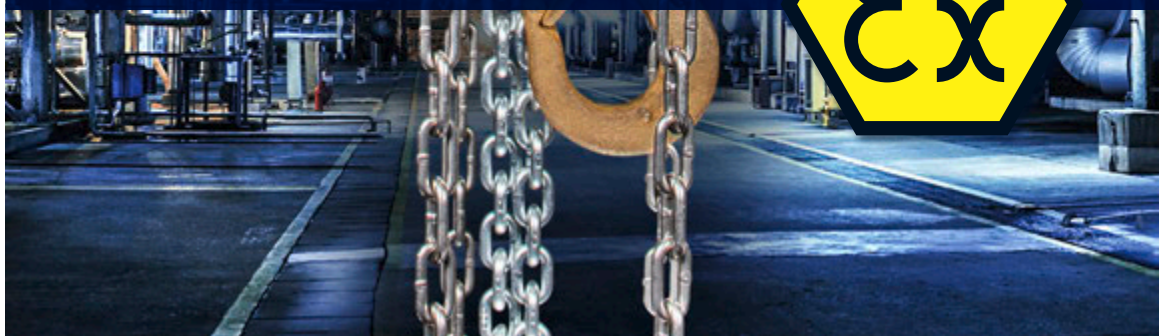
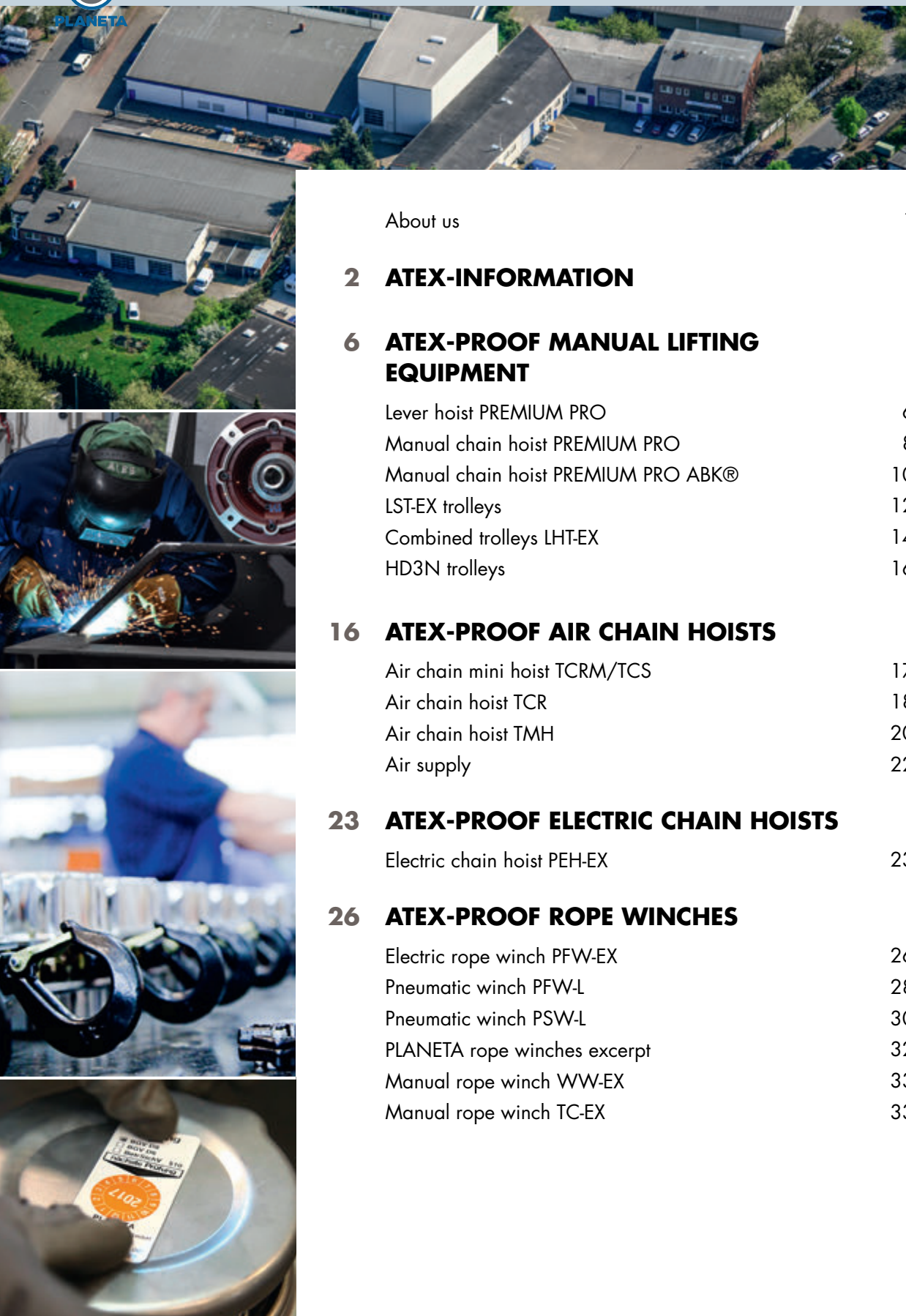


ATEX Lifting Equipment

22





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**Note:** PLANETA are constantly striving to increase and further improve the product range.

Whilst every effort has been made to ensure the accuracy of the specifications and dimensions included at the time of printing, we are unable to warrant the given information. Designs and specifications are subject to change without notice or obligation. The inclusion of any product does not guarantee the availability of that product in the future. Customers should check both the availability and conformance of the product to any critical parameters at the time of ordering!



## Quality by tradition

Stability and innovation. In truth, they are two sides of the same coin because continuous readiness for innovation enables sustainable developments.

Sustainability, reliability and responsibility are the basic values that we are committed to here at PLANETA. In all periods of the company's history, these values have been personified by our employees and their quest to always do the good things that little bit better.

## Trust is good – Control is better

PLANETA rope winches are subject to the strictest quality controls and are also designed with high functionality for the toughest operating conditions.

Only quality products that have been tested with an appropriate excess load in compliance with all standards are supplied.

## Quality means safety

Reliability and responsibility are the values that we are particularly committed to. This begins with work safety during production, up to certification of all processes as part of the annual TÜV DIN EN ISO 9000:2001 audit or membership in the GKS.

## Your satisfaction is our success

A large network of consultants, service technicians and specialist dealers trained by PLANETA is available to you. We strive to provide you with the best solution at the best possible price, and this goes well beyond the product itself. To us, best quality means always showing you the solution which corresponds to your requirements.

As one of Germany's oldest lifting device manufacturers, we strive to do this for you each and every day.



PLANETA manual chain hoists from 1950 to today



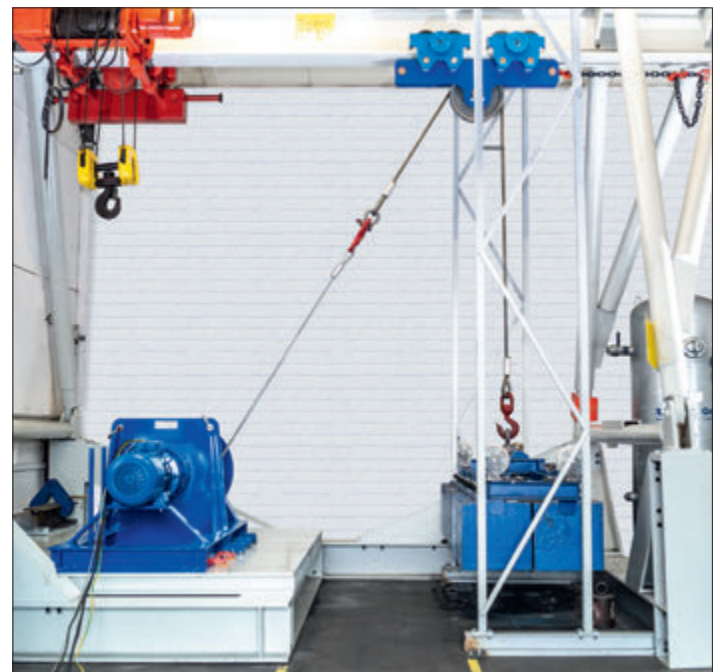
**Quality**  
CERTIFIED



**Industrial safety**  
CERTIFIED



**Environmental protection**  
CERTIFIED



Management System  
ISO 9001:2015  
ISO 14001:2015  
SCC\*\*:2011

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## Information Explosion Protection

According to the ATEX 2014/34/EU directive, the manufacturer is obliged to manufacture his lifting equipment in accordance with the applicable rules, standards and regulations for explosion-protected equipment, to classify it in EX classes and to mark it.

**The customer must specify either a classification or an EX zone.**

Once the classification has been specified, we can make you an appropriate offer for the required hoist. As an aid to orientation, we provide you here with an overview of the classification of explosion-protected equipment in accordance with the ATEX Directive.

The standards, regulations and guidelines of the responsible bodies, for example BG-Chemie, on the use of equipment in potentially explosive atmospheres must be observed by the operator when installing, assembling and operating **EX-protected hoists**. PLANETA offers hoists for the various applications, which are suitable for the following operating conditions in EX areas:

➔ **Use in zone 1, 2, 21, 22 as well as in underground and surface installations of mines according to category M2\***

➔ **Temperature classes up to T4 or 135 °C**

➔ **Suitable for environments with gases and dusts according to IIC\* and IIIC**

### \* Restrictions:

- Gase bis IIC außer Ethylen und Schwefelwasserstoff
- Special conditions of use for equipment of the MEDIUM / HIGH version intended for use in mining operations in accordance with category M2, in the event of the additional presence of flammable gases or combustible dust to the mine gas atmosphere, the classifications for gas or combustible dust also specified in the MEDIUM / HIGH version for gas or dust explosion protection shall apply. Dust explosion protection

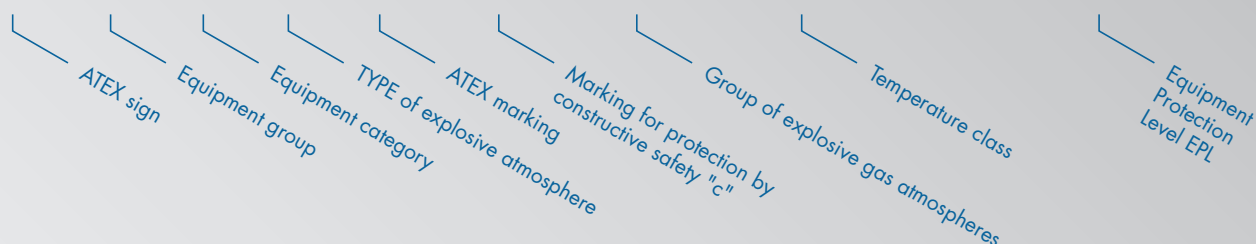
## Explanation of the designation of an Ex classification:

### Gases:

 **II 2 G Ex h IIC T4 Gb**

### Dusts:

 **II 2 G Ex h IIIC T135 °C Db**







## Classification and marking of potentially explosive atmospheres

Flammable sub- stances	Temporary behaviour flammable substances in Ex-area explosive medium	Classification of potentially explosive areas	Marking of the equipment				Equipment Protection Level EPL		
			Equipment group	Equipment category					
Gases Fog Vapours (G)	is constant, long-lasting or frequent	Zone 0	II	1G	2G	3G	Ga	Gb	Gc
	occurs occasionally	Zone 1	II						
	probably does not occur or occurs only very rarely	Zone 2	II						
Dusts (D)	is present constantly, for a long time or frequently	Zone 20	II	1D	2D	3D	Da	Db	Dc
	occurs occasionally	Zone 21	II						
	Probably does not occur or occurs only very rarely	Zone 22	II						

## Classification into explosion groups

Group II - explosive gas atmospheres			Group III - explosive dust atmospheres		
Propane Ammonia Methane Ethane	Acrylonitrile Ethylene Ethyl glycol Hydrogen sulphide	Hydrogen Acetylene Carbon disulphide	combustible suspended solids	non-conductive dusts	conductive dusts
IIA			IIIA		
IIB			IIIB		
IIC			IIIC		

## Temperature classes:

The max. surface temperature of the equipment must always be lower than the ignition temperature of the gas-vapour-air mixture. Equipment classified in higher temperature classes is also permitted in areas where a lower temperature class is required.

In potentially explosive atmospheres caused by combustible dusts, the surface temperature must not exceed 2/3 of the ignition temperature in °C of the dust/air mixture. The specification of the temperature class in relation to PLANETA hoists assumes a maximum ambient temperature between -20 °C and +40 °C.

## Temperature classes for explosive gas atmospheres

Propane Ammonia Methane Ethane Acrylonitrile Hydrogen T1 max. 450 °C	Cyclohexane Ethyl alcohol n-Butane Ethylene Ethylene oxide Acetylene	Petrol Diesel Heating oil n-Hexane Ethyl glycol Hydrogen sulphide	Acetaldehyd Ethylether	T5 max. 100 °C	Carbon disulphide
	T2 max. 300 °C				
		T3 max. 200 °C			
			T4 max. 135 °C		
					T6 max. 85 °C









**Explosive dust atmospheres:** Indication of the maximum surface temperature e.g.: T 135 °C.

The following information is based on our internally gathered experience, based on the ATEX Directive 2014/34/EU and the DIN EN ISO 80079-36 and -37 standard. for use in potentially explosive atmospheres are deposited with TÜV SÜD Product Service GmbH.

BASIC	MEDIUM	HIGH
<ul style="list-style-type: none"> <li>Used in zone 2 and 22</li> <li>Suitable for environments with gases and dusts acc. to IIB and IIIB, except ethylene and hydrogen sulphide</li> <li>Basic protection against sparks from fast moving contact parts and against corrosion of critical contact parts.</li> </ul> <p><b>Versions:</b></p> <ul style="list-style-type: none"> <li>Load and hand chains in galvanised design</li> <li>Trolley with pulp buffer Wheels with special coating</li> </ul>	<ul style="list-style-type: none"> <li>Used in zones 1, 2, 21 and 22 as well as in underground and surface installations of mines according to category M2*.</li> <li>Suitable for environments with gases and dusts acc. to IIB and IIIB, except ethylene and hydrogen sulphide</li> <li>Advanced protection against sparking of fast moving contact parts and against corrosion of critical contact parts</li> </ul> <p><b>Versions:</b></p> <ul style="list-style-type: none"> <li>Support and load hooks treated with special coating</li> <li>Load and hand chains in galvanised design</li> <li>Trolley with pulp buffer</li> <li>Wheels made of special material</li> </ul>	<ul style="list-style-type: none"> <li>Used in zones 1, 2, 21 and 22 as well as in underground and surface installations of mines according to category M2*.</li> <li>Suitable for environments with gases and dusts acc. to IIC* and IIIC, except ethylene and hydrogen sulphide</li> <li>High protection against sparks from fast moving contact parts and against corrosion of critical contact parts.</li> <li>Replacement of some components with non-corrosive and low-sparking materials (partly accompanied by load reduction due to new technological data)</li> </ul> <p><b>Versions:</b></p> <ul style="list-style-type: none"> <li>Support and load hooks treated with special coating</li> <li>Load and hand chains in NIROSTA-Design</li> <li>Trolley with pulp buffer</li> <li>Wheels made of special material</li> </ul>

\* with restrictions according to chapter 6 "Instructions for use and special conditions of use".

## Specified equipment protection levels and equipment markings for PLANETA-ATEX manual hoists and trolleys:

<b>BASIC:</b>	 II 3 G Ex h IIB T4 Gc or  II 3 D Ex h IIIB T 135 °C Dc
<b>MEDIUM:</b>	 II 2 G Ex h IIB T4 Gb or  II 2 D Ex h IIIB T 135 °C Db or  I M 2 Ex h I T 135 °C (T4) Mb X
<b>HIGH:</b>	 II 2 G Ex h IIC T4 Gb X or  II 2 D Ex h IIIC T 135 °C Db or  I M 2 Ex h I T 135 °C (T4) Mb X





## Load reduction of the standard chain hoists with "HIGH" version

Example Manual chain hoist PREMIUM PRO-EX	Chain diameter  in mm	Number of chain falls	Capacity in version BASIC / MEDIUM in kg	Reduced capacity with HIGH version in kg
PREMIUM PRO-EX 0.25	4 x 12	1	250	250
PREMIUM PRO-EX 0.5	5 x 15	1	500	500
PREMIUM PRO-EX 1	6 x 18	1	1,000	900
PREMIUM PRO-EX 1.5	8 x 24	1	1,500	1,250
PREMIUM PRO-EX 2	8 x 24	1	2,000	1,250
PREMIUM PRO-EX 3	10 x 30	1	3,000	2,000
PREMIUM PRO-EX 5	10 x 30	2	5,000	3,200
PREMIUM PRO-EX 10	10 x 30*	3	10,000	6,400

\* Grade 100





PREMIUM PRO  
3.2

## Lever hoist PREMIUM PRO

The next development stage of the reliable PLH-PREMIUM lever hoist is the PREMIUM PRO. Thanks to a significant weight saving, handling is improved. Despite this, the frame has been strengthened compared to the previous generation. Proven quality also ensures longevity and its design makes it very robust.

### Free-running mode

When the selection switch is moved to the middle point, the unladen chain can easily be pulled through the device freely to the required usage length. This makes tensioning the chain easier.

### Load chain

The tempered, galvanised load chain according to DIN EN 818-7-T is supplied with the unit. The standard lifting height is 1.5 m; any length required for higher lifting is possible.

### New chain end piece

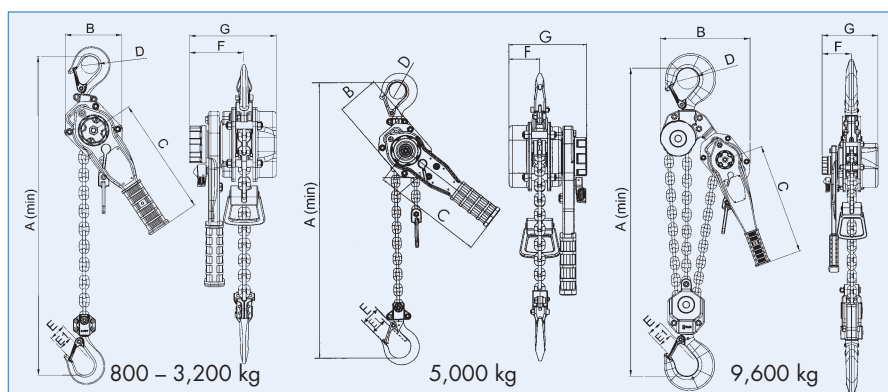
The robust chain end piece provides additional safety because it cannot be pulled through the device with the chain.

### Protected handle

The ergonomic rubber handle on the end of the lever protects the user against injury and is also screwed in place to prevent it slipping.

### Technical advantages

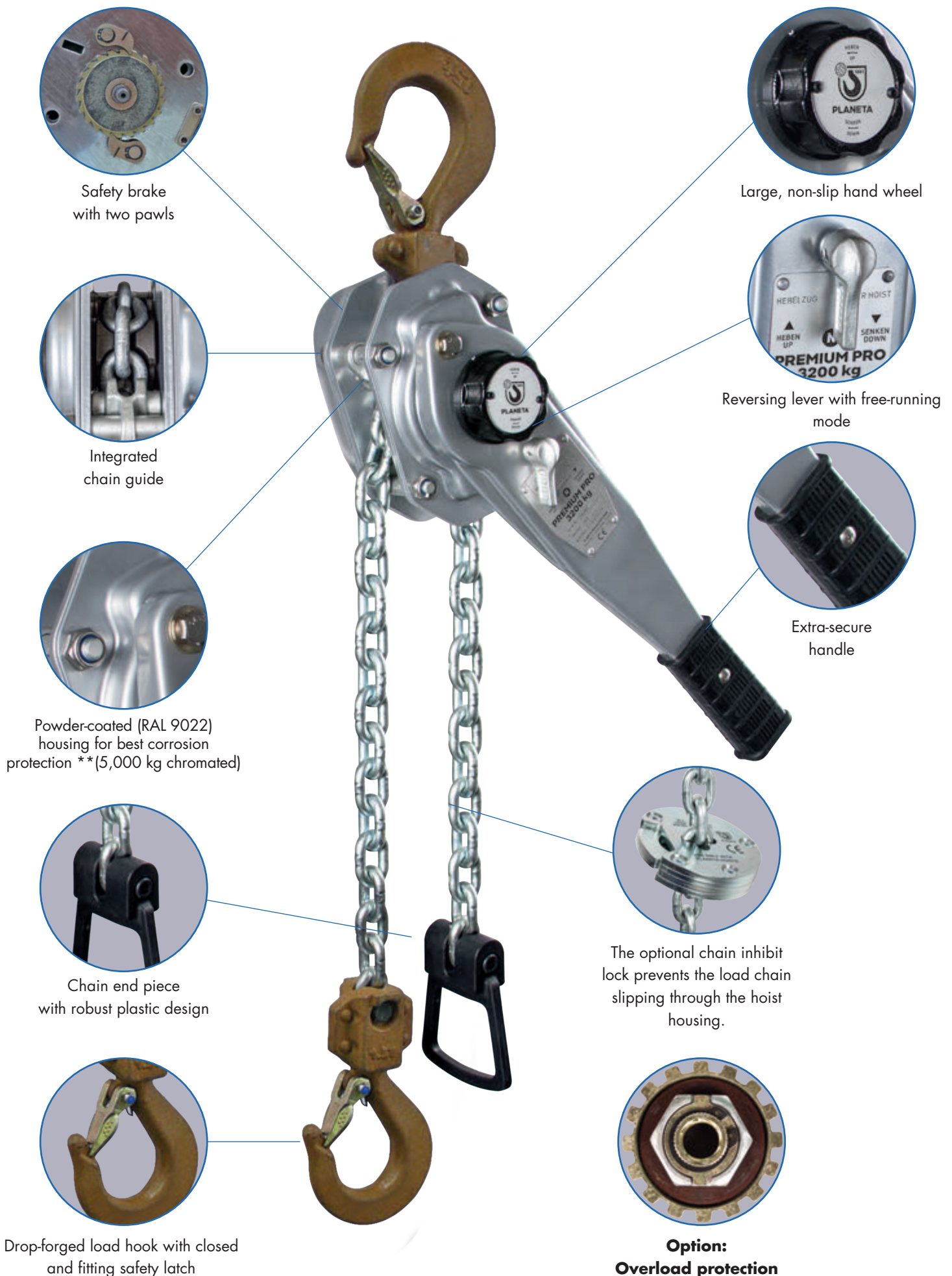
Hand lever can be used in any position thanks to the ratchet; safety automatic mechanical brake; galvanised connecting parts; cast hook clip; large, non-slip and closed hand wheel; safety chain end piece.



TYPE	PREMIUM PRO -EX...	0.8	1.6	3.2	5**	6.4	9.6
Capacity <b>Basic/Medium</b>	kg	800	1,600	3,200	5,000	6,400	9,600
Capacity <b>High</b>	kg	600	1,200	1,600	3,300	3,200	4,800
Standard lift	m	1.5	1.5	1.5	1.5	1.5	1.5
Min. headroom (A)	mm	320	360	431	655	500	635
Lever force	daN	22	24	33	37	36	38
Meters load chain movement with 1 round 360°	m	0,019	0,015	0,016	0,009	0,008	0,005
Number of chain falls		1	1	1	1	2	3
Chain size	mm	5.6 x 17	7.1 x 21	9 x 27*	13 x 36	9 x 27*	9 x 27*
B (Dimensions)	mm	115	137	169	180	238	300
C	mm	239	259	374	400	374	374
D	mm	35	42	48	60	60	70
E	mm	35	38	46	43	59	54
E1	mm	23	28.5	33	41	39	51
F	mm	91	67	98	104	98	98
G	mm	146	162	187	213	187	187
Weight with standard lift	kg	6.3	8.8	16.4	32.5	24.9	42.1
Weight for 1m additional lifting height	kg	0.7	1.1	1.8	3.7	3.6	5.4
<b>Version Basic:</b> PREMIUM PRO-EX ... with 1.5 m lift	<b>Order No.</b>	<b>G10320</b>	<b>G10321</b>	<b>G10322</b>	<b>G10323</b>	<b>G10324</b>	<b>G10325</b>
<b>Version Medium:</b> PREMIUM PRO-EX ... with 1.5 m lift	<b>Order No.</b>	<b>G10326</b>	<b>G10327</b>	<b>G10328</b>	<b>G10329</b>	<b>G10330</b>	<b>G10331</b>
Add. lifting height per m <b>Basic / Medium</b>	<b>Order No.</b>	<b>G10086</b>	<b>G10087</b>	<b>G10249</b>	<b>G10287</b>	<b>G10254</b>	<b>G10256</b>
<b>Version High:</b> PREMIUM PRO-EX ... with 1.5 m lift	<b>Order No.</b>	<b>G10338</b>	<b>G10339</b>	<b>G10340</b>	<b>G10341</b>	<b>G10342</b>	<b>G10343</b>
Add. lifting height per m <b>High</b>	<b>Order No.</b>	<b>-</b>	<b>G10345</b>	<b>G10346</b>	<b>G10347</b>	<b>G10348</b>	<b>G10349</b>

\* Grade 100 \*\*chromated





## PREMIUM PRO with EX-protection

The PREMIUM PRO-EX gets a very special surface treatment and has some changes in design that allows you to use the manual chain hoist in explosion hazardous areas. It accords to EC-guide lines 2014/34/EU.

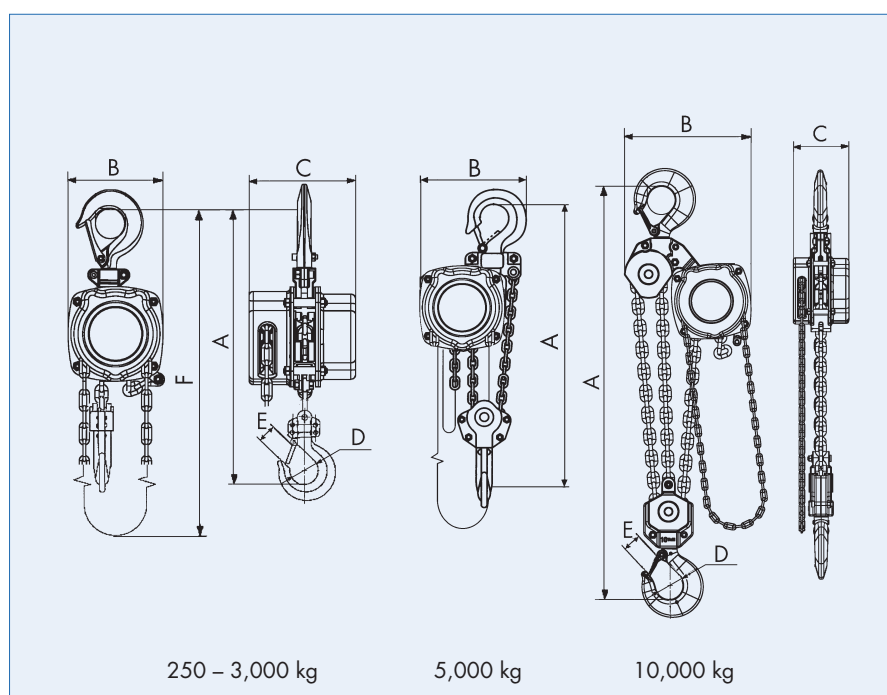
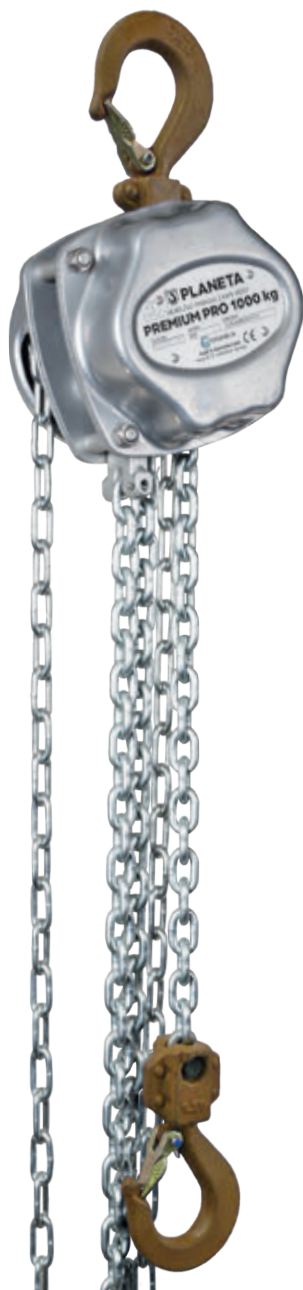
**Three explosion classes are specified. We offer the versions Basic, Medium and High. Please ask us for more detailed informations in case of doubts.**

### All around galvanization and chromatisation

Mud and dirt cannot harm this hoist! This protection begins with self-locking galvanized castle nuts, goes over bronze wheels and rustfree chains and ends with fully powder-coated housing parts. Overload protection in 0.5 t capacity hoist and bigger, supplied with ATEX-Certificate!



PREMIUM PRO 1



TYPE	PREMIUM PRO-EX ...	0.25	0.5	1	1.5	2	3	5	10
Capacity <b>Basic/Medium</b>	kg	250	500	1,000	1,500	2,000	3,000	5,000	10,000
Capacity <b>High</b>	kg	250	500	900	1,250	1,250	2,000	3,200	6,400
Standard lift	m	3	3	3	3	3	3	3	3
Min. headroom (A)	mm	259	309	373	460	460	553	630	900
Hand chain force	daN	22	24	30.5	36	36	37	39	39.5
Hand chain operation length	m	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Meters hand chain to pull to lift 1m	m	14.8	29.5	39.4	60.8	60.8	96.7	193.3	290
Number of chain falls		1	1	1	1	1	1	2	3
Chain size	mm	4 x 12	5 x 15	6 x 18	8 x 24	8 x 24	10 x 30	10 x 30	10 x 30*
B (Dimensions)	mm	95	114	152	190	190	240	240	391
C	mm	99.4	110	139	150	150	158	158	166
D	mm	30	33	40	52	52	62	72	85
E	mm	22	22	28	33	33	37	44	60
F	m	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Weight with standard lift	kg	5.8	7.6	11.5	17.2	17.2	27	40.5	61.9
Weight per m additional lift	kg	1.2	1.4	1.6	2.2	2.2	3.0	5.2	14.8
<b>Version Basic:</b> PREMIUM PRO-EX ... with 3 m lift	<b>Order No.</b>	<b>G10360</b>	<b>G10361</b>	<b>G10362</b>	<b>G10363</b>	<b>G10364</b>	<b>G10365</b>	<b>G10366</b>	<b>G10367</b>
<b>Version Medium:</b> PREMIUM PRO-EX ... with 3 m lift	<b>Order No.</b>	<b>G10368</b>	<b>G10369</b>	<b>G10370</b>	<b>G10371</b>	<b>G10372</b>	<b>G10373</b>	<b>G10374</b>	<b>G10375</b>
Add. lifting height per m <b>Basic / Medium</b>	<b>Order No.</b>	<b>G10270</b>	<b>G10271</b>	<b>G10242</b>	<b>G10243</b>	<b>G10243</b>	<b>G10272</b>	<b>G10246</b>	<b>G10247</b>
<b>Version High:</b> PREMIUM PRO-EX ... with 3 m lift	<b>Order No.</b>	<b>G10376</b>	<b>G10377</b>	<b>G10378</b>	<b>G10379</b>	<b>G10380</b>	<b>G10381</b>	<b>G10382</b>	<b>G10383</b>
Add. lifting height per m <b>High</b>	<b>Order No.</b>	<b>G50024</b>	<b>G50025</b>	<b>G50026</b>	<b>G50027</b>	<b>G50028</b>	<b>G50029</b>	<b>G50030</b>	<b>G50031</b>

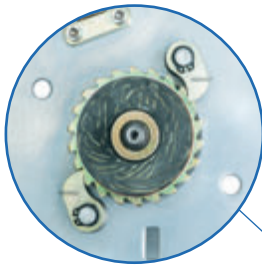
\* Grade 100 by versions Basic and Medium.

\*\* Chain bag (plastic) up to 3 m lift. Chain bag up 6 t (steel plate) on request.

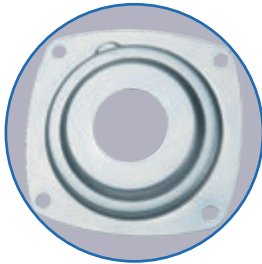
**More capacities on request.**



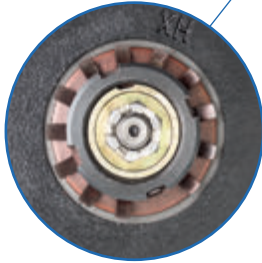
Safety brake with two pawls hold the load in any position safely! All parts corrosion protected!



Extra brake dust cover



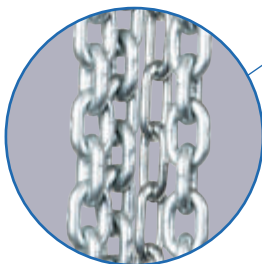
Standard overload protection (over 500 kg)



Chain mounting for lower terminal link



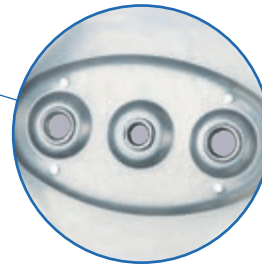
Tempered and galvanized load chain acc. DIN EN 818-7-1



Swivelling top and bottom hook



3-fold bearing of the gearbox



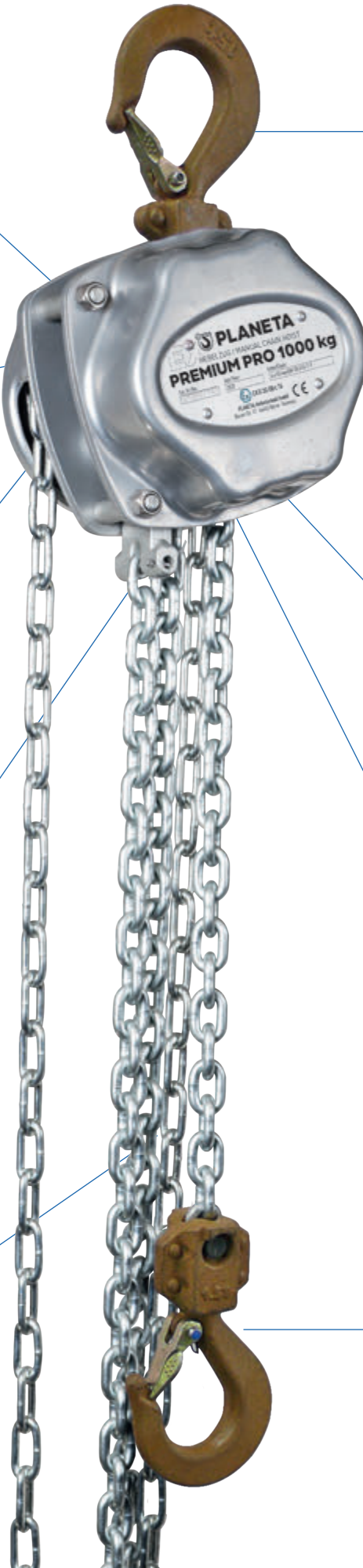
Powder-coated (RAL 9022) housing for best corrosion protection



Ball bearing mounted sprocket shaft



New cast hook clips





## **PREMIUM PRO ABK® – Corrosion resistant hand chain hoists**

Corrosive and aggressive environments like in the chemical, water treatment and animal food processing industries, need reliable lifting equipment which can withstand these elements.

**PLANETA's** Premium Pro ABK offer high resistant aluminum ceramic coatings, offer the excellent properties of ceramics such as high hardness and wear resistance.

Plasma spraying has shown excellent results in this application. During plasma spraying, oxide ceramic powder such as aluminum oxide, are melted in a plasma flame at approx. 10,000 °C and sprayed on a previously sandblasted metal surface.

The single fall hoists are as standard equipped with Grade 60 polished stainless steel lifting and maneuvering chains, as well as stainless steel hooks. Operators will sense the efficient gear ratio and low tolerance gears and perform lifting operations with the least efforts.

The failsafe brake is protected by an internal dustcover and the mechanical torque limiter protects the hoist and structures against overload. For special conditions high temperature or food grade grease is available.

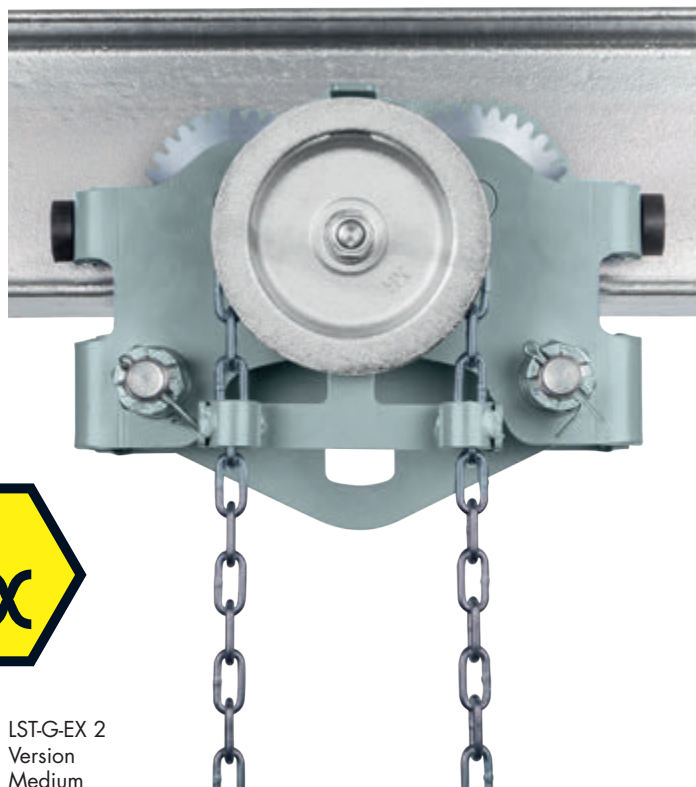








LST-H-EX 0.5  
Version  
Medium



LST-G-EX 2  
Version  
Medium

## LST-EX trolleys

The undercarriages are manufactured to a high quality and are designed for hard and long-lasting operation.

The PREMIUM PRO-EX block and tackle hoists of the same load capacity can be easily attached and detached with the hook in and out.

The trolleys have rubber buffers on both sides!

### Large adjustment range

Due to the simple change of spacers, the trolleys offer the trolleys adjustability to many carriers.

There are two flange adjustment ranges. The standard bolts are adjustable for normal widths, the size 2 bolts offer an extended adjustment range up to large HE-B beams with 300 mm flange width.

### Double safety

Double anti-tippers on both sides of all trolleys prevent the trolleys from climbing onto the girder. Angled side plates act as fall protection.

### Stable side plates

Balanced load distribution on four wheels due to Self-adjustment with two carrying bolts! Slightly movable support bolts allow the side plates to automatically adjust to any unevenness of the running surface.

## EX-protection version

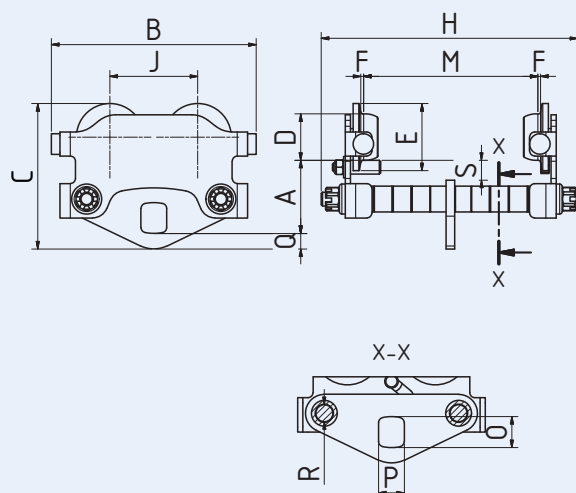
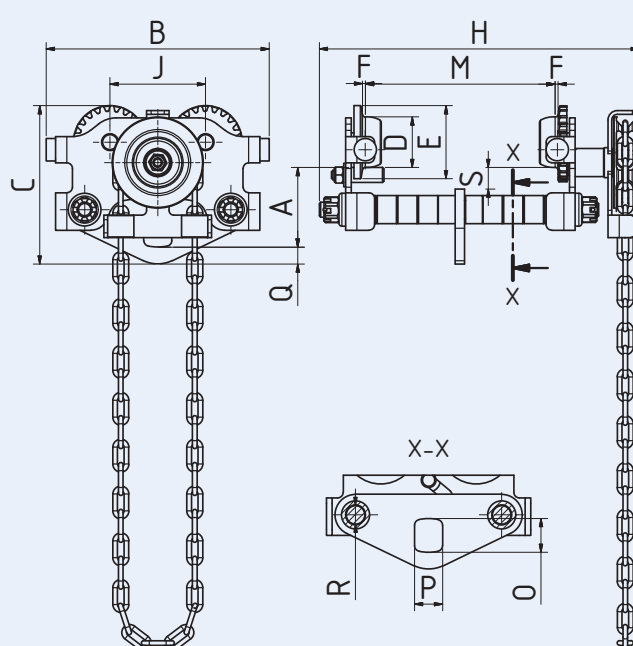
For EX-protected applications, specially treated wheels and hand treated wheels and hand chains made of stainless steel are available, which makes the trolleys suitable for EX-areas up to zone 1 II 2 G IIC T4. the trolleys. The trolleys comply with the ATEX Directive 2014/34/EU.

### Types:

**LST-H-EX** = Push trolley

**LST-G-EX** = Gear type trolley

The trolleys shown are designed for use with manual hoists.


**LST-H-EX**

**LST-G-EX**

TYPE		LST-H-EX ...	0.5	1	2	3	5	10	-
TYPE		LST-G-EX ...	0.5	1	2	3	5	10	20
Capacity	kg		500	1,000	2,000	3,000	5,000	10,000	20,000
Flange width M min. – max.	mm		50–203	64–203	88–203	100–203	114–203	124–203	136–203
Min. curve radius	m		0.85	1	1.1	1.3	1.4	2	a.A.
Hand chain operation length LST-G-EX	m		2.5	2.5	2.5	2.5	2.5	2.5	2.5
Reel path for 1 m path LST-G-EX	m		2.96	3.63	4.65	5.66	6.34	7.98	10.63
A (Dimensions)	mm		85	103	115	125	143	187	250
B	mm		238	288	338	390	472	476	564
C	mm		169	207	237	271	307	381	514
D	mm		54	67	80	100	109	133	170
E	mm		78	96	111	133.5	145	176	228
F	mm		3	3	3	4	4	4	4
H (LST-H-EX)	mm		298	314	325	355	381	388	–
H (LST-G-EX)	mm		342	363	374	403	428	445	498
J	mm		102	112	131	153	168	194	234
O	mm		36	40	48	54	66	80	130
P	mm		30	36	40	46	52	64	100
Q	mm		18	22	26	29	37	40	65
R	mm		Ø 20	Ø 24	Ø 29	Ø 34	Ø 39	Ø 44	Ø 59
S	mm		23	24	28	26	28	50	55
Net weight LST-H-EX	kg		9	14	22	36	55	86	–
Net weight LST-G-EX	kg		11	16	24	39	59	89	190
<b>Version Basic:</b> LST-H-EX	<b>Order No.</b>		<b>G20400</b>	<b>G20401</b>	<b>G20402</b>	<b>G20403</b>	<b>G20404</b>	<b>G20405</b>	<b>–</b>
<b>Version Medium:</b> LST-H-EX	<b>Order No.</b>		<b>G20410</b>	<b>G20411</b>	<b>G20412</b>	<b>G20413</b>	<b>G20414</b>	<b>G20415</b>	<b>–</b>
<b>Version High:</b> LST-H-EX	<b>Order No.</b>		<b>G20420</b>	<b>G20421</b>	<b>G20422</b>	<b>G20423</b>	<b>G20424</b>	<b>G20425</b>	<b>–</b>
<b>Version Basic:</b> LST-G-EX with 2.5 m operation length	<b>Order No.</b>		<b>G20430</b>	<b>G20431</b>	<b>G20432</b>	<b>G20433</b>	<b>G20434</b>	<b>G20435</b>	<b>G20436</b>
<b>Version Medium:</b> LST-G-EX with 2.5 m operation length	<b>Order No.</b>		<b>G20440</b>	<b>G20441</b>	<b>G20442</b>	<b>G20443</b>	<b>G20444</b>	<b>G20445</b>	<b>G20446</b>
<b>Version High:</b> LST-G-EX with 2.5 m operation length	<b>Order No.</b>		<b>G20450</b>	<b>G20451</b>	<b>G20452</b>	<b>G20453</b>	<b>G20454</b>	<b>G20455</b>	<b>G20456</b>
Add. hand chain operation length/m (Basic/Medium)	<b>Order No.</b>		<b>G20017</b>	<b>G20017</b>	<b>G20017</b>	<b>G20017</b>	<b>G20017</b>	<b>G20017</b>	<b>G20017</b>
Add. hand chain operation length/m (High)	<b>Order No.</b>		<b>G20520</b>	<b>G20520</b>	<b>G20520</b>	<b>G20520</b>	<b>G20520</b>	<b>G20520</b>	<b>G20520</b>
Larger flange width min. – max.	mm		50–305	64–305	68–305	100–305	114–305	124–305	136–305
	<b>Order No.</b>		<b>G20090</b>	<b>G20091</b>	<b>G20093</b>	<b>G20094</b>	<b>G20095</b>	<b>G20097</b>	<b>G20099</b>
Position lock device	<b>Order No.</b>		<b>G20521</b>	<b>G20522</b>	<b>G20524</b>	<b>G20525</b>	<b>G20526</b>	<b>G20527</b>	<b>G20528</b>
Extended handwheel shaft	<b>Order No.</b>		<b>G20529</b>	<b>G20530</b>	<b>G20531</b>	<b>G20532</b>	<b>G20533</b>	<b>G20534</b>	<b>G20535</b>

Other capacities on request!





LHT-H-EX 005L  
Version Medium



LHT-G-EX 005L  
Version Medium



## EX-proof combined trolleys LHT-EX

By directly connecting the manual chain hoist and the trolley, the upper hook of the conventional manual chain hoist is saved and thus the overall height is significantly reduced. Here we use our proven Premium Pro manual chain block in the explosion-protected version.

The Premium Pro manual chain hoist with ball bearings is also suitable for heavy-duty use and protected against corrosion by its coated components. Additionally stainless steel components prevent sparking. The standard overload protection prevents overloading of the hoist and the supporting structure. If the Ex class Medium or High is required the load hook is additionally coated against sparking.

The LHT trolley is coated on all sides to reduce sparking and the stainless steel ball bearing wheels ensure smooth running.

Stainless steel load and hand chains are used depending on which Ex class is required..

### Standard version:

- Premium Pro EX (BASIC, Medium, High) Manual chain hoist with 3 m lift and 2.5 m manual chain.
- Available as push trolley (TYPE: H) or as gear type trolley (TYPE: G)
- Thanks to the crowned wheel profiles, the LHT is suitable for I-NP girders with inclined flanges as well as for all other HE girders with parallel flanges.

### Special equipment (on request):

- Chain box for suspended chain
- Design for rust-prone areas with special chains
- Special flange widths up to 305 mm possible if the specified adjustment range (dimension H) is no longer sufficient.

### Advantages of a combined trolley:

- Optimum utilisation of the often narrow installation space between machines and raceway supports
- Reduction of downtimes e.g. in ship engine rooms
- Less expensive bridge and jib cranes
- Labour savings during repair and maintenance work.

### Types:

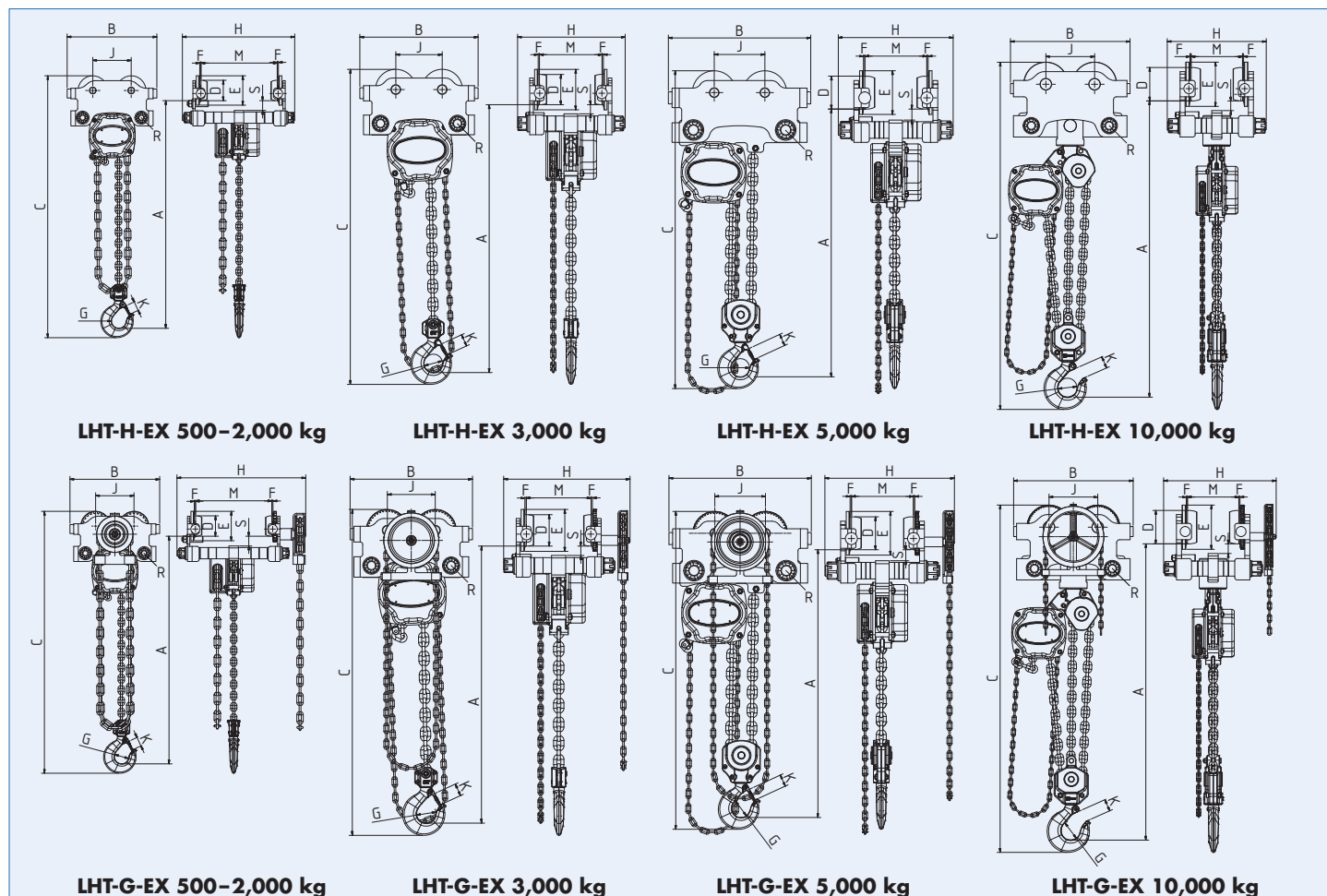
**LHT-H-EX** = Manual chain hoist with push trolley

**LHT-G-EX** = Manual chain hoist with gear type trolley

TYPE	LHT...-H/-G-EX	005L	010L	015L	020L	030L	050L	100L
Capacity <b>Basic/Medium</b>	kg	500	1,000	1,500	2,000	3,000	5,000	10,000
Capacity <b>High</b>	kg	500	900	1,250	1,250	2,000	3,200	6,400
Standard lift	m	3	3	3	3	3	3	3
Number of chain falls		1	1	1	1	1	2	3
Chain size	mm	5 x 15	6 x 18	8 x 24	8 x 24	10 x 30	10 x 30	10 x 30*
Min. headroom (A)	mm	268	318	388	388	472	595	800
Flange width min.-max. (M)	mm	50-203	64-203	88-203	88-203	100-203	114-203	124-203
Min. curve radius	m	0.85	1	1.1	1.1	1.3	1.4	2
Reel path for 1 m Hub	m	29.5	39.4	60.8	60.8	96.7	193.3	290
Reel path for 1 m path LHT-G	m	3	3.6	4.7	4.7	5.7	6.3	8
Weight with 3 m lift LHT-H	kg	13.5	22	42	42	56	82	143
Weight with 3 m lift LHT-G	kg	14.8	23.5	43.7	43.7	58	85	148
<b>Version Basic:</b> LHT-H-EX with 3 m lift	<b>Order No.</b>	<b>G20460</b>	<b>G20461</b>	<b>G20462</b>	<b>G20463</b>	<b>G20464</b>	<b>G20465</b>	<b>G20466</b>
<b>Version Medium:</b> LHT-H-EX with 3 m lift	<b>Order No.</b>	<b>G20470</b>	<b>G20471</b>	<b>G20472</b>	<b>G20473</b>	<b>G20474</b>	<b>G20475</b>	<b>G20476</b>
Additional lift per m (LHT-H-EX)	<b>Order No.</b>	<b>G10271</b>	<b>G10242</b>	<b>G10243</b>	<b>G10243</b>	<b>G10272</b>	<b>G10246</b>	<b>G20077</b>
<b>Version High:</b> LHT-H-EX mit 3 m Hub	<b>Order No.</b>	<b>G20480</b>	<b>G20481</b>	<b>G20482</b>	<b>G20483</b>	<b>G20484</b>	<b>G20485</b>	<b>G20486</b>
Additional lift per m (LHT-H-EX)	<b>Order No.</b>	<b>G50025</b>	<b>G50026</b>	<b>G50027</b>	<b>G50028</b>	<b>G50029</b>	<b>G50030</b>	<b>G50031</b>
<b>Version Basic:</b> LHT-G-EX with 3 m lift	<b>Order No.</b>	<b>G20490</b>	<b>G20491</b>	<b>G20492</b>	<b>G20493</b>	<b>G20494</b>	<b>G20495</b>	<b>G20496</b>
<b>Version Medium:</b> LHT-G-EX with 3 m lift	<b>Order No.</b>	<b>G20500</b>	<b>G20501</b>	<b>G20502</b>	<b>G20503</b>	<b>G20504</b>	<b>G20505</b>	<b>G20506</b>
Additional lift per m (LHT-G-EX)	<b>Order No.</b>	<b>G20320</b>	<b>G20321</b>	<b>G20322</b>	<b>G20323</b>	<b>G20324</b>	<b>G20325</b>	<b>G20327</b>
<b>Version High:</b> LHT-G-EX with 3 m lift	<b>Order No.</b>	<b>G20510</b>	<b>G20511</b>	<b>G20512</b>	<b>G20513</b>	<b>G20514</b>	<b>G20515</b>	<b>G20516</b>
Additional lift per m (High) (LHT-G-EX)	<b>Order No.</b>	<b>G20536</b>	<b>G20537</b>	<b>G20538</b>	<b>G20539</b>	<b>G20540</b>	<b>G20541</b>	<b>G20542</b>
Position lock device	<b>Order No.</b>	<b>G20521</b>	<b>G20522</b>	<b>G20523</b>	<b>G20524</b>	<b>G20525</b>	<b>G20526</b>	<b>G20527</b>
Larger flange width (M) min.-max.	mm	64-305	64-305	88-305	88-305	100-305	114-305	124-305
	<b>Order No.</b>	<b>G20090</b>	<b>G20091</b>	<b>G20092</b>	<b>G20093</b>	<b>G20094</b>	<b>G20095</b>	<b>G20097</b>

Chain bag (plastic) on request.

\* Grade 100



## SUPER-Corrosion protection (Basic/Medium)

HD3N-trolleys have outstanding corrosion protection. All steel parts are electrolytically zinc plated. This is a must in wet rooms and in very aggressive environment. Larger flange width (size 2 - 4) are optional. Wheels fit flat and also tapered flanges!

**Capacities up to 25,000 kg on request.**

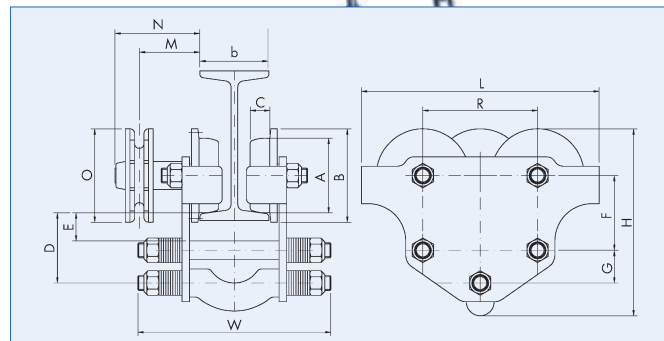
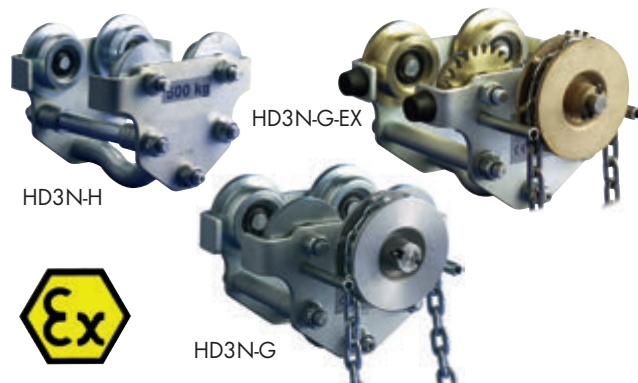
## EX-protection version (High)

Trolleys for use in environments with explosion danger (so-called ex-proof areas) are equipped with bronze wheels and sparkfree hand chains for EX-areas **up to ⚡-Zone 1 II 2 G IIC T4**.

The trolleys accord to ATEX Directive 2014/34/EU.

**Many special version upon request.**


- Person transporting trolleys - acc. EN 1808 up to 4 t capacity
- Flame zinc plating
- NIROSTA - trolleys up to 3,000 kg (non-corrosive steel)
- Bogie trolleys up to 10,000 kg
- Rack and pinion trolleys up to 12,500 kg



TYPE	HD3N-H-EX ...	0.5	1	2	3.2	5	6.3	8	10	12.5	20
TYPE	HD3N-G-EX ...	-	1	2	3.2	5	6.3	8	10	12.5	20
Capacity	kg	500	1,000	2,000	3,200	5,000	6,300	8,000	10,000	12,500	20,000
Maximum weight of hoist	kg	100	120	250	150	300	200	550	600	150	800
Flange width b	min. / max. Size 1 mm	55/102	55/102	74/127	90/143	106/156	106/156	106/156	131/195	143/222	170/212
	min. / max. Size 2 mm	105/152	105/152	127/180	149/203	160/210	160/210	167/247	196/271	223/298	-
	min. / max. Size 3 mm	-	156/203	190/243	203/254	210/260	210/260	248/349	272/363	299/389	-
	min. / max. Size 4 mm	-	207/254	254/305	251/305	255/305	255/305	-	-	-	-
Hand chain force	daN	-	10	16	20	20	25	16	19	23	25
Hand chain operation length	m	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Min. curve radius	m	1	1.5	1.6	2	2.9	2.9	3.5	3.5	3.5	3.5
A (Dimensions)	mm	45	60	80	100	125	125	160	160	160	200
B	mm	60	75	100	120	150	150	190	190	190	240
C	mm	15	18	22	25	30	30	35	35	35	50
D	mm	52	60	75	90	117	117	145	145	145	165
E	mm	15	20	27	35	40	40	45	45	45	42
F	mm	45	60	80	100	120	120	145	145	145	165
G	mm	30	30	35	40	60	60	80	80	80	100
H	mm	125	150	195	235	295	300	365	370	375	450
L	mm	150	190	255	300	375	375	450	450	450	550
M	mm	-	65	65	70	100	100	115	115	115	135
N	mm	-	90	90	95	130	130	135	135	135	170
O	mm	-	100	100	100	135	135	270	270	270	300
W	Size 1 mm	160	170	215	250	275	275	b + 150	b + 150	b + 150	b + 185
	Size 2 mm	210	220	265	310	330	330				
	Size 3 mm	-	270	330	360	380	380				
	Size 4 mm	-	325	390	410	425	425				
R	mm	75	99	123	144	174	174	220	220	220	272
S	Size 1 mm	20	20	30	35	40	45	40	50	55	65
	Size 2 mm	20	25	35	40	45	50	45	55	60	-
	Size 3 mm	-	30	35	40	50	55	50	60	65	-
	Size 4 mm	-	30	40	45	50	55	-	-	-	-
Net weight HD3N-H	kg	3	5	11	18	33	35	85	90	95	150
Net weight HD3N-G	kg	-	6	12	19	35	36	90	95	100	160
Version Basic/Medium HD3N-H	Order No.	G20120	G20121	G20122	G20123	G20124	G20125	G20126	G20127	G20128	G20290
Version High HD3N-H	Order No.	G20130	G20131	G20132	G20133	G20134	G20135	G20136	G20137	G20138	G20291
Version Basic/Medium HD3N-G with 2.5 m operation length	Order No.	-	G20141	G20142	G20143	G20144	G20145	G20146	G20147	G20148	G20292
Version High HD3N-G with 2.5 m operation length	Order No.	-	G20151	G20152	G20153	G20154	G20155	G20156	G20157	G20158	G20293
Add. hand chain operation length/m Standard zinc plated (2.5 m total)	Order No.	G20118	G20118	G20118	G20118	G20118	G20118	G20118	G20118	G20118	G20118
Add. hand chain operation length/m V2A (EX) rustfree (2.5 m total)	Order No.	G20119	G20119	G20119	G20119	G20119	G20119	G20119	G20119	G20119	G20119
Larger flange width size 2-4	Order No.	G20160	G20161	G20162	G20163	G20164	G20165	-	-	-	-
Flame zinc plating	Order No.	G20170	G20171	G20172	G20173	G20174	G20175	G20179	G20177	G20178	G20295



## Mini-Hoist TCRM/TCS

If you are looking for an excellent technical, flexible and compact air hoist that works under many different situations, now here it is. The new model range TC. This series comprises the new 125 to 990 kg pneumatic chain hoists. The TC is one of the most compact and transportable air chain hoist you can get. The headroom of the TC hoist is only 305 mm (125/250 kg). Although the weight is only 7 kg with inclusive 3 m length of load chain, the air hoist can lift up to 17 meters per minute without any problem. The new TC is available with rope or pendant control including emergency stop. The keys allow optimal control over variable speeds. Use up to  **Zone IIA 3 GD c T4/T5/T6**.



TCRM 250C  
(Rope control)



Chain bag  
for TCRM



### Light

Very light weighted aluminium housing



### Fast

Lifting speed from 4.5  
17 m/min with full load



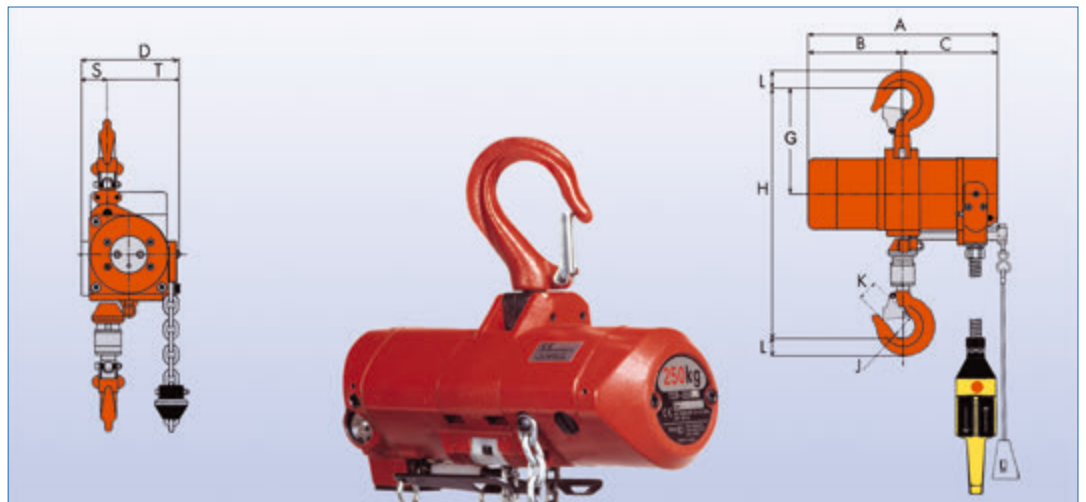
TCRM 250DP  
(Pendant  
control)



TCS-500  
high precisely  
speed control



TCS-980  
with  
chain case



TYPE	TCR...	M125 C/DP	M250 C/DP	M500 C2/DP2	TCS-500	TCS-980*
Capacity	kg	125	250	500	500	990
Number of chain falls		1	1	2	1	2
Air pressure	bar	6	6	6	6	6
Lifting speed with full load	m/min	14	9.3	4.5	17	8.5
Lifting speed without load	m/min	19	19	9.5	33	16.5
Air consumption	l/s	11.7	11.7	11.7	33	33
Chain dimensions	mm	4 x 12	4 x 12	4 x 12	6.3 x 19	6.3 x 19
Control length	m	2	2	2	2	2
Min. Headroom (H)	mm	305	305	365	414	456
A (Dimensions)	mm	230	230	230	365	365
B	mm	110	110	110	204	204
C	mm	120	120	120	161	161
D	mm	95	95	95	143	173
G	mm	130	130	130	151	173
K	mm	29	29	29	25	29
L	mm	15	15	15	15	29.5
S	mm	35	35	35	31	37
T	mm	60	60	60	112	136
Weight with standard lift	kg	7	7	8.5	15.9	16.8
Weight for 1 m additional lift	kg	0.35	0.35	0.7	0.9	1.8
TCR/TCS... with 3 m lift and rope control	Order No.	H10070	H10071	H10072	H10088	H10108
TCR/TCS... with 3 m lift and pendant control	Order No.	H10073	H10074	H10075	H10098	H10118
Additional lift per meter	Order No.	H10076	H10076	H10077	H10069	H10128

\* Equipped with chain case up to 4 m lifting height.

Chain case for TYPE	Size of chain case	Order No.
TCRM 125	up to 12 m chain	H10354
	up to 20 m chain	H10355
TCRM 250	up to 12 m chain	H10354
	up to 20 m chain	H10355
TCRM 500	up to 6 m chain	H10354
	up to 10 m chain	H10355



TCR 1000C2  
with cable control  
(Chain control)

## Air chain hoist LIFTMASTER TCR

### The areas of application

A hoist can not just be selected for its load bearing capacity. Easy operation, the type of task, the frequency of use, the required speed and precision of the control are important factors that must be considered. The LIFTMASTER compressed air hoist can basically be used wherever electric hoists are used. Furthermore, it is particularly suitable for explosive areas and corrosive atmospheres, as its motor is innately non-sparking and extremely resistant to environmental influences. Expensive protective measures are therefore not required.

### Fault-free operation

Overloads cannot damage the LIFTMASTER, as there is no overheating and torsion that burns through. To protect the bearing structures and to conform with the CE Machinery Directive, as of a load bearing capacity of 1 t, adjustable overload cut-off devices are provided, which are also available as an option for smaller devices. Whether it's being stopped and started or operated continuously: you can expect reliable performance.

### Compact and light

Small dimensions and a light structure make the LIFTMASTER ideal for low installation conditions.

### Variable speed

Unlimited speed changes make it possible to position loads accurately and precisely. The knotted link control can be controlled very precisely thanks to its direct connection to the control rod.

### Soft start and stop

The LIFTMASTER provides high operational safety. A soft start-up reduces wear, as gentle operation of the compressed air hoists leads to fewer vibrations and a longer device service life.

### Best cost effectiveness

Thanks to the low air consumption and the low procurement cost, the LIFTMASTER is very cost-effective.

### The flexibility

For loads of up to 120 kg that have to be moved frequently and precisely, the EHW compressed air hoist with a cable and a control on the device is the solution!

### Standard

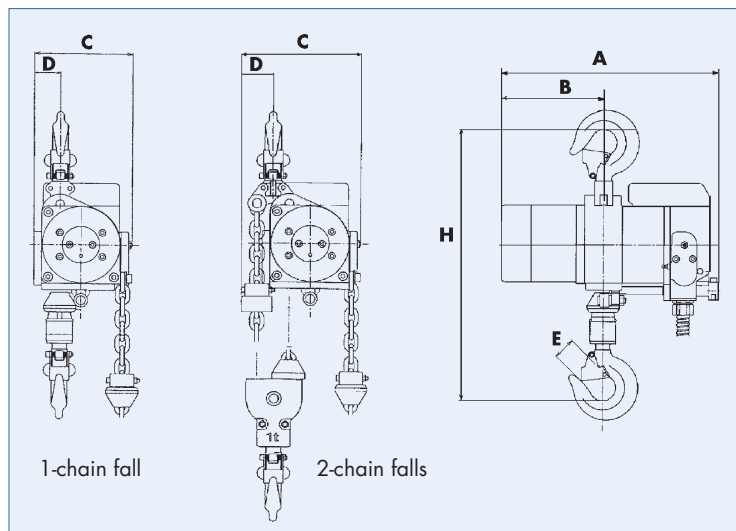
3 m lifting height, 2 m control length, up to **Zone IIA 3 GD c T4/T5/T6**. Also see the "EX-protection information" part. Higher EX-protection upon request!

### Air pressure

The LIFTMASTER achieves its specified performance data at 6 bar flow pressure. 4 or 5 bar is also sufficient, whereby only 70 or 85 % of the speeds are reached. The rated load is always lifted. The very comprehensive range of TCR compressed air hoists from 0.25 to 100 tonnes has a very convenient ratio of size to performance. The speeds of the hoists can be varied infinitely and they are designed for continuous use, a switch-on duration of 100 % is no problem. Smooth starts and stops prevent "shock" movements. The TCR compressed air hoists are particularly suitable for continuous and safe use thanks to their compact cast steel housing.

### Equipment features:

- Drop-forged, high-strength **hook** made of tempered steel
- Stable, galvanised **hook aperture safeguards**
- Effective **noise suppressor**
- Precise **chain guide** with chain wiper
- Reliably starting **multi-disc motor** with 7 discs
- Control valve for precise speed control
- Robust **cast metal housing**
- Drive chain sprocket with accurately fitting, **milled** recesses
- Limit switches for top and bottom hook position, and rocker switch for knotted link chain control
- **Flexible** control hoses
- Round steel chain in accordance with DIN EN 818-7-T, with **rust protection coating**
- Three-stage **planetary gear**
- Automatic **disc brake**
- **EMERGENCY STOP button**, also for 4-fold button control with trolley, in accordance with EN 418.
- Rotatable hook bundle in axial ball bearing



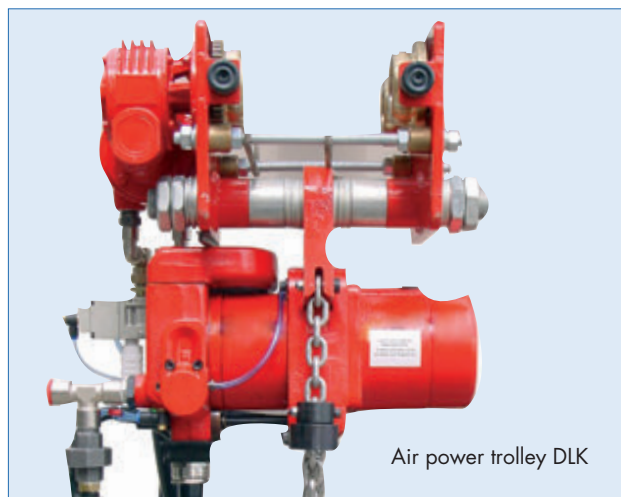
TYP	TCR ...	A	B	C	D	E	H
TCR 250 C/P		342	156	149	52	29	462
TCR 500 C/P		342	156	149	52	29	462
TCR 1000 C2/P2		342	156	180	47	29	519
TCR 1000 C/P		342	156	157	40	29	466
TCR 2000 C2/P2		342	156	194	50	29	580
TCR 20 C4/P4		549	247	230	200	100	1,350

TYPE	LIFTMASTER TCR ...	250C/P	500C/P	1000C2/P	1000C/P	2000C2/P	20-C4/P4
Capacity (Air pressure 6 bar - 1Bm)	kg	250	500	1,000	1,000	2,000	20,000
Lifting speed without load	m/min	20.5	20.5	10.3	11.3	5.7	1.2
Lifting speed with full load	m/min	10.5	10.5	5.3	6	3	0.8
Lowering speed without load	m/min	13.4	13.4	6.7	6.8	3.4	0.9
Lowering speed with full load	m/min	17.9	17.9	9	10.3	5.2	1.2
Air consumption with full load	l/sec	25	25	25	25	25	90
Number of chain falls		1	1	2	1	2	4
Air inlet R	inch	1/2"	1/2"	1/2"	1/2"	1/2"	1"
Chain size (diameter)	mm	6.3 x 19.1	6.3 x 19.1	6.3 x 19.1	7.1 x 21	7.1 x 21	16 x 45
Weight with standard lift	kg	31	31	34	35	40	470
TCR... with 3 m Lift with rope control	Order No.	H10001	H10002	H10003	H10004	H10005	H10011
TCR... with 3 m Lift with pendant control	Order No.	H10015	H10016	H10017	H10018	H10019	H10025
Add. lift per meter	Order No.	H10029	H10029	H10030	H10031	H10032	H10038
Maintenance unit	Order No.	H10054	H10054	H10054	H10054	H10054	H10056
Chain bag (plastic) to 3 m lift	Order No.	H10340	H10341	H10342	H10343	H10344	-
Add. air powered trolley DLK	Order No.	H10044	H10052	H10053	H10099	H10045	H10050
Add. control length rope control / m	Order No.	H10042	H10042	H10042	H10042	H10042	H10042
Add. control length pendant control / m	Order No.	H10043	H10043	H10043	H10043	H10043	H10043
Pneumatic-Special-Oil (Content: 2.5 Liter)	Order No.	H20566	H20566	H20566	H20566	H20566	H20566

Chain bag up 10 t (steel plate) on request.

## Air power trolley DLK

**Trolleys upon request!**



Air power trolley DLK





TMH 3000



TMH 6000



TMH 25000

## LIFTMASTER TMH air chain hoist

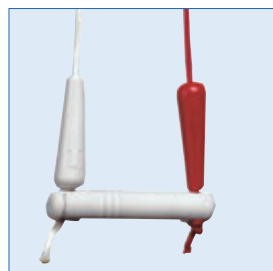
The LIFTMASTER TMH compressed air chain hoist has the highest lifting speeds with the smallest installation height on the hoist market. With an M4 "Class of Mechanism", this new hoist has a long service life, which guarantees continuity in your work. The TMH hoists have been designed with a fastening eye on the housing for easy installation and to affix the hoist for additional safety (while working).

### Equipment features:

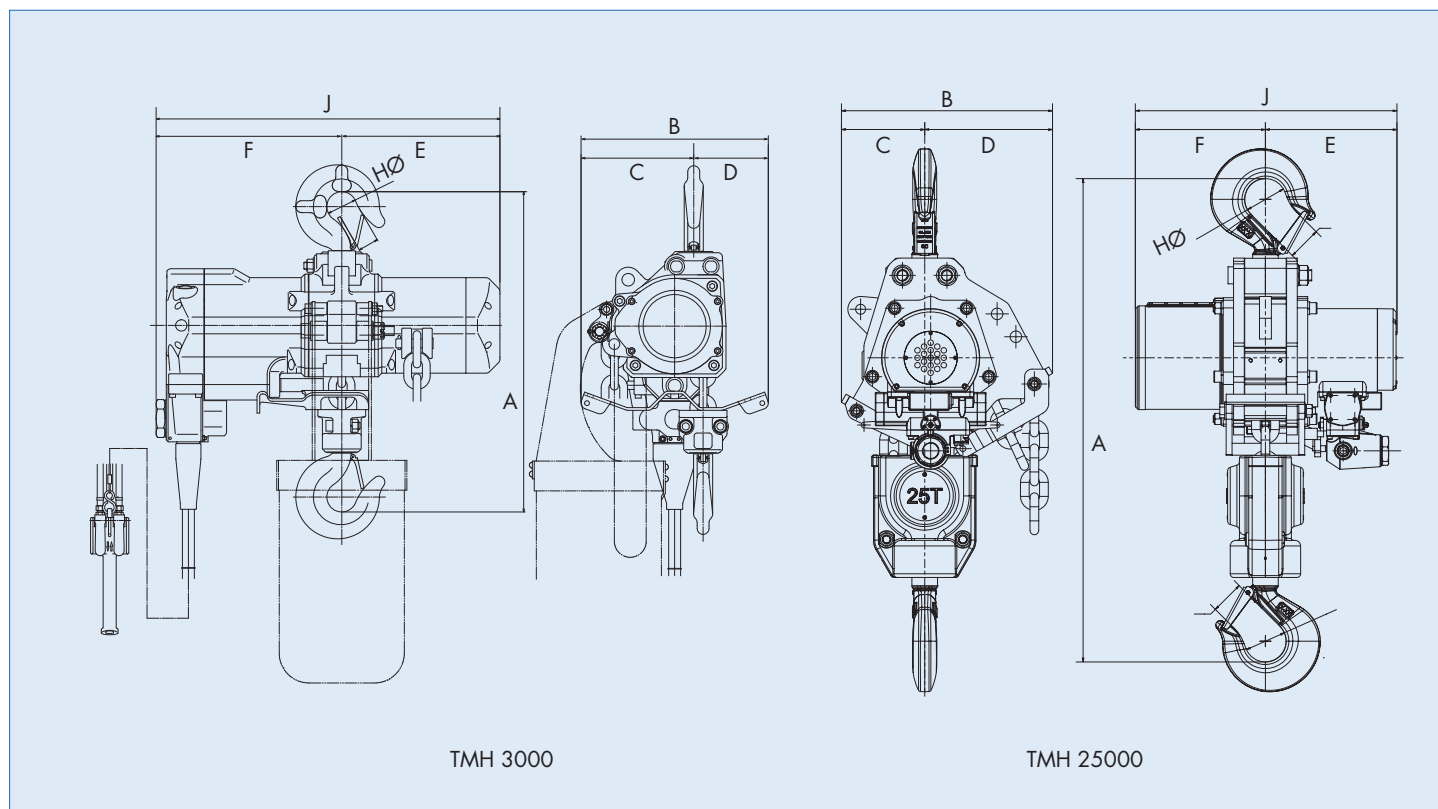
- Very accurate speed control (cable and pushbutton operation)
- Optimum checks and exact positioning of the load
- Closing valve for the main air passage
- Mechanical limit stop shut-off
- Integrated load limiter without losing the construction height
- Operational air pressure (4 – 6.3 bar)
- Exhaust air through the hose



Manual push-button control



Rope control



TYPE	LIFTMASTER TMH ...	3000	6000	9000	12000	15000	25000
Capacity (Air pressure 6 bar - 1Bm)	kgt	3,000	6,000	9,000	12,000	15,000	25,000
Lifting speed without load	m/min	10.8	5.4	3.6	2.7	2.16	2.7
Lifting speed with full load	m/min	5.4	2.7	1.8	1.35	1.08	1.4
Lowering speed with full load	m/min	10.2	5.1	5.1	2.5	2.04	3
Air consumption with full load	l/sec	58.3	58.3	58.3	58.3	58.3	108
Number of chain falls		1	2	3	4	5	2
Air inlet R	Zoll	¾" BSPT	¾" BSPT	¾" BSPT	¾" BSPT	¾" BSPT	1½" BSPT
Chain size	mm	13 x 36	13 x 36	13 x 36	13 x 36	13 x 36	23.5 x 66
A (Dimensions)	mm	537	742	800	856	855	1,290
B	mm	314	371	455	398	466	566
C	mm	189	245	295	249	313	223
D	mm	125	126	160	149	152	343
E	mm	265	265	310	266	275	356
F	mm	311	311	265	309	300	352
H	ø mm	50	65	53	83	84	100
I	mm	34	42	53	64	58	71
J	mm	576	576	576	575	575	708
Weight with standard lift	kg	99	124	170	190	280	581
TMH... with 3 m Lift with rope control	Order No.	H10360	H10362	H10369	H10371	H10373	H10366
TMH... with 3 m Lift with pendant control	Order No.	H10361	H10363	H10370	H10372	H10374	H10367
Add. lift per meter	Order No.	H10364	H10365	H10377	H10378	H10379	H10368
Maintenance unit	Order No.	H10054	H10054	H10056	H10056	H10056	H10090
Chain bag (galvanised steel) to 3 m lift)	Order No.	H10345	H10345	H10345	H10345	H10345	-
Add. air powered trolley DLK	Order No.	H10046	H10047	H10047	H10047	H10047	H10051
Add. control length rope control / m	Order No.	H10042	H10042	H10042	H10042	H10042	H10042
Add. control length pendant control / m	Order No.	H10043	H10043	H10043	H10043	H10043	H10043
Pneumatic-Special-Oil (Content: 2.5 Liter)	Order No.	H20566	H20566	H20566	H20566	H20566	H20566

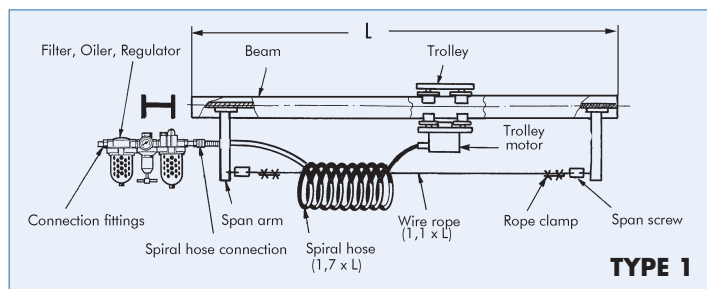
Other capacities on request!

## TYPE 1: Spiral hose

Beam length up to 10 m are best to serve with a spiral hose for air supply. A rope is spanned parallel to the beam between two holding arms. The spiral hose winds around it. The plastic hose acts like a spiral spring, gets longer or shorter with the moving trolley.

### Complete set for 3 meter beam drive:

Spiral hose with reserve ( $1.7 \times L$ ), twistable connections with male thread, 2 span arms, wire rope with reserve, 4 rope clamps and 2 span screws. The maintenance unit (filter, lubricator, regulator) should be fixed as near as possible to the trolley. Short beams may have it at the beginning of the beam.



## TYPE 2: Drag hose

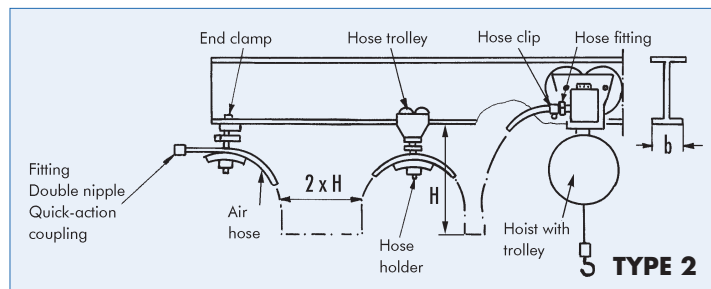
Pulling the air hose behind the trolley is the easiest way to bring air to the hoist. Small plastic trolleys carry the hose in certain distance behind the trolley. The hose hangs normally one meter down. So one hose carrier is needed each two meters. The hose is transparent with a strengthening textile inlet. It stands a pressure up to 15 bar. Water and oil cannot harm it. Since the trolleys are pushed together when the train comes into end position, the beam must be a little bit longer.

### Complete set

The beside mentioned order number includes all accessory for a beam length of 3 m. In details: air hose plus 3 meter addition for leading down to the ground where a ball valve cuts air supply off. Plastic trolleys, end clamp, nipples end other fittings. If the hose shall be detachable, a quick-acting coupling shall be ordered.

### ATTENTION:

Driving through curves need special equipment. Please inquire!



## TYPE 3: C-track

A C-track is the most comfortable air supply. The total beam length can be used for driving. This TYPE is mostly used with slewing cranes because the complete length of swing arm is necessary to

drive on. Here the holding arm of C-rack can be fixed easily what is difficult in opposite under the ceiling in case of a double T-beam. C-tracks are available in lengths of 6 m. They are added with combiners to longer rails.

### Complete set

The beside mentioned order number includes all accessory for a beam length of 3 m. In details: air hose plus 3 meter addition for leading down to the ground, where a ball valve cuts air supply off. Three holding arms, connection clamps, screws, C-rail holder, C-rails in 2 m length, C-rail connectors, first trolley leading arm, hose clamps, fittings.

All metal parts are zinc plated.

Remind when ordering that hoses have the correct diameter.

Choose one size bigger in case that hoses are longer than 10 m.

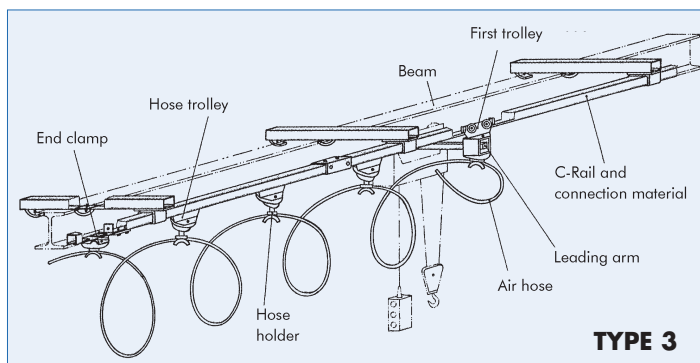
The longer the hose, the deeper the pressure drops.

Hoists need minimum 5 bar FLOWING pressure during operation.

Each quick-acting coupling, every pipe bow, all valves etc.

reduce flow pressure. Even when static pressure is 6 bar before operation, the flow pressure is a result of air friction in hoses and fittings and other users of the same ring pipe line. Keep an eye

on your pressure gauge! A bad performance of air hoist is for 99% a result of wrong air supply and too low flow pressure.

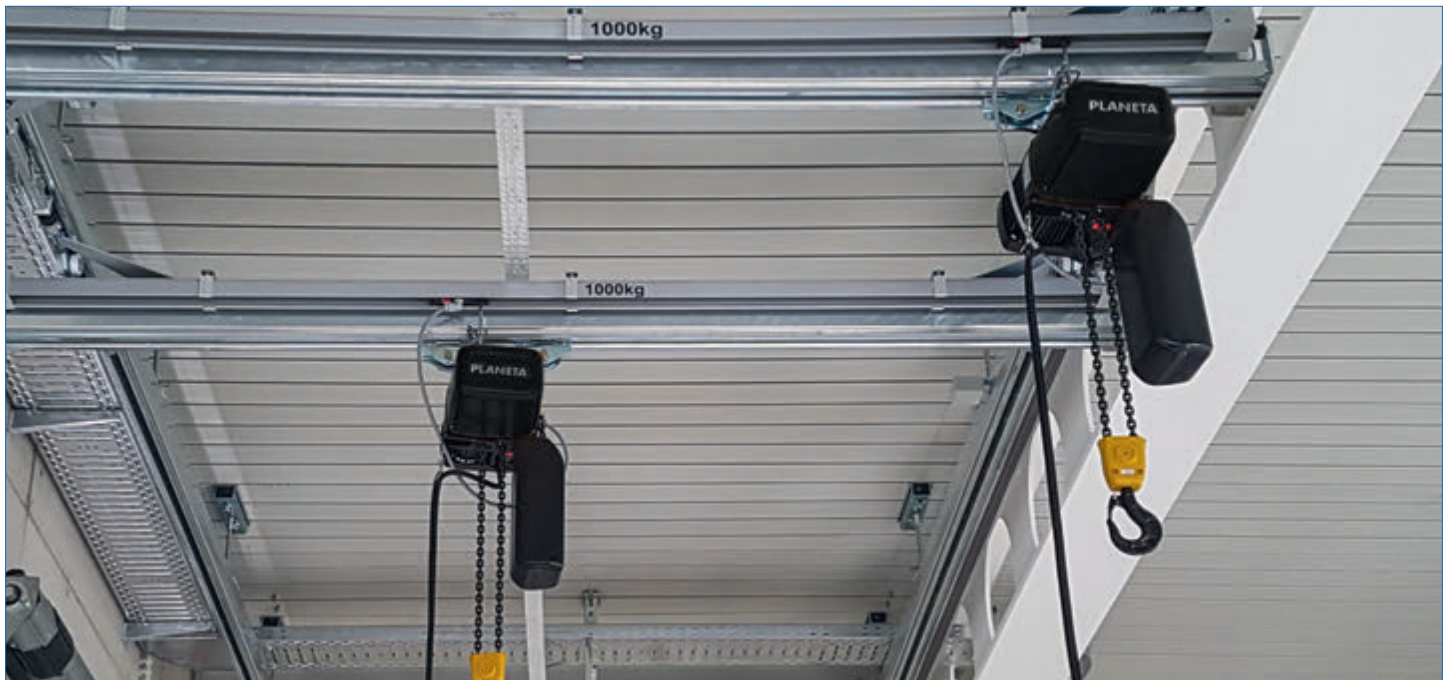


Ball valve

Quick-action coupling

TYPE		1	2	3
Standard driving length	m	3	3	3
Complete 1/2 inch	Order No.	H10180	H10181	H10182
1 m more rail length 1/2 inch	Order No.	H10183	H10184	H10185
Complete 3/4 inch	Order No.	H10186	H10187	H10188
1 m more rail length 3/4 inch	Order No.	H10189	H10190	H10191
Complete 1 inch	Order No.	-	H10193	H10194
1 m more rail length 1 inch	Order No.	-	H10196	H10197
Special equipment:				
Quick-action coupling 1/2 inch	Order No.	-	H10199	H10200
Quick-action coupling 3/4 inch	Order No.	-	H10202	H10203
Quick-action coupling 1 inch	Order No.	-	H10205	H10206
Air hose 1/2 inch - 6 bar	Order No.	-	H10208	H10209
Air hose 3/4 inch - 6 bar	Order No.	-	H10211	H10212
Air hose 1 inch - 6 bar	Order No.	-	H10214	H10215
Air hose 1 1/4 inch - 6 bar	Order No.	-	H10217	H10218
Air hose 1 1/2 inch - 6 bar	Order No.	-	H10220	H10221



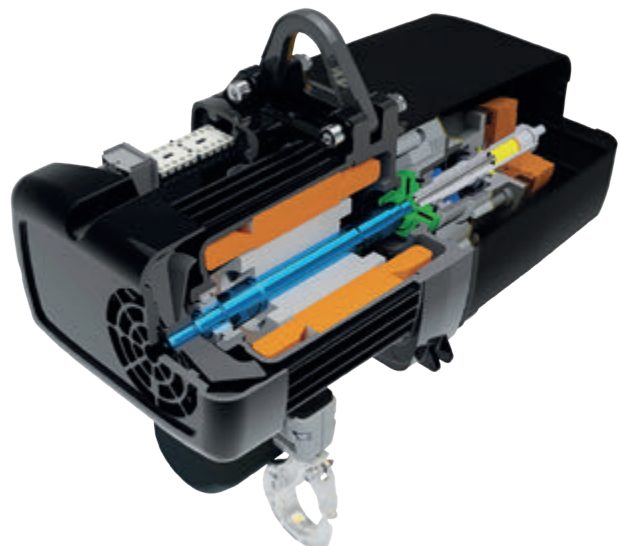


## **THE ENDURANCE HOIST – Electric chain hoist PEH-EX Capacity up to 6,300 kg**

The PEH has a modular design and is equipped with a robust contactor control.

Robust design thanks to the use of die-cast aluminium for the housing and cover.

It is characterised by smooth running and is designed for a long service life in tough applications.



## YOUR BENEFITS:

### Light and powerful.

The newest generation of PLANETA electrical chain hoists. Simple and easy to use – reliable and safe to operate – durable and maintenance-friendly.

### Reliable and long-lasting

- No sensitive electronics used
- Aluminium casing and cover
- Minimum 1600 operating hours with 40% duty cycle, 240 s/h (FEM: 2 m, ISO M5)
- Dry-running slipping clutch
- Area of application –15 to +50 °C
- Gearbox with permanent lubrication
- High safety in operation
- Low-wear DC-spring-loaded brake
- Chain safety factor minimum 8-times (1-fall in FEM, 2 m, ISO, M5)
- Manganese phosphated profile steel chain with increased service life and improved dry-running properties

### Easy to operate

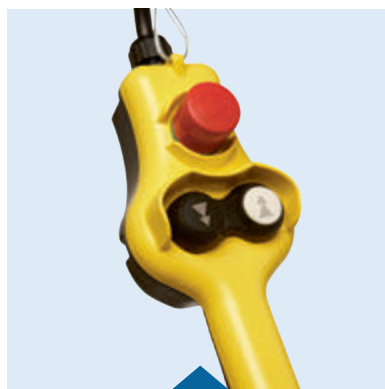
- Low dead weight from 14 kg
- Compact housing with low headroom
- Protection class IP65; suitable for outdoor use
- Geared limit switches with high accuracy in positioning of the highest and lowest hook position
- Ergonomic control switch with emergency stop
- 42 V low voltage control
- Quiet running with 3-step drive and helical gearing
- 2 speeds as standard
- Load hook rotated through 360 degrees, with locking safety catch and rubber buffer
- No special tools for maintenance needed
- Easy to maintain, wearing parts can be changed easily and quickly
- Short delivery time

### Customer specific

- Three- or single-phase power
- Worldwide operation voltages
- Various control voltages
- Direct control, special control, radio remote control, frequency inverter
- Special speeds
- Special versions such as synchronised electric chain hoist, low headroom version, corrosion resistant version, ATEX
- Eyebolt or hook suspension
- Temperature monitoring
- Operating data counter
- Wide range of accessories and options
- **DGUV V17/18** model available
- UP-SIDE-DOWN model available



**UP TO 60% MORE CAPACITY.**



#### Protection class IP65

A feature of the hoist and the control switch is the protection class IP65.

It is dust proof and protected against water jets. As it is compact and robust designed, the GP is best suited for dusty environments as well as for outdoor operation.



#### Profile steel chain

The higher cross-sectional area reduces wear and increases the lifetime of the chain. The PEH has a chain safety factor of at least 8-times (FEM, 2 m, ISO, M5). The case hardened and manganese phosphated profile steel chain provides about 15% more capacity at an identical nominal diameter compared to the round steel chain.



#### Polygonal connection

The inner part of the modularly designed chain hoist embodies real innovation. All shaft-hub connections are built to a polygonal design.

This allows significantly faster disassembly and assembly during maintenance and thus reduces service costs.



#### Protection class IP65

A feature of the hoist and the control switch is the protection class IP65.

It is dust proof and protected against water jets. As it is compact and robust designed, the GP is best suited for dusty environments as well as for outdoor operation.

## Electric chain hoist PEH-EX

### Equipment:

- Lifting capacity PEH: up to 2,500 kg
- 3 x 400 V / 50 Hz
- 42 V low voltage control
- 3 phase motor: 2 speeds
- Control cable length 1.8 m
- Geared limit switches
- Ergonomic control switch with emergency-stop
- Protection class IP65
- Temperature monitoring by thermocouple (Klixon)  
Lift movement is monitored

### Classification

**Ex II 3D Ex tc IIIA T130°C Dc**

### Accessories and options:

- Control switch in ATEX version  
2 buttons or 4 buttons with emergency stop
- Other operating / control voltages on request
- Hook suspension / Safety load hook, self-closing
- Geared limit switches with high accuracy in positioning of the highest and lowest hook position
- Operating data counter
- 2nd brake
- External limit switch
- Compact design
- Manual trolleys
- Frequency control
- Corrosion-resistant design



TYPE	Capacities in kg acc. ISO (FEM)*					Lifting speed with load m/min. 50 Hz	Number of chain falls	Chain size mm	Motor power kW	3 x 400 V 50 Hz A	Weight with 3 m lift kg	Weight each meter add. lift kg	Order No. PEH with 3 m lift	Order No. Add lift per m
	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)									
PEHM 250/1NF EX	-	320	250	200	-	8/2	1	3.75 x 10.75	0.72/0.18	2.8/1.7	24	0.34	H21520	H21521
PEHM 250/1SF EX	-	-	125	100	-	16/4	1	3.75 x 10.75	0.72/0.18	2.8/1.7	24	0.34	H21522	H21521
PEH 250/1NF EX	400	320	250	200	160	8/2	1	3.75 x 10.75	0.72/0.18	2.8/1.7	24	0.34	H21524	H21521
PEH 250/1SF EX	-	160	125	100	-	16/4	1	3.75 x 10.75	0.72/0.18	2.8/1.7	24	0.34	H21526	H21521
PEH 250/1N EX	400	320	250	200	160	8	1	3.75 x 10.75	0.72	2.8/1.7	24	0.34	H21528	H21521
PEH 250/2NF EX	-	630	500	400	320	4/1	2	3.75 x 10.75	0.72/0.18	2.8/1.7	25	0.34	H21534	H21535
PEH 250/2N EX	-	630	500	400	320	4	2	3.75 x 10.75	0.72	2.8	25	0.34	H21536	H21535
PEH 500/1NF EX	800	630	500	400	320	8/2	1	5.25 x 15	0.72/0.18	2.8/1.7	26	0.69	H21542	H21543
PEH 500/1SF EX	-	320	250	200	160	16/4	1	5.25 x 15	0.72/0.18	2.8/1.7	26	0.69	H21544	H21543
PEH 500/1N EX	800	630	500	400	320	8	1	5.25 x 15	0.72	2.8	26	0.69	H21546	H21543
PEH 500/2NF EX	-	1,250	1,000	800	630	4/1	2	5.25 x 15	0.72/0.18	2.8/1.7	28	0.69	H21552	H21553
PEH 500/2N EX	-	1,250	1,000	800	630	4	2	5.25 x 15	0.72	2.8	28	0.69	H21554	H21553
PEH 1000/1NF EX	1,600	1,250	1,000	800	630	8/2	1	7.45 x 23	2.3/0.68	5.7/4.1	58	1.37	H21600	H21609
PEH 1000/1SF EX	-	630	500	400	320	16/4	1	7.45 x 23	2.3/0.68	5.7/4.1	58	1.37	H21601	H21609
PEH 1000/1N EX	1,600	1,250	1,000	800	630	8	1	7.45 x 23	2.3	6.5	57	1.37	H21602	H21609
PEH 1000/NL EX	1,600	1,250	1,000	800	630	4	1	7.45 x 23	1.5	6.5	62	1.37	H21603	H21609
PEH 1000/2NF EX	-	2,500	2,000	1,600	1,250	4/1	2	7.45 x 23	2.3/0.68	5.7/4.1	62	1.37	H21604	H21610
PEH 1000/2N EX	-	2,500	2,000	1,600	1,250	4	2	7.45 x 23	2.3	6.5	61	1.37	H21605	H21610
PEH 1000/2NL EX	-	2,500	2,000	1,600	1,250	2	2	7.45 x 23	1.5	6.5	66	1.37	H21606	H21610

\* FEM classification:

Quantity of starts at pendant control per hour

M3 (1Bm) = 150 starts per hour, 25% duty cycle

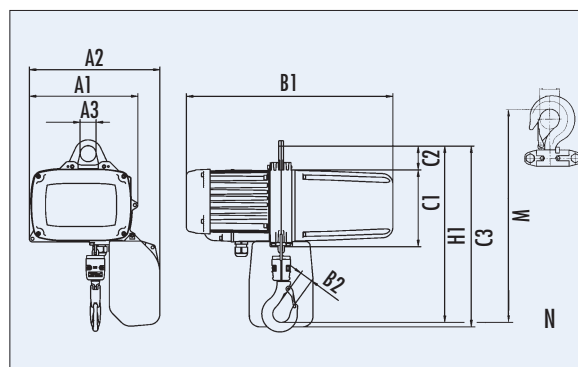
M4 (1Am) = 180 starts per hour, 30% duty cycle

M5 (2m) = 240 starts per hour, 40% duty cycle

M6 (3m) = 300 starts per hour, 50% duty cycle

M7 (4m) = 360 starts per hour, 60% duty cycle

TYPE PEH...		250/1	250/2	500/1	500/2	1000/1	1000/2
A1 (Dimensions)	mm	246	246	246	246	328	328
A2	mm	296	296	296	296	385	385
A3	mm	Ø 40	Ø 40	Ø 40	Ø 40	Ø 52	Ø 52
B1	mm	444	444	444	444	548	548
B2	mm	24	24	24	24	33	33
C1	mm	162	162	162	162	212	212
C2	mm	49	49	49	49	85	85
C3	mm	462	462	462	462	598	598
H1	mm	400	414	414	453	519	578
M	mm	475	506	488	528	592	651
N	mm	Ø 42	Ø 42	Ø 42	Ø 42	Ø 51	Ø 51





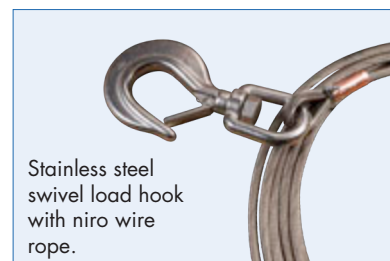
# Electric rope winch PFW-EX



Electric rope winch PFW-EX with special equipment.



EX-proof wall-mounted switch



Stainless steel swivel load hook with wire rope.

## Electric rope winch PFW-EX

With a load bearing capacity from 250 to 3000 kg this electrical rope winch with its modular construction principle is one of the most modern devices for pulling, lifting and moving loads. With its extensive range of configuration and finishing options it can be adapted to suit almost any installation situation. The PFW-EX version is built according to the CE directive 2006/42/EC and European ATEX-guidelines 2014/34/EU. With its special equipment and configuration these winches may be used in areas at risk of explosion.

### Made in Germany

The PFW range combines a modern design, innovative technology and superlative components, which are produced exclusively in Germany. Prior to shipping, each winch is tested dynamically with 125% of the nominal load and leaves our factory with a 24 month guarantee.

### Equipment

- Electrical control in pressure-resistant casing EX II 2 GD de IIB T4 T 135°C
- Standard Protection Classification IP55 with isolation F
- Standard ambient temperature from -10 °C to +40 °C
- Standard mechanism group acc. FEM 1,001: M3 (1Bm)
- Standard supply voltage of 3 PH / 400 Volt / 50 Hz Preisvorteil

- Contactor control available for areas at risk of explosion or standard version for installation in safe areas to combine safe equipment with price advantages
- Pendant remote control and radio remote control available for areas at risk of explosion

### Available options

- Grooved drum with drum length on customer demand for higher rope storage and better spooling
- Different voltage and frequency
- Adjustable speed with frequency converter
- Free spooling clutch
- Special paintings and higher protection class of electrical equipment for outdoor and offshore applications
- Drum pressure roller
- Multi rope strands or drum divider
- Drum cover
- Limit switches according to ATEX guidelines
- Overload protection
- Special ropes with bronze coated hooks or solid steel version

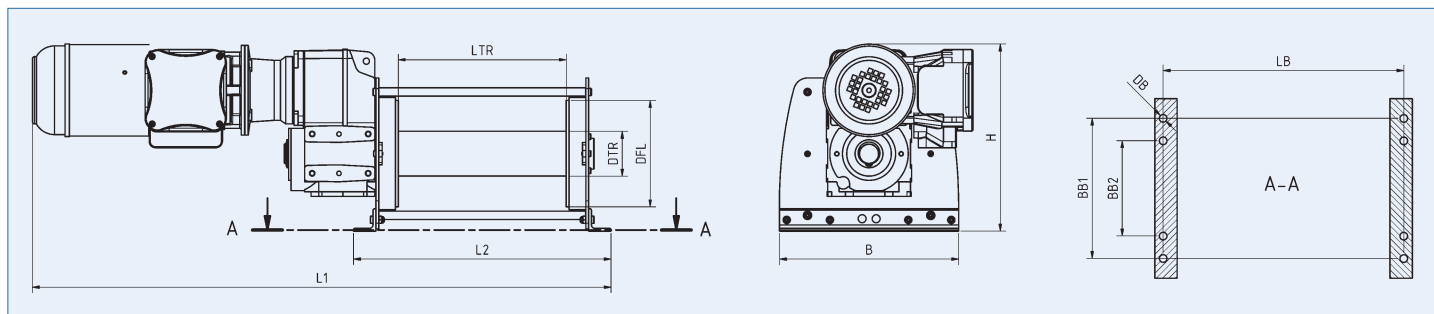
### Classification

**EX II 2 GD de IIB T4 T 135 °C**

### Basic design

TYPE	PFW-1D-EX	250	500	750	1000	1500	2000	3000
Lifting capacity in 1st rope layer	kg	250	500	750	1,000	1,500	2,000	3,000
Lifting capacity in 5th rope layer	kg	160	320	480	640	950	1,270	1,920
Rope diameter	mm	5	6	7	8	10	12	14
Rope length in 1st rope layer	m	11	11	11	10	10	9	9
Rope length in 5th rope layer	m	75	75	75	75	75	75	75
Expansion every 100 mm extended drum 1st/5th layer	approx. m	4/25	4/25	4/25	4/25	4/25	4/25	4/25
Rope speed in 1st rope layer	approx. m/min	8	8	8	8	8	8	8
Rope speed in 5th rope layer	approx. m/min	12	12	12	12	12	12	12
Motor power	kW	0.37	0.75	1.1	1.5	2.1	2.6	4
<b>PFW-1D-EX with standard speed</b>	<b>Order No.</b>	<b>H62401</b>	<b>H62411</b>	<b>H62421</b>	<b>H62431</b>	<b>H62441</b>	<b>H62451</b>	<b>H62461</b>

## Dimensions und weights – PFW-1D-EX



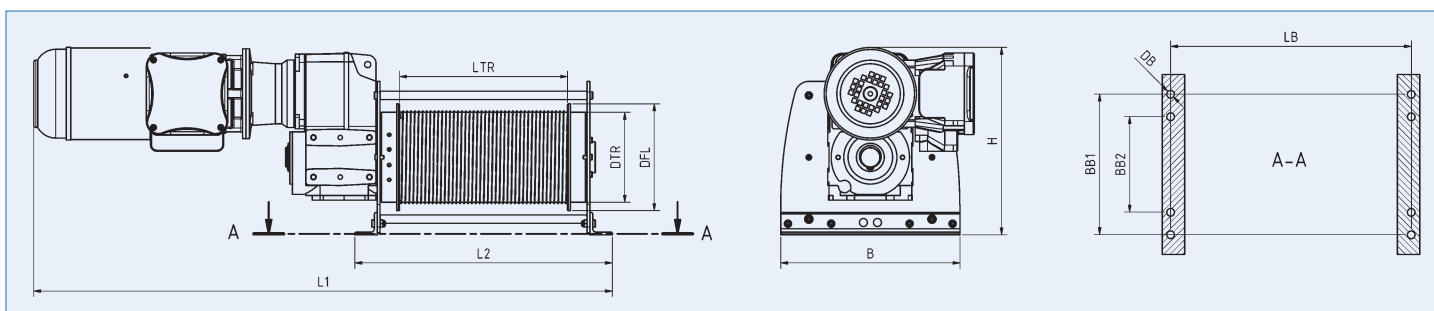
TYPE	PFW-1D-EX	250	500	750	1000	1500	2000	3000
L1 *	approx. mm	1,000	1,050	1,070	1,160	1,180	1,300	1,350
L2	mm	460	460	460	500	500	570	570
B	mm	270	320	360	400	460	550	620
H	approx. mm	310	340	420	460	550	630	690
LTR	mm	300	300	300	300	300	300	300
DTR	mm	65	80	92	105	130	155	185
DFL	mm	155	190	220	250	310	370	430
LB	mm	430	430	430	460	460	520	520
BB1	mm	220	250	310	350	410	500	560
BB2	mm	–	–	–	220	280	320	380
DB	mm	13.5	13.5	13.5	13.5	13.5	17.5	17.5
Weight without accessories	approx. kg	35	60	75	110	155	240	380

\* Length can vary according to configuration.

## Double diameter drum

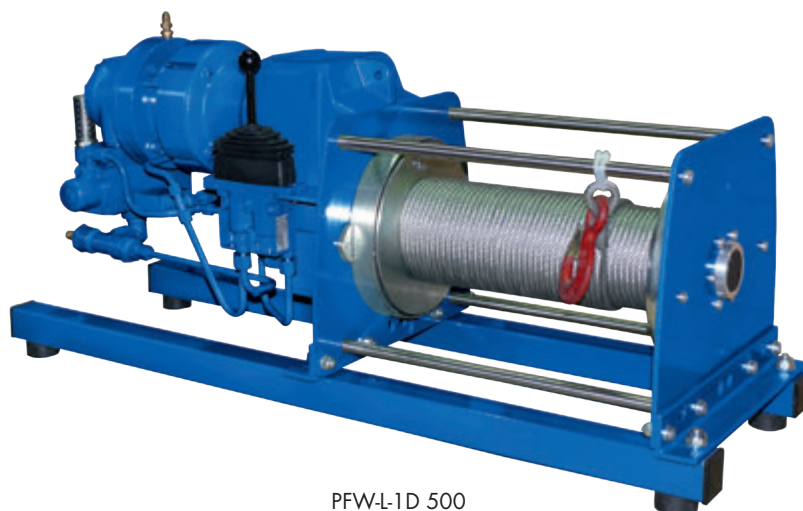
TYPE	PFW-2D-EX	250	500	750	1000	1500	2000	3000
Lifting capacity in 1st rope layer	kg	125	250	375	500	750	1,000	1,500
Rope diameter	mm	5	6	7	8	10	12	14
Rope length in 1st rope layer	m	20	20	20	20	19	18	17
Expansion every 100 mm extended drum 1st layer	approx. m	7	7	7	7	7	7	7
Rope speed in 1st rope layer	approx. m/min	15	15	15	15	15	15	15
Motor power	kW	0.37	0.75	1.1	1.5	2.1	2.6	4
PFW-2D-EX with standard speed	Order No.	H62501	H62511	H62521	H62531	H62541	H62551	H62561

## Dimensions und weights – PFW-2D-EX



TYPE	PFW-2D-EX	250	500	750	1000	1500	2000	3000
L1 *	approx. mm	1,000	1,050	1,070	1,160	1,180	1,300	1,350
L2	mm	460	460	460	500	500	570	570
B	mm	270	320	360	400	460	550	620
H	approx. mm	300	340	420	460	550	630	660
LTR	mm	300	300	300	300	300	300	300
DTR	mm	130	160	185	210	260	310	350
DFL	mm	155	190	220	250	310	370	430
LB	mm	430	430	430	460	460	520	520
BB1	mm	220	250	310	350	410	500	560
BB2	mm	–	–	200	220	280	320	380
DB	mm	13.5	13.5	13.5	13.5	13.5	17.5	17.5
Weight without accessories	approx. kg	40	65	85	120	170	280	425

\* Length can vary according to configuration.



PFW-L-1D 500

## Pneumatic winch PFW-L-Series

For pneumatic winch applications, demanding a modular and solid design, this range of explosion proof winches provides the solution.

The use of vane TYPE motors and spring applied pneumatic disc brakes ensures trouble free operation and low maintenance requirements.

These winches find their use in general industry, oil and gas exploration and in many places where compact, explosion proof hoisting gear is required. Because of the modular design of the PFW winch also the pneumatic version can be delivered with advantageous delivery times.

Faster rope speeds are available upon request.

### Standard features

- High efficiency spur gear box
- Rotary vane motor with pneumatic fail-safe disc brake
- Steel drum (not grooved) with rope fixing point at flange
- Two drum supports
- Double layer 2 component coating, colour RAL 5010

### Available options

- Manual disengaging clutch
- Grooved drum
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guard
- Marine / offshore coating systems
- Proportional control valve, local or remote
- Pneumatic limit switch
- Pneumatic slack wire switch

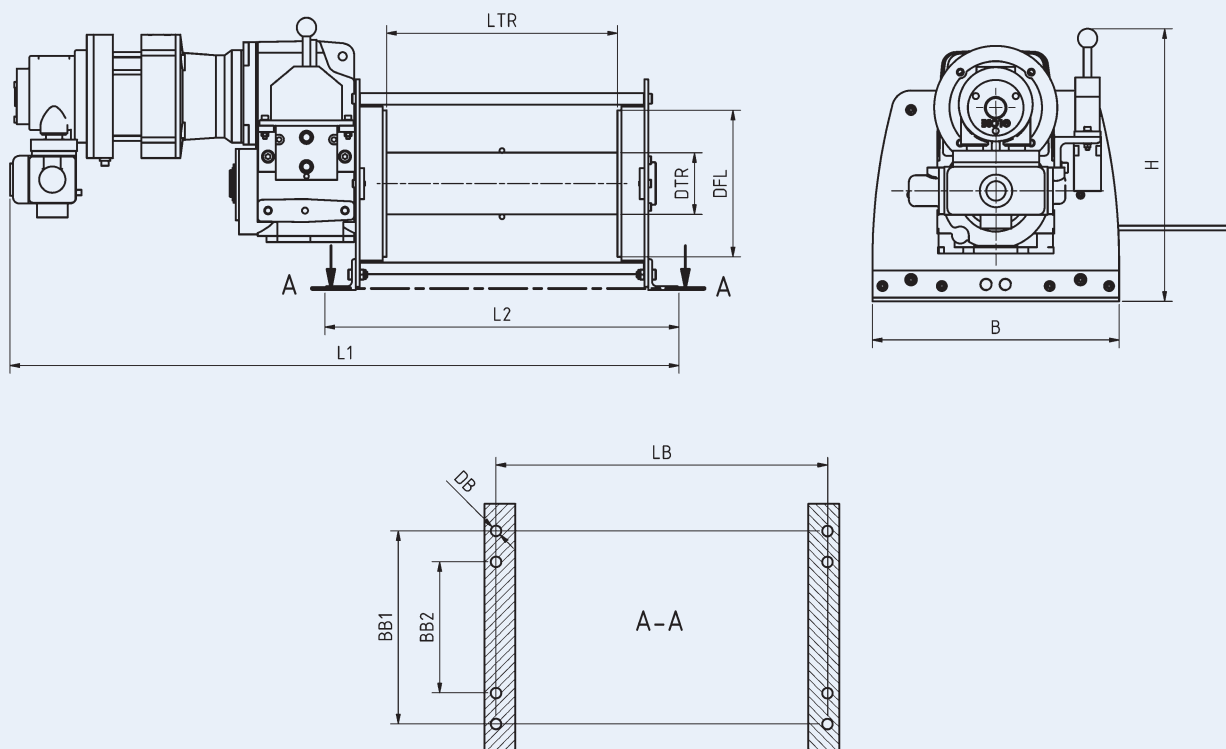
### Classification

**II 2 GD c T4 135°C**

TYPE	PFW-L-1D	500	750	1000	1500	2000	3000
Lifting capacity in 1st rope layer	kg	500	750	1,000	1,500	2,000	3,000
Lifting capacity in 5th rope layer	kg	320	480	640	950	1,270	1,920
Rope diameter	mm	6	7	8	10	12	14
Rope length in 1st rope layer	m	11	11	10	10	9	9
Rope length in 5th rope layer	m	75	75	75	75	75	75
Expansion every 100 mm extended drum 1st/5th layer	approx. m	4/25	4/25	4/25	4/25	4/25	4/25
Rope speed in 1st rope layer	approx. m/min	9	10	8	12	8	5
Rope speed in 5th rope layer	approx. m/min	14	15	13	18	12	8
Motor power	kW	1.8	2.2	2.2	3.5	3.5	3.5
Air pressure	bar	6	6	6	6	6	6
Air consumption	l/min	45	55	55	80	80	80
<b>PFW-L-1D with standard speed</b>	<b>Order No.</b>	<b>H62611</b>	<b>H62621</b>	<b>H62631</b>	<b>H62641</b>	<b>H62651</b>	<b>H62661</b>

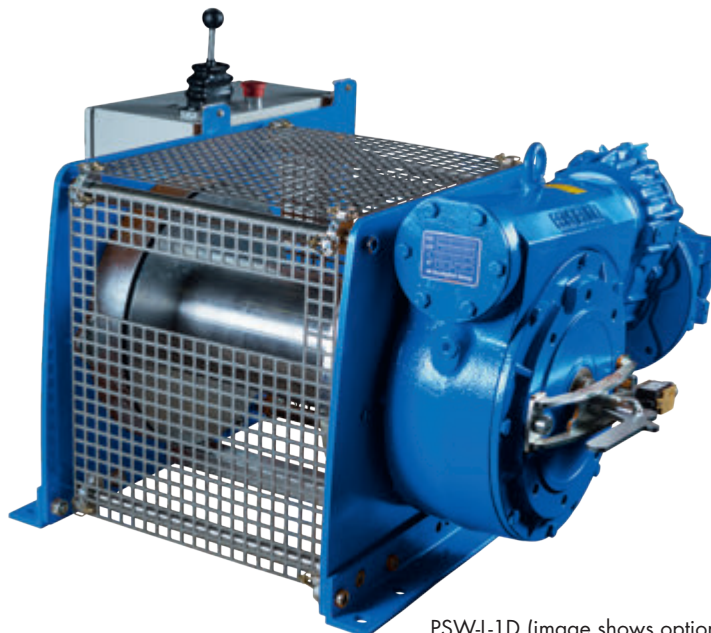


TYPE	PFW-L-2D	500	750	1000	1500	2000	3000
Lifting capacity in 1st rope layer	kg	250	375	500	750	1000	1500
Rope diameter	mm	6	7	8	10	12	14
Rope length in 1st rope layer	m	20	20	20	19	18	17
Expansion every 100 mm extended drum 1st layer	approx. m	7	7	7	7	7	7
Rope speed in 1st rope layer	approx. m/min	18	19	15	22	15	9
Motor power	kW	1.8	2.2	2.2	3.5	3.5	3.5
Air pressure	bar	6	6	6	6	6	6
Air consumption	l/min	45	55	55	80	80	80
<b>PFW-L-2D with standard speed</b>	<b>Order No.</b>	<b>H62711</b>	<b>H62721</b>	<b>H62731</b>	<b>H62741</b>	<b>H62751</b>	<b>H62761</b>



## Dimensions and weights

TYPE	PFW-L-1D/ PFW-L-2D	500	750	1000	1500	2000	3000
L1	approx. mm	890	980	1,050	1,110	1,210	1,275
L2	mm	460	460	500	500	570	570
B	mm	320	360	400	460	550	620
H	approx. mm	330	410	460	540	620	680
LTR	mm	190	220	250	310	370	430
DTR 1D/2D	mm	80/160	92/185	106/210	130/260	155/310	186/350
DFL	mm	190	220	250	310	370	430
LB	mm	430	430	460	460	520	520
BB1	mm	250	310	350	410	500	560
BB2	mm	–	–	220	280	320	380
DB	mm	13.5	13.5	13.5	13.5	17.5	17.5
Weight	approx. kg	50	80	105	140	230	355



PSW-L-1D (image shows options)

## Pneumatic winch PSW-L-Series

For pneumatic winch applications, demanding a modular and solid design, this range of explosion proof winches provides the solution.

The use of vane TYPE motors in combination with a self-braking worm gearbox ensures trouble free operation and low maintenance requirements without the need of an additional brake. These winches find their use in general industry, oil and gas exploration and in many places where compact, explosion proof hoisting gear is required. Because of the modular design of the PSW winch it can be delivered with advantageous delivery times. Upon request faster or slower rope speeds are available.

### Standard features

- Self-braking worm gearbox
- Low maintenance vane air motor
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010

### Available options

- Manual disengaging clutch
- Grooved drum
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guard
- Marine / offshore coating systems
- Proportional control valve, local or remote
- Pneumatic limit switch
- Pneumatic slack wire switch

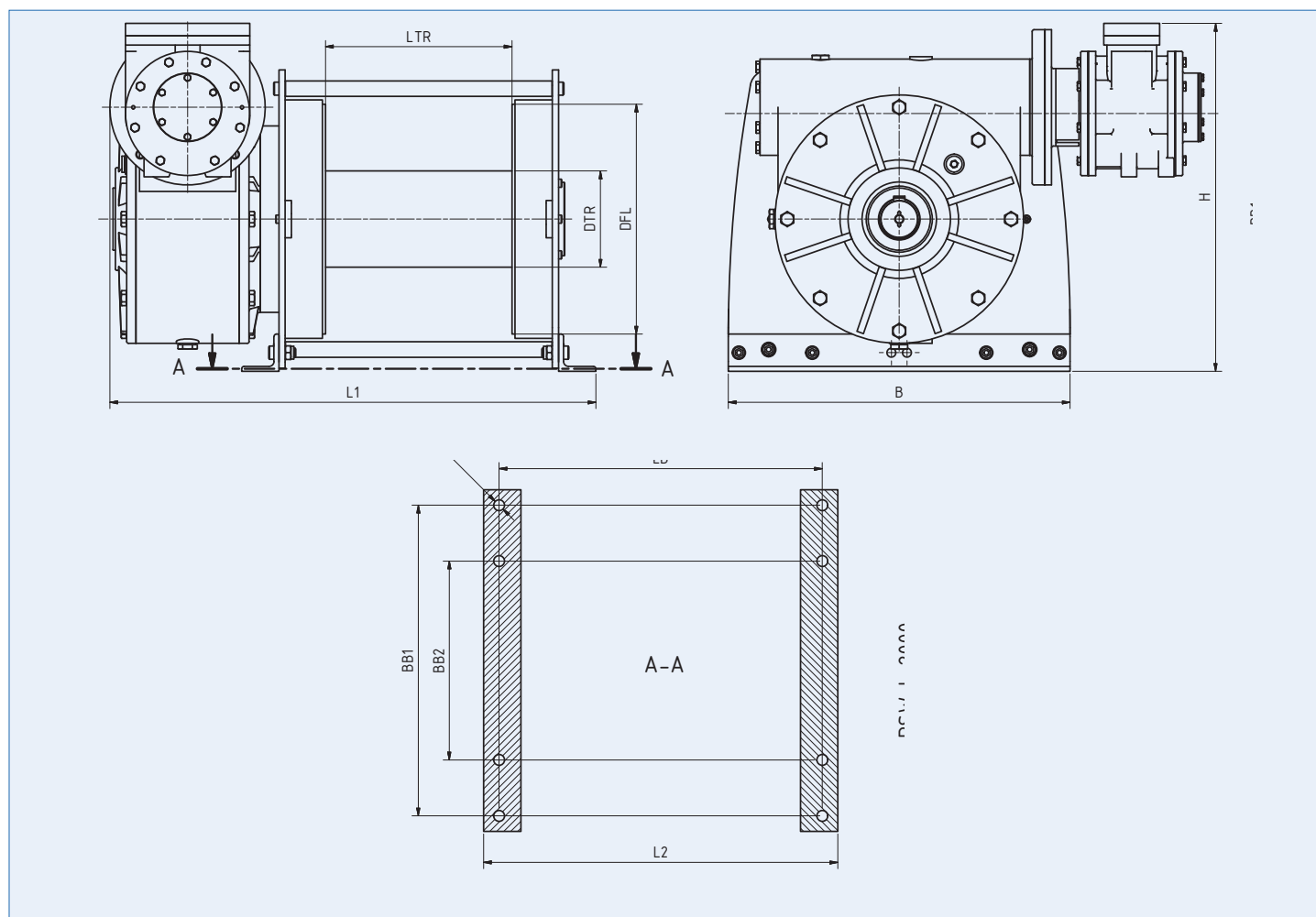
### Classification

**II 2 GD c T4 135 °C**

**Also available in hydraulic version!**

TYPE	PSW-L-1D	250	500	750	1000	1500	2000
Hubkraft 1. Lage	kg	250	500	750	1,000	1,500	2,000
Hubkraft 5. Lage	kg	160	320	480	640	950	1,270
Seildurchmesser	mm	11	6	7	8	10	12
Seilaufnahme 1. Lage	m	75	11	11	10	10	9
Seilaufnahme 5. Lage	m	75	75	75	75	75	75
Erw. je 100 mm verl. Trommel 1./5. Lage	ca. m	4/25	4/25	4/25	4/25	4/25	4/25
Seilgeschwindigkeit 1. Lage	ca. m/min	8	8	8	8	8	8
Seilgeschwindigkeit 5. Lage	ca. m/min	12	12	12	12	12	12
Luftdruck	bar	6	5	6	6.5	6	5
Luftverbrauch	l/min	35	45	80	90	120	190
<b>PSW-L-1D mit Standardgeschwindigkeit</b>	<b>Order No.</b>	<b>H64601</b>	<b>H64611</b>	<b>H64621</b>	<b>H64631</b>	<b>H64641</b>	<b>H64651</b>

TYPE	PSW-L-2D	250	500	750	1000	1500	2000
Lifting capacity in 1st rope layer	kg	125	250	375	500	750	1,000
Rope diameter	mm	5	6	7	8	10	12
Rope length in 1st rope layer	m	20	20	20	20	19	18
Expansion every 100 mm extended drum 1st layer	approx. m	7	7	7	7	7	7
Rope speed in 1st rope layer	approx. m/min	15	15	15	15	15	15
Air pressure	bar	6	5	6	6.5	6	5
Air consumption	l/min	35	45	80	90	120	190
<b>PSW-L-2D with standard speed</b>	<b>Order No.</b>	<b>H64701</b>	<b>H64711</b>	<b>H64721</b>	<b>H64731</b>	<b>H64741</b>	<b>H64751</b>



## Dimensions and weights

TYPE	PSW-L-1D/ PSW-L-2D	250	500	750	1000	1500	2000
L1	approx. mm	552	563	624	667	707	782
L2	mm	460	460	460	500	500	570
B	mm	270	320	360	400	460	550
H	approx. mm	234	283	368	410	485	560
LTR	mm	300	300	300	300	300	300
DTR 1D/2D	mm	65/130	80/160	92/185	105/210	130/260	155/310
DFL	mm	155	190	220	250	310	370
LB	mm	430	430	430	460	520	520
BB1	mm	220	250	310	350	410	500
BB2	mm	–	–	–	220	280	320
DB	mm	13.5	13.5	13.5	13.5	13.5	17.5
Weight	approx. kg	35	50	88	120	172	250

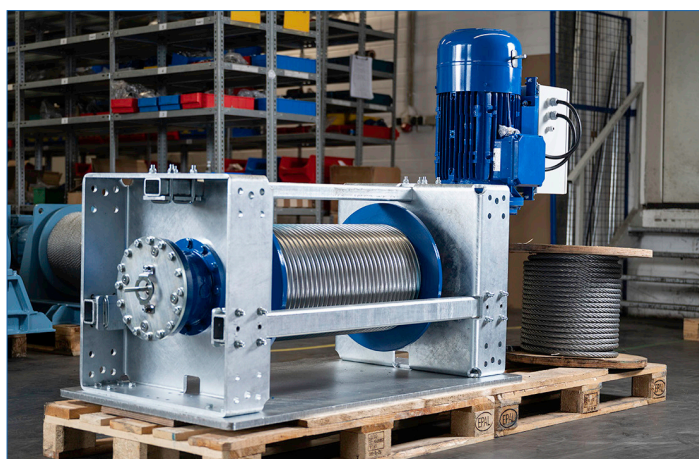
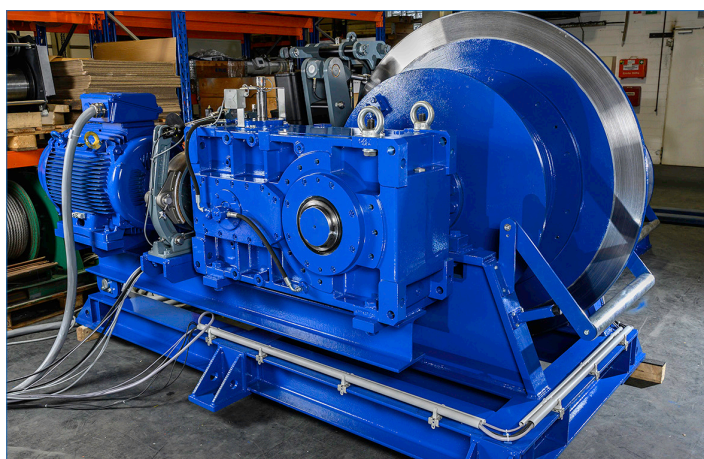
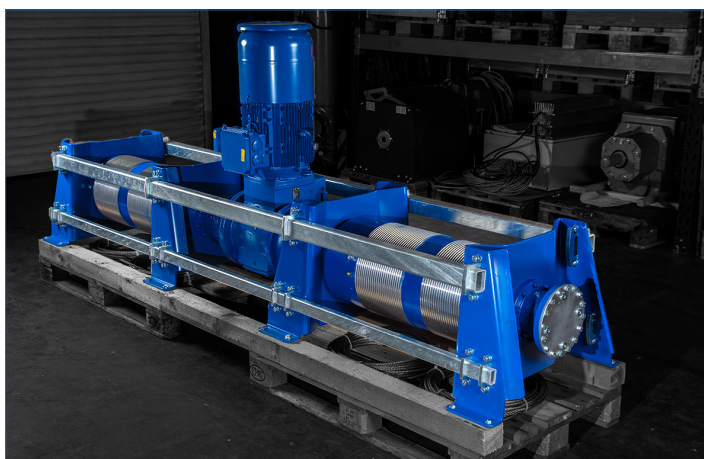
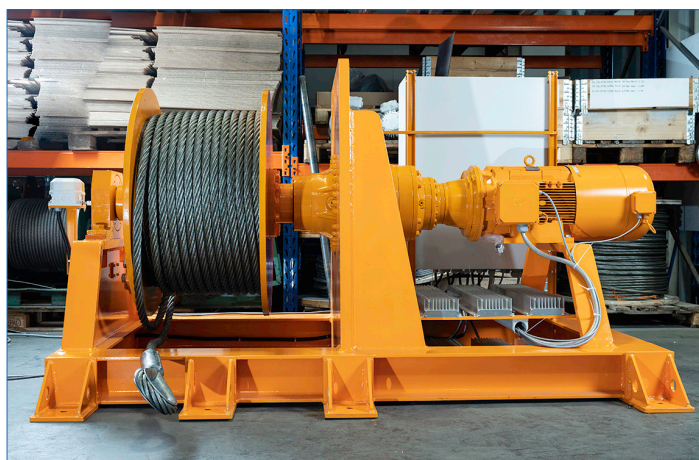
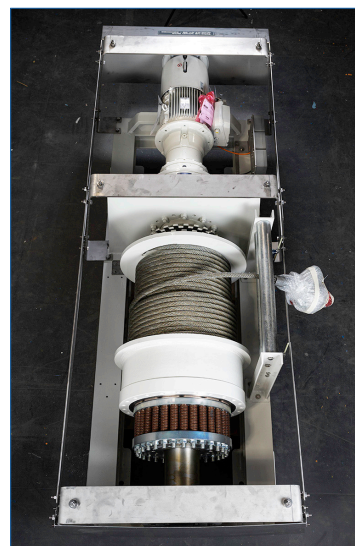




PLANETA

# PLANETA ROPE WINCHES

- Capacity up to 60 tons
- Rope length up to 200 m
- Rope speed up to 35 m/min
- Protection class up to IP66
- Extensive special equipment





## Hand operated worm gear winch WW-EX

- Robust and safe hoisting winch
- Static safety factor of 4
- Square worm-wormwheel transmission and maintenance free bearing
- Adjustable crank, with ergonomic grip
- Easy to grease worm-wormwheel transmission
- Load pressure brake with quiet double ratchet system
- Optional ATEX certified **II 3 GD T4**, suitable for zone 2 and 22  
TYPE example WW250 GR/D/Ex
- Grooved drum as extra option (GD instead of D)
- 2 cable compartments (2D instead of D) multi compartment possible upon request
- Standard paint finish 1 layer (60 - 80 Micron)
- In compliance with EN13157, DIN 15020 and Ex TYPEs ATEX 95 (94/9/EG)

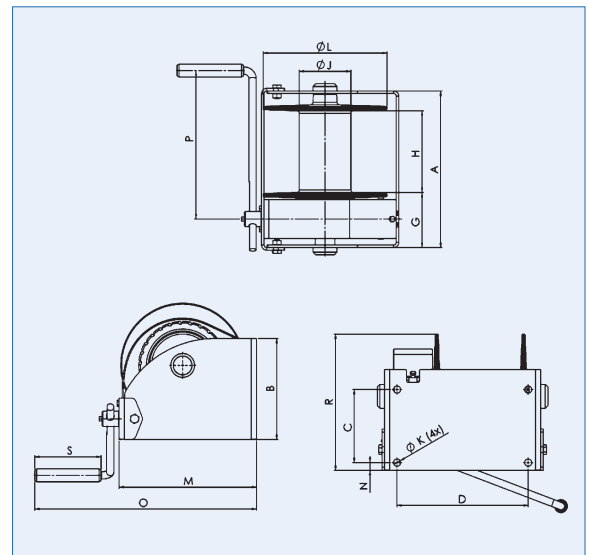


WW-EX-1000GR-D

**Options:**  
Winch with zinc-plated finishing (6 - 8 Micron)

TYPE	WW-EX...	250	500	1000	1500
Max. pulling force bottom (1st) cable layer	kg	250	500	1,000	1,500
Max. pulling force top (last) cable layer	kg	95	239	542	845
Crankforce 1st cable position	daN	6	10	13	14
Hoisting length by one rotation of crank , 1st layer	mm	17	20	13	9
Max. cable storage (one drum compartment)	m	59	77	55	42
Diameter cable	mm	5	6	9	10
Min. breaking load cable	kN	15.9	22.9	51	63
Own weight	kg	13	16	29	28
WW-EX... (without rope)	<b>Order No.</b>	<b>H50460</b>	<b>H50461</b>	<b>H50462</b>	<b>H50463</b>
WW-EX... complete with rope and hook	<b>Order No.</b>	<b>H50464</b>	<b>H50465</b>	<b>H50466</b>	<b>H50467</b>

TYPE	A	B	C	D	G	H	J	K	L	M	N	O	P	R	S
WW-EX-250	238	145	100	192	106	102	48	14	160	191	15	354	280	171	130
WW-EX-500	269	160	115	223	107	131	70	14	190	221	15	384	325	192	130
WW-EX-1000	302	195	141	254	110	160	102	17	240	266	15	429	350	264	130
WW-EX-1500	302	250	178	254	111	160	102	17	240	278	15	441	350	306	130



## Hand driven spur gear winch TC-EX

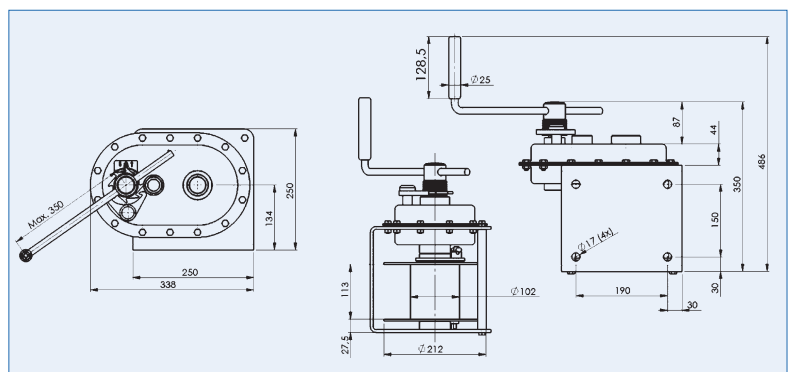
- Robust and safe hoisting and pulling (approx. 2.5x hoisting cap.) winch
- Static safety factor of 4
- Load pressure brake with double ratchet system
- Maintenance-free bearing
- Adjustable crank from 250 to 350 mm, ergonomic plastic grip
- Cable outlet to left, right, and top side
- Standard paint finish 1 layer (60 - 80 Micron) GR
- Optional ATEX certified **II 3 GD T3**, suitable for zone 2 and 22  
TYPE example TC 1000 GR/FS/Ex
- With free spool FS
- 2 cable compartments as extra option (2D instead of D), multi compartments upon request
- Closed gearbox
- In compliance with EN 13157 and DIN 15020 and Ex TYPEs ATEX 95 (94/9/EG)



TC-EX-1000

**Options:**  
Winch in stainless steel design.

TYPE	TC-EX...	1000	1500
Max. pulling force bottom (1st) cable layer	kg	1,000	1,500
Max. pulling force top (last) cable layer	kg	587	844
Crankforce 1st cable position	daN	11	12
Hoisting length by one rotation of crank , 1st layer	mm	20	14
Cable capacity	m	25	21
Diameter cable	mm	9	10
Min. breaking load cable	kN	51	63
Own weight	kg	27	27.5
TC-EX... (without rope)	<b>Order No.</b>	<b>H50470</b>	<b>H50471</b>
TC-EX... complete with rope and hook	<b>Order No.</b>	<b>H50472</b>	<b>H50473</b>





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