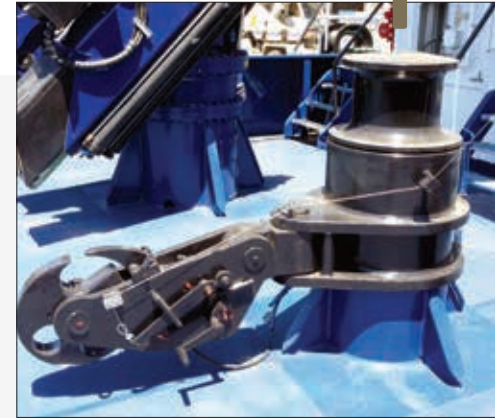




# CONTENTS

- ANCHOR WINDLASSES
  - VERTICAL WINDLASSES
  - HORIZONTAL WINDLASSES
- CAPSTANS
- HYDRAULIC SYSTEMS
- CHAIN STOPPERS
- CHAIN END FASTENING DEVICES
- CONTROL SYSTEMS AND ACCESSORIES
- ANCHOR WINDLASS INQUIRY FORM
- CAPSTAN INQUIRY FORM





With many years' experience of manufacturing windlasses, we are well aware of the problems concerning operation in marine atmospheric conditions. DATA windlass and capstans are designed and manufactured to meet the highest standards and serve in long term with minimum maintenance.

DATA has a standard range of vertical and horizontal windlasses up to 42 mm stud-link chain with 12 tons of pull.

Capstans are rated up to 11 tons of pull. Beside the standard range, DATA is flexible to modify designs according to customer needs or produce a unique solution.

Every windlass and capstan is delivered after being tested in our factory.

Windlasses and capstans are compatible with the rules of all well known class societies and can be certified and delivered with class certificate upon customer request.

We highly recommend to use anchor windlasses with a chain stopper in front. DATA offers various types of stoppers to be combined with windlasses.

## on everything that's on sea...



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## How to choose a windlass?

There are a few criteria to be considered when choosing an anchor windlass. According to class rules, an equipment number (EN) is calculated taking into account size and wind area of the vessel. Suitable chain size, anchor size and mooring equipments are selected from the tables of EN. If the required chain size is determined from EN, suitable windlass can be chosen from the below ANCHOR WINDLASS QUICK SELECTION table and next pages of this catalog.

If an EN is not available, tables showing suitable horizontal and vertical windlasses according to vessel can be referenced.

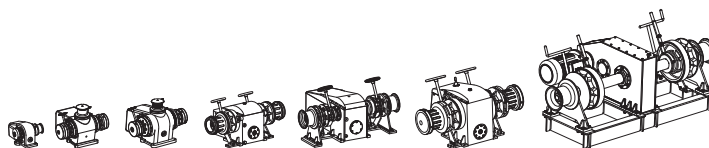
Before selecting the proper windlass, you have to decide which type will be suitable for your boat; Horizontal or vertical? Hydraulic or electric?

		SHORT LINK CHAIN (DIN 766)										STUD LINK CHAIN (ISO 1704:2008)																			
WINDLASS MODEL		8	10	12	13	14	16	18	20	23	26	11	12.5	14	16	17.5	19	20.5	22	24	26	28	30	32	34	36	38	40	42		
VERTICAL	DZC 440	■	■																												
	DZC 450	■	■																												
	DZC 1000		■	■	■	■						■	■																		
	DZC 1400			■	■	■							■	■																	
	DZC 2200					■	■	■						■	■																
	DZC 3300								■	■	■						■	■	■	■											
	DZC 5000										■	■						■	■	■	■	■									
	DZC 7000											■									■	■	■	■	■						
	DZC 11000																					■	■	■	■	■	■	■	■	■	■
	HORIZONTAL	DZC 401	■	■																											
DZC 901/902			■	■	■							■	■																		
DZC 1201/1202			■	■	■	■						■	■	■																	
DZC 1701/1702						■	■	■					■	■	■																
DZC 2001/2002							■	■	■					■	■																
DZC 3301/3302								■	■	■							■	■	■	■											
DZC 3501/3502									■	■	■						■	■	■	■	■										
DZC 7001/7002											■										■	■	■	■	■						
DZC 12001/12002																						■	■	■	■	■	■	■	■	■	■

Note: Above table is based on Q2 quality for stud-link chains. For Q3 quality, it might be necessary to select one size bigger windlass

## Horizontal Windlasses

This type of windlasses are entirely installed above deck. Due to this reason, maintenance and installation operations are simpler than vertical ones. Horizontal windlasses provide 90°-120° wrap of chain around the gypsy.

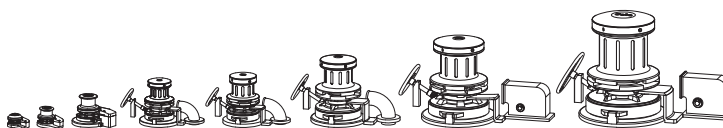


HORIZONTAL WINDLASSES SUITABLE VESSEL LENGTH																									
metres	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	
feet	26	39	52	66	79	92	105	118	131	144	157	171	184	197	210	223	236	249	262	276	289	302	315	328	
DZC 401		■	■	■																					
DZC 901/902				■	■	■																			
DZC 1201/1202					■	■	■																		
DZC 1701/1702						■	■	■	■	■															
DZC 2001/2002							■	■	■	■	■														
DZC 3301/3302										■	■	■	■												
DZC 3501/3502											■	■	■	■											
DZC 7001/7002													■	■	■	■	■	■	■	■					
DZC 12001/12002																				■	■	■	■	■	■

Note : Above table is intended to give a quick idea for selection. Suitable windlass may change due to the displacement, type and windage area of the vessel. Always consult to DATA or an authorized DATA dealer when selecting the windlass. Refer to relevant classification society rules and related equipment number.

## Vertical Windlasses

The main difference of vertical type is that the profile deck is very compact as the motor and the gearbox are under the deck. With the help of this advantage, they are suitable for every kind of vessel and preferred more than horizontal ones in recent years. Vertical windlasses look more esthetic and offer more security for anchoring by making 180° chain wrap around the gypsy. If there are two anchors, positioning of the windlass on deck is much more flexible than horizontal ones. Also two independent vertical windlasses offer higher security comparing a horizontal windlass with 2 gypsy on 1 shaft. Since most of the mechanical components are under the deck, maintenance operations are slightly difficult than the horizontal windlasses.



VERTICAL WINDLASSES SUITABLE VESSEL LENGTH																									
metres	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	
feet	26	39	52	66	79	92	105	118	131	144	157	171	184	197	210	223	236	249	262	276	289	302	315	328	
DZC 440		■	■	■																					
DZC 450		■	■	■																					
DZC 1000				■	■	■																			
DZC 1400					■	■	■																		
DZC 2200							■	■	■	■															
DZC 3300										■	■	■	■												
DZC 5000												■	■	■	■										
DZC 7000														■	■	■	■	■	■	■					
DZC 11000																				■	■	■	■	■	■

Note : Above table is intended to give a quick idea for selection. Suitable windlass may change due to the displacement, type and windage area of the vessel. Always consult to DATA or an authorized DATA dealer when selecting the windlass. Refer to relevant classification society rules and related equipment number.



### Hydraulic Windlasses

Hydraulic windlasses offer an advantage of constant speed under all load conditions and can be run almost constantly. If well built and correctly installed including the piping, modern hydraulic systems provide low maintenance and high efficiency for long term use. Central hydraulic systems either driven by main engines or by electric motors, can power windlasses beside other consumers on the vessel such as thrusters, capstans, cranes or sail winches. which reduces the investment cost.



### Electric Windlasses

Comparing to hydraulic systems, electric motor driven windlasses and capstans provide easier installation and start up procedures.

Electric windlasses can be powered by either direct current (DC) motors (12V or 24V) or by alternating current (AC) motors (210-440V, 50-60 Hz, 3 phases). DC motors are preferred on smaller boats where a generator is not available or generator is not rated for the windlass or capstan motor power. Windlasses and capstans with DC motors are available up to 3.5 kW power.

Windlasses and capstans with AC motors do not have a power limit if there is enough generator power on board. AC motors can be started direct on line (DOL) or by means of a frequency converter. DOL is a cheaper solution but loads high starting currents on the generator. With the help of fastly improving technology, systems with frequency converters are getting more affordable and much user friendly. With a frequency converter it is very easy to have multiple speeds, soft start/stop and integrity to ship control systems.

Please feel free to consult DATA for more information. The anchor windlass inquiry form is available at the end of this catalog for your use.

# HORIZONTAL WINDLASSES



## DZC 401E

DZC 401E is the smallest windlass in horizontal range. It is driven by a 1200W (12 or 24VDC) electric motor providing a max. pull of 590 kgs. It has a gypsy for chains 8 or 10 mm DIN766.

DZC 401E	
Drive	DC Electric Motor (12 or 24V)
Max. cont. Pull	390 kg (S2)
Max. pull	590 kg (S3)
Haulage speed (for 100 kg. working load)	16 m/min.
Gypsy for chain	8 - 10 mm DIN766
Approximate weight	32 kg
Current draw (at max. cont.pull)	125A (12V) - 70A (24V)
Motor power	1200W



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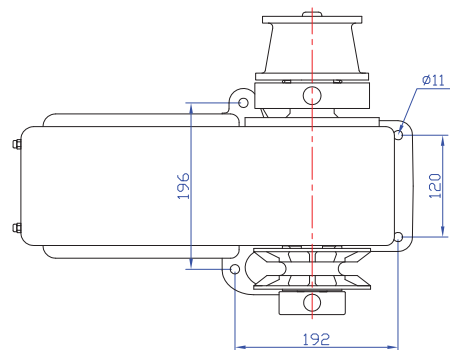
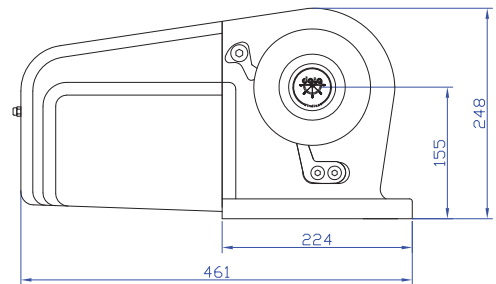
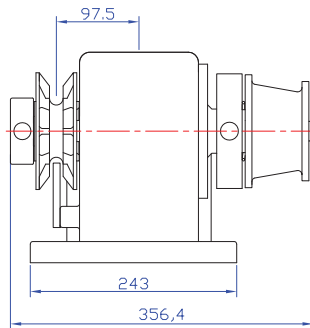
## DZC 401 E / 1224 - 10K

### E. Motor

1212	1200 W - 12 V DC E. Motor
1224	1200 W - 24 V DC E. Motor

### Chain Type / Size

8 K	8mm. DIN 766
10 K	10 mm. DIN 766



DZC 401E

## FEATURES

Manual override.

Chain can be dropped by means of loosable conical clutch which also provides overload protection.

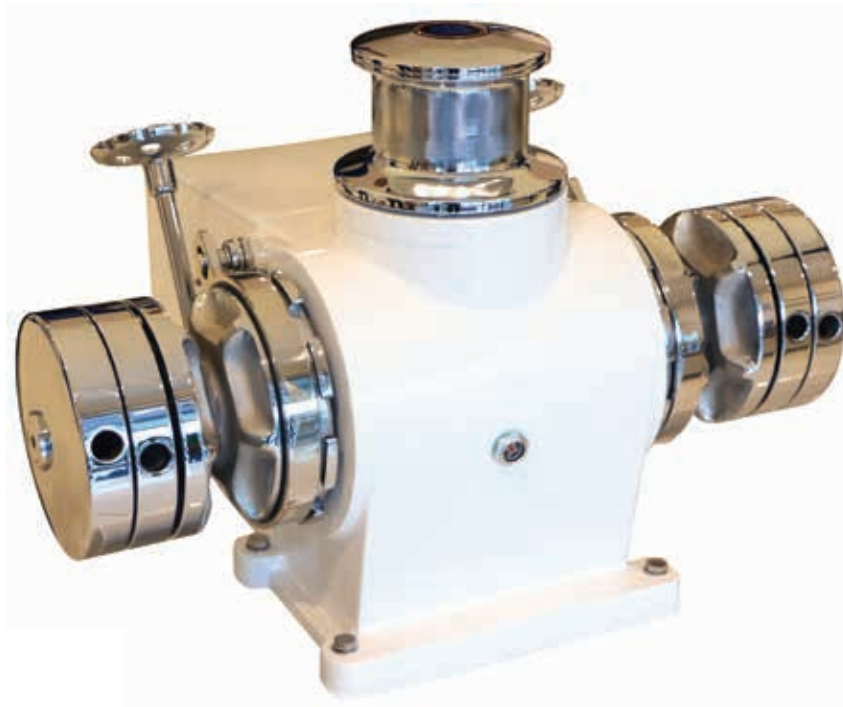
Body is marine grade aluminium and covered with white (RAL 9016) polyurethane paint.

Drive shaft is stainless steel.

Gypsy and clutch are chrome plated bronze.

Warping drum and manual override wheel are chrome plated aluminium.

Delivered with marine type DC relays for reversible operation.



## DZC 901/902

DZC 901 and 902 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 1100 kgs. It has a gypsy for chains 10, 12 or 13 mm DIN766, 11 or 12.5 mm stud-link.

	DZC 901E / 902E (DC)	DZC 901E / 902E (AC)	DZC 901H / 902H
Drive	DC Electric Motor (24V)	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	730 kg (S2)	660 kg (30 min)	1000 kg (30 min)
Max. pull	1100 kg (S3)	1000 kg (2 min)	1100 kg (2 min)
Haulage speed (for 200 kg. working load)	15 m/min.	12 m/min.	13 m/min.
Gypsy for chain	10-12-13 mm DIN766, 11-12.5 Stud-link	10-12-13 mm DIN766, 11 Stud-link	10-12-13 mm DIN766, 11-12.5 Stud-link
Approximate weight	95 / 120 kg	95 / 120 kg	90 / 115 kg
Current draw (at max. cont.pull)/ Hyd. pressure - Oil flow (on motor)	110A	4.5A	110 bar - 25 lt/min
Motor power	2000W	2200W (400V - 50hz)	





**DZC 901 E BL / P-12K/1****No. Of Gypsy & Drum**

901	1 gypsy 1 warping drum
902	2 gypsies 2 warping drums

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gypsy & Drum Position**

A	1 gypsy 1 drum (as the drawing)
AL	1 gypsy 1 drum (on opposite side)
B	1 gypsy 1 drum (as the drawing)
BL	1 gypsy 1 drum (on opposite side)
	2 gypsies 1 drum

**Material**

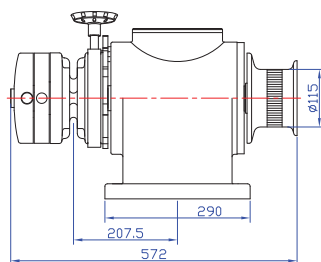
B	Bronze
Kr	Stainless steel
P	Steel

**Chain Type / Size**

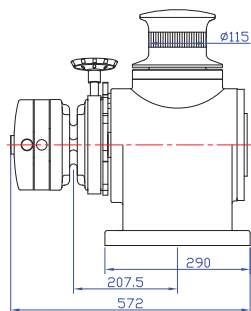
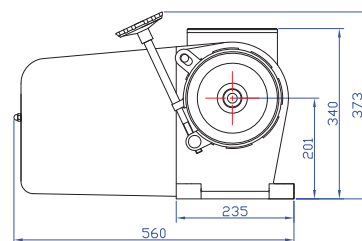
10K	10 mm DIN766
12K	12 mm DIN766
13K	13 mm DIN766
11L	11 mm Stud-link
12.5L	12.5 mm Stud-link

**E. Motor**

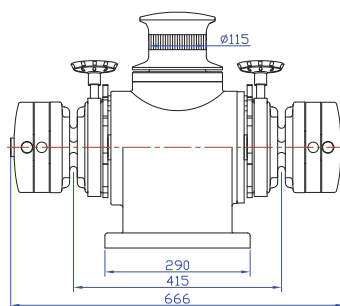
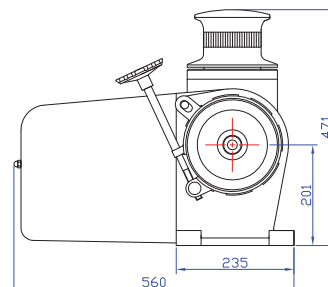
1	2000 W V DC E. Motor
2	2200 W 380V AC E. Motor



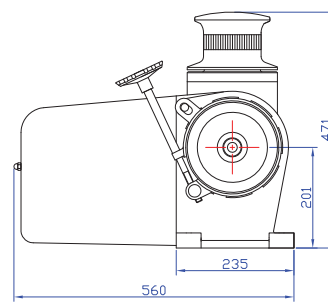
DZC 901H/E type A



DZC 901H/E type B



DZC 902H/E



## FEATURES

Manual override.

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by means of loosable conical clutch which also provides overload protection.

Body is marine grade aluminium and covered with white (RAL 9016) polyurethane paint..

Drive shaft, brake screw and brake band are stainless steel.

Delivered with marine type DC relays for reversible operation (DC electric motor models).

## OPTIONS

Hydraulic motor drive

Chrome plated bronze gypsy,clutch and warping drum.

Polyurethane painted steel gypsy, clutch and warping drum.

Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

Warping drum on top or at side.

For single gypsy models, right and left versions available.



# DZC 1201/1202

DZC 1201 and 1202 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 1375 kgs. It has a gypsy for chains 10, 12, 13 or 14 mm DIN766, 11, 12.5 or 14 mm stud-link.

	DZC 1201E / 1202E (DC)	DZC 1201E / 1202E (AC)	DZC 1201H / 1202H
Drive	DC Electric Motor (24V)	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	920 kg (S2)	850 kg (30 min)	1250 kg (30 min)
Max. pull	1375 kg (S3)	1250 kg (2 min)	1375 kg (2 min)
Haulage speed (for 250 kg. working load)	14 m/min.	12 m/min.	15 m/min.
Gypsy for chain	10-12-13-14 mm DIN766, 11-12.5-14 Stud-link	10-12-13-14 mm DIN766, 11-12.5-14 Stud-link	10-12-13-14 mm DIN766, 11-12.5-14 Stud-link
Approximate weight	125 / 150 kg	125 / 150 kg	110 / 130 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	140A	5.8A	140 bar - 25 lt/min
Motor power	2500W	3000W (400V - 50hz)	



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**DZC 1201 E AL / B - 12 K / 1****No of Gypsy**

1201	1 gypsy
1202	2 gypsies

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Pos of Gypsy & Drum**

A	1 gypsy 1 drum (as the drawing)
AL	1 gypsy 1 drum (in opposite side)
B	1 gypsy 1 drum (as the drawing)
BL	1 gypsy 1 drum (in opposite side)
-	2 gypsies 1 drum

**Material**

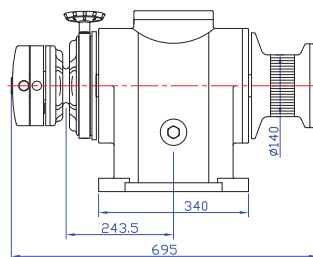
B	Bronze
Kr	Stainless steel
P	Steel

**Chain Type / Size**

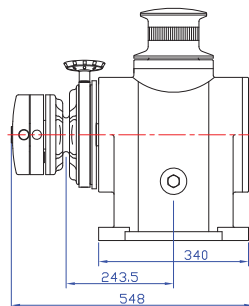
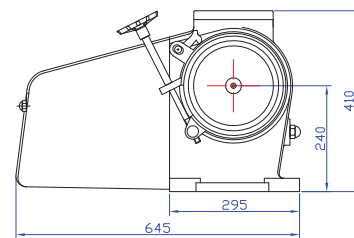
10 K	10 mm. DIN 766
12 K	12 mm. DIN 766
13 K	13 mm. DIN 766
14 K	14 mm. DIN 766
12 L	12.5 mm. Stud-link
14 L	14 mm. Stud-link

**E. Motor**

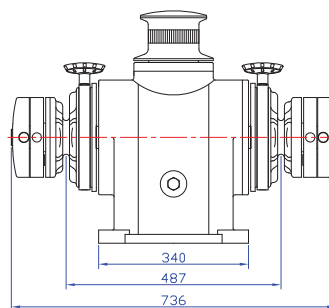
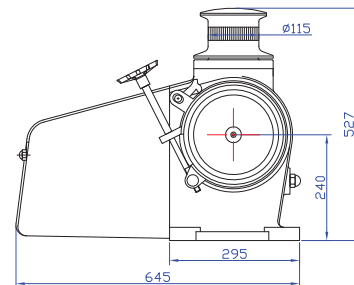
1	2500 W 24 V DC E. Motor
2	3000 W 380 V AC E. Motor



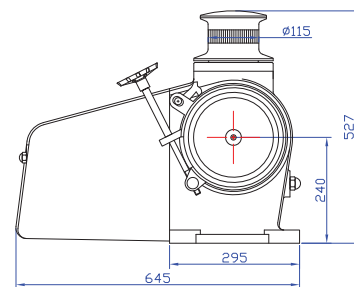
DZC 1201H/E type A



DZC 1201H/E type B



DZC 1202 H/E



## FEATURES

Manual override.

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by means of loosable conical clutch which also provides overload protection.

Body is marine grade aluminium and covered with white (RAL 9016) polyurethane paint.

Drive shaft, brake screw and brake band are stainless steel.

Delivered with marine type DC relays for reversible operation (DC electric motor models).

## OPTIONS

AC or DC electric motor drive.

Hydraulic motor drive.

Chrome plated bronze gypsy, clutch and warping drum.

Polyurethane painted steel gypsy, clutch and warping drum.

Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

Warping drum on top or at side.

For single gypsy models, right and left versions available.



## DZC 1701/1702

DZC 1701 and 1702 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 2200 kgs. It has a gypsy for chains 14, 16 or 18 mm DIN766, 12.5, 14 or 16 mm stud-link.

	DZC 1701E / 1702E	DZC 1701H / 1702H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	1750 kg (7500W - 30 min)	1750 kg (30 min)
Max. pull	2200 kg (7500W - 2 min)	1950 kg (2 min)
Haulage speed	13 m/min.	12 m/min.
Gypsy for chain	14-16-18 mm DIN766, 12.5-14-16 Stud-link	14-16-18 mm DIN766, 12.5-14-16 Stud-link
Approximate weight	275 / 325 kg	185 / 220 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	11.2A (5500W) - 15.4A (7500W)	120 bar - 40 lt/min
Motor power	5500W - 7500W (400V - 50hz)	



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**DZC 1701 H / BS - 14 K /****No. Of Gypsy & Drum**

1701	1 gypsy 1 drum
1702	2 gypsies 2 drums

**Drive**

E	E. Motor driven
H	Hydraulic driven

**Gypsy & Drum Position**

L	As the drawing In opposite side
---	------------------------------------

**Material**

B	Bronze
Kr	Stainless steel
P	Steel

**Control Type**

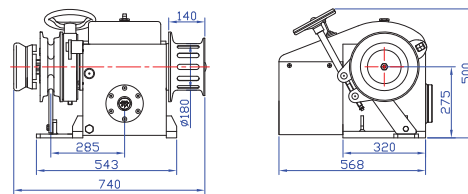
M	Local control
S	Solenoid control
E.	Motor drive

**Chain Type / Size**

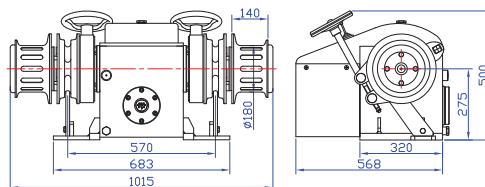
14 K	14 mm. DIN 766
16 K	16 mm. DIN 766
18 K	18 mm. DIN 766
12 L	12.5 mm. Stud-link
14 L	14 mm. Stud-link
16 L	16 mm. Stud-link

**E. Motor**

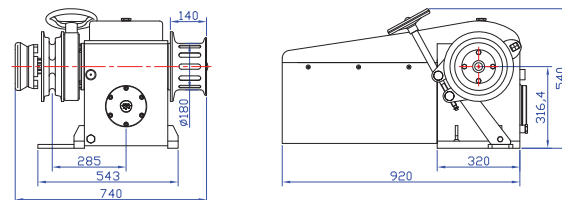
5	5.5 kW 380 V AC E. Motor
7	7.5 kW 380 V AC E. Motor



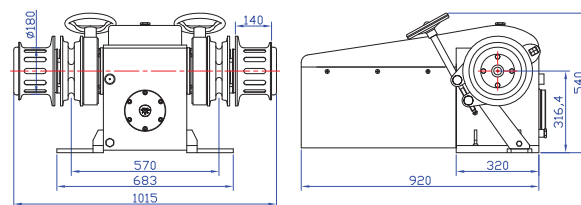
DZC 1701H



DZC 1702H



DZC 1701E



DZC 1702E

## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is galvanized steel work. Top cover and motor cover are marine grade aluminium. All covered with polyurethane paint.

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

Polyurethane painted steel gypsy, clutch and warping drum.

Bronze gypsy, clutch and warping drum.

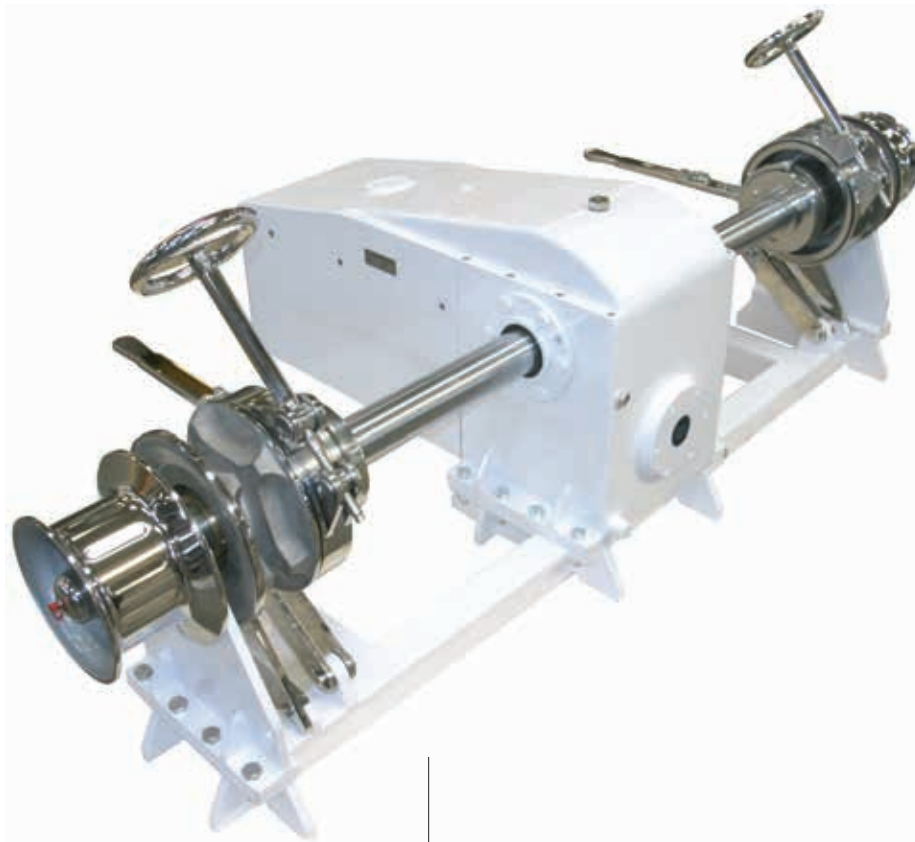
Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

For single gypsy models, right and left versions available.

Starter with frequency converter.

Hydraulic control valve installed on windlass.



# DZC 2001/2002

DZC 2001 and 2002 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 2200 kgs. It has a gypsy for chains 16, 18 or 20 mm DIN766, 14, 16 or 17.5 mm stud-link.

	DZC 2001E / 2002E	DZC 2001H / 2002H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	1750 kg (30 min)	1750 kg (30 min)
Max. pull	2200 kg (2 min)	1950 kg (2 min)
Haulage speed	13 m/min.	12 m/min.
Gypsy for chain	16-18-20 mm DIN766, 14-16-17.5 Stud-link	16-18-20 mm DIN766, 14-16-17.5 Stud-link
Approximate weight	300 / 385 kg	215 / 280 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	15.4A (7500W)	140 bar - 40 lt/min
Motor power	7500W (400V - 50hz)	





**DZC 2002 H / PM - 17.5L****No. Of Gypsy & Drum**

2001	1 gypsy 1 warping drum
2002	2 gypsies 2 warping drums

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gypsy & Drum Position**

L	As the drawing In the opposite side
---	--

**Material**

B	Bronze
Kr	Stainless steel
P	Steel

**Control Type**

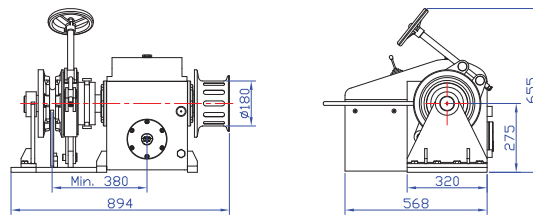
M	Local control
S	Solenoid control E. Motor drive

**Chain Type / Size**

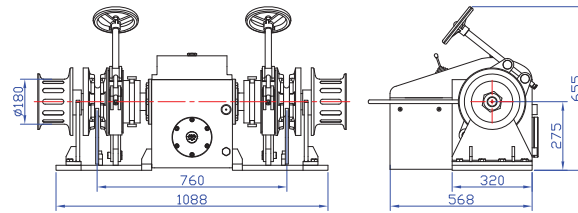
16K	16 mm DIN766
18K	18 mm DIN766
20K	20 mm DIN766
14L	14 mm Stud-link
16L	16 mm Stud-link
17.5L	17.5 mm Stud-link

**E. Motor**

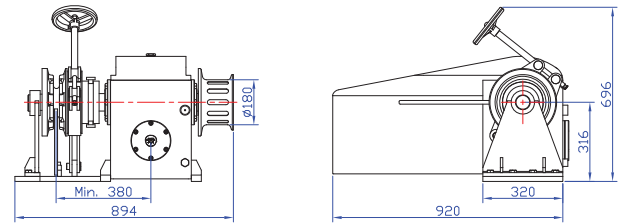
7	7.5 kW 380 VAC E. Motor
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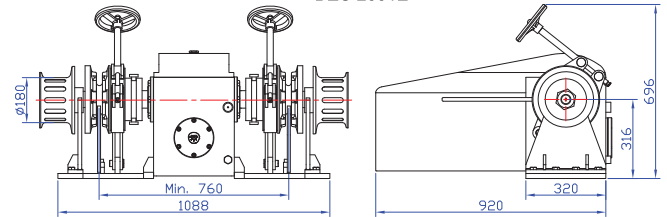
DZC 2001H



DZC 2002H



DZC 2001E



DZC 2002E

## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by losing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is galvanized steel work. Top cover and motor cover are marine grade aluminium. All covered with polyurethane paint.

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

Increased strength with vertical supports at the ends of main shaft which also allows to arrange the distance between two gypsies.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

Polyurethane painted steel gypsy, clutch and warping drum.

Bronze gypsy, clutch and warping drum.

Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

For single gypsy models, right and left versions available.

Starter with frequency converter.

Hydraulic control valve installed on windlass.

Foundation to be welded on deck.



## DZC 3301/3302

DZC 3301 and 3302 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 3600 kgs. It has a gypsy for chains 18, 20 or 23 mm DIN766, 17.5, 19, 20.5 or 22 mm stud-link.

	DZC 3301E / 3302E	DZC 3301H / 3302H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	2900 kg (11000W - 30 min)	3300 kg (30 min)
Max. pull	3600 kg (11000W - 2 min)	3600 kg (2 min)
Haulage speed	14 m/min.	13 m/min.
Gypsy for chain	18-20-23 mm DIN766, 17.5-19-20.5.-22 Stud-link	18-20-23 mm DIN766, 17.5-19-20.5.-22 Stud-link
Approximate weight	655 / 730 kg	415 / 525 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	15.4A (7500W) - 21A (11000W)	150 bar - 55 lt/min
Motor power	7500W - 11000W (400V - 50hz)	



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**DZC 3301 EL / B - 18 K / 11****No of Gypsy & Drum**

3301	1 gypsy 1 drum
3302	2 gypsies 2 drums

**Drive**

E	E. Motor driven
H	Hydraulic driven

**Gypsy & Drum Position**

L	As the drawing In opposite side
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**Material**

B	Bronze
Kr	Stainless steel
P	Steel

**Control Type**

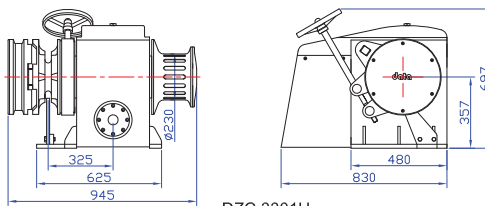
M	Local control
S	Solenoid control E. Motor drive

**Chain Type / Size**

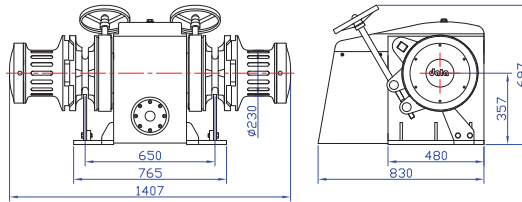
18 K	18 mm. DIN 766
20 K	20 mm. DIN 766
23 K	23 mm. DIN 766
17.5 L	17.5 mm. Stud-link
19 L	19 mm. Stud-link
20.5 L	20.5 mm. Stud-link
22 L	22 mm. Stud-link

**E. Motor**

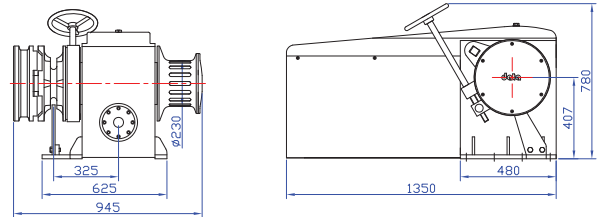
7.5	7.5 kW 380 V AC E. Motor
11	11 kW 380 V AC E. Motor



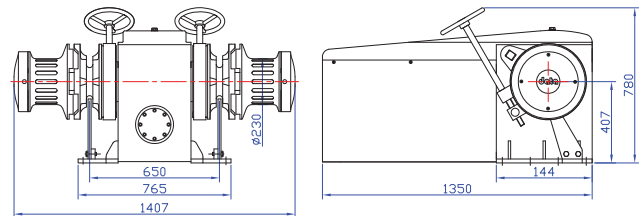
DZC 3301H



DZC 3302H



DZC 3301E



DZC 3302E

## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosening band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is galvanized steel work. Top cover and motor cover are marine grade aluminium. All covered with polyurethane paint.

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

Polyurethane painted steel gypsy, clutch and warping drum.

Bronze gypsy, clutch and warping drum.

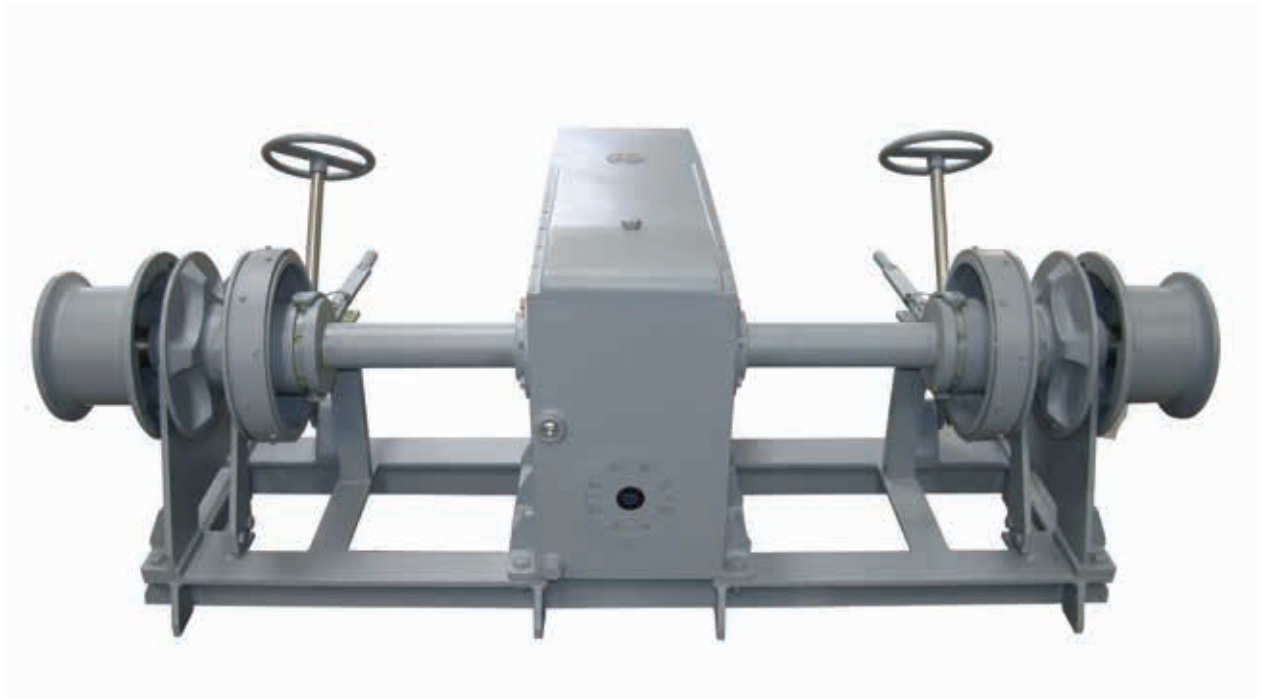
Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

For single gypsy models, right and left versions available.

Starter with frequency converter.

Hydraulic control valve installed on windlass.



## DZC 3501/3502

DZC 3501 and 3502 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 4100 kgs. It has a gypsy for chains 18, 20 or 23 mm DIN766, 17.5, 19, 20.5, 22 or 24 mm stud-link.

	DZC 3501E / 3502E	DZC 3501H / 3502H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	3000 kg (30 min)	3700 kg (30 min)
Max. pull	3700 kg (2 min)	4100 kg (2 min)
Haulage speed	14 m/min.	12 m/min.
Gypsy for chain	18-20-23 mm DIN766, 17.5-19-20.5.-22-24 Stud-link	18-20-23 mm DIN766, 17.5-19-20.5.-22-24 Stud-link
Approximate weight	610 / 820 kg	460 / 615 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	21A (11000W)	140 bar - 55 lt/min
Motor power	11000W (400V - 50hz)	



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**DZC 3501 H / PM - 17.5L****No. Of Gypsy & Drum**

3501	1 gypsy 1 warping drum
3502	2 gypsies 2 warping drums

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gypsy & Drum Position**

L	As the drawing In the opposite side
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**Material**

B	Bronze
Kr	Stainless steel
P	Steel

**Control Type**

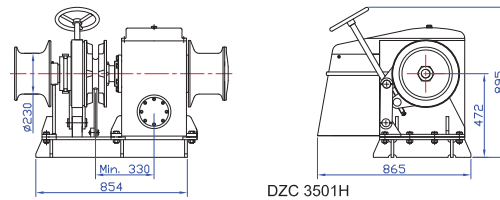
M	Local control
S	Solenoid control
	E. Motor drive

**Chain Type / Size**

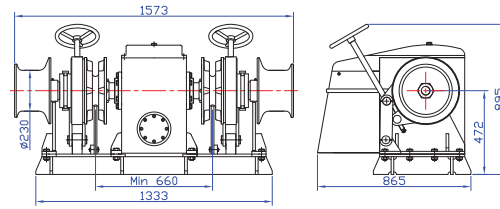
18K	18 mm DIN766
20K	20 mm DIN766
23K	23 mm DIN766
17.5L	17.5 mm Stud-link
19L	19 mm Stud-link
20.5L	20.5 mm Stud-link
22L	22 mm Stud-link
24L	24 mm Stud-link

**E. Motor**

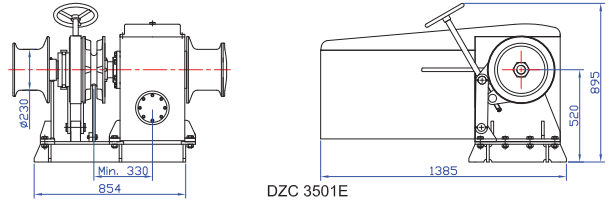
11	11 kW 380 VAC E. Motor
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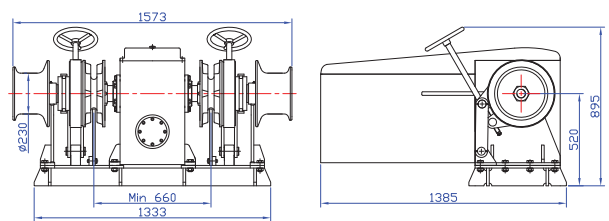
DZC 3501H



DZC 3502H



DZC 3501E



DZC 3502E

## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by losing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is galvanized steel work. Top cover and motor cover are marine grade aluminium. All covered with polyurethane paint..

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

Increased strength with vertical supports at the ends of main shaft which also allows to arrange the distance between two gypsies.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

Polyurethane painted steel gypsy, clutch and warping drum.

Bronze gypsy, clutch and warping drum.

Mirror polished stainless steel gypsy, clutch and warping drum.

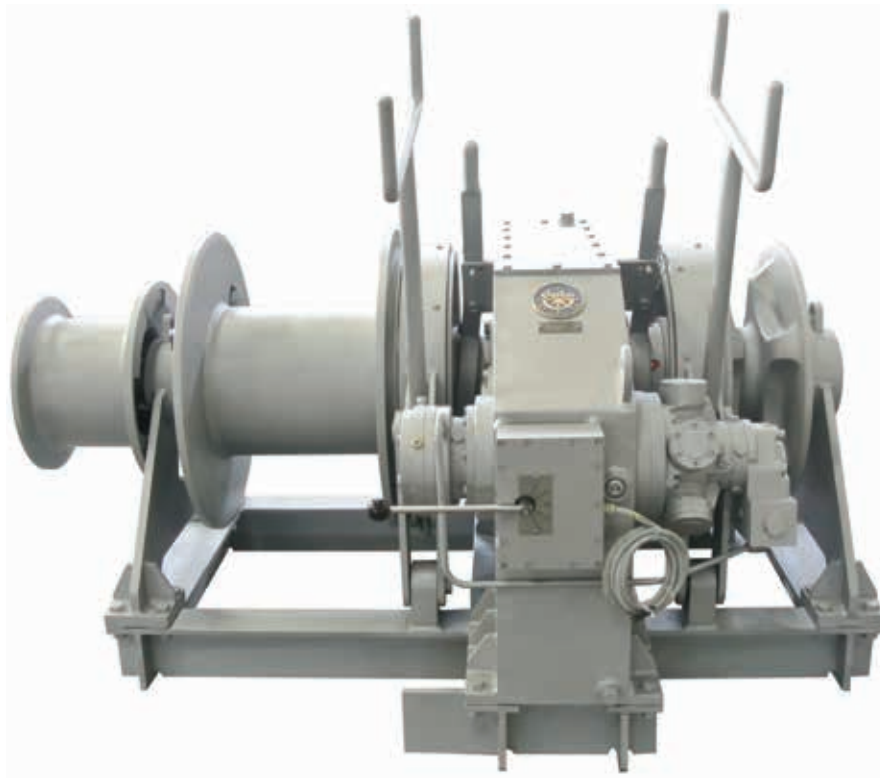
Single or double gypsy.

For single gypsy models, right and left versions available.

Starter with frequency converter.

Hydraulic control valve installed on windlass.

Foundation to be welded on deck.



## DZC 7001/7002

DZC 7001 and 7002 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 7500 kgs. It has a gypsy for chains 26 mm DIN766, 24, 26, 28, 30 or 32 mm stud-link.

	DZC 7001E / 7002E	DZC 7001H / 7002H
Drive	AC Electric Motor (210-440V, 3 ph)	Hydraulic Motor
Max. cont. Pull	6500 kg (18500W - 30 min)	6500 kg (30 min)
Max. pull	7500 kg (18500W - 2 min)	7200 kg (2 min)
Haulage speed	13 m/min.	12 m/min.
Gypsy for chain	26 mm DIN766, 24-26-28-30-32 Stud-link	26 mm DIN766, 24-26-28-30-32 Stud-link
Approximate weight		
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	29.8A (15000W) - 34.5A (18500W)	180 bar - 60 lt/min
Motor power	15000W - 18500W (400V - 50hz)	



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**DZC 7001-1 E / P-26L/15****No. Of Gypsy & Drum**

7001	1 gypsy 1 warping drum
7002	2 gypsies 2 warping drums
7001-1	1 gypsy 1 rope drum 1 warping drum

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gypsy & Drum Position**

L	As the drawing In the opposite side
---	--

**Material**

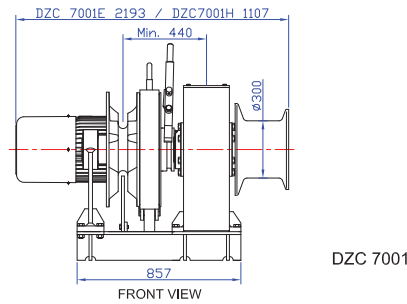
Kr	Stainless steel
P	Steel

**Chain Type / Size**

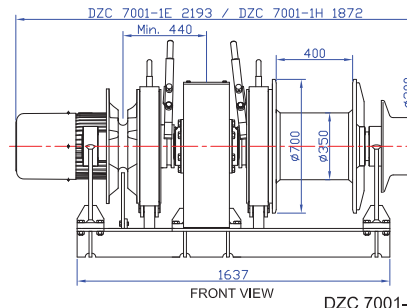
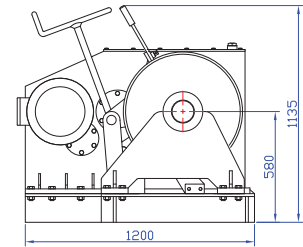
26K	26 mm DIN766
24L	24 mm Stud-link
26L	26 mm Stud-link
28L	28 mm Stud-link
30L	30 mm Stud-link
32L	32 mm Stud-link

**E. Motor**

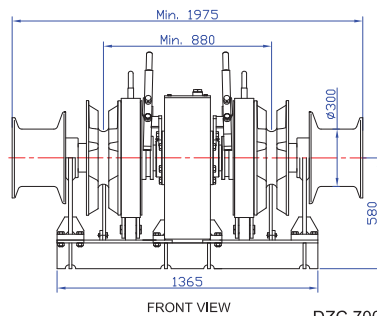
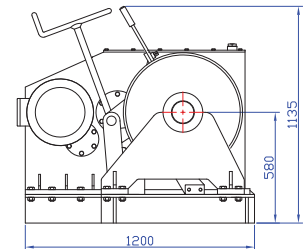
15	15 kW 380VAC E. Motor
18.5	18.5 kW 380VAC E. Motor



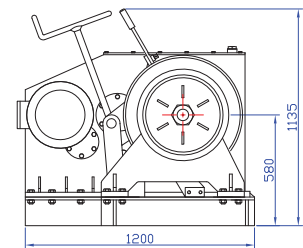
DZC 7001



DZC 7001-1



DZC 7002



## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by losing band brake.

Gypsy is engaged by means of dog clutch..

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is steel and covered with polyurethane paint..

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

Increased strength with vertical supports at the ends of main shaft which also allows to arrange the distance between two gypsies.

Hardened steel gears in oil bath.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive with single or double speed.

Mirror polished stainless steel gypsy, clutch and warping drum.

Single or double gypsy.

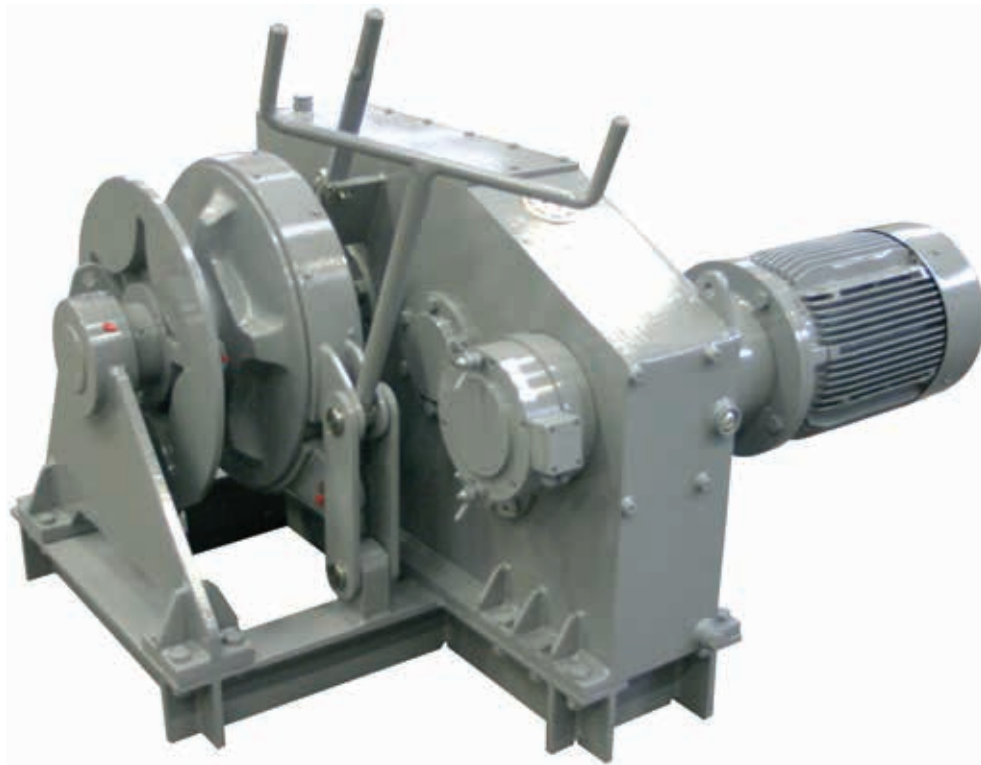
For single gypsy models, right and left versions available.

Single or double mooring drum with brake and clutch.

Starter with frequency converter.

Remote hydraulic released gypsy brake.

Foundation to be welded on deck.



## DZC 12001/12002

DZC 12001 and 12002 are horizontal anchor windlasses with single or double gypsies. Electric or hydraulic versions are available providing a max. pull of 12000 kgs. It has a gypsy for chains 30, 32, 34, 36, 38, 40 or 42 mm stud-link.

	DZC 12001E / 12002E	DZC 12001H / 12002H
Drive	AC Electric Motor (210-440V, 3 ph)	Hydraulic Motor
Max. cont. Pull	9500 kg (30000W - 30 min)	12000 kg (30 min)
Max. pull	12000 kg (30000W - 2 min)	13200 kg (2 min)
Haulage speed	12 m/min.	11 m/min.
Gypsy for chain	30-32-34-36-38-40-42 Stud-link	30-32-34-36-38-40-42 Stud-link
Approximate weight		
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	42.5A (22000W) - 55A (30000W)	210 bar - 105 lt/min
Motor power	22000W - 30000W (400V - 50hz)	



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**DZC 12002 E / P-36L/22****Drum**

12001	1 gypsy 1 warping drum
12002	2 gypsies 2 warping drums
12001-1	1 gypsy 1 rope drum 1 warping drum

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gypsy & Drum Position**

L	As the drawing In the opposite side
---	--

**Material**

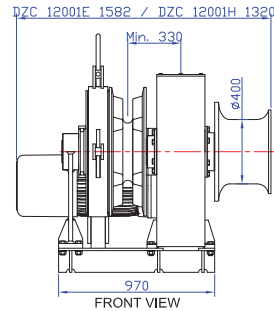
Kr	Stainless steel
P	Steel

**Chain Type / Size**

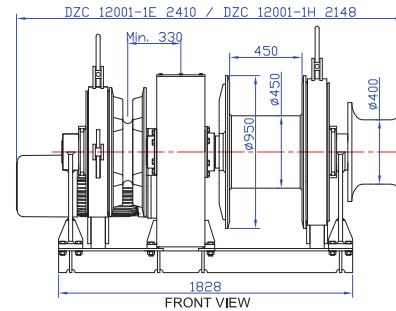
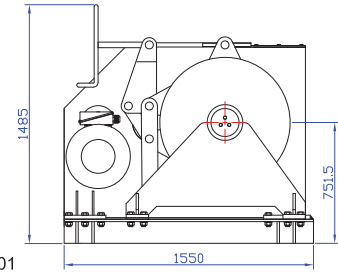
30L	30 mm Stud-link
32L	32 mm Stud-link
34L	34 mm Stud-link
36L	36 mm Stud-link
38L	38 mm Stud-link
40L	40 mm Stud-link
42L	42 mm Stud-link

**E. Motor**

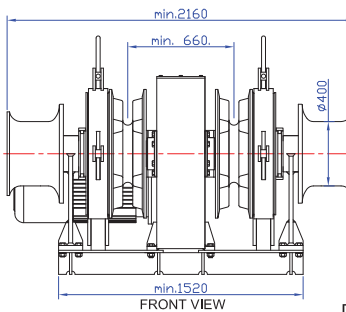
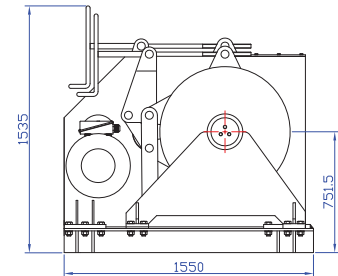
22	22 kW 380VAC E. Motor
30	30 kW 380VAC E. Motor



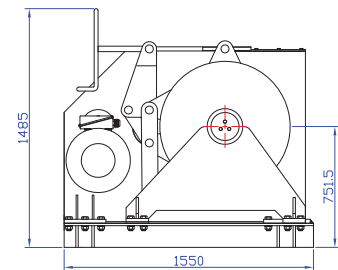
DZC 12001



DZC 12001-1



DZC 12002



## FEATURES

Gypsies are equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

Body is steel and covered with polyurethane paint.

High strength drive shaft and brake screw are stainless steel.

DOL starter for electric motor driven models.

Increased strength with vertical supports at the ends of main shaft which also allows to arrange the distance between two gypsies.

Hardened steel gears in oil bath.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive with single or double speed.

Single or double gypsy.

For single gypsy models, right and left versions available.

Single or double mooring drum with brake and clutch.

Starter with frequency converter.

Remote hydraulic released gypsy brake.

Foundation to be welded on deck.



## DZC 440E/450E

DZC 440E / 450E are the smallest windlasses in vertical range. They are driven by a 1200W (12 or 24VDC) electric motor providing a max. pull of 590 kgs. It has a gypsy for chains 8 or 10 mm DIN766.

DZC 440E / 450E	
Drive	DC Electric Motor (12 or 24V)
Max. cont. Pull	390 kg (S2)
Max. pull	590 kg (S3)
Haulage speed	16 m/min.
Gypsy for chain	8 - 10 mm DIN766
Approximate weight	19 / 20 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	125A (12V) - 70A (24V)
Motor power	1200W



## DZC 440 EKr / 1212 - 8

### Material

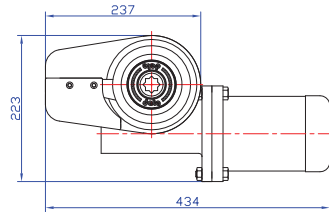
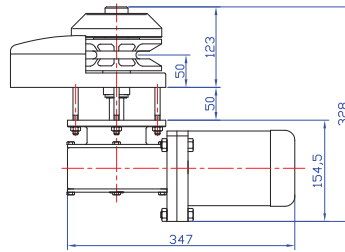
B	Bronze
Kr	Stainless steel

### E. Motor

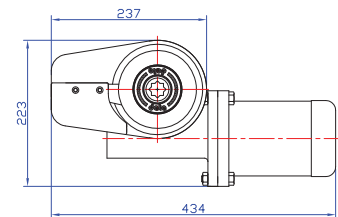
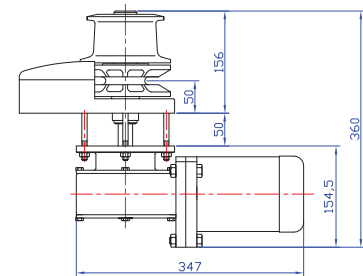
1212	1200 W - 12 V DC E. Motor
1224	1200 W - 24 V DC E. Motor

### Chain Type / Size

8	8 mm. DIN 766
10	10 mm. DIN 766



DZC 440E



DZC 450E

## DZC 450 EB / 1224 - 10

### Material

B	Bronze
Kr	Stainless steel

### E. Motor

1212	1200 W - 12 V DC E. Motor
1224	1200 W - 24 V DC E. Motor

### Chain Type / Size

8	8 mm. DIN 766
10	10 mm. DIN 766

## FEATURES

Manual override.

Chain can be dropped by means of loosable conical clutch which also provides overload protection.

Body, gypsy and clutch are chrome plated bronze. Gearbox is marine grade aluminium covered with black epoxy paint.

Drive shaft is stainless steel.

Warping drum is chrome plated aluminium.

Delivered with handle and marine type DC relays for reversable operation.

## OPTIONS

Windlass with warping drum (DZC 450E) or with out drum (DZC440E).

Mirror polished stainless steel parts above deck.



# DZC 1000

DZC 1000 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 1100 kgs. It has a gypsy for chains 10, 12 or 13 mm DIN766, 11 or 12.5 mm stud-link.

	DZC 1000E (DC)	DZC 1000E (AC)	DZC 1000H
Drive	DC Electric Motor (24V)	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	630 kg (S2)	620 kg (30 min)	1000 kg (30 min)
Max. pull	950 kg (S3)	930 kg (2 min)	1100 kg (2 min)
Haulage speed (for 250 kg. working load)	18 m/min.	12 m/min.	15 m/min.
Gypsy for chain	10-12-13 mm DIN766, 11-12.5 Stud-link	10-12-13 mm DIN766, 12.5 Stud-link	10-12-13 mm DIN766, 11-12.5 Stud-link
Approximate weight	120 kg	120 kg	70 kg
Current draw (at max. cont.pull)/ Hyd. pressure - Oil flow (on motor)	140A	4.5A (400V - 50hz)	120 bar - 20 lt/min
Motor power	2500W	2200W (400V - 50hz)	





**DZC 1000 - 1EW / B - K / 2****Drum**

1	Low profile (without drum)
2	High profile (with drum)

**Drive**

E	E. Motor driven
H	Hydraulic motor driven

**Gearbox Type**

PI	Planetary (Single Axis)
PL	Planetary (90°)
W	Worm gear

**Material**

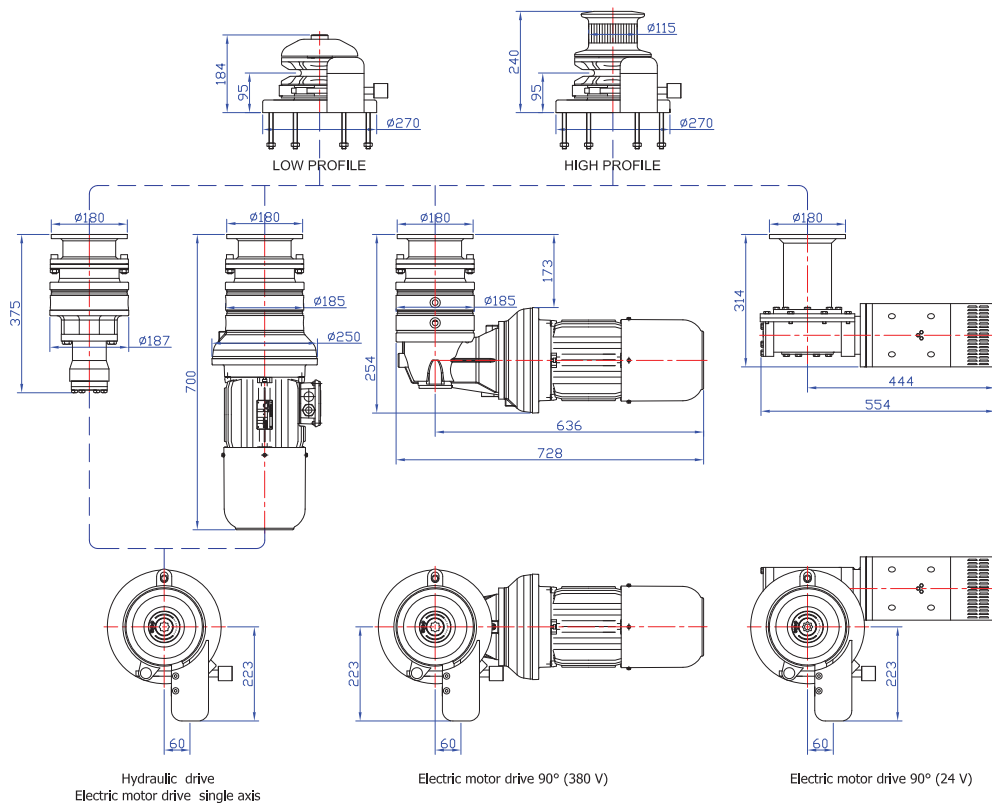
B	Bronze
Kr	Stainless steel
P	Steel

**Chain Type / Size**

10K	10 mm. DIN766
12K	12 mm. DIN766
13K	13 mm. DIN766
11L	11 mm. Stud-link

**E. Motor**

1	2500 W 24 V DC E. Motor
2	2200 W 380 VAC E. Motor



Hydraulic drive  
Electric motor drive single axis

Electric motor drive 90° (380 V)

Electric motor drive 90° (24 V)

## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by means of loosable conical clutch which also provides overload protection.

Drive shaft, brake screw and brake band are stainless steel.

Delivered with marine type DC relays for reversable operation (DC electric motor models).

## OPTIONS

AC or DC electric motor drive.

Hydraulic motor drive.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Polished or chrome plated bronze parts above deck.



## DZC 1400

DZC 1400 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 1660 kgs. It has a gypsy for chains 12, 13 or 14 mm DIN766, 12.5 or 14 mm stud-link.

	DZC 1400E (DC)	DZC 1400E (AC)	DZC 1400H
Drive	DC Electric Motor (24V)	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	1000 kg (S2)	1330 kg (30 min)	1400 kg (30 min)
Max. pull	1500 kg (S3)	1660 kg (2 min)	1540 kg (2 min)
Haulage speed (for 300 kg. working load)	15 m/min.	12 m/min.	16 m/min.
Gypsy for chain	12-13-14 mm DIN766, 12.5-14 Stud-link	12-13-14 mm DIN766, 12.5-14 Stud-link	12-13-14 mm DIN766, 12.5-14 Stud-link
Approximate weight	170 kg	160 kg	130 kg
Current draw (at max. cont.pull)/ Hyd. pressure - Oil flow (on motor)	195A	6.6A (400V - 50 hz)	120 bar - 25 lt/min
Motor power	3500W	3000W (400V - 50 hz)	



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**DZC 1400 - 1 EW / B - 12.5 L / 3****Drum**

- 1 Low profile (Without drum)
- 2 High profile (With drum)

**Drive**

- H Hydraulic driven
- E Motor driven

**Gearbox Type**

- PI Planetary (Single Axis)
- PL Planetary (90°)
- W Worm gear

**Material**

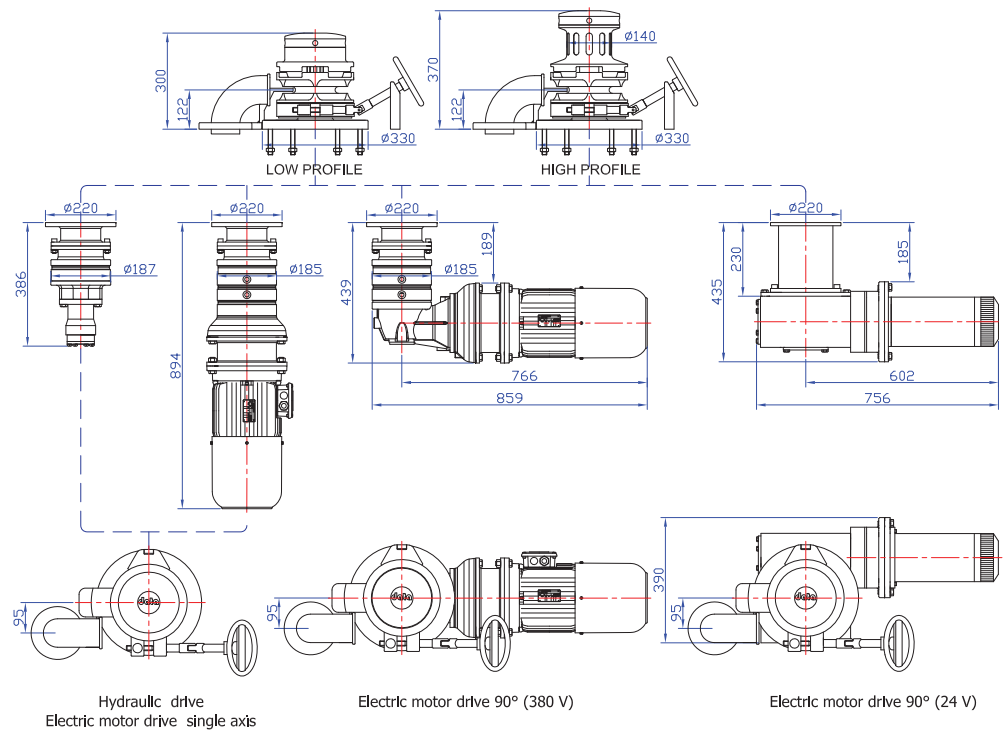
- B Bronze
- Kr Stainless steel
- P Steel

**Chain Type / Size**

- 12 K 12 mm. DIN 766
- 13 K 13 mm. DIN 766
- 14 K 14 mm. DIN 766
- 12.5 L 12.5 mm. Stud-link
- 14 L 14 mm. Stud-link

**E. Motor**

- 3 3500 W 24 V DC E. Motor
- 4 3000 W 380 V AC E. Motor



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

Delivered with marine type DC relays for reversible operation (DC electric motor models).

## OPTIONS

AC or DC electric motor drive.

Hydraulic motor drive.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Polished or chrome plated bronze parts above deck.

Starter with frequency converter.

Remote hydraulic released gypsy brake.



## DZC 2200

DZC 2200 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 2600 kgs. It has a gypsy for chains 14, 16 or 18 mm DIN766, 14 or 16 mm stud-link.

	DZC 2200E (AC)	DZC 2200H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	2100 kg (30 min)	2200 kg (30 min)
Max. pull	2600 kg (2 min)	2450 kg (2 min)
Haulage speed	14 m/min.	14 m/min.
Gypsy for chain	14-16-18 mm DIN766, 14-16 Stud-link	14-16-18 mm DIN766, 14-16 Stud-link
Approximate weight	200 kg	160 kg
Current draw (at max. cont.pull)/Hyd. pressure - Oil flow (on motor)	11.2A (400V - 50hz)	135 bar - 32 lt/min
Motor power	5500W (400V - 50 hz)	



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**DZC 2200 - 2 HPI/Kr - 16 L****Drum**

- |   |                            |
|---|----------------------------|
| 1 | Low profile (Without drum) |
| 2 | High profile (With drum)   |

**Drive**

- |   |                  |
|---|------------------|
| H | Hydraulic driven |
| E | E. Motor driven  |

**Gearbox Type**

- |    |                         |
|----|-------------------------|
| PI | Planetary (Single Axis) |
| PL | Planetary (90°)         |
| W  | Worm gear               |

**Material**

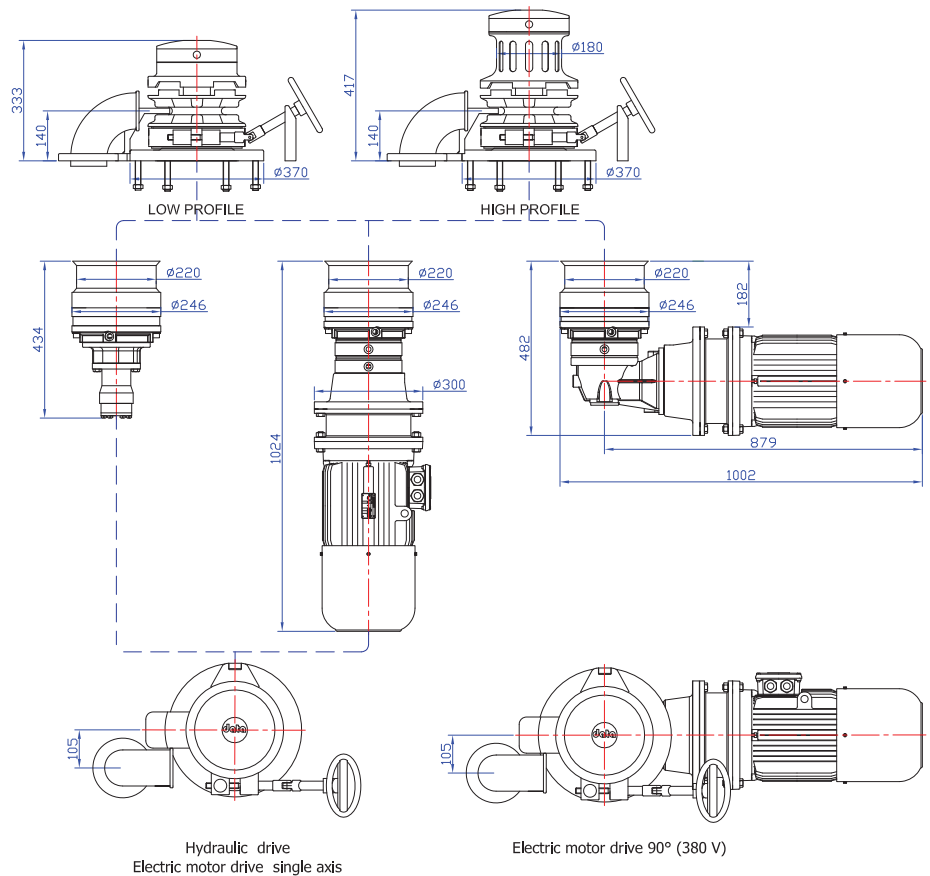
- |    |                 |
|----|-----------------|
| B  | Bronze          |
| Kr | Stainless steel |
| P  | Steel           |

**Chain Type / Size**

- |      |                  |
|------|------------------|
| 14 K | 14 mm. DIN 766   |
| 16 K | 16 mm. DIN 766   |
| 18 K | 18 mm. DIN 766   |
| 14 L | 14 mm. Stud-link |
| 16 L | 16 mm. Stud-link |

**E. Motor**

- |   |                          |
|---|--------------------------|
| 5 | 5.5 kW 380 V AC E. Motor |
|---|--------------------------|



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Polished or chrome plated bronze parts above deck.

Starter with frequency converter.

Remote hydraulic released gypsy brake.



## DZC 3300

DZC 3300 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 3600 kgs. It has a gypsy for chains 18, 20 or 23 mm DIN766, 17.5, 19, 20.5 or 22 mm stud-link.

	DZC 3300E (AC)	DZC 3300H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	3000 kg (30 min)	3300 kg (30 min)
Max. pull	3750 kg (2 min)	3650 kg (2 min)
Haulage speed (for single speed)	13 m/min.	12 m/min.
Gypsy for chain	18-20-23 mm DIN766, 17.5-19-20.5-22 Stud-link	18-20-23 mm DIN766, 17.5-19-20.5-22 Stud-link
Approximate weight	330 kg	280 kg
Current draw (at max. cont.pull) /Hyd. pressure - Oil flow (on motor)	15.4A (400V - 50hz)	130 bar - 45 lt/min
Motor power	7500W (400V - 50 hz)	



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**DZC 3300 - 1 EPL/P - 19L / 7****Drum**

- |   |                            |
|---|----------------------------|
| 1 | Low profile (Without drum) |
| 2 | High profile (With drum)   |

**Drive**

- |    |                        |
|----|------------------------|
| H  | Hydraulic driven       |
| H2 | Double speed hydraulic |
| E  | E. Motor driven        |

**Gearbox Type**

- |    |                         |
|----|-------------------------|
| PI | Planetary (Single Axis) |
| PL | Planetary (90°)         |
| W  | Worm gear               |

**Material**

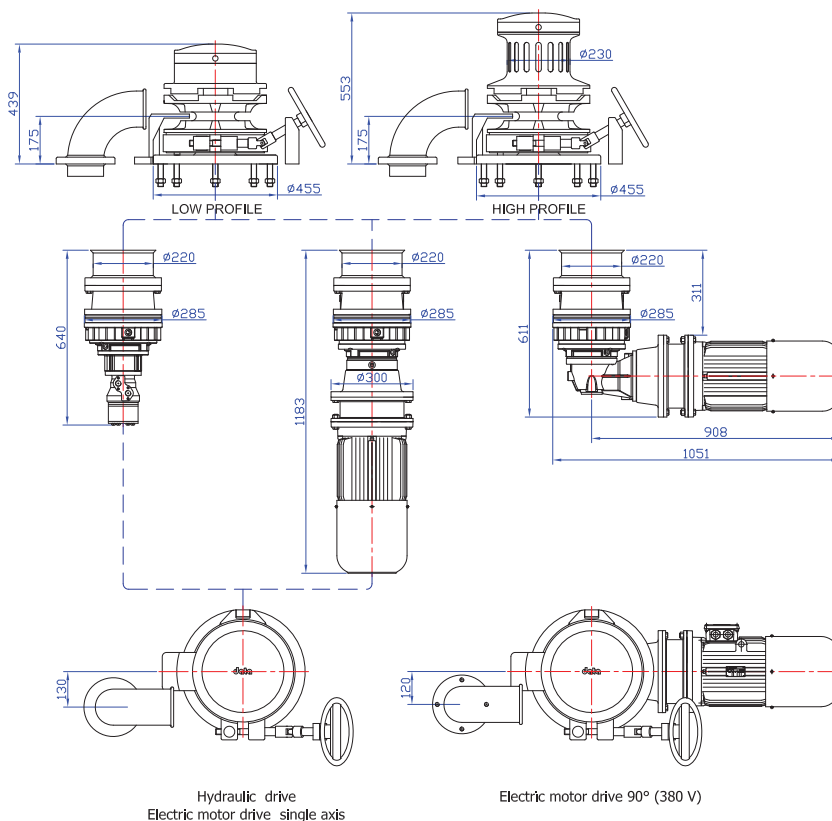
- |    |                 |
|----|-----------------|
| B  | Bronze          |
| Kr | Stainless steel |
| P  | Steel           |

**Chain Type / Size**

- |        |                    |
|--------|--------------------|
| 18 K   | 18 mm. DIN 766     |
| 20 K   | 20 mm. DIN 766     |
| 23 K   | 23 mm. DIN 766     |
| 17.5 L | 17.5 mm. Stud-link |
| 19 L   | 19 mm. Stud-link   |
| 20.5 L | 20.5 mm. Stud-link |
| 22 L   | 22 mm. Stud-link p |

**E. Motor**

- |   |                          |
|---|--------------------------|
| 7 | 7,5 kW 380 V AC E. Motor |
|---|--------------------------|



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Polished or chrome plated bronze parts above deck.

Starter with frequency converter.

Remote hydraulic released gypsy brake.





## DZC 5000

DZC 5000 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 5750 kgs. It has a gypsy for chains 23 or 26 mm DIN766, 19, 20.5, 22, 24 or 26 mm stud-link.

	DZC 5000E (AC)	DZC 5000H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	4600 kg (30 min)	5000 kg (30 min)
Max. pull	5750 kg (2 min)	5500 kg (2 min)
Haulage speed (for single speed)	13 m/min.	13 m/min.
Gypsy for chain	23-26 mm DIN766, 19-20.5-22-24-26 Stud-link	23-26 mm DIN766, 19-20.5-22-24-26 Stud-link
Approximate weight	700 kg	660 kg
Current draw (at max. cont.pull) /Hyd. pressure - Oil flow (on motor)	21A (400V - 50hz)	165 bar - 55 lt/min
Motor power	11000W (400V - 50 hz)	



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**DZC 5000 - 2 EPI/Kr - 24L / 11****Drum**

- |   |                            |
|---|----------------------------|
| 1 | Low profile (Without drum) |
| 2 | High profile (With drum)   |

**Drive**

- |    |                        |
|----|------------------------|
| H  | Hydraulic driven       |
| H2 | Double speed hydraulic |
| E  | E. Motor driven        |

**Gearbox Type**

- |    |                         |
|----|-------------------------|
| PI | Planetary (Single Axis) |
| PL | Planetary (90°)         |
| W  | Worm gear               |

**Material**

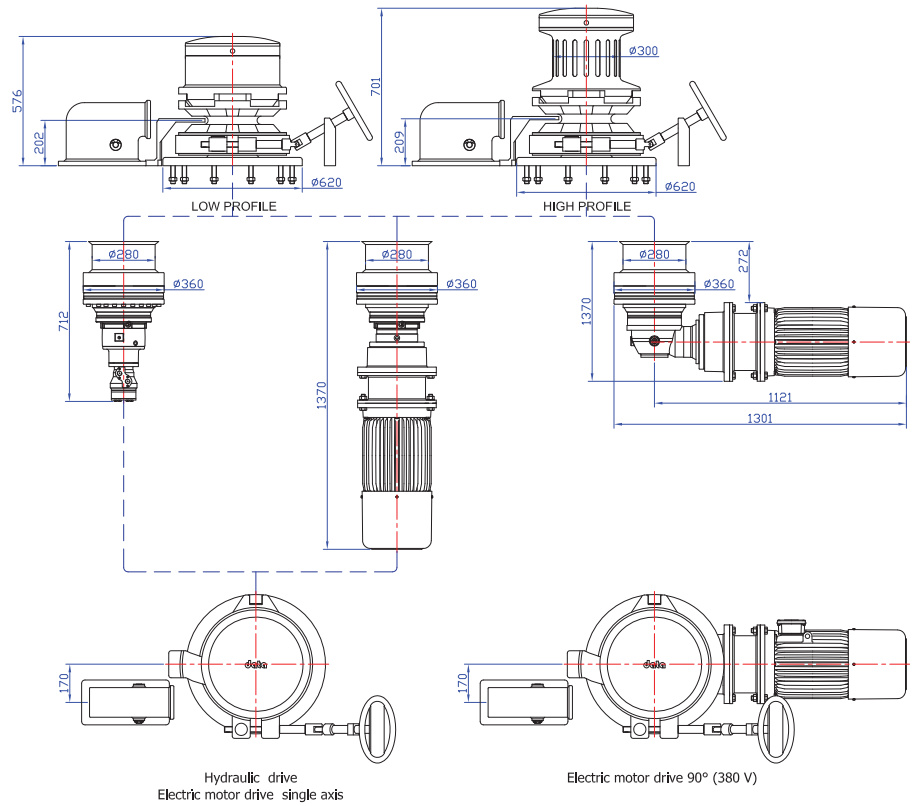
- |    |                 |
|----|-----------------|
| Kr | Stainless steel |
| P  | Steel           |

**Chain Type / Size**

- |        |                    |
|--------|--------------------|
| 23 K   | 23 mm. DIN 766     |
| 26 K   | 26 mm. DIN 766     |
| 19 L   | 19 mm. Stud-link   |
| 20.5 L | 20.5 mm. Stud-link |
| 22 L   | 22 mm. Stud-link   |
| 24 L   | 24 mm. Stud-link   |
| 26 L   | 26 mm. Stud-link   |

**E. Motor**

- |    |                         |
|----|-------------------------|
| 11 | 11 kW 380 V AC E. Motor |
|----|-------------------------|



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive with single or double speed.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Starter with frequency converter.

Remote hydraulic released gypsy brake.



## DZC 7000

DZC 7000 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 8250 kgs. It has a gypsy for chains 24, 26, 28, 30 or 32 mm stud-link.

	DZC 7000E (AC)	DZC 7000H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	6600 kg (30 min)	7000 kg (30 min)
Max. pull	8250 kg (2 min)	7700 kg (2 min)
Haulage speed (for single speed)	12 m/min.	12 m/min.
Gypsy for chain	24-26-28-30-32 Stud-link	24-26-28-30-32 Stud-link
Approximate weight	1100 kg	1200 kg
Current draw (at max. cont.pull) /Hyd. pressure - Oil flow (on motor)	29.8A (400V - 50hz)	220 bar - 60 lt/min
Motor power	15000W (400V - 50 hz)	



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**DZC 7000 - 2 HPI/ Kr - 28 L****Drum**

1	Low profile (Without drum)
2	High profile (With drum)

**Drive**

H	Hydraulic driven
H2	Double speed hydraulic
E	E. Motor driven

**Gearbox Type**

PI	Planetary (Single Axis)
PL	Planetary (90°)
W	Worm gear

**Material**

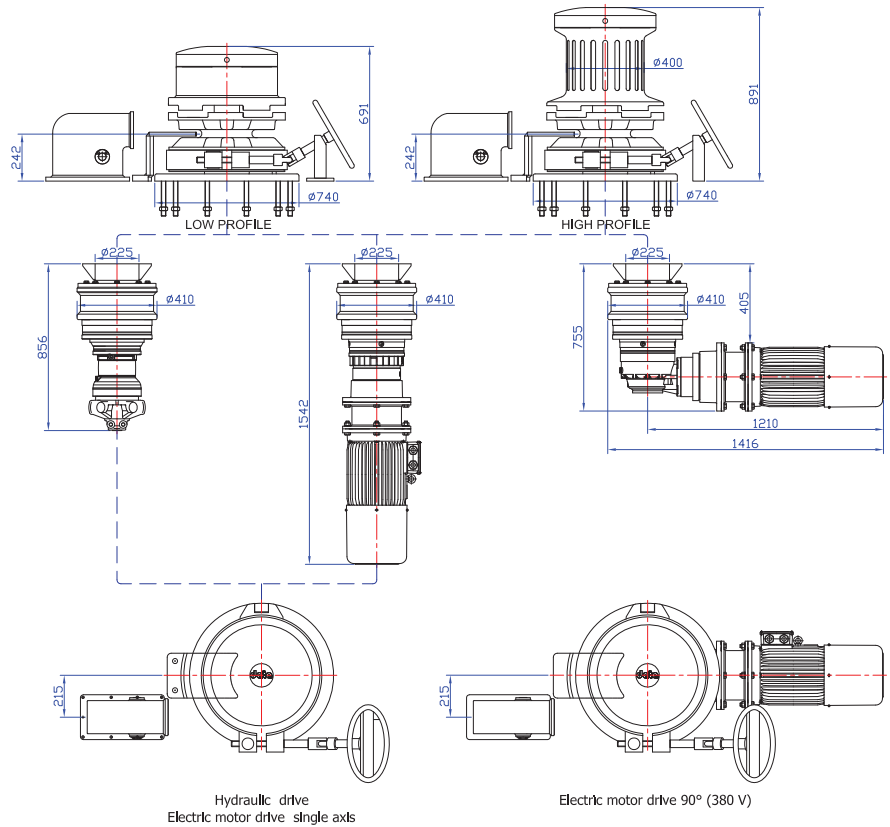
Kr	Stainless steel
P	Steel

**Chain Type / Size**

24 L	24 mm. Stud-link
26 L	26 mm. Stud-link
28 L	28 mm. Stud-link
30 L	30 mm. Stud-link
32 L	32 mm. Stud-link

**E. Motor**

15	15 kW 380 V AC E. Motor
----	-------------------------



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive with single or double speed.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Starter with frequency converter.

Remote hydraulic released gypsy brake.



# DZC 11000

DZC 11000 is a vertical anchor windlass. Electric or hydraulic versions are available providing a max. pull of 12000 kgs. It has a gypsy for chains 30, 32, 34, 36, 38, 40 or 42 mm stud-link.

	DZC 11000E (AC)	DZC 11000H
Drive	AC Electric Motor (210-400V, 3 ph)	Hydraulic Motor
Max. cont. Pull	10000 kg (30 min)	11500 kg (30 min)
Max. pull	12500 kg (2 min)	12600 kg (2 min)
Haulage speed (for single speed)	11 m/min.	11 m/min.
Gypsy for chain	30-32-34-36-38-40-42 Stud-link	30-32-34-36-38-40-42 Stud-link
Approximate weight	2000 kg	1800 kg
Current draw (at max. cont.pull) /Hyd. pressure - Oil flow (on motor)	42.5A (400V - 50hz)	220 bar - 80 lt/min
Motor power	22000W (400V - 50 hz)	



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**DZC 11000 - 2 EPL/P - 32L/22****Drum**

1	Low profile (Without drum)
2	High profile (With drum)

**Drive**

H	Hydraulic driven
H2	Double speed hydraulic
E	Motor driven

**Gearbox Type**

PI	Planetary (Single Axis)
PL	Planetary (90°)
W	Worm gear

**Material**

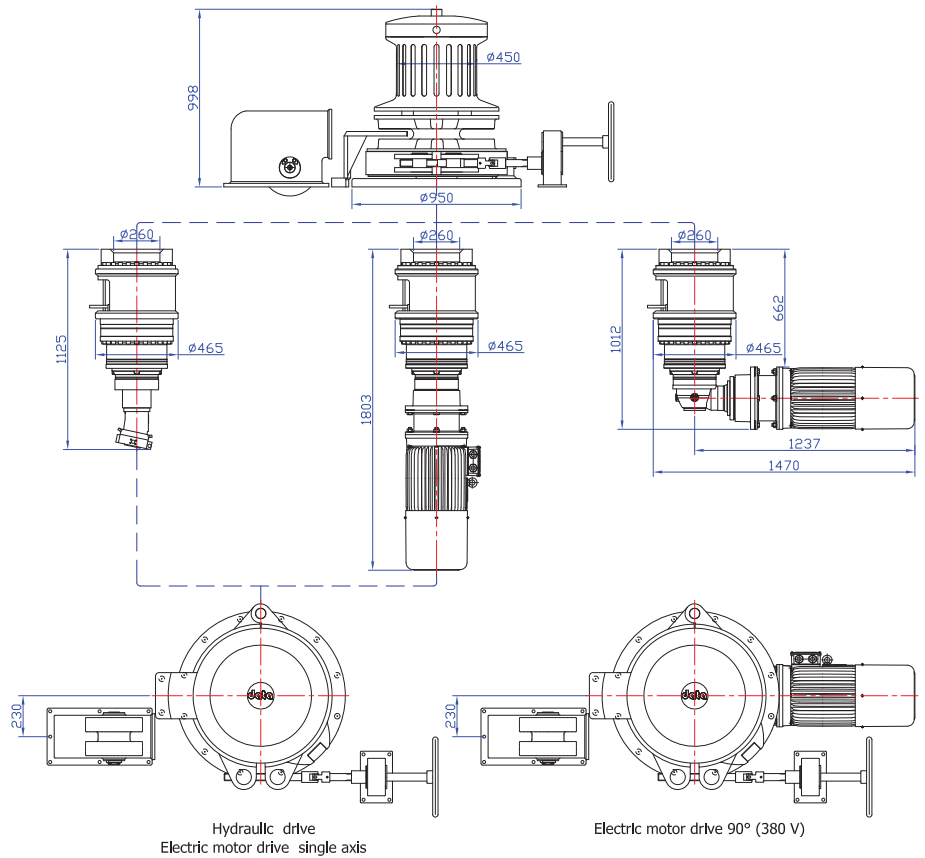
Kr	Stainless steel
P	Steel

**Chain Type / Size**

30 L	30 mm. Stud-link
32 L	32 mm. Stud-link
34 L	34 mm. Stud-link
36 L	36 mm. Stud-link
38 L	38 mm. Stud-link
40 L	40 mm. Stud-link
42 L	42 mm. Stud-link

**E. Motor**

22	22 kW 380 V AC E. Motor
----	-------------------------



## FEATURES

Gypsy is equipped with both clutch and band brake to allow independent operation of gypsy and warping drum.

Chain can be dropped by loosing band brake.

Gypsy is engaged by means of dog clutch.

Electric motor driven models are equipped with torque limiting coupling for over load protection.

High strength drive shaft and brake screw are stainless steel.

## OPTIONS

AC electric motor drive.

Hydraulic motor drive with single or double speed.

In line or right angle gearbox-motor installation.

Windlass with warping drum or with out drum (low profile).

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

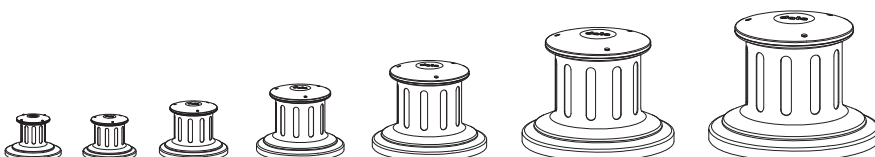
Starter with frequency converter.

Remote hydraulic released gypsy brake.

# CAPSTANS



DATA offers capstans with pull starting from 500 kgs up to 11000 kgs. They are designed with gears and motors below the deck for an uncluttered on deck



CAPSTANS SUITABLE VESSEL LENGTH																											
metres	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104	108	112	
feet	39	52	66	79	92	105	118	131	144	157	171	184	197	210	223	236	249	262	276	289	302	315	328	341	354	367	
DHC 500																											
DHC 1000																											
DHC 1600																											
DHC 2200																											
DHC 3000																											
DHC 4500																											
DHC 7000																											
DHC 11000																											

Note : Above table is intended to give a brief idea for selection. Suitable capstan may change due to the displacement, type and windage area of the vessel. Always consult to DATA or an authorized DATA dealer when selecting the capstan.



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## FEATURES

Reversible motors.

Totally sealed against water leak below deck.

High strength stainless steel drive shaft.

Splined and knurled surface in order to get a better hold (for stainless & bronze).

Delivered with marine type DC relays for reversible operation (DC electric motor models).

## OPTIONS

DC (up to DHC 1600) or AC electric motor drive.

Hydraulic motor drive.

In line or right angle gearbox-motor installation.

Starter with frequency converter.

Tall capstan.

Reduction gear installed in the drum for minimum length under deck (only for DHC 4500H and above).

Foundation for totally above deck installation.

Capstan integrated with towing hook foundation.

Polyurethane painted steel parts above deck.

Mirror polished stainless steel parts above deck.

Polished or chrome plated bronze parts above deck.

## CAPSTAN CAPACITIES

ELECTRIC CAPSTAN	DHC 500E	DHC 1000E	DHC 1600E	DHC 2200E	DHC 3000E	DHC 4500E	DHC 7000E	DHC 11000E
Drive	DC El. Motor (12 or 24V)	DC (24V) / AC El. Motor	DC (24V) / AC El. Motor	AC Electric Motor	AC Electric Motor	AC Electric Motor	AC Electric Motor	AC Electric Motor
Drum diameter	ø95 mm	ø115 mm	ø140 mm	ø180 mm	ø230 mm	ø300 mm	ø400 mm	ø450 mm
Maximum pull	550 kg	1000 / 1000 kg	1600 / 1750 kg	2500 kg	3500 kg	5000 kg	7800 kg	12500 kg
Haulage speed	15 m/min.	16 / 11 m/min	13 / 12 m/min	14 m/min	14 m/min	14 m/min	12 m/min	11 m/min
Current draw (at max. cont.pull)	125A (12V) - 70A (24V)	140 / 4.5 A	195 / 6.6 A	11.2A (400V - 50hz)	15.4A (400V - 50hz)	21A (400V - 50hz)	29.8A (400V - 50hz)	42.5A (400V - 50hz)
Motor power	1200W	2500 / 2200 W	3500 / 3000 W	5500W (400V - 50 hz)	7500W (400V - 50 hz)	11000W (400V - 50 hz)	15000W (400V - 50 hz)	22000W (400V - 50 hz)

HYDRAULIC CAPSTAN	DHC 1000H	DHC 1600H	DHC 2200H	DHC 3000H	DHC 4500H	DHC 7000H	DHC 11000H
Drive	Hydraulic Motor	Hydraulic Motor	Hydraulic Motor	Hydraulic Motor	Hydraulic Motor	Hydraulic Motor	Hydraulic Motor
Drum diameter	ø115 mm	ø140 mm	ø180 mm	ø230 mm	ø300 mm	ø400 mm	ø450 mm
Maximum pull	1000 kg	1600 kg	2200 kg	3000 kg	5000 kg	7000 kg	11000 kg
Haulage speed	13 m/min	13 m/min	15 m/min	16 m/min	13 m/min	11 m/min	10 m/min
Hyd. pressure - Oil flow (on motor)	90 bar - 20 lt/min	140 bar - 25 lt/min	140 bar - 32 lt/min	160 bar - 45 lt/min	160 bar - 55 lt/min	190 bar - 60 lt/min	195 bar - 80 lt/min

# HYDRAULIC CAPSTANS

## DHC 1000 HP / Kr

### Maximum Pull

1000	1000 kg.
1600	1600 kg.
2200	2200 kg.
3000	3000 kg.
4500	4500 kg.
7000	7000 kg.
11000	11000 kg.

### Drive

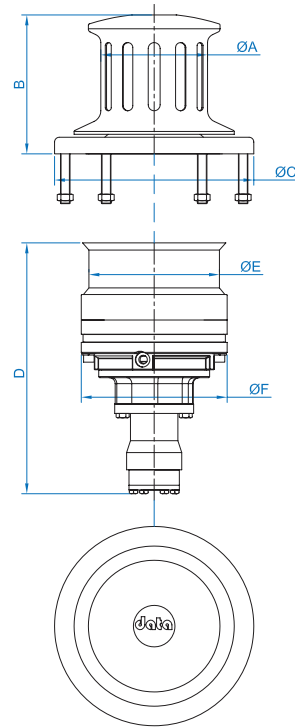
H	Hydraulic drive
H2	Double speed motor

### Gearbox Type

Pl	Planetary
W	Worm gear

### Material

B	Bronze
Kr	Stainless steel
P	Steel



	DHC 1000H	DHC 1600H	DHC 2200H	DHC 3000H	DHC 4500H	DHC 7000H	DHC 11000H
<b>A</b>	115	140	180	230	300	400	450
<b>B</b>	177	216	234	238	404	482	513
<b>C</b>	270	320	370	390	520	660	800
<b>D</b>	375	378	423	629	712	728	953
<b>E</b>	180	220	220	220	280	375	435
<b>F</b>	187	187	246	285	360	410	465

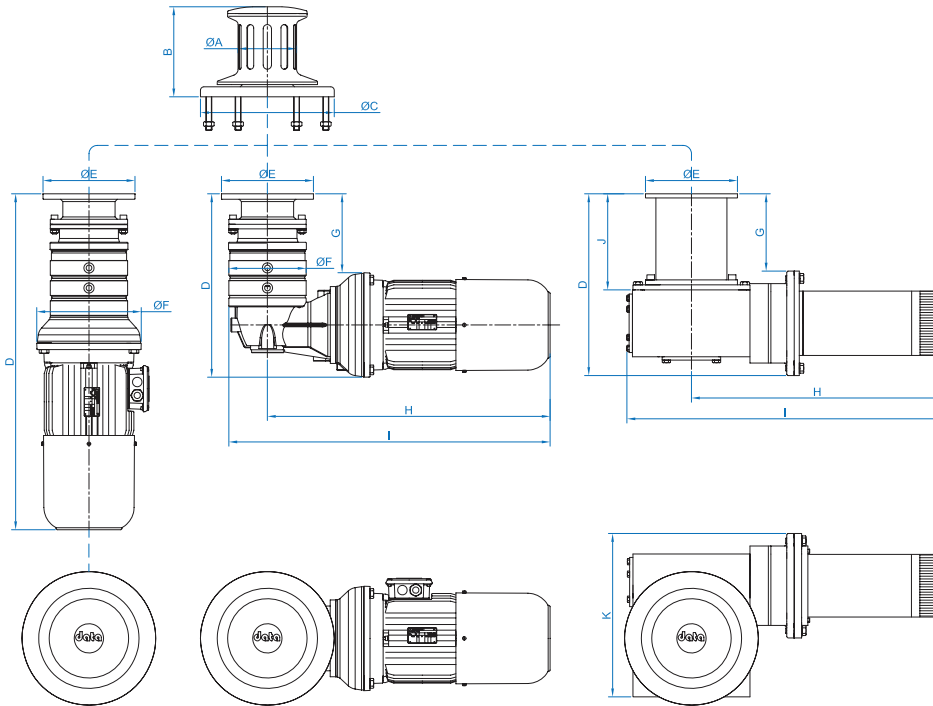
### HYDRAULIC DRIVE

DHC 1000 H  
DHC 1600 H  
DHC 2200 H  
DHC 3000 H  
DHC 4500 H  
DHC 7000 H  
DHC 11000 H



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# ELECTRIC CAPSTANS



## ELECTRIC MOTOR DRIVE

DHC 1600EP  
DHC 2200EP  
DHC 3000EP  
DHC 4500EP  
DHC 7000EP  
DHC 11000EP

## ELECTRIC MOTOR DRIVE (AC)

DHC 1600E  
DHC 2200E  
DHC 3000E  
DHC 4500E  
DHC 7000E  
DHC 11000E

## ELECTRIC MOTOR DRIVE (DC)

DHC 500E  
DHC 1000E  
DHC 1600E

	DHC 500E	DHC 1000E	DHC 1600E	DHC 2200E	DHC 3000E	DHC 4500E	DHC 7000 E	DHC 11000 E
<b>A</b>	95	115	140	180	230	300	400	450
<b>B</b>	133	177	216	234	298	404	482	513
<b>C</b>	146	270	320	370	390	520	660	800
<b>D</b>	368	314	804/439/435	935/483	1093/611	1233/622	1414/628	1494/840
<b>E</b>	150	180	220	220	220	280	375	435
<b>F</b>	-	-	250/185	300/246	300/285	360	410	465
<b>G</b>	90	-	189	183	311	272	278	490
<b>H</b>	305	444	677/602	789	818	984	1210	1100
<b>I</b>	380	554	769/756	912	961	1164	1416	1333
<b>J</b>	115	207	230	-	-	-	-	-
<b>K</b>	230	301	390	-	-	-	-	-

## DHC 1600 E - PL/Kr/4 8

### Maximum Pull

500	550 kg.
1000	1000 kg.
1600	1750 kg.
2200	2500 kg.
3000	3500 kg.
5000	5000 kg.
7000	7800 kg.
11000	12500 kg.

### Drive

E	Electric
E2	Double speed motor

### Gearbox Type

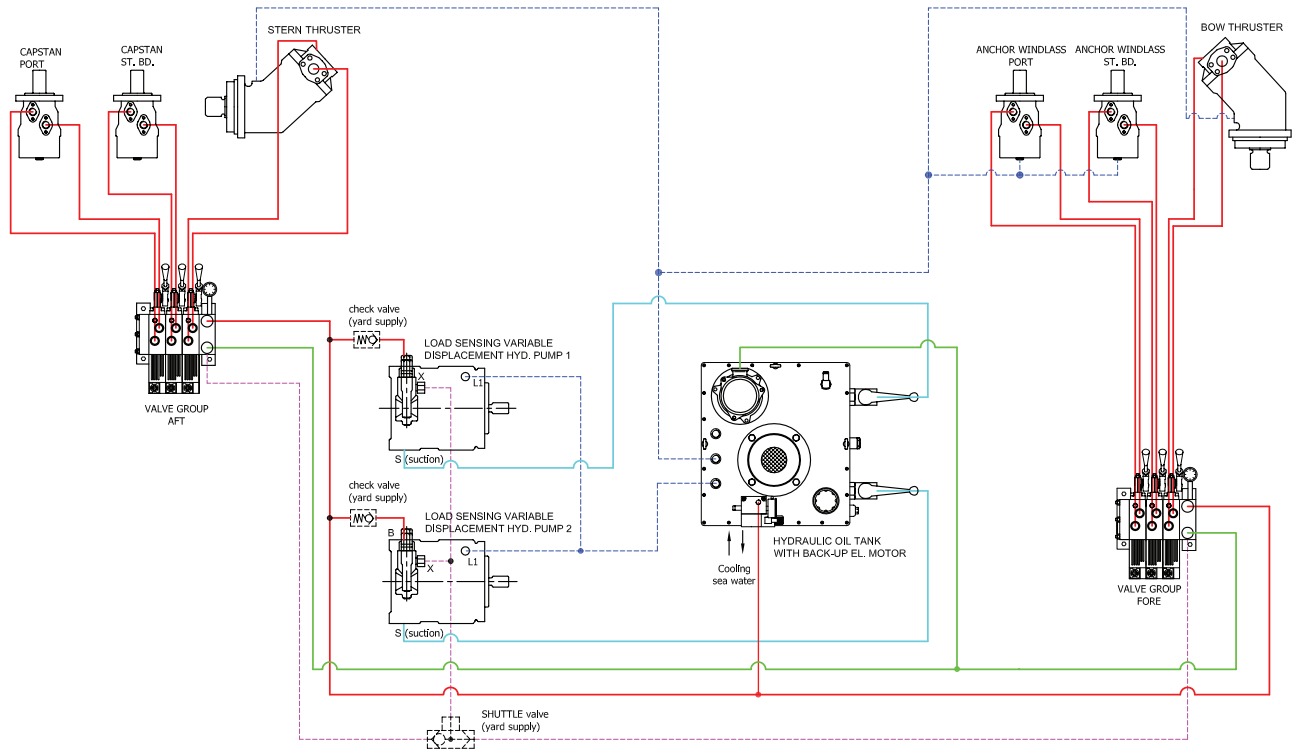
PI	Planetary (Single Axis)
PL	Planetary (90)
W	Worm gear

### Material

B	Bronze
Kr	Stainless steel
P	Steel

### E. Motor

1	2.5 kW 24 V DC E. motor for 1000
2	2.2 kW 380 V AC E. motor for 1000
3	3 kW 24 V DC E. motor for 1600
4	4 kW 380 V AC E. motor for 2200
5	5.5 kW 380 V AC E. motor for 2200
7	7.5 kW 380 V AC E. motor for 3000
11	11 kW 380 V AC E. motor for 4500
15	15 kW 380 V AC E. motor for 7000
22	22 kW 380 V AC E. motor for 11000



Schematic of a typical double PTO driven central hydraulic system supporting bow thruster, stern thruster, windlasses and capstans. Pumps are variable displacement

# HYDRAULIC SYSTEMS

DATA hydraulic systems are specially designed to support windlasses and capstans. Also it is possible to support any of the other consumers on board by means of modular control valves. Hydraulic systems are designed using the same demanding priorities as all other DATA parts, focusing on;

- :: Reliability
- :: Safety
- :: Performance
- :: Easy & safe installation
- :: Easy maintenance
- :: Long operating life

Perhaps, the most important feature of any complete hydraulic system is for it to be delivered as ready as possible for installation. DATA hydraulic systems require only the external hydraulic and electric connections (which can only be done on board), saving time and trouble for the installers. Our hydraulic systems are delivered with all necessary drawings and installation manuals to ensure an easy and correct installation and lifetime of reliability.



## FEATURES

First quality hydraulic equipments from well known brands.  
Large oil tanks for easy heat transfer and self cooling.  
Suction filter and tank return filter with service gauge.  
Oil level and temperature gauge.  
Oil fill caps with filter and breathing.  
DOL starter up to 5.5 kW, delta-star starter from 7.5kW and up.

## OPTIONS

Electric motor driven pumps.  
Main engine PTO driven pumps.  
Main engine belt driven pumps with manual dog clutch or electromagnetic clutch.  
HPU with fixed displacement or variable displacement pump.  
Cooling with sea water exchanger or air fan exchangers.  
Proportional valve control.  
Pressure filter.  
Oil level switch for low oil alarm.  
Alarm out put from starter for vessels AMS.  
Anti-vibration mounts.  
Starter with soft starter or frequency converter.  
Special HPUs for different customer demands.



HPU for 2 windlasses with single electric motor



HPU for 2 windlasses with double electric motor



HPU tank for PTO driven central hydraulic system



Main engine belt driven hydraulic pump with electromagnetic clutch.

# CHAIN STOPPERS



Chain stopper is an important part of the anchoring system. According to classification society rules, a chain stopper must be capable of holding a load which is equal to 80% of the used chain cable. If a chain stopper is not installed, windlass brake must hold the same load. Therefore, chain stopper is an essential part and DATA highly recommends to use chain stoppers or compressors to protect windlasses from high loads during the anchoring.

When the anchor is stowed, devil's claw is used to tighten the anchor in the pocket.



## FEATURES

- Durable design for holding high loads.
- Special roller design for different chain sizes.
- Stainless steel shaft and moving parts.
- Certified by class societies.
- Grease lubrication nipples for moving parts.

## OPTIONS

- Painted steel or mirror polished stainless steel.
- Stoppers with rollers.
- Stoppers with devil's claw.
- Bolted or welded deck connections.
- Stoppers suitable for vertical or horizontal windlasses.
- Custom designs for different customer demands.



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DZST 11-18B



DZST 26-32A

## CHAIN END FASTENING DEVICES

According to classification society rules, the end of chain in the chain locker must be connected to the hull in a detachable way. By means of the chain end fastening device, it is possible to set apart the end of chain remotely from deck or from a compartment neighbour to the chain locker. DATA offers various types of chain end fastening devices suitable for the chains in its range.

### FEATURES

- Durable design for holding high loads.
- Maintenance free design with stainless steel and bronze parts.
- Certified by class societies.

### OPTIONS

- Releasing from deck or a compartment neighbour to chain locker.
- Custom designs for different customer demands.



# CONTROL SYSTEMS AND ACCESSORIES



Windlass control panels with frequency converters

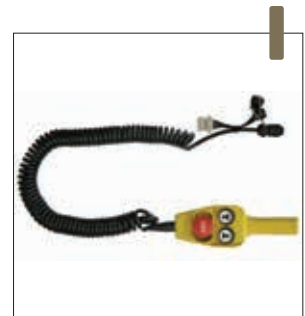
Electric motor driven anchor windlasses, capstans or HPUs for hydraulic ones can be controlled with DOL or frequency converter starters. The starter cabinets are equipped with all necessary devices in means of safety and operation. Local up/down control buttons on the cover of the starter cabinet are also available. By means of frequency converter, it is possible to provide multiple speed steps and soft start/stop of the windlass motor which makes the operation very comfortable and avoids heavy loads on the electric system during the start of the motor. Starter cabinets are power coated (RAL9010 white) in standart. Stainless steel cabinets are optional.

Water tight (IP66) windlass remote controls are available in pleasure yacht version and heavy duty versions which is suitable for mega yachts or commercial vessels also. Pleasure yacht type remote controls come with 3 mt. Spiral cable and water tight plug. Chain counter type of remote control is also available.

Heavy duty windlass remote controls (DEK-1 or DEK-2) come with 7 mt. Spiral cable and water tight plug. Single speed (DEK-1) and double speed (DEK-2) versions are available. DEK-1 and DEK-2 are equipped with emergency stop button.



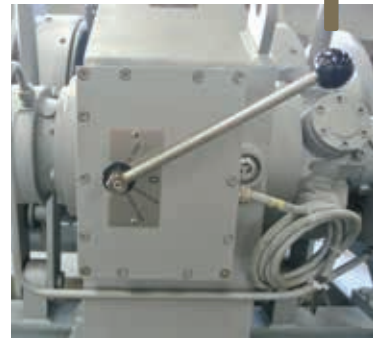
EV200-D Remote Control



DEK-2 remote control



DKK is a water tight (IP66) and heavy duty windlass control for fixing on deck. It is made of marine grade aluminium and stainless steel. There are options for single speed up/down (DKK-1) 2 speed up/down (DKK-2) or 3 speed up/down (DKK-3)



DKK-2

Water tight foot switches come with plastic nickel chromed cover in standart version. Stainless steel mirror polished cover is optional.



Foot switches

As an alternative stainless steel foot switch box (DAK-2) is available. DAK-2 is a water tight portable capstan control. It comes with two swithes with stainless steel covers and 7 mt spiral cable with water tight plug.



DAK-2

DAS-1 is the heavy duty version of the foot switches offered for commercial or navy ships.



DAS-1

# ANCHOR WINDLASS INQUIRY FORM

## CUSTOMER INFORMATION

Customer Name		Date (dd/mm/yy)	
Shipyard		Hull/Yard No.	
Vessel Name			
Phone / Fax			
E-mail			
Address			

### TECHNICAL DATA

**Vessel length**  m  
**Vessel type**  (Motor yacht, Sail yacht, Ship, Tug etc)  
**Equipment number**   
**Chain size**  mm **Chain type** Stud-link  DIN 766   
**Chain length**  m  
**Anchor weight**  kg  
**Number of anchors**  pcs.  
**Required number of windlasses**  pcs.

**Anchor windlass type** Horizontal  Vertical   
**Anchor windlass drive motor** Hydraulic  Electric  →  V DC  
 →  V AC

**Power unit for hydraulic windlass** Not required  Required  → EL. motor driven   
 Main engine PTO driven   
 Main engine driven via belt+mechanical clutch   
 Main engine driven via belt+electromagnetic clutch

**Control valve on the hyd. windlass** Not required  Required  (For some models only)  
**Starter for electric windlass** Not required  Required  Direct start single speed   
 Direct start Double speed   
 Frequency converter

**Windlass speed step** Single speed  Double speed  Other   
**Windlass chain pull speed** Manufacturer standart  Special requirement  m/min.

**Windlass material** Stainless steel  Steel  Bronze  Alu.   
**Chain counter required?** No  Yes  On bridge console   
 In hand remote controller

**Chain stopper required** No  Yes

**Generator capacity**  kVA  Hz  Volts  
**Classification** Available   Not Available

Special requirements / notes .....

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# MOORING CAPSTAN INQUIRY FORM

## CUSTOMER INFORMATION

Customer Name		Date (dd/mm/yy)	
Shipyard		Hull/Yard No.	
Vessel Name			
Phone / Fax			
E-mail			
Address			

### TECHNICAL DATA

Vessel length  m

Vessel type  (Motor yacht, Sail yacht, Ship, Tug etc)

Equipment number

Rope size  mm

Required pulling force  kN

Required number of capstans  pcs.

Capstan type  Horizontal  Vertical

Capstan drive motor  Hydraulic  Electric →  V DC  
→  V AC

Power unit for hydraulic capstan  Not required  Required →  El. motor driven  
 Main engine PTO driven  
 Main engine driven via belt+mechanical clutch  
 Main engine driven via belt+electromagnetic clutch

Starter for electric capstan  Not required  Required  Direct start single speed  
 Direct start Double speed  
 Frequency converter

Capstan speed step  Single speed  Double speed  Other

Capstan chain pull speed  Manufacturer standart  Special requirement  m/min.

Capstan material  Stainless steel  Steel  Bronze  Alu.

Generator capacity  kVA  Hz  Volt

Special requirements / notes.....

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on everything  
that's on sea...

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