

HA® Master Link OS+

The HA master link OS+ is a fundamental component used in a wide range of lifting and rigging applications. It is typically used in wire rope, chain and synthetic sling assemblies, acting as the connection point between the sling legs below and the lifting machine above. More specifically, having received DNV type approval, our HA master link OS+ range is recognised and specified globally by operators, contractors and rigging shops for use in offshore rigging and DNV 2.7-1 container lifting sets. Manufactured from grade 8 triple alloy steel, the HA master link OS+ range is specially engineered for use in harsh offshore environments.

DNV type approved: certified by DNV pursuant to Type Approval No. TAS00003J2 Rev. 1 and Type Approval No. TAS0000337 Rev. 3 in accordance with DNV-ST-E271, DNV-ST-E273, BSEN ISO 10855-2, EN1677-4, ASME B30.26 and API-2CCU-2017-08.

Additional standards: in addition to the standards covered by the DNV type approvals above, this product is designed and manufactured in accordance with AS3776:2015.

Product sizes: available in diameters from 16mm to 120mm and working load limits from 4.1 tonnes to 250.0 tonnes.

Temperature: operational temperature range of - 40°C to + 200°C without reduction in working load limit.

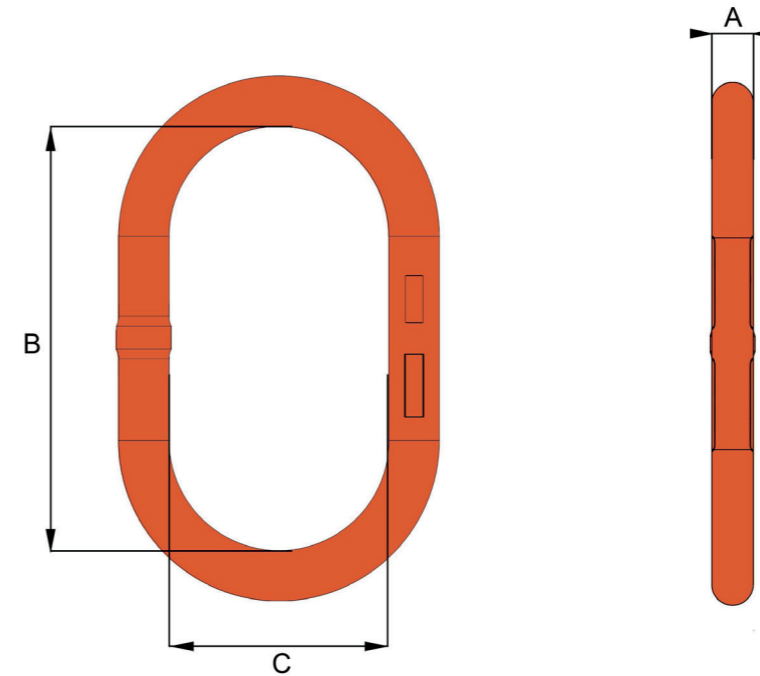
Material & hardness: manufactured from grade 8 triple alloy steel, with a hardness range of 34 to 36 HRC.

Average impact energy (Charpy): 42 Joules minimum impact resistance at -40°C (up to 50mm diameter sizes).

Testing: individually proof load tested to 2.5 times working load limit (for sizes 16mm to 75mm) and 2 times working load limit (for sizes 90mm and 120mm), and 100% MPI tested.

Embossing: includes product description (i.e., "HA16ML 8 OS+") and batch number.

Safety factor: 5 : 1.



Specifications

Part Code	Description	A mm	B mm	C mm	WLL t	MPF kN	MBL kN	Mass kg
330.160+	HA16ML 8 OS+	16.0	150.0	75.0	4.1	101	201	0.68
330.22S+	HA22MLS 8 OS+	22.0	162.0	90.0	11.0	270	540	1.47
330.220+	HA22ML 8 OS+	22.0	270.0	140.0	7.0	172	343	2.28
330.250+	HA25ML 8 OS+	25.5	270.0	140.0	9.3	229	456	3.11
330.28S+	HA28MLS 8 OS+	28.0	200.0	110.0	19.5	479	956	2.95
330.280+	HA28ML 8 OS+	28.0	270.0	140.0	14.5	356	711	3.78
330.320+	HA32ML 8 OS+	32.0	270.0	140.0	19.0	466	932	5.02
330.360+	HA36ML 8 OS+	36.0	270.0	140.0	26.0	638	1275	6.46
330.400+	HA40ML 8 OS+	40.0	280.0	155.0	30.5	749	1496	8.46
330.450+	HA45ML 8 OS+	45.0	320.0	175.0	40.0	981	1962	12.18
330.500+	HA50ML 8 OS+	50.0	350.0	195.0	51.0	1251	2502	16.54
330.650+	HA65ML 8 OS+	65.0	410.0	220.0	75.0	1840	3679	33.02
330.750+	HA75ML 8 OS+	75.0	450.0	250.0	100.0	2453	4905	48.98
330.900	HA90ML*	90.0	510.0	300.0	150.0	2943	7360	86.00
330.1200	HA120ML*	120.0	610.0	410.0	250.0	4905	12260	197.00

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

HA® Master Link OS+

The HA master link OS+ is a fundamental component used in a wide range of lifting and rigging applications. It is typically used in wire rope, chain and synthetic sling assemblies, acting as the connection point between the sling legs below and the lifting machine above. More specifically, having received DNV type approval, our HA master link OS+ range is recognised and specified globally by operators, contractors and rigging shops for use in offshore rigging and DNV 2.7-1 container lifting sets. Manufactured from grade 8 triple alloy steel, the HA master link OS+ range is specially engineered for use in harsh offshore environments.

DNV type approved: certified by DNV pursuant to Type Approval No. TAS00003J2 Rev. 1 and Type Approval No. TAS0000337 Rev. 3 in accordance with DNV-ST-E271, DNV-ST-E273, BSEN ISO 10855-2, EN1677-4, ASME B30.26 and API-2CCU-2017-08.

Additional standards: in addition to the standards covered by the DNV type approvals above, this product is designed and manufactured in accordance with AS3776:2015.

Product sizes: available in diameters from 16mm to 120mm and working load limits from 4.1 tonnes to 250.0 tonnes.

Temperature: operational temperature range of - 40°C to + 200°C without reduction in working load limit.

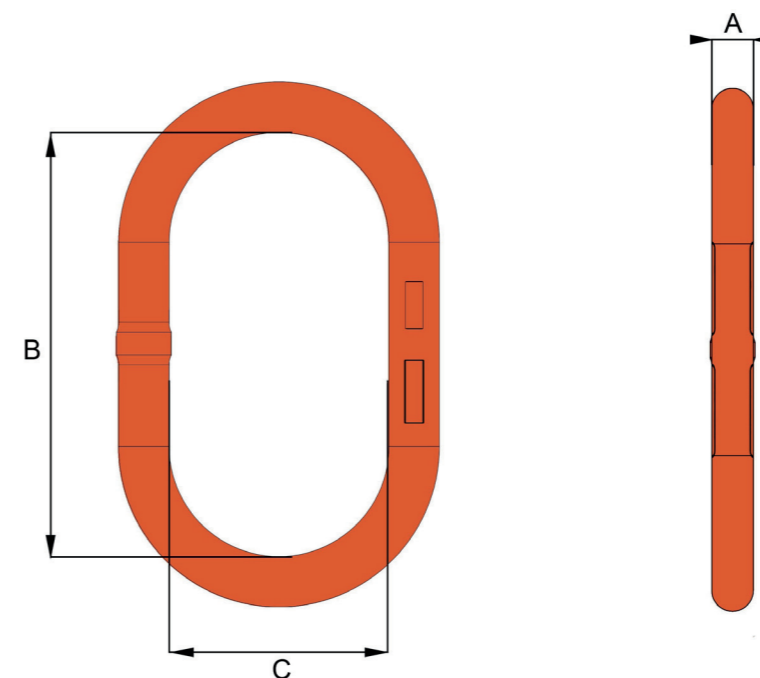
Material & hardness: manufactured from grade 8 triple alloy steel, with a hardness range of 34 to 36 HRC.

Average impact energy (Charpy): 42 Joules minimum impact resistance at -40°C (up to 50mm diameter sizes).

Testing: individually proof load tested to 2.5 times working load limit (for sizes 16mm to 75mm) and 2 times working load limit (for sizes 90mm and 120mm), and 100% MPI tested.

Embossing: includes product description (i.e., "HA16ML 8 OS+") and batch number.

Safety factor: 5 : 1.



Specifications

Part Code	Description	A inch	B inch	C inch	WLL lbs	MPF lbs	MBL lbs	Mass lbs
330.160+	HA16ML 8 OS+	5/8	6	3	9038	22705	45186	1.50
330.22S+	HA22MLS 8 OS+	7/8	6-1/2	3-5/8	24250	60698	121396	3.24
330.220+	HA22ML 8 OS+	7/8	10-3/4	5-5/8	15432	38667	77109	5.03
330.250+	HA25ML 8 OS+	1	10-3/4	5-5/8	20503	51481	102512	6.86
330.28S+	HA28MLS 8 OS+	1-1/8	8	4-3/8	42990	107683	214916	6.50
330.280+	HA28ML 8 OS+	1-1/8	10-3/4	5-5/8	31967	80031	159838	8.33
330.320+	HA32ML 8 OS+	1-1/4	10-3/4	5-5/8	41887	104760	209521	11.07
330.360+	HA36ML 8 OS+	1-7/16	10-3/4	5-5/8	57320	143427	286630	14.29
330.400+	HA40ML 8 OS+	1-9/16	11	6	67240	168381	336313	18.65
330.450+	HA45ML 8 OS+	1-3/4	12-3/4	7	88184	220537	441074	26.85
330.500+	HA50ML 8 OS+	2	14	7-3/4	112436	281235	562470	36.46
330.650+	HA65ML 8 OS+	2-9/16	16-1/8	8-5/8	165347	413647	827070	72.80
330.750+	HA75ML 8 OS+	3	18	10	220462	551455	1102685	108.00
330.900	HA90ML*	3-5/8	21	12-1/2	330693	661611	1654590	189.59
330.1200	HA120ML*	4-3/4	24	16-3/8	551156	1102685	2756157	434.31

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