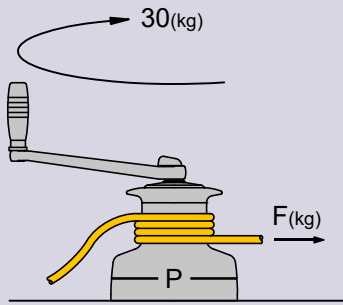


2019 / 2020



antata

winches: technical information

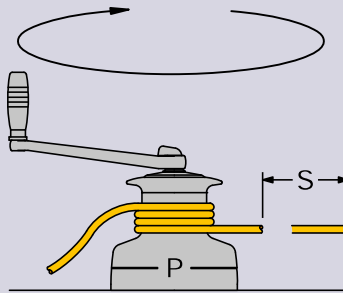


WINCH POWER AND MAXIMUM FORCE

To calculate the maximum force (F), first use the tables to find winch power (P). Assuming the efficiency is 70% and the maximum force exerted on the handle is 30 kg, the maximum force obtainable will be:

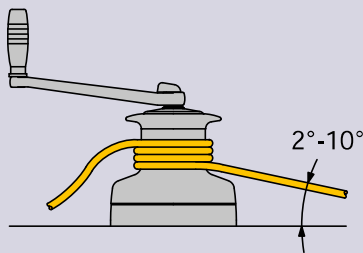
$F = 20 \times P$ (kg) i.e. twenty times the winch power.

For example, for a model with a winch power 50, the maximum force would be $F = 20 \times 50 = 1000$ Kg



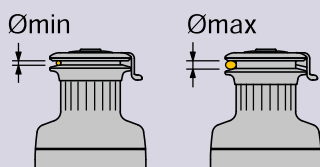
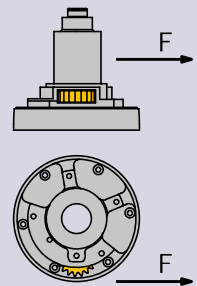
RECOVERY SPEED

The recovery speed (S) is the length of line recovered with one turn of the handle. It is the converse of the winch power (P), and can be calculated using the formula: $S = 1600/P$ (mm) For example, a model with winch power 50 would have a recovery speed of $S = 1600/50 = 32$ mm for each 360° turn of the handle.



WINCH MOUNTING

Line drum lead angle: it is correct to provide an angle of between 2 and 10 degrees. It is advisable for the output gear of 2 speed models to be positioned with respect to pull direction, as shown in the figure (90°).



SPRING-LOADED SELF-TAILING

The new self-tailing winches with spring-loaded disks adapt automatically to even the thinnest lines. We recommend to put three or four wraps of line on the drum, otherwise excessive load on the self-tailing disks could cause the line to slip.



MAINTENANCE

Clean the winch by removing any old grease with a solvent (e.g. using diesel fuel). Spread a thin layer of marine grease on all moving parts. Grease will protect aluminium from corrosion (where contact with dissimilar metal occurs). It is useful to use some grease especially on stainless steel screws, threads and stainless washers.

For a complete documentation ask for the "Winch User's Guide".

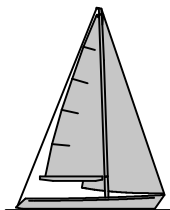
LUBRICATION

Antal uses HYDROLUB (**mod. HDR**) for winch and gear lubrication. This grease can be supplied (in 150 gr tubes) on request.

SPARE PARTS

Antal can supply you with a universal repair kit (**mod. XTKIT**) suitable for all winch types, including 4 pawls and 4 pawl springs.

winch selection guide

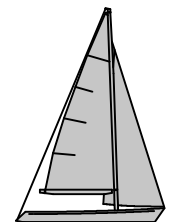


MASTHEAD RIG

LOA up to (m)	7	8	9	10	11	12	13	14	15	16	18	21
LOA up to (ft)	23	26	30	33	36	39	43	46	49	53	60	70
GENOA (m ²)	18	24	32	40	50	63	78	92	110	130	180	230
MAIN (m ²)	12	14	16	18	23	29	35	42	52	65	80	100
SPIN (m ²)	28	40	55	75	92	120	150	185	225	270	360	460

WINCH POWER

GENOA SHEET	8/16	16/30	30/40	40/44	44/48	52	62	66	66/70	70/80	70/80	80
MAIN SHEET	-	-	-	-	16	30	30/40	40	44	52	62	66
SPIN SHEET	7/8	8/16	16/30	30	40	44	48	48	52	62/66	66	70
GENOA HALYARD	7/8	8	16	30	30/40	40/44	44	44	48	52	62	66
MAIN HALYARD	7/8	8	16	30	40	44	44	44/48	48	52	62	66
SPIN HALYARD	7/8	8	16	16	30	40	44	44	48	52	62	66
TOPPING LIFT	-	-	8	8	16	30	30/40	40	44	48	52	62
FOREGUY	-	-	8	8	16	30	30/40	40	44	48	52	62
REEFING	-	8	8	16	30	40	40/44	40/44	48	52	62	66
VANG	-	-	-	8	8	16	30	30	40	44	52	62
RUNNERS	-	-	-	-	8	16	16	30/40	40	44	52	62



FRACTIONAL RIG

LOA up to (m)	7	8	9	10	11	12	13	14	15	16	18	21
LOA up to (ft)	23	26	30	33	36	39	43	46	49	53	60	70
GENOA (m ²)	10	15	23	30	38	47	56	63	72	79	95	120
MAIN (m ²)	14	17	24	32	40	49	57	65	75	82	100	130
SPIN (m ²)	22	34	52	68	88	105	122	140	158	175	210	270

WINCH POWER

GENOA SHEET	8	16	30	40	44	48	52	62	62/66	70	66/70	80
MAIN SHEET	-	-	-	-	16	30	40	44	48	52	66	66
SPIN SHEET	7/8	8	16	30	40	40	44	44/48	48	62	66	66
GENOA HALYARD	7	8	16	16	30	40	44	44	48	52	62	66
MAIN HALYARD	7/8	8	16	30	30/40	40/44	44	48	48	52	62	66
SPIN HALYARD	7/8	8	16	16	30	40	40	44	48	48	62	62
TOPPING LIFT	-	-	8	8	16	16	30	40	44	44	48	52
FOREGUY	-	-	8	8	16	16	30	40	44	44	48	52
REEFING	-	8	16	16	30	40	40	44	48	52	62	66
VANG	-	-	-	8	16	30	30	40	44	44	52	62
RUNNERS	-	16	30	40	40/44	44	48	52	62	66	66	70

standard winches

Tod 33 - Jacopin

STANDARD WINCHES

There are three series of standard winches:
one direct speed winches, small and fast models for boats up to 6-7 m.
two speed winches, direct and reduced: medium size models for boats up to 9-10 m.
two reduced speed winches, medium-large size models for boats up to 12-13 m.



SNUBBING WINCH W5

Basic model, snubbing winch without handle, completely glass-fiber resin made.



Mod. W5

MODEL	W5
BASE (mm)	80
HEIGHT (mm)	66
WEIGHT (gr)	193
SCREWS N x Ø (mm)	4 x Ø 6

ONE DIRECT SPEED WINCHES W6 - W7 - W8

Turn the handle clockwise to engage the single direct gear; the handle turns freely counterclockwise.

Model **W6** is the smallest and lightest in the range, with a glass-fibre resin base and drum and an aluminium central rod.

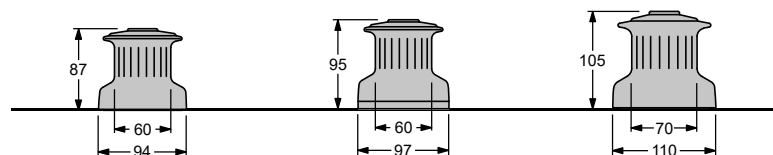
Model **W7** is similar but with a hard black anodized aluminium drum.

Model **W8** has an AISI 316 stainless steel central rod, a bronze base and a black anodized aluminium (AL) or chrome-plated (CH) drum mounted on roller bearings.



Mod. W8 AL

Mod. W8 CH



1 SPEED WINCHES

MODEL	W6	W7	W8
POWER P1	6.7	6.7	7.3
RECOVERY S1 (mm)	188	188	220
WEIGHT AL (kg)	0.43*	0.70	1.60
WEIGHT CH (kg)	-	-	2.10
SCREWS N x Ø (mm)	5 x Ø6	5 x Ø6	5 x Ø6

*Glass fibre resin drum. For mod. W6 and W7 winch power is calculated with short handle (L = 200 mm).

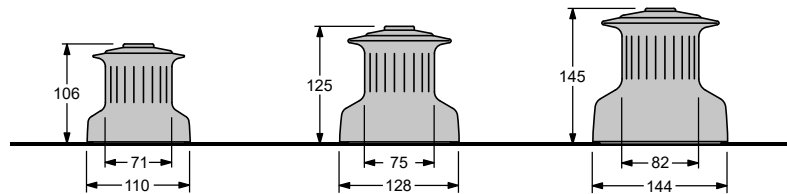


Mod. W42 AL

Mod. W42 CH

TWO SPEED WINCHES: DIRECT, REDUCED W16 - W30 - W42

The first speed is direct (one turn of the drum for each turn of the handle); the second speed is reduced: slower but more powerful. Bronze base and gears, AISI 316 stainless steel central rod and roller bearings, and black anodized aluminium (AL) or chrome-plated (CH) drums.



2 SPEED WINCHES

MODEL	W16	W30	W42
POWER P1-P2	7.3 / 14.5	7.0 / 28.0	6.4 / 42.5
RECOVERY S1-S2 (mm)	220 / 110	235 / 60	250 / 37
WEIGHT AL (kg)	2.00	2.80	4.10
WEIGHT CH (kg)	2.90	3.80	6.00
SCREWS N x Ø (mm)	5 x Ø6	5 x Ø6	5 x Ø8

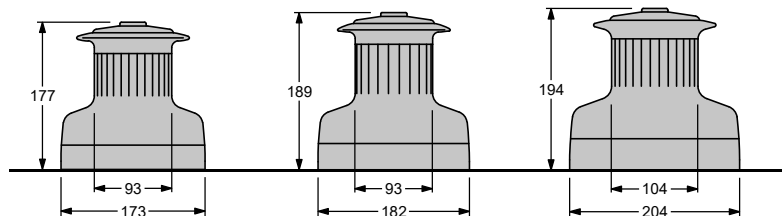


Mod. W52 AL

Mod. W52 CH

TWO REDUCED SPEED WINCH W44 - W48 - W52

Quick and powerful operation is obtainable with the first reduced speed, then with increasing load, simply wind in the opposite direction the second gear and maximum power is automatically selected. Marine bronze is used for gears, AISI 316 stainless steel for central rod and roller bearings, CNC aluminium base, hard black anodized aluminium (AL) or chrome-plated (CH) drum.



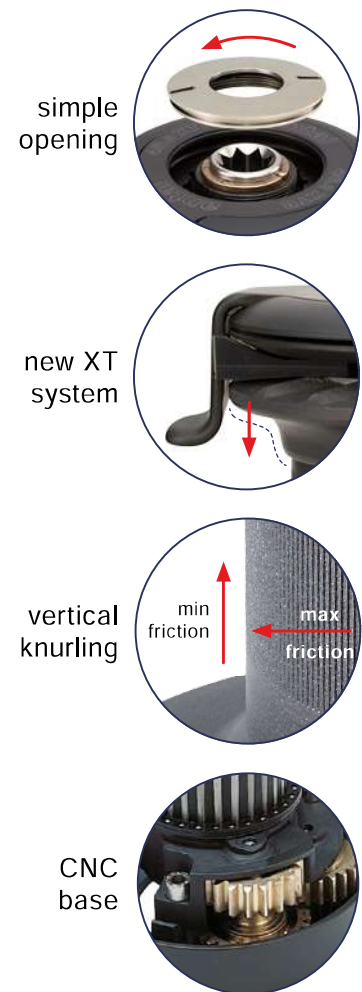
2 SPEED WINCHES

MODEL	W44	W48	W52
POWER P1-P2	20.0 / 43.0	19.0 / 47.4	14.9 / 51.1
RECOVERY S1-S2 (mm)	81 / 38	84 / 34	107 / 31
WEIGHT AL (kg)	5.50	6.30	7.80
WEIGHT CH (kg)	8.50	9.50	11.50
SCREWS N x Ø (mm)	6 x Ø8	6 x Ø8	6 x Ø8

P1,P2 : power with the first (fast) and second (slow) gear.

S1,S2 : recovery speed, the length of line recovered with one turn of the handle in first gear and in second gear.

XT winches



15 new self-tailing winches available in the following versions:

HARD BLACK ALUMINIUM (AL): the aluminium drum is hard black anodized and teflon coated, scratch-proof and very hard-wearing (page 10-11).

CHROME (CH): the drum, ST disks and ST arm are entirely chrome-plated. All chromed parts are highly polished, thickly nickel-plated and finally finished in chrome (pages 10-11).

RACE (R): racing series obtained by lightening the previous series AL (page 22).

CLASSIC (CHC and BNC): entirely made of chromed or natural bronze (page 26).

Moreover an electric and hydraulic powered series are also available. (page 12-18)

Antal winches have a three-year warranty.

SIMPLE OPENING: just unscrew the upper ring to immediately dismantle the winch for an easy

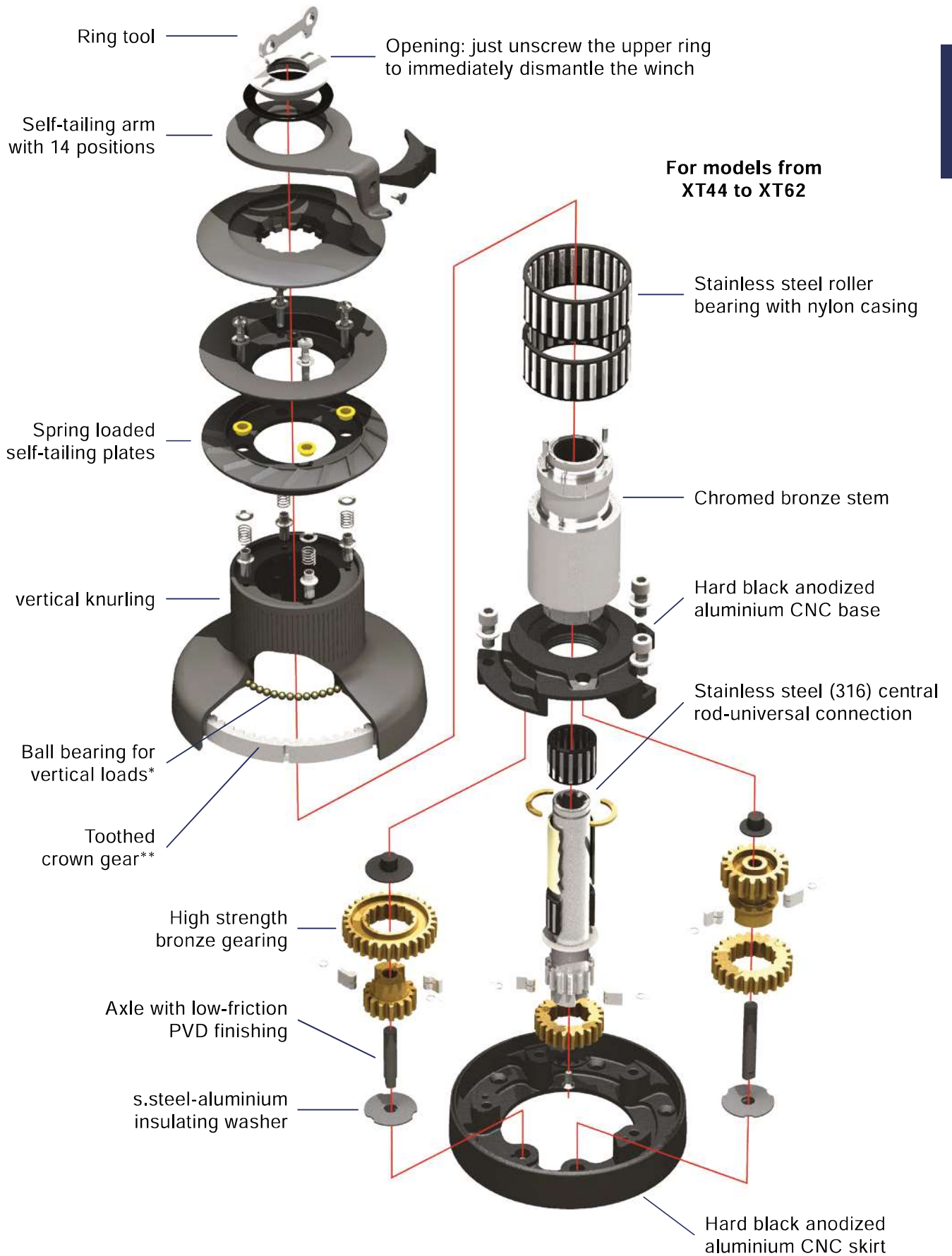
of cleaning and maintenance.

NEW SELF-TAILING XT SYSTEM: fixed upper disk with built in ST arm and self-regulating lower disk on springs. The new self-tailing adapts automatically to a wide range of rope diameters and, if overloading occurs, releases the line to avoid excess force on the ST arm.

KNURLING: the drum vertical knurling offers maximum horizontal friction allowing the rope "slide" upwards.

Differentiated grip (aluminium drums only): minimum friction on the lower part where loads are higher and maximum at the top where loads are minimal: the result is an even grip along the entire drum.

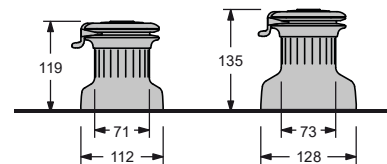
CNC BASE: machined by CNC (computer numeric control machines) is lighter and stronger than normal castings; aluminium made, hard black anodized and teflon coated. Easy removal from the winch makes maintenance a simple affair.



* ball bearing for vertical load: from model XT48, on smaller models it is replaced by a plastic washer.

** the aluminium drum fitted with a high strength alloy crown gear is provided on the following XT models: sizes 62, 66 and 70, all racing winches from size 40 to size 70, all electrical and hydraulic versions up to size 62. The electric and hydraulic versions of models XT66, XT70 and XT80 are fitted with AISI 316 s.steel crown gear.

self-tailing XT winches



ONE REDUCED SPEED WINCH XT16 - XT30

The two smallest models (XT16 and XT30) have a single reduced speed, giving a slow but powerful gear. The handle turns freely the other way. Both available in chrome (CH) or hard black alloy (AL).

ONE SPEED WINCHES

MODEL	XT16	XT30
POWER P1	14	28
RECOVERY S1 (mm)	115	58
Ø LINE (mm)	6 / 10	6 / 10
WEIGHT AL (kg)	2.4	2.7
WEIGHT CH (kg)	3.1	3.8
SCREWS N x Ø (mm)	5 x Ø6	5 x Ø6

TWO SPEED WINCHES: DIRECT, REDUCED XT16.2 - XT30.2

The addition of a direct speed to the above described models gives a faster recovery gear, which, combined with reduced weight and an automatic self-tailing for very thin lines, makes these models the best choice for racing.

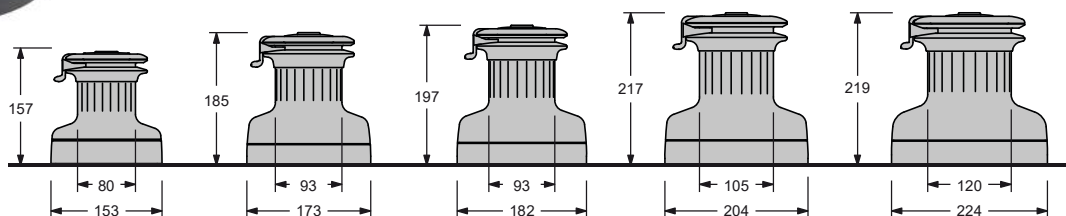
TWO SPEED WINCHES

MODEL	XT16.2	XT30.2
POWER P1-P2	7.0 / 14	7.0 / 28
RECOVERY S1-S2 (mm)	229 / 115	229 / 58
Ø LINE (mm)	6 / 10	6 / 10
WEIGHT AL (kg)	2.6	2.9
WEIGHT CH (kg)	3.0	3.7
SCREWS N x Ø (mm)	5 x Ø6	5 x Ø6



Mod. XT52/AL

Mod. XT52/CH



TWO REDUCED SPEED WINCHES XT40 - XT44 - XT48 - XT52 - XT62

Quick and powerful operation is obtainable with the first reduced speed, then with increasing load, simply wind in the opposite direction the second gear and maximum power is automatically selected.

TWO SPEED WINCHES

MODEL	XT40	XT44	XT48	XT52	XT62
POWER P1-P2	12.8 / 40.0	20.0 / 43.0	19.0 / 47.4	15.9 / 52.8	17.8 / 62.1
RECOVERY S1-S2 (mm)	125 / 40	80 / 38	84 / 34	100 / 30	89 / 26
Ø LINE (mm)	6 / 12	8 / 14	8 / 14	8 / 14	8 / 16
WEIGHT AL (kg)	4.4	6.2	6.9	9.2	10.9
WEIGHT CH (kg)	5.9	8.7	9.9	13.0	15.7
SCREWS N x Ø (mm)	5 x Ø8	6 x Ø8	6 x Ø8	6 x Ø8	6 x Ø8

All these models (from size 40) can be powered with electric or hydraulic motors (page 12-17)

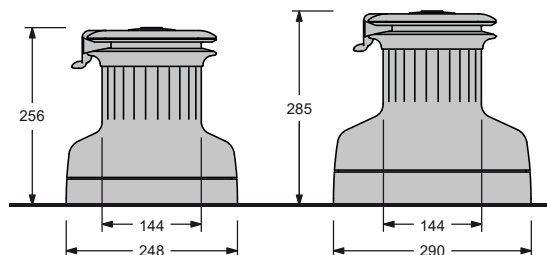


Mod. XT70/AL

Mod. XT70/CH

TWO REDUCED SPEED WINCHES XT66 - XT70

Large drum winches for 15-18 m boats. All the gears are fitted with roller bearings and the drum works on a very wide diameter roller-ball bearings.



TWO SPEED WINCHES

MODEL	XT66	XT70
POWER P1-P2	18.0 / 65.6	27.1 / 69.8
RECOVERY S1-S2 (mm)	89 / 24	59 / 23
Ø LINE (mm)	10 / 18	10 / 18
WEIGHT AL (kg)	14.8	18.5
WEIGHT CH (kg)	24.6	30.0
SCREWS N x Ø (mm)	6 x Ø10	6 x Ø10

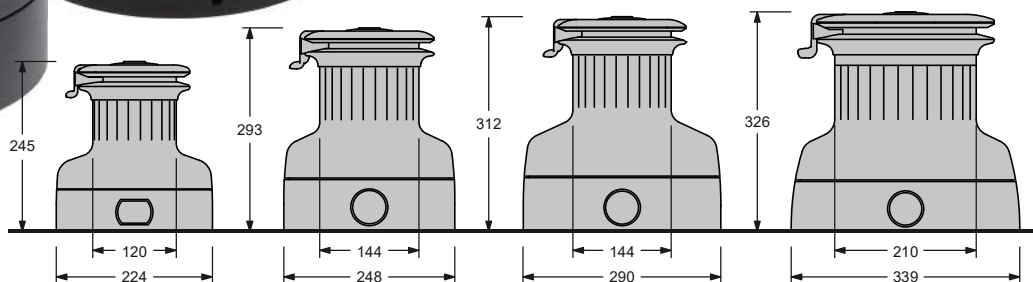


Mod. XT70.3/AL

Mod. XT70.3/CH

THREE REDUCED SPEED WINCHES XT62.3 - XT66.3 - XT70.3 - XT80.3

The push-button on the base starts the first gear (the fastest); second and third gear are automatically selected simply by reversing the rotation of the handle.



THREE SPEED WINCHES

MODEL	XT62.3	XT66.3	XT70.3	XT80.3
POWER P1-P2-P3	6.6 / 17.8 / 62.1	10.7 / 20.8 / 65.3	10.7 / 27.1 / 69.8	11.0 / 30.0 / 81.4
RECOVERY S1-S2-S3 (mm)	241 / 89 / 26	151 / 77 / 24	151 / 59 / 23	147 / 53 / 20
Ø LINE (mm)	8 / 16	10 / 18	10 / 18	12 / 20
WEIGHT AL (kg)	12.8	18.6	22.8	47.0
WEIGHT CH (kg)	17.6	28.4	34.4	52.0
SCREWS N x Ø (mm)	6 x Ø8	6 x Ø10	6 x Ø10	8 x Ø10

P1, P2, P3 : power with the first (fast), second (medium) and third (slow) gear.

S1, S2, S3 : recovery speed, the length of line recovered with one turn of the handle in first, second and third gear.