



The image shows the winch RPE up to 1.0t

## Yale *RPE*

### Electric winch

#### Capacity 250 - 2000 kg

Winches series RPE are designed for performance, efficiency and safety and offer many advantages and options. RPE's compact, practical cube design and universal rope lead-offs allow individual applications in almost any position for lifting and pulling loads.

The winches are designed to DIN 15020, classification 1 Bm/M3 and the EC machinery directives.

Every winch is factory tested with overload. The units are supplied with a test certificate showing the unit's serial-no. and an operating instructions manual which contains a manufacturer's declaration.

#### Features

- Compact dimensions due to internal brake motor.
- Standard: 400 V/230 V, 3 Ph, 50 Hz or 230 V, 1 Ph, 50 Hz
- Protected to IP55
- Insulation class F
- Adjustable slip clutch to protect the winch from overloading standard for RPE 10-6 and RPE 20-6.
- Spur gear transmission with helical first gear ensures smooth motion. Lubricated by grease and can, therefore, be used in any position.
- Spring pressure disc brake incorporated in the motor holds the load secure even in the event of a power failure.
- Plain rope drum standard. The rope is secured to the drum in a recess so that the rope can be wound onto the drum in several layers without damage.
- 42V low voltage control (incl. push-button with emergency-stop and 2 m control cable) or without controls.



Rope attachment



Spring pressure disc brake



Brake motor

## INFO

When selecting the length of the rope please bear in mind that a minimum of 2-3 windings have to remain on the drum!

The wire rope, if ordered, comes dismantled, and is to be mounted onto the drum by the user.

Please note, the single-phase winches generate a higher noise level than those with three-phase motors!

**Optional**

- Different drum designs (XL) extended to accommodate longer rope.
- Machined grooved drums for better rope reeling.
- Drums with separation web and extra rope outlets for working with two or more ropes.
- Geared limit switches to limit rope motion in both directions (in combination with 42V low voltage control).
- Slack rope switch to automatically stop the winch when rope tension eases e.g. when the load touches down (in combination with 42V low voltage control).
- Frequency converter for stepless speed control.
- Radio remote control (in combination with 42V low voltage control).
- Other operating voltages on request.
- Motor brakes with manual release.
- Special coatings or zinc plated finish.

The image shows the winch RPE 20-6 with the grooved drum (optional).



Single-phase A.C. motor



Geared limit switches



Gearbox with slip clutch



Different drum designs



**INFO**

Also available as zinc-plated version on request!

## Technical data RPE

Model	Capacity kg	Lifting speed m/min		Rope layers max.	Rope diameter mm	Motor kW	Motor rating ED	Weight without rope kg	
		1 <sup>st</sup> layer	top layer					L	XL
RPE 2-13 L	250	10.2	13.2	4	4	0.55	40%	40	48
RPE 5-6 L	500	4.6	6.6	4	6	0.55	40%	41	49
RPE 5-12 L	500	8.7	12.6	4	6	1.1	40%	47	54
RPE 10-6 L <sup>1</sup>	1000	5.1	6.5	3	8	1.1	40%	89	105
RPE 20-6 <sup>1</sup>	2000	5.2	7.6	3	12	2.2	40%	213	235

<sup>1</sup>Adjustable slip clutch as standard



## Plain drum rope capacity

Model	Capacity top layer kg	Drum size	Useable rope length max. m			
			1 <sup>st</sup> layer	2 <sup>nd</sup> layer	3 <sup>rd</sup> layer	4 <sup>th</sup> layer
RPE 2-13 <sup>1</sup>	250	1 <sup>1</sup>	11.1	24.5	39	54
RPE 5-6 <sup>1</sup>	500	1 <sup>1</sup>	7.4	16.9	27	38
RPE 10-6 <sup>1</sup>	1000	1 <sup>1</sup>	10.1	23.0	37	–
RPE 20-6	2000	1	13.2	30.3	49	–
RPE 2-13 L	250	2	16.8	36.4	57	80
RPE 5-6 L	500	2	11.3	25.2	40	57
RPE 5-12 L	500	2	11.3	25.2	40	57
RPE 10-6 L	1000	2	15.8	35.2	56	–
RPE 20-6 L	2000	2	20.6	46.1	74	–
RPE 2-13 XL	250	3	44.3	94.1	148	200
RPE 5-6 XL	500	3	30.0	65.5	105	149
RPE 5-12 XL	500	3	65.0	65.5	105	149
RPE 10-6 XL	1000	3	30.7	67.0	107	–
RPE 20-6 XL	2000	3	34.1	74.9	120	–

<sup>1</sup>available on request only!

## Grooved drum rope capacity

(recommended for single layer operation)

Model	Capacity top layer kg	Drum size	Useable rope length m	
			1 <sup>st</sup> layer	max.
RPE 2-13 R <sup>1</sup>	250	1 <sup>1</sup>	8.8	43
RPE 5-6 R <sup>1</sup>	500	1 <sup>1</sup>	6.2	33
RPE 10-6 R <sup>1</sup>	1000	1 <sup>1</sup>	8.2	30
RPE 20-6 R	2000	1	12.0	44
RPE 2-13 LR	250	2	13.3	64
RPE 5-6 LR	500	2	9.5	49
RPE 5-12 LR	500	2	9.5	49
RPE 10-6 LR	1000	2	12.9	47
RPE 20-6 LR	2000	2	16.8	61
RPE 2-13 XLR	250	3	35.3	165
RPE 5-6 XLR	500	3	25.7	128
RPE 5-12 XLR	500	3	25.7	128
RPE 10-6 XLR	1000	3	25.2	89
RPE 20-6 XLR	2000	3	27.9	99

<sup>1</sup>available on request only!

## INFO

When selecting the length of the rope please bear in mind that a minimum of 2-3 windings have to remain on the drum!

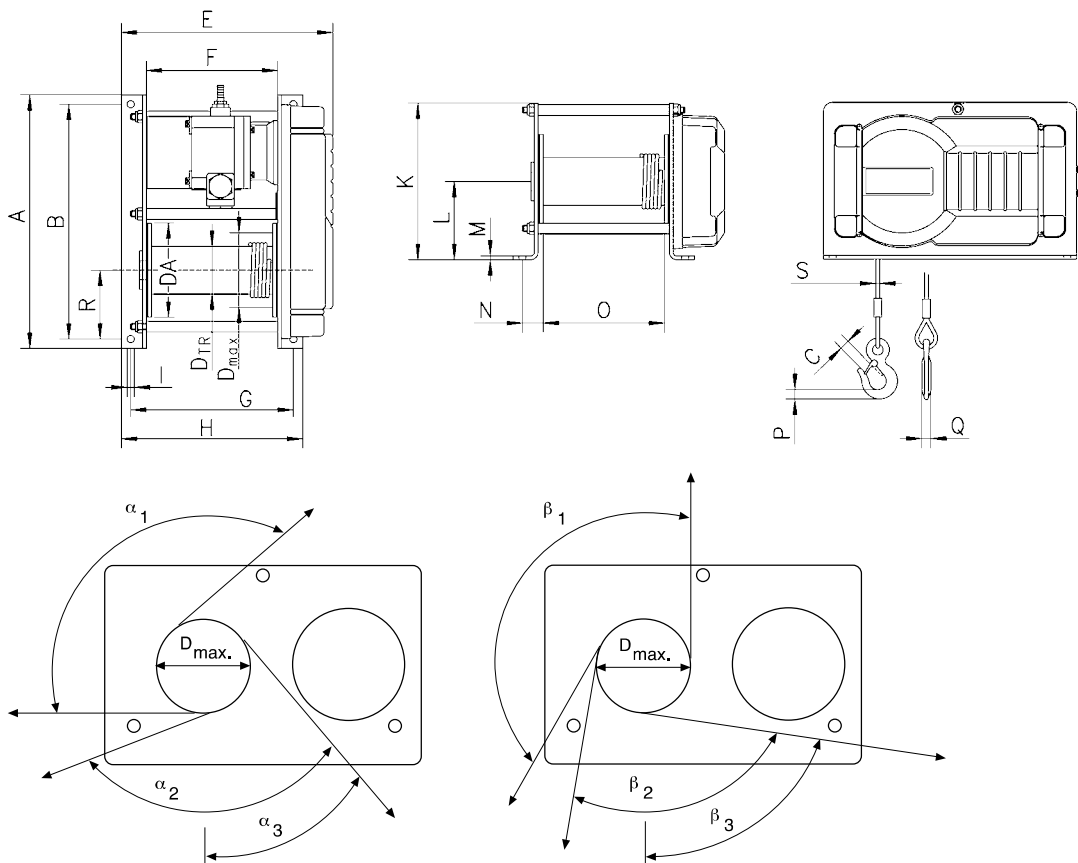
Yale hoists and trolleys are not designed for passenger elevation applications and must not be used for this purpose.

Dimensions RPE

Model	RPE 2-13 <sup>1</sup> RPE 5-6 <sup>1</sup>	RPE 2-13L RPE 5-6L RPE 5-12L	RPE 2-13XL RPE 5-6XL RPE 5-12XL	RPE 10-6 <sup>1</sup>	RPE 10-6L	RPE 10-6XL	RPE 20-6	RPE 20-6L	RPE 20-6XL
A, mm	405	405	405	525	525	525	670	670	670
B, mm	375	375	375	485	485	485	550	550	550
C, mm	18	18	18	25	25	25	36	36	36
D <sub>TR</sub> , mm	76	76	76	108	108	108	146	146	146
D <sub>max</sub> , mm	104	118	118	148	148	148	224.4	224.4	224.4
DA, mm	150	150	150	180	180	180	245	245	245
E, mm	338	428	865	450	575	902	619	784	1.084
F, mm	210	300	737	270	395	722	360	525	825
G, mm	260	350	787	345	470	797	480	645	945
H, mm	290	380	817	380	505	832	540	705	1.005
I, mm	11	11	11	13	13	13	23	23	23
K, mm	250	250	250	340	340	340	401	401	401
L, mm	125	125	125	170	170	170	215	215	215
M, mm	6	6	6	10	10	10	15	15	15
N, mm	33	33	33	47.5	47.5	47.5	72.5	72.5	72.5
O, mm	194	284	721	250	375	702	335	500	800
P, mm	19	19	19	24	24	24	34	34	34
Q, mm	13	13	13	19	19	19	26	26	26
R, mm	125	125	125	170	170	170	135	135	135
S, mm	4	6	6	8	8	8	12	12	12
α 1, °	130	130	130	145	145	145	153	153	153
α 2, °	110	110	110	125	125	125	136	136	136
α 3, °	40	40	40	50	50	50	64	64	64
β 1, °	150	150	150	155	155	155	147	147	147
β 2, °	90	90	90	100	100	100	107	107	107
β 3, °	80	80	80	83	83	83	83	83	83

<sup>1</sup>available on request only!

Dimensions for models with optional features are available on request!



Rope lead-offs for electric winch RPE

## DSRB S

Sheave block for rope guidance, equipped with ball bearings



### Technical data DSRB S

Model	Art.-No.	Classification FEM/ISO	Pulling force in kg at deflection 90°	Pulling force in kg at deflection 180°	Rope diameter
					mm
DSRB S 90/4	33447103	2m/M5	700	500	4
DSRB S 90/6	33447413	1Dm/M1	700	500	4
DSRB S 145/5	33447104	4m/M6	1100	800	5
DSRB S 145/6	33447105	2m/M5	1100	800	6
DSRB S 145/7	33447106	1 Am/M4	1100	800	6
DSRB S 185/8	33447107	2m/M5	2300	1630	8
DSRB S 185/9	33447108	1 Am/M4	2300	1630	9
DSRB S 270/12	33447111	2m/M5	2500	1800	12

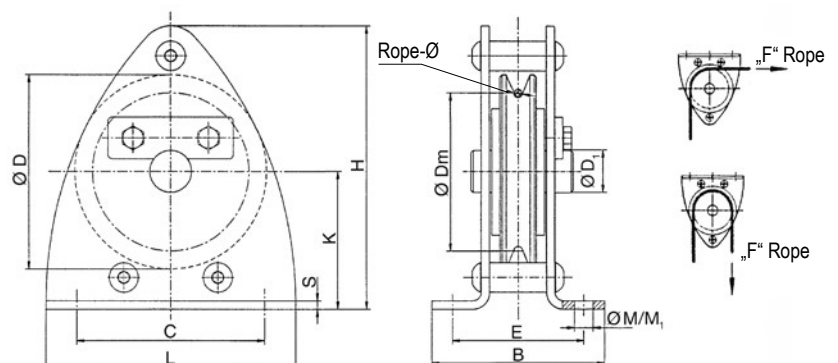
All sheaves are available as an individual component on request.

### Dimensions DSRB S

Model	DSRB S 90/4	DSRB S 90/6	DSRB S 145/5	DSRB S 145/6	DSRB S 145/7	DSRB S 185/8	DSRB S 185/9	DSRB S 270/12
Art.-No.	33447103	33447413	33447104	33447105	33447106	33447107	33447108	33447111
B, mm	85	85	125	125	125	138	138	191
C, mm	90	90	160	160	160	195	195	290
Ø D, mm	90	90	145	145	145	185	185	270
Ø D1, mm	20	20	25	25	25	30	30	40
Ø Dm, mm	80	78	125	125	126	160	162	246
E, mm	62	62	88	88	88	106	106	138
H, mm	134	134	224	224	224	273	273	407
K, mm	65	65	110	110	110	135	135	202
L, mm	120	120	200	200	200	245	245	360
Ø M/M1, mm	9/9	9/9	11.5/13	11.5/13	11.5/13	13.5/15	13.5/15	18/20
S, mm	4	4	6	6	6	8	8	10



Ex-version on request!



## BETA SL Electric winch

### Capacity 250 - 2000 kg

Electric winches of the BETA SL range are used for lifting, towing and positioning of loads. The proven technology and specified equipment features make the winch the ideal product for standard applications.

#### Features

- The electrically released spring pressure disc brake safely holds the load also in the event of a power failure.
- Powerful three-phase AC drives for multi-range voltage 400V – 50Hz. Motor type of enclosure IP 55, duty factor 40 % ED.
- Electronic overload protection from 1000 kg lifting load as standard.
- The maintenance-free, oil lubricated gearbox has quiet running characteristics due to milled and ground gears with helical teeth.
- Standard rope drum of grooved design, with large rope capacity.
- Variable rope lead-in.
- Contactor control (incl. gear limit switch).
- In accordance with DGUV regulation 55 (winches, lifting and pulling equipment).



*Also available at short notice with the following options:*

- **Rope pressure roll**  
Supports the tidy coiling of the rope, especially with high lifting heights.
- **Slack rope switch**  
Prevents unwanted uncoiling if the wire rope is not under load.
- **Control switch with 3 m control cable**  
Greater freedom of movement for the user, better view of the working area of the wire rope winch.
- **Frequency converter (SL 1 - SL 3)**  
Infinitely variable rope speed controlled via potentiometer, control range 20-87 Hz (SL 3 = 10-50 Hz). The frequency converter allows loads to be moved gently and sensitively..



Optional: Frequency converter  
(For infinitely variable speed regulation)

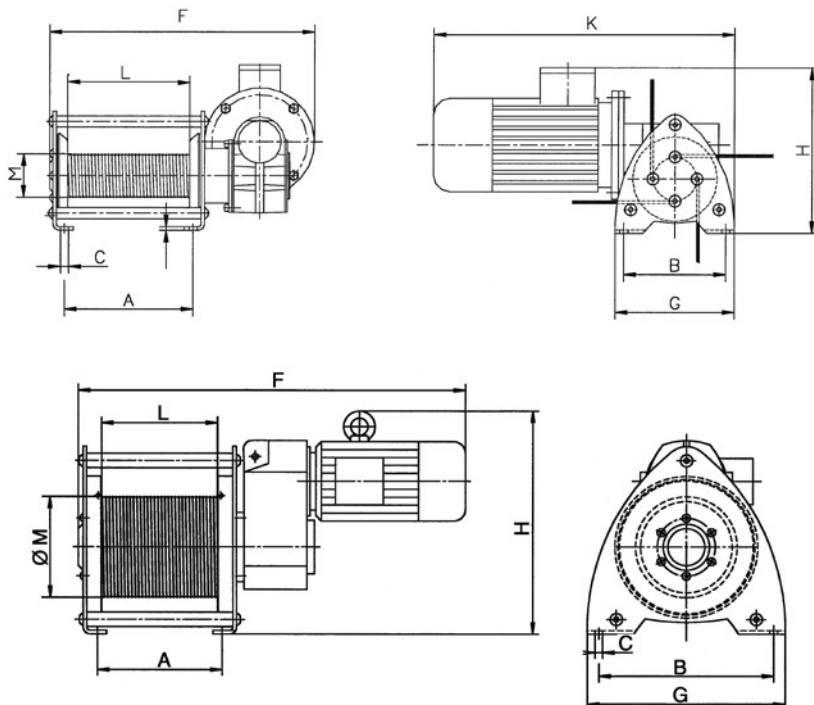
## Technical data BETA SL

Model	Art.-No.	Size	Capacity	Lifting speed	Rope diameter <sup>3</sup>	Motor	Classification	Useable rope length	
			1 <sup>st</sup> layer	1 <sup>st</sup> layer	1 <sup>st</sup> layer			top layer	
			kg	m/min	mm	kW		m/min	m/min
BETA-SL0-250-2,5-4-46,7-1-GE-St	40063758	SL0	250	2.5	4	0.25		7	46.7
BETA-SL0-250-5,0-4-46,7-1-GE-St	31140006	SL0	250	4.7	4	0.37		7	46.7
BETA-SL1-500-7,1-6-48,9-1-GE-St	40062946	SL1	500	6.8	6	0.75		6.7	48.9
BETA-SL1-630-7,1-6-48,9-1-GE-St	40062989	SL1	630	6.8	6	0.75		6.7	48.9
BETA-SL2-980-6,3-9-77,5-1-GE-St	40062990	SL2	980	6.0	9	1.1		11	77.5
BETA-SL2-1250-6,3-9-64,0-1-GE-St	40062993	SL2	1250	6.0	9	1.1		11	77.5
BETA-SL3-2000-6,8-12-73,8-1-GE-St	40062996	SL3	2000	6.8	12	2.2		10	74.5

<sup>3</sup>recommended rope: DIN 3069 FE-znk 1960 sZ-spa

## Dimensions BETA SL

Model	BETA-SL0-250 2,5-4-46,7-1-GE-St	BETA-SL0-250 5,0-4-46,7-1-GE-St	BETA-SL1-500 7,1-6-48,9-1-GE-St	BETA-SL1-630 7,1-6-48,9-1-GE-St	BETA-SL2-980 6,3-9-77,5-1-GE-St	BETA-SL2-1250 6,3-9-64,0-1-GE-St	BETA-SL3-2000 6,8-12-73,8-1-GE-St
A, mm	185	185	215	215	270	270	320
B, mm	170	170	300	300	400	400	510
Ø C, mm	12	12	13.5	13.5	18	18	22
F, mm	389	389	740	750	920	930	1070
G, mm	200	200	340	340	465	465	570
H, mm	241	241	340	345	475	480	614
K, mm	432	-	-	-	-	-	-
L, mm	180	180	200	200	250	250	300
Ø M, mm	64	64	86	86	175	175	175



## INFO

Pfaff winches are not designed for passenger elevation applications and must not be used for this purpose.

## THETA Electric winch

### Capacity 100 kg

The compact Pfaff-silberblau THETA series offers reliable safety, besides being suitable for a wide range of applications and very easy to use. Its high safety standard is achieved, amongst other things, by a mechanical double safety drum brake, separate from the drive, for safe and firm holding of the load.

Factory-specified features make this safety electric wire rope winch interesting for many applications, such as construction sites, in building technology or sports facilities – and thus also for individuals, craftsmen, local councils and construction yards. The Pfaff-silberblau THETA wire rope winch is operated with a supply voltage of 230 V (50 Hz).

### Features

- Compact design.
- Two independently acting brakes.
- Ready for use with control/limit switch.
- Connection cable with plug.
- Test and maintenance friendly.
- Made in Germany.
- Available from stock and ready for immediate use after delivery.
- In accordance with the accident prevention regulations DGUV V54 (BGV D8) with special release for static suspension of loads above persons incl. expert.

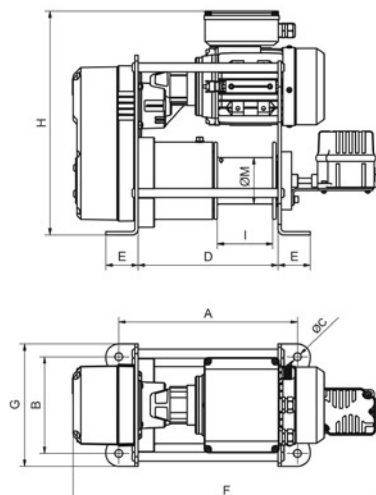


### Technical data THETA

Model	Art.-No.	Capacity kg	Rope speed m/min	Motor kW	Rope diameter mm	Rope capacity m
THETA	192054528	100	3	0.12	4	10

### Dimensions THETA

Model	THETA
Art.-No.	192054528
A, mm	277
B, mm	150
Ø C, mm	12
D, mm	217
E, mm	50
F, mm	476
G, mm	190
H, mm	348
I, mm	86
Ø M, mm	72





*Endless winch  
up to 500 kg!*



STANDARD  
This image shows the  
Yale Mtrac winch with  
standard equipment

PATENTED\*  
**BI-DIRECTIONAL ACTUATOR**  
FOR BI-DIRECTIONAL  
LIFTING

\*German Patent DE 10 2012 100 099

## Yale *Mtrac*<sup>®</sup>

### Endless winch

#### Capacity 66 - 500 kg

(two-fall design up to 1000 kg, optional)

The Yale *Mtrac*<sup>®</sup> endless winch combines state-of-the-art industrial design with technical innovation to solve a specific customer need – the need for a safe and simple handling solution for mobile applications.

We did just that. Because the rope of the endless winch is not collected during operation, there is no limit to the lifting height and traction length when using this product. And, with a full offering of wire ropes and accessories, this winch can be used in virtually any application requiring a hoist., e.g. on construction sites, in maintenance and assembly, in wind mills and power supply, water and utility sector, overhead line maintenance, etc.

#### Features

- Control pendant (IP 65-type of enclosure) is connected via a control cable.
- Standard power cable has a length of 1.0 m and is fitted with a CE connector plug (or a Schuko-plug).
- 42 V low-voltage control.
- Ergonomic, fitted carrying handle features a comfortable plastic grip.
- Mounting feet fixed on the housing for easy set up.
- Standard operating voltages of 400 V, 3 Ph, 50 Hz or 230 V, 1 Ph, 50 Hz.
- Galvanized, high-density steel rope is 10 m long (dia. 6.5 mm) and features a safety hook on one end as well as a rounded, plastic-coated tip at the loose end.
- Two spring buffers with adjusting rings can be attached to the wire rope to set the limit switches for both upward and downward movement.
- Drive sheave is made of especially hardened steel designed to ensure long service life.
- The patented (German Patent DE 10 2012 100 099) bi-directional actuator ensures the rope is safely guided and securely held in place.
- Slip clutch is located outside of the load path for added safety.
- Limit switches ensure safe cut-out for the upper and lower hook positions.
- Electromagnetic brake holds the load safely, even in the event of a power failure.
- Winch is classified up to 1 Bm/M3 acc. to FEM/ISO.
- Winch is protected up to IP 55.

## FEATURES

### PATENTED\* BI-DIRECTIONAL ACTUATOR

The Yale *Mtrac* endless winch features a unique bi-directional actuator that allows the winch to move the rated load on both ends of the rope. A hook can be fitted on the unloaded rope end (as an option) thus eliminating no-load motions. How does it work? Once the load has reached the top position, the unloaded rope end with the other hook is automatically in the bottom position and a new load can be picked up immediately. The lifting frequency is doubled as the two falls can be evenly loaded alternately with the rated load.

\*German Patent DE 10 2012 100 099

### READY TO USE

Each winch leaves our factory as a complete plug and play unit.

The control cable with control pendant is connected, as is the power supply cable with the plug. The standard design also features a wire rope complete with fitted safety hook. The carrying handle is included as standard and load-bearing feet are provided on the lower part of the housing.

### STATE-OF-THE-ART INDUSTRIAL DESIGN

A compact and state-of-the-art design was at the focus of the Yale *Mtrac*. The housing is made of low-pressure, die-cast aluminum and the high-strength, glass-fiber reinforced plastic covers ensure low weight and outstanding rigidity. A carrying frame, available as an option, allows for easy, two-person transport and provides additional protection against damage when moving the unit or operating it in rough conditions.

### VERSATILE APPLICATION

*Mtrac* winches can be used vertically, at an angle or horizontally for versatility depending on your application. Optionally, the load capacity can be doubled with two-fall reeving. Bolting points on the housing allow the customer to attach the winch in a way that best suits their application.

### PROVEN TECHNOLOGY

*Mtrac* winches include reliable and proven Yale technology. The oil-bath lubricated and case-hardened gearbox has a helical gearing for smooth operation and a long service life. IP 55-rated motor enclosure ensures reliable operation of the winch for both indoor and outdoor applications.

## BEST-IN-CLASS SAFETY

Standard winch models feature 42 V low-voltage control with built-in limit switches designed to stop the hoist when the hook has reached the upper or lower position. The operator can define the limit switch positions by simply relocating the spring buffers on the rope. The winch is also protected against overload by means of a slip clutch that is designed to guarantee a permanent connection between the load and the brake.

## SIMPLE MAINTENANCE

Yale *Mtrac* winches are easy to service. Units are designed with a modular structure with all critical parts easily accessible. Re-adjusting the slip clutch and inspecting the brake is quick and easy as well. In addition, the handle, or carrying frame, can be quickly and easily assembled and removed.

## ERGONOMIC DESIGN

Standard units have a comfortable plastic grip that allows for convenient one-person transport. The optional carrying frame features a grip on each handle, making two-person transport easy. And, because of the rounded housing, operator injury is minimized.



### STANDARD

This image shows the Yale *Mtrac* winch with standard equipment.



*Capacity up to 1000 kg*

**TWO-FALL DESIGN**

with optional components such as suspension hook and bottom block.

**Optional**

**BI-DIRECTIONAL LIFTING**

To realize the full potential of this winch, operators can utilize the bi-directional actuator. Simply fit an additional hook at the loose rope end to take advantage of this unique feature. Once the hook is in place, the unit can be used in bi-directional lifting mode (two-hook mode). The actuator is mounted in the interior of the winch and ensures the rope smoothly runs in the drive sheave. It also extends the pressure surface of the rope on the drive sheave for safe friction contact. The two load falls are designed to alternately carry the rated load.

**CARRYING FRAME**

The carrying frame on the Yale Mtrac can be installed either at the top or at the bottom on the unit. It is ergonomically designed with plastic grips that ensure hand-friendly handling and carrying of the winch by two people. The carrying frame cannot be used as a load-bearing component; it is exclusively intended to protect the housing, e.g. while working, during storage or while transporting or carrying the winch. Two carrying frames can also be used (one at the top and one at the bottom).

**CONNECTION TO TROLLEYS**

If low headroom is required, the Yale Mtrac winch can be easily converted from the standard hook connection to a trolley mount using a Yale trolley. Manual and power-driven trolleys available on request.

Yale Mtrac winches with two carrying frames (optional) are extremely well protected and can be safely operated in any position.



The accessories for the two-part reeved option double the load capacity.



**Optional**

- The transport and carrying frames are designed to protect the housing.
- **They must not be used as load-bearing components!**
- Two-part reeving configuration doubles the load capacity.
- Additional hook kit for bi-directional lifting.
- Special voltages on request.
- Steel wire ropes of various lengths.
- Manual and electric trolleys.
- Frequency converter for variable speed control or smooth starting.
- Operating hours counter to determine the remaining service life and number of switching operations.
- Radio remote control with extended operation range.
- Varying lengths for power and control cables.
- Stainless steel wire ropes (with shorter service life than standard).

PATENTED \*  
**BI-DIRECTIONAL ACTUATOR**  
 FOR BI-DIRECTIONAL LIFTING

\*German Patent DE 10 2012 100 099



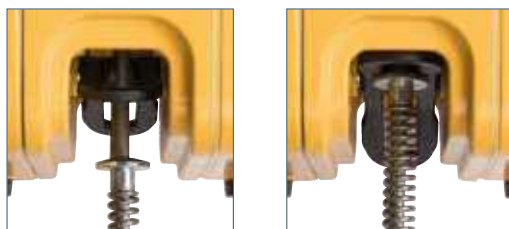
Optional  
Radio remote control

**BI-DIRECTIONAL LIFTING**

This image shows the Yale Mtrac's optional second hook that allows for bi-directional lifting operation.

The hooks of the two rope falls can be alternately loaded with 100% rated load.

**BI-DIRECTIONAL LIFTING**



**LIMIT SWITCHES AND LIMIT SWITCH ACTUATOR**

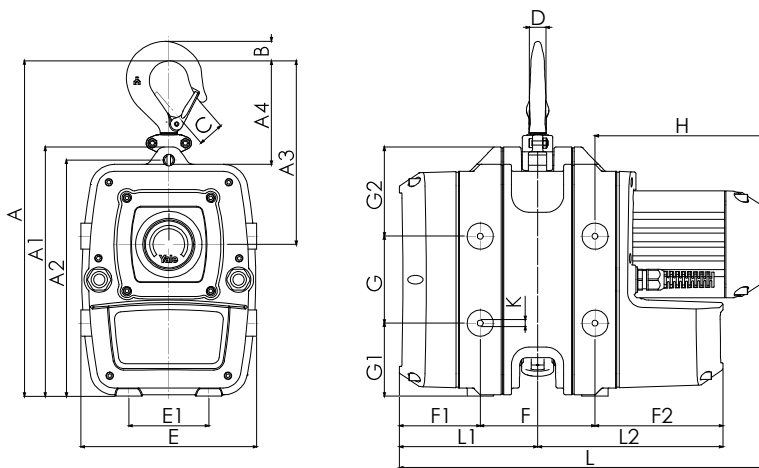
The spring buffers attached to the rope trip the limit switch actuator when they contact the paddle, which in turn actuates the micro-switches that stop the hoisting motion (via the low voltage control).

## Technical data YaleMtrac

Model	Art.-No.	Single fall version Standard		Double fall version Optional		Motor kW	Operating voltage
		Capacity	Lifting speed	Capacity	Lifting speed		
		kg	m/min	kg	m/min		
YMT 1-15	192025166	100	15	200	7.5	0.37	230 V/1 Ph/50 Hz
YMT 3-5	192025170	300	5	600	2.5	0.37	230 V/1 Ph/50 Hz
YMTF 0,6-30	192025175	66	30/7.5	130	15/3.7	0.37/0.09	400 V/3 Ph/50 Hz
YMT 1-30	192025171	100	30	200	15	0.55	400 V/3 Ph/50 Hz
YMTF 2-10	192025176	200	10/2.5	400	5/1.3	0.37/0.09	400 V/3 Ph/50 Hz
YMT 3-10	192025174	300	10	600	5	0.55	400 V/3 Ph/50 Hz
YMT 5-5	192053140	500	5	1.000	2.5	0.55	400 V/3 Ph/50 Hz

Weight from 24 to 26 kg (without rope) depending on options.

Rope Ø 6.5 mm



Dimensions	
A, mm	385
A1, mm	287
A2, mm	272
A3, mm	221
A4, mm	119
B, mm	22
C, mm	29
D, mm	19
E, mm	202
E1, mm	92
F, mm	132
F1, mm	93
F2, mm	147
G, mm	100
G1, mm	84
G2, mm	103
H, mm	201
K, mm	M8
L, mm	426
L1, mm	159
L2, mm	213



## INFO

Yale hoists and trolleys are not designed for passenger elevation applications and must not be used for this purpose.

