

## Electric rope winch PFW

With a load bearing capacity from 250 to 3,000 kg this electrical cable 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.

### Drive

In standard form the spur gear transmission is equipped with a 3-phase braked motor. The standard operating voltage is 3 Ph. / 400 V / 50 Hz. The duty cycle is around 60% thus enabling operation to continue almost without a break in the most difficult of conditions. For unprotected use outdoors the braked motor fulfils **protection class IP55**. Other operating voltages, alternative types of drive, higher duty cycles and protection classes are also available on request.

### End position switch-off

In standard configuration the end switch is installed on the drive side to save space. If desired, or when using the manual free-wheeling coupling, it can be installed on the opposite side, mounted above the drum bearing. Alongside the standard design as emergency end switch, we also offer the end switch as an option with 4 contacts as an operational end switch, in order to be sure that the emergency end switch is not reached during normal operation, as required in the machinery directive. When operating the **PFW**, for example, in combination with a frequency converter controller, the end switch can be equipped with an integrated incremental sensor at the factory.

**Protection class IP65** as well as the high quality manufacturing of the end switch enables deployment in almost any environment.

### Cable drum

In the basic version your **PFW** is delivered with a smooth drum surface. If desired we can deliver the cable drum with scoring in order to achieve a longer service life for the cable and quieter running for the cable. You can select between two cable drum diameters. The standard diameter is based on a D/d ratio of 1.4 and thus fulfils the requirements of drive mechanism group 1Bm. There is also a double drum diameter version available for single layer, high precision applications. The modular construction of the cable drum even enables your **PFW** drum to be retrofitted from smooth to scored by us in the factory. Special versions with multiple cable outflows, drum separators or versions in rust-free stainless steel are also available on request!

### Base frame

Torsionally rigid and yet flexible, it is well suited to almost any sub-structure. Many accessory parts can be retrofitted and can thus be changed throughout the course of the use of the winch. In standard form the winch has side guards that effectively prevent the cable jumping off. Alongside the facility to allow the cable to run in almost any direction from the drum, the rust-proof frame bars also enable easy handling during transportation or mounting.



## Options

Thanks to the modular construction, for the first time it is possible to retrofit or change many options. Foremost of these is the manual **free-wheeling coupling**, which de-couples the cable drum from the drive and the brake for a rapid reeling off of the cable.

Simply select **scored** or **extended drums**, **end switches**, **cable contact rollers**, **slack cable switches**, **protective drum covers**, **two or more cable outflows**, **manual brake venting**, with or without **emergency hand crank** and **various protective paint systems** from our options catalogue.

Thus with our C5 painting per ISO 12944, in combination with a higher protection class for the motor and connecting elements made from rustproof stainless steel, the offshore variant of the **PFW** can also be used in salty sea-air environments or on ships. Other custom solutions are also possible on request. In standard configuration the end switch is installed on the drive side. If desired, or when using the manual free wheeling coupling, it can be installed on the opposite side, mounted above the drum bearing.



## Versions

The cable winch can also be appropriately equipped to allow use in explosive atmospheres or for use in theatres, stages and studios where persons can be underneath the load whilst the hoist is operating. Special versions such as two or multiple cable applications and transverse winches are likewise available from the standard range.

## Made in Germany

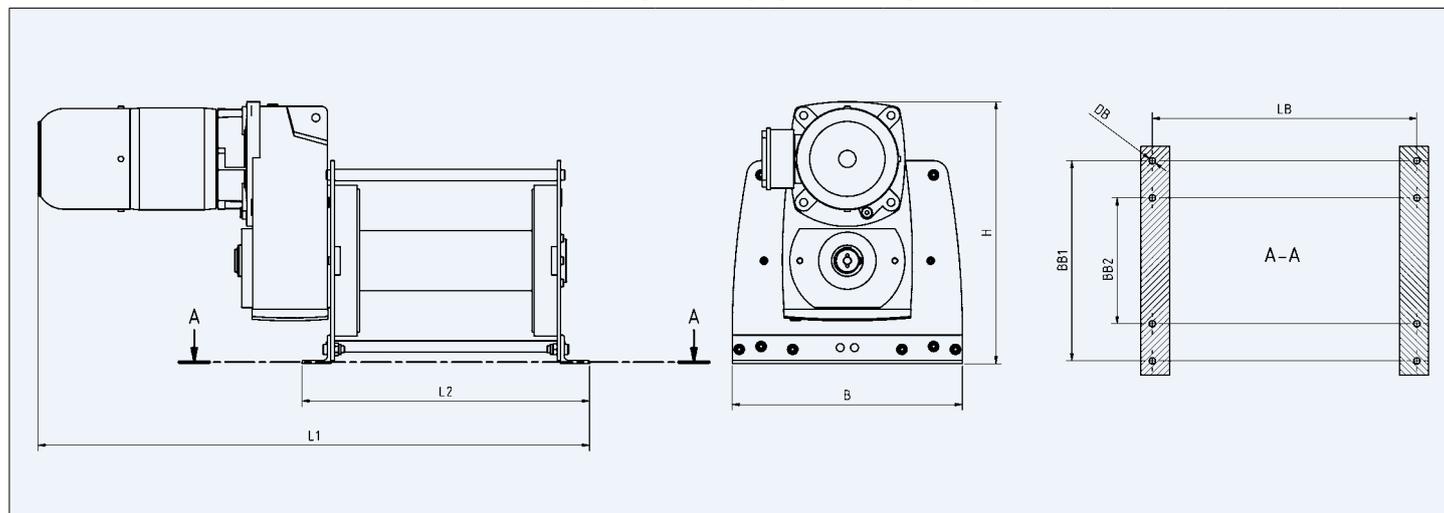
The **PFW** range combines a modern design, innovative technology and superlative components, which are produced exclusively in Germany. Prior to shipping, each winch is tested dynamically with 125% of the nominal load and leaves our factory with a 24 month guarantee.



## Basic design

TYPE	PFW-1D	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 with standard speed</b>	<b>Order No.</b>	<b>H62101</b>	<b>H62111</b>	<b>H62121</b>	<b>H62131</b>	<b>H62141</b>	<b>H62151</b>	<b>H62161</b>
Rope speed in 1st rope layer	approx. m/min	4/8	4/8	4/8	4/8	4/8	4/8	4/8
Rope speed in 5th rope layer	approx. m/min	6/12	6/12	6/12	6/12	6/12	6/12	6/12
Motor power	kW	0.25/0.37	0.37/0.55	0.55/1.0	0.7/1.4	1.1/2.2	1.5/2.5	2.9/4.4
<b>PFW-1D with two speeds</b>	<b>Order No.</b>	<b>H62102</b>	<b>H62112</b>	<b>H62122</b>	<b>H62132</b>	<b>H62142</b>	<b>H62152</b>	<b>H62162</b>
Rope speed in 1st rope layer	approx. m/min	12	12	12	12	12	12	12
Rope speed in 5th rope layer	approx. m/min	19	19	19	19	19	19	19
Motor power	kW	0.55	1.1	1.5	2.1	3.2	4	5.5
<b>PFW-1D with faster speed</b>	<b>Order No.</b>	<b>H62103</b>	<b>H62113</b>	<b>H62123</b>	<b>H62133</b>	<b>H62143</b>	<b>H62153</b>	<b>H62163</b>
<b>Options</b>								
Grooved drum	Order No.	H62800	H62801	H62802	H62803	H62804	H62805	H62806
Longer drum each 100 mm	Order No.	H62810	H62810	H62811	H62811	H62812	H62812	H62813
Second rope outflow	Order No.	H62820	H62821	H62822	H62823	H62824	H62825	H62826
Manual free-wheeling coupling	Order No.	-	H62831	H62832	H62833	H62834	H62835	H62836
Protective drum cover	Order No.	H62840	H62841	H62842	H62843	H62844	H62845	H62846
Drum pressure roller	Order No.	H62850	H62851	H62852	H62853	H62854	H62855	H62856
Emergency limit switch	Order No.	H62861	H62861	H62861	H62862	H62862	H62863	H62863
Operational limit switch	Order No.	H62865						
Limit switch extended by four additional contacts	Order No.	H62866						
Slack wire switch	Order No.	H62870	H62871	H62872	H62873	H62874	H62875	H62876
Manual brake release	Order No.	H62881	H62881	H62881	H62882	H62882	H62882	H62883
Manual brake release with crank	Order No.	H62884	H62884	H62884	H62885	H62885	H62885	H62886
Protective paint per ISO12944 C4 (high)	Order No.	H62891	H62891	H62892	H62892	H62893	H62893	H62894
Protective paint per ISO12944 C5 (very high / marine)	Order No.	H62895	H62895	H62896	H62896	H62897	H62897	H62898

## Dimensions and weights of the standard design (special equipment may vary)



L1	mm	860	910	910	1,020	1,060	1,200	1,300
L2	mm	460	460	460	500	500	570	570
B	mm	270	320	360	400	460	550	620
H	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

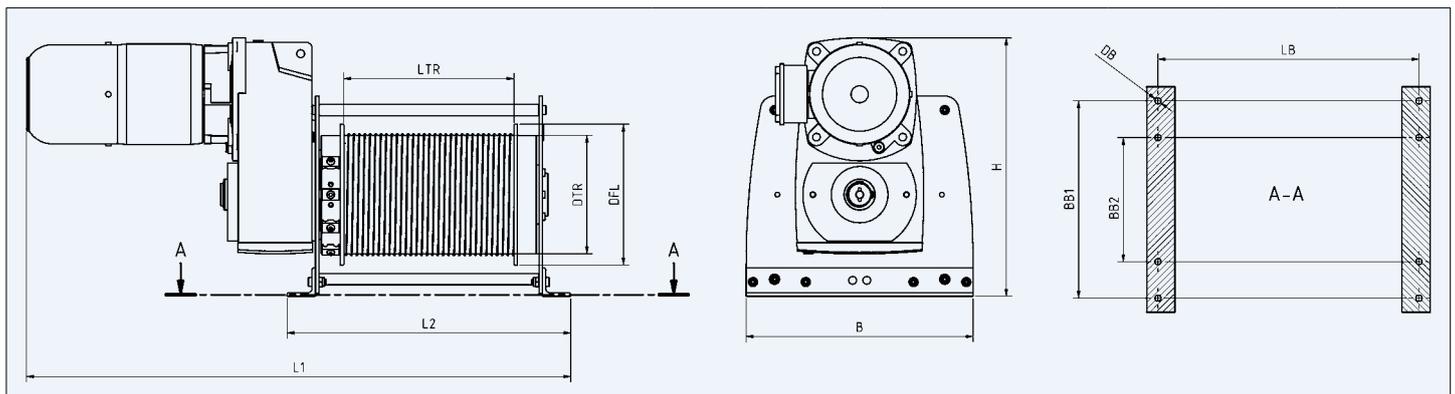
## Double diameter drum, stage & studios

TYPE	PFW-2D	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
<b>PFW-2D with standard speed</b>	<b>Order No.</b>	<b>H62201</b>	<b>H62211</b>	<b>H62221</b>	<b>H62231</b>	<b>H62241</b>	<b>H62251</b>	<b>H62261</b>
Rope speed in 1st rope layer	approx. m/min	7/15	7/15	7/15	7/15	7/15	7/15	7/15
Motor power	kW	0,25/0.37	0.37/0.55	0.55/1.0	0.7/1.4	1.1/2.	1.5/2.5	2.9/4.4
<b>PFW-2D with two speeds</b>	<b>Order No.</b>	<b>H62202</b>	<b>H62212</b>	<b>H62222</b>	<b>H62232</b>	<b>H62242</b>	<b>H62252</b>	<b>H62262</b>
Rope speed in 1st rope layer	approx. m/min	22	22	22	22	22	22	22
Motor power	kW	0.55	1.1	1.5	2.1	3.2	4	5.5
<b>PFW-2D with faster speed</b>	<b>Order No.</b>	<b>H62203</b>	<b>H62213</b>	<b>H62223</b>	<b>H62233</b>	<b>H62243</b>	<b>H62253</b>	<b>H62263</b>

TYPE	PFW stages and studios	250	500	750	1000	1500	2000	3000
Lifting capacity in 1st rope layer	kg	100	200	300	400	630	900	1,200
Rope diameter	mm	5	6	7	8	10	12	14
Rope length in 1st rope layer	m	19	19	19	19	18	17	16
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	7/15	7/15	7/15	7/15	7/15	7/15	7/15
Motor power	kW	0.18/0.25	0.37/0.55	0.4/0.75	0.55/1.0	1.0/1.6	1.5/2.5	2.2/3.4
	<b>Order No.</b>	<b>H62301</b>	<b>H62311</b>	<b>H62321</b>	<b>H62331</b>	<b>H62341</b>	<b>H62351</b>	<b>H62361</b>

Options	Order No.	incl.						
Grooved drum	<b>Order No.</b>	<b>incl.</b>						
Longer drum	<b>Order No.</b>	<b>H62814</b>	<b>H62814</b>	<b>H62815</b>	<b>H62815</b>	<b>H62816</b>	<b>H62816</b>	<b>H62817</b>
Second rope outflow	<b>Order No.</b>	<b>H62820</b>	<b>H62821</b>	<b>H62822</b>	<b>H62823</b>	<b>H62824</b>	<b>H62825</b>	<b>H62826</b>
Manual free-wheeling coupling (not for stages and studios)	<b>Order No.</b>	<b>-</b>	<b>H62831</b>	<b>H62832</b>	<b>H62833</b>	<b>H62834</b>	<b>H62835</b>	<b>H62836</b>
Protective drum cover	<b>Order No.</b>	<b>H62840</b>	<b>H62841</b>	<b>H62842</b>	<b>H62843</b>	<b>H62844</b>	<b>H62845</b>	<b>H62846</b>
Drum pressure roller	<b>Order No.</b>	<b>H62850</b>	<b>H62851</b>	<b>H62852</b>	<b>H62853</b>	<b>H62854</b>	<b>H62855</b>	<b>H62856</b>
Emergency limit switch	<b>Order No.</b>	<b>H62861</b>	<b>H62861</b>	<b>H62861</b>	<b>H62862</b>	<b>H62862</b>	<b>H62863</b>	<b>H62863</b>
Operational limit switch	<b>Order No.</b>	<b>H62865</b>						
Limit switch extended by four additional contacts	<b>Order No.</b>	<b>H62866</b>						
Slack wire switch	<b>Order No.</b>	<b>H62870</b>	<b>H62871</b>	<b>H62872</b>	<b>H62873</b>	<b>H62874</b>	<b>H62875</b>	<b>H62876</b>
Manual brake release	<b>Order No.</b>	<b>H62881</b>	<b>H62881</b>	<b>H62881</b>	<b>H62882</b>	<b>H62882</b>	<b>H62882</b>	<b>H62883</b>
Manual brake release with crank	<b>Order No.</b>	<b>H62884</b>	<b>H62884</b>	<b>H62884</b>	<b>H62885</b>	<b>H62885</b>	<b>H62885</b>	<b>H62886</b>
Protective paint per ISO12944 C4 (high)	<b>Order No.</b>	<b>H62891</b>	<b>H62891</b>	<b>H62892</b>	<b>H62892</b>	<b>H62893</b>	<b>H62893</b>	<b>H62894</b>
Protective paint per ISO12944 C5 (very high)	<b>Order No.</b>	<b>H62895</b>	<b>H62895</b>	<b>H62896</b>	<b>H62896</b>	<b>H62897</b>	<b>H62897</b>	<b>H62898</b>

## Dimensions and weights



L1	mm	840	920	920	1,040	1,080	1,200	1,200
L2	mm	460	460	460	500	500	570	570
B	mm	270	320	360	400	460	550	620
H	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