use of the accessories can be affected by the product's condition and wear, overloading, corrosion, distortion, or any other type of improper use or unauthorised modification. Our products are designed in compliance with EN1677 norm to resist up to 20.000 cycles during load applications. A single overhead lifting operation, due to the dynamic effect, may generate many cycles of load application, thereby during frequent use of enhanced and dynamic loads, it is convenient to choose slings with higher dimension value to extend the life cycle of the sling's components under effort.
Factors to be always considered for selection and correct use of the lifting system:
**-Weight of the load to be lifted-**
It is essential to know the weight of the load to be lifted (if necessary estimated by calculation) and its centre of gravity in order to avoid dangerous tilting during lifting. Multiple-leg slings must be selected on the basis of angles for use specified in the Tab. 5 and the working loads indicated must never be exceeded.
**-Variation of load exerted on the legs due to the sling angle-**
Bear in mind that the load limit of the sling reduces as the angle between the legs is increased. In the case of multiple-leg slings, try to choose a configuration that allows equal angles to be maintained between the vertical and each of the legs.
Multiple-leg slings can be used with lifting angles of between 15° and 60° in relation to the vertical.
Angles greater than 60° are not permitted, while angles of less than 15° can make the load unstable and should, as a rule, be avoided. In asymmetrical lifting situation (loss of symmetry of the working surface and/or different angles formed between the vertical and the chain legs) the load supported is not uniformly distributed among the sling legs and in some cases the great part of the weight is carried by the half of the chain legs only.
The load can be considered as symmetric only when all the following requirements are satisfied:

- the weight to be lifted is less than 80% of the WLL indicated on the identification tag;
- all angles between the vertical and the chain sling legs are greater or equal to 15°;
- all angles between the vertical and the chain sling legs are encompassed in a 15° arch;
- with 3 or 4 legs chain slings, the plan angles are encompassed in a 15° arch;

If the above mentioned requirements are not satisfied the load has to be considered as asymmetric and the lifting operation has to be carried out by a skilled person that will decide the safety load factor of the sling.As an alternative the sling must be used at half the working load limit (WLL) indicated on the identification tag.
**-Effects of the environment-**
Chain slings must not be used in acid environments or immersed in acid or caustic solutions or vapours; they must therefore never be subjected to pickling, hot-dip galvanizing processes or to any other galvanizing process in general. Bear in mind that strong oxidizing agents corrode the metal of the sling.
**-Effect of high and low temperatures-**
Variations of the working load limit (WLL) of chain sling based on the operating temperature are shown in Tab. 1.
However difficult it may be to assess, never underestimate the temperature that might be reached during operation.

# What to do before first use of the sling

It is recommended to check that:

- the sling meets exactly the application requirements;
- the Manufacturer Certificate/Declaration of Conformity CE are to hand;
- all identification standards and Working Load Limit WLL mentioned on the identification tag correspond to what is indicated in the Certificate;
- the details of the sling are recorded;
- this manual has been read and undestood.

# Usage information

**-Use of the fittings-** (Hooks, Shortening Hooks, Connecting Links)
Weissenfels products are manufactured in conformity with the most common Italian and international technical standards and meet the essential safety requirements of the Machinery Directive 2006/42/EC.
Hooks are equipped with a safety device that avoids the accidental release of the load.
Use of this device is mandatory and its efficacy shall be always preemptively checked.
In any case for some specific applications hooks without safety closing device are available (Foundry Hooks:FHE,WA50÷WA54; and Clevis C Hooks:C-CH,CH).Those hooks can be used only when it is not technically possible to use hooks with safety device and all steps to make sure that there is no risk of an accidental release of the load have been taken.
Hooks can have two different kind of connection device: clevis device and eye device. For the connection of the chain with the clevis hook and eye hook please refer to the instructions (Fig. 1 and 2)
**-Sling hooks-** (SHC, SHE, ecc.)
Before any use make sure that the safety device of the hook works properly. Once the load has been hooked on, make sure that the safety latch closes correctly into its seating.
Attach the load, taking care to locate it in the centre of the hook; never load the tip of the hook nor the safety device. (Fig. 3).
**-Self-Locking hooks-** (SKB, SKC, SKE, SKS, ecc.)
To open the hook locking device, operate the safety latch by pressing it downwards.
Attach the load, taking care to locate it in the centre of the hook, close the safety latch manually by operating the lever locking device. Always check that the safety lock is properly locked. Loading the tip of the hook or the safety device, in any way, is strictly prohibited. The hook can be open only when not under loading, by operating the lever locking device.
**-Shortening hooks-** (GIE, GSC, GSE, ecc.)
To balance the load use the shortening hook and adjust the length of the sling legs.To shorten the chain leg, insert the link into groove G, (Fig. 4 Part.A) making sure it is correctly positioned; only after checking the correct placement of the link attach the load to the end hook of the shortened leg. No load must be applied to the tip of the shortening hook.When shortening chains of multiple leg slings, please do shorten each leg with the right shortening device (Fig. 4, part. B) installed into the same Weisslock connecting link where also the leg is attached.
Do not use the shortening hooks to make basket slings, as the Weisslock would overload (Fig. 5).
**-Connecting Link Weisslock-** (WLK, ecc.)
To assemble the chain with eye hooks, master links and sub-assembly use the WLK Connecting Link.
Assembly Information is shown in Fig. 2.

# Use of the slings

The load's anchor points are determined on the basis of its centre of gravity, in order to avoid swinging or tilting as the load is lifted. Balancing of the load can be achieved by varying the position of the hooking points or by using the special shortening hooks on one or more of the legs (Fig. 6). Avoid and prevent dangerous swinging, due to sudden slowing down or acceleration of the load; avoid also jerky and abrupt movements during lifting, otherwise reduce the WLL as indicated in Tab. 2.
The master link must be correctly located in the bottom of the crane hook and must never ever be placed on the tip of the hook or jammed onto the hook latch. The master link must be free to tilt in every direction and its movement must not be impeded by joining components or other obstructions.
Use edge protection to prevent sharp edges from damaging the lifting equipment. A rule of thumb is that the radius of the edge >2X chain diameter (Fig.7). When lifting with chain directly on lugs it is recommended the lug diameter >3x the pitch of the chain. When diameter is less than mentioned above, the WLL must be reduced with 50%. Prevent the chain from coming into contact with sharp edges which could damage them, when under load, by providing suitable protection if there is a risk of this happening.
Do not knot or twist the chains to shorten them. Use only the shortening hook provided on the sling. For correct use of this hook, please see the paragraph 'Use of hooks'.
Clear the area in which the load is to be deposited of all obstructions and make sure that the floor or ground can support its weight. To avoid any dangerous damage, lower the load to the ground carefully, taking care to ensure that the sling does not become tangled in the load. The sling must not be removed from beneath the load while the load is resting on it, and must not be dragged across the floor or abrasive surfaces.
Never walk or stand under a suspended load. Before moving loads in the workplace, the danger must be adequately signalled and any person in the danger area must be moved away.
If a multiple-leg chain sling is used with part of its leg only, the working load limit (WLL) indicated on the identification tag must be reduced as indicated in Tab. 3. Any unused leg of the sling must be gathered together and hooked out of the way to prevent any risk of them catching while the load is moved.
Always keep hands and other parts of the body well clear of sling chains and components, in order to avoid injury as the sling is tensioned during lifting.
Before starting to lift, slowly take up all slack in the sling legs and lift the load slowly and in a controlled way until it safely assumes the anticipated position.
Do not hang onto the sling.

If slings are to be used in extremely dangerous conditions (offshore activities, lifting of persons, lifting of molten metals, lifting of corrosive metals, lifting of fissile materials), the degree of risk must be assessed by a skilled person and the working load limit must be reduced accordingly.

**-Slinging methods-**

Loads can be slung in various ways and the following are a few examples:

**a) Straight leg**

The bottom fitting is connected directly to the attachment point. Suitable for lifting loads with a single, well-balanced attachment point (Fig.8);

**b) Running knot**

Consists of a running noose that tightens when the load is lifted (Fig. 9 and 10). This method has the advantage of compressing the load and should be used when there are no suitable attachment points. If a running knot is used, the working load limit (WLL) of the sling must not exceed 80% of that marked on the identification plate.

## Lifting slings maintenance

**-Storage-**

To avoid damage, chain slings must be stored hanging on suitable brackets and not left lying on the ground. If chain slings are to remain unused for long periods of time, it is advisable to clean and lightly oil them to protect them against corrosion.

**-Periodic inspections-**

Regularly inspect the chains before each use, in a clean, well lit place, to make sure they are not defective or damaged. Keep a record of all periodic inspections, which must be carried out by a skilled person. The maximum interval between inspections is one year, but frequency may vary according to legislation in force in the country in which the chains are used.

In the case of continuous or particularly heavy use the frequency of inspections must be increased accordingly.

**-Maintenance and repair-**

Repair and maintenance of slings must be carried out by expert and skilled personnel.

Components which show signs of distortion, cracks, breaks, serious corrosion or any other damage, or on which the maximum permissible wear limit has been reached, must be replaced with genuine spare parts (Fig. 11 and 12). When sling components have to be replaced, always use new pins and spring pins and follow the instruction for use.

If any of the chain links are damaged, always replace the entire leg of the sling.

Minor defects such as small nicks or gouges should be removed with extreme care, using a file.

The surface must never show signs of an abrupt variation in the cross sectional area of the material. Always check that removal of minor defects has not reduced the nominal diameter of the section by more than 10%.

Never carry out any welding operations on the chain or its accessories.

In conclusion, if any defects or damage are found which could affect safe use of the slings, they must be taken out of service and thoroughly inspected by skilled personnel.

## Conditions requiring immediate withdrawal of the sling from service

If any one of the following conditions occurs, the sling must immediately be taken out of service:

- identification plate or label illegible or missing;
- one or more components showing distortion, cracks, breaks or any sign of damage (Fig.11 and 12);
- the opening of a hook mouth differs by more than 10% from the nominal size indicated in the catalogue (Fig.13);
- the sling has been used for a load exceeding the permissible WLL;
- the sling has been exposed to temperatures higher or lower than those permissible;
- the chain links no longer move freely against each other;
- the chain is worn by more than 10% of the nominal diameter (Tab.4);
- faulty closing (hold in closed position not ensured) of latch due to deformation or visible increase of throat opening of the hook;
- wear or deformation/distortion of components over the permissible deviations shown in Tab.4a;
- chain links showing an increase of the pitch (p) of 5% or more - elongation- (example: chain 10x30 mm showing a single link pitch of 31,5 mm)

This use and maintenance manual could be separately free downloaded from website www.kitochainitalia.com

Fig. 1

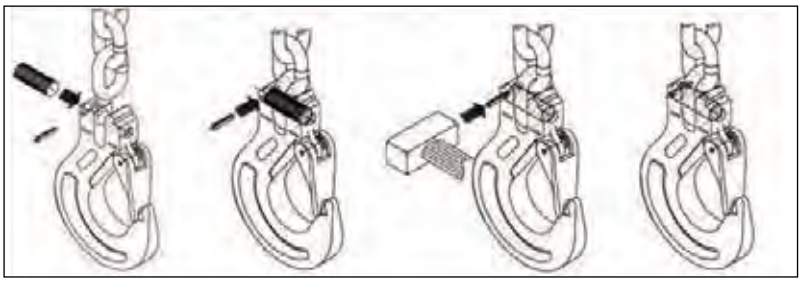


Fig. 2

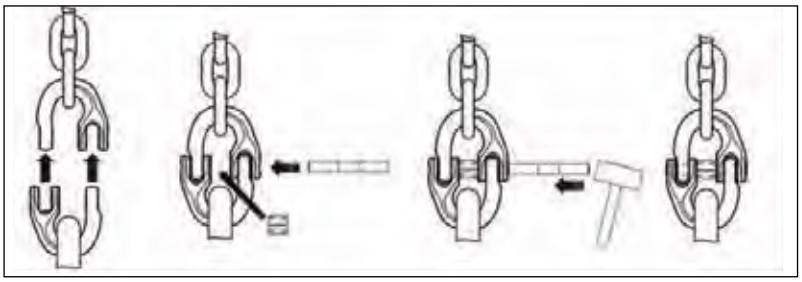


Fig. 3

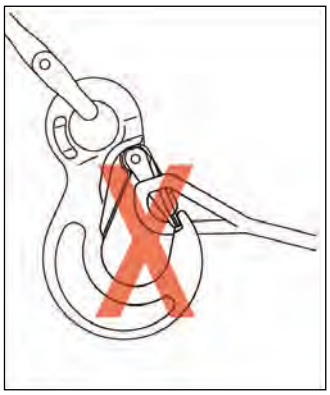


Fig. Y

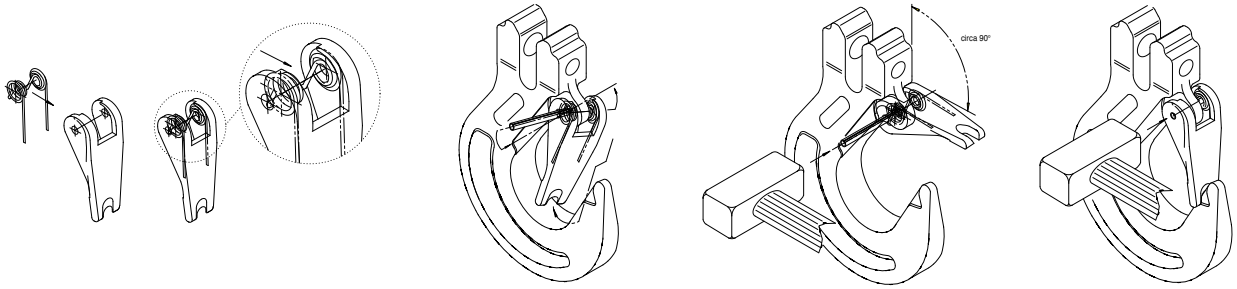


Fig. 4

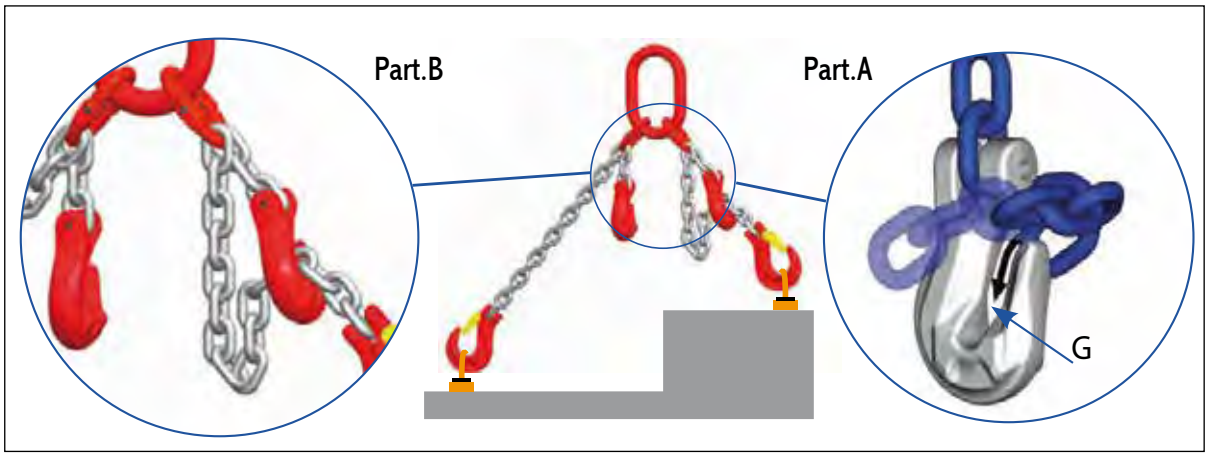



Fig. 5

Fig. 6

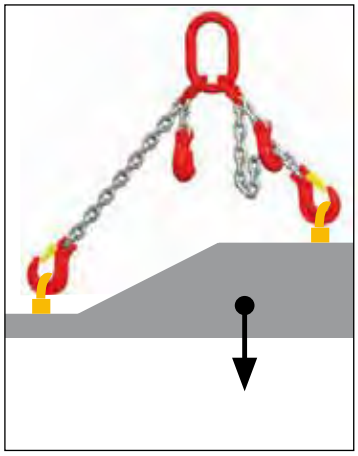


Fig. 7

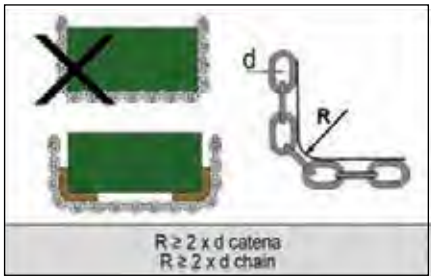
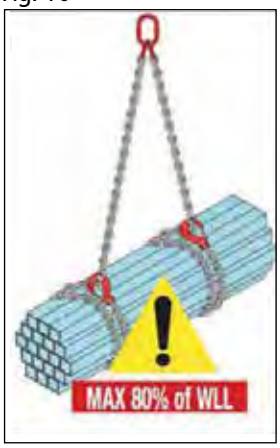


Fig. 8

Fig. 9

Fig. 10




Tab. 1

| % Reduction of working load limit according to the temperature | | | | |
|---|---|---|---|---|
| **Product** | **Temperatue** | | | |
| **VIS Gr.10 - CLASSIC Gr.8** (accessories)<br>**CLASSIC EN Gr.8** (chain) | -40°C < T ≤ 200°C | 200°C < T ≤ 300°C | 300°C < T ≤ 400°C | T < -40°C / T > 400°C |
| | No reduction<br>Nessuna | 10 %<br>reduction | 25 %<br>reduction / riduzione | Use not permitted |
| **VIS 400 Gr.10** (chain) | -40°C < T ≤ 200°C | 200°C < T ≤ 300°C | 300°C < T ≤ 380°C | T < -40°C / T > 380°C |
| | No reduction<br>Nessuna | 10 %<br>reduction | 25 %<br>reduction | Use not permitted |
| **VIS 200 Gr.10** (chain )<br>**CLASSIC W8 Gr.8** (chain ) | -29°C < T ≤ 205°C | T < -29°C | T > 205°C | |
| | No reduction | Use not permitted | Use not permitted | |

Tab. 2

| Load limit variation in presence of impulsive load<br>Variazione della portata in presenza di carichi impulsivi | | | |
|---|---|---|---|
| Impulsive load | light impulse | medium impulse | strong impulse |
| Reduction factor | 1 | 0,7 | not allowed |

Tab. 3

| Type of sling | Number of legs used<br>Numero di tratte utilizzate | WLL factor to be applied in I.D. tag |
|---|---|---|
| 2 legs | 1 | 1/2 |
| 3 or 4 legs | 2 | 2/3 |
| 3 or 4 legs | 1 | 1/3 |

Tab. 4

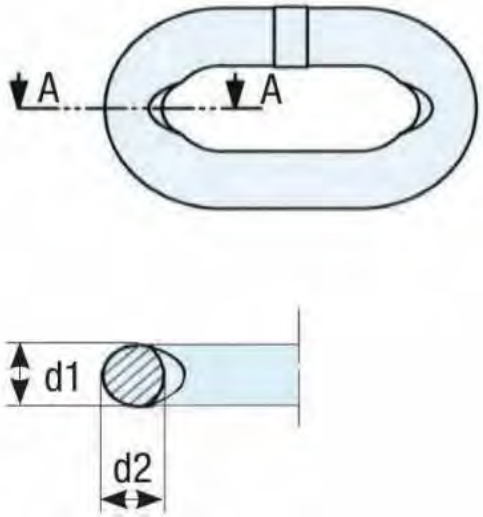
| CHAIN | NOMINAL DIAMETER (mm) | MINIMUM DIAMETER (d1+d2)/2 (mm) |
|---|---|---|
|  | 6 | > 5.4 |
| | 7 | > 6.3 |
| | 8 | > 7.2 |
| | 10 | > 9.0 |
| | 13 | > 11.7 |
| | 16 | > 14.4 |
| | 18 | > 16.2 |
| | 19 | > 17.1 |
| | 20 | > 18.0 |
| | 22 | > 19.8 |
| | 26 | > 23.4 |
| | 32 | > 28.8 |

Fig. 11

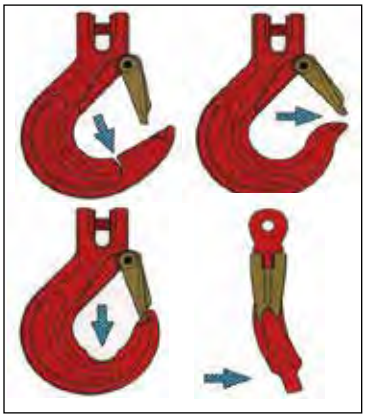


Fig. 12

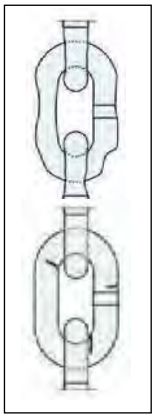


Fig. 13

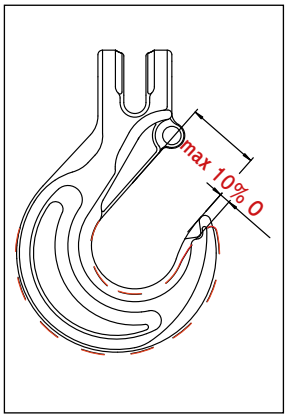
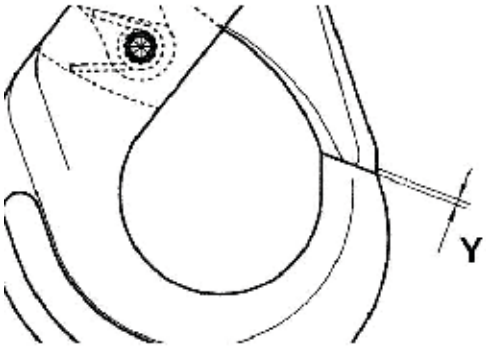



Fig. 14

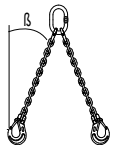
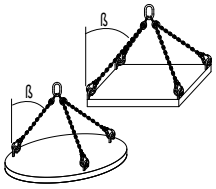


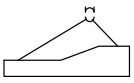

Tab. 4a

| ACCESSORIES | DIMENSION (*) | MAXIMUM ADMISSIBE DEVIATION |
|---|---|---|
| Ganci Hooks<br>CCH FHE GIE GSC GSC-S GSE SHC SHE CR<br>WA40÷WA45 WA90÷WA95<br>WA29-S÷WA35-S WA79-S÷WA85-S | R | +5% |
| | E - H - P(pin) | -10% |
| | O | +10% |
| Self-locking hooks<br><br>SKB SKC SKE SKS<br>SNC SNE<br><br>(Fig.14) | E - P(pin) | -10% |
| | H | -10% |
| | Y (6-7-8-10mm) | 2mm |
| | Y (13mm) | 3mm |
| | Y (16mm) | 4mm |
| | Y (19-20-22mm) | 6mm |
| Masterlinks and Master Link Assemblies | D - D1 | -10% |
| | P - P1 | +10% |
| Coupling links<br>WCL WLK WA58÷WA67 | R | +5% |
| | H - P(pin) | -10% |

(*) Note: the indicated letters refer to the ones showed in the components drawings (see previous pages)

Tab. 5

| MAX WLL FOR VIS GR.10 AND CLASSIC GR.8 CHAIN SLINGS ACCORDING TO EN 818-1,2,4 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **SAFETY FACTOR** | | **1 LEG** | **2 LEGS** | | **3 or 4 LEGS** | | **HOKE ENDLESS SLING** | **BASKET SLING** | |
| **4** | | |  | |  | | | | |
| Working angles | | - | 0°<ß≤45° | 45°<ß≤60° | 0°<ß≤45° | 45°<ß≤60° | - | 0°<ß≤45° | 0°<ß≤45° |
| Load factor | | 1 | 1,4 | 1 | 2,1 | 1,5 | 1,6 | 1,4 | 2,1 |
| **d mm** | **Gr.** | **WLL max t** | | | | | | | |
| **6** | 10 | 1,4 | 2 | 1,4 | 3 | 2,12 | 2,24 | 2 | 3 |
| | 8 | 1,12 | 1,6 | 1,12 | 2,36 | 1,7 | 1,8 | 1,6 | 2,36 |
| **7** | 10 | 1,9 | 2,65 | 1,9 | 4 | 2,8 | 3 | 2,65 | 4 |
| | 8 | 1,5 | 2,12 | 1,5 | 3,15 | 2,24 | 2,5 | 2,12 | 3,15 |
| **8** | 10 | 2,5 | 3,55 | 2,5 | 5,3 | 3,75 | 4 | 3,55 | 5,3 |
| | 8 | 2 | 2,8 | 2 | 4,25 | 3 | 3,15 | 2,8 | 4,25 |
| **10** | 10 | 4 | 5,6 | 4 | 8,4 | 6 | 6,3 | 5,6 | 8 |
| | 8 | 3,15 | 4,25 | 3,15 | 6,7 | 4,75 | 5 | 4,25 | 6,7 |
| **13** | 10 | 6,7 | 9,5 | 6,7 | 14 | 10 | 10,6 | 9,5 | 14 |
| | 8 | 5,3 | 7,5 | 5,3 | 11,2 | 8 | 8,5 | 7,5 | 11,2 |
| **16** | 10 | 10 | 14 | 10 | 21,2 | 15 | 16 | 14 | 21,2 |
| | 8 | 8 | 11,2 | 8 | 17 | 11,8 | 12,5 | 11,2 | 17 |
| **18** | 8 | 10 | 14 | 10 | 21,2 | 15 | 16 | 14 | 21,2 |
| **19** | 10 | 14 | 20 | 14 | 30 | 21,2 | 22,4 | 20 | 30 |
| | 8 | 11,2 | 16 | 11,2 | 23,6 | 17 | 18 | 16 | 23,6 |
| **20** | 10 | 16 | 22,4 | 16 | 33,6 | 24 | 25,6 | 22,4 | 33,6 |
| | 8 | 12,5 | 17 | 12,5 | 26,5 | 19 | 20 | 17 | 26,5 |
| **22** | 10 | 19 | 26,5 | 19 | 40 | 28 | 30 | 26,5 | 40 |
| | 8 | 15 | 21,2 | 15 | 31,5 | 22,4 | 23,6 | 21,2 | 31,5 |
| **26** | 10 | 26,5 | 37,5 | 26,5 | 56 | 40 | 42,5 | 37,5 | 56 |
| | 8 | 21,2 | 30 | 21,2 | 45 | 31,5 | 33,5 | 30 | 45 |
| **32** | 8 | 31,5 | 45 | 31,5 | 67 | 47,5 | 50 | 45 | 67 |



In case of asymmetric loading, the chain sling shall be rated at 50% the marked WLL

## Waar kunt u ons vinden?

Wij zijn gevestigd te Meppel, centraal gelegen tussen de snelwegen A32 en A28. Dankzij deze optimale ligging kunnen wij u altijd de beste service bieden. Tevens zijn wij 24/7 bereikbaar in geval van calamiteiten.

Tevens bieden wij samen met onze transportpartners een haal- en brengservice, zodat u geen kostbare tijd verliest.

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