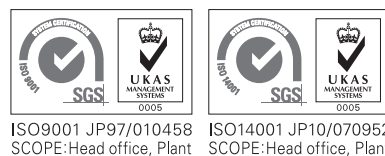
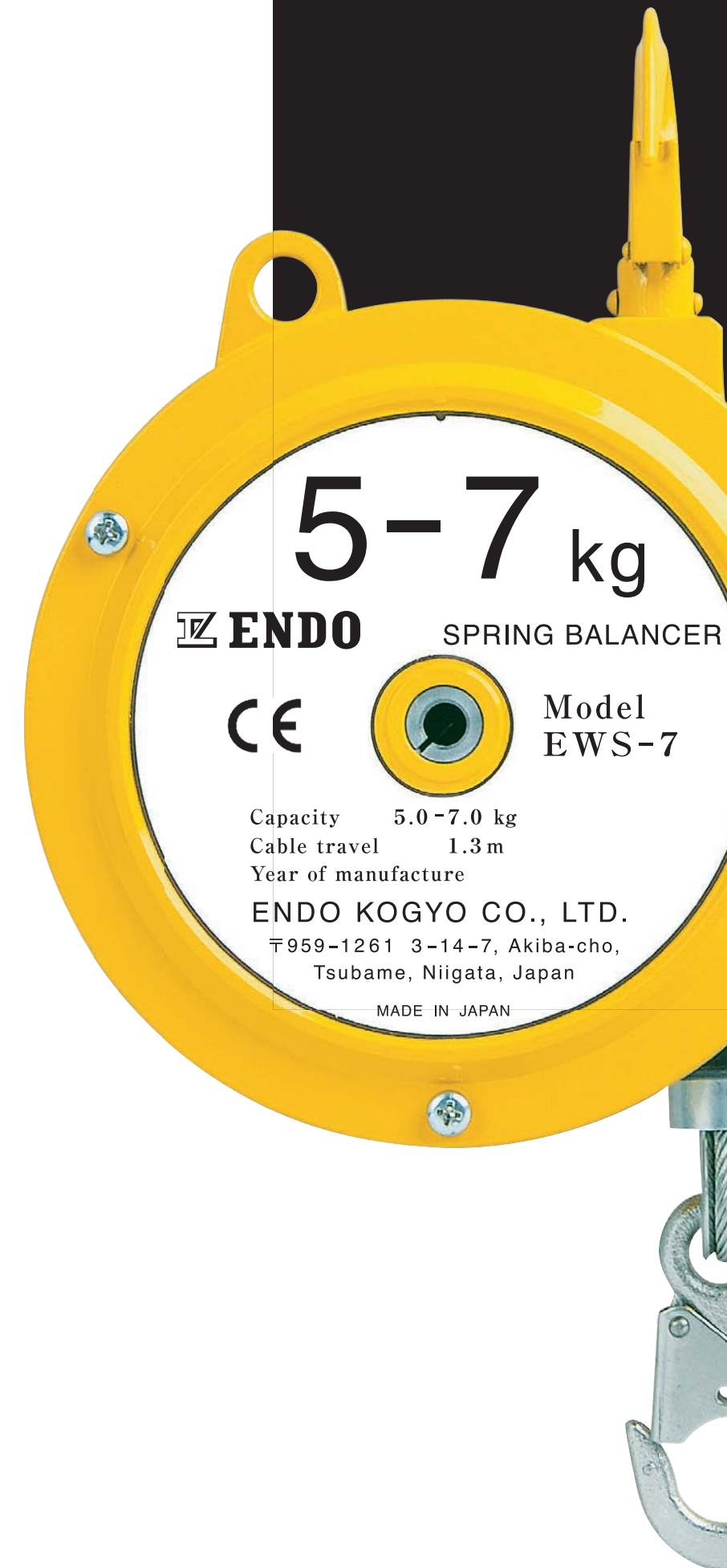


ENDO

SPRING BALANCER

ENDO



ISO9001 JP97/010458
SCOPE:Head office, Plant

ISO14001 JP10/070952
SCOPE:Head office, Plant

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※Please note we no have responsibility for missing and fault on the printing.

SPRING BALANCER



What is Spring balancers?

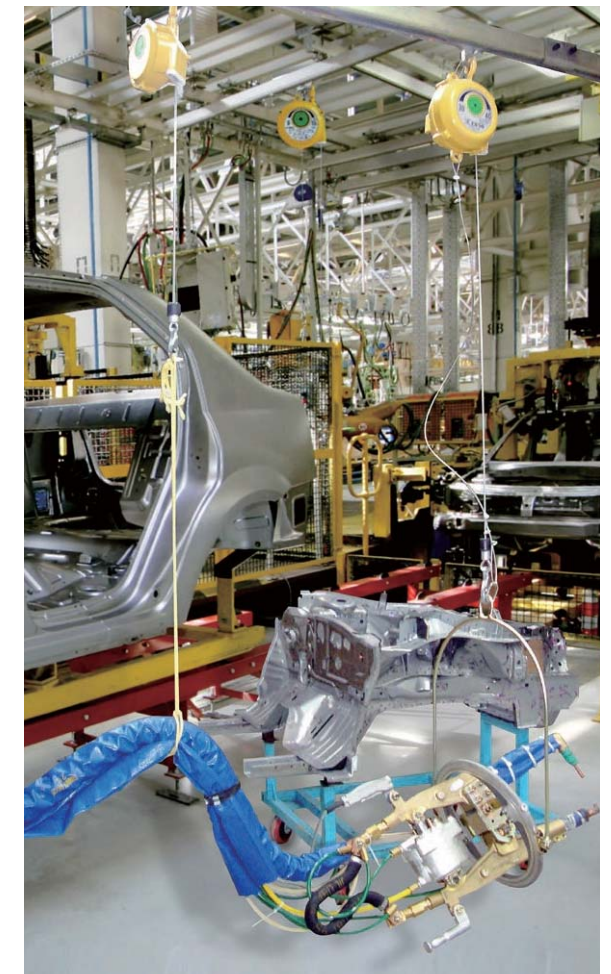
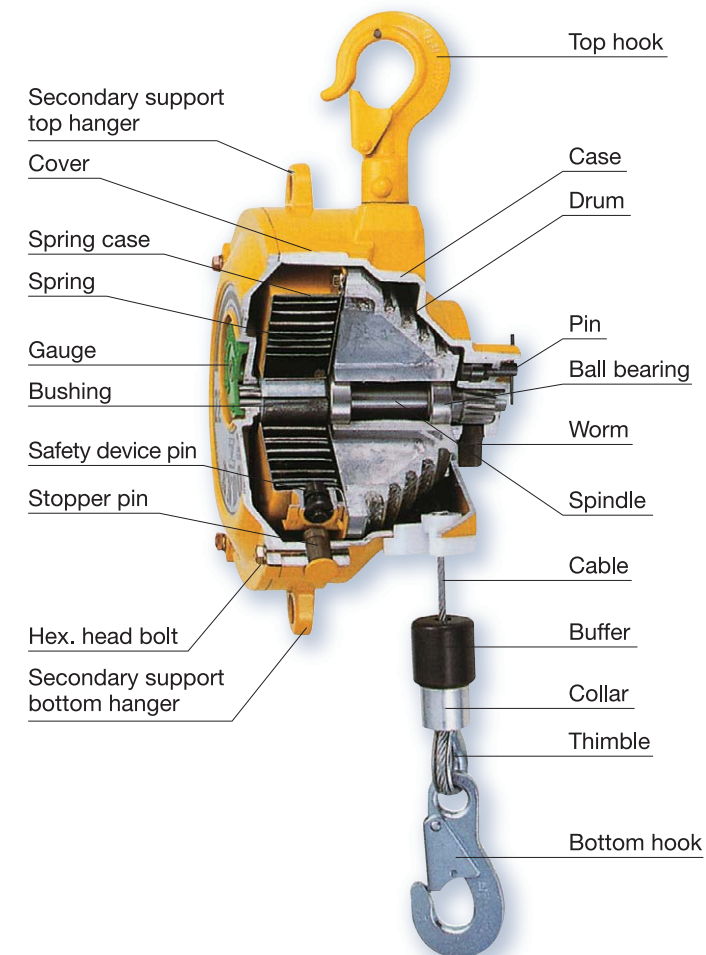
The tension is kept stable on even if the cable is pulled out or retrieved because of the tapered drum. So Spring balancers can hold the tools suspended in hollow and work for flexible positioning of the tools. Workers can enjoy comfortable operation with less fatigue.

Location of use

- Suspending a tool for product assembly line.
- Frequent fastening screws, bolts and nuts.
- Suspending a jig, tool, welding gun etc.

Advantages

- The balancers improve working efficiency and diminish worker fatigue.
- The balancers make the position of a tool stable and contribute to accurate work.
- The balancers are available for keeping a tool not damaged.
- Any electric or pneumatic power is not required and safe working is achieved.



SPRING BALANCER

How to adjust spring tension

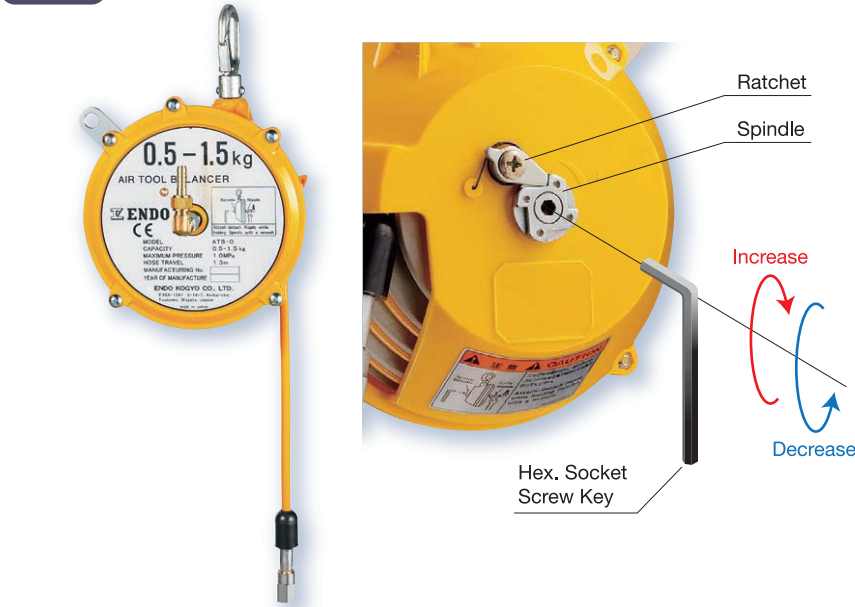
Worm gear system, Ratchet system or Handle system are available and dependent on the models. Clockwise adjustment increases the spring tension and Counter clockwise adjustment decreases the spring tension. (The spring tension has been set at the middle of capacity in advance prior to shipment)

Handle system	ERP model				
Ratchet system	EK-00,EK-0	EW-3,5	SBC	ER model	ATB model
Worm gear system	EWS model	EWF model	ELF model	RSB model	
	ETP model	THB model	ATR model	EWA model	

Handle system



Ratchet system



Worm gear system



Read the instruction manual carefully for details.

Features

※ All features are not always available on all balancers.



Fall arrest device

When spring brakes, safety pin pops out and collides with pin fixed or case to prevent the suspended tools from falling.



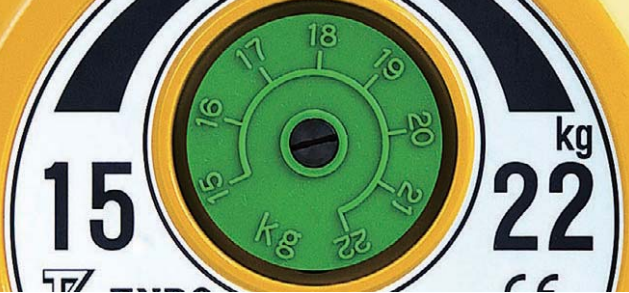
Drum lock device

By changing the position of the pin, you can lock the drum rotating. It provides easy tool/wire rope replacement.



Gauge

The gauge indication contributes to worker recognition on tension adjustment.



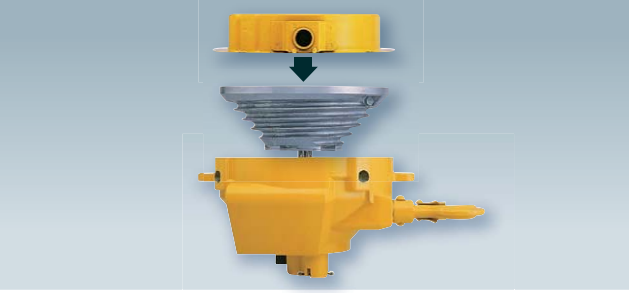
Secondary support hanger

The secondary support hanger is available on every model.



Cartridge spring assembly

Cartridge spring provides easy and safe spring replacement.



Wire rope replacement

The plug fixing system provides the easy cable replacement.



SPRING BALANCER

Summary

Type	Model	Capacity(kg)	Stroke (m)	Cable dia (φ mm)	Mass (kg)	CE	
Light capacity	EK-00	0.5 - 1.5	0.5	2.0	0.2	○	Suitable for light weight tools like an electric driver. P.7
	EK-0	0.5 - 1.5	1.0	3.0	0.5	○	
	ERP-06E	0.3 - 0.6	1.5	2.0	0.4	○	
	ERP-1E	0.5 - 1.0	1.5	2.0	0.4	○	
	ERP-2E	1.0 - 2.0	1.5	2.0	0.4	○	
Standard	EW-3	1.0 - 3.0	1.3	3.0	1.4	○	Most popular series for a welding gun, pneumatic tool etc. Many safety features are equipped. P.8
	EW-5	2.5 - 5.0	1.3	3.0	1.5	—	
	EWS-3	1.5 - 3.0	1.3	3.0	1.9	○	
	EWS-5	3.0 - 5.0	1.3	3.0	2.1	○	
	EWS-7	5.0 - 7.0	1.3	3.0	2.1	○	
	EWF-9	4.5 - 9.0	1.3	4.0	3.5	○	
	EWF-15	9.0 - 15.0	1.3	4.0	3.8	○	
	EWF-22	15.0 - 22.0	1.5	4.76	7.3	○	
	EWF-30	22.0 - 30.0	1.5	4.76	7.7	○	
	EWF-40	30.0 - 40.0	1.5	4.76	9.7	○	
	EWF-50	40.0 - 50.0	1.5	4.76	10.1	○	
	EWF-60	50.0 - 60.0	1.5	4.76	11.1	○	
	EWF-70	60.0 - 70.0	1.5	4.76	11.4	○	
Large capacity	EWF-90	70.0 - 90.0	2.0	4.76	21.9	○	Suitable for heavy weight devices like a multiple nut runner. P.10
	EWF-105	85.0 - 105.0	2.0	4.76	24.0	○	
	EWF-120	100.0 - 120.0	2.0	4.76	27.5	○	
	ETP-14	120.0 - 140.0	1.2	6.0	24.1	○	
	ETP-15	140.0 - 170.0	1.2	6.0	28.7	○	
	ETP-16	170.0 - 200.0	1.2	6.0	29.7	○	
Long stroke	ELF-3	1.5 - 3.0	2.5	3.0	4.6	○	Available for high ceiling applications. P.11
	ELF-5	3.0 - 5.0	2.5	3.0	4.8	○	
	ELF-9	5.0 - 9.0	2.5	3.0	5.4	○	
	ELF-15	9.0 - 15.0	2.5	4.76	10.0	○	
	ELF-22	15.0 - 22.0	2.5	4.76	10.2	○	
	ELF-30	22.0 - 30.0	2.5	4.76	11.0	○	
	ELF-40	30.0 - 40.0	2.5	4.76	14.0	○	
	ELF-50	40.0 - 50.0	2.5	4.76	14.5	○	
	ELF-60	50.0 - 60.0	2.5	4.76	17.1	○	
	ELF-70	60.0 - 70.0	2.5	4.76	18.0	○	
With Ratchet	RSB-15	9.0 - 15.0	1.5	5.0	7.4	—	Available for holding suspend tool on the way of stroke mechanically. Even if no load is applied, its hook can be hold on the way of stroke. P.12
	RSB-22	15.0 - 22.0	1.5	5.0	7.7	—	
	RSB-30	22.0 - 30.0	1.5	5.0	8.1	—	
	RSB-40	30.0 - 40.0	1.5	5.0	8.5	—	

Type	Model	Capacity(kg)	Stroke (m)	Cable/Hose dia (φ mm)	Mass (kg)	CE	
With cable snap back prevention device	EWA-15	9.0 - 15.0	1.3	4.0	4.7	○	Having device to arrest wire rope snap back in case that a wire rope is cut or suspended tool is disengaged. It will save worker from injury or dangerous occurred by such a situation. P.13
	EWA-22	15.0 - 22.0	1.5	4.76	8.9	○	
	EWA-30	22.0 - 30.0	1.5	4.76	9.3	○	
	EWA-40	30.0 - 40.0	1.5	4.76	11.9	○	
	EWA-50	40.0 - 50.0	1.5	4.76	12.3	○	
	EWA-60	50.0 - 60.0	1.5	4.76	13.3	○	
	EWA-70	60.0 - 70.0	1.5	4.76	13.6	○	
With brake system	EWF-3B	1.5 - 3.0	1.3	3.0	4.7	○	Having one-way clutch lining braking system. Provide speedy and safe work by moving up tools slowly. P.14
	EWF-5B	3.0 - 5.0	1.3	3.0	8.9	○	
	EWF-7B	5.0 - 7.0	1.3	3.0	9.3	○	
Air tool balancer	ATB-0	0.5 - 1.5	1.3	6.3	1.58	○	Having two function both hose reel and balancer. Urethane hose is wound and air tools can be easily moved up and down. P.15
	ATB-1	1.5 - 3.0	1.3	6.3	1.66	○	
	ATB-2	3.0 - 5.0	1.3	3.6	1.73	—	
Tool hose balancer	THB-15A	0.5 - 1.5	1.3	8.5	2.0	○	Inside diameter of hose is φ8.5mm.(bigger than ATB series) which supplies enough air to operate the suspended air tool or device. P.16
	THB-25A	1.5 - 2.5	1.3	8.5	2.1	○	
	THB-35A	2.5 - 3.5	1.3	8.5	2.2	○	
	THB-50A	3.5 - 5.0	1.3	8.5	2.2	○	
	THB-65A	5.0 - 6.5	1.3	8.5	2.3	○	


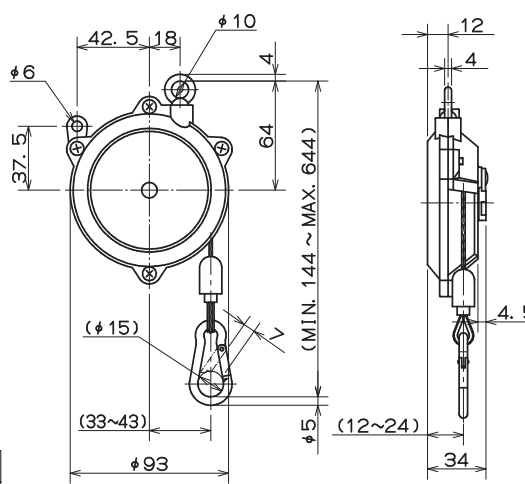
Type	Model	Max tension N {kgf}	Stroke (m)	Cable/Hose dia (φ mm)	Mass (kg)	CE	
Air tool reel	ATR-5	4.9 {5.0}	2.0	10.0	3.8	○	Suitable for retracting hose into the device automatically. P.17
	ATR-5-1	4.9 {5.0}	2.0	10.0	4.2	○	
Torque reel	ER-3A	18 {1.8}	3.0	2.38	1.4	○	Long travel cable is suitable for hanging pendant switch and so on. -A type has ratchet system that can be stopped on the way of cable travel. P.18
	ER-3B	18 {1.8}	3.0	2.38	1.3	○	
	ER-5A	25 {2.5}	3.0	2.38	1.5	—	
	ER-5B	25 {2.5}	3.0	2.38	1.4	—	
	ER-10A	49 {5.0}	3.0	2.38	4.5	—	
	ER-10B	49 {5.0}	3.0	2.38	3.8	—	

They are suitable for the light weight tool like an electric driver.

EK-00 Light capacity

FUNCTION

- Ratchet system spring adjustment
- CE Mark available


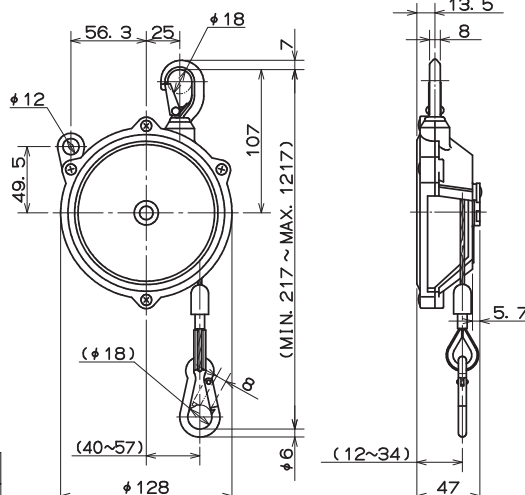



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EK-00	0.5-1.5	0.5	2.0	0.2

EK-0 Light capacity

FUNCTION

- Ratchet system spring adjustment
- CE Mark available


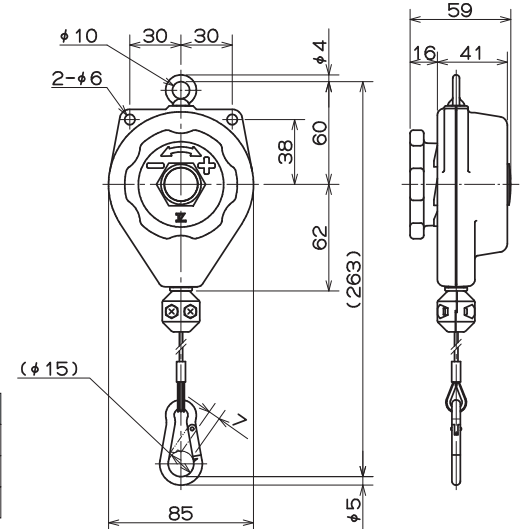



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EK-0	0.5-1.5	1.0	3.0	0.5

ERP-06E/1E/2E Light capacity

FUNCTION

- Handle system spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ERP-06E	0.3-0.6	1.5	2.0	0.4
ERP-1E	0.5-1.0	1.5	2.0	0.4
ERP-2E	1.0-2.0	1.5	2.0	0.4

* A nylon rope is employed for CE market instead of a nylon coated cable.

Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation

- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.


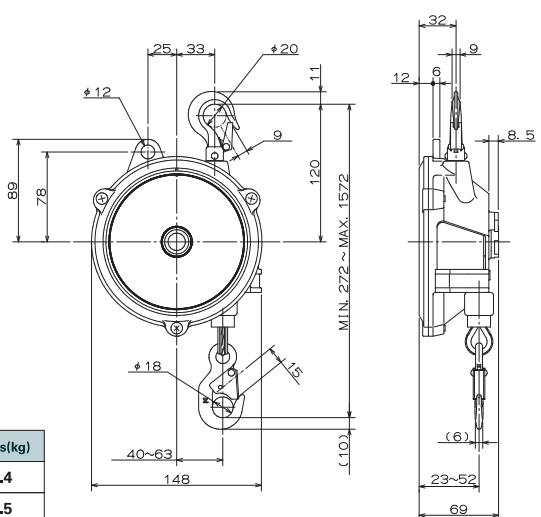
Many safety features are equipped and they are most popular. For a welding gun, Pneumatic tool etc.

EW-3/5 Standard

FUNCTION

- Plug type cable set
- Ratchet system spring adjustment
- CE Mark available

* Only EW-3 is available for CE Mark


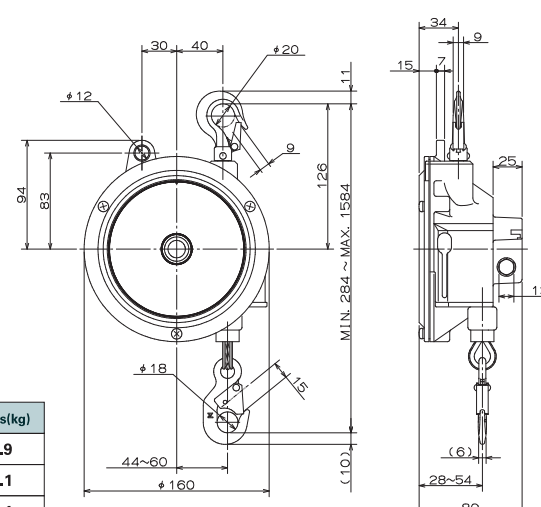



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EW-3	1.0-3.0	1.3	3.0	1.4
EW-5	2.5-5.0	1.3	3.0	1.5

EWS-3/5/7 Standard

FUNCTION

- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available


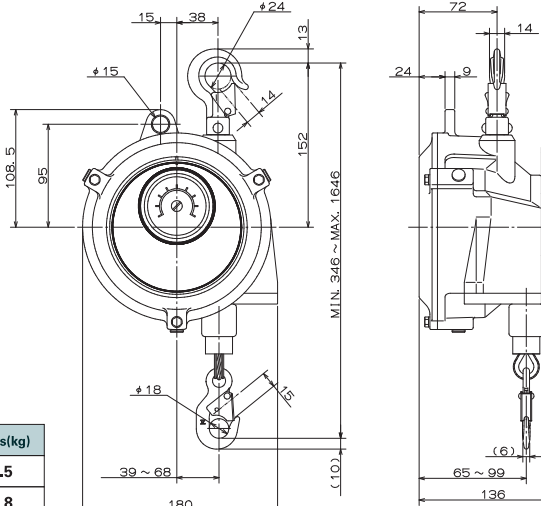



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWS-3	1.5-3.0	1.3	3.0	1.9
EWS-5	3.0-5.0	1.3	3.0	2.1
EWS-7	5.0-7.0	1.3	3.0	2.1

EWF-9/15 Standard

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWF-9	4.5- 9.0	1.3	4.0	3.5
EWF-15	9.0-15.0	1.3	4.0	3.8

Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation


- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

Many safety features are equipped and they are most popular. For a welding gun, Pneumatic tool etc.

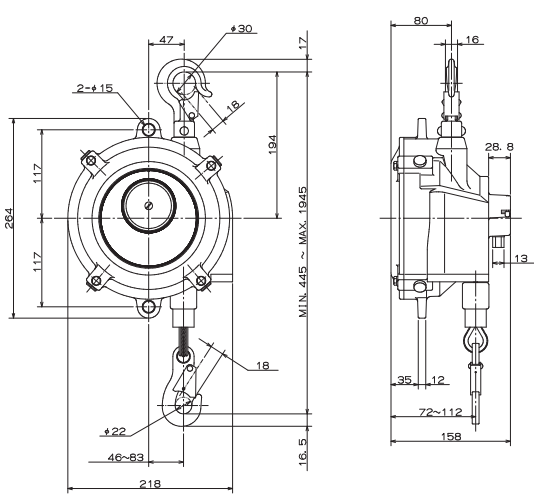
Standard

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available




Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWF-22	15.0-22.0	1.5	4.76	7.3
EWF-30	22.0-30.0	1.5	4.76	7.7



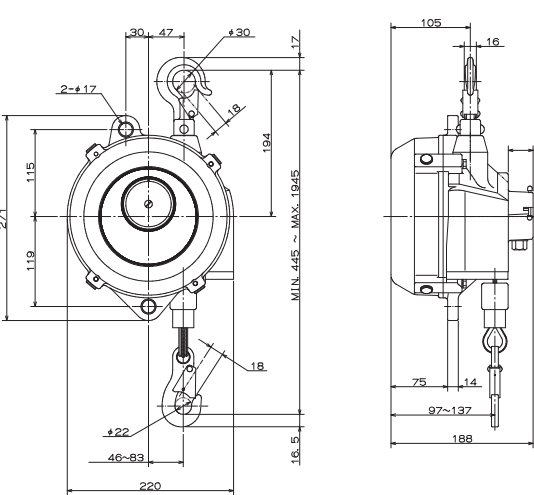
Standard

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available




Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWF-40	30.0-40.0	1.5	4.76	9.7
EWF-50	40.0-50.0	1.5	4.76	10.1



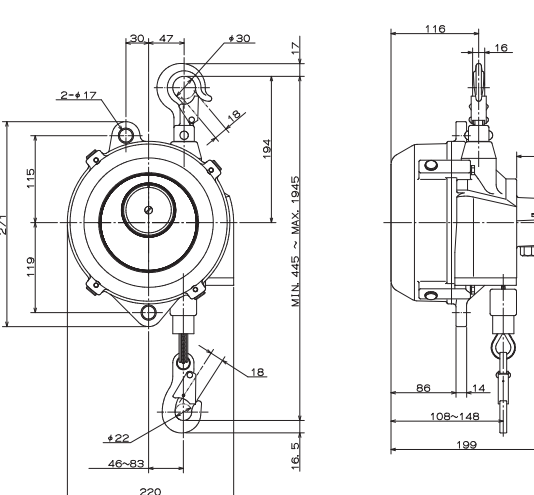
Standard

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWF-60	50.0-60.0	1.5	4.76	11.1
EWF-70	60.0-70.0	1.5	4.76	11.4



Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation


- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

They are suitable for a heavy weight device like multiple nut runner.

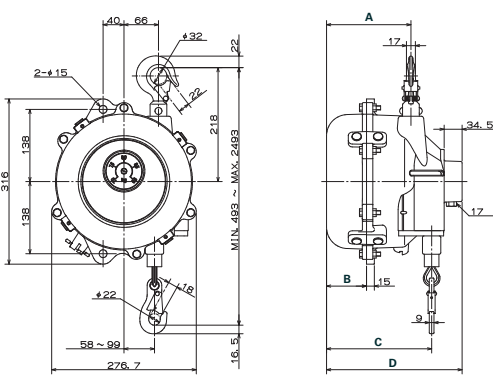
Large capacity

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available




Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWF-90	70.0- 90.0	2.0	4.76	21.9
EWF-105	85.0-105.0	2.0	4.76	24.0
EWF-120	100.0-120.0	2.0	4.76	27.5



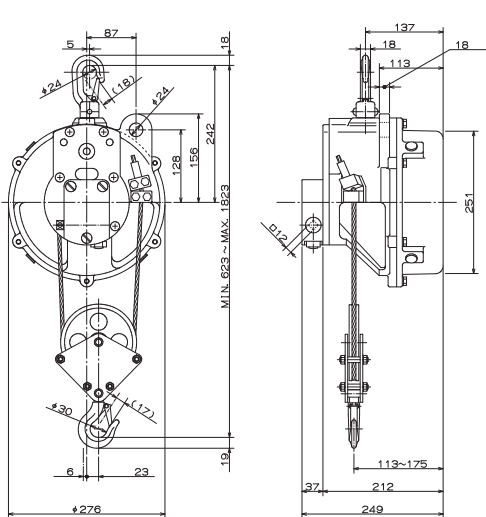
Large capacity

FUNCTION

- Fall arrest device
- Worm gear spring adjustment
- CE Mark available



Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ETP-14	120.0-140.0	1.2	6.0	24.1
ETP-15	140.0-170.0	1.2	6.0	28.7
ETP-16	170.0-200.0	1.2	6.0	29.7



Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation

- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

ELF series are available for high ceiling application.

ELF-3/5/9

Long stroke

FUNCTION

- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ELF-3	1.5-3.0	2.5	3.0	4.6
ELF-5	3.0-5.0	2.5	3.0	4.8
ELF-9	5.0-9.0	2.5	3.0	5.4

ELF-15/22/30

Long stroke

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ELF-15	9.0-15.0	2.5	4.76	10.0
ELF-22	15.0-22.0	2.5	4.76	10.2
ELF-30	22.0-30.0	2.5	4.76	11.0

ELF-40/50

Long stroke

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ELF-40	30.0-40.0	2.5	4.76	14.0
ELF-50	40.0-50.0	2.5	4.76	14.5

Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation

- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

ELF-60/70

Long stroke

FUNCTION

- Gauge
- Cartridge spring assembly
- Plug type cable set
- Fall arrest device
- Drum lock device
- Worm gear spring adjustment
- CE Mark available

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ELF-60	50.0-60.0	2.5	4.76	17.1
ELF-70	60.0-70.0	2.5	4.76	18.0

RSB-15

With Ratchet

FUNCTION

- Ratchet device
- Fall arrest device
- Worm gear spring adjustment

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
RSB-15	9.0-15.0	1.5	5.0	7.4

RSB-22/30/40

With Ratchet

FUNCTION

- Gauge
- Ratchet device
- Fall arrest device
- Worm gear spring adjustment

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
RSB-22	15.0-22.0	1.5	5.0	7.7
RSB-30	22.0-30.0	1.5	5.0	8.1
RSB-40	30.0-40.0	1.5	5.0	8.5

Selection of suitable model

Always use a suitable model meeting the total weight of suspended tool or instrument. The balancer should be selected considering the weight of the tool and accessories.

Installation

- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

Spring balancer with cable snap back prevention device

Features

In case that a cable installed in a spring balancer is cut or a suspended tool is disengaged, the cable will snap back due to the tension of spring involved in a spring balancer, causing the dangerous situation such as the injury to personnel etc. This new device has developed to protect personnel from such the danger.

Description of the device

As soon as a cable is cut, a drum revolves rapidly winding a cable up. Rapid revolution of the drum generates centrifugal force. The centrifugal force makes a Ratchet on a spring case pushed out and the ratchet sticks in a wheel fixed on a cover, stopping the revolution of the drum.

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWA-15	9.0-15.0	1.3	4.0	4.7
EWA-22	15.0-22.0	1.5	4.76	8.9
EWA-30	22.0-30.0	1.5	4.76	9.3
EWA-40	30.0-40.0	1.5	4.76	11.9
EWA-50	40.0-50.0	1.5	4.76	12.3
EWA-60	50.0-60.0	1.5	4.76	13.3
EWA-70	60.0-70.0	1.5	4.76	13.6

* The cable snap back protection device for 70kg to 120kg capacity is available on request.

FUNCTION

Gauge

Cartridge spring assembly

Plug type cable set

Fall arrest device

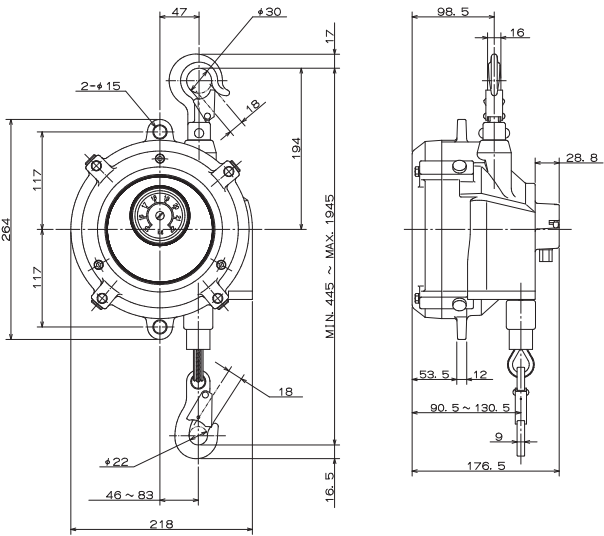
Snap back protection

Drum lock device

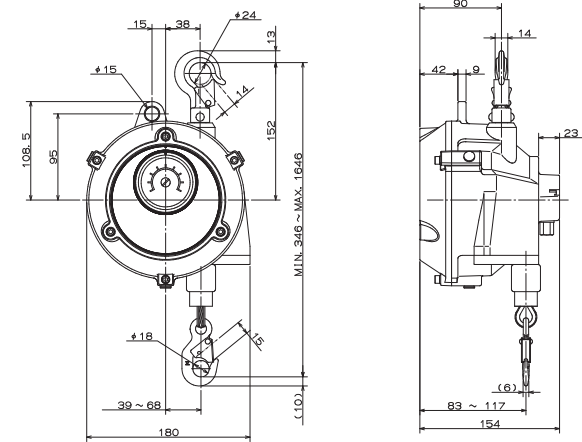
Worm gear spring adjustment

CE Mark available

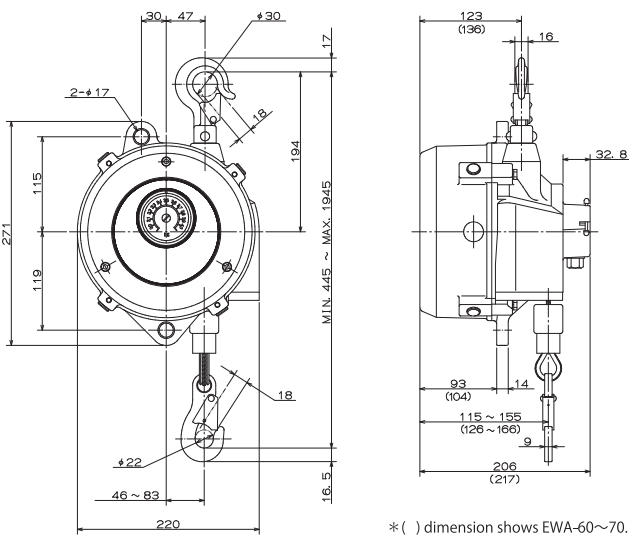
EWA-22/30



EWA-15



EWA-40/50/60/70



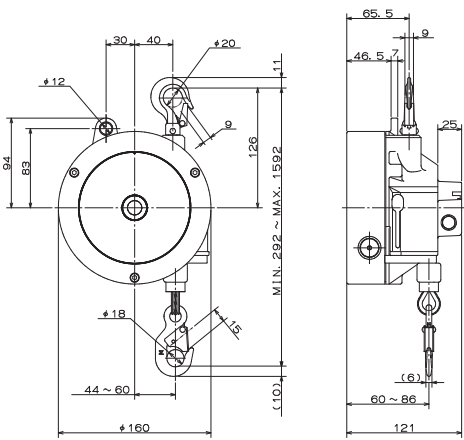
*() dimension shows EWA-60~70.

Spring balancer with brake system

Features

It uses one-way clutch lining braking system and it hangs up tools slowly. Snap back with slow speed helps speedy and safe work for you. Set brake free, you can use it as a normal balancer.

Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
EWB-3B	1.5-3.0	1.3	3.0	4.7
EWB-5B	3.0-5.0	1.3	3.0	8.9
EWB-7B	5.0-7.0	1.3	3.0	9.3



FUNCTION

Cartridge spring assembly

Plug type cable set

Fall arrest device

Drum lock device

Worm gear spring adjustment

CE Mark available

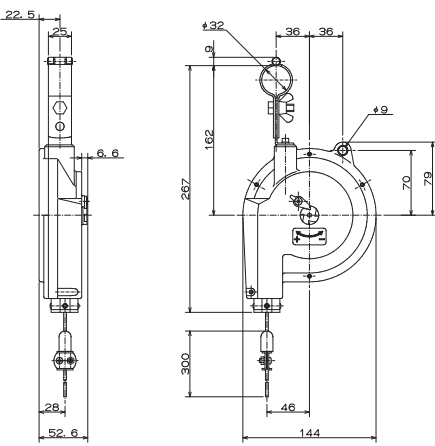
Spring Balancer for clean room

Features

The case is conductive, allowing it to be grounded using an earth wire and it is sealed to prevent the dispersal of particles.

Model	Capacity(kg)	Stroke(m)	Mass(kg)
SBC-15-D	0.5-1.5	0.9	1.2
SBC-25-D	1.5-2.5	0.9	1.3

* Stainless wire rope is covered with urethane tube.



FUNCTION

Ratchet system spring adjustment

CE Mark available

Features

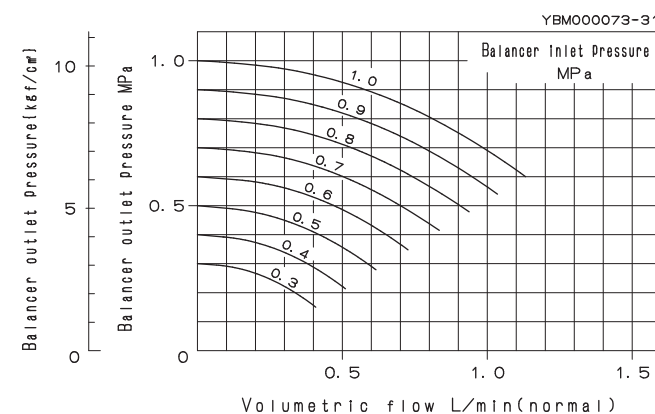
Instead of the wire rope, the urethane hose is wound and air tools can be easily moved up and down.
Casing and drum are made of acrylonitrile butadiene-styrene resin and they are light.
The diameter of hose nipple is $\phi 9\text{mm}$ at inlet portion.
And swivel joint size Rc.1/4 at outlet portion.

Working conditions

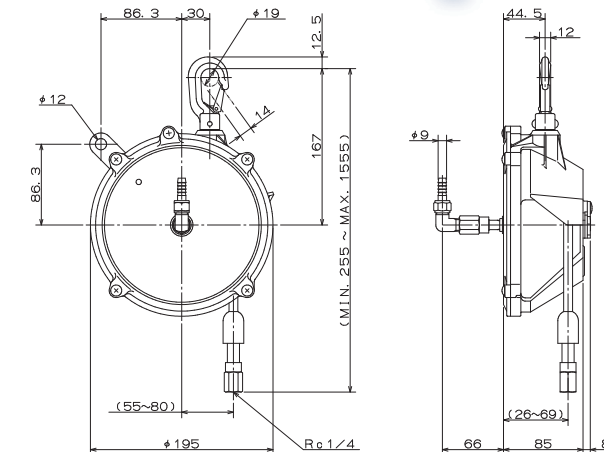
- Application area : Indoor and normal atmospheric conditions
- Temperature rang : -10°C to $+40^{\circ}\text{C}$
- Application fluid : Air
- Maximum air pressure : 1.0MPa {10kgf/cm²}

Model	Capacity(kg)	Hose travel (m)	Air inlet.(ϕmm)	Mass(kg)
ATB-0	0.5-1.5	1.3	6.3	1.58
ATB-1	1.5-3.0	1.3	6.3	1.66
ATB-2	3.0-5.0	1.3	6.3	1.73

Flow characteristics



Dimensions(mm)



FUNCTION



※ATB-2 is not available for CE Mark.

Features

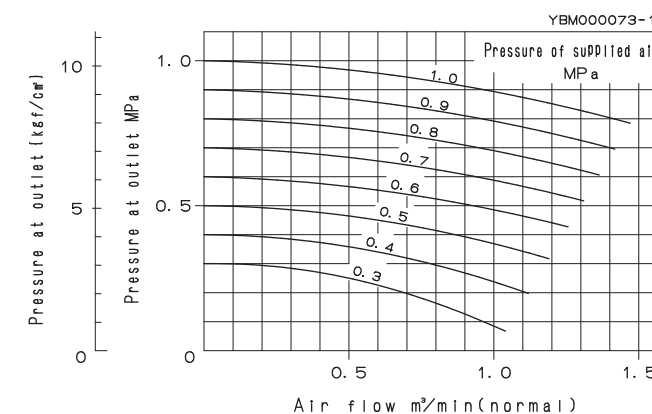
Instead of the wire rope, the urethane hose is wound and air tools can be easily moved up and down.
When the spring failure is happened, the fall prevention device will operate and stop the suspended tool or device.
The inside diameter of hose is $\phi 8.5\text{mm}$ which supplies enough air to operate the suspended air too or device.

Working conditions

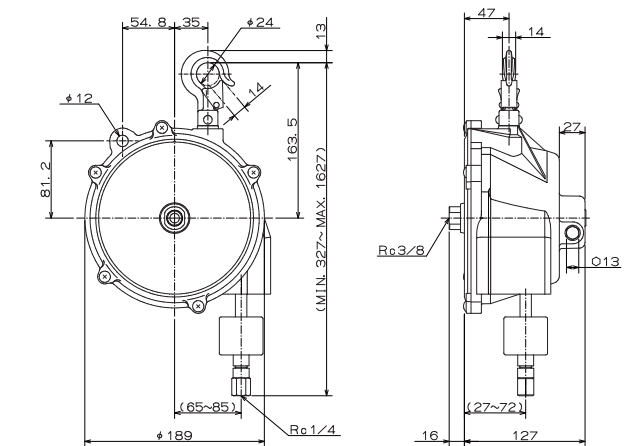
- Application area : Indoor and normal atmospheric conditions
- Temperature rang : -10°C to $+40^{\circ}\text{C}$
- Application fluid : Air
- Maximum air pressure : 1.0MPa {10kgf/cm²}

Model	Capacity(kg)	Hose travel (m)	Hose inside diameter. (ϕmm)	Mass(kg)
THB-15A	0.5-1.5	1.3	8.5	2.0
THB-25A	1.5-2.5	1.3	8.5	2.1
THB-35A	2.5-3.5	1.3	8.5	2.2
THB-50A	3.5-5.0	1.3	8.5	2.2
THB-65A	5.0-6.5	1.3	8.5	2.3

Flow characteristics



Dimensions(mm)



FUNCTION

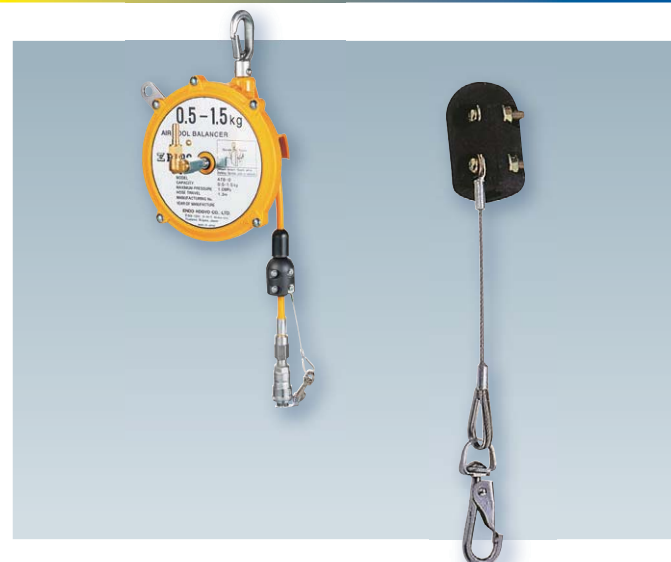


Accessories

Protect wire set

Product number	Available model
LBP000794	ATB-0,1,2

The protector is available for tool fall protection caused by unintentionally detaching an air tool from a coupling.



Special accessories

Swivel elbow fitting for air inlet (outer dia 10.5mm)

Parts No. LBP000654

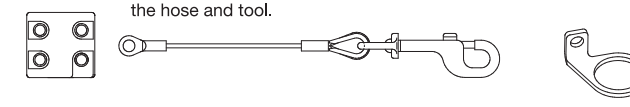
Swivel Joint

Parts No. LBP000659

Protect wire

Parts No. LBP002196

The protect wire prevents accidental dropping and / or disconnection between the hose and tool.



Coupling socket (Outer dia 11.3mm)

Parts No. LBP000784



Adjustable hose stopper

Parts No. LBP001894

Special hose for an extended length (with a swivel joint ;1m)

Parts No. LBP000785 (max. 2m extension)



Features

An included spring works to retract a hose into the device automatically.

A contained hose solves the short of air consumption for air tool owing to a large inner diameter of 10φ.

A ratchet system applied for the device can keep a tool suspended at any position on the hose travel where you want.

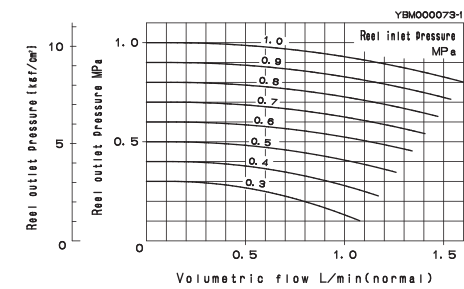
※On-off work of ratchet system is available through knob operation.

The fall preventive system from the tool drop works when the included spring has been broken.

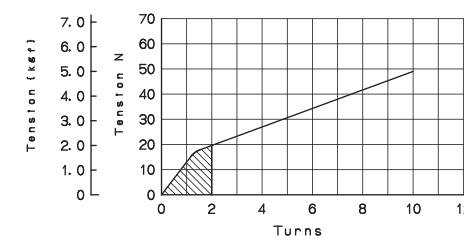
ATR-5 is installed with top hook and ATR-5-1 is installed with bracket.

Model	Max tension N (kgf)	Hose travel (m)	Air inlet.(φmm)	Mass(kg)
ATR-5	4.9 {5.0}	2.0	10.0	3.8
ATR-5-1	4.9 {5.0}	2.0	10.0	4.2

Flow characteristics



Tension curves



Accessories



Special hose
for extended length
(with a swivel joint)

1m Parts No. LBP000659
2m Parts No. LBP000664
3m Parts No. LBP000665



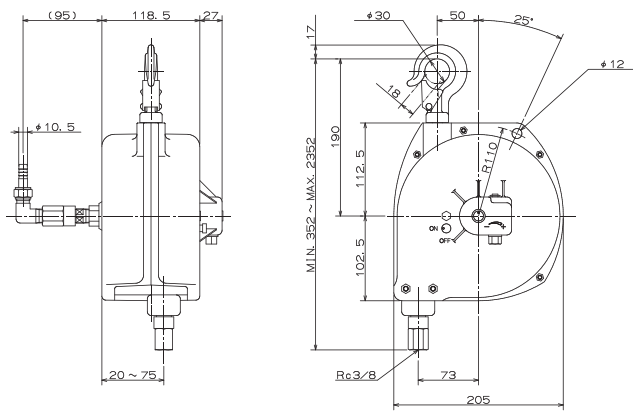
Adjustable hose
stopper

Parts No. LRP007933

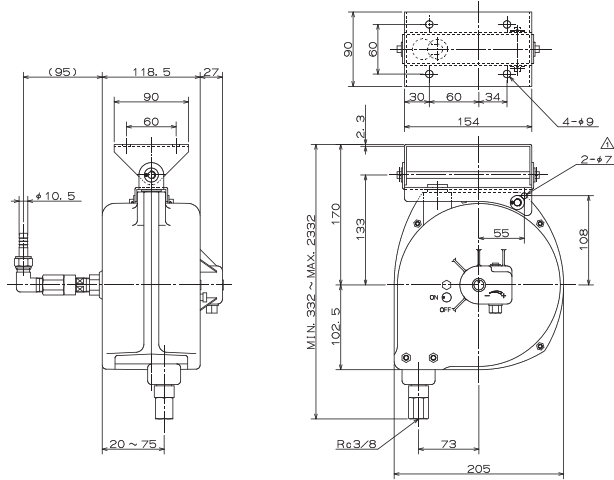


Dimensions(mm)

ATR-5



ATR-5-1



FUNCTION



Worm gear
spring adjustment



Ratchet device



Fall arrest device



CE Mark available



For the next generation

Through the development of the product that is environmentally friendly, we contribute to the sustainable development of community.

EWF-Type-X / EWF-Type-Y

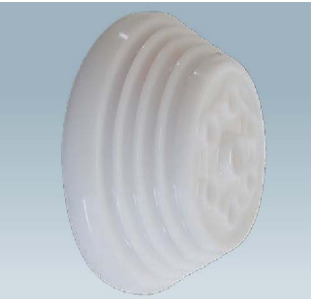
Features

- The world's first "Eco-Friendly" spring balancer
- Synthetic food grade grease (H1 grade)
- High potential capability and endurance
- Flexible adaptability in a wide range of 1-120kg models

Specifications

		Treating Method			
Type	Y Type			X Type	
Casing	Unpainted			Unpainted	
Cover	Unpainted			Unpainted	
Upper Hook	Zinc plating			Zinc plating	
Rivet	Clear painting			Stainless steel	
Rope	Nylon rope	White	EW(EWS)-3Y-7Y	Nylon rope	White EW(EWS)-3X-7X
		Black	EWF-9Y-15Y		Black EWF-9X-15X
	SUS Wire rope		EWF-22Y-120Y	SUS Wire rope	
				EWF-22X-120X	
Lower Hook	Standard(Zinc plated)			Stainless steel	
Pin(EWF-9-120)	Zinc plating			Zinc plating	
Plug	Standard			Stainless steel	
Bolts	Standard(Zinc plated)			Stainless steel	
Screws	Standard(Zinc plated)			Stainless steel	
Grease	Standard grease(on Spring)			Food grease(on Spring)	

EWF-Type-C



Plastic Drum

Abrasion Powder in greatly reduced comparing with the existing model.



Fall Arrest Device

Drum lock system in equipped to prevent to fall the tools in case of the spring breakage.



Replaceable Wire rope

Easy wire rope replacement is provided with the plug-in method.



Riveted Spring

Outer riveted spring helps safety replacement of the spring.

Specifications

Model	Capacity(kg)	Stroke(m)	Wire rope dia.(mm)	Mass(kg)
EWF-3C	1.5-3.0	1.3	φ3	1.7
EWF-5C	3.0-5.0	1.3	φ3	1.9
EWF-7C	5.0-7.0	1.3	φ3	1.9

