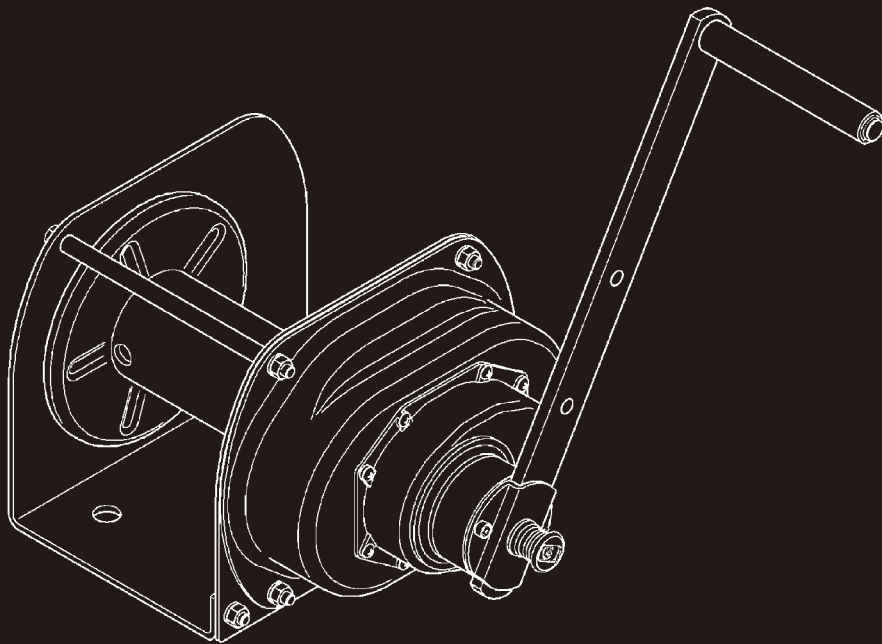


# Portable Winches

Safe · Environmentally friendly ·

MADE IN JAPAN



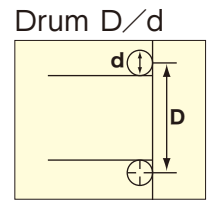
Fuji Mfg Co., Ltd.



# Safety · Environment · Designed and manufactured in-house

## The Pursuit of Safety

- Safety factor of wire rope is set to be more than 3.55 times.
- Cleared drum  $D/d$  more than 11 times by having a big diameter drum.
- The safety plunger provided can help fixing a handle and adjusting the handle length surely and easily, also preventing the handle from dropping.
- Brake Mechanism is safe, highly reliable and has been used successfully.
- High grade series are also available.  
 QW·SS series : with more safety, cleared  $D/d$  more than 12 times, CE Marking  
 Excellent series:  $D/d=16$ ·brake for lightweight loads· installed upper /lower limit mechanism



## Environmentally Friendly

- Brake Discs are made of Aramid fiber that is asbestos-free material. The coating is trivalent chromate treatment. The nonlead painting is used and compliance with RoHs Directive.

## Our products are designed and manufactured in-house to the highest quality standards

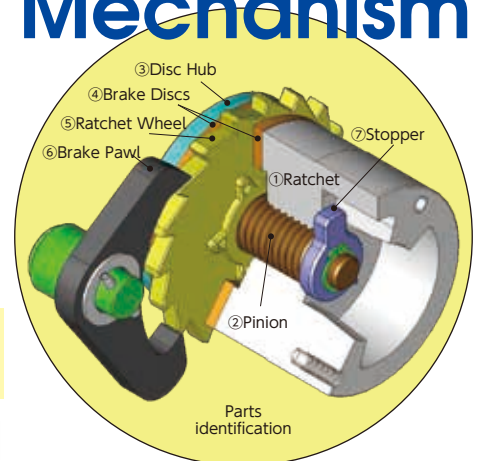
- Our products are different from the imported OEM products or the products of assemble maker. We are doing all planning, designing, cutting operation, gear cutting, hardening, polishing, painting, assemble and inspection at our factory. Therefore, we can comply with the special order promptly and flexibly.
- Authentic MADE in JAPAN

# Reliable Stable Braking Mechanism

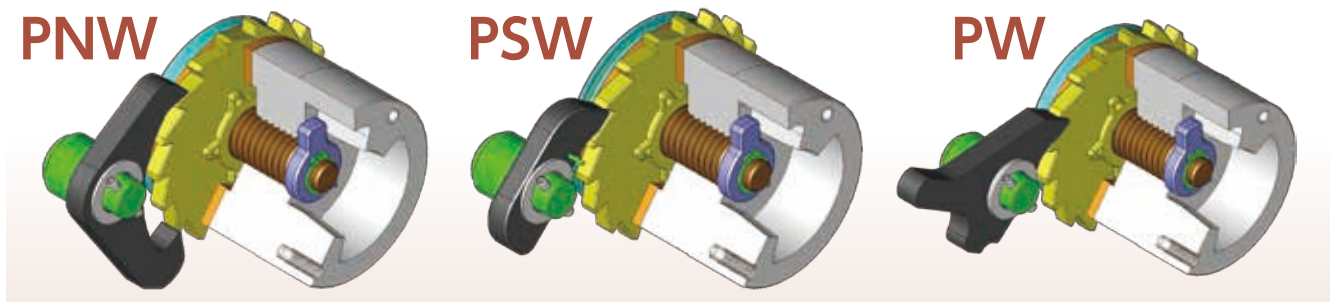
## Structure of Mechanical Brake

The ratchet ① is screwed in the pinion ② (Both of them are clockwise screws.) and the handle is mounted on. The pinion ② is connected with the drum through the reduction gear (100kg type: without reduction gear). The disc hub ③ is inserted into the pinion ② with holding square socket and they rotate together. The brake discs ④ rotate freely along the ridge of the ratchet wheel ⑤, which is held with a brake pawl ⑥ and rotates only in clockwise direction.

Note ● There are 3 different types of shape of brake pawl ⑥, PNW-series · PSW-series · PW-series, the ratchet wheel of all series rotates only in clockwise direction.



## The figure of Brake Structure



## Lifting Work

When the handle is turned clockwise, the ratchet turns along pinion threads. Then, the brake discs and the ratchet wheel are pressed against a disc hub. These parts rotate with the pinion, lifting loads through drum rotation. When the handle stops rotating clockwise, the load on the cable works to drive the pinion in counterclockwise direction, but the brake pawl stop the ratchet wheel rotating counterclockwise. The ratchet wheel is combined with the other parts, so the brake begins functioning automatically.

## Lowering Work

The load on the cable works to drive the pinion in counterclockwise direction, but the brake pawl stop the ratchet wheel rotating counterclockwise. When the handle is turned counterclockwise, the ratchet turns in the same direction simultaneously slackening and giving clearance, releasing the pinion. The drum which is connected with pinion through reduction gear rotate to rewind. The load is lowered at the same speed as the handle rotation speed and stopped when the handle stops rotating.

## Operation

Wound in by turning the handle clockwise and rewound by turning it counterclockwise. The brake begins functioning automatically from where the handle is stopped, and midair load-hanging is also possible.

Note

- In PRW series, moving back and forth operation of the handle is possible, and recommended in the narrow space that unable to turn the handle 360°.

## Optional Brake for Lightweight Loads (Patent Pending)

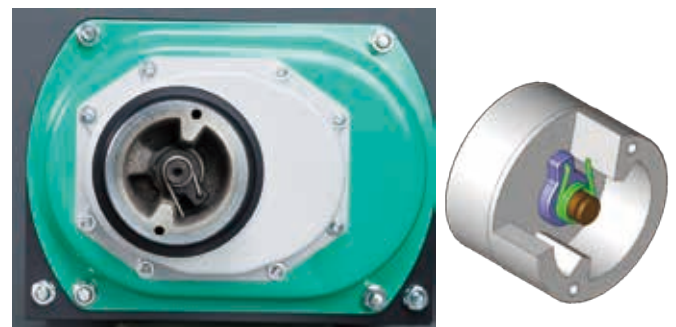
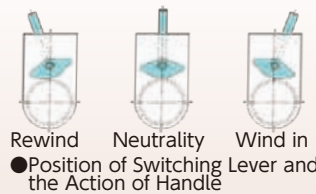
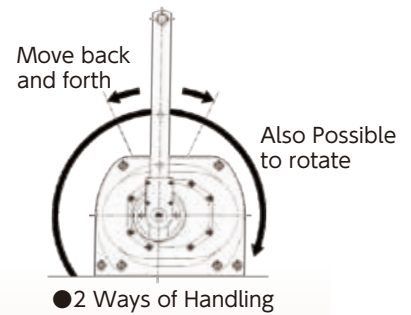
The Mechanical brake structure does not function automatically if loads to counterclockwise are not put on the pinion. In case of weights lighter than the maximum weights for winch (under 15%), the brake sometimes functions improperly, slipping. The optional brake for lightweight loads was designed to solve this problem and to function stably even with lightweight loads. This brake can be used safely for adjusting belt conveyer elevation angles, opening/closing stage drop scenes and store shutters, and so on.

Note

- It is not possible to add this function later because the modification of brake mechanism is required.

Note

- Never do reverse winding  
If the handle is turned in counterclockwise direction, wire ropes can be winding in, but it is very dangerous because the mechanical brake will not work, then the load dropping and the handle will spin at a high rate of speed. Pay particular attention to the orientation of the cable winding in and the direction of load.



## Safe Handle Retainer

The handle can be easily adjusted to desired length by setting the safety plunger in adjustment hole for handle length.

Note

- The handle can be fixed to three adjustment holes only. (Two adjustment holes are provided for 100N series.)
- The handle retainers of QW · SS · Small and LHW series are different type.

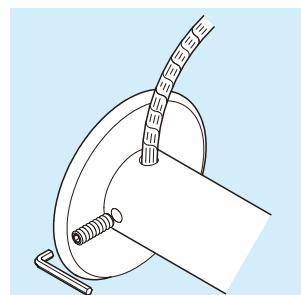


## Easy to Attach Wire Rope

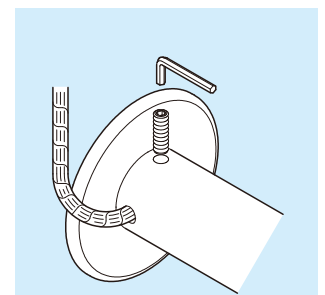
Attaching wire rope can be done easily and surely, i.e. insert wire rope end into drum assembly and tighten retainer bolt.

Note

- The extra maintenance winding is to be at least three turns for safety.



● 100N · 950N · 150N · 2100N types



● 300N · 500N types



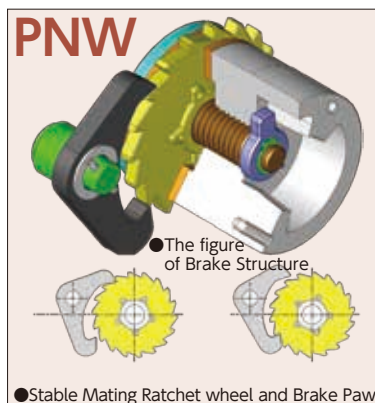
# Standard 3 Series

## PNW Series

PNW-100N • PNW-300N  
PNW-500N • PNW-950N  
PNW-1500N • PNW-2100N



## Installed stable and safe double brake pawls



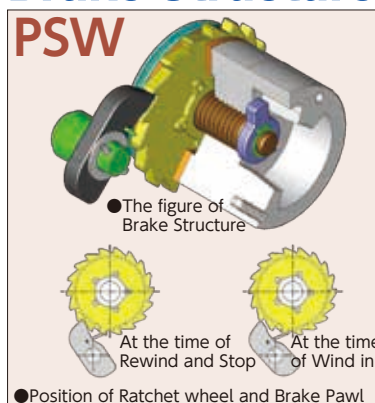
When one brake pawl is released, the other brake pawl engages the ratchet wheel. Therefore, under all conditions, the brake pawls continue working maintaining winch safety. Because springs are not used, the operating sound is low and the brake structure is extremely durable with little wear and tear.

## PSW Series

PSW-100N • PSW-300N  
PSW-500N • PSW-950N  
PSW-1500N • PSW-2100N



## Reliable Non-Noise Brake Structure



Using a special horseshoe-shape spring which has been used for more than 30 years, because of the function in which brake pawl is released when wind in, this non-noise brake structure has been successfully designed to make almost noiseless brake pawl. This series is the most appropriate for use in places with noise regulations such as theaters, hospitals, and night construction sites.

**Option (Crystal-Clear Brake Cover)**  
The crystal-clear brake cover that can do checking the braking mechanism easily is available at option.

**Note**

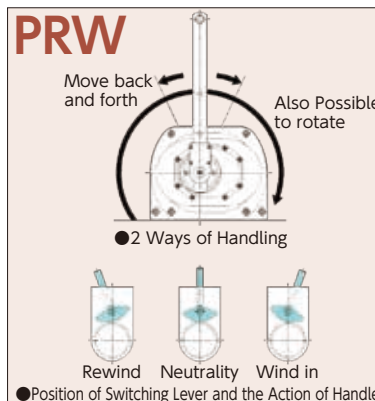
- To protect the grease for vibrating part of spring, do not set or use PSW series outside, at high temperatures and high humid places.
- If load drop occurs due to reverse winding, there may be a trouble in braking mechanism. Please be sure to inspect after this.

## PRW Series

PRW-100N • PRW-300N  
PRW-500N • PRW-950N  
PRW-1500N • PRW-2100N



## Ratchet Handle both <Moving Back and Forth+Rotating Handle> Mechanical Brake is same as PNW series.



In the PRW series, the handle is designed in the ratchet style. Therefore, winding and rewinding cable is possible by repeatedly moving the handle from side to side. Even in narrow spaces where it is impossible to rotate handle 360 degree, the work can be done with the winches fixed directly to walls or floors. As with the SSW, PNW, PSW, PZW series, rotating handle operation is also possible.

**Note**

- Ratchet Handle Assy is available for the other winch series, but not available for some models. Please contact us in advance.

# Excellent Rust-Resistant 3 series

- Mechanical Brake is with Reliable Double Braking Pawls (same as PNW series)
- These winches are very effective for use on salty-air beaches, gulf coast facilities such as marinas, rainy and windy roads, in recreational facilities, animal industry, fishing industry, agricultural facilities, indoor pools, and also high humidity hothouses.

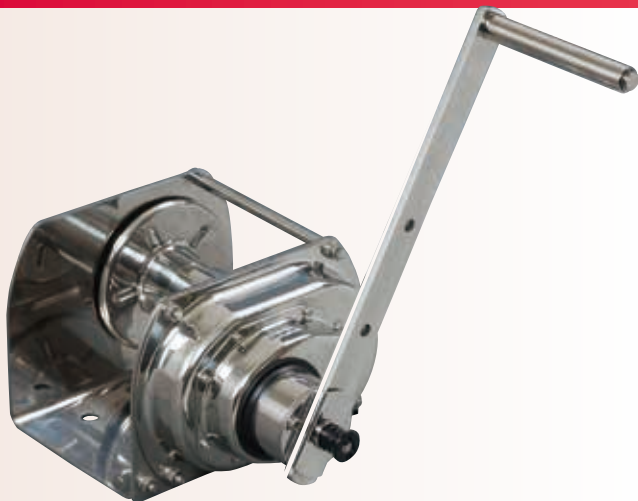


## SSW Series

SSW-100N • SSW-300N • SSW-500N • SSW-950N

### Authentic Rust-Resistant Stainless Steel Winches

- Stainless Steel is used as much as possible. To increase durability, high-grade rust-resistant SUS304 stainless steel is used in the casing, drum, gear cover, handle, and other parts such as ball bearings, screws, and bolts are stainless steel.
- Internal mechanism such as gear and mechanical brake etc. are not constructed from stainless steel to keep the strength. (Ratchet is bronze casting CAC408)
- Brake cover and handle grip are constructed from weather resistant plastic.
- Paint Finish

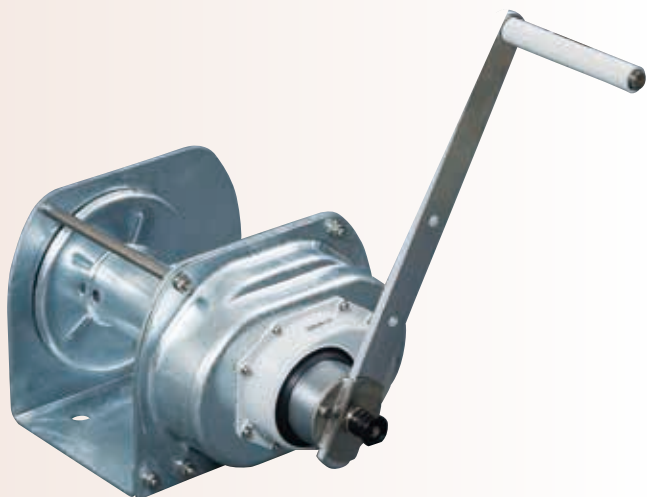


## SSW-BUFF

SSW-100N BUFF • SSW-300N BUFF • SSW-500N BUFF • SSW-950N BUFF Series

### Stain-Resistant, Brightness of All Stainless

- In addition to SSW series, brake cover, ratchet and handle grip are also constructed from stainless steel, and #400 SUS Buff Polished beautifully.
- Effective for use in the places that required to be clean, such as chemical • pharmaceutical • food facilities and indoor pools etc.



## PZW Series

PZW-100N • PZW-300N • PZW-500N  
PZW-950N • PZW-1500N • PZW-2100N

### Rust Resistant Hot-Dip Galvanizing

- The casing, drum, gear cover and handle are hot-dip galvanized. Handle retainer, screws, bolts and nuts are constructed from SUS.
- Brake cover and handle grip are constructed from weather resistant plastic.
- The winches in this series combine the rust-resistant qualities of the SSW series with the low prices of the PNW series.
- High load capacity 1,500kg • 2,100kg are available for PZW series though it is not available for SSW • SSW-Buff series.

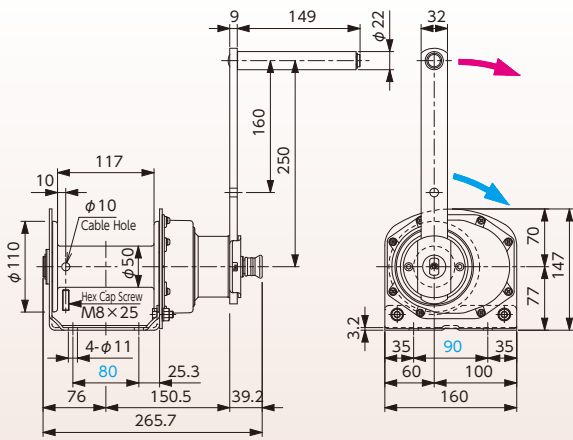
# Specification / Dimension

## PNW-100N

PSW-100N  
SSW-100N  
PZW-100N

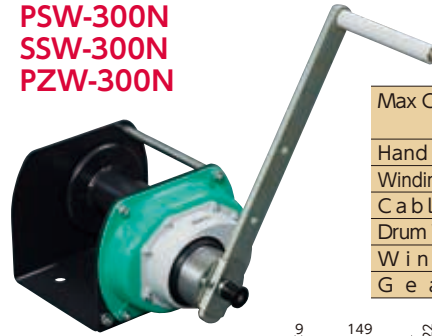


Max Capacity(1 <sup>st</sup> Layer)	100kg
(Top 6 <sup>th</sup> Layer)	52kg
Hand Pressure Load	116N
Winding Length per Turn	172.7mm
Cable Diameter	φ5mm
Drum Winding Capacity	30m
Winch Weight	7.5kg
Gear Ratio	1:1

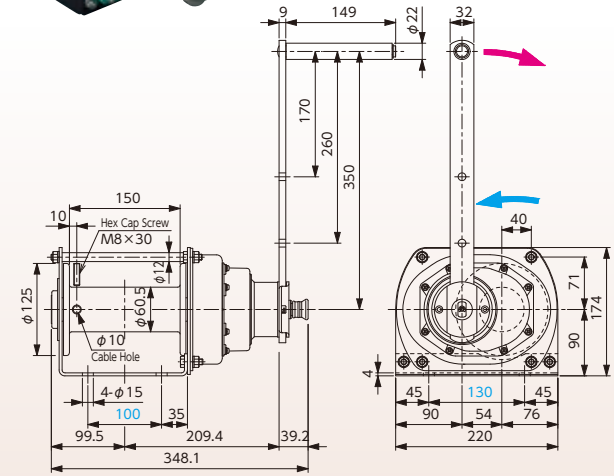


## PNW-300N

PSW-300N  
SSW-300N  
PZW-300N



Max Capacity(1 <sup>st</sup> Layer)	300kg
(Top 5 <sup>th</sup> Layer)	174kg
Hand Pressure Load	110N
Winding Length per Turn	72.5mm
Cable Diameter	φ6mm
Drum Winding Capacity	30m
Winch Weight	12kg
Gear Ratio	1:2.88

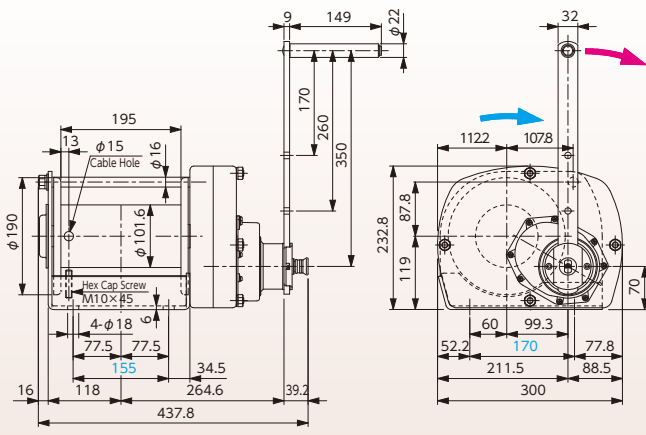


## PNW-1500N

PSW-1500N  
PZW-1500N



Max Capacity(1 <sup>st</sup> Layer)	1500kg
(Top 4 <sup>th</sup> Layer)	975kg
Hand Pressure Load	123N
Winding Length per Turn	15.4mm
Cable Diameter	φ10mm
Drum Winding Capacity	30m
Winch Weight	26kg
Gear Ratio	1:22.68

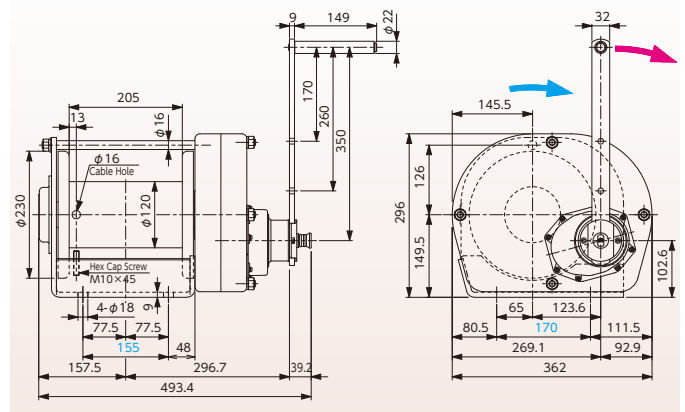


## PNW-2100N

PSW-2100N · PZW-2100N



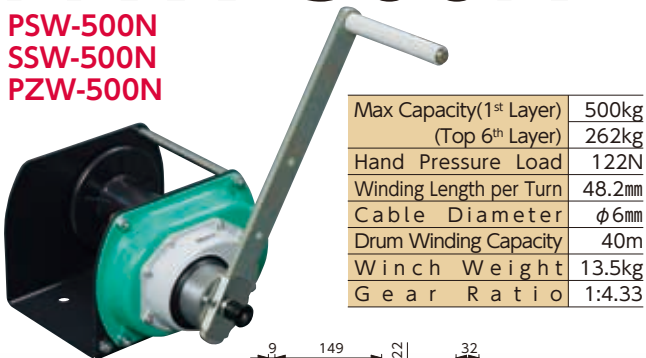
Max Capacity(1 <sup>st</sup> Layer)	2100kg
(Top 4 <sup>th</sup> Layer)	1358kg
Hand Pressure Load	158N
Winding Length per Turn	14.2mm
Cable Diameter	φ12mm
Drum Winding Capacity	30m
Winch Weight	46kg
Gear Ratio	1:29.16



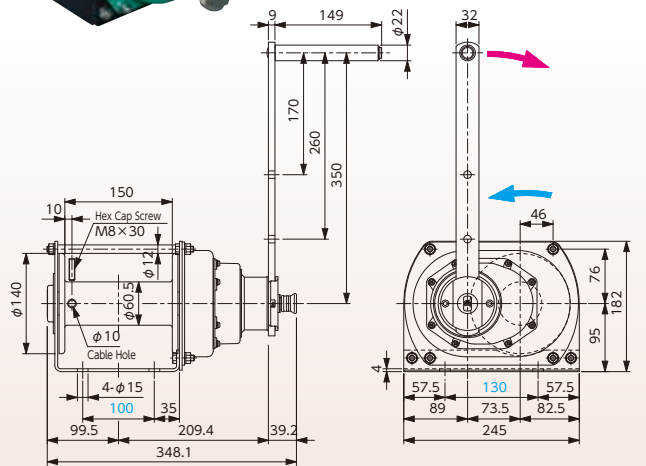


# PNW-500N

PSW-500N  
SSW-500N  
PZW-500N



Max Capacity(1 <sup>st</sup> Layer)	500kg
(Top 6 <sup>th</sup> Layer)	262kg
Hand Pressure Load	122N
Winding Length per Turn	48.2mm
Cable Diameter	φ6mm
Drum Winding Capacity	40m
Winch Weight	13.5kg
Gear Ratio	1:4.33

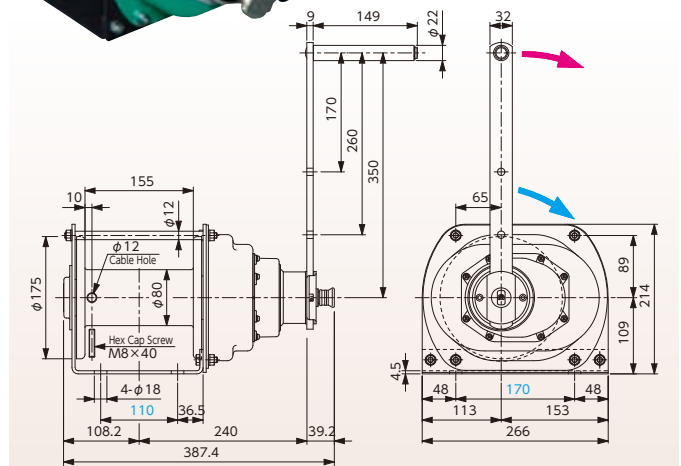


# PNW-950N

PSW-950N • SSW-950N  
PZW-950N

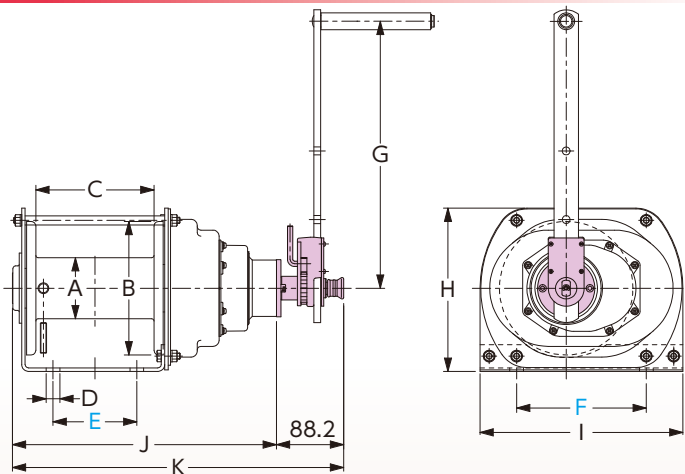


Max Capacity(1 <sup>st</sup> Layer)	950kg
(Top 5 <sup>th</sup> Layer)	550kg
Hand Pressure Load	114N
Winding Length per Turn	22.6mm
Cable Diameter	φ8mm
Drum Winding Capacity	30m
Winch Weight	19kg
Gear Ratio	1:12.19



# PRW-N Series

PRW-100N • PRW-300N  
PRW-500N • PRW-950N  
PRW-1500N • PRW-2100N



● The main PRW body shown in the detailed diagram is the same as that of PNW, except the handle part

PRW	A	B	C	D	E	F	G	H	I	J	K
100N	φ50	φ110	117	φ11	80	90	250	147	160	224.5	312.7
300N	φ60.5	φ125	150	φ15	100	130	350	174	220	306.9	395.1
500N	φ60.5	φ140	150	φ15	100	130	350	182	245	306.9	395.1
950N	φ80	φ175	155	φ18	110	170	350	214	266	346.2	434.4
1500N	φ101.6	φ190	195	φ18	155	170	350	232.8	300	396.6	484.8
2100N	φ120	φ230	205	φ18	155	170	350	296	362	452.2	540.4

Note

- The photo shows PNW series, but the each dimension of SSW • PSW series is the same.
- The dimension of PZW series is different from it of this page. Please refer to the drawing of PZW series.
- The dimension colored blue shows the setting pitch of winches.
- → Shows the rotating direction of the handle at the time of winding in
- Shows the rotating direction of the drum

# Small Series

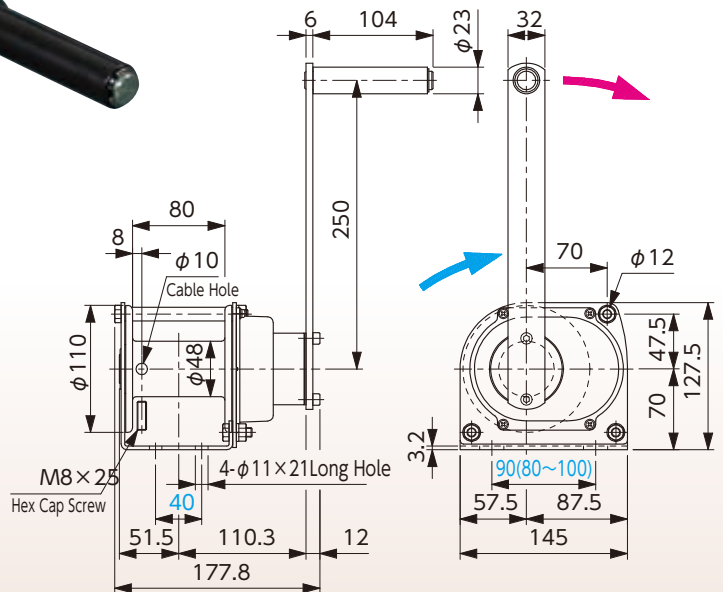
## PNW-100S•PSW-100S•PW-100S

In order to meet the requests for smaller winches, the small series with max.capacity 100kg and drum winding capacity 20m are provided. The mechanical brake is made to be smaller as much as possible.

Max Capacity(1 <sup>st</sup> Layer)	100kg
(Top 6 <sup>th</sup> Layer)	51kg
Hand Pressure Load	112N
Winding Length per Turn	166.5mm
Cable Diameter	φ5mm
Drum Winding Capacity	20m
Winch Weight	5kg
Gear Ratio	1:1

※Drum D/d is 10 times.

※It is very useful for using to the hanging curtain, drop scenes and small devices and so on.



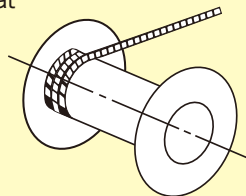
### Precautions when using

- JIS (6×37) Wire Rope is recommended.
- Three turns or more must remain on the drum as dead turns of wire rope.

The Japanese Industrial Standard specify that the dead turns of rope is to be at least two turns, but the wire rope should be long enough to be possible to keep a minimum of three turns on the drum assembly (If possible, more than five turns).

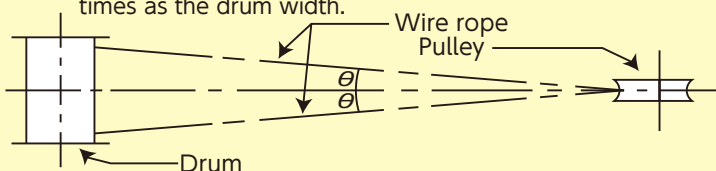
The relationship between the number of dead turns of rope and the pressure to wire rope stopper based on the friction coefficient at  $\mu=0.1$ .

Dead Turn of rope	0	1	2	3	4	5
Pressure to wire rope stopper	1	0.53	0.28	0.15	0.08	0.04



### Fleet Angle

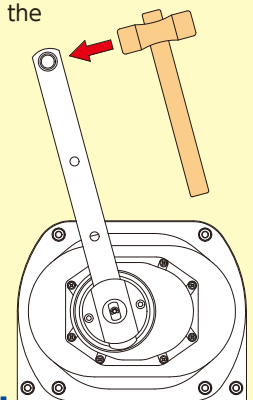
When using a drum without groove, keep the fleet angle within 2°  
 ※Ref.: Distance between the drum and the pulley is to be more than 15 times as the drum width.



- The technical training is required for operating the winches.

### Brake Sticking (Lock-up)

There is a case that you cannot rewind when the winch has not been used for a long time or operated in overload. This is caused by the engagement of the ratchet wheel and the brake disc because of repeated shocks of loads and/or overload. To solve this problem, turn the handle hard to the direction for rewinding as below or tap the handle stem with a rubber mallet to the same direction to detach the ratchet wheel from the brake disc.





# High Grade Excellent Series

## EXW-300S



Excellent Series are suitable for the places as Gymnasiums, theaters, stage props etc. that is required for more safe and noiseless.

### Safe Brake Mechanism (Noise-free PSW + Brake for lightweight loads)



Mechanical brake is reliable non-noise brake as PSW series, and brake for lightweight loads is also equipped. Crystal-Clear Brake Cover is used to check the brake unit easily. Taking two or three safety measures.

### Upper limit and lower limit of winding/rewinding



Prevent load drop accident due to incorrect operation such as reverse winding.

### Safety-Sensitive Big diameter, Grooved drum

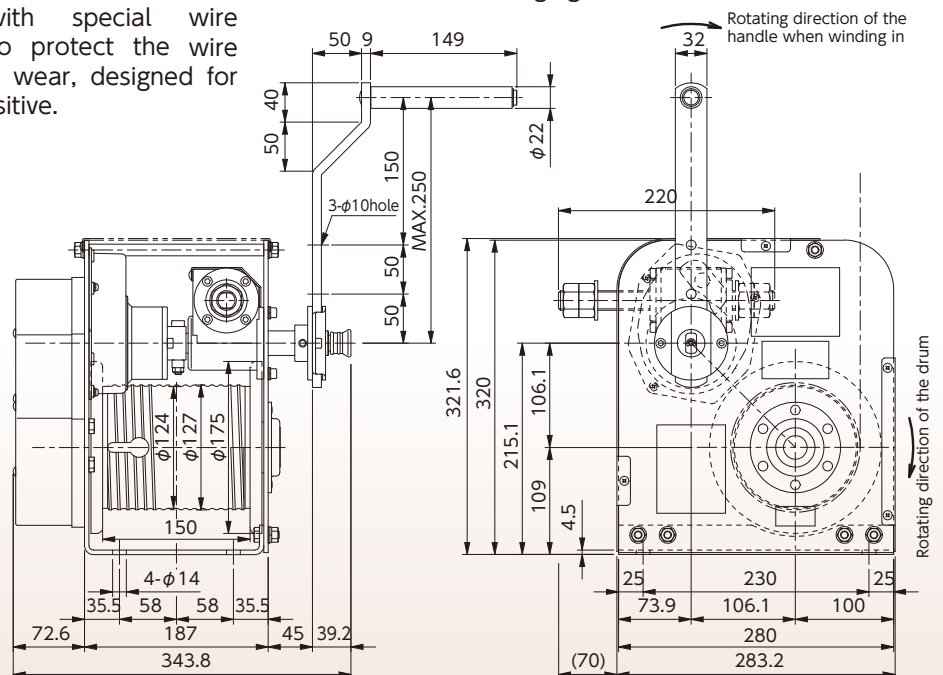


Drum D/d is more than 16 times, with special wire stopper to protect the wire rope from wear, designed for safety-sensitive.

### Variety of Capacity and Special Order

In addition to standard 300kg type (EXW-300S), 100kg, 600kg, 1000kg capacity are also available at special order. Please feel free to contact us for the availability of extended drum width, big diameter drum, dual hanging and so on.

Max Capacity (1 <sup>st</sup> Layer)	300kg
Hand Pressure Load	68N
Winding Length per Turn	30.5mm
Cable Diameter	φ8mm
Drum Winding Capacity	(1 <sup>st</sup> Layer) 6m (2 <sup>nd</sup> Layer) 13m
Winch Weight	29.5kg
Gear Ratio	1:13.6



# High grade "CE Marked" Series

## QW·SS Series



- QW · SS series are in conformity with EC law as approximated by the machinery directive 2006/42/EC relating to Cranes-Safety-Hand powered lifting equipment.
- Mechanical Brake with reliable double braking pawls (same as PNW).
- Drum D/d is more than 12 times.
- Pinion, gear and drum shaft are constructed from the chrome molybdenum steel to increase in strength. (QW-40,75, 110,170 and SS-40,65)
- Handle length is freely adjustable by thumbscrew.
- Free-Wheeling Device is installed. This device is available when there is no load on the winch, and for safe operation, the brake is designed to function automatically in case of sudden additional loads on the winches during operation.
- SS series are stainless steel winches, almost same specifications as SSW series.

**Note**

- The maximum load of SS series is lighter than QW series (only SS-65) because the drum axis is also constructed from SUS.
- Recommended wire rope is BS302 6x19 or 6x36 fiber cored.

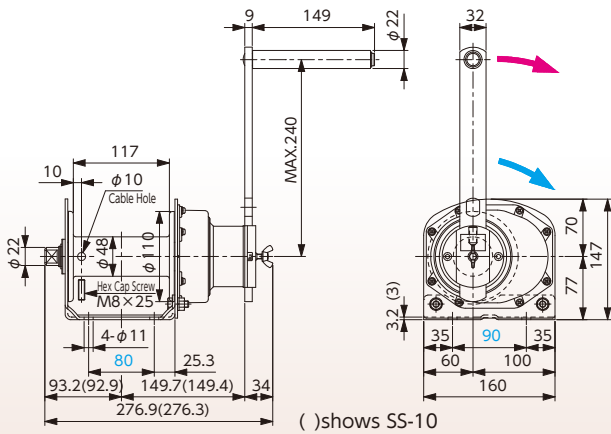


## QW·SS Series CE Marked

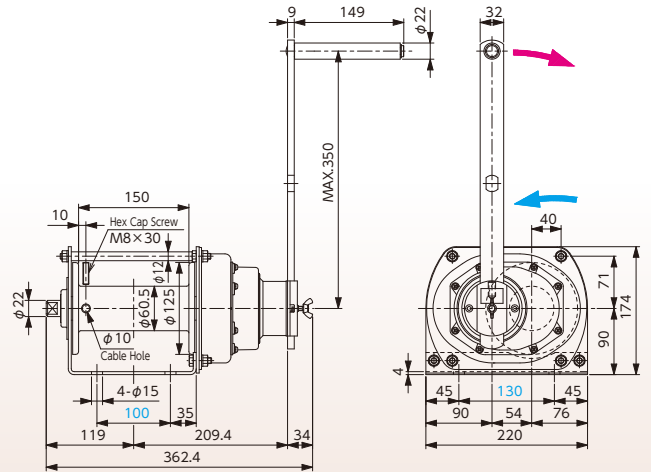
### Specifications

Type Nos.	CE Marked	QW-10 SS-10	QW-25 SS-25	QW-40 SS-40	QW-75 SS-65	QW-110	QW-170
Cable BS302 Dia. Suggested to Use		4.0 mm	5.0 mm	6.0 mm	8.0 mm	10.0 mm	12.0 mm
Cable Breaking Load		890 kgf	1,390 kgf	2,000 kgf	3,810 kgf	5,950 kgf	8,570 kgf
Cable Safety Factor		8.9	5.5	5.0	5.0	5.4	5.0
Maximum Capacity		100 kgf	250 kgf	400 kgf	750(650)kgf	1,100 kgf	1,700 kgf
2nd Layer		86 kgf	216 kgf	345 kgf	643(558)kgf	942 kgf	1,467 kgf
3rd Layer		76 kgf	191 kgf	304 kgf	564(488)kgf	825 kgf	1,291 kgf
4th Layer		68 kgf	171 kgf	271 kgf	501(434)kgf	733 kgf	
5th Layer		61 kgf	155 kgf	245 kgf	452(391)kgf		
6th Layer		56 kgf	141 kgf				
7th Layer		52 kgf					
Drum Diameter		48.0 mm	60.5 mm	70.0 mm	89.1 mm	110.0 mm	139.8 mm
D/d		13.0	13.1	12.6	12.1	12.0	12.6
Manual Pressure Load		11.5 kgf	9.0 kgf	11.0 kgf	10.0(8.5)kgf	10.0 kgf	15.0 kgf
Drum Winding Capacity		40 m	40 m	30 m	30 m	30 m	20 m
Winding Length per Turn		163.3 mm	71.4 mm	55.1 mm	25.0 mm	16.9 mm	16.5 mm
Working Handle Length		240 mm	350 mm	350 mm	350 mm	350 mm	350 mm
Gear Ratio		1 : 1	2.88 : 1	4.33 : 1	12.2 : 1	22.2 : 1	28.8 : 1
Overall Dimensions H W D		147.0 mm 276.5 mm 160.0 mm	174.0 mm 362.5 mm 220.0 mm	182.0 mm 362.5 mm 245.0 mm	214.0 mm 403.5 mm 266.0 mm	231.0 mm 448.0 mm 300.0 mm	296.0 mm 509.0 mm 362.0 mm
Net Weight Gross Weight		6.9 kg 7.6 kg	11.8 kg 12.9 kg	13.5 kg 14.8 kg	18.7 kg 20.3 kg	26.4 kg 28.2 kg	44.9 kg 47.6 kg

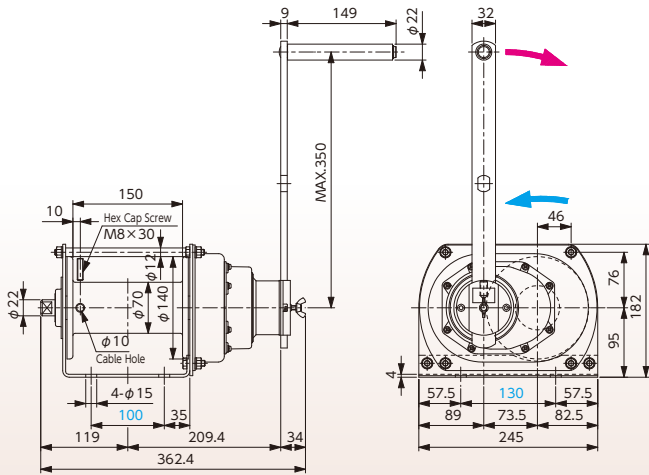
# QW-10 • SS-10



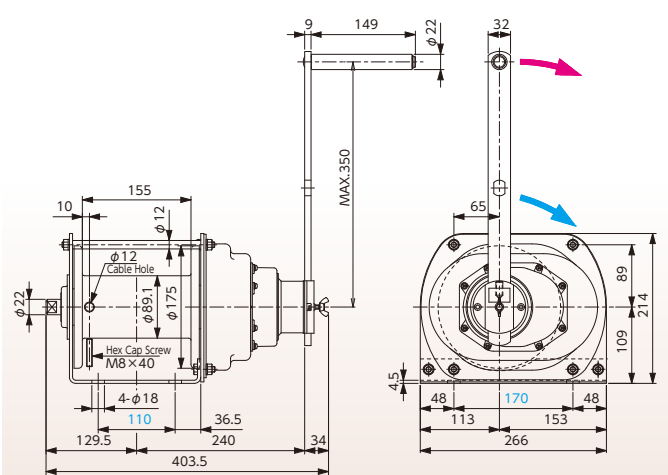
# QW-25 • SS-25



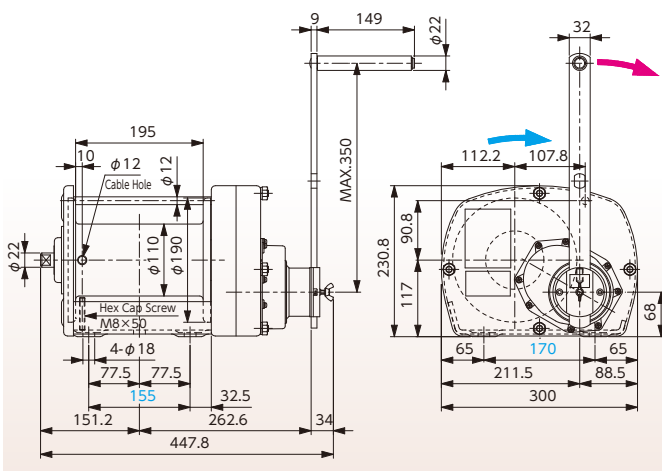
# QW-40 • SS-40



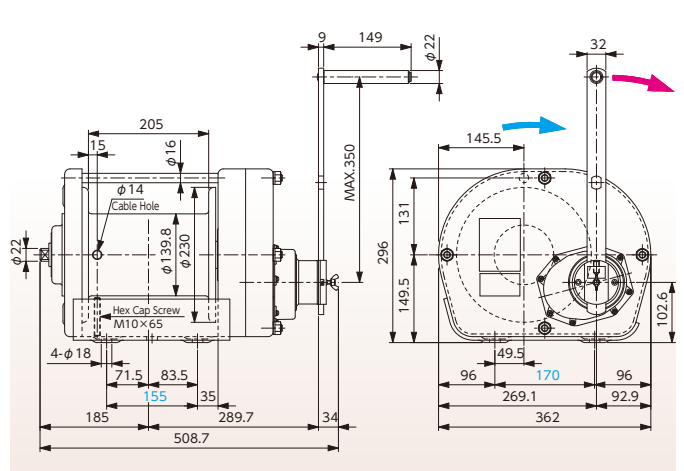
# QW-75 • SS-65



# QW-110



# QW-170



**Note**

- The dimension colored blue shows the setting pitch of winches.
- → shows the rotating direction of the handle at the time of winding in → shows the rotating direction of the drum.

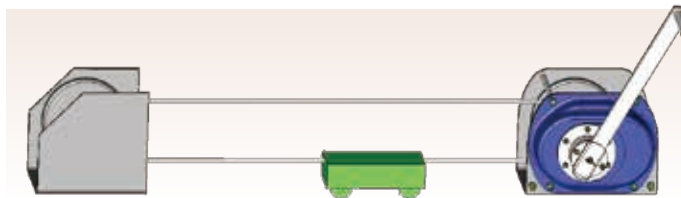


# Winches for specialized operation

## LHW Series (For horizontal endless pulling)

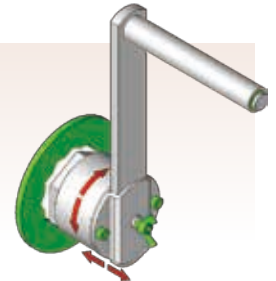
### Braking Mechanism with Handle-Lock

In horizontal endless pulling, the mechanical brake will not work due to the load weight put on both sides of the drum. LHW series with handle-lock was developed to solve this problem.



#### Manner of Operation

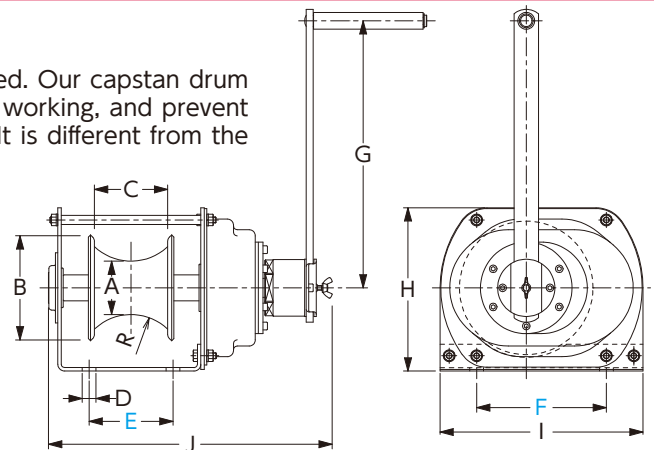
Press the ratchet head to winch to insert the hexagonal part of ratchet into serrated plate and activate brake. Pull the ratchet head out of winch, ratchet comes out together and handle can be turned in either direction. Handle length is freely adjustable by thumbscrew.



## LHW-CP Series

### Capstan Drum

In horizontal endless pulling, capstan drum is usually used. Our capstan drum have complete U-shaped drum formed by special press working, and prevent wire ropes from rubbing with each other or damaged. It is different from the other companies' products that have incomplete U-shaped drum which is just like grooved. This winch can be used for moving dollies, and so on.

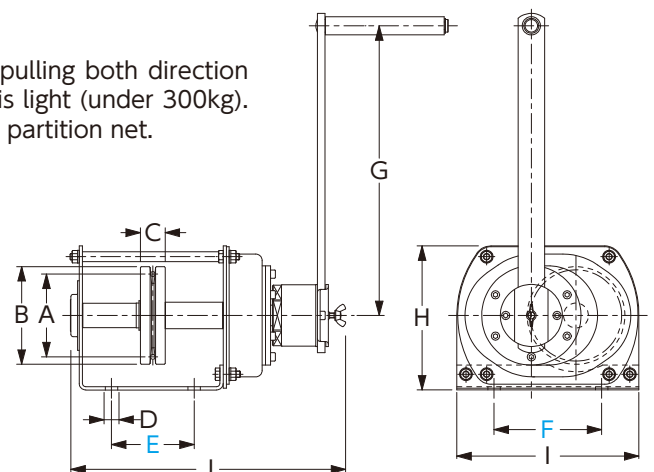


LHW	Max.Load	A	B	C	R	D	E	F	G	H	I	J
100CP	100kg	φ48.6	φ110	80	R55	φ11	80	90	250	147	160	250
300CP	300kg	φ48.6	φ125	80	R55	φ15	100	130	350	174	220	332.5
500CP	437kg	φ70	φ140	96	R70	φ15	100	130	350	182	245	332.5
950CP	950kg	φ70	φ138.6	96	R70	φ18	110	170	350	214	266	371.8
1500CP	1500kg	φ89.1	φ190	110	R70	φ18	155	170	350	232.8	300	422.2
2100CP	2100kg	φ101.6	φ190	145	R95	φ18	155	170	350	296	362	478

## LHW-V Series

### V groove sheave

LHW with V groove sheave is recommended for use in pulling both direction through narrow width. Also it is effective when the load is light (under 300kg). It is useful when opening/closing a safety net for rangers, partition net.

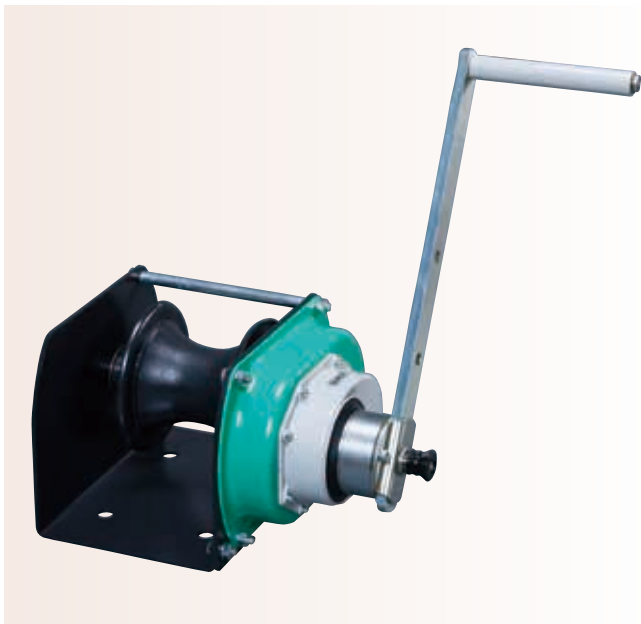


LHW	Max. Load	Cable Dia	A	B	C	D	E	F	G	H	I	J
100V	60kg	φ5 (φ91)	φ98	25	φ11	80	90	250	147	160	250	
300V	180kg	φ6 (φ110)	φ118	30	φ15	100	130	350	174	220	332.5	
500V	300kg	φ6 (φ110)	φ118	30	φ15	100	130	350	182	245	332.5	

# PNW-CP • PSW-CP SSW-CP • PZW-CP

## Capstan Drum Winches

Drum of PNW • PSW • SSW • PZW series can be changed to Capstan Drum.  
In endless pulling, please apply load in one direction up-and-down or slope.

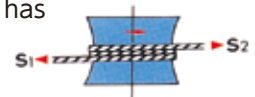


〈Reference〉 The following formula can be used to find the amount of tension required to avoid load slipping in capstan drum.

$$S_2 = \frac{S_1}{e^{\mu\alpha}} = \frac{S_1}{e^{\mu 2\pi n}}$$

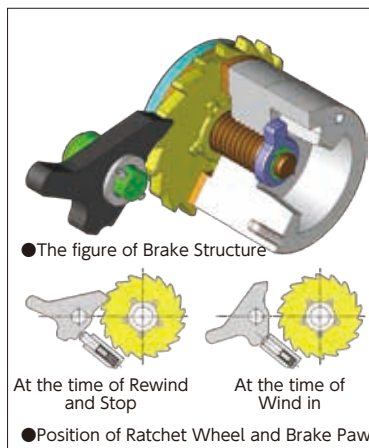
- $S_1$  : Tension at the side of winding in (under load)
- $S_2$  : Tension required at the side of pulling out
- $e^{\mu\alpha}$  : Damping ratio of tension
- $n$  : Winding times of the wire rope around the drum
- $\alpha$  : Rope winding angle (rad)  $\alpha = 2\pi n$
- $\mu$  : Friction coefficient of the drum and the wire rope
- $e$  : Natural log base  $e = 2.718$

The damping ratio of tension  $e^{\mu\alpha}$  has been calculated based on the friction coefficient at  $\mu = 0.1$  of the drum and the wire rope.



Winding times $n$	3	4	5
Damping ratio of tension $e^{\mu\alpha}$	6.58	12.34	23.14

## PW Series 〈with Free-Wheeling Devices〉



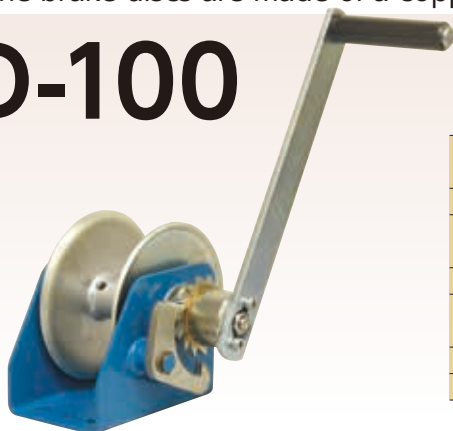
If you need to use the free-wheeling devices, PW series are available. With no load on the winches, the brake is easily released to pay out cable by manually switching the brake pawl.

- Note**
- Make sure the winch is free from loads when releasing the brake pawl.
  - For safety, the free-wheeling devices is not installed on standard 3 series now (except for QW • SS series).
  - The main frame is same as PNW.

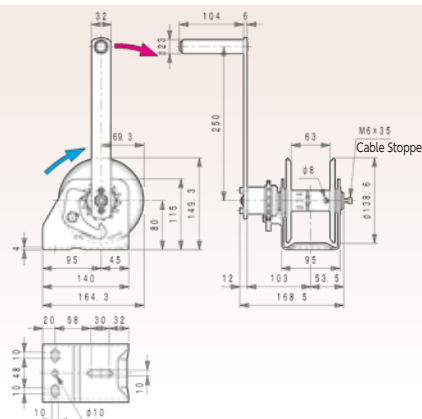
# Handy Winch with Compact Mechanical Brake

Installed the mechanical brake (double brake pawls). Possible to use outdoors without brake cover because the brake discs are made of a copper alloy.

## HD-100

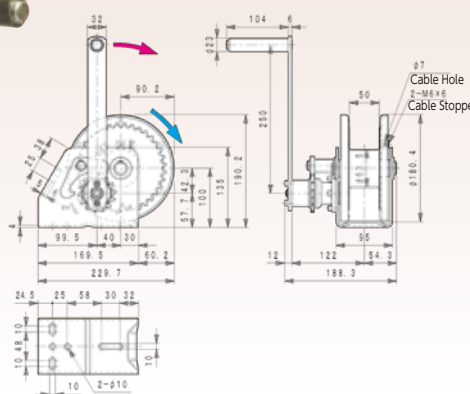
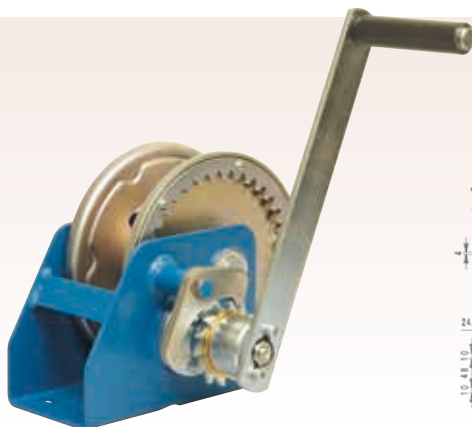


Max Capacity (1 <sup>st</sup> Layer)	100kg
Hand Pressure Load	85N
Winding Length per Turn	125.6mm
Cable Diameter	φ6mm
Drum Winding Capacity	15m
Winch Weight	4.5kg
Gear Ratio	1:1



## HD-300

Max Capacity (1 <sup>st</sup> Layer)	300kg
Hand Pressure Load	85N
Winding Length per Turn	36.3mm
Cable Diameter	φ6mm
Drum Winding Capacity	15m
Winch Weight	6.6kg
Gear Ratio	1:6



→ shows the rotating direction of the handle at the time of winding in → shows the rotating direction of the drum

Note

● In addition to the brake sticking (lock-up) that you cannot rewind (Page 7), there is another brake sticking (lock-up) that does not work at all because the ratchet is stick to U-nut when the load drop is occurred due to reverse winding by mistake. It is occurred because there is not a stopper for handy winch (Ref. page 1 Structure ㉞). To solve this problem, turn the handle hard to the direction for winding in or tap the handle stem with a rubber mallet in the same direction to detach the ratchet from U-nut. Please refer to the manual for details to solve the brake sticking (lock-up).

## Plenty of Uses in accordance with Purposes



Net for preventing balls



Banner · Hanging curtain



Opening/Closing a shading Net



For drying a fire-fighting hose



Water gate



For course ropes at canoe playing field



# Special Model Winches

Please feel free to contact us about the design and production of other models in compliance with your requests.



## ■ For chain Wheel Operation

Useful when winches are used in high places for hoisting basketball-boards, opening and closing a shade net etc.



## ■ Slip type Winch

● Suitable for the Ceiling Net.

The brake mechanism having special structure is built in this winch, so if more than specified load is applied, the brake will slip and not apply excessive load on the drum. So it prevent the net from being damaged due to sudden snow and so on.



## ■ Overload Prevention Lever (Patented)

With manual control, overloading and wire-cutting accidents can be prevented.

**Note** When adjusting the torque of slip type winch and overload prevention lever, please allow for the errors of plus or minus 30% in its initial stage.



## ■ Fitting Base

Various kinds of fitting base designed for different purposes and places can be produced matching client specifications.



## ■ Winch Mount(at option)

Not interfere with handle rotating. Easy to mount the winch to the concrete pole by using this with adjustable bands.



## ■ Compartment Drum

Useful when it is necessary to move two ropes up and down equally for lifting and lowering dumpers, hoisting hanging batons, and so on.



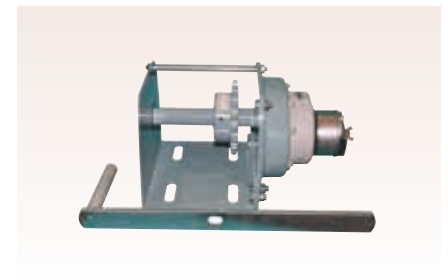
## ■ Grooved Drum for Large Diameter Wire

Because of the grooves, very long lengths of wire can be wound efficiently per drum turn. Drums for winding multiple wires are also available.



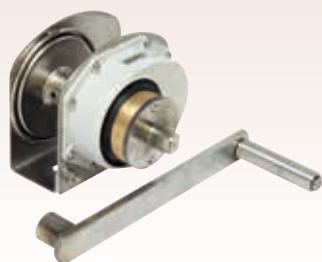
## ■ Multi-Grooved Drum

With just this winch, the load can be hoisted different distances at different speeds.



## ■ Sprocket Model

With the sprocket attached to the drum shaft and with the use of roller chains, heavy-duty machinery can be moved.



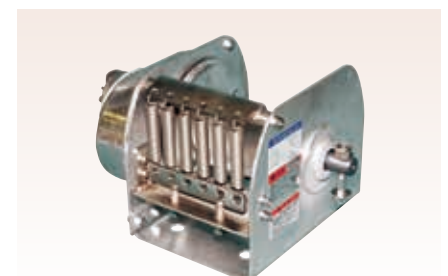
## ■ Narrow Width Drum

This small narrow drum is ideal for use in tight places for small work.



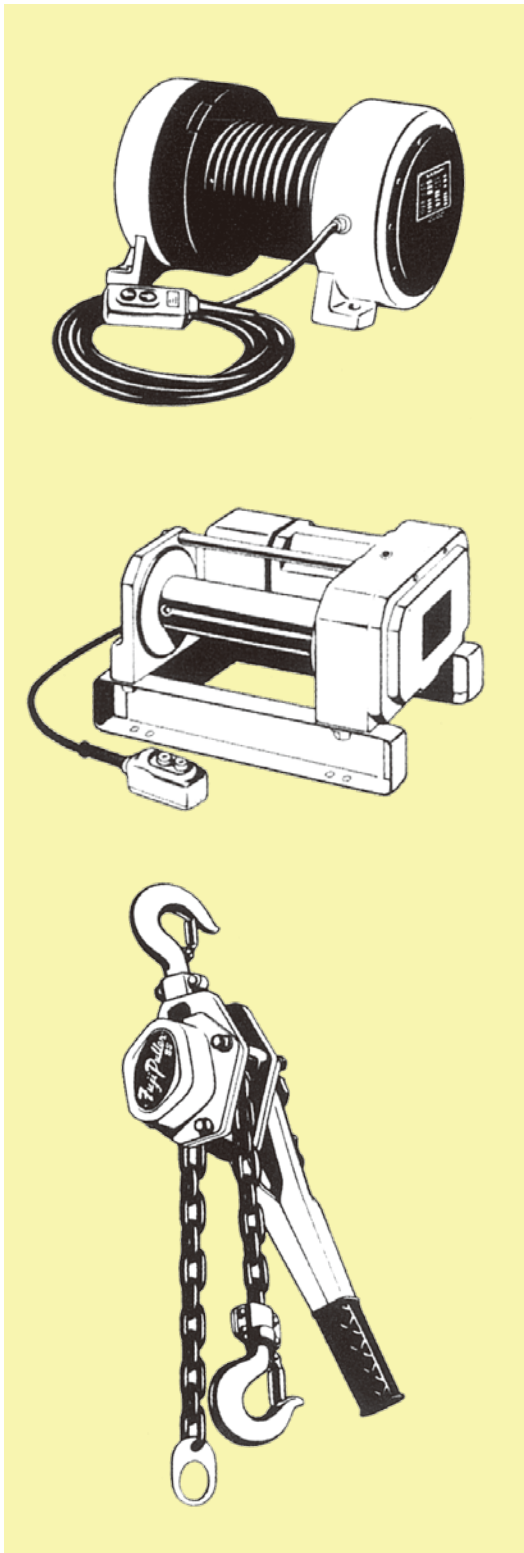
## ■ Accordion Handle

Useful in the wing-body of trucks in order to protect and stabilize projecting handles.



## ■ Wire Stopper

Prevents cable slackening no load is attached.



Other products for users' needs.  
Your consideration is invited.



# Fuji Mfg Co., Ltd.

## Head Office

Uchida Bldg.5F 2-13-11, Shinkawa, Chuo-ku, Tokyo 104-0033, Japan  
Phone: 81-3-3555-3031

## Ishikawa Office

Ha-195, Akai-machi, Nomi-city, Ishikawa Pref. 929-0101, Japan  
Phone: 81-761-55-0253 Fax: 81-761-55-3519  
URL: <http://www.fujiseisakusyo.co.jp>

**Attention: Please read operator manuals before use of products and use the products in accordance with the manuals.**