



HA QUAD ASSEMBLIES OS Type Approval TAS000013Z Rev. 2

Type Approval No. TAS000013Z Rev. 2

Certified to: DNV 2.7-1, DNV 2.7-3, BSEN ISO 10855-2, EN1677-4, ASME B30.26 and API-2CCU - Aug. 2017

The HA range of master links and quad assemblies is the most complete range of links available today, in diameters from 16mm up to 120mm and working load limits up to 150 tonnes. The links are manufactured from triple alloy steel in accordance with EN1677, they are individually proof load tested to 2.5 times working load limit in accordance with EN1677 and they are all supplied with charpy impact values of in excess of 42 Joules at -40°C. The links are suitable for use in a temperature range of -40°C up to 200°C without reduction in working load limit.

The HA range of links are widely used in lifting sets for offshore containers and they are type approved to DNV 2.7-1 under approval number TAS000013Z Rev. 2.

MPF = Manufacturing Proof Force = 2.5 x 9.81 x Working Load Limit (kN) (min.)

BF = Break Force = WLL x Factor of Safety

WLL = Working Load Limit (tonne) @ 45° to vertical

Factor of Safety = 5 : 1

Embossing - As per Description column and Batch Number

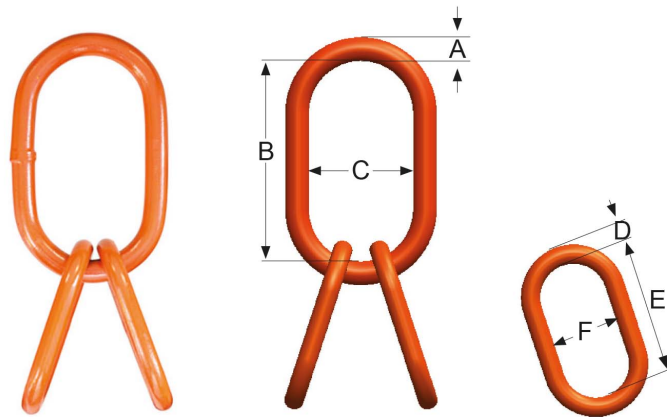
Manufactured in accordance with EN1677-4

Design air temperature -40° min.

Average impact energy (charpy) 42 Joules minimum impact resistance at -40°C up to 50mm diameter

Operational temperature range is -40° C to + 200°C

*Certified on a batch basis to the requirements of DNV 2.7-1



SPECIFICATIONS

| Part Code | Description | A mm | B mm | C mm | D mm | E mm | F mm | WLL t | MPF kN | MBL kN | Mass Kg |
|-----------|-------------|------|------|------|------|------|------|-------|--------|--------|---------|
| 350.160 | HA16QA OS | 16.0 | 150 | 75 | 14.5 | 125 | 60 | 4.10 | 101 | 201 | 1.30 |
| 350.220 | HA22QA OS | 22.0 | 162 | 90 | 20.0 | 140 | 70 | 8.83 | 217 | 433 | 3.60 |
| 350.230 | HA23QA OS | 22.0 | 270 | 140 | 16.0 | 150 | 75 | 5.80 | 143 | 284 | 3.80 |
| 350.250 | HA25QA OS | 25.5 | 270 | 140 | 20.0 | 140 | 70 | 8.83 | 217 | 433 | 5.30 |
| 350.260 | HA26QA OS | 28.0 | 270 | 140 | 20.0 | 140 | 70 | 14.50 | 356 | 711 | 5.90 |
| 350.280 | HA28QAS OS | 28.0 | 200 | 110 | 22.0 | 140 | 70 | 14.50 | 356 | 711 | 5.50 |
| 350.320 | HA32QA OS | 32.0 | 270 | 140 | 25.0 | 190 | 102 | 17.10 | 420 | 838 | 9.70 |
| 350.360 | HA36QA OS | 36.0 | 270 | 140 | 28.0 | 190 | 100 | 23.00 | 565 | 1128 | 11.90 |
| 350.400 | HA40QA OS | 40.0 | 280 | 155 | 32.0 | 270 | 140 | 28.10 | 690 | 1378 | 18.60 |
| 350.450 | HA45QA OS | 45.0 | 320 | 175 | 36.0 | 270 | 140 | 38.30 | 939 | 1878 | 25.40 |

| | | | | | | | | | | | |
|---------|-----------|------|-----|-----|------|-----|-----|--------|------|------|--------|
| 350.500 | HA50QA OS | 50.0 | 350 | 195 | 40.0 | 260 | 130 | 45.00 | 1104 | 2207 | 32.30 |
| 350.600 | HA60QA OS | 60.0 | 410 | 220 | 50.0 | 350 | 195 | 65.00 | 1594 | 3188 | 63.90 |
| 350.650 | HA65QA OS | 65.0 | 410 | 220 | 50.0 | 350 | 195 | 75.00 | 1840 | 3679 | 67.90 |
| 350.700 | HA70QA OS | 70.0 | 450 | 250 | 60.0 | 410 | 220 | 85.00 | 2085 | 4169 | 102.60 |
| 350.750 | HA75QA OS | 75.0 | 450 | 250 | 60.0 | 410 | 220 | 100.00 | 2453 | 4905 | 115.70 |
| 350.900 | HA90QA* | 90.0 | 510 | 300 | 70.0 | 400 | 200 | 150.00 | 3679 | 7358 | 164.10 |

SPECIFICATIONS - Imperial

| Part Code | Description | A (inches) | B (inches) | C (inches) | D (inches) | E (inches) | F (inches) | WLL (lbs.) | MPF (lbs.) | MBL (lbs.) | Mass (lbs.) |
|-----------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| 350.160 | HA16QA OS | 5/8" | 6" | 3" | 9/16" | 5" | 2-3/8" | 9,036 | 22,705 | 45,186 | 2.86 |
| 350.220 | HA22QA OS | 7/8" | 6-1/2" | 3-5/8" | 3/4" | 5-5/8" | 2-3/4" | 19,461 | 48,653 | 97,307 | 7.83 |
| 350.230 | HA23QA OS | 7/8" | 10-3/4" | 5-5/8" | 5/8" | 6" | 3" | 12,783 | 31,958 | 63,916 | 8.45 |
| 350.250 | HA25QA OS | 1" | 10-3/4" | 5-5/8" | 3/4" | 5-5/8" | 2-3/4" | 19,461 | 48,653 | 97,307 | 11.66 |
| 350.260 | HA26QA OS | 1-1/8" | 10-3/4" | 5-5/8" | 3/4" | 5-5/8" | 2-3/4" | 31,958 | 79,895 | 159,790 | 12.96 |
| 350.280 | HA28QAS OS | 1-1/8" | 8" | 4-3/8" | 7/8" | 5-5/8" | 2-3/4" | 31,958 | 79,895 | 159,790 | 12.16 |
| 350.320 | HA32QA OS | 1-1/4" | 10-3/4" | 5-5/8" | 1" | 7-5/8" | 4" | 37,688 | 94,221 | 188,442 | 21.27 |
| 350.360 | HA36QA OS | 1-7/16" | 10-3/4" | 5-5/8" | 1-1/8" | 7-5/8" | 4" | 50,692 | 126,730 | 235,460 | 26.18 |
| 350.400 | HA40QA OS | 1-9/16" | 11" | 6" | 1-1/4" | 10-3/4" | 5-5/8" | 61,932 | 154,831 | 309,662 | 40.92 |
| 350.450 | HA45QA OS | 1-3/4" | 12-3/4" | 7" | 1-7/16" | 10-3/4" | 5-5/8" | 84,413 | 211,033 | 422,066 | 55.90 |
| 350.500 | HA50QA OS | 2" | 14" | 7-3/4" | 1-9/16" | 10-3/4" | 5-5/8" | 99,180 | 247,950 | 495,900 | 71.10 |
| 350.600 | HA60QA OS | 2-33/64" | 16-1/4" | 8-3/4" | 2" | 14" | 7-3/4" | 143,260 | 358,150 | 716,300 | 140.60 |
| 350.650 | HA65QA OS | 2-9/16" | 16-9/16" | 8-21/32" | 2" | 14" | 7-3/4" | 165,340 | 413,684 | 826,847 | 149.70 |
| 350.700 | HA70QA OS | 2-3/4" | 18" | 10" | 2-3/8" | 16-1/4" | 8-3/4" | 187,340 | 468,350 | 936,700 | 225.70 |
| 350.750 | HA75QA OS | 2-61/64" | 18" | 10" | 2-3/8" | 16-1/4" | 8-3/4" | 220,460 | 551,456 | 1,102,683 | 255.00 |
| 350.900 | HA90QA* | 3-5/8" | 21" | 12-1/2" | 2-3/4" | 15-3/4" | 7-7/8" | 330,600 | 661,611 | 1,654,590 | 360.00 |



William Hackett

William Hackett Lifting Products Ltd Oak Drive, Lionheart Enterprise Park, Alnwick, Northumberland NE66 2EU
 Email: liftingsales@williamhackett.co.uk Tel: +44 (0)1665 604200 Fax: +44 (0)1665 604204

William Hackett Chain Products Ltd Maypole Fields, Cradley, Halesowen, West Midlands B63 2QE.
 Email: info@williamhackett.co.uk Tel: +44 (0)1384 569431 Fax: +44 (0)1384 639157

Web: www.williamhackett.co.uk



Better connected with William Hackett