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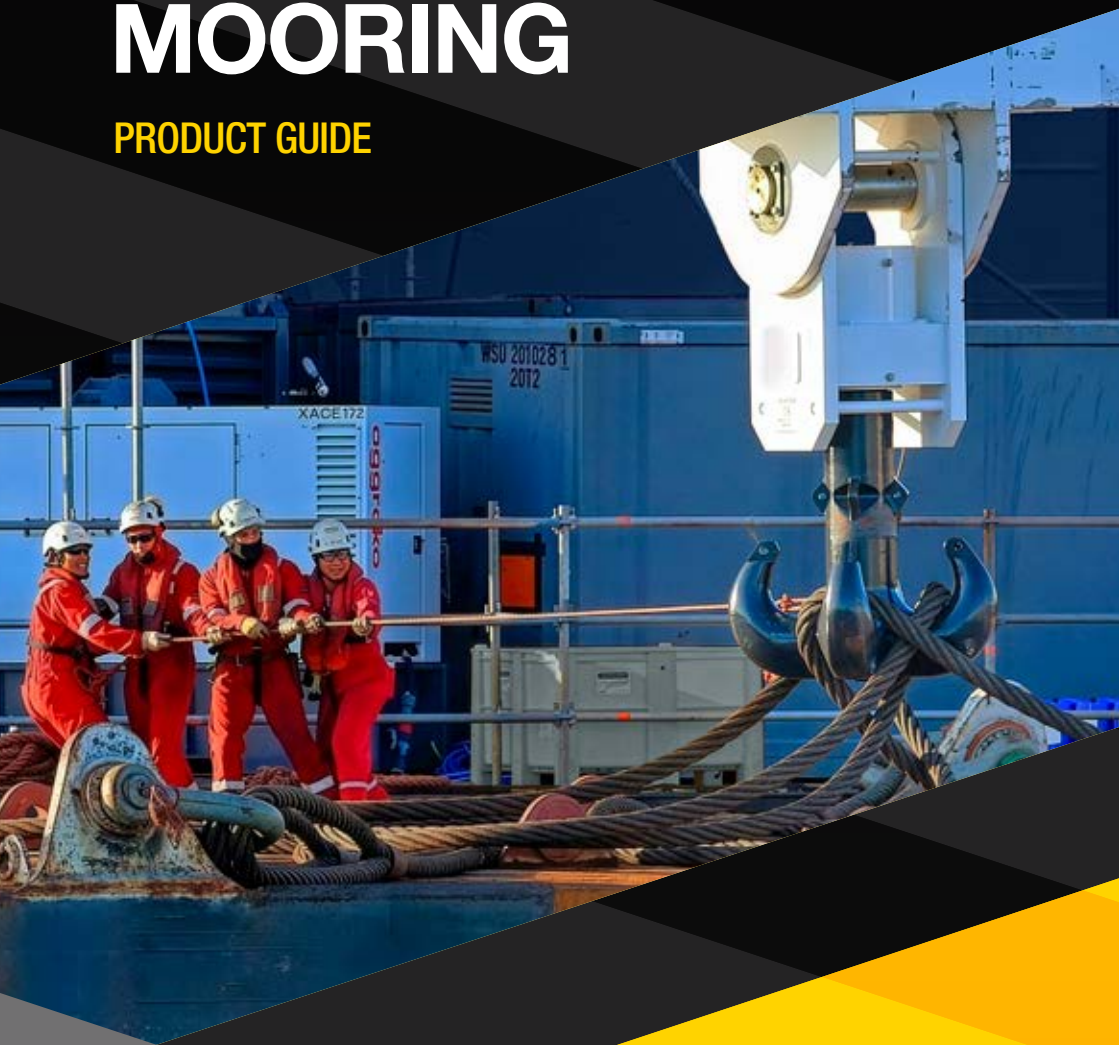


OFFSHORE LIFTING & MOORING

PRODUCT GUIDE




VAN BEEST



**HEAVY DUTY CHALLENGES.
FORGED SOLUTIONS.**



Welcome to Irizar Forge

INTRODUCTION



Forged in the Basque Country since 1923

Irizar Forge has been proudly producing lifting and mooring connectors in Lazkao, in the Basque Country in Spain, for over 100 years. Francisco Irizar founded his workshop in the Goierri Valley, one of Europe's great steelmaking regions, in 1923. Four generations later, leadership has remained within the family.

Everything under one roof

What began as a local forge, initially supplying up to 50 t and later expanded its capacity to deliver up to 500 t, has evolved into a global producer of over 1000 t heavy duty lifting and mooring components. Today, the facility combines forging, heat treatment, machining, finishing, assembly, proof load testing and certification all under one roof.

Lasting strength

Behind every product are the people who make it possible, employees committed to quality, safety, and long lasting performance.

Every component that leaves the factory reflects that commitment. Irizar Forge hooks, hook blocks, swivels and connectors are designed, tested and certified to work in the harshest environments.

Lead by innovation

At the core of Irizar Forge is a dedication to innovation, engineering solutions that enhance operational safety, improve efficiency and simplify maintenance.

A global network behind every order

With warehouses in Spain, the United States and Brazil, and sales offices in Spain, the Netherlands, the United States and Brazil, supported by a global partnership network, Irizar Forge can support projects worldwide. Offering not only high-performing products, but a partnership you can depend on.

Irizar Forge

Heavy Duty Challenges. Forged Solutions.

Certifications

Our manufacturing facilities, production processes, and quality management systems are certified and approved by internationally recognized classification societies and certification bodies, including **ABS, DNV, Bureau Veritas, Lloyd's Register, and TÜV Rheinland.**

Scan the QR code to view our certificates and approvals.





→ OFFSHORE

HEAVY LIFTING SOLUTIONS FOR TOPSIDE AND SUBSEA

Offshore lifting doesn't forgive mistakes. Topside operations involve rolling seas, salty air and dynamic loading. Subsea environments add hydrostatic pressure and limited visibility to the calculation and create complex recovery challenges if something needs replacing. In offshore, every component must be right first time.

Irizar Forge supplies EPC contractors, OEM manufacturers and selected distributors with precision-forged lifting components that are specifically engineered for topside and subsea conditions.



INDUSTRIES SERVED

- Oil and gas
- Subsea operations
- (De)commissioning
- Offshore wind

PRODUCTS

Crane hooks, Hook blocks, Swivels, ROV hooks, Lifting H-links, Master links, Triplates

Engineering and manufacturing

Every offshore component begins with design, calculation and simulation, including load analysis, safety factor verification and finite element modelling of stress and fatigue behaviour, before the steel is heated. Production covers forging, heat treatment, machining, surface finishing and assembly, with inspection and testing before, during and after production using both destructive and non-destructive methods. Each component is proof load tested on benches rated to 2000 t. All this is done in-house.

Standard and advanced solutions

Standard solutions cover certified lifting components manufactured to recognised international standards. Fully type-approved and readily available from stock.

Advanced solutions are fully engineered to customer specification. Irizar Forge manages the entire process, from initial design and classification society approval through production, testing and third-party certification by LRS, DNV, ABS and BV.



→ **PRODUCT RANGE**

OFFSHORE

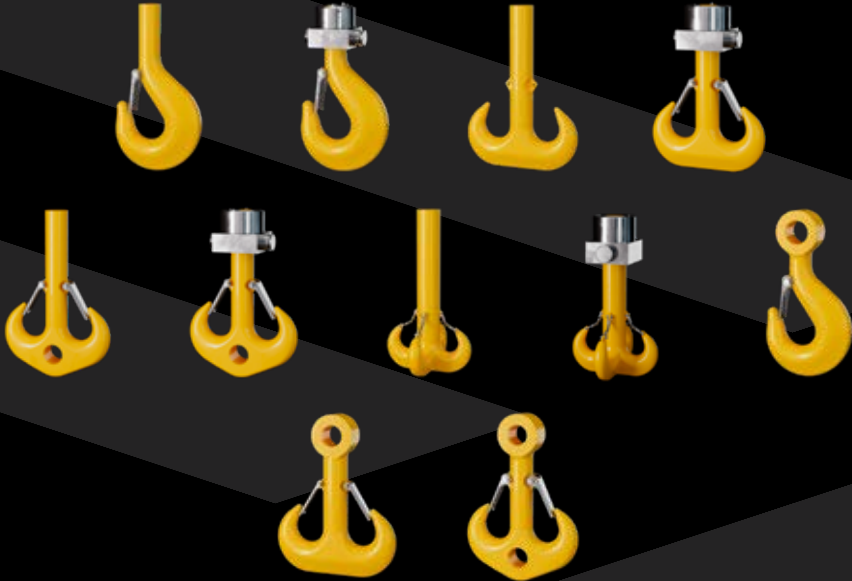
SUBSEA HARDWARE



CONNECTORS



CRANE HOOKS



HOOK BLOCKS



SWIVELS



→ SUBSEA HARDWARE



Irizar Forge engineers subsea hardware to solve real operational challenges, both above and below the waterline.

From J-Tube and I-Tube pull-ins to subsea installations, A&R operations and heavy lift activities, each solution is designed around the specific demands of the application. The subsea hardware range enhances handling, accessibility, and operational control through features such as extended reach geometries, integrated handling systems, split-centre designs, and ROV-operable configurations, improving both safety and efficiency.

All models incorporate round profile load-bearing surfaces to support equipment longevity, with selected products available with Type Approval.

The Irizar Forge subsea hardware portfolio includes a comprehensive range of connectors designed to ensure safe and efficient load transfer between lifting equipment, rigging assemblies, and installed structures. The range includes Master links, H-links, Triple links and other connection solutions. Engineered for applications where strength, reliability, and operational flexibility are critical, these components are widely used across diverse lifting and installation activities worldwide.

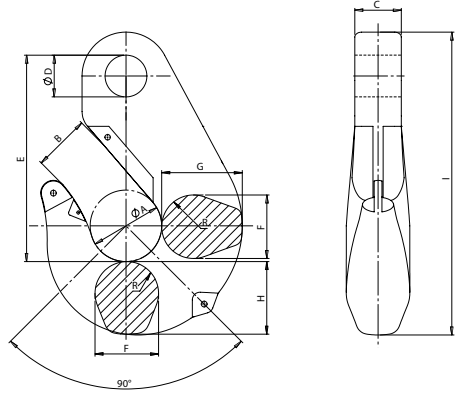
A defining feature of the range is the use of forged, weldless Master link designs. The removal of welded joints from critical load-bearing areas minimizes risks associated with welding, such as heat-affected zones, material inconsistencies, and fatigue-sensitive transitions. The result is a robust and reliable connection solution optimized for demanding offshore service.



SLING DEFENDER ROV EYE HOOK

Forged ROV hook

SCAN FOR MORE
INFORMATION



- WLL: from 50 t to 1000 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Proof Load tested
- Standard spring latch with locking system; for additional options see Spare Parts chapter
- ROV - operable
- Type Approved by DNV
- Colour: yellow

FORGED ROV HOOKS SLING DEFENDER ROV EYE HOOK												
Overall dimensions (mm)												Weight
WLL(t)	MBL(t)	A	B	C ±0,5	D +1/-0	E	F	R	G	H	I	(Kg)
50	200	112	90	80	75	390	100	55	125	115	555	65
63	250	125	100	100	80	425	112	60	140	125	605	88
80	320	140	112	100	87	465	125	60	160	145	670	112
100	400	160	125	125	100	530	140	80	180	165	760	160
120	480	180	140	130	100	560	160	80	200	185	815	220
150	600	200	160	139	114	590	180	90	224	205	865	305
200	800	224	180	147	137	680	200	110	250	225	985	455
250	1000	250	200	170	147	750	224	125	280	250	1090	605
300	1200	280	224	185	158	865	250	140	315	285	1250	845
400	1600	315	250	205	184	910	280	170	355	320	1335	1180
500	2000	355	280	230	194	985	315	180	400	360	1455	1510
600	2400	400	315	255	215	1035	355	190	450	400	1555	2050
700	2800	420	330	275	220	1060	370	185	475	450	1600	1994
800	3200	450	355	280	240	1180	400	220	500	455	1775	3090
1000	4000	500	400	320	280	1340	450	240	560	510	2010	4380

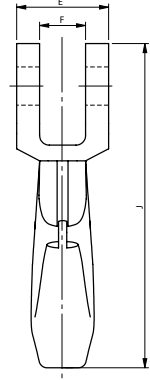
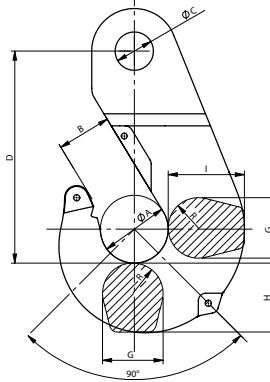
Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)





SLING DEFENDER ROV CLEVIS HOOK

Forged ROV hook



- WLL: from 100 t to 800 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Proof Load tested
- Pin and locking cap/nut included
- Standard spring latch; for additional options see Spare Parts chapter
- ROV - operable
- Colour: yellow

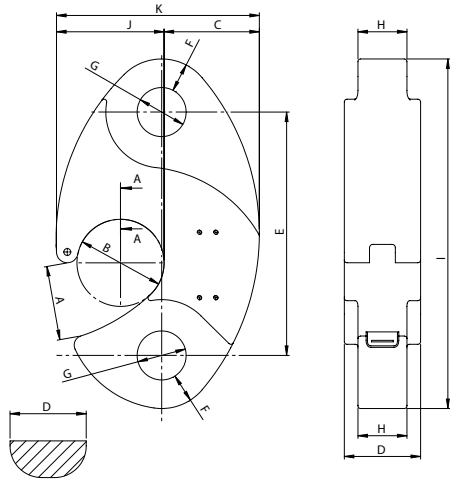
FORGED ROV HOOKS SLING DEFENDER ROV CLEVIS HOOK													
Overall dimensions (mm)													Weight
WLL(t)	MBL(t)	A	B	C +1/-0	D	E +3/-0	F +1/-0	R	G	H	I	J	(Kg)
100	400	160	125	100	540	290	135	70	140	165	180	820	208
150	600	200	160	112	633	310	150	90	180	190	224	955	355
200	800	224	180	137	666	330	170	100	200	225	250	1040	478
300	1200	280	224	158	876	370	190	125	250	285	315	1340	932
400	1600	315	250	184	918	440	240	140	280	320	355	1435	1300
500	2000	355	280	194	1048	465	245	157,5	315	360	400	1615	1715
600	2400	400	315	215	1128	580	260	177,5	355	400	450	1755	2356
700	2800	420	330	275	1160	590	310	185	370	450	475	1852	2663
800	3200	450	355	240	1280	620	320	200	400	455	500	2000	3562

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



ROV LOAD TRANSFER HOOK

Forged ROV hook



- WLL: from 150 t to 600 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204;
- 3.2 certificate upon request
- Proof Load tested
- Load transfer hook latch; for additional options see Spare Parts chapter
- ROV - operable
- Colour: yellow

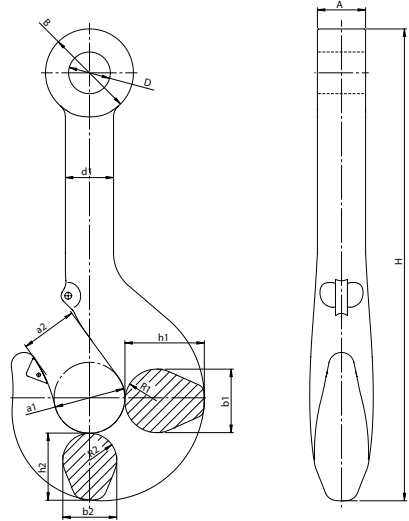
FORGED ROV HOOKS ROV LOAD TRANSFER HOOK													
Overall dimensions (mm)													Weight
WLL(t)	MBL(t)	A	B	C	D	E	F	G +1/-0	H	I	J	K	(Kg)
150	600	162	180	230	180	594	70	224	120	854	235	465	290
200	800	180	210	260	200	663	77	136	145	953	289	549	440
250	1000	200	250	290	224	724	90	150	164	1054	325	615	580
300	1200	205	300	320	250	853	100	160	170	1213	390	710	870
400	1600	240	320	350	280	894	105	180	180	1284	396	746	1055
500	2000	250	340	390	315	988	110	190	215	1398	428	818	1500
600	2400	265	360	390	345	1003	125	210	250	1463	450	840	1740

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



LONG SHANK ROV EYE HOOK

Forged ROV hook



- WLL: from 100 t to 800 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Proof Load tested
- Standard spring latch with locking system; for additional options see Spare Parts chapter
- ROV - operable
- Colour: yellow

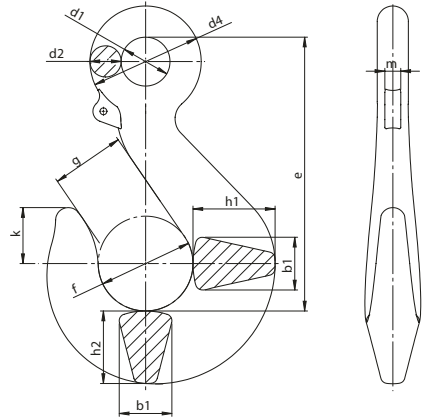
FORGED ROV HOOKS LONG SHANK ROV EYE HOOK															
Overall dimensions (mm)														Weight	
WLL(t)	MBL	a1	a2	b1	R1	b2	R2	h1	h2	d1	A ±0,5	D H10	B		H
100	400	160	125	140	70	118	59	180	150	106	125	100	210	1112	157
120	480	180	140	160	80	132	66	200	170	118	130	100	210	1277	220
150	600	200	160	180	90	150	75	224	190	132	139	114	240	1402	310
200	800	224	180	200	100	170	85	250	212	150	147	137	290	1551	450
250	1000	250	200	224	112	190	95	280	236	170	170	147	310	1664	630
300	1200	280	224	250	125	212	106	315	265	190	185	158	330	1848	840
400	1600	315	250	280	140	236	118	355	300	212	205	184	380	2085	1195
500	2000	355	280	315	157,5	265	132,5	400	335	236	230	194	400	2271	1635
600	2400	400	315	355	177,5	300	150	450	375	265	255	215	450	2475	2280
700	2800	420	330	375	187,5	320	160	475	400	280	275	220	475	2685	2798
800	3200	450	355	400	200	335	167,5	500	425	300	280	240	500	2880	3102

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



ROV EYE HOOK DIN7540

Forged ROV hook



- WLL: from 40 t to 400 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204;
3.2 certificate upon request
- Proof Load tested
- ROV DIN7540 latch; for additional options see Spare Parts chapter
- ROV - operable
- Colour: yellow

FORGED ROV HOOKS | ROV EYE HOOK DIN7540

No	WLL(t)	Overall dimensions (mm)										Weight	
		b1	d1	d2	e	f	g	h1	h2	k	m	d4	(Kg)
34	40	78	114*	51*	460	140	109	118	103	80	20	216*	35
35	50	89	130*	50.5*	520	158	124	135	116	90	23	231*	51
36	63	99	144*	64*	548	176	138	151	130	101	25	272*	68
37	80	110	102	63	610	198	155	168	145	113	30	228	80
38	100	125	116	74	650	225	175	195	172	133	38	264	125
39	150	140	130	86	765	250	200	225	199	160	38	302	250
40	200	160	150	102	850	275	225	260	237	195	45	354	365
41	250	180	170	120	928	310	255	290	269	210	45	410	515
42	300	200	190	140	1052	350	290	330	309.5	240	45	470	730
43	400	240	210	170	1195	400	320	380	345	270	45	550	1055

(*): These dimensions are not compliant with DIN7540.
Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)

CUSTOM AND SPECIAL HARDWARE

Irizar Forge designs and manufactures ROV hooks tailored to specific lifting applications, supporting capacities of up to 1000 t and ensuring compliance with safety, design, material performance, and certification requirements.





→ CONNECTORS



In offshore lifting systems, connectors play a critical role in transferring loads safely and efficiently between lifting equipment, rigging assemblies and installed structures. Whether used as part of heavy lift spreads, subsea installation systems or specialized rigging arrangements, these components form the essential link between key elements of the load path.

The Irizar Forge offshore connector range includes Master links, H-links, Triple links and other engineered connection solutions designed to meet the demanding requirements of modern offshore operations. Developed for applications where strength, reliability and operational flexibility are critical, these products are used in a wide range of lifting and installation operations worldwide.

A key feature of the range is the use of forged, weldless Master link designs. By eliminating welded joints from critical load-bearing areas, potential concerns associated with welding processes such as localized heat affected zones, material property variations and fatigue-sensitive transitions can be avoided. The result is a robust and reliable connection solution optimized for demanding offshore service.

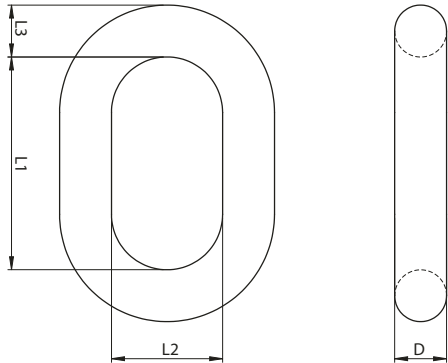
Alongside a portfolio of proven standard products, Irizar Forge offers extensive customization capabilities supported by an experienced engineering team. Dimensions, interfaces, geometries and connection arrangements can be adapted to specific project requirements, while fully customized concepts can be developed for unique operational challenges.

From standard lifting assemblies to project-specific engineered systems, the Irizar Forge offshore connector range provides reliable connection solutions designed to support the evolving needs of offshore and subsea operations.



FORGED MASTER LINK

SCAN FOR MORE
INFORMATION



- WLL: from 179 t to 500 t
 - Material: alloy steel
 - Weld free
 - Design Factor: > 4
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
 - Proof Load tested
 - Colour: yellow
 - Type Approved by DNV

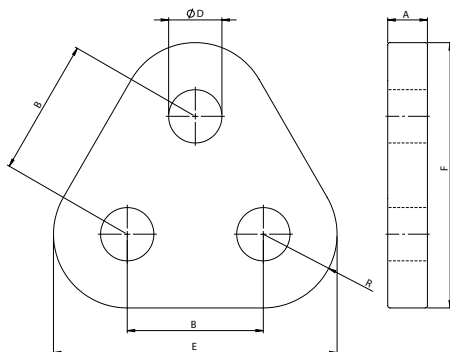
CONNECTORS FORGED MASTER LINK						
Overall dimensions (mm)						Weight
WLL(t)	MBL(t)	D +2/-0	L1 +20/-0	L2 +10/-0	L3 +5/-0	(Kg)
179	716	98	402	210	98	85
250	1000	98	512	250	98	102
300	1200	103	569	270	103	122
400	1600	113	670	290	113	167
500	2000	170	750	350	170	456

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)





FORGED TRIPLATE



- WLL: from 17 t to 700 t
- Material: carbon steel
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Proof Load test upon request
- Design Factor: > 5
- Color: yellow

CONNECTORS FORGED TRIPLATE							
Overall dimensions (mm)							Weight
WLL(t)	MBL(t)	B	D	E	F	R	(Kg)
17	85	120	47	250	234	65	10
25	125	145	55	305	286	80	18
35	175	155	60	335	314	90	27
55	275	200	75	410	383	105	56
85	425	225	90	505	475	140	99
120	600	270	105	610	574	170	182
150	750	310	115	680	638	185	249
175	875	320	115	710	667	195	273
200	1000	380	140	810	759	215	379
250	1250	390	150	850	798	230	487
300	1500	410	160	910	855	250	601
400	2000	460	185	1040	978	290	1051
500	2500	510	200	1230	1230	360	1518
600	3000	550	220	1310	1236	380	1707
700	3500	580	230	1320	1242	370	2126

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



CUSTOM CONNECTORS

Irizar Forge designs and manufactures connectors tailored to specific lifting applications, supporting capacities of up to 1000 t and ensuring compliance with safety, design, material performance, and certification requirements.



→ CRANE HOOKS



Offshore lifting operations demand more than strength alone. The increasing use of synthetic slings, grommets, and specialized rigging systems makes the interaction between the hook and lifting gear a critical factor in ensuring safe, reliable and efficient operations.

To meet these demands, Irizar Forge has developed a range of offshore hooks with optimized round profile geometries, specifically engineered for subsea, offshore construction and heavy lifting applications. The enlarged radiused contact area ensures more uniform load distribution, reducing localized pressure on slings and minimizing wear during demanding lifting cycles.

Manufactured in-house from premium European steel, each hook benefits from advanced forging technology that creates a continuous grain flow aligned with the load path. Combined with rigorous testing, full traceability, and extensive offshore engineering expertise, this results in exceptional strength, toughness and long-term fatigue performance in critical lifting applications.

Available in a wide range of capacities and configurations, Irizar Forge offshore hooks can be tailored to specific project requirements, delivering engineered solutions designed to protect and enhance the performance of the entire lifting system.





SUBSEA HARDWARE

CONNECTORS

CRANE HOOKS

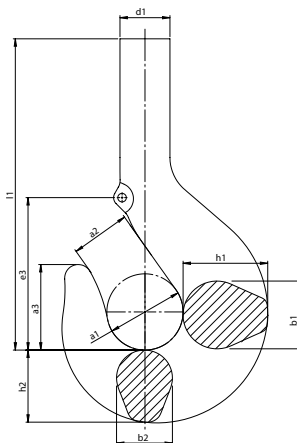
HOOK BLOCKS

SWIVELS



SINGLE FORGED HOOK

Unmachined



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

SINGLE FORGED HOOK UNMACHINED											
Overall dimensions (mm)											Weight
No	a1	a2	a3	b1	b2	d1	e3	h1	h2	l1	(Kg)
10	112	90	127	100	85	75	221	125	106	460	40
12	125	100	143	112	95	85	252	140	118	525	55
16	140	112	160	125	106	95	280	160	132	595	77
20	160	125	180	140	118	106	330	180	150	665	112
25	180	140	202	160	132	118	360	200	170	735	160
32	200	160	225	180	150	132	400	224	190	810	220
40	224	180	252	200	170	150	447	250	212	905	310
50	250	200	285	224	190	170	485	280	236	990	430
63	280	224	320	250	212	190	550	315	265	1120	600
80	315	250	358	280	236	212	598	355	300	1270	860
100	355	280	402	315	265	236	688	400	335	1415	1220
125	400	315	450	355	300	265	750	450	375	1590	1740
160	450	355	505	400	335	300	825	500	425	1790	2480
200	500	400	565	450	375	335	900	560	475	2048	3420
250	560	450	635	500	425	375	980	630	530	2305	4800
320	630	500	715	560	475	425	1080	710	580	2605	6770
400	710	560	755	630	530	475	1195	800	630	2950	9405

Forging tolerances acc. to DIN15401

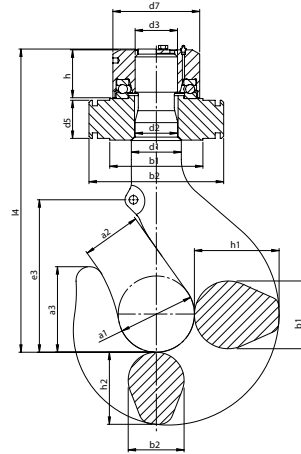
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



SINGLE FORGED HOOK

Machined fitted with nut, crosshead and bearing



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Thread DIN15403; Nut DIN15413; Crosshead DIN15412; Assembly DIN15411

SINGLE FORGED HOOK | MACHINED FITTED WITH NUT, CROSSHEAD AND BEARING

Overall dimensions (mm)												DIN15412 Crosshead			DIN15413 Nut		Weight	
No	a1	a2	a3	b1	b2	d1	e21	h1	h2	d2 h11	d3	l4	b1	b2	d5 h9	d7	h	(Kg)
10	112	90	127	100	85	75	221	125	106	64	Rd64x8	446	160	230	55	145	76	54,6
12	125	100	143	112	95	85	252	140	118	72	Rd72x8	504,5	180	265	60	165	87	85,5
16	140	112	160	125	106	95	280	160	132	80	Rd80x10	576	190	275	70	175	91	114,5
20	160	125	180	140	118	106	330	180	150	90	Rd90x10	645	200	295	80	185	102	158,5
25	180	140	202	160	132	118	360	200	170	100	Rd100x12	716	220	318	90	205	113	222,6
32	200	160	225	180	150	132	400	224	190	110	Rd110x12	788	260	378	100	240	131	315
40	224	180	252	200	170	150	447	250	212	125	Rd125x14	885	285	415	110	270	144	443
50	250	200	285	224	190	170	485	280	236	140	Rd140x16	969	335	465	125	320	153	630
63	280	224	320	250	212	190	550	315	265	160	Rd160x18	1100	380	522	140	360	181	885
80	315	250	358	280	236	212	598	355	300	180	Rd180x20	1245	420	565	160	400	198	1254
100	355	280	402	315	265	236	688	400	335	200	Rd200x22	1388	470	645	180	445	228	1768
125	400	315	450	355	300	265	750	450	375	225	Rd225x24	1565	510	685	200	490	246	2491
160	450	355	505	400	335	300	825	500	425	250	Rd250x28	1761	550	750	220	530	274	3483
200	500	400	565	450	375	335	900	560	475	280	Rd280x32	2012	610	810	240	590	343	4791
250	560	450	635	500	425	375	980	630	530	320	Rd320x36	2272	700	920	260	680	383	6793
320	630	500	715	560	475	425	1080	710	580	370	Rd360x36	2565	790	1030	280	760	433	9443
400	710	560	755	630	530	475	1195	800	630	415	Rd400x36	2878	895	1145	300	865	482	13220

Forging tolerances acc. to DIN15401

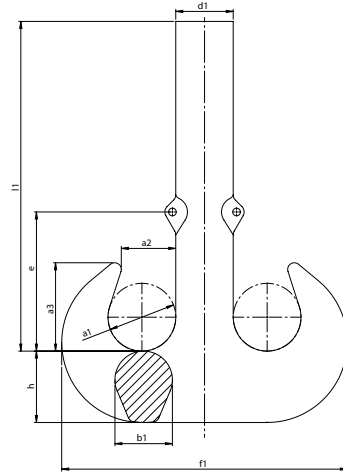
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



RAMSHORN FORGED HOOK

Unmachined



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile

- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

RAMSHORN FORGED HOOK UNMACHINED										
Overall dimensions (mm)										Weight
No	a1	a2	a3	b1	d1	e	f1	h	l1	(Kg)
10	90	71	116	75	75	192	377	95	450	36,3
12	100	80	130	85	85	210	421	106	510	50,5
16	112	90	146	95	95	237	471	118	580	71,1
20	125	100	163	106	106	265	531	132	650	99,5
25	140	112	182	118	118	315	598	150	715	138
32	160	125	205	132	132	335	672	170	790	197
40	180	140	230	150	150	375	754	190	885	286
50	200	160	260	170	170	420	842	212	965	394
63	224	180	292	190	190	460	944	236	1090	547
80	250	200	325	212	212	515	1062	265	1235	759
100	280	224	364	236	236	575	1186	300	1375	1060
125	315	250	408	265	265	645	1330	335	1550	1491
160	355	280	458	300	300	725	1505	375	1745	2115
200	400	315	515	335	335	800	1685	425	1998	3015
250	450	355	580	375	375	875	1885	475	2250	4268
320	500	400	650	425	425	950	2125	530	2550	6018
400	560	450	730	475	475	1045	2375	600	2895	8576

Forging tolerances acc. to DIN15402

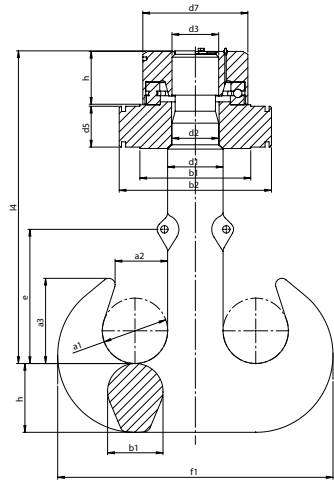
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



RAMSHORN FORGED HOOK

Machined fitted with nut, crosshead and bearing



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Thread DIN15403; Nut DIN15413; Crosshead DIN15412; Assembly DIN15411

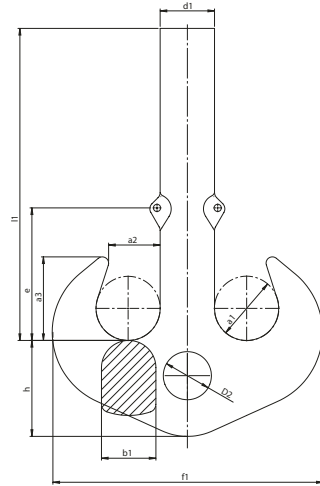
RAMSHORN FORGED HOOK MACHINED FITTED WITH NUT, CROSSHEAD AND BEARING																	
Overall dimensions (mm)												DIN15412 Crosshead			DIN15413 Nut		Weight
No	a1	a2	a3	b1	d1	e	f1	h1	d2H15	d3	l4	b1	b2	d5 h9	d7	h	(Kg)
10	90	71	116	75	75	192	377	95	64	Rd64x8	435	160	230	55	145	76	57
12	100	80	130	85	85	210	421	106	72	Rd72x8	492	180	265	60	165	87	81
16	112	90	146	95	95	237	471	118	80	Rd80x10	562	190	275	70	175	91	108
20	125	100	163	106	106	265	531	132	90	Rd90x10	628	200	295	80	185	102	145,5
25	140	112	182	118	118	315	598	150	100	Rd100x12	696	220	318	90	205	113	199,5
32	160	125	205	132	132	335	672	170	110	Rd110x12	768	260	378	100	240	131	291
40	180	140	230	150	150	375	754	190	125	Rd125x14	863	285	415	110	270	144	418
50	200	160	260	170	170	420	842	212	140	Rd140x16	944	335	465	125	320	153	592
63	224	180	292	190	190	460	944	236	160	Rd160x18	1072	380	522	140	360	181	830
80	250	200	325	212	212	515	1062	265	180	Rd180x20	1212	420	565	160	400	198	1148
100	280	224	364	236	236	575	1186	300	200	Rd200x22	1351	470	645	180	445	228	1600
125	315	250	408	265	265	645	1330	335	225	Rd225x24	1522	510	685	200	490	246	2230
160	355	280	458	300	300	725	1505	375	250	Rd250x28	1714	550	750	220	530	274	3100
200	400	315	515	335	335	800	1685	425	280	Rd280x32	1962	610	810	240	590	343	4366
250	450	355	580	375	375	875	1885	475	320	Rd320x36	2217	700	920	260	680	383	6234
320	500	400	650	425	425	950	2125	530	370	Rd360x36	2505	790	1030	280	760	433	8791
400	560	450	730	475	475	1045	2375	600	415	Rd400x36	2820	895	1145	300	865	482	12220

Forging tolerances acc. to DIN15402
 Dimensional modifications, other sizes and class approvals upon request.
 Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



B TYPE RAMSHORN FORGED HOOK WITH CENTRAL BORE

Unmachined



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

B TYPE RAMSHORN FORGED HOOK WITH CENTRAL BORE | UNMACHINED

Overall dimensions (mm)											Weight
No	a1	a2	a3	b1	d1	d2H15	e	f1	h	l1	(Kg)
10	90	71	116	75	75	74	192	377	130	450	41
12	100	80	130	85	85	78	210	421	150	510	57
16	112	90	146	95	95	86	237	471	170	580	82
20	125	100	163	106	106	96	265	531	190	650	115
25	140	112	182	118	118	106	315	598	212	715	160
32	160	125	205	132	132	116	335	672	236	790	229
40	180	140	230	150	150	131	375	754	265	885	330
50	200	160	260	170	170	146	420	842	300	965	458
63	224	180	292	190	190	168	460	944	335	1090	638
80	250	200	325	212	212	188	515	1062	375	1235	892
100	280	224	364	236	236	208	575	1186	425	1375	1248
125	315	250	408	265	265	235	645	1330	475	1550	1757
160	355	280	458	300	300	260	725	1505	530	1745	2500
200	400	315	515	335	335	282	800	1685	600	1960	3560
250	450	355	580	375	375	312	875	1885	670	2210	5033
320	500	400	650	425	425	330	950	2125	750	2515	7095
400	560	450	730	475	475	370	1045	2375	840	2830	10010

Forging tolerances acc. to DIN15402

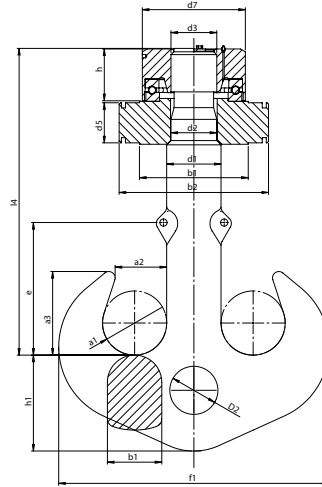
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



B TYPE RAMSHORN FORGED HOOK WITH CENTRAL BORE

Machined fitted with nut, crosshead and bearing



- WLL: from 20 t to 2000 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended

- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Thread DIN15403; Nut DIN15413; Crosshead DIN15412; Assembly DIN15411

B TYPE RAMSHORN FORGED HOOK WITH CENTRAL BORE | MACHINED FITTED WITH NUT, CROSSHEAD AND BEARING

Overall dimensions (mm)											DIN15412 Crosshead			DIN15413 Nut		Weight		
No	a1	a2	a3	b1	b5	d1	d2H15	e	f1	h1	d3	l4	b1	b2	d5 h9	d7	h	(Kg)
10	90	71	116	75	75	74	192	377	130		Rd64x8	435	160	230	55	145	76	61,7
12	100	80	130	85	85	78	210	421	150		Rd72x8	492	180	265	60	165	87	87,5
16	112	90	146	95	95	86	237	471	170		Rd80x10	562	190	275	70	175	91	118,9
20	125	100	163	106	106	96	265	531	190		Rd90x10	628	200	295	80	185	102	161
25	140	112	182	118	118	106	315	598	212		Rd100x12	696	220	318	90	205	113	221,5
32	160	125	205	132	132	116	335	672	236		Rd110x12	768	260	378	100	240	131	323
40	180	140	230	150	150	131	375	754	265		Rd125x14	863	285	415	110	270	144	462
50	200	160	260	170	170	146	420	842	300		Rd140x16	944	335	465	125	320	153	656
63	224	180	292	190	190	168	460	944	335		Rd160x18	1072	380	522	140	360	181	921
80	250	200	325	212	212	188	515	1062	375		Rd180x20	1212	420	565	160	400	198	1281
100	280	224	364	236	236	208	575	1186	425		Rd200x22	1351	470	645	180	445	228	1788
125	315	250	408	265	265	235	645	1330	475		Rd225x24	1522	510	685	200	490	246	2496
160	355	280	458	300	300	260	725	1505	530		Rd250x28	1714	550	750	220	530	274	3485
200	400	315	515	335	335	282	800	1685	600		Rd280x32	1962	610	810	240	590	343	4911
250	450	355	580	375	375	312	875	1885	670		Rd320x36	2217	700	920	260	680	383	7037
320	500	400	650	425	425	330	950	2125	750		Rd360x36	2505	790	1030	280	760	433	9302
400	560	450	730	475	475	370	1045	2375	840		Rd400x36	2820	895	1145	300	865	482	13133

Forging tolerances acc. to DIN15402

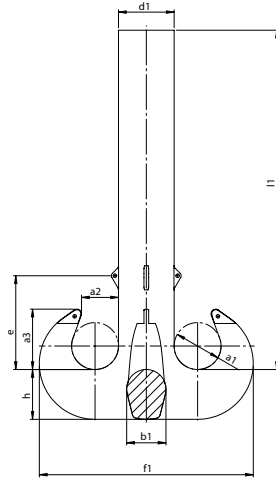
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



QUAD FORGED HOOK

Unmachined



- WLL: from 160 t to 2000 t
- Material: carbon steel, alloy steel
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Chain latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

QUAD FORGED HOOK UNMACHINED											
Overall dimensions (mm)											Weight
No	WLL(t)	a1	a2	a3	b1	d1	e	f1	h	l1*	(Kg)
16	160	112	90	146	95	132	237	508	118	790	154
20	200	125	100	163	106	150	265	575	132	885	221
25	250	140	112	182	118	170	315	650	150	965	312
32	320	160	125	205	132	190	335	730	170	1090	440
40	400	180	140	230	150	212	375	816	190	1235	624
50	500	200	160	260	170	236	420	908	212	1375	868
63	640	224	180	292	190	265	460	1019	236	1550	1231
80	800	250	200	325	212	300	515	1150	265	1745	1751
100	1000	280	224	364	236	335	575	1285	300	1998	2477
125	1260	315	250	408	265	375	645	1440	335	2250	3490
160	1600	355	280	458	300	425	725	1630	375	2550	5122
200	2000	400	315	515	335	475	800	1825	425	2895	7158

Forging tolerances +7%/-0

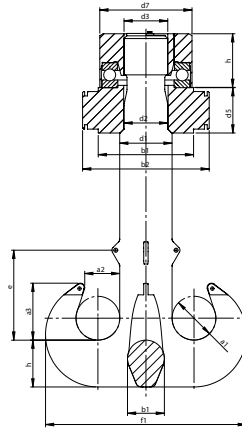
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



QUAD FORGED HOOK

Machined fitted with nut, crosshead and bearing



- WLL: from 160 t to 2000 t
- Material: carbon steel, alloy steel
- Strength class: P-S-T-V-W
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended

- Chain latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Thread DIN15403; Nut DIN15413; Crosshead DIN15412; Assembly DIN15411

QUAD FORGED HOOK | MACHINED FITTED WITH NUT, CROSSHEAD AND BEARING

Overall dimensions (mm)												DIN15412 Crosshead			DIN15413 Nut		Weight	
No	WLL(t)	a1	a2	a3	b1	d1	e	f1	h1	d2 h11	d3	l4*	b1	b2	d5 h9	d7	h	(Kg)
16	160	112	90	146	95	132	237	508	118	110	Rd110x12	768	260	378	100	240	131	231
20	200	125	100	163	106	150	265	575	132	125	Rd125x14	863	285	415	110	270	144	325
25	250	140	112	182	118	170	315	650	150	140	Rd140x16	944	335	465	125	320	153	472
32	320	160	125	205	132	190	335	730	170	160	Rd160x18	1075	380	522	140	360	181	679
40	400	180	140	230	150	212	375	816	190	180	Rd180x20	1212	420	565	160	400	198	1106
50	500	200	160	260	170	236	420	908	212	200	Rd200x22	1351	470	645	180	445	228	1321
63	640	224	180	292	190	265	460	1019	236	225	Rd225x24	1522	510	685	200	490	246	1838
80	800	250	200	325	212	300	515	1150	265	250	Rd250x28	1714	550	750	220	530	274	2523
100	1000	280	224	364	236	335	575	1285	300	280	Rd280x32	1962	610	810	240	590	343	3598
125	1260	315	250	408	265	375	645	1440	335	320	Rd320x36	2217	700	920	260	680	383	5115
160	1600	355	280	458	300	425	725	1630	375	370	Rd360x36	2505	790	1030	280	760	433	7220
200	2000	400	315	515	335	475	800	1825	425	415	Rd400x36	2820	895	1145	300	865	482	10195

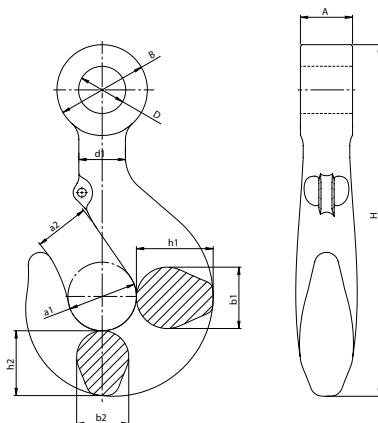
Forging tolerances +7%/-0

Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



SINGLE FORGED EYE HOOK



- WLL: from 80 t to 1800 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

SINGLE FORGED EYE HOOK													
Overall dimensions (mm)													Weight
No	WLL(t)	MBL(t)	a1	a2	b1	b2	h1	h2	d1	A ±0,5	D H10	B	H
16	80	320	140	112	125	106	160	132	95	100	87	180	746
20	100	400	160	125	140	118	180	150	106	125	100	210	812
25	120	480	180	140	160	132	200	170	118	130	100	210	927
32	150	600	200	160	180	150	224	190	132	139	114	240	1052
40	200	800	224	180	200	170	250	212	150	147	137	290	1201
50	250	1000	250	200	224	190	280	236	170	170	147	310	1314
63	300	1200	280	224	250	212	315	265	190	185	158	330	1448
80	400	1600	315	250	280	236	355	300	212	205	184	380	1685
100	500	2000	355	280	315	265	400	335	236	230	194	400	1871
125	600	2400	400	315	355	300	450	375	265	255	215	450	2075
160	800	3200	450	355	400	335	500	425	300	280	240	500	2294
200	1000	4000	500	400	450	375	560	475	335	320	280	580	2450
250	1250	5000	560	450	500	425	630	530	375	355	315	650	2810
320	1550	6200	630	500	560	475	710	580	425	355	335	680	3060
400	1800	7200	710	560	630	530	800	630	475	410	395	750	3430

Forging tolerances acc. to DIN15401

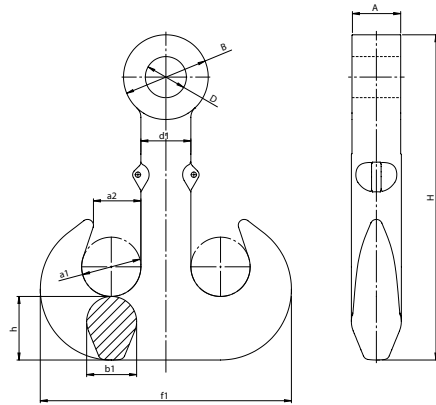
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)

WLL with highest material grade



RAMSHORN FORGED EYE HOOK



- WLL: from 80 t to 1800 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Design Factor: > 4
- Sling-friendly: round profile
- Proof load test: recommended

- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

RAMSHORN FORGED EYE HOOK													
Overall dimensions (mm)													Weight
No	WLL(t)	MBL(t)	a1	a2	b1	h	d1	f1	A ±0,5	D H10	B	H	(Kg)
16	80	320	112	90	95	118	95	471	100	87	180	625	77
20	100	400	125	100	106	132	106	531	125	100	210	713	113
25	120	480	140	112	118	150	118	598	130	100	210	799	153
32	150	600	160	125	132	170	132	672	139	114	240	872	213
40	200	800	180	140	150	190	150	754	147	137	290	1004	307
50	250	1000	200	160	170	212	170	842	170	147	310	1112	420
63	300	1200	224	180	190	236	190	944	185	158	330	1210	577
80	400	1600	250	200	212	265	212	1062	205	184	380	1408	831
100	500	2000	280	224	236	300	236	1186	230	194	400	1536	1096
125	600	2400	315	250	265	335	265	1330	255	215	450	1708	1576
160	800	3200	355	280	300	375	300	1505	280	240	500	1879	2187
200	1000	4000	400	315	335	425	335	1685	320	280	580	2125	3063
250	1250	5000	450	355	375	475	375	1885	355	315	650	2240	4072
320	1550	6200	500	400	425	530	425	2125	355	335	680	2390	5532
400	1800	7200	560	450	475	600	475	2375	410	395	750	2545	7526

Forging tolerances acc. to DIN15402

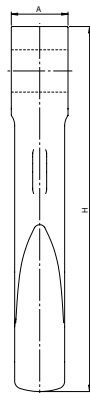
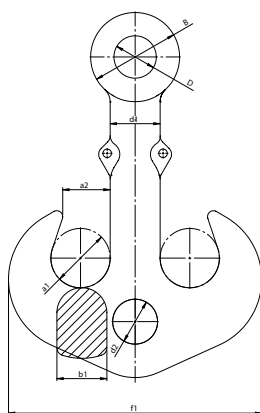
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)

WLL with highest material grade



B TYPE RAMSHORN FORGED EYE HOOK WITH CENTRAL BORE



- WLL: from 80 t to 1800 t
- Material: carbon steel, alloy steel; stainless steel upon request
- Design Factor: > 4
- Sling-friendly: round profile
- Load test: recommended
- Standard spring latch; for additional options see Spare Parts chapter
- Certification: 3.1 according to EN10204; 3.2 certificate upon request

B TYPE RAMSHORN FORGED EYE HOOK WITH CENTRAL BORE

No	WLL(t)	MBL(t)	Overall dimensions (mm)								B	H	Weight (Kg)
			a1	a2	b1	d1	d2H15	f1	A ±0,5	D H10			
16	80	320	112	90	95	95	86	471	100	87	180	678	84
20	100	400	125	100	106	106	96	531	125	100	210	771	120
25	120	480	140	112	118	118	106	598	130	100	210	862	169
32	150	600	160	125	132	132	116	672	139	114	240	938	236
40	200	800	180	140	150	150	131	754	147	137	290	1080	353
50	250	1000	200	160	170	170	146	842	170	147	310	1201	468
63	300	1200	224	180	190	190	168	944	185	158	330	1308	633
80	400	1600	250	200	212	212	188	1062	205	184	380	1518	898
100	500	2000	280	224	236	236	208	1186	230	194	400	1660	1240
125	600	2400	315	250	265	265	235	1330	255	215	450	1848	1730
160	800	3200	355	280	300	300	260	1505	280	240	500	2034	2442
200	1000	4000	400	315	335	335	282	1685	320	280	580	2300	3490
250	1250	5000	450	355	375	375	312	1885	355	315	650	2553	4855
320	1550	6200	500	400	425	425	330	2125	355	335	680	2755	6950
400	1800	7200	560	450	475	475	370	2375	410	395	750	2980	9834

Forging tolerances acc. to DIN15402

Dimensional modifications upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)

WLL with highest material grade

CUSTOM HOOKS

Irizar Forge designs and manufactures hooks tailored to specific lifting applications, supporting capacities of up to 2000 t and ensuring compliance with safety, design, material performance, and certification requirements.

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→ HOOK BLOCKS



Every lifting operation is unique, shaped by specific capacities, crane configurations, environmental conditions, and project demands. That's why hook block solutions must go beyond standard designs.

The Irizar Forge Hook block range is engineered for modern offshore, subsea, and heavy lifting applications, combining proven performance with extensive customization. From compact systems to high-capacity blocks, each solution is tailored to match the exact requirements of the operation.

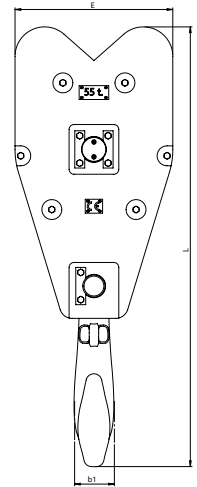
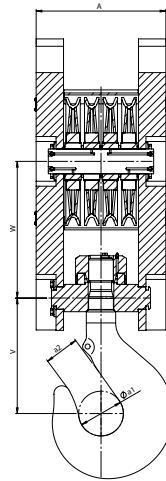
Hook arrangements, sheave configurations, reeving systems, block weights and handling features are carefully adapted to specific crane characteristics. Optimized layouts and application-specific interfaces ensure each hook block delivers maximum efficiency and performance in its intended role. Where required, Irizar Forge round profile hooks can be integrated to enhance compatibility with advanced offshore rigging systems and synthetic slings.

For harsh offshore environments, hook blocks can be equipped with robust protection systems that minimize water ingress and safeguard critical components. Advanced sealing, corrosion protection, and project-specific environmental features ensure long-term reliability in the most demanding marine conditions.



IRIZAR FORGE OFFSHORE BLOCK (IFOB)

SCAN FOR MORE
INFORMATION



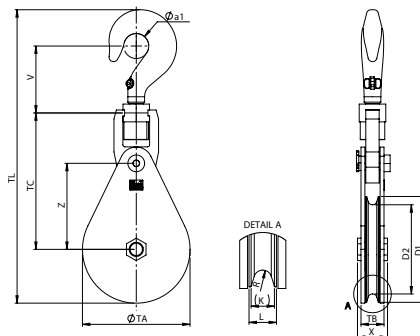
- WLL: from 30 t to 110 t
- Hook type: single or ramshorn
- Design Factor: > 4
- Weld-free
- Certification: certificate of conformity
- Coating: fully painted

IRIZAR FORGE OFFSHORE BLOCK (IFOB)

Overall dimensions (mm)														
Block Article	Wire Rope	L	WLL(t)	A	E	W	V	a1	a2	b1	Hook size	n° Sheaves	ØD1	ØD2
HBSHS16-4/1	18-19	1519	30	342	560	515	370	140	112	125	Single hook - 16T	3	380	440
HBSHS25-4/1	20-22	1770	55	522	629	550	465	180	140	160	Single hook - 25T	4	450	515
HBSHS32-4/1	25-26	1960	75	565	695	645	500	200	160	180	Single hook - 32T	4	500	575
HBSHS32-4/1	25-26	1960	110	565	695	645	500	200	160	180	Single hook - 32V	4	500	575



HOOK SNATCH BLOCK



- WLL: from 32 t to 125 t
- Hook type: single
- Design Factor: > 4
- Weld-free
- Certification: certificate of conformity
- Coating: fully painted

HOOK SNATCH BLOCK															
Overall dimensions (mm)															
Block Article	Wire Rope	TL	WLL(t)	Z +0,5/-0,3	TA ±1	TB ±0,5	X ±1	TC	V	a1	Hook size	Sheave			
												R	K	L ±1	ØD1 ±1
BKOFFSS1632C	28-35	1034,5	32	325	409	112	162	480	350	140	Single hook - 16	18,4	40,6	68,6	399
BKOFFSS1832C	28-38	1088	32	351	470	112	162	503	350	140	Single hook - 16	20	40,6	68,6	450
BKOFFSS2032C	28-38	1133,5	32	376	511	112	162	528	350	140	Single hook - 16	20	40,6	68,6	495
BKOFFSS2332C	28-32	1243	32	434	610	112	162	588	350	140	Single hook - 16	16,4	40,6	68,6	594
BKOFFSS2036C	28-38	1152,5	36	399	511	122	173	547	350	140	Single hook - 16	20	40,6	68,6	495
BKOFFSS2354C	38-51	1453	54	460	610	142	240	723	425	160	Single hook - 20	26,8	66	89	594
BKOFFSS2375C	44-51	1695	75	460	610	142	270	950	440	180	Single hook - 25	27	68	89	594
BKOFFSS3075C	44-57	1884	75	569	770	203	370	1059	440	180	Single hook - 25	30	84	122	749
BKOFFSS32100C	64-67	2027	100	650	820	203	270	1122	495	200	Single hook - 32	33	89	127	800
BKOFFSS35125C	70-76	2278,5	125	749	919	203	270	1224	595	224	Single hook - 40	40	97	127	889

WLL with T material grade hooks

CUSTOM HOOK BLOCKS

Irizar Forge designs and manufactures hook blocks tailored to specific lifting applications, supporting capacities of up to 1000 t and ensuring compliance with safety, design, material performance, and certification requirements.

SCAN FOR MORE
INFORMATION



→ SWIVELS



Swivels ensure safe and controlled interaction between the crane and the load. They ensure controlled rotation to prevent torsion and enable safe, efficient load handling when straight lifting and sufficient weight are required.

A key element in their design is the protective cover, which safeguards internal machined components such as bearings and threads. At the same time, it provides the necessary weight to support stable rotation and reduce the risk of rope outlet or crane-related incidents.

In offshore operations, swivels are used for two applications:

Subsea lifting: Supporting safe lifting operations from shallow water to deepwater projects of up to 4000 meters, including manifold recovery and seabed pipeline maintenance.

Mooring systems: Providing reliable connections between chains, wire ropes, synthetic ropes and slings, enabling hybrid mooring solutions that reduce weight and installation costs.

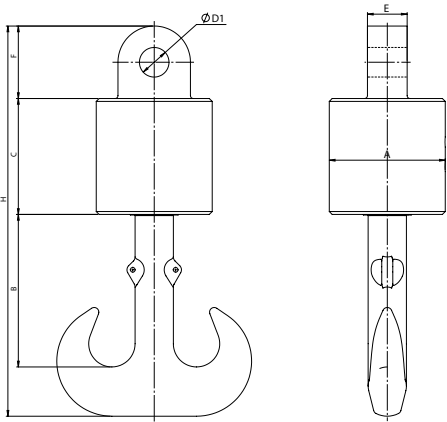
Irizar Forge swivels are equipped with advanced seals to prevent water ingress and ensure reliable, smooth rotation. Trusted in offshore lifting and mooring applications worldwide, Irizar Forge swivels deliver the performance, durability and confidence required for critical operations.



SWIVEL HOOK

Forged components

SCAN FOR MORE
INFORMATION



- WLL: from 100 t to 500 t
- Hook material: alloy steel
- Design Factor: > 4
- Standard spring latch; for additional options see Spare Parts chapter

- Certification: 3.1 according to EN10204; 3.2 certificate upon request
- Weld-free
- Proof load test: recommended
- Hook based on DIN15402

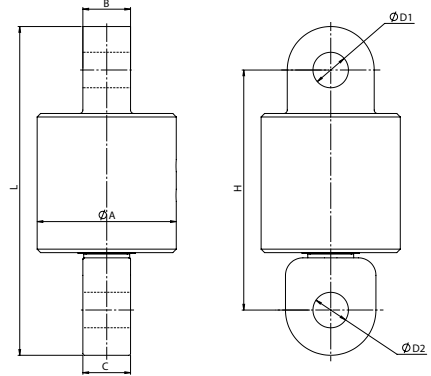
SWIVEL HOOK									
Overall dimensions (mm)									Weight
WLL(t)	Hook size	A	B	C	F	H	E	D	(Kg)
100	Ramshorn Hook - 32	400	445	400	300	1346	137	102	578
200	Ramshorn Hook - 50	500	570	550	400	1830	174	137	1123
300	Ramshorn Hook - 63	600	685	650	450	2020	195	160	1980
400	Ramshorn Hook - 80	700	860	675	490	2295	220	182	2850
500	Ramshorn Hook - 100	800	880	800	650	2630	249	194	4385

Hook forging tolerances acc. to DIN15402
Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



SWIVEL EYE-EYE CONNECTION

Forged components



- WLL: from 100 t to 500 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204;
3.2 certificate upon request
- Proof load test: recommended

SWIVEL EYE-EYE CONNECTION								
Overall dimensions (mm)								Weight
WLL(t)	A	B	C	L	H	D1	D2	(Kg)
100	400	137	137	945	690	102	102	480
200	500	174	174	1415	1040	137	137	995
300	600	195	195	1600	1200	160	160	1770
400	700	220	220	1765	1285	182	182	2550
500	800	249	249	2200	1600	194	194	4177

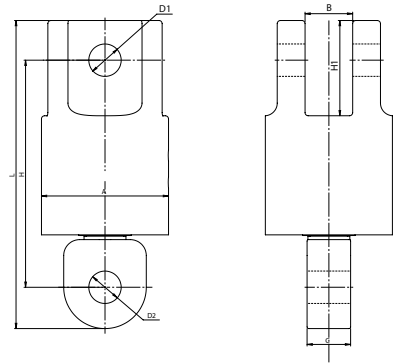
Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



SWIVEL CLEVIS-EYE CONNECTION

Forged components



- WLL: from 100 t to 500 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204;
3.2 certificate upon request
- Weld-free
- Proof load test: recommended

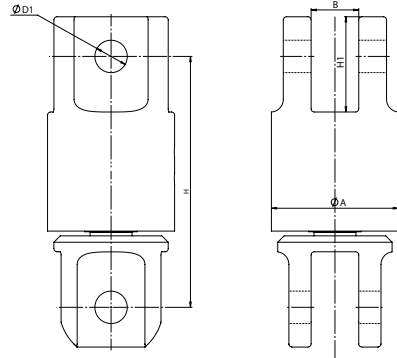
SWIVEL CLEVIS-EYE CONNECTION									
Overall dimensions (mm)									Weight
WLL(t)	A	B	C	L	H	H1	D1	D2	(Kg)
100	400	150	150	970	715	300	102	102	525
200	500	200	200	1365	990	400	137	137	979
300	600	250	250	1465	1065	450	160	160	1592
400	700	300	300	1725	1260	500	182	182	2712
500	800	350	350	2095	1545	600	194	194	4145

Dimensional modifications, other sizes and class approvals upon request.
Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)



SWIVEL CLEVIS-CLEVIS CONNECTION

Forged components



- WLL: from 100 t to 500 t
- Material: alloy steel
- Design Factor: > 4
- Certification: 3.1 according to EN10204;
3.2 certificate upon request
- Weld-free
- Proof load test: recommended

SWIVEL CLEVIS-CLEVIS CONNECTION										
Overall dimensions (mm)										Weight
WLL(t)	A	B	C	L	H	H1	H2	D1	D2	(Kg)
100	400	150	150	1040	790	300	300	102	102	585
200	500	200	200	1415	1065	400	400	137	137	1053
300	600	250	250	1555	1165	450	450	160	160	1795
400	700	300	300	1885	1435	500	500	182	182	3190
500	800	350	350	2200	1700	600	600	194	194	4754

Dimensional modifications, other sizes and class approvals upon request.

Design Factor (DF) = Minimum Breaking Load (MBL) / Working Load Limit (WLL)

CUSTOM SWIVELS

Irizar Forge designs and manufactures swivels tailored to specific lifting applications, supporting capacities of up to 800 t and ensuring compliance with safety, design, material performance, and certification requirements.





→ MOORING

FOR LONG-TERM AND TEMPORARY MOORING OPERATIONS

Floating platforms may remain on station from a few months to as long as 20 years. Modern systems also combine steel chain, wire rope, synthetic rope and textile slings, turning each transition point into a potential weak link.

Irizar Forge supplies EPCI contractors, OEM's, end users, operators and mooring specialists selected distributors with precision-forged mooring connectors engineered for long service life. Manufactured from super alloy steels up to grade R4 and R5, these components are designed for easy assembly, disassembly, and maintenance.



INDUSTRIES SERVED

- Offshore oil and gas
- Floating wind
- Renewable energy

PRODUCTS

KS hooks, Customised shackles, Mooring Y-links, H-links, Triangle plates, Kenter shackles, Anchor shackles

Engineering and manufacturing

Every mooring connector begins with design, calculation and simulation before the steel is heated. Production covers forging, heat treatment, machining, surface finishing and assembly. Inspection and testing are performed before, during and after production, using both destructive and non-destructive methods. Each connector is proof load and MBL tested on benches rated to 2,000 t. All this is done in-house.

Standard and advanced solutions

Irizar Forge's standard range consists of mooring connectors that comply with international standards. Fully type-approved and readily available from stock.

Advanced solutions are fully engineered to customer specification. Irizar Forge manages the entire process, from initial design and classification society approval through production, testing and third-party certification by DNV and ABS.



→ **PRODUCT RANGE**

MOORING

TEMPORARY MOORING



LONG TERM MOORING



→ TEMPORARY MOORING



Temporary mooring operations require connectors capable of withstanding extreme loads, repeated installation cycles and demanding offshore conditions. Components such as Kenter shackles, Anchor shackles and other joining elements play a critical role in the temporary mooring of drilling rigs and support vessels during field development and installation activities.

Because these systems are frequently assembled, tensioned, dismantled and redeployed, durability, safe handling and ease of inspection are essential. Many components remain in service for years, making long-term reliability a key consideration for operators and rental fleets alike.

Irizar Forge offers a range of short-term mooring solutions engineered for safety, performance and longevity. Products such as the Smart-Con Link are designed to withstand severe dynamic loads, high pretensioning forces and repeated use, while enabling safer and more efficient assembly and disassembly.

Supported by advanced in-house design, forging, machining, testing and certification capabilities, Irizar Forge delivers type approved mooring connectors that combine exceptional strength, durability and proven safety for demanding offshore applications.





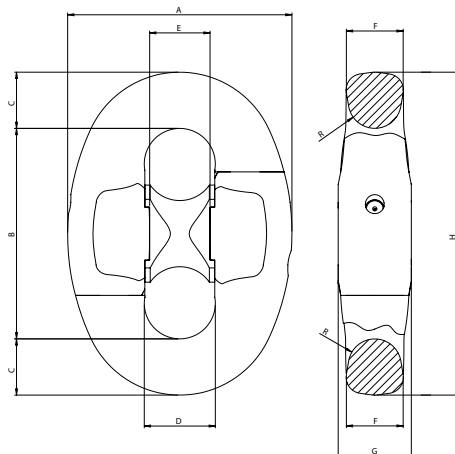
TEMPORARY MOORING

LONG TERM MOORING



SMART-CON LINK WITH TAPER PIN

Kenter Shackles



- The Smart-Con Link is a new design version of a Kenter Joining Shackle
- Thinner and lighter than Standard Kenter Joining Shackle
- 76 mm and 84 mm with taper pin on stock; taper pin available as spare part

- Type approved by DNV or ABS
- Forged alloy steel in Grade R4, R4S and R5
- Application: Temporary and Mobile Mooring
- Other sizes: upon request
- Coating protection: upon request

SMART-CON LINK WITH TAPER PIN															
Overall dimensions (mm)									Test Loads (kN)						Weight (Kg)
chain dia.	A	B	C	D	E	F	G	H	PL R4	BL R4	PL R4S	BL R4S	PL R5	BL R5	
70	294	280	71	94	80	76	97	423	4064	5156	4516	5720	4723	6021	48
76	319	304	78	102	87	82	105	459	4754	6030	5282	6691	5524	7043	61,3
84	353	336	86	113	96	91	116	507	5682	7208	6313	7997	6602	8418	82,4
90	378	360	92	121	103	97	124	544	6439	8167	7154	9062	7482	9539	105
92	386	368	94	123	105	99	127	556	6699	8497	7443	9428	7784	9924	108,5
95	399	380	97	128	109	103	131	574	7096	9001	7884	9987	8246	10512	119,5
102	428	408	104	137	117	110	141	616	8054	10217	8949	11336	9359	11932	147,9
105	441	420	107	141	120	113	145	634	8478	10754	9420	11932	9851	12560	161,5
114	479	456	116	153	130	123	158	689	9791	12420	10879	13780	11378	14506	206,6
120	504	480	122	161	137	130	166	725	10700	13573	11889	15059	12434	15852	241

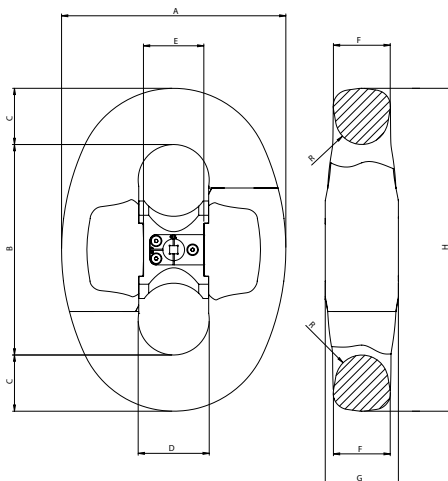
Tolerances in accordance with Classification Society requirements





SMART-CON LINK WITH IRIZAR FORGE STUD

Kenter Shackles



- The Smart-Con Link is a new design version of a Kenter Joining Shackle with the new Irizar Forge stud: quick and safe (dis)assembly without brute force
- Thinner and lighter than a Standard Kenter Joining Shackle
- 76 mm and 84 mm Smart-Con Link with Irizar Forge stud on stock; Irizar Forge stud available as spare part
- Type approved by DNV or ABS
- Forged alloy steel in Grade R4, R4S and R5
- Application: Temporary and Mobile Mooring
- Other sizes: upon request
- Coating protection: upon request

SMART-CON LINK WITH IRIZAR FORGE STUD															
Overall dimensions (mm)									Test Loads (kN)						Weight
chain dia.	A	B	C	D	E	F	G	H	PL R4	BL R4	PL R4S	BL R4S	PL R5	BL R5	(Kg)
70	294	280	71	94	80	76	97	423	4064	5156	4516	5720	4723	6021	48
76	319	304	78	102	87	82	105	459	4754	6030	5282	6691	5524	7043	61
84	353	336	86	113	96	91	116	507	5682	7208	6313	7997	6602	8418	82
90	378	360	92	121	103	97	124	544	6439	8167	7154	9062	7482	9539	105
92	386	368	94	123	105	99	127	556	6699	8497	7443	9428	7784	9924	109
95	399	380	97	128	109	103	131	574	7096	9001	7884	9987	8246	10512	120
102	428	408	104	137	117	110	141	616	8054	10217	8949	11336	9359	11932	148
105	441	420	107	141	120	113	145	634	8478	10754	9420	11932	9851	12560	162
114	479	456	116	153	130	123	158	689	9791	12420	10879	13780	11378	14506	207
120	504	480	122	161	137	130	166	725	10700	13573	11889	15059	12434	15852	241

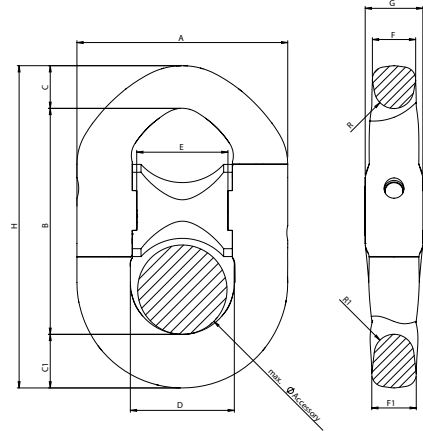
Tolerances in accordance with Classification Society requirements





SMART-CON ANCHOR LINK WITH TAPER PIN

Kenter Shackles



- The Smart-Con Anchor Link with taper pin is a classic design with a taper pin locking system
- Thinner and lighter than a Standard Kenter Anchor Shackle
- 76 mm and 84 mm Anchor shackle on stock; taper pin available as spare part
- Type approved by DNV or ABS
- Forged alloy steel in Grade R4, R4S and R5
- Application: Temporary and Mobile Mooring
- Other sizes: upon request
- Coating protection: upon request

SMART-CON ANCHOR LINK WITH TAPER PIN																			
Overall dimensions (mm)													Test Loads (kN)						Weight
chain dia.	A	B	C	C1	D	E	F	G	H	R	R1	PL R4	BL R4	PL R4S	BL R4S	PL R5	BL R5	(Kg)	
70	372	398	75	95	183	161	76	78	102	568	35	35	4064	5156	4516	5720	4723	6021	48
76	404	432	82	103	199	175	83	85	110	617	38	38	4754	6030	5282	6691	5524	7043	61
84	446	478	90	113	220	193	92	94	122	682	42	42	5682	7208	6313	7997	6602	8418	82
90	478	512	97	122	236	207	98	101	131	730	45	45	6439	8167	7154	9062	7482	9539	105
92	489	523	99	124	241	212	100	103	134	747	46	46	6699	8497	7443	9428	7784	9924	109
95	504	541	102	128	249	219	104	106	138	771	48	48	7096	9001	7884	9987	8246	10512	120
102	542	580	110	138	267	235	111	114	148	828	51	51	8054	10217	8949	11336	9359	11932	148
105	558	597	113	142	275	242	114	118	152	852	53	53	8478	10754	9420	11932	9851	12560	162
114	605	649	123	154	299	262	124	128	166	925	57	57	9791	12420	10879	13780	11378	14506	207
120	637	683	129	162	314	276	131	134	174	974	60	60	10700	13573	11889	15059	12434	15852	241

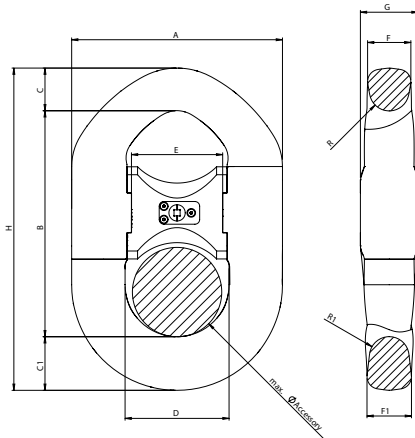
Tolerances in accordance with Classification Society requirements





SMART-CON ANCHOR LINK WITH IRIZAR FORGE STUD

Kenter Shackles



- The Smart-Con Anchor Link is a new design version of a Kenter Anchor Shackle with the new Irizar Forge stud: quick and safe (dis)assembly without brute force
- Thinner and lighter than a Standard Kenter Anchor Shackle
- 76 mm and 84 mm Smart-Con Kenter Anchor shackle on stock; Irizar Forge stud available as spare part
- Type approved by DNV or ABS
- Forged alloy steel in Grade R4, R4S and R5
- Application: Temporary and Mobile Mooring
- Other sizes: upon request
- Coating protection: upon request

SMART-CON ANCHOR LINK WITH IRIZAR FORGE STUD																			
chain dia.	Overall dimensions (mm)											Test Loads (kN)							Weight (Kg)
	A	B	C	C1	D	E	F	F1	G	H	R	R1	PL R4	BL R4	PL R4S	BL R4S	PL R5	BL R5	
70	372	398	75	95	183	161	76	78	102	568	35	35	4064	5156	4516	5720	4723	6021	48
76	404	432	82	103	199	175	83	85	110	617	38	38	4754	6030	5282	6691	5524	7043	61
84	446	478	90	113	220	193	92	94	122	682	42	42	5682	7208	6313	7997	6602	8418	82
90	478	512	97	122	236	207	98	101	131	730	45	45	6439	8167	7154	9062	7482	9539	105
92	489	523	99	124	241	212	100	103	134	747	46	46	6699	8497	7443	9428	7784	9924	109
95	504	541	102	128	249	219	104	106	138	771	48	48	7096	9001	7884	9987	8246	10512	120
102	542	580	110	138	267	235	111	114	148	828	51	51	8054	10217	8949	11336	9359	11932	148
105	558	597	113	142	275	242	114	118	152	852	53	53	8478	10754	9420	11932	9851	12560	162
114	605	649	123	154	299	262	124	128	166	925	57	57	9791	12420	10879	13780	11378	14506	207
120	637	683	129	162	314	276	131	134	174	974	60	60	10700	13573	11889	15059	12434	15852	241

Tolerances in accordance with Classification Society requirements



→ LONG TERM MOORING



Long term mooring systems secure offshore assets such as production platforms, FPSOs and floating offshore wind structures for decades, often without planned component replacement. These demanding applications require connectors that deliver maximum reliability, durability and performance throughout their service life.

Irizar Forge offers a dedicated range of long term mooring products, including hooks, H/Y connectors, anchor and joining shackles, plate connectors and custom-engineered solutions. Each component is tailored to project-specific requirements, considering factors such as water depth, environmental conditions, corrosion exposure and required design life.

Irizar Forge's engineering expertise also includes ROV-installable connectors, enabling safe installation in deepwater environments.

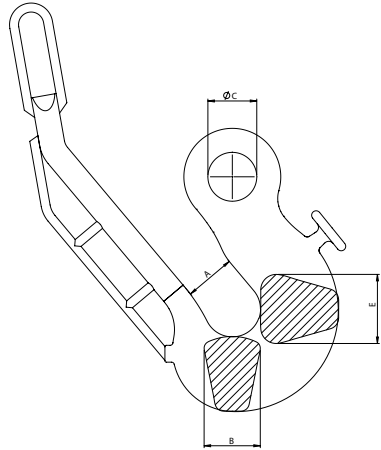
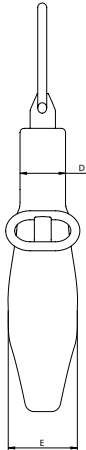
Supported by advanced in-house design, forging, heat treatment, machining, testing and certification capabilities, Irizar Forge delivers type approved mooring solutions that combine proven safety, exceptional durability and long-term value for the most demanding offshore applications.



KS HOOK

LTM mooring hooks

SCAN FOR MORE
INFORMATION



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type Approval by DNV and ABS
- Application: Long Term Mooring;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

KS HOOK								
Overall dimensions (mm)							Test Loads (kN)	
Type	chain dia.	A	B	C	D	E	PL R4	BL R4
KS 40	95	162	170	138	128	200	7096	9001
KS 50	120	180	200	174	162	246	10700	13573

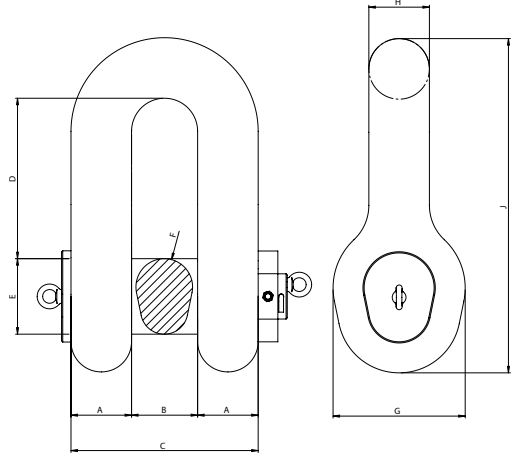
Tolerances in accordance with Classification Society requirements





D-TYPE JOINING SHACKLE

LTM mooring shackles



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by DNV. ABS upon request
- Application: Long Term Mooring;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

D-TYPE JOINING SHACKLE											
Overall dimensions (mm)										Test Loads (kN)	
chain dia.	A	B	C	D	E	F	G	H	J	PL R4	BL R4
70	91	98	280	238	112	84	196	91	497	4064	5156
76	99	106	304	258	122	91	213	99	540	4731	6001
84	109	118	336	286	134	101	235	109	596	5682	7208
90	117	126	360	306	144	108	252	117	639	6439	8167
92	120	129	368	313	147	110	258	120	653	6699	8497
95	124	133	380	323	152	114	266	124	675	7096	9001
102	133	143	408	347	163	122	286	133	724	8054	10217
105	137	147	420	357	168	126	294	137	746	8478	10754
114	148	160	456	388	182	137	319	148	809	9791	12420
120	156	168	480	408	192	144	336	156	852	10700	13573
132	172	185	528	449	211	158	370	172	937	12585	15965
147	191	206	588	500	235	176	412	191	1044	15048	19089

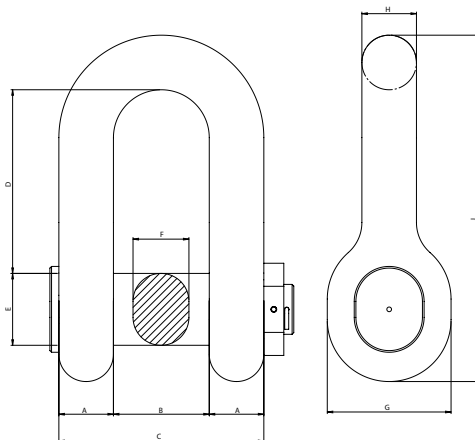
Tolerances in accordance with Classification Society requirements





D-TYPE ANCHOR SHACKLE

LTM mooring shackles



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by DNV. ABS upon request
- Application: Long Term Mooring;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

D-TYPE ANCHOR SHACKLE											
Overall dimensions (mm)										Test Loads (kN)	
chain dia.	A	B	C	D	E	F	G	H	J	PL R4	BL R4
70	98	168	364	322	126	98	217	98	609	4064	5156
76	106	182	395	350	137	106	236	106	661	4731	6001
84	117,6	201,6	436,8	386,4	151,2	117,6	260,4	117,6	730,8	5682	7208
90	126	216	468	414	162	126	279	126	783	6439	8167
92	128,8	220,8	478,4	423,2	165,6	128,8	285,2	128,8	800,4	6699	8497
95	133	228	494	437	171	133	295	133	827	7096	9001
102	142,8	244,8	530,4	469,2	183,6	142,8	316,2	142,8	887,4	8054	10217
105	147	252	546	483	189	147	326	147	914	8478	10754
114	159,6	273,6	592,8	524,4	205,2	159,6	353,4	159,6	991,8	9791	12420
120	168	288	624	552	216	168	372	168	1044	10700	13573
132	184,8	316,8	686,4	607,2	237,6	184,8	409,2	184,8	1148,4	12585	15965
147	206	353	764	676	265	206	456	206	1279	15048	19089

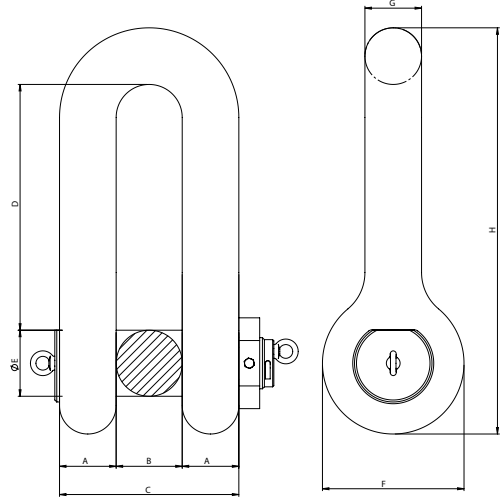
Tolerances in accordance with Classification Society requirements





END JOINING SHACKLE

LTM mooring shackles



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by DNV. ABS upon request
- Application: Long Term Mooring;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

END JOINING SHACKLE										
Overall dimensions (mm)									Test Loads (kN)	
chain dia.	A	B	C	D	E	F	G	H	PL R4	BL R4
70	84	98	266	364	98	210	84	602	4064	5156
76	91	106	289	395	106	228	91	654	4731	6001
84	101	118	319	437	118	252	101	722	5682	7208
90	108	126	342	468	126	270	108	774	6439	8167
92	110	129	350	478	129	276	110	791	6699	8497
95	114	133	361	494	133	285	114	817	7096	9001
102	122	143	388	530	143	306	122	877	8054	10217
105	126	147	399	546	147	315	126	903	8478	10754
114	137	160	433	593	160	342	137	980	9791	12420
120	144	168	456	624	168	360	144	1032	10700	13573
132	158	185	502	686	185	396	158	1135	12585	15965
147	176	206	559	764	206	441	176	1264	15048	19089

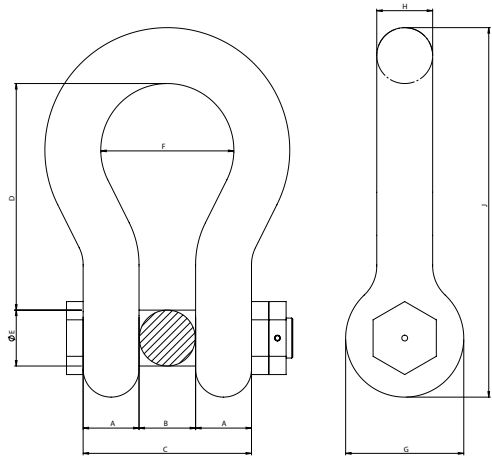
Tolerances in accordance with Classification Society requirements





OMEGA SHACKLE

LTM mooring shackles



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by DNV. ABS upon request
- Application: Long Term Mooring; for KS hooks;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

OMEGA SHACKLE												
Overall dimensions (mm)											Test Loads (kN)	
Type	chain dia.	A	B	C	D	E	F	G	H	J	PL R4	BL R4
KS 40	95	130	140	400	430	133	270	280	130	767	7096	9001
KS 50	120	170	170	510	680	170	400	355	170	1113	10700	13573

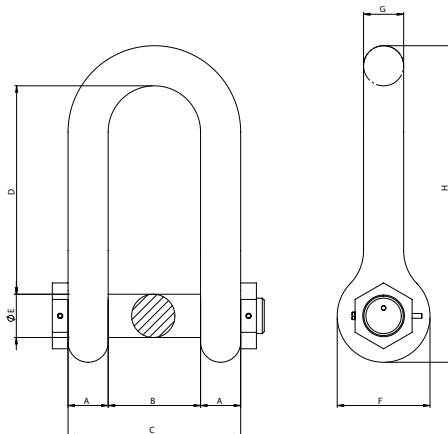
Tolerances in accordance with Classification Society requirements





SPECIAL THIMBLE SHACKLE

LTM mooring shackles



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by DNV. ABS upon request
- Application: Long Term Mooring;
In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

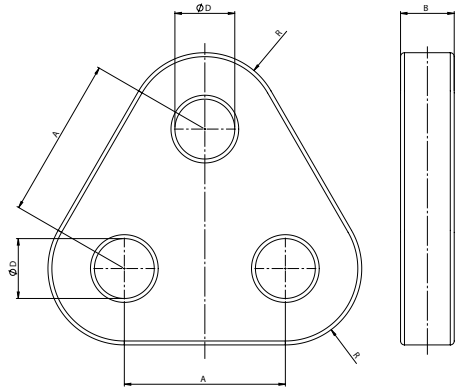
SPECIAL THIMBLE SHACKLE									
Overall dimensions (mm)									Test Loads (t)
Size	A	B	C	D	E	F	G	H	PL R4
710 t	102	235	439	575	110	230	102	753	440
									BL R4
									710

Tolerances in accordance with Classification Society requirements





LTM TRIANGLE PLATE



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type approval by ABS. DNV upon request
- Application: Long Term Mooring; for Mooring
shackles; In accordance with Petrobras specification
- Other sizes: upon request
- Coating protection: upon request

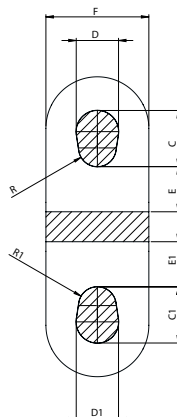
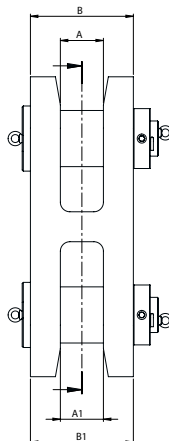
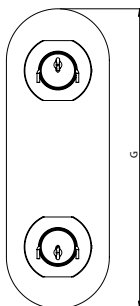
LTM TRIANGLE PLATE							
Overall dimensions (mm)					Test Loads (kN)		Weight
chain dia.	A	B	Ø D	R	PL R4	BL R4	(Kg)
76	296	99	110	144	4731,0	6001	152
84	328	109	122	159	5681,8	7208	204
95	371	124	138	180	7095,8	9001	296
105	410	137	152	199	8477,8	10754	399
114	445	148	165	216	9791,3	12420	511
120	468	156	174	227	10699,8	13573	596

Tolerances in accordance with Classification Society requirements





H-LINK FOR COMMON LINKS



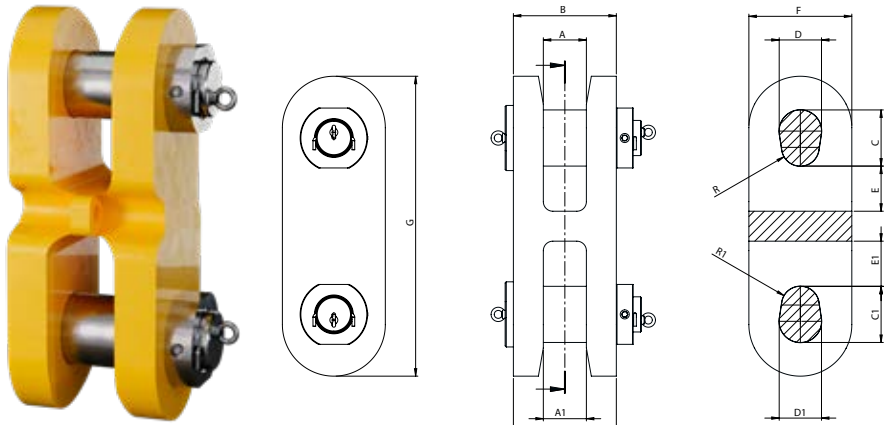
- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type Approval by DNV and ABS upon request
- Application: Long Term Mooring
- Other sizes: upon request
- Coating protection: upon request

H-LINK FOR COMMON LINKS											
Overall dimensions (mm)									Test Loads (t)		
chain dia.	A	B	C	D	E	F	G	R	PL R3S	BL R3S	PL R4
70	81	176	105	79	84	176	562	35	3387	4685	4064
76	87	191	114	86	91	191	610	38	3942	5454	4731
84	97	211	126	95	101	211	675	42	4735	6550	5682
90	104	226	135	102	108	226	723	45	5365	7422	6439
92	106	231	138	104	110	231	739	46	5582	7722	6699
95	109	238	143	107	114	238	763	48	5913	8180	7096
102	117	256	153	115	122	256	819	51	6712	9285	8054
105	121	264	158	119	126	264	843	53	7065	9773	8478
114	131	286	171	129	137	286	915	57	8159	11287	9791
120	138	301	180	136	144	301	964	60	8916	12334	10700
132	152	331	198	149	158	331	1060	66	10488	14508	12585
147	169	369	221	166	176	369	1180	74	12540	17347	15048

Tolerances in accordance with Classification Society requirements



CUSTOM FORGED H-LINK



- Suitable for: Chain to chain / chain to socket / chain to triangle plate (sizes on request)
- Material: Forged material - Grade R4
- 3.2 Material Certificate EN10204; available with Design Approval by DNV and ABS
- Sizes upon request; different pin configurations available
- Coating protection: upon request

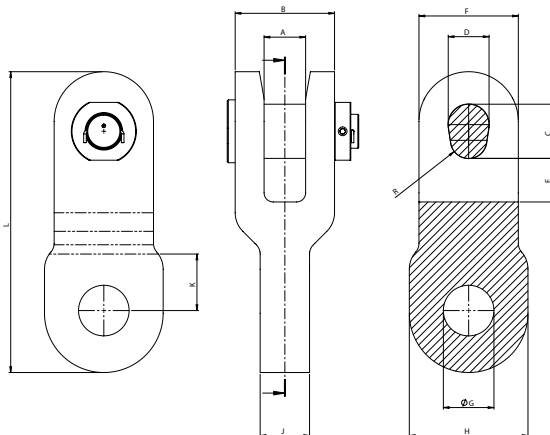
CUSTOM FORGED H-LINK

Dimensions based on the nominal diameter of the chain Test Loads (kN)

Tolerances in accordance with Classification Society requirements



CUSTOM FORGED Y-LINK



- Material: Forged material - Grade R4
- Certification: Certificate of Conformity;
3.2 Material Certificate EN10204;
Type Approval by DNV and ABS upon request

- Application: Long Term Mooring
- Other sizes: upon request
- Coating protection: upon request

CUSTOM FORGED Y-LINK

Dimensions based on the nominal diameter of the chain Test Loads (kN)

Tolerances in accordance with Classification Society requirements



HOOK LATCHES

As part of our customer service, we provide spare parts for hooks such as safety latches and locking systems. For more information, please contact us at irizar@irizarforge.com.



STANDARD SPRING LATCH



STANDARD SPRING LATCH WITH LOCKING SYSTEM





ROV DIN7540 LATCH



LOAD TRANSFER HOOK LATCH



HEAVY DUTY LATCH



FIX LATCH





GRAVITY LATCH



HOOK ROTATION LOCKING SYSTEM

Enables hook anti-rotation locking without any additional machining of the hook.
Typically provided in 4 positions at 90° intervals.

FREE ROTATION



FOR 90° LOCKING POSITIONS





IRIZAR FORGE STUDS AND TAPER PINS

As part of our customer service, we provide spare parts for kenter shackles and anchor shackles such as Irizar Forge studs and taper pins. For more information, please contact us at irizar@irizarforge.com.

IRIZAR FORGE STUD FOR ANCHOR LINK



IRIZAR FORGE STUD FOR KENTER LINK



TAPER PIN



Irizar Forge studs are only compatible with Smart-Con Kenter Shackles fitted with an Irizar Forge stud and are not compatible with Kenter Shackles fitted with a taper pin.

ANNEX 1

DIN15400 Drive Groups

This table specifies the drive group as a function of hook strength class and the lifting capacity as a function of hook number.

Strength class	DRIVE GROUP										Strength class
M	Hooks used in a drive group lower than 1B _m are not included here.										M
P											P
S											S
T											T
V											V
Hook Number	LIFTING CAPACITY, IN KG										Hook Number
006	320	250	200	160	125	100	-	-	-	-	006
010	500	400	320	250	200	160	125	100	-	-	010
012	630	500	400	320	250	200	160	125	100	-	012
020	1.000	800	630	500	400	320	250	200	160	125	020
025	1.250	1.000	800	630	500	400	320	250	200	160	025
04	2.000	1.600	1.250	1.000	800	630	500	400	320	250	04
05	2.500	2.000	1.600	1.250	1.000	800	630	500	400	320	05
08	4.000	3.200	2.500	2.000	1.600	1.250	1.000	800	630	500	08
1	5.000	4.000	3.200	2.500	2.000	1.600	1.250	1.000	800	630	1
1.6	8.000	6.300	5.000	4.000	3.200	2.500	2.000	1.600	1.250	1.000	1.6
2.5	12.500	10.000	8.000	6.300	5.000	4.000	3.200	2.500	2.000	1.600	2.5
4	20.000	16.000	12.500	10.000	8.000	6.300	5.000	4.000	3.200	2.500	4
5	25.000	20.000	16.000	12.500	10.000	8.000	6.300	5.000	4.000	3.200	5
6	32.000	25.000	20.000	16.000	12.500	10.000	8.000	6.300	5.000	4.000	6
8	40.000	32.000	25.000	20.000	16.000	12.500	10.000	8.000	6.300	5.000	8
10	50.000	40.000	32.000	25.000	20.000	16.000	12.500	10.000	8.000	6.300	10
12	63.000	50.000	40.000	32.000	25.000	20.000	16.000	12.500	10.000	8.000	12
16	80.000	63.000	50.000	40.000	32.000	25.000	20.000	16.000	12.500	10.000	16
20	100.000	80.000	63.000	50.000	40.000	32.000	25.000	20.000	16.000	12.500	20
25	125.000	100.000	80.000	63.000	50.000	40.000	32.000	25.000	20.000	16.000	25
32	160.000	125.000	100.000	80.000	63.000	50.000	40.000	32.000	25.000	20.000	32
40	200.000	160.000	125.000	100.000	80.000	63.000	50.000	40.000	32.000	25.000	40
50	250.000	200.000	160.000	125.000	100.000	80.000	63.000	50.000	40.000	32.000	50
63	320.000	250.000	200.000	160.000	125.000	100.000	80.000	63.000	50.000	40.000	63
80	400.000	320.000	250.000	200.000	160.000	125.000	100.000	80.000	63.000	50.000	80
100	500.000	400.000	320.000	250.000	200.000	160.000	125.000	100.000	80.000	63.000	100
125	630.000	500.000	400.000	320.000	250.000	200.000	160.000	125.000	100.000	80.000	125
160	800.000	630.000	500.000	400.000	320.000	250.000	200.000	160.000	125.000	100.000	160
200	1.000.000	800.000	630.000	500.000	400.000	320.000	250.000	200.000	160.000	125.000	200
250	1.250.000	1.000.000	800.000	630.000	500.000	400.000	320.000	250.000	200.000	160.000	250

Reference values are based on old DIN15400 standard. For exact capacities, please contact our R&D Department at irizar@irizarforge.com.

Information about strength class W upon request.

VOCABULARY & ABBREVIATIONS

t	Metric ton (1,000kg)
ST	Short Ton; US customary unit of weight equal to 2,000 lb (907.185 kg). 1 ST = 2,000 lb.
kg	Kilogram
No	Number
mm	Millimeters
WLL	Working Load Limit
SWL	Safety Working Load
COC	Certificate of Conformity
COO	Certificate of Origin
DAC	Design Approval Certificate
CSIC	Classification Society Inspection Certificate
EN	European Standard
EN13001	New European Standard for Cranes
EN13001-3-5:2016	New European Standard for Forged Crane Hooks
EN10204	Metallic products - Types of inspection documents (Material Certificate recognized in Europe)
3.1	EN10204-3.1 Original Manufacturer Material Certificate, with tests results (no 3 rd Party)
2.1	EN10204-2.1 Original Manufacturer Assembly Certificate (no 3 rd Party)
3.2	EN10204-3.2 Third Party Material Certificate, with tests results (witnessed by 3 rd Party)
ILO-3	Load Test Certificate recognized by International Labour Office
PTL	Proof Test Load
FAT	Factory Acceptance Test
MBL	Minimum Breaking Load
LTM	Long Term Mooring
FEA	Finite Element Analysis
YS	Yield Strength
US	Ultimate Strength
FS	Fatigue Strength
PL	Proof Load by cold forming
DT	Destructive Test
NDT	Non Destructive Test
UT	Ultrasonic Test
MT	Magnetic Test
+QT	Quenched & Tempered (a kind of heat treatment)
+N	Normalizing (a kind of heat treatment)
R4	Alloy steel linked to chain materials
DF	Design Factor (MBL/WLL)
SF	Safety Factor (MBL/WLL)
BS	British Standard
BS2903	Old recognized British Standard for crane shank hooks
DIN	Deutsches Institut für Normung
DIN15400	Old recognized European standard for crane shank hooks
CLASS P	Very low mechanical properties material (regularly carbon steel)
CLASS S	Low mechanical properties material (regularly low alloy steel)
CLASS T	Medium mechanical properties material (regularly medium alloy steel)
CLASS V	High mechanical properties material (regularly high alloy steel)
CLASS W	Very high mechanical properties material (regularly super alloy steel)

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