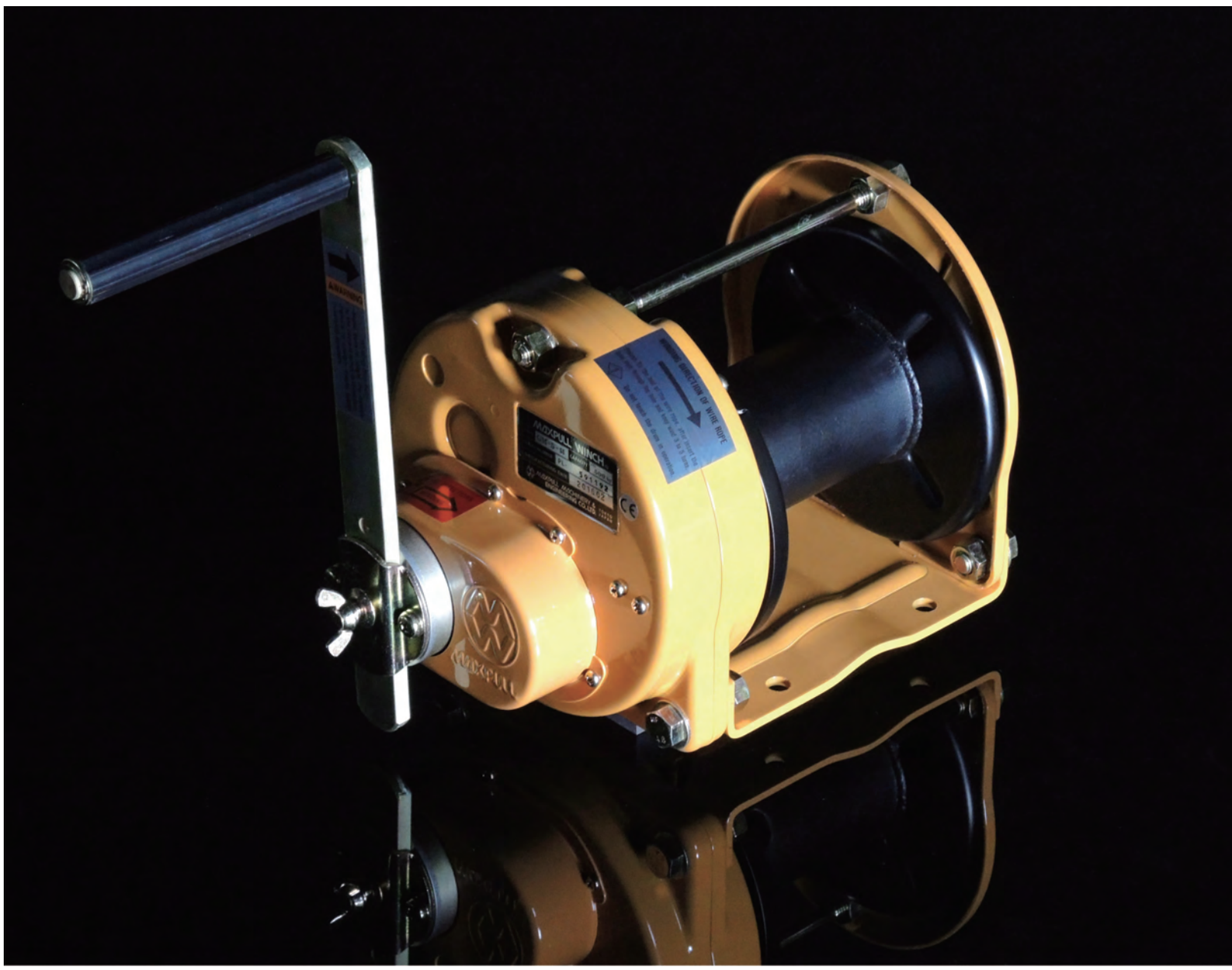
MAXPULL WINCH®

Hand Winch Catalog

RoHS CE

- ●Both Directions Pulling Endless Winch • Twin-Drum ME Series
- ●Stainless Steel Rotating-Handle • Buffing SB Series • Electropolishing ESB Series • Metallic Painting ST Series
- ●Stainless Steel Ratchet-Handle • Buffing RSB Series • Electropolishing ERSB Series • Metallic Painting RST Series
- ●Steel Hot-Dip Galvanizing • Rotating-Handle GS Series
- ●Steel • Rotating-Handle GM Series • Ratchet-Handle MR Series • Capstan-Drum MC Series
- ●Mini Winch Rotating-Handle ●Hand Winch Accessories & Options ●Special Hand Winch



MAXPULL MACHINERY & ENGINEERING CO., LTD.
マックスプル工業株式会社

Gravity is our only rival !

We are currently in the 21st century. More and more multistory buildings have been increased in a city, and great depth underground development is about to begin under it. MAXPULL extends its range of activities in various fields as a specialist for lifting and pulling. One of them, MAXPULL Special Electric winch MAW-1100 has been adopted in "Deep Ice Coring Project at Dome Fuji, Antarctica" that solves wonder of the science, such as environmental issues and the mystery of the birth of the universe. The project finally succeeded in drilling of 3,035m at Dome Fuji, Antarctica on January 26, 2007, and collected ice core of 720,000 years ago. We participated in the grand national project that examines the global climate change from 720,000 years ago. The challenge spirit to mechanism of nature like this becomes our energies that have the vistas on the future.

Antarctic Research "Electric winch MAW-1100 for deep ice coring system"

Acknowledgment

We received a great deal of advice and assistance for our excavating test that was carried out using the snow ice surface layer mechanical drill and the development of the deep ice core drill system. We received very valuable advice from professor Yoshio Suzuki of the Institute of Low Temperature Science, Hokkaido University regarding conceptual design and testing of ice core drill for liquid-filled holes. We learned the basics about cutting theory from assistant professor Katsumi Sakakida of the Department of Mining at Akita University. Theoretical consideration presented here are based on the concept created by assistant professor Katsumi Sakakida. The member of Maxpull energetically engaged in manufacture of the surface layer mechanical drill and winches, and performed outdoor tests before lab tests. I appreciate their efforts and cooperation.

Prof. Yoshiyuki Fujii, Department of Snow and Ice, National Institute of Polar Research

"Shallow ice coring system" for the 29th and 30th Japanese Antarctic Research Expedition

Strength can be Beautiful…Go Stainless!

Prevents rust and keeps the winch shining bright - suitable for the harshest environments.

Beautiful environments can often be extremely harsh to mechanical equipment.

Think of the salty breeze and sand near the oceans, or the serene highlands where the temperatures vastly differ from day and night producing condensation.

Even in highly automated manufacturing or research facilities, the elements of chemicals, steam and dust can affect the performance of any factory mechanism.

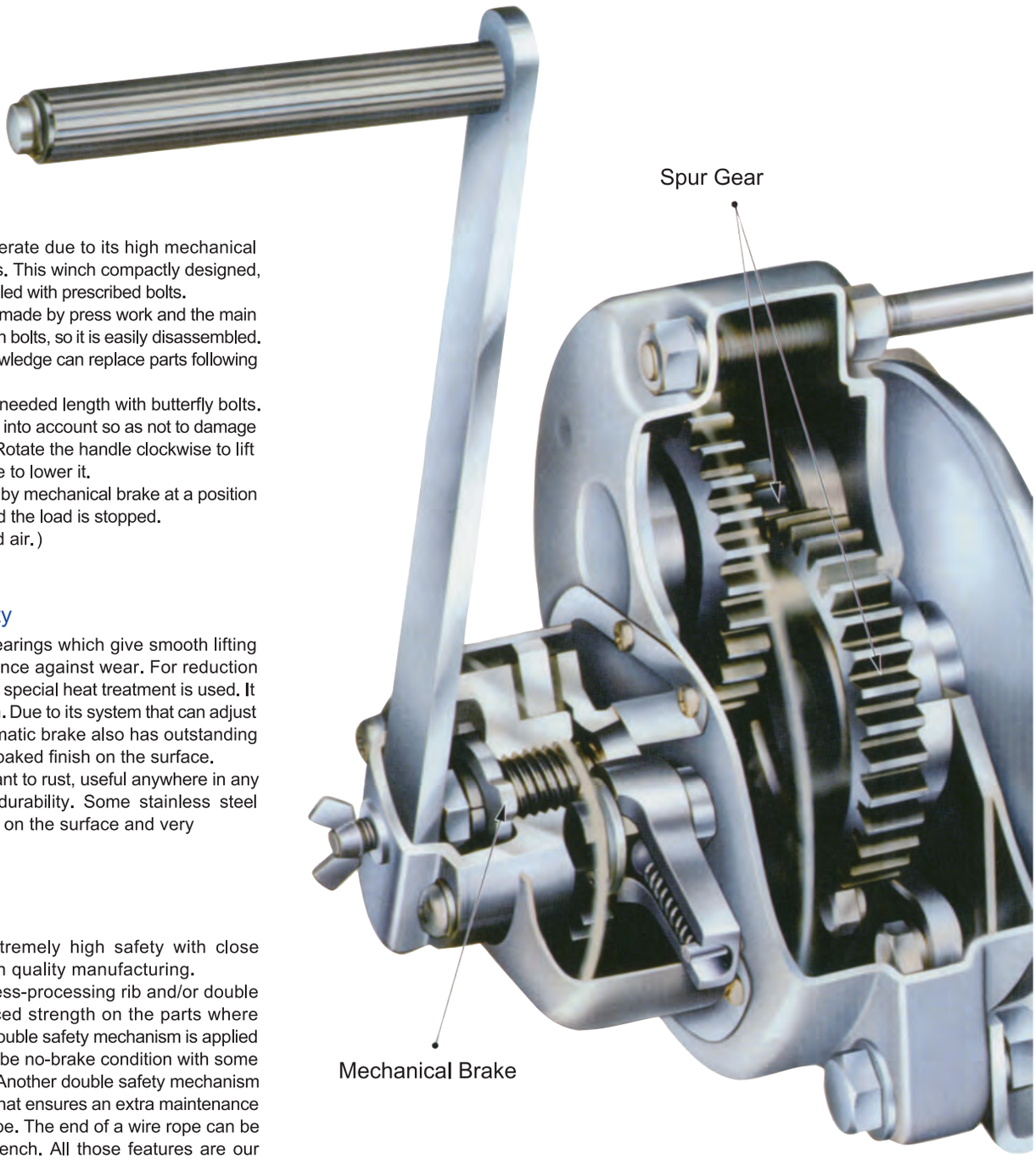
The MAXPULL stainless steel winch has outstanding reliability and excellent durability for these harsh environments. The stainless steel keeps its natural beauty with its high tolerance for salinity and rust-prevention.

If you are pursuing high-performance winches in the harshest of conditions, these quality winches will handle your needs and stay beautiful.

Strength can be beautiful, and it is the MAXPULL stainless steel winch series.

- **Primary use:**
- **Cargo handling at port facilities**
- **Nuclear power plants**
- **Chemical and pharmaceutical manufacturing facilities**
- **Clean rooms**
- **Refrigeration plants**
- **Marine and cruise facilities**
- **Any environment that require safety, strength, salt tolerance, and chemical resistance**

LOOK AT THIS MECHANISM ··· An Original Design Backed by Long



■ Easy Operation

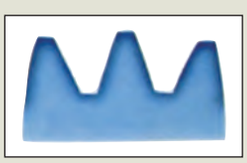
Our winch is very easy to operate due to its high mechanical efficiency compare with others. This winch compactly designed, is light to carry and easily installed with prescribed bolts.
In addition, the main parts are made by press work and the main parts of winch is assembled with bolts, so it is easily disassembled. Anyone who has technical knowledge can replace parts following this manual.
The handle is adjusted to the needed length with butterfly bolts. A plastic grip have been taken into account so as not to damage the hand during the rotation. Rotate the handle clockwise to lift the load and counterclockwise to lower it.
Brake is applied automatically by mechanical brake at a position to stop rotating the handle, and the load is stopped.
(The load is suspended in mid air.)

■ Outstanding Durability

Ball bearings are used for bearings which give smooth lifting and offer outstanding resistance against wear. For reduction unit, our original gear that has special heat treatment is used. It allows you to work with margin. Due to its system that can adjust the gap as desired, the automatic brake also has outstanding durability. Steel winch has a baked finish on the surface.
Stainless steel winch is resistant to rust, useful anywhere in any conditions and outstanding durability. Some stainless steel winch has a metallic painting on the surface and very durable.

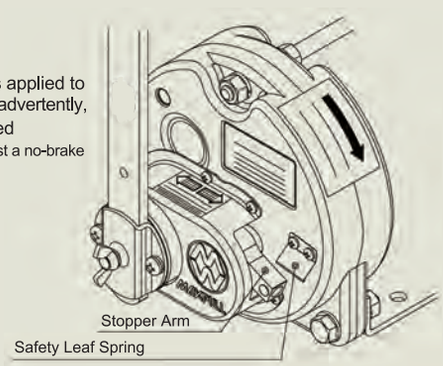
■ Reliable Safety

The winch provides the extremely high safety with close examined materials and high quality manufacturing.
By combining a precision press-processing rib and/or double plate, the winch has enhanced strength on the parts where load is intensively applied. A double safety mechanism is applied to the automatic brake not to be no-brake condition with some impact onto the stopper arm. Another double safety mechanism is applied to the special drum that ensures an extra maintenance winding for anchoring wire rope. The end of a wire rope can be anchor with attached hex wrench. All those features are our original and designed with high safety.



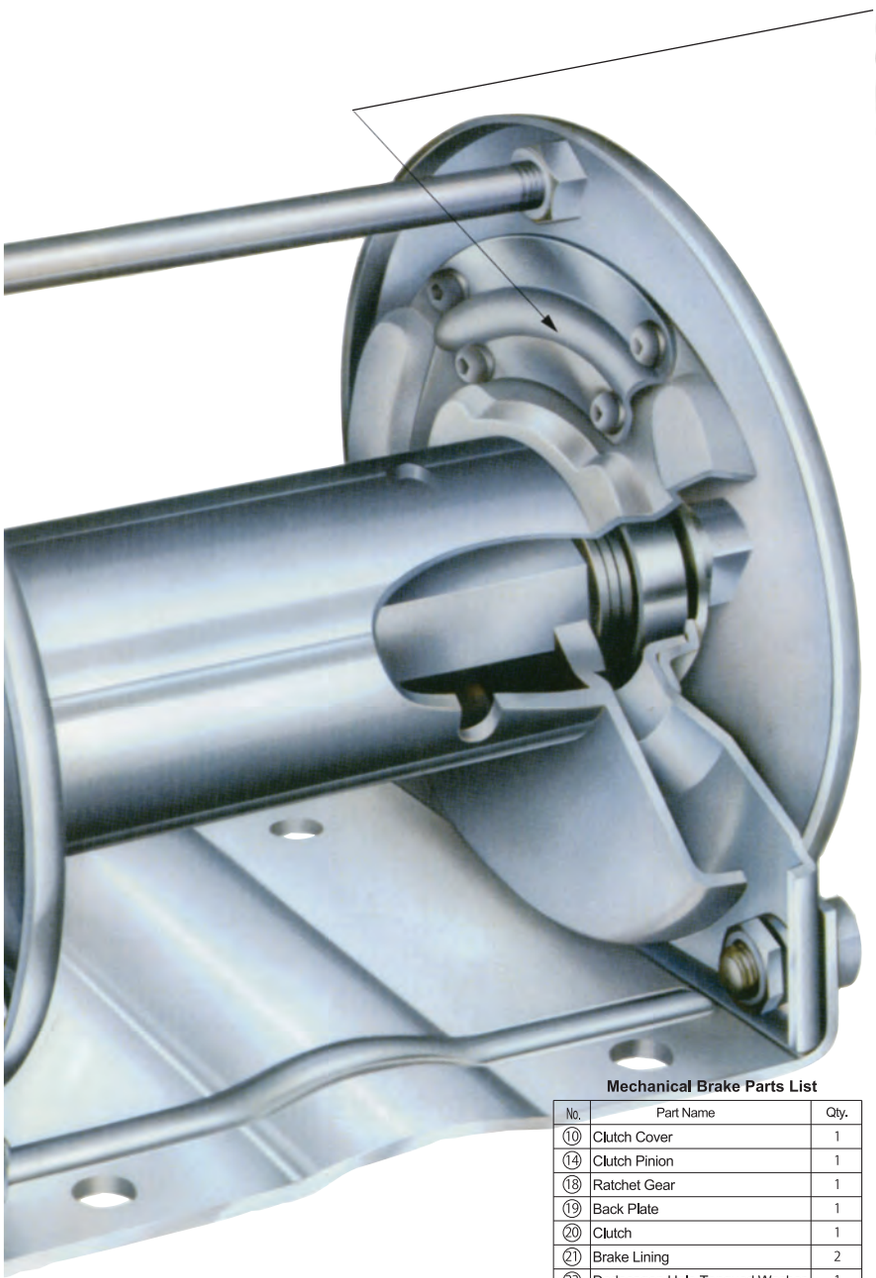
If gear subjected to large forces to concentrate forces is worn or damaged easily, reduction mechanism of the winch does not hold.
In MAXPULL Winch, profile-shifted gears of original design have been incorporated to provide extra rugged teeth, which are made of chromium molybdenum steel, and further carburized and quenched along the surface, as shown in the illustration. The carburized layer extends only to a depth of 0.7mm from the gear tooth surface (effective thickness of the carburized layer). This ensures a hard wear-resistant tooth surface combined with tough impact-resistant tooth body because engaging parts of the tooth are hard, and to retain toughness inside the substance of the tooth body.

Even if force is applied to stopper arm inadvertently, it is not released
(protection against a no-brake condition).



Born of a Unique Concept and Years of Experience …

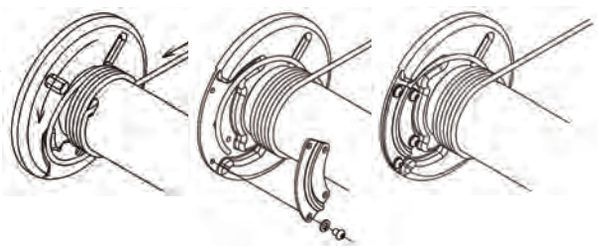
MAXPULL WINCH



Mechanical Brake Parts List

No.	Part Name	Qty.
⑩	Clutch Cover	1
⑭	Clutch Pinion	1
⑱	Ratchet Gear	1
⑲	Back Plate	1
⑳	Clutch	1
㉑	Brake Lining	2
㉒	Dodecagon Hole Tongued Washer	1
㉓	Stopper	1
㊼	Hexagon Nut (With Lock Washer Helspr)	1

Double Safety Mechanism for Wire Rope Locking



The double locking mechanism, consisting of a special drum that keeps extra maintenance winding and our unique anchoring plate of wire rope, ensures the safety and soundness.

- On Models GM-30 and MR-30, the mechanism for wire rope locking is a slightly different from others.
- Models other than GM-30 and MR-30, the wire rope locking part is located at the gear case side.

■ Operation of the Mechanical Brake

The state before start of winding is illustrated in Fig 1, and Fig 2 shows that the winch in operation or the brake mechanism is engaged. Rotating the handle in clockwise direction, the triple thread screw will tighten the clutch ⑳ and the clutch pinion ⑭, the brake lining ㉑ will be stuck on the ratchet gear ⑱ integrally and the lifting the load will be started as shown in the Fig 2.
When lowering the load, the force of free fall will work on the clutch pinion ⑭ and loosen the triple thread screw. Rotating the handle in counterclockwise direction will loosen the triple thread screw, the proper gap (A) will be created between the brake lining ㉑ and ratchet gear ⑱ as Fig 1, and it is possible to lower the load at whatever speed you want.
During lifting or stop lowering, mechanical brake becomes the state shown in the Fig 2, the stopper ㉓ is engaged with the ratchet gear ⑱ as Fig 3 and stop the movement at any point. Triple thread screw used for clutch ⑳ and clutch pinion ⑭ provides efficient tightening with smaller pitch. In addition, the lead is three times larger, and the speed for tightening and loosening the screw is fast, so it ensures momentary actions of mechanical brake.

■ Adjusting the Brake Gap

P1 is the position of dodecagon hole tongued washer ㉒ when the mechanical brake is disengaged. P is the engaged position. If the movement angle of P1 and P is within 10 to 15 degrees, the position is appropriate. (See Fig 3.)
When the mechanical brake is engaged, the dodecagon hole tongued washer ㉒ might be located in the position of P2. This behavior occurs when the brake linings ㉑ are worn. In such a case, remove the M10 hexagon nut ㊼ and the dodecagon hole tongued washer ㉒ once, tighten the clutch ⑳ fully, and set the dodecagon hole tongued washer ㉒ in the position of P. This will ensure appropriate gap of the brake lining (A) when disengaged.

■ Description of Mechanical Brake Mechanism

Fig 1

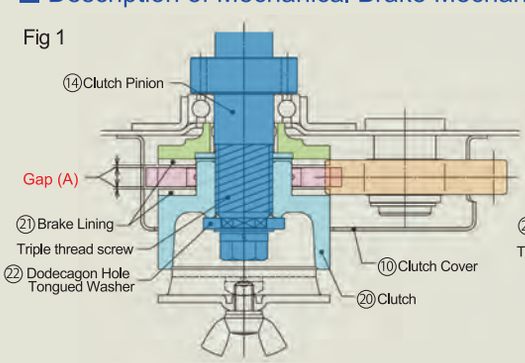


Fig 2

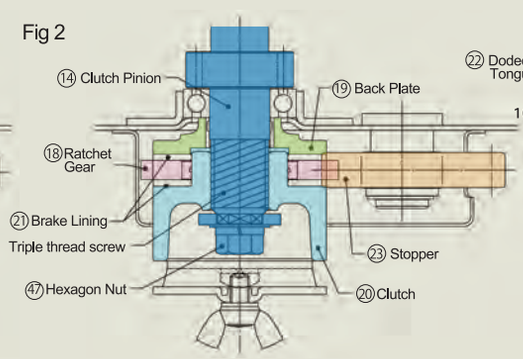
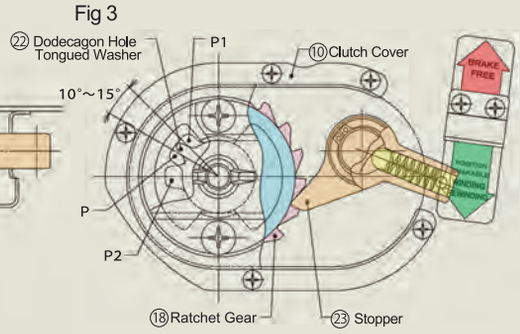


Fig 3



Technical Documents

Calculation Formula of the Drum Capacity (For reference)

Winding length of wire rope

Fig 1 shows the conventional thinking about the wire rope that is wound onto a drum, and over the second layer, the overlapped wire rope of the upper layer fits into the groove between the adjacent wire rope of the lower layer, however, as shown in Fig 2, the calculation is performed by closely aligned winding because it is suitable for the current state and facilitates calculation. (The following formula is for reference in design criteria of an electric winch, and it is not a regulation.)

Fig 1

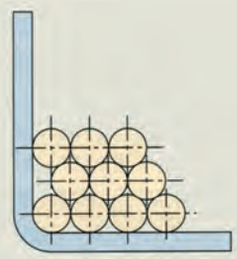
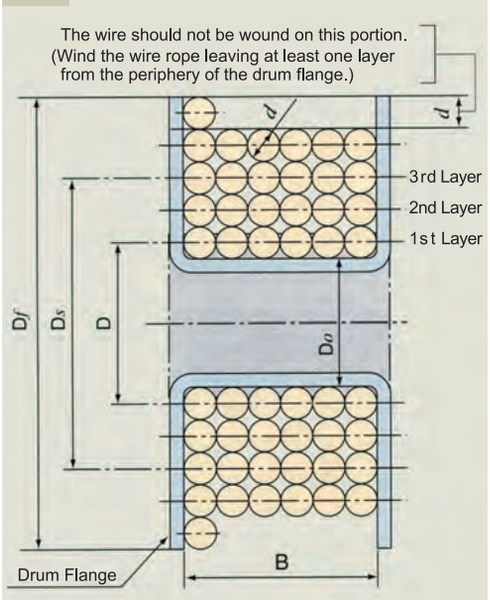


Fig 2

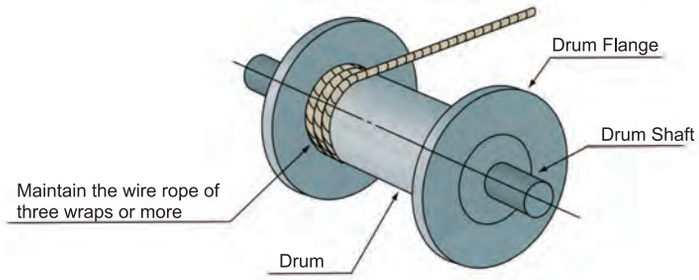


Drum Diameter	D_o mm
Wire Rope Diameter	d mm
Pitch Circle Diameter of the Wire Rope on the 1st Layer	$D = (D_o + d)$ mm
Pitch Circle Diameter of the Wire Rope on the i-th Layer	$D_i = D_o + (2 \times i - 1) \times d$ mm
Drum Width	B mm
Winding Length of Wire Rope	L mm
Drum Flange Diameter	D_f mm
Standard Layer	$D_s = \frac{D_o + D_f}{2}$ mm

The standard layer is defined by the pitch circle diameter (D_i) of the wire rope that the calculated value (D_s) is the closest to the whole number.

Length of wound wire rope on the 1st layer (m)	$L_1 = \pi \times (\frac{B}{d} - 1) \times (D_o + d) \div 1{,}000$
Length of wound wire rope on the 2nd layer (m)	$L_2 = \pi \times (\frac{B}{d} - 1) \times (D_o + 3 \times d) \div 1{,}000$
Length of wound wire rope on the i-th layer (m)	$L_i = \pi \times (\frac{B}{d} - 1) \times \{D_o + (2 \times i - 1) \times d\} \div 1{,}000$
Length of wound wire rope on the n-th layer (m)	$L_n = \pi \times (\frac{B}{d} - 1) \times \{D_o + (2 \times n - 1) \times d\} \div 1{,}000$
Outermost Layer (number)	$n = \frac{D_f - D_o}{d} - 1$ (Truncate to the whole number)
Winding Length of Wire Rope (m)	$L = L_1 + L_2 + \cdots\cdots + L_n$

Therefore, the winding length of a wire rope represents the overall length of the wire rope including the extra maintenance winding.
Extra maintenance winding is to maintain at least three wraps of wire rope on the drum for anchoring the end of the wire rope securely when unwinding entire wire rope.



Case of Model GM-10

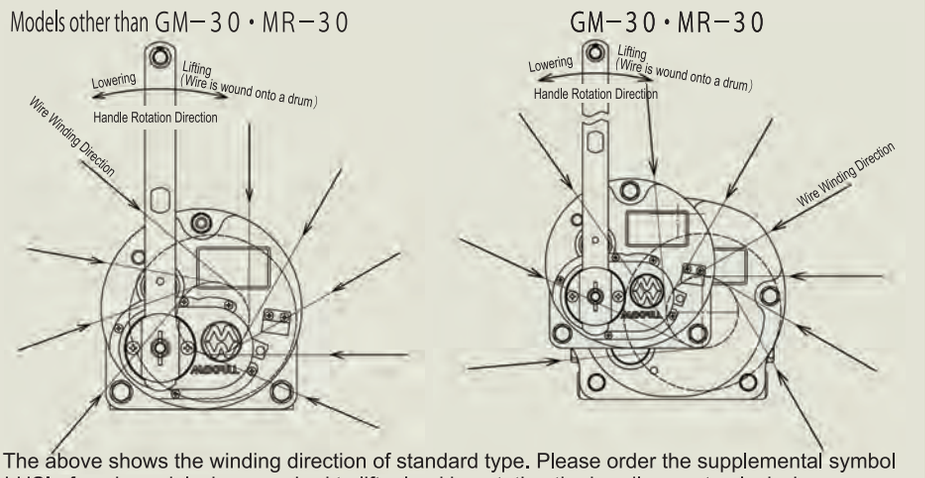
mm (inch)

Wire Rope Diameter	d = 8 (5/16)
Drum Diameter	D_o = 76.3 (3)
Drum Flange Diameter	D_f = 175 (6 57/64)
Drum Width	B = 170 (6 11/16)
Rated Wire Rope Tension	W_r = 1,000 kg (2,200 lbs)

Winding Layer	Pitch Circle Diameter D mm (inch)	Maximum Wire Rope Tension kg (lbs)	Winding Length of Wire Rope m (ft)		Remarks
			on Each Layer	Cumulative Total	
1	84.3(3 5/16)	1,000 (2,200)	5.36 (17)	5.36 (17)	Pitch Circle Diameter of the Wire Rope on the Drum D
2	100.3(3 61/64)	1,000 (2,200)	6.38 (20)	11.74 (37)	
3	116.3(4 37/64)	1,000 (2,200)	7.39 (24)	19.13 (61)	Rated Wire Rope Tension on Standard Layer Wr
4	132.3(5 13/64)	879 (1,900)	8.41 (27)	27.54 (88)	
5	148.3(5 27/32)	784 (1,700)	9.43 (30)	36.97 (118)	Winding Length L

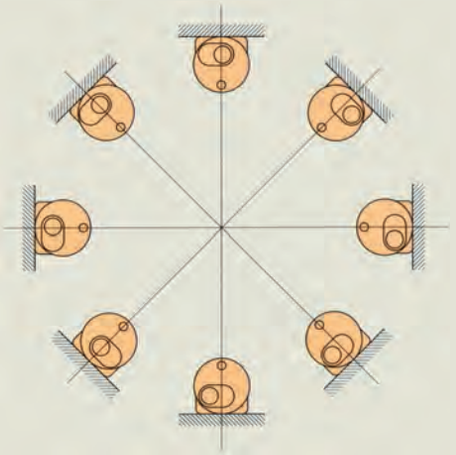
Caution : Under the standard layer, the maximum wire rope tension should not exceed rated wire rope tension.
Over the standard layer, the maximum wire rope tension is reduced to less than rated wire rope tension.
In the case of this calculation, the standard layer is the 3rd and the rated wire rope tension is 1,000 kg (2,200 lbs).

The following arrow indicates the winding direction of wire rope.



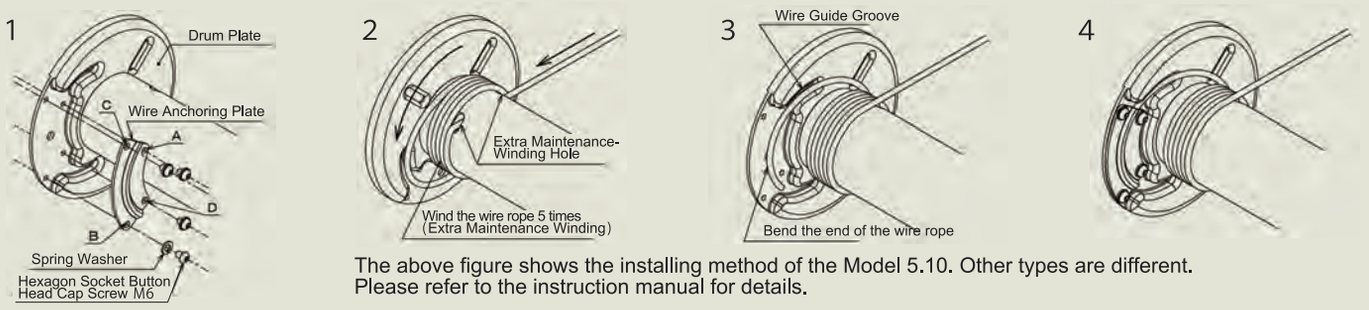
The above shows the winding direction of standard type. Please order the supplemental symbol LUSI of each model when required to lift a load by rotating the handle counterclockwise.
(The winding direction of wire rope changes to the opposite direction shown in the above figure.)

Example of Installation



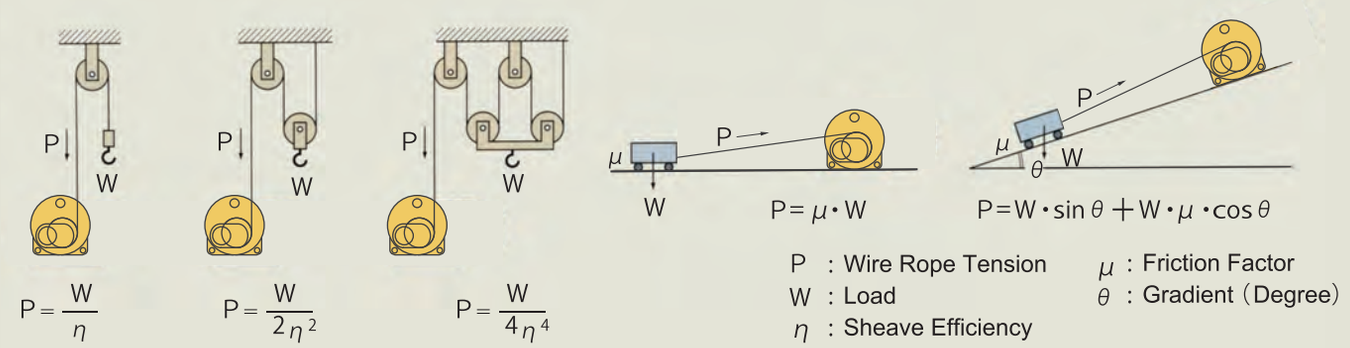
As shown in the figure, MAXPULL Winch can be installed at any angle up to 360 degrees.

Installing a Wire Rope



The above figure shows the installing method of the Model 5.10. Other types are different. Please refer to the instruction manual for details.

Calculation of Wire Rope Tension by Using MAXPULL Winch



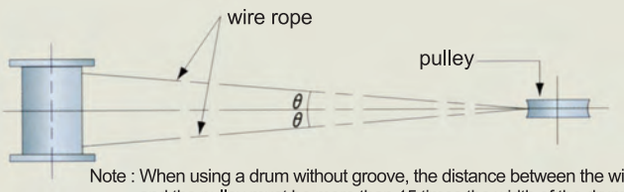
$P = \frac{W}{\eta}$ $P = \frac{W}{2\eta^2}$ $P = \frac{W}{4\eta^4}$ $P = \mu \cdot W$ $P = W \cdot \sin\theta + W \cdot \mu \cdot \cos\theta$

P : Wire Rope Tension
W : Load
η : Sheave Efficiency
μ : Friction Factor
θ : Gradient (Degree)

Fleet Angle

The fleet angle is an angle (θ) formed with a perpendicular line from the pulley to the drum and the line between the center of the pulley and the drum plate. When using a drum without groove, set this angle (θ) to 2 degrees or less.

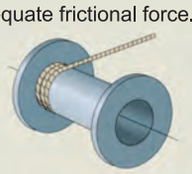
※ If the angle is larger than above-mentioned, the wire rope is wound unevenly or overlapped when it approaches to the edge of the drum.



Note : When using a drum without groove, the distance between the winch and the pulley must be more than 15 times the width of the drum.

Wind the extra maintenance winding of 3 wraps or more.

The extra maintenance winding is specified for 2 wraps or more by JIS (Japanese Industrial Standard), but it is necessary at least 3 wraps or more. If possible, it is preferred more than 5 wraps. Insufficient extra maintenance winding may cause an accident due to inadequate frictional force.



Relationship between the number of times in extra maintenance winding and the force applied to the end of the wire rope anchored to the drum

Number of times in extra maintenance winding	0	1	2	3	4
Force applied to the end of the wire rope anchored to the drum (When wire rope tension is 1)	1	0.534	0.285	0.152	0.081

■ Table of Model Selection & Contents

Type \ Item	Characteristics	Model	Capacity*1	Supplemental Symbol	Page
Hand Winch For Each Purpose	Brake Releasable	—	—		10
	Armless Stopper	—	—	SI	10
	Dust proof and Drip-Proof of Brake Mechanism	—	—	SIC	10
	Noiseless	—	—	NSIL	11
	Counterclockwise Rotation	—	—	LUSI*2	11
	Two-wire ropes on one drum	—	—	NWD *2	11
 Both Directions Pulling Endless	It provides a stable pulling power in both directions and prevent loosing of wire rope with only one main body. This winch is effective in the pulling of left and right directions on the horizontal place. It is also possible to pull in one direction such as towing.	ME	5, 10	B Mechanical Brake Type	12～15
				L Latching Brake Type	12～15
 Stainless Steel (Buffing)	The surface is buffing. Stainless surface is polished with a buffing compound by hand, and it has the unique beauty of stainless steel and excellent chemical resistance.	SB Rotating	1, 3, 5, 10	SI, SIC, LUSI	16
		RSB Ratchet	1, 3, 5, 10	SI, SIC, LUSI	17
		SBC*2 Capstan	1, 3, 5, 10	SI, SIC, LUSI	—
 Stainless Steel (Electropolishing)	Electropolishing is done. The surface of the stainless steel parts that is immersed in the electrolyte solution is dissolved by the power of electricity, and the lustrous film is formed. It have excellent rust-proof and salt tolerance, and excellent chemical resistance than buffing.	ESB Rotating	1, 3, 5, 10	SI, SIC, LUSI	16
		ERSB Ratchet	1, 3, 5, 10	SI, SIC, LUSI	17
		ESBC*2 Capstan	1, 3, 5, 10	SI, SIC, LUSI	—
 Stainless Steel (Metallic Painting)	Metallic painting is painted. After the surface of the stainless steel is washed, the baking finish is applied. It have excellent rust-proof.	ST Rotating	1, 3, 5, 10	SI, SIC, LUSI	18
		RST Ratchet	1, 3, 5, 10	SI, SIC, LUSI	19
		STC*2 Capstan	1, 3, 5, 10	SI, SIC, LUSI	—

Type \ Item	Characteristics	Model	Capacity*1	Hop Dip Galvanizing	Supplemental Symbol	Page
 Steel (Hot Dip Galvanizing)	It has excellent rust-proof and salt tolerance, and lower cost than stainless steel.	GM Rotating	1, 3, 5, 10, 20, 30	GS	SI, NSIL SIC, LUSI	20～21

■ It is possible to manufacture ratchet-handle type and capstan-drum type.
■ The parts performed hot dip galvanizing are gear case, gear case cover, drum, side frame, bed, clutch cover and handle arm.
■ Stay bolt, bolts, screws, nuts, retaining ring and spring are made of SUS-304.
■ Stopper, clutch and handle holder with chromate plating are painted in paints for zinc plating repair.
■ Only the tip of shaft with chromate plating are painted in paints for zinc plating repair.

■Table of Model Selection & Contents

Item / Type	Characteristics	Model	Capacity*1	Supplemental Symbol	Page
 Steel (Melamine Baked finish)	The surface is Melamine baked finish. It is standard type and excellent in rust-proof.	GM Rotating	1, 3, 5, 10, 20, 30	SI, SIC, NSIL, LUSI	22～23
		MR Ratchet	1, 3, 5, 10, 20, 30	SI, SIC, LUSI	24～25
		MC Capstan	1, 3, 5, 10, 20	SI, SIC, NSIL, LUSI	26～27
Mini Winch	Light weight and compact mini winch for limited space	GM Rotating	1	LH-SI	28～29
Hand Winch Accessories & Options	Cloth sheet cover	—	—		33
	Mounting bracket for pole	—	—		33
	Customized winches of various colors	—	—		33

*1 1 : 100 kg (220 lbs)、3 : 300 kg (660 lbs)、5 : 500 kg (1,100 lbs)、10 : 1,000 kg (2,200 lbs)、20 : 2,000 kg (4,400 lbs)、30 : 3,000 kg (6,600 lbs)

*2 Made-to-order product

■ Notation of Model Code

Model ─ Capacity ─ (Galvanized) ─ (Supplemental Symbol)
- (Supplemental Symbol): (SI, SIC, NSIL, LUSI)
- (Galvanized): (GS)
- Capacity: 1, 3, 5, 10, 20, 30
- Model: SB, RSB, SBC, ESB, ERSB, ESBC, ST, RST, STC, GM, MR, MC

e.g. SB-1 SB-3-SI GM-5-GS-SI GM-10 GM-20-SI

※ Brake Releasable type does not include the supplemental symbol.

■ Safety Information

(General Operation)

⚠DANGER

- Carefully read the Instruction Manual to understand the contents before operating the winch. And keep Instruction Manual at a designated place at all times to have quick access when required.
- Be sure to confirm regulations in your country or region to determine the suitability of the winch to intended use.
- Only qualified personnel authorize by the supervisor can operate the winch. Anybody unqualified, unskilled for the winch operation or lacking in knowledge for safe operation should not operate the winch.
- This hand winch is designed for load lifting only. Do not use it to lift people or to move lifted people laterally or do not lift loads over people. This winch is not appropriate for lifting people on the law, structure and safety.
- Operated with hand power only. (Rotate the winch handle at a speed slower than 100 rpm) This winch should not be operated with a motor of any kind. (Electric motor, pneumatic motor, hydraulic motor etc.)
- Never alter or modify the winch in any way. (Welding, Machining etc.)
- Never attempt to load exceeding the rated load.
- ※ MAXPULL takes no responsibility for the winch failure and accident that caused by alteration or modification outside MAXPULL and not following the manual or catalog.

【Safety Precautions】

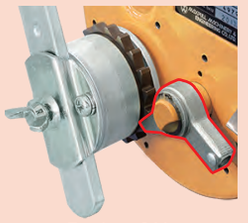
- ◆ When this winch is used for the usage that causes a significant effect on life and property, be sure to install a danger detection unit and an emergency brake other than the winch brake on device side where this winch is mounted.
- ◆ Observe the essential safety regulations of installation location and using equipment.
- ◆ Attach the oil pan etc. against grease leakage, if the winch is used in the place where the oil leak is forbidden. (food factory, clean room etc.)
- ◆ Refer to the applicable regulations in the country or the region where the winch is installed, and perform the inspection and maintenance when operating the winch.

Hand Winch for Each Purpose

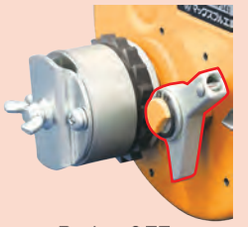
● MAXPULL Special Winch addresses the needs of dust proof, rust-prevention and noiseless

Releasable Brake

Safety design and convenient structure for lifting and pulling



Brake-ON
(During normal use)



Brake-OFF
(Drum Idle Condition)

This type can release the brake by disengaging the stopper during a no load condition.
By idling the drum, the wire ropes can rewind quickly from the drum after removal of the handle.
Wire ropes are usually housed on the drum but the wire rope can conveniently be drawn out at the time of operation.
These braking units can be mounted to all models made of stainless steel and steel.
When ordering, please specify the models such as GM-5 or ESB-5.

⚠DANGER Do not release the brake during vertical lifting. This will result in serious accidents or injuries due to the falling load.

Armless Stopper (Type SI)

Safety design when brake release is unnecessary

Closed-type clutch cover
(Stopper not exposed)

Stopper for Type SI
(Armless Stopper)

This type is suitable for use in public spaces where many people are near
(lifting and lowering for various gymnasium nets, goal nets, and other stage equipment).
It eliminates the stopper arm which releases the brake, and it incorporates a different stopper mechanism in a closed-type clutch cover ⑩ to prevent the risk of accidentally releasing the stopper during operation.
These braking units can be mounted to all models made of stainless steel and steel.
When ordering, please specify the models such as GM-5-SI or ESB-5-SI.

Dust & Splash-proof Brake (Type SIC)

Protection design of dust proof & splash-proof

Shielding Ring
and Shielding Packing

When main unit is installed

Like the SI models, there is no stopper arm that releases the brake and idles the drum. The stopper mechanism is covered with a closed-type clutch cover ⑩.
In order to make the entire brake mechanism dust and splash-proof and improve the sealing performance, use the "Shield Packing" on the mounting flange surface of the clutch cover ⑩ and "Shield Ring" on the sliding part with clutch ⑳.
As the inclusion of foreign matter from outside is reduced, the maintenance part of the brake part is also relatively long compared with other models.
In addition, the Shielding Ring and Shielding Packing reduces the noise emitted from the brake mechanism to a minimum.
These units can be mounted to all models made of stainless steel and steel.
When ordering, please specify the models such as GM-5-SIC or ESB-5-SIC.

IMPORTANT! This winch is designed as manual operation. Do not operate it with a motor of any kind. (Electric motor, pneumatic motor, hydraulic motor etc.)
Never alter or modify the winch in any way. It could cause major accident by the structure of the brake.

Noiseless (Type NSIL)

Noiseless design that eliminates clicking sound

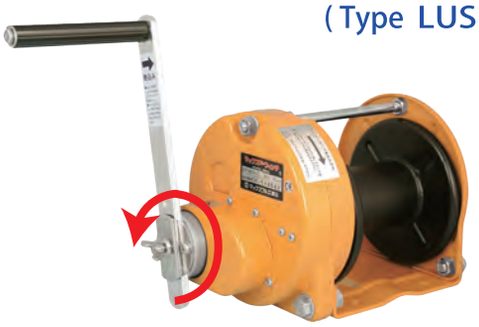
Brake unit of the noiseless type

The stopper during winding is separated from the ratchet gear

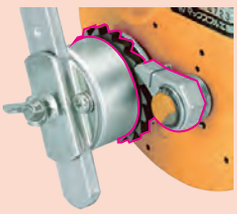
This type is noiseless and was developed with a brake to operate without any sound for quiet environments.
During the handle operation and due to the action of two magnetic flux enhancement plates, the stopper ㉓ does not contact the ratchet gear ⑱.
This makes it possible to wind and rewind without noise, and the brake will apply automatically when the handle is not in motion.
Even if the magnet and supporting parts fail, the safety design allows the spare spring to work immediately and the brake operates.
These braking units can be mounted to all models of GM and MC.When ordering, please specify the models such as GM-5-NSIL.

* Due to reactions of the magnetic material with stainless steel and clicking sounds generated from ratchet handles, the ESB and MR models cannot be manufactured in NSIL types.
* In this mechanism, you are unable to externally release the brake.

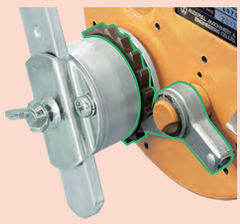
Counter-clockwise Rotation (Type LUSI)



Winding with counter-clockwise rotation, rewinding with clockwise rotation



Stopper for counter - clockwise rotation (LUSI) and direction of ratchet gear



Standard stopper and direction of ratchet gear

Unlike the normal winding of the wire rope in clockwise rotation, this type winds the wire rope in counter-clockwise rotation.
The "Right triple-thread screw" machining applied to the clutch pinion⑭ and clutch⑳ of the "Mechanical Brake Mechanism" explained on page 5 is changed to "Left triple-thread screw".
Similarly, the ratchet gear⑱ and stopper㉓ are installed in the opposite direction to apply the brake in a counter-clockwise rotation.
These braking units can be mounted to all models made of stainless steel and steel.
When ordering, please specify the models such as GM-5-LUSI or ESB-5-LUSI.

* Shape and dimensions are same as the models using clockwise rotation.

Two-wire ropes on one drum (Type NWD)

Simultaneously winds two wire ropes

Cross-partition prevention board

Two-wire anchoring plates

This type can horizontally lift the load with two wire ropes attached to both ends of a long object.
Suitable for long signboards, art batons to use on stage, wider lids and others.
In the center of the drum, a "Cross-partition prevention board" stops the left and right ropes from crossing.
In order to anchor the ends of the two wire ropes, anchoring plates for each wire are attached to both sides of drum plates.
These units can be mounted to all models other than the both-directions pulling endless winch.
When ordering, please specify the models like GM-1-NWD, MR-3-NWD.

Both Directions Pulling Endless Winch

●This is an epochal endless hand winch for both direction pulling equipped with unique functions.

This winch have two drums that rotate the same direction at the same time with several special wire rope grooves, and two pressure rollers attached on the each drum. It provides a stable pulling power in both directions and prevent loosing of wire rope with only one main body.

It is easy to wind a wire rope onto the drum from any portion of the endless wire rope.

This winch is effective in the pulling of left and right directions on the horizontal place. It is also possible to pull in one direction such as towing because the synergistic effect of the drum with special wire rope grooves and the pressure rollers have a firm grip on the wire rope. Moreover, it is small and lightweight, so it can be used in various places.

M E - 5
500kg (1,100lbs)

RoHS CE

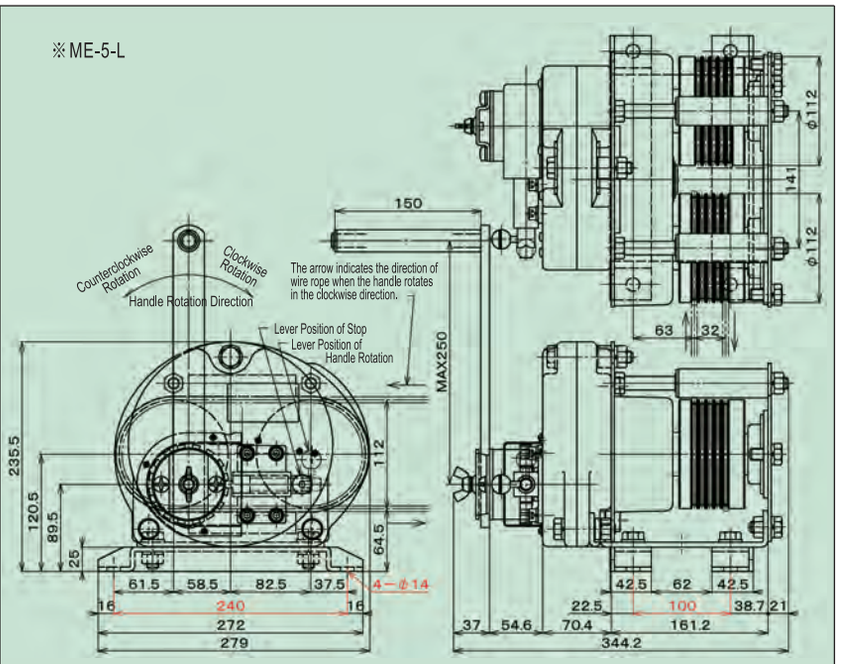
M E - 5 - B

Mechanical Brake Type

M E - 5 - L

Latching Brake Type

※ME-5-L



Model	M E − 5	Wire Rope	φ6 mm (6×37) (1/4 inch (6×36))	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	9.9kg (21.8lbs)	Gear Ratio	13.3 : 1
Wire Rope Tension	500kg (1,100lbs)	Winding Wire Rope	4 Wraps			Weight (Body + Handle)	30.0kg (66.1lbs)

M E - 10
1,000kg (2,200lbs)

RoHS CE

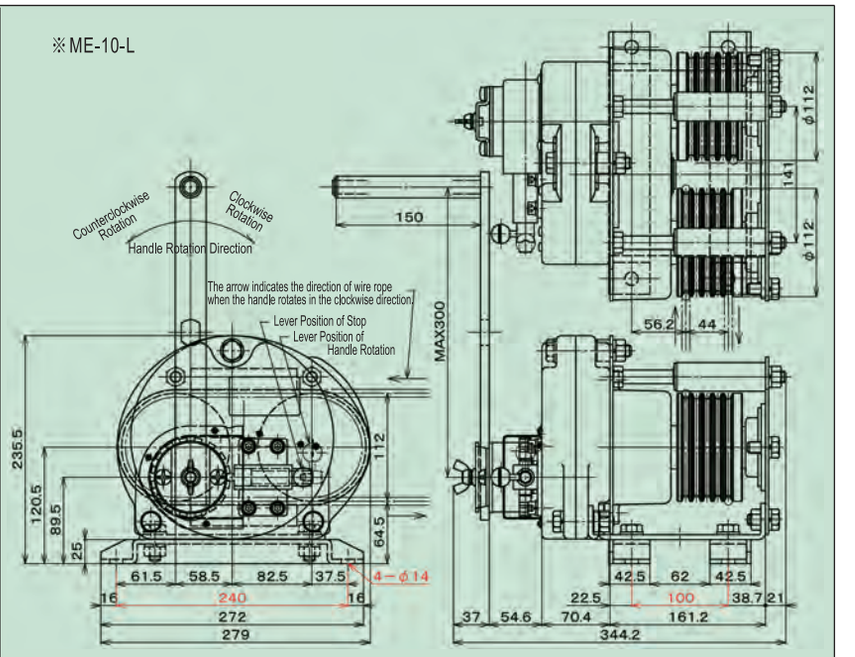
M E - 10 - B

Mechanical Brake Type

M E - 10 - L

Latching Brake Type

※ME-10-L



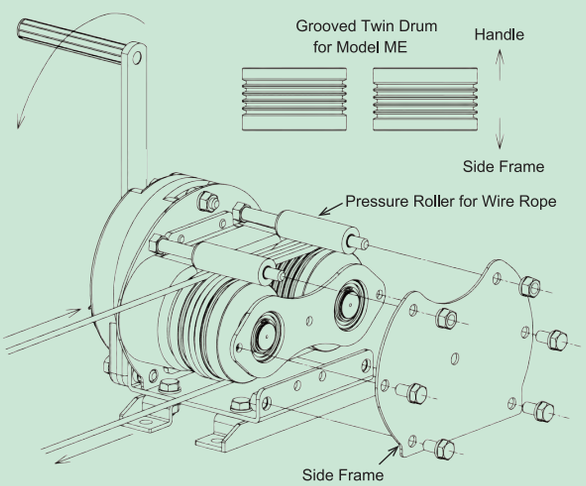
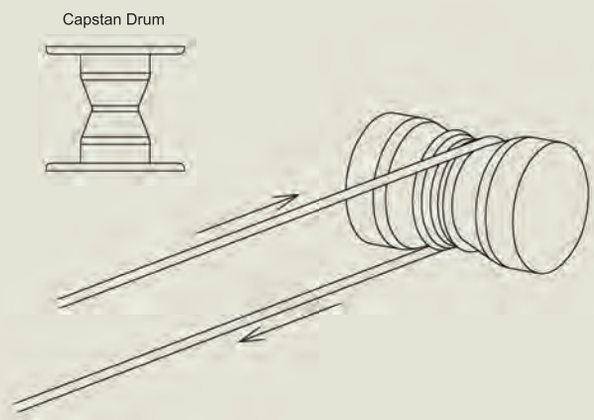
Model	M E − 10	Wire Rope	φ8 mm (6×37) (5/16inch (6×36))	Handle Force Handle Length (Effective Max.) 300mm (11.81inch)	11.6kg (25.6lbs)	Gear Ratio	19 : 1
Wire Rope Tension	1,000 kg (2,200 lbs)	Winding Wire Rope	4 Wraps			Weight (Body + Handle)	30.0kg (66.1lbs)

IMPORTANT! Pull the wire rope that is sent out and apply the tension to prevent loosening the wire rope between the drums when the wire rope is not used as the endless type.
Dimensions are in metric and subject to change without notice.

Brake Selection

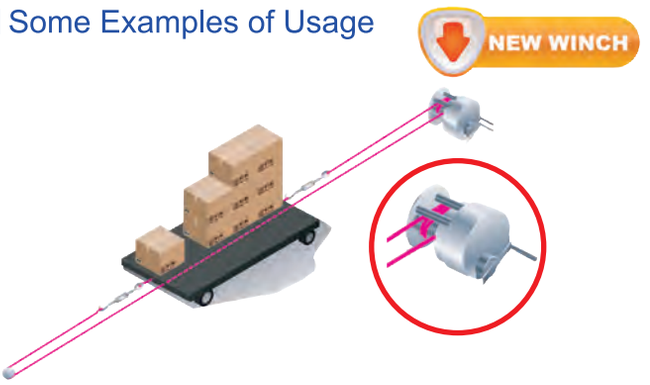
Mechanical Brake Type (B)	Latching Brake Type (L)
It is screw type mechanical brake that is used the weight of the load. Brake automatically works only in the operation of the handle. It is effective for the lifting work and it is an automatic brake in one direction. In the horizontal endless pulling, however, the mechanical brake does not work when the external force toward the winch acts on the pulling load because the mechanical brake does not work by the direction of the torque that applied to the drum. Therefore, in general pulling work, it is recommended to select the latching brake type.	It is a brake system to keep the state of the winch intact when the brake is applied. While the brake is being applied, it is impossible to move in both (lifting and lowering) directions. It is useful when the load should not be moved by external factors. When the brake is being released, the winch cannot be used for lifting work because it is the free state.

Difference between Our Unique Grooved Twin Drum and General Capstan Drum

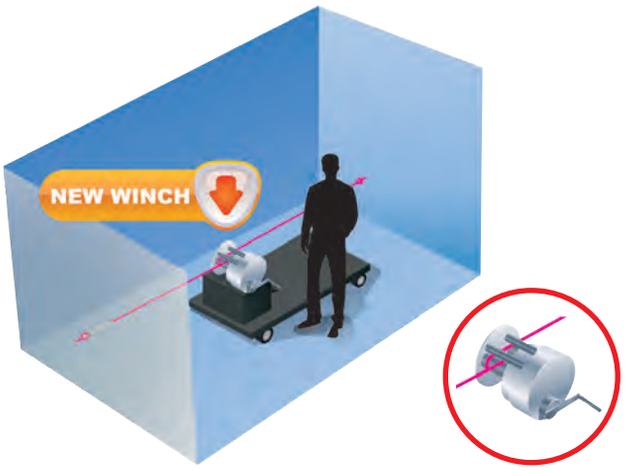
Our Unique Grooved Twin Drum	General Capstan Drum
	
① Wire Rope Installation	
Side frame is removable. It will be the cantilevered state when removing the it. It is easy to wind the wire rope to the drum from any portion.	It is necessary to wind 5 or 7 wraps of wire rope onto the drum and apply the tension to the wire rope being hauled in to avoid slipping of the drum and wire rope wound on the drum.
② Pressure Roller for Wire Rope	
Pressure roller that is pressed against the wire rope to keep the wire rope onto the groove of drum when the wire rope is stretched or tension is missing are standard.	The drum is in the shape of hourglass shape to gather the wire rope to the center of drum. On its structure, it is impossible to attach the pressure roller for wire rope.
③ Slack of Wire Rope	
Higher frictional resistance occurs between the wire rope and the drum by fitting the wire rope into the special groove. And furthermore, the wire is surely prevented from loosening because the pressure roller for wire rope is attached on each drum.	Tension is always necessary and wire rope loosens easily by the drum shape of hourglass. Frictional resistance of the drum and the wire rope cannot be maintained except that the tension is applied. Tension cannot be kept when the wire rope is stretched, the frictional resistance of the drum and the wire rope is reduced and it is likely to run idle.
④ Wear of Wire Rope	
Several special groove that was designed from the optimum friction coefficient is engraved on the two drums. It has a structure that the wire rope is not in contact with each other because the groove is independent and parallel. There is no damage to the wire rope by contacting with each other.	As the load is applied, the wire rope gathers in the center of the drum by the drum shape of hourglass and the wire rope rubs with each other. The wire rope always slips and rubs on the drum, and it wear down easily.

IMPORTANT! Pull the wire rope that is sent out and apply the tension to prevent loosening the wire rope between the drums when the wire rope is not used as the endless type.

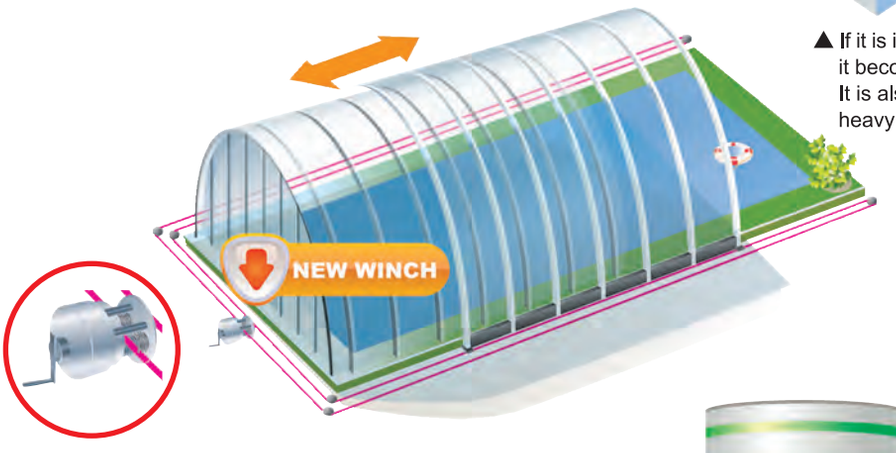
Some Examples of Usage



▲ It is suitable for both directions pulling of truck.
If the pulley is used effectively, the handle can be operated from any

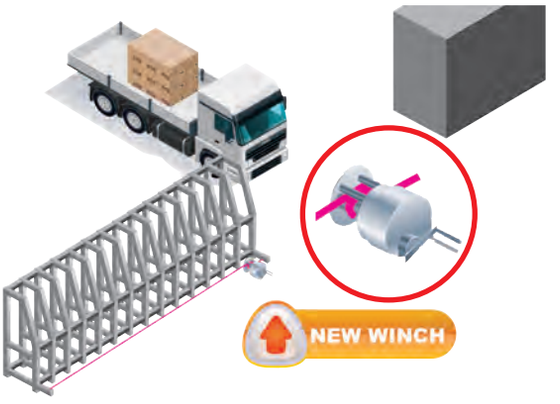


▲ If it is integrated into the large mechanical equipment, it becomes movable at the time of maintenance.
It is also suitable for the horizontal movement of the heavy machinery.



▲ The horizontal movements such as dome-shaped tents, accordion-type hoods and arcades are possible.

◀ It is possible to open and close the lid of the chimney or the discharge port of the silo by both directions pulling.



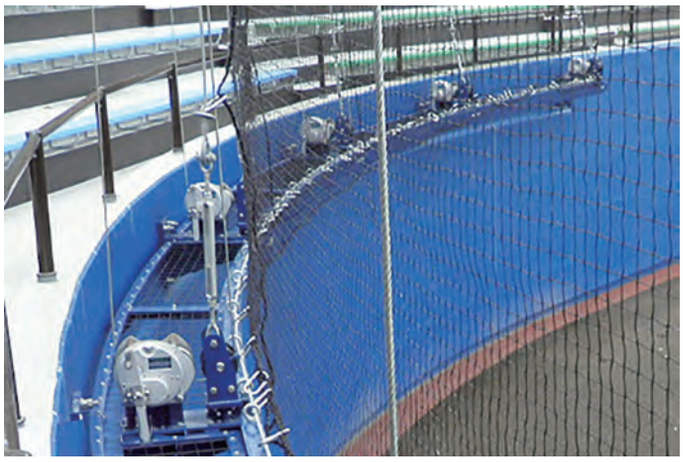
▲ It is possible to open and close the gate by anchoring the wire rope at both ends of it.

This is quite useful not only lifting work of the survey equipment and the cleaning machine in the chimney but also pullout work if the power cable is connected with the wire rope. ▶

▲ If the safety nets is moved horizontally, it is possible to partition in the gymnasium and athletic park.
Additionally, the both directions pulling of the curtain for the window is also possible.

IMPORTANT! Pull the wire rope that is sent out and apply the tension to prevent loosening the wire rope between the drums when the wire rope is not used as the endless type.

Usage Example

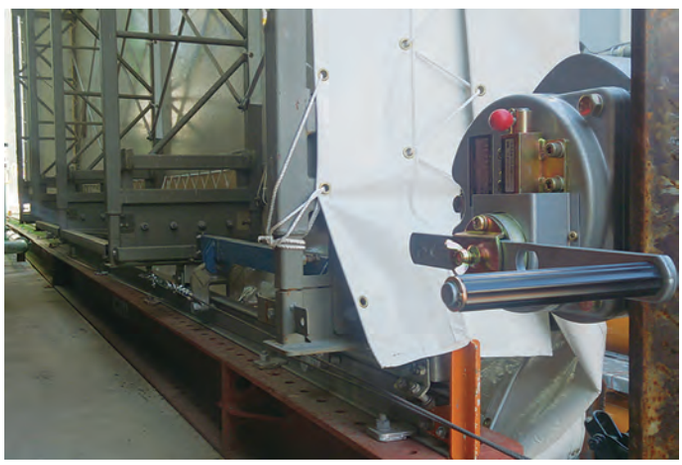


▲For lifting and lowering baseball backstop netting (forced descent)

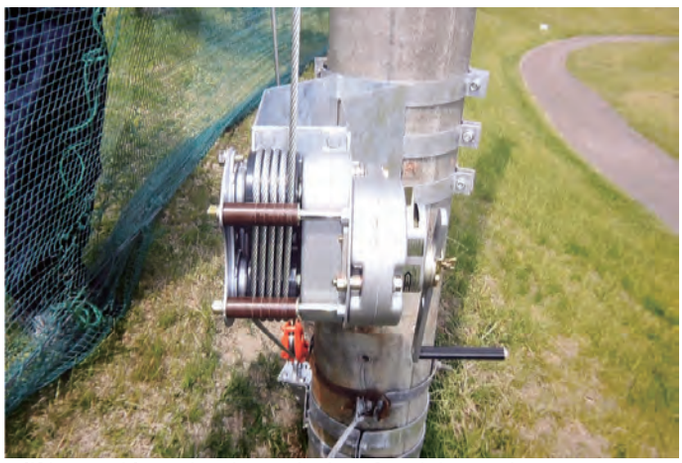
▲For simultaneous angle adjustment of multiple solar panels

▲For opening and closing vinyl roofing

▲For opening and closing sliding doors



▲For large tent slides



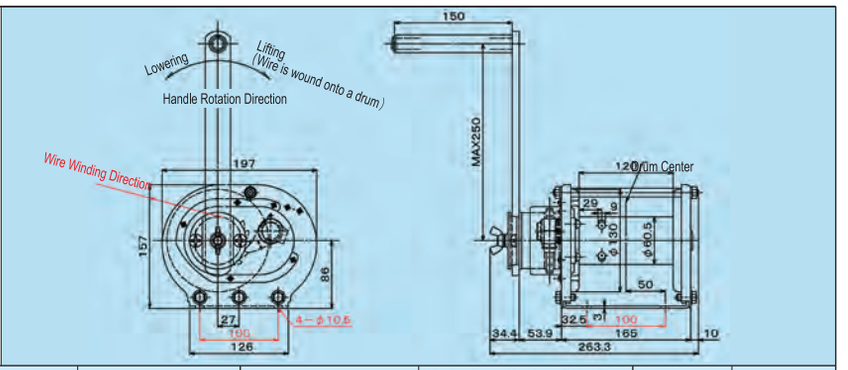
▲For partition netting at golf courses for simultaneous lifting and lowering (two winches for eight nets)

IMPORTANT! Pull the wire rope that is sent out and apply the tension to prevent loosening the wire rope between the drums when the wire rope is not used as the endless type.

Stainless Steel (Rotating) Winch Buffing (SB) • Electropolishing (ESB)

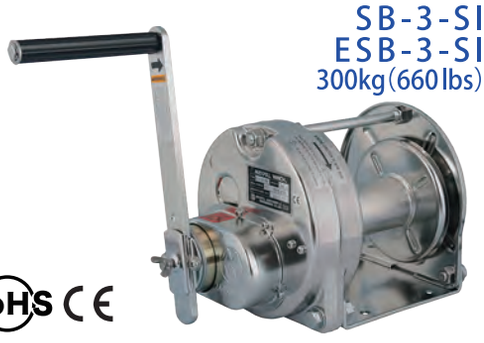
※ To order, please specify either buffing or electrolytic polishing. Because there is a difference in the price, please contact us for details.
●Select this type when the handle can rotate 360 degrees on mounting position.

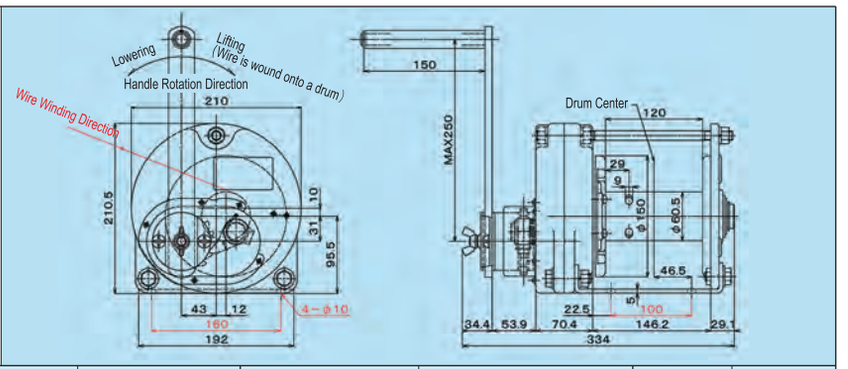
SB-1-SI / ESB-1-SI 100kg (220 lbs)



Model	SB-1-SI / ESB-1-SI	Drum Capacity	6-Layers Winding φ5 mm (6×19)×35 m (3/16 inch (7×19)×114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less				1st Layer : 14.6 kg (32.2 lbs) 3rd Layer : 19.0 kg (41.9 lbs) 4th Layer : 21.2 kg (46.7 lbs)	Weight (Body + Handle)	7.4 kg (16.3 lbs)

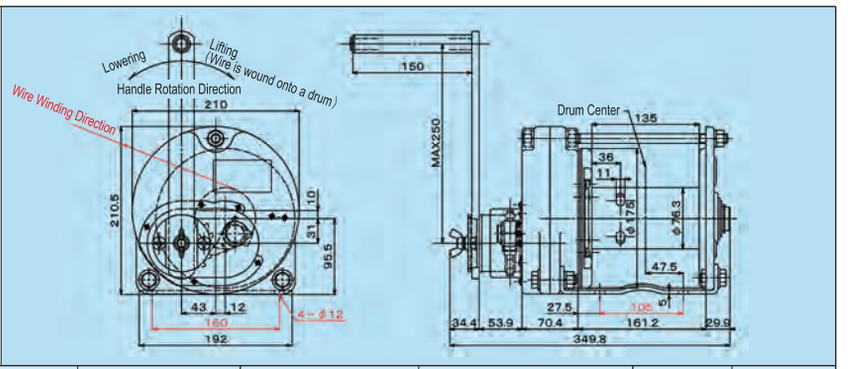
SB-3-SI / ESB-3-SI 300kg (660 lbs)





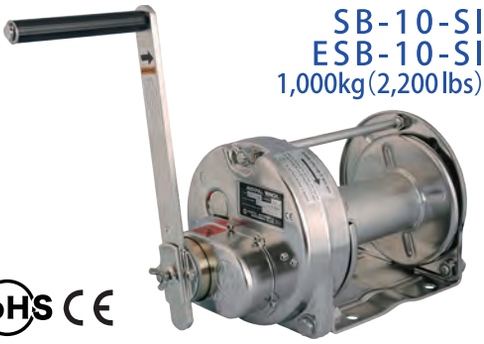
Model	SB-3-SI / ESB-3-SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×32 m (1/4 inch (6×36)×104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less				1st Layer : 7.7 kg (7 b) 3rd Layer : 10.5 kg (23.1 lbs) 5th Layer : 13.3 kg (29.3 lbs)	Weight (Body + Handle)	14.3 kg (31.5 lbs)

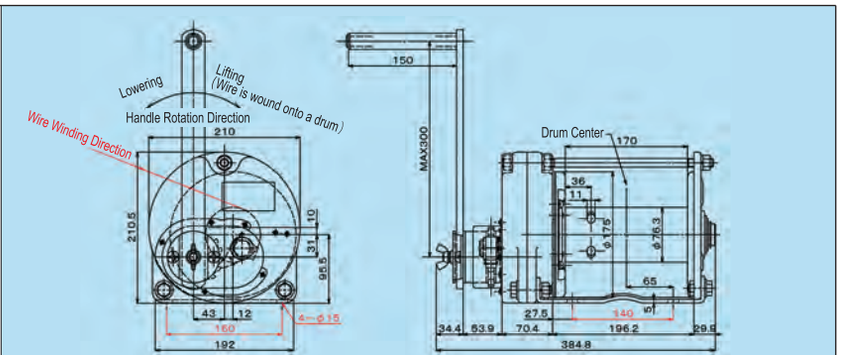
SB-5-SI / ESB-5-SI 500kg (1,100 lbs)



Model	SB-5-SI / ESB-5-SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×40 m (1/4 inch (6×36)×131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less				1st Layer : 11.1 kg (24.5 lbs) 3rd Layer : 14.4 kg (31.8 lbs) 5th Layer : 17.7 kg (39.0 lbs)	Weight (Body + Handle)	15.6 kg (34.4 lbs)

SB-10-SI / ESB-10-SI 1,000kg (2,200 lbs)





Model	SB-10-SI / ESB-10-SI	Drum Capacity	**5-Layers Winding φ8 mm (6×37)×35 m (5/16 inch (6×36)×114 ft)**	Handle Force Handle Length (Effective Max.) 300 mm (11.81 inch)	Winding Layer Number of Wire Rope	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs) 3th Layer or Less				1st Layer : 13.5 kg (29.8 lbs) 2nd Layer : 16.0 kg (35.3 lbs) 3rd Layer : 18.5 kg (40.8 lbs)	Weight (Body + Handle)	16.6 kg (36.6 lbs)

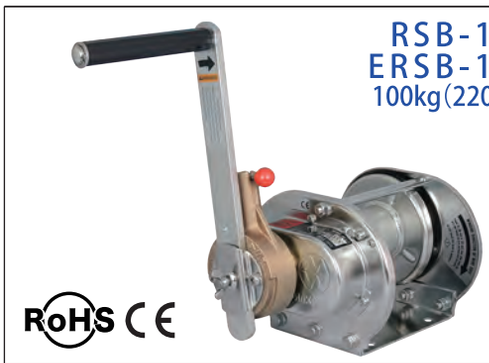
※ Drum capacity include the length of extra maintenance winding.
※ Wire rope tension is the value of standard layer or less. If the winding layer number exceeds the standard layer, decrease the wire rope tension according to the ratio.

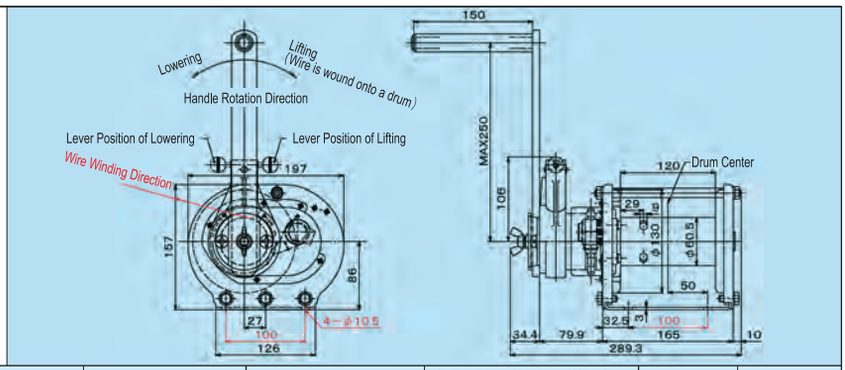
Stainless Steel (Ratchet) Winch Buffing (RSB) · Electropolishing (ERSB)

MAXPULL WINCH

● It permits reciprocating handle movement in both direction for lifting and lowering load, and accommodates installation in cramped locations such as wall and floor. It can be used by rotating the handle a full 360 degrees in addition to the above-mentioned.

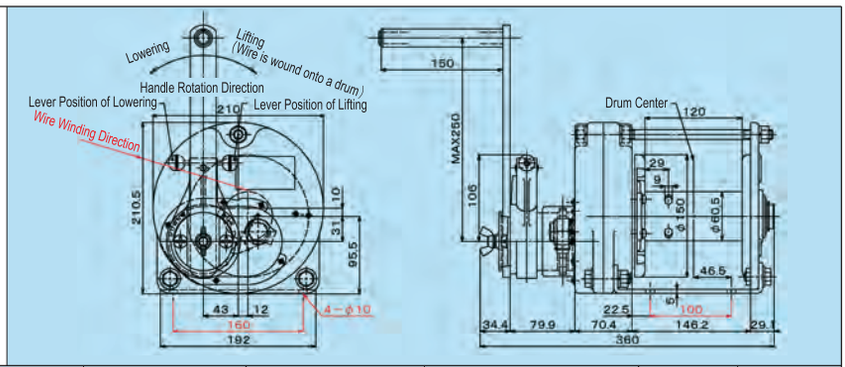
RSB-1-SI / ERSB-1-SI 100kg (220lbs)





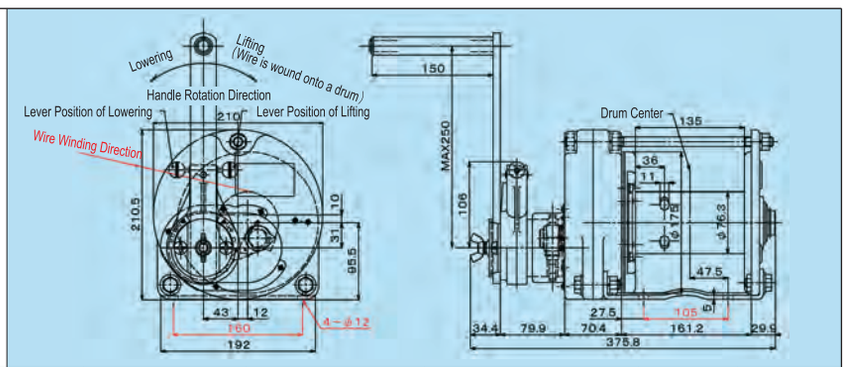
Model	RSB−1−SI / ERSB−1−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19)×35 m (3/16 inch (7×19)×114ft)	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less				1st Layer : 14.6kg (32.2lbs) 3rd Layer : 19.0kg (41.9lbs) 4th Layer : 21.2kg (46.7lbs)	Weight (Body + Handle)	9.0kg (19.8lbs)

RSB-3-SI / ERSB-3-SI 300kg (660lbs)



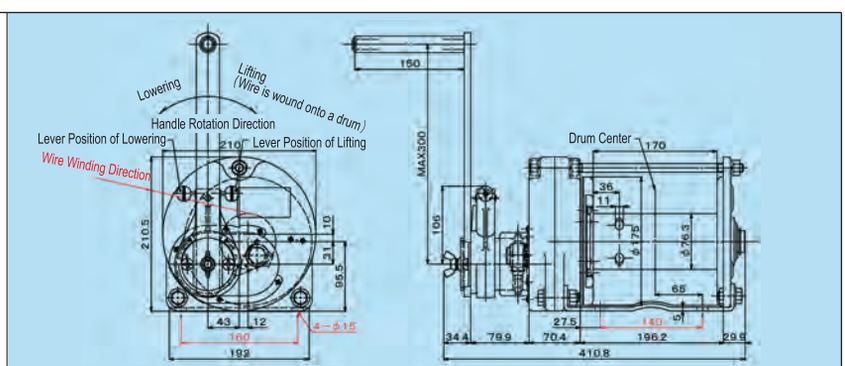
Model	RSB−3−SI / ERSB−3−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×32 m (1/4 inch (6×36)×104ft)	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	Winding Layer Number of Wire Rope	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less				1st Layer : 7.7kg (17.0lbs) 3rd Layer : 10.5kg (23.1lbs) 5th Layer : 13.3kg (29.3lbs)	Weight (Body + Handle)	15.9kg (35.1lbs)

RSB-5-SI / ERSB-5-SI 500kg (1,100lbs)



Model	RSB−5−SI / ERSB−5−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×40 m (1/4 inch (6×36)×131ft)	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	Winding Layer Number of Wire Rope	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less				1st Layer : 11.1kg (24.5lbs) 3rd Layer : 14.4kg (31.8lbs) 5th Layer : 17.7kg (39.0lbs)	Weight (Body + Handle)	17.2kg (37.9lbs)

RSB-10-SI / ERSB-10-SI 1,000kg (2,200lbs)



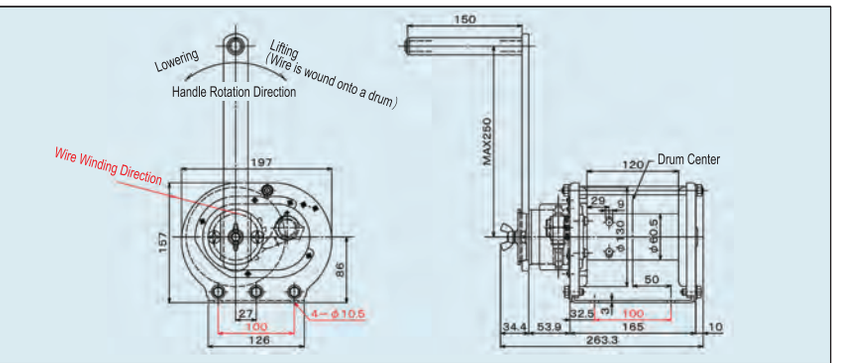
Model	RSB−10−SI / ERSB−10−SI	Drum Capacity	5-Layers Winding φ8 mm (6×37)×35 m (5/16 inch (6×36)×114ft)	Handle Force Handle Length (Effective Max.) 300mm (11.81inch)	Winding Layer Number of Wire Rope	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs) 3th Layer or Less				1st Layer : 13.5kg (29.8lbs) 2nd Layer : 16.0kg (35.3lbs) 3rd Layer : 18.5kg (40.8lbs)	Weight (Body + Handle)	18.2kg (40.1lbs)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Stainless Steel (Rotating) Winch Metallic Painting (ST)

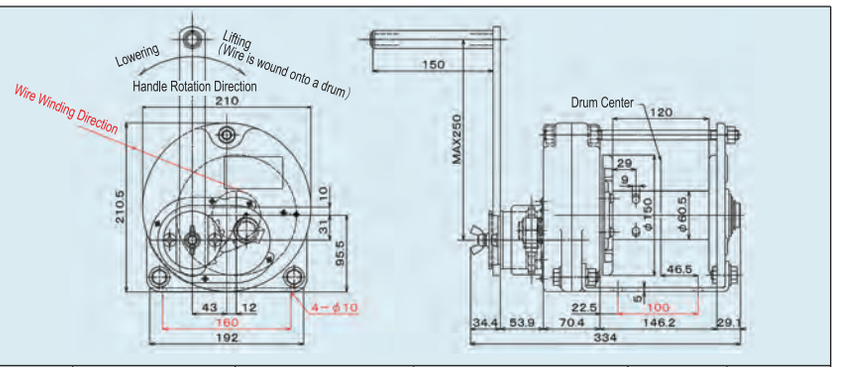
●Select this type when the handle can rotate 360 degrees on mounting position.

ST-1-SI
100kg(220lbs)



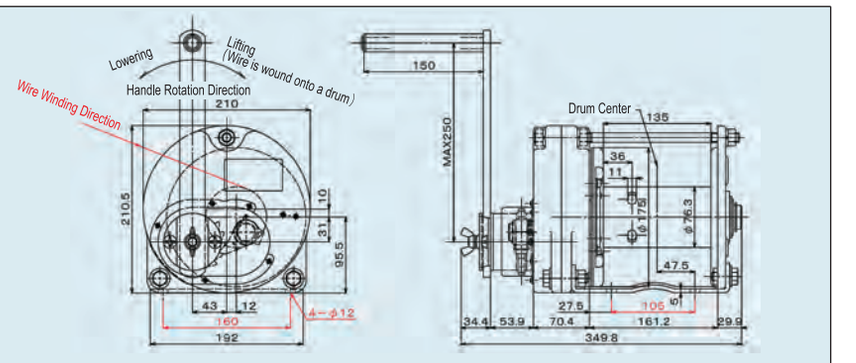
Model	ST−1−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19)×35 m (3/16 inch (7×19)×114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 14.6 kg (32.2 lbs) 3rd Layer : 19.0 kg (41.9 lbs) 4th Layer : 21.2 kg (46.7 lbs)	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less					Weight (Body + Handle)	7.4 kg (16.3 lbs)

ST-3-SI
300kg(660lbs)



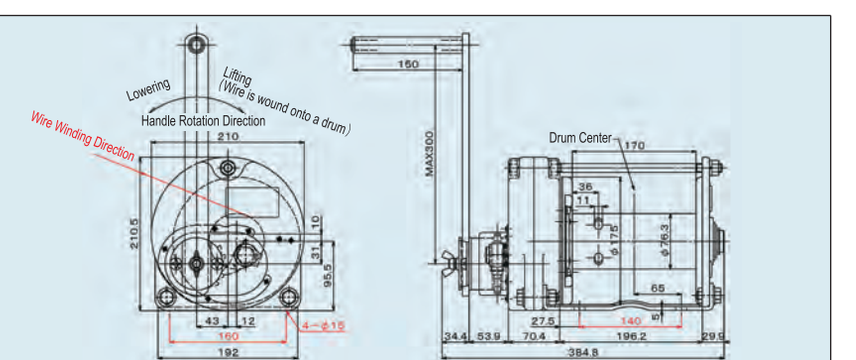
Model	ST−3−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×32 m (1/4 inch (6×36)×104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 7.7 kg (17.0 lbs) 3rd Layer : 10.5 kg (23.1 lbs) 5th Layer : 13.3 kg (29.3 lbs)	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less					Weight (Body + Handle)	14.3 kg (31.5 lbs)

ST-5-SI
500kg(1,100lbs)



Model	ST−5−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×40 m (1/4 inch (6×36)×131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 11.1 kg (24.5 lbs) 3rd Layer : 14.4 kg (31.8 lbs) 5th Layer : 17.7 kg (39.0 lbs)	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less					Weight (Body + Handle)	15.6 kg (34.4 lbs)

ST-10-SI
1,000kg(2,200lbs)



Model	ST−10−SI	Drum Capacity	5-Layers Winding φ8 mm (6×37)×35 m (5/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 300 mm (11.81 inch)	Winding Layer Number of Wire Rope 1st Layer : 13.5 kg (29.8 lbs) 2nd Layer : 16.0 kg (35.3 lbs) 3rd Layer : 18.5 kg (40.8 lbs)	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs) 3th Layer or Less					Weight (Body + Handle)	16.6 kg (36.6 lbs)

※ Drum capacity include the length of extra maintenance winding.
※ Wire rope tension is the value of standard layer or less. If the winding layer number exceeds the standard layer, decrease the wire rope tension according to the ratio.

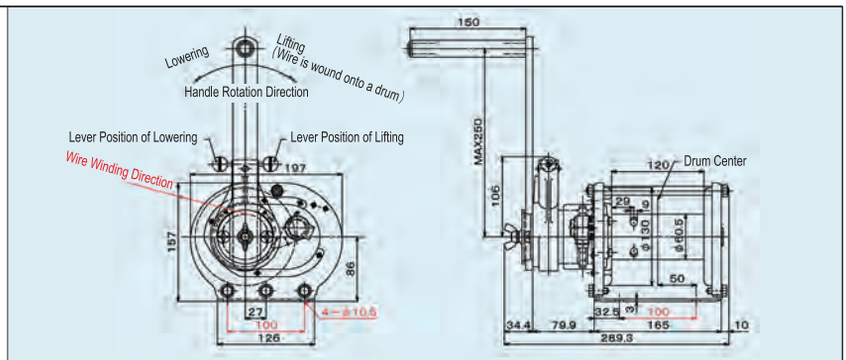
Stainless Steel (Ratchet) Winch

MAXPULL WINCH

Metallic Painting (RST)

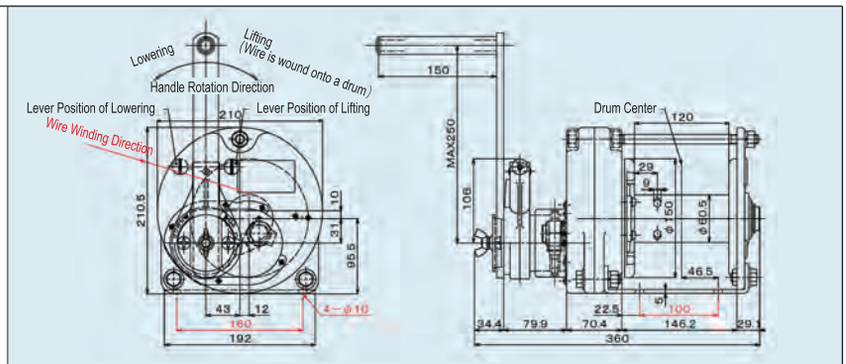
●It permits reciprocating handle movement in both direction for lifting and lowering load, and accommodates installation in cramped locations such as wall and floor. It can be used by rotating the handle a full 360 degrees in addition to the above-mentioned.

RST-1-SI
100kg(220lbs)



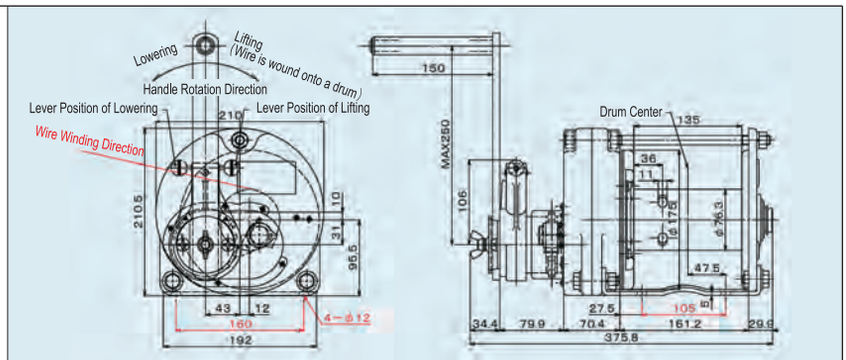
Model	RST−1−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19)×35 m (3/16 inch (7×19)×114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 14.6kg (32.2lbs) 3rd Layer : 19.0kg (41.9lbs) 4th Layer : 21.2kg (46.7lbs)	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less					Weight (Body + Handle)	9.0kg (19.8lbs)

RST-3-SI
300kg(660lbs)



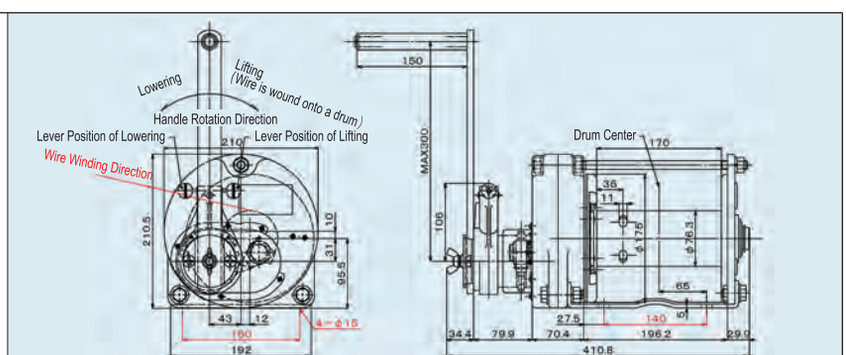
Model	RST−3−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×32 m (1/4 inch (6×36)×104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 7.7kg (17.0lbs) 3rd Layer : 10.5kg (23.1lbs) 5th Layer : 13.3kg (29.3lbs)	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less					Weight (Body + Handle)	15.9kg (35.1lbs)

RST-5-SI
500kg(1,100lbs)



Model	RST−5−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×40 m (1/4 inch (6×36)×131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 11.1kg (24.5lbs) 3rd Layer : 14.4kg (31.8lbs) 5th Layer : 17.7kg (39.0lbs)	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less					Weight (Body + Handle)	17.2kg (37.9lbs)

RST-10-SI
1,000kg(2,200lbs)



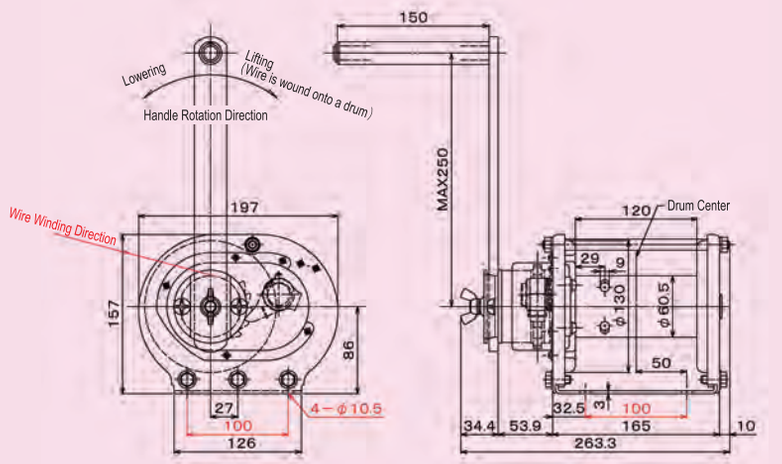
Model	RST−10−SI	Drum Capacity	5-Layers Winding φ8 mm (6×37)×35 m (5/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 300 mm (11.81 inch)	Winding Layer Number of Wire Rope 1st Layer : 13.5kg (29.8lbs) 2nd Layer : 16.0kg (35.3lbs) 3rd Layer : 18.5kg (40.8lbs)	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs) 3th Layer or Less					Weight (Body + Handle)	18.2kg (40.1lbs)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Steel Hot Dip Galvanizing (Rotating) Winch

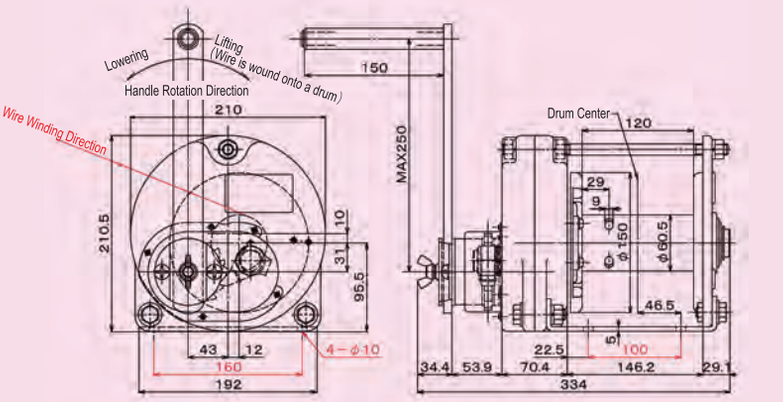
●Select this type when the handle can rotate 360 degrees on mounting position.
●It has excellent rust-proof, salt tolerance, and lower cost than stainless steel.

GM-1-GS-SI
100kg(220lbs)



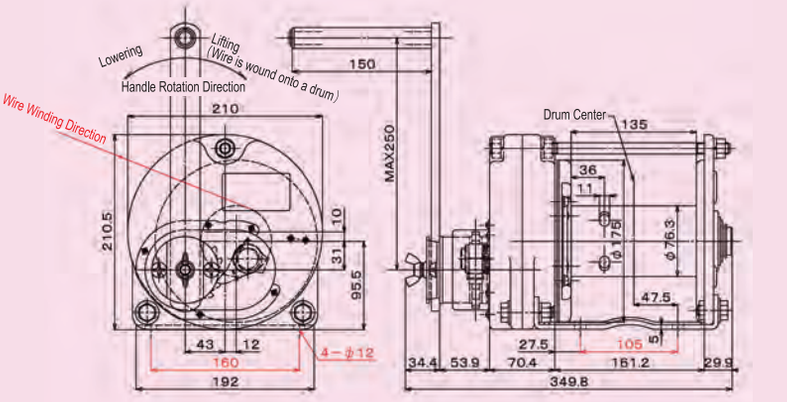
Model	GM−1−GS−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19)×35 m (3/16 inch (7×19)×114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less				1st Layer : 14.6kg (32.2lbs) 3rd Layer : 19.0kg (41.9lbs) 4th Layer : 21.2kg (46.7lbs)	Weight (Body + Handle)	7.2kg (15.9lbs)

GM-3-GS-SI
300kg(660lbs)



Model	GM−3−GS−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×32 m (1/4 inch (6×36)×104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less				1st Layer : 7.7kg (17.0lbs) 3rd Layer : 10.5kg (23.1lbs) 5th Layer : 13.3kg (29.3lbs)	Weight (Body + Handle)	14.1kg (31.1lbs)

GM-5-GS-SI
500kg(1,100lbs)

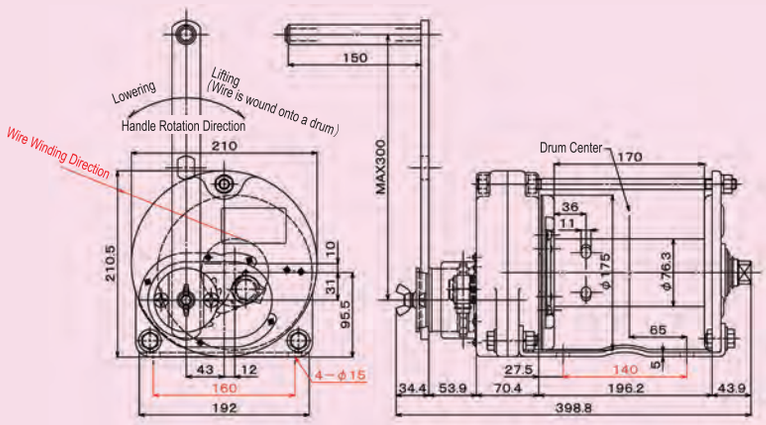


Model	GM−5−GS−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37)×40 m (1/4 inch (6×36)×131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less				1st Layer : 11.1kg (24.5lbs) 3rd Layer : 14.4kg (31.8lbs) 5th Layer : 17.7kg (39.0lbs)	Weight (Body + Handle)	15.4kg (34.0lbs)

※ Drum capacity include the length of extra maintenance winding.
※ Wire rope tension is the value of standard layer or less. If the winding layer number exceeds the standard layer, decrease the wire rope tension according to the ratio.

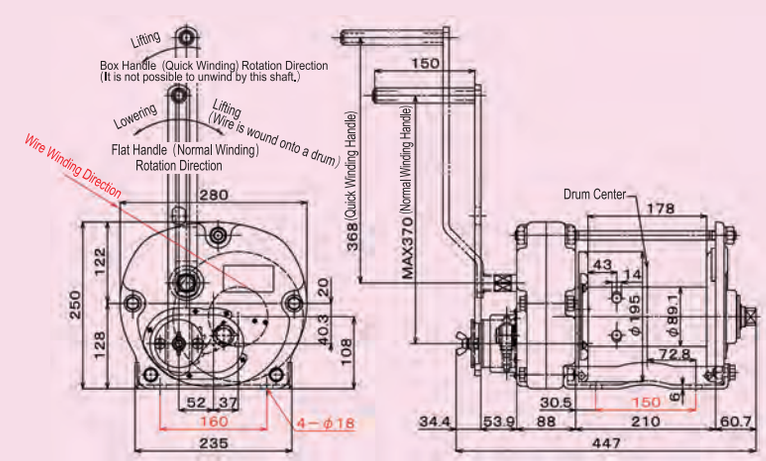
※It is possible to manufacture ratchet-handle type and capstan-drum type. To order, please specify as for example MR-5-GS-SI, MC-5-GS-SI.
※The parts performed hot dip galvanizing are gear case, gear case cover, drum, side frame, bed, clutch cover and handle arm.
※Stay bolt, bolts, screws, nuts, retaining ring and spring are made of SUS-304.

GM-10-GS-SI
1,000kg(2,200lbs)



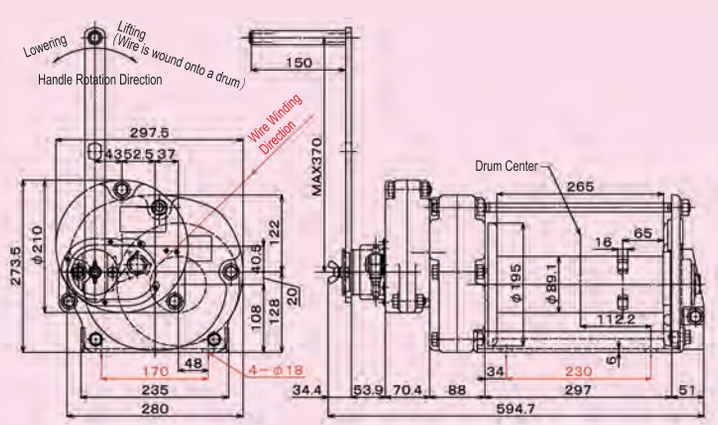
Model	GM−10−GS−SI	Drum Capacity	5-Layers Winding ϕ8 mm (6×37)× 35 m (5/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 300 mm (11.81 inch)	Winding Layer Number of Wire Rope	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs) 3th Layer or Less				1 st Layer : 13.5kg (29.8lbs) 2nd Layer : 16.0kg (35.3lbs) 3rd Layer : 18.5kg (40.8lbs)	Weight (Body + Handle)	16.4kg (36.2lbs)

GM-20-GS-SI
2,000kg(4,400lbs)



Model	GM−20−GS−SI	Drum Capacity	5-Layers Winding ϕ9 mm (6×37)× 38 m (3/8 inch (6×36)×124 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57inch)	Winding Layer Number of Wire Rope	Gear Ratio	Quick Winding 4 : 1 Normal Winding 20 : 1
Wire Rope Tension	Normal Winding : 400 kg (880 lbs) 3th Layer Quick Winding : 2,000 kg (4,400 lbs) or Less				1 st Layer : 16.0kg (35.3lbs) 2nd Layer : 18.9kg (41.7lbs) 3rd Layer : 21.8kg (48.1lbs)	Weight (Body + Handle)	28.2kg (62.2lbs)

GM-30-GS-SI
3,000kg(6,600lbs)



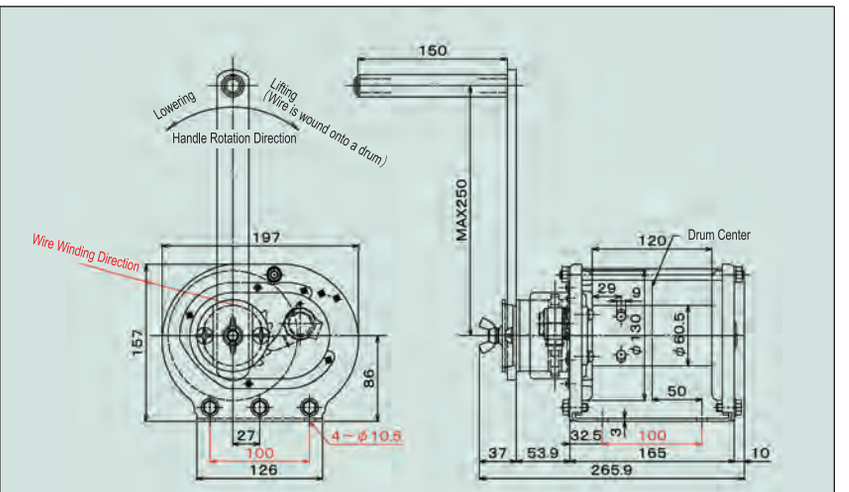
Model	GM−30−GS−SI	Drum Capacity	4-Layers Winding ϕ12 mm (6×37)× 35 m (7/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57inch)	Winding Layer Number of Wire Rope	Gear Ratio	35.5 : 1
Wire Rope Tension	3,000 kg (6,600 lbs) 3th Layer or Less				1 st Layer : 13.9kg (30.6lbs) 2nd Layer : 17.2kg (37.9lbs) 3rd Layer : 20.5kg (45.2lbs)	Weight (Body + Handle)	37.7kg (83.1lbs)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Steel (Rotating) Winch

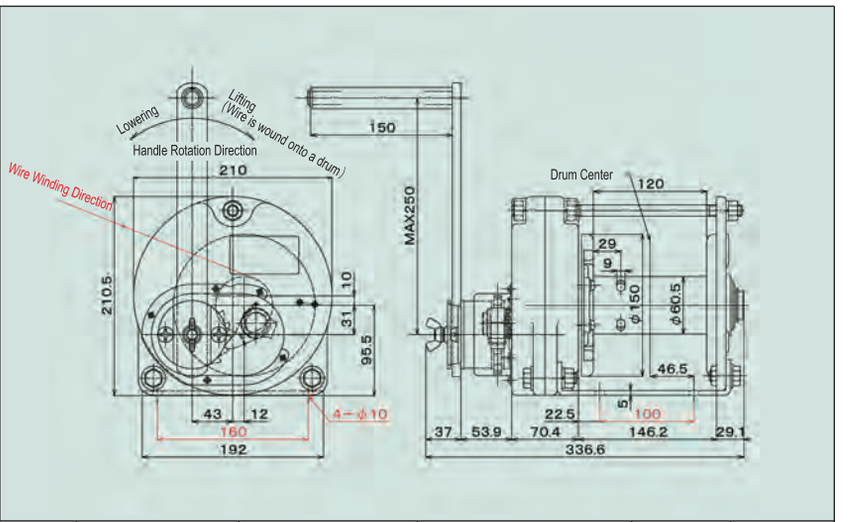
●Select this type when the handle can rotate 360 degrees on mounting position.

GM-1-SI
100kg (220lbs)



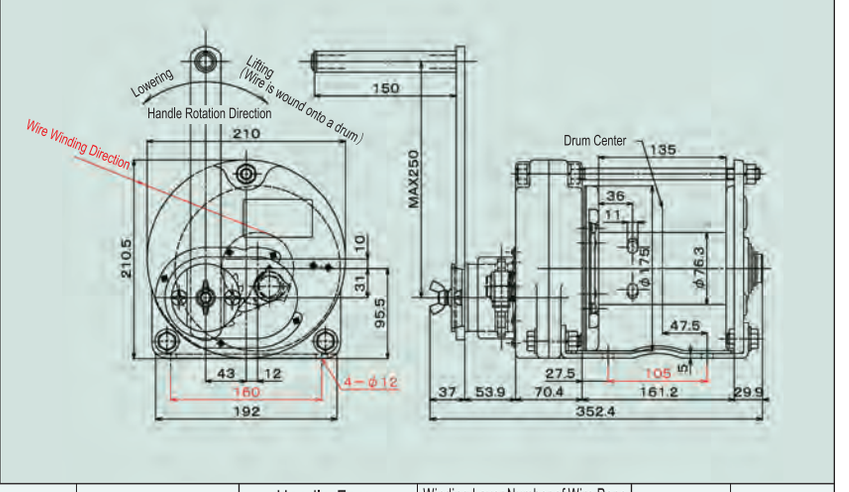
Model	GM−1−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19) × 35 m (3/16 inch (7×19) × 114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 14.6 kg (32.2 lbs) 3rd Layer : 19.0 kg (41.9 lbs) 4th Layer : 21.2 kg (46.7 lbs)	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less					Weight (Body + Handle)	7.2 kg (15.9 lbs)

GM-3-SI
300kg (660lbs)



Model	GM−3−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37) × 32 m (1/4 inch (6×36) × 104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 7.7 kg (17.0 lbs) 3rd Layer : 10.5 kg (23.1 lbs) 5th Layer : 13.3 kg (29.3 lbs)	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less					Weight (Body + Handle)	14.1 kg (31.1 lbs)

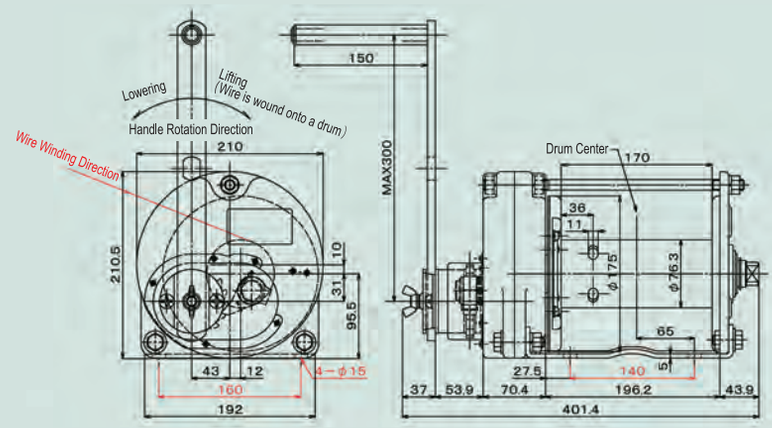
GM-5-SI
500kg (1,100lbs)



Model	GM−5−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37) × 40 m (1/4 inch (6×36) × 131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope 1st Layer : 11.1 kg (24.5 lbs) 3rd Layer : 14.4 kg (31.8 lbs) 5th Layer : 17.7 kg (39.0 lbs)	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less					Weight (Body + Handle)	15.4 kg (34.0 lbs)

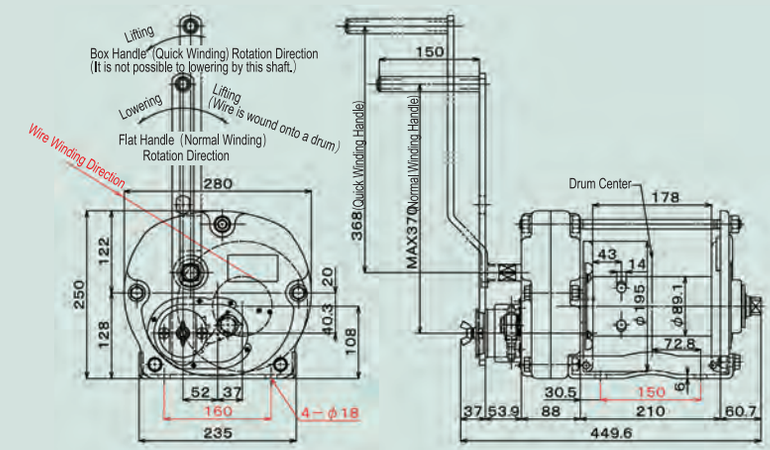
※ Drum capacity include the length of extra maintenance winding.
※ Wire rope tension is the value of standard layer or less. If the winding layer number exceeds the standard layer, decrease the wire rope tension according to the ratio.

GM-10-SI
1,000kg(2,200lbs)



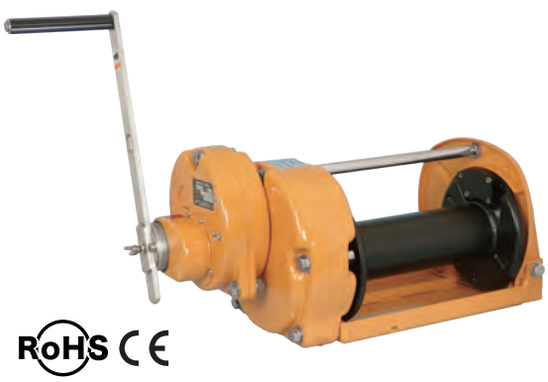
Model	GM−10−SI		Drum Capacity	5-Layers Winding ϕ8 mm (6×37)×35 m (5/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 300 mm (11.81inch)	Winding Layer Number of Wire Rope	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs)	3th Layer or Less				1 st Layer : 13.5kg (29.8lbs) 2nd Layer : 16.0kg (35.3lbs) 3rd Layer : 18.5kg (40.8lbs)	Weight (Body + Handle)	16.4kg (36.2lbs)

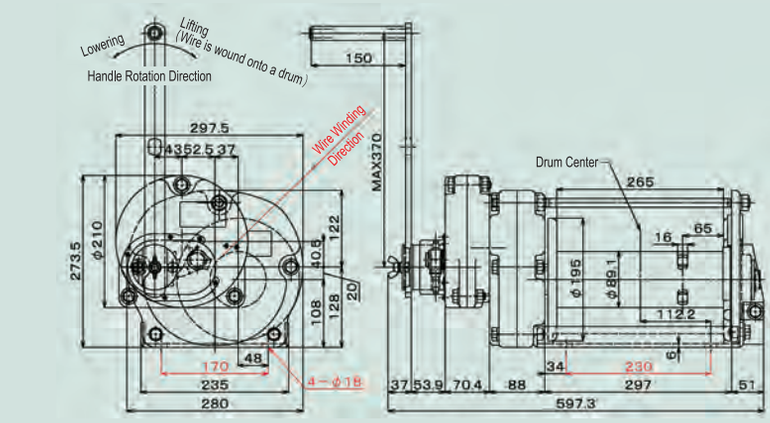
GM-20-SI
2,000kg(4,400lbs)



Model	GM−20−SI		Drum Capacity	5-Layers Winding ϕ9 mm (6×37)×38 m (3/8 inch (6×36)×124 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57inch)	Winding Layer Number of Wire Rope	Gear Ratio	Quick Winding 4 : 1 Normal Winding 20 : 1
Wire Rope Tension	Normal Winding : 400 kg (880 lbs) 3th Layer Quick Winding : 2,000 kg (4,400 lbs) or Less					1 st Layer : 16.0kg (35.3lbs) 2nd Layer : 18.9kg (41.7lbs) 3rd Layer : 21.8kg (48.1lbs)	Weight (Body + Handle)	28.2kg (62.2lbs)

GM-30-SI
3,000kg(6,600lbs)





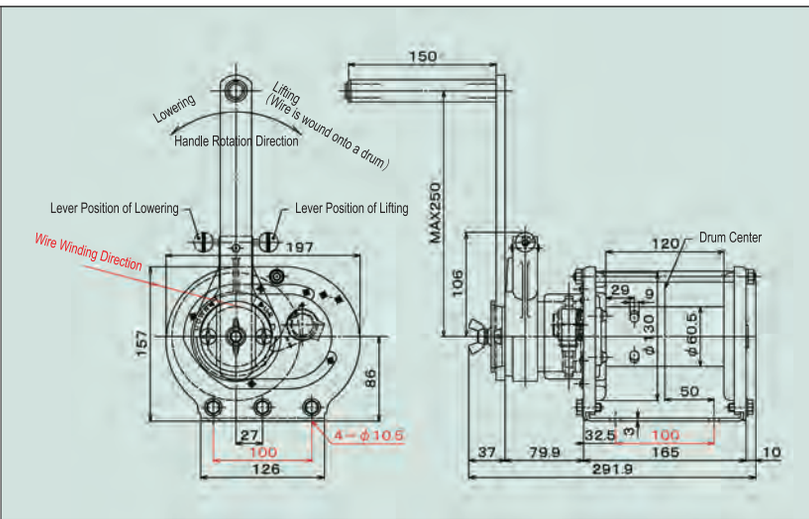
Model	GM−30−SI		Drum Capacity	4-Layers Winding ϕ12 mm (6×37)×35 m (7/16 inch (6×36)×114 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57inch)	Winding Layer Number of Wire Rope	Gear Ratio	35.5 : 1
Wire Rope Tension	3,000 kg (6,600 lbs)	3th Layer or Less				1 st Layer : 13.9kg (30.6lbs) 2nd Layer : 17.2kg (37.9lbs) 3rd Layer : 20.5kg (45.2lbs)	Weight (Body + Handle)	37.7kg (83.1lbs)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Steel (Ratchet) Winch

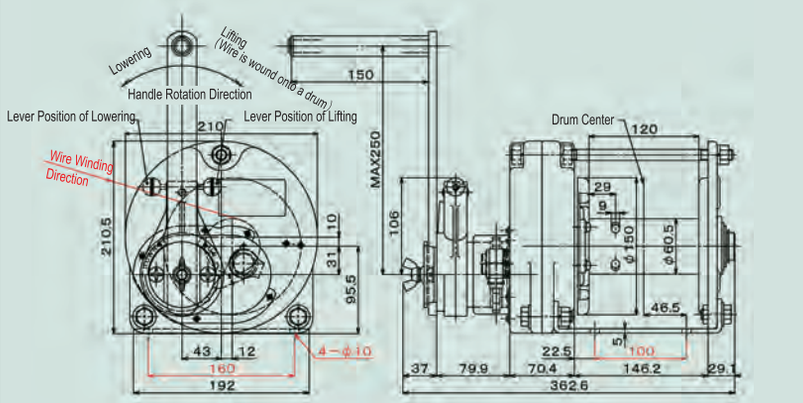
● It is a ratchet handle winch and using left-right motion of the handle to perform lifting and lowering, and can be installed directly in cramped locations where handle cannot be rotated such as wall and floor.

MR-1-SI
100kg (220lbs)



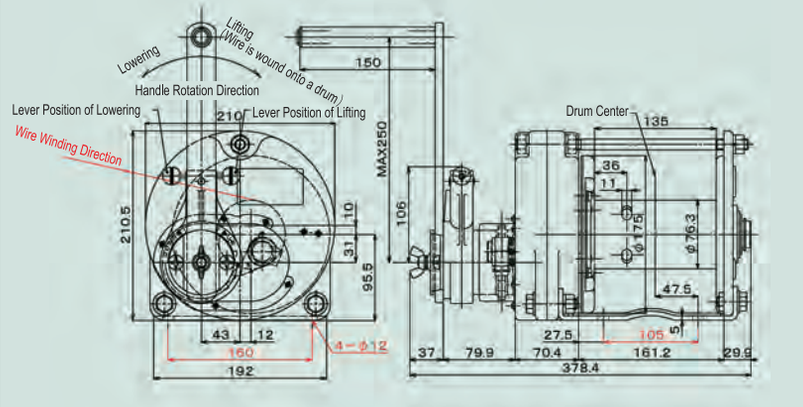
Model	MR−1−SI	Drum Capacity	6-Layers Winding φ5 mm (6×19) × 35 m (3/16 inch (7×19) × 114 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 4th Layer or Less				1st Layer : 14.6kg (32.2lbs) 3rd Layer : 19.0kg (41.9lbs) 4th Layer : 21.2kg (46.7lbs)	Weight (Body + Handle)	8.1kg (17.9lbs)

MR-3-SI
300kg (660lbs)



Model	MR−3−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37) × 32 m (1/4 inch (6×36) × 104 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	6.25 : 1
Wire Rope Tension	300 kg (660 lbs) 5th Layer or Less				1st Layer : 7.7kg (17.0lbs) 3rd Layer : 10.5kg (23.1lbs) 5th Layer : 13.3kg (29.3lbs)	Weight (Body + Handle)	15.0kg (33.1lbs)

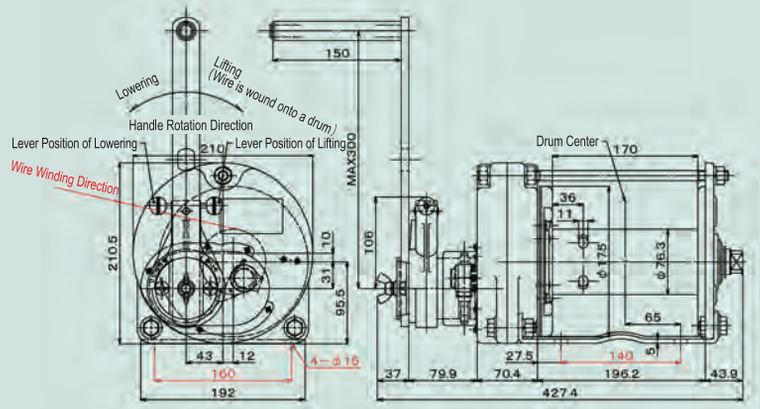
MR-5-SI
500kg (1,100lbs)



Model	MR−5−SI	Drum Capacity	6-Layers Winding φ6 mm (6×37) × 40 m (1/4 inch (6×36) × 131 ft)	Handle Force Handle Length (Effective Max.) 250 mm (9.84 inch)	Winding Layer Number of Wire Rope	Gear Ratio	8.9 : 1
Wire Rope Tension	500 kg (1,100 lbs) 5th Layer or Less				1st Layer : 11.1kg (24.5lbs) 3rd Layer : 14.4kg (31.8lbs) 5th Layer : 17.7kg (39.0lbs)	Weight (Body + Handle)	16.3kg (35.9lbs)

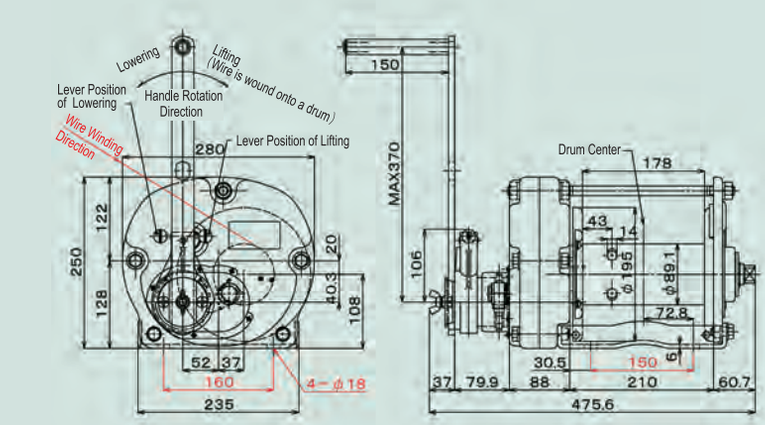
※ Drum capacity include the length of extra maintenance winding.
※ Wire rope tension is the value of standard layer or less. If the winding layer number exceeds the standard layer, decrease the wire rope tension according to the ratio.

MR-10-SI
1,000kg(2,200lbs)



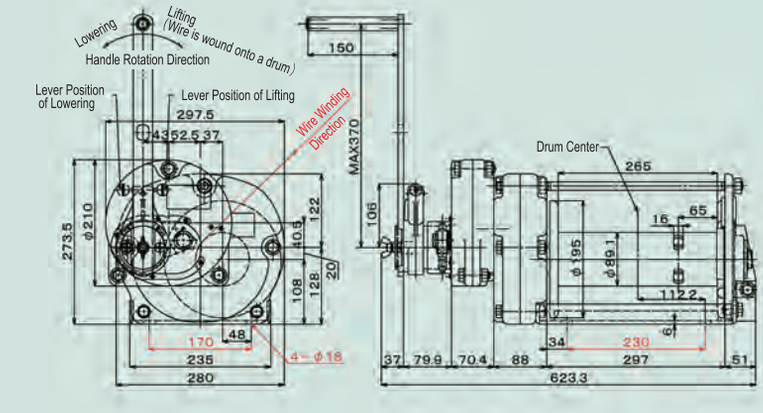
Model	MR−10−SI		Drum Capacity	5-Layers Winding φ8 mm (6×37) × 35 m (5/16 inch (6×36) × 114 ft)	Handle Force Handle Length (Effective Max.) 300 mm (11.81 inch)	Winding Layer Number of Wire Rope 1st Layer : 13.5kg (29.8lbs) 2nd Layer : 16.0kg (35.3lbs) 3rd Layer : 18.5kg (40.8lbs)	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs)	3th Layer or Less					Weight (Body + Handle)	17.3kg (38.1lbs)

MR-20-SI
2,000kg(4,400lbs)



Model	MR−20−SI		Drum Capacity	5-Layers Winding φ9 mm (6×37) × 38 m (3/8 inch (6×36) × 124 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57 inch)	Winding Layer Number of Wire Rope 1st Layer : 16.0kg (35.3lbs) 2nd Layer : 18.9kg (41.7lbs) 3rd Layer : 21.8kg (48.1lbs)	Gear Ratio	20 : 1
Wire Rope Tension	2,000 kg (4,400 lbs)	3th Layer or Less					Weight (Body + Handle)	29.1kg (64.2lbs)

MR-30-SI
3,000kg(6,600lbs)



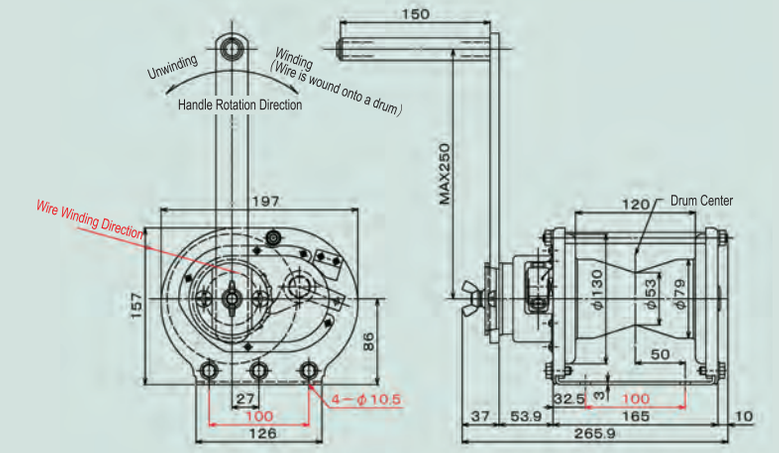
Model	MR−30−SI		Drum Capacity	4-Layers Winding φ12 mm (6×37) × 35 m (7/16 inch (6×36) × 114 ft)	Handle Force Handle Length (Effective Max.) 370 mm (14.57 inch)	Winding Layer Number of Wire Rope 1st Layer : 13.9kg (30.6lbs) 2nd Layer : 17.2kg (37.9lbs) 3rd Layer : 20.5kg (45.2lbs)	Gear Ratio	35.5 : 1
Wire Rope Tension	3,000 kg (6,600 lbs)	3th Layer or Less					Weight (Body + Handle)	38.6kg (85.1lbs)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Steel (Capstan) Winch

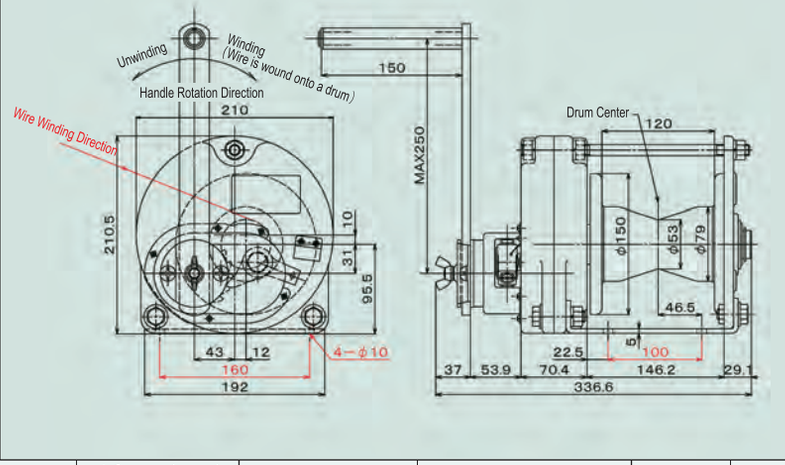
● Wind 5 or 7 wraps of wire rope onto the drum, and haul in the same length as the wire rope wound on the drum while rotating the handle. To do this, apply tension to the wire rope being hauled in to avoid slipping of the drum and wire rope wound on the drum. (The length of the wire

MC-1
100kg (220lbs)



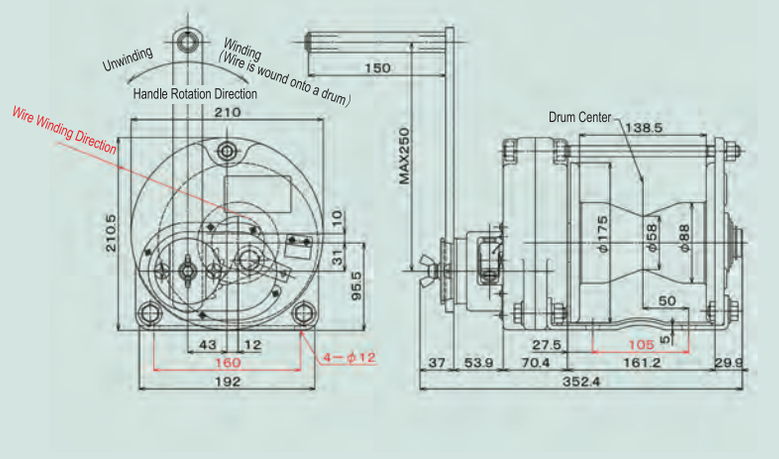
Model	MC−1	Wire Rope	φ5 mm (6×19) (3/16inch (7×19))	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	12.4kg (27.3lbs)	Gear Ratio	1 : 1
Wire Rope Tension	100kg (220lbs)	Winding Wire Rope	5 or 7 Wraps			Weight (Body + Handle)	8.9kg (19.6lbs)

MC-3
300kg (660lbs)



Model	MC−3	Wire Rope	φ6 mm (6×37) (1/4 inch (6×36))	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	6.5kg (14.3lbs)	Gear Ratio	6.25 : 1
Wire Rope Tension	300kg (660lbs)	Winding Wire Rope	5 or 7 Wraps			Weight (Body + Handle)	15.8kg (34.8lbs)

MC-5
500kg (1,100lbs)

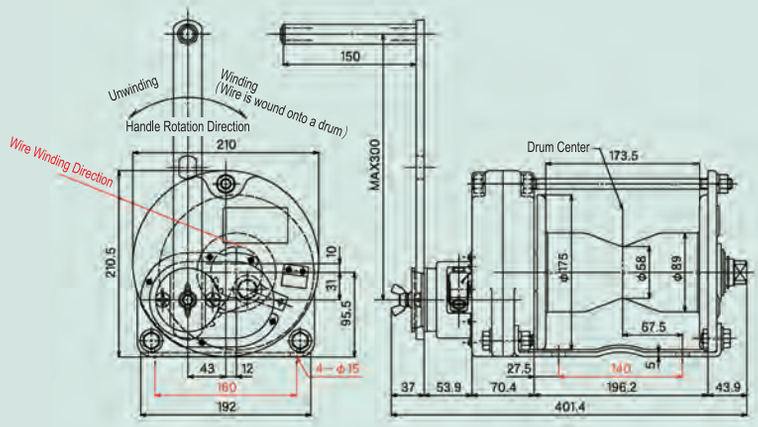


Model	MC−5	Wire Rope	φ6 mm (6×37) (1/4 inch (6×36))	Handle Force Handle Length (Effective Max.) 250mm (9.84inch)	8.5kg (18.7lbs)	Gear Ratio	8.9 : 1
Wire Rope Tension	500kg (1,100lbs)	Winding Wire Rope	5 or 7 Wraps			Weight (Body + Handle)	17.8kg (39.2lbs)

⚠DANGER Model MC is designed only for pulling horizontally. Never use this winch for lifting vertically.
IMPORTANT! Dimensions are in metric and subject to change without notice.

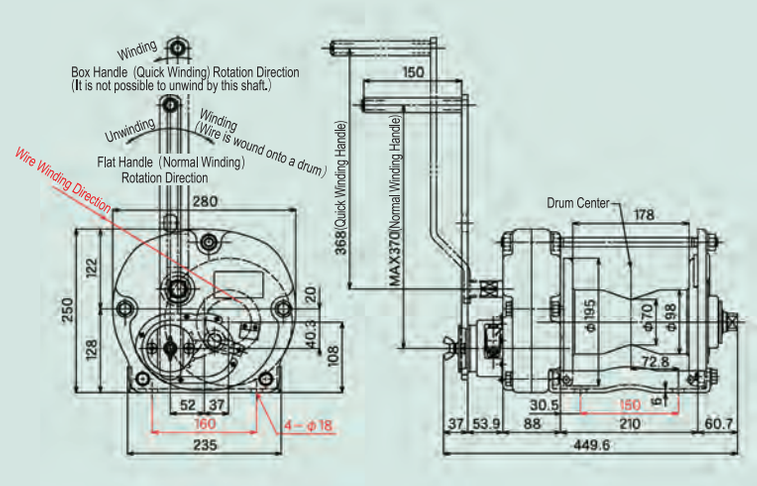
Rope to be used is endless.)

MC-10
1,000kg (2,200lbs)



Model	MC−10	Wire Rope	φ8 mm (6×37) (5/16inch (6×36))	Handle Force Handle Length (Effective Max.) 300mm (11.81inch)	10.8kg (23.8lbs)	Gear Ratio	12.6 : 1
Wire Rope Tension	1,000 kg (2,200 lbs)	Winding Wire Rope	5 or 7 Wraps			Weight (Body + Handle)	20.1kg (44.3lbs)

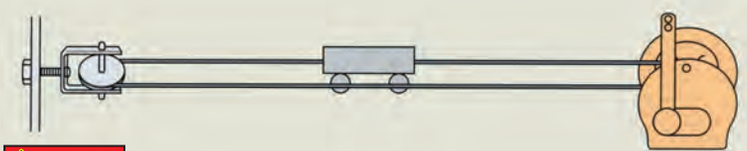
MC-20
2,000kg (4,400lbs)



Model	MC−20	Wire Rope	φ9 mm (6×37) (3/8 inch (6×36))	Handle Force Handle Length (Effective Max.) 370mm (14.57inch)	13.0kg (28.7lbs)	Gear Ratio	Quick Winding 4 : 1 Normal Winding 20 : 1
Wire Rope Tension	Normal Winding : 400 kg (880 lbs) Quick Winding : 2,000 kg (4,400 lbs)	Winding Wire Rope	5 or 7 Wraps			Weight (Body + Handle)	31.3kg (69.0lbs)

Capstan winch is mainly used in the following cases :

1. Movement of Truck
2. Opening and Closing of Stage Setting
3. Device for Opening / Closing Arcade
4. Stretching a Safety Net for Training of Fire Department



⚠DANGER
Model MC is designed only for pulling horizontally. Never use this winch for lifting vertically.

■ Please refer to the following table to find the amount of tension required.

Model	MC−1	MC−3	MC−5	MC−10	MC−20
Tension for Hauling in the Wire Rope	2kg or more (4.4lbs or more)	4kg or more (8.8lbs or more)	7kg or more (15.4lbs or more)	13kg or more (28.7lbs or more)	25kg or more (55.1lbs or more)

※ The value shown on the diagram is the value of wound the wire rope around the center of the capstan drum 7 times.

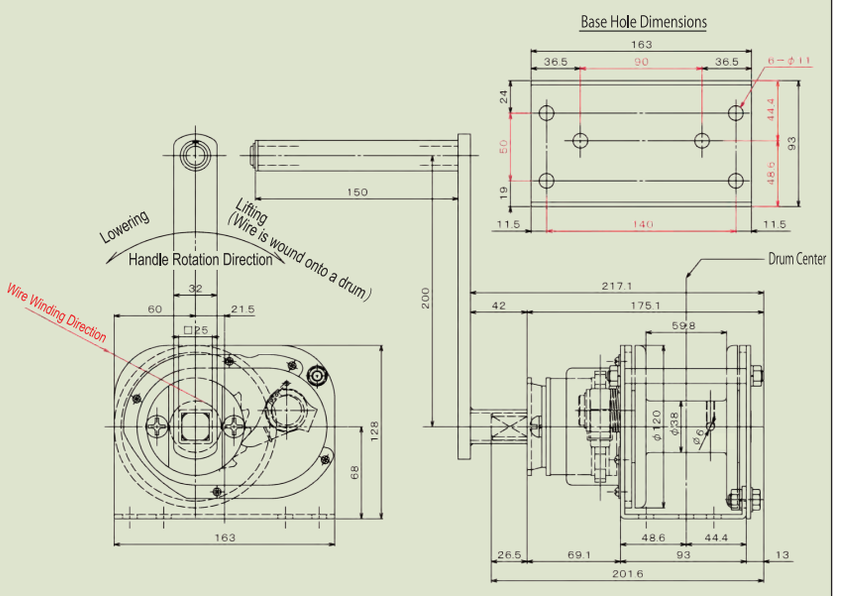
⚠DANGER Model MC is designed only for pulling horizontally. Never use this winch for lifting vertically.
IMPORTANT! Dimensions are in metric and subject to change without notice.

Mini (Rotating) Winch

● Important parts such as mechanical brake are made with model GM common parts to making it robust, but mounting pitch is 140mm × 50mm(5 33/64 inch × 1 31/32 inch), super compact design with weight of 5 kg(11.0lbs). It is the best winch for customers who place importance on safety and reliability even in small size.

GM-1LH-SI-KEN
100kg(220lbs)

RoHS CE

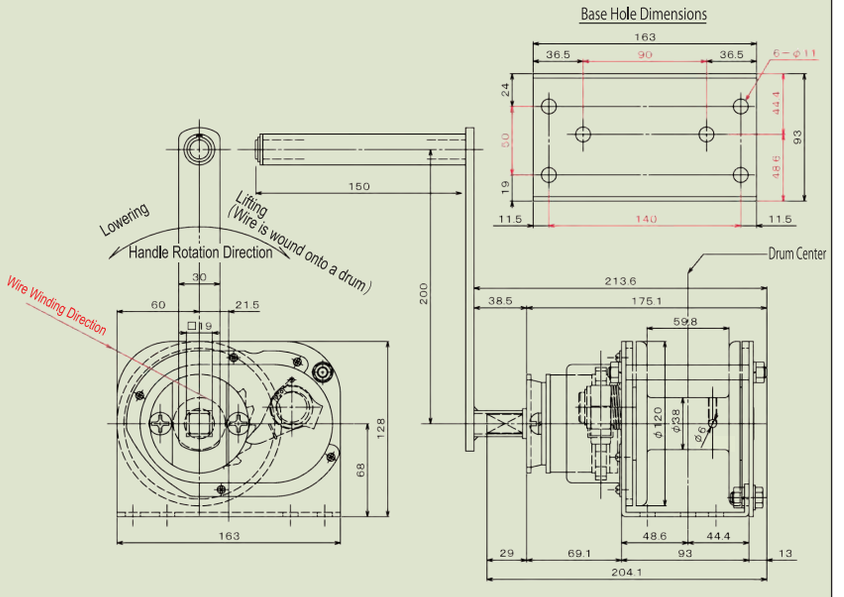


Model	GM−1LH−SI−KEN	Drum Capacity	8-Layers Winding φ4 mm(6×19)×22 m (5/32inch(7×19)×72 ft)	Handle Force Handle Length 200mm	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 5th Layer or Less				1st Layer : 11.4kg(25.1lbs) 3rd Layer : 15.8kg(34.8lbs) 5th Layer : 20.1kg(44.3lbs)	Weight (Body)	5.0kg (11.0lbs)

※ An automatic brake is used. (Rotating the handle clockwise when lifting, and counterclockwise when lowering.)

ESB-1LH-SI-KEN
100kg(220lbs)

RoHS CE

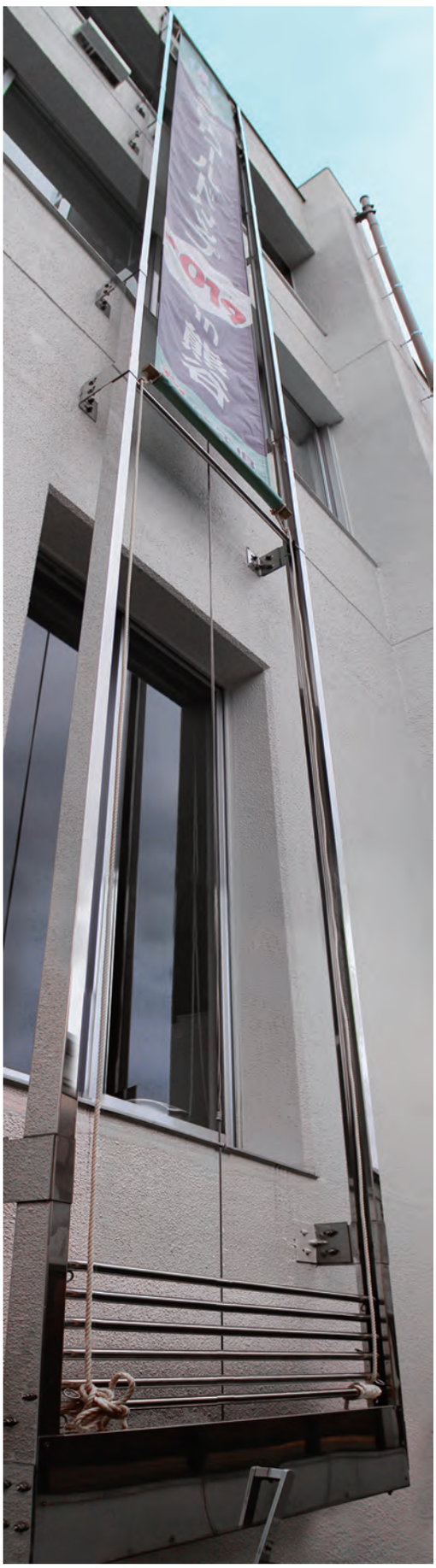


Model	ESB−1LH−SI−KEN	Drum Capacity	8-Layers Winding φ4 mm(6×19)×22 m (5/32inch(7×19)×72 ft)	Handle Force Handle Length 200mm	Winding Layer Number of Wire Rope	Gear Ratio	1 : 1
Wire Rope Tension	100 kg (220 lbs) 5th Layer or Less				1st Layer : 11.4kg(25.1lbs) 3rd Layer : 15.8kg(34.8lbs) 5th Layer : 20.1kg(44.3lbs)	Weight (Body)	5.0kg (11.0lbs)

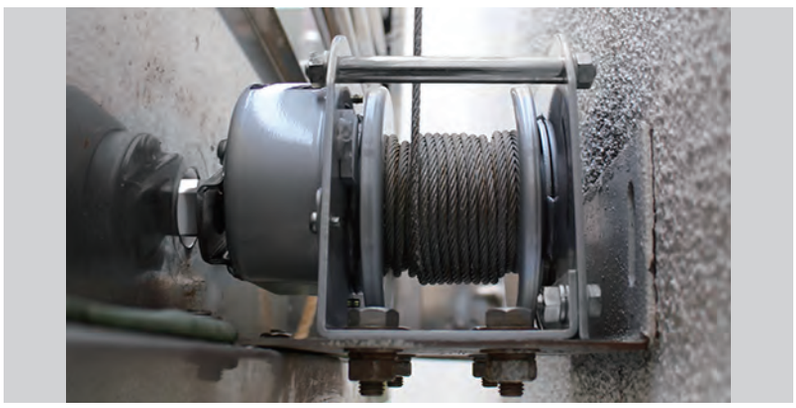
※ An automatic brake is used. (Rotating the handle clockwise when lifting, and counterclockwise when lowering.)

IMPORTANT! Dimensions are in metric and subject to change without notice.

Usage Example of 1LH Series

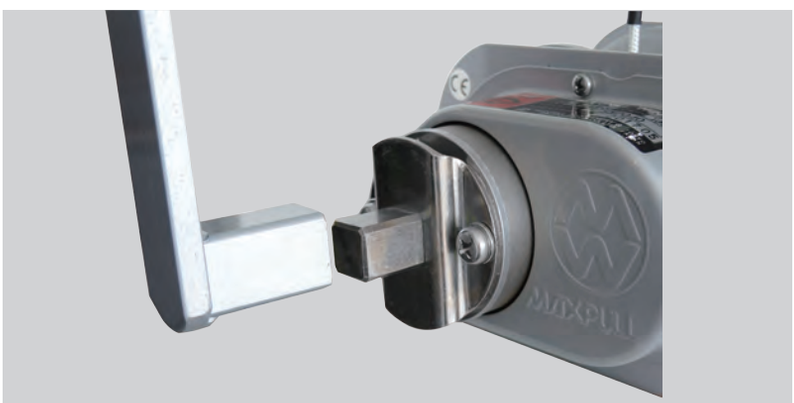


▲ Screen hanging apparatus



▲ Compact size allows space-saving installation

▲ Square handle for 1LH type

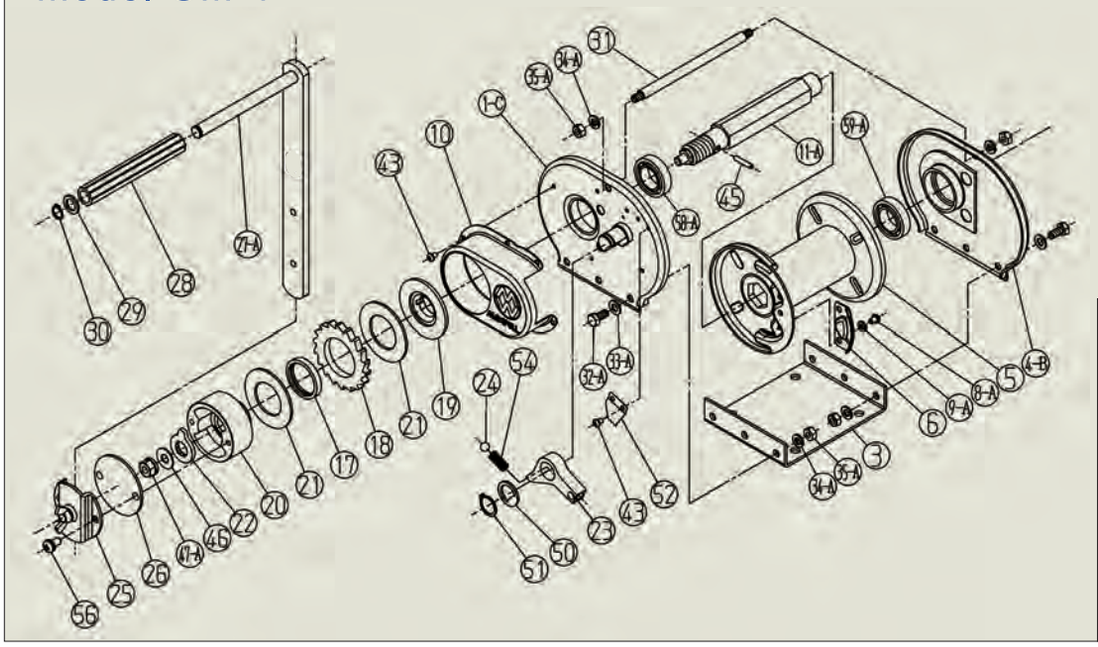


▲ Easy connection into square handle holder

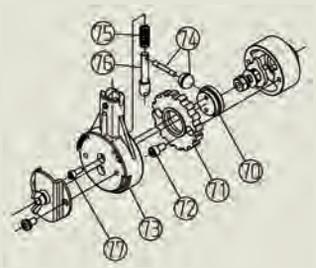
▲ Operate the winch inside of the device

Exploded view (Steel)

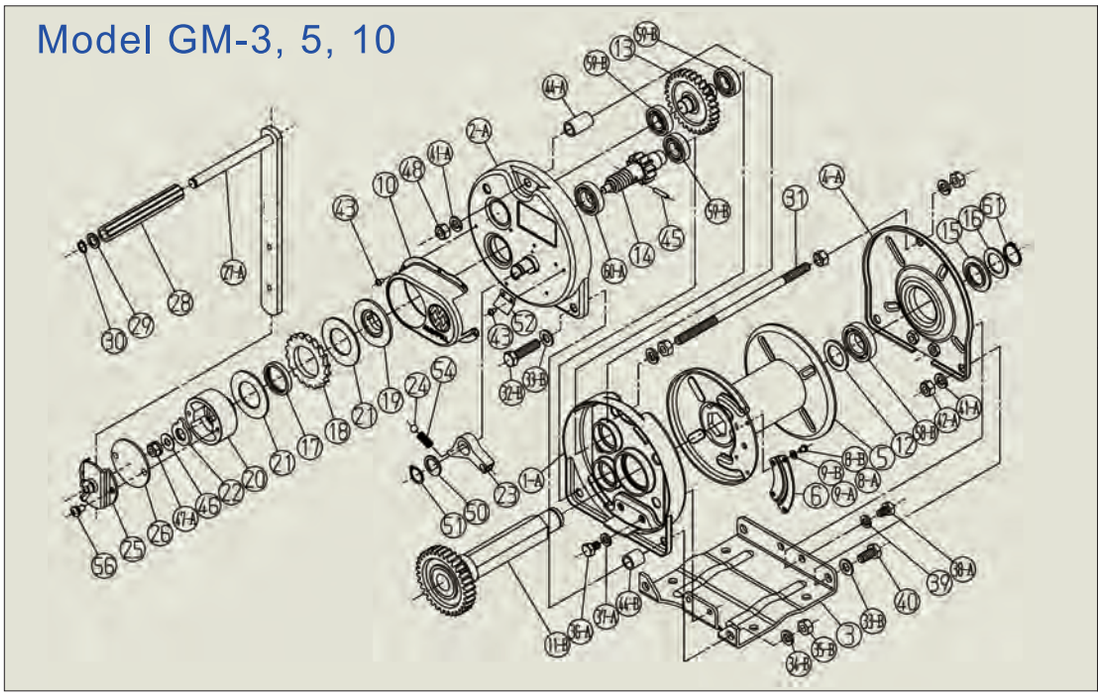
Model GM-1



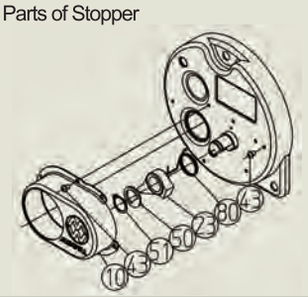
Model MR (Ratchet Type)
Parts of Ratchet Handle



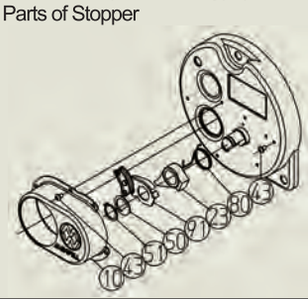
Model GM-3, 5, 10



Model SI (Stopper Armless Type)
Parts of Stopper



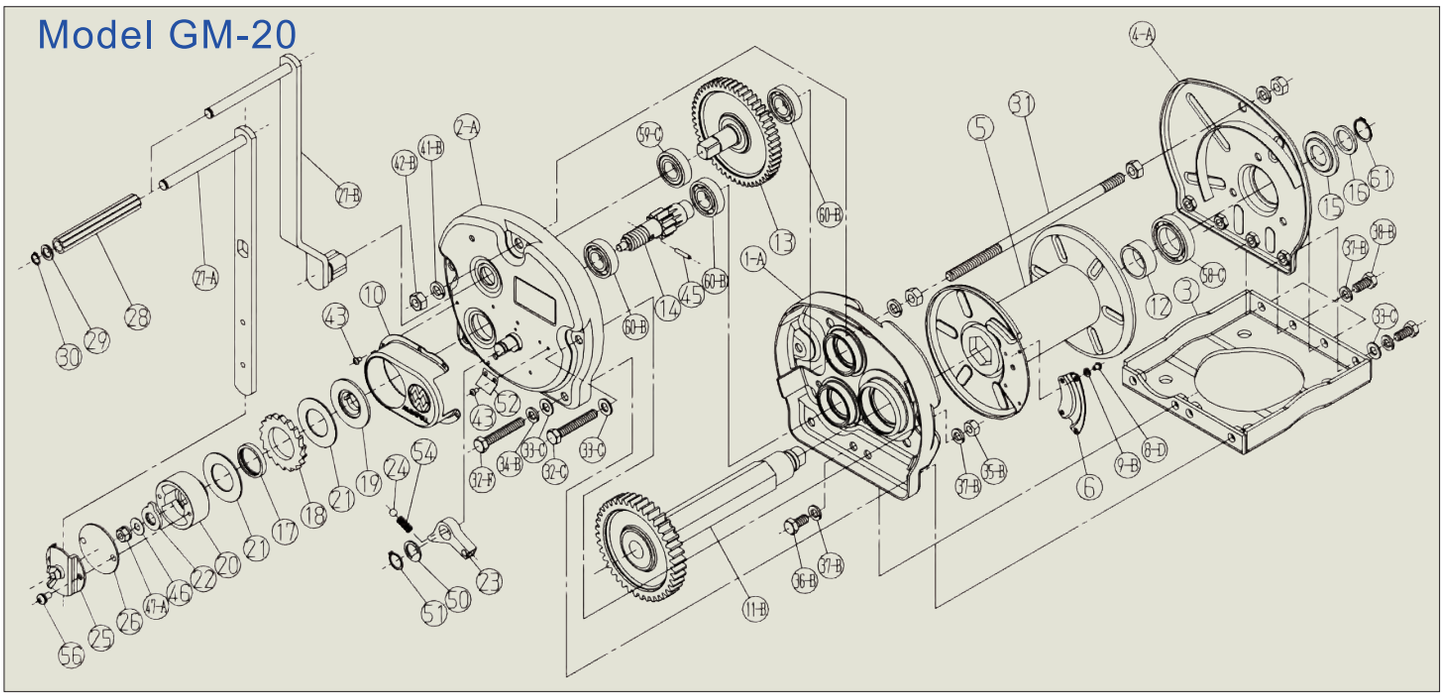
Model NSIL (Noiseless Type)
Parts of Stopper



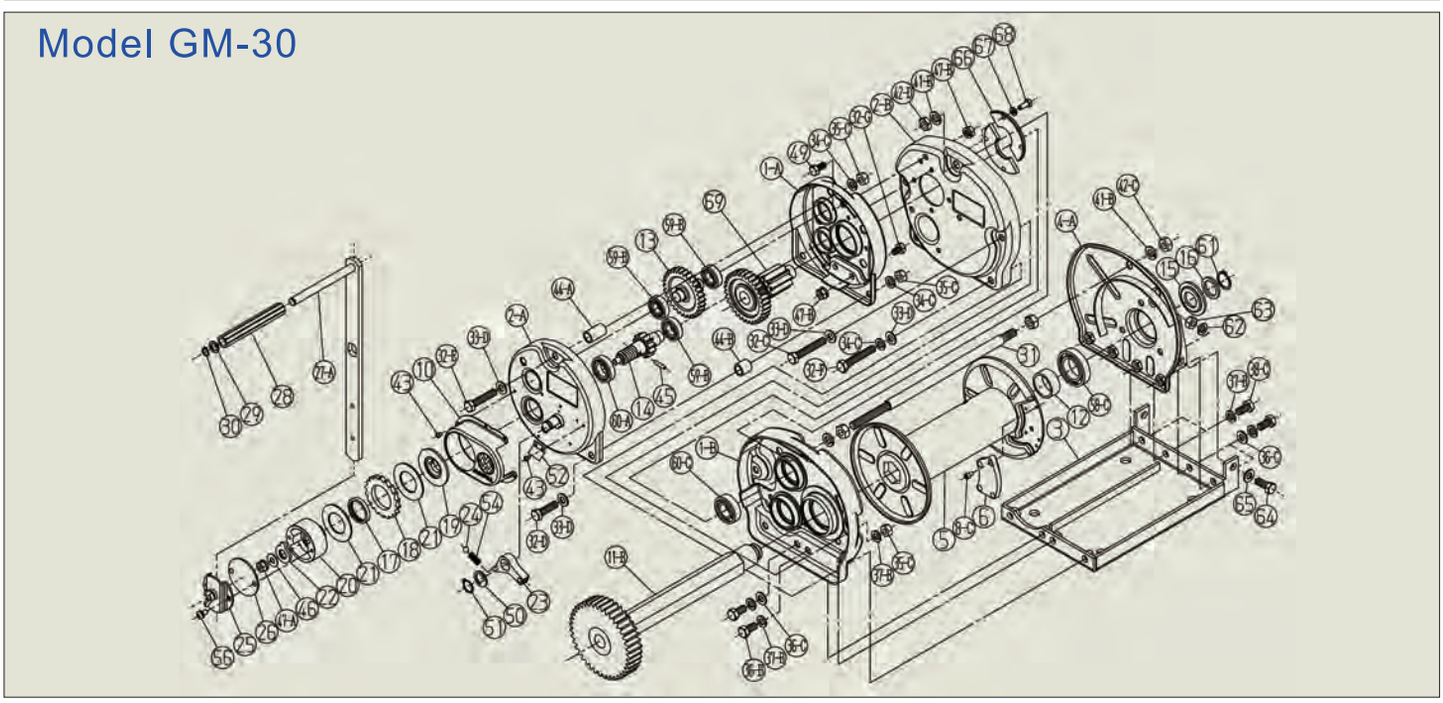
Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.
1-A	Gear Case	1	9-B	Spring Washer GM-5, 10, 20	4	23	Stopper	1	32-F	Hexagon Head Bolt GM-20, 30	2
1-B	Gear Case	1	10	Clutch Cover	1	24	Steel Ball	1	32-G	Hexagon Head Bolt GM-30	2
1-C	Side Frame A	1	11-A	Drum Shaft	1	25	Handle Holder with Butterfly Bolt	1	33-A	Plain Washer GM-1	6
2-A	Gear Case Cover	1	11-B	Drum Shaft Main Gear	1	26	Clutch Shield Plate	1	33-B	Plain Washer GM-3, 5, 10	4
2-B	Gear Case Cover	1	12	Shaft Distance Piece	1	27-A	Handle Arm	1	33-C	Plain Washer GM-20	5
3	Bed Plate	1	13	Spur Gear Pinion	1	27-B	Handle Arm GM-20	1	33-D	Plain Washer GM-30	7
4-A	Side Frame	1	14	Clutch Pinion	1	28	Handle Grip	1 - 2	34-A	Spring Washer GM-1	8
4-B	Side Frame B	1	15	Shaft Washer A	1	29	Handle Washer	1 - 2	34-B	Spring Washer GM-3, 5, 10, 20	2
5	Drum	1	16	Shaft Washer B	1	30	Retaining Ring C Type	1 - 2	34-C	Spring Washer GM-30	5
6	Wire Anchoring Plate	1	17	Ratchet Metal	1	31	Stay Bolt	1	35-A	Hexagon Nut GM-1	8
8-A	Hexagon Socket But -ton Head Cap Screw GM-1, 3	2	18	Ratchet Gear	1	32-A	Hexagon Head Bolt GM-1	6	35-B	Hexagon Nut GM-3, 5, 10, 20	2
8-B	Hexagon Socket But -ton Head Cap Screw GM-5, 10 , 20	4	19	Back Plate	1	32-B	Hexagon Head Bolt GM-3, 5, 10	2	35-C	Hexagon Nut GM-30	5
8-C	Hexagon Socket Head Cap Screw GM-30	4	20	Clutch	1	32-C	Hexagon Head Bolt GM-20, 30	2	36-A	Hexagon Head Bolt GM-3, 5, 10	2
8-D	Hexagon Socket But -ton Head Cap Screw GM-20	4	21	Brake Lining	2	32-D	Hexagon Head Bolt GM-30	2	36-B	Hexagon Head Bolt GM-20, 30	2
9-A	Spring Washer GM-1, 3 M6	2	22	Dodecagon Hole Tongued Washer	1	32-E	Hexagon Head Bolt GM-30	1	36-C	Plain Washer GM-30	3

IMPORTANT! Parts lists in this view are subject to change without notice.

Model GM-20



Model GM-30

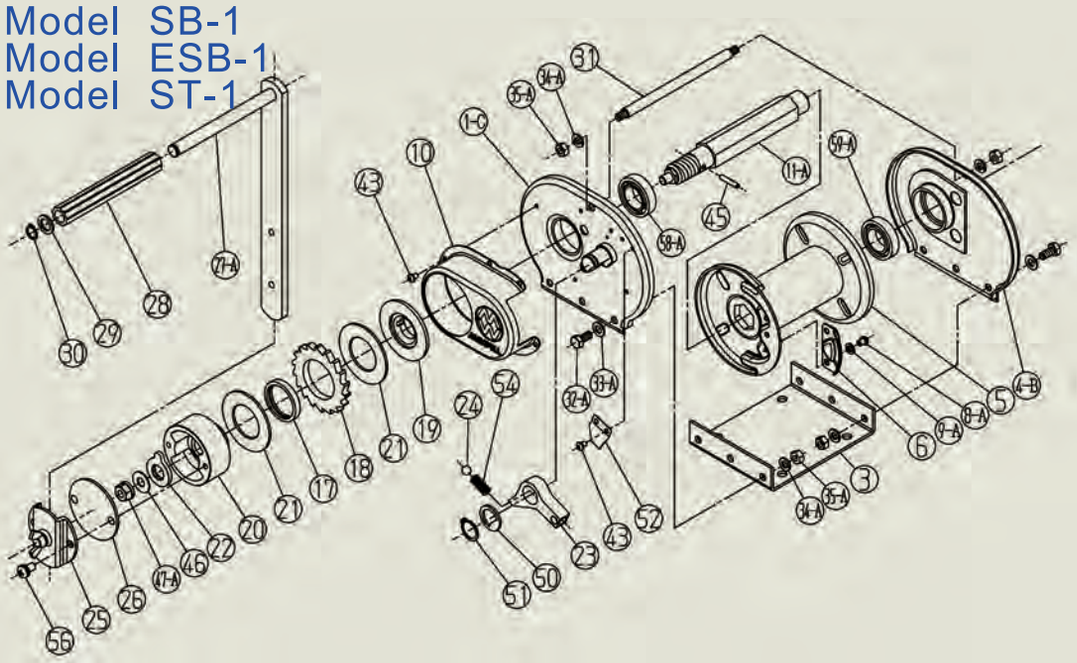


Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.
37-A	Spring Washer GM-3, 5, 10	2	44-B	Spacer	2	59-A	Bearing GM-1	1	70	Axis Model MR	1
37-B	Spring Washer GM-20, 30	8	45	Parallel Pin	1	59-B	Bearing GM-3, 5, 10, 30	3	71	Ratchet Wheel Model MR	1
38-A	Hexagon Head Bolt GM-3, 5, 10	2	46	Washer	1	59-C	Bearing GM-20	1	72	Hexagon Socket Head Cap Screw Model MR	2
38-B	Hexagon Head Bolt GM-20	4	47-A	Hexagon Nut with Lock Washer Helspr	1	60-A	Bearing GM-3, 5, 10, 30	1	73	Ratchet Handle Model MR	1
38-C	Hexagon Head Bolt GM-30	4	47-B	Hexagon Nut GM-30	5	60-B	Bearing GM-20	3	74	Switch Lever Model MR	1
39	Spring Washer GM-3, 5, 10	2	48	Hexagon Nut	4	60-C	Bearing GM-30	1	75	Coil Spring Model MR	1
40	Hexagon Head Bolt GM-3, 5, 10	2	49	Hexagon Head Bolt GM-30	3	61	Retaining Ring C Type	1	76	Switch Pin Model MR	1
41-A	Spring Washer GM-3, 5, 10	5	50	Hinge Pin Washer	1	62	Spring Washer GM-30	2	77	Hexagon Socket Head Cap Screw Model MR	2
41-B	Spring Washer GM-20, 30	3	51	Retaining Ring C Type	1	63	Hexagon Nut GM-30	2			
42-A	Hexagon Head Bolt GM-3, 5, 10	2	52	Safety Leaf Spring	1	64	Hexagon Head Bolt GM-30	2	80	Torsion Spring Model SI, NSIL	1
42-B	Hexagon Head Bolt GM-20	4	54	Coil Spring	1	65	Plain Washer GM-30	2	91	Magnetic Plate Model NSIL	1 set
42-C	Hexagon Head Bolt GM-30	3	56	Phillips Pan Head Screw	2	66	Division Disc GM-30	1 set			
42-D	Hexagon Head Bolt GM-30	1	58-A	Bearing GM-1	1	67	Spring Washer GM-30	4			
43	Tapping Screw	7	58-B	Bearing GM-3, 5, 10	1	68	Hexagon Head Bolt GM-30	4			
44-A	Spacer	1	58-C	Bearing GM-20, 30	1	69	Main Gear Pinion GM-30	1			

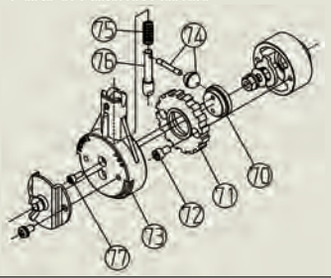
IMPORTANT! Parts lists in this view are subject to change without notice.

Exploded View (Stainless Steel)

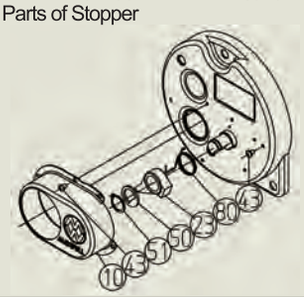
Model SB-1
Model ESB-1
Model ST-1



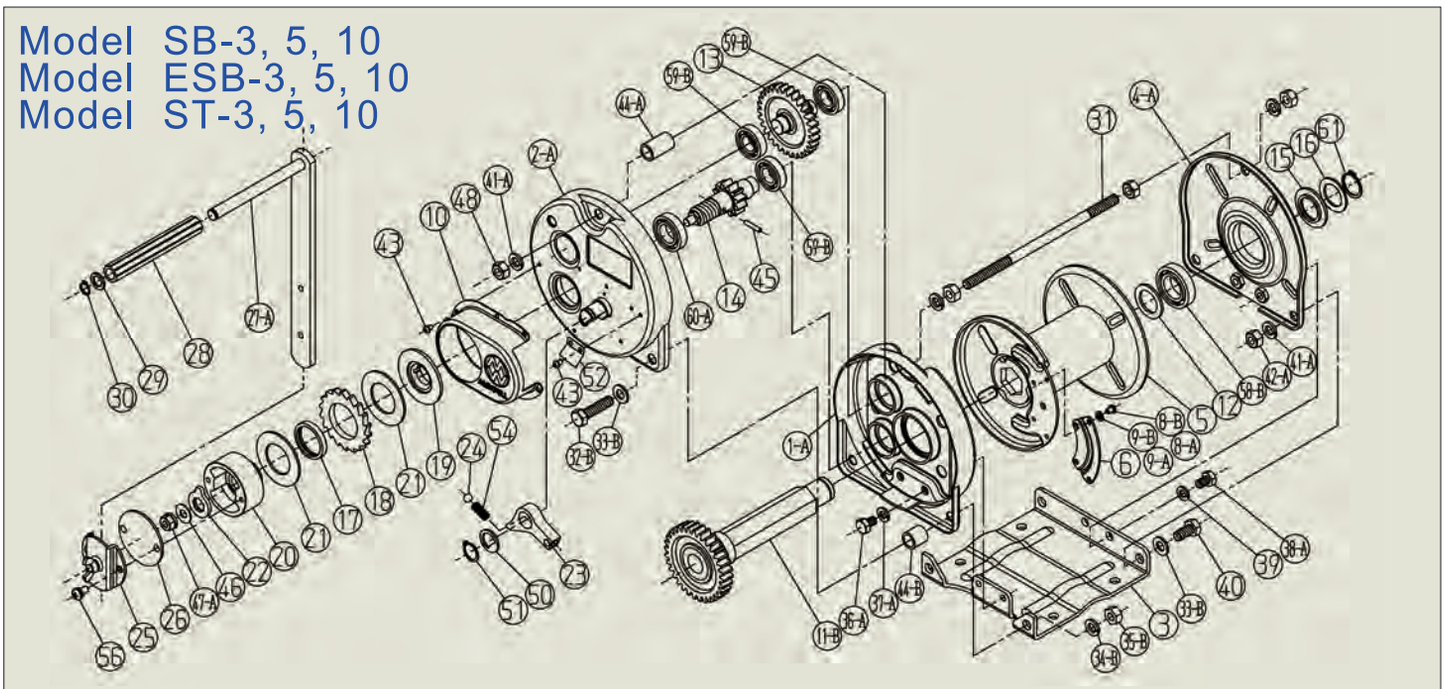
Model MR (Ratchet Type)
Parts of Ratchet Handle



Model SI (Stopper Armless Type)
Parts of Stopper



Model SB-3, 5, 10
Model ESB-3, 5, 10
Model ST-3, 5, 10



Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.	Part No.	Part Name	Qty.
1-A	Gear Case	1	16	Shaft Washer B	1	44-A	Spacer	1	70	Axis Ratchet Type	1
1-C	Side Frame	1	17	Ratchet Metal	1	44-B	Spacer	2	71	Ratchet Wheel Ratchet Type	1
2-A	Gear Case Cover	1	18	Ratchet Gear	1	45	Parallel Pin	1	73	Ratchet Handle Ratchet Type	1
3	Bed Plate	1	19	Back Plate	1	46	Washer	1	74	Switch Lever Ratchet Type	1
4-A	Side Frame	1	20	Clutch	1	50	Hinge Pin Washer	1	75	Coil Spring Ratchet Type	1
4-B	Side Frame B	1	21	Brake Lining	2	52	Safety Leaf Spring	1	76	Switch Pin Ratchet Type	1
5	Drum	1	22	Dodecagon Hole Tongued Washer	1	54	Coil Spring	1			
6	Wire Anchoring Plate	1	23	Stopper	1	56	Pan Head Screw with Lock Washer Helspr	2	80	Torsion Spring Model SI	1
10	Clutch Cover	1	24	Steel Ball	1	58-A	Bearing Model -1	1			
11-A	Drum Shaft	1	25	Handle Holder with Butterfly Bolt	1	58-B	Bearing Model -3, -5, -10	1			
11-B	Drum Shaft Main Gear	1	26	Clutch Shield Plate	1	59-A	Bearing Model -1	1			
12	Shaft Distance Piece	1	27-A	Handle Arm	1	59-B	Bearing Model -3, -5, -10	3			
13	Spur Gear Pinion	1	28	Handle Grip	1	60-A	Bearing Model -3, -5, -10	1			
14	Clutch Pinion	1	29	Handle Washer	1						
15	Shaft Washer A	1	31	Stay Bolt	1						

※ The bolts, nuts and retaining ring are made of SUS304, and the dimensions are same as standard type. Please refer to the dimension table of a standard type.
※ Main material of the ball bearing is SUS440C.

 IMPORTANT! Parts lists in this view are subject to change without notice.

Hand Winch Accessories & Options

Cloth sheet cover

●When installing a manual winch for long-term outdoor use, winches are more likely to rust due to wind and rain compared to indoor installations.
This is an accessory for covering and protecting the winch so it is not exposed directly to wind and rain.
This will reduce rust and damage of the hand winch from dust.
Available for all models of hand winches.
The same size is used for the models 300kg(660lbs), 500kg(1,100lbs), and 1,000kg(2,200lbs).
※Please select the cloth sheet cover depending on the winch position and direction in which the wire rope is pulled out.
Two types for the right and left are available.

▼Installation direction of the Winch

▲Cloth sheet cover (For wire rope pulling out to Right side)

For wire rope pulling out to Right side

For wire rope pulling out to Left side

Mounting bracket for structural poles

●This accessory set combines two winch mounting brackets and two universal bands to install a hand winch on a structural pole.
It is excellent for rust prevention using hot-dip galvanized steel, and the unique shape of the winch mounting bracket allows the winch handle to not contact the structural pole.
By adjusting the height of the two winch mounting brackets, it can be installed for models 300kg(660lbs), 500kg(1,100lbs), 1,000kg(2,200lbs) and 2,000kg(4,400lbs).
※Two types of universal bands are available for a pole diameter of φ300 mm to φ410mm
(φ 11 13/16 inch to φ 16 9/64 inch) and φ410 to φ580 mm (φ 16 3/16 inch to φ 22 53/64 inch).

◀Winch mounting brackets

Universal bands▶

▲ Installation example (without winch)

▲ Installation example (with winch)

Customized winches of various colors

●Customized winches of various colors are also available upon request of customer’ s desire.
※Please specify color and production quantity, if you are requesting specialized colors.

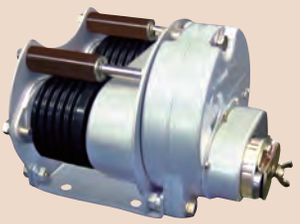
Whatever the request, please contact us.
We will manufacture the most suitable winch with the capacity, type, size and uses of your desired.

Special Hand Winches

In addition to the standard products, our unique custom-made products are used in various fields. The uses, capacity, method and size are many and varied.
Our unique design responds adequately to customer expectations.
We are manufacturing various winches according to the number of demands.
For example, there is a winch such as for clean room and lifting the stage setting.
Please contact us if your business idea requires that something be "moved".

Winch for lifting the floodgate
(with universal joint)
Capacity : 75 kg(165 lbs) + 75 kg(165 lbs)
＝150kg(330 lbs)
Model : GM-3-SI-WGD

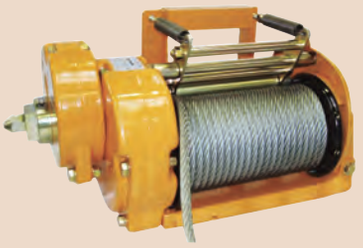
Gear Ratio 1/1.2 endless winch for light load
Capacity : 50 kg(110 lbs)
Model : **ME-05SI-R1.2-F8**



Short drum winch
(For jib crane)
Capacity : 300 kg(660 lbs)
Model : GM-3-LD60

Winch for fixing the rotary shaft of industrial equipment
(Latching brake)
Capacity : 4.5 kg (9.9 lbs)
Model : ESBH-1-SE

Winch with wire holding unit
Capacity : 3,000 kgf (6,600 lbs)
Model : GM-30-FSPW



Stainless winch for nuclear power plant
Capacity Maximum : 150 kg(330 lbs)
Minimum : 50 kg(110 lbs)
Model : ESB-3-SDG138-Ⅱ

Winch for jib crane in chemical manufacturer
Dust proof and drip-proof type
Capacity : 300 kg(660 lbs)
Model : ESB-3-SIC-LD60

4 ropes stainless winch for lifting precision lens
Capacity : 250 kg (550 lbs)× 4
= 1,000 kg(2,200 lbs)
Model : ERSB-10SI-4GD265

Winch for boat davit
Anti-rust painting specification
Capacity Normal : 2,400 kg(5,200 lbs)
Proof Stress : 6,000 kg(13,200 lbs)
Wire Rope : ϕ12.5mm × 16m × 2
(ϕ1/2 inch × 52.5 ft × 2)
Model : GM-60-OSN-C

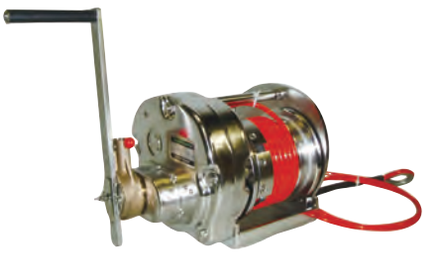
4 ropes noiseless type stainless winch for lifting the drop curtain
Capacity : 125 kg(270 lbs)×4 = 500 kg(1,100 lbs)
Model : GM-5SE-FGD-1

IMPORTANT! Be sure to confirm regulations in your country or region to determine the suitability of the winch to intended use and read the Instruction Manual supplied with the equipment before operating winch.

Winch with chain sprocket for winding the screen axis
Capacity : 70 kg(150 lbs)
Model : ESB-07-SI-SH4030

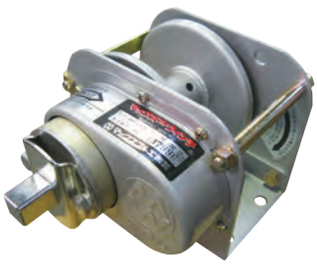
Winch for lifting the basketball backboard
(Chain Link)
Capacity : 1,000 kg(2,200 lbs)
Model : GM-10-SI-KS

Stainless steel winch for clean room
(A special fiber is used for rope)
Capacity Normal : 450 kg(990 lbs)
Proof Stress : 1,000 kg(2,200 lbs)
Model : ERSB-10-SI-GD165-Ⅱ



2 ropes stainless winch for optical manufacturer
(Fine adjustment is possible)
Capacity : 500 kg(1,100 lbs)
Model : MNW-5-SUDWG165-R200

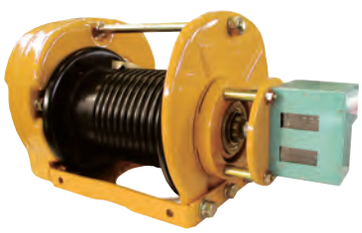
Winch for vertical banner
Capacity : 100 kg(550 lbs)
Model : GM-1LH-SI-JY



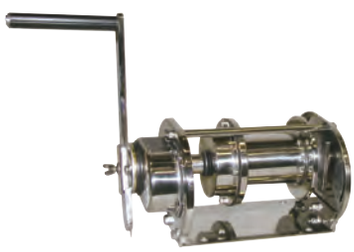
Stainless winch for aircraft production line
Capacity : 60 kg(130 lbs)
Model : ESB-06-D76PW

Winch for vessel fan damper
(With emergency lock release device)
Capacity : 1,000 kg(2,200 lbs)
Model : ESB-10-LSTP

Winch with rotary counter and grooved drum
Capacity : 1,000 kg(2,200 lbs)



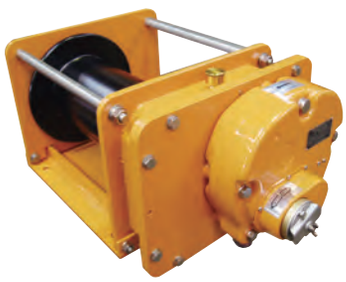
Stainless winch with torque keeper
Capacity 1st Layer : 24.6 kg(54 lbs)
4th Layer : 18.6 kg(41 lbs)
Wire Rope : ϕ 5 mm (6×19) × 20 m
(3/16 inch (7×19) × 65.6 ft)
Model : SB-T1



Noiseless type winch for lifting the drop curtain in National Bunraku Theater
Capacity : 300 kg(660 lbs)
Wire Rope : ϕ 6 mm (6×37)
(1/4 inch (6×36))

Hot dip galvanizing winch with dog clutch type
Capacity : 250 kg(550 lbs)
Model : GM-2.5-GSSI-SCB-DSU-140

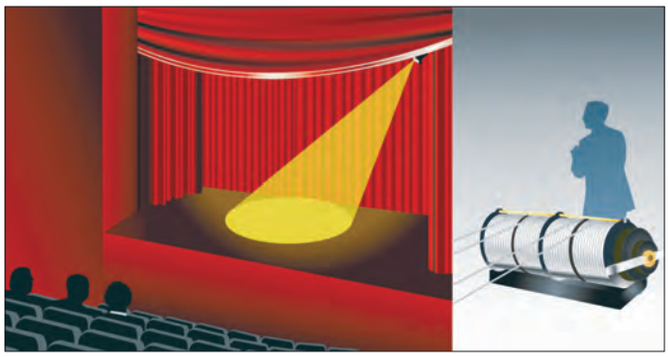
Winch for Koinobori (carp streamer) event
Capacity : 1,000 kg(2,200 lbs)
Model : GM-30YS6T-D165



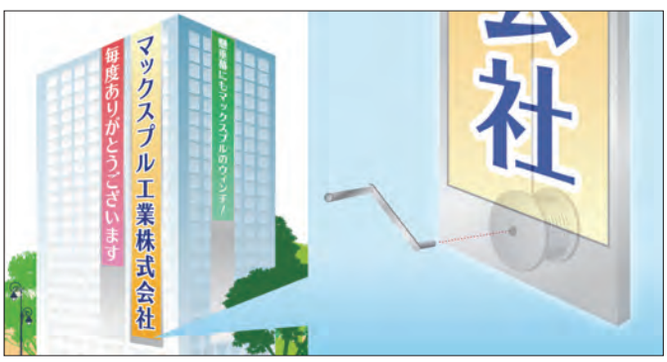
IMPORTANT! Be sure to confirm regulations in your country or region to determine the suitability of the winch to intended use and read the Instruction Manual supplied with the equipment before operating winch.

Some examples of thousand ways to use MAXPULL winches

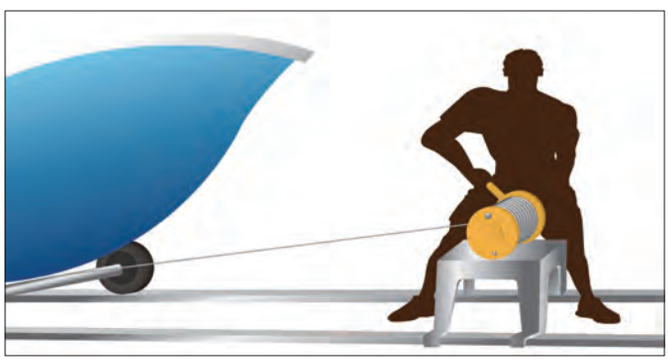
Adaptability meets height adjustment of the working table like as conveyor.



Stage equipment (Drop curtain, lighting equipment, projection screen etc.) is lifted using several wire rope while maintaining synchronization.

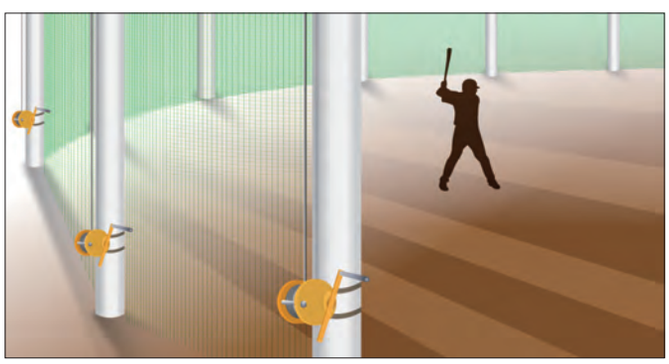


Small winch is used in the lifting equipment of vertical banner. It never spoils the landscape because it is not visible from the outside.



Horizontal pulling of small boat, car or dolly in factory is easily.

Stainless steel winch is ideal for the place where sanitation is needed. (food factory, chemical plant, clean room, etc.)



Maxpull winches help to lift and lower various safety nets for baseball field, golf driving range, etc.

⚠ WARNING Read the manual before using these products in order to use correctly and safety.

Manufacturer

MAXPULL MACHINERY & ENGINEERING CO., LTD.
マックスプル工業株式会社
1296-22, Nakaya, Nishifukai, Nagareyama-shi, Chiba
270-0107, JAPAN
TEL:+81-4-7186-6797 FAX:+81-4-7186-6798
E-mail:info@maxpull.co.jp

Quality Certificate CE

Web Site: www.maxpull.co.jp

●Because of continued product improvement, we change the specifications, dimension and appearance without notice.

MAXPULL winches are not for lift or move people. Also do not lift loads over people.

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