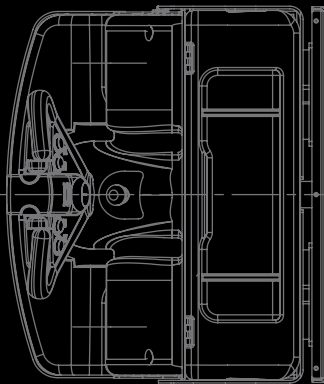


PROLIFT

HANDLING LTD

The Lifting Equipment Specialists



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Dear Customer,

Prolift Handling Ltd was formed in 2013 and is a wholly Irish owned company.

We are now the largest supplier of lifting, material Handling and Height Safety equipment in Ireland and are also recognised throughout Europe as a leading distributor within our industry.

Prolift are ISO 9001 approved and also LEEA accredited (Lifting Equipment Engineers Association)

The corner stone of our business is to supply high quality European manufactured products with full traceability that meets all EN standards and regulatory requirements.

We are delighted to present to you our new catalogue detailing the lifting, height safety and material handling equipment we supply. We endeavour to supply the highest quality products by being official distributors for European manufacturers such as Gunnebo, Verlinde, JDN, Tractel, Pramac, Pevag and Kito.

This catalogue is designed to give you an overview of our product range and also give you and your team a platform to make an informed decision on which equipment may best suit your application

If required a more detailed product overview including specifications, user guides and data sheets can be found on our website www.prolift.ie.

Our sales team are on hand to answer your calls and we would be more than happy to make a site visit to assist you further with your requirements.

Darragh Hickey
Director

David McElhinney
Director





Grade 100
Components

7



Quality Assurance

Type Testing

In order to prove the design, material, heat treatment and method of manufacture, each size of component and chain has been type tested in the finished condition in order to demonstrate that the component and chain possesses the required mechanical properties. The following testing procedures are particularly relevant:

Test for Deformation

The Manufacturing Proof Force (MPF) for the relevant size of the component is applied and removed. The dimensions after proof loading shall not alter from the original dimensions within the tolerances prescribed in our specifications and in the international standards.

Static Tensile Test

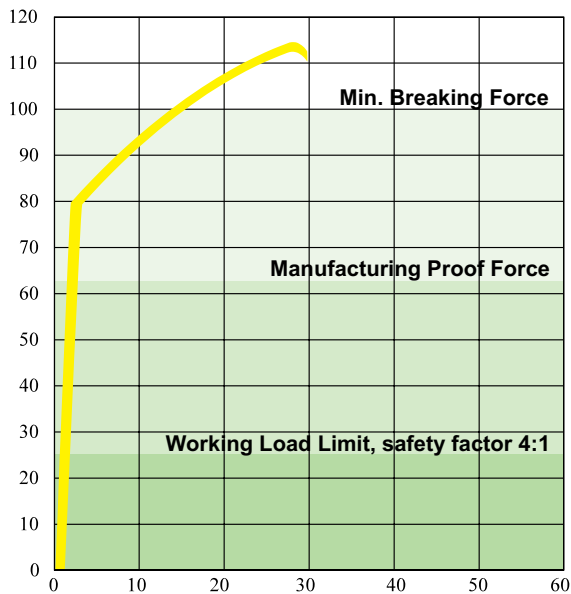
The Breaking Force (BF) for each component and size is verified. The verified value shall be at least equal to the Minimum Breaking Force (MBF) value. The MBF value is equal to the Working Load Limit (WLL) multiplied by the safety factor.

Fatigue Test

By fatigue testing in pulsator testing machines the toughest conditions of service are simulated.

Stress / Elongation Diagram

Chain grade 10, type KL
% of min. Breaking Force



% elongation

Manufacturing Testing

During manufacture continuous process tests are carried out according to the requirements in our specifications and in the latest international standards. The following testing procedures are particularly relevant:

Proof Force

Each individual component and chain link is tested to the Manufacturing Proof Force (MPF) level before delivery. The MPF level is 2.5 times the WLL, equal to 62,5% of the Minimum Breaking Force.

Non Destructive Test / Visual Inspection

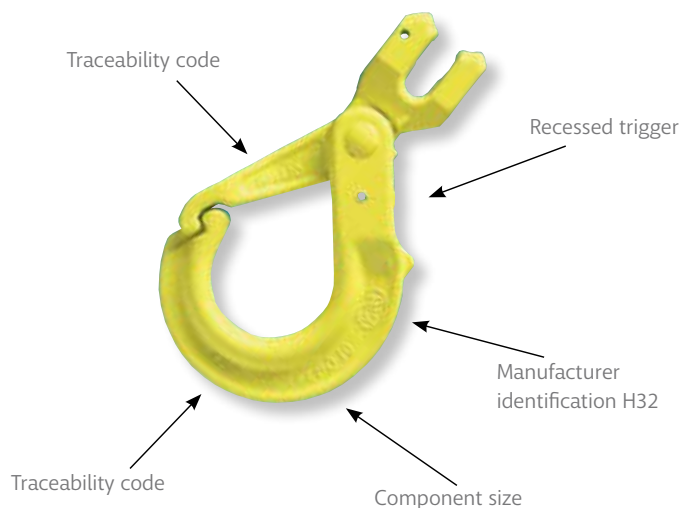
3% of every production batch of forged components are subject to magnetic particle or dye penetrating examination. Visual inspection is carried out on each chain link and each forged component to detect defects.

Static Tensile and Ultimate Elongation test

During manufacture, samples are tested and the Minimum Breaking Force (MBF) value and the total ultimate elongation are verified.

Bending Deflection

During manufacturing, of chain and master links, samples are taken and the minimum bend deflection is verified.

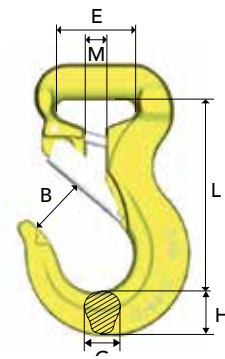


Roundsling Hook RH

The RH-hook is the perfect load connection solution, combining the advantages of both soft lifting slings and grade 100 components. It can be inserted into a softsling and is quicker and safer to use than the commonly used shackle. The RH-hook is a connector as well as a hook, which gives the user increased flexibility, safer use and increased durability of the soft slings.

The RH-hook comes with a blocking pin, but thanks to the narrow opening it may be used without blocking pin.

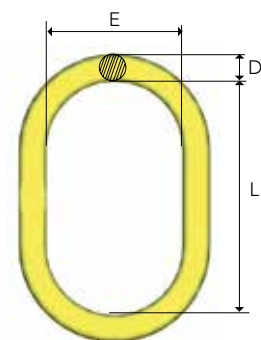
The roundsling hooks are colour coded in order to match the corresponding size of the roundsling: Red=5T / Yellow=3T / Green=2T / Violet=1T



Art. no.	Code	WLL tonnes*	B	E	G	L	H	M	Weight kgs
B14490	RH-1-10	1	24	35	16.6	84	19	8	0.5
B14491	RH-2-10	2	28	40	17	96	22	10	0.7
B14492	RH-3-10	3	33	47	24	117	30	12	1.3
B14493	RH-5-10	5	43	73	27	155	36	16.5	3.2

Master Link M

Art. no.	Code	WLL tonnes (SF 5:1)		L	E	D	Weight kgs
		EN 1677-4	ASTM A-952				
Z101271	M-6-10	1.5	1.5	100	60	11	0.2
Z101272	M-86-10	2.5	3.2	125	70	14	0.4
Z101273	M-108-10	4.0	5.2	140	80	17	0.8
Z101274	M-13-10	5.4	5.6	150	90	19	1.0
Z101267	M-1310-10	7.5	8.0	160	95	22	1.5
Z101268	M-1613-10	10.0	13.6	190	110	28	2.8
Z101247	M-19-10	12.0	16.0	200	120	30	3.5
Z101269	M-2016-10	17.0	20.6	240	140	34	5.2
Z101270	M-2220-10	25.0	30.9	250	150	40	7.3
Z101275	M-2622-10	28.0	32.0	250	150	42	8.7
Z101284	M-32-10	33.0	38.6	300	180	45	11.7
Z101276	M-3226-10	43.0	46.6	300	200	50	14.8
Z101277	M-3632-10	56.0	65.0	350	200	55	20.7
Z101278	M-4536-10	70.0	72.7	375	210	60	26.4
Z101279	M-90T-10	90.0	100.0	450	250	70	42.8
Z101280	M-125T-10**	125.0	125.0	450	260	80	57.0

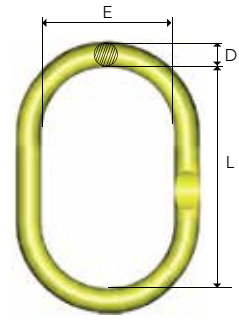


** Dimension L and E not acc. to EN 1677-4.

Master Link MF

For 1-, 2-, 3- and 4-leg slings. 3- and 4 leg chain slings require CLD / CGD

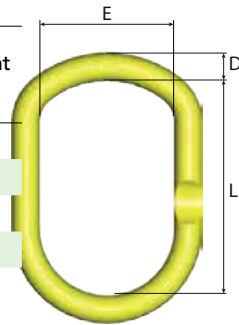
Art. no.	Code	WLL tonnes (SF 5:1)		For chain size, mm			L	E	D	Weight kgs
		EN 1677-4	ASTM A-952	1-leg	2-leg	3-4-leg				
B14487	MF-6-10	1.5	1.5	6			100	60	11	0.2
B14481	MF-86-10	2.5	3.2	6, 8	6	-	125	70	14	0.4
B14482	MF-108-10	4.0	5.2	10	8	6	140	80	17	0.8
B14483	MF-1310-10	7.5	8.0	13	10	8	160	95	22	1.5
B14484	MF-1613-10	10.0	13.6	16	13	10	190	110	28	2.8
B14485	MF-2016-10	17.0	20.6	20	16	13	240	140	34	5.2
B14486	MF-2220-10	25.0	30.9	22	20	16	250	150	40	7.3



Master Link MFH

Designed for crane hooks, DIN 15401. 3- and 4 leg chain slings require CLD / CGD

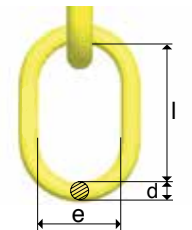
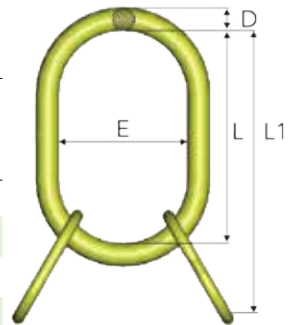
Art. no.	Code	WLL tonnes (SF 5:1)		For chain size, mm			L	E	D	DIN 15401	DIN 15402	Weight kgs
		EN 1677-4	ASTM A-952	1-leg	2-leg	3-4 leg						
Z101262	MFH-1310-10	7.5	8.0	13	10	8	230	125	22	≤ 12	≤ 16	1.9
Z101263	MFH-1613-10	10	13.6	16	13	10	250	135	28	≤ 12	≤ 16	3.2
Z101264	MFH-2016-10	17	20.6	20	16	13	280	135	32	≤ 16	≤ 20	4.6
Z101265	MFH-2220-10	28	30.9	22	20	16	320	175	40	≤ 25	≤ 32	8.6
Z101266	MFHW-2220-10	25	30.9	22	20	16	355	225	40	≤ 50	≤ 63	9.9



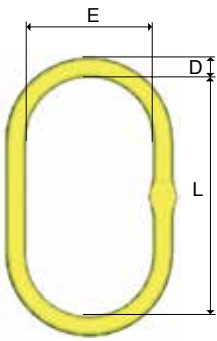
Master Link with Sublinks, MT

Designed for use with chain or wire rope. For 3- and 4-leg slings.

Art. no.	Code	WLL tonnes (SF 5:1)		L1	L	E	D	l	e	d	Weight kgs
		EN 1677-4	ASTM A-952								
Z100902	MT-6-10	3.5	5.0	270	150	90	19	120	70	14	1.8
Z100903	MT-8-10	5.2	8.0	300	160	95	22	140	80	17	3.0
Z101359	MT-9-10	6.9	9.7	340	190	110	28	150	90	19	4.9
Z100904	MT-10-10	11.5	16.0	360	200	120	30	160	95	22	6.4
Z100905	MT-13-10	17.0	26.0	450	250	150	40	190	110	28	14.2
Z100906	MT-16-10	28.0	35.0	500	300	200	50	200	120	32	23
Z101074	MT-20-10	35.0	50.0	550	300	200	55	250	150	40	31.5
Z101281	MT-22-10	53.0	75.0	610	350	200	60	260	140	45	46
Z101282	MT-26-10	70.0	100.0	730	450	250	70	280	160	50	71



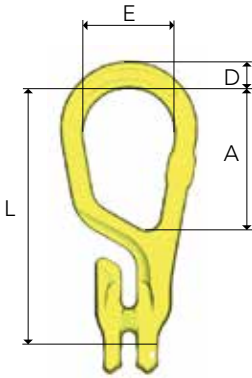
Master Link, MFX Oversized, for 1- and 2-leg slings.



Art. no.	Code	WLL tonnes (SF 5:1)		For chain 1-leg	For chain 2-leg	L	E	D	Weight kgs
		EN 1677-4	ASTM A-952						
Z100550	MFX-108-10	4.25	5.2	8, 10	8	340	180	25	3.7
Z100551	MFX-1310-10	7.5	8.0	13	10	340	180	28	4.7
Z100552	MFX-1613-10	11.2	13.6	16	13	340	180	34	7.1
Z101125	MFX-2016-10	16.0	20.6	20	16	340	180	40	9.6

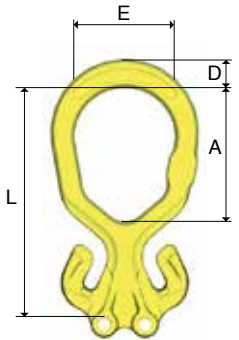
Designed for use with CL, CLD, CG and CGD.

Master Grab MG "All-in-one" compact top link.



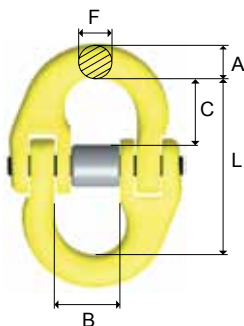
Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14710	MG-6-10	1.5	145	88	60	15	0.5
B14711	MG-8-10	2.5	171	92	60	18	0.9
B14712	MG-10-10	4.0	211	113	75	22	1.8
B14713	MG-13-10	6.7	261	138	90	26	3.5
B14714	MG-16-10	10.0	311	157	105	31	6.1

Master Grab Duo MGD "All-in-one" compact top link for 2-leg slings.



Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14700	MGD-6-10	2.1	144	90	60	17	0.7
B14701	MGD-8-10	3.5	171	100	75	21	1.3
B14702	MGD-10-10	5.6	211	124	90	24	2.3
B14703	MGD-13-10	9.5	262	149	105	31	5.2
B14704	MGD-16-10	14.0	310	175	120	35	7.9

Coupling Link G



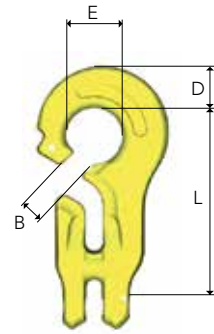
Art. no.	Code	WLL tonnes*	L	B	F	A	C	Weight kgs
Z100821	G-6-10	1.5	45	15	7	8	16	0.1
Z101358	G-7-10	2.0	56	18	9	11	22	0.2
Z100822	G-8-10	2.5	56	18	9	11	22	0.2
Z100823	G-10-10	4.0	68	25	12	13	26	0.3
Z100824	G-13-10	6.7	89	29	15	17	33	0.7
Z100825	G-16-10	10.0	106	36	19	20	40	1.4
Z101119	G-20-10	16.0	125	43	23	26	44	2.2
Z101339	G-22-10	20.0	152	50	26	28	59	3.5
Z101365	G-26-10	27.0	161	58	32	34	61	5.7

For larger sizes, see Classic Grade 8

C-Grab CG

 For use with master link, eye hooks and choke.

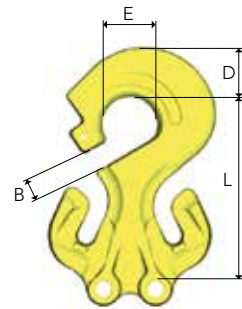
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14730	CG-6-10	1.5	80	11	24	19	0.3
B14731	CG-8-10	2.5	107	12	32	24	0.7
B14732	CG-10-10	4.0	134	15	40	29	1.5
B14733	CG-13-10	6.7	172	18	52	38	3.2
B14734	CG-16-10	10.0	215	22	64	47	6.1



C-Grab CGD

 For use with master links.

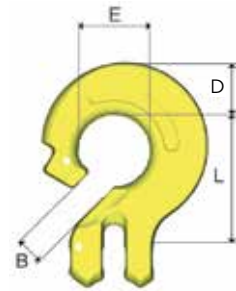
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14720	CGD-6-10	2.1	79	11	24	20	0.6
B14721	CGD-8-10	3.5	107	12	32	29	1.1
B14722	CGD-10-10	5.6	134	15	40	37	2.2
B14723	CGD-13-10	9.5	173	19	48	48	5.4
B14724	CGD-16-10	14.0	215	22	64	57	9.1



C-Lok CL

 For use with master links, eye hooks and choke.

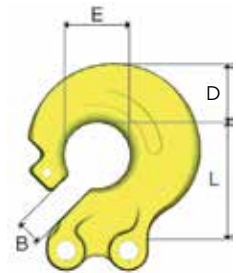
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14750	CL-6-10	1.5	43	11	24	18	0.2
B14751	CL-8-10	2.5	58	12	32	24	0.5
B14752	CL-10-10	4.0	74	15	40	29	1.0
B14753	CL-13-10	6.7	94	18	52	38	2.0
B14754	CL-16-10	10.0	119	22	64	48	3.8



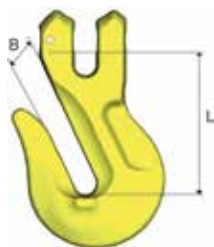
C-Lok CLD

 For use with master links.

Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14740	CLD-6-10	2.1	43	11	24	22	0.4
B14741	CLD-8-10	3.5	58	12	32	29	0.6
B14742	CLD-10-10	5.6	74	15	40	37	1.2
B14743	CLD-13-10	9.5	94	18	52	46	3.1
B14744	CLD-16-10	14.0	119	25	64	57	5.5

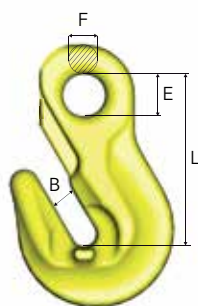


Grab Hook GG



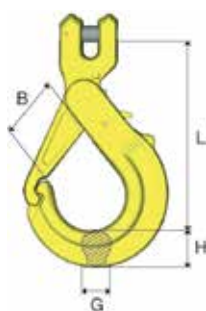
Art. no.	Code	WLL tonnes*	L	B	Weight kgs
Z100845	GG-7-10	2.0	57	10	0.3
B14771	GG-8-10	2.5	57	10.5	0.4
B14772	GG-10-10	4.0	76	12	0.9
B14773	GG-13-10	6.7	97	16	1.8
B14774	GG-16-10	10.0	124	20	3.1
Z101152	GG-20-10	16.0	147	26	7.0

Grab Hook OG



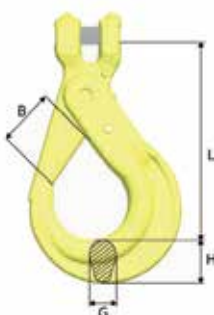
Art. no.	Code	WLL tonnes*	L	B	E	F	Weight kgs
Z101296	OG-7/8-10	2.5	65	10.5	17	12	0.3
Z101297	OG-10-10	4.0	85	12	20	16	0.7
Z101298	OG-13-10	6.7	104	16.2	26	22	1.6
Z101299	OG-16-10	10.0	131	20	32	24	2.8
Z101300	OG-20-10	16.0	167	26.4	41	28	6.1
Z101301	OG-22-10	20.0	187	26	46	32	8.6
Z101302	OG-26-10	27.0	228	32	55	38	14

Safety Hook GBK



Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z100758	GBK-6-10	1.5	87	26	15	17	0.4
Z100849	GBK-7-10	2.0	114	36	20	22	0.5
Z100759	GBK-8-10	2.5	119	36	20	22	0.8
Z100760	GBK-10-10	4.0	150	47	22	29	1.4
Z100761	GBK-13-10	6.7	172	53	29	38	2.7
Z100762	GBK-16-10	10.0	208	68	30	45	4.4

Safety Hook BKG



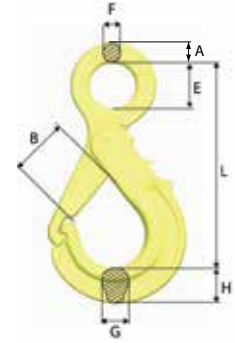
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z101110	BKG-6-10	1.5	91	29	15	21	0.5
Z101098	BKG-7-10	2.0	120	37	17	22	0.5
Z101100	BKG-8-10	2.5	121	37	17	26	0.9
Z101026	BKG-10-10	4.0	144	45	21	31	1.5
Z101034	BKG-13-10	6.7	180	55	30	40	3.0
Z101042	BKG-16-10	10.0	219	62	37	50	5.5
Z101091	BKG-20-10	16.0	240	68	44	62	9.6

*Safety factor 4:1

All dimensions in mm

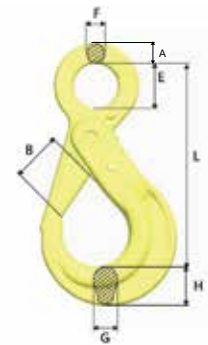
Safety Hook OBK

Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101048	OBK-6-10	1.5	12	103	26	22	9	15	17	0.4
Z101143	OBK-7/8-10	2.5	14	139	37	28	10	20	22	0.8
Z101145	OBK-10-10	4.0	16	170	47	34	13	22	29	1.3
Z101147	OBK-13-10	6.7	21	206	53	44	15	29	38	2.6
Z101141	OBK-16-10	10.0	26	251	68	56	19	29	45	4.4
Z101240	OBK-18/20-10	16.0	28	293	74	60	22	44	56	7.3



Safety Hook BK

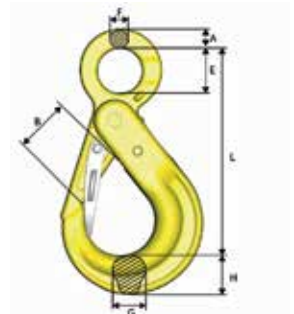
Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101108	BK-6-10	1.5	12	109	29	22	10	15	21	0.5
Z101097	BK-7/8-10	2.5	14	138	37	28	11	17	26	0.9
Z101024	BK-10-10	4.0	16	168	45	34	13	21	31	1.5
Z101032	BK-13-10	6.7	20	207	55	44	16	30	40	3.0
Z101040	BK-16-10	10.0	26	254	62	56	20	37	50	5.5
Z101089	BK-18/20-10	16.0	30	289	68	60	22	44	62	9.0
Z101325	BK-22-10	20.0	32	320	80	70	24	50	62	11.3
Z101326	BK-26-10	27.0	35	342	100	80	25	54	68	16.5



For larger sizes, see Classic Grade 8

Safety Hook BKD The double latch BK-hook with recessed trigger.

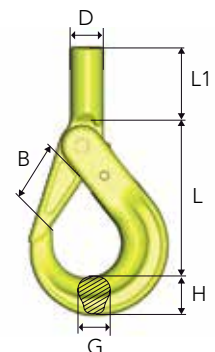
Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101154	BKD-13-10	6.7	20	207	44	44	16	30	40	3.2
Z101155	BKD-16-10	10.0	26	254	48	56	20	37	50	5.8
Z101156	BKD-18/20-10	16.0	30	289	57	60	22	44	62	9.1
Z101373	BKD-26-10 OS	27.0	35	342	72	80	25	50	69	14.5

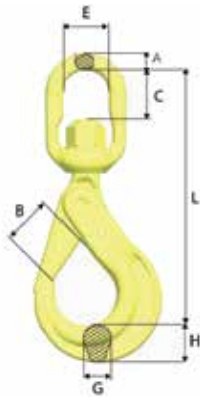


Shank Safety Hook BKT

Art. no.	Code	WLL tonnes*	L	B	L1	D	dmin	G	H	Weight kgs
Z1011120	BKT-6-10	1.5	90	29	36	20	11	15	21	0.5
Z1011020	BKT-7/8-10	2.5	111	37	47	24	13	17	26	0.9
Z1010690	BKT-10-10	4.0	133	45	51	29	16	21	31	1.6

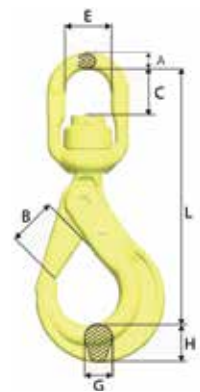
d min = the smallest permitted shank dimension after machining.
Note! After machining of the shank, proof loading must be carried out.





Swivel Safety Hook BKL

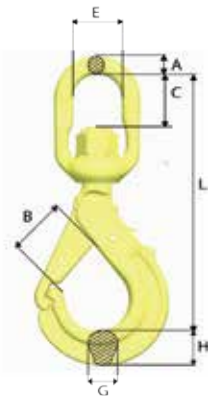
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101114	BKL-6-10	1.5	149	29	23	33	11	15	21	0.7
Z101104	BKL-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101028	BKL-10-10	4.0	218	45	37	44	15	21	31	2.0
Z101036	BKL-13-10	6.7	282	55	49	48	19	30	40	4.0
Z101044	BKL-16-10	10.0	341	62	65	61	25	37	50	7.2
Z101093	BKL-18/20-10	16.0	368	68	70	72	31	44	62	11.4



Swivel Safety Hook BKLK with ball-bearing

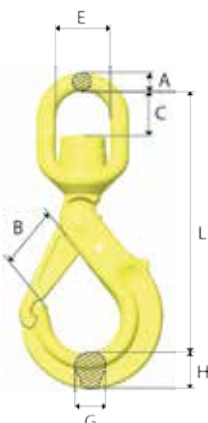
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101116	BKLN-6-10	1.5	149	29	24	33	11	15	21	0.7
Z101106	BKLN-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101030	BKLN-10-10	4.0	218	45	35	44	15	21	31	2.0
Z101038	BKLN-13-10	6.7	280	55	45	48	19	30	40	4.0
Z101046	BKLN-16-10	10.0	339	62	62	61	25	37	50	7.4
Z101095	BKLN-18/20-10	16.0	368	68	60	72	31	44	62	11.5
Z101294	BKLN-22-10 OS	20.0	436	79	80	80	35	50	62	16.8
Z101295	BKLN-26-10 OS	27.0	486	100	110	102	45	54	68	26

For larger sizes, see Classic Grade 8



Swivel Safety Hook with Griplatch LBK

Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z100978	LBK-7/8-10	2.5	177	37	27	38	12	20	22	1.1
Z100960	LBK-10-10	4.0	214	47	37	44	15	22	29	1.8
Z100993	LBK-13-10	6.7	262	53	45	48	19	29	38	3.5
Z100995	LBK-16-10	10.0	324	68	66	61	25	30	45	5.9



Swivel Safety Hook with Griplatch LKBK with ball-bearing

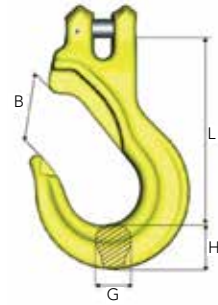
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z100980	LKBK-7/8-10	2.5	176	37	27	38	12	20	22	1.1
Z100962	LKBK-10-10	4.0	213	47	35	44	15	22	29	1.9
Z100997	LKBK-13-10	6.7	261	53	43	48	19	29	38	3.6
Z100999	LKBK-16-10	10.0	323	68	61	61	25	30	45	6.2

*Safety factor 4:1

All dimensions in mm

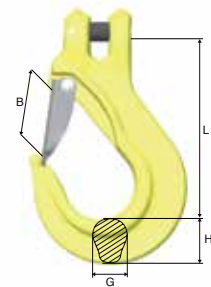
Sling Hook EGK

Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z100915	EGK-6-10	1.5	86	28	17	20	0.4
Z100918	EGK-7-10	2.0	95	32	17	22	0.5
Z100938	EGK-8-10	2.5	95	32	17	23	0.5
Z100942	EGK-10-10	4.0	121	41	23	31	1.0
Z100946	EGK-13-10	6.7	145	49	28	38	2.0
Z100950	EGK-16-10	10.0	170	61	36	46	3.8
Z101138	EGK-20-10	16.0	209	70	42	60	7.3



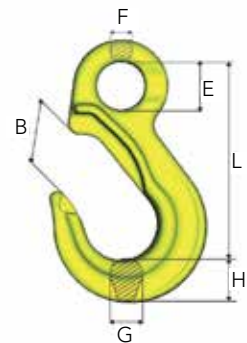
Sling Hook EGKN with latch

Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
B14460	EGKN-6-10	1.5	86	24,5	17	20	0.4
Z100843	EGKN-7-10	2.0	95	28	17	23	0.5
B14461	EGKN-8-10	2.5	95	28	17	23	0.5
B14462	EGKN-10-10	4.0	121	35	23	31	1.1
B14463	EGKN-13-10	6.7	145	42	28	38	2.2
B14464	EGKN-16-10	10.0	170	52	36	46	4.0
Z101127	EGKN-20-10	16.0	209	61	42	60	7.6



Sling Hook EK

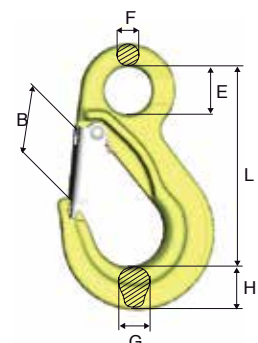
Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z101162	EK- 6-10	1.5	94	29	22	10	17	20	0.4
Z101164	EK- 8-10	2.5	109	32	28	12	17	23	0.5
Z101166	EK-10-10	4.0	134	42	34	14	23	30	0.9
Z101168	EK-13-10	6.7	166	49	44	18	28	38	2.0
Z101170	EK-16-10	10.0	203	60	56	22	36	47	3.8
Z101306	EK-20-10	16.0	229	71	61	26	42	60	6.3
Z101307	EK-22-10	20.0	267	83	64	31	43	67	8.5
Z101308	EK-26-10	27.0	301	95	66	32	51	75	12.6



For larger sizes, see Classic Grade 8

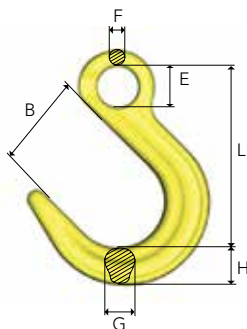
Sling Hook EKN with latch

Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z101128	EKN- 6-10	1.5	94	24	22	10	17	20	0.4
Z101130	EKN- 8-10	2.5	108	28	28	12	17	23	0.5
Z101132	EKN-10-10	4.0	134	37	34	14	23	30	1
Z101134	EKN-13-10	6.7	166	42	44	18	28	38	2.1
Z101136	EKN-16-10	10.0	203	50	56	22	36	47	3.9
Z101327	EKN-20-10	16.0	229	60	61	26	42	60	6.3
Z101328	EKN-22-10	20.0	267	73	64	31	43	67	8.7
Z101329	EKN-26-10	27.0	301	82	66	32	51	75	13.2



For larger sizes, see Classic Grade 8

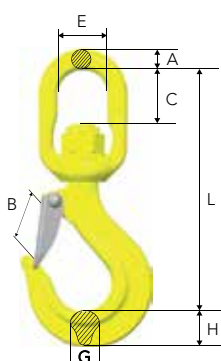
Foundry Hook OKE



Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z100853	OKE-7/8-10	2.5	124	63	28	12	21	26	0.8
Z100854	OKE-10-10	4.0	151	76	34	15	26	30	1.4
Z100855	OKE-13-10	6.7	184	90	44	19	33	39	2.8
Z100898	OKE-16-10	10.0	218	102	56	23	40	46	4.9
Z101340	OKE-20-10	16.0	247	114	60	27	46	60	7.2
Z101341	OKE-22-10	20.0	275	120	64	31	60	70	11.3
Z101342	OKE-26-10	27.0	300	113	70	35	64	77	16

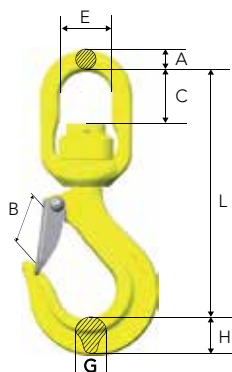
For larger sizes, see Classic Grade 8

Swivel Latch Hook LKN



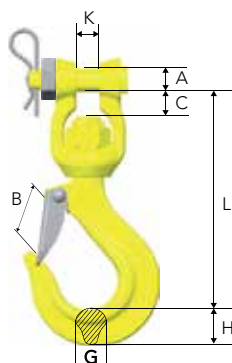
Art. no.	Code	WLL tonnes*	For chain dim. mm	L	B	C	E	A	G	H	Weight appr. kgs
Z101345	LKN-7/8-10	2.5	7, 8	155	28	28	38	12	18	24	0.8
Z101346	LKN-10-10	4.0	10	192	35	37	44	15	23	31	1.5
Z101347	LKN-13-10	6.7	13	238	40	47	48	19	28	38	3.1
Z101348	LKN-16-10	10.0	16	295	53	65	61	25	34	43	5.3

Swivel Latch Hook LKNK with ball bearing



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight appr. kgs
Z101349	LKNK-7/8-10	2.5	7, 8	154	28	28	38	12	18	24	0.9
Z101350	LKNK-10-10	4.0	10	191	35	35	44	15	23	31	1.6
Z101351	LKNK-13-10	6.7	13	236	40	45	48	19	28	38	3.3
Z101352	LKNK-16-10	10.0	16	293	53	62	61	25	34	43	5.6

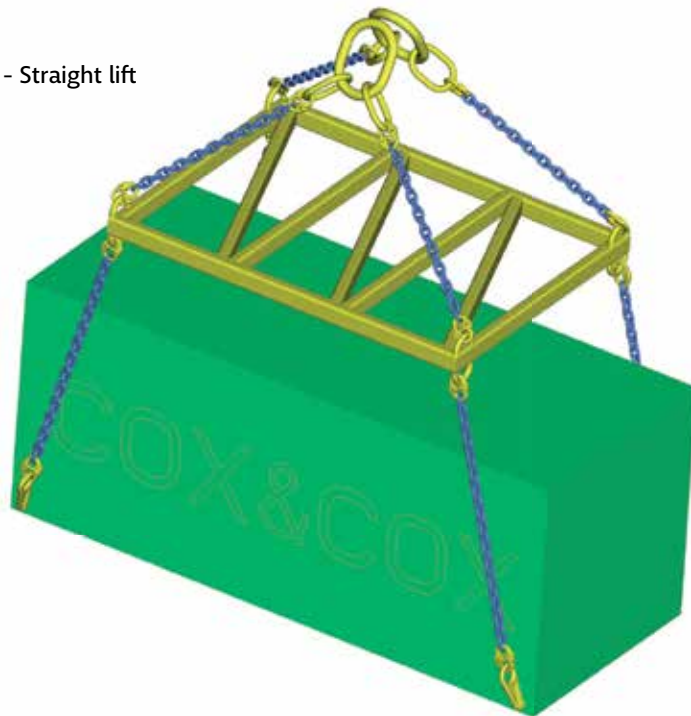
Clevis Swivel Hook LKNG



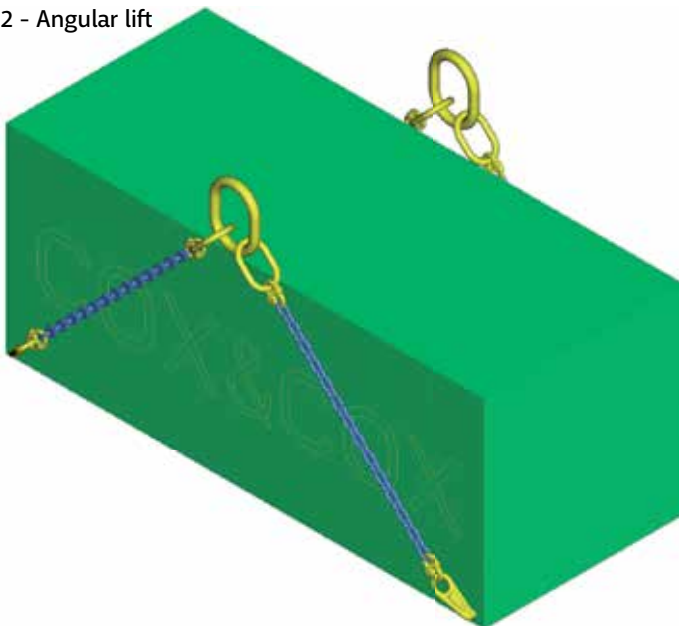
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	A	G	H	K	Weight appr. kgs
Z101353	LKNG-16-10	10.0	16	258	53	30	28	34	43	27	5.7

Container Hook CH Made for lifting containers in their lower fittings.

Alt. 1 - Straight lift



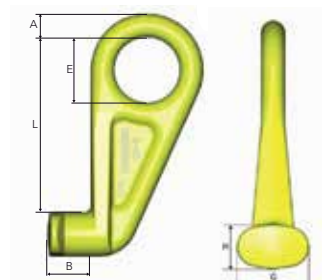
Alt. 2 - Angular lift



+



Art. no.	Code	WLL tonnes*	A	L	E	B	H	G	Weight kgs
Z101220	CH-3	12.5	25	187	70	46	47	75	3.8
Z101221	CH-3, 45° left	12.5	25	187	70	46	47	75	3.8
Z101219	CH-3, 45° right	12.5	25	187	70	46	47	75	3.8



*Safety factor 4:1

All dimensions in mm



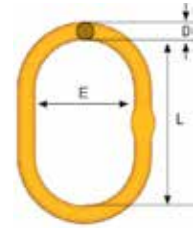


Grade 80
Components

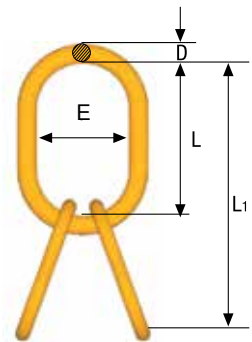
21

Master Link MF EN 1677-4

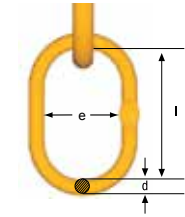
Art. no.	Code	WLL (SF 5:1) tonnes*		L	E	D	Weight kgs
		EN 1677-4	ASTM A-952				
Z100860	MF-86-10	2.5	3.2	125	70	14	0.4
Z100861	MF-108-10	4.0	5.2	140	80	17	0.8
Z100862	MF-1310-10	7.5	8.0	160	95	22	1.5
Z100863	MF-1613-10	10.0	13.6	190	110	28	2.5
Z100864	MF-2016-10	17.0	20.6	240	140	34	5.2
Z100865	MF-2220-10	25.0	30.9	250	150	40	7.3


Master Link with Sub Links MT EN 1677-4

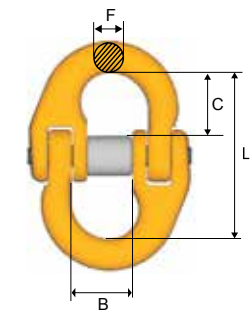
Art. no.	Code	WLL (SF 5:1) tonnes*		For chain 3-4-leg	L1	L	E	D	I	e	d	Weight kgs
		EN 1677-4	ASTM A-952									
Z100888	MT-6-10**	3.5	5.0	6	270	150	90	19	120	70	14	1.8
Z100889	MT-8-10**	5.2	8.0	7, 8	300	160	95	22	140	80	17	3
Z100890	MT-10-10**	11.5	16.0	10	360	200	120	30	160	95	22	6.4
Z100891	MT-13-10**	17.0	26.0	13	450	250	150	40	200	120	30	14.2
Z100892	MT-16-10**	28.0	35.0	16	500	300	200	50	200	120	32	23



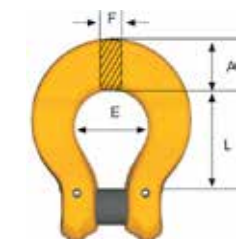
** With flattened section for use with BL


Coupling Link G EN 1677-1

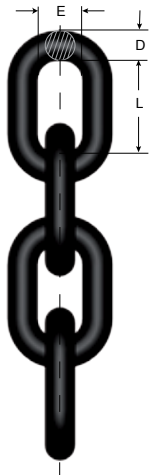
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	F	A	C	Weight. kgs
Z622882	G-6-8	1.12	6	45	15	7	8	17	0.1
Z279333	G-7/8-8	2.0	7, 8	56	18	9	11	22	0.2
Z279430	G-10-8	3.2	10	68	25	9	11	26	0.3
Z279537	G-13-8	5.4	13	89	29	12	13	33	0.7
Z279634	G-16-8	8.0	16	105	36	15	17	40	1.2
Z279731	G-18/20-8	12.5	19	125	43	19	20	47	1.9
Z279838	G-22-8	15.5	22	152	50	23	26	59	3.0
Z349171	G-26-8	21.6	26	161	58	26	28	61	5.2
Z349189	G-32-8	32.8	32	200	70	32	34	77	9.5


Berglok Chain Coupler BL EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	F	A	Weight kgs
Z622036	BL-6-8	1.12	6	27	20	9	14	0.1
Z195823	BL-7/8-8	2.0	7, 8	35	25	11	18	0.2
Z208022	BL-10-8	3.2	10	45	32	14	22	0.4
Z217820	BL-13-8	5.4	13	56	40	17	28	0.8
Z208226	BL-16-8	8.0	16	68	50	22	35	1.4



Chain Classic Grade 8 EN 818-2 Short link chain, KL



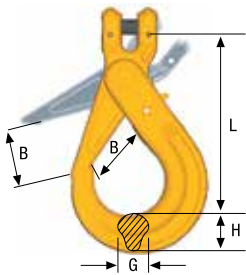
Heat treatment
Quenched and tempered.

Surface treatment
Painted black (KLB)
Painted yellow (KLU)

Marking
8E

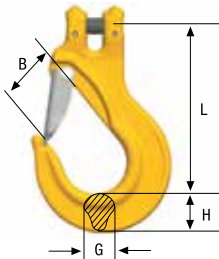
Art.no Box	Code	D nom.	L	E	Weight kgs/m	WLL tonnes *	Manufact. proof force kN	Breaking force kN
Z802174 - 1 x 200 m	KLB 6-8E	6	18	8.5	0.8	1.1	28.3	45.2
Z802175 - 1 x 200 m	KLB 7-8E	7	21	10	1.1	1.5	38.5	62
Z802176 - 1 x 200 m	KLB 8-8E	8	24	11	1.4	2.0	50.3	80.6
Z802156 - 1 x 100 m	KLB 10-8E	10	30	14	2.2	3.2	78.5	130
Z802157 - 1 x 100 m	KLB 13-8E	13	39	18	3.7	5.4	133	214
Z802177 - 1 x 100 m	KLB 16-8E	16	48	22	5.6	8.0	201	322
Z801203 - 1 x 100 m	KLB 19-8E	19	57	26	7.8	11.6	284	457
Z801228 - 1 x 50 m	KLB 22-8E	22	66	30	10.6	15.5	380	610
Z801231 - 1 x 50 m	KLB 26-8E	26	78	35	14.8	21.6	531	850
Z801232 - 1 x 25 m	KLB 32-8E	32	96	43	21.6	32.8	804	1300

Safety hook BKG EN 1677-3



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight appr. kgs
Z297222	BKG-7/8-8	2.0	7, 8	120	37	17	26	0.9
Z295929	BKG-10-8	3.2	10	143	45	21	30	1.5
Z291527	BKG-13-8	5.4	13	179	55	30	39	2.8
Z291624	BKG-16-8	8.0	16	217	62	37	48	5.1

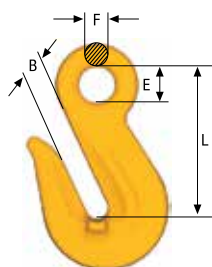
Sling hook EGKN with latch EN 1677-2



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight appr. kgs
Z100744	EGKN-7/8-8	2.0	7, 8	95	29	17	22	0.5
Z100772	EGKN-10-8	3.2	10	121	37	19	29	0.9
Z100773	EGKN-13-8	5.4	13	147	42	27	36	2.0
Z100774	EGKN-16-8	8.0	16	170	49	34	44	3.6

Grab hook OG EN 1677-1

Not for use with Berglok. No reduction of working load limit, thanks to supporting lugs on either side of hook to prevent chain link deformation.



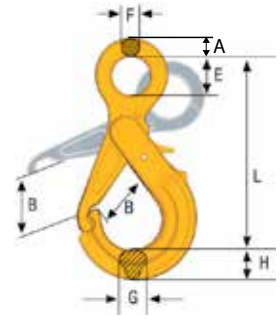
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	Weight appr. kgs
Z100811	OG-7/8-8	2.0	7, 8	65	10	16	10	0.3
Z291022	OG-10-8	3.2	10	85	12	20	12	0.6
Z295220	OG-13-8	5.4	13	104	15	25	16	1.2
Z296221	OG-16-8	8.0	16	130	19	30	19	2.4

*Safety factor 4:1

All dimensions in mm

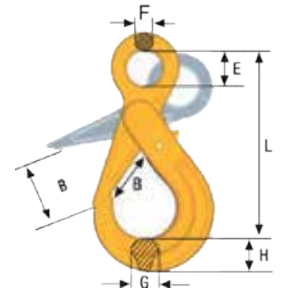
Safety Hook OBK with griplatch EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	A	L	B	E	F	G	H	Weight kgs
Z100218	OBK-22-8	15.5	22	30	335	87	70	24	40	57	10.2



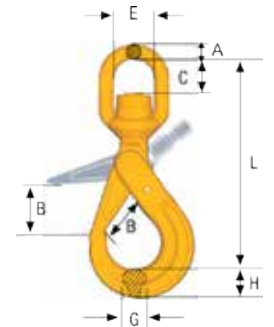
Safety Hook BK EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight kgs
Z101357	BK-32-8	32.8	32	400	120	90	30	62	86	23.8



Safety Hook BKLK EN 1677-3

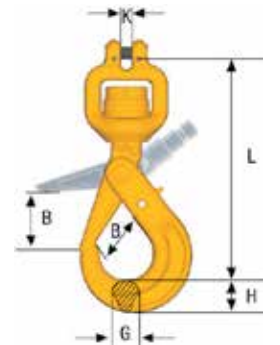
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight kgs
Z101344	BKLK-32-8 OS	32.8	32	533	120	110	102	45	62	86	32.3



Clevis Swivel Safety Hook BKH with ball bearing

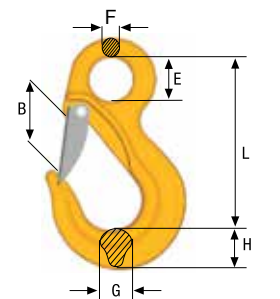
EN 1677-3

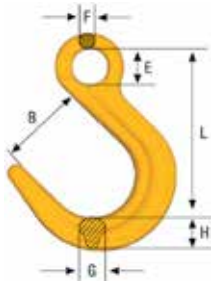
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	K	G	H	Weight kgs
Z336222	BKH-6-8	1.12	6	145	29	6.8	15	21	0.7
Z700809	BKH-7/8-8	2.0	7 - 8	181	37	8.8	17	26	1.2



Sling Hook EK (without latch) and EKN (with latch)

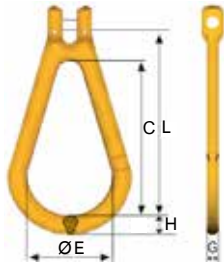
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight kgs	
EN 1677-2											
Z100720	EK-32-8	32.8	32	333	105	76	38	61	80	17.7	
Z100725	EKN-32-8	32.8	32	333	93	76	38	61	80	17.9	
DIN 7540 - Also available in ROV version											
Z101382	DK-50T-8	50		442	124	130	50.5	89	116		
Z101361	DKN-50T-8	50		442	124	130	50.5	89	116		
Z101384	DK-80T-8	80		610	155	102	63	110	145		
Z101363	DKN-80T-8	80		610	155	102	63	110	145		





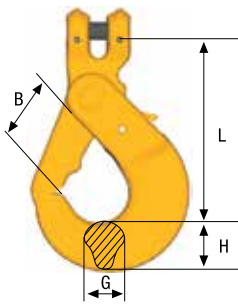
Foundry Hook OKE EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight appr. kgs
Z645564	OKE-32-8	32.8	32	384	145	90	42	77	94	30



Clevis Egglink CEL EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	C	E	G	H	L	Weight kgs
Z700968	CEL-7/8-8	2.0	7, 8	80	40	14	15	100	0.4
Z700969	CEL-10-8	3.2	10	100	50	18	19	126	0.7
Z700970	CEL-13-8	5.4	13	130	65	23	25	162	1.5



Container Hook BKGC EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight kgs
Z100240	BKGC-13-8	5.4	13	164	55	27	43	3.2
Z100242	BKGC-16-8	8.0	16	160	55	27	43	3.4

(Spare part: RDOBK-16 to both sizes)



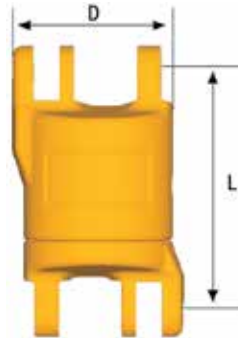
*Safety factor 4:1

All dimensions in mm

Roller-Bearing Swivel, SKLI/SKLU EN 1677-1

Electrically insulated, lubricated, sealed roller bearing swivel. Fully rotational even at maximum load. Tested to resist 1.000 V. Suitable for protection of overhead cranes during welding operations on suspended loads.

The Gunnebo Industries SKLI is equipped with a heavy duty roller bearing, enabling high durability and safe use also under severe load. It also has heavy duty nylon insulation inside to decrease friction when in use. The SKLI is compatible with the entire Gunnebo Industries SK-range for versatile use.



Art. no.	Code	WLL tonnes*	For chain dim.	L	D	Weight kgs
Z100316	SKLI-7/8-8	2	7, 8	75	48	0.7
Z100414	SKLI-10-8	3.2	10	97	59	1.3
Z100415	SKLI-13-8	5.4	13	120	75	2.8
Z100416	SKLI-16-8	8	16	137	90	4.6
Z100417	SKLI-18/20-8	12.5	19	159	104	7.3
RS16520	SKLU-22-8*	15.5	22	160	109	9.2
RS16530	SKLU-26-8*	21.6	26	207	135	18.3

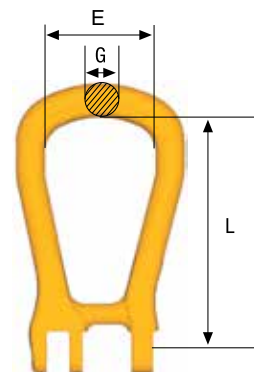
* Uninsulated

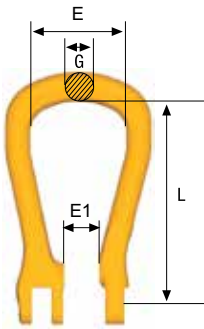


Art. no.	Code	Weight kgs
Z700674	SKA-6-8	0.01
Z323624	SKA-7/8-8	0.02
Z318024	SKA-10-8	0.04
Z303822	SKA-13-8	0.08
Z303725	SKA-16-8	0.14
Z145048	SKA-18/20-8	0.26
Z133530	SKA-22-8	0.35
Z605407	SKA-26-8	0.63

Master Link SKG (closed) EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	Weight kgs
Z419684	SKG-7/8-8	2	7, 8	99	50	14	0.3
Z419781	SKG-10-8	3.2	10	127	66	18	0.6
Z419888	SKG-13-8	5.4	13	145	72	22	1.1
Z419985	SKG-16-8	8	16	175	82	25	1.5
Z420086	SKG-18/20-8	12.5	19	204	105	30	3.0



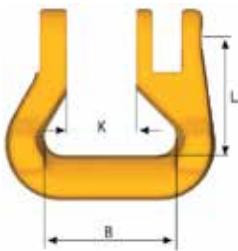


Master Link SKO (open) EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	E1	Weight kgs
Z418683	SKO-7/8-8	2	7, 8	99	50	14	15	0.3
Z418780	SKO-10-8	3.2	10	127	66	18	20	0.6
Z419383	SKO-13-8	5.4	13	145	72	22	25	1
Z419480	SKO-16-8	8	16	175	82	25	30	1.5
Z419587	SKO-18/20-8	12.5	19	204	105	30	36	2.9

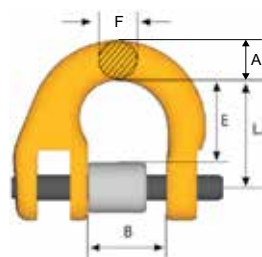
Roundsling Coupling SKR EN 1677-1

Special shape for full WLL of the roundsling



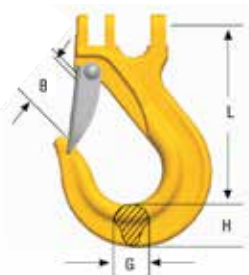
Art. no.	Code	WLL tonnes*	L	B	K	Weight kgs
Z127840	SKR-7/8-8	2	35	40	18	0.2
Z143143	SKR-10-8	3.2	42	47	24	0.4
Z302538	SKR-13-8	5.4	50	53	29	0.7
Z143240	SKR-16-8	8	62	67	35	1.3
Z143347	SKR-18/20-8	12.5	71	80	43	1.9
Z100057	SKR-22-8	15.5	111	125	50	5.3
Z100055	SKR-26-8	21.6	129	150	58	8.9

Half-link SKT (incl. locking set) EN 1677-1



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	F	A	E	Weight kgs
Z426286	SKT-7/8-8	2	7, 8	28	18	9	11	22	0.1
Z426383	SKT-10-8	3.2	10	34	25	11	13	26	0.2
Z426480	SKT-13-8	5.4	13	44	30	15	16	33	0.4
Z426587	SKT-16-8	8	16	52	36	19	20	40	0.6
Z426684	SKT-18/20-8	12.5	19	63	43	22	23	48	1.1
Z100225	SKT-22-8	15.5	22	76	50	24	26	60	1.7
Z100226	SKT-26-8	21.6	26	80	58	30	33	61	2.6
Z100227	SKT-32-8	32.8	32	100	70	38	40	78	4.9

Sling Hook ESKN/SKN with latch EN 1677-2



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight kgs
Z424682	SKN-7/8-8	2.0	7, 8	90	27	18	21	0.4
Z424789	SKN-10-8	3.2	10	115	34	23	29	0.8
Z101214	ESKN-13-8	5.4	13	145	42	28	36	1.8
Z100786	ESKN-16-8	8.0	16	178	54	38	43	3.4
Z100781	ESKN-18/20-8	12.5	19	197	59	49	51	5.1

How do you transform your excavator into a crane?

Universal Weld-On Hook, UKN

For excavators, construction machinery, lifting beams etc. Specified by leading excavator manufacturers.

Welding Instructions for UKN

WARNING! WELDING OPERATION SHOULD BE CARRIED OUT BY A TRAINED WELDER.

ELECTRODES

Electrodes or wire must be for use with non-alloy or low-alloy steel. Electrodes must not be wet. Do not use rusty welding wire.

Following types are recommended:

ISO 2560, DIN EN 499, BS EN 499, AWS A 5.1 E 7018 or equal.

B. POSITIONING

These are universal hooks and can be welded on to different supporting materials (e.g. girder). If the hook is welded on to a bucket it should be placed so that:

1. it will withstand all strains caused by different positions of the bucket.
2. any damage to the coupling element which might be caused by the other parts of the excavator is avoided.
3. the user will not be injured (pinched or cut).
4. any unintentional unhooking of the coupling element will be made impossible.
5. the coupling element can be easily hooked and unhooked.
6. it doesn't hamper excavation and lifting.

The hook should be placed in the middle of the upper part of the bucket. The position should be protected, but also easy to reach. Figure shows two different positions.

Before use a competent person shall certify that the hook may be taken into use. Always take into consideration the tensile strength and thickness of the supporting material. Proof load testing may be required

C. WELDING

Before welding, the surfaces must be cleaned thoroughly from rust, paint or similar.

NOTE! At temperatures below 0°C the welding surfaces should be preheated.

Positioning of the hook should be done by spot welding in each corner. Next, the bottom joint is to be welded and must be carried out continuously (well filled all around). Welding torch or electrode should be held at 45° (see figure), to obtain required penetration. When the top joint is to be welded, a larger electrode maybe chosen. Minimum value of throat thickness, A, (see table) must be achieved. Cracks or pores are not permitted.

NOTE! The welded joint must NOT be cooled by water. Only non-forced air cooling, is allowed. The pin (axle) should be lubricated until the hook has reached ambient temperature

In service temperature: -40 °C to +200 °C without reduction of the WLL

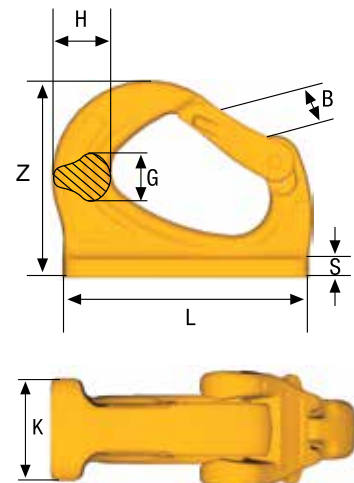
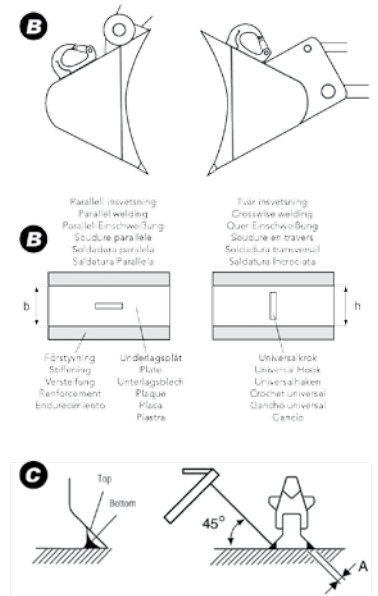
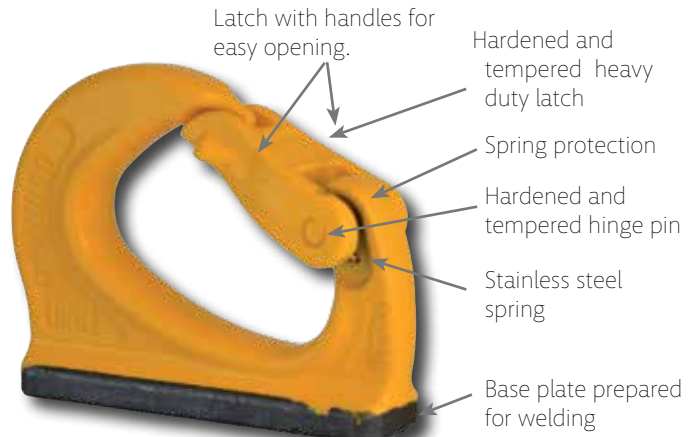
Can also be provided unpainted

Art. no.	Code	WLL tonnes**	B	G	H	K	L	S	Z	Weight kgs
Z1002560	UKN-0,75*	0.75	20	13	20	19	81.5	5	56	0.2
Z6511810	UKN-1*	1	27	17	25	25	95	6	72	0.6
Z7009060	UKN-2*	2	33	20	30	30	114	8	86	0.9
Z6455730	UKN-3	3	30	23	32	35	132	10	105	1.3
Z6521160	UKN-4	4	30	29	38	42	140	11	114	2.0
Z6455800	UKN-5	5	34	30	47	45	165	12	131	3.2
Z6515390	UKN-8	8	34	40	51	50	172	13	133	3.6
Z6456030	UKN-10	10	47	43	58	55	220	14	170	8.2
Z1007850	UKN-15	15	55	50	67	60	240	15	188	9.8

* Welding plate slightly curved

** Safety factor 5:1

If welding on to an excavator or its accessories we recommend that when necessary the working load limit is reduced, to meet legislative requirements. Please contact your distributor for further information.



Spare Part RDBK (with assembly kit)



Set for BK/BKG Safety hooks consists of trigger, stainless steel spring, retaining pin and assembly kit.

Recessed trigger

Art. no.	Code	Weight kgs
Z100282	RDBK-6	0.02
Z100283	RDBK-8	0.03
Z100284	RDBK-10	0.03
Z100285	RDBK-13	0.05
Z100286	RDBK-16	0.10
Z100297	RDBK-18/20	0.21
Z100287	RDBK-22	0.20
Z100280	RDBK-26	0.50
Z100294	RDBK-32-8	0.40

Standard trigger

Art. no.	Code	Weight kgs
Z1002820	RDBK-6	0.01
Z1002830	RDBK-8	0.03
Z1002840	RDBK-10	0.03
Z1002850	RDBK-13	0.05
Z1002860	RDBK-16	0.12
Z100292	RDBK-28/32	0.45

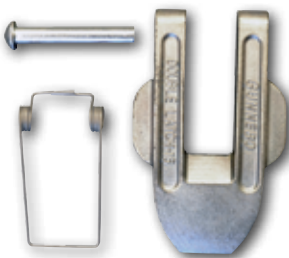
Spare Part RDOBK / GBK (with assembly kit)



Set for OBK/GBK Safety hooks consists of trigger, stainless steel spring, retaining pin and assembly kit.

Art. no.	Code	Weight kgs
Z100281	RDOBK-6	0.01
Z100288	RDOBK-7/8	0.02
Z100289	RDOBK-10	0.03
Z100290	RDOBK-13	0.05
Z100291	RDOBK-16	0.08
Z100297	RDOBK-18/20	0.21
Z100323	RDOBK-22-8	0.35

Spare Part RDBKD (with assembly kit)



Art. no.	Code	Weight kgs
Z101157	RDBKD-13 double latch	
Z101158	RDBKD-16 double latch	
Z101159	RDBKD-18/20 double latch	

Spare Part GKN / OKN



Art. no.	Code	Weight kgs
Z622175	GKN/OKN-7/8-8	0.05
Z622183	GKN/OKN-10-8	0.09
Z622206	GKN/OKN-13-8	0.13
Z622214	GKN-16-8	0.22

Set consists of latch, stainless steel spring and rivet.

Spare Part LKN / LKNK / EKN / OKN / EGKN / RH / ESKN

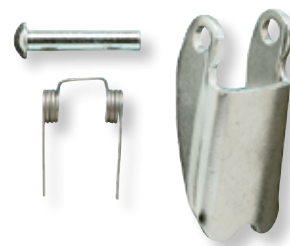
Art.no.	Code	Weight kgs
Z100445	RDEKN- 6 / OKN / RH 1	0.03
Z100447	RDEKN- 7/8 /LKN / RH 2	0.05
Z100450	RDEKN-10 / LKN / RH 3	0.06
Z100449	RDEKN-13 / LKN / RH 5	0.13
Z100217	RDEKN-16 / LKN	0.20
Z100453	RDEKN-18/20	0.26
Z100452	RDEKN-22	0.42
Z100742	RDEKN-26	0.53
Z100743	RDEKN-32	0.60



Set consists of latch, stainless steel spring and rivet.

Spare Part Set SKN, OKN and LKN (old version)

Art. no.	Code	Weight kgs
Z420581	SKN/LKN-7/8-8	0.05
Z420688	SKN/LKN-10-8	0.10
Z420785	SKN/LKN-13-8	0.14
Z420989	SKN/OKN-16-8	0.22
Z421087	SKN/OKN-18/20-8	0.27
Z700698	OKN-22-8	0.48



Set consists of latch, stainless steel spring and rivet.

Spare Part UKN

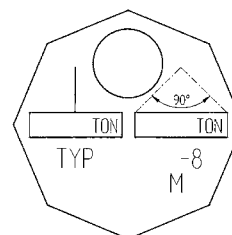
Art. no.	Code	Weight kgs
Z100258	RDUKN-0.75	0.06
Z700264	RDUKN-1	0.12
Z700958	RDUKN-2	0.20
Z700266	RDUKN-3/4	0.20
Z700268	RDUKN-5/8	0.36
Z700269	RDUKN-10	0.88
Z700984	RDUKN-15	1.20



Spare part set RDUKN (msp) consists of forged latch, pin, stainless steel spring and retaining pin.

Id-tag Stainless

Art.no.	Code
Z100004	Id-tag

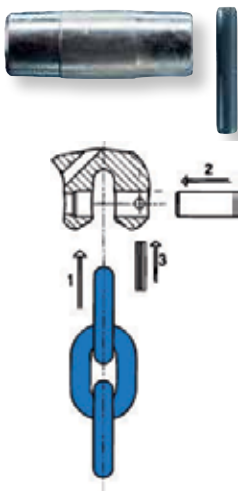


Sling Id-tag Stainless steel



Art. no.	Code
B14841	Flexitag 6 mm with ferrule and wire
B14842	Flexitag 8 mm with ferrule and wire
B14843	Flexitag 10 mm with ferrule and wire
B14844	Flexitag 13 mm with ferrule and wire
B14845	Flexitag 16 mm with ferrule and wire
Z100971	Flexitag 6 mm
Z100972	Flexitag 8 mm
Z100973	Flexitag 10 mm
Z100974	Flexitag 13 mm
Z100975	Flexitag 16 mm
Z101077	Flexitag 20 mm
Z100899	Flexitag Neutral

Load Pin Set CLS



Art. no.	Code	Weight kgs/ea
B14930	CLS- 6	0.01
B14931	CLS- 8	0.02
B14932	CLS-10	0.04
B14933	CLS-13	0.09
B14934	CLS-16	0.16
B14935	CLS-20	0.26

Clevis connection set (CLS) consists of one load pin and one spring retaining pin.

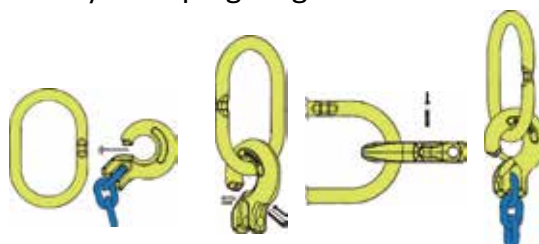
Spare Part CS



Art. no.	Code	Weight kgs/ea
B14920	CS- 6-10	0.01
B14921	CS- 8-10 / RH-1&-2	0.01
B14922	CS-10-10 / RH-3	0.01
B14923	CS-13-10	0.03
B14924	CS-16-10 / RH-5	0.05

The C-connection set CS, for CG, CGD, CL, CLD and RH hook, consists of one blocking pin and one spring retaining pin, for locking.

Assembly: C-coupling - C-grab/C-lok with MF



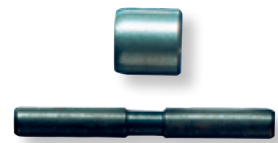
Close/Open Locking Set FlexiLeg Quick Pin

Art. no.	Code	Weight kgs
Z101010	QP-6-10	0.01
Z101011	QP-8-10	0.01
Z101012	QP-10-10	0.01
Z101013	QP-13-10	0.03
Z101014	QP-16-10	0.06



Spare Part Set SKA

Art. no.	Code	Weight kgs	Art. no.	Code	Weight kgs
Z100989	SKA- 6-10	0.01	Z700674	SKA-6-8	0.01
Z100933	SKA- 7/8-10	0.02	Z323624	SKA-7/8-8	0.02
Z100934	SKA-10-10	0.04	Z318024	SKA-10-8	0.04
Z100990	SKA-13-10	0.08	Z303822	SKA-13-8	0.08
Z100991	SKA-16-10	0.14	Z303725	SKA-16-8	0.14
Z101176	SKA-20-10	0.26	Z145048	SKA-18/20-8	0.26
Z650555	SKA-22-10	0.35	Z133530	SKA-22-8	0.35
Z650556	SKA-26-10	0.63	Z605407	SKA-26-8	0.63
			Z650554	SKA-32-8	1.05



SKA locking set for G-link, consists of a load pin and locking collar.

Spare Part Set Berglok BLA

Art. no.	Code	Weight kgs
Z275649	BLA-6-8	0.01
Z275347	BLA-7/8-8	0.02
Z275444	BLA-10-8	0.04
Z275648	BLA-13-8	0.08
Z276047	BLA-16-8	0.15
Z276241	BLA-19-8	0.26

Set for Berglok and Clevis type connections. Consists of one load pin and two retaining pins.



Locking Set Midgrab MIG

Art. no.	Code	Weight kgs
B14904	C-8	0.02
B14905	L-8	0.02
B14914	C-10	0.02
B14915	L-10	0.02
B14916	C-13	0.08
B14917	L-13	0.05



L - Permanent locking function



C - Close/open function

Working Load Limits

Grade 10 GrabiQ (tonnes)

1-leg		2-leg		3- & 4-leg		Choke hitch	
Chain dim.		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°
6	1.5	2.1	1.5	3.15	2.2	1.6	1.2
7	2.0	2.8	2.0	4.2	3.0	2.2	1.6
8	2.5	3.5	2.5	5.2	3.7	2.7	2
10	4.0	5.6	4	8.4	6	4.4	3.2
13	6.7	9.5	6.7	14.0	10	7.4	5.3
16	10	14	10	21.0	15	11	8
20	16	22.4	16	33.6	24	17.6	12.8
22	20.0	28.0	20.0	42.0	30.0	22.0	16.0
26	27.0	38.2	27.0	57.3	40.5	29.7	21.6

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Grade 8 Classic (tonnes)

EN 818-4:1996

1-leg		2-leg		3-leg & 4-leg		Choked endless sling
Chain dim. mm		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	1.1	1.6	1.1	2.36	1.7	1.8
7	1.50	2.12	1.5	3.15	2.24	2.5
8	2.0	2.8	2.0	4.25	3.0	3.15
10	3.15	4.25	3.15	6.7	4.75	5.0
13	5.3	7.5	5.3	11.2	8.0	8.5
16	8.0	11.2	8.0	17.0	11.8	12.5
19	11.2	16.0	11.2	23.6	17.0	18.0
22	15.0	21.2	15.0	31.5	22.4	23.6
26	21.2	30.0	21.2	45.0	31.5	33.5
32	31.5	45.0	31.5	67.0	47.5	50.0

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Rules for Correct WLL

Where choke hitch is employed, the WLL of the chain sling should be reduced by 20 % (unless the LK choker hook is used).

Asymmetrical Loading Conditions

For unequally loaded chain slings, the following approach to permissible loads is recommended:

- A two-legged system is treated as a single-legged system.
- A three- or four-legged system is treated as a two-legged system.

Note! Different standards apply for Australia,

GrabiQTM

The Flexible and Cost Efficient Chain Sling System.

GrabiQ stands for:

- "Grab" - Built in shortening function allows the user to instantly adjust the chain sling.
- IQ - Intelligent design gives more efficient lifts which making the user more successful.
- IO - Grade 10 material gives 25% added strength as well as lighter slings.
- i - Innovation has been and still is one of our driving forces. Many of our products are unique on the market and are protected by patents.
- Q - Quality. No product leaves our factories without being proof loaded and visually inspected, so that we can guarantee top quality to all customers



GrabiQ offers:

Cost Efficiency

GrabiQ has been designed to integrate multiple functions in each component. This means fewer components in each sling, but with the same and even better function than the old system. A good example of this is our FlexiLeg system, where one master link combined with one 1-leg sling and two 2-leg sling units, completely replaces four master links and ten legs of chain sling. Read more about FlexiLeg on page 2:6.

Flexibility in Field

We understand how fast the conditions for a lift can change and we also recognize that time is money in lifting operations - big and small. With the GrabiQ system we have included functions that would otherwise demand additional products or a complete change of chain sling. The user gets a quicker and more ergonomic lifting operation each time when using the GrabiQ system.

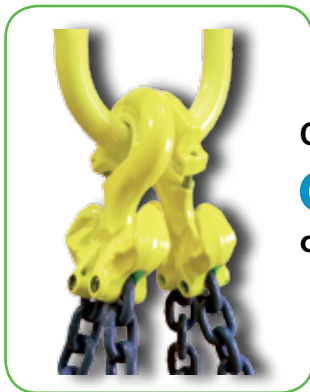
Reduce the Cost - Increase the Efficiency

The GrabIQ system makes your lift quicker, safer and easier.

The all-inclusive chain sling system for coupling, shortening and lifting in grade 10 is designed to improve your lifting actions and make it as quick and easy as possible. Some of the top features are:

- Less components - cost efficient
- Built in shortening function
- Light weight for better ergonomics

4-leg sling with shortening function

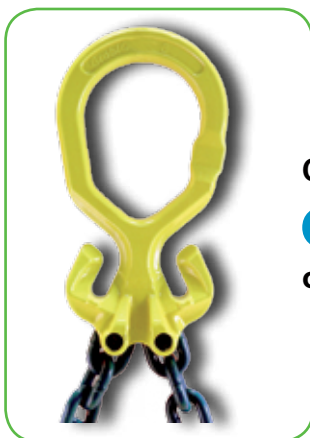


Only **3**
GrabIQ™
components

Used to be **15**
components



2-leg sling with shortening function



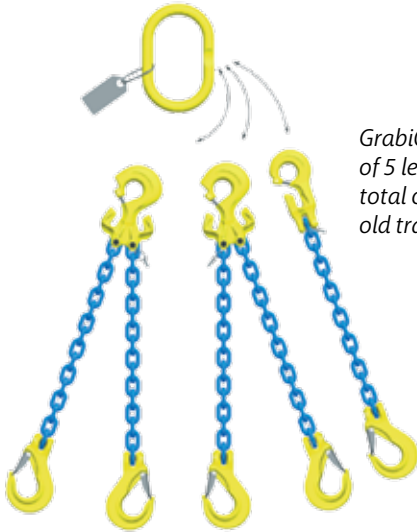
Only **1**
GrabIQ™
component

Used to be **7**
components



Less is More with FlexiLeg™

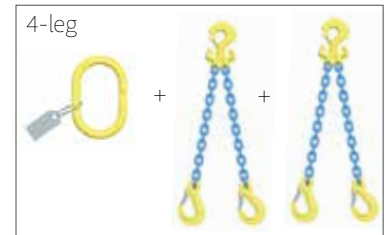
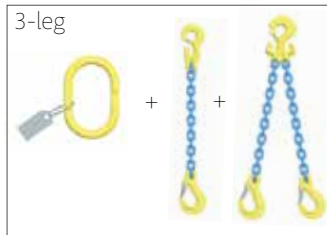
FlexiLeg is a solution that allows you to have an instant leg change. One single master link and a combination of five legs replace four complete slings, a total of ten legs, with the traditional system. By using the unique features of the GrabiQ range, Gunnebo Industries has increased the flexibility even further.



GrabiQ FlexiLeg – a total of 5 legs replaces the total of 10 legs with the old traditional system.



Old system - 10 legs in 4 separate chain slings.



Why do you want instant leg-change?

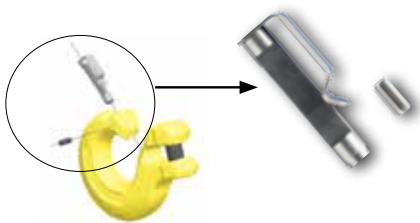
- It will enable the user to change slings, leg by leg, which will make it lighter and easier to work with.
- Sling legs that are not being used can easily be removed, thereby increasing safety at the work site.
- The quantity of sling material is greatly reduced, providing cost savings.
- The chain sling can be rebuilt on site, thus increasing efficiency.

Art. no.	Code	WLL in tonnes*		
		1-leg	2-leg	3- & 4-leg
Z101050	FlexiLeg GBK 6 mm L= 2 m	1.5	2.1	3.15
Z101051	FlexiLeg EGKN 6 mm L= 2 m	1.5	2.1	3.15
Z101052	FlexiLeg GBK 8 mm L= 2 m	2.5	3.5	5.2
Z101053	FlexiLeg EGKN 8 mm L= 2 m	2.5	3.5	5.2
Z101054	FlexiLeg GBK 10 mm L= 2 m	4.0	5.6	8.4

Art. no.	Code	WLL in tonnes*		
		1-leg	2-leg	3- & 4-leg
Z101055	FlexiLeg EGKN 10 mm L= 2 m	4.0	5.6	8.4
Z101056	FlexiLeg GBK 13 mm L= 2 m	6.7	9.5	14
Z101057	FlexiLeg EGKN 13 mm L= 2 m	6.7	9.5	14
Z101058	FlexiLeg GBK 16 mm L= 2 m	10	14	21
Z101059	FlexiLeg EGKN 16 mm L= 2 m	10	14	21

Safety factor 4:1
* For different lifting angles - see WLL table page 2:8.

Related products



QuickPin - For safe exchange of sling legs

- Fits all C-components! (CL, CLD, CG, CGD)
- Has instant close/open function, no tools needed!
- Easy to retro-fit!
- Made of stainless steel for long product life span.



FlexiTag - For every GrabiQ sling

- Specially designed for FlexiLeg
- Fits all other GrabiQ slings
- WLL and chain size pre-stamped for 1 - 4 legs
- Leg angle 45/60 degree shown in contour
- Made of stainless steel for use in all weather conditions.

Chain Sling Solutions

1-leg Chain Slings



Type: Master link MG, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*	Total Component length mm
6	1.5	171
8	2.5	296
10	4.0	361
13	6.7	453
16	10.0	527



Type: Master link MG, Chain KLA, Hook with latch EGKN

Dim. mm	WLL t*	Total Component length mm
6	1.5	231
8	2.5	261
10	4.0	331
13	6.7	408
16	10	481



Type: Master link MF, C-grab CG, Chain KLA, Safety Hook BKG

Dim. mm	WLL t*	Total Component length mm
6	1.5	200
8	2.5	346
10	4.0	424
13	6.7	504
16	10.0	621

2-leg Chain Sling



Type: Master link MF, C-grab CG, Chain KLA, Hook with latch EGKN

Dim. mm	WLL t*	Total Component length mm
6	1.5	286
8	2.5	342
10	4.0	415
13	6.7	507
16	10.0	624



Type: Master link MGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL tonnes*		Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	235
8	3.5	2.5	296
10	5.6	4.0	361
13	9.5	6.7	453
16	14.0	10.0	527



Type: Master link MGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL tonnes*		Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	230
8	3.5	2.5	261
10	5.6	4.0	331
13	9.5	6.7	408
16	14.0	10.0	481



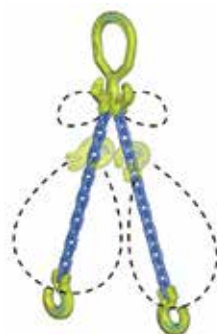
Type: Master link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Components total length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	291
8	3.5	2.5	366
10	5.6	4.0	444
13	9.5	6.7	534
16	14.0	10.0	671



Type: Master link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	286
8	3.5	2.5	342
10	5.6	4.0	415
13	9.5	6.7	507
16	14.0	10.0	625



Type: Master link MGD, Chain KLA, C-lok CL

Dim. mm	WLL t*		WLL choked t*		Component total length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	1.6	1.2	187
8	3.5	2.5	2.7	2.0	230
10	5.6	4	4.4	3.2	285
13	9.5	6.7	7.4	5.4	359
16	14.0	10.0	11.0	8.0	429

*Safety factor 4:1

3-leg Chain Sling



Type: Master link MF, C-grab CG, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Total component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	311
8	5.2	3.7	392
10	8.4	6.0	474
13	14.0	10.0	604
16	21.0	15.0	680



Type: Master link MF, C-grab CG, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	306
8	5.2	3.7	357
10	8.4	6.0	444
13	14.0	10.0	559
16	21.0	15.0	634

4-leg Chain Sling



Type: Master link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	311
8	5.2	3.7	392
10	8.4	6.0	474
13	14.0	10.0	604
16	21.0	15.0	680



Type: Master link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	306
8	5.2	3.7	357
10	8.4	6.0	444
13	14.0	10.0	559
16	21.0	15.0	634

WLL in tonnes, Grade 10 GrabiQ

1-leg		2-leg		3- & 4-leg		Choke hitch	
Chain dim.		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°
6	1.5	2.1	1.5	3.15	2.24	1.6	1.2
7	2.0	1.8	2.0	4.2	3.0	2.2	1.6
8	2.5	3.5	2.5	5.2	3.7	2.7	2.0
10	4.0	5.6	4.0	8.4	6.0	4.4	3.2
13	6.7	9.5	6.7	14.0	10.0	7.4	5.3
16	10.0	14.0	10.0	21.0	15.0	11.0	8.0
20	16.0	22.4	16.0	33.6	24.0	17.6	12.8
22	20.0	28.0	20.0	42.0	30.0	22.0	16.0
26	27.0	38.2	27.0	57.3	40.5	29.7	21.6

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Midgrab Chain Shortener, MIG

Product Features

- Instant mounting and positioning on any part of the chain.
- Shortening in either chain direction; up-down.
- Designed to prevent inadvertent chain disengagement.
- Can be set idle on the chain leg when shortening is not required.
- LC version offers secure mounting with locking set on any desired part of the chain with one chain direction open for shortening.
- CC version offers close-open function in both chain directions for safe retention of the chain.



Locking Devices for Midgrab MIG Note! The MIG should be used with at least one locking device.

L - fixed locking set

For fixed mounting

Code:

- L-8: B14905
- L-10: B14915
- L-13: B14917



C - close/open locking set

Spring operated locking device. Can be placed either in open or closed position.

Code:

- C-8: B14904
- C-10: B14914
- C-13: B14916



Product Code Guide - Locking options

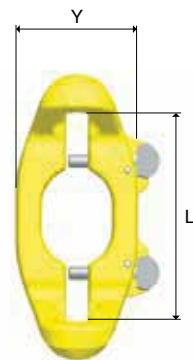


MIG C

MIG CC

MIG L

MIG LC



MIG with C pins

Art No.	Code	WLL tonnes*	L	X	Y	Weight kgs
B14303	MIG CC-8-10	2.5	95	50	60	0.6
B14313	MIG CC-10-10	4.0	125	70	77	1.1
B14323	MIG CC-13-10	6.7	150	90	80	2.6

MIG without C pins

Art No.	Code	WLL tonnes*	L	X	Y	Weight kgs
B14300	MIG-8-10	2.5	95	50	60	0.7
B14310	MIG-10-10	4.0	125	70	77	1.0
B14320	MIG-13-10	6.7	150	90	80	2.5



*Safety factor 4:1

All dimensions in mm





Chain

41

Short Link KLA, GrabiQ Grade 10 (200)

Heat treatment

Quenched and tempered.
Note! For chain grade 10 (200) the maximum in-service temperature is 200 °C.

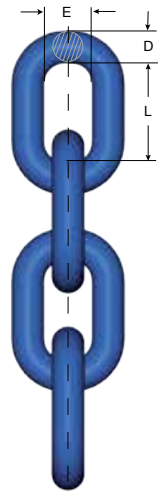
Surface treatment

Painted blue

Marking

10G

Art. no. Box	Code	WLL tonnes	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN	Breaking force kN
Z802300 - 1 x 200 m	KLA 6-10 (200)	1.5	6	18	8	0.8	35.4	60
Z802337 - 1 x 200 m	KLA 7-10 (200)	2	7	21	10	1.1	48	77
Z802301 - 1 x 200 m	KLA 8-10 (200)	2.5	8	24	11	1.4	63	100
Z802302 - 1 x 100 m	KLA 10-10 (200)	4	10	30	14	2.3	98	160
Z802303 - 1 x 100 m	KLA 13-10 (200)	6.7	13	39	18	3.8	166	260
Z802304 - 1 x 100 m	KLA 16-10 (200)	10	16	48	22	5.6	251	402
Z802305 - 1 x 50 m	KLA 20-10 (200)	16	20	60	29	9.4	393	630
Z802246 - 1 x 50 m	KLA 22-10 (200)	20	22	66	31	11.8	490	806
Z802248 - 1 x 50 m	KLA 26-10 (200)	27	26	78	37	14.6	664	1062



Short Link KLA, GrabiQ Grade 10 (400)

Heat treatment

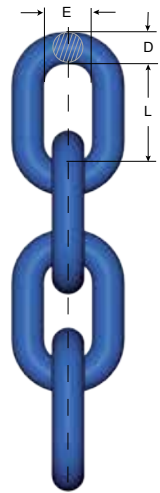
Quenched and tempered.
Note! For chain grade 10 (400) the maximum in-service temperature is 400 °C.

Surface treatment

Painted blue

Note: This chain is marked with "8+" in addition to the marking required by the machine directive.

Art. no. Box	Code	WLL tonnes	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN	Breaking force kN
Z802306 - 1 x 200 m	KLA 6-10 (400)	1.5	6.6	18	8.9	1.0	37	60
Z802307 - 1 x 200 m	KLA 8-10 (400)	2.5	8.8	24	11.2	1.7	62.5	100
Z802308 - 1 x 100 m	KLA 10-10 (400)	4	11.0	30	14.4	2.6	100	160
Z802309 - 1 x 100 m	KLA 13-10 (400)	6.7	14.3	39	19.2	4.5	162	260
Z802310 - 1 x 100 m	KLA 16-10 (400)	10	17.3	48	23.0	6.7	250	402



Short link KLB, Classic Grade 8

EN 818-2

Heat treatment

Quenched and tempered

Surface treatment

Painted black
Painted yellow

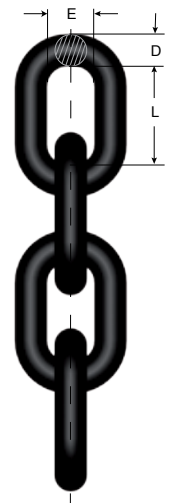
Marking

8G

Charge no.

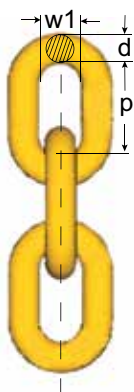
SWE

Art. no. Box	Code	WLL tonnes*	D nom.	L	E	Weight kgs/m	Manufacturing proof force kN	Breaking force kN
Z802174 - 1 x 200 m	KLB 6-8E	1.1	6	18	8.5	0.8	28.3	45.2
Z802175 - 1 x 200 m	KLB 7-8E	1.5	7	21	10	1.1	38.5	61.6
Z802176 - 1 x 200 m	KLB 8-8E	2.0	8	24	11	1.4	50.3	80.4
Z802156 - 1 x 100 m	KLB 10-8E	3.2	10	30	14	2.2	78.5	126
Z802157 - 1 x 100 m	KLB 13-8E	5.4	13	39	18	3.7	133	212
Z802177 - 1 x 100 m	KLB 16-8E	8.0	16	48	22	5.6	201	322
Z801203 - 1 x 100 m	KLB 19-8E	11.6	19	57	26	7.8	284	454
Z801228 - 1 x 50 m	KLB 22-8E	15.5	22	66	30	10.6	380	608
Z801231 - 1 x 25 m	KLB 26-8E	21.6	26	78	35	14.8	531	849
Z801232 - 1 x 25 m	KLB 32-8E	32.0	32	96	43	21.6	804	1290



*Safety factor 4:1

Short Link Chain KLFU, Grade 8



Heat treatment

Quenched and tempered,
Stress relieved

Surface treatment

Painted yellow

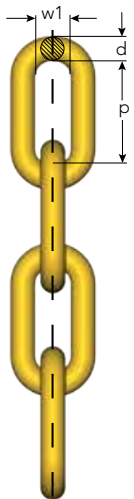
Marking

GF

Not for lifting purposes.

Art. no.	Code	Link dimensions			Weight kgs/m	Min. breaking load (tonnes)	Delivery length
		d nom.	P »	w1 »			
Z802330	KLFU-10-8	10	30	14.6	2.2	12.6	1 x 100 m
Z802331	KLFU-13-8	13	39	18.4	3.7	21.4	1 x 100 m
Z801146	KLFU-16-8	16	48	22.6	5.8	32.2	1 x 100 m
Z327377	KLFU-19-8	19	57	26	8.0	45.4	1 x 100 m
Z327385	KLFU-22-8	22	66	30	11.0	61.0	1 x 50 m
Z801505	KLFU-26-8	26	78	35	14.8	86.0	1 x 50 m

Mid-link Chain MLFU, Grade 8



Heat treatment

Quenched and tempered,
Stress relieved

Surface treatment

Painted yellow

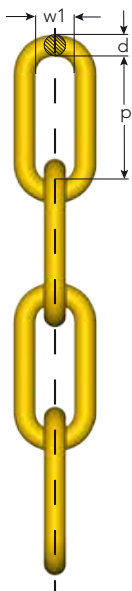
Marking

GF

Not for lifting purposes.

Art. no.	Code	Link dimensions			Weight kgs/m	Min. breaking load (tonnes)	Delivery length
		d nom. mm	P » mm	w1 » mm			
Z802332	MLFU-10-8	10	40	14	2.0	12.6	1 x 100 m
Z802333	MLFU-13-8	13	55	20	3.3	21.4	1 x 100 m
Z800564	MLFU-16-8	16	65	22	5.0	32.2	1 x 100 m
Z800476	MLFU-19-8	19	75	29	7.1	45.4	1 x 100 m
Z800661	MLFU-22-8	22	88	30	9.4	61.0	1 x 50 m
Z801770	MFLU-26-8	26	91	35	13.9	86.0	1 x 50 m

Long-link Chain LLU, Grade 8



Heat treatment

Quenched and tempered,
Stress relieved

Surface treatment

Painted yellow

Marking

GF

Not for lifting purposes.

Art. no.	Code	Link dimensions			Weight kgs/m	Min. breaking load (tonnes)	Delivery length
		d	p	w1			
Z801933	LLU-6-8	6	35	10	0.6	4.5	5 x 100 m
Z801934	LLU-9-8	9	53	15	1.4	10.2	4 x 100 m
Z801935	LLU-11-8	11	64	18	2.1	15.4	4 x 100 m
Z801936	LLU-13-8	13	80	22	2.9	21.4	3 x 100 m
Z802160	LLU-16-8	16	100	27	4.6	32.2	1 x 100 m
Z601983	LLU-19-8	19	100	28	6.5	45.4	1 x 100 m
Z700526	LLU-22-8	22	120	36	8.7	61.0	1 x 50 m

Short Link Chain - KLFZ, Grade 7

Heat treatment

Quenched and tempered

Surface treatment

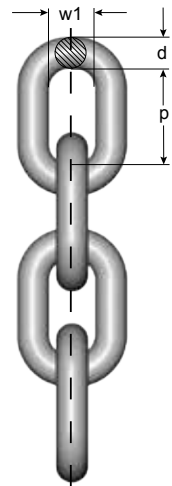
Hot Dip Galvanized (HDG)

Marking

GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	P »m	w1 »			
Z800666	KLFZ-10-7	10	30	14.6	11	2.2	1 x 100 m
Z802329	KLFZ-13-7	13	39	18.4	18	3.7	1 x 100 m
Z801644	KLFZ-16-7	16	48	22.6	28	5.8	1 x 100 m
Z801409	KLFZ-17-7	17	48	24	30	6.4	1 x 100 m
Z801407	KLFZ-19-7	19	57	26	40	8.0	1 x 100 m



Mid-link Chain MLFZ, Grade 7

Heat treatment

Quenched and tempered

Surface treatment

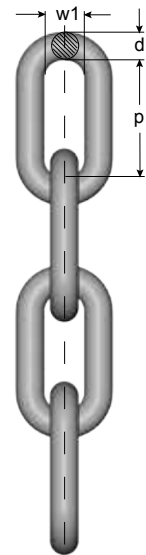
Hot Dip Galvanized (HDG)

Marking

GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	P »	w1 »			
Z801561	MLFZ-10-7	10	40	14	11	2.0	1 x 100 m
Z802335	MLFZ-13-7	13	55	20	18	3.3	1 x 100 m
Z801645	MLFZ-16-7	16	65	22	28	5.0	1 x 100 m
Z801477	MLFZ-19-7	19	75	29	40	7.1	1 x 100 m



Long Link Chain LLZ, Grade 6/7

Heat treatment

Quenched and tempered

Surface treatment

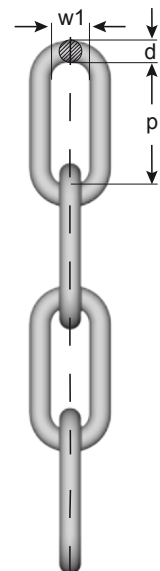
Hot Dip Galvanized (HDG)

Marking

GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	p »	w1 »			
Z487081	LLZ-6-7	6	35	10	3.9	0.6	1 x 100 m
Z801553	LLZ-9-7	9	53	15	9	1.4	1 x 100 m
Z360314	LLZ-11-7	11	64	18	13	2.1	4 x 100 m
Z800676	LLZ-13-6	13	80	22	16	2.9	3 x 100 m
Z801567	LLZ-16-6	16	100	27	24	4.6	1 x 100 m
Z801458	LLZ-19-6	19	100	28	34	6.5	1 x 100 m
Z801887	LLZ-22-6	22	120	36	46	8.7	1 x 50 m



Chain Manufacturing - Quality and Strength Requirements

Chains are divided into grades based on minimum nominal breaking load.

Chain Grade	Surface treatment	Code	Minimum breaking load N/mm ²	Load factors			Typical use
				WLL	MPF	Breaking force	
8	Yellow U Black B	KL	800	1	2.5	4	General lifting (KL), Container lashing (LL). Extra heavy towing (ML), Lashing (KL, LL). Fishing (KL, ML, LL)
		ML	800	1	2.5	5	
		LL	800	1	2.5	5	
10	Blue A	KL	1000	1	2.5	4	General lifting

Testing and Quality Control- GrabiQ & Classic Chain (Grade 10 & 8)

In each step of the manufacturing of the chain, our systematic quality monitoring will ensure the highest safety and the longest life span in the product. Here are some especially important aspects of quality:

Material

The incoming material is supplied with test certificates only from qualified manufacturers and according to our stated material specifications.

Manufacturing

During forming and welding, the operators continuously control that the links meet the specified dimensions both before and after welding.

Single link samples are continuously mandrel tested on the weld. Shape, dimensions and deburring are then inspected visually.

Sample lengths are heat treated and then destruction load tested. Following these tests, the chain is heat treated.

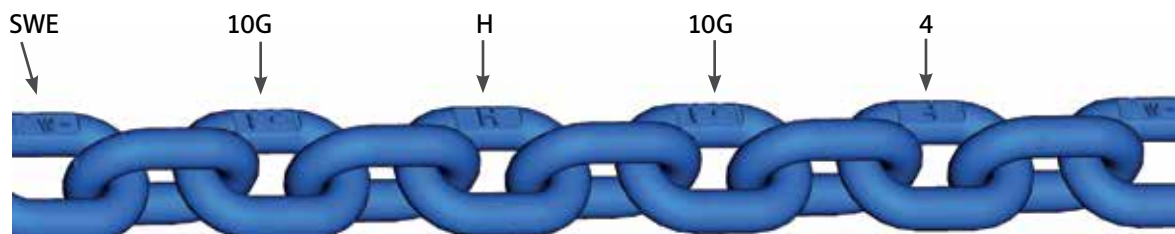
Hardening and tempering is carried out continuously in computer controlled induction furnaces with regular samplings.

Proof Load

The entire chain is test loaded. The test force for short link chain is 2.5 times the permitted working load limit. This gives the chain high safety in use. The chain is then visually inspected and cut into delivery lengths. A sample is taken from every length and tested to destruction. Dimensions and shape are also checked. All results are documented.

Marking and traceability

The international standards for lifting chain require that the chain is marked with Grade and Manufacturers ID. On our chain we stamp "SWE - 10G - H - 10G - 4", where the "H" and the "4" is the combination for the traceability code. In case of the unlikely event of chain failure, we can trace the specific chain link back to the very batch and raw material as well as the year and place of manufacture. Each individual delivery also has its unique batch number.



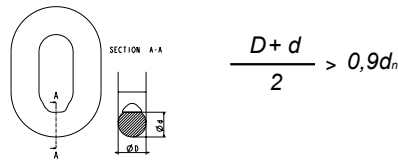
Use

- Never lift with a twisted chain.
- Use shortening hooks, knotting is not allowed.
- Use edge protectors to prevent sharp edges from damaging the chain.

Maintenance

Periodic thorough examination must be carried out at least every 12 months or more frequently according to local statutory regulations, type of use and past experience.

1. Overloaded chain slings must be taken out of service.
2. Chain and components including load pins which have been damaged, deformed, elongated, bent or showing signs of cracks or gouges shall be replaced. Carefully grind away small nicks and burrs
3. Additional testing by magnetic particle inspection and/or proof loading at max. 2 x WLL may be carried out. The wear of the chain and component shall in no place exceed 10% of the original dimensions.
4. The chain link wear - max. 10% - is defined as the reduction of the mean diameter measured in two directions.



Severe Environment

Chain and components must not be used in alkaline (>pH10) or acidic conditions (<pH6). Comprehensive and regular examination must be carried out when used in severe or corrosive inducing environments. In uncertain situations consult your Gunnebo Lifting dealer.

Extreme Temperature Conditions

The in service temperature effects the WLL as following:

Temperature (°C)	Reduction of WLL			
	Grade 10 chain (400)	Grade 10 chain (200)	Grade 10 components	Grade 8 chain & components
-40 to +200 °C	0 %	0 %	0 %	0 %
+200 to +300 °C	10 %	Not allowed	10 %	10 %
+300 to +400 °C	25 %	Not allowed	25 %	25 %

After short heat exposure, maximum one hour, the sling reverts to its fully capacity. Upon return to normal temperature, the sling reverts to its full capacity within the above temperature range. Chain slings should not be used above or below these temperatures.

For chain grade 10 the maximum in service temperature is 200° C.

Definitions

Proof force:

Each individual chain link is tested to the Manufacturing Proof Force (MPF) level before delivery. The MPF level is 2.5 times the WLL, equal to 62.5% of the Minimum Breaking Force.

Breaking force (BF):

The highest static force a chain is exposed to during test loading before breaking.

Working load limit (WLL):

The maximum permitted load on a lifting chain under normal (vertical) lifting conditions.

Total ultimate elongation:

The elongation of the test item, relative to the original length, at the moment of breaking.





Lifting Points

49

The New Lifting Point Family

In June 2015 Gunnebo Industries introduced three new lifting points as well as a significantly improved existing lifting point. The range will fit most lifting and lashing applications and can offer a full system, from masterlink to lifting point.

Choosing the right lifting point for your operation can be tricky, you know as well as we do that most lifting points can be used for a lot of purposes. But in order to give some guidance, and what we consider best practice, a cross-chart has been created (as seen on next page) to be used as indication to which lifting point that might be best suited for your specific purpose.

Rotating Eye Lifting Point - RELP

The RELP is a compact and robust lifting point, ideal for top-mounting and when it is important to have quick and easy on-hooking. The bolt has a hexagon socket which makes it easy to mount and dismount but an even better feature is the marking. On the bolt itself information such as the working load limit, mounting torque and manufacturing ID is stamped so it's always available for the operator, should the conditions for the operation change.

The RELP will automatically adjust to the loading direction which decreases the risk to load it incorrectly and endangering the lifting operation. For sensitive load surfaces the RELP is ideal, as the connecting sling hook will be positioned mainly parallel to the load surface, thus completely avoiding the hook causing damage on impact on the load.



Rotating Lifting Point - RLP

The RLP has an easily dismountable D-ring to enable assembly of roundsling, master link or hook directly onto the lifting point.

RLP has a hexagon screw to make it easy to disassemble/assemble with a wrench. The bolt is also clearly marked with information such as working load limit, mounting torque and manufacturer ID so it's always available to the operator. The RLP rotates 360° and pivots 180°, making it strong, flexible and reliable.



De-centered Lifting Point - DLP

The design of the DLP allows the link to be folded over the housing when idle, allowing the lifting point to be almost completely stowed away when not in use.

The closed, oblong link is also equipped with a "stay-up"-function for easy on-hooking, (sizes up to M24) especially when there is limited space. This saves both the load from damage due to impacts from the hook, as well as making rigging fast and easy. The DLP is ideal in narrow spaces, such as corners or edge position, as the housing has a compact design.



Ball-bearing Lifting Point - BLP

The BLP is a very versatile lifting point and can safely be used for most applications. The ballbearings in the BLP allow the load to be rotated during the lift, which is especially good when maintenance is needed on heavy tools and other types of equipment.

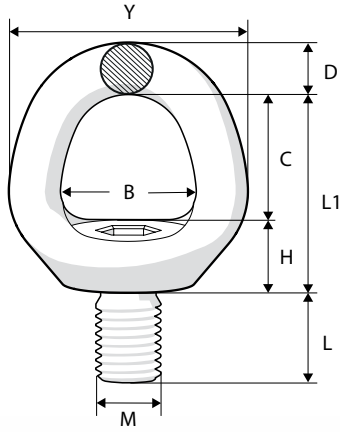
If the load surface is sensitive to impacts or scratches, the BLP is a good choice as it builds out from the load which makes it less likely that the lifting equipment will come in contact with it causing damage. The housing of the BLP has a hexagon shape for easy mounting and dismounting.





	RELP	RLP	DLP	BLP
Tight space	✓		✓	✓
Limited height (effective length)	✓	✓		
Vertical lift	✓	✓		✓
Angular lift		✓	✓	✓
Vertical rotation under load				✓
Tilting under load		✓	✓	✓
Sensitive load surface				✓
Single part lift	✓	✓		✓
Multiple part lift		✓	✓	✓
Integrated combination (hook or link)		✓		

This chart is intended to give guidance in choosing the right lifting point for your operation and is not rules for usage. For more advice contact your closest Gunnebo Industries dealer.



Rotating Eye Lifting Point RELP

Art. no.	Code	Dimensions in mm								Weight kgs
		B	C	D	H	L	L1	M	Y	
Z102408	RELPM8 x 1.25	28	28	11	14	15	42	8	50	0.2
Z102410	RELPM10 x 1.5	28	28	11	14	15	42	10	50	0.2
Z102412	RELPM12 x 1.75	32	33	13	13	20	47	12	58	0.3
Z102416	RELPM16 x 2	39	41	15	16	24	57	16	70	0.5
Z102420	RELPM20 x 2.5	42	43	16	18	30	60	20	78	0.7
Z102424	RELPM24 x 3	50	51	19	20	36	71	24	88	1.1
Z102430	RELPM30 x 3.5	60	62	26	28	45	90	30	112	2.4
Z102436	RELPM36 x 4	72	72	32	32	54	104	36	136	4.1
Z102442	RELPM42 x 4.5	82	82	38	37	63	119	42	158	6.7
Z102448	RELPM48 x 5	94	96	43	39	72	135	48	180	9.9



RELPM with UNC thread

Art. no.	Code	Dimensions in m								M inch	Weight kgs
		B	C	D	H	L	L1	Y			
Z102508	RELPM 5/16"-18 UNC	28	28	11	14	15	42	50	5/16"	0.2	
Z102510	RELPM 3/8"-16 UNC	28	28	11	14	15	42	50	3/8"	0.2	
Z102512	RELPM 1/2"-13 UNC	32	33	13	13	20	47	58	1/2"	0.3	
Z102516	RELPM 5/8"-11 UNC	39	41	15	16	24	57	70	5/8"	0.5	
Z102520	RELPM 3/4"-10 UNC	42	43	16	18	30	60	78	3/4"	0.7	
Z102521	RELPM 7/8"-9 UNC	42	43	16	18	30	60	78	7/8"	0.7	
Z102524	RELPM 1"-8 UNC	50	51	19	20	36	71	88	1"	1.1	
Z102530	RELPM 1 1/4"-7 UNC	60	62	26	28	45	90	112	1 1/4"	2.4	
Z102536	RELPM 1 1/2"-6 UNC	72	72	32	32	54	104	136	1 1/2"	4.1	
Z102542	RELPM 1 3/4"-5 UNC	82	82	38	37	63	119	158	1 3/4"	6.8	
Z102548	RELPM 2"-4.5 UNC	94	96	43	39	72	135	180	2"	10.0	

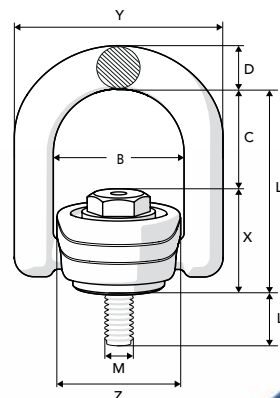
Working Load Limits* - RELPM

Symmetric Load (tonnes)							Tightening torque	Allen key		
	No. of legs	1	1	2	2	2 symmetric			3 & 4 symmetric	
Angle β	0°	90°	0°	90°	0-45°	45-60°	0-45°	45-60°		
RELPM - M8 x 1.25	0.7	0.3	1.4	0.6	0.4	0.3	0.6	0.4	10 Nm	8 mm
RELPM 5/16"-18 UNC	0.7	0.3	1.4	0.6	0.4	0.3	0.6	0.4	7 Ft.Lbs	5/16"
RELPM - M10 x 1.5	1.2	0.5	2.4	1.0	0.7	0.5	1.0	0.7	15 Nm	8 mm
RELPM 3/8"-16 UNC	1.2	0.5	2.4	1.0	0.7	0.5	1.0	0.7	11 Ft.Lbs	5/16"
RELPM - M12 x 1.75	2.0	0.8	4.0	1.6	1.1	0.8	1.6	1.2	27 Nm	8 mm
RELPM 1/2"-13 UNC	2.0	0.8	4.0	1.6	1.1	0.8	1.6	1.2	20 Ft.Lbs	5/16"
RELPM - M16 x 2	3.5	1.5	7.0	3.0	2.1	1.5	3.1	2.2	60 Nm	8 mm
RELPM 5/8"-11 UNC	3.5	1.5	7.0	3.0	2.1	1.5	3.1	2.2	44 Ft.Lbs	5/16"
RELPM - M20 x 2.5	6.1	2.4	12.2	4.8	3.3	2.4	5.0	3.6	90 Nm	8 mm
RELPM 3/4"-10 UNC	5.0	2.3	10.0	4.6	3.1	2.3	4.8	3.4	66 Ft.Lbs	5/16"
RELPM 7/8"-9 UNC	6.1	2.4	12.2	4.8	3.3	2.4	5.0	3.6	66 Ft.Lbs	5/16"
RELPM - M24 x 3	8.1	3.3	16.2	6.6	4.6	3.3	6.9	4.9	135 Nm	19 mm
RELPM 1"-8 UNC	8.1	3.3	16.2	6.6	4.6	3.3	6.9	4.9	100 Ft.Lbs	3/4"
RELPM - M30 x 3.5	12.1	4.6	24.2	9.2	6.4	4.6	9.6	6.9	270 Nm	19 mm
RELPM 1 1/4"-7 UNC	12.1	4.6	24.2	9.2	6.4	4.6	9.6	6.9	200 Ft.Lbs	3/4"
RELPM - M36 x 4	16.1	7.1	32.2	14.2	9.9	7.1	14.9	10.6	320 Nm	19 mm
RELPM 1 1/2"-6 UNC	16.1	7.1	32.2	14.2	9.9	7.1	14.9	10.6	236 Ft.Lbs	3/4"
RELPM - M42 x 4.5	24	9.1	48	18.2	12.7	9.1	19.1	13.6	600 Nm	19 mm
RELPM 1 3/4"-5 UNC	24	9.1	48	18.2	12.7	9.1	19.1	13.6	440 Ft.Lbs	3/4"
RELPM - M48 x 5	32	12.1	64	24.2	16.9	12.1	25.4	18.1	800 Nm	19 mm
RELPM 2"-4.5 UNC	32	12.1	64	24.2	16.9	12.1	25.4	18.1	590 Ft.Lbs	3/4"

*Safety factor 4:1

Rotating Lifting Point RLP

Art. no.	Code	Dimensions in mm									Weight kgs
		B	C	D	L	L1	M	X	Y	Z	
Z101708	RLP-M8 x 1.25	42	35	12	16	62	8	27	64	Ø40	0.3
Z101710	RLP -M10 x 1.5	42	35	12	16	62	10	27	64	Ø40	0.3
Z101712	RLP -M12 x 1.75	57	46	19	25	88	12	42	91	Ø54	1.0
Z101716	RLP-M16 x 2	57	46	19	25	88	16	42	91	Ø54	1.0
Z101720	RLP-M20 x 2.5	83	55	28	36	110	20	55	133	Ø80	2.9
Z101724	RLP-M24 x 3	83	55	28	36	110	24	55	133	Ø80	2.9
Z101730	RLP-M30 x 3.5	114	70	34	58	148	30	78	182	Ø111	7.1
Z101736	RLP-M36 x 4	114	70	34	58	148	36	78	182	Ø111	7.3
Z101742	RLP-M42 x 4.5	149	91	40.4	81	190	42	99	229	Ø142	14.3
Z101748	RLP-M48 x 5	149	91	40.4	81	190	48	99	229	Ø142	14.5



RLP with UNC thread

Art. no.	Code	Dimensions in mm									M inch	Weight kgs
		B	C	D	L	L1	X	Y	Z			
Z101808	RLP-5/16"-18 UNC	42	35	12	16	62	27	64	Ø40	5/16"	0.3	
Z101810	RLP-3/8"-16 UNC	42	35	12	16	62	27	64	Ø40	3/8"	0.3	
Z101812	RLP-1/2"-13 UNC	57	46	19	25	88	42	91	Ø54	1/2"	1.0	
Z101816	RLP-5/8"-11 UNC	57	46	19	25	88	42	91	Ø54	5/8"	1.0	
Z101820	RLP-3/4"-10 UNC	83	55	28	36	110	55	133	Ø80	3/4"	2.9	
Z101821	RLP-7/8"-9 UNC	83	55	28	36	110	55	133	Ø80	7/8"	2.9	
Z101824	RLP 1"-8 UNC	83	55	28	36	110	55	133	Ø80	1"	2.9	
Z101830	RLP 1 1/4"-7 UNC	114	70	34	58	148	78	182	Ø111	1 1/4"	7.1	
Z101836	RLP 1 1/2"-6 UNC	114	70	34	58	148	78	182	Ø111	1 1/2"	7.3	
Z101842	RLP 1 3/4"-5 UNC	149	91	40.4	81	190	99	229	Ø142	1 3/4"	14.4	
Z101848	RLP 2"-4.5 UNC	149	91	40.4	81	190	99	229	Ø142	2"	14.7	

Disassembly of the RLP is made easy by just folding the D-ring forward and push down.



Working Load Limits* - RLP

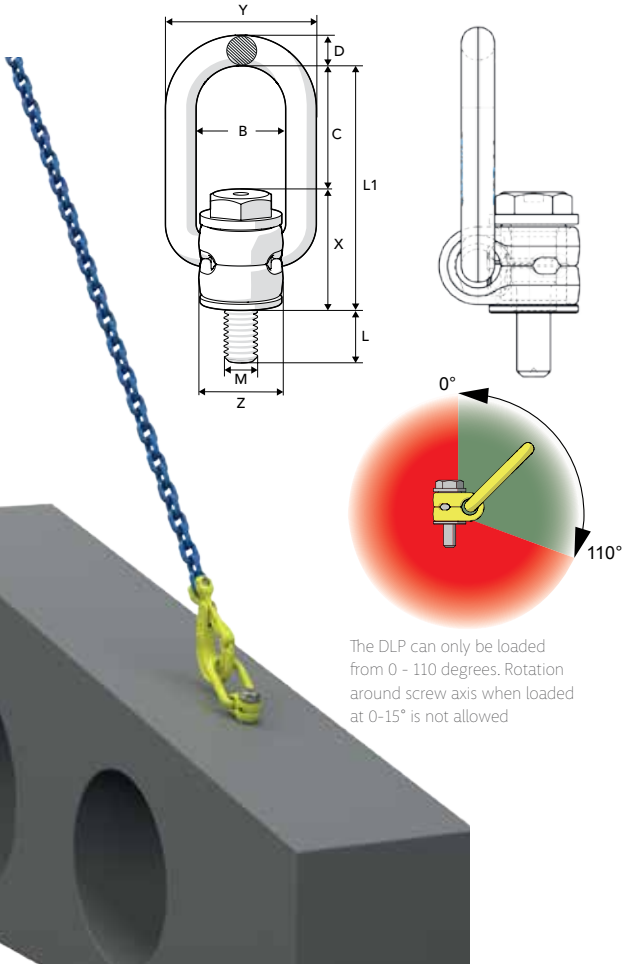
Symmetric Load (tonnes)	No. of legs								Tightening torque	Spanner size
	1	1	2	2	2 symmetric	3 & 4 symmetric	0-45°	45-60°		
Angle β	0°	90°	0°	90°	0-45°	45-60°	0-45°	45-60°		
RLP - M8 x 1.25	0.8	0.4	1.6	0.8	0.5	0.4	0.8	0.6	10 Nm	13 mm
RLP 5/16"-18 UNC	0.8	0.4	1.6	0.8	0.5	0.4	0.8	0.6	7 Ft.Lbs	1/2"
RLP - M10 x 1.5	1.2	0.7	2.4	1.4	0.9	0.7	1.4	1.0	15 Nm	13 mm
RLP 3/8"-16 UNC	1.2	0.65	2.4	1.3	0.9	0.6	1.3	0.9	11 Ft.Lbs	1/2"
RLP - M12 x 1.75	2.0	1.2	4.0	2.4	1.6	1.2	2.5	1.8	27 Nm	24 mm
RLP 1/2"-13 UNC	2.0	1.2	4.0	2.4	1.6	1.2	2.5	1.8	20 Ft.Lbs	15/16"
RLP - M16 x 2	3.2	2.0	6.4	4.0	2.8	2.0	4.2	3.0	60 Nm	24 mm
RLP 5/8"-11 UNC	3.2	2.0	6.4	4.0	2.8	2.0	4.2	3.0	44 Ft.Lbs	15/16"
RLP - M20 x 2.5	5.6	2.8	11.2	5.6	3.9	2.8	5.8	4.2	90 Nm	32 mm
RLP 3/4"-10 UNC	5.0	2.5	10.0	5.0	3.5	2.5	5.2	3.7	66 Ft.Lbs	1 5/16"
RLP 7/8"-9 UNC	5.6	2.8	11.2	5.6	3.9	2.8	5.8	4.2	66 Ft.Lbs	1 5/16"
RLP - M24 x 3	9.2	4.6	18.4	9.2	6.4	4.6	9.6	6.9	135 Nm	32 mm
RLP 1"-8 UNC	9.2	4.6	18.4	9.2	6.4	4.6	9.6	6.9	100 Ft.Lbs	1 5/16"
RLP - M30 x 3.5	12.0	6.0	24.0	12.0	8.4	6.0	12.6	9.0	270 Nm	55 mm
RLP 1 1/4"-7 UNC	12.0	6.0	24.0	12.0	8.4	6.0	12.6	9.0	200 Ft.Lbs	2 1/4"
RLP - M36 x 4	14.0	8.0	28.0	16.0	11.2	8.0	16.8	12.0	320 Nm	55 mm
RLP 1 1/2"-6 UNC	14.0	8.0	28.0	16.0	11.2	8.0	16.8	12.0	236 Ft.Lbs	2 1/4"
RLP - M42 x 4.5	16.0	14.0	32.0	28.0	19.6	14.0	29.4	21.0	600 Nm	75 mm
RLP 1 3/4"-5 UNC	16.0	14.0	32.0	28.0	19.6	14.0	29.4	21.0	440 Ft.Lbs	3"
RLP - M48 x 5	20.0	16.0	40.0	32.0	22.4	16.0	33.6	24.0	800 Nm	75 mm
RLP 2"-4.5 UNC	20.0	16.0	40.0	32.0	22.4	16.0	33.6	24.0	590 Ft.Lbs	3"

*Safety factor 4:1

Extra Long Bolt for RLP **

Art. no.	Bolt	Protrusion L (mm)	Weight (kgs)
Z1017081L	M8 x 1.25	101	0.06
Z1017101L	M10 x 1.5	101	0.08
Z1017121L	M12 x 1.75	80	0.14
Z1017161L	M16 x 2	80	0.20
Z1017201L	M20 x 2.5	86	0.46
Z1017241L	M24 x 3	86	0.50
Z1017301L	M30 x 3.5	300	2.40
Z1017361L	M36 x 4	300	3.00
Z1017421L	M42 x 4.5	301	5.00
Z1017481L	M48 x 5	301	6.00
Z1018081L	UNC 5/16"-18	101	0.06
Z1018101L	UNC 3/8"-16	101	0.07
Z1018121L	UNC 1/2"-13	80	0.16
Z1018161L	UNC 5/8"-11	80	0.20
Z1018201L	UNC 3/4"-10	86	0.44
Z1018211L	UNC 7/8"-9	86	0.50
Z1018241L	UNC 1"-8	86	0.60
Z1018301L	UNC 1 1/4"-7	300	2.50
Z1018361L	UNC 1 1/2"-6	300	3.30
Z1018421L	UNC 1 3/4"-5	301	5.40
Z1018481L	UNC 2"-4.5	301	6.40

** When using extra long bolt, make sure to use nut/washer of min. strength rating 10.9, ISO 898-1.



The DLP can only be loaded from 0 - 110 degrees. Rotation around screw axis when loaded at 0-15° is not allowed

De-centered Lifting Point DLP

Art. no.	Code	Dimensions in mm									Weight kgs
		B	C	D	L	L1	M	X	Y	Z	
Z102208	DLP-M8 x 1.25	35	48	10	13	78	8	30	55	26	0.3
Z102210	DLP-M10 x 1.5	35	48	10	13	78	10	30	55	26	0.3
Z102212	DLP-M12 x 1.75	35	48	12	23	91	12	44	59	32	0.5
Z102216	DLP-M16 x 2	35	48	12	23	91	16	44	59	32	0.5
Z102220	DLP-M20 x 2.5	54	88	18	34	145	20	58	90	48	1.6
Z102224	DLP-M24 x 3	54	88	18	34	145	24	58	90	48	1.7
Z102230	DLP-M30 x 3.5	82	94	26	53	182	30	88	122	75	5.0
Z102236	DLP-M36 x 4	82	94	26	53	182	36	88	122	75	5.2
Z102242	DLP-M42 x 4.5	100	103	36	73	216	42	113	156	110	11.6
Z102248	DLP-M48 x 5	100	103	36	73	216	48	113	156	110	11.9

DLP with UNC thread

Art. no.	Code	Dimensions in mm									M inch	Weight kgs
		B	C	D	L	L1	X	Y	Z			
Z102308	DLP-5/16"-18 UNC	35	48	10	13	78	30	55	26	5/16"	0.3	
Z102310	DLP-3/8"-16 UNC	35	48	10	13	78	30	55	26	3/8"	0.3	
Z102312	DLP-1/2"-13 UNC	35	48	12	23	91	44	59	32	1/2"	0.5	
Z102316	DLP-5/8"-11 UNC	35	48	12	23	91	44	59	32	5/8"	0.5	
Z102320	DLP-3/4"-10 UNC	54	88	18	34	145	58	90	48	3/4"	1.6	
Z102321	DLP-7/8"-9 UNC	54	88	18	34	145	58	90	48	7/8"	1.6	
Z102324	DLP-1"-8 UNC	54	88	18	34	145	58	90	48	1"	1.7	
Z102330	DLP-1 1/4"-7 UNC	82	94	26	53	182	88	122	75	1 1/4"	5.5	
Z102336	DLP-1 1/2"-6 UNC	82	94	26	53	182	88	122	75	1 1/2"	5.7	
Z102342	DLP-1 3/4"-5 UNC	100	103	36	73	216	113	156	110	1 3/4"	11.7	
Z102348	DLP-2"-4.5 UNC	100	103	36	73	216	113	156	110	2"	12.1	

Extra Long Bolt for DLP**

Art. no.	Bolt	Protrusion L (mm)	Weight (kgs)
Z1022081L	M8 x 1.25	98	0.06
Z1022101L	M10 x 1.5	98	0.08
Z1022121L	M12 x 1.75	78	0.14
Z1022161L	M16 x 2	78	0.20
Z1022201L	M20 x 2.5	84	0.46
Z1022241L	M24 x 3	84	0.50
Z1022301L	M30 x 3.5	295	2.40
Z1022361L	M36 x 4	295	3.00
Z1022421L	M42 x 4.5	283	5.00
Z1022481L	M48 x 5	283	6.00
Z1023081L	UNC 5/16"-18	98	0.06
Z1023101L	UNC 3/8"-16	98	0.07
Z1023121L	UNC 1/2"-13	78	0.16
Z1023161L	UNC 5/8"-11	78	0.20
Z1023201L	UNC 3/4"-10	84	0.44
Z1023211L	UNC 7/8"-9	84	0.50
Z1023241L	UNC 1"-8	84	0.60
Z1023301L	UNC 1 1/4"-7	295	2.50
Z1023361L	UNC 1 1/2"-6	295	3.30
Z1023421L	UNC 1 3/4"-5	283	5.40
Z1023481L	UNC 2"-4.5	283	6.40

Working Load Limits* - DLP

Symmetric Load (tonnes)

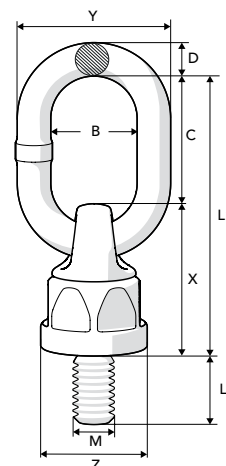
No. of legs	1		2		2 symmetric		3 & 4 symmetric		Tightening torque	Spanner size
	Angle beta		0° < beta < 90°		0-45°	45-60°	0-45°	45-60°		
DLP-M8 x 1.25	0.35	0.70	0.5	0.35	0.7	0.5	10 Nm	13 mm		
DLP 5/16"-18 UNC	0.35	0.70	0.5	0.35	0.7	0.5	7 Ft.Lbs	1/2"		
DLP-M10 x 1.5	0.65	1.30	0.9	0.65	1.4	1.0	15 Nm	13 mm		
DLP 3/8"-16 UNC	0.60	1.20	0.8	0.60	1.3	1.0	11 Ft.Lbs	1/2"		
DLP-M12 x 1.75	1.0	2.0	1.4	1.0	2.1	1.5	27 Nm	24 mm		
DLP 1/2"-13 UNC	1.0	2.0	1.4	1.0	2.1	1.5	20 Ft.Lbs	15/16"		
DLP-M16 x 2	1.8	3.6	2.5	1.8	3.7	2.7	60 Nm	24 mm		
DLP 5/8"-11 UNC	1.6	3.2	2.2	1.6	3.3	2.4	44 Ft.Lbs	15/16"		
DLP-M20 x 2.5	2.6	5.2	3.5	2.6	5.4	3.9	90 Nm	32 mm		
DLP-3/4"-10 UNC	2.2	4.4	3.0	2.2	4.6	3.3	66 Ft.Lbs	1 5/16"		
DLP-7/8"-9 UNC	2.6	5.2	3.5	2.6	5.4	3.9	66 Ft.Lbs	1 5/16"		
DLP-M24 x 3	4.1	8.2	5.7	4.1	8.6	6.1	135 Nm	32 mm		
DLP-1"-8 UNC	4.1	8.2	5.7	4.1	8.6	6.1	100 Ft.Lbs	1 5/16"		
DLP-M30 x 3.5	5.0	10.0	7.0	5.0	10.5	7.5	270 Nm	55 mm		
DLP-1 1/4"-7 UNC	5.0	10.0	7.0	5.0	10.5	7.5	200 Ft.Lbs	2 1/4"		
DLP-M36 x 4	7.0	14.0	9.8	7.0	14.7	10.5	320 Nm	55 mm		
DLP-1 1/2"-6 UNC	7.0	14.0	9.8	7.0	14.7	10.5	236 Ft.Lbs	2 1/4"		
DLP-M42 x 4.5	15.0	30.0	21.0	15.0	31.5	22.5	600 Nm	75 mm		
DLP-1 3/4"-5 UNC	15.0	30.0	21.0	15.0	31.5	22.5	440 Ft.Lbs	3"		
DLP-M48 x 5	20.0	40.0	28.0	20.0	42.0	30.0	800 Nm	75 mm		
DLP-2"-4.5 UNC	20.0	40.0	28.0	20.0	42.0	30.0	590 Ft.Lbs	3"		

** When using extra long bolt, make sure to use nut/washer of min. strength rating 10.9, ISO 898-1.

*Safety factor 4:1

Ball-bearing Lifting Point BLP

Art. no.	Code	B	C	D	Dimensions in mm						Weight kgs
					L	L1	M	X	Y	Z	
Z102008	BLP-M8 x 1.25	35	55	13	16	112	8	57	61	Ø42	0.6
Z102010	BLP -M10 x 1.5	35	55	13	20	112	10	57	61	Ø42	0.6
Z102012	BLP -M12 x 1.75	35	55	13	24	112	12	57	61	Ø42	0.6
Z102016	BLP-M16 x 2	35	55	13	30	112	16	57	61	Ø42	0.6
Z102020	BLP-M20 x 2.5	34	57	17	30	132	20	75	67	Ø59	1.3
Z102024	BLP-M24 x 3	50	70	17	36	145	24	75	84	Ø59	1.5
Z102030	BLP-M30 x 3.5	54	96	22	45	102	30	106	99	Ø74	3.4
Z102036	BLP-M36 x 4	54	96	22	54	102	36	106	99	Ø74	3.5
Z102042	BLP-M42 x 4.5	70	120	28	63	242	42	122	127	Ø93	6.5
Z102048	BLP-M48 x 5	70	120	28	72	242	48	122	127	Ø93	6.8

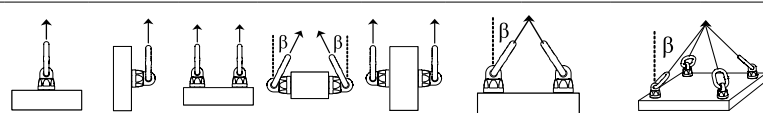


BLP with UNC thread

Art. no.	Code	B	C	D	Dimensions in mm						M inch	Weight kgs
					L	L1	X	Y	Z			
Z102108	BLP-5/16"-18 UNC	35	55	13	16	112	57	61	Ø42	5/16"	0.6	
Z102110	BLP-3/8"-16 UNC	35	55	13	20	112	57	61	Ø42	3/8"	0.6	
Z102112	BLP-1/2"-13 UNC	35	55	13	24	112	57	61	Ø42	1/2"	0.6	
Z102116	BLP-5/8"-11 UNC	35	55	13	30	112	57	61	Ø42	5/8"	0.6	
Z102120	BLP-3/4"-10 UNC	34	57	17	30	132	75	67	Ø59	3/4"	1.3	
Z102121	BLP-7/8"-9 UNC	34	57	17	30	132	75	67	Ø59	7/8"	1.3	
Z102124	BLP-1"-8 UNC	50	70	17	38	145	75	84	Ø59	1"	1.5	
Z102130	BLP-1 1/4"-7 UNC	54	96	22	48	202	106	99	Ø74	1 1/4"	3.4	
Z102136	BLP-1 1/2"-6 UNC	54	96	22	57	202	106	99	Ø74	1 1/2"	3.6	
Z102142	BLP-1 3/4"-5 UNC	70	120	28	67	242	122	127	Ø93	1 3/4"	6.6	
Z102148	BLP-2"-4.5 UNC	70	120	28	76	242	122	127	Ø93	2"	7.0	



Working Load Limits* - BLP



	1		2		2 symmetric		3 & 4 symmetric		Tightening torque	Spanner size
	No. of legs	Angle β	0°	90°	0-45°	90°	0-45°	45-60°		
BLP -M8 x 1.25	0.6	0°	0.3	1.2	0.4	0.6	0.4	0.3	10 Nm	36 mm
BLP -5/16"-18 UNC	0.6	90°	0.3	1.2	0.4	0.6	0.4	0.3	7 Ft.Lbs	1 1/2"
BLP -M10 x 1.5	1.2	0°	0.6	2.4	0.8	1.2	0.8	0.6	15 Nm	36 mm
BLP -3/8"-16 UNC	1.0	90°	0.5	2.0	0.7	1.0	0.7	0.5	11 Ft.Lbs	1 1/2"
BLP -M12 x 1.75	1.5	0°	0.75	3.0	1.1	1.5	1.1	0.75	27 Nm	36 mm
BLP -1/2"-13 UNC	1.5	90°	0.75	3.0	1.1	1.5	1.0	0.75	20 Ft.Lbs	1 1/2"
BLP -M16 x 2	3.0	0°	1.5	6.0	2.1	3.0	2.1	1.5	60 Nm	36 mm
BLP -5/8"-11 UNC	3.0	90°	1.5	6.0	2.1	3.0	2.1	1.5	44 Ft.Lbs	1 1/2"
BLP -M20 x 2.5	5.0	0°	2.5	10.0	3.5	5.0	3.5	2.5	90 Nm	50mm
BLP -3/4"-10 UNC	4.5	90°	2.25	9.0	3.1	4.5	3.1	2.25	66 Ft.Lbs	2"
BLP -7/8"-9 UNC	6.0	0°	3.0	12.0	4.2	6.0	4.2	3.0	66 Ft.Lbs	2"
BLP -M24 x 3	7.0	0°	4.0	14.0	5.6	8.0	5.6	4.0	135 Nm	50mm
BLP -1"-8 UNC	7.0	90°	4.0	14.0	5.6	8.0	5.6	4.0	100 Ft.Lbs	2"
BLP -M30 x 3.5	12.0	0°	6.0	24.0	8.4	12.0	8.4	6.0	270 Nm	65 mm
BLP -1 1/4"-7 UNC	12.0	90°	6.0	24.0	8.4	12.0	8.4	6.0	200 Ft.Lbs	2 5/8"
BLP -M36 x 4	14.0	0°	8.0	28.0	11.2	16.0	11.2	8.0	320 Nm	65 mm
BLP -1 1/2"-6 UNC	14.0	90°	8.0	28.0	11.2	16.0	11.2	8.0	236 Ft.Lbs	2 5/8"
BLP -M42 x 4.5	16.0	0°	10.0	32.0	14.0	20.0	14.0	10.0	600 Nm	85 mm
BLP -1 3/4"-5 UNC	16.0	90°	10.0	32.0	14.0	20.0	14.0	10.0	440 Ft.Lbs	3 1/8"
BLP -M48 x 5	18.0	0°	13.0	36.0	18.2	26.0	18.2	13.0	800 Nm	85 mm
BLP -2"-4.5 UNC	18.0	90°	13.0	36.0	18.2	26.0	18.2	13.0	590 Ft.Lbs	3 1/8"

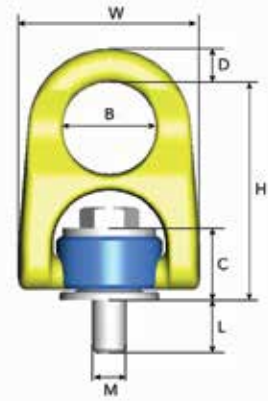
*Safety factor 4:1

Rotating Lifting Point ERLP

Slim design to fit in confined spaces.

Note! ERLP will be cancelled from our product range during 2016.

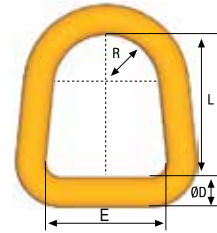
Art. no.	Code	L	M	B	D	C	H	W	Weight (kgs)
Z101260	ERLP-M8-10	15	M8	Ø27	10	20	63	52	0.2
Z101261	ERLP-M10-10	20	M10	Ø27	10	20	63	52	0.2
Z101252	ERLP-M12-10	19	M12	Ø38	15	31	91.8	73	0.8
Z101253	ERLP-M16-10	24	M16	Ø38	15	31	91.8	73	0.8



Master Link D

Art. no.	Code	WLL tonnes*	E	D	L	R	Weight kgs
Z700877	D-14-8	2.5	55	14	65	24	0.4
Z700878	D-17-8	4	64	17	62	29	0.5
Z700880	D-22-8	8	76	22	90	33	1

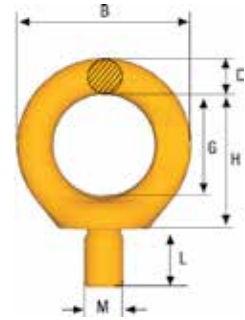
The load bearing width must be at least 0.5 x E



Eye Lifting Point ELP

Art. no.	Code	WLL tonnes*	B	D	G	H	L	M	Weight kgs
Z100434	ELP-16-8	1**	72	16	42	55	24	M16	0.4
Z100435	ELP-20-8	1.5**	72	16	42	58	30	M20	0.4
Z100436	ELP-24-8	2**	88	19	48	69	36	M24	0.9
Z100437	ELP-30-8	3**	106	22	60	84	45	M30	1.4

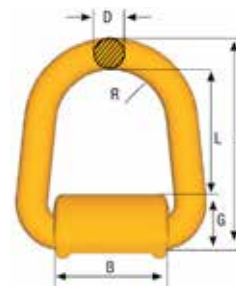
** In case of 1-leg application where loading is limited to straight loading in the direction of thread (no bending force) it is possible to use ELP with four times higher WLL. Note! Threaded depths need to be at least 1xM for steel, 1,25xM for cast iron and 2xM for aluminium alloy.



Weldable Lifting Point WLP

Art. no.	Code	WLL tonnes*	B	D	G	L	R	T	Weight kgs
Z700900	WLP-1T	1	50	14	27	53	24	95	0.5
Z700901	WLP-3T	3	58	17	34	48	29	97	0.8
Z700902	WLP-5T	5	64	22	41	73	33	135	1.8

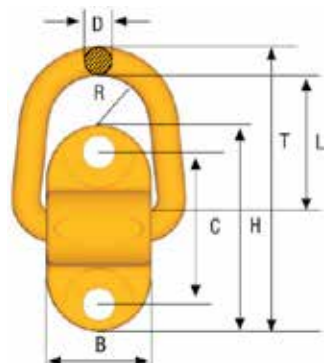
Supplied with spring for stay up function



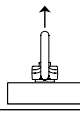
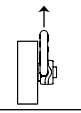
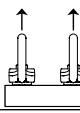
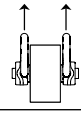
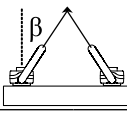
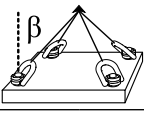
Screw-on Lifting Point SLP

Art. no.	Code	WLL tonnes*	B	C	D	H	L	M	T	R	Weight kgs
Z700988	SLP-1T	1	50	72	14	98	55	M14	139	24	0.8
Z700987	SLP-3T	3	58	84	17	114	50	M16	144	29	1.3
Z700986	SLP-5T	5	64	116	22	160	74	M20	203	33	2.6

Supplied with spring for stay up function



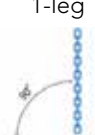

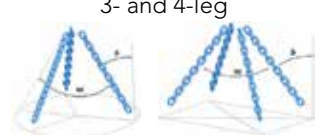
Working Load Limits (tonnes) for ERLP

								
No. of legs	1	1	2	2	2 symmetric		3 & 4 symmetric	
β	0°	90°	0°	90°	0-45°	45-60°	0-45°	45-60°
Load factor		1		2	1.4	1	2.1	1.5
M8-10	0.60	0.30	1.20	0.60	0.42	0.30	0.63	0.45
M10-10	1.00	0.50	2.00	1.00	0.70	0.50	1.05	0.75
M12-10	1.50	0.75	3.00	1.50	1.00	0.75	1.60	1.13
M16-10	3.00	1.50	6.00	3.00	2.10	1.50	3.15	2.25

In case of asymmetric loading we recommend following loading:

- 2-leg as corresponding 1-leg
- 3- or 4-leg as corresponding 2-leg

Working Load Limits (tonnes) for ELP / WLP / SLP

					
Typ	WLL tonnes*	α 0-90° β 0-45°	α 90-120° β 45-60°	α 0-90° β 0-45°	α 90-120° β 45-60°
ELP-16-8	1**	1.4	1	2.1	1.5
ELP-20-8	1,5**	2.1	1.5	3.2	2.3
ELP-24-8	2**	2.8	2	4.2	3
ELP-30-8	3**	4.2	3	6.3	4.5
WLP-1T	1	1.4	1	2.1	1.5
WLP-3T	3	4.2	3	6.3	4.5
WLP-5T	5	7	5	10.5	7.5
SLP-1T	1	1.4	1	2.1	1.5
SLP-3T	3	4.2	3	6.3	4.5
SLP-5T	5	7	5	10.5	7.5

**Note! The above loads apply to normal usage and equally loaded legs. For asymmetric loaded chain slings, the following is recommended:

- A two-legged system is rated as a single-legged system.
- A three- or four-legged system is rated as a two-legged system.





Stainless Steel Chains
and Components

59



WOX Chain inox

Clean, tidy and hard-working.

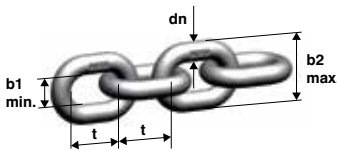
This stainless steel lifting chain is made from high-grade stainless steel, with a load capacity that is 25 % higher than that of G5 lifting chains. The chains are tested at 100 % of their load capacity, which is an impressive 12,000 kg! The chain is electrically welded for an extra-clean finish, stamped and with a higher resistance to acids and caustics than the standard lifting chains G8, G10 and G12.

The chain is guaranteed to be compatible with the Connex CWI links, with dimensions that are similar to DIN 5687-1 and EN 818-2. The stamp makes the chains clearly identifiable.

The WOX chain is particularly suited for use in water and wastewater applications. It can also be used in connection with chemicals and food products; however, restrictions will apply.



WOX Chain inox	Code	Nominal diameter dn [mm]	Standard-delivery length [m]	Pitch t [mm]	Inside width b1 min. [mm]	Outside width b2 max. [mm]	WLL [kg]	Breaking force [kN]	Weight [kg/m]
	WOX 4-6	4	50 m	12	6.2	14.8	400	16.0	0.38
	WOX 5-6	5	50 m	15	7.5	18.5	630	25.0	0.58
	WOX 6-6	6	50 m	18	8.7	20.9	900	37.5	0.82
	WOX 7-6	7	50 m	21	9.5	25.2	1,250	50.0	1.11
	WOX 8-6	8	50 m	24	10.8	28.6	1,600	63.0	1.43
	WOX 10-6	10	50 m	30	13.5	36.0	2,500	100.0	2.25
	WOX 13-6	13	25 m	39	17.5	46.8	4,250	170.0	3.77
	WOX 16-6	16	25 m	48	21.5	57.6	6,300	250.0	5.62
	WOX 20-5	20	-	60	27	72	8,000	314.0	9.29
	WOX 26-4+	26	-	78	35.0	93.6	12,000	471.0	16.20



AWI Master Link

Doubles up as a dependable end link.

High-grade stainless steel yields a result that outshines the rest: This stainless master link is electrically welded for a clean finish, stamped and suitable for both I- and II-legged chains and wire rope slings (similar to DIN 3088- 1989). The master link may also be used in VVI four-legged assemblies and as an end link. Its dimensions are similar to DIN 5688-1 and it is tested at 100 % of its load capacity. A particular bonus is the higher resistance to acids and caustics compared to the standard loading rings G8, G10 and G12. The stamp makes the master link clearly identifiable. The master link also bears the CE mark.



The AWI Master link is particularly suited for use in water and wastewater applications. It can also be used in connection with chemicals and food products; however, restrictions will apply.

AWI Master link	Code	WLL 0-45° [kg]	Usable up to sling hooks following DIN 15401 No.	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	For I-leg chain slings	For II-leg chain slings
	AWI 8-6	560	0.5	8	60	35	-	0.08	4	4
	AWI 10-6	850	1.6	10	80	50	-	0.14	5	5
	AWI 13-6	1,600	2.5	13	110	60	10	0.34	6/7/8	6
	AWI 16-6	2,600	2.5	16	110	60	14	0.53	10	7/8
	AWI 18-6	3,500	5	18	135	75	14	0.92	-	10
	AWI 22-6	6,300	6	23	160	90	17	1.60	13/16	13
	AWI 26-6	8,900	8	27	180	100	20	2.46	20	16
	AWI 32-6	13,200	10	32	200	110	26	4.14	-	20
	AWI 36-6	14,700	16	36	260	140	29	6.22	-	-
	AWI 45	12,000	-	45	340	180	**	12.82	26	-



Custom-made, also with flattening available.

BWI Transition Link

Electrically welded for an extra-clean finish.

A higher resistance to acids and caustics compared to the standard transition links G8, G10 and G12 is just one of the many benefits that make this stamped transition link truly remarkable. The use of high-grade stainless steel also ensures that this electrically welded transition and securing link will never rust.

The stamp and the CE mark ensure that the product is clearly identifiable. The transition link is part of welded assemblies, may also be used as an end link and is tested at 100 % of its maximum load capacity. Its dimensions are similar to DIN 5688-1.

The outstanding quality of this transition link is also reflected in its wide range of possible applications: It may be used as a connecting link for assembling I- to IV-strand assemblies in welded systems as well as an end link. In addition, it is ideally suited for use in water and wastewater applications and can also be used in connection with chemicals and food products; however, restrictions will apply.



BWI Transition link	Code	WLL 0-45° [kg]	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	For I-leg chain slings	For II-leg chain slings
	BWI 7-6	900	7	36	16	-	0.03	5/6	5/6
	BWI 9-6	1,250	9	44	20	-	0.07	7	7
	BWI 10-6	1,600	10	44	20	-	0.09	8	8
	BWI 13-6	2,500	13	54	25	10	0.19	10	10
	BWI 16-6	4,250	16	70	34	14	0.36	13	13
	BWI 20-6	6,300	20	85	40	16	0.71	16	16
	BWI 22-6	8,000	23	115	50	17	1.16	20	-
	BWI 26-6	10,070	27	140	65	20	1.92	-	-
	BWI 32-6	12,000	32	150	70	26	3.18	26	-

Custom-made, also with flattening available.

VWI Master Link Assembly


Consistent performance.

This stainless steel chain sling is electrically welded for a clean finish, stamped and ideally suited for assembling III- and IV-legged chain slings in welded or assembled systems. The dimensions are similar to DIN 5688-1.

The VWI Master link assembly is tested at 100 % of its load capacity. It is made from high-grade stainless steel with a higher resistance to acids and caustics than the standard four-legged chain slings G8, G10 and G12.

It is ideally suited for use in water and wastewater applications and can also be used in connection with chemicals and food products; however, restrictions will apply. The stamp and the CE mark ensure that the product is clearly identifiable.



VWI Master link assembly	Code	Consisting of	Usable up to sling hooks following DIN 15401 No.	WLL 0-45° [kg]	e [mm]	d [mm]	t [mm]	w [mm]	d1 [mm]	t1 [mm]	w1 [mm]	Weight [kg/pc.]
	VWI 4-6	AWI 10-6 + 2 BWI 9-6	1.6	840	124	10	80	50	9	44	20	0.28
	VWI 5-6	AWI 13-6 + 2 BWI 10-6	2.5	1,300	154	13	110	60	10	44	20	0.52
	VWI 6/7-6	AWI 16-6 + 2 BWI 13-6	5	2,600	164	16	110	60	13	54	25	0.91
	VWI 8-6	AWI 18-6 + 2 BWI 16-6	6	3,350	205	18	135	75	16	70	34	1.64
	VWI 10-6	AWI 22-6 + 2 BWI 20-6	8	5,250	245	23	160	90	20	85	40	3.02
	VWI 13-6	AWI 26-6 + 2 BWI 22-6	10	8,900	295	27	180	100	23	115	50	4.78
	VWI 16-6	AWI 32-6 + 2 BWI 26-6	16	13,200	340	32	200	110	27	140	65	7.98

Custom-made, also with flattening available.

Number close to code constitutes chain, used in combination with product.



CWI Connex Connecting Link

For a seamless connection.

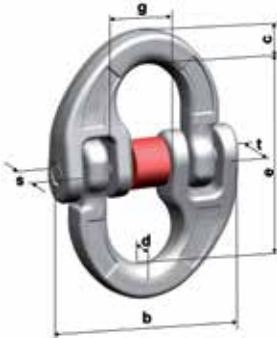
This stainless steel connecting link is drop-forged and stamped and consists of two symmetrical halves made from high-grade stainless steel. Its labour-intensive manufacturing process gives the product its outstanding quality. The connecting link may be divided and used for the universal assembly of chain slings, master links, master link assemblies, shortenings, shackles and other accessories and is guaranteed to be compatible with all pewag winner inox components of the same nominal size.

The suspension bolt is locked by a stainless steel coil spring (mat. 1.4571) with a synthetic sleeve. The bolt and the shell are available as spare parts.

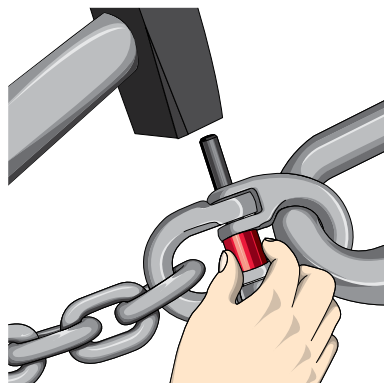
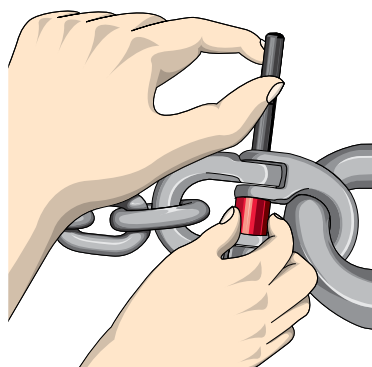
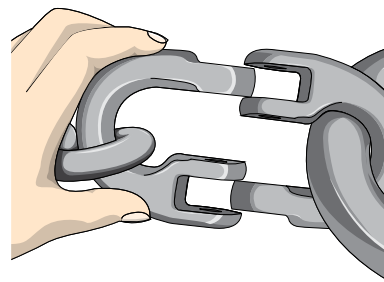
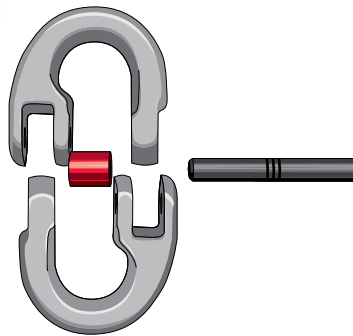
The manufacturing process of the CWI Connex connecting link is similar to EN 1677-1. The product is suitable for straight pulling only; the simultaneous application of loads by two or more legs must be avoided. After the universally usable connecting link has been assembled and disassembled three times, it is recommended to use a new bolt and a new shell, to be mounted securely by a professional, to ensure that the quality of the product remains unimpaired. CBHWI spare part sets are available.

It is ideally suited for use in water and wastewater applications and can also be used in connection with chemicals and food products; however, restrictions will apply. The stamp and the CE mark ensure that the product is clearly identifiable.



CWI Connex connecting link	Code	WLL [kg]	e [mm]	c [mm]	s [mm]	t [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
	CWI 5-6	630	36	7	10	11	7	34	13	0.06
	CWI 7-6	1,250	54	9	13	14	9	51	17	0.14
	CWI 10-6	2,500	73	13	18	18	13	70	25	0.37
	CWI 13-6	4,250	92	17	23	25	17	86	29	0.76
	CWI 16-6	6,300	104	21	32	28	20	105	37	1.41

Number close to code constitutes chain, used in combination with product.



HSWI Eye Sling Hook

The new face of resilience.

Like all pewag elements, this stainless steel eye sling hook is the result of a sophisticated manufacturing process. Using high-grade stainless steel, the hook is drop-forged and stamped. The compact design of the hook ensures the highest possible load capacity while maintaining a minimum product weight. The hook provides impact for protection for the safety latch, a large hook mouth and an extra-wide hook point to prevent accidental hooking into the chain. Due to the flat section on the eye, the hook is also compatible with alternative connecting systems.

This eye sling hook provides excellent directional stability and perfect guidance of the safety trap. It is particularly suited for the assembly of welded and assembled rope lashings. The safety trap engages with the hook point, which provides an effective protection against lateral movements. Forged inspection marks that facilitate the visual recognition of the discard criteria complete this outstanding product.

The manufacturing process is similar to EN 1677-2. The stamp and the CE mark ensure that the product is clearly identifiable. The safety latch assembly is available as spare part SFGWI. Preferred areas of application are water and wastewater applications and the product can also be used in connection with chemicals and food products; however, restrictions will apply.



HSWI Eye sling hook	Code	WLL [kg]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	HSWI 5/6-6	900	84	20	14	21	8	22	67	0.25
	HSWI 7/8-6	1,600	112	29	20	27	13	32	98	0.70
	HSWI 10-6	2,500	133	33	28	37	15	39	115	1.35
	HSWI 13-6	4,250	172	43	35	48	18	51	147	2.60
	HSWI 16-6	6,300	213	51	44	55	24	66	182	4.80



Number close to code constitutes chain, accessories in combination with product.





VLWI Chain Shortener

Safety is key.

This corrosion-resistant chain shortener is manufactured from high-grade stainless steel and has a welded-in BWI transition link for the simple, effortless link-by-link shortening of stainless steel chains. In addition to being extremely convenient in its application, the shortener also offers the benefit of easy retrofitting in assembled systems and ensures that the chain cannot fall out even when it is shortened, as its proper weight will always lock it in place. The stamp and CE mark ensure that the product is clearly identifiable.

Preferred areas of application for the VLWI shortener are water and wastewater applications and the product can also be used in connection with chemicals and food products; however, restrictions will apply and we recommend that you contact the manufacturer for advice prior to exposing the product to such use.



VLWI Chain shortener	Code	WLL [kg]	e [mm]	e1 [mm]	a [mm]	d [mm]	d1 [mm]	g [mm]	Weight [kg/pc.]
	VLWI 5/6-6	900	80	114	52	16	26	8	0.22
	VLWI 7/8-6	1,600	111	156	68	22	34	11	0.57
	VLWI 10-6	2,500	133	183	86	27	40	12	1.06
	VLWI 13-6	4,250	169	242	108	32	52	16	2.20
	VLWI 16-6	6,300	204	284	134	38	64	20	4.16



Number close to code constitutes chain, accessories in combination with product.



Correct application



Correct application



Correct application



Wrong application

VAWI Special master link assembly for wire ropes – G5

One for all.

With its flattened transition links, this stainless steel master link assembly for wire ropes opens up universal connection possibilities. If safety is your primary concern, you can't go wrong with this IV-legged master link assembly with extra-large transition links to create III- and IV-legged wire rope slings in the welded or assembled system. The assembly is wide enough to fit two rope thimbles per transition link and is electrically welded and stamped for an extra-clean finish.

The manufacturing process of this corrosion-resistant, grade 5 master link assembly is similar to DIN 5688-1 and DIN 3088-1989.

It is tested to 100 % of its maximum load capacity.
The stamp and CE mark ensure that the product is clearly identifiable.

Preferred areas of application for the VAWI IV-legged master link assembly G5 are water and wastewater applications and the product can also be used in connection with chemicals and food products; however, restrictions will apply and we recommend that you contact the manufacturer for advice prior to exposing the product to such use.



Code	Consisting of	Usable up to sling hooks following DIN 15401 No.	WLL 0-45° [kg]	e [mm]	d [mm]	t [mm]	w [mm]	d1 [mm]	t1 [mm]	w1 [mm]	Weight [kg/pc.]
VAWI 6	AWI 18 + 2 AWI 13	2.5	1,600	245	19	135	75	13	110	60	1.60
VAWI 7	AWI 18 + 2 AWI 16	5	2,100	245	19	135	75	16	110	60	1.98
VAWI 8	AWI 22 + 2 AWI 18	6	3,000	295	23	160	90	19	135	75	3.44
VAWI 10	AWI 26 + 2 AWI 22	8	4,800	340	27	180	100	23	160	90	5.66
VAWI 13	AWI 32 + 2 AWI 26	10	7,100	380	33	200	110	27	180	100	9.06
VAWI 16	AWI 36 + 2 AWI 32	16	10,500	460	36	260	140	33	200	110	14.50



Number close to code constitutes chain, used in combination with product and attribution of ropes under construction of WLL in accordance of relevant rules of rope slings.





SSWI Safety Shackle

Withstands any vibrations.

Yet another quality product made from high-grade steel that is forged, stamped and tested to within an inch of its life before it is put to use. This stainless steel safety shackle with a reinforced suspension bolt is designed for use as an end fitting in chain and wire rope slings and in connection with pump chains for the lifting of submersible pumps and breathers, where maximum safety is key. The product comes with a safety mechanism to protect against unintentional release. Please note that it cannot be mounted directly onto the chain.

If used correctly, the SSWI Safety shackle easily withstands vibrations. Each of these safety products bears the CE mark and has a code on the bolt and pins for added traceability.

Preferred areas of application for the shackle are water and wastewater applications and the product can also be used in connection with chemicals and food products; however, restrictions will apply and we recommend that you contact the manufacturer for advice prior to exposing the product to such use.



SSWI Safety shackle	Code	WLL [kg]	e [mm]	a [mm]	b [mm]	d [mm]	d1 [mm]	c [mm]	Weight [kg/pc.]
	SSWI 0,5 t-S	500	33	8	18	8	9	18	0.07
	SSWI 1,25 t-S	1,250	40	12	25	12	13	25	0.22
	SSWI 2 t-S	2,000	60	16	32	16	17	32	0.52
	SSWI 3,2 t-S	3,200	78	19	41	19	21	47	0.80
	SSWI 5 t-S	5,000	109	25	56	25	29	60	2.2
	SSWI 26-C	13,000	152	34	76	34	38	75	7

Other sizes and special models available on request! On request also stronger shackles available.

Bolt safety mechanism:

S = with safety splint C = with bolt adhesive

CBHWI bolts and safety bush

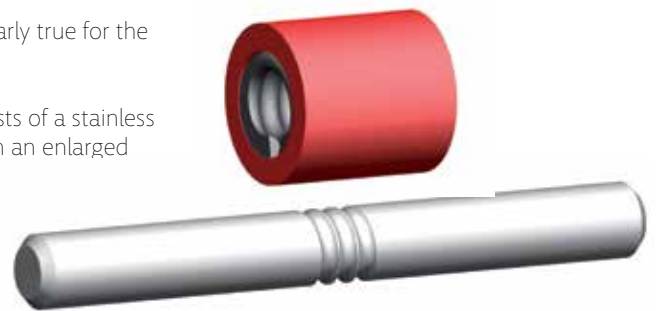
Because safety comes first.


Any whole is more than the sum of its parts – and this is particularly true for the high-quality combinations within the pewag portfolio.

The CBHWI safety set that goes with the Connex connector consists of a stainless steel suspension bolt and a spiral spring (Mat. 1.4571) that is set in an enlarged synthetic sleeve for particularly easy fitting, ensuring that the suspension bolt always locks perfectly in place.

Variety of use: CBHWI bolts and safety bushes for grade 6 correspond to the design of CBHWI grade 5 and may therefore also be used as replacement parts. Please note the modified material properties of grade 6!

Important: The replacement sets for grade 5 are not suitable for CWI grade 6 plus! Only bolts stamped with G6 plus may be used as replacement parts!





CBHWI Bolts and safety bush	Code	For connecting link
	CBHWI 5-6	CWI 5-6
	CBHWI 7-6	CWI 7-6
	CBHWI 10-6	CWI 10-6
	CBHWI 13-6	CWI 13-6
	CBHWI 16-6	CWI 16-6

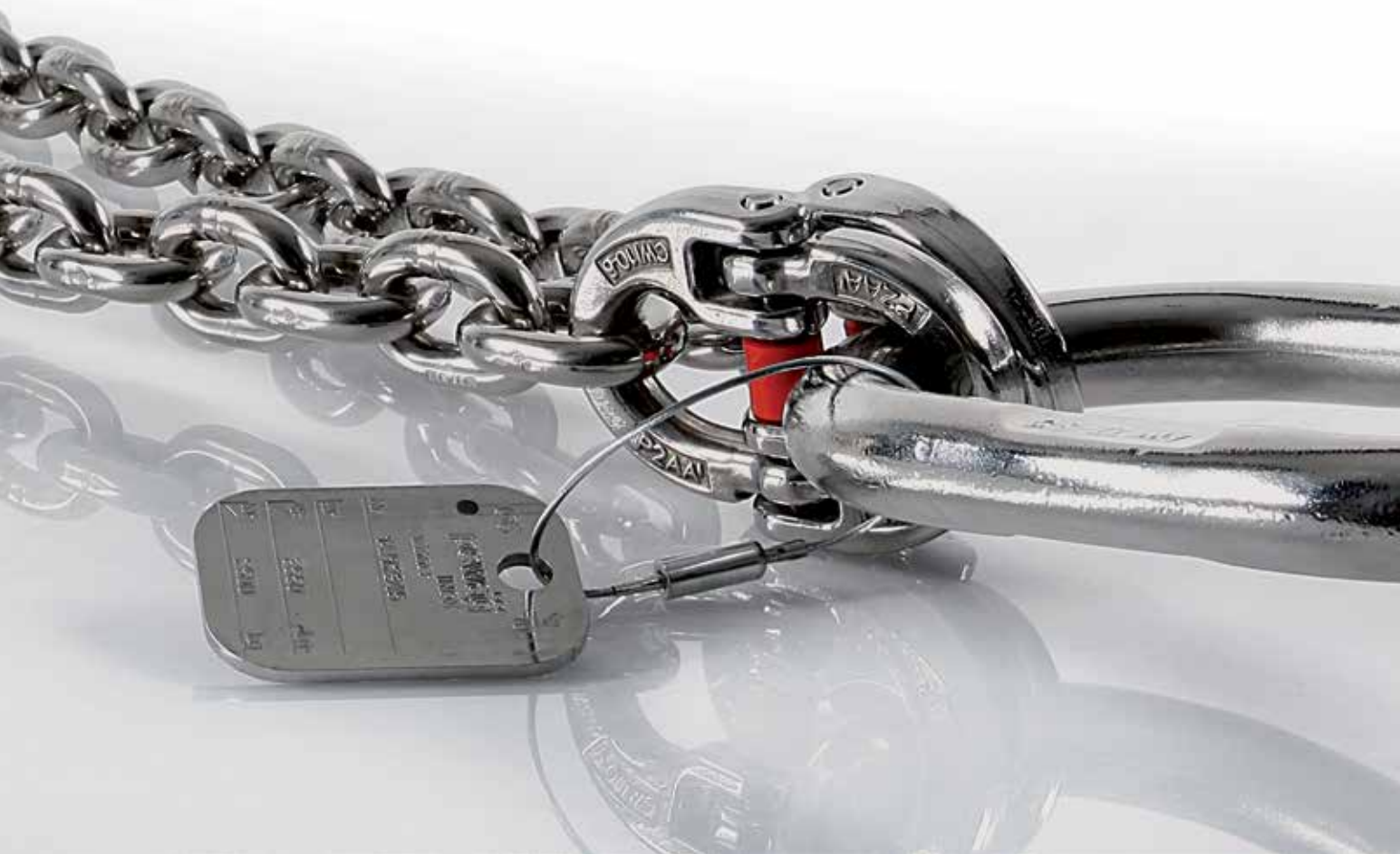
SFGWI Safety Catch

Extra strength you can count on.

It's all in the name: Safety is what this stainless steel safety catch set with an extra-strong spring and rivetable safety pin is all about. The catch is simple to use and its quality speaks for itself, with even the tiniest parts manufactured to absolute perfection.



SFGWI Safety catch	Code	For hook
	SFGWI 5	HSWI 5 stamped HSK 5 or HK 5
	SFGWI 7	HSWI 7 stamped HSK 7 or HK 7
	SFGWI 10	HSWI 10 stamped HSK 10 or HK 10
	SFGWI 13	HSWI 13 stamped HSK 13 or HK 13
	SFGWI 16	HSWI 16 stamped HSK 16 or HK 16
	SFGWI 5/6-6	HSWI 5/6 stamped HSWI 5/6
	SFGWI 7/8-6	HSWI 7/8 stamped HSWI 7/8
	SFGWI 10-6	HSWI 10 stamped HSWI 10
	SFGWI 13-6	HSWI 13 stamped HSWI 13
	SFGWI 16-6	HSWI 16 stamped HSWI 16





Rectangular Identification Tags

New look.

pewag always remains focused on continuously improving its products wherever possible. For this reason, our lifting identification tags now come in a rectangular shape that offers several benefits, all leading towards greater safety.

The tags are made from corrosion-resistant material and are attached to the sling with a quick-release fastener, also corrosion-resistant, thus significantly improving safety for the user. The idea was to eliminate the errors that were made repeatedly in the past, when users took the number of corners of the identification tag and the chain dimensions to work out the maximum load capacity without taking the markings on the identification tag into consideration. This is due to the fact that in all standard documentation for lifting chains, the number of corners featured by the identification tag corresponds to the grade category of the lifting chain. However, standards only ever describe the minimum requirements of a product and may of course be exceeded.






A rectangular identification tag effectively prevents these sort of errors from occurring and offers users the following benefits:

- Prevents misjudging the carrying capacity of the lifting chain as the user is forced to look at the tag prior to each lifting process
- When the marking is not observed, the lifting chain will be classed as a maximum grade 4
- Corrosion-resistant; therefore resistant to acids, caustics and their vapours
- Easily replaceable due to the corrosion-resistant cable with quick-release fastener
- All information is engraved, allowing for customer-specific markings
- Pre-stamped year dates for periodic inspections make the date of the last inspection immediately apparent
- For periodic inspections, only the month needs to be stamped

ID Identification Tag

Fully customisable.

Quality should never have to remain anonymous. This stainless steel ID tag set, consisting of a TKWI identification set and a mounting rope, is now fully customisable to feature the customer name or any other logo you would like. Inspection data may also be entered, and a plaque for different grade classifications makes things easier for fitters!

ID Identification tag	Code	For lifting chains	Consisting of
  	ID-Tag set neutral	I- and multi-leg slings	Tag neutral + cable with quick release fastener + safety information

* Front side
** Back side

Assembled System




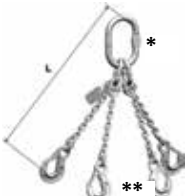
pewag winner inox stainless steel chain slings in the assembled system – boundless possibilities for combinations.

Below, you will find an overview of different combinations of components within the assembled system. The possibilities are nearly endless! Of course, there are many more options available. We are also happy to supply customised versions upon request. The pewag customer service team is here to help!

1) WLL Reduction WOX 16 – SSWI 5 t-S:

On request also stronger shackles available.

I-leg chain	II-leg chain		III+IV-leg chain	
–	0-45°	45-60°	0-45°	45-60°
5,000	7,100	5,000	10,000	7,500

	Diameter d	WLL I-leg	WLL 0-45°	WLL 45-60°	*Top fitting		**Possible end fittings				
					Master link	Eye sling hook	Master link	Transition link	Shackle	Chain shortener	
					AWI	HSWI	AWI	BWI	SSWI	VLWI	
	[mm]	[kg]	[kg]	[kg]							
I-leg chain sling											
	5	630	-	-	AWI 10-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6	
	7	1,250	-	-	AWI 13-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6	
	10	2,500	-	-	AWI 16-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6	
	13	4,250	-	-	AWI 22-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6	
	16	6,300	-	-	AWI 22-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6	
II-leg chain sling											
	5	-	850	630	AWI 10-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6	
	7	-	1,750	1,250	AWI 16-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6	
	10	-	3,500	2,500	AWI 18-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6	
	13	-	5,950	4,250	AWI 22-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6	
	16	-	8,800	6,300	AWI 26-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6	
III-leg chain sling											
	5	-	1,300	940	AWI 13-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6	
	7	-	2,600	1,850	AWI 16-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6	
	10	-	5,250	3,750	AWI 22-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6	
	13	-	8,900	6,350	AWI 26-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6	
	16	-	13,200	9,400	AWI 32-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S1)	VLWI 16-6	
IV-leg chain sling											
	5	-	1,300	940	AWI 13-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6	
	7	-	2,600	1,850	AWI 16-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6	
	10	-	5,250	3,750	AWI 22-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6	
	13	-	8,900	6,350	AWI 26-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6	
	16	-	13,200	9,400	AWI 32-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6	

L = Effective working length according customer specification

Application instructions for shortening



Correct application



Correct application



Correct application



Wrong application



PCWI Stainless Steel Pump Chains

All round power packs.

These high-grade pump chains have a load capacity that ranges from 200 to max. 12,000 kg. Their welded design, solid construction and range of components makes them particularly suitable for submersible pumps and breathers in water and wastewater applications.

Systematic expediency

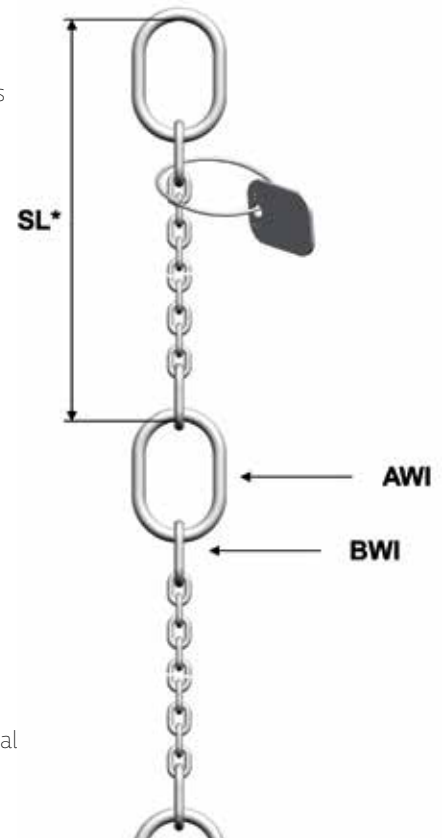
These pump chains are tested for perfection and serialised with a dedicated identification tag and test certificate, issued individually for each chain. Enlarged master links at the beginning, at segmented intervals and at the end of the chain make them ideally suited for step-by-step lowering, lifting or locking.

Upon request, we also offer customised variations:

- Two-legged system with "Y" for pumps equipped with 2 eye screws
- Alternative end fittings, such as eye hooks, BWI links or shackles
- Additional stabilisation chain
- Variation of standard segment length
- Customised models available
- Stainless steel hoist chains for pump stations are available upon request

We recommend safety shackles type SSWI for joining the pump to the chain.

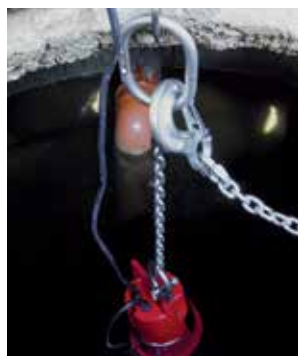
When placing an order, please indicate the desired total length of the chain or the number of segments as well as the end fitting (e.g. AWI Master link). Note: The actual length is a multiple of the segment length, plus the length of the end fitting!



Type [mm]	WLL [kg]	Master link	Dimensions AWI [mm]	Transition link	Dimensions BWI [mm]	Chain type	SL* Number of links	Segment length SL* [mm]	Length of master links/end links [mm]	Weight SL* [kg]
PCWI 4/200	200	AWI 6	6x60x35			WOX 4x12	77	984	60	0.39
PCWI 4/400	400	AWI 8	8x60x35	BWI 5	5x26x13	WOX 4x12	73	988	60	0.43
PCWI 5/560	560	AWI 8	8x60x35	BWI 7	7x36x16	WOX 5x15	53	943	60	0.62
PCWI 5/630	630	AWI 10	10x80x50	BWI 7	7x36x16	WOX 5x15	53	963	80	0.68
PCWI 6	850	AWI 10	10x80x50	BWI 7	7x36x16	WOX 6x18	47	998	80	0.90
PCWI 7	1,250	AWI 13	13x110x60	BWI 9	9x44x20	WOX 7x21	37	975	110	1.35
PCWI 8	1,600	AWI 13	13x110x60	BWI 10	10x44x20	WOX 8x24	33	990	110	1.70
PCWI 10	2,500	AWI 16	16x110x60	BWI 13	13x54x25	WOX 10x30	25	968	110	2.6
PCWI 13	3,500	AWI 18	18x135x75	BWI 16	17x70x34	WOX 13x39	19	1,016	160	4.50
PCWI 16	6,300	AWI 22	23x160x90	BWI 20	20x85x40	WOX 16x48	15	1,050	135	8.00
PCWI 20**	8,000	AWI 26	27x180x100	BWI 22	23x115x50	WOX 20x60	27	2,030	180	21
PCWI 26**	12,000	AWI 45	45x340x180	BWI 32	32x150x70	WOX 26x78	19	2,122	340	43.20

* SL consisting of 1 x AWI, 2 x BWI, WOX chain in standard length. PCWI 4/200 manufactured without transition links BWI.

** Made to order.



Welded System





Perfection, piece by piece: pewag winner inox stainless steel chain slings and endless chains in the welded system.

Below, you will find an overview of different combinations of stainless steel chain slings and components as well as endless chains. Of course, there are many more options available. We are also glad to supply customised variations upon request. The pewag customer service team is here to help!

1) WLL Reduction WOX 16 – SSWI 5 t-S:

On request also stronger shackles available.

I-leg chain	II-leg chain		III+IV-leg chain	
–	0-45°	45-60°	0-45°	45-60°
5,000	7,100	5,000	10,000	7,500

	Diameter d [mm]	WLL I-leg [kg]	WLL 0–45° [kg]	WLL 45–60° [kg]	*Top fitting		**Possible end fittings			
					Master link	Eye sling hook	Master link	Transition link	Shackle	Chain shortener
					AWI	HSWI	AWI	BWI	SSWI	VLWI
I-leg chain sling										
	4	400	-	-	AWI 8-6	-	AWI 8-6	BWI 5-6	SSWI 0.5t-S	-
	5	630	-	-	AWI 10-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	6	900	-	-	AWI 13-6	HSWI 5/6-6	AWI 13-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	7	1,250	-	-	AWI 13-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6
	8	1,600	-	-	AWI 13-6	HSWI 7/8-6	AWI 13-6	BWI 10-6	SSWI 2t-S	VLWI 7/8-6
	10	2,500	-	-	AWI 16-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6
	13	4,250	-	-	AWI 22-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6
	16	6,300	-	-	AWI 22-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6
20	8,000	-	-	AWI 26-6	-	AWI 26-6	BWI 26-6	SSWI 26-C	-	
26	12,000	-	-	AWI 45-6	-	AWI 45-6	BWI 32-6	SSWI 26-C	-	
II-leg chain sling										
	4	-	560	400	AWI 8-6	-	AWI 8-6	BWI 5-6	SSWI 0.5t-S	-
	5	-	850	630	AWI 10-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	6	-	1,250	900	AWI 13-6	HSWI 5/6-6	AWI 13-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	7	-	1,750	1,250	AWI 16-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6
	8	-	2,200	1,600	AWI 16-6	HSWI 7/8-6	AWI 13-6	BWI 10-6	SSWI 2t-S	VLWI 7/8-6
	10	-	3,500	2,500	AWI 18-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6
	13	-	5,950	4,250	AWI 22-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6
	16	-	8,800	6,300	AWI 26-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6
20	-	11,200	8,000	AWI 32-6	-	AWI 26-6	BWI 26-6	SSWI 26-C	-	
III-leg chain sling										
	4	-	840	600	VWI 4-6	-	AWI 8-6	BWI 5-6	SSWI 0.5t-S	-
	5	-	1,300	940	VWI 5/6-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	6	-	1,850	1,350	VWI 5/6-6	HSWI 5/6-6	AWI 13-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	7	-	2,600	1,850	VWI 5/6-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6
	8	-	3,350	2,400	VWI 8-6	HSWI 7/8-6	AWI 13-6	BWI 10-6	SSWI 2t-S	VLWI 7/8-6
	10	-	5,250	3,750	VWI 10-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6
	13	-	8,900	6,350	VWI 13-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6
	16	-	13,200	9,400	VWI 16-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6
IV-leg chain sling										
	4	-	840	600	VWI 4-6	-	AWI 8-6	BWI 5-6	SSWI 0.5t-S	-
	5	-	1,300	940	VWI 5/6-6	HSWI 5/6-6	AWI 10-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	6	-	1,850	1,350	VWI 5/6-6	HSWI 5/6-6	AWI 13-6	BWI 7-6	SSWI 1.25t-S	VLWI 5/6-6
	7	-	2,600	1,850	VWI 5/6-6	HSWI 7/8-6	AWI 13-6	BWI 9-6	SSWI 1.25t-S	VLWI 7/8-6
	8	-	3,350	2,400	VWI 8-6	HSWI 7/8-6	AWI 13-6	BWI 10-6	SSWI 2t-S	VLWI 7/8-6
	10	-	5,250	3,750	VWI 10-6	HSWI 10-6	AWI 16-6	BWI 13-6	SSWI 3.2t-S	VLWI 10-6
	13	-	8,900	6,350	VWI 13-6	HSWI 13-6	AWI 22-6	BWI 16-6	SSWI 5t-S	VLWI 13-6
	16	-	13,200	9,400	VWI 16-6	HSWI 16-6	AWI 22-6	BWI 20-6	SSWI 5t-S 1)	VLWI 16-6

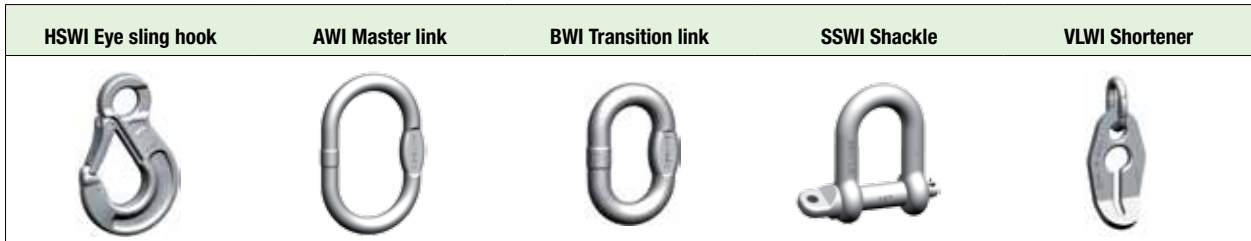
L = Effective working length according customer specification



pewag winner inox stainless steel chain slings are fully functional at a maximum working temperature of 350°C.

As top end fittings for welded chain slings, a master link or IV-legged assembly is assumed. For the bottom end fittings, customers may choose between the HSWI Eye hook, AWI Master link, BWI Transition link and SSWI Shackles.


Single chain legs may be shortened easily and safely using the VLWI Chain shortener.



Application instructions for shortening



Chain slings assembled with CWI Connex connectors are additionally possible in self-construction by technical experts.

SWI Endless chain	Code	Diameter d [mm]	WLL laced [kg]
These stainless steel endless chains are electrically welded for an extra-clean finish, with the same link dimensions as the chain, welded and tested at 100 % of the load capacity.			
	SWI 4	4	640
	SWI 5	5	1,000
	SWI 6	6	1,400
	SWI 7	7	2,000
	SWI 8	8	2,500
	SWI 10	10	4,000
	SWI 13	13	6,800
SWI 16	16	10,000	

Order example: WOX 7-6 mm SWI 4,000 endless chain with a circumferential length of 4 m.

As part of the comprehensive pewag service, all chain slings and endless chains in the welded system come with an identification tag and test certificate.





Shackles

75

Feel Confident in Every Situation

Our lifting systems are valued for their long durability and high quality. Whether the working environment is hot or cold, our systems assure lifting operations with high safety and functionality.

Gunnebo Lifting shackles are made from a range of steel qualities, including acid proof stainless steel and high grade alloy steel to comply with the most stringent specifications. Our workshops comprise all facilities and systems for the manufacturing and control of a top quality product. This includes tool design, an advanced tool shop, forging, heat treatment, machining, hot dip galvanizing and quality control.

We offer a range of DNV 2.7-1 Type approved lifting shackles of offshore for containers, developed for the tough conditions of the offshore industry, where safety must be of highest priority at all times. The heat treatment of these products ensures the proper ductility and strength to sustain shock loads which may be imposed when the container is lifted from the deck of a vessel.

Furthermore we offer Standard shackles, Super lifting shackles with increased working load limit, ROV shackles, Heavy duty shackles, Wide-Body shackles, Mooring shackles, Stainless Steel shackles etc.

Make sure you have the original

- High quality shackles acc. EN 13889 and U.S. Fed.Spec RR-C. 271 (grade A and grade B)
- Consistent product quality
- Long experience of shackle production using modern manufacturing methods
- Local availability expertise from Gunnebo Lifting subsidiary or distributors

To ensure you have a genuine Gunnebo Lifting Shackle, it should be marked as below:

- Company logo
- Grade
- Working load
- The bolt is marked with: Company logo, traceability code and grade
- Traceability code
- CE marking
- Dimension



Product documentation

Upon request at time of order, load rated products can be supplied with:

- Works certificate acc. EN 10204 - 2.1
- Sample certificate of raw material acc. EN 10204 - 3.1
- Test certificate
- Traceable rawmaterial / inspection certificate acc. EN 10204 - 3.1
- Third part proof load documentation



Gunnebo Lifting Standard Shackle No 834 and No 835

Dee shackles

Standard: DNV 2.7-1 Type-Approved, EN-13889 and U.S Fed. Spec. RR-C-271

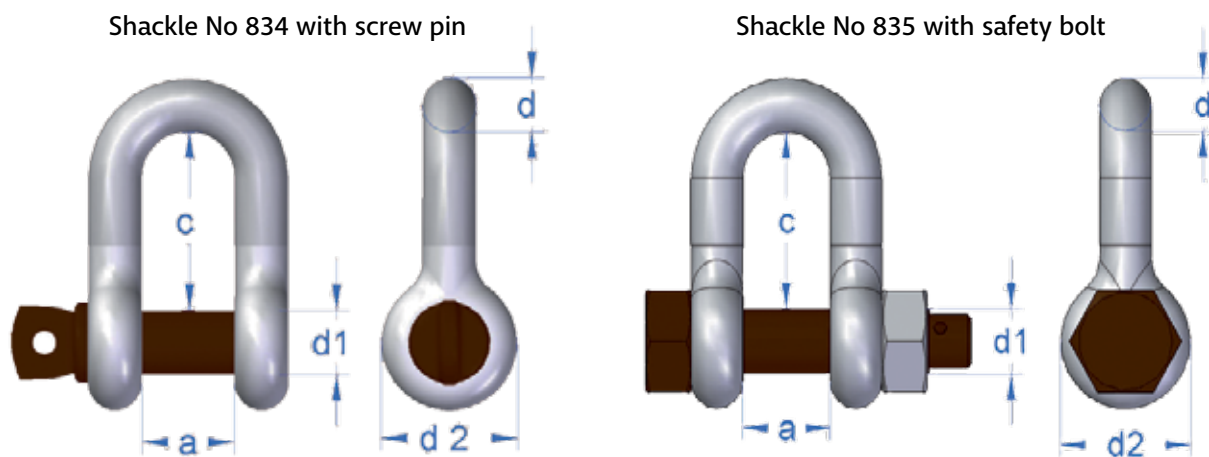
Material: High Tensile Carbon Steel, Quenched and tempered, Grade 6

Finish: All parts hot dip galvanized, brown painted pins on top of galv.

Safety factor: 6:1

Documentation: Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1.
 Sizes from 2 - 25 tonnes can be supplied with DNV 2.7-1 Type Approval Certification.

Temperature: -20°C to 200°C



Measurement in mm

Art. no. Screw pin	Art. no. Safety bolt	Dim. d1	Dim. d (mm - inch)	Inner width a*	Inner length c*	Eye outer d2	WLL (tonnes) 6:1	Screw pin (kgs)	Safety bolt (kgs)
A083405	-	6	5 - 3/16"	10	22	13	0.33	0.02	-
A083406	-	8	7 - 1/4"	12	25	12	0.5	0.06	-
A083408	-	10	9 - 5/16"	13.5	27	16	0.75	0.11	-
A083409	-	11	10 - 3/8"	17	31	20	1	0.15	-
A083411	-	13	11 - 7/16"	18.5	37	22	1.5	0.21	-
A083413	A083513	16	13 - 1/2"	21	41	33	2	0.25	0.30
A083416	A083516	19	16 - 5/8"	27	51	40	3.25	0.55	0.60
A083419	A083519	22	19 - 3/4"	31	60	47	4.75	1.00	1.10
A083422	A083522	25	22 - 7/8"	37	71	50	6.5	1.30	1.50
A083425	A083525	28	25 - 1"	43	81	58	8.5	1.90	2.20
A083428	A083528	32	28 - 1.1/8"	46	90	64	9.5	2.80	3.10
A083432	A083532	35	32 - 1.1/4"	52	100	72	12	3.60	4.20
A083435	A083535	38	35 - 1.3/8"	57	111	74	13.5	4.60	5.60
A083438	A083538	42	38 - 1.1/2"	60	122	84	17	6.50	7.50
A083445	A083545	50	45 - 1.3/4"	74	149	105	25	11.50	13.00
A083452	A083552	57	50 - 2"	83	171	127	35	16.00	18.00
-	A083564	70	65 - 2.1/2"	105	203	152	55	-	39.00

* Forging tolerance: +/- 5% on inside width/length.

Standard Shackle No 854 and No 855

Bow shackles

Standard: DNV 2.7-1 Type-Approved, EN-13889 and U.S Fed. Spec. RR-C-271

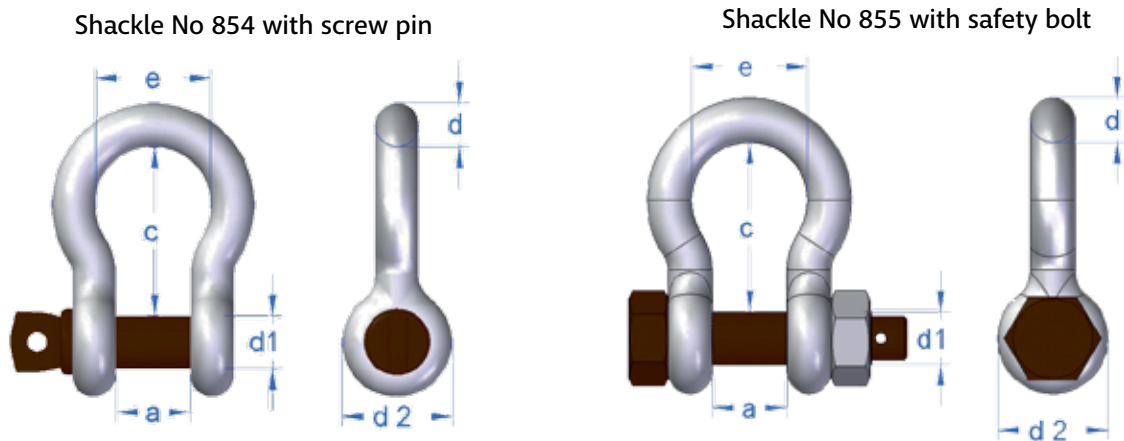
Material: High Tensile Carbon Steel, Quenched and tempered, Grade 6

Finish: All parts hot dip galvanized, brown painted pins on top of galv.

Safety factor: 6:1

Documentation: Test certificate and traceable raw material / inspection certificate acc. EN-10204 - 3.1.
Sizes from 2 - 25 tonnes can be supplied with DNV 2.7-1 Type Approval Certification.

Temperature: -20°C to 200°C



Measurement (mm)

Art. no. Screw pin	Art. no. Safety bolt	Dim. d1	Dim. d (mm - inch)	inner width a*	inner length c*	Bow width e	Eye outer d2	WLL (tonnes) 6:1	Screw pin (kgs)	Safety bolt (kgs)
A085405	-	6	5 - 3/16"	10	22	16	13	0,33	0.02	-
A085406	A085506	8	6 - 1/4"	12	29	20	16	0.5	0.06	0.07
A085408	A085508	10	8 - 5/16"	13	32	21	20	0.75	0.11	0.13
A08409	A085509	11	9 - 3/8"	16	36	26	22	1	0.15	0.17
A085411	A085511	13	11 - 7/16"	18	43	29	26	1.5	0.21	0.25
A085413	A085513	16	13 - 1/2"	21	47	33	33	2	0.37	0.42
A085416	A085516	19	16 - 5/8"	27	60	42	40	3.25	0.65	0.70
A085419	A085519	22	19 - 3/4"	31	71	51	47	4.75	1.10	1.20
A085422	A085522	25	22 - 7/8"	37	84	58	50	6.5	1.50	1.70
A085425	A085525	28	25 - 1"	43	95	68	58	8.5	2.20	2.50
A085428	A085528	32	28 - 1.1/8"	46	108	74	64	9.5	3.10	3.40
A085432	A085532	35	32 - 1.1/4"	52	119	83	72	12	4.20	4.80
A08545	A085535	38	35 - 1.3/8"	57	132	89	74	13.5	6.00	7.00
A085438	A085538	42	38 - 1.1/2"	60	146	98	84	17	8.00	9.00
A085445	A085545	50	45 - 1.3/4"	74	178	127	105	25	13.50	15.00
A085452	A085552	57	50 - 2"	83	197	138	127	35	19.00	21.00
-	A085556	65	57 - 2.1/4"	95	222	160	140	42.5	-	28.50
A085464	A085564	70	65 - 2.1/2"	105	255	185	152	55	38.00	39.00
-	A085576	83	75 - 3"	127	330	190	165	85	-	62.00
-	**A085589	95	89 - 3.1/2"	146	380	235	203	120 (5:1)	-	110.00

* Forging tolerance: +/- 5% on inside width/length.

** Safety factor 5:1

Arctic Shackle No 856

Bow shackle with safety bolt

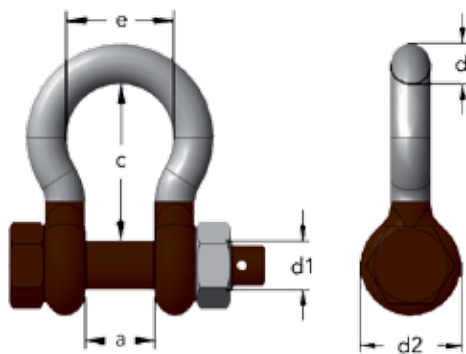
Unique Benefits with The Arctic Shackle

Adverse weather and rough sea conditions in combination with extremely low temperatures, as often encountered in the North Sea for instance, places tough requirements on the products used. Gunnebo Lifting has a range of shackles specially designed for these conditions: The Arctic Shackle. This shackle is type approved to DnV 2.7-1 Offshore containers and meets the impact requirements of 42 J at - 40 degrees oC.

The Arctic Shackle is a grade 8 shackle with all parts hot dipped galvanized, including the safety pin, and has the characteristic brown colour marking.



Standard:	DNV 2.7-1, U.S. Fed. Spec. RR.C-271 and EN-13889
Material:	Special Alloy Steel, Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown colour marking
Safety factor:	As specified in the table below
Documentation:	Test certificate and traceable raw material / inspection certificate acc. EN-10204 - 3.1 All sizes can be supplied with DNV 2.7-1 Type Approval Certification.
Temperature:	- 40 °C to 200 °C



Art. no.	d1	Dim. d (mm - inch)	a	c	d 2	e	WLL (tonnes)	Weight (kgs)	Safety factor
A085613	16	13 - 1/2"	21	47	33	33	2	0.42	8.00
A085616	19	16 - 5/8"	27	60	40	42	3.3	0.7	8.00
A085619	22	19 - 3/4"	31	71	47	51	4.8	1.2	8.00
A085622	25	22 - 7/8"	37	84	52	58	6.5	1.7	7.85
A085625	28	25 - 1"	43	95	58	68	8.5	2.5	7.25
A085628	32	28 - 1.1/8"	46	108	64	74	9.5	3.4	6.94
A085632	35	32 - 1.1/4"	52	119	72	83	12	4.8	6.40
A085635	38	35 - 1.3/8"	57	132	74	89	13.5	7	6.10
A085638	42	38 - 1.1/2"	60	146	84	98	17	9	6.00
A085645	50	45 - 1.3/4"	74	178	105	127	25	15	6.00
A085652	57	50 - 2"	83	197	119	138	35	21	6.00
A085664	70	65 - 2.1/2"	105	255	145	185	55	39	6.00
A085676	83	75 - 3"	127	330	165	190	85	62	6.00

Super Shackle No 858

Bow shackle with safety bolt

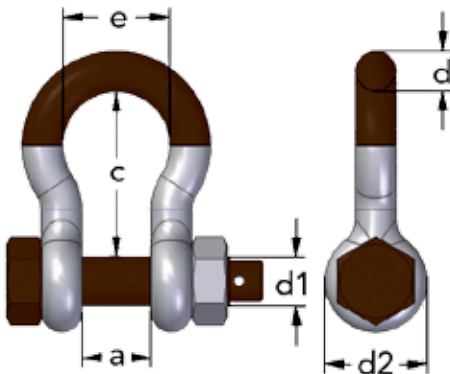
Unique Benefits with The Super Shackle

In certain situations, a demand for extra Working Load Limit occurs, in others the lifting environment has limited space for the lifting application. Gunnebo Lifting has therefore added the Super Shackle to the range, enabling the same Working Load Limit on a 22 mm Super shackle as for a 28 mm Standard shackle.

The Gunnebo Lifting Super shackle meets the US Federal Specification RR.C-271. It is a grade 8 shackle and has all parts hot dipped galvanized, including the safety pin.



Standard:	U.S. Fed. Spec. RR.C-271 Type IVA Class 3, Grade B
Material:	High Tensile Steel. Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown colour marking
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate



Split pin included

Art.no	d1	Dim. d (mm - inch)	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A085813	16	13 - 1/2"	21	51	33	33	3.3	0.4
A085816	19	16 - 5/8"	27	60	40	42	5	0.7
A085819	22	19 - 3/4"	31	71	47	51	7	1.2
A085822	25	22 - 7/8"	37	84	52	58	9.5	1.7
A085825	28	25 - 1"	43	95	58	68	12.5	2.5
A085828	32	28 - 1 1/8"	46	108	64	74	15	3.4
A085832	35	32 - 1 1/4"	52	119	72	83	18	4.8
A085835	38	35 - 1 3/8"	57	132	74	89	21	7
A085838	42	38 - 1 1/2"	60	146	89	99	30	8.8
A085845	50	45 - 1 3/4"	74	178	105	126	40	15
A085857	57	57 - 2 1/4"	83	197	117	138	55	22
A085870	70	70 - 2 3/4"	105	260	143	180	85	38
A085883	83	83 - 3 3/4"	127	329	162	190	120	70
A085895	95	95 - 3 3/4"	144	400	208	238	150	112

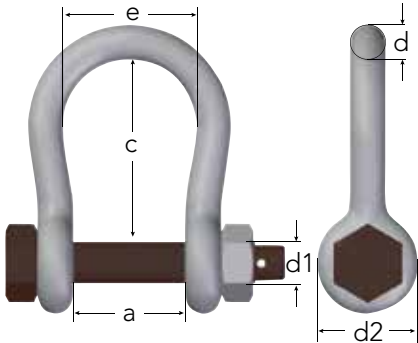
Fishing and aquaculture

Mooring Shackle No 852

Standard: Third party approved acc. to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking



Art.no	Dim. d (mm - inch)	MBL (tonnes)	a	c	e	d2	d1
A085219	19 - 3/4"	28	44	100	58	47	22
A085222	22 - 7/8"	40	52	125	68	50	25
A085228	28 - 1 1/8"	60	62	150	89	58	28
A085232	32 - 1 1/4"	90	82	170	98	72	32
A085245	45 - 1 3/4"	150	126	248	140	105	50

Available Safety Pins

Plastic clip (28T - 40T Yellow / 60-90 Green)

Green seizing wire

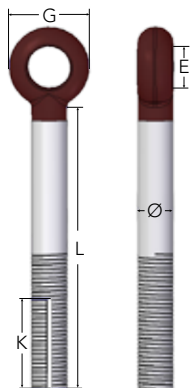
- Steel core with 5-10 mm zinc coat and also PVC coated

Yellow/green seizing wire (dim Ø5,5 mm x 250 mm)

Split pin (dim Ø 5,5 mm x 40 mm)

- Copper core (Ø4,0 mm PVC coated)

- Can be delivered electric plated or acid proof

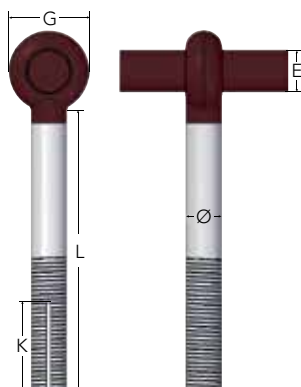


Gunnebo Lifting Mooring bolts - Eye Bolt no. 8250

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking

Art.no	dim Ø x L	MBL	G	E
A825032	Ø32 x 400	40 T	72	38
A825038	Ø38 x 500	60 T	84	46
A825045	Ø45 x 600	80 T	105	54



Gunnebo Lifting Mooring bolts - T-bolt no. 8252

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking

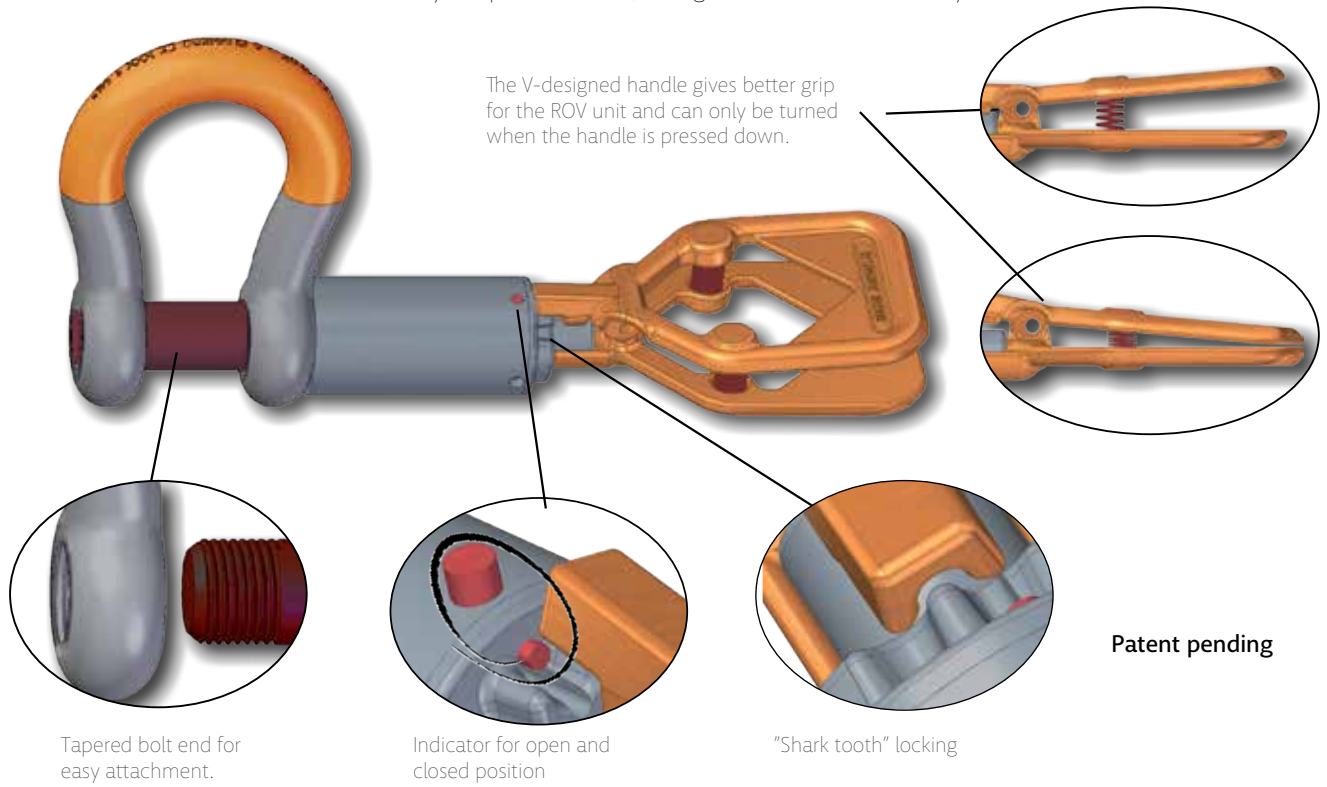
Art.no	dim Ø x L	MBL	G	E	L
A825232	Ø32 x 400	40 T	72	35	400
A825235	Ø35 x 400	50 T	76	38	400
A825238	Ø38 x 500	60 T	84	42	500
A825245	Ø45 x 600	80 T	105	45	600
A825250	Ø50 x 700	100 T	110	50	700

ROV Shackles

The ROV Retrieve Shackle is designed for smooth and easy use in retrieving and releasing subsea lifting and rigging operations. It has no loose parts, in closed or opened position, and there is therefore no need for wires or monkey fists that will risk snagging or getting in the way.

The high visibility handles are close-die forged and has double safety functions - shark tooth locking with indicator that will show if the shackle is in open or locked position as well as the spring loaded handle. The handle is the same size, regardless of size of shackle.

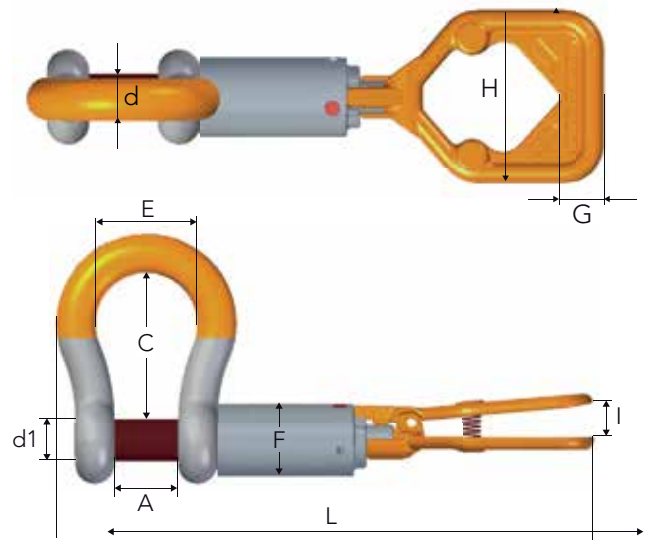
The ROV Retrieve Shackle no. 861 is an easy to operate shackle, saving valuable time and money.



ROV Retrieve Shackle No 861

All shackles have unique marking

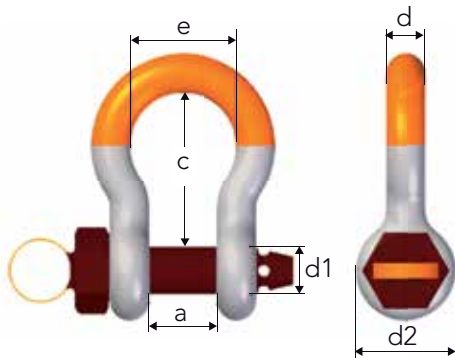
- Standard: Dim. according to EN 13889
- Material: High Tensile Steel, Quenched and Tempered
- Finish: All load bearing parts hot dip galvanized
- Safety factor: 6:1
- Documentation: Test certificate and traceable 3.1 certificate can be supplied on request
- Impact values: -40 °C to 200 °C, 42 Joule



Art. no	d1	d	A	C	E	F	L	I	H	G	WLL (tonnes)	Weight (kg)
A086132	35	32	52	119	83	60	460	31	132	33	12	8.0
A086138	42	38	60	146	98	63.5	501	31	132	33	17	10.5
A086145	50	45	74	178	127	70	565	31	132	33	25	16.5
A086152	57	50	83	197	138	76	604	31	132	33	35	20.5
A086164	70	65	105	255	185	88	712	31	132	33	55	42.0

ROV Shackle no. 860 Threaded bolt with locking pin

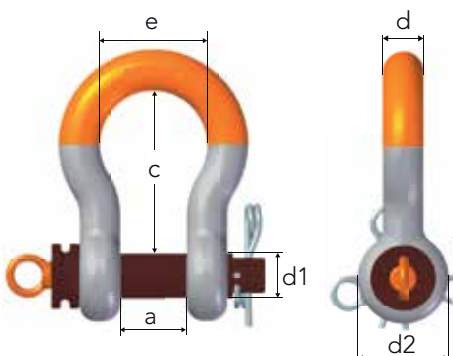
Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	6:1
Documentation:	Test certificate and traceable 3.1 certificate can be supplied on request
Temperature:	-20 °C to 200 °C



Art. no.	d1	d	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A086025	28	25	43	95	60	68	8.5	2.7
A086028	32	28	46	108	64	74	9.5	3.4
A086032	35	32	52	119	72	83	12	5.0
A086038	42	38	60	146	84	98	17	7.8
A086045	50	45	74	178	105	127	25	13.9
A086052	57	50	83	197	127	138	35	17.0
A086064	70	65	105	255	152	185	55	37.0

ROV Release Shackle no. 863

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate can be supplied on request
Temperature:	-20 °C to 200 °C



Art. no.	d1	d	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A086322	25	22	37	84	52	58	6.5	1.6
A086328	32	28	46	108	64	74	9.5	3.4
A086332	35	32	52	119	72	83	12	5.0
A086338	42	38	60	146	84	98	17	7.8
A086345	50	45	74	178	105	127	25	13.9
A086352	57	50	83	197	127	138	35	17.0
A086364	70	65	105	255	152	185	55	37.0

All dimensions in mm

Technical Information

The Machinery Directive 2006/42/EC highlights the responsibility of the manufacturer, distributor and end user of lifting gear.

Gunnebo shackles are specified, monitored and documented in compliance with the most stringent requirements for the product concerned. A certified ISO 9001-2000 system is an evidence of our quality standard.

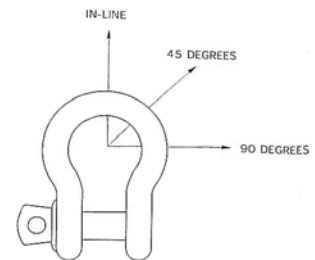
Instructions For Safe Use

1. The user is obliged to keep a valid Test Certificate for any shackle being used in a lifting operation.
2. Before use each shackle should be inspected to ensure that:
 - all markings in the body and the pin of the shackle are legible and in compliance with the relevant Test Certificate.
 - the shackle pin is of the correct type.
 - the body and pin shall not be distorted or unduly worn.
 - The body and pin are free from nicks, cracks, grooves and corrosion.
 - If there is any doubt with regards to the above criteria being met, the shackle should not be used for a lifting operation.
3. It is important to ensure that the pin is safely locked after assembly. For repeated lifting between inspections of the gear, it is recommended to use a safety bolt type shackle with nut and split-pin - the user must ensure that the split-pin is fitted, to prevent the nut from unscrewing during use.
4. Incorrect seating of a pin may be due to a bent pin, damaged threads or misalignment of the holes. Do not use the shackle under these circumstances, but refer the matter to a competent person (i.e. dealer, manufacturer)
5. Shackles should be fitted to the load in a manner that allows the shackle body to take the load in a true line along its centreline to avoid undue bending stresses which will reduce the load capacity of the shackle. When using shackles in conjunction with multi-leg slings, due consideration should be given to the effect of the angle between the sling legs. When a shackle is used to secure the top block of a set of rope blocks the load on this shackle is increased by the value of the hoisting effect.
6. To avoid eccentric loading of the shackle it is recommended to distribute the load as far as possible over the total length of the pin or to use loose spacers.
7. Never modify, repair or reshape a shackle by welding, heating or bending as this will affect the nominal WLL.
8. Never heat treat a shackle as this may affect the WLL.

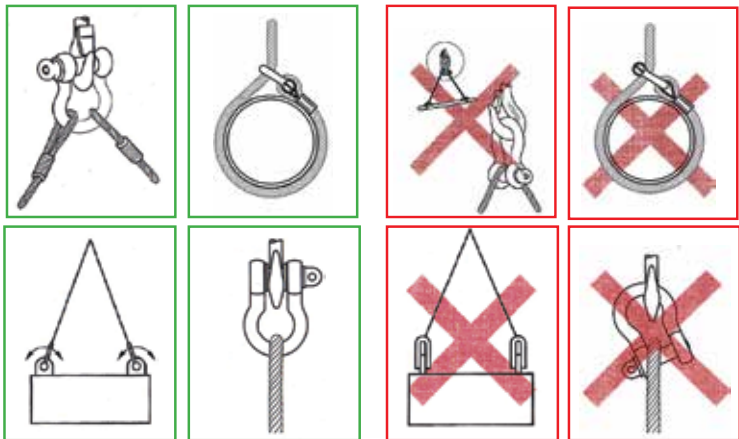
Side loads should be avoided as the products are not designed for this purpose. If side loads cannot be avoided, the following reduction factors must be taken into account:

Reduction for side loading

Load angle	New Working Load Limit
0°	100% of original WLL
45°	70% of original WLL
90°	50% of original WLL



Avoid applications where, due to load movement, the shackle pin can rotate



Shackle must be loaded in straight direction

Temperature

If extreme temperature situations are applicable, the following load reductions must be taken into account

Reduction for elevated temperatures

Temperature:	New Working Load Limit
0 - 200 °C	100% of original Working Load Limit
200 - 300 °C	90% of original Working Load Limit
300 - 400 °C	75% of original Working Load Limit
> 400 °C	not allowed



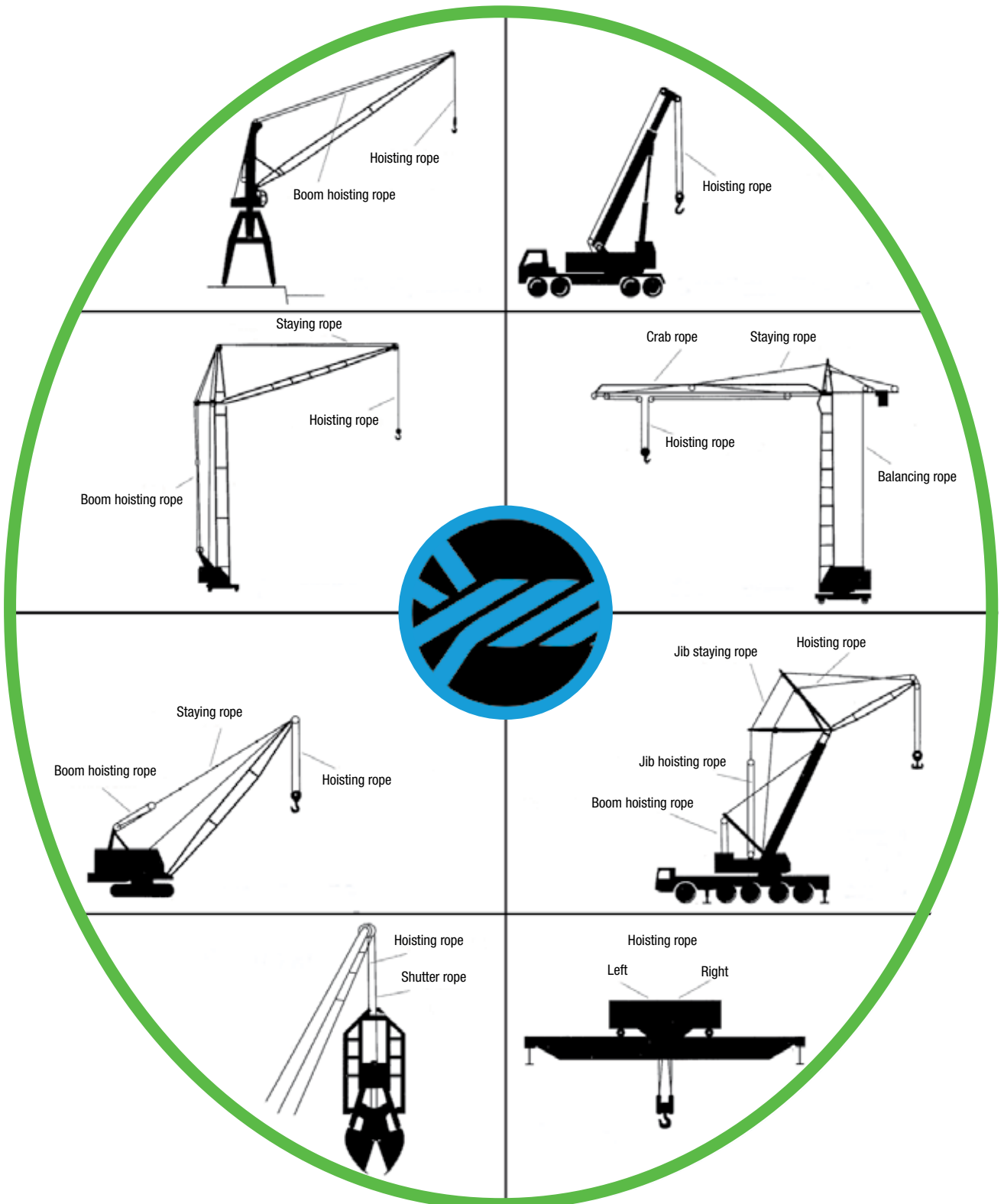


Wire Rope and
Accessories

87

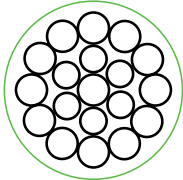
Technical information

Crane Types and Rope Names

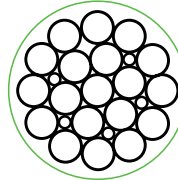


Strand Designs

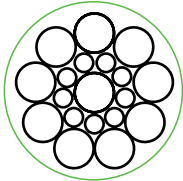
Standard constructions



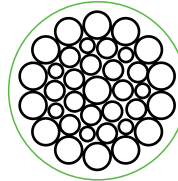
Round Strand
All rope wires have the same diameter.



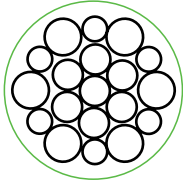
Filler wires 1x25 (12/6F+6/1)
The wires in the outer and inner layers have the same diameter. The space between the layers is filled up by wires with another diameter.



Seale 1x19 (9/9/1)
Every layer has a different wire diameter. All layers have the same amount of wires.



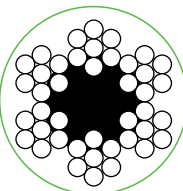
Warrington - Seale 1x36 (14/7+7/7/1)
This design is a combination of Warrington and Seale.



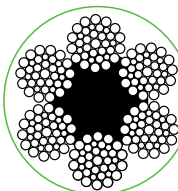
Warrington 1x19 (6+6/6/6/1)
The outer layer consists of wires with two different diameters.

Example of rope sections

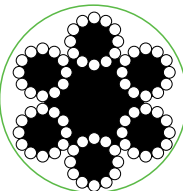
Standard constructions



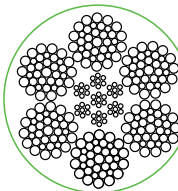
6x7 + FC



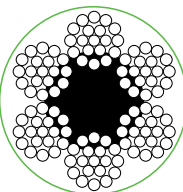
6X36 WS+FC



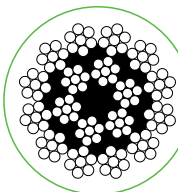
6x12 +7 FC



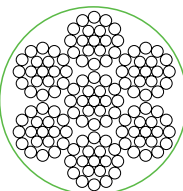
6x36 WS+IWRC



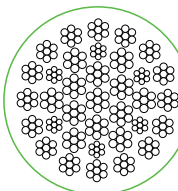
6x19 +FC



18x7 +WSC



6x19 +WSC



35x7

Standard steel wire

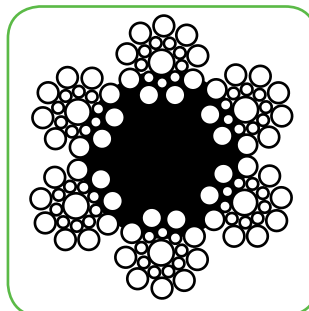
6x19 + FC

According to EN 12385-4

Construction: 6x19+FC
Surface treatment: Galvanized

Fields of application

- Cranes
- Lifting equipment
- Hoists
- Elevators
- Winches
- Ski lifts



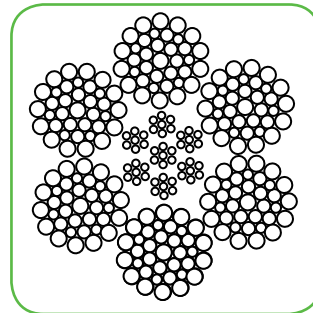
Fill factor. F = 49%

Nominal diameter d		Approx. mass mm ²	Weight ca kgs/100 m	Min. breaking load	
mm	tol. %			1770 N/mm ² kN	180 kp/mm ² kp
3	+8-0	3.2	3.0	4.9	500
4	+7-0	5.7	5.4	8.7	887
5	+7-0	9.6	9.0	14.6	1490
6	+6-0	13.8	12.9	21.0	2140
7	+6-0	18.8	17.6	28.6	2920
8	+5-0	24.6	23.0	37.4	3810
9	+5-0	31.2	29.1	47.3	4830
10	+5-0	38.5	35.9	58.4	5960
11	+5-0	46.5	43.3	70.7	7210
12	+5-0	55.4	51.7	84.1	8580
13	+5-0	65.0	60.7	98.7	10100
14	+5-0	75.4	70.4	114	11700
16	+5-0	98.5	91.9	150	15300
18	+5-0	125.0	116	189	19300
20	+5-0	154.0	144	234	23800
22	+5-0	186.0	174	283	28800
24	+5-0	222.0	207	336	34300
26	+5-0	260.0	243	395	40300
28	+5-0	302.0	281	458	46700
32	+5-0	394.0	368	598	61000
36	+5-0	499.0	465	757	77200

6x36 WS + IWRC

According to EN 12385-4

Construction: 6x36 WS + IWRC
Surface treatment: Galvanized



Fill factor, F = 58%

Fields of application

- Cranes
- Winches
- Bar
- Towing
- Offshore
- Elevator
- Forrest winches
- Pile driver
- Excavator

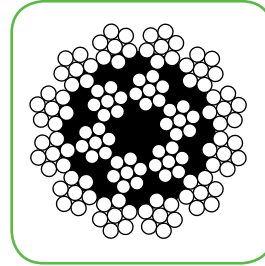
Nominal diameter d		Approx. mass mm ²	Weight ca kgs/100 m	Min. breaking load			
mm	tol. %			1770 N/ mm ² kN	180 kp/mm ² kp	1960 N/ mm ² kN	200 kp/mm ² kp
10	+5-0	46	40.9	63.0	6420	69.8	7120
11	+5-0	55	49.5	76.2	7770	84.5	8620
12	+5-0	66	58.9	90.7	9230	100	10200
13	+5-0	77	69.1	106	10800	118	12040
14	+5-0	89	80.2	124	12600	137	13970
16	+5-0	117	105	161	16400	179	18260
18	+5-0	148	133	204	20700	226	23050
19	+5-0	166	148	227	23150	252	25700
20	+5-0	182	164	252	25900	279	28460
22	+5-0	220	198	305	31000	338	34480
24	+5-0	262	236	363	36900	402	41000
26	+5-0	308	276	426	43400	472	48140
28	+5-0	357	321	494	50300	547	55790
30	+5-0	410	376	566	57700	628	64060
32	+5-0	466	419	645	65700	715	72930
34	+5-0	532	473	728	74200	800	81600
36	+5-0	590	530	817	83300	904	92200
38	+5-0	664	591	910	92800	1008	102800
40	+5-0	729	654	1010	103000	1120	114200
44	+5-0	882	792	1220	124400	1350	137700
48	+5-0	1050	942	1450	147900	1610	164200
51	+5-0	1184	1100	1640	167000	1816	185230
54	+5-0	1328	1240	1840	188000	2036	207670
57	+5-0	1479	1390	2050	209000	2269	231440
60	+5-0	1694	1560	2270	231540	2514	256430
64	+5-0	1866	1730	2688	274000	2860	291720

Stainless steel wire

18x7 + 1 WSC

According to EN 12385-4

Construction: 18x7 + 1 WSC
Surface treatment: Galvanized



Fill factor. F = 52%

Fields of application

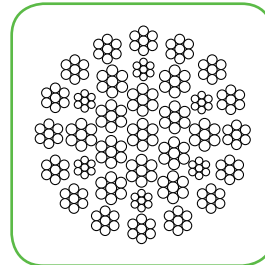
- Building cranes

Nominal diameter d		Approx. mass mm ²	Weight ca kgs/100 m	Min. breaking load	
mm	tol. %			1960 N/mm ² kN	200 kp/mm ² kp
5	+6-1	10.2	10.0	15.6	1591
6	+5-1	14.7	14.5	23.1	2350
7	+5-1	20.0	19.7	31.5	3210
8	+4-1	26.1	24	41.1	4190
9	+4-1	33.1	31	52.1	5310
10	+4-1	40.8	38	64.3	6550
11	+4-1	49.4	46	77.8	7930
12	+4-1	58.8	55	92.6	9440

35x7 Non-rotating

According to EN 12385-4

Construction: 35x7
Surface treatment: Galvanized



Fill factor. F = 61%

Fields of application

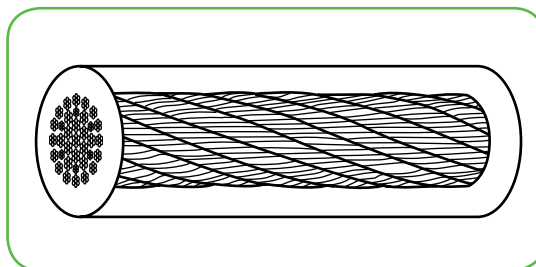
- Building cranes
- Mobile cranes

Nominal diameter d		Approx. mass mm ²	Weight ca kgs/100 m	Min. breaking load 1960 N/mm ² kN
mm	tol. %			
8	+5-0	30.7	29.1	45.2
9	+5-0	38.9	36.8	57.2
10	+5-0	48.0	45.4	70.6
11	+5-0	58.1	54.9	85.4
12	+5-0	69.1	65.4	102.0
13	+5-0	81.1	76.7	119.0
14	+5-0	94.1	89.0	138.0
16	+5-0	123.0	116.0	181.0
18	+5-0	156.0	147.0	229.0
20	+5-0	192.0	182.0	282.0
22	+5-0	232.0	220.0	342.0
24	+5-0	276.0	262.0	406.0
26	+5-0	324.0	307.0	477.0
28	+5-0	376.0	356.0	553.0
32	+5-0	492.0	465.0	723.0
36	+5-0	622.0	588.0	914.0
38	+5-0	693.0	656.0	1020.0

PVC-Coated Steel Wire

Fields of application

- Locking straps
- Cover wire rope



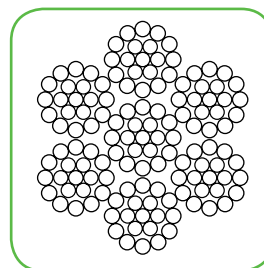
Nominal diameter mm	Rope wire	PVC application	Weight ca kgs/100 m	Min. breaking load vid 1770 N/mm ² kp
2.0-3.0	42 wire FZ	Clear	2.0	248
3.0-5.0	42 wire FZ	Clear	5.0	536
4.0-6.0	42 wire FZ	Clear	8.0	963
3.0-6.0	72 wire FZ TIR	Clear	6.0	338
4.0-5.5	72 wire FZ	Red	7.0	601
4.0-5.5	72 wire FZ	White	7.0	601
4.0-6.0	19 wire Stainless (1570)	White	9.0	1400

6 x 19 + WSC, Stainless Steel

Construction: 6x19+WSC
Material: AISI 316

Fields of application

- Lifting equipment
- Cranes
- Hoists
- Winches



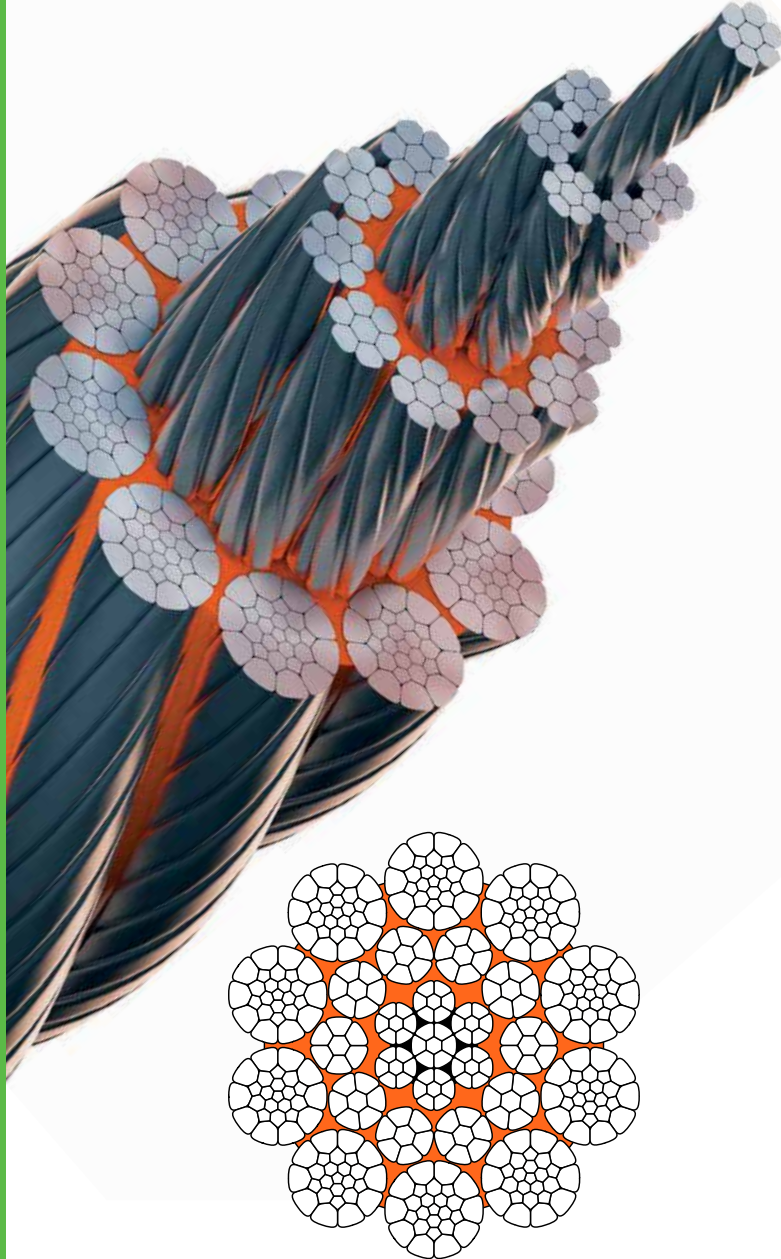
Fill factor . F = 52%

Nominal diameter d mm	tol. %	Approx. mass mm ²	Weight ca kgs/100 m	Min. breaking load	
				1570 N/mm ² kN	160 kp/mm ² kp
3	+7-1	3.9	3.4	4.8	488
4	+6-1	6.9	6.1	9.8	1000
5	+6-1	10.8	9.5	13.1	1330
6	+5-1	15.6	13.8	18.7	1900
8	+4-1	27.6	24.3	33.4	3400
10	+4-1	43.2	38.0	52.1	5300
12	+4-1	62.2	54.7	75.6	7700

High Performance Hoisting Rope

Combines unmatched bending fatigue resistance with excellent breaking strength.

verotech 10 is a very flexible 10-strand, Non-rotation-resistant rope in parallel lay construction with compacted strands and a rope core covered with a plastic layer.



- verotech 10 provides excellent breaking strength.
- verotech 10 has a very stable rope structure and achieves unmatched bending fatigue resistance.
- verotech 10 offers excellent resistance to crushing and abrasion.
- verotech 10 possesses perfect spooling behavior on multilayer drum.
- verotech 10 may not be used with a swivel.

The rope is fully lubricated. The finish available as standard is galvanized, bright Finish on request.

- Average Fill factor 0.732
- Lay type: Ordinary Lay Rope Category Number (RCN) to determine the number of visible broken outer wires, signaling discard of rope acc. ISO 4309: RCN =11

Nominal rope diameter		Approx mass	Minimum breaking force			
			Rope grade			
			1960		2160	
mm*	inch	kg/m	kN	t	kN	t
6		0.178	34.9	3.6	38.0	3.9
7		0.242	47.5	4.8	51.7	5.3
8	5/16	0.316	62.0	6.3	67.6	6.9
9		0.400	78.5	8	85.5	8.7
10		0.494	96.9	9.9	105.6	10.8
11	7/16	0.598	117.3	12	127.7	13
12		0.712	139.5	14.2	152.0	15.5
12.7	1/2	0.797	156.3	15.9	170.2	17.3
13		0.836	163.8	16.7	178.4	18.2
14		0.969	189.9	19.4	206.9	21.1
15		1.112	218.0	22.2	237.5	24.2
16	5/8	1.266	248.1	25.3	270.2	27.5
17		1.429	280.1	28.5	305.1	31.1
18		1.602	314.0	32	342.0	34.8
19	3/4	1.785	349.8	35.6	381.0	38.8
20		1.978	387.6	39.5	422.2	43
21		2.180	427.4	43.6	465.5	47.4
22		2.393	469.0	47.8	510.9	52.1
22.4		2.481	486.2	49.5	529.6	54
23		2.616	512.6	52.2	558.4	56.9
24		2.848	558.2	56.9	608.0	62
25		3.090	605.7	61.7	659.7	67.2
25.4	1	2.190	625.2	63.7	681.0	69.4
26		3.342	655.1	66.8	713.5	72.7
27		3.604	706.5	72	769.5	78.4
28		3.876	759.8	77.4	827.5	84.3
28.6	1-1/8	4.044	792.7	80.8	863.4	88
29		4.158	815.0	83	887.7	90.5
30		4.450	872.2	88.9	950.0	96.8
31		4.751	931.3	94.9	1014	103.3
32	1-1/4	5.063	992.3	101.1	1081	110.2
33		5.384	1055	107.5	1149	117.1
34		5.716	1120	114.1	1220	124.3

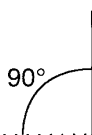
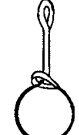


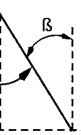


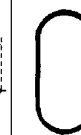
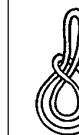

*Standard tolerance: +2% to +4%, other tolerances possible upon agreement.
Other and special rope diameters are available upon request.

Errors and omissions excepted! The cross-section shows a typical rope diameter and can vary within the range.
Subject to modifications, this may change the specifications.

Steel wire equipment

Load Table for Steel Wire Slings with Fibre Core

The table is based on tensile grade 1770/1960 N/mm² and states max. load for the most common wire constructions (Ø 3-7 mm 114-tr 1770N/mm², Ø 8-60 mm 216-tr 1960 N/mm²) used for slings.

Nom. Ø mm	Max WLL i tonnes									
	1-leg			2-leg*		3- & 4-leg*		Endless		
	 Straight	 Choked	 U-shaped	 α 0°-90° β 0°-45°	 α 90°-120° β 45°-60°	 α 0°-90° β 0°-45°	 α 90°-120° β 45°-60°	 Straight	 Choke hitch	 Parallel choke hitch
3	0.09	0.07	0.18	0.12	0.09	0.19	0.13	0.18	0.14	0.36
4	0.15	0.12	0.30	0.21	0.15	0.31	0.22	0.30	0.24	0.60
5	0.25	0.20	0.50	0.35	0.25	0.50	0.35	0.50	0.40	1.00
6	0.35	0.28	0.70	0.50	0.35	0.70	0.50	0.70	0.55	1.40
7	0.50	0.40	1.00	0.70	0.50	1.00	0.75	1.00	0.80	2.00
8	0.75	0.60	1.50	1.10	0.75	1.60	1.10	1.40	1.20	3.00
9	0.90	0.80	1.80	1.26	0.90	2.00	1.40	1.80	1.50	3.60
10	1.20	0.95	2.40	1.70	1.20	2.50	1.80	2.40	1.90	4.80
11	1.40	1.10	2.80	2.00	1.40	3.00	2.20	2.80	2.30	5.60
12	1.70	1.30	3.40	2.40	1.70	3.60	2.60	3.40	2.70	6.80
13	2.00	1.60	4.00	2.80	2.00	4.20	3.00	4.00	3.20	8.00
14	2.30	1.80	4.60	3.20	2.30	4.80	3.50	4.60	3.70	9.20
16	3.00	2.40	6.00	4.20	3.00	6.30	4.50	6.00	4.80	12.00
18	3.80	3.10	7.60	5.30	3.80	8.00	5.70	7.60	6.10	15.20
20	4.70	3.80	9.40	6.60	4.70	10.00	7.10	9.40	7.60	18.80
22	5.70	4.60	11.40	8.00	5.70	12.00	8.50	11.40	9.20	23.00
24	6.80	5.40	13.60	9.50	6.80	14.30	10.20	13.60	11.00	27.00
26	8.00	6.40	16.00	11.20	8.00	16.80	12.00	16.00	12.80	32.00
28	9.30	7.40	18.60	13.00	9.30	19.50	14.00	18.60	15.00	37.00
32	12.00	9.70	24.00	16.80	12.00	25.50	18.00	24.00	19.50	48.00
36	15.00	12.00	30.00	21.00	15.00	32.00	23.00	30.00	25.00	60.00
40	19.00	15.00	38.00	27.00	19.00	40.00	28.50	38.00	30.00	76.00
44	23.00	18.00	46.00	32.00	23.00	48.00	34.00	46.00	37.00	92.00
48	27.00	22.00	54.00	38.00	27.00	57.00	41.00	54.00	44.00	108.00
52	32.00	26.00	64.00	45.00	32.00	67.00	48.00	64.00	51.00	128.00
56	37.00	30.00	74.00	52.00	37.00	78.00	56.00	74.00	60.00	148.00
60	43.00	34.00	86.00	60.00	43.00	90.00	64.00	86.00	68.00	172.00

* When multiple legs are used in a lift with a choked sling - reduce the value by 20%

When planning a lift where technical data on weight, centre of gravity etc. are known, trigonometry may be used for calculating the maximum load on the lifting equipment. Basis for the calculation is the column for 1-legged slings, on the following formula:

$$WLL = \frac{F_{min} \times KT}{Z_p \times g}$$

where

F_{min} = The minimum breaking load of the rope in kN

KT = allowed factor for the efficiency of the termination

KL = is the leg factor related to the number of legs and the angle to the vertical

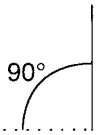
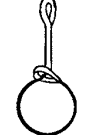
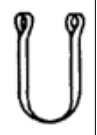
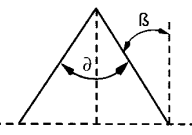
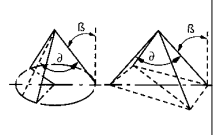



Z_p = safety factor 5

g = 9.81

The calculation yields the max. load on each leg when the lifting angle is 0°, rounded off to the nearest hundred kilos.

Load Table for Steel Wire Slings with Steel Core

The table is based on tensile grade 1770/1960 N/mm² and states max. load for the most common wire constructions (Ø 3-7 mm 133-tr 1770N/mm². Ø 8-60 mm 265-tr 1960 N/mm²) used for slings.

Wire Ø mm	Max WLL I tonnes									
	1-legged			2-legged*		3- & 4-legged*		Endless		
									Straight	Choked
Straight	Choked	U-shaped	α 0°-90° β 0°-45°	α 90°-120° β 45°-60°	α 0°-90° β 0°-45°	α 90°-120° β 45°-60°	Straight	Choked	U-shaped	
3	0.10	0.08	0.20	0.14	0.10	0.21	0.15	0.20	0.16	0.40
4	0.17	0.14	0.34	0.24	0.17	0.36	0.25	0.34	0.27	0.68
5	0.27	0.22	0.54	0.38	0.27	0.56	0.41	0.54	0.43	1.08
6	0.38	0.30	0.76	0.53	0.38	0.80	0.57	0.76	0.61	1.52
7	0.53	0.42	1.06	0.74	0.53	1.10	0.80	1.06	0.85	2.12
8	0.80	0.65	1.60	1.15	0.80	1.70	1.20	1.60	1.30	3.20
9	1.05	0.80	2.10	1.45	1.05	2.20	1.80	2.10	1.70	4.20
10	1.30	1.00	2.60	1.80	1.30	2.70	1.90	2.60	2.00	5.20
11	1.50	1.20	3.00	2.20	1.50	3.30	2.30	3.00	2.50	6.00
12	1.80	1.40	3.60	2.60	1.80	3.90	2.80	3.60	3.00	7.20
13	2.20	1.80	4.40	3.00	2.20	4.50	3.20	4.40	3.50	8.80
14	2.50	2	5.00	3.50	2.50	5.30	3.80	5.00	4.00	10.00
16	3.30	2.60	6.60	4.60	3.30	6.90	4.90	6.60	5.20	13.20
18	4.10	3.30	8.20	5.80	4.10	8.70	6.20	8.20	6.60	16.40
20	5.10	4.10	10.20	7.20	5.10	10.70	7.70	10.20	8.20	20.40
22	6.20	5.00	12.40	8.70	6.20	13.00	9.30	12.40	10.00	24.80
24	7.40	5.90	14.80	10.30	7.40	15.50	11.10	14.80	11.80	29.60
26	8.70	7.00	17.40	12.10	8.70	18.20	13.00	17.40	13.80	34.80
28	10.00	8.00	20.00	14.00	10.00	21.00	15.00	20.00	16.00	40.00
32	13.00	10.40	26.00	18.40	13.00	27.50	19.70	26.00	21.00	52.00
36	16.60	13.30	33.00	23.00	16.60	35.00	25.00	33.00	26.50	66.00
40	20.50	16.40	41.00	29.00	20.50	43.00	31.00	41.00	33.00	82.00
44	25.00	20.00	50.00	35.00	25.00	52.00	37.00	50.00	40.00	100.00
48	29.50	23.60	59.00	41.00	29.50	62.00	44.00	59.00	47.00	118.00
52	35.00	28.00	70.00	48.00	35.00	73.00	52.00	70.00	55.00	140.00
56	40.00	32.00	80.00	56.00	40.00	84.00	60.00	80.00	64.00	160.00
60	46.00	37	92.00	65.00	46.00	97.00	69.00	92.00	74.00	184.00

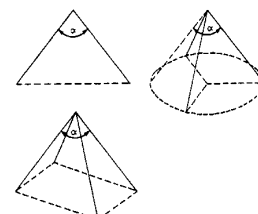
* When multiple legs are used in a lift with a choked sling - reduce the value by 20%

If the table is not used, the max. load must be calculated.

The result of the formula shown on previous page, representing the max. load on a 1-legged sling, shall be multiplied by a factor according to the following table:

Lifting angle α	Factor K _L No. of legs	
	2	3-4
0-90°	1.4	2.1
90-120°	1.0	1.5

The lifting angle (α) is measured according to the following figures:







Polyester Lifting

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Roundsling, Single Cover EN 1492-2

Max WLL: 1–12 tonnes.

- Gunnebo Lifting Roundsling with seamless single cover and protected label, made of 100% high tensile polyester, close-woven sealed material for high wear resistance.
- CE-marked
- Safety factor 7:1
- Gunnebo Lifting roundsling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length	WLL 1 tonnes		WLL 2 tonnes		WLL 3 tonnes		WLL 4 tonnes		WLL 5 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
0.5	M57P101	0.2	M57P201	0.3	M57P301	0.4				
1	M57P102	0.4	M57P202	0.5	M57P302	0.6	M57P402	0.8	M57P502	1
1.5	M57P103	0.5	M57P203	0.7	M57P303	1.1	M57P403	1.2	M57P503	1.4
2	M57P104	0.7	M57P204	1.1	M57P304	1.3	M57P404	1.6	M57P504	1.9
2.5	M57P105	0.7	M57P205	1.7	M57P305	1.4	M57P405	2	M57P505	2.3
3	M57P106	1	M57P206	1.5	M57P306	1.8	M57P406	2,3	M57P506	2.7
4	M57P108	1.4	M57P208	2	M57P308	2.6	M57P408	3.1	M57P508	3.6
5	M57P110	1.9	M57P210	2.5	M57P310	3.2	M57P410	3.9	M57P510	4.4
6	M57P112	2.4	M57P212	2.8	M57P312	3.9	M57P412	4.7	M57P512	5.3

Eff. length	WLL 6 tonnes		WLL 8 tonnes		WLL 10 tonnes		WLL 12 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M57P604	2.3	M57P804	3.1	M571004	3.9	M571204	4.9
2.5	M57P605	3.4	M570805	3.8	M571005	4.8	-	-
3	M57P606	3.4	M57P806	4.5	M571006	5.8	M571206	7.3
4	M57P608	4.6	M57P808	6	M571008	7.7	M571208	9.6
5	M57P610	5.7	M57P810	7.5	M571010	9.6	M571210	12
6	M57P612	6.8	M57P812	9	M571012	11.4	M571212	14.2
7	-	-	-	-	M571014	13.2	M571214	16.5
8	-	-	-	-	M571016	15.1	M571216	18.8

Other sizes can be produced upon request.

Roundsling, Double Cover EN 1492-2

WLL: 15–30 tonnes

- Gunnebo Lifting Roundsling with side seam, double cover, made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.
- CE-marked.
- Safety factor 7:1
- Gunnebo Lifting roundsling for safe lifting marked with Gunnebo Lifting manufacturer ID.

Eff. length	WLL 15 tonnes		WLL 20 tonnes		WLL 25 tonnes		WLL 30 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M471504	6.8	-	-	-	-	-	-
2.5	M471505	8.5	-	-	-	-	-	-
3	M471506	10.2	M472006	15	-	-	-	-
4	M471508	13.5	M472008	20	M472508	25.2	M473008	32
5	M471510	16.9	M472010	24.9	M472510	31.5	M473010	38.7
6	M471512	20.2	M472012	29.8	M472512	37.7	M473012	46.4



Webbing Sling Duplex with folded and sleeved eyes

EN 1492-1

WLL: 1 – 15 tonnes.

- Gunnebo Lifting flat webbing slings with eyes, made of 100% high-tensile polyester, close woven sealed material for high wear resistance.
- According to standard specifications.
- Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length m	WLL 1 tonnes Web. width 30 mm		WLL 2 tonnes Web. width 60 mm		WLL 3 tonnes Web. width 90 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M37P101	0.3	M37P201	0.6	-	-
2	M37P102	0.5	M37P202	1	M37P302	1.4
3	M37P103	0.7	M37P203	1.3	M37P303	2
4	M37P104	0.9	M37P204	1.7	M37P304	2.5
5	M37P105	1	M37P205	2	M37P305	3.1
6	M37P106	1.3	M37P206	2.4	M37P306	3.6
8	M37P108	1.4	M37P208	2.8	M37P308	4.6
10	M37P110	1.8	M37P210	3.7	M37P310	5.7
12	M37P112	2.1	M37P212	4.8	M37P312	6.1

Eff. length m	WLL 4 tonnes Web. width 120 mm		WLL 5 tonnes Web. width 150 mm		WLL 6 tonnes Web. width 180 mm		WLL 8 tonnes Web. width 240 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
6	M37P406	5.1	M033506	6.7	M033606	6.7	M033806	9.1
8	M37P408	6.7	M033508	8.9	M033608	8.8	M033808	11.7
10	M37P410	8.4	M033510	11	M033610	10.8	M033810	14.5
12	M37P412	9.7	M033512	13.1	M033612	12.9	M033812	17.3

Other sizes can be produced upon request.



Webbing sling - Endless

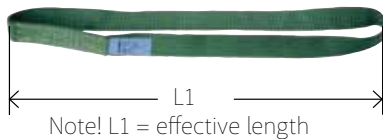
EN 1492-1

WLL: 1-4 Tonnes.

- Gunnebo Lifting flat webbing endless sling made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.
- CE-marked.
- Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length	WLL 1 tonnes Webb. width 30 mm		WLL 2 tonnes Webb. width 60 mm		WLL 3 tonnes Webb. width 90 mm		WLL 4 tonnes Webb. width 120 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M30P102	0.2	M30P202	0.4	M030030	0.7	M030040	0.9
1.5	M30P103	0.3	M30P203	0.6	M30P303	0.9	M030041	1.3
2	M30P104	0.4	M30P204	0.8	M30P304	1.2	M030042	1.6
2.5	M30P105	0.5	M30P205	1	M30P305	1.5	M030043	2
3	M30P106	0.6	M30P206	1.2	M30P306	1.7	M030044	2.4
4	M30P108	0.7	M30P208	1.5	M30P308	2.3	M030045	3.1
5	M030008	0.9	M30P210	1.9	M30P310	2.2	M030046	3.8
6	M030009	1.1	M30P212	2.3	M30P312	3.4	M030047	4.5



Other sizes can be produced upon request.

Polyurethane Protective Sleeves

Protective sleeves made of polyurethane for roundslings and flat webbing slings can be supplied upon request.

Art. no.	Inside measurement width x depth	For webbing width	Length	Suits
M890611	32 x 11	30 mm	1000	Web. sling 1 tonnes
M890612	32 x 11	30 mm	2000	Web. sling 1 tonnes
M890613	62 x 11	60 mm	1000	Web. sling 2 tonnes
M890614	62 x 11	60 mm	2000	Roundsling 1 tonnes
M890615	105 x 11	90 mm	1000	Web. sling 3 tonnes
M890616	105 x 11	90 mm	2000	Roundsling 4 tonnes
M890623	130 x 11	120 mm	1000	Web. sling 3 tonnes
M890624	130 x 11	120 mm	2000	Roundsling 5 tonnes
M890625	156 x 11	150 mm	1000	Web. sling 4 tonnes
M890626	156 x 11	150 mm	2000	Roundsling 6/8 tonnes



Protective Sleeve for Roundslings

Protective sleeve made of polyester for fitting on roundslings. Velcro tape for easy attachment, no sewing necessary.

Art. no.	Roundsling (t)	Length
M040124	1 - 3	500
M040125	4 - 8	500
M040126	1 - 3	1000
M040127	4 - 8	1000



All dimensions in mm

Recommended Contact Surface for Polyester Roundsling 7:1

Tonnes	Min. diameter bolt	Min. free contact width
1	23	35
2	32	40
3	35	47
4	38	50
5	42	53
6	46	60
8	50	67
10	56	75
12	58	80
15	70	96
20	78	104
25	84	112
30	90	120
35	96	128
40	102	136
50	120	160

Smaller diameter connections and insufficient free contact width, may adversely affect lifting safely and cause serious damage to the roundsling.

Polyester Lifting Information




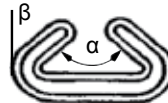
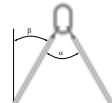


When using the sling for the first time, read the manufacturers certificate and instructions/education.

1. Always plan the lift carefully before proceeding with the operation.
2. Always check that the length and WLL stated on the sling label are suitable for the intended use.
3. Examine the sling for damage and defects before use. Never use a damaged or defective sling.
4. Never overload!
5. Make sure that the load is lifted vertically, centred above the point of gravity.
6. Use identical slings in case of multi- legged lifting and take the lifting angles into account when choosing equipment.
7. Do not tie knots on the slings to shorten or join them.
8. Never lift with twisted or entwined slings.
9. Place load-bearing seams and joints between the hook and the load.
10. Protect the sling from sharp edges using edge protection or protective sleeves.
11. Avoid shock loading and snatch lifting.
12. Do not drag the sling, with or without load, on the ground.
13. Keep polyester slings away from alkalis (for example ammonia and caustic soda). If in doubt about exposure to chemicals, check with your supplier.
14. Do not use polyester slings in temperatures over +100°C.
15. Examine slings after use and remove from service if visible damage is discovered.
16. Do not stand under the suspended load or between load and other objects in proximity, to avoid being injured from falling or moving load.
17. To avoid injuries, keep hands, feet and body away from sling, when lifting.

Maintenance

1. Store the equipment in a dry place.
2. Ensure that seams and labelling are undamaged.
3. The equipment can be cleaned by washing in a petroleum-based detergent and rinsing in water.
4. Roundslings with damaged sleeving, allowing dirt to enter, should be discarded.
5. Roundslings with broken yarns as a result of damaged sleeving must be discarded.
6. Roundslings must be inspected regularly for knots and irregularities, indicating yarn breakage. Discard if found.
7. Webbing slings: Discard in case of serious damage due to friction or wear and tear (appears like a blank and hard or "hair-like" surface).
8. Webbing slings: Discard if/when edge wear/ damage exceeds 5% of its width.
9. Webbing slings: Repair or discard when eye sleeving is worn out.
10. Slings must be regularly inspected, according to local statutory requirements. Records of inspections must be maintained.

Working Load Limits (tonnes)

	Straight lift	Choked lift	Straight basket hitch		Two part choker		Three and four part choker		
									
			Parallel	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°
Cover colour	Working Load Limits								
	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Purple	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Green	2	1.6	4	2.8	2	2.8	2	4.2	3
Yellow	3	2.4	6	4.2	3	4.2	3	6.3	4.5
Grey	4	3.2	8	5.6	4	5.6	4	8.4	6
Red	5	4	10	7	5	7	5	10.5	7.5
Brown	6	4.8	12	8.4	6	8.4	6	12.6	9
Blue	8	6.4	16	11.2	8	11.2	8	16.8	12
Orange	10	8	20	14	10	14	10	21	15
Orange	12	9.6	24	16.8	12	16.8	12	25	18
Orange	15	12	30	21	15	21	15	31.5	22.5
Orange	20	16	40	28	20	28	20	42	30
Orange	25	20	50	35	25	35	25	52.5	37.5
Orange	30	24	60	42	30	42	30	63	45
Orange	35	28	70	49	35	49	35	73.5	52.5
Orange	40	32	80	56	40	56	40	84	60
Orange	50	40	100	70	50	70	50	105	75
Orange	60	48	120	84	60	84	60	126	90

Properties of polyester fibre

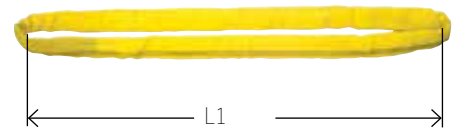
Physical properties

Specific weight: ca 1.38

Melting point: 260°C

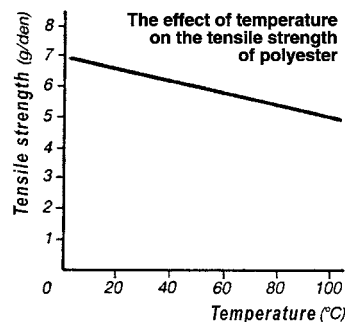
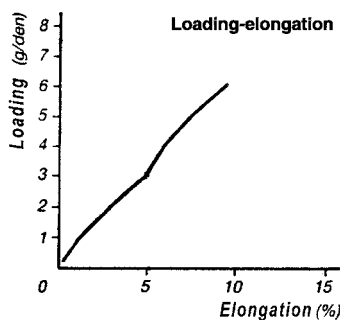
Sensitivity to low temperature: No effect down to -40°C

Aging: Very low



L1 = Effective length

Examples of the properties of polyester fibre



Elongation properties webbing

Polyester webbing has an elongation to break of approximately 15-20%. The first time a webbing lashing or lifting assembly is loaded, it can elongate slightly when the fibres settle.

Chemical properties

Polyester offers good resistance to most acids provided the concentration does not exceed 50%.





Height Safety Solutions

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Height Safety Innovations

This guide is aimed at giving you an overview of the height safety products that Tractel can offer. We hope that the guide will enable you to choose the best Tractel products to suit your needs. Use the QR codes to watch videos of our harnesses via Tractelly, our YouTube channel.

A full list of product codes & prices can be found at the back of the guide.

Find out what's new...

Technical Harness Range

We've totally re-vamped our technical harness range. All now include the X-Pad comfort system, integrated fall indicators, the option of elastrac™ boxes and brand new styling. See page 7



Harness Accessories

We've developed a brand new range of accessories to be used with our harnesses. These include a variety of products for rope access technicians and tree surgeons. See page 15



EN Standards



Harnesses

EN 361: Personal protective equipment against falls from height. Full body harness suitable for work restraint & fall arrest.

EN 358: Personal protective equipment for work positioning & prevention of falls from height. Belts for work positioning, restraint & work positioning lanyards. Normally encompassing side 'D' rings on the waist belt, this allows the user to incorporate a work positioning belt.

EN 813: Personal fall protection equipment sit harnesses. These harnesses have a padded sit harness & are suitable for working in full suspension. This includes rope access & activities such as window cleaning. It allows greater comfort for the user & has an attachment point for attaching a descender.

Lanyards

EN 354: Personal fall protection equipment - lanyards.

These can be made from webbing or rope and are suitable for work restraint.

EN 355: Personal protective equipment against falls from a height - energy absorbers.

These lanyards have an energy absorbing element & are suitable for fall arrest & restraint.

HT22

Entry Level Multiple Use Harness, EN 361

- Dorsal & sternal attachment points
- 5 adjustment points
- Sub pelvic strap
- Front & rear attachment points
- Available with or without automatic buckles



Attachment Points:



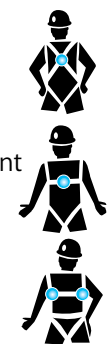
HT34

Multiple Use Harness with Belt, EN 361, EN 358

- Dorsal, sternal & 2 thoracic attachment points
- Complete with CE01 support belt
- 6 adjustment points
- Sub-pelvic strap



Attachment Points:



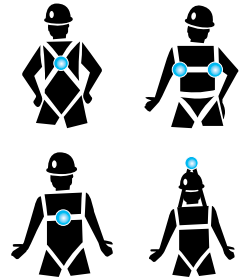
HT22 R

Recovery Harness EN 1497, EN 361

- Dorsal, sternal, over head & thoracic attachment points
- Equipped with an evacuation strap for vertical recovery
- Ideal for use in confined space
- 5 adjustment points



Attachment Points:



HT54, HT55 & HT56

Multiple Use Harnesses, EN 361

HT54

- Designed for working in an industrial environment
- Dorsal & thoracic attachment points

HT55

- Designed for working in a construction environment
- Dorsal & sternal attachment points

HT56

- Designed for working in industrial maintenance & construction
- Dorsal, sternal & thoracic attachment points



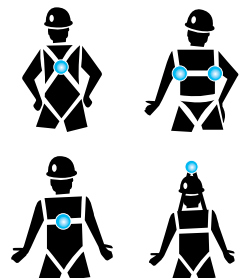
HT Easyclimb

Recovery Harness EN 1497, EN 361

- Designed for climbing up & down ladders equipped with guided type fall arresters
- Patented system offering umbilical attachment point which tears upwards in the event of a fall to end up resting at chest height
- Easy movement with lower attachment point
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:



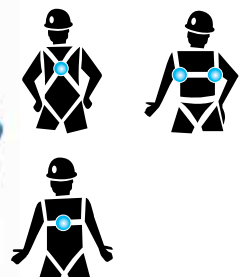
HT Electra

Utilities Industry EN 358, EN 361, EN 354

- Perfect for use on power lines & pylons
- Complete with rotating belt to increase freedom of movement
- Automatic buckles as standard
- Work positioning harness
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:





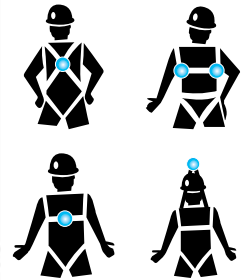
HT Promast

Mast Climbing EN 358, EN 361, EN 813

- Mast climbing or rope access harness
- Perfect for long periods of working in suspension
- Complete with webbing attachment loops
- Automatic buckles as standard
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:



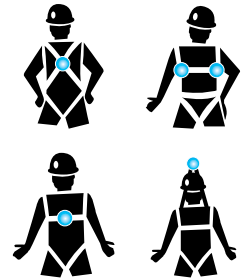
HT Greentool

Arborist harness EN 358, EN 361, EN 813

- Designed for arborist/tree surgeons
- Equipped with rigid & comfortable work seat
- Easy to don & remove
- Automatic buckles as standard
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:



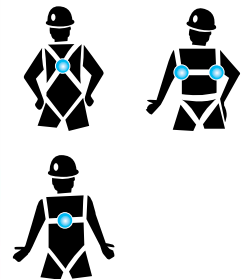
HT Rescue/HT Secours

Rope Access EN 358, EN 361, EN 813

- Designed for working in rope access
- Suitable to attach a chest ascender
- Work suspension harness
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:



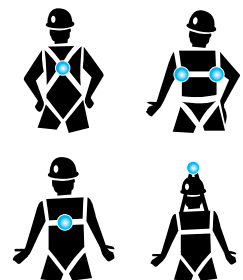
HT Transport

High movement applications EN 358, EN 361, EN 813

- Designed for applications that require a high level of movement
- Easy to don & remove
- Automatic buckles as standard
- Integrated fall indicators
- Integrated X-Pad comfort system
- Available with Elastrac™ option for 4cm of extra movement



Attachment Points:



Harness Product Selector

Try our harness selector to help you find the correct harness for your application:

	Automatic buckles as standard	Chest anchorage point	Thoracic anchorage points	Rear attachment point	Tool holder loops	Compatible with seat attachment	Suspension loop for descender	Side 'D' rings	Overhead attachment point
HT22	-	✓	-	✓	-	-	-	-	-
HT34	-	✓	✓	✓	-	-	-	✓	-
HT22 R	-	✓	✓	✓	-	-	-	-	✓
HT54	-	-	✓	✓	-	-	-	-	-
HT55	-	✓	✓	✓	-	-	-	-	-
HT56	-	✓	✓	✓	-	-	-	-	-
HT Easyclimb	✓	✓	✓	✓	✓	-	-	-	-
HT Greentool	✓	✓	-	✓	✓	✓	-	✓	-
HT Electra	✓	✓	-	✓	✓	✓	-	✓	-
HT Promast	✓	✓	-	✓	✓	✓	✓	✓	-
HT Rescue*	-	✓	-	✓	✓	✓	✓	✓	-
HT Transport	✓	✓	-	✓	✓	✓	-	-	-

*HT Secours

Rope Access Accessories

Ascent Handle

For 8mm to 12mm Kernmantel rope.
Conforms to EN 12841/B 06. NFPA L1993:06 6. EN 567:97



Foot Loop

Adjustable strap foot loop



LSD Jumar Lanyard

Double strap lanyard 32cm & 57cm with 3 M15 connectors to connect the ascent handle to the harness. EN 354 compliant



Sternal Ascent

For climbing kernmantel rope 8mm to 12mm. Conforms to EN 1284/B 06. NFPA 1993:06 6. EN 567:97



Work Seat

Large, rigid, comfortable work seat equipped with 3 'D' rings to connect tools & equipment.



Tree Surgeon Accessories

Anchoring Lanyard

Allows the removal of the rope from the ground when work is completed.



Prussik Knot

Rope loop for tying prussik knots for ascending ropes.



Throw Bag

Weighted bag for throwing a guide line over a tree branch to haul ropes.



Adjuster Lanyard

Equipped with a braided rope reinforced by steel cable LCM03. EN 358 compliant





Lanyards

LC - Single rope lanyard

- 1m, 1.5m & 2m options
- Available as twin lanyard
- EN 354



LCR - Adjustable rope lanyard

- 1.5m & 2m options
- Fully adjustable
- EN 358



LCAD - Twin rope lanyard

- 1.5m & 2m options
- With shock absorber
- EN 355



LSA - Webbing lanyard

- 1.5m, 1.75 & 2m options
- With shock absorber
- EN 355



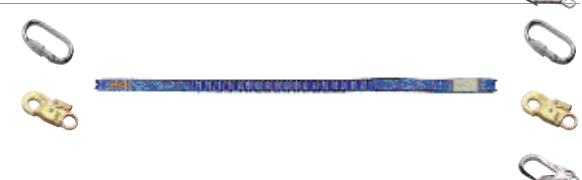
LPA - Absorber POY lanyard

- 1.5m, 1.75 & 2m options
- Lightweight & durable
- EN 355



LSE - Elastic webbing lanyard

- 1.5m, 1.75 & 2m options
- Flexible & durable
- EN 354



Blocfor™ Fall Arrest Blocks

Blocfor™ 1.8A ESD



Blocfor™ 2W



Blocfor™ 5 & 6 ESD



Blocfor™ 10 AES



Blocfor™ 20 & 30



Blocfor™ 20R & 30R



- Fall arrest blocks from 1.5m to 30m
- Blocfor™ 5, 6 & 10 are service free
- Models with AES (Absorbing end system) & ESD (Energy system dissipater) technology, reducing the strength of impact on the user's body even when the cable is completely unwound
- 30m recovery version compatible with our confined space system

Fixed & Mobile Anchor Points

Door Anchor

- CE EN 795 class B
- Very fast & easy to set up
- Up to 2 users
- Spacing: 1100mm = 1 user
800mm = 2 users



Rollclamp

- Creates a mobile anchor point on an R.S.J
- Available in medium and large
- Adjustable from 120mm to 640mm



Rollbeam

- Travels on a lower iron footplate
- Standard CE EN 795 class B



PA anchors

- Aluminium anchor point
- Unpainted or painted
- Secured with two M12 screws



Tracpode

Confined space kit



Travsmart

Lifeline system



Stopfor K™

Fall prevention device



FABA

Rail systems



TR2000

Height safety helmet



Derope™

Emergency decent devices







Lashings and
Transport

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Chain Tensioner - GT

The chain tensioner from Gunnebo Lifting, GT, is integral in one set. It is made of light weight Grade 10 material and the ratchet handle contributes to a fast and ergonomic lashing procedure. The GT is fitted with safety pins to prevent against unintended release of the threaded end fittings, yet allows for disassembly and convenient repair and replacements of parts, making maintenance easier and faster.

Our chain tensioner is designed to be compatible with the GrabiQ product range, enabling the choice of robust end-hooks with latches. Can also be provided as approved for lifting purposes.



Unique Benefits With our Chain Tensioner



Short Handle

- Fully protected ratched mechanism with 8 steps per 90 degree pull, enabling use in very narrow spaces.
- Easy to change direction
- The rubber handle decreases the risk of slipping and is convenient in cold climates

Open Design

- For easier and faster cleaning and lubrication
- Allows dirt to fall through instead of building up
- Two drain holes in the body prevent water residue.

Trapezoidal Thread

- Makes the thread less sensitive to dirt and particles
- Low-friction treated for trouble free operation
- Makes lashing faster
- Safety pins prevents unintended unwinding

The Gunnebo Lifting Chain Lashing System

Gunnebo Lifting offers a complete chain lashing system approved according to EN 12195-3. The system has been developed with focus on the user's needs and working environment, and with safety as highest priority. The unique Midgrab chain shortener saves valuable time and effort, and is a natural part of an efficient and effective chain lashing system.

End Fitting

Lashing hooks in grade 10, such as the EGKN Sling Hook with a heavy duty latch or the GBK Griplatch Safety Hook. Marked with positive indication of the manufacturer, product designation, size, batch number and grade.

ID-tag

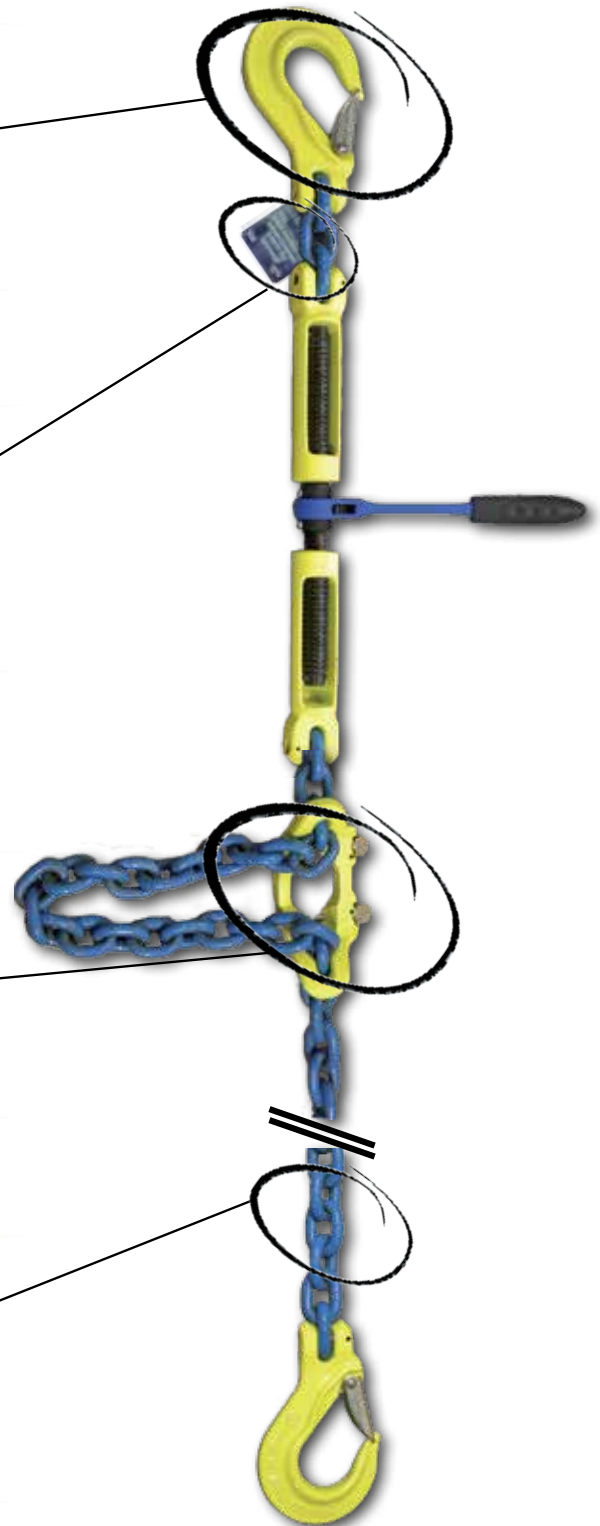
The ID-tag must state the lashing Standard, capacity, tension force, traceability and name of manufacturer. It must also clearly say that the set is for lashing only, lifting is prohibited

Shortening Function

The Midgrab offers instant mounting on any part of the chain, with the ability to shorten the chain in either direction. It is designed to prevent the chain from disengaging. Marked with positive indication of the manufacturer, product designation, size, batch number and grade

Chain

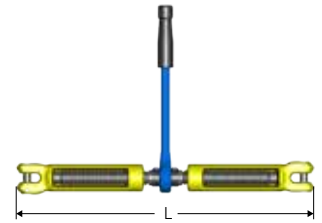
Gunnebo Lifting's high tensile short link chain, grade 10 = 1000 N/mm² type KLA-10-10, LC = 8000 daN. Surface treatment: Powder coated. ID-marking of the chain: 10G





Chain Tensioner GT

Model	Lashing capacity (kN)	STF (daN)	L = Min. length (mm)	L = Max. length (mm)	Weight (kgs)
GT-8-10	50	2400	400	600	3.3
GT-10-10	80	2400	400	600	3.3



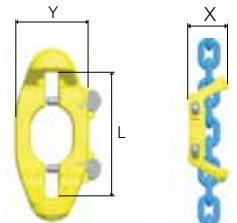
Chain GrabiQ Grade 10 short link, KL

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN
Z802301	KLA-8-10	2.5	50	8	24	11	1.5	63
Z801921	KLA-10-10	4	80	10	30	14	2.3	100



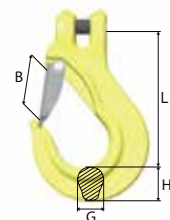
Midgrab MIG with locking pins

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	X	Y	Weight kgs
B14303	MIG CC-8-10	2.5	50	95	50	60	0.7
B14313	MIG CC-10-10	4.0	80	125	70	77	1.1



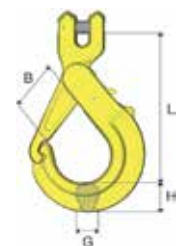
Sling Hook EGKN

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	B	G	H	Weight kgs
B14461	EGKN-8-10	2.5	50	95	28	17	23	0.5
B14462	EGKN-10-10	4	80	121	35	23	31	1



Safety Hook GBK

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	B	G	H	Weight kgs
Z100759	GBK-8-10	2.5	50	119	36	20	22	0.8
Z100760	GBK-10-10	4	80	150	47	22	29	1.4



All dimensions in mm

Lashing 4 - 10 Tonnes European standard EN 12195-2



Art. no.	Description	Colour	Width	Breaking strength (t)	EN 12195-2 LC daN	EN 12195-2 STF daN
Complete lashing						
M275141	0.4+9.5 m with wire hook	Yellow	75	10	3000	305
Complete lashing						
M135098	0.4+7.5 m with wire hook	Blue	50	5	2000	340
M136090	0.4+9.5 m with wire hook	Blue	50	5	2000	340
Complete lashing						
M134098	0.4+ 7.5 m wire hook	Blue	50	4	1700	340
M134090	0.4+9,5 m wire hook	Blue	50	4	1700	340
M24595W	10m endless	Blue	50	5	4000	340
Ratchet with short straps						
M135051K	0.4m with wire hook	Blue	50	4 & 5	200	

Lashing 1 - 4 Tonnes European standard EN 12195-2



Art. no.	Description	Colour	Width mm	Breaking strength (t)	EN 12195-2 LC daN	EN 12195-2 STF daN
Complete lashing						
M140090	0.5+4.5 m with wire hook	Orange	35	2.5	1000	180
M140091	0.5+5.5 m with wire hook	Orange	35	2.5	1000	180
M14P00W	5 m endless (single web.)	Orange	35	2.5	1000	
Complete lashing stainless						
M22210K	0.4+9.5 m with wire hook	Blue	50	3	1500	305
Complete lashing						
M150101	0,4+3,6 m with sewn-on eyes	Blue	26	1.5	700	150
M150102	0,4+3,6 m with wire hook	Blue	26	1.5	700	150
M150110	0,5+4,5 m with wire hook	Blue	26	1.5	700	150
M150103	5 m endless	Blue	26	1.5	700	150
Complete lashing						
M151002	0.4+3.6 m with sewn-on eyes	Orange	25	0.7	300	100
M151003	0.4+3.6 m with wire hook	Orange	25	0.7	300	100
M151005	0.4+4.5 m with wire hook	Orange	25	0.7	300	100
M151001	5 m endless	Orange	25	0.7	300	100

Rigging Screw with Ratchet Handle



Art. no.	Code	For chain diam. mm	Breaking strength approx. tonnes
G009860018	RS 15 T	10 mm	12.6
G009860023	RS 20 T	13 mm	21.6

Chain Tensioner

Webbing width: 50 mm

Suits chain LLU 6-11 mm



Art. no.	Description	Breaking strength appr. tonnes
M129002	Chain tensioner 0.5 + 1 m, with chain tensioning hook no M161 00D	4.5
M129003	Chain tensioner 0.5 + 1 m, with twisted flat hook with latch no M016 604	5.0

Lashing for Construction Machinery

Rigging Screw with Ratchet Handle

Art. no.	Code	For chain diam. mm	Breaking strength approx. tonnes
G009860018	RS 15 T	10-13 mm	15
G009860023	RS 20 T	13-16 mm	20



Chain Grade 8 with clevis hooks EGK at both ends

Length = 3.5 meter

Art. no.	Chain dim.	Suit above rigging screw	Breaking strength approx. tonnes
Z100099	10 mm	RS 15 tonnes	12.6
Z100100	13 mm	RS 20 tonnes	21.6

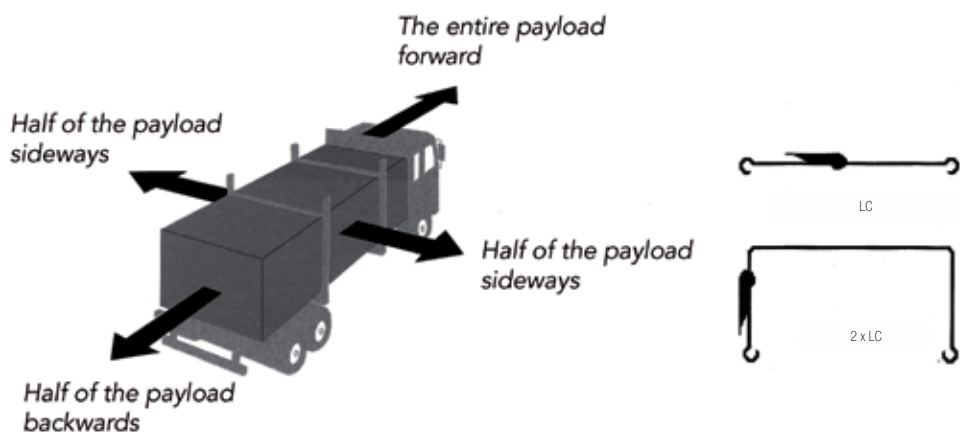


Complete Lashing Sets (RS) for construction machinery

Art. no.	Contents
G009860118	4 rigging screws RS 15 t. nr G009 860 017 4 chains, 10 mm no Z100 099
G009860123	4 rigging screws RS 20 t. nr G009 860 022 4 chains 13 mm n0 Z100 100



The lashing must take:



Gunnebo Lifting lashings with a breaking load of 500 kg and above are clearly marked with labels.

The dimensioning of a lashing arrangement must be based on local regulations

Technical Explanations for: Standard EN 12195-2

LC = Lashing capacity: Maximum force for use in straight pull that a web lashing is designed to sustain in use.

Safety factor: 2:1 complete system and metal parts.

3:1 non-sewn polyester webbing.

Elongation: Maximum 7% when polyester webbing subjected to the LC.

Marked: Traceability code similar to lifting products. A protected label ensures traceability at all circumstances.







Manual Hoists
and Winches

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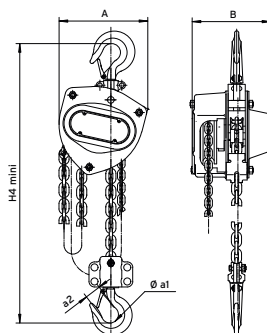


VHR[®] Hand chain hoist for loads of 250 to 5,000 kg

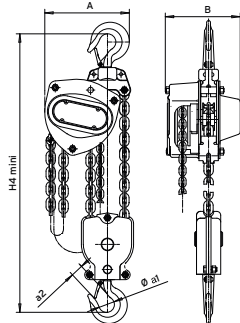
Eye-pleasing, compact and efficient, the V.H.R. is tested to all currently applicable standards.

Technical characteristics

- Machined chain sprocket and gears provide smoother, more efficient operation.
- 3 meters standard lift. Hand chain is 0.5 meters less than lift chain. Non-standard lifts available.
- High strength grade 80 alloy steel load chain with galvanized finish for corrosion resistance (comply with EN 818, safety factor 4).
- VHR's compact design offers safety together with reduced weight. Ideal for construction and maintenance applications.
- Rugged construction featuring steel gearcase and handwheel cover.
- Hooks are alloy steel, heat treated and equipped with hook latches and inspection points.



VHR 1 brin



VHR 2 brins

Options available

A wide range of options is available for this hoist:

- VHR with stainless steel load chain.
- Chain bag.
- VHR with trolley operated by push action on load.
- VHR with short headroom trolley (HPR).
- VHR version Ex – ATEX.
- VHR Ex with Ex short headroom trolley (HPR).

VHR[®]

Overhung with trolley operated by push action on load type CHD.

Capacité	A	B	Øa1	a2	H4 mini	Chaîne	Nombre de brins	Effort sur la chaîne de manœuvre (kg)	Poids (kg)
250 kg	121	114	31	21	280	4 x 12	1	25	6,2
500 kg	148	132	35	23	345	5 x 15	1	35	11
1000 kg	172	151	40	27	376	6 x 18	1	25	12,5
1500 kg	196	173	45	33	442	7,1 x 21	1	35	17,8
2000 kg	210	175	50	35	470	8 x 24	1	35	19,5
3000 kg	255	205	55	39	548	10 x 28	1	40	35
5000 kg	280	189	65	45	688	9 x 27	2	36	41,3



VHR® Hand chain hoist for loads of 500 to 20,000 kg

VHR® 

Hand chain hoist in sparkproof version.



Options available

A wide range of options is available for this hoist:

- VHR with stainless steel load chain.
- Chain bag.
- VHR with trolley operated by push action on load.
- VHR with short headroom trolley (HPR).
- VHR version Ex – ATEX.
- VHR Ex with Ex short headroom trolley (HPR).



VHR® 

Overhung with travel trolley backed by handwheel and hand chain operation type CHDD (Spark proof version of hoist and trolley).

**ZHR®****Hand chain hoist**for loads of
500 to 20,000 kg

Technical characteristics

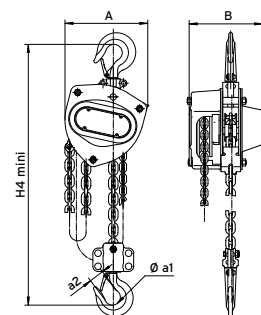
- Overload limiter is standard equipment.
- Four-bearing lifting mechanism.
- Offshore high-resistance RAL 7021 powder coating, 220 μ thick.
- Machined chain sprocket and gears provide smoother, more efficient operation.
- 3 meters standard lift. Hand chain is 0.5 meters less than lift chain.
- Non-standard lifts available.
- High strength grade 80 alloy steel load chain with corrosion-resistant galvanized (complies with standard EN 818, safety factor 4). Made in Europe.
- Galvanized hand chain made in Europe.
- ZHR's compact design offers safety together with reduced weight. Ideal for construction and maintenance applications.
- Steel casing solidly protects chain sprocket, gearcase and handwheel cover.
- Upper and lower alloy steel ISO hooks with safety latches.
- Weston-type load brakes.
- Delivered with CE certificate, and hook and chain certificate.

Options available

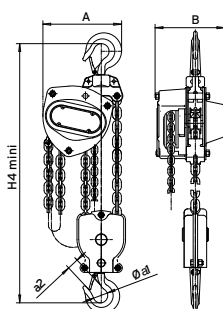
A wide range of options is available for this hand chain block:

- ZHR with stainless steel load and hand chain.
- Chain bag.
- ZHR HPN with normal headroom.
- ZHR HPR with short headroom trolley.

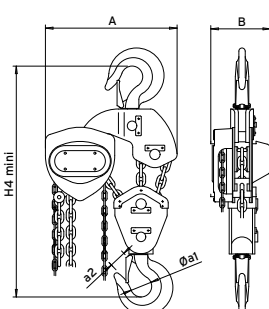
Load	A	B	$\varnothing a1$	a2	H4 min	Chain	Number of falls	Pulling force (kg)	Net weight (kg)
500 kg	148	132	35	23	345	5 x 15	1	35	11
1000 kg	172	151	40	27	376	6 x 18	1	25	12,5
1500 kg	196	173	45	33	442	7,1 x 21	1	35	17,8
2000 kg	210	175	50	35	470	8 x 24	1	35	19,5
3000 kg	255	205	55	39	548	10 x 28	1	40	35
5000 kg	280	189	65	45	688	9 x 27	2	36	41,3
7500 kg	433	189	47	67	688	9 x 27	3	38	62
10000 kg	463	189	75	57	765	9 x 27	4	38	78,5
12500 kg	430	220	75	54	835	9 x 27	5	38,4	110
16000 kg	718	200	95	71	900	9 x 27	6	38,7	135
20000 kg	840	200	106	85	950	9 x 27	8	38,7	192



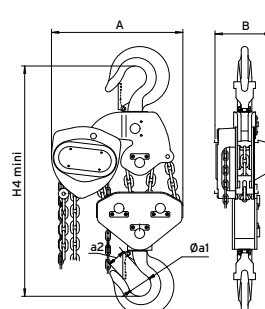
ZHR 1 fall



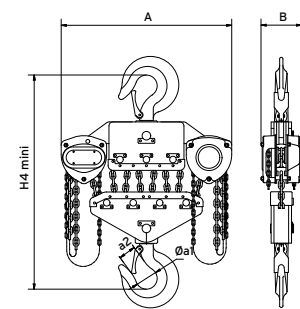
ZHR 2 fall



ZHR 3 fall



ZHR 4 fall



ZHR 5, 6 and 8 fall

ZHR-HPR[®] Low headroom version manual travelling trolley hoist for loads of 500 to 20,000 kg

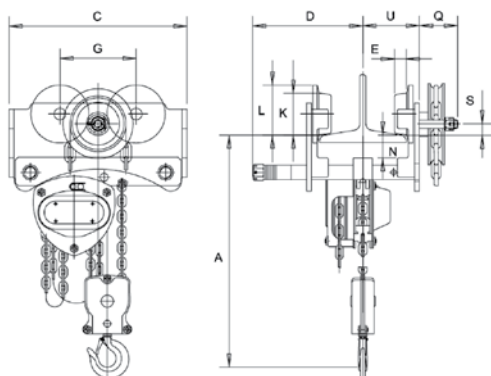
Especially designed for use in areas where optimal use of short headroom is essential.

Technical characteristics

- Characteristics of the hand chain block : see ZHR page 9.
- Controlled via handwheel and chain.
- Easy to adjust for different flange widths up to 305 mm.
- Trolley body made of high-resistance steel.
- Side plates finished with RAL 7021 dark gray coating, 70 µ thick.
- Steel rollers machined for smooth movement.
- Rollers compatible with all types of I and H beams.
- Wheel ball bearings are moisture-tight and maintenance free.
- Galvanized hand chain.
- Fall-prevention brackets and rubber stops.
- Loads up to 20 tons.
- Serial number inscribed on chassis.

Options available

- Ex version with ATEX Marking.
- Stainless steel lift and hand chains.
- Chain bag.



Load	Dimensions in mm											Num. of falls	Range	Weight without chain (kg)	Additional weight per m of lifting height (kg)	Pulling force (N)
	A	C	D	E	G	K	L	N	Q	S	U					
500 kg	299	258	119	17	100	55	67	29	57	9	95	1	50-203	19	1.6	240
1000 kg	331	292	150	18	125	68	82	37	57	18	125	1	64-305	37	2.1	265
1500 kg	383	319	156	20	130	74	88	38	57	18	125	1	74-305	37	2.1	265
2000 kg	410	358	159	22	135	80	94	38	57	18	129	1	88-305	50	2.4	335
3000 kg	461	434	167	25	158	100	115	40	59	8	132	1	100-305	65	2.5	372
5000 kg	655	448	177	34	170	108	126	42	59	25	138	2	114-305	91	4.8	360
7500 kg	750	624	186	39	190	130	153	45	66	20	146	3	124-305	135	7.2	365
10000 kg	755	636	189	40	200	134	155	45	66	35	148	4	124-305	153	9.6	380
12500 kg	830	668	191	43	200	150	170	50	66	26	150	5	124-305	242	12	420
16000 kg	930	791	222	50	272	166	196	50	77	8	193	2 x 3	136-305	278	14.4	400
20000 kg	950	891	229	52	272	172	198	58	77	5	193	2 x 4	136-305	353	19.2	440



ZHV[®] Manual chain hoist for loads of 500 to 50,000 kg

Technical characteristics

- Epoxy Painting (min. 50 µm).
- Machined chain sprocket and gears provide smoother, more efficient operation.
- High strength alloy steel load chain with corrosion-resistant galvanized
- Galvanized hand chain.
- ZHV's compact design offers safety together with reduced weight. Ideal for construction and maintenance applications.
- Steel casing solidly protects chain sprocket, gearcase and handwheel cover.
- Upper and lower alloy steel ISO hooks with safety latches.
- Delivered with CE certificate.

Options available (according to models)

- ZHV with EX ATEX marking (bronze coated hook, polyester paint,...)
- ZHV full stainless steel (hoist frame, chain, hook,..)
- ZHV with Aluminum Ceramic Coat (min. 30 µm).
- ZHV with Aluminum Ceramic Coat (min. 30 µm) and additional polyester paint.
- ZHV with Offshore paint coating.
- Locking device on trolley, activated by hand chain.
- ZHV with normal headroom trolley (HPN).
- ZHV with short headroom trolley (HPR).
- ZHV with trolley for curved beam (HPNB).
- ZHV with short headroom trolley (HPR).

Large range of surface treatments may be applied.



ZHV with
Aluminum
Ceramic Coat

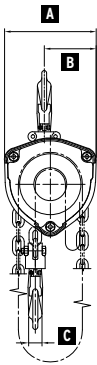


Hand chain block
EX TEX with coat of
polyester paint and
brass hook

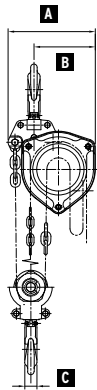
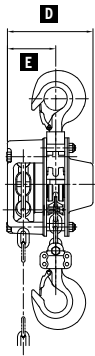


ZHV full
stainless steel
(500 & 1,000 kg)

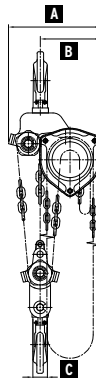
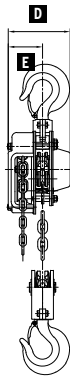
Load (kg)	Dimensions in mm					Standard height of lift (m)	Length of hand chain (m)	Lifting chain size (mm)	Number of falls	Weight (kg)
	A	B	C	D	E					
500	150	85	22	140	79	2,5	2,0	∅ 6,3 x P 19,0	1	10,5
1000	150	85	22	140	79	2,5	2,0	∅ 6,3 x P 19,0	1	10,5
1000	163	92,5	22	149,5	84,75	2,5	2,0	∅ 7,1 x P 20,2	1	12
1500	163	92,5	24	149,5	84,8	2,5	2,0	∅ 7,1 x P 20,2	1	13
1500	193	110,5	28	162,3	90,25	2,5	2,0	∅ 7,9 x P 23,0	1	18
2000	193	110,5	28	162,3	90,3	3,0	2,5	∅ 7,9 x P 23,0	1	20
2000	224	130	33	175	94,5	3,0	2,5	∅ 9,5 x P 28,6	1	25,5
3000	228,5	160,5	32	162,3	90,25	3,0	2,5	∅ 7,9 x P 23,0	2	28,5
5000	291,5	190,5	45	162,3	90,25	3,0	3,0	∅ 7,9 x P 23,0	3	44
8000	423	285	68	191	102	3,5	3,5	∅ 11,1 x P 33,3	3	91
10000	423	285	68	191	102	3,5	3,5	∅ 11,1 x P 33,3	3	91
15000	465	293	92,4	251	149	3,5	3,5	∅ 11,1 x P 33,3	5	181
20000	798	399	92,4	310	155	3,5	3,5	∅ 11,1 x P 33,3	6	235
30000	834	417	110	437	218,5	3,5	3,5	∅ 11,1 x P 33,3	10	492
40000	862	431	130	554	277	3,5	3,5	∅ 11,1 x P 33,3	14	800
50000	936	468	156	727	363,5	3,5	3,5	∅ 11,1 x P 33,3	18	1880



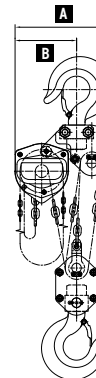
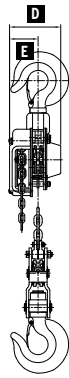
ZHV 1 fall



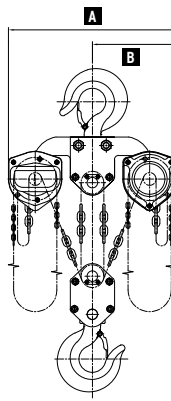
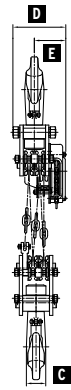
ZHV 2 fall



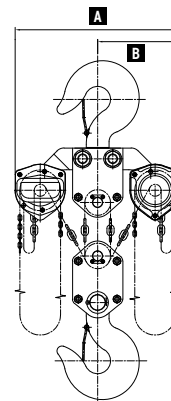
ZHV 3 fall



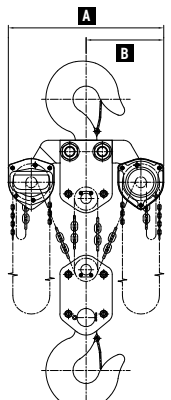
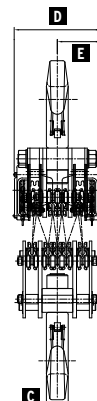
ZHV 5 fall



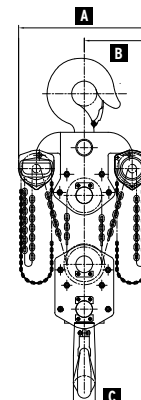
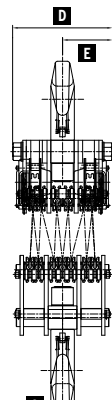
ZHV 6 fall



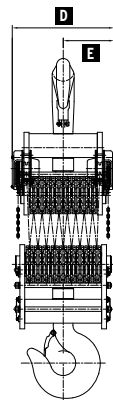
ZHV 10 fall



ZHV 14 fall



ZHV 18 fall





ZHV-HPR[®] Hand chain block with low headroom trolley construction

for loads of 500 to 50,000 kg

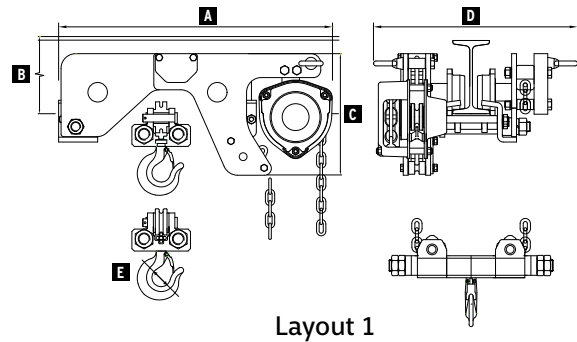


Technical characteristics

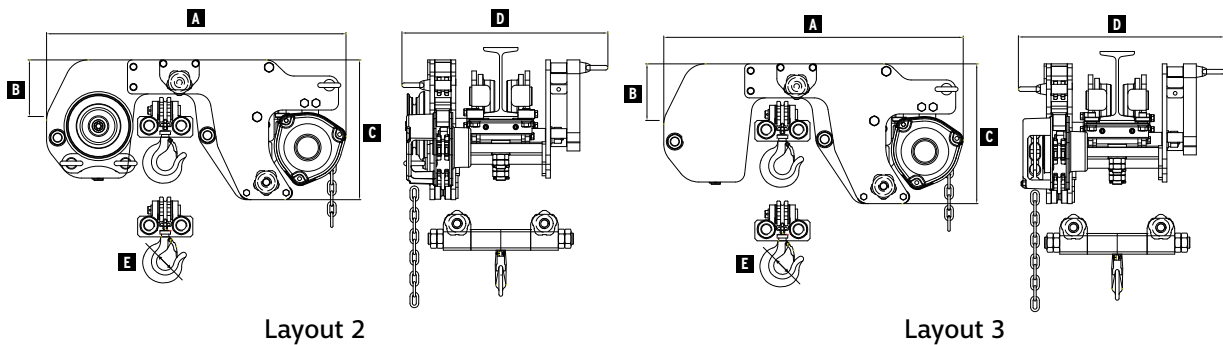
- Epoxy Painting (min. 50 µm).
- Machined chain sprocket and gears provide smoother, more efficient operation.
- High strength alloy steel load chain with corrosion resistant galvanized.
- Galvanized hand chain.
- ZHV's compact design offers safety together with reduced weight.
- Ideal for construction and maintenance applications.
- Steel casing solidly protects chain sprocket, gearcase and handwheel cover.
- Upper and lower alloy steel ISO hooks with safety latches.
- Delivered with CE certificate.

Options available

- See options of ZHV-CHZ.



Layout 1



Layout 2

Layout 3

Load (kg)	Dimensions in mm					Standard height of lift (m)	Length of hand chain (m)	Lifting chain size (mm)	Number of falls	Flange width (mm)	Min radius (mm)	Weight (kg)
	A	B	C	D	ØE							
Layout 1 : Hand chain block ZHR with short headroom push trolley (HPR)												
1000	561	150	-	418	38	2,5	2,0	Ø 6,3 x P19,0	2	75 ~ 125	2900	61
2000	560,5	150	285	372,5	41	3,0	2,5	Ø 7,1 x P20,2	2	75 ~ 150	3200	64
Layout 2 : Hand chain block ZHR with short headroom geared trolley (HPR)												
1000	652	150	304	448	38	2,5	2,0	Ø 6,3 x P 19,0	2	75 ~ 125	2900	59
2000	560,5	150	285	463	41	3,0	2,5	Ø 7,1 x P 20,2	2	75 ~ 150	3200	63
3000	691	300	370	568	58	3,0	2,5	Ø 7,9 x P 23,0	2	100 ~ 150	3500	150
5000	794	300	407	644	64	3,0	3,0	Ø 11,1 x P 33,3	2	125 ~ 175	-	195
10000	995	350	643	640	86	3,5	3,5	Ø 11,1 x P 33,3	4	150 ~ 190	-	460
20000	1460	285	660	1100	-	3,5	3,5	Ø 11,1 x P 33,3	6	150 ~ 190	-	850
30000	1650	600	655	894	130	3,5	3,5	Ø 11,1 x P 33,3	10	175 ~ 190	-	1320
Layout : Hand chain block ZHR with short headroom geared trolley for curved beam (HPNB)												
1000	652	123	304	448	-	2,5	2,0	Ø 6,3 x P 19,0	2	75 ~ 125	1000	98
Layout 3 : Hand chain block ZHR with short headroom push trolley for curved beam (HPNB)												
1000	652	123	304	448	-	2,5	2,0	Ø 6,3 x P 19,0	2	75 ~ 125	1000	93

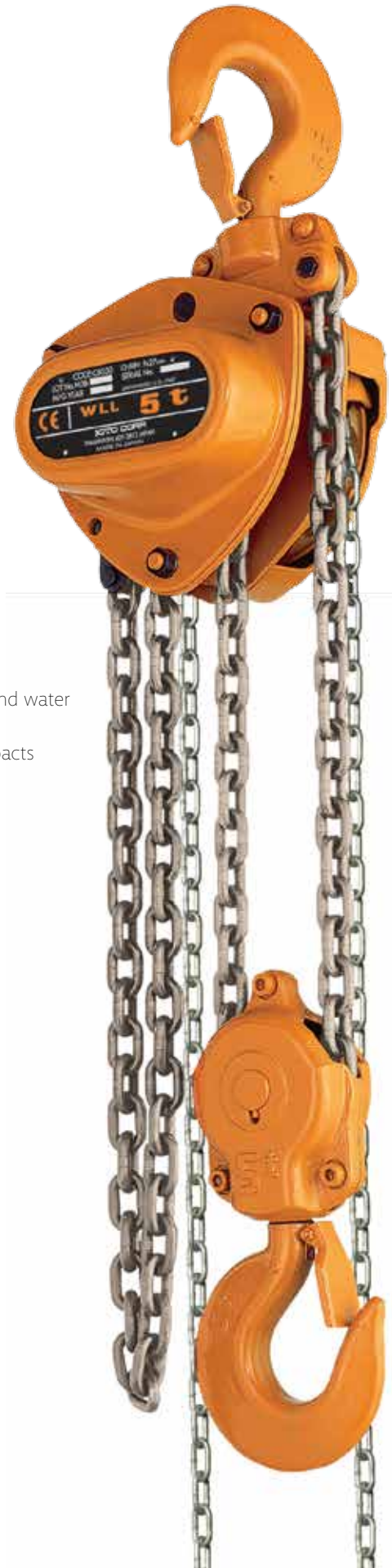
KITO

Manual Chain Hoist CB Model up to 50 t



Easy handling

Long-lasting and reliable



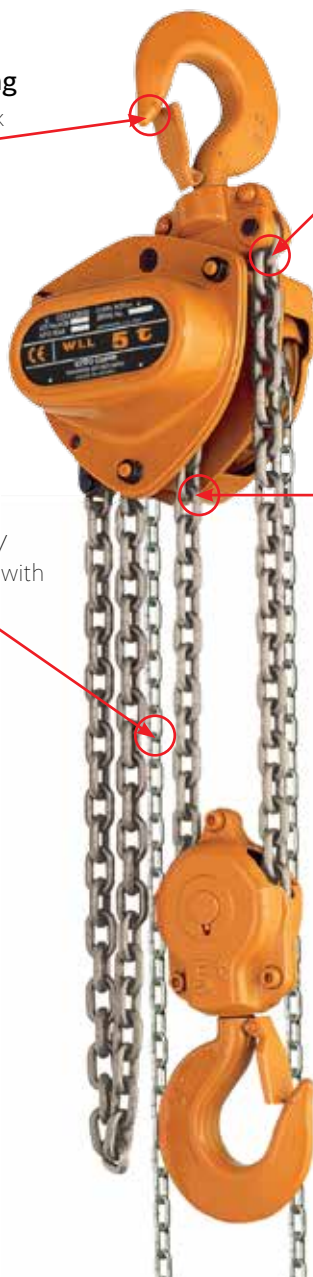
- **Double casing**
for protection against dust and water
- **Impact proof gear casing**
resistant against exterior impacts
- **Precise gear mechanism**
smooth and easy handling
- **Made in Japan**

Wide hook opening
top and bottom hook

High performance brake
safety beyond the regular limits

Nickel plated load chain
grade 100 (V) (1000N/mm²), in accordance with standard EN 818-7

Chain guide
silent and easy operation



Option: Universal Trolleys TS model



Optional chain bucket:

Weather-proof canvas.
Recommended for large lifting heights

Optional overload limiter:

Protects the operator from faulty operation with overload

Technical data

Type	Capacity, kg	Standard lift, m	Hand pull to lift full load, daN	Chain pulled to lift load 1 meter, m	Load chain diameter, mm	Chain fall	Net weight, kg	Weight for additional 1 m lift, kg
CB005	500	3,0	23,5	25	5,0 x 15,1	1	11,0	1,5
CB010	1000	3,0	28,4	43	6,3 x 19,1	1	12,5	1,8
CB015	1500	3,0	34,3	57	7,1 x 21,2	1	15,5	2,1
CB020	2000	3,0	35,3	70	8,0 x 24,2	1	20,0	2,3
CB025	2500	3,0	32,3	99	9,0 x 27,2	1	27,0	2,7
CB030	3000	3,0	35,3	114	7,1 x 21,2	2	24,0	3,2
CB050	5000	3,0	33,3	198	9,0 x 27,2	2	41,0	4,4
CB075	7500	3,5	34,3	297	9,0 x 27,2	3	63,0	6,2
CB100	10000	3,5	35,3	396	9,0 x 27,2	4	83,0	7,9
CB150	15000	3,5	36,3	594	9,0 x 27,2	6	155,0	11,4
CB200	20000	3,5	35,3 x 2	396 x 2	9,0 x 27,2	8	235,0	15,8
CB300	30000	3,5	42,1 x 2	495 x 2	9,0 x 27,2	10	310,0	19,2
CB400	40000	3,5	42,1 x 2	693 x 2	9,0 x 27,2	14	480,0	26,2
CB500	50000	3,5	48,0 x 2	792 x 2	9,0 x 27,2	16	640,0	29,7

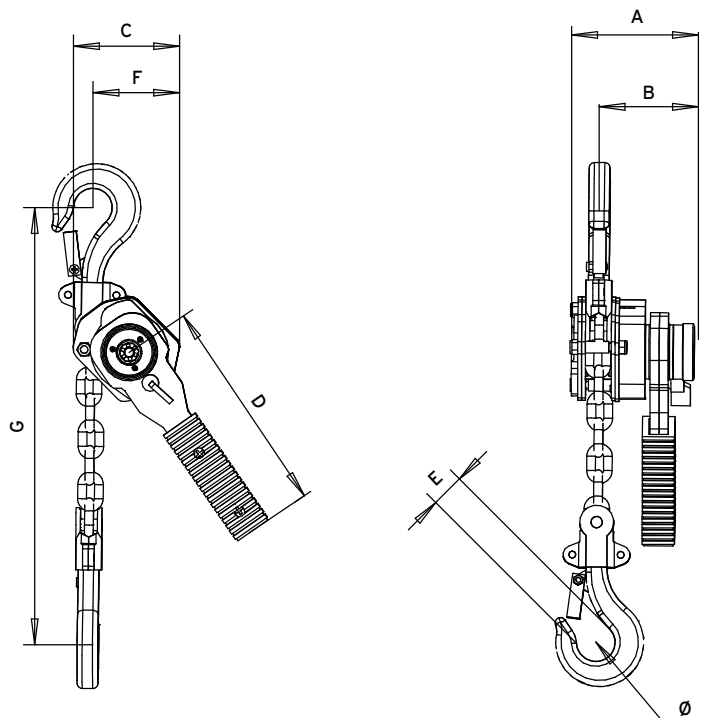

VERLINDE
LIFTING EQUIPMENT
PLV[®]**Manual
Lever Hoist**for loads of
250 to 3,000 kg

The PLV Manual Lever Hoist is a compact unit for lifting, pulling and sliding. Especially suitable for industrial use. Easy to handle, this convenient unit can be used for all sorts of jobs anywhere at the production or building. Great for tight spots where headroom is limited.

Technical characteristics

- Four good-looking, robust, compact lightweight, easy handling models.
 - PLV can be used in any position ; simply switch the lever to make the PLV easier to handle
 - Made with special steels, PLV lever hoists are very compact
 - The lever hoist – a new concept combining good looks with reliability.
 - Chrome-plated steel hoist and lever.
 - Reinforced casing effectively protects mechanisms.
 - Lever rotates 360°.
- Rubber grip.
 - Weston-type load brake with four braking surfaces.
 - Braking mechanism fully protected against dust and splashing.
 - Extra-safe, lightweight and low-maintenance.
 - Chain can be declutched when winch is not loaded.
 - High-strength grade 80 steel alloy chain. Galvanized for corrosion resistance.
 - Complies with en 818, safety factor 4.
 - Made in Europe.
 - Delivered with CE certificate, and hook and chain certificate.
 - Treated steel alloy upper and lower ISO turning hooks with safety latches and inspection points.





Capacity	A	B	C	D	E	F	G	Ø	Lifting height (m)	Num. of falls	Chain diam. (mm)	Weight (kg)
250 kg	92	71	70	168	20	50	245	31	1	1	4	2,1
750 kg	149	89	128	308	26	85	310	37	1	1	6	6,2
1,500 kg	171	102	145	408	36	130	385	45	1,5	1	7	9,5
3,000 kg	204	114	203	418	44	150	460	55	1,5	1	10	20,2



- Treated steel alloy upper and lower iso turning hooks with safety latches and inspection points.



- Chain can be declutched when winch is not loaded.



- Lever can rotate 360°. Rubber grip.

Load capacity

	250 kg	750 kg	1500 kg	3000 kg
> PLV1	█			
> PLV2	█	█		
> PLV3	█	█	█	
> PLV4	█	█	█	█

KITO

Lever Hoist

LB Model
up to 9 t



The Original

Constantly developed
further and improved



- Unique freewheel chain adjusting mechanism
with safeguards against accidental freewheeling under load
- Rugged lever handle
- Smooth geared mechanism
for effortless handling
- Light and compact
- Made in Japan



Hook latch with safety tip

KITO Original freewheel chain adjusting mechanism

protects from accidental freewheeling

Nickel plated load chain

grade 100 (V) (1000N/mm²), in accordance with standard EN 818-7

Fourfold riveted increased safety



Options:

Kito-Clip*



Point load hook

for special applications / e.g. in shipbuilding and in sheet metal forming

- LB-OF without freewheel chain adjusting mechanism
- LB-OLL with optional slip clutch

Technical data valid for all LB models

*to be used for pulling horizontal loads only

Type	LB008	LB010	LB016	LB025	LB032	LB063	LB090
Capacity, kg	800	1000	1600	2500	3200	6300	9000
Standard lift, m	1,5	1,5	1,5	1,5	1,5	1,5	1,5
Hand pull to lift full load, daN	28,4	35,3	33,3	36,3	36,3	37,2	38,2
Load chain diameter, mm	5,6 x 15,7	5,6 x 15,7	7,1 x 19,9	8,8 x 24,6	10 x 28,0	10 x 28,0	10 x 28,0
Chain fall	1	1	1	1	1	2	3
Net weight, kg	5,7	5,9	8,0	11,2	15,0	26,0	40,0
Headroom C, mm	280	300	335	375	395	540	680
Weight for additional 1 m lift, kg	0,7	0,7	1,1	1,7	2,3	4,7	7,0

**TLV[®]****Manual lever winch** for loads of
800 to 3,000 kg

The TLV winch is designed to lift and pull loads over long distances.

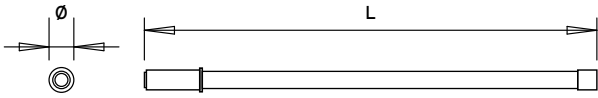
Technical characteristics

- Designed for lifting and pulling loads over long distances.
- Built with high resistance aluminum, making it light and easy to handle.
- Heavy duty tool suitable for tough working conditions.
- Low maintenance make it suitable for outdoor work.
- Delivered with a 20m / 40m rope.
- Delivered with CE certificate, and hook and chain certificate.



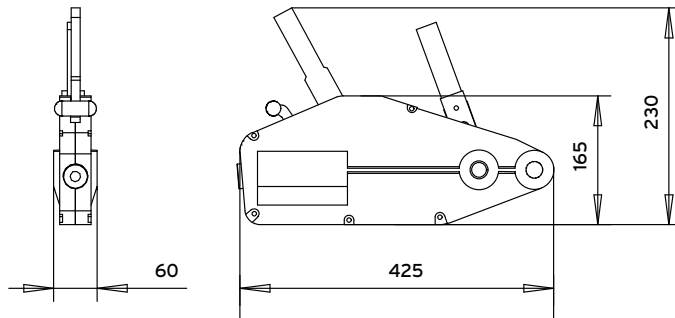
Load capacity

	800 kg	1600 kg	3200 kg
> TC08	█		
> TC16	█	█	
> TC32	█	█	█

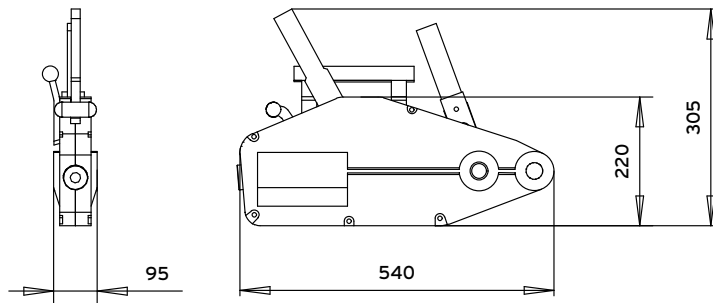


Type	S.W.L (kg)	Diameter (mm)	L (mm)	L bent (mm)
TC08	800	32	790	-
TC16	1600	34	1121	85
TC32	3200	34	1121	85

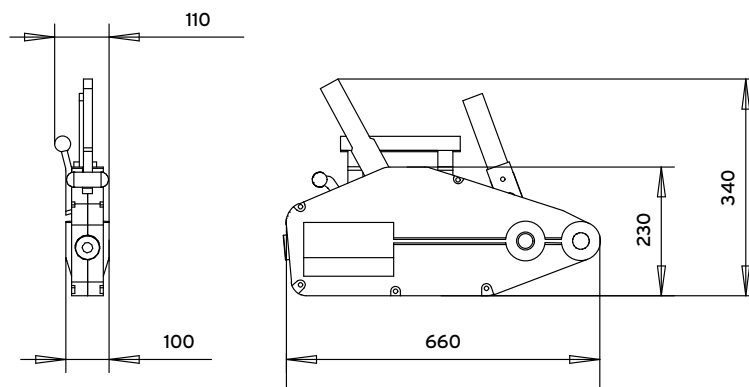
TLV lever



TC08



TC16



TC32

Type	S.W.L (kg)	Lever length (mm)	Effort on lever (kg)	Rope dis. (mm)	Rope length (m)	Breaking load (kg)	Dimensions (mm)	Net weight (kg)
TC08	800	800	28,5	8	20	4800	425 x 60 x 230	6
TC16	1600	1120	41	11	20	9600	540 x 95 x 305	11
TC32	3200	1120	44	16	20	19200	660 x 110 x 340	22



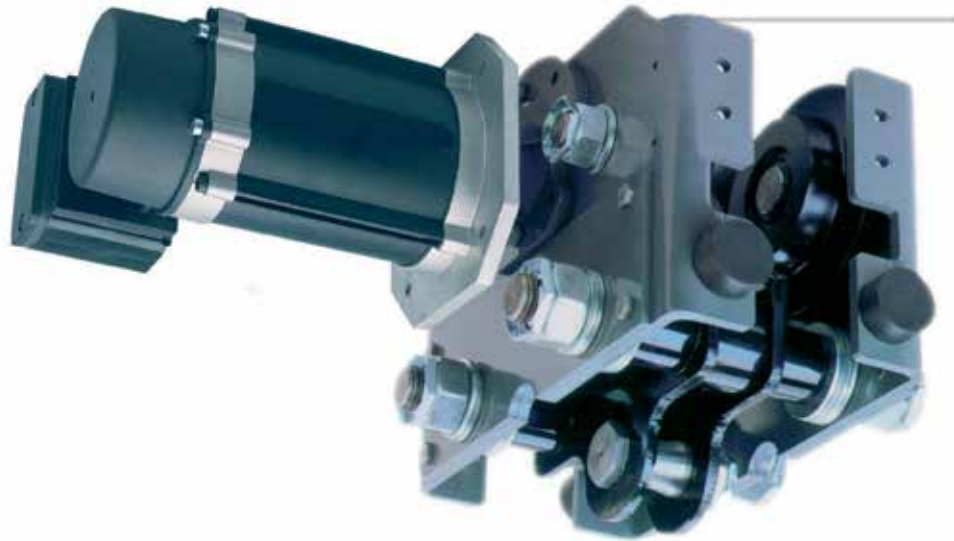


Trolleys and
Accessories

141

CHV[®] Electric variable speed travel trolley for loads of 125 to 5,000 kg

Designed to roll on all profiles type IPN or IPE, HEA or HEB, both straight or curved, the VERLINDE CHV electric trolley enables a hoist with a top hook or EUROCHAIN hoist coupling systems to be hung directly.



Technical characteristics

- The CHV enables any type of hoisting device to be hung.
- Variable travel movement speed 5 to 20 m/min.
- Gap between flanges adjustable enabling it to be adapted to all types of IPN, IPE, HEA or HEB straight or curved profiles.
- 4 rubber stops
- Trolley complete, ready to connect up.
- IP 55, class F motor protection system.
- Low voltage electrical cabinet.

Options available

- Worm gear box to obtain reduced travel movement speed (5 or 10 m/min and 10-2.5 m/min).
- Two-speed travel movement (20-5 m/min).
- Low variable speed (3-10 m/min).
- Very low voltage push button box, 1 or 2 speeds and control transformer.
- Limit switch with 1 or 2 steps.
- Other three-phase types of power supply.
- Version with hooking crosshead.



Load capacity

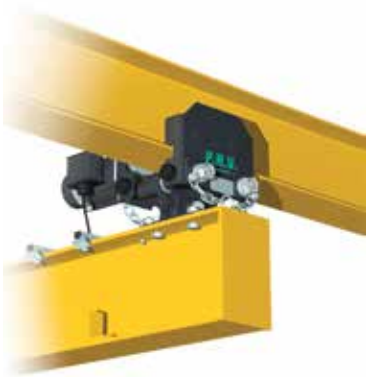
	125 kg	1000 kg	1250 kg	2000 kg	2500 kg	3200 kg	4050 kg	5000 kg
> CHV10								
> CHV20								
> CHV30								
> CHV50								



PRD-PRV®

Trolleys designed for hand-operated articulated sliding girders system

for loads from 500 to 2,500 kg



Trolleys designed for electrically powered articulated sliding girders

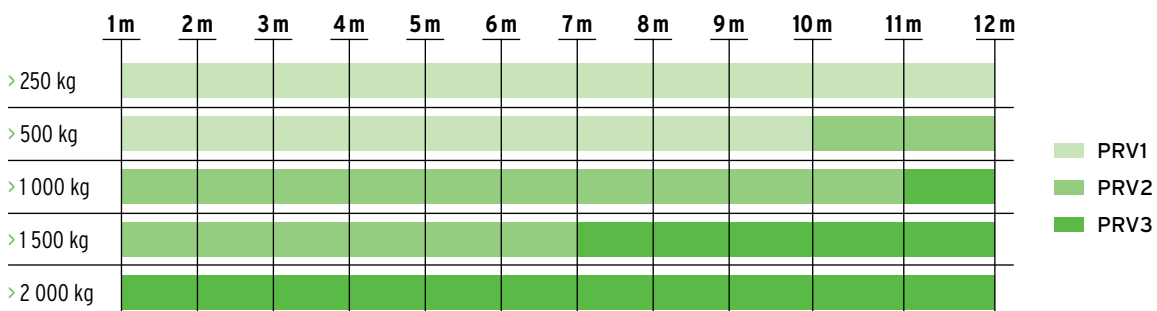
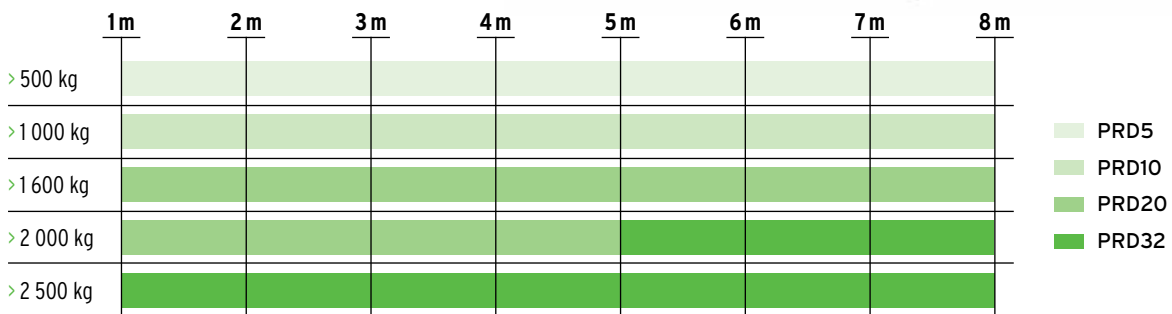
for loads from 250 to 2,000 kg

The ideal solution for hand-operated articulated sliding girders with spans of up to 8 metres. The PRD offers a low-cost solution for moving loads of 500 to 2,500 kg by pushing them along any type of monorail type steel section.

Example of use of PRD trolley.



Span and load capacities



PAP® Girder clamp for loads of 1,000 to 5,000 kg



The PAP enables a lifting device to be hooked in fixed position from a girder, an attachment point for hoisting profiles, installation of mechanical limit switch (stop) at low cost... Its applications are limited only by your imagination!



Model	Capacity (kg)	Distance (mm)	Weight (kg)
PAP 1	1 000	75 - 230	3,9
PAP 2	2 000	75 - 230	5
PAP 3	3 000	80 - 316	9,5
PAP 5	5 000	90 - 306	11,3





Electric Hoists
and Winches

147

VERLINDE
LIFTING EQUIPMENT**EUROCHAIN VR®****Electric chain hoist**
for loads of 63 to 5,000 kg

Completely innovative, top of the range design, its fluid, contemporary and elegant lines confirm the power of this electric chain hoist. This new generation of EUROCHAIN VR hoists is the result of innovative technology ; new materials, new operating concepts, can adapt to each specific need.





Technical characteristics

The EUROCHAIN VR electric chain hoist is designed to provide users with the maximum level of safety. It is delivered with the following equipment as standard:

- New lifting nut concept with intermediate teeth for perfect chain drive.
- Torque limiter.
- Disk lifting brake.
- 3m standard lifting height.
- Dual-speed lifting.
- Safety electric end of run for up and down position.
- IP55 lifting and travelling motor.
- Thermal protection on lifting motor.
- Tropic-proof protection (lifting and steering – 90 to 95 %).
- Galvanised lifting chain.
- Disconnectable command cable.
- 2-buttons unit on fixed hoist or push steering carriage.
- 4-buttons unit on hoist coupled to electric steering carriage.
- "Punch" emergency stop button.
- 400V/3Ph/50Hz or 415V/3Ph/50 Hz or 460V/3 Ph/60 Hz power supply.
- Low voltage 48 V command.
- Chain bag.
- 70 mm, RAL 7021 epoxy powder paint.
- Speed variation on travelling – MS Mode (for hoists with an electric trolley).
- Complies with the CE machine directive.



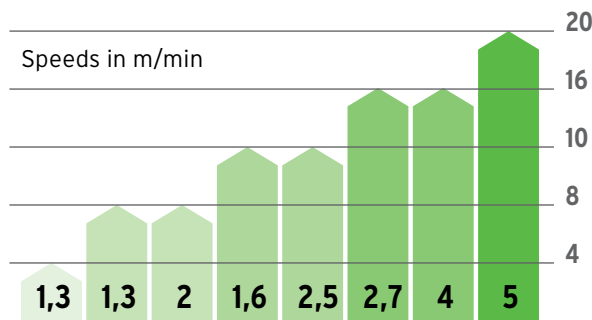
EUROCHAIN VR®

Speeds

Wide range of speeds.

25% quicker than the previous generation: 4/1,3; 8/1,3; 8/2; 10/1,6; 10/2,5; 16/2,7; 16/4; 20/5.

The lifting speed ranges have been considerably expanded to enable them to better meet your production constraints and increase productivity, performance, safety and usage on a daily basis.



Power

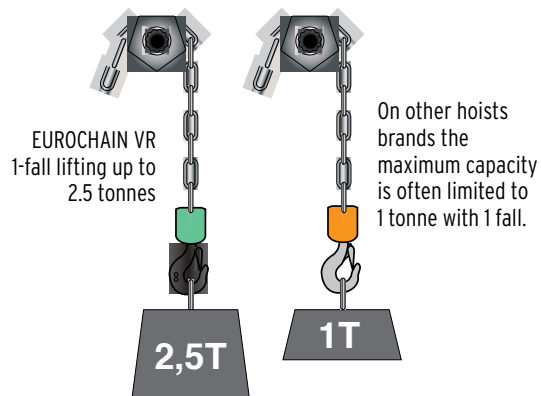
Lifting capacities.

The load spectra for each hoist body have been revised upwards to optimise your lifting equipment investment.

1-fall lifting up to 2.5 tonnes in FEM 2m.

This product advantage offers you the possibility of working at greater lifting heights, with the following benefits:

- Reduction in chain bag dimensions, with a more compact lifting unit.
- Reduction in maintenance costs (fewer lifting chains to be replaced if necessary during maintenance operations).
- Elimination of lifting hook tip-over risks.
- High lifting speeds preserved.



FEM user group up to 3m.

For intensive use of your hoist, up to 300 start-ups per hour!

Savings

Maintenance operations are now simpler, quicker and more economical:

- Easy access to the brake setting.
- Easy access to the clutch setting.
- Easy access to the fuse.
- Access (workspace) and easy removal of the electric boards by removable plug.

Safety

Clutch concept.

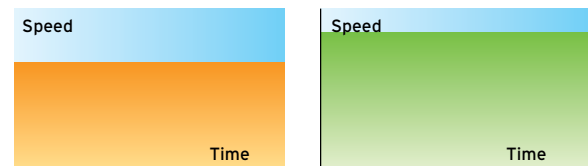
The clutch position in the reducer ensures the load is held by the brake regardless of the machine's daily operating conditions.

Low voltage or direct voltage command.

Enables perfect operation for your usage context (operation in industrial environment, stage lifting, etc.).

Variable speed electric travelling.

The variable speed travelling combined with the high lifting speeds enables flexible and quick working in complete safety for the operator



Load wheel, electric limit switch.

A new patented concept, the 5-pockets lifting nut has 5 intermediate teeth for perfect control over the lifting chain.

This innovation enables better guidance for the chain and avoids any risk of jamming. Increased operating safety and reduced maintenance costs.

The lifting hook's maximum up and down positions are secured by the electric limit switch located under the chain guidance system.

The switches are activated alternately by the lifting hook's upper cone and the slack fall stop.



Made-to-measure configurations



- Fixed suspended by hook.



- Hooked to a manual or electric trolley in a Eurosystem ST profile.



- Coupled to a pushed or chain driven travelling trolley.



- Hooked to a manual or electric trolley in a Eurosystem ALU profile.



- Coupled to a motorised variable speed travelling trolley.





EUROCHAIN VR® INOX

Electric chain hoist

for loads of 63 to 1,250 kg*

Technical characteristics

- Stainless steel lifting chain.
- New lifting nut concept with intermediate teeth for perfect chain drive.
- Torque limiter.
- Disk lifting brake.
- 3 m standard lifting height.
- Dual-speed lifting.
- Safety electric end of run for up and down position.
- IP55 lifting and travelling motor.
- Thermal protection on lifting motor.
- Tropic-proof protection (lifting and steering – 90 to 95 %).
- Disconnectable command cable.
- 2-buttons unit on fixed hoist or push steering carriage.
- 4-buttons unit on hoist coupled to electric steering carriage.
- Emergency stop button.
- 400V/3Ph/50Hz or 415V/3Ph/50 Hz or 460V/3 Ph/60 Hz power supply.



Options available

- Stainless steel lifting hook.
- Biodegradable oil NSF H1 or dedicated for food (lifting and travelling gearbox, lifting chain). Lubricant clean and bubble for chains, sprockets and guides in the industry food. Oil synthetic anti-wear and extreme pressure, usable for incidental contact with the foodstuffs following the FDA requirements (certificates available on request).
- Stainless steel load wheel on trolley hoist and accessory white finish Paint.
- Level of protection increased: ATEX Zone 1, EEx.
- Level of protection increased: ATEX Zone 22.
- IP66 protection.
- Variable speed lifting.
- Extreme operating Temperatures: (-40 °C to +70 °C).
- Wall control panel instead of the pendant.
- Remote radio control.
- Manual or electric trolley.



STAGEMAKER SR



Industrial chain type electric hoist specially adapted to "show-business" applications for loads of 125 to 5,000 kg*

Optional equipment

- Single brake option.
- Pushbutton controller.
- 4, 8, and 12 channel controllers.
- 110VAC or 48VAC control available.
- Single and double flight cases.
- Non rotating hook.
- Suspension eye instead of upper hook.
- Industrial chain guide.

Innovation

PERFECT PUSH



New "Perfect Push", patented concept, 5 pocket load wheel, fitted with 5 intermediate teeth. This innovation provides improved chain guiding and chain flow, to help reduce the risk of chain jamming.

CHAINFLUX



- Design provides a horizontal flow of the chain as it comes off of the load wheel. This design, along with the high strength aluminum construction, allows for a more fluid flow of the chain into the chain bag and helps reduce the risk of chain jamming.
- Drain in housing to avoid water collection in load wheel compartment.

- Rubber buffers located on the hoist corners provide added protection for the hoist.
- Motor design provides consistent speeds when both fully loaded or unloaded.
- Electrical components designed for "plug and play" connectivity.

Safety

- Double lifting brake as standard for more safety. Stagemaker SR is D8+ ready (after resetting nominal load, divided by 2).
- Clutch concept. the clutch position in the reducer ensures the load is held by the brake regardless of the machine's daily operating conditions.
- Electrical limit switch as standard on all hoists (version B).
- IP55 protection for the entire hoist.
- Black electro galvanized lifting chain manufactured specifically for Stagemaker.
- All hoist motor as integral thermal protection to prevent overheating (version B).



*In combination with Stagemaker SM series

Operating convenience

- Operating sound level down to 60 db (test certificate available).
- Climbing hoist or industrial suspension configuration can be changed simply by reversing the chain container.
- Rotating upper and lower hooks.
- Chaining tool delivered with every hoist.
- High capacity and high strength chain bag made of 1100 denier, high grade black fabric, is both removable and reversible.

X2
DOUBLE
BRAKE
as standard
BGV D8+
READY



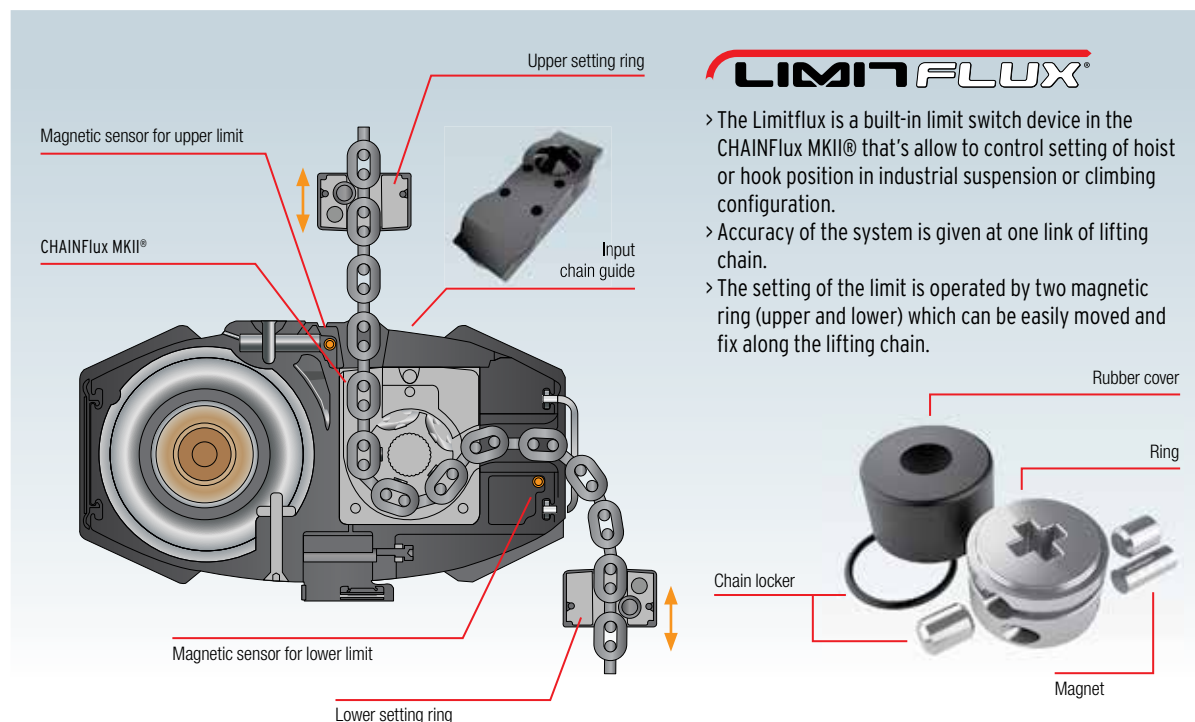
Improved ergonomics

- Due to oval shape the chain can't be stuck on top of the motor, this reduces the risk of chain jamming, the design with its flowing and refined lines draws attention to its robustness and on-board technology and gives a strong impression of integral safety. The new streamlining provides STAGEMAKER SR better integration in its operating environment (lighting, loudspeakers, etc.).
- Hoist meets ecology regulations and is RoHS compliant.
- The hoist body is powder coated with black, protective 70 µm epoxy paint, allowing it to perform under the most extreme conditions (-20°C to +50°C / -4 to 122 degrees F).
- Lifting hook has an ergonomic, rubber clad, gripping surface.
- New ergonomic concept for the retractable, rubber clad handgrips, allow for easy transportation of the hoist.

Savings

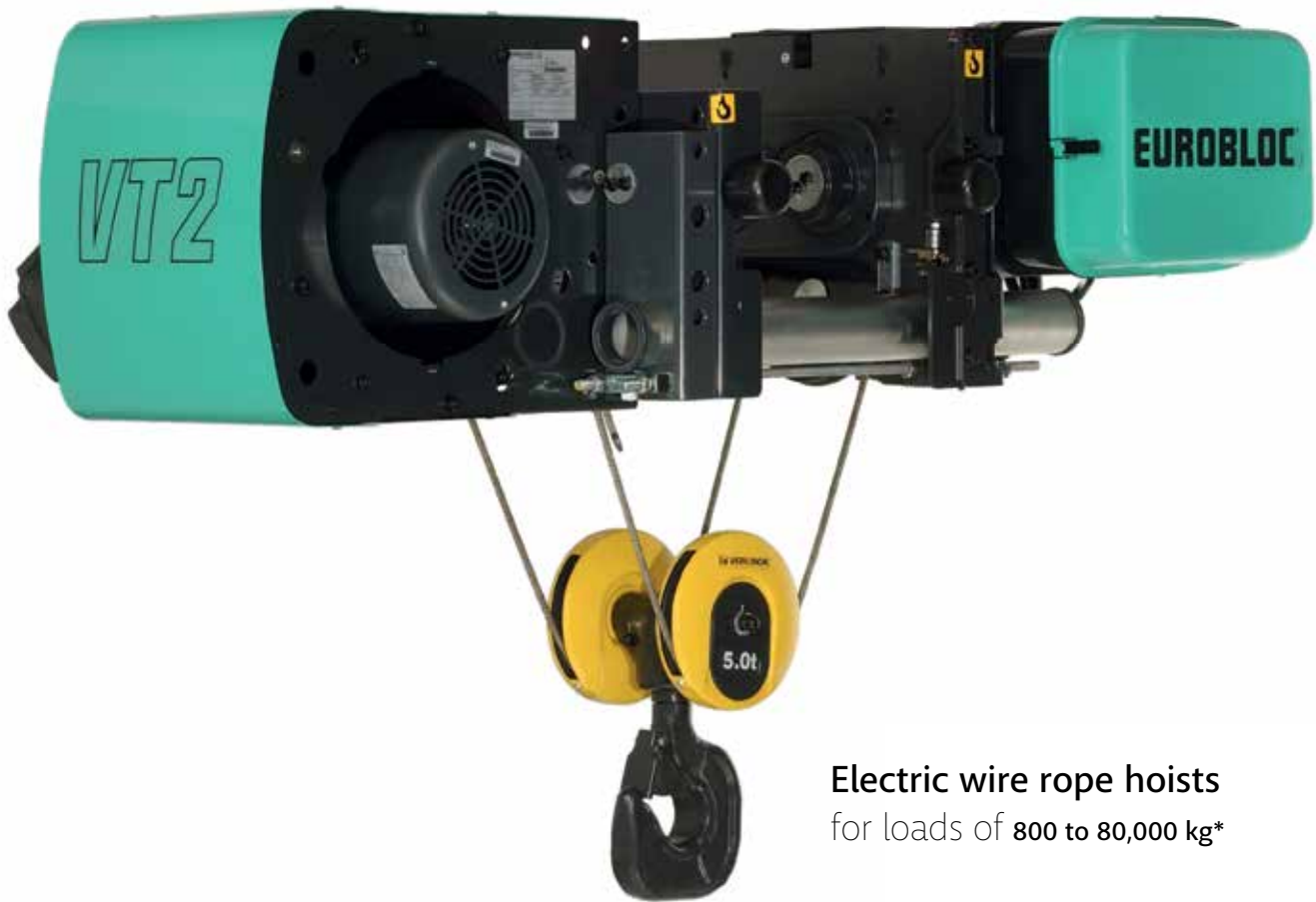
Maintenance operations are now simpler, faster and more economical:

- Easy access to the torque limiter.
- Easy access to safety fuses.
- New concept of easily dismountable hoisting motor.
- Easy access and removal of plug and play electronic boards.
- Easy visual access to the brake for control.




VERLINDE
LIFTING EQUIPMENT

EUROBLOC VT®



Electric wire rope hoists for loads of 800 to 80,000 kg*

VERLINDE has always been in the vanguard for innovative ideas and designs for lifting units with hooks (over 70 patents filed in France and worldwide).

The new EUROBLOC VT electric wire rope hoist has been designed in this resolutely "avant garde" spirit

– 13 patents have been approved from this design alone.



EUROBLOC® VT9-10-11-12

Electric wire rope hoists

for loads of 10,000 to 250,000 kg*



The EUROBLOC VT family has now been widened to include the VT9-10-11-12. This line of open winches offers technical solutions to meet your requirements for:

- A greater hoist capacity (10 to 250 tons).
- Lifting height (up to 103,6 m).
- Utilisation group (ISO classification up to M6).
- Hoist speed.
- Speed control (speed variation).



Technical characteristics

- High performance hoist motor.
- Very high safety level of hoist brake.
- Smart supervision of brake by the variator with slip or jamming detection feature.
- Double safety system for end of travel lifting (limit switches with detection of top and bottom position together with a limit switch tripped by the rope lead-off).
- Travel limit switch as standard.
- Overload protection.
- Winch supervision with Monitor system.
- IP55 and IP66 components.
- Hoist motor insulation class F/H, IP55 protection, thermal protection.
- Epoxy paint (thickness 120 µm).



The leading French manufacturer of lifting equipment

Leading french manufacturer of lifting equipment. VERLINDE produce in large batches electric wire rope hoist, electric chain hoist, electric belt hoist, electric winches, jib cranes, and cranes components in their fully modernized and enlarged production center of VERNOUILLET (France).

From CAD/CAM design to production by machines amongst the most modern in Europe combined with know-how from a skilled staff, each lifting equipment showing the VERLINDE brand ensures reliability and quality to users.

New **products**, new **concepts**

VERLINDE has always been among the first companies to introduce new ideas for the innovation of hoisting units with a hook (more than 70 patents taken out in France and around the world). The new EUROBLOC VT electric wire rope hoist has been created within this avant-garde spirit, as it accounts for a total of 13 patents on its own.

The EUROBLOC VT electric wire rope hoist is, as of now, the only hoisting unit with wire rope and a hook that offers, in its standard version:

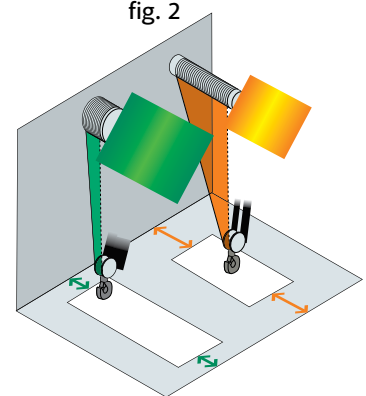
- Hook approach, "C" dimensions and the "F" approach distance of the hoist are the smallest available on the market (fig. 2).
- The pulley block presents only a slight lateral shift during hoisting motion (virtually vertical lifting) (fig. 1).
- The possibility to adjust speed while travelling (fig. 3).

And more equipment to be discovered in the pages that follow.

fig. 1

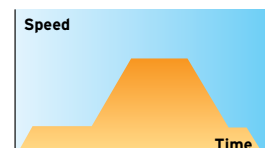
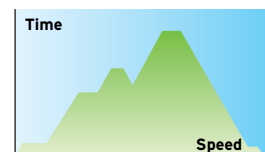


fig. 2



Conventional hoist
with traditional design Eurobloc VT

fig. 3





Technical characteristics

- 2-speed hoisting motor (ratio 1-6) with bimetal sensors. 60% operating factor.
- Maintenance-free DC disc brake.
- 4-position limit switch (up, down, high position deceleration, reversed phase protection).
- Load limiter.
- 3 to 20 m/min variable speed travelling motor.
- Electrical cabinet with low voltage transformer and switchgear. Safety on/off.
- Standard 380V/400V/415V/50Hz, 440V/460V/60Hz power supply.
- IP55 / Class F protection system for motors.
- Tropicalised for travelling and lifting.
- Cable guide for difficult environments.
- Time counter.

MT2, supervisor unit (optional).

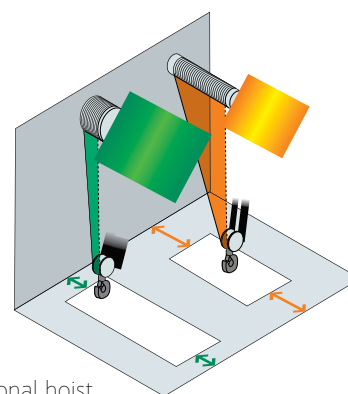


Advantages

- Virtual vertical lift.
- Compact dimensions.
- Dimension "C" is compact to optimise hoisting height as much as possible.
- Greater accuracy in moving loads, thanks to the variable travel speed (preventing the load from swinging).
- Minimum approach distances.




Short "C" dimension.



Conventional hoist with traditional design Eurobloc VT

Options available

- Higher travelling speeds.
- Radio remote control.
- MT2 monitor.
- Load limiter with 2 or 3 steps.
- Special supply voltage.
- Load display.
- Explosion proof hoist. 

Load capacity

	2 000 kg	3 200 kg	10 000 kg	20 000 kg	40 000 kg	80 000 kg
> Type VT1						
> Type VT2						
> Type VT3						
> Type VT4						
> Type VT5						



Customised installations

- Foot mounted or overhead mounted.
- Monorail trolley with standard headroom (HPN).



- Double girder trolley (fixed or suspended).





- Monorail trolley with short headroom (HPR).



- Monorail trolley with short headroom (HPR) and lifting inverter.





Safety

Travelling. Variable travelling speed for precise positioning of loads.

Wire rope. in galvanized steel as a standard, high safety factor (factor 4,6 -FEM 2m).

Electrical cubicle. The cover can be folded back so that you can store your tools for maintenance (the cover has two steel safety wires to prevent it from falling).

MT2. Electronic control of the recording of hoist solicitation status.

Electrical. Low voltage control for more safety.

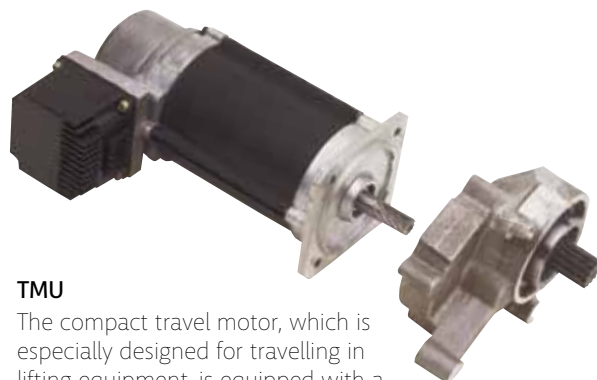
Traverse wheels. The 4 steering wheels are fully streamlined for improved safety.

Hook and pulley block. Rotating hook and pulley block with safety latch.



Ergonomics

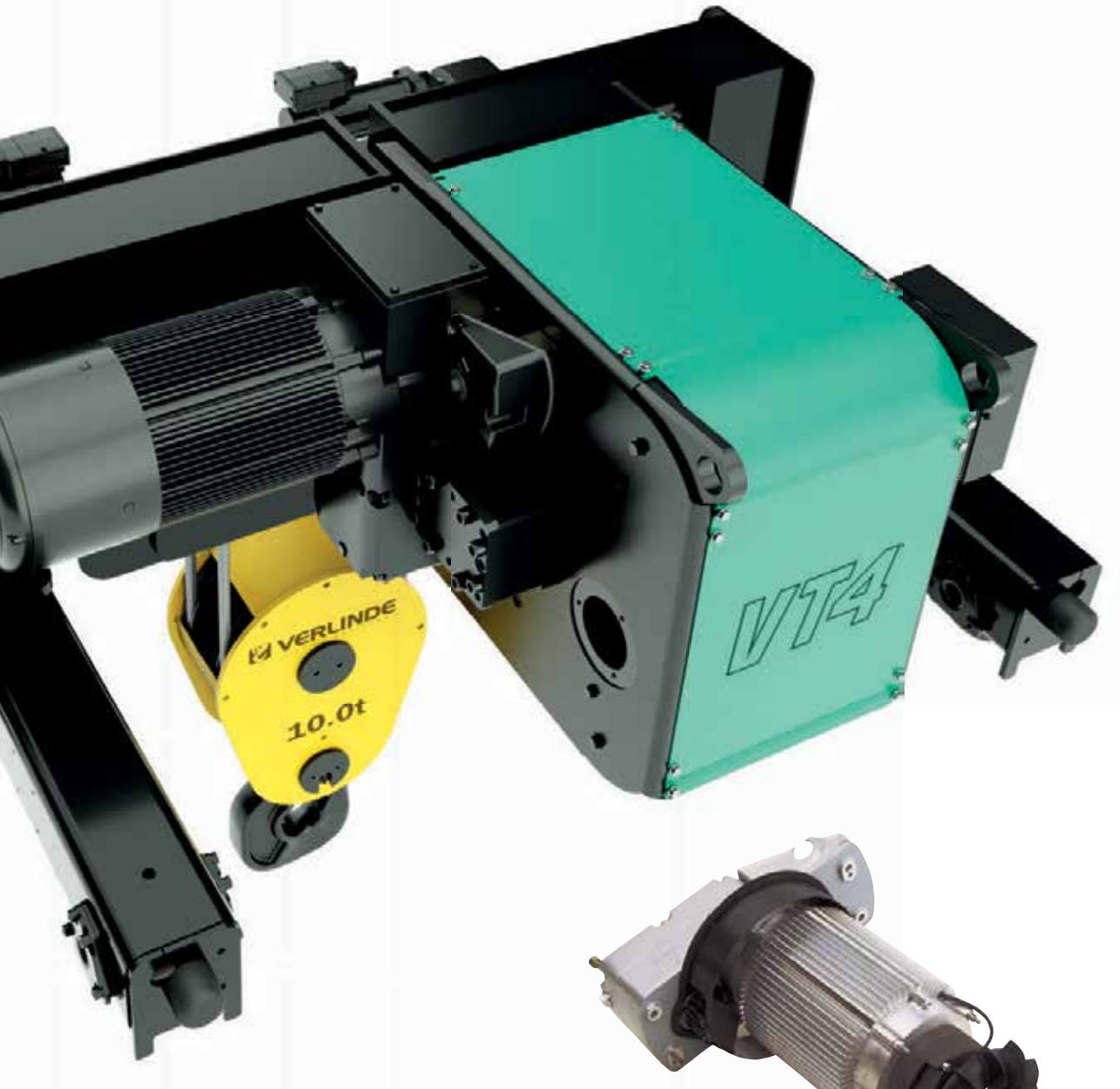
- **Hook and pulley block.**
Ergonomical hook (area to grab and hold).
- **Push button box.** Made with tinted polypropylene, grounded, with double insulation, ergonomic (IP 65 protection). Optional load display available.
- **Electrical cubicle.** Located on the side of the hoist, easily accessible. The open / close system uses a quick closure method.



TMU

The compact travel motor, which is especially designed for travelling in lifting equipment, is equipped with a variable speed system that is a standard equipment. Maximum speed range is 2 to 32 m/min. IP 55 protection. The motor is designed to ease any necessary maintenance:

- "Intelligent" easy system for motor positioning and assembly onto the trolley.
- The motor receives power from a single plug that can be unbound easily.



Easy maintenance

Hoisting motor. Motor cooling increased by 30 % (tunnel effect).

Hoisting brake. The brake is tested for hoist longevity under normal use conditions.

Steering motor-reducer. Steering reducer with one rail and a permanently lubricated connection.

Drum. The drum has been completely covered for better protection.

Rope guide. Built "without spring" so that it can be more easily replaced during maintenance.

Electrical cubicle. The wires go in and out by means of steel plugs that can be unbound and that are built into the case.

MT2. Calculation of the SWP (Safe Working Period). Assembly is in modules, for easier management of spare parts for replacement.

Surface treatment. 2- component epoxy paint with 120 μ for greater protection.

Hoisting Motor and Brake

Designed specifically for lifting, the 2-speed hoisting motor comes with all the necessary protections:

- Type IP 55 protection and F insulation class.
- Bimetal sensor.
- Cooling fins enlarged significantly to encourage heat dissipation.

Hoisting drum

There is a special patent for drum assembly and drum rotation without ball bearings.

Advantage: this prevents grease and steel particles from falling into the motor.





Savings

Hoisting motor. 60 % operating factor and tropicalised as a standard for greater longevity.

Travelling motor. Tropicalised as a standard for greater longevity.

Pulley block. The best "C" dimension on the market for optimal use of the size of your buildings and optimal use of work areas.

Travelling. Variable travelling speed to reduce wear on steering rollers.

Load limiter. As ordered by the directive on "Machines" (required equipment). All EUROBLLOC VTs are equipped with a load limiter as a standard (safety measure in the event of hoist overload). For greater longevity.

Hook and pulley block. Doesn't take up much space, permanently lubricated rollers, pulleys are in GGG cast iron, very resistant. A high pulley/wire rope diameter ratio gives the wire rope greater longevity.



Gear limit switches

The limit switch with 4 cams can be accessed on the gear unit and is used for managing the upper and lower limit switches of the hook, switching from low to high speed, and for managing phase reversals.





MT2
EUROBLOC VT can be equipped with the optional MONITOR 2 (Electronic control of the recording of the hoist's tractive effort states: SWP, time running, starts, overloads, temperature, load, brake, etc.).

Rope guide

New rope guided system "very high performance" for difficult environments.



High technology

Pulley block. Only a small shift of the pulley block for hoisting (lifting is almost perfectly centred).

Rope guide. The guidance system does not get dirty, which allows for use in any type of environment.

Drum. A very high wire rope / drum diameter ratio (twice as large as the standard one), which:

- Increases the longevity of the wire rope.
- Reduces the approach data of the hoist.
- Reduces the "C" approach data of the hook.

Electrical case. Quite large, it is equipped with the speed variation module as a standard.

Lifting gearbox. Direct impulse gearbox unit, helicoid toothed gears, permanently lubricated, detector to prevent pressure overload.

Optimal positioning of steering rollers. The 4 steering rollers equally share the load in order to optimise your tracks.



Options

- Non standard rail width.
- Special rail gauge.
- Higher travelling speed.
- Radio remote control.
- Travelling limit switch.
- Derailment catches on double girder trolley.
- Boogies trolley (only with HPN).
- Missing phase control.
- Monitor 2 (MT2).
- 2 or 3 steps overload device.
- Overload device temporization.
- Optical and audible warning connected to overload limit switch.
- Non standard main voltage.
- Rain cover.
- Klaxon on pendant box.
- Explosion proof and / or spark proof version.
- Load indication device.
- Motors thermal protection.
- Class H motors.
- Heating device on motor.
- Stainless steel hoist electrical cubicle
- IP 55 or IP 65.
- CSA electrical control.
- Hook operated upper limit switches.
- Ramshorn hook.
- Additional brake.
- Lifting variable speed.
- Crash protection with electronic cell.



Standards and hoisting regulations



CE directive. Since 129 December 2009, the European Machinery Directive (2006/42/EC) applies to the sale and assembly of all new machines marketed from 2010. The new decree is complementary to the former Directive, made up of 600 standards issued in 1995. That directive obliges that machine constructors ensure that their machinery complies with certain regulations, standards, national legislations and technical specifications.

F.E.M. European lifting equipment association.
S.W.P. Safe Working Period. A Safe Working Period is calculated for each electrical hoist unit according to the average operating time of the hoisting equipment, load capacity and class of application. After this period, a general service carried out by the constructor is necessary.

Class of operation. According to FEM classification, two fundamental criteria must be taken into account: the type of duty and the class of duty (according to average daily operation time average load).

ISO standard. Classes of operation can also be defined according to ISO grouping (1Am =M4, 2m =M5, 3m =M6, etc.).

Type of duty.

- **Light service.** Equipment rarely subject to maximum load and frequently to very little load.
- **Medium service.** Equipment rarely subject to maximum load and frequently to very little load.
- **Heavy service.** Equipment frequently subject to maximum load and frequently to medium load.
- **Very heavy service.** Equipment frequently subject to maximum or near maximum load.

Average daily operating time (hours)				≤0,5		≤1		≤2		≤4		≤8		≤16	
Class of duty				V0,25	T2	V0,5	T3	V1	T4	V2	T5	V3	T6	V4	T7
Type of service	1	L1	Light					1Bm	M3	1Am	M4	2m	M5	V4	M6
	2	L2	Medium			1Bm	M3	1Am	M4	2m	M5	3m	M6		
	3	L3	Heavy	1Bm	M3	1Am	M4	2m	M5	3m	M6				
	4	L4	Very heavy	1Am	M4	2m	M5	3m	M6						
Group								1Bm	M3	1Am	M4	2m	M5	3m	M6
Duty factor*								25 %		30 %		40 %		50 %	
Number of star starts per hour								150		180		240		300	

■ FEM 9511 standards classification. ■ ISO standards classification.

* Duty factor in % = $\frac{\text{Hoisting time} + \text{lowering time}}{\text{Hoisting time} + \text{idle time} + \text{lowering time} + \text{idle time}} \times 100$

Hoist codification	Load (FEM/kg)			H.O.L. (m)	Lifting speeds (m/mn)	Trolleys					
	1Am	2m	3m			Fixed	Monorail		Double girder trolley		
							HPR	HPN	High	Med.	Low
VT10211--N P1		1 000	800	12	10 / 1,6	•	•	•	•	•	
VT10211--N P2		1 600	1 250	12 - 19	10 / 1,6	•	•	•	•	•	
VT10211--R P2		1 600	1 250	12 - 19	12,5 / 2	•	•	•	•	•	
VT10411--N P1		2 000	1 600	6 - 9,5	5 / 0,8	•	•	•	•	•	
VT10411--N P2		3 200	2 500	6 - 9,5	5 / 0,8	•	•	•	•	•	
VT10411--R P2		3 200	2 500	6 - 9,5	6,3 / 1	•	•	•	•	•	
VT20211--N P3		2 500	2 000	12 - 18 - 24 - 30*	10 / 1,6	•	•	•	•	•	
VT20211--R P4		2 500	2 000	12 - 18 - 24 - 30*	16 / 2,6	•	•	•	•	•	
VT20211--L P3	3 200			12 - 18 - 24 - 30*	8 / 1,3	•	•	•	•	•	
VT20411--N P3		5 000	4 000	6 - 9 - 12 - 15*	5 / 0,8	•	•	•	•	•	
VT20411--R P4		5 000	4 000	6 - 9 - 12 - 15*	8 / 1,3	•	•	•	•	•	
VT20411--L P3	6 300			6 - 9 - 12 - 15*	4 / 0,7	•	•	•	•	•	
VT20611--N P3		7 500		6 - 8 - 10	3,2 / 0,5	•	•	•	•	•	
VT20611--R P4		7 500		6 - 8 - 10	5 / 0,8	•	•	•	•	•	
VT20811--N P3	10 000	8 000		4,5 - 6 - 7,5	2,5 / 0,4	•	•	•	•	•	
VT20811--R P4	10 000	8 000		4,5 - 6 - 7,5	4 / 0,7	•	•	•	•	•	
VT30211--N P5		5 000	4 000	18 - 24 - 32 - 40*	10 / 1,6	•	•	•	•	•	
VT30211--R P6		5 000	4 000	18 - 24 - 32 - 40*	16 / 2,6	•	•	•	•	•	
VT30211--L P5	6 300			18 - 24 - 32 - 40*	8 / 1,3	•	•	•	•	•	
VT30411--N P5		10 000	8 000	9 - 12 - 16 - 20*	5 / 0,8	•	•	•	•	•	
VT30411--R P6		10 000	8 000	9 - 12 - 16 - 20*	8 / 1,3	•	•	•	•	•	
VT30411--L P5	12 500			9 - 12 - 16 - 20*	4 / 0,7	•	•	•	•	•	
VT30611--N P5		15 000		4,5 - 6 - 8 - 10	3,2 / 0,5	•	•	•	•	•	
VT30611--R P6		15 000		4,5 - 6 - 8 - 10	5 / 0,8	•	•	•	•	•	
VT30811--N P5	20 000	16 000		4,5 - 6 - 8 - 10	2,5 / 0,4	•	•	•	•	•	
VT30811--R P6	20 000	16 000		4,5 - 6 - 8 - 10	4 / 0,7	•	•	•	•	•	
VT30421--N P5		5 000	4 000	10 - 14 - 19 - 26 - 35 - 47	10 / 1,6	•	•	•	•	•	
VT30421--R P6		5 000	4 000	10 - 14 - 19 - 26 - 35 - 47	16 / 2,6	•	•	•	•	•	
VT30821--N P5		10 000	8 000	5 - 7 - 9,5 - 13 - 17,5 - 23,5	5 / 0,8	•	•	•	•	•	
VT30821--R P6		10 000	8 000	5 - 7 - 9,5 - 13 - 17,5 - 23,5	8 / 1,3	•	•	•	•	•	
VT31221--N P5		15 000	12 000	4,5 - 6,5 - 8,5 - 11,5 - 15,5	3,2 / 0,5	•	•	•	•	•	
VT31221--R P6		15 000	12 000	4,5 - 6,5 - 8,5 - 11,5 - 15,5	5 / 0,8	•	•	•	•	•	
VT31621--N P5	20 000	16 000		4,5 - 6,5 - 8,5 - 11,5	2,5 / 0,4	•	•	•	•	•	
VT31621--R P6	20 000	16 000		4,5 - 6,5 - 8,5 - 11,5	4 / 0,7	•	•	•	•	•	
VT40211--L P6	10 000	8 000	6 300	16,4 - 22 - 28,6 - 37	8 / 1,3	•	•	•	•	•	
VT40211--N P6		8 000	6 300	16,4 - 22 - 28,6 - 37	10 / 1,6	•	•	•	•	•	
VT40211--N P7	10 000			16,4 - 22 - 28,6 - 37	10 / 1,6	•	•	•	•	•	
VT40211--R P7		8 000	6 300	16,4 - 22 - 28,6 - 37	12,5 / 2	•	•	•	•	•	
VT40411--L P6	20 000	16 000	12 500	8,2 - 11 - 14,3 - 18,5 - 23,8	4 / 0,6	•	•	•	•	•	
VT40411--N P6		16 000	12 500	8,2 - 11 - 14,3 - 18,5 - 23,8	5 / 0,8	•	•	•	•	•	
VT40411--N P7	20 000			8,2 - 11 - 14,3 - 18,5 - 23,8	5 / 0,8	•	•	•	•	•	
VT40411--R P7		16 000	12 500	8,2 - 11 - 14,3 - 18,5 - 23,8	6,3 / 1	•	•	•	•	•	
VT40611--L P6	30 000	25 000		5,5 - 7,3 - 9,5 - 12,3 - 15,9	2,5 / 0,4	•	•	•	•	•	
VT40611--N P6		25 000		5,5 - 7,3 - 9,5 - 12,3 - 15,9	3,2 / 0,5	•	•	•	•	•	
VT40611--N P7	30 000			5,5 - 7,3 - 9,5 - 12,3 - 15,9	3,2 / 0,5	•	•	•	•	•	
VT40611--R P7		25 000		5,5 - 7,3 - 9,5 - 12,3 - 15,9	4 / 0,6	•	•	•	•	•	
VT40811--L P6	40 000			5,8 - 7,2 - 9,3 - 11,9	2 / 0,3	•	•	•	•	•	
VT40811--N P7	40 000			5,8 - 7,2 - 9,3 - 11,9	2,5 / 0,4	•	•	•	•	•	
VT41011--N P7		18m / 50 000		5,8 - 7,2 - 9,3 - 11,9	2 / 0,3	•	•	•	•	•	
VT40421--L P6	10 000	8 000	6 300	20 - 25,7 - 33	8 / 1,3	•	•	•	•	•	
VT40421--N P6		8 000	6 300	20 - 25,7 - 33	10 / 1,6	•	•	•	•	•	
VT40421--N P7	10 000			20 - 25,7 - 33	10 / 1,6	•	•	•	•	•	
VT40421--R P7		8 000	6 300	20 - 25,7 - 33	12,5 / 2	•	•	•	•	•	
VT40821--L P6	20 000	16 000	12 500	10 - 12,8 - 16,5 - 21,2 - 27,9 - 33,7	4 / 0,6	•	•	•	•	•	
VT40821--N P6		16 000	12 500	10 - 12,8 - 16,5 - 21,2 - 27,9 - 33,7	5 / 0,8	•	•	•	•	•	
VT40821--N P7	20 000			10 - 12,8 - 16,5 - 21,2 - 27,9 - 33,7	5 / 0,8	•	•	•	•	•	
VT40821--R P7		16 000	12 500	10 - 12,8 - 16,5 - 21,2 - 27,9 - 33,7	6,3 / 1	•	•	•	•	•	
VT41221--L P6	30 000	25 000		6,6 - 8,5 - 11 - 14,1 - 18,6 - 22,4	2,5 / 0,4	•	•	•	•	•	
VT41221--N P6		25 000		6,6 - 8,5 - 11 - 14,1 - 18,6 - 22,4	3,2 / 0,5	•	•	•	•	•	
VT41221--N P7	30 000			6,6 - 8,5 - 11 - 14,1 - 18,6 - 22,4	3,2 / 0,5	•	•	•	•	•	
VT41221--R P7		25 000		6,6 - 8,5 - 11 - 14,1 - 18,6 - 22,4	4 / 0,6	•	•	•	•	•	
VT41621--L P6	40 000			6,4 - 8,2 - 10,6 - 13,9 - 16,8	2 / 0,3	•	•	•	•	•	
VT41621--N P7	40 000			6,4 - 8,2 - 10,6 - 13,9 - 16,8	2,5 / 0,4	•	•	•	•	•	
VT42021--N P7		18m / 50 000		6,6 - 8,5 - 11,1	2 / 0,3	•	•	•	•	•	
VT50421--	20 000	16 000	12 500	4,5 - 6,7 - 10,1 - 13,5	**	•	•	•	•	•	
VT50821--	40 000	32 000	25 000	6,2 - 8,2 - 10,9 - 14,4	**	•	•	•	•	•	
VT51221--	60 000	50 000		5,9 - 7,7 - 10 - 13,2	**	•	•	•	•	•	
VT51621--	80 000			5,8 - 7,5 - 9,9 - 12	**	•	•	•	•	•	

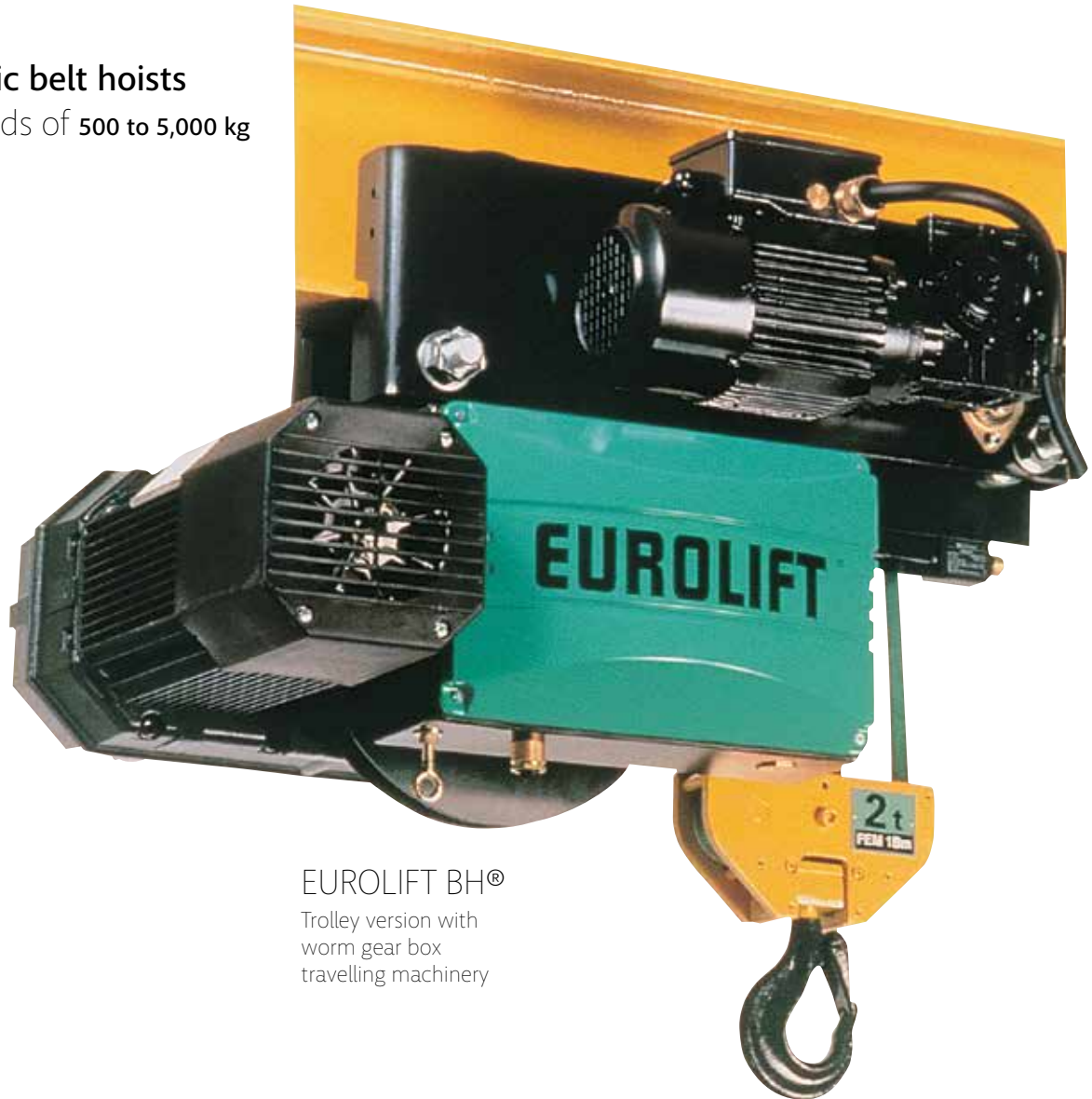
*Not available in HPR version.

**Consult us.


VERLINDE
LIFTING EQUIPMENT

EUROLIFT BH[®]12

Electric belt hoists
for loads of 500 to 5,000 kg



EUROLIFT BH[®]

Trolley version with
worm gear box
travelling machinery

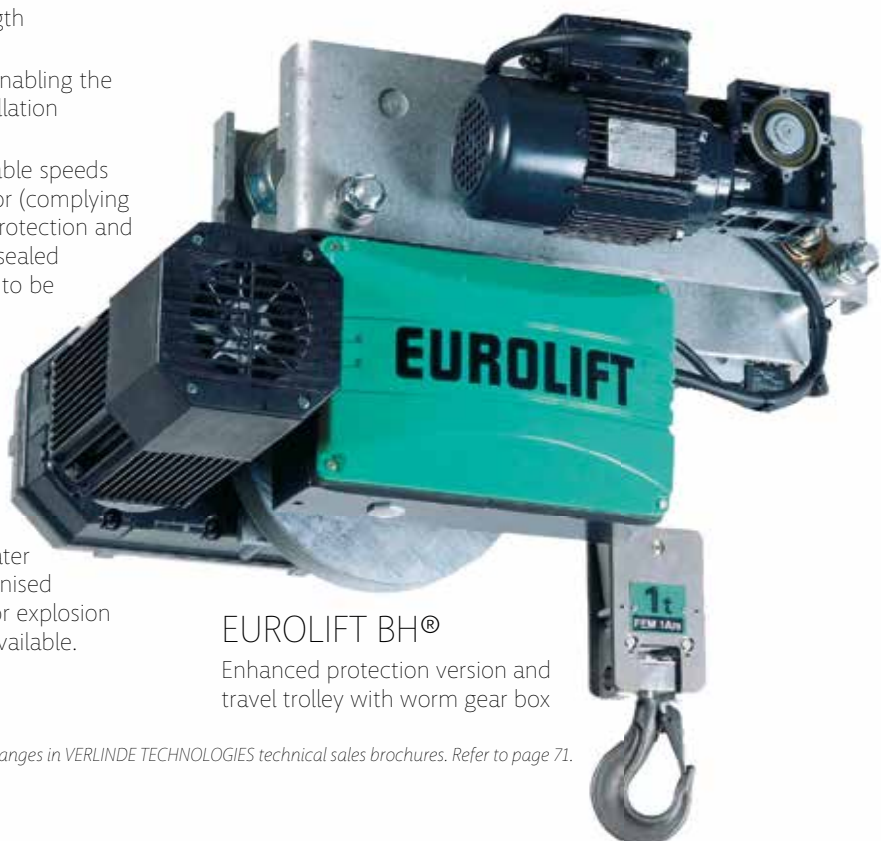


The EUROLIFT BH electric belt hoist meets your needs for hoisting power with the strictest levels of cleanliness. The EUROLIFT BH is a hoist complying with EC European standards, offering you the lifting power and robustness of a product designed for industrial duty combined with 100% clean operation to meet your most stringent requirements with regard to hygiene, handling of foodstuffs and chemical products and "white room" conditions,...



Technical characteristics

- Anticorrosion product with high strength rot-proof belt.
- Exceptionally little loss of headroom, enabling the EUROLIFT BH to adapt to all your installation configurations.
- Lift motor with two mechanically variable speeds and two speed travel movement motor (complying with standard EC 34.1/IEC 34.2, IP 55 protection and insulation F) combined with perfectly sealed reduction gearing enabling your loads to be shifted silently with great precision.
- A high security belt guide, electric hoisting limit switch and electrical load limiter as standard equipment, ensuring you, as user, maximum safety in every situation.
- Variable speed travel motor for precise positioning of loads.
- An option of this lifting unit offers greater protection with stainless steel or galvanised elements and an EX spark proof and/or explosion proof version (ATEX standard) is also available.



EUROLIFT BH®

Enhanced protection version and travel trolley with worm gear box



Refer to sales information on our EX ATEX ranges in VERLINDE TECHNOLOGIES technical sales brochures. Refer to page 71.


VERLINDE
LIFTING EQUIPMENT
TIRLIFT®

TIRLIFT®
Long version TL

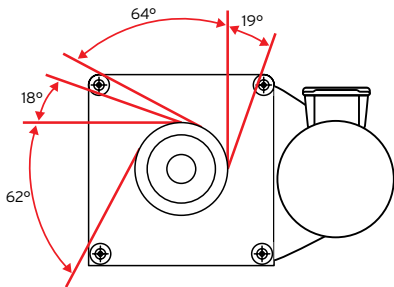
Electric belt hoists for loads of 125 to 990 kg



TIRLIFT®
Short version TC

This line of all-purpose electric winches for lifting and traction adapt perfectly to all your needs (wide load range, numerous options). They are designed for the lifting of loads of 125 kg to 990 kg. Compliance with the EC directive concerning machines.

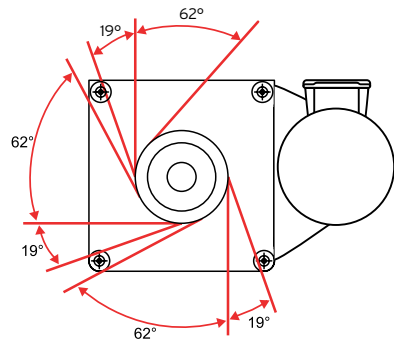
Winch positions and rope outlets



• Outlet A

Foot mounted.

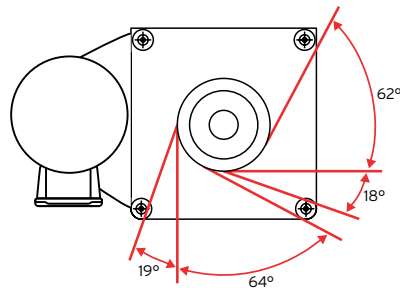
Rope outlet on left side (rope fixed to right of drum, on gear side).



• Outlet B

Foot mounted.

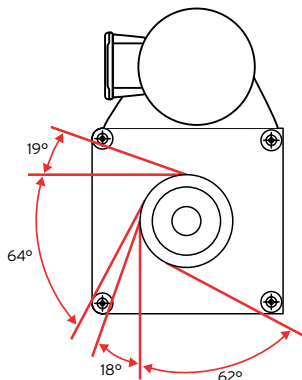
Rope outlet on right side (rope fixed to left of drum, on bearing side).



• Outlet C

Version mounted on ceiling.

Rope outlet on right side (rope fixed to right of drum, on gear side).



• Outlet D

Rope outlet on left side (rope fixed to left of drum, on bearing side).



Technical characteristics

The TIRLIFT type TL and TC electric winches offer as standard:

- A drum designed for 5 to 7 mm wire ropes depending on loads.
- IP55 type protection of the switchgear (cabinet and motor).
- A wide range of lift braking motors complying with class F insulation.
- A frame of modular and open-ended design, permitting for instance multiple cable exit directions from the drum.
- Tri-phase or single phase available.




TEC[®]


Electric winch
for loads of **600 to 7,500 kg**

The ideal solution for traction and hoisting loads of up to 7,5 tons. This line of electric winches will perfectly match your needs.

Furthermore, its design displays qualities of discretion, since it is highly compact, and calls for very little maintenance. TEC electric winches comply with the EC directive concerning machines.

Technical characteristics

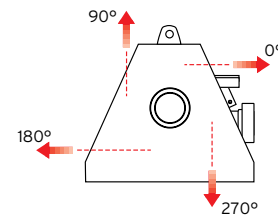
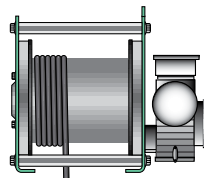
- A frame of modular and open-ended design, permitting for instance multiple cable exit directions from the drum.
- 230 / 400 V / 3 Ph / 50Hz power supply.
- Control voltage 24 V switchgear.
Thermic control circuit breaker
- Electric cabinet to IP 55.
- Handset with emergency stop on 3m spirally wound cable.

Options available

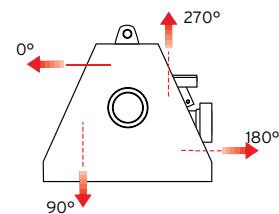
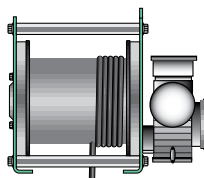
- Limit switch.
- Electronic load limiter.
- Grooved drum.
- Variable speed winch.
- Radio remote control.



Rope exits

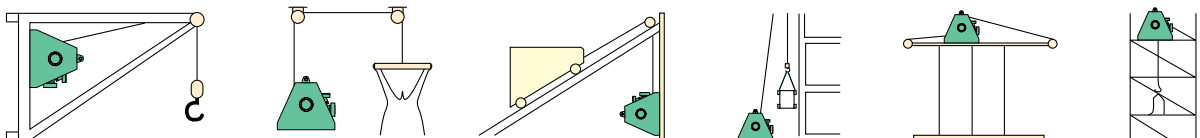


- Right exit (rope) – Standard configuration



- Left exit (rope) - Option

Examples of uses







Jib Cranes,
Gantry Cranes
and Accessories

175



EUROSYSTEM® ST

Overhead handling systems

for loads of 60 to 2,000 kg



The ideal solution for moving light loads. The EUROSYSTEM overhead handling system adapts perfectly to your site development or production process needs, offering a great many configurations.

The EUROSYSTEM can take the form of a monorail, roller paths, single-girder overhead travelling cranes, double girder overhead travelling cranes, single or complex circuit systems, with points for changing the direction of travel, or a multi-direction turntable.

Technical characteristics

An graded range of hollow sections providing excellent headroom. The EUROSYSTEM consists of three different models, the use of which is determined by the load capacity and distance between the suspension points:

- UKA 20: maximum capacity 250 kg
- UKA 30: maximum capacity 1,000 kg
- UKA 40: maximum capacity 2,000 kg

Unquestionable advantages

- The loads are easy to handle, thanks to an excellent rolling coefficient.
- The load on the bearing structure is kept to a minimum through the pendular design of the system.
- Maintenance is practically zero.
- Installations are pleasing to the eye.
- Great flexibility.
- Minimum loss of headroom.
- Many different solutions for securing the system, adaptable to any structure (I-beams, wood, concrete,...).
- Installation and anchoring simply by bolting.

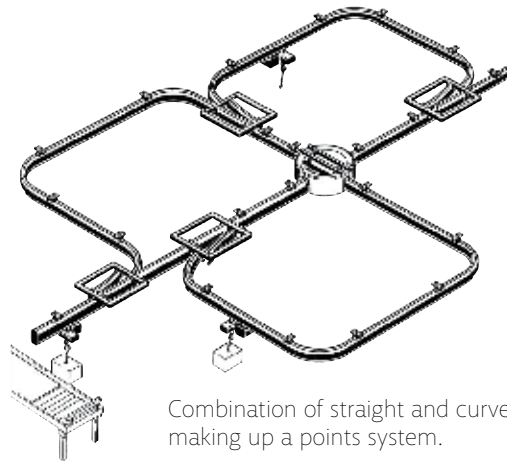




- **Suspended or embedded single girder travelling crane.**

Load capacity: 125 to 1,600 kg

A practical solution for handling requirements over large areas.



Combination of straight and curved sections making up a points system.

- **Suspended or embedded double girder travelling crane.**

Load capacity: 125 to 2,000 kg

For greater loads and reaches, a EUROSYSTEM twin-beam model can also be provided, to meet your lifting and handling requirement.





EUROSYSTEM® ALU



**Aluminium hollow
profile overhead
handling system**
for loads of **60 to 2,000 kg**

Technical characteristics

A graded range of 4 sizes of profile.
As for steel sections, the selection of the model will depend on the load capacity and the distance between the suspension points.

- AL06, 6.5 kg/m, up to 320 kg.
- AL08, 8 kg/m, up to 500 kg.
- AL06, 10.6 kg/m, up to 2,000 kg.
- AL06, 14.5 kg/m, up to 2,000 kg.



The Aluminium Eurosystem represents a new generation of hollow profile handling systems.

This innovative solution presents the combined advantages of conventional steel and aluminium hollow profile.

Advantages of aluminium

- **ERGONOMIC.** The lightness of the rails provides easy, effortless manipulation by the user even with heavy and unwieldy loads.
- **PRECISE.** Precision is ensured by top quality manufacturing and smooth manoeuvring.
- **ANTI-CORROSIVE TREATMENT.** The profile aluminium is anodized outside and inside.
- **ECONOMICAL.** By the reduced volume and simplification of the bearing structures, by the rapidity of assembly.
- **NEW TECHNOLOGY.** The profile was made possible by the latest cold extrusion engineering innovations and optimisation of structures.
- **PRACTICAL.** The profile is compatible with all ITEM standardised accessories.
- **LONG LIFE SPAN.** The remarkable resistance to wear is due to the anodizing treatment and to the roller material.
- **SAFETY.** The profile is guaranteed weldless.
- **NOISELESS.** The very low noise level of operation is due to the great smoothness of the rolling surface.



- **Suspended or embedded single girder travelling crane.**

Load capacity up to 2,000 kg.

Can be embedded to optimise lifting height.



Options available

- Integrated electrical power supply.
- Transfer system.
- Powered travelling and/or traversing trolleys.
- Parallel power supply in profile with integrated lead.



- **Suspended or embedded double girder travelling crane.**

Load capacity up to 2,000 kg.

For large spans and highest loads. 3-dimensional surface coating.
Limited overall height.



Made-to-measure configurations

- Wall-mounted (secured to the wall or a mast post)

Triangular design



VATS

Boom in EUROSYSTEM ST type hollow profile.



VAT

IPE section boom



VATAL

Boom in EUROSYSTEM ALU type hollow profile.



Inverted design



VAI

IPE section boom



- Column mounted partially slewable

Triangular design



VFTS

Boom in EUROSYSTEM ST type hollow profile.

VFT

IPE section boom



VFTAL

Boom in EUROSYSTEM ALU type hollow profile.



Inverted design



VFI

IPE section boom



- Column mounted 360° slewable

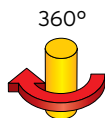


Manually slewable

VFP

Electrically slewable version also available (VFM version)

IPE section boom



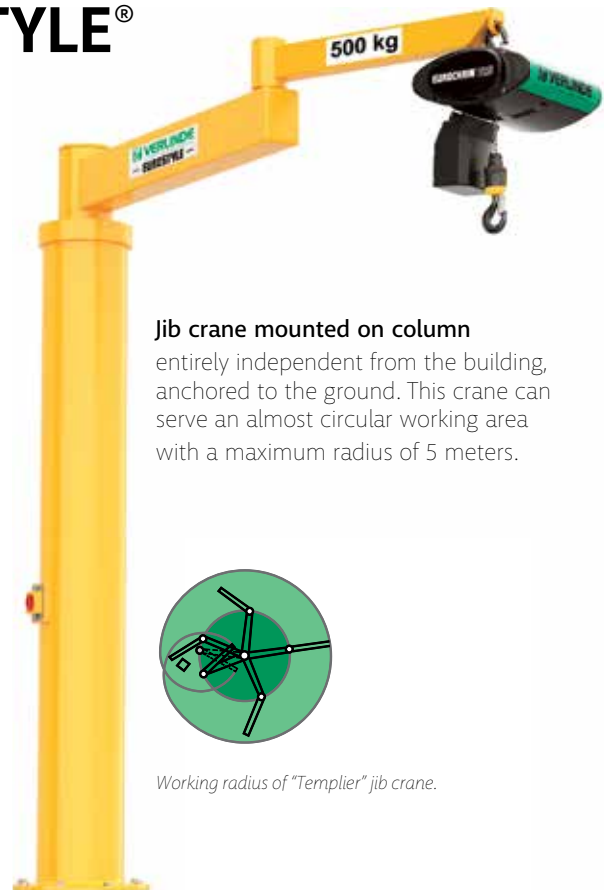


EUROSTYLE®

“Templier” type manual jib cranes with articulated arms

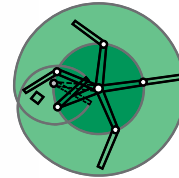
VERLINDE articulated crane is designed for handling loads of 50 to 1,000 kg with ease, taking up very little space in an almost circular area. Practically all the working zones afford access to the hoisting tackle mounted at the tip of the boom.

The articulated arm enables obstacles to be avoided.



Jib crane mounted on column

entirely independent from the building, anchored to the ground. This crane can serve an almost circular working area with a maximum radius of 5 meters.



Working radius of “Templier” jib crane.

Technical characteristics

- All-steel design in compliance with DIN 15018 standards.
- Service temperature: -10° to +40° C.
- IP54 switchgear.
- Presentation: shot-peened frame, primer coat and glossy yellow topcoat.

The characteristics of all our cranes (overall dimensions, weight, boom length and foundations) are indicated in our technical sheets.



Jib crane mounted on bracket

(secured to a wall or mast post). This crane serves an almost circular working area with a radius of 5 meters.

Jib crane mounted on roof

(secured to a ceiling or members of the structural frame of the building). This crane can serve an almost circular working area with a radius of 5 meters.





EUROSTYLE® H₂O RANGE

Aluminium and galvanized jib cranes for water treatment systems.

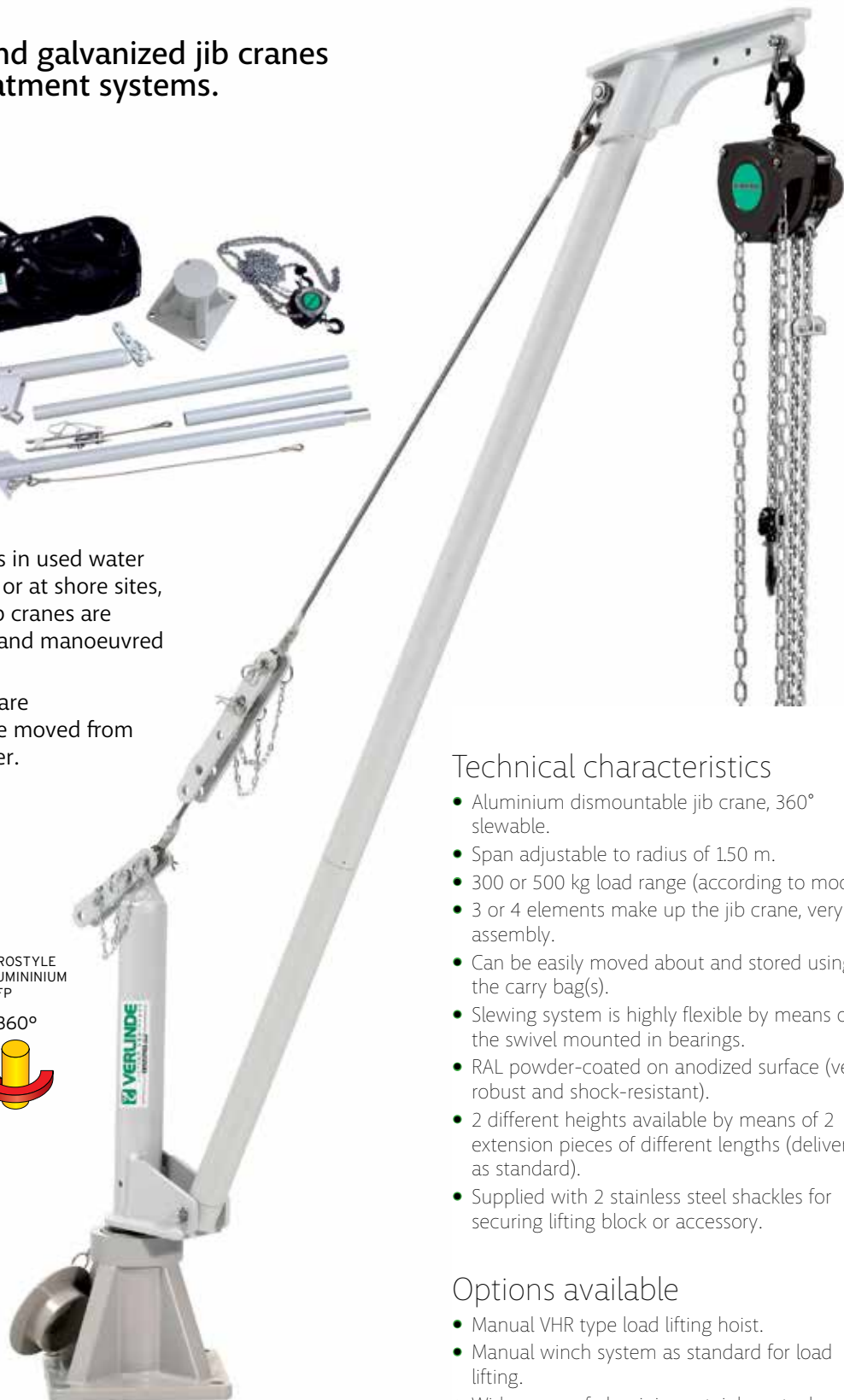


Ideal for operations in used water treatment stations or at shore sites, EUROSTYLE H2O jib cranes are easily transported and manoeuvred by one person.

Furthermore, they are dismantlable to be moved from one base to another.

EUROSTYLE
ALUMINIUM
VEFP

360°



Technical characteristics

- Aluminium dismantlable jib crane, 360° slewable.
- Span adjustable to radius of 150 m.
- 300 or 500 kg load range (according to model).
- 3 or 4 elements make up the jib crane, very fast assembly.
- Can be easily moved about and stored using the carry bag(s).
- Slewing system is highly flexible by means of the swivel mounted in bearings.
- RAL powder-coated on anodized surface (very robust and shock-resistant).
- 2 different heights available by means of 2 extension pieces of different lengths (delivered as standard).
- Supplied with 2 stainless steel shackles for securing lifting block or accessory.

Options available

- Manual VHR type load lifting hoist.
- Manual winch system as standard for load lifting.
- Wide range of aluminium, stainless steel or galvanized bases to be fixed to floor or wall.
- Mounting hardware kit.
- Jib crane frame riser with different heights.

Technical characteristics

- Galvanized steel dismountable jib crane, 360° slewable.
- Span: loads vary with span from 0.5 to 1.5 m.
- Headroom beneath hook: 2.88 to 3.26m.
- Load capacity: 500 kg.
- Electrogalvanized swivel mounted on greased ball bearings.
- Loaded slewing effort: less than 200 N.
- 2 tubular, hinged and removable manoeuvring handles.
- Manual lever hoist with galvanized chain to orientate the jib arm.
- Nylon return pulley.
- Flat synthetic fibre strap guy.
- Each element is fitted with a synthetic fibre carry handle.
- Storage case in varnished pinewood.

EUROSTYLE
GALVA VEFPT

360°



Options available

- Manual VHR type load lifting hoist.
- Manual load lifting winch.
- Wide range of aluminium, stainless steel or galvanized bases to be fixed to floor or wall.
- Mounting hardware kit.
- Paint uaranteed 6 years.
- ATEX jib crane or in STAINLESS STEEL.

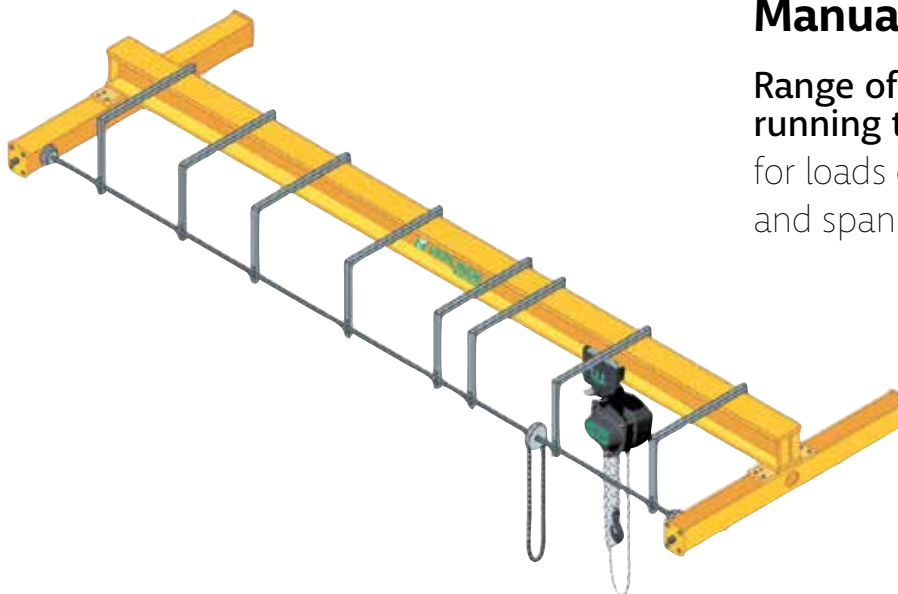




GANTRY CRANES

Manual Cranes

Range of hand operated top-running travelling cranes for loads of 250 to 10,000 kg and span of up to 18 meters



Technical characteristics

- Complete crane delivered ready to erect. Frame designed to group 2m requirements. The runway beam consists of an IPN, IPE, HEA or HEB profile, depending on the load and span, two travel movement support girders equipped with steel wheels and buffer. Finish in RAL 1028 glycerophthalic lacquer.
- Delivered with assembly and dimension drawings.
- An option for electrification of this type of crane is also available.

VERLINDE's manual travelling cranes program provides access to a comprehensive travelling system for your hand operated or electrically powered lifting devices.



Range of hand operated underslung cranes

for loads of 250 to 6,300 kg and span of up to 16 meters

Technical characteristics

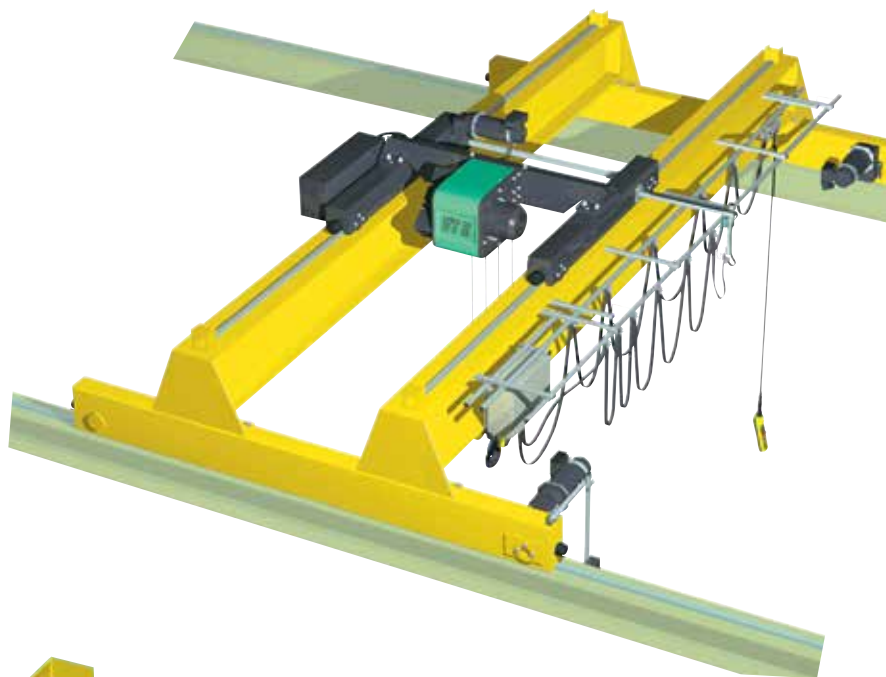
- Complete crane delivered ready to erect. Frame designed to group 2m requirements. The runway beam consists of an IPN, IPE, HEA or HEB profile, depending on the load and span with two travel movement support girders. Finish in RAL 1028 glycerophthalic lacquer. Delivered with assembly and dimension drawings.
- End carriage fitted with steel wheels and buffer.
- An option for electrification of this type of crane is also available.

EUROPONT®
VERLINDE

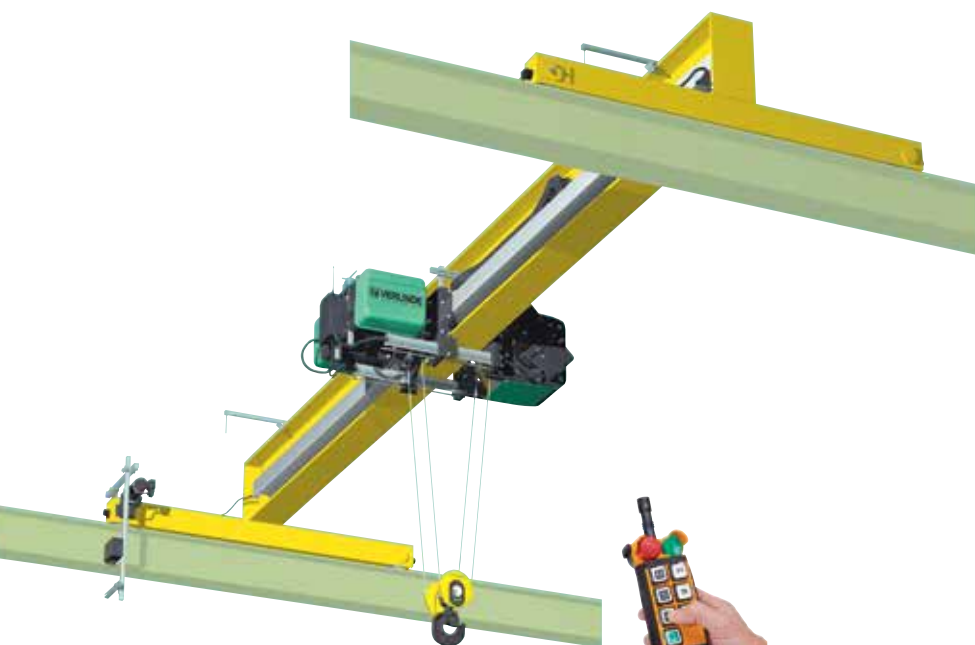
Europont is a network of French, Belgium and Netherlands cranes manufacturers.

Range of EUROPONT VERLINDE travelling cranes breaks down into 7 versions and two types (conventional power supply line or cable-carrying chain):

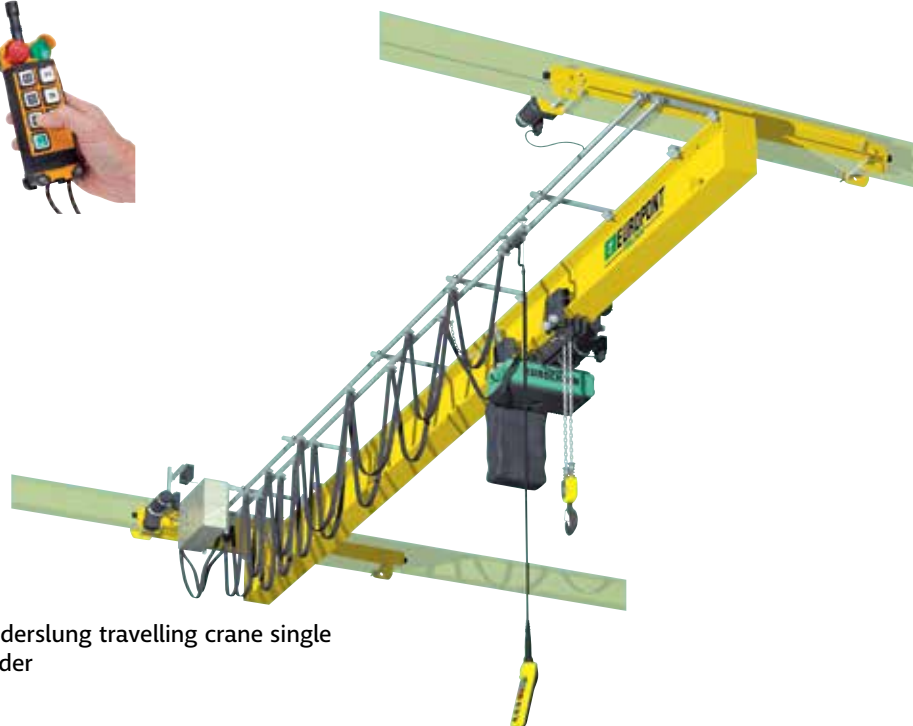
- Single girder top-running overhead travelling crane with electric chain or wire rope hoist.
- Single girder underslung overhead travelling crane in profile with electric chain or wire rope hoist.
- Double girder top-running overhead travelling crane with electric wire rope hoist.



Double girder top running crane



Single girder top running crane




Underslung travelling crane single girder



COMPOSANTS +



Top-running and underslung end carriage. 

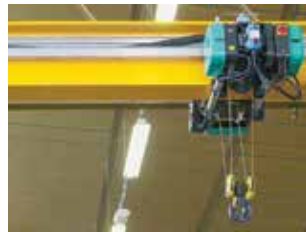
- Wheels are also available in spark-proof version.

Travelling crane components

The range of VERLINDE components for electrically-power overhead travelling cranes offers you a complete high performance hoisting, travelling and traverse system.

General power supply line.

- Conventional type of power line.
- Cable holder chain power line.



Travelling roller unit.

This geared travelling unit is designed for top-running end carriage.



Electric cabinet.

- Sealed (IP55) steel cabinet.
- Main isolating switch, actuatable from outside.
- Compliant with standard NF 52070.
- Available in explosion-proof version.



Travelling motor gear box.

- 2 standard travel speeds: many other speed possibilities.
- Motor-reduction set available in explosion-proof version.



Movable box.

- Movable along the length of the crane as it travels, and independent from the hoisting device,



Options available

- Radio remote-control system.
- VARIATOR: frequency inverter system for variable speed on lifting and travelling motions.
- Electronic system for monitoring the statuses of the hoist and crane.
- Zone lighting.
- Luminous or audio warning system indicating that the load is in motion.
- Digital display of load on the crane, hook or pushbutton box.

Load gripping system

- (lifting beam, clamp and clamshell)





EUROMOTE®

Radio remote control system for hoists and travelling cranes

The EUROMOTE remote control systems have been specially designed for use with the EUROBLOCK and EUROCHAIN hoisting unit and the crane components of VERLINDE.

Adapted to the most severe industrial conditions, the EUROMOTE remote control systems stand out through their ease of use, great flexibility and reliability. They will enable you to improve the productivity of your operators and the safety of lifting manoeuvres and achieve productivity gains and shorter down-times.



Micromote®



Euromote H®



Digimote®





Aluminium hollow profile overhead handling system
for loads of 250 to 5,000 kg

VGI gantry crane



With this line of VERLINDE independent manual gantries, maintenance services, assembly teams and any artisan mechanic will be able to carry out mounting, dismounting operations, and position parts or assemblies. This line of standard gantries is designed to receive all types of hoisting device. The VERLINDE gantry can be equipped with manual or electrically-powered chain tackle.

Technical characteristics

- The extreme mobility and stability on all surfaces provided by means of four caster wheels fitted with ball bearings on the shafts and king pins. These wheels formed from acetyl resin have excellent shock behaviour and ability to withstand attack by chemicals.
- The raceway is a weld-fabricated IPE profile designed to accommodate a lifting and traversing movement device, with two traversing breast-pieces. The unit is finished in RAL 1028 polyurethane lacquer. Fully dismantlable, the VERLINDE independent gantries adapt to your need to make best use of workshop space.
- The gantry is delivered disassembled, together with its galvanised boltwork and takes little time to assemble and commission.
- A 3-piece dismantled weld fabricated package.
- The gantries can be moved loaded on a smooth, clean floor.

Load capacity

	250 kg	500 kg	1000 kg	1600 kg	2000 kg	3200 kg	5000 kg
> VGI gantry							
> VGPS gantry							
> VGPA gantry							

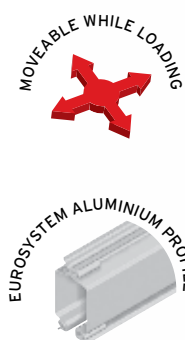


VGPS gantry crane
EUROSYSTEM TYPE STEEL hollow profile

Technical characteristics

The characteristics of these gantries are identical to those of the standard profile model except for the following:

- The raceway of these VERLINDE workshop gantries consists of a EUROSYSTEM hollow profile in steel or aluminium (depending on model).
- The gantry is delivered with a manual hoist-bearing EUROSYSTEM type trolley.
- These workshop gantries are mounted on caster wheels in white polyamide.
- The gantry cannot be shifted under load.
- On the aluminium gantry version:
Legs can be folded for handling.
Lift height and span can be adjusted by an operator alone.



VGPA gantry crane
EUROSYSTEM type aluminium hollow profile



PAL[®] Range of steel and aluminium lifting beams

for loads of 125 to 10,000 kg



PAL P2R ALU
with central hanging and
2 adjustable lifting points.



PAL P2R
with central hanging and
2 adjustable lifting
points.



Technical characteristics

- Rupture safety factor: 5.
- The PAL line is manufactured to standard NFE 52210 and classed category FEM 5.
- No load bearing welds.
- Anti-rust treatment and RAL1028 glycerine paint finish.
- Standard equipment: bow shackles, reel hooks and safety latches.
- EC certificate of compliance.
- User manual.

Options available

- "Y" type models with 3 hoisting points or
- "X" type with 4 hoisting points available on request.
- Galvanized lifting beams.
- Special lifting beams with fork gripping system for pallets.
- Lifting beams for Big Bag system.
- Special aluminium lifting beams for light hoists.



PAL P4F
"H" type central hanging and 4
permanent lifting points.



PAL P4R
"H" type with central
hanging and 4
adjustable lifting points.

Model	Capacity (kg)	Span (m)
P2F	1000 to 10000	1 to 6
P2R	1000 to 10000	0,5 to 6
P4F	1000 to 10000	1 to 4
P4R	1000 to 10000	1 to 4
P2F ALU	125 to 2000	1 to 6
P2R ALU	125 to 2000	1 to 6
P4HF ALU	125 to 2000	1 to 4
P4HR ALU	125 to 2000	1 to 4

Technical characteristics

- Fitted with 2 articulated forged safety swivel hooks.
- Tear-resistant eyelet for use with synthetic slings, cables, etc.
- Rustproof paint with high-strength yellow RAL 1028 finishing.
- Safety coefficient: 4
- No load-bearing welding.
- Manufacture in accordance with standard NFE 52210.
- Group: FEM5.
- Hooks adjusted by means of upper handles (for the adjustable spreaders only).
- No 100 mm adjustment as standard (for the adjustable spreaders only).
- Hoisting speed = maximum 16 m/mn.
- Delivered with instructions for use and maintenance, EC certificate of conformity.

PAL P2F

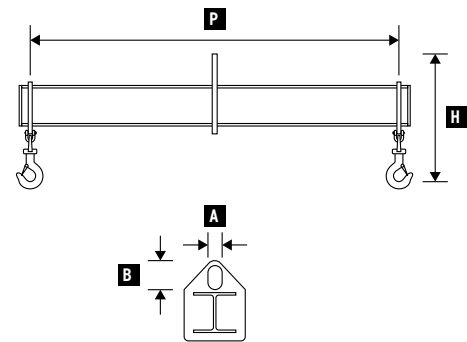
for loads of **1,000 to 10,000 kg**

Axial cord lifting beam with 2 **fixed** lifting points



Articulated swivel hooks with forged safety latches.

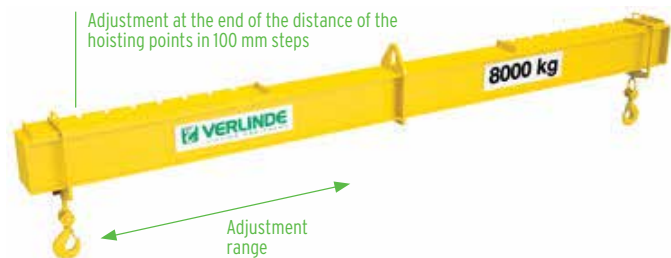
Load (T)	A x B (mm)	Span in metres (P)						
		1	2	3	4	5	6	
1 T	60 x 80	Height "H" (mm)	320	340	360	360	380	380
		Weight (kg)	32	59	96	122	176	208
2 T	80 x 120	Height "H" (mm)	380	400	420	440	460	480
		Weight (kg)	39	72	115	170	240	324
3 T	100 x 180	Height "H" (mm)	480	500	540	560	580	600
		Weight (kg)	56	94	163	234	326	432
4 T	100 x 180	Height "H" (mm)	480	520	560	580	600	620
		Weight (kg)	62	112	190	274	375	495
5 T	100 x 180	Height "H" (mm)	540	580	620	640	660	700
		Weight (kg)	69	126	216	306	420	597
6 T	100 x 180	Height "H" (mm)	540	600	640	660	700	700
		Weight (kg)	80	151	250	355	516	608
8 T	100 x 180	Height "H" (mm)	600	660	700	740	740	840
		Weight (kg)	93	176	288	431	524	616
10 T	100 x 180	Height "H" (mm)	620	680	740	740	740	790
		Weight (kg)	107	198	345	437	530	798



PAL P2R

for loads of **1,000 to 10,000 kg**

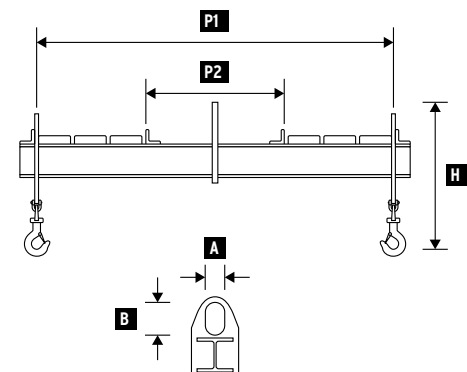
Axial cord lifting beam with 2 **adjustable** lifting points



Adjustment at the end of the distance of the hoisting points in 100 mm steps

Adjustment range

Load (T)	A x B (mm)	Span in metres (P)						
		1 / 0,5	2 / 1	3 / 1	4 / 2	5 / 3	6 / 4	
1 T	60 x 80	Height "H" (mm)	490	510	530	530	550	550
		Weight (kg)	38	64	101	127	181	213
2 T	80 x 120	Height "H" (mm)	450	470	490	510	530	550
		Weight (kg)	44	77	120	175	245	329
3 T	100 x 180	Height "H" (mm)	560	580	620	640	660	680
		Weight (kg)	66	104	173	244	336	442
4 T	100 x 180	Height "H" (mm)	610	650	690	710	730	750
		Weight (kg)	72	122	200	284	385	505
5 T	100 x 180	Height "H" (mm)	630	670	710	730	750	790
		Weight (kg)	79	136	226	316	430	607
6 T	100 x 180	Height "H" (mm)	630	690	730	750	790	790
		Weight (kg)	95	166	265	370	531	623
8 T	100 x 180	Height "H" (mm)	710	770	810	850	850	850
		Weight (kg)	113	196	308	451	544	636
10 T	100 x 180	Height "H" (mm)	730	790	850	850	850	900
		Weight (kg)	127	218	365	457	550	818





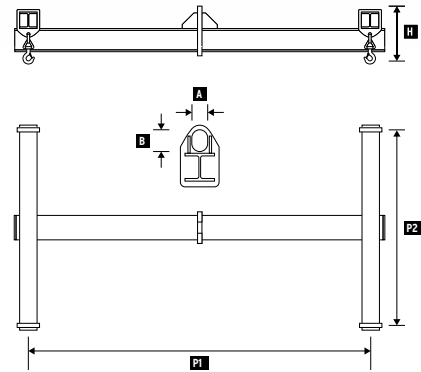
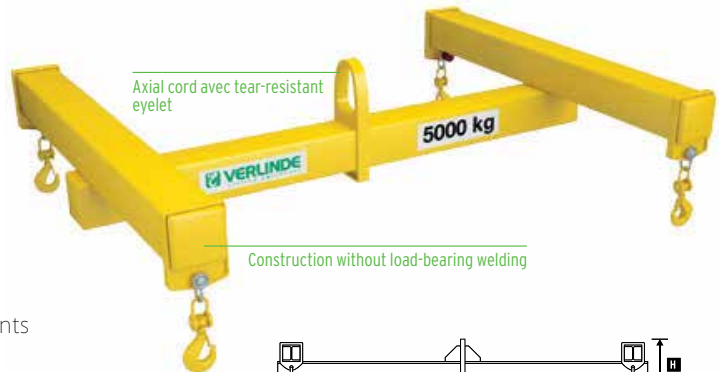
PAL® Range of steel and aluminium lifting beams

PAL P4HF

for loads of **1,000 to 10,000 kg**

"H" type axial cord lifting beam with **fixed** 4 lifting points

Load (T)	A x B (mm)	Span in metres (P1) / Base in metres (P2)						
		1 / 1	2 / 1	3 / 1	3 / 2	4 / 1	4 / 2	
1 T	60 x 80	Height "H" (mm)	240	240	240	240	240	240
		Weight (kg)	78	105	142	177	168	203
2 T	80 x 120	Height "H" (mm)	270	270	270	270	270	270
		Weight (kg)	85	118	161	211	216	266
3 T	100 x 180	Height "H" (mm)	350	350	350	350	350	350
		Weight (kg)	103	141	210	284	281	355
4 T	100 x 180	Height "H" (mm)	350	350	350	350	350	350
		Weight (kg)	117	167	245	311	329	395
5 T	100 x 180	Height "H" (mm)	390	390	390	390	390	390
		Weight (kg)	125	182	272	360	362	450
6 T	100 x 180	Hauteur "H" (mm)	390	390	390	390	390	390
		Weight (kg)	148	219	318	394	423	500
8 T	100 x 180	Height "H" (mm)	430	430	430	430	430	430
		Weight (kg)	163	246	358	457	501	600
10 T	100 x 180	Height "H" (mm)	430	430	430	430	430	430
		Weight (kg)	189	280	427	541	519	633

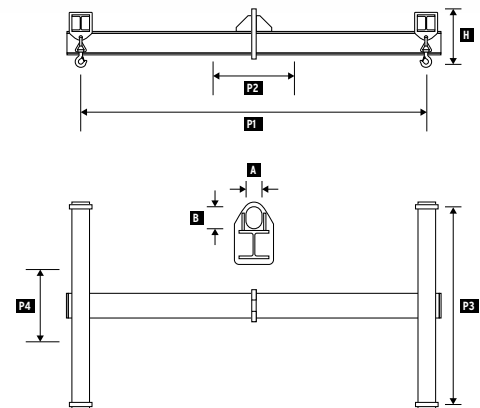
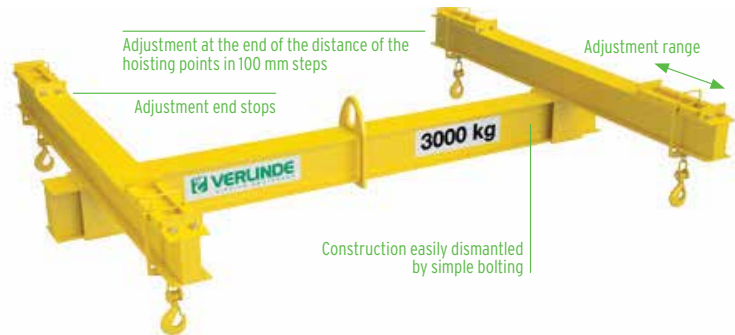


PAL P4HR

for loads of **1,000 to 10,000 kg**

"H" type Lifting beam axial cord with 4 **adjustable** lifting points

Load (T)	A x B (mm)	Span in metres maxi/mini (P1/P2) / Base in metres maxi/mini (P3/P4)						
		1/0,5/0,5/0,5	2/1/1/0,5	3/1/1/0,5	3/1/2/1	4/2/1/0,5	4/2/2/1	
1 T	60 x 80	Height "H" (mm)	290	290	290	290	290	290
		Weight (kg)	98	125	162	197	188	223
2 T	80 x 120	Height "H" (mm)	320	320	320	320	320	320
		Weight (kg)	105	138	181	231	236	286
3 T	100 x 180	Height "H" (mm)	400	400	400	400	400	400
		Weight (kg)	123	161	230	304	301	375
4 T	100 x 180	Height "H" (mm)	400	400	400	400	400	400
		Weight (kg)	147	197	275	341	359	425
5 T	100 x 180	Height "H" (mm)	440	440	440	440	440	440
		Weight (kg)	155	212	302	390	392	480
6 T	100 x 180	Height "H" (mm)	440	440	440	440	440	440
		Weight (kg)	178	249	348	424	453	550
8 T	100 x 180	Height "H" (mm)	480	480	480	480	480	480
		Weight (kg)	193	276	388	487	531	630
10 T	100 x 180	Height "H" (mm)	480	480	480	480	480	480
		Weight (kg)	219	310	457	531	549	673



Options available

- Greater load capacities available on request.
- 3 Type «Y» models with 3 lifting points, or type "X" with 4 lifting points are also available on request.
- Lifting beams for big bag, Special lifting beams.
- Galvanised lifting beams.
- Special lifting beams with pick-up fork for pallets.

Technical characteristics

- Fitted with swivel hooks with forged safety clips.
- Tear-resistant eyelet for use with synthetic slings, cables, etc.
- Anodised aluminium profile, rust-proof.
- Safety coefficient: 4.
- No load-bearing welding.
- Manufacture in accordance with standard NFE 52210.

- FEM5 group.
- Hooks adjustable by movable spindles for adjustable beams only).
- Adjustable by step of 100 mm for adjustable beams only).
- Lifting speed: 16 m/mn maxi.
- Delivered with instructions for use and maintenance, EC certificate of conformity

Advantages in aluminium

- The aluminium profile is anodised and is provides protection against corrosion
- This aluminium profile is compatible with all the standardised ITEM accessories

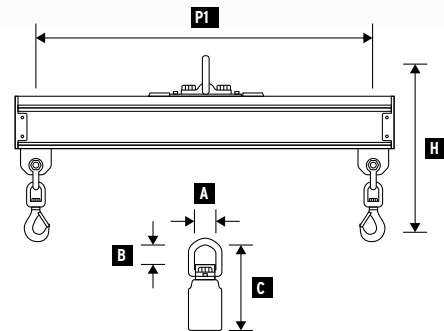
- Overall, the aluminium lifting beam is lighter than its steel equivalent, this makes it possible to optimise the chain hoist's capacity for lifting loads

PAL P2F ALU

for loads of **125 to 2,000 kg**

Axial cord aluminium lifting beam with 2 **fixed** lifting points

Load (kg)	Total span in metres						
	1	2	3	4	5	6	
125	Length between hooks (P1)	900	1900	2900	3900	4900	5900
	Weight (kg)	16	22	29	35	42	48
	Headroom (H)	454	454	454	454	454	454
	Dim. A x B x C	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226
250	Length between hooks (P1)	900	1900	2900	3900	4900	5900
	Weight (kg)	16	22	29	35	42	61
	Headroom (H)	454	454	454	454	454	504
	Dim. A x B x C	56x53x226	56x53x226	56x53x276	56x53x276	56x53x276	56x53x276
500	Length between hooks (P1)	900	1900	2900	3900	4900	5900
	Weight (kg)	16	22	36	44	53	74
	Hauteur perdue (H)	454	454	454	454	454	504
	Dim. A x B x C	56x53x226	56x53x226	56x53x276	56x53x276	56x53x276	56x53x306
750	Length between hooks (P1)	900	1900	2900	3900	4900	5900
	Weight (kg)	16	27	36	52	83	97
	Headroom (H)	454	454	504	504	504	535
	Dim. A x B x C	56x53x226	56x53x276	56x53x276	56x53x306	56x53x341	56x53x341
1000	Length between hooks (P1)	900	1900	2900	3900	4900	-
	Weight (kg)	21	31	42	68	83	-
	Headroom (H)	535	535	535	569	569	-
	Dim. A x B x C	56x53x306	56x53x306	56x53x306	56x53x341	56x53x341	-
1600	Length between hooks (P1)	900	1900	2900	-	-	-
	Weight (kg)	21	31	54	-	-	-
	Headroom (H)	535	535	569	-	-	-
	Dim. A x B x C	56x53x306	56x53x306	56x53x341	-	-	-
2000	Length between hooks (P1)	900	1900	-	-	-	-
	Weight (kg)	21	39	-	-	-	-
	Headroom (H)	535	569	-	-	-	-
	Dim. A x B x C	56x53x306	56x53x341	-	-	-	-

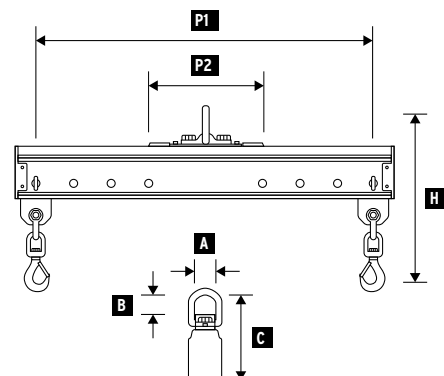
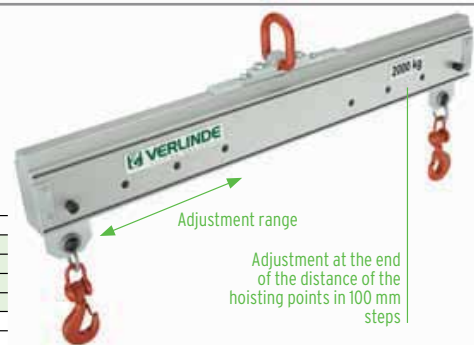


PAL P2R ALU

for loads of **125 to 2,000 kg**

Aluminium axial cord lifting beam with 2 **adjustable** lifting points

Load (kg)	Total span in metres						
	1	2	3	4	5	6	
125	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	3900/1900	4900/2900	5900/3900
	Weight (kg)	16	22	29	35	42	48
	Headroom (H)	454	454	454	454	454	454
	Dim. A x B x C	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226
250	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	3900/1900	4900/2900	5900/3900
	Weight (kg)	16	22	29	35	42	61
	Headroom (H)	454	454	454	454	454	504
	Dim. A x B x C	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226	56x53x276
500	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	3900/1900	4900/2900	5900/3900
	Weight (kg)	16	22	36	44	53	74
	Headroom (H)	454	454	454	454	454	504
	Dim. A x B x C	56x53x226	56x53x226	56x53x276	56x53x276	56x53x276	56x53x306
750	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	3900/1900	4900/2900	5900/3900
	Weight (kg)	16	27	36	52	83	97
	Hauteur perdue (H)	454	454	504	504	504	535
	Dim. A x B x C	56x53x226	56x53x276	56x53x276	56x53x306	56x53x341	56x53x341
1000	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	3900/1900	4900/2900	-
	Weight (kg)	21	31	42	68	83	-
	Headroom (H)	535	535	535	569	569	-
	Dim. A x B x C	56x53x306	56x53x306	56x53x306	56x53x341	56x53x341	-
1600	Length and width between hooks (P1/P2)	900/300	1900/900	2900/900	-	-	-
	Weight (kg)	21	31	54	-	-	-
	Headroom (H)	535	535	569	-	-	-
	Dim. A x B x C	56x53x306	56x53x306	56x53x341	-	-	-
2000	Length and width between hooks (P1/P2)	900/300	1900/900	-	-	-	-
	Weight (kg)	21	39	-	-	-	-
	Headroom (H)	535	569	-	-	-	-
	Dim. A x B x C	56x53x306	56x53x341	-	-	-	-





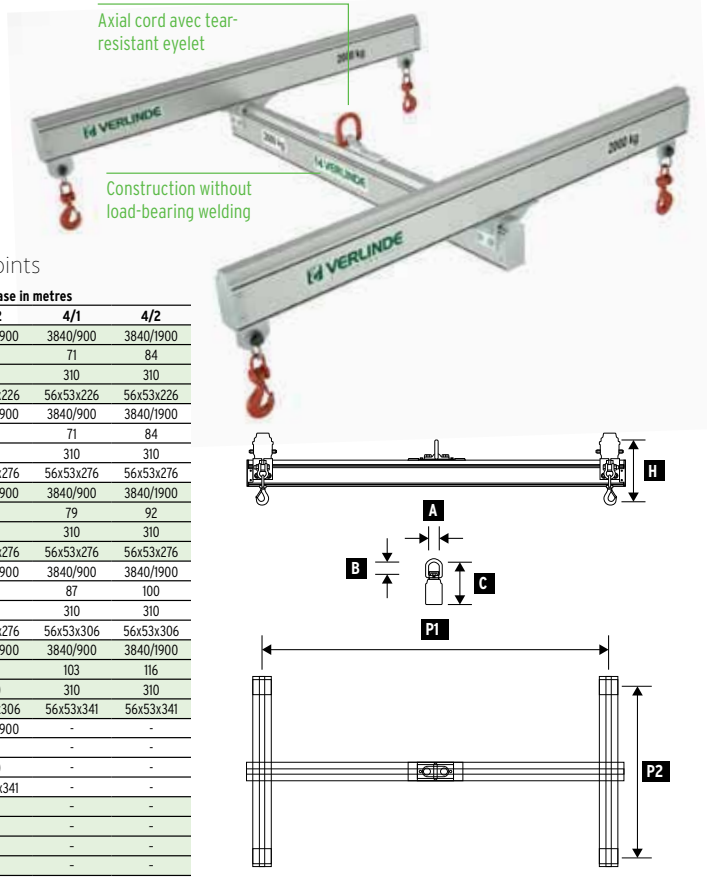
PAL® Range of steel and aluminium lifting beams

PAL P4HF ALU

for loads of 125 to 2,000 kg

Aluminium axial cord lifting beam with **fixed** 4 lifting points

Load (kg)	Total span in metres / Total base in metres						
	1/1	2/1	3/1	3/2	4/1	4/2	
125	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	2840/900	2840/1900	3840/900	3840/1900
	Weight (kg)	51	58	64	77	71	84
	Headroom (H)	310	310	310	310	310	310
	Dim. A x B x C	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226	56x53x226
250	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	2840/900	2840/1900	3840/900	3840/1900
	Weight (kg)	51	58	64	77	71	84
	Headroom (H)	310	310	310	310	310	310
	Dim. A x B x C	56x53x226	56x53x226	56x53x276	56x53x276	56x53x276	56x53x276
500	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	2840/900	2840/1900	3840/900	3840/1900
	Weight (kg)	51	58	71	84	79	92
	Hauteur perdue (H)	310	310	310	310	310	310
	Dim. A x B x C	56x53x226	56x53x226	56x53x276	56x53x276	56x53x276	56x53x306
750	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	2840/900	2840/1900	3840/900	3840/1900
	Weight (kg)	51	62	71	84	87	100
	Headroom (H)	310	310	310	310	310	310
	Dim. A x B x C	56x53x226	56x53x276	56x53x276	56x53x276	56x53x306	56x53x306
1000	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	2840/900	2840/1900	3840/900	3840/1900
	Weight (kg)	55	66	77	90	103	116
	Headroom (H)	310	310	310	310	310	310
	Dim. A x B x C	56x53x306	56x53x306	56x53x306	56x53x306	56x53x341	56x53x341
1600	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	-	-	-	-
	Weight (kg)	55	66	88	101	-	-
	Hauteur perdue (H)	310	310	310	310	-	-
	Dim. A x B x C	56x53x306	56x53x306	56x53x341	56x53x341	-	-
2000	Maxi/mini length between hooks (P1/P2)	840/900	1840/900	-	-	-	-
	Weight (kg)	64	82	-	-	-	-
	Headroom (H)	310	310	-	-	-	-
	Dim. A x B x C	56x53x306	56x53x341	-	-	-	-

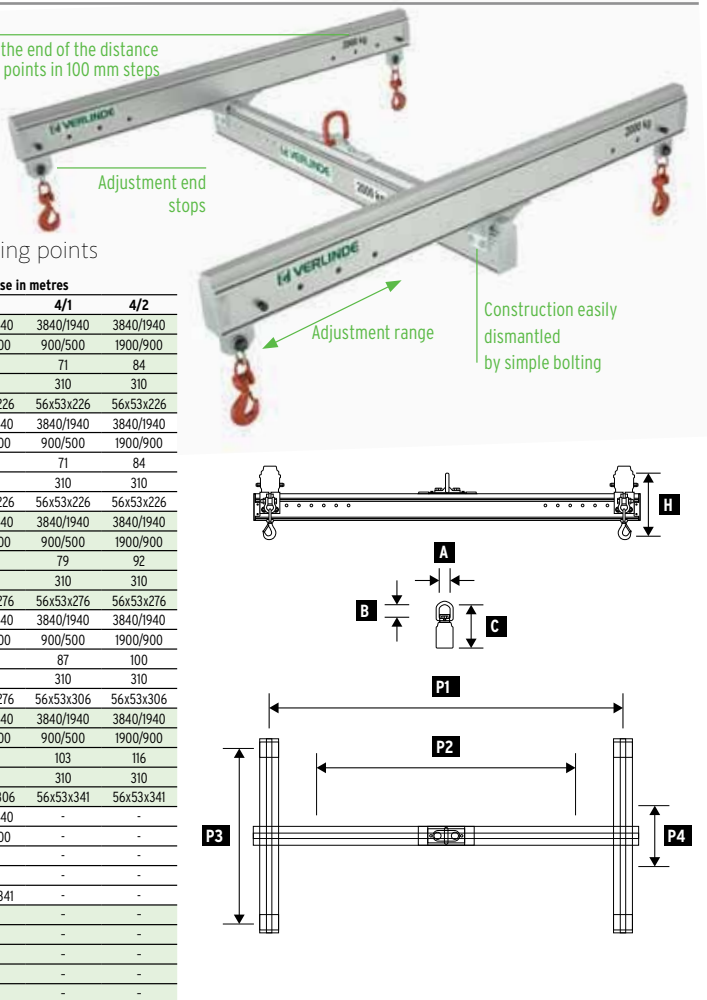


PAL P4HR ALU

for loads of 125 to 2,000 kg

Aluminium axial cord lifting beam with 4 **adjustable** lifting points

Load (kg)	Total span in metres / Total base in metres						
	1/1	2/1	3/1	3/2	4/1	4/2	
125	Long. maxi/mini between hooks (P1/P2)	840/400	1840/940	2840/1440	2840/1440	3840/1940	3840/1940
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	900/500	1900/900
	Weight (kg)	51	58	64	77	71	84
	Headroom (H)	310	310	310	310	310	310
250	Long. maxi/mini between hooks (P1/P2)	840/400	1840/940	2840/1440	2840/1440	3840/1940	3840/1940
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	900/500	1900/900
	Weight (kg)	51	58	64	77	71	84
	Headroom (H)	310	310	310	310	310	310
500	Long. maxi/mini between hooks (P1/P2)	840/400	1840/940	2840/1440	2840/1440	3840/1940	3840/1940
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	900/500	1900/900
	Weight (kg)	51	58	71	84	79	92
	Headroom (H)	310	310	310	310	310	310
750	Long. maxi/mini between hooks (P1/P2)	840/400	1840/940	2840/1440	2840/1440	3840/1940	3840/1940
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	900/500	1900/900
	Weight (kg)	51	62	71	84	87	100
	Headroom (H)	310	310	310	310	310	310
1000	Long. maxi/mini between hooks (P1/P2)	840/400	1840/940	2840/1440	2840/1440	3840/1940	3840/1940
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	900/500	1900/900
	Weight (kg)	55	66	77	90	103	116
	Headroom (H)	310	310	310	310	310	310
1600	Long. maxi/mini between hooks (P1/P2)	840/440	1840/940	2840/1440	2840/1440	-	-
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	900/500	1900/900	-	-
	Weight (kg)	55	66	88	101	-	-
	Headroom (H)	310	310	310	310	-	-
2000	Long. maxi/mini between hooks (P1/P2)	840/440	1840/940	-	-	-	-
	Maxi/mini width between hooks (P3/P4)	900/500	900/500	-	-	-	-
	Weight (kg)	64	82	-	-	-	-
	Headroom (H)	310	310	-	-	-	-





PEV[®]

Electronic force gauges with digital readout

for loads of 200 to 32,000 kg

VERLINDE offers a comprehensive range of compact electronic force gauges fitted with LCD or LED displays showing the load on hook in real time.

Technical characteristics

- Precision is +/- 0,1% of rated capacity.
- Standard functions: overload signal (110% of max. load), calibration.
- Reset, Total, complete deletion (except PEV 1 where "total" and "complete deletion" are options).
- Excellent legibility with large size display (LCD or LED).
- Readings are logged.
- Working temperature -20° to +60° C.
- Protection: IP 55.
- Delivered with 2 shackles and top and bottom mounting hardware.
- Delivered with rechargeable batteries and charger.



Options available

- Large-sized display.
- 25.4 mm digit on 5 LED display.
- Infra-red remote control.
- Carry case.
- Preselection of load.
- Intensive use batteries.
- Stainless steel version of gauge available.
- Tropicalisation and IP 65 protection.
- Printer integrated in gauge.
- Radio link, Bluetooth or Wifi.







Vacuum and Pneumatic
Lifting Solutions

197

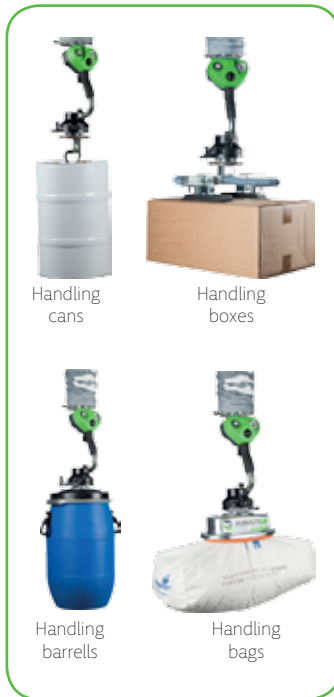


ERGO Fast

For repetitive and prolonged handling at an ergonomic height, it allows the operator to maintain a significant pace, all the while removing the risk of MSDs.



Also available in stainless steel



Handling cans

Handling boxes

Handling barrells

Handling bags

Joint allowing for the load to be rotated from horizontal to vertical or the load to be gripped horizontally or vertically



The handle is designed to encourage a full grip. This grip, known as a strong one, allows the load to be moved effortlessly. The operator can feel confident of having a firm grip by the neutral position of the forearm which allows for a greater freedom of movement of his upper limb. There is an automatic lifting system built-in to free the load effortlessly.

As an optional extra, there is the possibility of incorporating the start/ stop control onto the head. This way, the operator no longer needs to move to turn the device on or off.



Built-in automatic lifting system

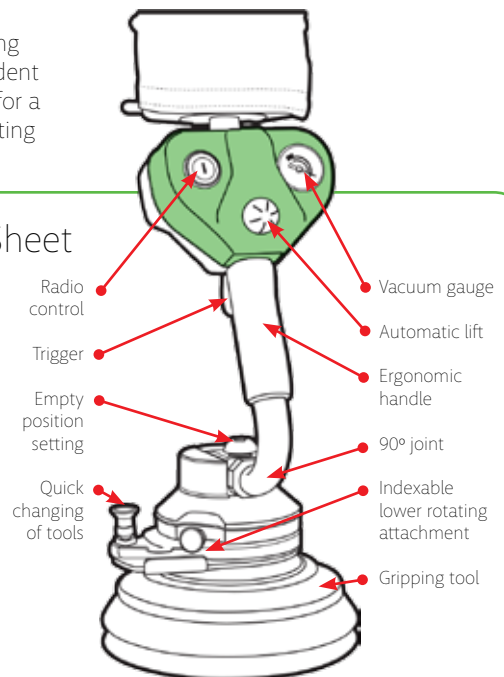
Technical Specifications Sheet

Integrated functions:

- Trigger
- Empty position setting
- Vacuum gauge
- Automatic lift
- Ergonomic handle
- Gripping tool
- 90° joint

Optional functions:

- Radio control
- Quick changing of tools
- Indexable lower rotating attachment



Radio control

Trigger

Empty position setting

Quick changing of tools

Vacuum gauge

Automatic lift

Ergonomic handle

90° joint

Indexable lower rotating attachment

Gripping tool

ERGO Flex

In the case of repetitive and prolonged handling at variable heights, it allows the operator to maintain a significant pace, all the while removing the risk of MSDs.



Also available in stainless steel



The handle has been designed to support the natural movement of the operator's wrist at variable heights, throughout their handling operations. Its modular system also allows it to go from a right to left-handed position and back, one hand triggers the system, the second acts as guidance assistance, which can reassure the operator for delicate, large or hazardous loads.



Technical Specifications Sheet

Integrated functions:

- Handle positioning pivot
- Empty position setting
- Quick change
- Vacuum gauge
- Ergonomic handle
- Automatic lift
- Gripping tool

Optional functions:

- Radio control
- Quick changing of tools
- Indexable lower rotating attachment

Labels in diagram:
 Handle positioning pivot
 Empty position setting
 Quick changing of tools
 Indexable lower rotating attachment
 Vacuum gauge
 Ergonomic handle
 Automatic lift
 Radio control
 Gripping tool



ERGO Plus

In the case of repetitive and prolonged handling at significant heights, it allows the operator to maintain a rapid pace, all the while removing the risk of MSDs.



Also available in stainless steel



This handle combines the advantages of the two previous ones. It is better suited to heavy, large or sensitive products. It has been designed so that the operator stays in an ergonomic position during the lowest and highest handling operations alike. The built-in automatic lifting system allows the operator to free the load effortlessly.



As an optional extra, there is the possibility of incorporating the start/stop control onto the head. This way, the operator no longer needs to move to turn the device on or off.

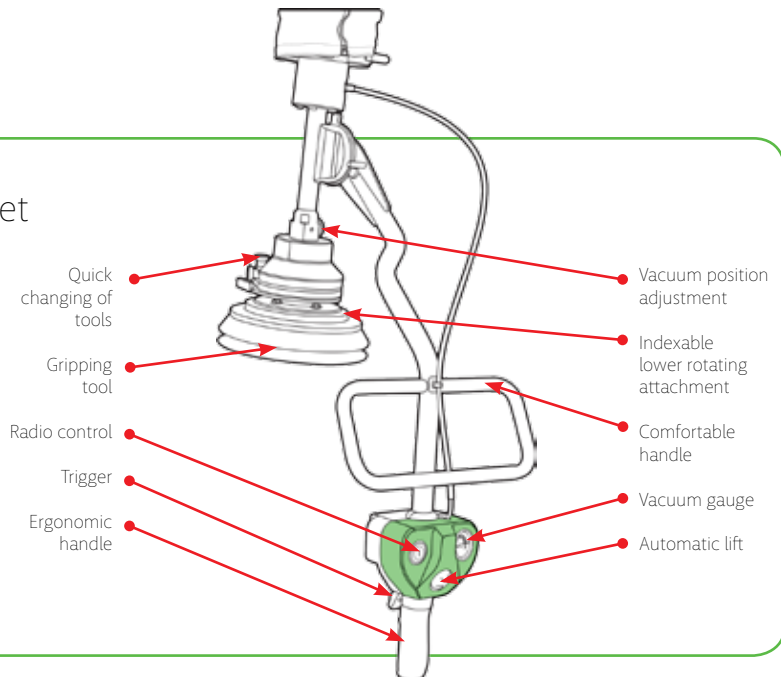
Technical Specifications Sheet

Integrated functions:

- Trigger
- Gripping tool
- Ergonomic handl
- Comfortable handle
- Vacuum gauge
- Automatic lift

Optional functions:

- Radio control
- Quick changing of tools
- Indexable lower rotating attachment



The Supports

The support is an integral part of the MANUT-LM handling assistance solution. By doing no more than defining the lifting equipment, you only respond partially to the issue of seeking ergonomics and removing difficult working conditions in the work station.

The support must be adapted to the vacuum lifting device, but it must also meet the requirements of your environment.

- Do you need to cover a significant working area or feed a machine?
- Do you have low-ceilinged premises or need to get round an obstacle?
- Do you have health and/or safety requirements specific to your business area?
- Do you have the option, or not, of attaching the support to the ground, the wall or a pillar?
- Do you need to be able to move the support?

Crane Bridges

Made up of two crane runways and a sliding girder, this support is also available as a monorail version. It requires attachment to the building's structural framework or implementation of a structure on the ground. It is available in steel, aluminium or stainless steel.



The Advantages:

- Able to cover a significant working area.
- Allows for a more flexible use of the manipulator(s).
- Lets you have several manipulators under a single support.

Jib cranes with sliding rail

This is a support which requires a significant height available and a good quality floor to attach it (jib crane on a column) or a wall/pillar compatible with the weight of the load and the range of the jib crane (wall jib crane). It is available in steel, stainless steel or with an aluminium rail.



The Advantages:

- Light to use
- Range up to 6m over a 260/270° rotation
- Moderate cost

Articulated jib crane

It is made from 2 articulated arms with the option of creating a vacuum inside. It needs a good quality floor to attach it (jib crane on a column) or a wall/pillar compatible with the weight of the load and the range of the jib crane (wall jib crane). It is available in steel or, depending on the weight, in stainless steel.



The Advantages:

- Installation possible in low-ceilinged premises or with an obstacle to get round.
- Range (up to 4m, 270° rotation on the first arm and 320° on the second arm).
- Avoids retention areas in environments with strict hygiene requirements, no air intake tube or rail (exclusive to Manut-LM).





Pneumatic Hoists

203



JDN AIR HOISTS Mini

The mini series at a glance



Energy supply (spiral hose)



Manual trolleys

Special grease for oil-free operation



mini in manipulator version



Galvanised chain
3 standard lifting heights

Mini tool box consisting of:
mini with 3m lift and 2m control length in practical transport box incl. 6m supply hose and couplings



Sensitive control
3 standard control lengths

Explosion classification
II 3 GD IIA T4

The JDN mini series for general duty

Capacities: 125 kg, 250 kg, 500 kg, 980 kg

Air pressure: 6 bar

The **mini** widens the range of applications in the light duty sector as a handy, flexible and universally deployable hoist making it an ideal tool for a wide range of light/medium manufacturing applications.

mini Manipulator

With the mini manipulator loads can be lifted, lowered, manually traversed and positioned with only one hand.

Further information on request.

Explosion Classification:

⊕ II 3 GD IIA T4



mini 250



mini 250
in manual trolley



mini -
Manipulator

The advantages at a glance

- Price competitive alternative when compared to other types of powered hoists.
- Suitable for lube-free operation.
- Suitable for application in hazardous areas.
- Minimum components for ease of maintenance.
- Wear resistant motor braking system.
- Lightweight for easy handling.
- Also suitable for horizontal pulling.
- Extremely sensitive lever control with emergency shut-off valve, max. control length 6 m.
- Available lifting heights: up to 8m.
- With chain box as standard.
- With manual trolley as option.

Technical Data

Type		mini 125	mini 250	mini 500	mini 1000
Capacity	lbs	275	550	1100	2160
	kg	125	250	500	980
Air pressure	PSI	85	85	85	85
	bar	6	6	6	6
Number of chain strands		1	1	1	1
Motor output	kW	0.4	0.4	1	1
Lifting speed at full load ¹	ft/min	49.5	26	33	16
	m/min	15	8	10	5
Lifting speed without load ¹	ft/min	130	65	65	33
	m/min	40	20	20	10
Lowering speed at full load	ft/min	99	52	59	33
	m/min	30	16	18	10
Lowering speed without load	ft/min	78.7	39.4	39.4	19.7
	m/min	24	12	12	6
Air consumption at full load - lifting	cfm	17.5	17.5	42.5	42.5
	m ³ /min	0.5	0.5	1.2	1.2
Air consumption at full load - lowering	cfm	24.7	24.7	56.5	56.5
	m ³ /min	0.7	0.7	1.6	1.6
Air connection		G 3/8	G 3/8	G 1/2	G 1/2
Hose dimension (Ø inside)	inch	3/8	3/8	1/2	1/2
	mm	9	9	13	13
Weight with 10 ft / 3 m lift	lbs	21	23.1	46.2	50.6
	kg	9.5	10.5	21	23
Chain dimension	mm	4 x 12	4 x 12	7 x 21	7 x 21
Weight of chain	lbs/ft	0.23	0.23	0.67	0.67
	kg/m	0.35	0.35	1.0	1.0
Height of lift	ft	10/16/26			
	m	3/5/8			
Length of control at standard lift	ft	6.5/13/20			
	m	2/4/6			
Noise level at full load ² - lifting	dB(A)	79	79	77	77
Noise level at full load ² - lowering	dB(A)	80	80	83	83

Group mechanism: M3 (1 Bm)

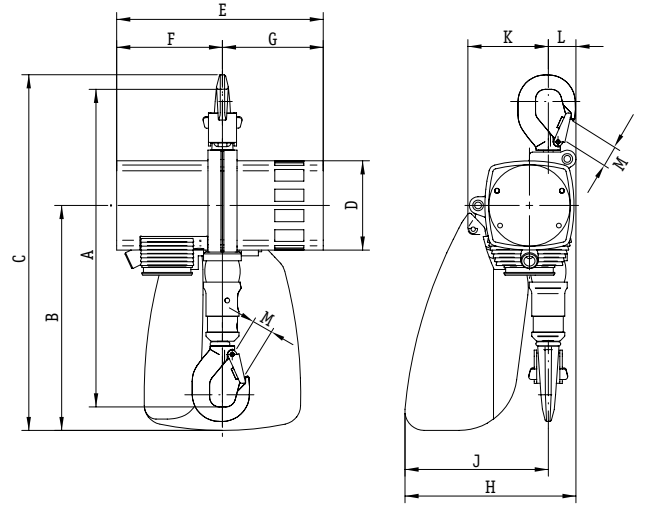
¹Lifting speed at 2 m length of control. Longer control hoses decrease the lifting speeds.

²Measured at 1 m distance acc. to DIN 45635 part 20



Dimensions

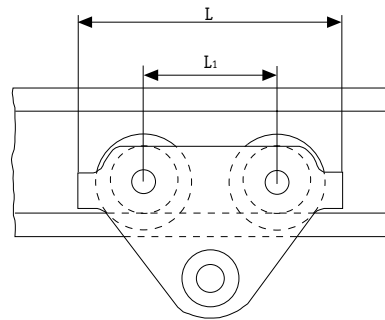
Type		mini 125	mini 250	mini 500	mini 1000
A	inch mm	12.9 328	12.9 328	18.0 458	18.0 458
B	inch mm	9.1 232	9.1 232	12.4 316	12.4 316
C	inch mm	14.4 367	14.4 367	19.9 505	19.9 505
D	inch mm	3.6 92	3.6 92	4.8 122	4.8 122
E	inch mm	8.4 213	8.4 213	11.5 292	11.5 292
F	inch mm	4.3 109	4.3 109	5.8 148	5.8 148
G	inch mm	4.1 104	4.1 104	5.6 144	5.6 144
H	inch mm	7 177	7 177	9.2 234	9.2 234
J	inch mm	5.8 148	5.8 148	7.6 194	7.6 194
K	inch mm	3.3 83	3.3 83	4.7 119	4.7 119
L	inch mm	1.1 29	1.1 29	1.6 40	1.6 40
M	inch mm	0.7 19	0.7 19	1.1 28	1.1 28



Manual Trolleys for JDN Air Hoists mini

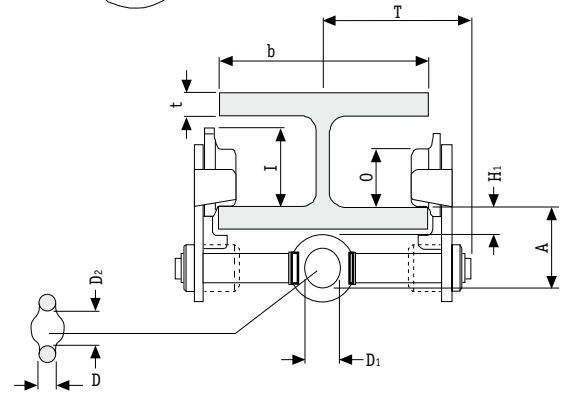
Technical Data

Type		LN 250	LN 1000
Capacity	lbs kg	550 250	2200 1000
Beam flange width b	inch mm	2-8 50-220	2-8 58-220
max. flange thickness t	inch mm	1.3 34	1.2 30
min. curve radius	inch m	35.4 0.9	39.4 1.0
Weight	lbs kg	17 7.7	21 10.5



Dimensions

Type		LN 250	LN 1000
A	inch mm	3.1 79	3.1 79
D	inch mm	0.7 17	0.7 17
D ₁	inch mm	1 25	1.2 30
D ₂	inch mm	1.2 30	1.4 35
H ₁	inch mm	1.2 30	1 25
I	inch mm	2.7 67.5	3.2 81.5
L	inch mm	10.2 260	10.2 260
L ₁	inch mm	5.1 130	5.1 130
O	inch mm	2.2 55	2.7 68
T	inch mm	5.7 144	5.9 151



JDN AIR HOISTS Profi

Capacities: 250 kg up to 100 t

Air pressure: 4 bar or 6 bar

Proven in practice: JDN Air Hoists **PROFI** Series are superior in all places where safety has priority. The **PROFI** Series scores well with its 100% duty rating and explosion protection as standard. This important advantage ensures JDN Air Hoists are especially suitable for applications in hazardous areas.

JDN Air Hoists **PROFI** Series are very robust and therefore suitable for tough industrial applications even in continuous working processes. According to your requirements there are various control systems available. For traversing loads there are also different trolley designs to meet your particular demands.

Where the JDN PROFI excellence has been proven

Aircraft construction, assembly lines, chemical industry, dairies, electro plating, explosives and pyrotechnics industry, food industry, foundries, furniture industry, glass industry, lacquer and varnish factories, match industry, mechanical engineering, auto industry, oil storage plants, on- and offshore, paint shops, paper industry, power plants, refineries, sawmills, shipyards, space industry, tempering plants, textile industry.



Standard Features

- Suitable for application in hazardous areas
- Sensitive infinitely variable speed control for the precise positioning of loads
- Easy operation
- Suitable for lube-free operation
- 100 % duty rating and unlimited duty cycles
- Low maintenance
- Low headroom, lightweight
- Sound absorption
- Insensitive to dust, humidity and temperatures ranging from -20°C up to +70°C
- From 1t upwards with overload protection (EC-version)

Technical Details

- Fail-safe starting, low maintenance vane motor
- Chain sprocket in the mid section runs in dust-proof maintenance-free ball bearings
- Planetary gear box with long-life grease lubrication, all gears made of tempered or hardened high-grade steel
- Load chain and hooks manufactured from high quality tempered steels with a breaking strength of five times the nominal load

The advantages at a glance

- **Strong – Fast – Silent**
High performance with more efficiency by reliability plus high lifting and lowering speeds. Low sound emissions.
- **High Level of Safety**
Integrated emergency stop switch from 1t upwards with overload protection.
- **Oil-Free Operation**
Patented, permanent motor lubrication during operation, using a high-performance grease. No additional motor lubrication required.
- **Patented Motor-Brake System**
For operation with low maintenance and little wear. Based on the proven design of the JDN Mini Series.
- **Modern Design – Compact Size**
Features no protruding control hoses or parts susceptible to damage, making the PROFI also suitable for horizontal pulling.
- **100% Duty Rating – No Downtime**
- **Ex Classification according to EC Directive on Hazardous Locations 94/9/EEC**
As standard:
 II 2 GD IIA T4/II 3 GD IIB T4
 With increased spark protection:
 II 2 GD IIC T4



The modular system at a glance



PROFI 025TI – 2TI

Technical Data

Type		025 TI		05 TI		1 TI		2 TI	
Capacity	mt	0.16	0.25	0.32	0.5	0.63	1	1.25	2
Air pressure	PSI	65	85	65	85	65	85	65	85
	bar	4	6	4	6	4	6	4	6
Number of chain strands		1		1		1		2	
Motor output	kW	0.6	1.0	0.6	1.0	0.6	1.0	0.6	1.0
Lifting speed at full load	ft/min	65.6	65.6	32.8	36.1	16.4	18	8.2	8.9
	m/min	20	20	10	11	5	5.5	2.5	2.7
Lifting speed without load	ft/min	123	137.8	52.5	62.3	32.8	36.1	16.4	18
	m/min	37.5	42	16	19	10	11	5	5.5
Lowering speed at full load	ft/min	124.7	124.7	55.8	55.8	32.8	36.1	16.4	18
	m/min	38	38	17	17	10	11	5	5.5
Air consumption at full load – lifting	cfm	24.7	42.4	24.7	42.4	24.7	42.4	24.7	42.4
	m ³ /min	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2
Air consumption at full load – lowering	cfm	28.3	53	28.3	53	28.3	53	28.3	53
	m ³ /min	0.8	1.5	0.8	1.5	0.8	1.5	0.8	1.5
Air connection		G 1/2		G 1/2		G 1/2		G 1/2	
Hose dimension (ø inside)	inch	1/2		1/2		1/2		1/2	
	mm	13		13		13		13	
Weight with standard lift, rope control	lbs	59.5	59.5	59.5	59.5	61.6	61.7 ¹	75 ¹	75 ¹
	kg	27	27	27	27	27.5	28 ¹	34 ¹	34 ¹
Chain dimension	mm	7 x 21		7 x 21		7 x 21		7 x 21	
Weight of chain	lbs/ft	0.67		0.67		0.67		0.67	
	kg/m	1.0		1.0		1.0		1.0	
Standard lift	ft	10		10		10		10	
	m	3		3		3		3	
Length of control at standard lift	ft	6.5		6.5		6.5		6.5	
	m	2		2		2		2	
Noise level at full load ² – lifting	dB(A)	73	74	74	75	74	76	74	76
Noise level at full load ² – lowering	dB(A)	77	78	77	78	77	78	77	78

¹With overload protection

²Measured at 1 m distance acc. to DIN 45635 part 20

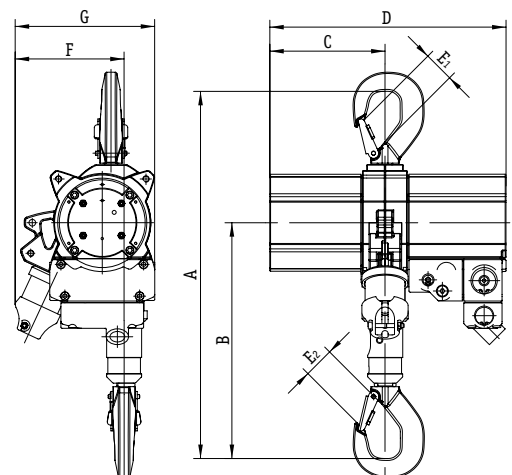
Group mechanism at 6 bar: PROFI 025TI M5 (2 m), PROFI 05TI - PROFI 2TI M4 (1 Am)



PROFI 1TI

Dimensions

Type		025 TI	05 TI	1 TI	2 TI
A min. headroom ¹	inch	17.7	17.7	17.7	19.6
	mm	450	450	450	498
B	inch	11.3	11.3	11.3	13.2
	mm	288	288	288	336
C	inch	5.7	5.7	5.7	5.7
	mm	145	145	145	145
D	inch	11.7	11.7	11.7	11.7
	mm	297	297	297	297
E ₁	inch	1.1	1.1	1.1	1.1
	mm	28	28	28	28
E ₂	inch	1.1	1.1	1.1	1.1
	mm	28	28	28	28
F up to hook centre	inch	5.4	5.4	5.4	5.4
	mm	137	137	137	137
G maximum width	inch	6.9	6.9	6.9	7.2
	mm	176	176	176	183



¹Chain containers increase the hoist headroom

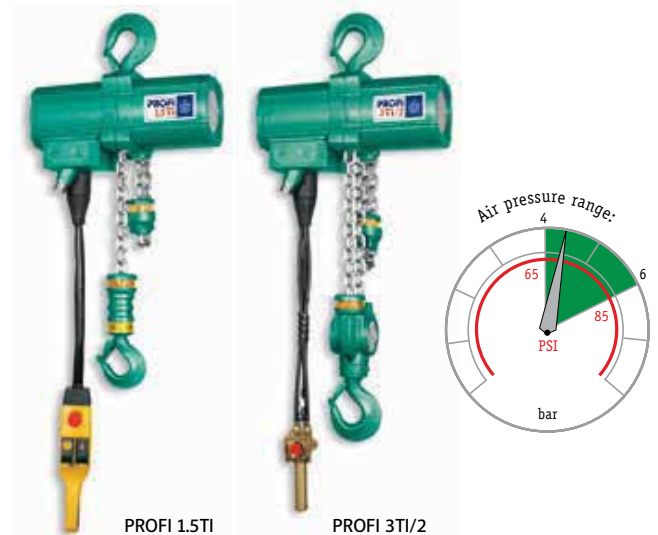


PROFI 1.5TI and 3TI/2

Technical Data

Type		1.5TI	3 TI/2
Capacity	mt	1.6	3.2
Air pressure range	PSI	65-85	65-85
	bar	4-6	4-6
Number of chain strands		1	2
Motor output	kW	1.3-2	1.3-2
Lifting speed at full load	ft/min	13.1-19.7	6.6-9.8
	m/min	4-6	2-3
Lifting speed without load	ft/min	27.6-32.8	13.8-16.4
	m/min	8.4-10	4.2-5
Lowering speed at full load	ft/min	36.1-39.4	18.0-19.7
	m/min	11-12	5.5-6
Air consumption at full load - lifting	cfm	53-92	53-92
Air consumption at full load - lowering	m ³ /min	1.5-2.6	1.5-2.6
Air connection		G 3/4	G 3/4
Hose dimension (∅ inside)	inch	3/4	3/4
	mm	19	19
Weight with standard lift, rope control	lbs	123	146
	kg	56	66
Chain dimension	mm	9 x 27	9 x 27
Weight of chain	lbs/ft	1.2	1.2
	kg/m	1.8	1.8
Standard lift	ft	10	10
	m	3	3
Length of control at standard lift	ft	6,5	6,5
	m	2	2
Noise level at full load ¹ - lifting	dB(A)	73-77	73-77
Noise level at full load ¹ - lowering	dB(A)	78-80	78-80

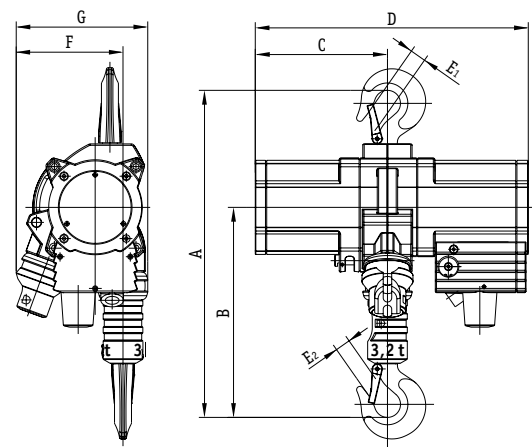
¹Measured at 1 m distance acc. to DIN 45635 part 20
Group mechanism: M3 (1 Bm)



Dimension

Type		1.5 TI	3 TI/2
A min. headroom ¹	inch	18.9	21.4
	mm	480	544
B	inch	11.5	14.0
	mm	293	356
C	inch	7.9	7.9
	mm	200	200
D	inch	16.2	16.2
	mm	412	412
E ₁	inch	1.1	1.1
	mm	28	28
E ₂	inch	1.0	1.1
	mm	26	28
F up to hook centre	inch	6.7	5.5
	mm	170	140
G maximum width	inch	8.5	8.5
	mm	215	215

¹Chain containers increase the hoist headroom



PROFI 3TI – 20TI

Technical Data

Type		3 TI		6 TI		10 TI		16 TI		20 TI	
Capacity	mt	3.2		6.3		10		16		20	
Air pressure	PSI	65	85	65	85	65	85	65	85	65	85
	bar	4	6	4	6	4	6	4	6	4	6
Number of chain strands		1		2		2		3		4	
Motor output	kW	1.8	3.5	1.8	3.5	1.8	3.5	1.8	3.5	1.8	3.5
Lifting speed at full load	ft/min	8.2	16.4	3.9	8.2	2.6	5.2	1.6	3.3	1.3	2.3
	m/min	2.5	5	1.2	2.5	0.8	1.6	0.5	1	0.4	0.7
Lifting speed without load	ft/min	19.7	32.8	9.8	16.4	6.6	10.5	4.3	6.6	3.3	4.6
	m/min	6	10	3	5	2	3.2	1.3	2	1	1.4
Lowering speed at full load	ft/min	24.6	35.4	11.8	17.7	8.2	11.2	5.3	6.9	3.9	5.3
	m/min	7.5	10.8	3.6	5.4	2.5	3.4	1.6	2.1	1.2	1.6
Air consumption at full load – lifting	cfm	71	142	71	142	71	142	71	142	71	142
	m ³ /min	2	4	2	4	2	4	2	4	2	4
Air consumption at full load – lowering	cfm	124	195	124	195	124	195	124	195	124	195
	m ³ /min	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Air connection		G 3/4		G 3/4		G 3/4		G 3/4		G 3/4	
Hose dimension (Ø inside)	inch	3/4		3/4		3/4		3/4		3/4	
	mm	19		19		19		19		19	
Weight with standard lift, rope control	lbs	189.6		242.5		343.9		529.1		627	
	kg	86		110		156		240		285	
Chain dimension	mm	13 x 36		13 x 36		16 x 45		16 x 45		16 x 45	
Weight of chain	lbs/ft	2.6		2.6		3.9		3.9		3.9	
	kg/m	3.8		3.8		5.8		5.8		5.8	
Standard lift	ft	10		10		10		10		10	
	m	3		3		3		3		3	
Length of control at standard lift	ft	6.5		6.5		6.5		6.5		6.5	
	m	2		2		2		2		2	
Noise level at full load ¹ – lifting	dB(A)	74	78	74	78	74	78	74	78	74	78
Noise level at full load ¹ – lowering	dB(A)	79	80	79	80	79	80	79	80	79	80

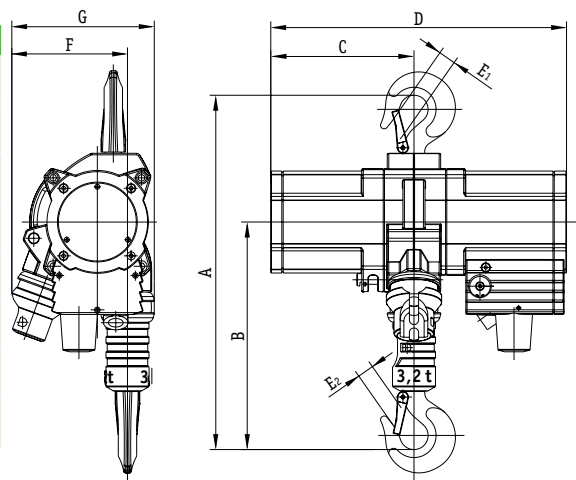
¹Measured at 1 m distance acc. to DIN 45635 part 20
Group mechanism at 6 bar: M3 (1 Bm)



PROFI 6TI

Dimensions

Type		3 TI	6 TI	10 TI	16 TI	20 TI
A min. headroom ¹	inch	23.3	26.5	32	35.4	40.6
	mm	593	674	813	898	1030
B	inch	14.7	17.9	21.6	23.5	26.4
	mm	373	454	548	598	670
C	inch	9.2	9.2	12.1	15	15
	mm	233	233	308	382	382
D	inch	19	19	22.6	27.2	27.2
	mm	483	483	575	692	692
E ₁	inch	1.6	1.6	1.7	2.1	2.8
	mm	40	40	44	53	70
E ₂	inch	1.2	1.6	1.7	2.1	2.8
	mm	30	40	44	53	70
F up to hook centre	inch	7.4	6.1	7.8	7.8	7.1
	mm	187	154	197	199	180
G maximum width	inch	9.2	9.2	12	12.1	12.4
	mm	233	233	306	308	315



¹Chain containers increase the hoist headroom



JDN Trolleys

Capacities: 0.25 t up to 20 t

JDN Trolleys are available for all hoists of the PROFI and M series:

- Manual trolleys (LN) for pushing or pulling the trolleys by hand
- Reel chain trolleys (LH) for moving the trolleys by operating the reel chain mechanism
- Motorised trolley (LM) air motor powered

Standard Features

- Easy to install
- With anti-climb and anti-drop devices
- Robust manufacture requiring little maintenance
- Able to negotiate curves

Options

- Rack and pinion drive
- Spark-resistant package
- Offshore paint

Energy Feeding Systems

The air supply can be fed by various systems:

- Energy chain
- C-rail
- Square rail
- Spiral hose
- Hose trolleys



PROFI 1TI in
Manual Trolley



PROFI 1TI in
Reel Chain Trolley



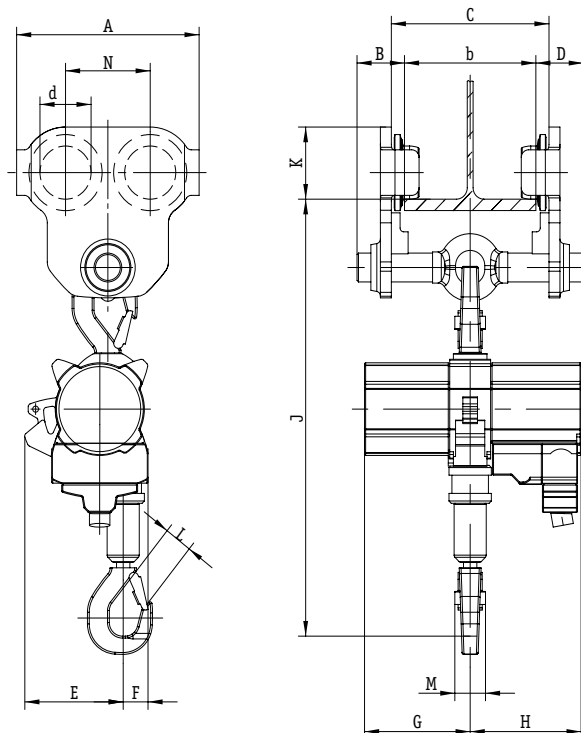
PROFI 2TI in
Motor Trolley

PROFI in Manual Trolley (LN)

Dimensions

JDN Air Hoist PROFI		025 TI	05 TI	1 TI	1.5 TI	2 TI	3 TI/2	3 TI	6 TI	10 TI	16 TI
With Trolley		LN 0.5 t		LN 1 t	LN 2 t		LN 3.2 t		LN 6.3 t	LN 10-16 t	
A	inch mm	10.2 260			12.2 310		11.5 292		19.7 500	19.3 490	
B max.	inch mm	4.7 119			4.8 122		4.5 113		6.2 157	6.4 162	
C	inch mm	b + 1.1 b + 28			b + 1 b + 26		b + 2.4 b + 60			b + 2.8 b + 70	
d	inch mm	2.2 55		2.7 68	3.2 80		3.3 84			6.5 165	
D max.	inch mm	4.7 119			4.8 122		4.5 113		6.2 157	6.4 162	
E	inch mm	5.4 137			5.7 170	5.4 137	5.5 140	7.4 187	6.1 154	7.8 197	7.8 199
F	inch mm	1.5 39			1.8 45	1.8 46	3.0 75	1.8 46	3.1 79	4.3 109	
G	inch mm	5.7 145			7.9 200	5.7 145	7.9 200	9.2 233		12.1 308	15 382
H	inch mm	6 152			3.3 212	6 152	3.3 212	9.8 250		10.5 267	12.2 310
J* (mounted)	inch mm	- -	- -	- -	- -	- -	24.1 613	25 635	30 763	37 929	39 982
J* (suspended)	inch mm	20.9 530			23.1 588	23.5 597	- -	31.4 798	36.2 919	46.3 1176	49.6 1260
K	inch mm	2.7 67.5		3.2 81.5	3.7 94		4.2 107			7.4 188	
L	inch mm	1.1 28			1.0 26	1.1 28		1.2 30	1.6 40	1.7 44	2.1 53
M	inch mm	1.7 42			1.6 40	1.7 42			2 51	2.6 66	3.2 82
N	inch mm	5.1 130			5.9 150		5.4 136			9.3 236	

*Chain containers increase the hoist headroom

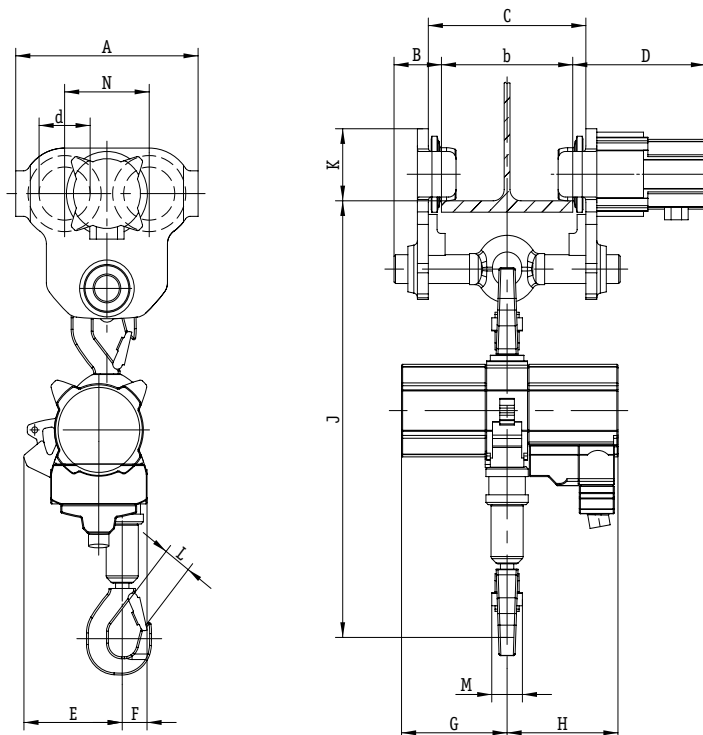


PROFI in Motor Trolley (LM)

Dimensions

JDN Air Hoist PROFI		025 TI	05 TI	1 TI	1.5 TI	2 TI	3 TI/2	3 TI	6 TI	10 TI	16 TI	20 TI
With Trolley		LM 2 t			LM 3.2 t			LM 6.3 t	LM 10-16 t		LM 20 t	
A	inch	9.8			11.5			19.7	19.3		23.6	
	mm	250			292			500	490		600	
B max.	inch	5.1			4.4			6.2	6.4		5.3	
	mm	130			113			157	162		134	
C	inch	b + 1.4			b + 2.4			b + 2.8		b + 2.7		
	mm	b + 36			b + 60			b + 70		b + 68		
d	inch	2.8			3.3			6.5		7.3		
	mm	70			84			165		185		
D	inch	7.3			7.3	7.3	7.5	8.1	12.5		12.9	
	mm	185			185	185	191	205	318		328	
E	inch	5.4			6.7	5.4	5.5	7.4	6.1	7.8	7.8	7.1
	mm	137			170	137	140	187	154	197	199	180
F	inch	1.5			1.7	1.8	3.0	1.8	3.1	4.3		5.3
	mm	39			45	46	75	46	79	109		135
G	inch	5.7			7.9	5.7	7.9	9.2		12.1	15	
	mm	145			200	145	200	233		308	382	
H	inch	6			3.3	6	3.3	9.8		10.5	12.2	
	mm	152			212	152	212	250		267	310	
J* (mounted)	inch	-	-	-	-	-	24.1	25	30	37	39	44.3
	mm	-	-	-	-	-	613	635	763	929	982	1125
J* (suspended)	inch	22.2			23.7	24.1	-	31.4	36.2	46.3	46.1	58.1
	mm	563			602	611	-	798	919	1176	1171	1475
K	inch	3.7			4.2			7.4		8.6		
	mm	95			107			188		218		
L	inch	1.1			1.0	1.1	1.2	1.6	1.7	2.1	2.9	
	mm	28			26	28	30	40	42	55	75	
M	inch	1.7			1.6	1.7		2	2.6	3.2	3.4	
	mm	42			40	42		51	66	82	86	
N	inch	4.6			5.4			9.3		10.8		
	mm	116			136			236		274		

*Chain containers increase the hoist headroom



JDN Low Headroom Trolleys

The trolley solution for restricted headroom areas.

Capacities: 0.5 t up to 6.3 t

Where headroom is restricted and standard trolleys can't meet the lifting height requirements we recommend JDN Low Headroom Trolleys whereby our air hoists are mounted horizontally. When only very low headroom is available we recommend JDN Ultra-Low Monorail Hoist design.

Standard Features

- Small number of maintenance/wear free moving parts
- No additional motor lubrication required
- 2-step travelling speed
- Adjustable trolley widths to suit your requirements

Special Features

- Able to negotiate curves
- Extended trolley tie bars for bulky or elongated loads

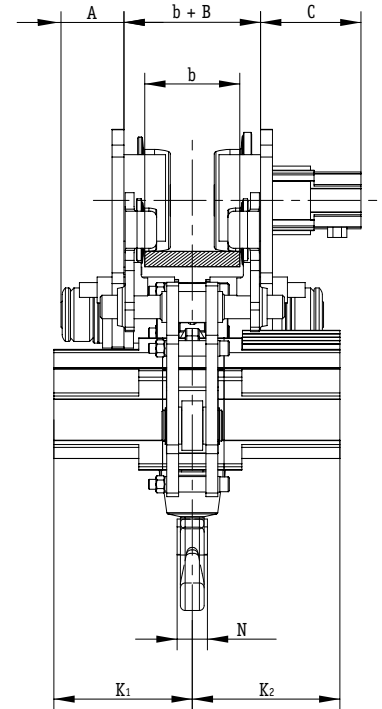
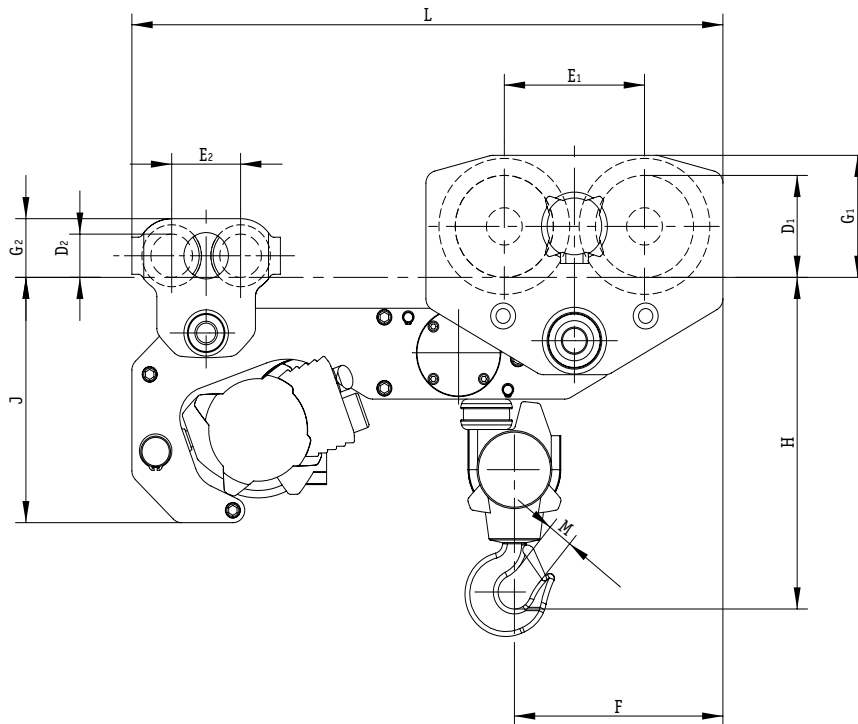
Technical Data

Hoist Type		PROFI 05 TI	PROFI 1 TI	PROFI 2 TI	PROFI 3 TI	PROFI 6 TI
Trolley Type		LMF 05-2 t	LMF 05-2 t	LMF 05-2 t	LMF 3.2 t	LMF 6.3 t
Capacity	mt	0.5	1	2	3.2	6.3
Air pressure	PSI bar	85 6	85 6	85 6	85 6	85 6
Number of chain strands		1	1	2	1	2
Motor output Hoist	kW	1	1	1	3.5	3.5
Motor output Trolley	kW	0.2	0.2	0.2	0.2	0.2
Lifting speed at full load	ft/min m/min	32.81 10	16.40 5	8.20 2.5	14.76 4.5	7.21 2.2
Lifting speed without load	ft/min m/min	55.77 17	32.81 10	16.40 5	29.52 9	14.76 4.5
Lowering speed at full load	ft/min m/min	55.77 17	36.09 11	18.04 5.5	35.43 10.8	17.72 5.4
Travelling speed at full load	ft/min m/min	29.53*/45.93 9*/14	29.53*/45.93 9*/14	29.53*/45.93 9*/14	29.53*/45.93 9*/14	29.53*/45.93 9*/14
Air consumption at full load – lifting	cfm m ³ /min	42.38 1.2	42.38 1.2	42.38 1.2	141.26 4	141.26 4
Air consumption at full load – lowering	cfm m ³ /min	52.97 1.5	52.97 1.5	52.97 1.5	194.23 5.5	194.23 5.5
Air consumption trolley motor	cfm m ³ /min	21.19 0.6	21.19 0.6	21.19 0.6	21.19 0.6	21.19 0.6
Air connection		G 1/2	G 1/2	G 1/2	G 3/4	G 3/4
Hose dimension (Ø inside)	inch mm	1/2 13	1/2 13	1/2 13	3/4 19	3/4 19
Weight with standard lift and control	lbs kg	216.05 98	218.26 99	231.59 105	462.97 210	727.53 330
Chain dimension	inch mm	0.28 x 0.83 7 x 21	0.28 x 0.83 7 x 21	0.28 x 0.83 7 x 21	0.51 x 1.42 13 x 36	0.51 x 1.42 13 x 36
Weight of chain	lbs/ft kg/m	0.67 1	0.67 1	0.67 1	2.6 3.8	2.6 3.8
Standard lift	ft m	10 3	10 3	10 3	10 3	10 3
Length of control at standard lift	ft m	6.5 2	6.5 2	6.5 2	6.5 2	6.5 2
Max. bottom flange thickness t	inch mm	0.98 25	0.98 25	0.98 25	1.38 35	1.38 35
Max. bottom flange width b	inch mm	12.20 310	12.20 310	12.20 310	12.20 310	12.20 310
Min. bottom flange width b	inch mm	3.15 80	3.15 80	3.15 80	4.92 125	4.92 125
Noise level at full load ¹ – lifting	dB(A)	75	76	76	78	78
Noise level at full load ¹ – lowering	dB(A)	78	78	78	80	80



Low Headroom
Trolley
LMF

*1st step at F-control with 2-step travelling speed, ¹Measured at 1m distance acc. to DIN 45635 part 20



Dimensions

Hoist Type		PROFI 05 TI	PROFI 1 TI	PROFI 2 TI	PROFI 3 TI	PROFI 6 TI
Trolley Type		LMF 05-2 t	LMF 05-2 t	LMF 05-2 t	LMF 3.2 t	LMF 6.3 t
A max.	inch mm	4.13 105	4.13 105	4.13 105	4.13 105	4.17 106
B	inch mm	1.42 36	1.42 36	1.42 36	1.42 36	2.76 70
b min.	inch mm	3.15 80	3.15 80	3.15 80	3.15 80	4.92 125
C	inch mm	6.46 164	6.46 164	6.46 164	6.46 164	6.65 169
D ₁	inch mm	2.76 70	2.76 70	2.76 70	2.76 70	6.50 165
D ₂	inch mm	2.76 70	2.76 70	2.76 70	2.76 70	2.76 70
E ₁	inch mm	4.57 116	4.57 116	4.57 116	4.57 116	9.29 236
E ₂	inch mm	4.57 116	4.57 116	4.57 116	4.57 116	4.57 116
F	inch mm	6.77 172	6.77 172	7.68 195	8.98 228	13.82 351
G ₁	inch mm	3.74 95	3.74 95	3.74 95	3.74 95	7.76 197
G ₂	inch mm	3.74 95	3.74 95	3.74 95	3.74 95	3.74 95
H min.	inch mm	12.60 320	12.60 320	15.51 394	16.34 415	21.14 537
J	inch mm	12.60 320	12.60 320	12.60 320	15.63 397	15.63 397
K ₁	inch mm	5.71 145	5.71 145	5.71 145	9.17 233	9.17 233
K ₂	inch mm	5.98 152	5.98 152	5.98 152	9.76 248	9.76 248
L	inch mm	28.15 715	28.15 715	28.15 715	32.48 825	39.17 995
M	inch mm	1.10 28	1.10 28	1.10 28	1.18 30	1.57 40
N	inch mm	1.65 42	1.65 42	1.65 42	1.65 42	2.01 51
t max.	inch mm	0.98 25	0.98 25	0.98 25	1.38 35	1.38 35

JDN Explosion Protection

Explosion Accessories

JDN Explosion Protection Classification and marking

Hoists and cranes from J.D. Neuhaus have an unbeatable advantage over electrically-driven lifting equipment: Even the standard versions are suitable for use in explosion-hazardous areas and bear explosion-proof labelling according to the ATEX standard. We recommend JDN Ultra-Low Monorail Hoist design.



If you have any questions about the topic of explosion protection, please contact our sales team. We will be happy to advise you.

Example: EX II 2 GD IIB T4 classification means:

EX	II	2	GD	IIB	T4
ATEX mandatory marking for equipment usable in explosive atmospheres	II Surface Work	2 For use in zone 1	G Gas	IIC (Acetylene & Hydrogen)	Temperature Class T1 < = 450°C T2 < = 300°C T3 < = 200°C T4 < = 135°C T5 < = 100°C T6 < = 85°C
	I Underground Work	3 For use in zone 2	D Dust	IIB (Ethylene)	
				IIA (Propane)	

JDN Accessories

Tailored to your individual needs

We offer a wide range of accessories designed to ensure that JDN standard products are suitable for your specific applications. This means, for example, that you can meet very specific safety requirements, adjust performance capacity or make operations even more convenient.

- Filter silencer
- Filter regulator
- Service unit
- Main air emergency-stop valve
- Chain box
- Special grease cartridge for oil-free operation, volume 250 ml
- Limit switch for lifting and travelling
- Booster valve (control lengths over 12 m)
- Extension arm for control on motorised trolley
- Additional suspension for chain box (for installation in trolley)
- Copper-plated load hook for increased spark protection
- Stainless steel load hook (up to 750 kg capacity)
- Stainless steel chain (reduced capacity) up to 6TI
- Manual emergency lowering device for PROFIL 3TI – 20TI hoists
- Special paint finishes



JDN Controls

JDN Air Hoists and Cranes are available with various controls to suit your special necessities.



Rope Control

Suitable for any control length:

This control type provides infinitely speed control for hoist lifting and lowering motions and is suitable for any required control length. The rope control option is available for all PROFI series hoists up to 25 t capacity. For larger capacity PROFI series hoists 37 TI, 50 TI and 100 TI the rope is replaced by a pull chain for greater strength.



FI-Control

Sensitive control, for easy handling:

The FI-Control provides precise infinitely variable speed control and the ergonomically designed synthetic housing ensures comfortable handling for the operator. The use of corrosion resistant materials makes it suitable for use in aggressive atmospheres, with the control hoses enclosed in an outer sheath which protects them from external conditions.



E-Control

Low maintenance, corrosion-proof:

The very robust brass construction distinguishes the E-type pendant control valve. Low weight and ergonomic design ensure ease of handling. Only available in single speed control version.



F-Control

Available for multi-function use:

The F-control is manufactured from an unbreakable synthetic material, resistant to external conditions. The ergonomically designed housing ensures ease of handling. Up to 18 different control functions can be incorporated in a single pendant control e.g key switch, two stage travelling speed, klaxon or simultaneous control of two hoist motors. As an option the F-control can also be delivered with infinitely variable speed control of hoisting and trolley travelling motions.

Controls for JDN Air Hoists in motor trolley and JDN Monorail Hoists

For controlling JDN air hoists in motor trolleys and JDN monorail hoists we recommend the four button version of the E or F-control. The rope control option is also available.

Controls for JDN Air Cranes

For controlling JDN air cranes the F-control is the most suitable because of its multi-function capability.

Operating Convenience via radio control

To overcome excessive distances between operator and crane, or to use hoisting equipment in remote areas, the JDN Radio Control offers a convenient and safe alternative to other control types. The JDN radio control is also available in explosion-proof design.

JDN Energy Supplies

A series of supply systems are available for powering JDN Air Hoists in trolleys, monorail hoists and crane systems:

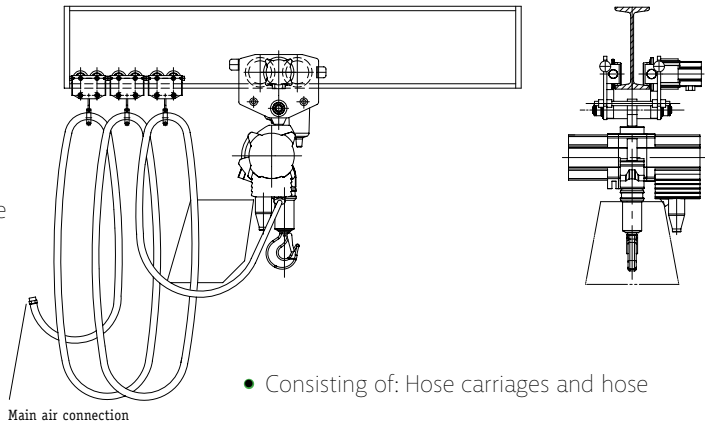
- Hose trolleys
- Spiral hose
- Square bar or C rail
- Energy chain

Hose trolleys

The hose is fastened to trolleys, which roll directly on the bottom flange of the beam. With each horizontal move of the hoist along the beam, the hose trolleys make the hose follow suit. The hose trolleys will be used for short distances or if there is not enough space on the side of the beam to install C or square bars.

Your advantages:

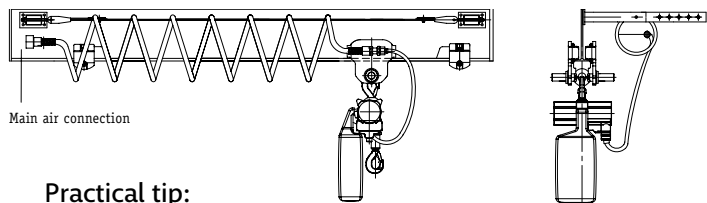
- Easy to install
- Cost-efficient



Spiral hose

This simple and economical solution is suitable for distances of up to 10 metres. The hose rings are suspended on a plastic-coated rope that runs parallel to the track.

The spiral hose can be used in category 3 (zone 2) with gases in explosion group IIA and IIB. It is not suitable for applications in category 2 (zone 1) or group IIC.



Practical tip:

Make sure to lay the hose so that its extended length is roughly 1.5 times the required distance.

- Consisting of: Tensioning arms, rope tensioners, hose and rope

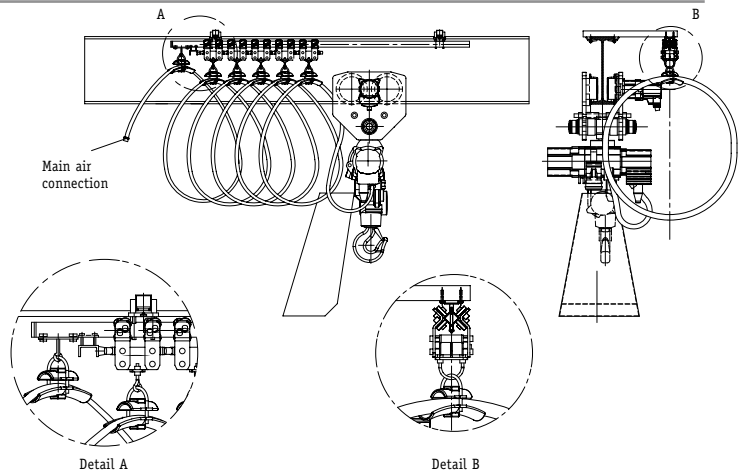
Square bar & C rail

Galvanised C rails or square bars are installed along the beam to carry the energy supply lines.

Square bar

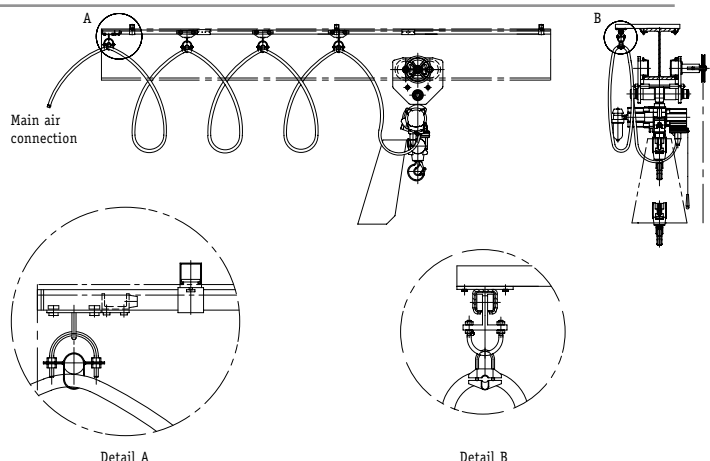
Depending on the local conditions, rails and curved tracks of different lengths are available, as well as an extensive range of installation accessories. The square bar is also suitable for curved tracks.

- Consisting of: Square bars, tensioning arms, hose, hose supports and supply line carriages



C rail

- Consisting of: Consisting of: C rails with support, adapter, antistatic supply hose and hose support. The supports must be attached to the upper flange of the beam.







Weighing and
Measurement Devices

221

EDjunior Dynamometer

Lifting the bar in electronic dynamometers

Big on the basics

The EDjunior dynamometer gets straight to the point – apply a load; take a reading. Its Spartan design is a direct response to industries that have wanted an extremely well-built instrument that could be relied upon for simple, yet critical measurements of weight and force.

A Strong Family Resemblance

The EDjunior draws its strength from the exhaustive engineering that went into the design of the Dillon EDXtreme dynamometer. Both share the same base of research and testing to match material characteristics and load cell technology. The choices made in development have yielded an exceptionally rugged instrument capable of consistently delivering accurate, repeatable measurements.

Extreme Value

The EDjunior is even more remarkable, when you consider price. If you believe you have to pay more, to get more – just compare the Dillon EDjunior to the competition. Nothing else comes close!

5,000 lb capacity EDjunior shown.

EDjunior dynamometers are available in capacities up to 25,000 lbf (10,000 kgf).

DILLON

Force Measurement Equipment



CE

Proof of Performance

The EDjunior is all about value. Behind its simple design and easy operation, you will find the quality and performance not found elsewhere in the low price range. With the EDjunior, Dillon proves that economy can go hand-in-hand with accuracy, long service life and, most importantly, worker safety.



Consider the features; compare the numbers:

Measurement Capabilities

The EDjunior provides peak detection as well as sustained load readings. Selectable units of measure include lbf, kgf and Newtons.

- **Accuracy** — The load element design and strain gauges chosen for the EDjunior produce an accuracy of 0.2 % (full scale). This level of precision offers flexibility for use in a broad range of applications.
- **Resolution** — Readings are displayed with a resolution of 1 part in 1000 to ensure the level of readability required for critical lifting applications.

Control Interface

The exclusive Dillon SOFTKEY interface provides direct access to setup and display functions without the typical confusing menu structure. The 6-digit dot-matrix display features 1 inch (26 mm) high numerals for greater visibility.

High Strength, Low Weight

Heavy, cumbersome tools make tough jobs even harder. Through the use of aircraft quality materials, Dillon has made the EDjunior an easy-to-position, highly mobile instrument with exceptional strength. It offers an impressive factor of safety at all capacities.

Dillon's distinctive curve-body design further eliminates unnecessary weight and streamlines the unit to help prevent binding.



Battery Operation

Power is supplied by two C-cell batteries that are easily accessible through a side-loading port. Battery replacement, however, is a rare event. With the EDjunior's low power consumption, typical battery life is over 425 hours.

All Environments

With its NEMA4/IP55 design, the EDjunior is at home in virtually any environment and ideally-suited to exterior job-site applications as well as in-plant use.

Backlight

When in a low light area, turn on the configurable backlight to make readings highly visible.

Standard Accessories

Cases for secure transportation and storage of instruments and shackles.

Specifications and dimensional details are available from an authorized Dillon Distributor or the website at www.dillonforce.com.

Dillon also manufactures highly accurate mechanical dynamometers and crane scales, as well as the EDxtreme, a full featured, precision electronic dynamometer with radio communications capability (right).



Low capacity model –
2,500 lbf / 1000 kgf

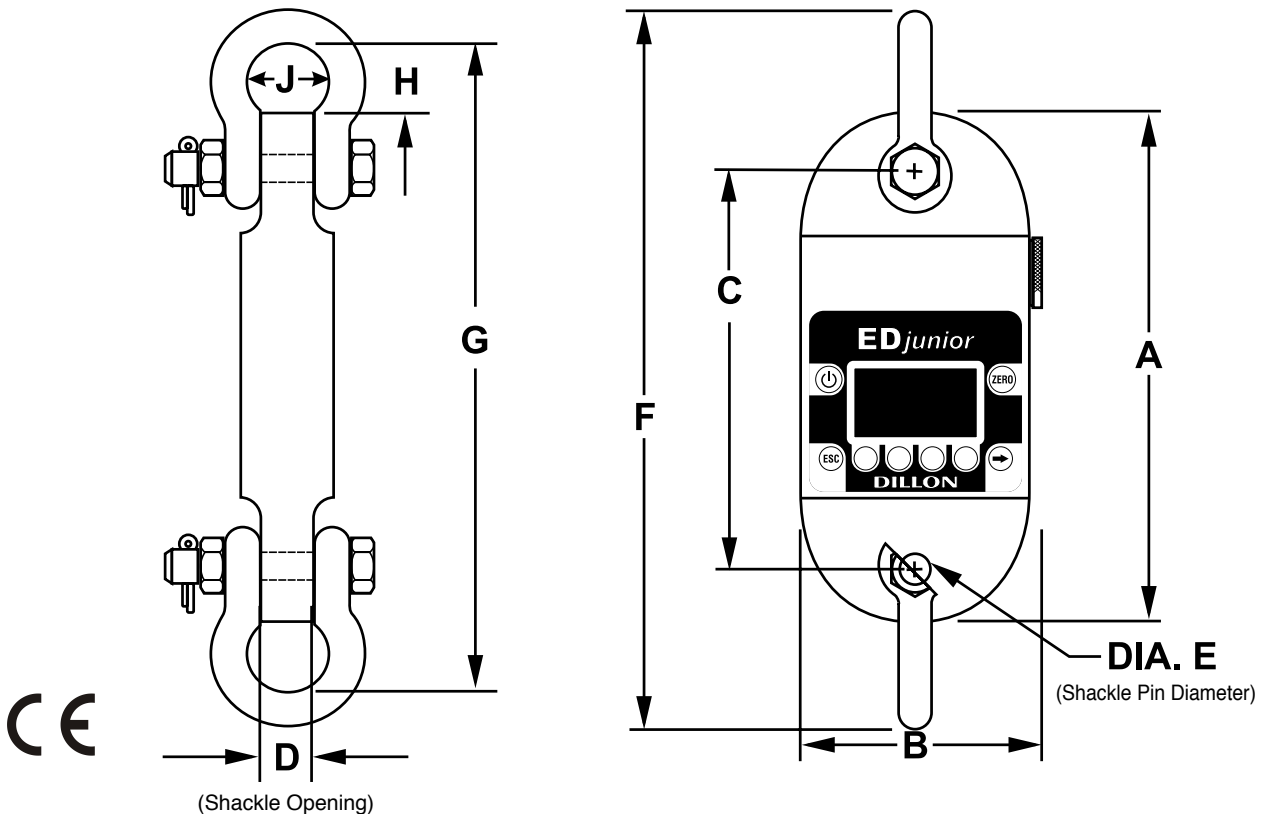


EDjunior Dynamometer Specifications

Capacity x Resolution				Body Construction and Overload Design
EDjr-1T (EDjr-2.5K)	2,500 lbf x 2	1,000 kgf x 1	10,000 N x 10	Aircraft quality 2024 Aluminum 700% Ultimate overload protection
EDjr-2T (EDjr-5K)	5,000 lbf x 5	2,000 kgf x 2	20,000 N x 20	
EDjr-5T (EDjr-10K)	10,000 lbf x 10	5,000 kgf x 5	50,000 N x 50	
EDjr-10T (EDjr-25K)	25,000 lbf x 20	10,000 kgf x 10	100,000 N x 100	E4340 Alloy Steel 500% Ultimate overload protection

Note: Model in parenthesis shows U.S. convention for describing capacities.

Dimensions <i>Dimensions shown are nominal and subject to tolerances</i>											
Model		A	B	C	D	E	F	G	H	I	J
EDjr-1T	inch	8.4	5.0	6.9	0.75	0.50	11.6	10.8	1.20	2.03	1.16
	mm	213	127	174	19	13	296	274	30	52	29
EDjr-2T	inch	10.6	5.0	7.8	1.06	0.75	14.8	13.4	1.41	2.94	1.69
	mm	269	127	198	27	19	375	340	35	75	43
EDjr-5T	inch	11.4	5.3	8.1	1.38	1.00	17.8	15.8	2.22	4.03	2.28
	mm	289	135	206	35	25	451	402	56	102	58
EDjr-10T	inch	11.5	5.3	7.9	1.97	1.38	21.6	18.8	3.67	4.53	3.25
	mm	291	133	201	50	35	548	478	93	115	83



Dillon EDXtreme

Guesswork is not acceptable – failure is not an option. When you have people working around high tension cables and massive loads, there is no room for error. You have to have complete confidence in the strength and the accuracy of your measurement tools.

Since 1937, Dillon Dynamometers have been chosen for the jobs where only the best will do. Now, Dillon has once again lifted the performance bar and set the standard for others to follow.

Features

- Dramatically improved battery life in the EDXtreme link
- Dramatically improved radio communications distance
- High speed Peak Capture 10/100/1,000 Hz
- Improved backlight intensity
- Lift and store of weight / force
- Date and time
- Continuous data storage
- Re-calibration reminder
- Can communicate with two Communicators via radio
- Overload at 120% with date and time record

Uncompromising on safety and adaptable to the need

The EDXtreme exemplifies the trademark precision and rugged construction of Dillon dynamometers. Its highly refined design draws on the inherent strengths of premium grade materials to achieve a 5:1 minimum factor of safety.*

While the EDXtreme may be configured for something as simple as a digital hanging scale, it offers a higher level of intelligence. With user-defined functions and sophisticated communication options, the EDXtreme readily adapts to multi-tasking operations or multi-link systems capable of monitoring a series of critical stress points from a single location — it is the definition of application versatility.

* Models with 75 T/160,000 lb or higher capacity feature a 4:1 safety factor and 0.3% accuracy.

Models available in capacities from 2500 to 550,000 lbf (1000 to 250,000 kgf).



For the toughest jobs you face

Xtreme engineering

Building a precision instrument that can survive real-world punishment requires masterful engineering. This is where Dillon's experience shines through. The engineers assigned to the EDXtreme drew on a depth of industrial application knowledge and conducted exhaustive materials testing to achieve the highest structural integrity.

- **Superior strength and corrosion resistance**
High capacity models are constructed of powder coated aircraft-quality alloy steel. Lower capacity models are powder coated aircraft-quality aluminum.
- **5:1 factor of safety***
This measure of strength and safety is maintained at all capacities. Computer modeling confirms the low stress and long product life that is inherent in the EDXtreme design.
- **Retained hardware**
Allows permanent attachment of centering spacers, which eliminates fumbling during high capacity rigging.
- **NEMA 4X/IP55**
The EDXtreme is clearly the choice for reliability in any environment – in-plant or out on the job site.

* Models with 75 T/160,000 lb or higher capacity feature a 4:1 safety factor and 0.3% accuracy.

Xtreme accuracy: 0.1%

High resolution and accurate repeatable readings are essential to proper weighing. The higher standards set for the EDXtreme meant taking the time to ensure that material characteristics, load element design and strain gauge meshed perfectly. The result of that effort is a typical accuracy of 0.1% of full scale capacity*. The enhanced resolution mode of 1 part in 5000 provides the level of readability needed for refined weighing.

Xtreme ease

- **Exclusive SOFTKEY interface** – Dillon has eliminated confusing menus for faster setup and simple operation. In addition to lbf, kgf and Newtons, programmable functions can correct for gravitational variations and allow the use of custom units of measurement.
- **Wide-angle, backlit LCD** – Provides improved readability over a wider viewing angle and has backlighting for low light conditions.
- **Battery operation** – The EDXtreme is powered by two standard C-cell batteries. Batteries are easily accessible for fast replacement.

Configuration options

A basic stand-alone model can be easily upgraded "in-the-field" to accommodate changing needs. Remote configuration, data acquisition and single point monitoring of multiple links are all possible with the hardwired or radio communication options available with the EDXtreme. An RS-232 interface is standard on both the EDXtreme and Communicator for connection to a host PC.

Typical Configurations

1. Stand-alone EDx for direct measurement applications.
2. Single network with one EDx radio dynamometer and Communicator.
3. Single network with multiple EDx dynamometers and one Communicator. The Communicator monitors the load at each scale, plus the total weight.
4. Single network with two, three or four Communicators.
5. Multiple networks with multiple EDx dynamometers and Communicators.



Optional Remote Communicator II



EDXtreme Dynamometer Specifications

Capacity & Resolution

Model*	Capacity x Resolution (normal/enhanced)			Overload†	Construction
EDx-1T (EDx-2.5K)	2,500 lbf x 2/0.5	1,000 kgf x 1/0.2	10,000 N x 10/2		
EDx-2T (EDx-5K)	5,000 lbf x 5/1	2,000 kgf x 2/0.5	20,000 N x 20/5	700%	Aircraft-quality 2024 aluminum
EDx-5T (EDx-10K)	10,000 lbf x 10/2	5,000 kgf x 5/1	50,000 N x 50/10		
EDjr-2T (EDjr-5K)	25,000 lbf x 20/5	10,000 kgf x 10/2	100,000 N x 100/20		
EDx-10T (EDx-25K)	55,000 lbf x 50/10	25,000 kgf x 20/5	250,000 N x 200/50	500%	Aircraft-quality E4340 alloy steel
EDx-25T (EDx-55K)	100,000 lbf x 100/20	50,000 kgf x 50/10	500,000 N x 500/100		
EDx-50T (EDx-100K)	160,000 lbf x 100/50	75,000 kgf x 50/20	-		
EDx-100T (EDx-220K)	220,000 lbf x 200/50	100,000 kgf x 100/20	-		
EDx-150T (EDx-330K)	330,000 lbf x 200/100	150,000 kgf x 100/50	-	400%	Aircraft-quality E4340 alloy steel
EDx-250T (EDx-550K)	550,000 lbf x 500/200	250,000 kgf x 200/50	-		

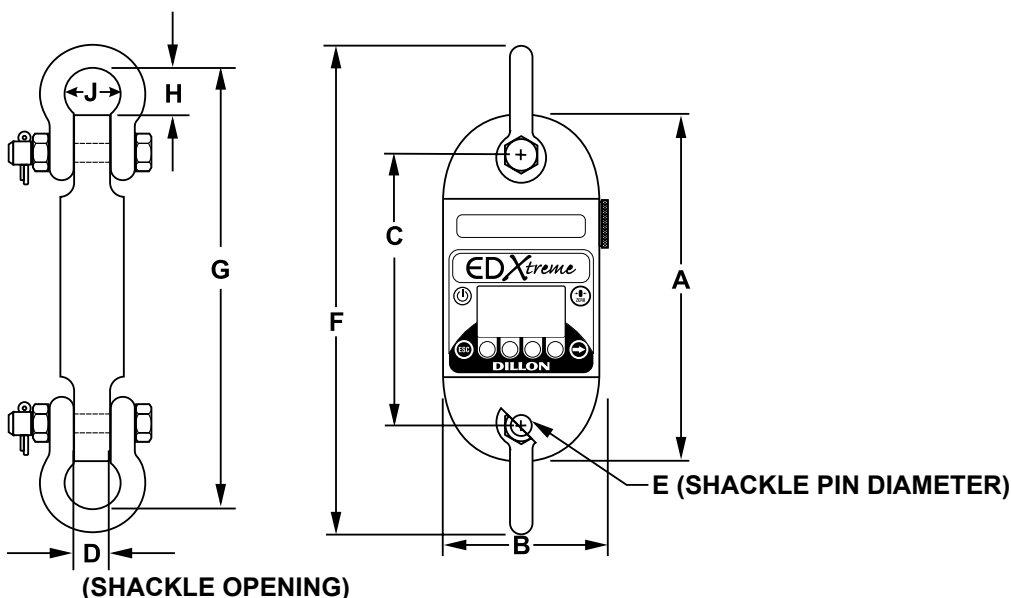
*Model number in parenthesis shows U.S. convention for describing capacities. †Ultimate overload protection rating.

Dimensions inches (mm)

Model	A	B	C	D	E	F	G	H	J	Shackle
EDx-1T	10.6 (269)	5.0 (127)	7.8 (198)	1.06 (26)	0.75 (19)	15.3 (389)	13.4 (340)	1.36 (34)	1.69 (43)	Dillon
EDx-2T	10.6 (269)	5.0 (127)	7.8 (198)	1.06 (26)	0.75 (19)	15.3 (389)	13.4 (340)	1.36 (34)	1.69 (43)	Dillon
EDx-5T	11.4 (289)	5.3 (135)	8.1 (206)	1.46 (37)	1.00 (25)	17.5 (444)	15.7 (400)	2.17 (55)	2.28 (58)	Green Pin*
EDx-10T	11.5 (291)	5.3 (133)	7.9 (201)	2.01 (51)	1.38 (35)	21.0 (534)	18.5 (470)	3.50 (89)	3.25 (83)	Green Pin*
EDx-25T	13.7 (348)	6.0 (152)	9.0 (229)	2.91 (74)	1.97 (50)	28.7 (730)	25.2 (640)	5.70 (146)	4.96 (126)	Green Pin*
EDx-50T	15.8 (400)	6.8 (172)	10.3 (262)	4.13 (105)	2.75 (70)	38.8 (986)	33.7 (856)	8.98 (228)	7.09 (180)	Green Pin*
EDx-75T	16.5 (419)	7.8 (197)	10.3 (262)	4.13 (105)	2.75 (70)	39.3 (998)	33.7 (856)	8.58 (218)	7.09 (180)	Green Pin*
EDx-100T	18.0 (457)	7.8 (197)	11.0 (280)	5.00 (127)	3.25 (83)	46.9 (1191)	40.4 (1025)	11.14 (283)	7.48 (190)	Green Pin*
EDx-150T	21.0 (533)	8.8 (222)	12.6 (321)	5.25 (133)	3.75 (95)	53.9 (1368)	45.6 (1159)	12.3 (313)	9.0 (229)	Crosby
EDx-250T	27.0 (686)	9.8 (248)	17.5 (445)	8.5 (216)	5.00 (127)	75.8 (1925)	62.8 (1595)	17.9 (454)	13.0 (330)	Crosby

*Dimensions using Green Pin shackles. Crosby shackles available. Consult factory for dimensions.

Dimensions shown are nominal and subject to tolerances.



Dynamometer Specifications

Enclosure: Designed to NEMA4X/IP55. Suitable for continuous outdoor use.

Accuracy: 0.1% of capacity up to EDx-50T.*
0.3% of capacity for EDx-75T and above.*

Repeatability: 0.1% of capacity up to EDx-50T.*
0.3% of capacity for EDx-75T and above.*

*Normal resolution mode with Dillon provided shackles.

Proof Load: 150% of capacity up to EDx-75T.
110% of capacity EDx-100T and above.

Ultimate Overload: See table on reverse.

Safe Overload: 200% of capacity

Body Protection: Aluminum and alloy steel capacities are powder coated.

Bearings: Unmatched repeatability attained by needle bearings in shackle pin holes up to EDx-5T. Shackle pin acts as inner race.

Shackles: Forged industry standard anchor shackles. Models up to EDx-5T use precision machined shackle pin. Higher capacities use bar stock pin.

Display: 128 x 64 dot-graphic LCD display shows up to 6 digits 1.0" (26 mm) high plus annunciators and softkeys. Digits are .11 inches (3 mm) thick for unmatched readability.

Display Update Rate: 2 times per second.

Peak Capture Rate: 10/100/1,000 Hz

Connector: Recessed sealed connector may be used for serial communications or connection to a Communicator II remote.

RS-232

Communication: Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.

Calibration: Traceable to the National Institute of Standards and Technology. Certificate included with curve of readings. Passes only with three consecutive confirming runs, with all points in specification.

Battery Life: Stand alone EDxtreme with no radio and no backlight lasts up to 400+ hours. 150 hours continuous with Radio Link System. Use with two C-Cell alkaline batteries. (When using backlight, battery life will be reduced, depending on intensity.)

Operating Temperature: -4° F to 158° F (-20° to 70° C)

Included with

Instrument: All include certificate of calibration, manual and batteries. Plastic carry case included for EDx-1T to EDx-50T. Higher capacities include rugged plywood storage crate. Instruments with shackles include centering spacers (EDx-20T & up) and shackle storage crate (EDx-20T to EDx-75T). Display backlight.

Options: Shackles. Radio communications.

Approval: CE

Dynamometer Specifications

Enclosure: Designed to NEMA 3 / IP54 with optional sleeve. Suitable for protected outdoor use.

Instrument Size: 9.5 x 5.0 x 2.5 inch (241 x 127 x 64mm).

Accuracy: Not applicable. Only sends and receives digital information.

Display: 128 x 64 dot-graphic LCD display can show full readings up to 5 instruments.

Battery Life: Up to 80 hours continuous radio using (4) AA alkaline batteries.

Operating Temperature: -4° F to 158° F (-20° to 70° C)

Connectors: Sealed connectors may be used for serial communications and wired connection to an EDxtreme dynamometer.

RS-232

Communication: Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.

Included with Remote: Carry case and batteries

Accessories: Rubberized case protector sleeve.
Remote wall mount bracket.
Serial and remote cable assemblies.

Approval: CE

Dynamometer Specifications

FCC Certified: For unlicensed low power devices. No radio licensing or permits required for normal operation.
**(In the US and Canada. Check local ordinances in other countries.)*

Frequency: ISM 2.4 GHz frequency band operates between 2.4 to 2.4835 GHz.

Output Level: 10 mW (10 dBm)

Display Update Rate: 1 time per second.

Number of Links Remote Can Control: Up to 15 addresses.

Configuration Address: Automatic and configurable.

Antenna: Integral antenna.

Range: Open-air range up to 600 feet, line-of-sight. Indoor range dependent upon environment with 300 feet common. Low power radio systems are dependent upon interference levels from other radio systems and environmental conditions. Radio devices are not suitable for all applications.

Weights pounds (kg)

Model	Unit Weight	Weight with Shackles	Approximate Shipping Weight
EDx-1T	4.3 (2.0)	8.6 (3.9)	13 (6)
EDx-2T	4.4 (2.0)	8.7 (3.9)	13 (6)
EDx-5T	5.6 (2.5)	14 (6)	22 (10)
EDx-10T	16 (7.3)	38 (17)	44 (20)
EDx-25T	25 (11)	91 (41)	120 (54)
EDx-50T	38 (17)	216 (98)	274 (124)
EDx-75T	54 (25)	229 (104)	304 (138)
EDx-100T	70 (32)	395 (179)	465 (211)
EDx-150T	120 (54)	650 (295)	750 (340)
EDx-250T	250 (113)	1,490 (675)	1,600 (725)
Communicator	1.25 (.6)	-	10 (5)

AP Crane Scale Hardware Kits

Proven reliability and performance



DILLON
Force Measurement Equipment

CE

Model AP Mechanical Crane Scale Hardware Kits

Features and Benefits

- **Available in Low, Intermediate and High Range Models:** Capacities from 1000 to 20,000 pounds. Capacities from 500 to 10,000 kg.
- **Anti-Parallax Dial and Pointer:** Easy to read even at an angle.
- **Tare Capability:** Tare loads up to 20% of capacity can be zeroed out by means of zero control.
- **Dust Protection:** Pinion gear, sector gear and shafts are mounted in precision aircraft bearings, permanently sealed against dust and dirt. Oiling is never required.
- **Tough Construction:** Mechanism case is a heavy aluminum alloy casting, tough enough to resist even heavy blows.
- **Ingenious Design:** Utilizes a specially designed alloy steel beam that translates force to pounds. Full scale reading results from beam deflection of only 0.026. Applied loads are indicated instantly.
- **Reduced Wear:** Pinion and sector gears are cut from stainless steel and hardened aluminum. Use of these dissimilar materials greatly reduces friction and wear.
- **Protective Finish:** Scale cases are coated with a baked-on powder paint process making them resistant to chips, scratches, rust and corrosion.
- **Maximum Indicator:** Remains in position to indicate peak load point after load is removed from scale.
- **Hook Kits:** Now offered as an add on feature to the AP Dynamometer of choice.

Specifications

Capacity	Dynamometer			Hook Kit		Crate		
	Capacities & Dial Divisions (kg)	Capacities & Dial Divisions (lb)	Length (cm)	Net Wt. (kg)	Ship Wt. (kg)	Net Wt. (kg)	Ship Wt. (kg)	Dimensions (cm)
Low	500 x 2	1,000 x 5	64.8	4.5	7	6	20	35.6 x 73.7 x 27.9
Low	1,000 x 5	2,000 x 10	64.8	4.5	7	6	20	35.6 x 73.7 x 27.9
Low	2,000 x 10	N/A	64.8	4.5	7	6	20	35.6 x 73.7 x 27.9
Low	N/A	5,000 x 20	64.8	4.5	7	6	30	35.6 x 73.7 x 27.9
Low	5,000 x 20	10,000 x 50	64.8	4.5	7	9	30	35.6 x 73.7 x 27.9
Med	*10,000 x 50	*20,000 x 100	75.6	4.5	7	19	35	35.6 x 73.7 x 27.9

Accuracy: To $\pm 0.5\%$ of full scale

Tare Adjustment: Up to 20% of full scale range

Ultimate Safety Factor:

5:1

*4:1 for 20,000 lb, 10000 kg

All kits are shipped complete to allow direct interface to the AP Dynamometer.

Hook kits are shipped in separate packaging.

Dial Diameter: 10"

Scale Length: (from inside of eye to inside of hook)

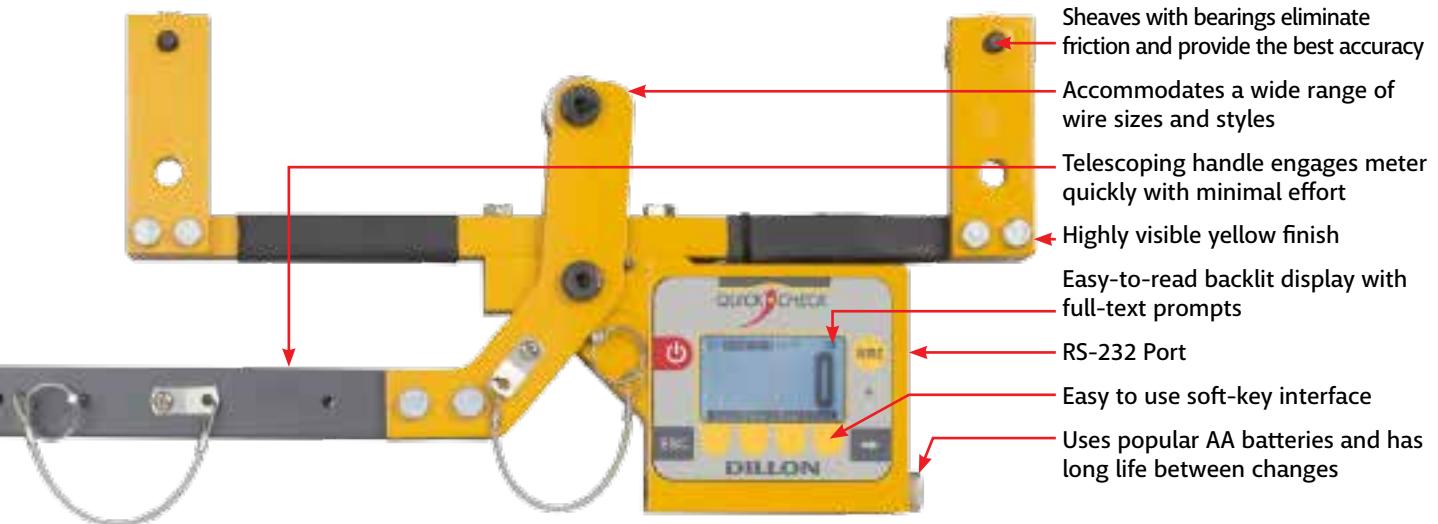
Low Range: 64.8 cm (25½")

Intermediate Range: 75.6 cm (29¾")

High Range: 95.3 cm (37½")

Approval: CE

Warranty: 2 years parts and labor



- Sheaves with bearings eliminate friction and provide the best accuracy
- Accommodates a wide range of wire sizes and styles
- Telescoping handle engages meter quickly with minimal effort
- Highly visible yellow finish
- Easy-to-read backlit display with full-text prompts
- RS-232 Port
- Easy to use soft-key interface
- Uses popular AA batteries and has long life between changes

The Fastest Cable Tension Meter

The Dillon Quick-Check can be placed on a cable, measure its tension, and removed in under five seconds! There are no complex lookup tables, no conversion charts. The operator can quickly select from 20 different wire sizes and types stored in Quick-Check's memory. The Check-Tensioning mode graphically displays the current and target tensions for extremely quick setting of line tension. Even the infrequent battery changes are quick.

Broad Application

The Quick-Check can be employed in many industries to ensure proper tensioning. Typical applications include tower and stack guy wires, pretensioned cable barriers, bridges, elevators, winch rope, overhead electric transit wires, fall arrest systems, aircraft cables and utilities.

Specifications

Tension capacities:

2000 lb/10 kN/1000 kg
10,000 lb/45 kN/4500 kg

Wire sizes:

3/16 inch through 1 inch
(4.75 mm through 25.4 mm)
View helpful ordering tips at dillon-force.com

Accuracy: + 3% instrument capacity (calibrated to specific wire size and type.)

Loading error: Cable elongation of only 0.08 inch (2mm)

Display: Dot-graphic LCD display supports full text and 1 inch high digits.

Sheave range: Each set accommodates rated wire size and 1/2" smaller. Multiple sheave sets may be used.

Suggested wire calibrations: Calibrate each wire diameter needed with the most appropriate sheaves. If two wire types are used of the same diameter (e.g. 1/2" 1x7 and 1/2" 6x19), calibrate each type independently if accuracy is critical.

Environment protection:
Suitable for continued outdoor use.

Operating range:
-4° F to 158° F (-20° C to 70° C)

Tension units of measure:
pound-force, kilogram force, Newtons

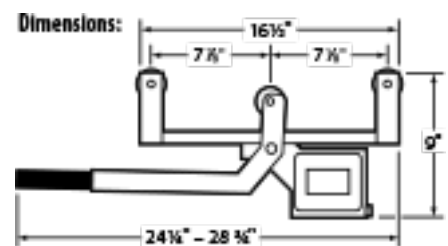
Resolution: Configurable low/med/high

Size: 10 x 23 x 3 inch (25 x 59 x 8 cm)

Weight: Approx 11 lb (5 kg)

Recalibration: At user discretion. Commonly 12-24 months; should be more frequent with heavy use. On-site recalibration may be possible through your Dillon distributor.

Approvals: CE



RS-232 port



Carry case included



Dillon also manufactures highly accurate electronic and mechanical dynamometers and crane scales.







Material
Handling Range

233



GS GS BASIC - GS PRO GS SPECIAL - GS PREMIUM

GS series is a suitable practical solution meeting all the needs of manual handling.

For the transport of fragile and delicate loads, such as loads of glass or ceramics, the premium version includes a sensitive and safe forks lowering control system. The special series, with its broad choice of forks dimensions, guarantees solutions to handle any type of pallet; finally, the pro version, also available with a 3.000 Kg load capacity, completes the range of Lifter pallet trucks that are completely made in Italy.

GS Basic

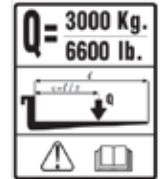
The GS basic pallet truck is the model of access to the range of Lifter hand pallet trucks with which it shares reliability and solidity. Available with fork length 800 and 1150 mm.

GS Premium

The GS premium pallet truck offers innovative cutting-edge solutions, such as the tilt guide wheel, the load lowering speed control, the covered steering wheel, apart from a certified hydraulic unit for 50.000 Cycles.

GS Pro, Special 3 ton

The GS pro pallet truck is equipped as a standard with a start and exit roller and a more ergonomic handle. The special series allows for the handling of pallets of any size thanks to the great variety of frames. The new 3.000 Kg model offers a load capacity of 3.000 Kilograms thanks to its reinforced structure.



Available accessories: tandem rollers, polyurethane rollers (as a standard on Premium), rubber guide wheels, manual control brake



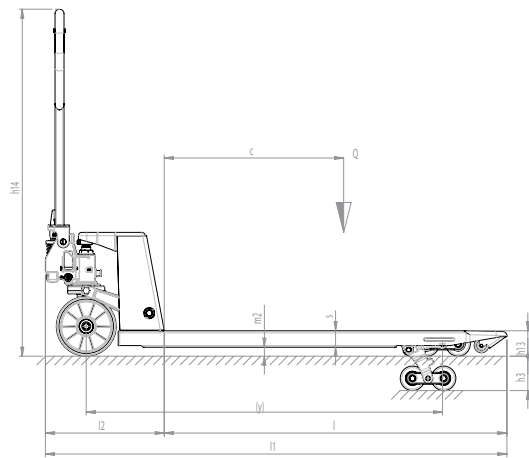
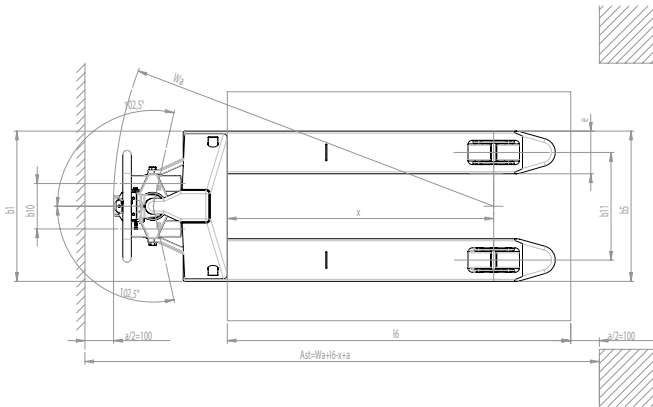
Maximum Pressure Valve

When the maximum load capacity is exceeded, oil pressure exceeds its maximum limit and the valve automatically locks the forks. Thus possible structural damage is avoided.



Painting

Following an appropriate conditioning operation the frame is varnished with epoxy-polyester powder at a temperature of 250° to guarantee maximum resistance to wear and atmospheric agents.



DESCRIPTION											
1.2	MODEL		GS BASIC 22 S2-S4	GS PRO 25 S2-S4	GS PREMIUM 25 S2-S4	GS/AV PRO 25 S2-S4	GS PRO 30 S4	GS/L PRO 25 S2-S4	GS/M PRO 25 S2-S4	GS B 20 S4	
1.3	DRIVE		MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	
1.5	LOAD CAPACITY	Q	kg	2200	2500	2500	3000	2500	2500	2000	
1.6	LOAD CENTRE DISTANCE	c	mm	600	600	600	600	600	400	600	
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	932	932	932	932	932	582	945	
1.9	WHEEL BASE	y	mm	1192	1192	1192	1192	1192	842	1192	
WEIGHTS											
2.1	SERVICE WEIGHT		kg	61-63	61-63	63-65	61-63	79	66-68	52-54	71
2.2	AXLE LOAD LADEN, FRONT/REAR		kg	655/1606-1608	767/1794-1796	739/1824-1826	738/1823-1825	889/2190	771/1795-1797	691/1861-1863	693/1378
2.3	AXLE LOAD UNLADEN, FRONT/REAR		kg	42/19-21	42/19-21	43/20-22	42/19-21	53/26	46/20-22	35/17-19	48/23
TYRES/CHASSIS											
3.1	TYRES			P/N	P/N	P/P	P/N	P/N	P/N	P/A	
3.2	TYRE SIZE, FRONT (Ø x width)			200x45	200x55	200x55	200x55	200x55	200x55	200x55	
3.3	TYRE SIZE, REAR (Ø x width)			82x82-60	82x82-60	82x82-60	82x82-60	82x82-60	82x82-60	50x58	
3.4	SIDE WHEELS (Ø x width)			-	-	-	-	-	-	-	
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			2/2-2/4	2/2-2/4	2/2-2/4	2/2-2/4	2/4	2/2-2/4	2/2-2/4	2/4
3.6	TREAD, FRONT	b10	mm	155	155	155	155	155	155	155	130
3.7	TREAD, REAR	b11	mm	375	375	375	375	375	535	250	365
DIMENSIONS											
4.4	LIFT	h3	mm	115	115	115	115	115	115	115	
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14	mm	690/1160	690/1160	690/1160	415/1250	690/1160	690/1160	690/1160	690/1160
4.15	HEIGHT, LOWERED	h13	mm	85	85	85	85	85	85	85	55
4.19	OVERALL LENGTH	l1	mm	1550	1550	1550	1550	1550	1550	1200	1550
4.20	LENGTH TO FACE OF FORKS	l2	mm	400	400	400	400	400	400	400	400
4.21	OVERALL WIDTH	b1	mm	525	525	525	525	525	685	400	525
4.22	FORK DIMENSIONS	s/e/l	mm	55/150/1150	55/150/1150	55/150/1150	55/150/1150	55/150/1150	55/150/1150	55/150/800	40/160/1150
4.25	DISTANCE BETWEEN FORK ARMS	b5	mm	525	525	525	525	525	685	400	525
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2	mm	30	30	30	30	30	30	30	15
4.34	AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast	mm	1835	1835	1835	1835	1835	1835	1435	1822
4.35	TURNING RADIUS	Wa	mm	1367	1367	1367	1367	1367	1367	1017	1367
PERFORMANCE DATA											
5.2	LIFT SPEED, LADEN/UNLADEN		strokes	13/13	13/13	13/13	13/6	13/13	13/13	13/13	13/13

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

FORK LENGTH	l	mm	600	800	950	1000	1150	1220	1350	1500	1800	2000
LOAD CENTRE DISTANCE	c	mm	300	400	475	500	600	610	675	750	900	1000
WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			2/2-2/4	2/2-2/4	2/2-2/4	2/2-2/4	2/2-2/4	2/2-2/4	2/4	2/4	2/4	2/4
OVERALL LENGTH	l1	mm	1000	1200	1350	1400	1550	1620	1750	1900	2200	2400
LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	382	582	732	782	932	1002	1132	1282	1582	1782
WHEEL BASE	y	mm	642	842	992	1042	1192	1262	1392	1542	1842	2042
SERVICE WEIGHT		kg	52-54	57-59	59-61	60-62	63-65	65-67	90	112	127	134
AXLE LOAD LADEN, FRONT/REAR		kg	356/2196-2198	580/1017-1435	688/1871-1873	716/1844-1846	739/1824-1826	821/1744-1746	880/1710	929/1717	1002/1625	1037/1597
AXLE LOAD UNLADEN, FRONT/REAR		kg	37/15-17	40/17-19	40/19-21	39/21-23	43/20-22	44/21-23	59/31	66/46	76/51	80/54
TURNING RADIUS	Wa	mm	817	1017	1167	1217	1367	1437	1567	1717	2017	2217


Mr. Hydro

Mr. Hydro series, which is available in a several number of versions, is the ideal tool to handle loads in humid and damp conditions.

In particular the stainless steel model is suitable for environments where high hygienic standards are enforced, such as the chemical, pharmaceutical or food & beverage industry.

GS/G

The galvanised pallet truck offers good resistance to corrosion thanks to the hot dip galvanizing process of the frame, the control linkages of the pump body and the handle.

GS/X

In this version the parts getting in contact with the load and the operator are of aisi 304 electropolished stainless steel, while the remaining parts are subject to a hot dip galvanising treatment.

GS/I

Inox aisi 304 electropolished stainless steel is used for all metal sheet parts, while the pump is made of brass.

GS/Galvanised, Stainless steel and Galvinox



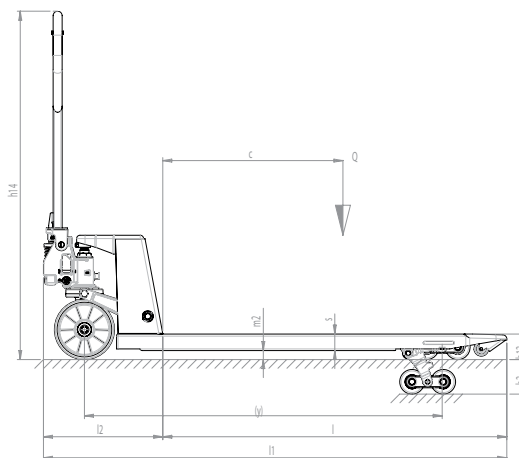
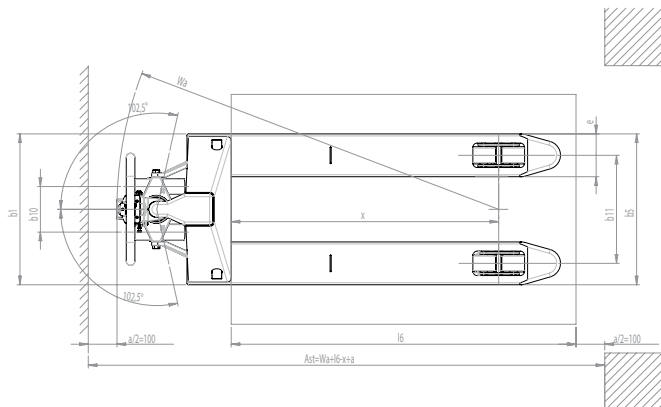
Hydraulic Pump Made of Brass

In the stainless steel version the hydraulic pump is made of brass to offer maximum resistance to humidity and oxidation.



Electropolishing

The use of Inox AISI 304, combined with an electropolishing surface treatment, provides the machine with better appearance. Resistance to corrosion also guarantees maximum hygiene.



DESCRIPTION						
1.2	MODEL		GS/G 25 S2-S4	GS/X 25 S2-S4	GS/I 25 S2-S4	GS/L G 25 S2-S4
1.3	DRIVE		MANUAL	MANUAL	MANUAL	MANUAL
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q	kg	2500	2500	2500
1.6	LOAD CENTRE DISTANCE	c	mm	600	600	400
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	932	932	582
1.9	WHEEL BASE	y	mm	1192	1192	842
WEIGHTS						
2.1	SERVICE WEIGHT		kg	61-63	62-64	67-69
2.2	AXLE LOAD LADEN, FRONT/REAR		kg	738/1823-1823	739/1823-1825	742/1825-1827
2.3	AXLE LOAD UNLADEN, FRONT/REAR		kg	42/19-21	43/19-21	46/21-23
TYRES/CHASSIS						
3.1	TYRES			N/N	NE/NE	NE/NE
3.2	TYRE SIZE, FRONT (Ø x width)			200x50	200x50	200x50
3.3	TYRE SIZE, REAR (Ø x width)			82x82-60	82x82-60	82x82-60
3.4	SIDE WHEELS (Ø x width)			-	-	-
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			2/2-2/4	2/2-2/4	2/2-2/4
3.6	TREAD, FRONT	b10	mm	155	155	155
3.7	TREAD, REAR	b11	mm	375	375	535
DIMENSIONS						
4.4	LIFT	h3	mm	115	115	115
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14	mm	690/1160	690/1160	690/1160
4.15	HEIGHT, LOWERED	h13	mm	85	85	85
4.19	OVERALL LENGTH	l1	mm	1550	1550	1550
4.20	LENGTH TO FACE OF FORKS	l2	mm	400	400	400
4.21	OVERALL WIDTH	b1	mm	525	525	685
4.22	FORK DIMENSIONS	s/e/l	mm	55/150/1150	55/150/1150	55/150/1150
4.25	DISTANCE BETWEEN FORK ARMS	b5	mm	525	525	685
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2	mm	30	30	30
4.35	TURNING RADIUS	Wa	mm	1367	1367	1367
PERFORMANCE DATA						
5.2	LIFT SPEED, LADEN/UNLADEN		strokes	13/13	13/13	13/13
COMPONENT SPECIFICATIONS						
	HYDRAULIC UNIT			GALVANIZED	GALVANIZED	BRASS
	FRAME			GALVANIZED	INOX	INOX
	PUSH RODS			GALVANIZED	GALVANIZED	INOX
	ROCKER ARM			GALVANIZED	GALVANIZED	INOX
	WHEELS			NYLON	NYLON EXTRA	NYLON EXTRA
	LOAD ROLLERS			NYLON	NYLON EXTRA	NYLON EXTRA
	TILLER			GALVANIZED	INOX	INOX

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

FORK LENGTH	l	mm	800	1150	1220
LOAD CENTRE DISTANCE	c	mm	400	600	610
WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			2/2-2/4	2/2-4/2	2/2-2/4
OVERALL LENGTH	l1	mm	1200	1550	1620
LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	582	932	1002
WHEEL BASE	y	mm	842	1192	1262
SERVICE WEIGHT		kg	55-57	61-63	63-65
AXLE LOAD LADEN, FRONT/REAR		kg	579/1976-1978	738/1823-1825	820/1743-1745
AXLE LOAD UNLADEN, FRONT/REAR		kg	39/16-18	42/19-21	43/20-22
TURNING RADIUS	Wa	mm	1017	1367	1437
aisle width for pallets 800x1200-l lengthwise	Ast	mm	1435	1835	1855


GS/P25 PX20

The Lifter scale truck series is available in two models, both of which equipped with an intelligent weighing device with many operating options. It is suitable for lifting and carrying heavy loads; it is therefore very precise and functional in all internal weighing operations.



Display

The PX20 pallet truck is a simple, economic and robust tool to be used for the weighing of transported loads. Its large-sized LCD display allows for easy reading of weight and the setting of tare simply and immediately.



GS/P25 - Stainless Steel

GS/P differs from PX20 due to its hydraulic unit of higher load capacity (2.500 kg) and the bigger number of functions, such as the items counter and the load totalization indicator. The pallet truck may also be equipped with a thermal printer, memory card SD or may be provided in the INOX version.



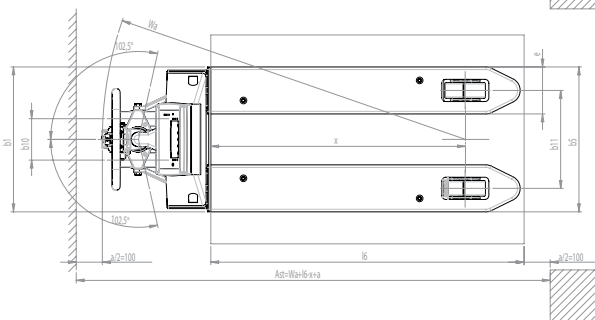
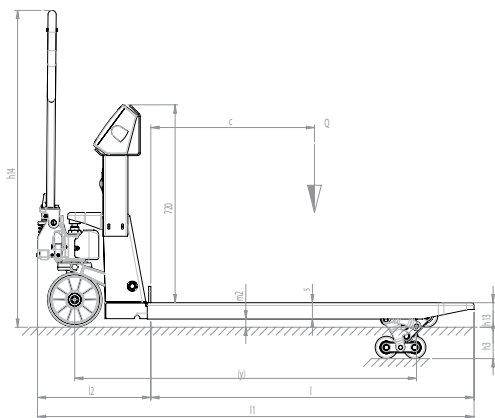
Frame Structure

The structure is made up of a double frame and a lower fork on which a counter fork is placed; both forks house four load cells that allow for a uniform load distribution, thus keeping weighing precision even in case of collision and unbalanced load.

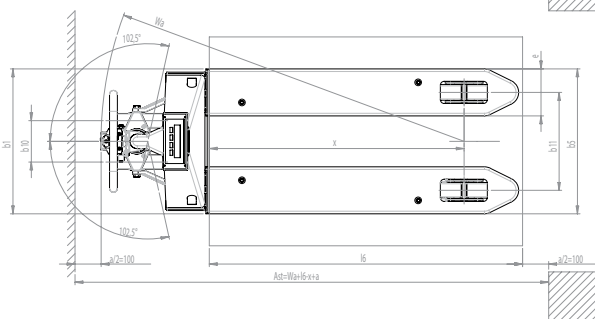
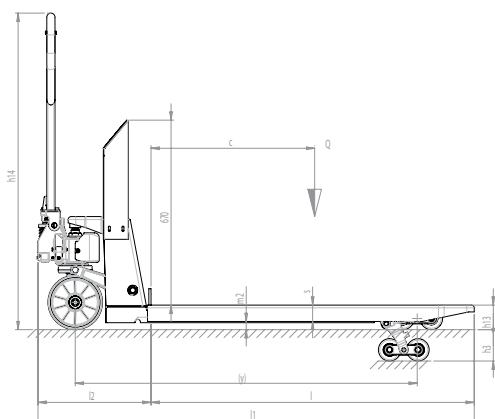


Memory Card SD

GS/P pallet truck is available with printing on SD memory card and approved weighing.



GS/P



PX20

DESCRIPTION						
1.2	MODEL		GS/P	GS/P CE-M HOMOLOGATION	GS/P INOX	PX20
1.3	DRIVE		MANUAL	MANUAL	MANUAL	MANUAL
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q kg	2500	2500	2500	2000
1.6	LOAD CENTRE DISTANCE	c mm	600	600	600	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	975,5	975,5	975,5	975
1.9	WHEEL BASE	y mm	1250	1250	1250	1255
WEIGHTS						
2.1	SERVICE WEIGHT	kg	124	124	132	113
2.2	AXLE LOAD LADED, FRONT/REAR	kg	787/1837	787/1837	790/1842	633/1480
2.3	AXLE LOAD UNLADEN, FRONT/REAR	kg	77/47	77/47	82/50	71/42
TYRES/CHASSIS						
3.1	TYRES		P/P	P/P	NE/NE	P/P
3.2	TYRE SIZE, FRONT (Ø x width)		200x55	200x55	200x50	200x55
3.3	TYRE SIZE, REAR (Ø x width)		82x60	82x60	82x60	82x60
3.4	SIDE WHEELS (Ø x width)		-	-	-	-
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		2/4	2/4	2/4	2/4
3.6	TREAD, FRONT	b10 mm	155	155	155	155
3.7	TREAD, REAR	b11 mm	375	375	375	375
DIMENSIONS						
4.4	LIFT	h3 mm	115	115	115	115
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	690/1160	690/1160	690/1160	690/1160
4.15	HEIGHT, LOWERED	h13 mm	90	90	90	90
4.19	OVERALL LENGTH	l1 mm	1596	1596	1596	1596
4.20	LENGTH TO FACE OF FORKS	l2 mm	411	411	411	411
4.21	OVERALL WIDTH	b1 mm	555	555	555	555
4.22	FORK DIMENSIONS	s/e/l mm	60/180/1185	60/180/1185	60/180/1185	60/180/1185
4.25	DISTANCE BETWEEN FORK ARMS	b5 mm	555	555	555	555
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	30	30	30	30
4.34	AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	1851	1851	1851	1815
4.35	TURNING RADIUS	Wa mm	1426	1426	1426	1390
PERFORMANCE DATA						
5.2	LIFT SPEED, LADEN/UNLADEN	strokes	13/13	13/13	13/13	13/13
SCALE						
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY	V/Ah	6/4	6/4	6/4	6/1,1
	DISPLAY		Liquid crystals/6 digits 25mm	Liquid crystals/6 digits 25mm	Liquid crystals/6 digits 25mm	Liquid crystals/6 digits 25mm
	UNITS OF MEASUREMENT		kg/lb	kg/lb	kg/lb	kg/lb
	FUNCTIONS		Tare/Auto-off/Weight totalizer/Piece counting	Tare/Auto-off/Weight totalizer/Piece counting	Tare/Auto-off/Weight totalizer/Piece counting	Tare/Unbalanced load/Auto-off counting
	AUTONOMY	h	50	50	50	30
	PRECISION	% full scale	0,05	0,05	0,05	0,05
	LOAD CELLS	n.	4	4	4	4
	DIVISION	kg	0,5	1	0,5	0,5


HX HX10M - HX10E

The HX10 series, available in manual and electric version, makes possible an easy and light lifting to a height of 800 mm, thus becoming a practical work platform, which is suitable for places such as machine workshops.

This pallet truck is also able to carry out the support function and material supply along the assembly and production lines.



Battery and external battery charger. Also available in GEL version and with an integrated battery charger.



Front and Rear Stabilizers

The new control linkage makes the entry onto the closed side of the pallet possible by slight lifting, facilitating successive handling phases. Furthermore, a certain machine stability has been obtained using load rollers in a more advanced position and providing front stabilizers as standard equipment. Rear stabilizers, in turn, render work stable and safe even in the case of elevated loads once the 400 mm of lifting up have been exceeded.



Auto Levelling System

- Automatic system whose photocell adjusts the height of the forks, maintaining the work height set.
- An optical and acoustic signal is activated at every fork movement.
- Possibility of adjusting the photocell both in height and reading angle.
- Micro-limit switch, active both on the way up to prevent superfluous absorption of energy and on the way down to protect the operator.



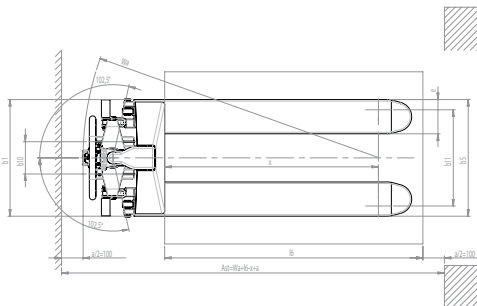
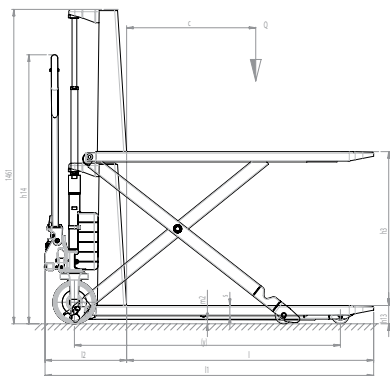
Control Lever

The hydraulic unit has been recently redesigned to allow for less effort at the steering wheel for all loads and a quick elevated function (30 cycles) for loads up to 150 kg.

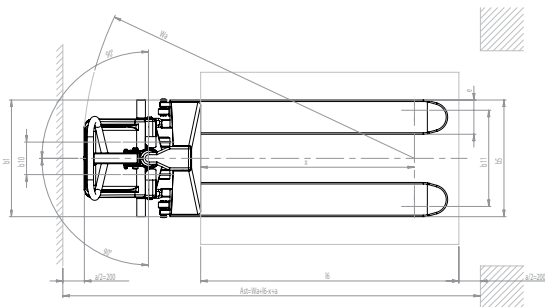
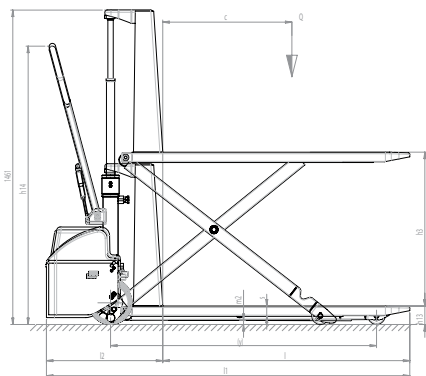


Emergency Pushbutton

The emergency pushbutton with a battery cut-off (isolator) switch function allows for a safer work.



HX10M



HX10E

DESCRIPTION		HX10M 1150x540	HX10M 1150x680	HX10E 1150x540	HX10E 1150x680	HX10E 1500x540	HX10E 1800x540	HX10E 2000x540
1.2	MODEL							
1.3	DRIVE	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL
1.4	OPERATOR TYPE	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q kg	1000	1000	1000	1000	1000	1000
1.6	AXLE LOAD LADEN, FRONT/REAR	c mm	600	600	600	762	900	1000
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	993	993	993	1368	1643	1843
1.9	WHEEL BASE	y mm	1236	1236	1236	1611	1886	2086
WEIGHTS								
2.1	SERVICE WEIGHT	kg	104	111	139 (144*)	146	235 (240*)	259 (264*)
2.2	AXLE LOAD LADEN, FRONT/REAR	kg	339/765	344/767	429/710 (434/710*)	434/712 (439/712*)	531/704 (536/704*)	572/687 (577/687*)
2.3	AXLE LOAD UNLADEN, FRONT/REAR	kg	79/25	84/27	111/28 (116/28*)	116/30	155/80 (160/80*)	178/81 (183/81*)
TYRES/CHASSIS								
3.1	TYRES	P/P	P/P	G/P	G/P	G/P	G/P	G/P
3.2	TYRE SIZE, FRONT (Ø x width)		200x45	200x45	200x50	200x50	200x50	200x50
3.3	TYRE SIZE, REAR (Ø x width)		80x50	80x50	80x50	80x50	80x50	80x50
3.4	SIDE WHEELS (Ø x width)		-	-	-	-	-	-
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		2/2	2/2	2/2	2/2	2/2	2/2
3.6	TREAD, FRONT	b10 mm	150	150	150	150	150	150
3.7	TREAD, REAR	b11 mm	447	587	447	587	447	447
DIMENSIONS								
4.4	LIFT	h3 mm	715	715	715	715	715	715
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	415/1250	415/1250	915/1300	915/1300	915/1300	915/1300
4.15	HEIGHT, LOWERED	h13 mm	85	85	85	85	85	85
4.19	OVERALL LENGTH	l1 mm	1526	1526	1690	1690	2340	2540
4.20	LENGTH TO FACE OF FORKS	l2 mm	376	376	540	540	540	540
4.21	OVERALL WIDTH	b1 mm	540	680	540	680	540	540
4.22	FORK DIMENSIONS	s/e/l mm	48/160/1150	48/160/1150	48/160/1150	48/160/1150	48/160/1800	48/160/2000
4.25	DISTANCE BETWEEN FORK ARMS	b5 mm	540	680	540	680	540	540
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	21	21	21	21	21	21
4.34	AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	1779	1779	1948	1948	2273	2548
4.35	TURNING RADIUS	Wa mm	1372	1372	1541	1541	1916	2191
PERFORMANCE DATA								
5.2	LIFT SPEED, LADEN/UNLADEN	strokes	62/30	62/30	0,08/0,13	0,08/0,13	0,08/0,13	0,08/0,13
5.3	LOWERING SPEED, LADEN/UNLADEN	m/s	0	0	0,13/0,06	0,13/0,06	0,13/0,06	0,13/0,06
ELECTRIC MOTORS								
6.2	LIFT MOTOR POWER	kW			1,6	1,6	1,6	1,6
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah			12/60	12/60	12/60	12/60
6.5	BATTERY WEIGHT	kg			14	14	14	14
8.4	SOUND LEVEL AT DRIVER'S EAR	dB(A)			67	67	67	67

*G=Rubber, N=Nylon, P=Polyurethane, A=Steel, NE=Nylon extra * On board battery charger version

MODEL	HX10E 1150x540 GEL/PLUS	HX10E 1500x540 GEL/PLUS	HX10E 1800x540 GEL/PLUS	HX10E 2000x540 GEL/PLUS
SERVICE WEIGHT	kg	145	241	265
AXLE LOAD LADEN, FRONT/REAR	kg	435/710	537/704	578/687
AXLE LOAD UNLADEN, FRONT/REAR	kg	116/28	161/80	184/81
OVERALL LENGTH	l1 mm	1720	2095	2370
LENGTH TO FACE OF FORKS	l2 mm	570	570	570
AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	1978	2303	2578
TURNING RADIUS	Wa mm	1571	1946	2221
BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah	12/50	12/50	12/50
BATTERY WEIGHT	kg	19	19	19


CX 12 - 14

The CX electric pallet trucks are available in different versions. They are suitable for carrying loads on smooth or paved surfaces. Its small size and turning radius make it the ideal tool to work with in confined spaces, such as lorries or narrow aisles.



Integrated battery and battery charger



Steering Wheel and Controls

- Ergonomic tiller
- Luminous indicator for battery state control.
- Butterfly valves for traction control.
- Safety pushbutton with warning buzzer.
- Forks way up/down control positioned on both sides of the handle (only on CX14).
- Hour counter in the Plus and Gel versions (only on CX14).
- "Tortoise" pushbutton for slow motion, which allows for the carrying out of operations with the tiller in vertical position.



Plus Batteries

The Plus versions are equipped with semitraction batteries that guarantee greater autonomy and an operative life that allows for up to 5 times higher a number of charge life cycles. Thanks to the design of its guard, access to batteries is easy and rapid; this model also optimally combines size, power and low running cost also due to the integrated batteries and battery charger.

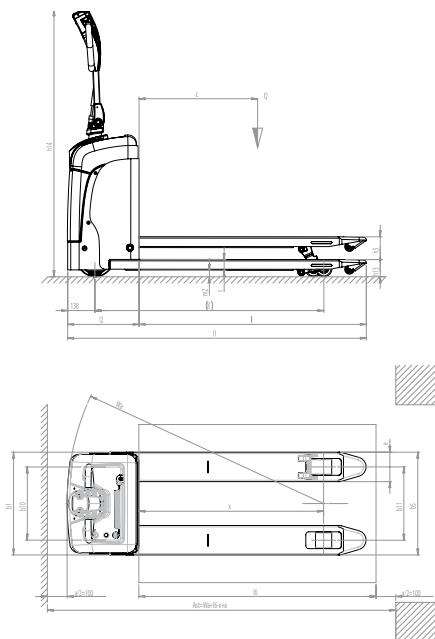
Compact Dimensions

Thanks to the B1 width, which is equal to the fork gauge, and the L2 measurement of 360 mm, the CX12 electronic pallet truck is the ideal tool for the handling of pallets on lorries, in supermarket aisles and any application where space is limited. This machine is the best configuration in its category thanks to the frame width, in-service weight and turning radius, guaranteeing great maneuverability and compactness.

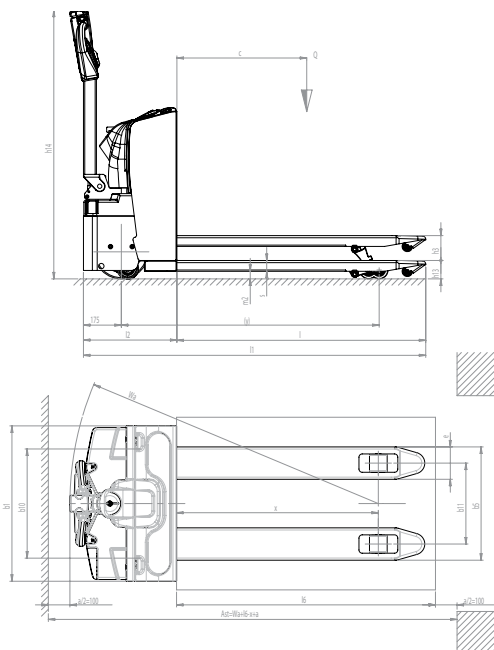


Stabilizers

Two stabilizing wheels enable movement even on more difficult surfaces thus guaranteeing maximum stability in any condition of use.



CX12



CX14

DESCRIPTION		CX12 S2-S4	CX12 PLUS S2-S4	CX12 GEL S2-S4	CX14 S2-S4	CX14 PLUS S2-S4	CX14 GEL S2-S4
1.2	MODEL	CX12 S2-S4	CX12 PLUS S2-S4	CX12 GEL S2-S4	CX14 S2-S4	CX14 PLUS S2-S4	CX14 GEL S2-S4
1.3	DRIVE	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
1.4	OPERATOR TYPE	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q kg	1200	1200	1400	1400	1400
1.6	LOAD CENTRE DISTANCE	c mm	600	600	600	600	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	886	886	886	935	935
1.9	WHEEL BASE	y mm	1119	1119	1119	1192	1192
WEIGHTS							
2.1	SERVICE WEIGHT WITH BATTERY (see line 6,5)	kg	155-157	165-167	160-162	201-207	246-250
2.2	AXLE LOAD LADEN, FRONT/REAR	kg	431/924-926	441/924-926	436/924-926	562/1041-1045	599/1047-1051
2.3	AXLE LOAD UNLADEN, FRONT/REAR	kg	124/31-33	134/31-33	129/31-33	170/33-37	207/39-43
TYRES/CHASSIS							
3.1	TYRES		G+P/P	G+P/P	G+P/P	G+P/P	G+P/P
3.2	TYRE SIZE, FRONT (Ø x width)		186x50	186x50	186x50	250x76	250x76
3.3	TYRE SIZE, REAR (Ø x width)		82x82-60	82x82-60	82x82-60	82x80-60	82x80-60
3.4	SIDE WHEELS (Ø x width)		75x25	75x25	75x25	100x40	100x40
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		1x+2/2-2/4	1x+2/2-2/4	1x+2/2-2/4	1x+2/2-2/4	1x+2/2-2/4
3.6	TREAD, FRONT	b10 mm	369	369	369	506	506
3.7	TREAD, REAR	b11 mm	371	371	371	375	375
DIMENSIONS							
4.4	LIFT	h3 mm	115	115	115	115	115
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	885/1345	885/1345	885/1345	786/1242	786/1242
4.15	HEIGHT, LOWERED	h13 mm	85	85	85	85	85
4.19	OVERALL LENGTH	l1 mm	1510	1510	1510	1650	1650
4.20	LENGTH TO FACE OF FORKS	l2 mm	360	360	360	500	500
4.21	OVERALL WIDTH	b1 mm	520	520	520	720	720
4.22	FORK DIMENSIONS	s/e/l mm	55/150/1150	55/150/1150	55/150/1150	50/150/1150	50/150/1150
4.25	DISTANCE BETWEEN FORK ARMS	b5 mm	520	520	520	525	525
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	30	30	30	35	35
4.34	AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	1782	1782	1782	1900	1900
4.35	TURNING RADIUS	Wa mm	1268	1268	1268	1435	1435
PERFORMANCE DATA							
5.1	TRAVEL SPEED, LADEN/UNLADEN	km/h	4,3/4,8	4,3/4,8	4,3/4,8	4,5/4,7	4,5/4,7
5.2	LIFT SPEED, LADEN/UNLADEN	m/s	0,03/0,04	0,03/0,04	0,03/0,04	0,02/0,03	0,02/0,03
5.3	LOWERING SPEED, LADEN/UNLADEN	m/s	0,05/0,02	0,05/0,02	0,05/0,02	0,04	0,04
5.8	MAX GRADEABILITY, LADEN/UNLADEN		10/25	10/25	10/25	5/10	5/10
5.10	SERVICE BRAKE		ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
ELECTRIC MOTORS							
6.1	DRIVE MOTOR POWER	kW	0,35	0,35	0,35	0,7	0,7
6.2	LIFT MOTOR POWER	kW	0,4	0,4	0,4	0,4	0,4
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C20	V/Ah	24/60	24/60 (45 C5)	24/48 (40 C5)	24/70 (C20)	24/118
6.5	BATTERY WEIGHT	V/Ah	2x14	2x19	2x16	32	78
8.4	SOUND LEVEL AT DRIVER'S EAR	dB(A)	67	67	67	76	76

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

MODEL	CX12 S2-S4	CX12 S2-S4	CX14 S2-S4
FORK LENGTH	l mm	800	1000
LOAD CENTRE DISTANCE	c mm	400	500
WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		1x+2/2-2/4	1x+2/2-2/4
OVERALL LENGTH	l1 mm	1160	1360
WHEEL BASE	y mm	769	969
LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	536	736
SERVICE WEIGHT WITH BATTERY (see line 6,5)	kg	150-152	153-155
AXLE LOAD LADEN, FRONT/REAR	kg	333/1017-1019	415/938-940
AXLE LOAD UNLADEN, FRONT/REAR	kg	121/29-31	123/30-32
TURNING RADIUS	Wa mm	918	1118
AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	1382	1582


QX 18 - 20 - 20DL

The QX pallet truck series meets the needs of a vast number of applications guaranteeing high performance, even during the haviest operations. The ac technology introduced in the traction motor promotes high energy efficiency and a longer battery charging duration; the absence of brushes in the motor and the simpler structure of the motor increase system reliability. Furthermore, the double lifting version keeps the high functionality of the electrical pallet truck and combines it with the practical convenience of stackers.

QX/DL

In this version the QX20 structure still has a load capacity of 2.000 Kg but has been extended with the addition of a central cylinder that allows for the lifting of an 800 kg load on the plated forks in order to create a smooth support platform for the operator. The load backrest also guarantees total safety. The plated forks and clamps can be lifted independently through the pushbuttons on the wheelhouse.



Tiller

- Ergonomic tiller
- Luminous indicator for battery state control.
- Butterfly valves for traction control.
- Safety pushbutton with warning buzzer.
- Forks way up/down control positioned on both sides of the handle
- Hour counter
- "Tortoise" pushbutton for slow motion, which allows for the carrying out of operations with the tiller in vertical position.
- Ideal for running in confined spaces.



Motor Wheels and Stabilizing Wheels

The motor wheel equipped with AC technology guarantees an excellent speed control system, with or without load on board (6 km/h). Two stabilizing wheels also enable movement even on more diffi cult surfaces, ensuring maximum stability in any condition of use.



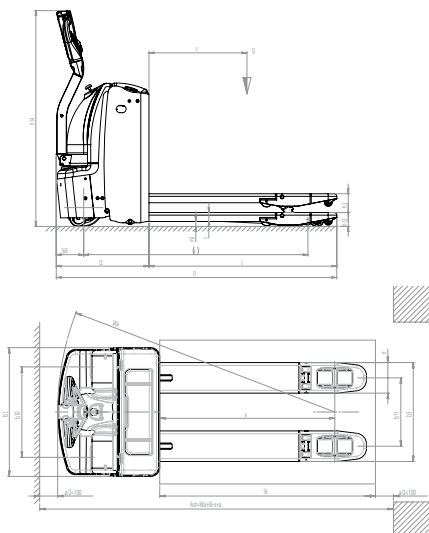
Forks and Connection

The structure of QX pallet trucks is designed to guarantee maximum solidity and reliability: front forks are made of very thick cast iron just like clevis and other connecting rod parts. Impact on pallets and difficult surfaces is no longer a problem!

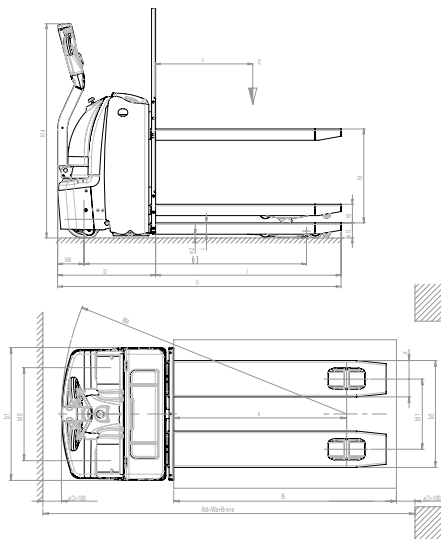


AC Technology

AC technology guarantees more energy efficiency and longer battery charging duration, thus reducing maintenance cost. Furthermore the absence of brushes in the motor and the simpler motor structure increase system reliability.



QX18-20



QX20DL

DESCRIPTION					
1.2	MODEL		QX18 S2-S4	QX20 S2-S4	QX20 DL S4
1.3	DRIVE		ELECTRIC	ELECTRIC	ELECTRIC
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q	kg	1800	2000/800
1.6	LOAD CENTRE DISTANCE	c	mm	600	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	973	973
1.9	WHEEL BASE	y	mm	1373	1373
WEIGHTS					
2.1	SERVICE WEIGHT WITH BATTERY (see line 6,5)		kg	510-515	615
2.2	AXLE LOAD LADEN, FRONT/REAR		kg	874/1436-1441	928/1582-1587
2.3	AXLE LOAD UNLADEN, FRONT/REAR		kg	388/122-127	388/122-127
TYRES/CHASSIS					
3.1	TYRES			P+P/P	P+P/P
3.2	TYRE SIZE, FRONT (Ø x width)			230x75	230x75
3.3	TYRE SIZE, REAR (Ø x width)			85x90-80	85x80
3.4	SIDE WHEELS (Ø x width)			100x40	100x40
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			1x+2/2-2/4	1x+2/4
3.6	TREAD, FRONT	b10	mm	506	506
3.7	TREAD, REAR	b11	mm	380	380
DIMENSIONS					
4.4	LIFT	h3	mm	115	115
4.6	INITIAL LIFT	h5	mm	-	115
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14	mm	784/1320	784/1320
4.15	HEIGHT, LOWERED	h13	mm	85	93
4.19	OVERALL LENGTH	l1	mm	1715	1755
4.20	LENGTH TO FACE OF FORKS	l2	mm	565	605
4.21	OVERALL WIDTH	b1	mm	716	716
4.22	FORK DIMENSIONS	s/e/l	mm	55/170/1150	70/196/1150
4.25	DISTANCE BETWEEN FORK ARMS	b5	mm	550	576
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2	mm	30	23
4.34	aisle width for pallets 800x1200 lengthwise	Ast	mm	2002	2079
4.35	TURNING RADIUS	Wa	mm	1575	1575
PERFORMANCE DATA					
5.1	TRAVEL SPEED, LADEN/UNLADEN		km/h	6,0/6,0	6,0/6,0
5.2	LIFT SPEED, LADEN/UNLADEN		m/s	0,04/0,05	0,04/0,05
5.3	LOWERING SPEED, LADEN/UNLADEN		m/s	0,05/0,04	0,05/0,04
5.8	MAX GRADEABILITY, LADEN/UNLADEN			10/20	10/20
5.10	SERVICE BRAKE			ELECTRIC	ELECTRIC
ELECTRIC MOTORS					
6.1	DRIVE MOTOR POWER		kW	1,2	1,5
6.2	LIFT MOTOR POWER		kW	2,2	2,2
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/180	24/200
6.5	BATTERY WEIGHT		kg	190	188
8.4	SOUND LEVEL AT DRIVER'S EAR		dB(A)	58,4	58,4

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

MODEL	QX18 S2-S4		QX20 S2-S4	
FORK LENGTH	l	mm	1000	1000
LOAD CENTRE DISTANCE	c	mm	500	500
OVERALL LENGTH	l1	mm	1565	1565
WHEEL BASE	y	mm	1223	1223
LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	823	823
SERVICE WEIGHT WITH BATTERY (see line 6,5)		kg	502-507	502-507
AXLE LOAD LADEN, FRONT/REAR		kg	868/1434-1439	922/1580-1585
AXLE LOAD UNLADEN, FRONT/REAR		kg	382/120-125	382/120-125
TURNING RADIUS	Wa	mm	1425	1425
aisle width for pallets 800x1200 lengthwise	Ast	mm	1802	1802
BATTERY				
BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/180	24/230
BATTERY WEIGHT		kg	185	212


QX 20P – 22

QX models equipped with a footplate are highly versatile electrical pallet trucks which, thanks to their folding footplate, can be used in confined spaces or over medium distances with an excellent shift speed (8 - 10 km/h). The strong frame, the separately excited traction motor technology and the braking system with energy recovery are just few samples of the high technology of this machine.

QX22

The QX22 is ideal to move loads rapidly and over long distances. Structural solidity, quality of components, elevated load capacity (2.2 T), excellent shift speed (10 km/h) and battery capacity (315 ah) make QX22 the best choice for those who work on different shifts.



Wheels

- Wheel drive of considerable power (2 kW) and big size (Ø mm 230x75).
- Two stabilizing wheels enable movement even on more difficult surfaces, ensuring maximum stability in any condition of use.



Replacement of Batteries

The battery compartment is equipped with a removable side frame and an internal roller that minimizes effort during the battery extraction and connection phases. A trolley is also available upon request to replace the battery rapidly.



Technology and Safety

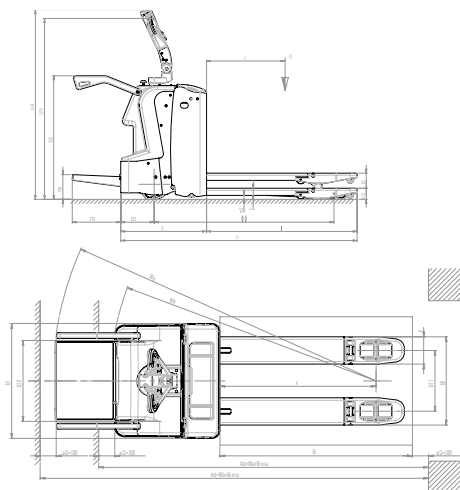
The machine is equipped with 3 sensors that automatically adjust speed control and reduce it up to 6 km/h when at least one of the following events occurs:

1. Lateral protection guards are not raised and are not brought to the "run" position.
2. The turning radius sensor registers a curve with an angle over 8 degrees.
3. The footplate is kept in closed position.

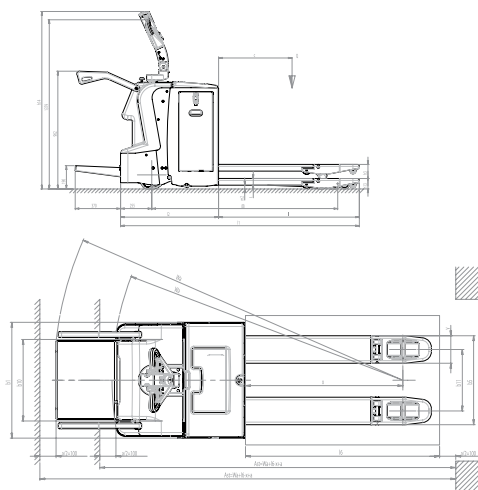


Motors

Lifting (2.2 kW) and traction (2 kW) motors have both a voltage of 24 Volt. The vertical assembly not only allows for a more rapid access to all the parts but also minimizes room cluttering-up and wiring stress. Separately excited traction motor (SEM) technology ensures speed which is independent from the load carried, while electronic control (MOSFET) allows for a better traction adjustment and a smoother and more progressive speed control. Furthermore the machine is equipped with a microswitch that protects the battery, avoiding energy waste, once the forks are brought to the maximum height.



QX20P



QX22

DESCRIPTION			
1.2	MODEL		QX20P S2-S4
1.3	DRIVE		ELECTRIC
1.4	OPERATOR TYPE		PEDESTRIAN/STANDING
1.5	LOAD CAPACITY	Q kg	2000
1.6	LOAD CENTRE DISTANCE	c mm	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	973
1.9	WHEEL BASE	y mm	1373
WEIGHTS			
2.1	SERVICE WEIGHT WITH BATTERY (see line 6,5)	kg	559-564
2.2	AXLE LOAD LADEN, FRONT/REAR	kg	1582-1587/977
2.3	AXLE LOAD UNLADEN, FRONT/REAR	kg	117-122/442
TYRES/CHASSIS			
3.1	TYRES		P/P+P
3.2	TYRE SIZE, FRONT (Ø x width)		85x90-80
3.3	TYRE SIZE, REAR (Ø x width)		230x75
3.4	SIDE WHEELS (Ø x width)		100x40
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		2/4 - 1x+2
3.6	TREAD, FRONT	b10 mm	380
3.7	TREAD, REAR	b11 mm	506
DIMENSIONS			
4.4	LIFT	h3 mm	115
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	1107/1450
4.15	HEIGHT, LOWERED	h13 mm	85
4.19	OVERALL LENGTH (PLATFORM CLOSED/OPEN)	l1 mm	1806/2176
4.20	LENGTH TO FACE OF FORKS (PLATFORM CLOSED/OPEN)	l2 mm	656/1026
4.21	OVERALL WIDTH	b1 mm	716
4.22	FORK DIMENSIONS	s/e/l mm	55/170/1150
4.25	DISTANCE BETWEEN FORK ARMS	b5 mm	550
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	30
4.34	aisle width for pallets 800x1200 LENGTHWISE (PLATFORM CLOSED/OPEN)	Ast mm	2084/2442
4.35	TURNING RADIUS (PLATFORM CLOSED/OPEN)	Wa mm	1657/2015
PERFORMANCE DATA			
5.1	TRAVEL SPEED, LADEN/UNLADEN (PLATFORM CLOSED/OPEN)	km/h	6,0/6,0 (8,0/8,0)
5.2	LIFT SPEED, LADEN/UNLADEN	m/s	0,04/0,05
5.3	LOWERING SPEED, LADEN/UNLADEN	m/s	0,05/0,04
5.8	MAX GRADEABILITY, LADEN/UNLADEN		8/20
5.10	SERVICE BRAKE		ELECTRIC
ELECTRIC MOTORS			
6.1	DRIVE MOTOR POWER	kW	2
6.2	LIFT MOTOR POWER	kW	2,2
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah	24/180
6.5	BATTERY WEIGHT	kg	190
8.4	SOUND LEVEL AT DRIVER'S EAR	dB(A)	56,4

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

MODEL			
QX20P S2-S4			
FORK LENGTH	l	mm	1000
LOAD CENTRE DISTANCE	c	mm	500
OVERALL LENGTH (PLATFORM CLOSED/OPEN)	l1	mm	1656/2026
WHEEL BASE	y	mm	1223
LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	823
SERVICE WEIGHT WITH BATTERY (see line 6,5)		kg	551-556
AXLE LOAD LADEN, FRONT/REAR		kg	1581-1586/970
AXLE LOAD UNLADEN, FRONT/REAR		kg	116-121/435
TURNING RADIUS (PLATFORM CLOSED/OPEN)	Wa	mm	1507/1865
aisle width for pallets 800x1200 LENGTHWISE (PLATFORM CLOSED/OPEN)	Ast	mm	1884/2242
BATTERY QX20P			
BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/180
BATTERY WEIGHT		kg	185
BATTERY QX22			
BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/230
BATTERY WEIGHT		kg	218


PROLIFT MX
HANDLING LTD

MX Series is not only an excellent compromise between price and performance but also a very resistant machine. Reinforced forks, steel pulley and forks precisely driven by rollers, are some of the main features of this stacker. The machine is also equipped with a foot pedal to lift forks, which considerably reduces the operator's effort.



Steel Pulley

A big chain and a strong steel pulley ensure great resistance and reliability even working with the max load capacity.



Foot Brake

The foot brake performs the parking brake function.



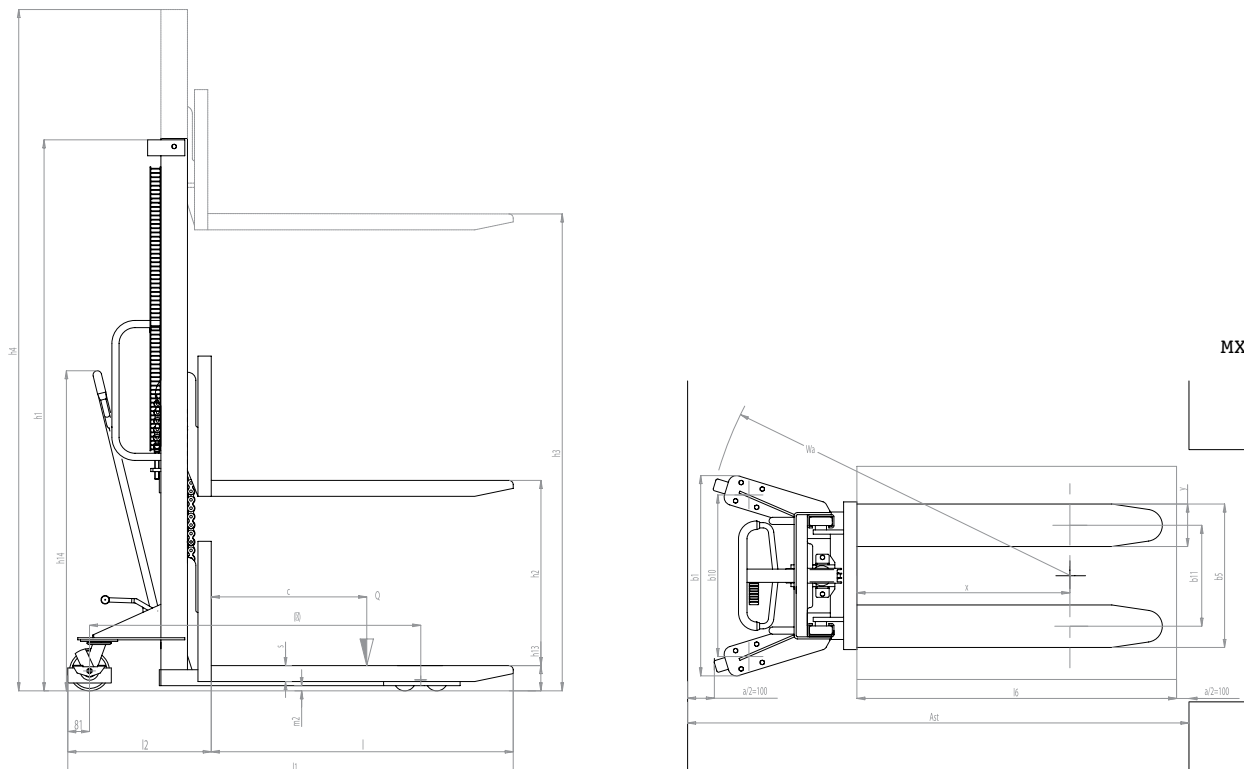
Tiller

The plastic cover increases the ergonomic character of the MX handle, rendering the raising and transport operations even "lighter". The 3-position control lever (down, neutral, up) is placed on the steering wheel to foster manoeuvrability.



Max Pressure Valve

When maximum load capacity is exceeded, the oil pressure exceeds its maximum limit and the valve automatically stops the forks from lifting. In this way, possible structural damage is avoided.



DESCRIPTION			
1.2	MODEL		MX 510 MX 516 MX 1016
1.3	DRIVE		MANUAL MANUAL MANUAL
1.4	OPERATOR TYPE		PEDESTRIAN PEDESTRIAN PEDESTRIAN
1.5	LOAD CAPACITY	Q kg	500 500 1000
1.6	LOAD CENTRE DISTANCE	c mm	600 600 600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	800 800 800
1.9	WHEEL BASE	y mm	1240 1240 1240
WEIGHTS			
2.1	SERVICE WEIGHT WITH BATTERY		185 200 210
2.2	AXLE LOAD LADEN, FRONT/REAR		202/483 213/487 309/901
2.3	AXLE LOAD UNLADEN, FRONT/REAR		113/72 123/77 129/81
TYRES/CHASSIS			
3.1	TYRES		N/N N/N N/N
3.2	TYRE SIZE, FRONT (Ø x width)		150x40 150x40 150x40
3.3	TYRE SIZE, REAR (Ø x width)		80x70 80x70 80x70
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		2/2 2/2 2/2
3.6	TREAD, FRONT	b10 mm	600 600 600
3.7	TREAD, REAR	b11 mm	380 380 380
DIMENSIONS			
4.2	HEIGHT, MAST LOWERED	h1 mm	1490 2080 2080
4.3	FREE LIFT	h2 mm	910 1510 1510
4.4	LIFT	h3 mm	910 1510 1510
4.5	HEIGHT, MAST EXTENDED	h4 mm	1490 2080 2080
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	490/1090 490/1090 490/1090
4.15	HEIGHT, LOWERED	h13 mm	90 90 90
4.19	OVERALL LENGTH	l1 mm	1690 1690 1690
4.20	LENGTH TO FACE OF FORKS	l2 mm	540 540 540
4.21	OVERALL WIDTH	b1/b2 mm	740 740 740
4.22	FORK DIMENSIONS	s/e/l mm	60/170/1150 60/170/1150 60/170/1150
4.24	FORK-CARRIAGE WIDTH	b3 mm	550 550 550
4.25	DISTANCE BETWEEN FORK ARMS	b5 mm	550 550 550
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	30 30 30
4.34	AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	2166 2166 2166
4.35	TURNING RADIUS	Wa mm	1400 1400 1400
PERFORMANCE DATA			
5.2	LIFT SPEED, LADEN/UNLADEN	m/s	37/37 73/73 73/73
5.3	LOWERING SPEED, LADEN/UNLADEN	m/s	0.16/0.05 0.16/0.05 0.12/0.03
5.10	SERVICE BRAKE		- - -
ELECTRIC MOTORS			
6.2	LIFT MOTOR POWER	kW	- - -
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah	- - -
6.5	BATTERY WEIGHT	kg	- - -
8.4	SOUND LEVEL AT DRIVER'S EAR	dB(A)	- - -

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra


PROLIFT TX
HANDLING LTD

The TX Series are characterized by manual traction and electrohydraulic lifting technology. Version 12 (1.2t) includes polyurethane wheels as standard to reduce resistance and effort required even with full load capacity.

TX/Straddle

The main feature of the straddle series, which is available for the TX models, gives the possibility to adjust forks and clamps for great versatility in the handling of loads of different sizes.



Integrated battery and battery charger



Start Key and Battery Cut-Off (Isolator) Switch

The start key on the TX stacker performs a double function:

- It switches the stacker on/off
- is an emergency control, i.e. it completely stops battery power supply and thus prevents the lifting of forks.



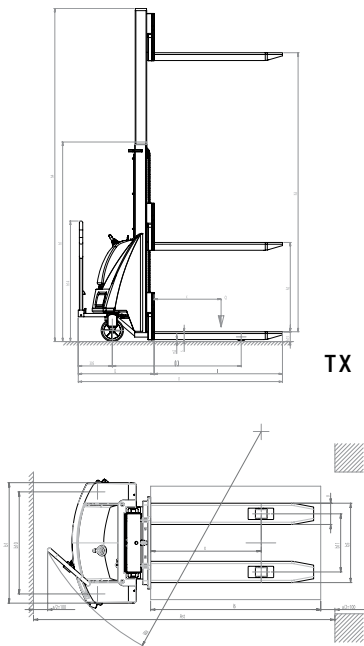
Foot Brake

The foot brake performs the parking brake function.

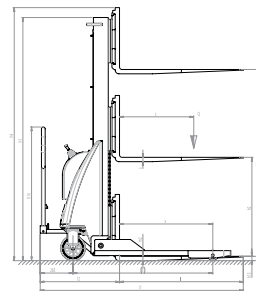


Adjustable Buffers

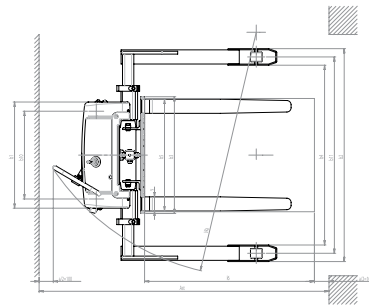
The TX 12 is equipped with adjustable buffers that minimize possible oscillation during lifting.



TX



TX STRADDLE



DESCRIPTION

		TX 10/20	TX 12/35	TX 10/16 STRADDLE
1.2 MODEL		TX 10/20	TX 12/35	TX 10/16 STRADDLE
1.3 DRIVE		MANUAL	MANUAL	MANUAL
1.4 OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5 LOAD CAPACITY	Q kg	1000	1200	1000
1.6 LOAD CENTRE DISTANCE	c mm	600	600	600
1.8 LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x mm	630	780	755
1.9 WHEEL BASE	y mm	965	1155	1130

WEIGHTS

2.1 SERVICE WEIGHT WITH BATTERY	kg	321	474	415
2.2 AXLE LOAD LADEN, FRONT/REAR	kg	253/1068	537/1137	453/962
2.3 AXLE LOAD UNLADEN, FRONT/REAR	kg	222/99	345/129	270/145

TYRES/CHASSIS

3.1 TYRES		G/N	P/N	G/N
3.2 TYRE SIZE, FRONT (Ø x width)		200x50	200x50	200x50
3.3 TYRE SIZE, REAR (Ø x width)		82x70	82x70	82x70
3.5 WHEELS, NUMBER (x=DRIVEN) FRONT/REAR		2/2	2/2	2/2
3.6 TREAD, FRONT	b10 mm	620	720	620
3.7 TREAD, REAR	b11 mm	410	410	1080/1387

DIMENSIONS

4.2 HEIGHT, MAST LOWERED	h1 mm	2370	2250	1970
4.3 FREE LIFT	h2 mm	1910	80	1510
4.4 LIFT	h3 mm	1910	3410	1510
4.5 HEIGHT, MAST EXTENDED	h4 mm	2370	3915	2045
4.9 HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14 mm	60/1080	60/1080	60/1080
4.15 HEIGHT, LOWERED	h13 mm	90	90	35
4.19 OVERALL LENGTH	l1 mm	1750	1850	1640
4.20 LENGTH TO FACE OF FORKS	l2 mm	600	700	640
4.21 OVERALL WIDTH	b1/b2 mm	750	850	750/1199-1504
4.22 FORK DIMENSIONS	s/e/l mm	70/150/1150	70/150/1150	35/100/1000
4.24 FORK-CARRIAGE WIDTH	b3 mm	650	650	825
4.25 DISTANCE BETWEEN FORK ARMS	b5 mm	560	560	230/790
4.26 DISTANCE BETWEEN LEGS MIN/MAX	b4 mm	-	-	965/1270
4.32 GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2 mm	20	20	40
4.34 AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	Ast mm	2336	2540	2588
4.35 TURNING RADIUS	Wa mm	1440	1760	1790

PERFORMANCE DATA

5.2 LIFT SPEED, LADEN/UNLADEN	m/s	0,09/0,12	0,09/0,12	0,09/0,12
5.3 LOWERING SPEED, LADEN/UNLADEN	m/s	0,4/0,1	0,4/0,1	0,4/0,1
5.10 SERVICE BRAKE		-	-	MANUAL

ELECTRIC MOTORS

6.2 LIFT MOTOR POWER	kW	1,6	2,2	1,6
6.4 BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah	12/70 (C20)	24/70 (C20)	12/70 (C20)
6.5 BATTERY WEIGHT	kg	16	32	32

8.4 SOUND LEVEL AT DRIVER'S EAR	dB(A)	67	67	67
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G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

MODEL		TX 10/09	TX 10/16	TX 12/25	TX 12/29
LIFT	h3 mm	810	1510	2410	2810
HEIGHT, MAST LOWERED	h1 mm	1300	1970	1780	1980
FREE LIFT	h2 mm	810	1510	-	-
HEIGHT, MAST EXTENDED	h4 mm	1300	1970	2985	3385
SERVICE WEIGHT WITH BATTERY (SEE ROW 6.5)	kg	296	311	415	431
AXLE LOAD LADEN, FRONT/REAR	kg	228/1068	241/1070	493/1122	502/1129
AXLE LOAD UNLADEN, FRONT/REAR	kg	197/99	210/101	301/114	310/121


PROLIFT **RX**
HANDLING LTD

RX is the most compact in the stackers' range, single mast, completely electric, suitable for loads up to 1.000 kg and elevation up to 1.600 mm, allowing a comfortable, safe use, with low maintenance costs, thanks to robust design with easy access for maintenance. RX combines compactness and ergonomics, offering a wide range of applications distribution and manufacturing environments and it is not intended for continuous daily activity.



EAST MAINTENANCE

Strong ABS carter/cover with storage compartments on top, easily removable to speed up maintenance operations. The bottom access opening allows an immediate disassembly of motor wheel, portal and tiller without lifting the machine.



Ergonomics

Ergonomic tiller placed laterally to increase visibility, ensuring an optimal arrangement of components inside the motor compartment. RX 10/16 solves perfectly the problem of handling goods in narrow spaces and corridors



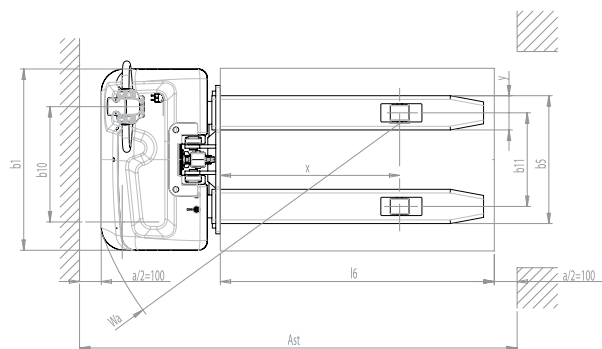
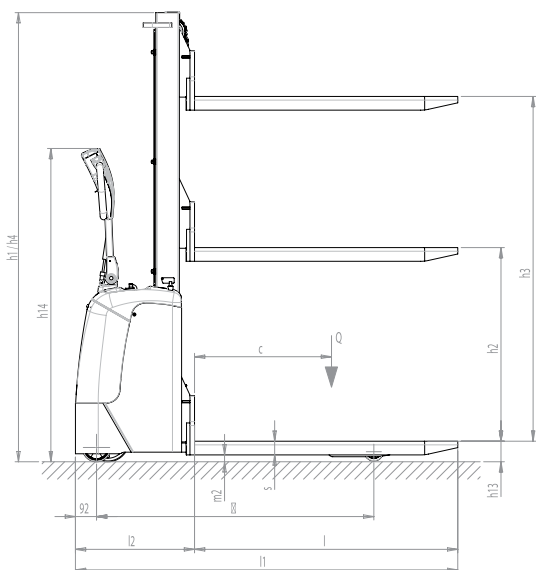
Versatility

It's ideal to move, even horizontally, palletized goods and at the same time it can be used as an adjustable worktable, reducing stress for the operator who must place goods on a shelf. Forks thickness 60 mm for an easier entrance inside pallet, while working in elevation.



Battery Pack

Starting batteries (light-traction PLUS or GEL type as option), lightweight and inexpensive, allow up to 3 hours autonomy.



DESCRIPTION					
1.2	MODEL		RX 10/16	RX 10/16 "PLUS"	RX 10/16 "GEL"
1.3	DRIVE		ELECTRIC	ELECTRIC	ELECTRIC
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q	kg	1000	1000
1.6	LOAD CENTRE DISTANCE	c	mm	600	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	786	786
1.9	WHEEL BASE	y	mm	1165	1165
WEIGHTS					
2.1	SERVICE WEIGHT WITH BATTERY (SEE ROW 6.5)		kg	363	371
2.2	AXLE LOAD LADEN, FRONT/REAR		kg	426/937	434/937
2.3	AXLE LOAD UNLADEN, FRONT/REAR		kg	261/102	269/102
TYRES/CHASSIS					
3.1	TYRES			G+P/P	G+P/P
3.2	TYRE SIZE, FRONT (Ø x width)			186x50	186x50
3.3	TYRE SIZE, REAR (Ø x width)			82x70	82x70
3.4	SIDE WHEELS (Ø x width)			125x45	125x45
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			1x+1/2	1x+1/2
3.6	TREAD, FRONT	b10	mm	505	505
3.7	TREAD, REAR	b11	mm	410	410
DIMENSIONS					
4.2	HEIGHT, MAST LOWERED	h1	mm	1970	1970
4.3	FREE LIFT	h2	mm	1510	1510
4.4	LIFT	h3	mm	1510	1510
4.5	HEIGHT, MAST EXTENDED	h4	mm	1970	1970
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14	mm	930/1365	930/1365
4.15	HEIGHT, LOWERED	h13	mm	90	90
4.19	OVERALL LENGTH	l1	mm	1675	1675
4.20	LENGTH TO FACE OF FORKS	l2	mm	522	522
4.21	OVERALL WIDTH	b1	mm	794	794
4.22	FORK DIMENSIONS	s/e/l	mm	60/150/1153	60/150/1153
4.24	FORK-CARRIAGE WIDTH	b3	mm	650	650
4.25	DISTANCE BETWEEN FORK ARMS	b5	mm	560	560
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2	mm	20	20
4.34	AISLE WIDTH FOR PALLET 800x1200 LENGTHWISE	Ast	mm	2120	2120
4.35	TURNING RADIUS	Wa	mm	1344	1344
PERFORMANCE DATA					
5.1	TRAVEL SPEED, LADEN/UNLADEN		km/h	3,7/4,3	3,7/4,3
5.2	LIFT SPEED, LADEN/UNLADEN		m/s	0,11/0,18	0,11/0,18
5.3	LOWERING SPEED, LADEN/UNLADEN		m/s	0,18/0,18	0,18/0,18
5.8	MAX GRADEABILITY, LADEN/UNLADEN		%	9/25	9/25
5.10	SERVICE BRAKE			ELECTRIC	ELECTRIC
ELECTRIC MOTORS					
6.1	DRIVE MOTOR POWER		kW	0,35	0,35
6.2	LIFT MOTOR POWER		kW	2,2	2,2
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/70 (C20)	24/50
6.5	BATTERY WEIGHT		kg	32	38
8.4	SOUND LEVEL AT DRIVER'S EAR		dB(A)	63	63

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra


GX

This compact sized stacker is the ideal solution to work in confined spaces and looks both powerful and reliable. The use of high resistance steel, the numerous parts made of cast iron and the abs protection guard are some of the main features of this machine. The GX10 series is also characterized by simplex masts with a capacity of 1.000 Kg while the GX12 version is equipped with duplex masts for a lift height up to 3.500 mm.

GX/Straddle

The main feature of the straddle series is the possibility to adjust the forks and the clamps for greater versatility in the handling of loads of different sizes.



GX/Free Lift

This stacker combines the characteristics of the gx series with the total free lift, allowing lifting forks up to 1472 mm from the ground without increasing the minimum machine bulk (1.967 mm). For this reason the truck can also be used in working spaces with reduced height.



GX/Plus

The GX Series is available in the plus version with a more powerful battery and the gel version with a gel battery. The battery of the plus model also allows for a greater number of charging cycles and longer autonomy.

PLUS GX 12



Integrated battery and battery charger. Available with double lifting command. Available with poly motorwheel ring.



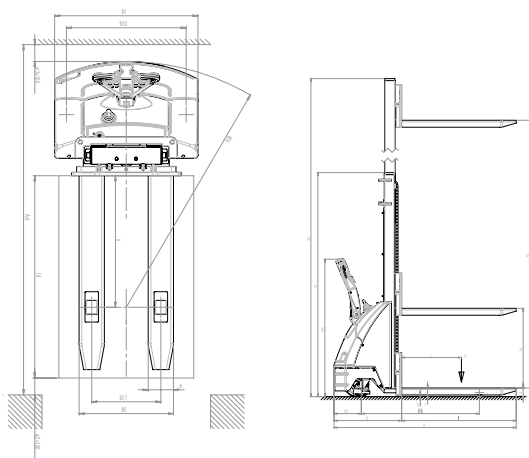
Tiller

- Butterfly valve for traction control
- Safety pushbutton with warning buzzer
- Luminous display for battery state control
- Hour counter (version Plus and Gel)
- Possibility of fork lifting double control

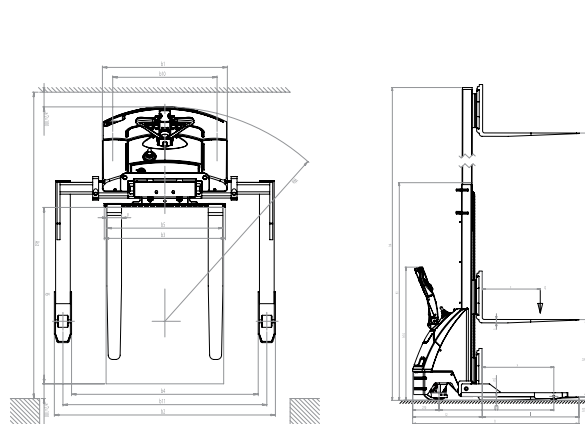


Protection Guard

The ABS "double" guard is synonymous of reliability and practical convenience. The removal of the only lower part ensures rapidity in the ordinary maintenance operations. Finally the particular thickness of the guard makes the machine even stronger.



GX



GX STRADDLE

DESCRIPTION								
1.2	MODEL		GX 10/09	GX 10/16	GX 10/20	GX 12/25	GX 12/29	GX 12/35
1.3	DRIVE		ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
1.4	OPERATOR TYPE		PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
1.5	LOAD CAPACITY	Q	kg	1000	1000	1000	1200	1200
1.6	LOAD CENTRE DISTANCE	c	mm	600	600	600	600	600
1.8	LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x	mm	785	785	785	785	785
1.9	WHEEL BASE	y	mm	1185	1185	1185	1185	1185
WEIGHTS								
2.1	SERVICE WEIGHT WITH BATTERY (SEE ROW 6.5)		kg	372	393	413	481	496
2.2	AXLE LOAD LADEN, FRONT/REAR		kg	428/944	443/950	457/956	545/1136	559/1137
2.3	AXLE LOAD UNLADEN, FRONT/REAR		kg	273/99	288/105	302/111	358/123	372/124
TYRES/CHASSIS								
3.1	TYRES			G+P/P	G+P/P	G+P/P	G+P/P	G+P/P
3.2	TYRE SIZE, FRONT (Ø x width)			240x60	240x60	240x60	250x76	250x76
3.3	TYRE SIZE, REAR (Ø x width)			82x70	82x70	82x70	82x70	82x70
3.4	SIDE WHEELS (Ø x width)			150x40	150x40	150x40	150x40	150x40
3.5	WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			1x+2/2	1x+2/2	1x+2/2	1x+2/2	1x+2/2
3.6	TREAD, FRONT	b10	mm	710	710	710	710	710
3.7	TREAD, REAR	b11	mm	410	410	410	410	410
DIMENSIONS								
4.2	HEIGHT, MAST LOWERED	h1	mm	1300	1970	2370	1780	1980
4.3	FREE LIFT	h2	mm	810	1510	1910	-	-
4.4	LIFT	h3	mm	810	1510	1910	2410	2810
4.5	HEIGHT, MAST EXTENDED	h4	mm	1300	1970	2370	2985	3385
4.6	INITIAL LIFT	h5	mm	-	-	-	-	-
4.9	HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h14	mm	990/1390	990/1390	990/1390	990/1390	990/1390
4.15	HEIGHT, LOWERED	h13	mm	90	90	90	90	90
4.19	OVERALL LENGTH	l1	mm	1825	1825	1825	1825	1825
4.20	LENGTH TO FACE OF FORKS	l2	mm	675	675	675	675	675
4.21	OVERALL WIDTH	b1/b2	mm	850	850	850	850	850
4.22	FORK DIMENSIONS	s/e/l	mm	70/150/1150	70/150/1150	70/150/1150	70/150/1150	70/150/1150
4.24	FORK-CARRIAGE WIDTH	b3	mm	650	650	650	650	650
4.25	DISTANCE BETWEEN FORK ARMS	b5	mm	560	560	560	560	560
4.32	GROUND CLEARANCE, CENTRE OF WHEEL BASE	m2	mm	20	20	20	20	20
4.34	aisle width for pallets 800x1200 lengthwise	Ast	mm	2236	2236	2236	2236	2236
4.35	TURNING RADIUS	Wa	mm	1460	1460	1460	1460	1460
PERFORMANCE DATA								
5.1	TRAVEL SPEED, LADEN/UNLADEN		km/h	4/5	4/5	4/5	4/5	4/5
5.2	LIFT SPEED, LADEN/UNLADEN		m/s	0.09/0.12	0.09/0.12	0.09/0.12	0.09/0.12	0.09/0.12
5.3	LOWERING SPEED, LADEN/UNLADEN		m/s	0.4/0.1	0.4/0.1	0.4/0.1	0.4/0.1	0.4/0.1
5.8	MAX GRADEABILITY, LADEN/UNLADEN		%	5/10	5/10	5/10	5/10	5/10
5.10	SERVICE BRAKE			ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
ELECTRIC MOTORS								
6.1	DRIVE MOTOR POWER		kW	0.5	0.5	0.5	0.7	0.7
6.2	LIFT MOTOR POWER		kW	2.2	2.2	2.2	2.2	2.2
6.4	BATTERY VOLTAGE, NOMINAL CAPACITY C5		V/Ah	24/70 (C20)	24/70 (C20)	24/70 (C20)	24/88 (C20)	24/88 (C20)
6.5	BATTERY WEIGHT		kg	32	32	32	40	40
8.4	SOUND LEVEL AT DRIVER'S EAR		dB(A)	67	67	67	67	67

G = Rubber, N = Nylon, P = Polyurethane, A = Steel, NE = Nylon extra

MODEL		GX 12/25 PLUS	GX 12/29 PLUS	GX 12/35 PLUS	GX 12/28 FREE LIFT	GX 12/25 STRADDLE	GX 12/29 STRADDLE	GX 12/35 STRADDLE	GX 12/38 STRADDLE
LIFT	h3	mm	2410	2810	3410	2750	2410	3410	3710
HEIGHT, MAST LOWERED	h1	mm	1780	1980	2250	1967	1780	2250	2425
FREE LIFT	h2	mm	-	-	80	1382	-	80	80
HEIGHT, MAST EXTENDED	h4	mm	2985	3385	3915	3335	2985	3385	4270
SERVICE WEIGHT WITH BATTERY (SEE ROW 6.5)		kg	515	530	565	508	565	580	665
AXLE LOAD LADEN, FRONT/REAR		kg	579/1136	593/1137	619/1146	564/1144	582/1183	596/1184	617/1198
AXLE LOAD UNLADEN, FRONT/REAR		kg	392/123	406/124	432/133	381/127	380/185	394/186	426/189
DISTANCE BETWEEN FORK ARMS MIN/MAX	b5	mm	560	560	560	560	230/790	230/790	230/790
DISTANCE BETWEEN LEGS MIN/MAX	b4	mm	-	-	-	-	965/1270	965/1270	965/1270

PROLIFT LX
HANDLING LTD

The new LX is a strong and reliable partner which bridges the gap between low-duty and heavy duty material handling daily operations. Due to its durability, low maintenance LX is suitable for environments as logistic centers, terminals, production and manufacturing areas. Also the new tiller arm equipped with fork lifting and lowering proportional control improves user-friendliness and maneuverability of the truck.

LX/Initial lifting

First Edition

Apart from the LX series high capacity characteristics, the initial lifting models also offer the possibility to lift legs, hence facilitating the overcoming of ramps and knick points. These models can also be used for the simultaneous transport of 2 pallets: one with the forks and one with the clamps.



Flip down operator platform available. AC traction motor



Carter Internal Features

The New LX design with its strong wheel protection guard integrated into the frame structure aimed to increase both stability and safety. Now the new strong ABS battery cover comes with hinges which speed up all ordinary battery maintenance operations.



Total Width Reduction

The LX maneuverability has been improved by reduction of total width from 850 mm to 800 mm and by side wheel always within the truck width even when pivoting, allowing the operator to handle goods in narrow spaces and corridors.



Improved Tiller

Improved tiller with lifting/lowering proportional control. Fully integrated system with throttle, safety pushbutton, horn, hourmeter, battery status indicator.



Mast

The wider mast combined with the new ergonomic tiller to make LX more agile and easy to use. A sticker ruler allows the operator to easily check the forks elevation by sight.

PROLIFT Stackers
HANDLING LTD

Residual lifting capacity - kg



* H3	900	1000	1200	1600	2000	2500	2800	2900	3300	3500	3600	3800	3850	4000	4200	4500	5000
MX 510		500 kg															
MX 516				500 kg													
MX 1016				1000 kg													
TX 10/09	1000 kg																
TX 10/16			1000 kg														
TX 10/20				1000 kg													
TX 12/25					1200 kg												
TX 12/29					1200 kg		800 kg										
TX 12/35					1200 kg		800 kg		600 kg								
GX 10/09	1000 kg																
GX 10/16			1000 kg														
GX 10/20				1000 kg													
GX 12/25					1200 kg												
GX 12/29					1200 kg		800 kg										
GX 12/28 Free Lift					1200 kg		800 kg										
GX 12/35					1200 kg		800 kg		600 kg								
LX 12/16			1200 kg														
LX 12/25					1200 kg												
LX 12/25 IL					1200 kg												
LX 12/29					1200 kg		1000 kg										
LX 12/35					1200 kg		1000 kg		800 kg								
LX 12/38					1200 kg		1000 kg		800 kg			800 kg					
LX 14/42								1400 kg		1200 kg			1000 kg	800 kg			
LX 14/45								1400 kg		1200 kg			1000 kg		800 kg		
LX 14/45 IL								1400 kg		1200 kg			1000 kg		800 kg		
LX 14/50								1400 kg		1200 kg			1000 kg			800 kg	
LX 16/16			1600 kg														
LX 16/25					1600 kg												
LX 14/25 IL					1400 kg												
LX 16/29					1600 kg		1400 kg										
LX 14/29 IL					1400 kg		1300 kg										
LX 16/35					1600 kg		1400 kg		1100 kg								
GX 12/38 Straddle												1200 kg					
GX 12/29 Straddle							1200 kg					1200 kg					
GX 12/25 Straddle					1200 kg												
GX 12/35 Straddle									1200 kg								
TX 10/16 Straddle			1000 kg														
LX 14/42 Free Lift								1400 kg		1200 kg			1000 kg	800 kg			
LX 14/45 Free Lift								1400 kg		1200 kg			1000 kg		800 kg		
LX 14/50 Free Lift								1400 kg		1200 kg			1000 kg			800 kg	

*H3: Lifting height (mm) - Load center at C = 600 mm



Reel Clamps

Transport, rotate and lift reels - find the equipment perfect for your handling situation and avoid strain on arms and back!

A World of Options:

- Handling of reels in vertical and horizontal position and reel that are clear of the floor
- Manual or electric rotation, with or without gearbox
- Reels with different reel diameters, lengths and weights
- With gripping arms or expanding mandrel



Reel Handler

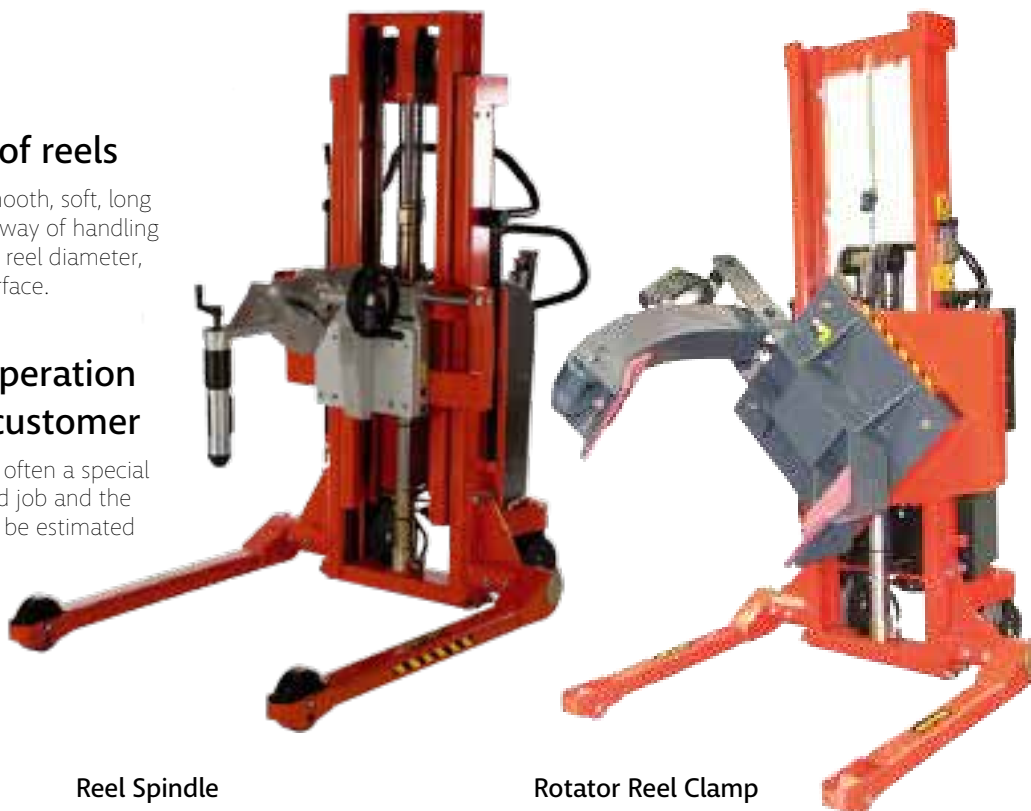


Handling of reels

Reels can be smooth, soft, long and heavy. The way of handling depends on the reel diameter, winding and surface.

Close cooperation with the customer

Reel handling is often a special and complicated job and the options have to be estimated in each case.



Reel Spindle

Rotator Reel Clamp





Correct lifting methods when transporting, lifting, filling and emptying boxes, containers and crates...

A World of Options:

- Standing and sitting working position
- Easy access to the contents at the bottom
- Ergonomically correct working positions
- Minimum strain of back, shoulders and joints



Rotator with box holders



A drum is not just a drum... It is a fact that the market consists of a number of drums with different forms and measurements!

A World of Options:

- Handling of drums in horizontal and vertical position
- Emptying, rotating and transporting drums
- Handling of standard steel and plastic drums
- Special solutions for drums with different materials and dimensions

Logitrans helps you find the best way to handle your drum!



Drum Turner





Correct lifting methods when transporting, lifting, filling and emptying boxes, containers and crates...

The drum forks

Lift and transport horizontal drums. The drum forks are available for both stackers and pallet trucks

The drum turner

Handles drums in the horizontal or vertical position and can rotate these 360°. Available in a manual or electric rotation model.



Specific requirements:

Aggressive environments

The material has to be resistant to corrosion, acids, salts and scratches.

Strict hygiene requirements

The construction has to fulfil the strict requirements of hygiene and cleaning.

Environments, sensitive to static electricity

Surface tension has to be avoided and conductivity has to be optimised.

Clean rooms

The material handling equipment has to fulfil the requirements concerning dust particles in the air.



Explosive atmospheres

The material handling equipment has to conduct away static electricity, fulfil the stipulations of the ATEX-directive and may not be a source of ignition.







Lift Tables

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Single scissors and high-lift

JIHAB Single

JIHAB Single is a single scissor lift table. This design is the basic model which forms the foundation of the entire JIHAB lifting table range. JIHAB Single can be used in a very wide range of applications in production, material handling and distribution, and as a component of a logistics system. JIHAB Single is a cost-effective handling product which can help you to design an ergonomically correct workplace.

JIHAB Single can be designed and equipped to meet user specifications and requirements.



JIHAB High-lift

JIHAB High-lift has multiple vertical scissor packages. Using several vertical scissor packages gives higher lifting movement without increasing the length of the lifting table. This reduces space requirements. JIHAB High-lift can be used in places where large lifting movement is required. Such as in various types of lifts, working platforms and pallet stackers.

JIHAB High-lift can be designed and equipped to meet user specifications and requirements.



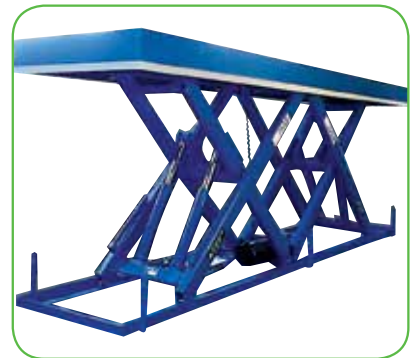
Long load and loading dock

JIHAB Long-load



JIHAB Long-load has multiple horizontally arranged scissor packages. Using several horizontally arranged scissor packages gives a longer table length and lifting capacity. The movement of the scissor packages is coordinated to give parallel lifting movement. JIHAB Long-load is an excellent choice when you need to handle long and heavy goods.

JIHAB Long-load can be designed and equipped to meet user specifications and requirements.



JIHAB Loading dock



JIHAB Loading dock is designed for harsh environments and heavy loads. It is at its best when used for loading and unloading in a loading bay, often outdoors. This job subjects the lifting table to heavy loads, often concentrated to one point.

JIHAB Loading dock can be designed and equipped to meet user specifications and requirements.



Low profile and U-shaped low profile

JHAB Low profile/JHAB Low profile U

Both models are designed as low-profile lifting tables, and do not require a pit in the floor - this makes them much more flexible and gives them a wider range of potential applications. JHAB Low profile is provided with a ramp when goods are handled with a pallet lifter.

JHAB Low profile U does not need a ramp, it can be loaded and unloaded directly from the floor with a pallet lifter. Both types of lifting table are suitable for use in a correctly designed ergonomic workplace. JHAB Low profile and JHAB Low profile U have the same performance:

Performance:

- Lifting capacity up to 2,000 Kg
- Lifting movement 800 mm
- Lifting table size max 1,400 x 1,200 mm

Both models can be designed and equipped to meet user specifications and requirements. JHAB Single can be designed and equipped to meet user specifications and requirements.



Vehicle carrier and Low cost models

JHAB Vehicle

JHAB Vehicle is only intended for transporting cars/vehicles between different floors, such as in sales and exhibition halls and multi-storey car parks. The lifting table is designed for even loading. It is not intended for passenger carrying. Special user instructions and safety rules apply to installation and operation.

JHAB Vehicle can be designed and equipped to meet user specifications and requirements.



JHAB Low-cost

JHAB Low-cost is available as standard units which can not be specially equipped or designed to suit customer requirements.

They are offered at a very attractive price for traditional lifting table use. JHAB Low cost is not designed for continual use in production lines etc.



Performance:

- Lifting capacity 500, 1,000 and 2,000 Kg
- Lifting movement 800 mm
- Lifting table size max 1,200 x 800 mm or 1,350 x 800 mm

JIHAB Equipment

There is an extensive range of optional equipment, in addition to the standard JIHAB range, which offers extensive customisation of a standard lifting table.

We would be happy to equip your lifting table so that it gives you maximum economy and correct ergonomoy.

Only a small selection of our optional equipment is shown in the pictures.







Construction
Equipment

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Misc Equipment

Construction Equipment



Manhole Clamp



Pipe Suspension Grab



Pipe Layer



Round Grab



Manhole And Cone Grab



Pipe Laying Hook



Road Gully Grab



Manhole Housing Grab



Pipe Pulling Device



Pipe Puller



Hydro Grab



Aluminium Tripod with winch

Lifting Equipment



Kerb Stone Lifter



Stele Clamp



Border Stone Lifter



Flat Grab

Rollers



Lifting Beam



Load Rotating Beam



Ride-on Roller



Hand Roller

Gantry Cranes



Gantry Crane



Frame Crane



Mobile Aluminium Crane



Mobile Job Crane

Vacuum Technology



Alpha Levator



Turbo M Levator



Turbo H Levator



Gamma Levator + SP 500

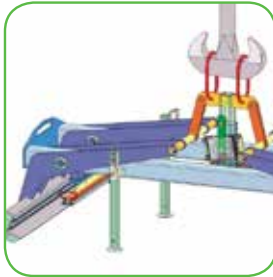


Uni Levator



Kappa Levator

Customised Solutions



Grab for Railway Sleepers



Round Grab



Load Rotating Beam



Coil Grab



Adjustable Lifting Beam



Vacuum Lifter







Plant Machinery
Safety Devices

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Product Application Guide

Company Profile

Prolift are proud to be distributors of GKD products. GKD specialise in the design, development and production of electronic safety systems for the Rail, Construction, Extraction, Waste and Distribution industries.

GKD Technik's core products are sophisticated rated capacity indicators and positional control systems for the Road Rail industries, in which GKD Technik Ltd is a recognized worldwide market leader.

GKD Technik also produces Rated Capacity Indicators, Height Control systems and Incline monitoring for off highway vehicles in the Construction and related industries, and has recently developed an innovative long range RFID based

Proximity Warning system designed to enhance pedestrian safety and reduce the incidence of collisions between vehicles and pedestrians in the workplace.

GKD Technik designs and develops all of its products in house, all system software is written and tested in house, and all product manufacturing is carried out either in house or using local specialist contractors.

Rail Products

3RCI Road Rail Rated Capacity Indicator

GKD's 3RCI system is the world's most popular retrofit Rated Capacity Indicator for Road Rail applications.

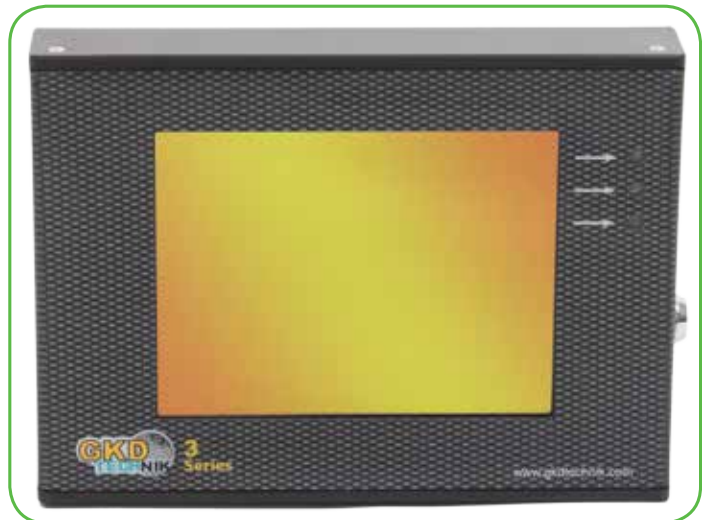
3RCI monitors the machine's load status and compares it to the machine's true lift capacity in its state of gradient, rail cant and axle lock configuration. Slew, Cant and Gradient duties are continuously calculated to make full use of the machine's lift capacity in every position.

Tandem Lift function is included as standard.

Full Intelligent motion cut of all booms plus slew on overload, allows recovery to a safer state but prevents movement further into overload. Angular Slew Limits, Virtual Walls and Height Limits are all included, selective Intelligent hydraulic motion cut of any boom or slew function at limit to prevent movement further into danger but allow recovery into the "safe" zone.

Full data logging of all functions and operational state is included.

An optional telemetry unit includes GPS, GRPS and WiFi modules and allows local communication between machines and controllers, and remote data transmission and fault diagnosis.



3RCI Spaceguard

Spaceguard is a variant of the 3RCI with dual sensing of all booms plus slew and cant / gradient and dual processing of all positional functions. Spaceguard is supplied with direct drive boom angle sensors and digital encoder based slew sensing, and is intended for use under live overhead

cables and alongside lines open to live traffic. Fully Dual Redundant, any positional mismatch between sensors causes an error state to be detected and all booms plus slew are hydraulically motion cut. Slow valves are activated when approaching any positional limit to eliminate limit breach, even when operating at speed.

Systems for Civil Engineering, Waste and Recycling, Distribution

Height Limiting

1HLI

A basic, inexpensive height limiter intended for use on excavators, wheel loaders, telehandlers etc.

1HLI consists of an angle sensor mounted on the variable position boom, and a display at the operator station. A Gravity Referenced angle sensor or a Direct Drive angle sensor can be specified to suit the application. The Height limit is variable and is set from the operator station using a Keyswitch to set limits, the key may be removed once the limit is set to prevent tampering.

On achieving the height limit an audible alarm sounds and an optional motion cut valve stops boom upward movement preventing movement further into the Danger zone but allowing movement away from the height limit in the safe direction.



1HLI-R

A variant of the 1HLI developed for the Australian Rail industry, this Dual Redundant system uses both direct drive and gravity referenced angle sensors on the primary boom to sense the boom position.

A mismatch between the two angle sensors causes an Error state to be triggered. Vehicle gradient is automatically compensated for. Additional outputs will drive external status lamps to indicate height limiter status.



2HLE

A more sophisticated height limiting system, with a colour touchscreen display at the operator station.

2HLE places angle sensors on each articulating boom, and provides height limiting for the entire articulated boom structure. Multiple motion cuts are intelligently applied to prevent height limit infringements by any part of the articulating boom structure.

2HLE is generally specified for excavators and multi - arm cranes or mowers.



Load Monitoring Systems

1TMI

A fairly simple and inexpensive load monitoring system, intended for installation on excavators, lorry mounted cranes, wheel loaders and telehandlers.

1TMI consists of an angle sensor to be mounted on the primary boom, and a pressure transducer to be installed in the lift cylinder hydraulic circuit. Hydraulic pressure is matched to the primary boom angle, and the display at the operator station indicates the load status of the machine using a series of coloured LEDs, set to light up at 50%, 75% and 100% of maximum load. An audible alarm sounds at 100% of load, and an internal relay allows control of an external alarm or lamp or motion cut valve where required. Secondary boom position or telescopic boom state are automatically taken into account. A mimic display is available where two displays are required.





2RCI

A more sophisticated load monitoring system for excavators, designed to satisfy LOLER regulations regarding use of an excavator as a crane. Angle sensors are fitted to each boom, and the display calculates and shows the current lift point height and radius, plus the machine's Rated Capacity for that height and radius, and the Load on Hook. A bar scale shows the proportion of lift capacity currently being used. An Amber alert is triggered, with internal audible alarm, when the load is at 95%, and a Red alert with external audible alarm is triggered at 104% of the machine's rated capacity for the height and radius. Additional duties allow for different capacity in different configurations, for instance road axle locked / unlocked on wheeled excavators, or with stabiliser legs deployed.

A Dig mode turns the Overload alarms off and instead used the boom angle sensors to calculate and display the bucket elevation against a datum for use as a basic Grade tool.

A height limit function is also included, with optional hydraulic motion cut of booms to prevent over height working.

Additional Optional expansion modules are available to provide full, Intelligent hydraulic motion cut of all booms on Overload, automatic lifting duty selection based on slew position, and full Data Logging.



Incline Alert

Incline Alert is a simple, inexpensive Incline monitoring system, designed to be installed on mini excavators, rollers, front tipping dumpers, ADTs and any other item of plant that works on slopes and inclines and is at risk of overturn.

A Pitch and Roll sensor monitors the incline of the machine against preset limits and warns the operator when the incline limit is reached. Separate incline limits can be set for facing up the slope, down the slope and across the slope. All incline limits are data logged, and should the machine overturn during use, an LED is turned on that cannot be turned off again except by an authorised engineer.



Proximity Warning System (PWS)

PWS Proximity Warning has been developed to help protect pedestrians working on busy jobsites shared with vehicles and items of plant.

PWS is an RFID radio system consisting of two parts, one being a transmitter / receiver fitted to the item of plant, and the other being a small radio Tag, worn by pedestrians on site, usually in an arm band.

The system on the machine constantly scans the local area around the machine, with a customisable range of 2 - 8 meters. As soon as a pedestrian tag "sees" this radio scan from the machine, it wakes up and transmits an identifier on a different frequency. This identifier is picked up by the receiver on the machine, and the machine operator is immediately alerted to the presence of the pedestrian by means of an audible alarm and an LED warning.

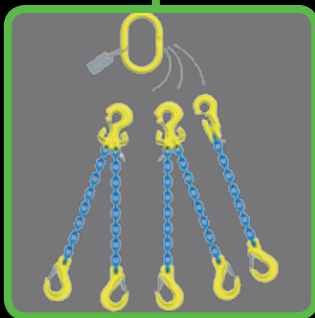
The driver must acknowledge the presence of the pedestrian to silence the alarm, or the pedestrian must move back out of range of the machine's scanned range. The system can be fitted to multiple machines on a site, and will cope with multiple tags.

All alarm states are data logged with time, data and tag identity. An optional GPRS telemetry unit uploads the data log from each machine automatically to a server based web site, where the data can be analyzed.

PWS is also well suited to warehouse environments, fitted to forklift trucks, and may be of help in preventing forklift trucks from colliding, in addition to the pedestrian safety benefits of the system.







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