Company profile

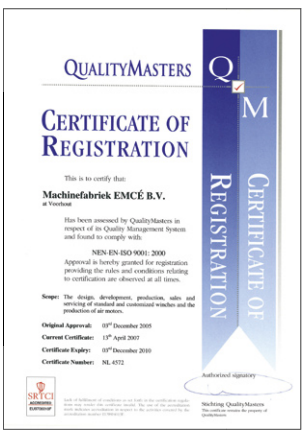
History

Founded in 1933, EMCÉ initially manufactured concrete mills and material lifts for the construction industry. During the 60's, the company decided to specialise in the field of winches, which already were an important part of the material lifts produced. Since 1964 the company EMCÉ is concentrating only upon the design, manufacturing and international marketing of winches, capstans and windlasses. Thus in the field of winches, EMCÉ has built up an outstanding reputation during the past 74 years, especially in the shipbuilding, oil & gas, dredging, fishery, construction, mining, theatre and industry in general.

EMCÉ is part of the Stokvis Holding Group of companies, with the head office also located at Voorhout - Holland, only 15 minutes away from Amsterdam Schiphol Airport. The Stokvis Holding Group employs over 400 people divided over 12 different companies. The group of companies represents a solid unit of entities that complement one another, and who have established their range of activities in the following sectors: transmissions (electric/pneumatic/hydraulic motors, gearboxes, couplings, etc.) and controls, internal transport equipment, automotive equipment, winches and hoisting equipment.

EMCÉ has two production facilities each dedicated to certain manufacturing operations.

EMCÉ is an ISO 9001:2000 Certified Company.


QUALITYMASTERS

CERTIFICATE OF REGISTRATION

This is to certify that:

Machinefabriek EMCÉ B.V.
at Voorhout

Has been assessed by QualityMasters in respect of its Quality Management System and found to comply with:

NEN-EN-ISO 9001: 2000

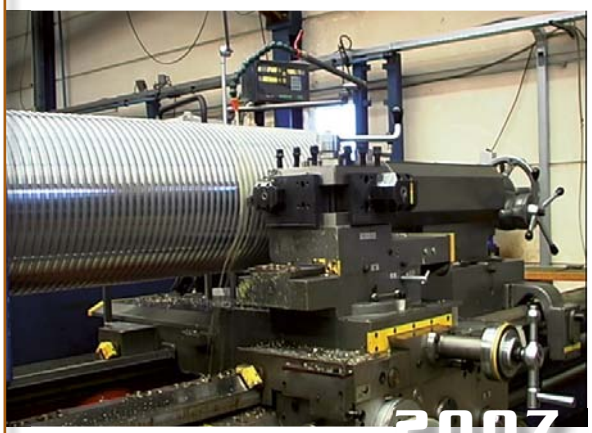
Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Scope: The design, development, production, sales and servicing of standard and customized winches and the production of air motors.

Original Approval: 07th December 2005
Current Certificate: 13th April 2007
Certificate Expiry: 07th December 2010
Certificate Number: SL 4572

Authorised signatory

Stichting QualityMasters



Company profile

Company mission

The primary mission of Machinefabriek EMCÉ b.v, is to design, manufacture and market winches & hoisting equipment based upon customer requirements (custom built), which have definite advantages in quality, performance, durability and safety for customers in the international market of shipbuilding, oil & gas, dredging, fishery, construction, mining, theatre and industry in general.

Engineering

Designing and building winches takes knowledge, innovation, a sense of quality and most important experience in the field. In her more than 45 years dedicated winch experience EMCÉ has made these qualities her own.
A well considered design and robust construction make for a long-lived and trouble free product.
Our designs are aimed at optimal simplicity, efficiency and compact size, using where possible standard industrial components kept in stock within our holding group of companies. This simplifies maintenance, spares availability and worldwide servicing.
From the electronic drawing board using the latest 3-D design software through to the finished product, production and design is done in house, so we can respond quickly and effectively to your inquiries and orders. To build their winches EMCÉ uses high quality type industrial gearboxes. The planetary gearbox offers some interesting advantages and can be proposed as a good alternative to parallel shaft gearboxes in various winch designs. The advantages of planetary gearboxes will match the specific requirements for winch designs, i.e. high reduction ratios, high transmissible torque and high radial loads on output shafts, further these gearboxes are highly reliable and durable and are maintenance free.
Due to the self-braking feature of worm gears, winches based upon this design are suitable for many pulling applications without the need for a brake motor.
The production process of all gearboxes used for EMCÉ winches meets the requirements of the NEN EN ISO 9001: 2000 standard.
In a lot of cases our standard designs will suffice, however, should a custom design or adaptation be necessary, we would be glad to discuss your needs and possibilities with you so we can arrive at an attractive solution.

Quality

All winches are in accordance with the Machinery directive 98/37/EU, Low voltage directive 73/23/EU, Machinery directive electromagnetic compatibility EMC 89/336EU:92/31/EU: 91/263/EU. Further they comply with the following harmonised standards; EN 292-1/2, EN-349, EN 418,
EN 60204, EN 61000, EN 954 and DIN EN 60034. Applied National standards are; P-82-NEN 3508, DIN 15020-1AM/2AM and NEN 1010.

In general most standard winches comply to the Rules for Lifting Appliances as set by Lloyds Register of Shipping (LRS) and Health and Safety Executive (HSE). Upon request winches can be supplied with an Independent Design Review by LRS, DNV, ABS or others upon request and at additional cost.

Before the winches are shipped they are subject to a performance test at one of our test beds which have a maximum dynamic test capacity of 10 and 75 Ton. The Factory Acceptance Tests can be witnessed by the client and/or any Third party like LRS, DNV, ABS, SGS, Inspectorate Suisse, etc…

75 ton

10 ton

Product range

Winches

The control and drive of the winch can be electric, hydraulic or pneumatic or a combination of the before mentioned options. An important fact to remember is that all know how is available within the company; therefore we can offer our customers a rapid response on inquiries and short delivery times against a highly competitive price level.
EMCÉ is active and highly specialised in the range of WLL up to 50 Tons, although we have designed and manufactured winches with working load limits up to 80 Tons to for several applications. Besides the comprehensive range of standard worm gear driven and planetary driven winches, EMCÉ is always able to offer a solution, which is individually tailored to meet the needs of the customer. Nowadays even more than 85% of the total production are winches designed and built to customer specifications.
EMCÉ has winches in use all over the world on land as well on sea, from high in the mountains to underwater, from the tropics to the Antarctic and from a local private owner to Downing Street 10.

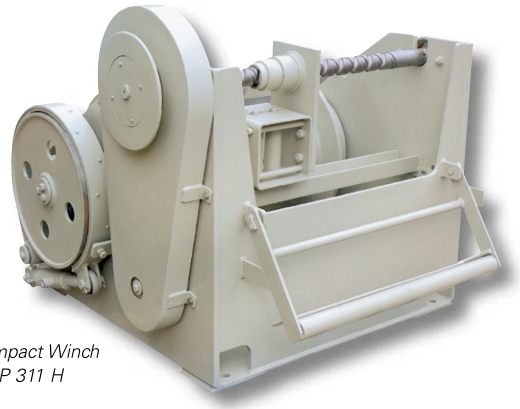
Air motors

The EMCE gear motors are produced and assembled within the Stokvis Holding and are developed in cooperation with a specialist in this field. Our air motors have some very interesting advantages over the conventional piston type of air motors, i.e.

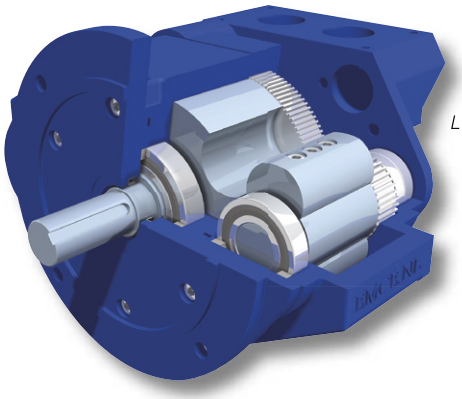
- life time;
- maintenance cost reduction;
- reliability;
- higher power output ratings;

All off the above mentioned advantages are realized by the fact that this motor has only 3 moving but no contacting parts, so hardly any wear and tear, thus no spare parts consumption and need for frequent overhauls. This motor has only a total of about 70 parts, where a piston motor has more than 160 parts, it is evident that the lesser parts the lesser the operational costs.

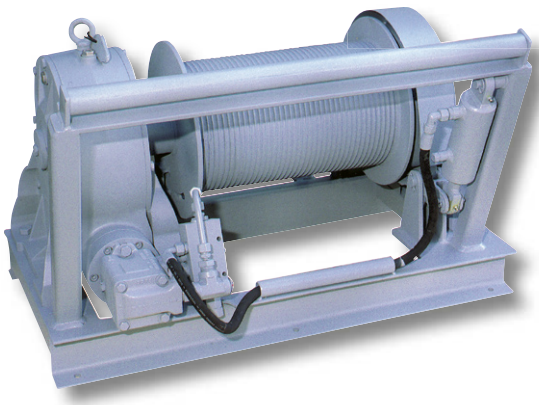
In principle, the gear motor is completely maintenance-free if the air quality requirements that apply to all air-operated motors are within the specifications.



Compact Winch MCP 311 H



LG6 gearmotor



Hydraulic Manrider H 2000 MR

Applications/Markets/Customers

EMCÉ winches found their way already in the following applications/markets:

Land based applications

- Theatres
- Construction
- Warehouses
- Overhead cranes
- Shipyards (slipways / shiplifts)
- Power / nuclear plants
- Mining industry
- Container cranes
- Research institutes
- Windmills
- High cranes / structures (man riding)
- Ferris wheels
- Factories
- Land rigs
- Steel industry
- Railways
- Hydro/electric plants
- Tunneling systems
- General industry
- And 'Downing Street 10' for lifting the prime ministers chandelier

Marine & Offshore applications

- Anchor treatment vessels
- Ferries
- Dredgers
- Crane Vessels
- River vessels
- Passenger ships
- Buoy positioning barges
- Coastguard vessels
- Minesweepers (stainless steel winches)
- Stealth corvettes (stainless steel winches)
- Tugs
- Off shore platforms
- Split barges
- Coasters
- Tankers
- Fishing vessels
- Multi purpose vessels
- Pipe laying vessels
- FSO's / FPSO's
- Off shore turrets / SBM's
- Inland vessels (car cranes)

Some customers*

Agip	Exxon	Pakistan Navy	Herrenknecht
Airbus Ind.	Halliburton	Pohang Steel Korea	Modec
Allseas	Heerema	Rexroth	Thule
APL	Huisman Itrec	Robbins USA	Seadrill
Arab Contractors	Hyundai	Sadra	ONGS
Bharat India	IHC Holland	Saipem	Samsung
Bluewater	John Zink Flares	SAS	SCA
BNFL	Jurong	SBM	NDC
Bofors	KCA Deutag	Shell	Aramco
BSR Group	Keppel Fels	Statkraft	Rolls Royce
Certex	Kobelco Japan	Statoil	QGP
Claxton Int.	Maersk Apm	Stena	QGM
CNOOC	Mammoet	Stolt Offshore	Apexindo
ConocoPhillips	Mars	Swedish Coast Guard	Sea Trucks
CSO	Mennens	Timsah	Bentec
Daewoo	Merwede	Total Elf Fina	Technip
Damen	Modec	Unocal	Premium Drilling
DePret	National Oilwell	Verolme	CSOL
Dolphin	Neg Micon	Pride Int	Lamprell
Dutch Diving	Noordhoek	Awilco	Smedvig
Sense-EDM	Norsk Hydro	Itag	Global Industries

** An updated reference list can be obtained from the EMCE sales department at any time*

About winches

EMCÉ winches are custom built made products

Many constructions are possible, and there are as many norms and selection criteria for choosing a winch. In this foreword we discuss several of these to help you in your selection.

W.L.L. (Working Load Limit)

The W.L.L. is usually given in the first layer, however it decreases for each higher cable layer. The line pull is expressed in kg or daN. Thus it is most important to determine the working length of the cable on the drum, to which should be added 3 safety windings which always remains on the drum.

Choice of cable

For lifting purposes a five-fold safety factor is normally applied to the cable breaking strength. Cables for pulling winches are normally chosen with a three-fold safety factor, though in some cases other safety factors may be required.

Speed

The required speed is vary much depending on the purpose of the winch. Sometimes it may be useful to equip it with a variable speed. With pneumatic- or hydraulic winches this is achieved using a proportional control valve, however for electric winches you need a frequency inverter in the control panel for a full variable drive. Nowadays the electric frequency inverter is a cost-effective solution as it also offers some other standard technical features.

Power source

Should your power source be other than the one stated in this catalogue, please consult EMCE. Our engineering department can recalculate the winch based upon your available power supply.

Winch environment

The winches can be used under a lot of different harsh conditions. Although we always like to know these conditions so we can judge if the standard will be suitable for the job or not. With regard to the temperature the following range is applicable.

- Temperature range, standard: -10°C / + 40°C
- Temperature range, special: -40°C / + 50°C

Brakes

Every lifting winch must have a fail-safe braking system. The standard electric- and pneumatic EMCÉ worm gear winches are self-braking without using a separate brake in the driveline. For some general lifting purposes this suffices, however for accurate positioning of a load and safe lifting a brake motor may be advised. The other EMCÉ winches are normally supplied with a fail-safe brake motor, but can, if required, be built without a brake.

Controls

Electric: alongside the normal options of push-buttons, direct reversing switches or remote controls (pendant or radio controlled), there are several options which may be useful or even necessary. These are; limit switches (to stop the winch when the drum is full or empty), electronic line pull limiter, variable speed, slack rope detection, constant tensioning, Eexd executions, etc.

Hydraulic and pneumatic: Hydraulic and pneumatic winches may be directly controlled, for example by flow and/or pressure regulators, or by combination of electric control boxes with electric actuated valves.
Full packages with hydraulic power packs also can be supplied together with the hydraulic winches either supplied onto the winch-frame or stand-alone.

About winches

Clutches

In general we use two types. Claw types: these can't be operated under load, so that the driveline must first be freed of the load, (for example using a band brake on the winch drum) before the clutch may be operated. Claw clutches are always manually operated, they are extremely robust, dependable and relatively inexpensive. Friction clutches: these can be operated under load and can compensate for differences in turning speeds between the drum and the driveline. Friction clutches can be operated manually as well as remotely by hydraulic or pneumatic power sources. They are normally more expensive and more complex than claw clutches. A notable exception to this rule is the friction clutch built onto the compact series MC 303 to MC 313. Note that for most lifting purposes, the use of a clutch in the driveline is not permitted!

Band brakes

Band brakes can be provide manually or failsafe automatically by means of a hydraulic or pneumatic cylinder. Band brakes are used for applications where a second brake, a drum brake is required. By instance for man riding applications where the regulations ask for a second brake if the first brake is malfunctioning or for applications where the static load is a multiple of the dynamic Working Load Limit.
An application of the second could be a wire rope anchor winch.

Electric requirements

Normally we work with protection class IP 54 (splash water tight, dust proof), both for the motors and the control boxes. Pendant remote controls are IP 65 protected. Cast iron motors can also be fitted in IP 56 TENV (totally enclosed non-ventilated) for deck equipment in marine use. For explosion proof and spark free zones, we can equip the winches with the correct explosion proof or spark free motors and control boxes.

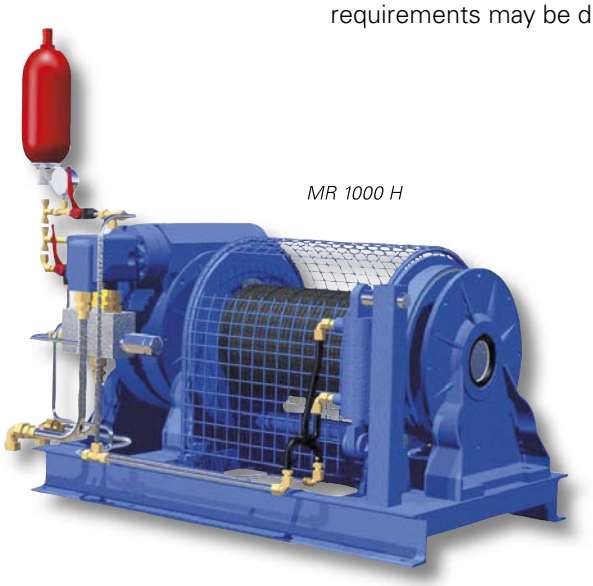
Cable guides

For normal cable (6x36) the maximum advisable fleet angle is 2° for smooth drums and 3° for helical grooved drums. The following aid to determine the distance between the drum and sheave can be used for smooth drums; 20 x drum length. Or for grooved drums; 15 x drum length. For a larger fleet angle a cable spooling a pressure roller is may be necessary.

The grooving of a drum and a constant load both help a cable spool correctly on the winch drum. For pulling winches, when the cable may become slack, a pressure roll is advisable, so that the cable stays neatly spooled on the drum.

Note

Depending on local regulations, options and requirements may be different.



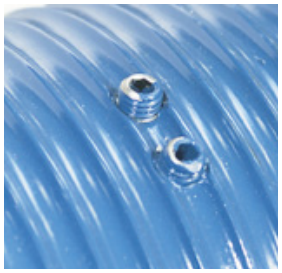
MR 1000 H

Winch options

PRESSURE ROLLER

DRUM GUARD

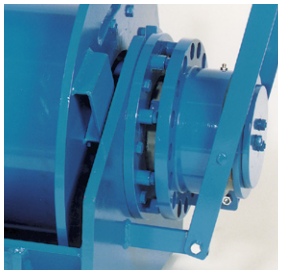
SPINDLE LIMIT SWITCH



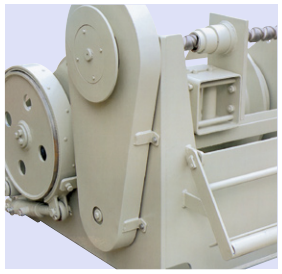
GROOVED DRUM

DRUM DIVIDER FLANGE

ENCODER + SPINDLE LIMIT SWITCH

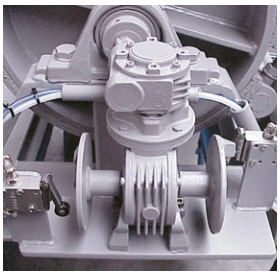


CLAW CLUTCH

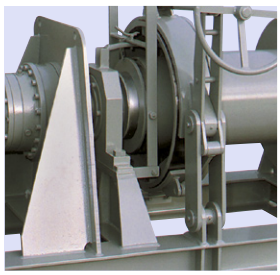


FRICTION CLUTCH

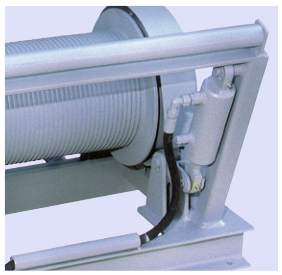
SLACK WIRE SWITCH



PNEUMATIC SPINDLE LIMIT SWITCH

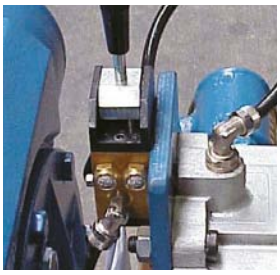


MANUAL BAND BRAKE

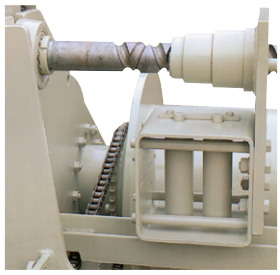


HYDRAULIC OPERATED BAND BRAKE

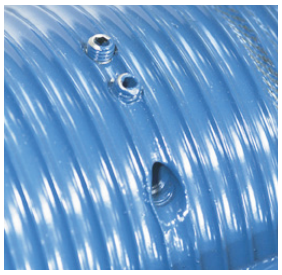
PENDANT REMOTE CONTROL



PNEUMATIC CONTROL VALVE

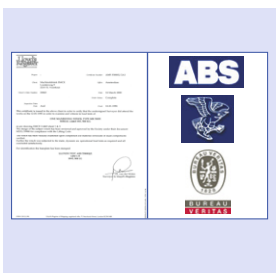


SPOOLING GEAR



ADDITIONAL ROPE ANCHOR

SLIP RING



CLASSIFICATION CERTIFICATES OF LR, BV, ABS, GL, DNV, ETC.

MANUAL EMERGENCY CRANK (ON ELECTRIC MOTOR)

CONTROL PANEL WITH FREQUENCY IN INVERTER

Electric Wormgear Winches MCW series

A range of electric self braking worm gear winches, developed for heavy duty pulling and traversing duties up to 2800 kg. Due to the self braking worm gears the winches are suitable for pulling up an incline. A brake is available as an option for accurate positioning or repetitive lifting applications up to 2000 kg.

Standard features

- Self braking worm gear transmission
- IP 54 aluminium non braked motor 400 VAC / 3 phase / 50 Hz.
- Steel drum (not grooved) with cable fixing point at flange
- Single drum support (MC 250, MC 500)
- Two drum supports (all other models)
- Double layer 2 component conservation, colour RAL 5010

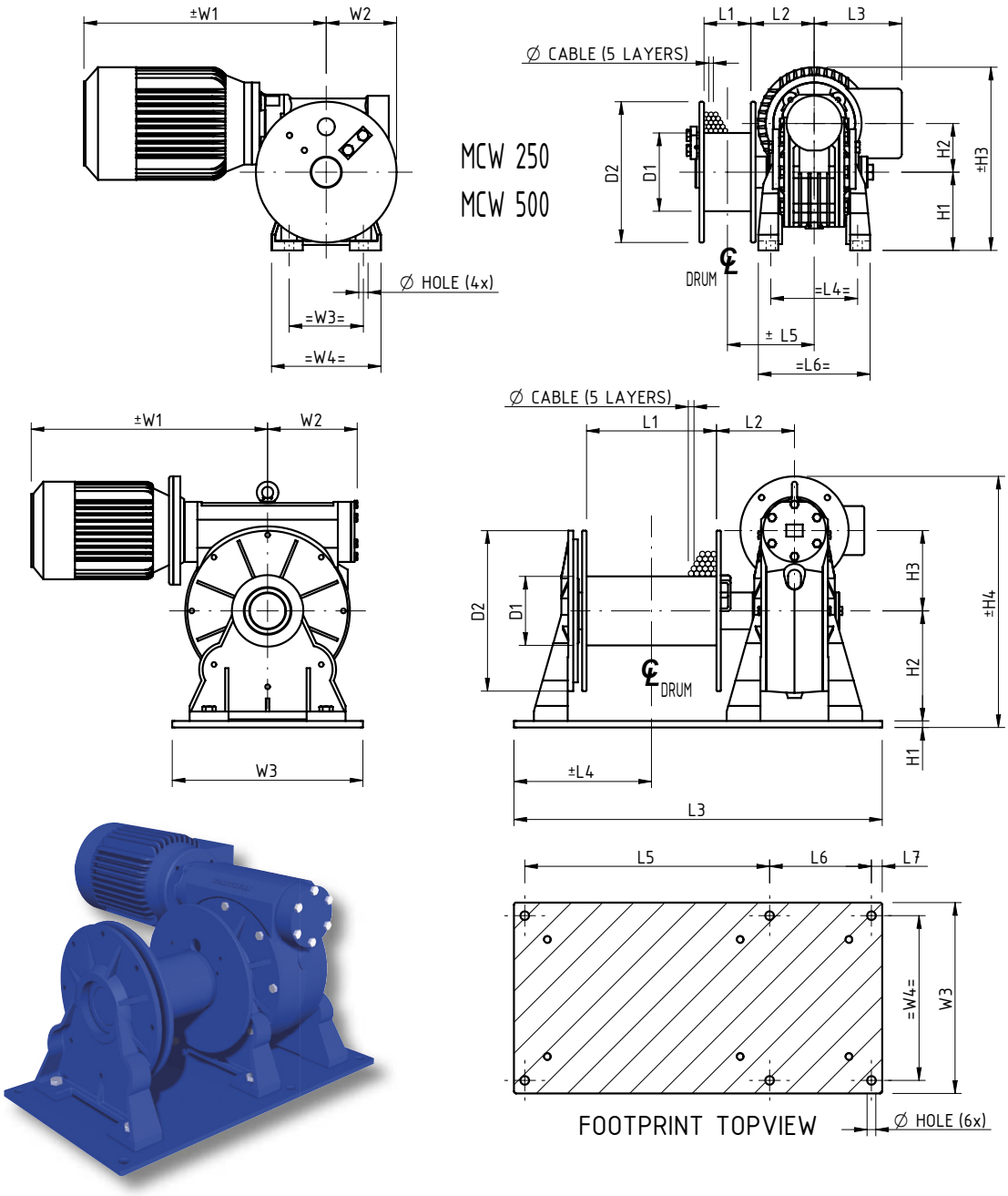
Available options

- Braked motor (aluminium or cast iron)
- IP 56 TENV cast iron motor for marine applications
- 220 single phase motors (up to MC 750)
- 24 VDC motors
- Explosion proof motors
- Protective steel motor cover
- Manual or remotely controlled disengaging clutch
- Band brakes
- Grooved drum
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guards
- Emergency cranking
- Marine / offshore coating systems

Available control options

- Direct pendant remote control IP 65 with emergency stop (up to 1,5 kW 220 VAC / 1 phase or 2,2 kW 400 VAC / 3 phase)
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches
- Slack wire switches

Winch type	W.L.L. Pulling 1st layer kg.	W.L.L. Pulling 5th layer kg.	W.L.L. Lifting 1st layer kg.	W.L.L. Lifting 5th layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Motor power 400 V kW. S2	Weight without rope kg.
MCW 250	250	170	200	135	6	6	2	19	0,75	22
MCW 500	500	340	400	275	6	6	2	19	1,1	35
MCW 750	750	490	600	390	7	6	6	42	1,5	55
MCW 1200	1200	750	960	600	8	5	5	38	2,2	92
MCW 1700	1700	1055	1300	805	10	6	7	50	4	140
MCW 2200	2200	1365	1700	1055	12	7	9	63	5,5	180
MCW 2800	2800	1745	2000	1245	13	8	11	76	7,5	254
Winch type	**W.L.L. Pulling 1st layer kg.**	**W.L.L. Pulling 5th layer kg.**	**W.L.L. Lifting 1st layer kg.**	**W.L.L. Lifting 5th layer kg.**	**Recomm. rope diam. mm.**	**Speed 1st layer m/min.**	**Drumcap. 1st layer m.**	**Drumcap. 5th layer m.**	**Motor power 230 V 1 phase kW. S2**	**Weight without rope kg.**
MCW 250 SPH	250	170	200	135	6	5	2	19	0,75	22
MCW 500 SPH	500	340	400	275	6	5	2	19	1,5	35
MCW 750 SPH	700	460	550	360	7	5	6	42	1,8	55



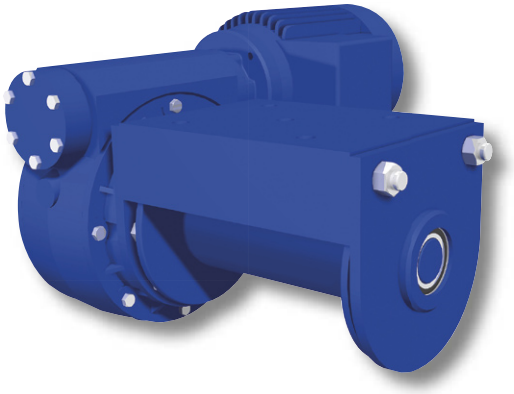
Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1	W2	W3	W4	Hole Ø
MCW 250	20	100	180	60	81	118	111	111	143	-	100	62	233	-	310	90	95	140	11,5
MCW 500	35	100	200	60	91	129	146	121	186	-	142	87	309	-	358	110	140	220	11,5
MCW 750	55	100	200	150	104	500	187	320	150	15	10	142	87	320	358	110	270	240	13
MCW 1200	92	100	250	150	125,5	560	203	340	180	20	10	170	110	380	421	140	325	285	17
MCW 1700	140	121	280	200	146,5	640	232	415	185	20	15	195	130	443	492	154	370	320	17
MCW 2200	180	146	320	250	155	710	260	470	200	20	15	220	150	510	519	180	410	360	17
MCW 2800	254	159	370	300	180	850	318	565	235	25	15	254	182	579	546	207	440	380	20

Electric Wormgear Winches MC AK series

Two electric self braking worm gear winches, specially developed for car lifting purposes. The winches can be mounted onto a Davit or crane boom. Winches can be used to lift cars, Zodiacs or any other non life saving craft on board of ships.

Standard features

- Self braking worm gear transmission
- IP 56 TENV cast iron non braked motor 400 VAC / 3 phase / 50 Hz.
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010

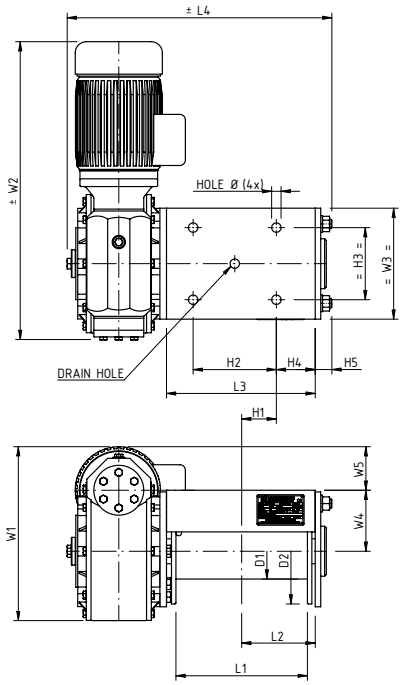


Available options

- Braked motor
- Alternative speeds
- Marine / offshore coating systems

Available control options

- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter
- Frequency inverter for variable speed control
- Limit switches



Winch Type 1st layer kg.	W.L.L. 4th layer kg.	W.L.L. rope diam. mm.	Recomm. rope diam. mm.	Speed 1st layer m.	Drumcap. 1th layer m.	Drumcap. 4th layer m.	Motor Power 400 V kW	Weight without rope kg.
MC 1200 AK	960	665	8	5	9	45	1,5	92
MC 1700 AK	1300	890	10	6	8	45	3	140

AK type	Mass (kg)	D1	D2	L1	L2	L3	L4	H1	H2	H3	H4	H5	W1	W2	W3	W4	W5	Hole Ø
1200	92	100	190	237	132.5	268	477	62,5	150	130	70	30	313,5	537	200	110	78,5	17
1700	140	121	240	240	134	291	540	59	170	160	75	30	400	638	240	150	105	17

Manual Operated Winches

M SERIES

A range of floor mounted manual driven winches, developed for heavy duty lifting and pulling duties up to 2620 kg. For applications where no other power source than human power is available, for example; windlasses on small barges, lifting of ramp doors on small ferries or any other industrial heavy duty job. The customer can choose for a hand wheel or crank drive system. A special safety crank with integrated centrifugal brake is available as an option for lifting duties. Maximum human force to be applied is 25 kg.

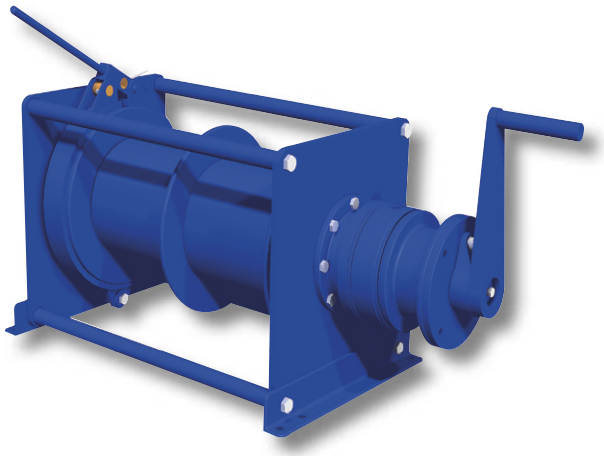
This range of standard winches can be easily adapted to the customers requirements, so if your specifications differ from the standard models as stated do not hesitate to send us your inquiry, we will offer you the required model accordingly.

Standard features

- Slight self braking worm gear transmission for M 500 up to M 1000
- High efficiency transmission for M 1500 and M 2000
- Heavy duty industrial construction of all parts
- Manual crank or hand wheel
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010

Available options

- Manual safety crank(s) with centrifugal brake for lifting duties
- Manual disengaging clutch
- Manual band brake
- Grooved drum
- Drum pressure roller
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guards
- Marine / offshore coating systems



Winch type	W.L.L. 1st layer kg.	W.L.L. Top layer kg.	Recomm. Rope diam. mm.	Speed Top layer m/min.	Drumcap. 1st layer m.	Drumcap. Top layer m.	Torque@ 60 rpm REQD. in nm	Qty. of cranks/ handwheels	Weight without rope kg.
M 500	725	500 (5)	6	2	7	47(5)	45	1	50
M 750	1120	750 (5)	8	1,5	7	44 (5)	55	1	80
M 1000	1370	1000 (4)	8	1	9	44 (4)	60	1	120
M 1500	2030	1500 (4)	10	1	9	46 (4)	45	1	160
M 2000	2620	2000 (4)	12	0,7	12	65 (4)	45	1	220

Electric Wormgear Lifting Winches EN series

A range of electric self braking worm gear winches, developed conform to the European norms for lifting winches, specially to P-82-NEN 3508-K3 and DIN 15020-1AM with long life service. The self braking worm gearbox is combined with an automatic fail-safe motor brake for precise load control. On types EN 580 to EN 1700 a grooved drum is fitted as standard according to the CE norm. A grooved drum ensures long service life for the cable.

Standard features:

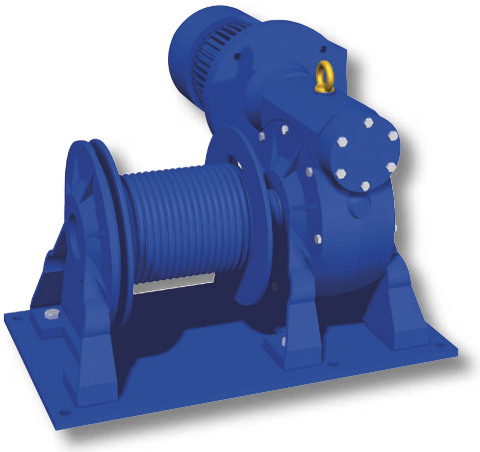
- Self braking worm gear transmission
- IP 54 aluminium braked motor 400 VAC / 3 phase / 50 Hz.
- Grooved steel drum (not grooved on EN 200, EN 450) with cable fixing point at flange
- Single drum support (EN 200, EN 450)
- Two drum supports (all other models)
- Double layer 2 component conservation, colour RAL 5010

Available options:

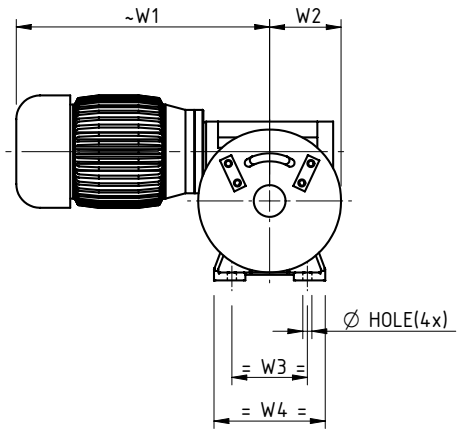
- IP 56 TENV cast iron motor for marine applications
- 220 VAC single phase motors (up to EN 500)
- 24 VDC motors
- Explosion proof motors
- Protective steel motor cover
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guards
- Emergency cranking
- Marine / offshore coating systems

Available control options:

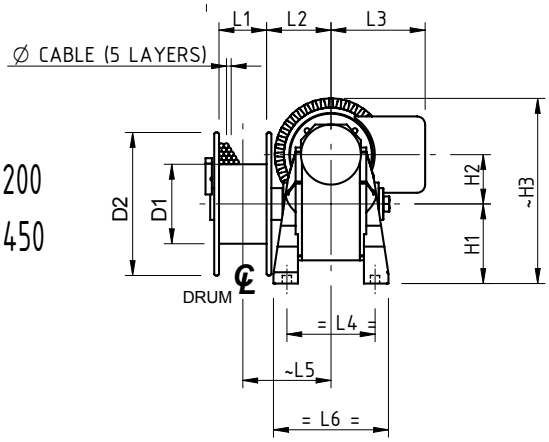
- Direct pendant remote control IP 65 with emergency stop (up to 1,5 kW 220 VAC / 1 phase or 2,2 kW 400 VAC / 3 phase)
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter (required by CE for applications exceeding 1000 kg W.L.L.)
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches
- Slack wire switches

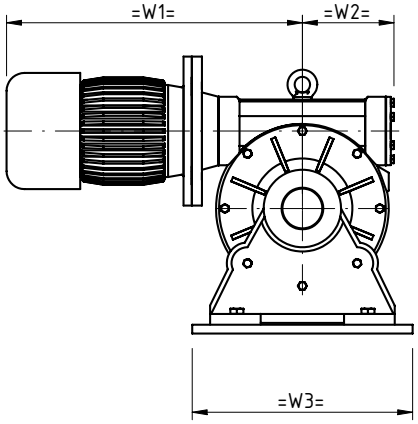


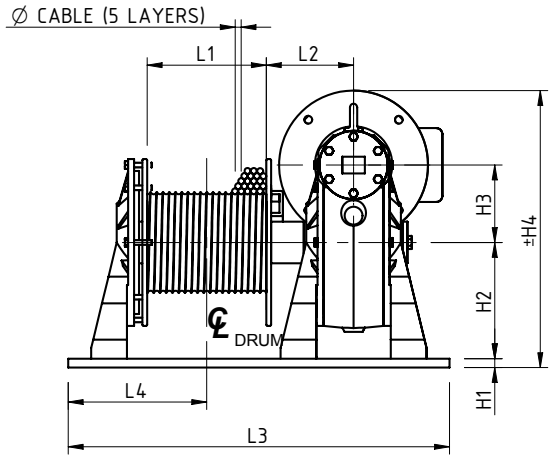
Winch type	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. Rope diam. mm.	Speed 1st layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	Motor power 400 V kW	Weight without rope kg.
EN 200	200	165	5	6	3	11	0,55	20
EN 450	450	375	6	7	3	11	1,1	35
EN 500	500	405	7	5,5	7	25	1,1	60
EN 800	800	640	8	6	6	23	1,5	90
EN 1050	1050	840	10	7,5	9	31	3	150
EN 1325	1325	1065	11	8	11	40	4	195
EN 1700	1700	1370	12	9	13	48	5,5	260

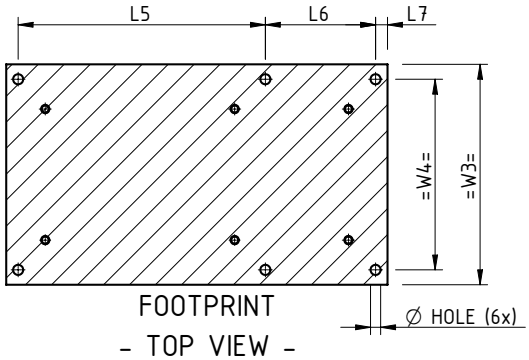


EN 200
EN 450









FOOTPRINT
- TOP VIEW -

Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1	W2	W3	W4	Hole Ø
EN 200	20	100	180	60	81	118	111	111	143	-	100	62	233	-	319	90	95	140	11,5
EN 450	35	121	200	60	91	129	146	121	186	-	142	87	309	-	374	110	140	220	11,5
EN 500	60	121	200	150	104	500	187	320	150	15	10	142	87	320	392	110	270	240	13
EN 800	90	127	250	150	125,5	560	203	340	180	20	10	170	110	380	435	140	325	285	17
EN 1050	150	159	280	200	146,5	640	232	415	185	20	15	195	130	443	496	154	370	320	17
EN 1325	195	178	320	250	155	710	260	470	200	20	15	220	150	510	525	180	410	360	17
EN 1700	260	195	370	300	180	850	318	565	235	25	15	254	182	579	634	207	440	380	20

Hydraulic Wormgear Winches H series

A range of hydraulic selfbraking wormgear winches, developed for heavy duty lifting and pulling applications up to 3150 kg. Due to the modular concept and the flexibility of our production it is possible to build, within short delivery times, many variations of these winches such that they may be adapted to your specific needs. The types H 500 and H 700 are constructed without a brake and are designed to be totally self braking. The types H 1200 to H 3150 are designed with a failsafe brake and brake valve.

Standard features:

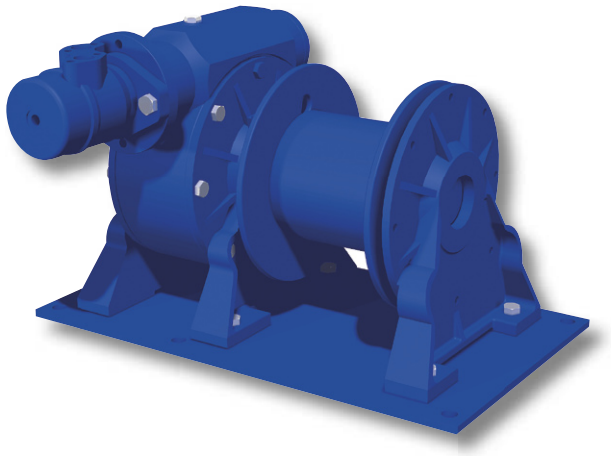
- Wormgear transmission
- Orbitmotor
- Steel drum (not grooved) with cable fixing point at flange
- Single drum support (H 500)
- Two drum supports (all other models)
- Double layer 2 component conservation, colour RAL 5010
- Brake and double acting brake valve (not on H 500, H 700)

Available options:

- Manual disengaging clutch
- Bandbrakes, manual or automatic fail safe
- Grooved drum
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guard
- Emergency cranking
- Marine / offshore coating systems

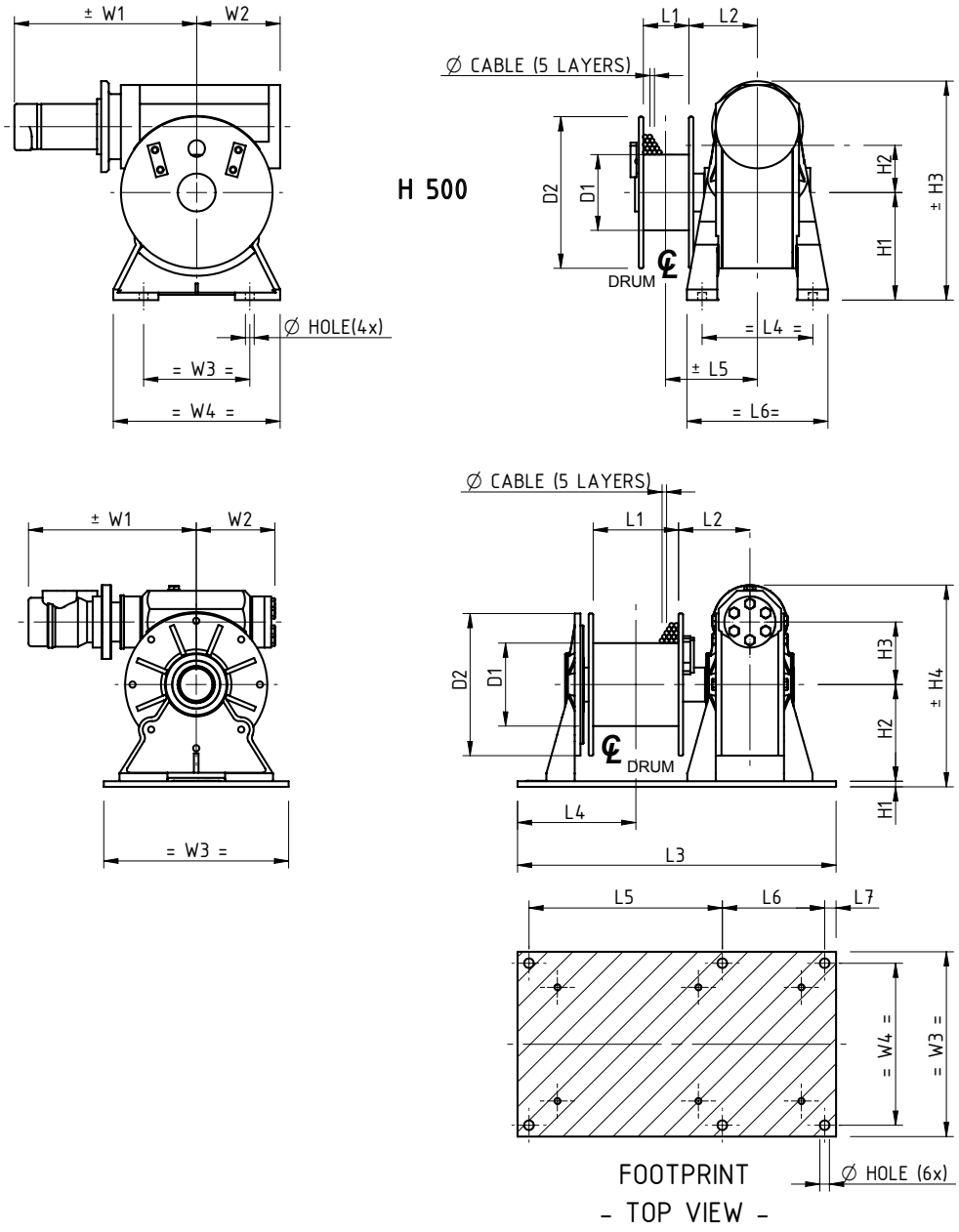
Available control options:

- Proportional control valves
- Hydraulic power packs



Winch type	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. Rope diam. mm.	Speed 1st layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	pressure drop in bar	Flow in L/min.
H 500 *	500	400	6	6,5	2	10	50	20
H 700 *	700	540	8	6,5	5	20	60	20
H 1200	1200	940	9	9	5	21	95	50
H 2000	2000	1560	12	10	8	28	105	60
H 2500	2500	1965	13	11	9	36	130	60
H 3150	3150	2455	16	8	11	41	140	60

** All winches with brake with the exception of the H 500 and H 700*



Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1	W2	W3	W4	Hole Ø
H 500	35	100	200	60	91	-	146	121	186	-	142	87	289	-	253	110	140	220	11,5
H 700	50	100	200	150	104	500	187	320	150	15	10	142	87	309	253	110	270	240	13
H 1200	82	121	250	150	125,5	560	203	340	180	20	10	170	110	354	400	140	325	285	17
H 2000	134	159	280	200	146,5	640	232	415	185	20	15	195	130	440	456	154	370	320	17
H 2500	170	178	320	250	155	710	280	470	200	20	15	220	150	510	467	180	410	360	17
H 3150	225	210	370	300	180	850	318	565	235	25	15	254	182	572	498	207	440	380	20

Pneumatic Wormgear Winches LV series

For pneumatic winch applications demanding lightweight construction, this range of explosion proof winches provides the solution. The use of vane type motors and inherently safe self braking worm gears ensures trouble free operation and low maintenance required. These winches find their use in general industry, oil and gas exploration, and in many places where compact, explosion proof hoisting gear is required.

The range includes two fast speed types, the LV 256 and LV 508 which also have optional carrying handles, and slower speed types up to 1700 kg. lifting capacity.

The self braking characteristics of the worm gear drive combined with closed ports is sufficient for almost all hoisting purposes. For accurate positioning of a load an extra brake may be necessary. Please consult factory in this case.

Standard features

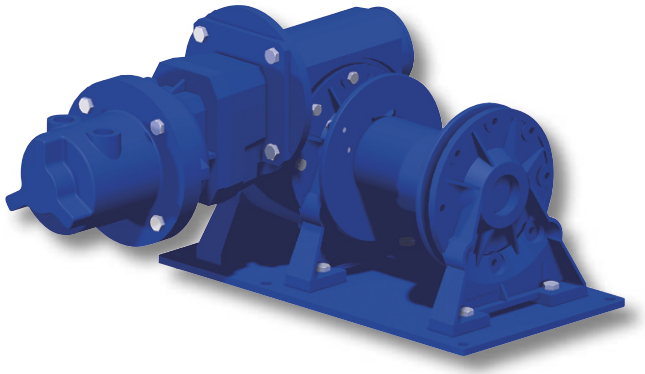
- Self braking worm gear transmission
- Rotary vane motor
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010
- Drum guard
- Emergency cranking
- Marine / offshore coating systems

Available control options

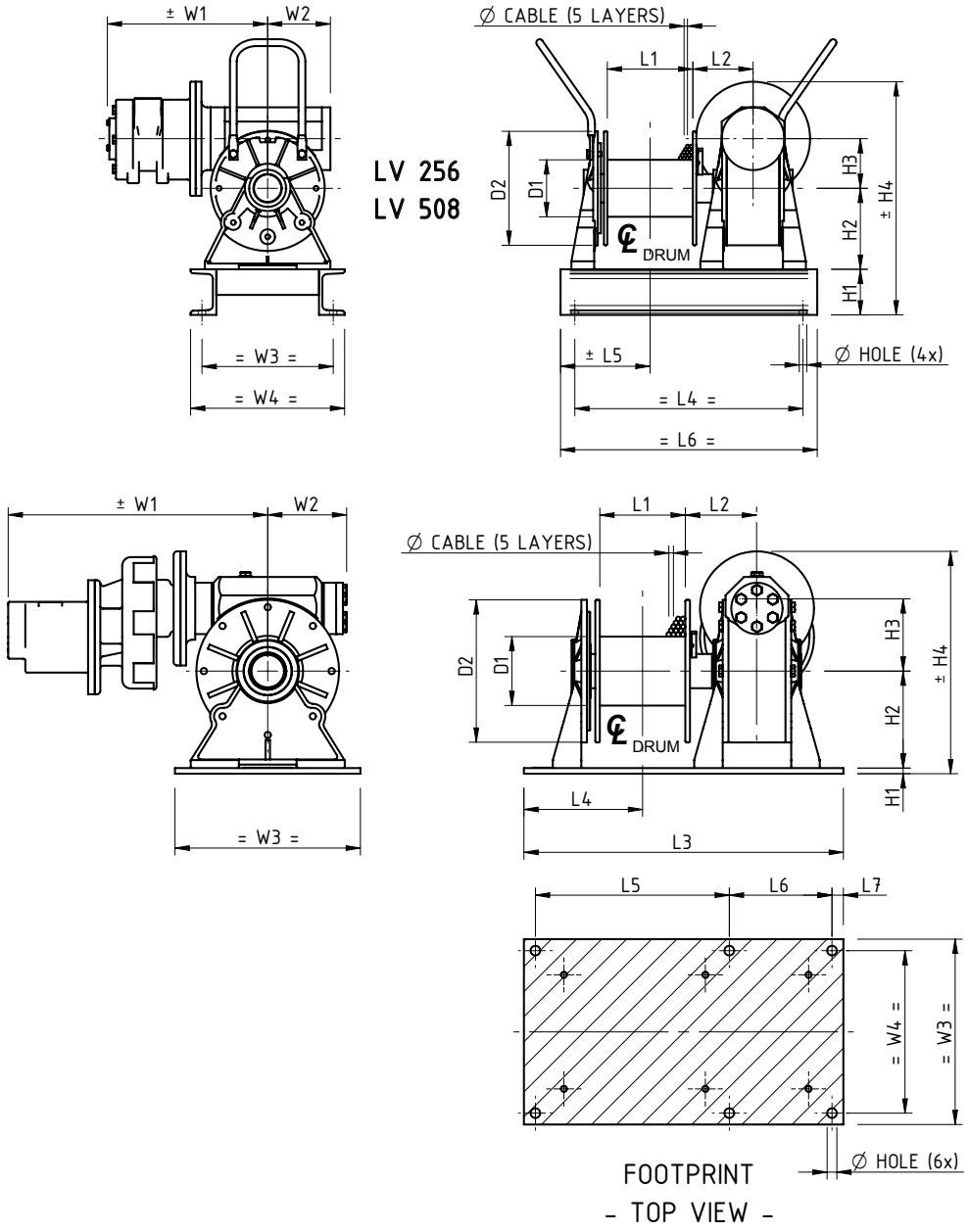
- Proportional control valve, local or remote
- Pneumatic limit switch
- Pneumatic slack wire switch

Available options

- Manual disengaging clutch
- Band brake, manual or automatic fail safe
- Grooved drum
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.



Winch Type	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	Pressure drop in bar	Flow in l/sec.
LV 256	250	210	5	12	8	30	6	60
LV 508	500	400	7	12	6	22	6	95
LV 425	425	350	6	5	7	26	6	20
LV 750	750	600	8	5,5	6	23	6	60
LV 1250	1250	1000	10	6	9	32	6	95
LV 1700	1700	1325	12	7	10	35	6	140



Type	Mass kg	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1	W2	W3	W4	Hole Ø
LV 256	58	100	200	150	105	-	400	157	450	-	80	142	87	409	278	110	270	230	13
LV 425	59	100	200	150	105	500	187	320	150	15	10	142	87	389	374	110	270	240	13
LV 508	65	100	200	150	105	-	400	157	450	-	80	142	87	409	281	110	270	230	13
LV 750	93	121	250	150	125,5	560	203	340	180	20	10	170	110	390	455	140	325	285	17
LV 1250	149	146	280	200	146,5	640	232	415	185	20	15	195	130	440	490	154	370	320	17
LV 1700	192	159	320	250	155	710	260	470	200	20	15	220	150	510	609	180	410	360	17

Manriding Winches

MR series

Designed to the standards issued by the classification societies for personnel lifting operations. The winches are dedicated personnel lifting winches offered with full material trace-ability. They have passed the EC testing for these applications, i.e., both the winches and their technical files are in compliance with the requirements of the EC Machinery Directives.

Please refer to page 38 for specific manriding winches used for offshore applications.

Standard features

- Worm gear transmission
- Automatic band brake
- Rotary vane, gear or radial piston air motor
- Obit or vane hydraulic motor
- IP 56 TENV or Eexd electric motor (50 / 60 Hz)
- Grooved steel drum
- Full material trace-ability (3.1 - EN 10204) on load bearing parts
- Two drum supports
- Emergency hand crank
- Offshore coating
- Mufflers on pneumatic winches
- Operating conditions -10°C through 40°C

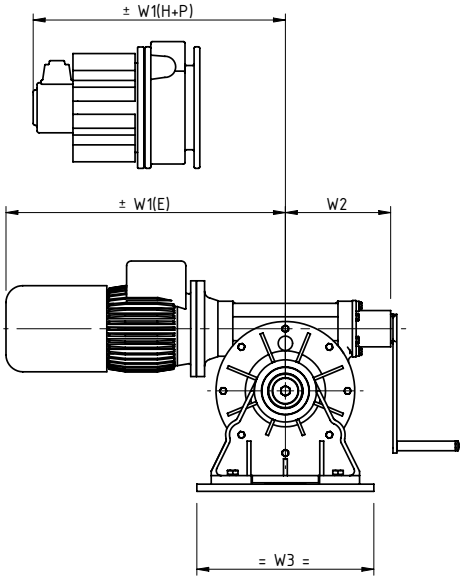
Available options

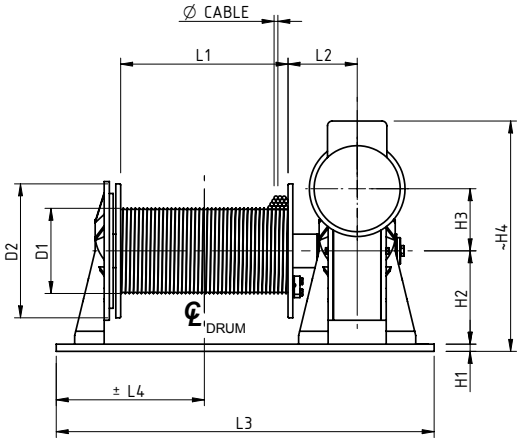
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guard
- Certifying authority witness test (ABS / DNV / etc.)
- Operating conditions -40°C through 50°C
- Air service unit

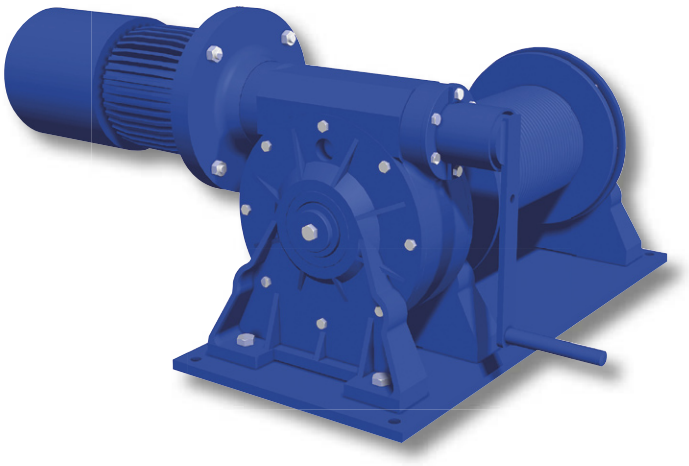
Available control options

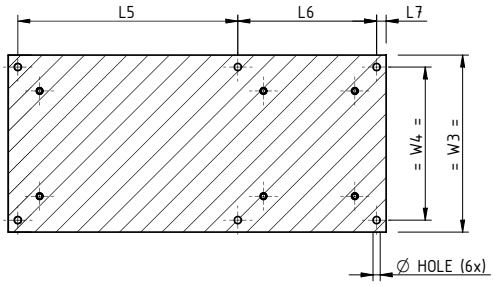
- Electric / hydraulic or pneumatic control systems
- Limit switch
- Slack wire switch
- Overload protection device (load limiter)
- Emergency hand crank interlock switch.

Winch type	W.L.L. kg.	Recomm. rope diam. mm.	Speed 4th layer m/min.	Drumcap. 4th layer m.	Motor power 400 V kW	Pressure drop in bar	Flow in L/min	Flow in L/sec
MR 500 E	500	8	10	105	1,8			
MR 700 E	700	10	12	85	3			
MR 1150 E	1150	12	13	90	5,5			
MR 500 EXD	500	8	10	105	1,8			
MR 700 EXD	700	10	12	85	3			
MR 1150 EXD	1150	12	13	90	5,5			
MR 150 H	150	8	15	110		65	30	
MR 500 H	500	8	20	105		105	40	
MR 1000 H	1000	12	17	75		125	50	
MR 1450 H	1450	13	20	95		140	60	
MR 150 P	150	8	15	110		5		50
MR 500 P	500	8	17	105		5		120
MR 700 P	700	10	14	85		7		140
MR 1150 P	1150	12	14	90		6		200









FOOTPRINT
- TOP VIEW -

Type	Mass (kg.)	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1 (E)	W1 (H+P)	W2	W3	W4	Hole Ø
MR 150	180	178	280	380	144,5	800	340	550	210	20	15	195	110	420	384	279	134	410	370	13
MR 500	200	178	280	350	144,5	790	310	460	290	20	15	195	130	481,5	584	533	154,3	370	320	15
MR 700	215	212	320	300	154,5	760	290	520	200	20	15	220	150	534	665	616	250	410	360	17
MR 1000	220	220	370	300	154,5	760	290	520	200	20	15	220	150	534	665	616	250	410	360	17
MR 1150	280	220	370	370	180	920	352,5	635	235	25	15	254	117,5	641,5	721	734	284,5	440	380	20
MR 1450	290	244	410	370	180	920	352,5	635	235	25	15	254	117,5	641,5	721	734	284,5	440	380	20

Planetary Compact Build Winches MCP series

A range of compact lifting and pulling winches utilising electric, hydraulic or pneumatic motors. The heavy duty planetary gearbox is located within the drum core, which both saves space and protects the gearbox from any external mechanical threats.
These winches can be fitted with a clutch which can be operated whilst under load.
With this range capacities can go up to 30 tonnes lifting capacity. Depending on your power source and application, we will be pleased to select and offer the correct model for you.

Standard features

- Heavy duty planetary gearbox
- MC E; IP 54 aluminium braked motor 400 VAC / 3 phase / 50 Hz.
- MC H; orbit type hydraulic motor complete with brake valve
- MC LPR; radial piston type air motor complete with hand control valve and mufflers
- MC LG; gear type air motor complete with hand or remote control valve and mufflers
- Steel drum with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010

Available options

- IP 56 TENV cast iron motor for marine applications
- Explosion proof motors
- Protective steel motor cover
- Drum pressure roller
- Band brakes (manual or failsafe automatic)
- Manual or automatic disengaging clutch (also under load)
- Alternative speeds
- Alternative supply voltages
- Drum guards
- Spooling gears
- Grooved drums
- Marine / offshore coating systems
- Tubular offshore frame construction with lifting eyes

Available control options

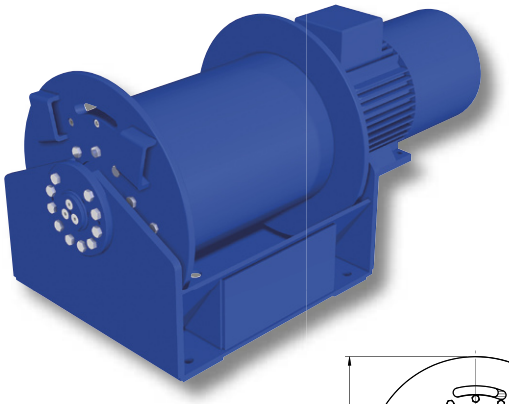
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter (required by CE for applications exceeding 1000 kg W.L.L.)
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches (only electric)
- Flange encoder
- Slack wire switches (electric, pneumatic)
- Proportional local or remote control valve (pneumatic or hydraulic)

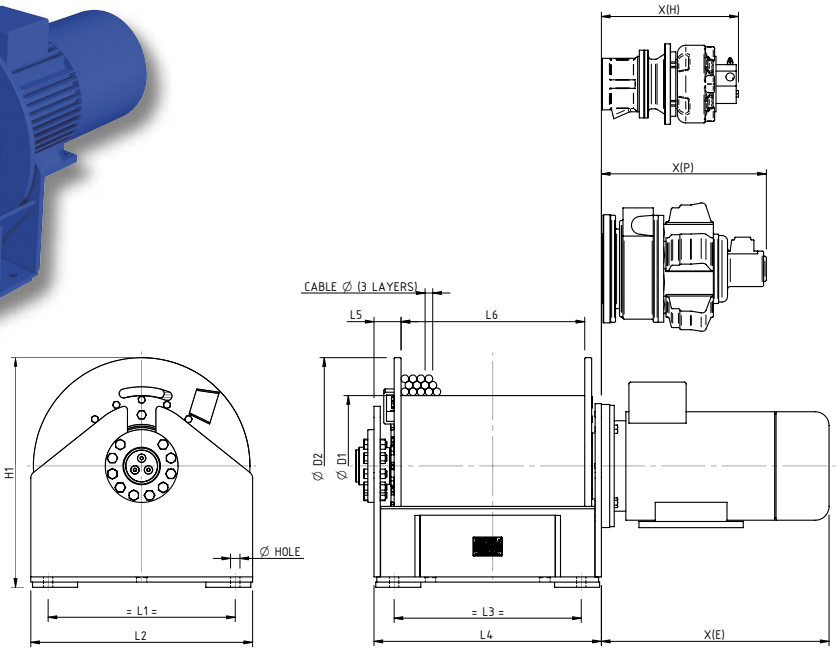
Winch type Electric	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 3rd layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	Motor power in kW
MCP 303 E	2000	1750	12	8,5	10	35	118	3
MCP 305 E	3500	2950	16	9	10,5	26	91	5,5
MCP 306 E	5500	4610	18	7	8,5	29	102	7,5
MCP 307 E	7000	5800	22	12	15	27	97	15
MCP 309 E	9000	7500	24	13,5	16	31	112	22
MCP 310 E	12000	9925	28	8	10	39	141	18,5
MCP 311 E	14000	11450	30	12	15	40	143	30
MCP 313 E	20000	16510	34	7,5	9	44	161	30

Winch type Hydraulic	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 3rd layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	Pressure drop in bar	Flow in L/min.
MCP 303 H	2000	1750	12	15	17	35	118	125	45
MCP 305 H	3800	3200	16	9	10,5	26	91	120	55
MCP 306 H	5500	4610	18	12	14	29	102	180	60
MCP 307 H	7000	5800	22	12	14,5	27	97	185	75
MCP 309 H	9000	7500	24	13	15,5	31	112	190	105
MCP 310 H	12000	9925	28	12	14,5	39	141	200	120
MCP 311 H	14000	11450	30	10	12	40	143	190	120
MCP 313 H	20000	16510	34	8	9,5	44	161	205	125

Planetary Compact Build Winches MCP series

Winch type Pneumatic	W.L.L. 1st layer kg.	W.L.L. 3rd layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 3rd layer m/min.	Drumcap. 1st layer m.	Drumcap. 3rd layer m.	Pressure drop in bar	Flow in L/sec.
MCP 303 LPR2	2000	1750	12	7	8	35	118	7	90
MCP 303 LPR3	2000	1750	12	17	19	35	118	7	150
MCP 305 LPR3	3600	3030	16	10	12	26	91	7	150
MCP 305 LPR4	4000	3365	16	16	19	26	91	7	225
MCP 306 LPR4	5500	4610	18	10	12	29	102	7	240
MCP 307 LPR4	7000	5800	22	8	9,5	27	97	7	240
MPC 309 LG6	9000	7500	24	10	12	31	112	7	350
MCP 310 LG6	12000	9925	28	7	8,5	39	141	7	350
MCP 311 LG6	14000	11450	30	6	7,5	40	143	7	350
MCP 313 LG6	20000	16510	34	4	5	44	161	7	350





Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	H1	X(H)	X(P)	X(E)	Hole Ø
MCP 303	325	323	480	440	500	440	543	58	450	510	261	485	410	20
MCP 305	400	323	480	440	500	440	543	58	450	510	276	565	570	20
MCP 306	560	355	540	490	560	525	635	68	520	575	325	565	570	22
MCP 307	710	405	625	560	640	520	656	78	530	660	239	565	710	25
MCP 309	850	457	700	640	720	585	721	80	590	738	259	520	785	27
MCP 310	1025	508	800	720	820	765	925	100	770	840	239	520	800	33
MCP 311	1100	508	800	720	820	825	985	100	830	840	248	520	920	33
MCP 313	1500	610	950	878	980	880	1055	110	890	995	348	520	920	34

Planetary Standard Build Winches SB series

The standard build SB type winch provides the basis of the solution to many pulling and lifting winch applications. The winch is constructed in the conventional manner with motor and gearbox and drum in line. With this range capacities can go up to 60 tonnes lifting capacity. Although the name of this winch indicates different, these winches are very suitable to fit to your specific winch application. Many options can be offered on these highly versatile winches.

Standard winch features

- Heavy duty planetary gearbox
- SB E; IP 54 aluminium braked motor 400 VAC / 3 phase / 50 Hz.
- SB H; orbit or radial piston type hydraulic motor complete with brake valve
- SB LPR; radial piston type air motor complete with hand control valve and mufflers
- SB LG; gear type air motor complete with hand or remote control valve and mufflers
- Steel drum with cable fixing point at flange
- Two drum supports
- Double layer 2 component conservation, colour RAL 5010

Available winch options

- IP 56 TENV cast iron motor for marine applications
- Explosion proof motors
- Protective steel motor cover
- Drum pressure roller
- Band brakes (manual or failsafe automatic)
- Manual disengaging clutch
- Alternative speeds
- Alternative supply voltages
- Drum guards
- Spooling gears
- Grooved drums
- Manual emergency crank
- Slip ring mounting
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Warping head
- Marine / offshore coating systems

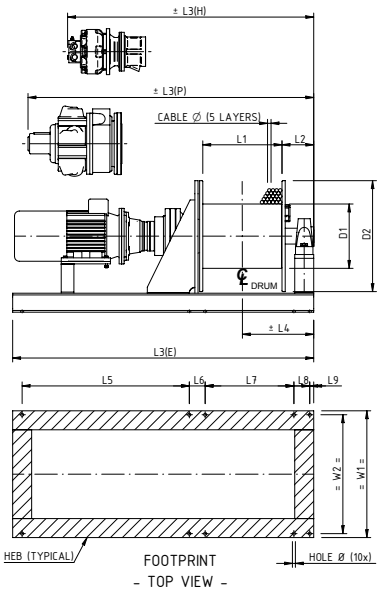
Available control options

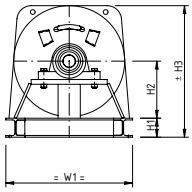
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter (required by CE for applications exceeding 1000 kg W.L.L.)
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches (electric, pneumatic)
- Slack wire switches (electric, pneumatic)
- Proportional local or remote control valve (pneumatic or hydraulic)

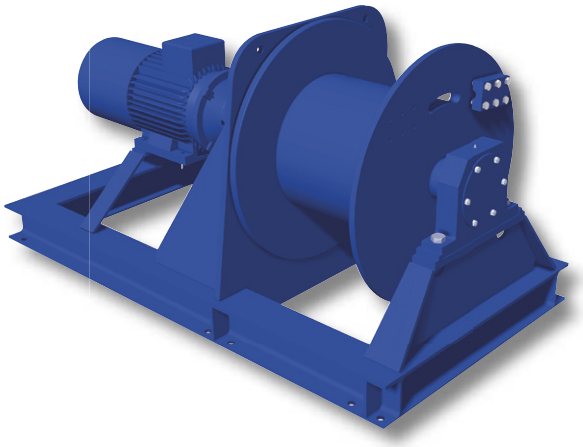
Winch type Electric	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 5th layer m/min.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Motor power kW
SB 300 E	1200	845	10	9,5	14	26	168	2,2
SB 301 E	2100	1435	12	7	10	24	157	3
SB 303 E	2500	1740	14	11	16	26	165	5,5
SB 305 E	4000	2770	16	7	10,5	25	161	5,5
SB 306 E	5500	3970	18	7	10	28	181	7,5
SB 307 E	7000	4960	22	12	17	26	171	15
SB 309 E	9000	6285	26	14	19,5	24	163	22
SB 310 E	12000	8460	28	8	12	24	168	18,5
SB 311 E	16000	10655	34	7	11	19	144	22
SB 313 E	20000	13610	38	6	8,5	19	151	22
SB 315 E	30500	20800	44	6	9	19	151	37
SB 316 E	37000	24570	48	6	9	17	141	45

Winch type Hydraulic	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 5th layer m/min.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Pressure drop in bar	Flow in L/min.
SB 303 H	2500	1740	14	18	26	26	165	140	60
SB 305 H	4000	2770	16	18	26	25	161	160	80
SB 306 H	5500	3970	18	25	35	28	181	225	95
SB 307 H	7000	4960	22	20	28	26	171	230	100
SB 309 H	9000	6285	26	13	18	24	163	190	100
SB 310 H	12000	8460	28	11	16	24	168	230	95
SB 311 H	16000	10655	34	10	15	19	144	230	110
SB 313 H	20000	13610	38	8	12	19	151	210	120
SB 315 H	30500	20800	44	8	12	19	151	235	165
SB 316 H	37000	24570	48	6	9	17	141	225	160

Winch type Pneumatic	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. Rope diam. mm.	Speed 1st layer m/min.	Speed 5th layer m/min.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Pressure drop in bar	Flow in L/sec.
SB 300 LPR2	1200	845	10	11	16	26	168	7	90
SB 301 LPR2	2100	1435	12	7	10	24	157	7	90
SB 303 LPR2	2500	1740	14	6	9	26	165	7	90
SB 303 LPR3	2500	1740	14	12	17	26	165	7	140
SB 305 LPR3	4000	2770	16	9	13	25	161	7	150
SB 305 LPR4	4000	2770	16	15	21	25	161	7	240
SB 306 LPR4	5500	3970	18	10	14	28	181	7	240
SB 307 LPR4	7000	4960	22	8	11	26	171	7	240
SB 307 LG6	7000	4960	22	13	18	26	171	7	350
SB 309 LPR4	9000	6285	26	6	9	24	163	7	220
SB 309 LG6	9000	6285	26	10	14	24	163	7	350
SB 310 LG6	12000	8460	28	7	10	24	168	7	350
SB 311 LG6	16000	10655	34	5	7,5	19	144	7	350
SB 313 LG6	20000	13610	38	4	6	19	151	7	350







Type	Mass (kg)	D1	D2	L1	L2	L3(E)	L3(H)	L3(P)	L4	L6	L7	L8	L9	H1	H2	H3	W1	W2	Heb	Hole Ø
300	250	178	410	500	135	1350	-	1450	385	80	540	80	20	100	215	520	500	460	100	14
301	250	195	410	500	155	1350	-	1450	405	80	540	80	20	100	215	520	500	460	100	14
303	400	244	500	500	155	1600	1350	1650	405	80	550	80	20	100	260	610	600	560	100	14
305	400	272	500	500	155	1650	1350	1800	405	80	550	80	20	100	260	610	600	560	100	14
306	510	355	600	500	165	1700	1450	1850	415	80	560	80	20	100	310	710	700	660	100	18
307	790	406	700	500	200	1950	1550	1900	450	100	560	100	25	120	360	830	800	750	120	20
309	1100	455	850	500	230	2000	1550	1900	480	110	560	110	30	140	435	1000	1000	940	140	22
310	1420	508	900	500	235	2100	1600	1950	485	120	590	120	40	160	460	1070	1100	1040	160	26
311	1740	508	1000	500	259	2150	1600	1950	509	120	590	120	40	160	510	1170	1150	1090	160	30
313	2320	610	1150	500	260	2150	1700	1950	510	120	590	120	40	180	585	1340	1350	1280	180	32
315	3400	711	1350	500	299	2600	2050	-	549	140	590	140	40	200	685	1560	1550	1470	200	36
316	2900	711	1400	500	299	2650	2100	-	549	140	590	140	40	200	710	1610	1600	1520	200	36

Planetary Crane Winches

FD series

Specially designed for applications where space is at a premium, these compact and lightweight lifting winches are ideally suited for installation on cranes, davits and derricks. The single drum support enables the rope to leave the drum at any angle. The heavy duty planetary drive is partly located within and protected by the drum core. The large drum diameters ensure a healthy drum to cable diameter ratio and a sufficient working length despite the short drums.

Standard features

- Heavy duty planetary gearbox
- FD E; IP 54 aluminium braked motor 400 VAC / 3 phase / 50 Hz.
- FD H; orbit or radial piston type hydraulic motor complete with brake valve
- FD LPR; radial piston type air motor complete with hand control valve and mufflers
- Steel drum with cable fixing point at flange
- Single drum support
- Double layer 2 component conservation, colour RAL 5010

Available options

- IP 56 TENV cast iron motor for marine applications
- Explosion proof motors
- Protective steel motor cover
- Drum pressure roller
- Alternative speeds
- Alternative supply voltages
- Drum guards
- Marine / offshore coating systems
- Tubular offshore frame construction with lifting eyes

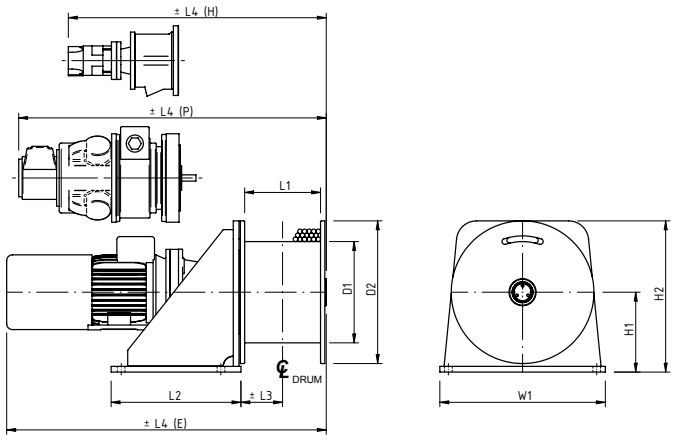
Available control options

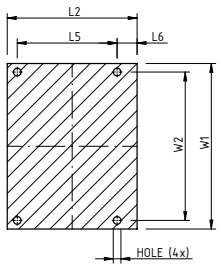
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter (required by CE for applications exceeding 1000 kg W.L.L.)
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches
- Slack wire switches
- Radio / Infra red remote control

Winch type Electric	W.L.L. 1st layer kg.	W.L.L. top layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed top layer m/min.	Drumcap. 1st layer m.	Drumcap. all layers m.	Motor power 400 VAC kW
FD 300 E	950	800/4	8	8,5	10	15	70/4	1,5
FD 301 E	1850	1470/4	11	9	11	10	53/4	3
FD 303 E	2300	1970/3	12	7	8,5	11	41/3	3
FD 305 E	3350	2800/3	14	9	11	10	40/3	5,5
FD 306 E	4100	3500/3	16	7	8,5	15	56/3	5,5
FD 307 E	5250	4490/3	18	12	14	18	67/3	11

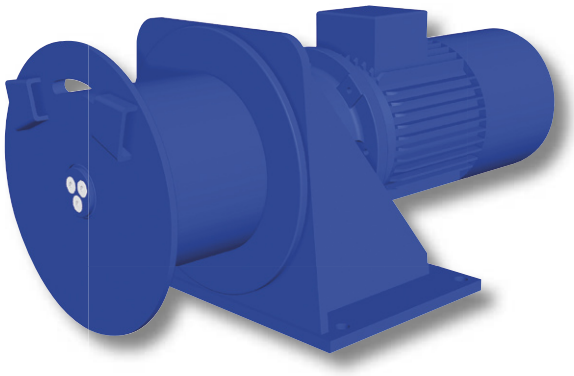
Winch type Hydraulic	W.L.L. 1st layer kg.	W.L.L. top layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed top layer m/min.	Drumcap. 1st layer m.	Drumcap. all layers m.	Pressure drop in bar	flow in L/min.
FD 300 H	950	800/4	8	30	35	15	70/4	140	35
FD 301 H	1850	1470/4	11	20	25	10	53/4	130	55
FD 303 H	2300	1970/3	12	15	17	11	41/3	130	50
FD 305 H	3350	2800/3	14	13	16	10	40/3	135	60
FD 306 H	4100	3500/3	16	13	15	15	56/3	140	70
FD 307 H	5250	4490/3	18	13	15	18	67/3	170	70

Winch type Pneumatic	W.L.L. 1st layer kg.	W.L.L. top layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 3rd layer m/min.	Drumcap. 1st layer m.	Drumcap. all layers kW	Pressure drop bar	Flow in l/sec.
FD 300 LPR1	800	675/4	8	8	10	15	70/4	7	30
FD 300 LPR2	950	800/4	8	18	21	15	70/4	7	90
FD 301 LPR2	1850	1470/4	11	9	11	10	53/4	7	90
FD 303 LPR2	2300	1970/3	12	7	8	11	41/3	7	90
FD 303 LPR3	2300	1970/3	12	15	18	11	41/3	7	150
FD 305 LPR3	3350	2800/3	14	10	12	10	40/3	7	150
FD 306 LPR4	4100	3500/3	16	15	18	15	56/3	7	225
FD 307 LPR4	5250	4490/3	18	12	14	18	67/3	7	240





FOOTPRINT
- TOP VIEW -



Type	Mass (kg)	D1	D2	L1	L2	L3	L4(E)	L4(H)	L4(P)	L5	L6	H1	H2	W1	W2	Hole Ø
300	125	244	380	176	310	93	736	520	765	240	44	215	405	440	400	18
301	130	244	380	176	310	93	796	558	785	240	44	215	405	440	400	18
303	175	272	410	191	350	106	818	595	905	275	50	235	440	500	450	22
305	240	272	410	210	350	116	1030	625	950	275	50	235	440	500	450	22
306	330	355	500	266	455	146	1100	780	1110	350	70	285	535	580	520	27
307	590	406	625	310	510	175	1313	885	1215	400	75	348	660	750	680	27

Standard Hydraulic Planetary Crane Winches

SH series

A range of standard hydraulic planetary winches, developed for heavy duty lifting and pulling applications up to 10000 kg were compactness is required. Due to the standard design it is possible to supply within short delivery times. All winches are standard fitted with a brake which makes them suitable for lifting applications.

Standard features

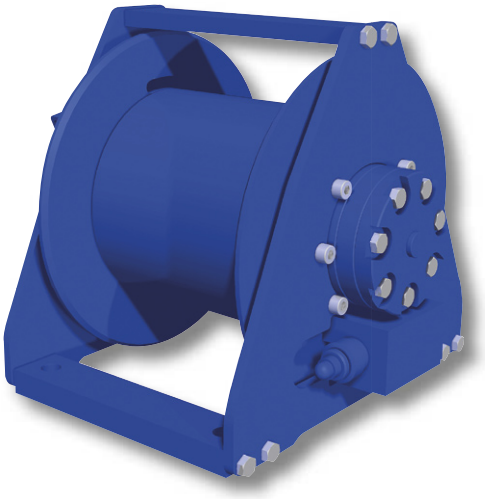
- Planetary transmission
- Orbit motor
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports
- Single layer of primer only, colour black
- Brake and single acting brake valve

Available options

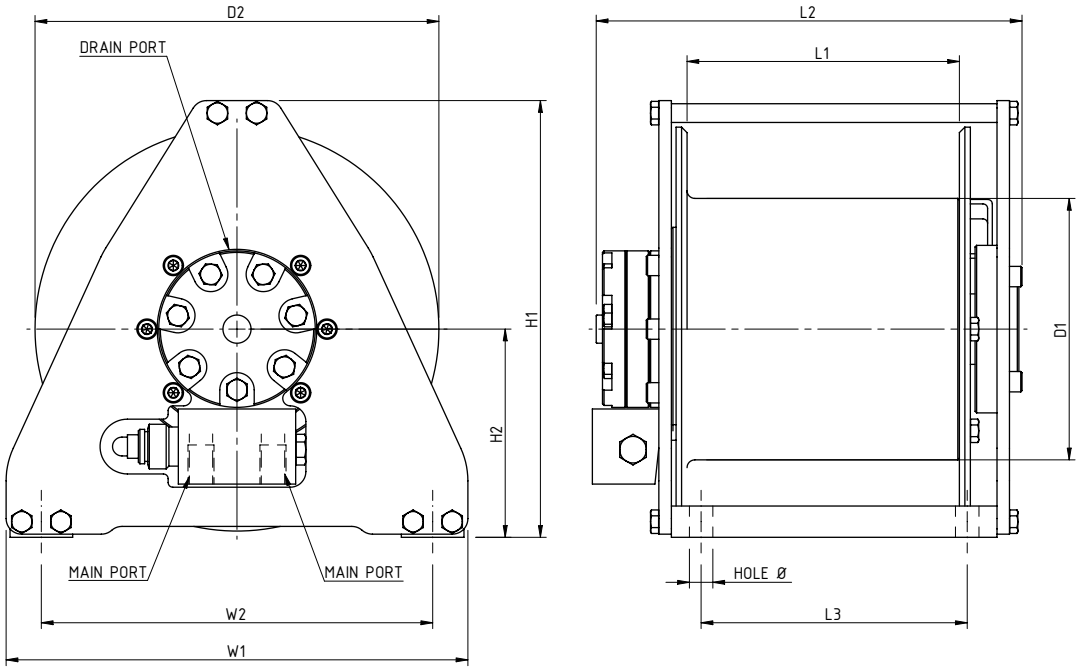
- Grooved drum
- Drum pressure roller
- Drum guards
- Marine / offshore coating systems

Available control options

- Proportional control valves
- Hydraulic power packs
- Hydraulic lower limit switch
- Load limiter



Winch type Hydraulic	W.L.L. 1st layer kg.	W.L.L. top layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Drumcap. 1st layer m.	Drumcap. all layers m.	Pressure drop in bar	Flow in l/min.	Main ports BSP	Drain ports BSP
SH 05	500	400	6	42	8	36/4	175	25	3/8"	-
SH 08	800	610	7	38	13	74/5	165	30	3/8"	-
SH 10	1000	790	8	38	11	50/4	175	40	3/8"	-
SH 15	1500	1190	9	43	13	59/4	190	50	1/2"	1/4"
SH 20	2000	1560	10	34	11	53/4	200	50	1/2"	1/4"
SH 25	2500	1950	12	29	12	54/4	205	50	1/2"	1/4"
SH 34	3400	2680	14	47	15	72/4	205	100	3/4"	1/4"
SH 47	4700	3410	16	36	20	120/5	220	100	3/4"	1/4"
SH 57	5700	4410	18	27	22	101/4	205	100	3/4"	1/4"
SH 60	6000	4680	18	29	22	99/4	200	120	3/4"	1/4"
SH 70	7000	5460	20	25	23	108/4	200	120	3/4"	1/4"
SH 85	8500	6670	20	19	28	128/5	195	120	1"	1/4"
SH 100	10000	7690	24	17	26	121/4	205	120	1"	1/4"



Winch type	Mass (kg)	D1	D2	L1	L2	L3	W1	W2	H1	H2	Hole Ø
SH 05	25	146	220	110	239	140	218	180	240	117	11
SH 08	40	167	258	174	275	170	295	250	279	133	15
SH 10	41	167	258	174	275	170	295	250	279	133	15
SH 15	71	202	312	187	319	170	315	250	348	175	15
SH 20	71	202	312	187	325	170	315	250	348	175	15
SH 25	95	243	376	191	352	190	405	350	403	195	17
SH 34	167	296	454	242	432	250	426	350	498	245	17
SH 47	258	322	530	321	510	330	610	530	566	271	25
SH 57	296	353	570	360	570	375	630	550	612	292	25
SH 60	350	366	580	360	751	360	-	530	630	295	23
SH 70	415	404	610	378	780	380	640	550	620	315	23
SH 85	430	418	640	430	851	435	694	590	665	345	23
SH 100	700	455	720	444	1008	470	788	670	745	385	23

General Purpose Winches

A series

A comprehensive range of standard winches with high efficiency gearbox, developed for heavy duty pulling and lifting duties up to 2800 kg. This broad range comprises a variation of very compact winches, each type is standard available with a choice of 3 different speeds. Drum lengths can easily be adapted to the customers request.

Standard features

- High efficiency transmission
- IP 54 aluminium braked motor 400 VAC / 3 phase / 50 Hz.
- Steel drum (not grooved) with cable fixing point at flange
- Two drum supports (all other models)
- Double layer 2 component conservation, colour RAL 5010,

Available options

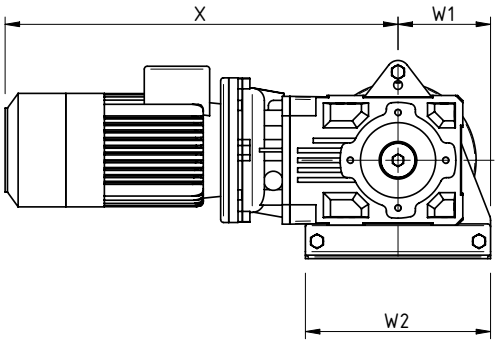
- IP 56 TENV cast iron motor for marine applications
- 230 VAC single phase motors (up to 1,8 kW)
- 24 VDC motors
- Hydraulic or pneumatic motors
- Explosion proof motors
- Manual or remotely controlled disengaging clutch
- Protective steel motor cover
- Band brakes
- Grooved drum
- Motor position vertically up
- Drum pressure roller
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guards
- Marine / offshore coating systems

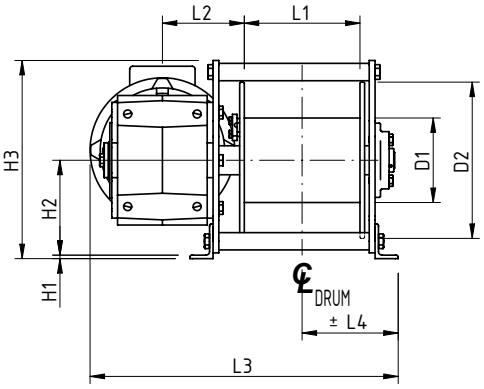
Available control options

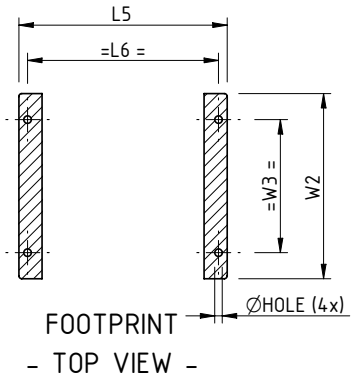
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches
- Slack wire switches
- Hydraulic or pneumatic control valves
- Radio / Infra red remote control

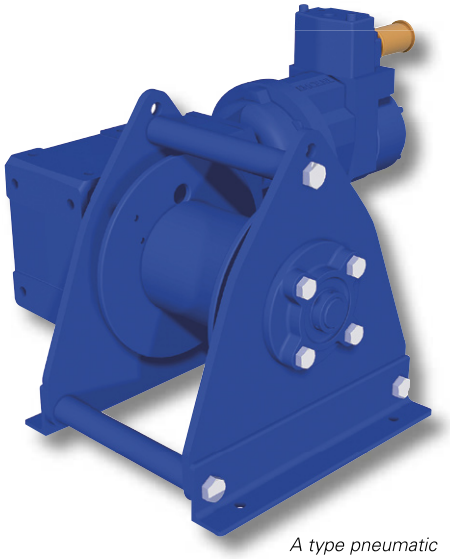
Winch type Electric	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Speed 1st layer m/min.	Speed 5th layer m/min.	Recomm. Rope diam. mm.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Motor power 400 V kW	"x" max.
A20L	500	345	3	4,5	6	7	48	0,37	575
A20M	500	345	8,5	12,5	6	7	48	0,75	600
A20H	500	345	16	23	6	7	48	1,50	600
A20 SP220	500	345	8,5	12,5	6	7	48	1,10	600
A30L	600	400	3	4,5	8	6	44	0,37	593
A30M	650	435	8,5	13	8	6	44	1,10	642
A30H	650	435	13	19,5	8	6	44	1,50	642
A41L	1200	820	4,5	7	9	10	62	1,10	683
A41M	1200	820	6	8,5	9	10	62	1,50	683
A41H	1200	820	13	19	9	10	62	3,00	707
A41 SP220	1000	685	6	8,5	9	10	62	1,50	707
A50L	1800	1205	4,5	7	11	10	74	1,50	713
A50M	1800	1205	7	10	11	10	74	2,20	758
A50H	1800	1205	12,5	19	11	10	74	4,00	783
A60L	2700	1800	4,5	7	14	17	117	2,20	866
A60M	2700	1800	8	12	14	17	117	4,00	820
A60H	2700	1800	14	21	14	17	117	7,50	946

Winch type Pneumatic	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Speed 1st layer m/min.	Speed 5th layer m/min.	Recomm. Rope diam. mm.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Pressure drop in bar	Flow in L/sec.
A20LG	500	345	14	20	6	7	48	7	65
A30LG	650	435	11	16	8	6	44	7	65
A41LG	1200	820	6	8	9	10	62	7	65
A50LG	1800	1205	4	5	11	10	74	7	65
A60LG	2700	1800	3	4	14	17	117	7	65

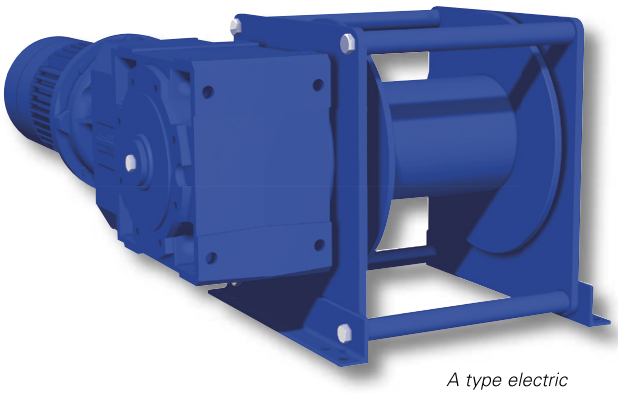








A type pneumatic



A type electric

Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	H1	H2	H3	W1	W2	W3	Hole Ø	"x" max electr.	"x" max LG
A 10	45	100	175	150	103	417	138	300	270	6	129	285	88	175	95	11 (4x)	565	495
A 20	60	100	175	150	116	430	139	305	275	6	164	342	160	320	230	13 (4x)	620	505
A 30	75	121	225	150	129	445	141	310	280	6	164	342	160	320	230	13 (4x)	640	525
A 41	115	146	270	200	141	533	166	360	330	6	164	343	160	320	230	13 (4x)	720	585
A 50	190	168	350	250	168	620	198	425	395	6	339	420	215	430	390	13 (8x)	790	665
A 60	255	210	390	400	180	815	270	575	545	6	339	440	235	470	430	13 (8x)	960	700

Standard Build Slew Ring Winches SR series

The standard build SR type winch provides the basis of the solution to many pulling and lifting winch applications. The winch is constructed with a slew ring in a combination with 3 or more planetary drives and motors. With this range capacities can go up to 75 tonnes lifting capacity.

Although the name of this winch indicates different, these winches are very suitable to fit to your specific winch application. Several options can be offered on these highly versatile winches. Prices and drawings can be obtained upon request.

Standard winch features

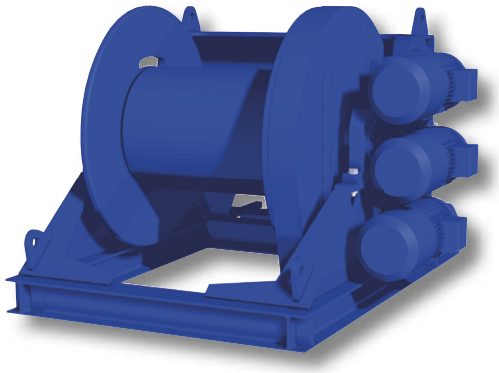
- Heavy duty slew ring
- Heavy duty planetary gearboxes fitted with pinions
- SR E; IP 54 braked motors 400 VAC / 3 phase / 50 Hz.
- SR H; orbit or radial piston type hydraulic motor complete with brake valve
- SR LG; gear type air motor complete with hand control valve and mufflers
- Radial piston type air motor complete with hand control valve
- Steel drum with cable fixing point at flange
- Double layer 2 component conservation

Available winch options

- IP 56 TENV cast iron motors
- Explosion proof motors
- Protective steel motor cover
- Band brakes (manual or failsafe automatic)
- Alternative speeds
- Alternative supply voltages
- Drum guards
- Spooling gears
- Grooved drums
- Slip ring or swivel mounting
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Warping head
- Marine / offshore coating systems
- Tubular offshore frame with lifting eyes

Available control options

- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter (required by CE for applications exceeding 1000 kg W.L.L.)
- Frequency inverter for speed control
- Wireless radio remote control systems
- Limit switches
- Slack wire switches
- Proportional local or remote control valve



Winch type	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. rope diam. mm.	Speed 1st layer m/min.	Speed 5th layer m/min.	Drumcap. 1st layer m.	Drumcap. 5th layer m.	Motor power kW.
SR 30 E3	43000	30000	44	7	10	42	290	66
SR 40 E3	57000	40000	52	6	8	40	290	66
SR 50 E4	73000	50000	56	6	8	37	275	74
SR 30 H3	41000	30000	44	7	10	42	290	66
SR 40 H3	57000	40000	52	6	8	40	290	66
SR 50 H4	73000	50000	56	6	8	37	275	74
SR 30 P3	41000	30000	44	6	8	42	290	-
SR 40 P3	57000	40000	52	4	6	40	290	-

Traction Winches

TR series

Traction winches are mainly built for the purpose. Winches are built to order and can be executed with a self braking worm gear or planetary gear, depending on the load required. The drive can be either electric, hydraulic or pneumatic. The winches are mainly used for traversing applications where a compact but heavy duty system is required. EMCÉ has supplied systems up to and including 10,000 kg.
Some applications we have supplied for are; opening and closing of hangar doors, moving railcars along a track, deep sea research and moving trolleys on a cable or at ground. Systems can be supplied with so called endless cable or with separate wire spooling unit.

Prices and drawings are available upon request, please let us have your specifications.

Standard features

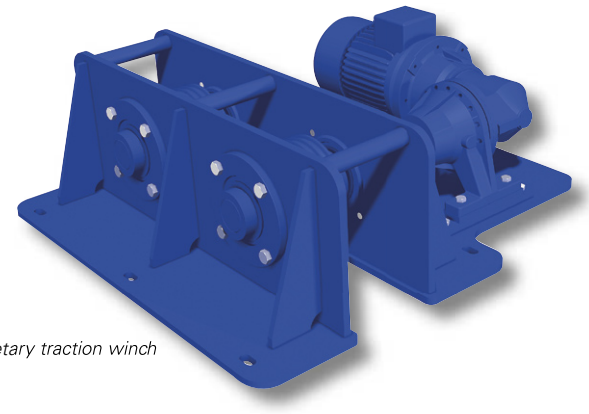
- Self braking worm gear or planetary gear transmissions
- IP 54 aluminium non braked motor 400 VAC / 3 phase / 50 Hz. (440 / 3 / 60)
- Steel sheaves
- Double layer 2 component conservation colour RAL 5010

Available options

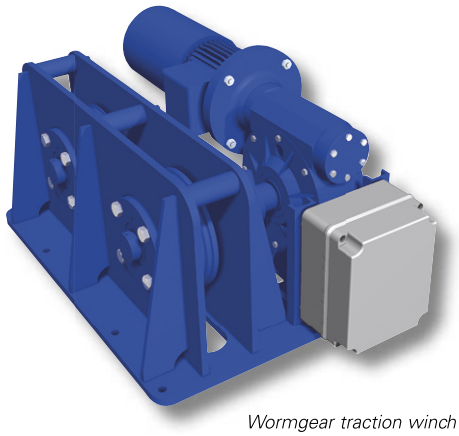
- Braked motor (aluminium or cast iron)
- IP 56 TENV cast iron motor for marine applications
- 220 single phase motors (up to 1,5 kW)
- Explosion proof motors
- Protective steel motor cover
- Manual or remotely controlled disengaging clutch
- Alternative speeds
- Protective guards
- Marine / offshore coating systems

Available control options

- Direct pendant remote control IP 65 with emergency stop (up to 1,5 kW 220 VAC / 1 phase or 2,2 kW 400 VAC / 3 phase)
- Control box IP 55 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 55 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiter
- Frequency inverter for variable speed control
- Wireless radio remote control systems
- Limit switches



Planetary traction winch



Wormgear traction winch

Offshore Air Winches

OAW/OMR SERIES

A range of compact lifting and pulling air winches specially designed for offshore applications or in any other hazardous environment where space is limited.
The heavy duty planetary gearbox and brake are mounted within the drum core, which both saves space and protects from any external damage. Winches designed to meet independent third party requirements like; Lloyds, ABS, DNV, etc. All winches are fitted with the same size of heavy duty in house produced pneumatic gear motor enabling reduction of spare parts. These standard winches can be fitted with several options and accessories. Further two of the winches are man riding prepared, adding some options and reducing the W.L.L. means that the winch can be used for man riding applications too. For Pod Line and Guide Line operations two standard winches are available with tall flanges and longer drums to accommodate cables up to 2000 meters.

Standard features

- Heavy duty planetary gearbox integrated in gearbox
- Contactless and maintenance free gear motor
- Proportional (biased) throttle valve
- Exhaust silencing mufflers
- Steel drum, length 610 mm with cable fixing point at flange
- Two drum supports
- Standard temperature range -10° through 50°C
- Disc brake
- Lifting lugs
- Offshore multi layer 2 component conservation, colour RAL 1023 (Yellow)
- Ⓔx II 2 G II B T4

Available options

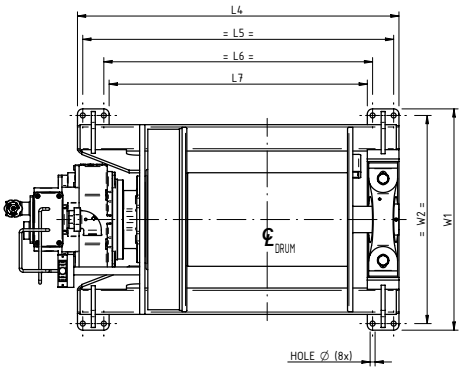
- Alternative drum lengths
- Drum pressure rollers / Drum guards
- Drum locking pins / Drum dividers
- Band brakes (manual or automatic failsafe)
- Spooling gears
- Grooved drums
- Tubular offshore frame construction
- Special temperature range -40˚C/+50˚C
- Natural gas driven

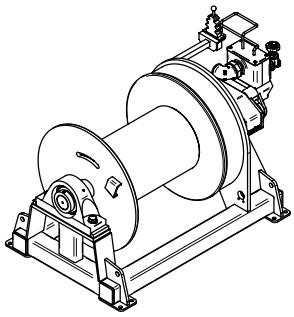
Available control options

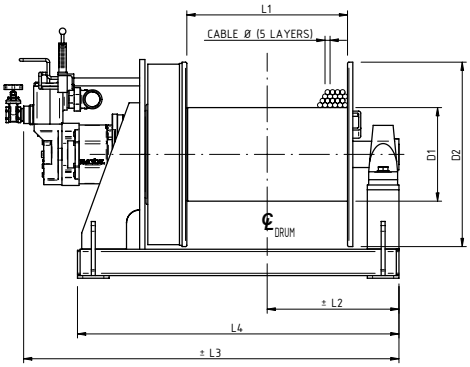
- Emergency main shut off valves
- Load limiters
- Limit switches (pneumatic)
- Slack wire switches (pneumatic)
- Proportional remote control valve
- Air service units
- Matching frame with IR, Atlas, Beebe, Chicago or Gardner

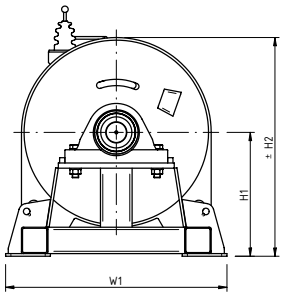
Winch type	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. Rope diam. mm.	Average speed* m/min.	Maximum Speed** m/min.	Drumcap. 5th layer m.	Pressure drop in bar	Flow in L/sec.	Application
OAW2.0	2670	2000	13	15	18	250	7	160	utility
OAW2.5	3440	2500	16	30	52	225	7	350	utility
OMR1.5	2000	1500	13	38	50	265	6	300	manrider
OAW4.5	6330	4500	19	17	24	210	7	350	utility
OAW5.0	7030	5000	19	15	24	210	7	350	utility
OMR3.0	4400	3150	19	20	24	210	6	300	manrider
OAW6.5	9170	6500	22	12	21	208	7	350	utility
OAW6.5GL	3760	1545 (17)	19	40	78	2000 (17)	7	350	guide line
OAW6.5PL	11280	4636 (17)	19	13	36	2000 (17)	7	350	pod line
OAW7.0	9880	7000	22	11	21	208	7	350	utility
OAW7.5	10625	7500	25	10	20	205	7	350	utility
OAW8.5	11800	8500	25	9	17	226	7	350	utility
OAW10.5	14300	10500	29	7	12	231	7	350	utility

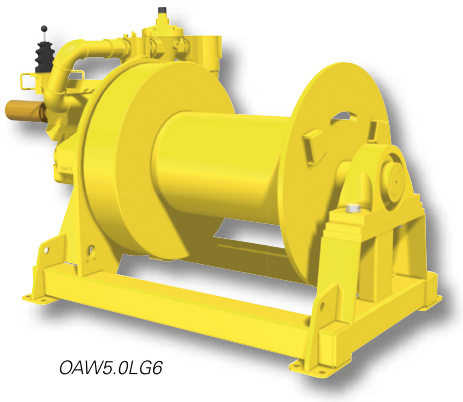
** Average speed is based on the speed in the middle layer at 75% of W.L.L.*
*** Maxiumum speed is based on the speed in the top layer at unloaded conditions*



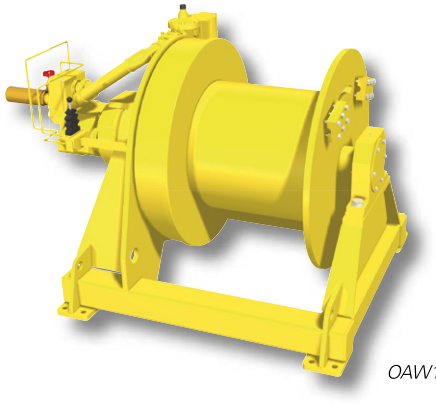








OAW5.0LG6



OAW10.5LG6

Type	Mass kg.	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	W1	W2	Hole
OAW2.0	450	298	550	610	470	1350	1120	1060	940	880	395	695	700	660	14
OAW2.5	550	323	550	610	470	1350	1120	1060	940	880	395	675	700	660	14
OMR1.5	580	323	550	610	470	1350	1120	1060	940	880	395	675	700	660	14
OAW4.5	950	355	700	610	500	1425	1220	1180	1020	980	470	820	840	790	19
OAW5.0	950	355	700	610	500	1425	1220	1180	1020	980	470	820	840	790	19
OMR3.0	980	355	700	610	500	1425	1220	1180	1020	980	470	820	840	790	19
OAW6.5	1100	406	750	610	535	1460	1320	1260	1100	1040	540	915	1000	940	22
OAW 6.5 GL	1600	406	1070	1067	764	2000	1780	1720	1560	1500	590	1125	1200	1140	22
OAW 6.5 PL	1600	406	1070	1067	764	2000	1780	1720	1560	1500	590	1125	1200	1140	22
OAW 7.0	1100	406	750	610	535	1460	1320	1260	1100	1040	540	915	1000	940	22
OAW 7.5	1200	455	900	610	535	1460	1340	1280	1120	1060	615	1065	1120	1050	22
OAW 8.5	1600	508	900	610	524	1650	1370	1300	1100	1030	625	1090	1120	1050	26
OAW 10.5	1880	609	1010	610	529	1700	1380	1310	1110	1040	680	1205	1220	1150	26

Offshore Hydraulic Winches OHW/OHR SERIES

A range of ultra compact lifting and pulling hydraulically driven winches specially designed for offshore applications or in any other hazardous environment where space is limited. The heavy duty planetary gearbox and brake are mounted within the drum core, which both saves space and protects from any external damage. Winches designed to meet independent third party requirements like; Lloyds, ABS, DNV, etc.
These standard winches can be fitted with several options and accessories. Further the winches are man riding prepared, adding some options and reducing the W.L.L. means that the winch can be used for man riding applications too. Winches are standard supplied without control valve however with single acting shuttle valve.

Standard features

- Heavy duty planetary gearbox integrated in gearbox
- Fixed displacement axial tapered piston motor (Rexroth A2FE series)
- Steel drum, length 610 mm with cable fixing point at flange
- Two drum supports
- Standard temperature range -10° through 50°C.
- Oil bath disc brake
- Lifting lugs
- Offshore multi layer 2 component conservation, colour RAL 1023 (Yellow)

Available options

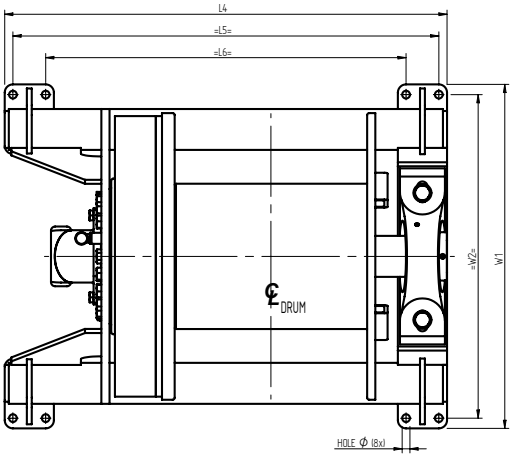
- Alternative drum lengths
- Drum pressure rollers
- Drum locking pins
- Band brakes (manual or automatic failsafe)
- Other motor brands like Volvo or Danfoss
- Variable displacement motors
- Drum guards
- Drum dividers
- Spooling gears
- Grooved drums
- Tubular offshore frame construction
- Man riding package

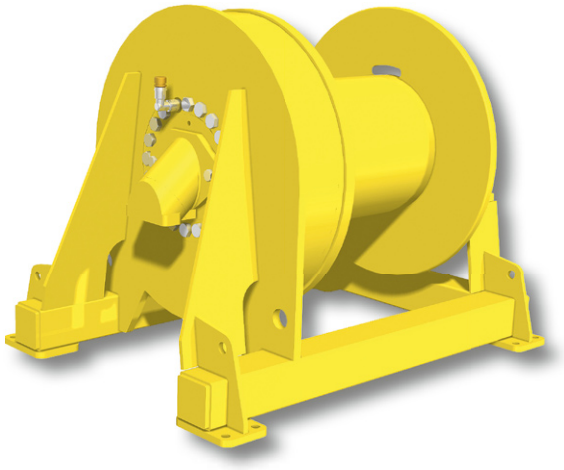
Available control options

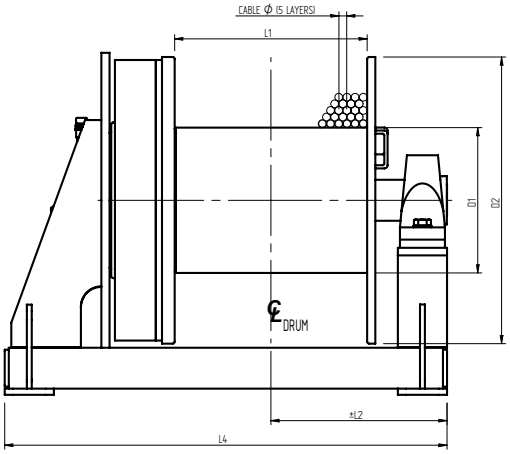
- Brake shuttle valve
- Proportional control valves
- Load limiters
- Limit switches (electric)
- Slack wire switches (electric)
- Proportional remote control valve
- HPU´s

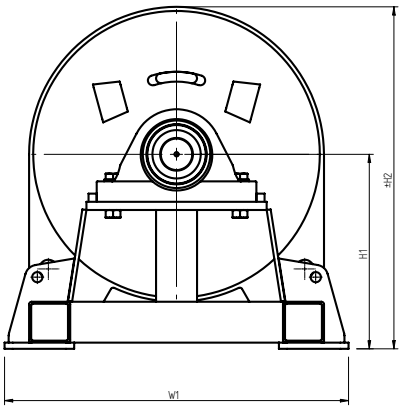
Winch type	W.L.L. 1st layer kg.	W.L.L. 5th layer kg.	Recomm. Rope diam. mm.	Speed 5th layer m/min.	Drumcap. 5th layer m.	Pressure drop in bar	Flow in L/min.
OHW2.5	3440	2500	16	44	225	205	85
OHR1.5	2000	1500	13	44	265	170	65
OHW4.5	6330	4500	19	38	210	230	120
OHR3.0	4400	3150	19	38	210	175	120
OHW5.0	7030	5000	19	28	210	195	120
OHW6.5	9170	6500	22	24	208	215	120
OHW7.0	9880	7000	22	24	208	225	120
OHW8.5	11800	8500	25	24	226	265	120
OHW10.5	14300	10500	29	20	231	225	150
OHW11.5	16090	11500	32	20	214	250	145
OHW14.5	20290	14500	32	17	214	245	160
OHW16	23140	16000	36	16	193	250	160
OHW17	25000	17000	38	15	185	240	165
OHW20	28115	20000	38	14	210	260	165

Offshore Hydraulic Winches OHW/OHR SERIES









Type	Mass kg.	D1	D2	L1	L2	L4	L5	L6	L7	H1	H2	W1	W2	Hole
OHW 2.5	365	323	550	610	470	1120	1060	940	880	395	675	700	660	14
OHR 1.5	395	323	550	610	470	1120	1060	940	880	395	675	700	660	14
OHW 4.5	735	355	700	610	500	1220	1180	1020	980	470	820	840	790	19
OHW 5.0	735	355	700	610	500	1220	1180	1020	980	470	820	840	790	19
OHR 3.0	765	355	700	610	500	1220	1180	1020	980	470	820	840	790	19
OHW 6.5	940	406	750	610	535	1320	1260	1100	1040	540	915	1000	940	22
OHW 7.0	940	406	750	610	535	1320	1260	1100	1040	540	915	1000	940	22
OHW 8.5	1360	508	900	610	539	1370	1300	1100	1030	625	1090	1120	1050	26
OHW 10.5	1600	609	1010	610	539	1380	1310	1110	1040	680	1205	1220	1150	26
OHW 11.5	1600	609	1010	610	539	1380	1310	1110	1040	680	1205	1220	1150	26
OHW 14.5	2000	609	1070	610	539	1570	1500	1300	1230	720	1300	1500	1430	32
OHW 16	2200	609	1070	610	539	1570	1500	1300	1230	720	1300	1500	1430	32
OHW 17	2200	609	1070	610	539	1570	1500	1300	1230	720	1300	1500	1430	32
OHW 20	2600	711	1250	610	550	1600	1530	1330	1260	800	1400	1600	1520	36

Manriding Winch

MR 30 FL

Designed to the standards issued by the classification societies and meets UK HSE regulations for personnel lifting operations on offshore installations. The winches are dedicated personnel lifting winches offered with Lloyds Register of Shipping (LRS) Design Appraisal Certificate and full material traceability. They have passed the EC testing for these applications, i.e., both the winches and their technical files are in compliance with the requirements of the EC Machinery Directives.

The MR 30 FL have been specially designed for personnel lifting applications in which a safety harness or a boatswain´s chair is used on fixed installations with a total W.L.L. of 150 kgs.
The MR 50 FL and MR 60 FL have been designed for use with assemblies using a platform, basket, carrier, etc. with a total W.L.L. of 500 kg for the MR 50 FL and 1000 kg for the MR 60 FL.

Standard features

- Helical shaft mounted gearbox, life lubricated with synthetic oil
- UK HSE compliance
- Caliper primary brake 180% of W.L.L.
- Automatic band brake as secondary drum acting brake 180% of W.L.L.
- Pneumatic gear motor
- Obit or vane hydraulic motor
- Helical grooved steel drum
- Full material trace-ability (3.1 - EN 10204) on load bearing parts
- Two drum supports
- Limit switch
- Slack wire switch
- Overload protection device
- Pendant proportional remote control with biased control valve (MR 30 FLP/FLV only)
- Drum guard
- Nylon drum pressure roller
- Offshore coating
- Mufflers (on MR 30), 50 en 60 FLG
- Prepared for emergency lowering system
- Main air emergency stop valve
- Operating conditions –20°C through 50°C
- Design appraisal certificate from: LRS, DNV and ABS (MR 30 FLG only)
- Design appraisal certificate from ABS for MR30 FLH

Available options

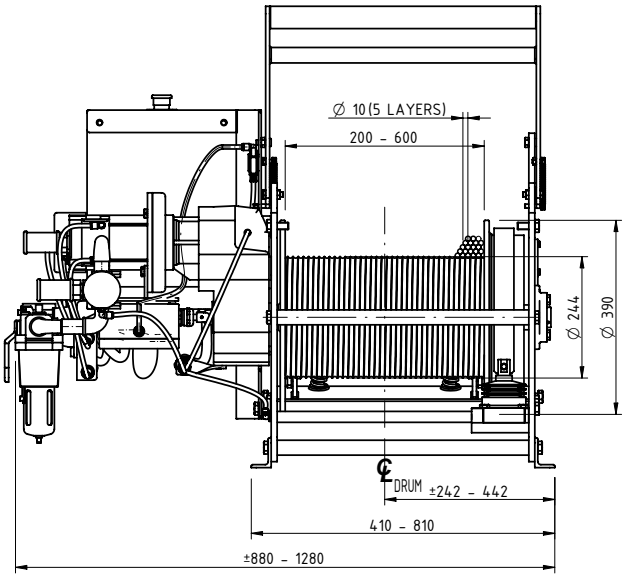
- Electric versions
- Alternative speeds
- Alternative drum dimensions
- Certifying authority witness test
- Operating conditions –45°C through 50°C
- Air service unit
- Pre equipped emergency lowering device including nitrogen air receiver (MR 30 FLG only)

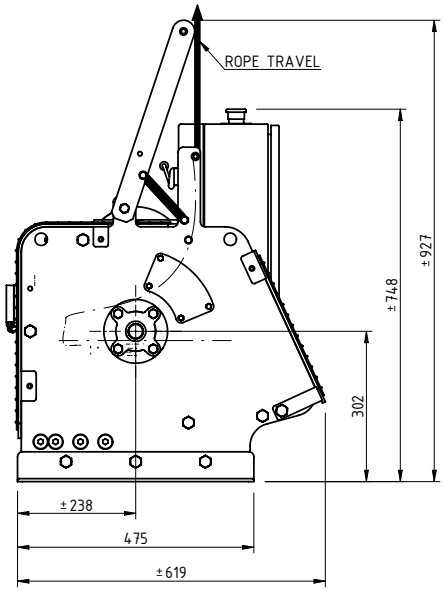
Available control options

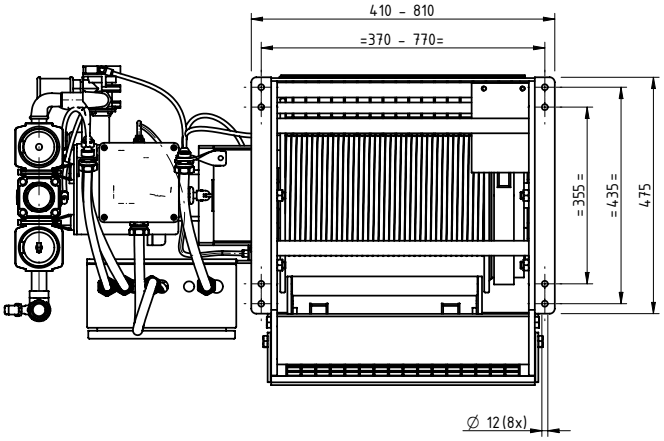
- Electric/hydraulic or pneumatic control systems

Winch type	W.L.L 1st layer kg.	W.L.L. top layer KG.	Recomm. Rope diam. mm.	Speed top layer m/min.	Drumcap. top layer m.	Pressure drop in BAR	Flow in L/sec.	Flow in L/min.
MR30FLG	200	150 (5)	10	37	165	6	50	
MR50FLG	635	500 (4)	13	16	135	7	65	
MR60FLG	1270	1000 (4)	13	30	135	6,5	120	
MR30FLH	200	150 (5)	10	43	150	70		25

** pressure roller and slack wire switch are optional items for the MR 50 FLG and MR 60 FLG*
** spindle limit switch and slack wire switch on MR 30 FLH are electric (intrinsic safe)*



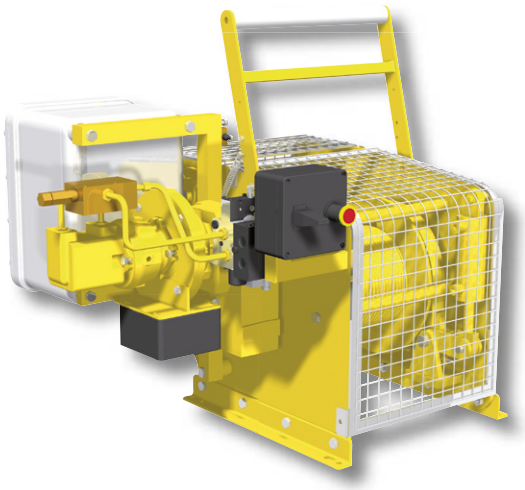




Drawing for
MR 30 FLG only

Others upon
request

MR 30 FLG



MR 30 FLH

Mooring winches

SRM SERIES

This standard range of SRM type mooring/anchor winches is designed for application on JU-rigs, barges and other offshore or marine units. These standard winches can be fitted with several options like free spooling clutches, spooling gears and other options. Also a range of mooring accessories can be offered with these winches like fairleads, sheaves, wire rope as well as load measuring equipment. Winches will be subject to our standard internal test procedure, which can be witnessed by client and/or third party.

Standard winch features

- Heavy duty slew ring
- Heavy duty planetary gearboxes fitted with pinions
- SR E; IP 56 TENV seawater resistant braked motors 400-440 VAC / 3 phase / 50 - 60 Hz.
- SR H; radial piston type hydraulic motors complete with brake valve
- Steel drum with cable fixing point at flange
- Band brake (manual)
- Two drum supports
- Lifting lugs
- Multi layer 2 component offshore conservation, colour RAL 5010

Available winch options

- Explosion proof motors, optional with ATEX approval
- Automatic band brakes
- Alternative speeds
- Alternative supply voltages
- Drum guards
- Spooling gears
- Grooved drums
- Alternative drum dimensions / rope lengths / rope diameters
- Warping head
- Wire rope

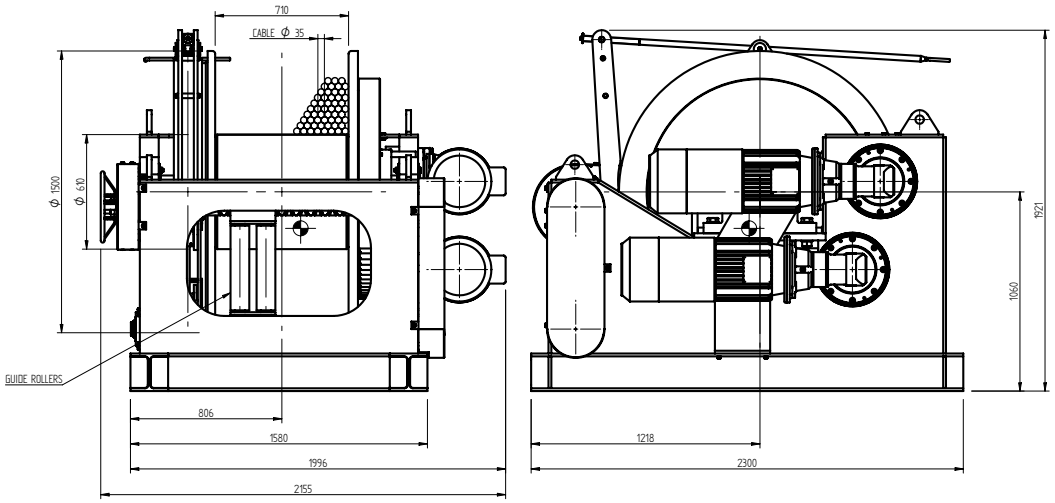
Available control options

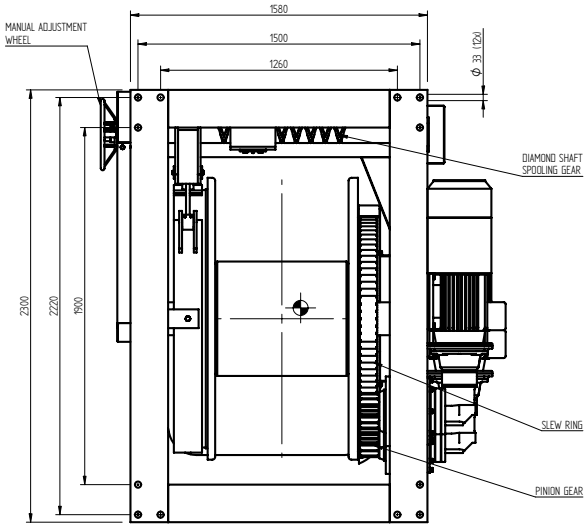
- Control box IP 55 with pushbuttons and emergency stop
- Control box IP 55 with low voltage IP 65 remote control
- Load limiter
- Frequency inverter for variable speed control
- Load and/or line monitoring
- Proportional local or remote control valve (pneumatic or hydraulic)

Available mooring equipment

- Horizontal deck sheaves without or with load pins
- Swivel fairleads
- 4,6,7 or 10 roller fairleads
- Deck bollards and chocks

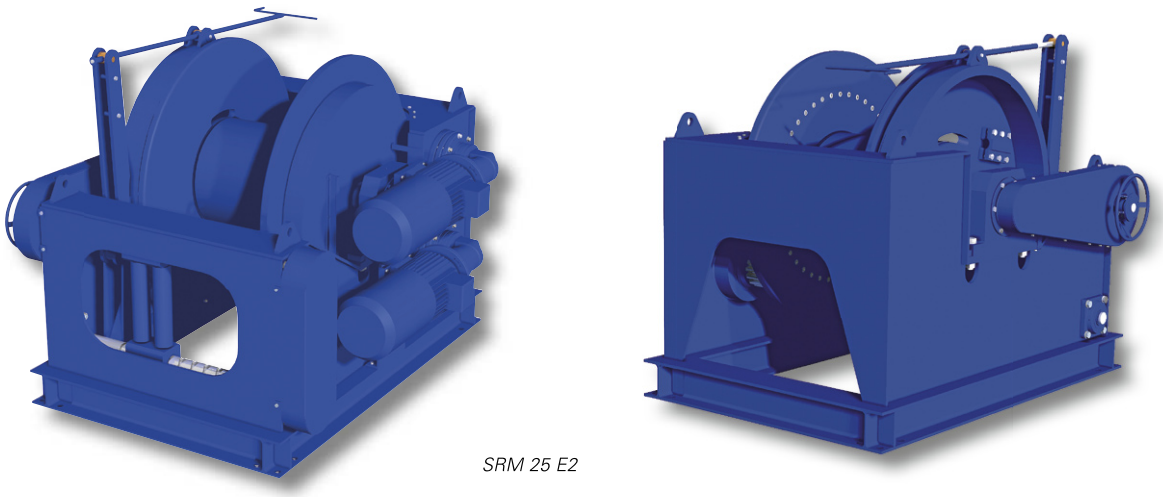
WINCH TYPE	W.L.L. 1ST LAYER KG.	W.L.L. 7TH LAYER KG.	RECOMM. ROPE DIAM. MM.	SPEED 1ST LAYER M/MIN.	SPEED 7TH LAYER M/MIN.	DRUMCAP. 7TH LAYER M.	BANDBRAKE HOLDINGFORCE 1ST LAYER / KG.	PRESSURE DROP IN BAR	FLOW IN L/MIN	MOTOR POWER kW
SRM 18 E1	18000	11265	32	8,5	13,5	430	45000			30
SRM 25 E2	25000	14980	36	8,5	14	390	62500			44
SRM 30 E2	30000	17610	38	7	12	375	75000			44
SRM 36 E2	36000	22265	44	7,5	12	415	90000			60
SRM 18 H1	18000	11265	32	8	13	430	45000	220	120	
SRM 25 H2	25000	14980	36	11	18	390	62500	230	210	
SRM 30 H2	30000	17610	38	10	17	375	75000	220	240	
SRM 36 H2	36000	22265	44	8,5	14	415	90000	230	240	





Drawing for SRM 25 E2 only

Others upon request



SRM 25 E2

Accommodation Ladder Winches AW/PW series

AW winches are designed to position and hold accommodation ladders, ship to shore or between vessels and offshore installations.

Constructed in accordance with SOLAS requirements for international shipping, the range features a dynamically and statically self braking worm gearbox and emergency hand crank. Each type may be configured for single or twin rope operation and powered by means of an electric or pneumatic motor.

PW winches are used to lower and lift the pilot ladder on board of seagoing vessels, EMCE has one standard design PW 550 which has been supplied for several dredging vessel fleet owners. Custom built designs are possible and have been made also.

Standard features

- Self braking worm gear transmission for AW series
- Planetary gear for PW 550
- SOLAS compliance
- IP 56 TENV motor protection for AW ES series
- IP 66 TENV with standstill heating for PW 550
- Rotary vane, gear type air or motor for AW LS series
- Steel drum (not grooved) with one or two cable fixing point(s) at flange
- Two drum supports
- Emergency hand crank for AW series only
- Double layer 2 component conservation, colour RAL 5010
- 13 meter pilot ladder with 32 flat steps, 4 spreaders and 4 rubber steps for PW 550
- Pneumatic versions with hand control valve
- IP 66 spindle limit switch for PW 550

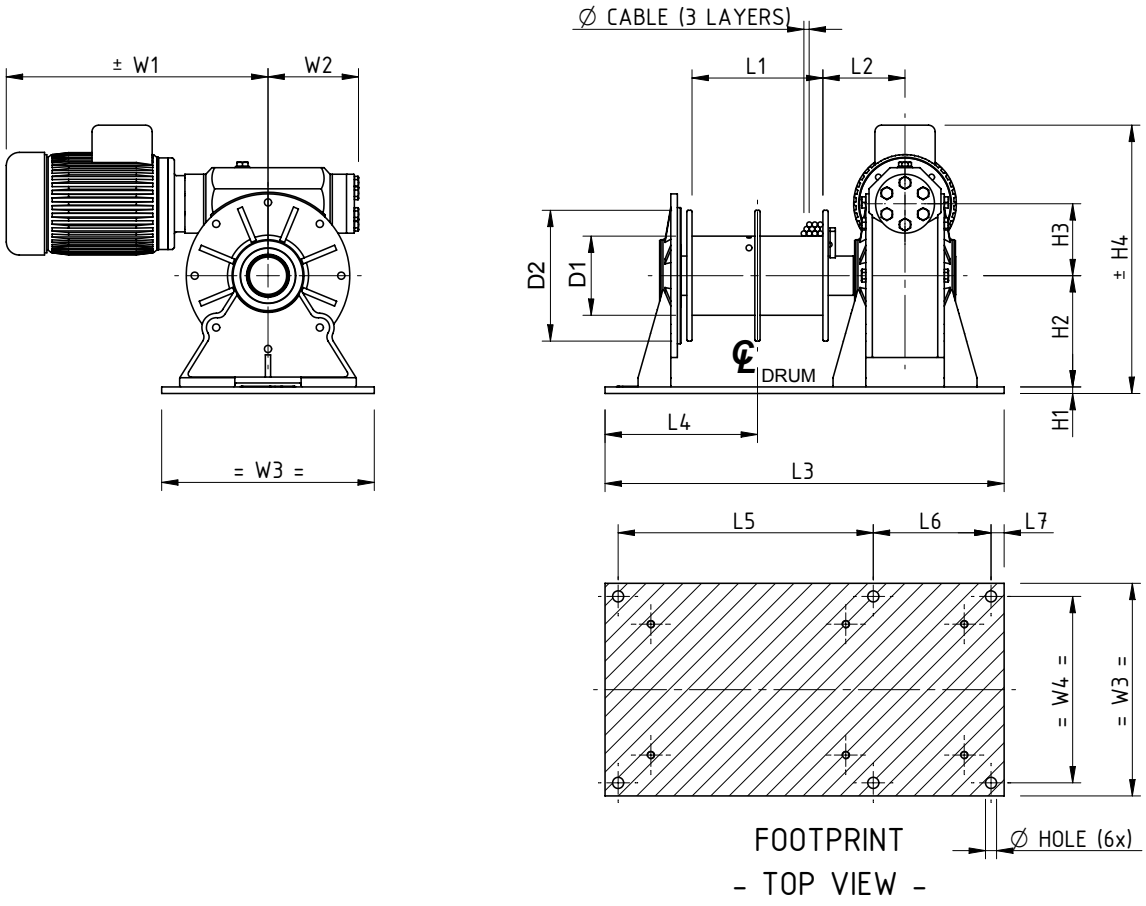
Available options

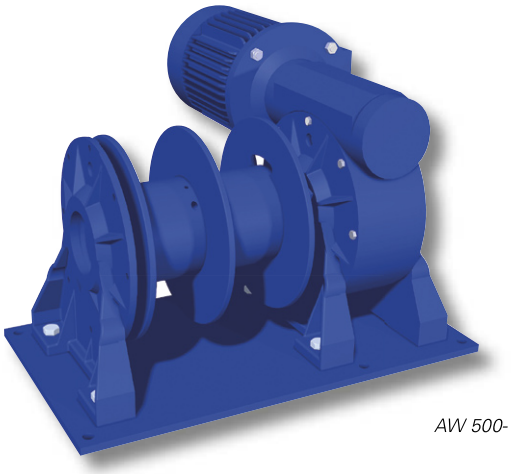
- Band brake, manual or automatic fail safe for AW series
- Increased motor protection IP 68 TENV for AW series
- Alternative supply voltages
- Grooved drum for AW series only
- Drum pressure roller for AW series only
- Alternative speeds
- Alternative drum dimensions / split drums / additional rope anchors / etc.
- Drum guard for AW series only
- Marine / offshore coating systems
- Class witness certificates

Available control options

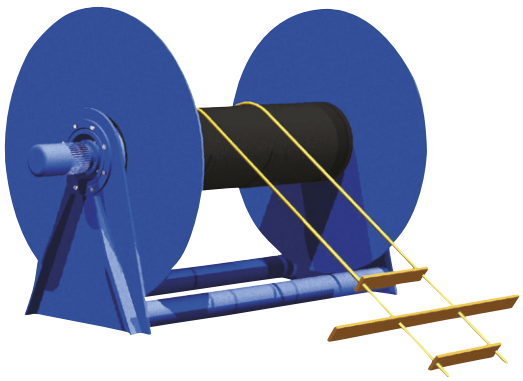
- Electric or pneumatic control systems
- Limit switches
- Load limiters

WINCH TYPE	W.L.L. FORCE KG.	HOLDING ROPE DIAM. KG.	RECOMM. 1ST LAYER MM.	SPEED 3RD LAYER M/MIN.	DRUMCAP. 400 V M.	MOTOR POWER DROP IN kW	PRESSURE IN BAR	FLOW L/SEC.
AW 500 ES	500 2 X 250	1500 1500	8 6	6 6	30 2 X 18	1,5 1,5		
AW 1000 ES	1000 2 X500	3000 3000	10 8	7,5 7,5	40 2 X 23	3 3		
AW 1500 ES	1500 2 X 750	4000 4000	12 10	9,5 9,5	50 2 X 27	4 4		
AW 500 LS	500 2 X 250	1500 1500	8 6	6 6	30 2 X 18		6 6	60 60
AW 1000 LS	1000 2 X500	3000 3000	10 8	6,5 6,5	40 2 X 23		6 6	100 100
AW 1500 LS	1500 2 X 750	4000 4000	12 10	7,5 7,5	50 2 X 27		6 6	130 130
PW 550 E	550	2000		12	13 m ladder	1,1		





AW 500-1500



PW 550

Type	Mass (kg)	D1	D2	L1	L2	L3	L4	L5	L6	L7	H1	H2	H3	H4	W1	W2	W3	W4	Hole Ø
AW 500	85	121	200	200	125,5	610	228	390	180	20	10	170	110	410	400	140	325	285	17
AW 1000	195	159	320	250	155	710	260	470	200	20	15	220	150	522	519	154	410	360	17
AW 1500	275	195	370	300	180	850	318	565	235	25	15	254	182	570,5	546	207	440	380	20
PW 550	1600	508	1700	1900	218	2440	1193	2552	-	-	-	1080	-	1930	650	250	-	-	-

Capstans

Wormgear capstans

Selfbraking worm gear drives with electric, hydraulic or even pneumatic motor, available in on-deck or below-deck build types. The on-deck drive is equipped with a waterproof motor for intermittent use. The below-deck drive is equipped with a dripwater proof motor and a mounting plate with extra self aligning bearing suitable for high static loads such as with mooring ropes. Pneumatic drives are available upon request.

Planetary capstans

Featuring a cast iron capstan head mounted on a heavy duty planetary gearbox. The entire drive is mounted in a watertight tube frame providing optimal protection from the elements. Pneumatic drives are available upon request. Capstans up to 15 ton can be offered upon request.

Standard features

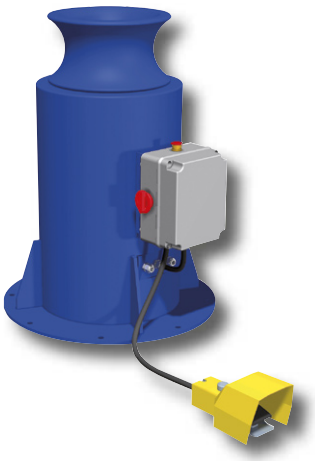
- Heavy duty worm gearbox or planetary gearbox
- IP 54 aluminium braked motor 400 VAC / 3-phase / 50 Hz for planetary capstans
- IP 56 TENV cast iron un braked motor 400 VAC / 3 phase / 50 Hz for on-deck worm gear capstans
- IP 54 un braked motor 400 VAC / 3 phase / 50 Hz for under-deck worm gear capstans
- Single speed and one direction only (electric capstans only)
- Orbit or radial piston type hydraulic motor
- Vertical cast iron warping head
- Double layer 2 component conservation, colour RAL 5010

Available options

- Cast iron motor for planetary capstans
- Explosion proof motors
- Back stop bearing build in planetary gearbox for one direction (replaces brake)
- 2 speed motors
- Alternative speeds
- Alternative supply voltages
- Horizontal warping head configuration
- Marine / offshore coating systems

Available control options

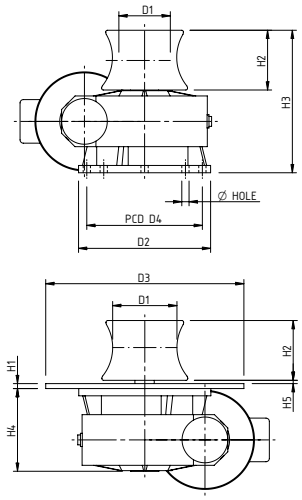
- Control box IP 55 with IP 65 foot pedal (single speed, one direction) control built acc. to NEN 1010
- Control box IP 55 with IP 65 foot pedal (two speed, two directions) control built acc. to NEN 1010
- Frequency inverter and proportional foot pedal for variable speed control
- Proportional local or remote control valve (pneumatic or hydraulic

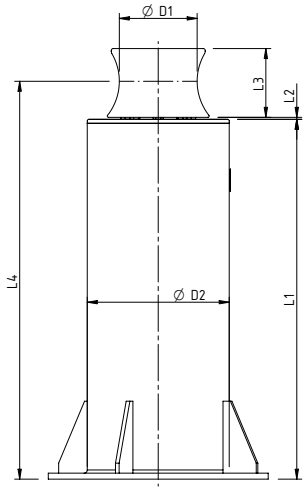


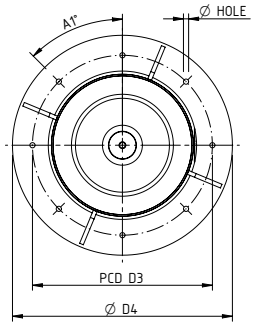
Winch type Worm	W.L.L. kg.	SPEED m/min.	Neck diameter mm.	Max. Rope diam. mm.	Motor power 400 V kW	Pressure drop in BAR	Flow in L/min.
C 086 E	500	6	100	18	1,1		
C 110 E	700	11	140	25	2,2		
C 130 E	1100	9	140	25	3		
C 150 E	1300	13	195	35	5,5		
C 185 E	1700	10	195	35	5,5		
C 086 H	500	8	100	18		70	20
C 110 H	700	8	140	25		105	15
C 130 H	1100	7	140	25		60	40
C 150 H	1300	10	195	35		90	40
C 185 H	1800	10	195	35		90	60

New series: replacement for the E and H series wormgear capstans

Winch type Planetary	W.L.L. Continuos Kg.	Speed M/min.	Neck Diameter Mm.	Recomm. Rope diam. Mm.	Motor power 400 V Kw	Pressure Drop in Bar	Flow In L/min.
C 300 E	1000	12	195	35	2,2		
C301 E	1650	10	195	35	3		
C 303 E	2300	10	195	35	4		
C 305 E	3400	9	275	45	5,5		
C 307 E	5500	11	405	75	11		
C 309 E	7500	11	405	75	15		
C 310 E	10000	8	450	95	15		
C 300 H	1000	20	195	35		135	30
C 301 H	1650	20	195	35		195	30
C 303 H	2600	20	195	35		215	40
C 305 H	4000	20	275	45		185	75
C 307 H	6000	25	405	75		220	105
C 309 H	7500	20	405	75		205	120
C 310 H	10000	17	450	95		230	120







Type	Mass (kg)	D1	D2	D3	D4	H1	H2	H3	H4	H5	Hole
C 086	50	100	210	300	176	10	130	320	190	10	8x 12.5
C 110	70	140	280	390	230	10	130	350	209	10	8x 13.5
C 130	90	140	320	420	255	15	130	360	230	10	8x 16
C 150	130	195	350	450	290	15	180	415	245	10	8x 18
C 185	170	195	400	500	350	15	180	440	251	10	8x 22

Type	Mass (kg)	D1	D2	D3	D4	L1	L2	L3	L4	A1	Hole
C 300	175	195	355	450	550	900	5	181	995	8x 45	13
C 301	200	195	355	450	550	900	5	181	995	8x 45	13
C 303	220	195	406	500	600	1000	5	181	1095	12x 30	18
C 305	320	275	455	570	650	1100	5	210	1205	12x 30	18
C 307	800	405	610	700	800	1300	5	315	1455	12x 30	18
C 309	900	405	610	720	825	1300	5	315	1455	12x 30	22
C 310	1020	450	711	840	950	1350	5	500	1680	10x 36	27

Windlasses

This series of windlasses is specially designed for intensive use and therefore has a robust construction. All windlasses are designed with a self braking gearbox (except P 1000 H and P 1600 H) which will save the costs of an expensive brake motor.

The band brakes are lined with a ferrodo (non asbestos) friction material.

Standard features

- Heavy duty worm gearbox or planetary/worm gear combination
- IP 56 TENV cast iron un braked motor 400 VAC / 3 phase / 50 Hz / with torque knob
- Orbit type hydraulic motor
- Suitable for 10 – 28 mm DIN / Studlink chain sizes from 12,5 – 28 mm
- Free fall clutch
- Band brake
- Horizontal cast iron warping head
- Double layer 2 component conservation, colour RAL 5010

Available options

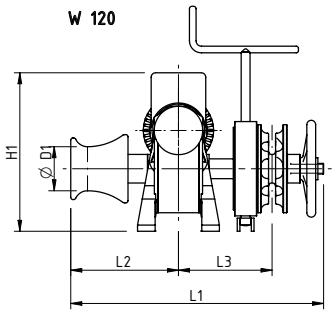
- Double executions possible for W 120 up to W 600
- Alternative supply voltages
- Full manual control by means of hand wheel
- Horizontal warping head configuration
- Remotely controlled band brakes
- Classification certificate from any recognized marine classification society
- Special marine / offshore coating systems

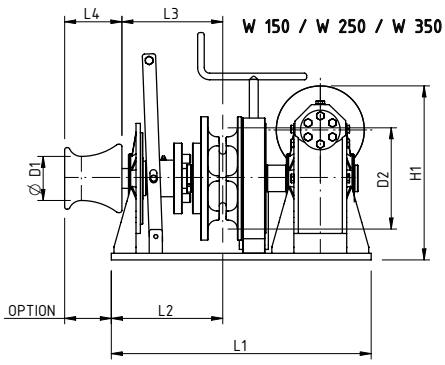
Available control options

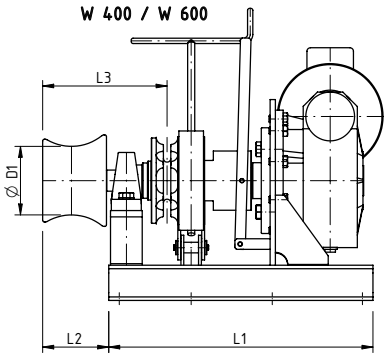
- Control box IP 55 with IP 65 pendant remote control or pushbuttons built acc. to NEN 1010
- Proportional local or remote control valve

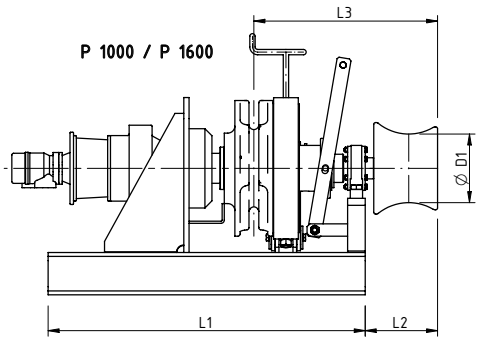
WINCH TYPE	CHAIN PULL KG.	CHAIN SIZE DIN	CHAIN SIZE STUD	SPEED M/MIN.	BANDBRAKE HOLDING FORCE KG.	MOTOR POWER 400 V kW S2	PEAK POWER 400 V kW
W 120 E	400	10		10	1200	1,1	1,5
W 150 E	600	10-13		10	1500	1,5	2,2
W 250 E	750	13-16	14	10	2500	2,2	3
W 350 E	1200	16	16	10	3500	4	5,5
W 400 E	1200	16	16	10	4000	4	5,5
W 600 E	2000	16-18	16	10	6000	5,5	7,5
PW 1000 E	3600	20	19	10	10000	7,5	11
PW 1600 E	5500	22	22	10	16000	15	18,5

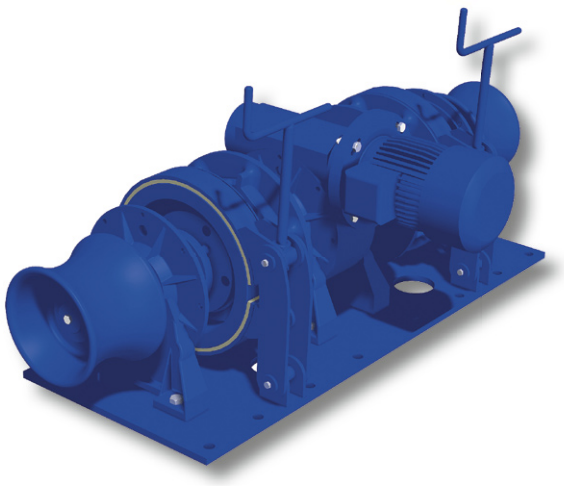
WINCH TYPE	CHAIN PULL KG.	CHAIN SIZE DIN	CHAIN SIZE STUD	SPEED M/MIN.	BANDBRAKE HOLDING FORCE KG.	PRESSURE DROP IN BAR	FLOW IN L/MIN.
W 120 H	400	10		10	1200	70	20
W 150 H	600	10-13		10	1500	100	20
W 250 H	750	13-16	14	10	2500	60	40
W 350 H	1200	16	16	10	3500	95	40
W 400 H	1200	16	16	10	4000	95	40
W 600 H	2000	16-18	16	10	6000	100	60
P 1000 H	3600	20	19	10	10000	95	55
P 1600 H	5500	22	22	10	16000	120	60











Type	Mass (kg)	D1	D2	L1	L2	L3	L4	H1
W 120	63	100	180	590	255	245	130	295
W 150	140	100	180	590	250	245	130	295
W 250	170	140	190	650	290	280	130	340
W 350	260	195	255	700	305	295	181	385
W 400	240	195	-	700	180	440	-	-
W 600	500	195	-	750	180	460	-	-
P 1000	360	280	-	1300	210	560	-	-
P 1600	500	280	-	1500	210	600	-	-

DIVER LAUNCH AND RECOVERY UNIT DLR-1250

This system is used for offshore diving applications, the maximum lowering capacity is 90 meters so it can be used for offshore platform diving operations as well. It consists of an A-frame with 2 approved man riding winches and a redundant electrical driven hydraulic power unit. All fits a 20" standard size container; even 2 off DLR-1250 will fit in one 20" container. One winch is used to lift and lower the dive bell, the other for the clump weight; a third optional winch can be used as a utility/tool winch. The function of the clump weight is to keep the dive bell straight and steady under water. In case of an emergency or breakdown of the wet bell winch the clump weight winch will be able to lift the dive bell and clump weight together.
Designed to fulfil with the requirements of Lloyds and meets UK HSE regulations for personnel lifting operations on offshore installations. The winches and A-frame are dedicated for personnel lifting suitable for diving operations and offered with Lloyds Register of Shipping (LRS) Design Appraisal Certificate and full material trace ability. They have passed the EC testing for these applications, i.e., both the winches and their technical files are in compliance with the requirements of the EC Machinery Directives. The DLR-1250 also complies with IMCA regulations and comes with an ATEX certificate as well.

The DLR-1250 is available for sale or lease.

Standard features

- Compact units with minimal deck space usage
- Suitable for Sea state 2-3
- Easily rigged and set up
- Main diving bell winch OHR 1.5, WLL 1250 kg @ 40 m/min
- Clump weight winch OHR 1.5, WLL 1250 kg @ 40 m/min
- Limit switches for upper limit
- Double failsafe braking on both winches
- Lifting height (lowering depth) 90 meters
- Utility winch 500 kg @ 25 m/min (optional)
- Fleet angle compensators for winches
- Power supply 380-460 VAC, 50/60 Hz
- Hydraulic cylinders for deploying the A-frame (optional)
- Forklift pockets for easy handling
- Container sockets for easy fastening
- Welding brackets for deck mounting
- Readout unit of paid out wire rope
- HPU Eexd ATEX, 100 l/min @ 180 bar, redundant pump system and cross over manifold and quick release connections
- Hydraulic proportional valves for winches and A-frame operation
- Operating conditions –20°C through 50°C
- Full material trace-ability (3.1 - EN 10204) on load bearing parts
- Easy transportation because fit standard 20" container size
- Fitted with twist free wire ropes with high (10x) safety factors
- IMCA and Lloyds compliant
- Flood light, Eexd
- Standard open basket with bottle mounting bracket, fall out prevention, pay load 650 kg
- Clumb weight, 400 kg
- Dimensions; operational 2976 x 2502 x 4017 mm, collapsed 4558 x 2178 x 1111 mm
- Weight excl. HPU; 2750 kg.

For more specific details please inquire with us or with one of our authorized dealers.

Hosereel/Umbilical/Transponder Winches
HR/UR/TW series

Hose reel, Umbilical or Transponder winches are mainly built for the purpose. Winches are built to order and can be executed with a self braking worm gear or planetary gear, depending on the load required. The drive can be either electric, hydraulic or pneumatic.
The Hose reels are mainly used to spool hoses for Fresh Water supply, MDO Fuel supply and Hydraulic Oil or to spool Electrical Power Supply Cables.
The Umbilical winches in general are used to spool a combination of hoses, signal cables, coax or even Fibre Optic cables. Most of them come with slip rings and/or rotating swivels.
Transponder winches used for powered transponders are mainly used with electrical signal cables and have in most cases an electrical slip ring mounted. Winches can be supplied complete with A frame if required.
EMCE has supplied systems for all applications including reels with SS swivels of 6" or slip rings for High Voltage.
Applications we have supplied for can be found on the following type of constructions; Offshore Heavy lift vessels, Offshore Semi Subs, Diving Support vessels, Research vessels, Cable and Pipe laying vessels and Offshore Pile Driving barges.

Standard features:

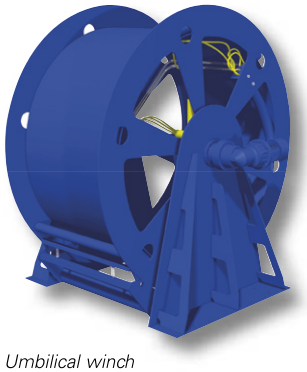
- Self braking worm gear, helical bevel, planetary or slew gear transmissions
- IP 56 TENV braked motors 400 VAC / 3 phase / 50 Hz (or 440/3/60)
- Radial piston air or hydraulic motors
- Heavy duty construction
- Offshore multi layer 2 component conservation, colour RAL 5010
- Protective guards
- Stainless steel slip rings (fibre optic or elec.)
- Stainless steel swivels
- Spooling devices
- Etc…..

Available options:

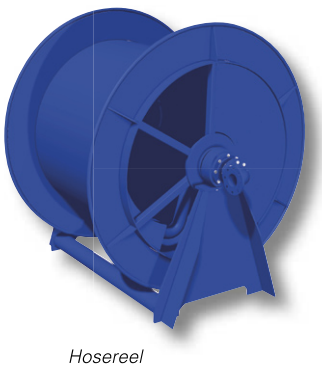
- Explosion proof electric motors
- Protective steel motor covers
- Alternative speeds

Available control options:

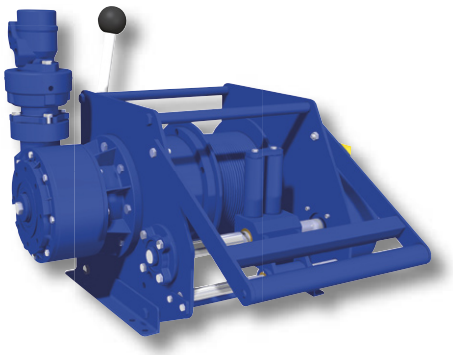
- Control box IP 65 with pushbuttons and emergency stop built acc. to NEN 1010
- Control box IP 66 with low voltage IP 65 remote control built acc. to NEN 1010
- Load limiters
- Frequency inverters for variable speed control
- Wireless radio remote control systems
- Limit switches
- Pneumatic and hydraulic control systems



Umbilical winch



Hosereel



Transponder winch

Winch inquiry checklist

In order providing you with the most suitable and competitive offer for our products we need to know the following basic information, the bold printed information is minimal required to provide an offer.

Company name : _____

Personal name : _____

Fax/tel/e-mail : _____

Latest bid date for offer : _____

Required delivery time : week _____ 200___

Short description of application : _____

Sketch of application available : no / yes find enclosed

No. of winches : _____

Type (if known) : _____

Application : ***lifting / pulling / traversing / traction / pile driving / anchoring / mooring***

Working Load Limit (W.L.L. /S.W.L.) : _____ **kg or daN** _____ **in 1st layer,** _____ **in top layer**

Speed : _____ **m/min in** _____ **layer, fixed / variable / 2-speed;** _____/_____ **m/min.**

Rope diameter : _____ mm

Rope length : _____ **m in max.** _____ **layers**

Drum dimensions (if known) : core diameter _____ mm, length _____ mm, flange diameter _____ mm

Drum finishing : smooth / helical grooved / grooved according to DIN / Lebus

Special drum features : 1 or _____ cable anchors / drum divider flange / cable kicker

Environmental conditions : Ambient temp. - _____ °C. / + _____ °C, Hazardous zone, _____ _____ Hostile, details; _____

Duty : continuous / intermittent; _____ times per day / week / month

Supply : **electric ;** _____ **VAC /** _____ **phase /** _____ **Hz.**
electric ; _____ **VDC**
hydraulic ; _____ **l/min@** _____ **bar**
pneumatic ; _____ **l/sec. @** _____ **bar**

Brakemotor required : yes / no

Required electric motor

IP classification : IP 54 / 55 / 56 TENV / IP 56 TEFC / 68 TENV

Special electric motor features : PTC / tropicalization / brakelifter / handcrank / encoder / heater

Winch options : clutch ; yes / no, remotely operated yes / no
band brake ; yes / no, automatic yes / no,
holding force _____ kg
pressure roller ; yes / no, steel / stainless steel / nylon
drum guard ; yes / no
spooling gear ; yes / no
emergency cranking ;yes / no

Controls electric :

Local panel with pushbuttons	yes / no
Local panel with pushbuttons and line pull limiter	yes / no
Pendant remote control	yes / no
Pendant remote control and line pull limiter	yes / no
Foot pedal control for capstan (1 direction - 1 speed)	yes / no
Foot pedal control (2 directions – 2 speed/variable)	yes / no
Panel mounted onto winch frame	yes / no
Protection class panel IP 55 / IP 65 / IP_____	
Spindle limit switch 2 / 4 / more ____ contacts	yes / no
Space heater (_____ VAC / _____ Hz)	yes / no
Frequency inverter for variable speed control	yes / no
Constant tensioning	yes / no

Controls pneumatic : On winch (joystick type valve); fixed/proportionally yes / no

Pilot valve on winch only	yes / no
Remote pendant with pilot emerg. stop, length _____ m	yes / no
Rem. pendant with main emergency. stop, length _____ m	yes / no
Remote panel mount joystick	yes / no

Controls hydraulic :

On winch; fixed speed / proportionally	yes / no
Remote pilot / solenoid	yes / no
Other _____	

Finishing, system : Makers std. (1 comp.) / Marine paint syst. / Special _____

Finishing, colour : Makers std. BS 20 (Medium Blue) / RAL _____ / _____

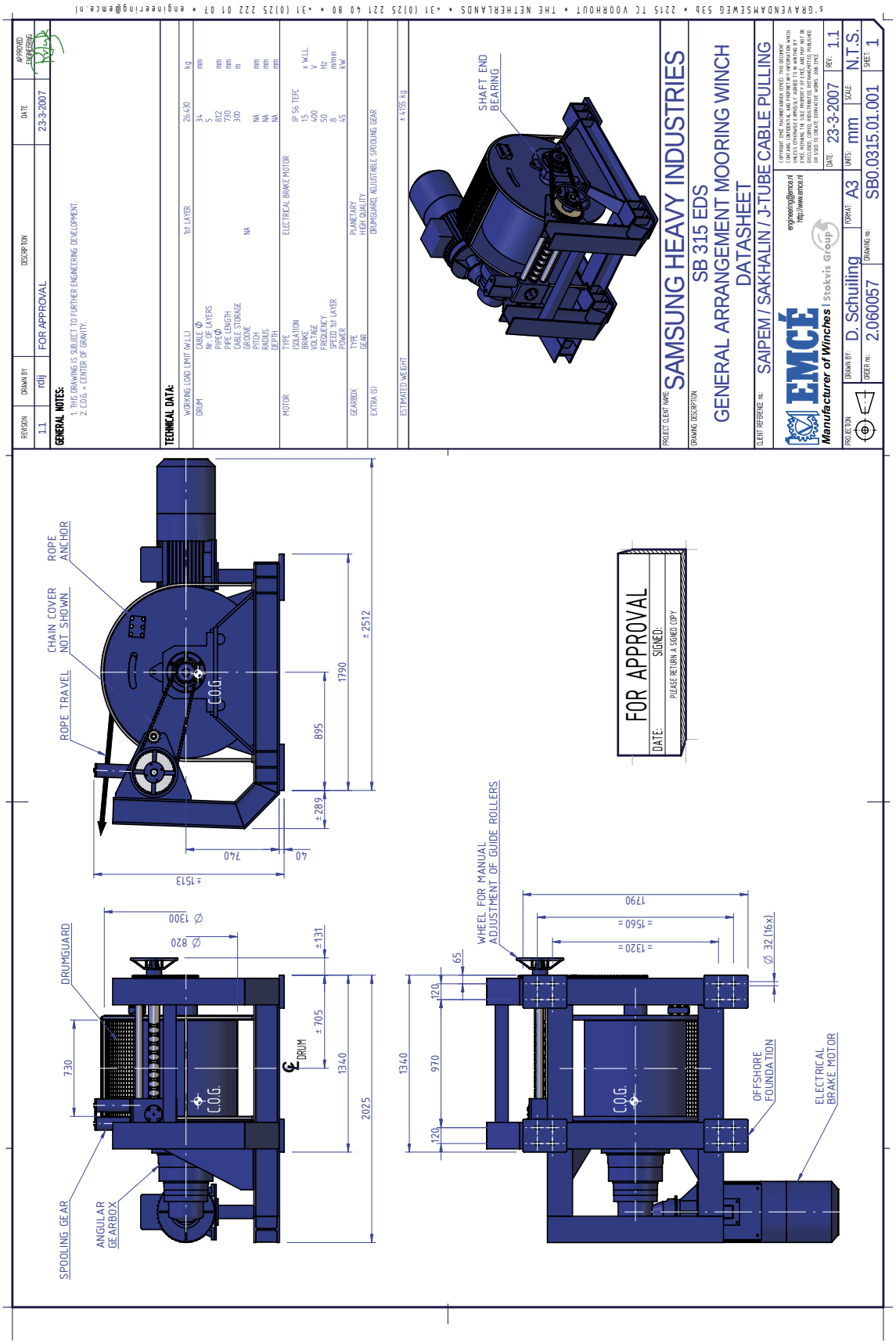
Overall dimensions limited to : _____ x _____ x _____ mm. (L x W x H)

Classification : LRS / BV / GL / ABS / ABS + CDS / DNV / TUV / _____

Special documentation requirements : yes / no; _____

Other requirements : _____

Reference drawing

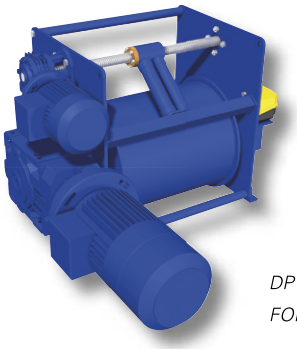


This is an example of a drawing for approval.

References

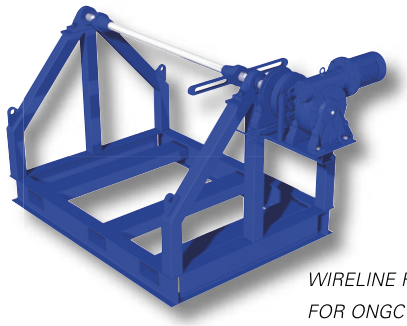
Winches has been supplied to a variety of customers worldwide, some of them are highlighted as follows

A 41H ELPS



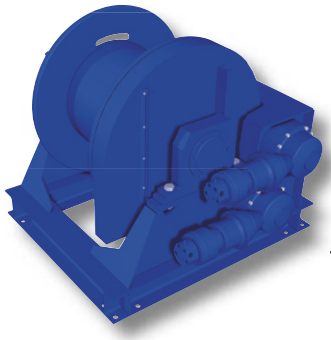
DP 3 TRANSPONDER WINCH FOR SEATRUCKS JASCON 5

WRS 2.3 EBC



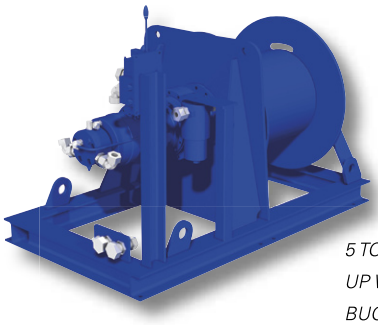
WIRELINE ROPE SPOOLER FOR ONGC INDIA

SR 30 H2



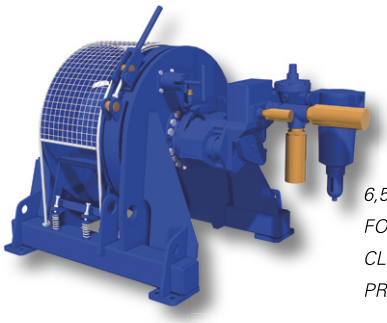
30 TON HYDRAULIC WINCH FOR UNOCAL THAILAND

SB 306 H



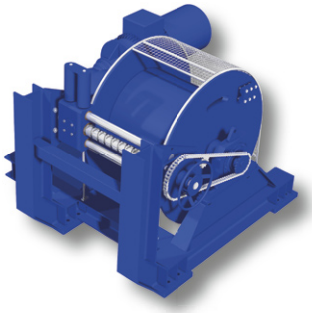
5 TON HYDRAULIC PICK UP WINCH FOR APL BUOY

OAW 6.5 LG6BDGLP



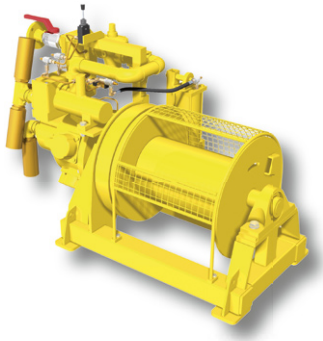
6,5 TON AIRWINCH FOR VARIOUS CLIENTS (CNOOC, PRIDE, SEATANKERS)

SR 315R EDS



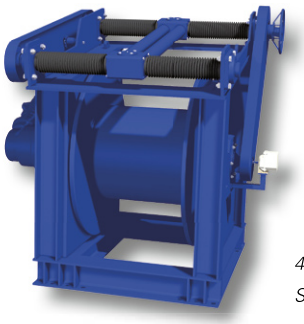
30 TON J-TUBE CABLE PULLING ELECTRIC WINCH FOR SAMSUNG (SAKHALIN PROJECT)

OAW 2.5 20AK1GEU



2,5 TON AIRWINCH FOR NDC ABU DHABI

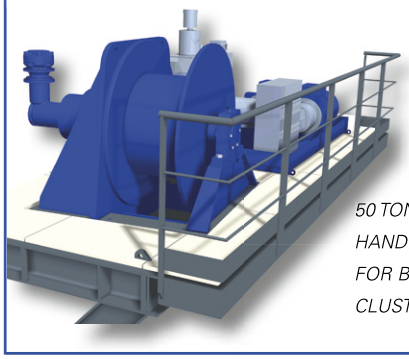
SB 316R HS



40 TON DAVIT WINCH FOR SAS GOUDA

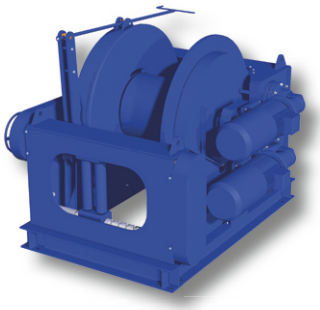
References

SB 319R H



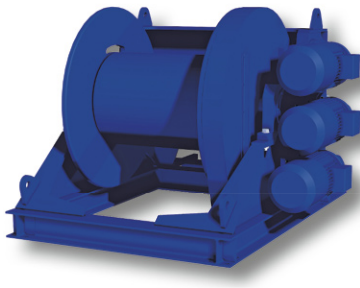
50 TON JUMPER HOSE HANDLING WINCH FOR BLUEWATER ABU CLUSTER FSO

SR 20 E2



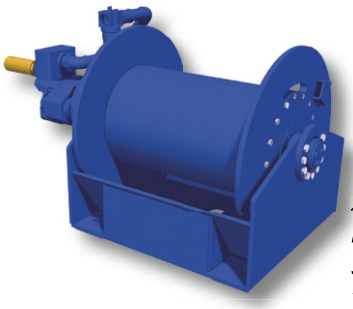
30 TON ELECTRIC JACK UP MOORING WINCH FOR THULE DRILLING (THULE POWER)

SR 40 E3



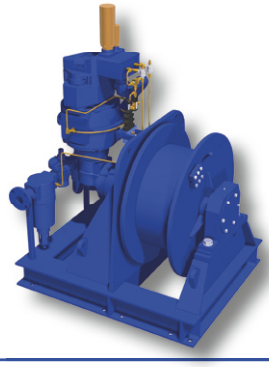
40 TON ELECTRIC WINCH FOR LUDAN FOR METHANE BARGE PROJECT

MCP 311 LG6



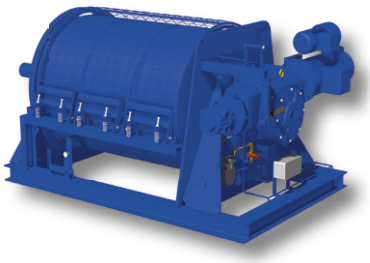
20 TON AIRWINCH FOR HUISMAN ITREC FOR SAPURA HEAVY LIFT VESSEL

SB 310R LG6



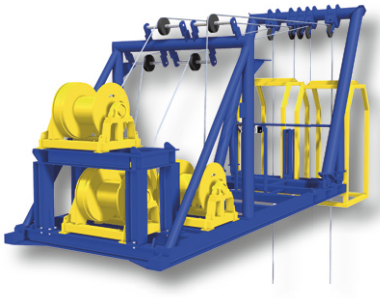
10 TON AIRWINCH FOR BLUEWATER BUOY

SB 307/185 EVSP



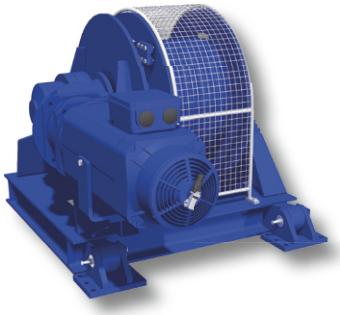
650 KG EEXD MANRIDER FOR GASHOLDER (POSCO, SAARSTAHL, ARCELOR)

OHR 3.0 BD



3 TON CLASSIFIED HYDRAULIC MANRIDER FOR DIVING A FRAME

SB 311R EDGP



10 TON ELECTRIC WINCH FOR DUBAI MARITIME CITY SHIPLIFT MOORING SYSTEM

Note: *This is only a comprehensive summary of winches delivered out of the more than 30,000 supplied over the past 30 years. EMCÉ produces approximately 1300 custom built and 400 standard winches every year. A more detailed list can be obtained from our sales department.*

Sales and service network

Eighty percent of EMCÉ's production is destined for the export market sold through a subsidiary company in Belgium and her world-wide dealer network. Because of this network EMCÉ is in the position to offer her customers a professional and reliable service around the globe. EMCÉ is justly proud of the fact that many of its customers have been part of its international customer base for years and that increasing numbers of new customers are also finding their way to the company. A solid base on which to build the future.

Please refer to backside cover for our world wide coverage.

To obtain the contact details of the local dealer please contact our export sales department.

General terms and conditions

All tenders and contracts for the performance of deliveries by us inside and outside the Netherlands are governed by the FME General Conditions for the sales and supply for mechanical and electrical industry of October 19th 1998 filed under reference nr. 119/1998 at the district court in The Hague.

Guarantee

EMCÉ warrants to the original user its winches to be free of defects in material and workmanship for a period of one year from the date of purchase. EMCÉ will repair, without cost, any product found to be defective, including parts and labour charges, or at its option, will replace such products or refund the purchase price less a reasonable allowance for depreciation, in exchange for the product.

If any product proves defective within its original one year warranty period, it should be returned to any authorized EMCÉ dealer, transportation prepaid with proof of purchase or winch data sheet / test certificate.

This warranty does not apply to products which EMCÉ has determined to have been misused or abused, improperly maintained by the purchaser; or where the malfunction or defect can be attributed to the use of non-genuine EMCÉ parts.

EMCÉ makes no other warranty, and all implied warranties including any warranty of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set forth above. EMCÉ´s maximum liability is limited to the purchase price of the product and in no event shall EMCÉ be liable for any consequential, indirect, incidental, or special damages of any nature arising from the sale or use of the product, whether based on contract, tort, or otherwise.