

AIR HOIST

ENDO



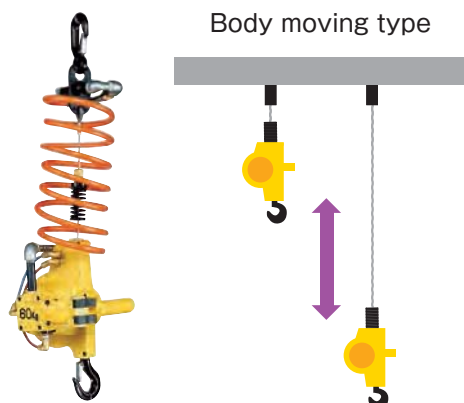


WIRE ROPE TYPE

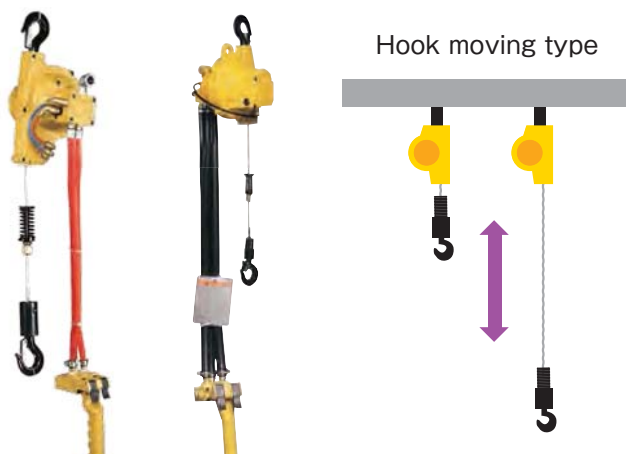
Wire rope series EHW / AH

Type of hoisting

EHW-60 , EHW-120



EHW-60R , EHW-120R , AH-250R



EHW-60 , EHW-120

FUNCTION



Wire rope
type



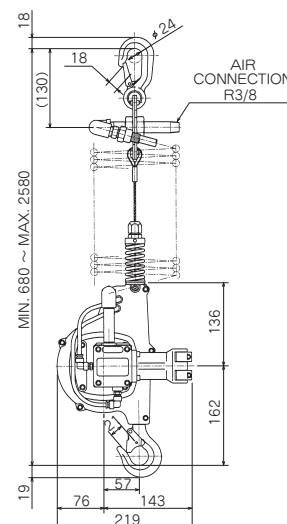
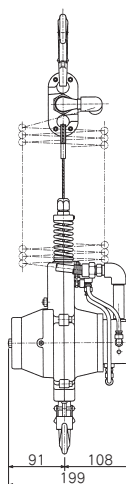
Air motor trolley
(on request)



Button
control



Plain trolley
(on request)



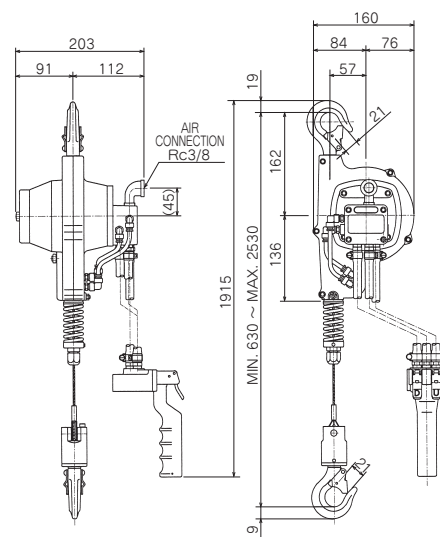
Model	Rated load (kg)	Stroke (m)	Air pressure MPa [kgf/cm ²]	Lifting speed m/min	Air consumption m ³ /min (normal)	Air inlet	Mass (kg)
EHW-60	60	1.9	0.4 {4}	18.5	0.55	R 3/8	9.2
			0.5 {5}	22.5	0.7		
			0.6 {6}	26.0	0.88		
EHW-120	120		0.4 {4}	11.0	0.59		9.4
			0.5 {5}	13.5	0.75		
			0.6 {6}	16.0	0.93		

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Both of cable extension and stroke extension are not available on EHW series and AH-250R.
3. Chain hoists are recommended for the frequent operation.
4. Application; Indoor -10°C~+50°C (Temperature)

EHW-60R, EHW-120R

FUNCTION

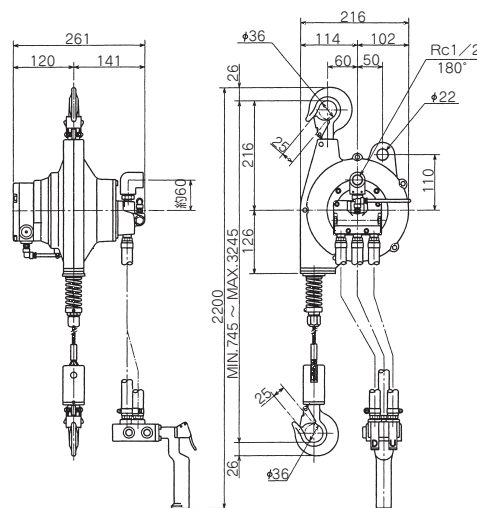
Wire rope
typeAir motor trolley
(on request)Button
controlPlain trolley
(on request)Emergency
stop button
(on request)

*The Length of control hose is 1.5m.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Air inlet	Mass (kg)	
EHW-60R	60	1.9	0.4 {4}	18.5	0.55	Rc 3/8	9.5	
			0.5 {5}	22.5	0.7			
			0.6 {6}	26.0	0.88			
EHW-120R	120		0.4 {4}	11.0	0.59		9.7	
			0.5 {5}	13.5	0.75			
			0.6 {6}	16.0	0.93			

AH-250R

FUNCTION

Wire rope
typeAir motor trolley
(on request)Button
control

*If you pull down the wire rope over the maximum stroke (2.5m), it is going to be retracted to the opposite direction for the structural reason.
Please use the hoist within the length of stroke (2.5m).

*The Length of control hose is 1.7m.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa [kgf/cm ²]	Lifting speed m/min	Air consumption m ³ /min (normal)	Air inlet	Mass (kg)
AH-250R	160	2.5	0.4 {4}	9.0	0.75	Rc 1/2	18.2
	200		0.5 {5}	10.0	0.92		
	250		0.6 {6}	11.0	1.1		

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Both of cable extension and stroke extension are not available on EHW series and AH-250R.
3. Chain hoists are recommended for the frequent operation.
4. Application; Indoor -10°C~+50°C (Temperature)

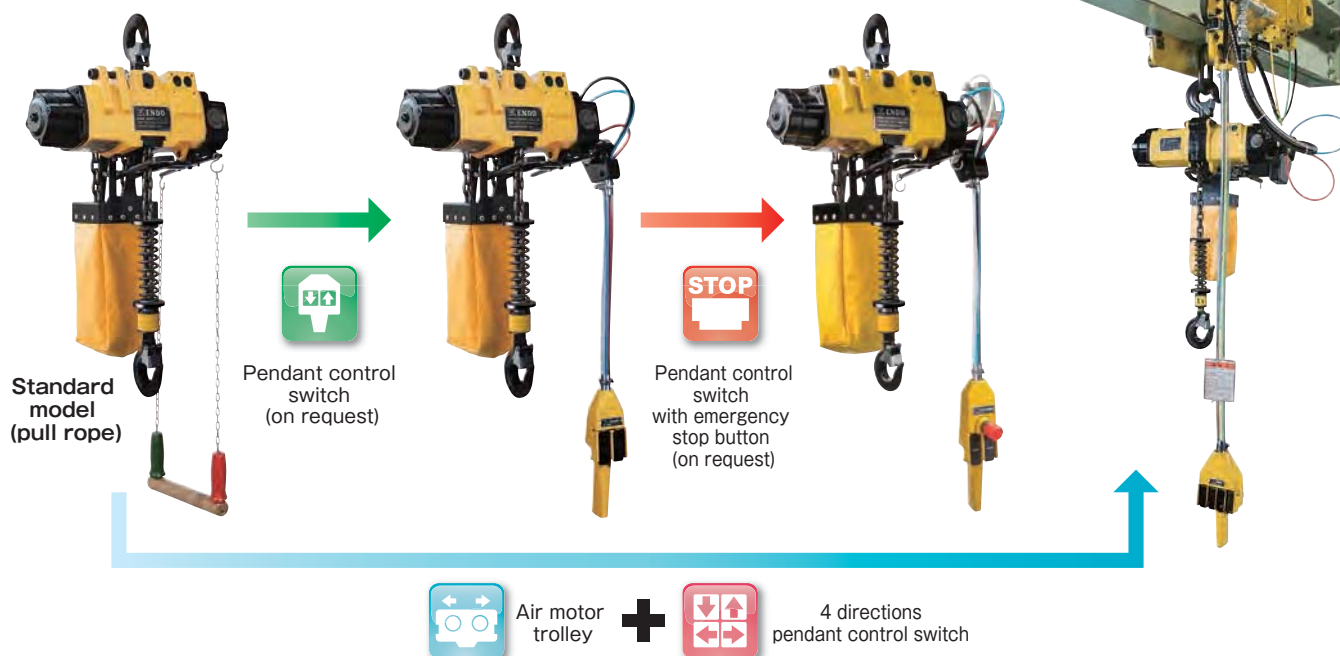


CHAIN TYPE

Load chain series AT / ATC / EHL / EHLK / EHV

ENDO chain hoists employ the surface hardened load chain with Grade DAT and provide long life and less maintenance cost.

EHL series / select operation device



AT-60K , AT-125K

FUNCTION



Chain



Air motor trolley
(on request)



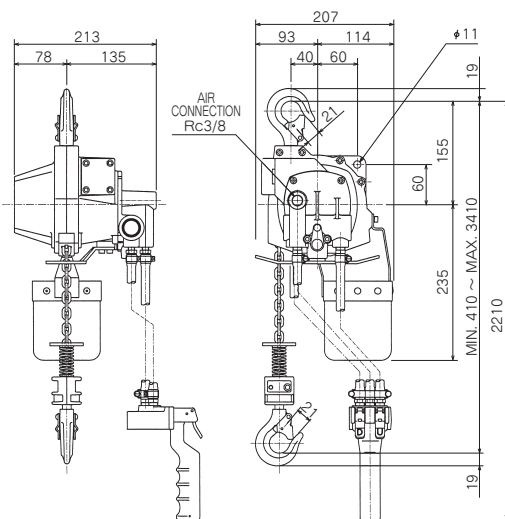
Button control



Plain trolley
(on request)



Chain extension (on request)



*The Length of control hose is 1.8m.

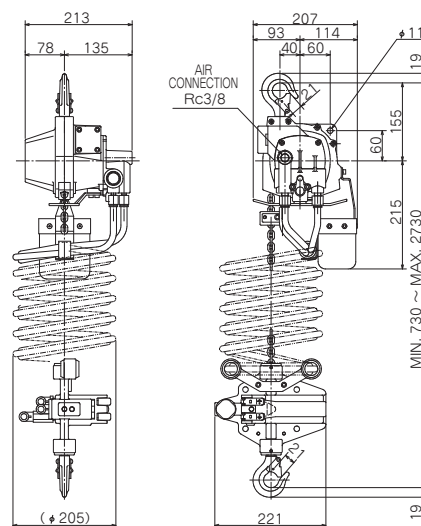
Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size × fall	Air inlet	Mass (kg)
AT-60K	60	3	0.4 {4}	16.5	0.52	4.0×1	Rc 3/8	12.3
			0.5 {5}	20.0	0.67			
			0.6 {6}	23.5	0.85			
AT-125K	125		0.4 {4}	10.0	0.55			12.5
			0.5 {5}	12.0	0.71			
		0.6 {6}	14.5	0.9				

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

ATC-60K , ATC-125K

FUNCTION

Chain
typeAir motor trolley
(on request)Button
controlPlain trolley
(on request)

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
ATC-60K	60	2	0.4 {4}	14.0	0.45	4.0x1	Rc 3/8	14.3
			0.5 {5}	17.5	0.58			
			0.6 {6}	20.0	0.68			
ATC-125K	125	2	0.4 {4}	6.5	0.42			14.5
			0.5 {5}	10.5	0.55			
			0.6 {6}	12.0	0.65			

AT-60K-5 , AT-125K-5 , ATC-60K-5 , ATC-125K-5

FUNCTION

Chain
typeAir motor trolley
(on request)Button
controlPlain trolley
(on request)Emergency
stop buttonChain
extension
(AT series)



For AT-60K-5



For ATC-60K-5

*The Length of control hose is 1.8m.

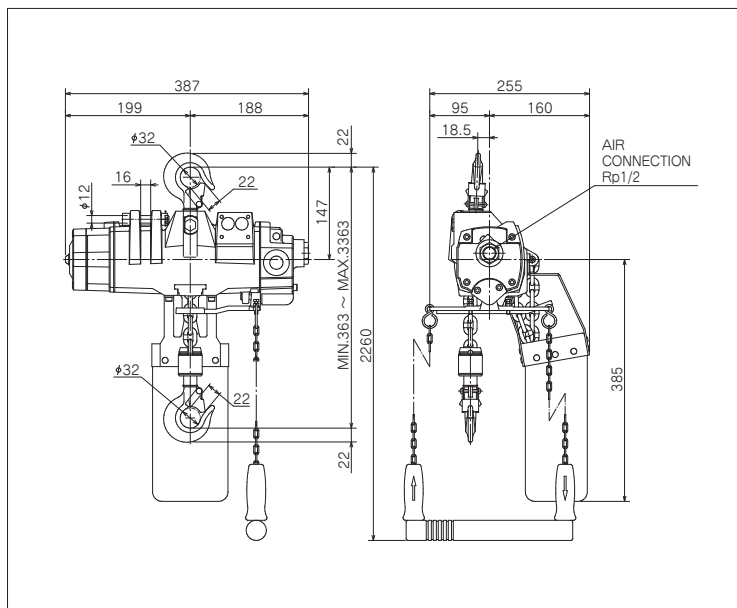
Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
AT-60K-5	60	3	0.4 {4}	16.5	0.52	4.0x1	Rc 3/8	13.0
			0.5 {5}	20.0	0.67			
			0.6 {6}	23.5	0.85			
AT-125K-5	125	3	0.4 {4}	10.0	0.55			13.2
			0.5 {5}	12.0	0.71			
			0.6 {6}	14.5	0.9			
ATC-60K-5	60	2	0.4 {4}	14.0	0.45			14.3
			0.5 {5}	17.5	0.58			
			0.6 {6}	20.0	0.68			
ATC-125K-5	125	2	0.4 {4}	6.5	0.42			14.5
			0.5 {5}	10.5	0.55			
			0.6 {6}	12.0	0.65			

ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

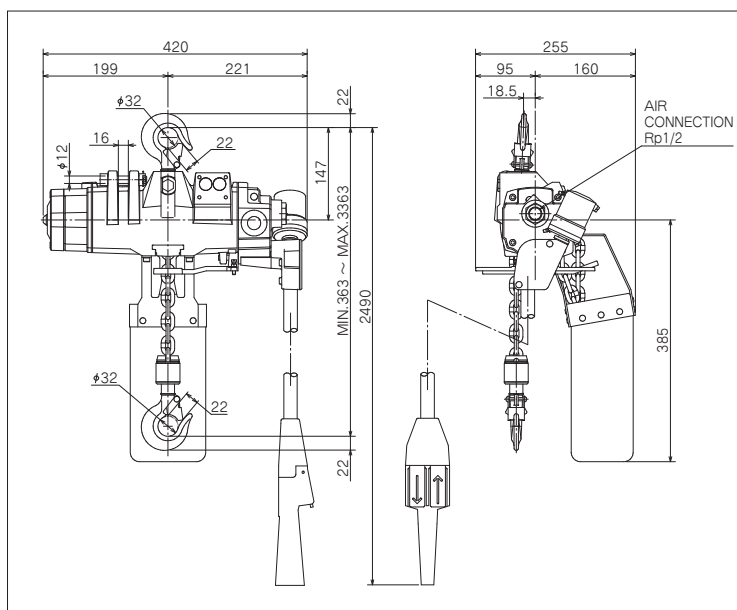
Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

EHL-025TS , EHL-049TS

EHL-025TS PCS-1
EHL-049TS PCS-1

*The length of control chain is 2m.



*The Length of control tube is 2m.

FUNCTION



Chain type

Pendant
control
switch
(on request)Chain
extension
(on request)Air motor
trolley
(on request)Overload
protector
(on request)

II 2 G / D II B T 5 (X)



ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa (kgf/cm ²)	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size × fall	Air inlet	Mass (kg)
EHL-025TS	250	3	0.4 {4}	12.0	0.9	6.3×1	Rp 1/2	20.0
			0.5 {5}	16.0	1.3			
			0.6 {6}	18.0	1.6			
EHL-049TS	490		0.4 {4}	7.5	0.95			
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			

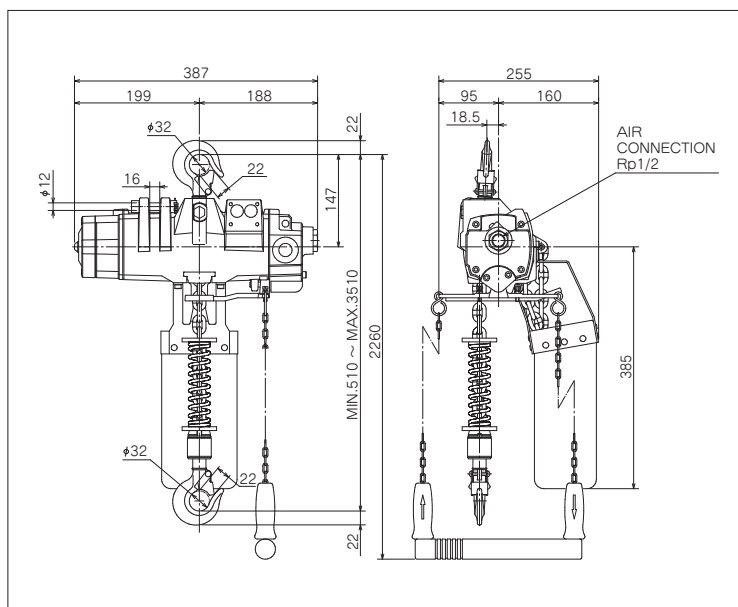
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

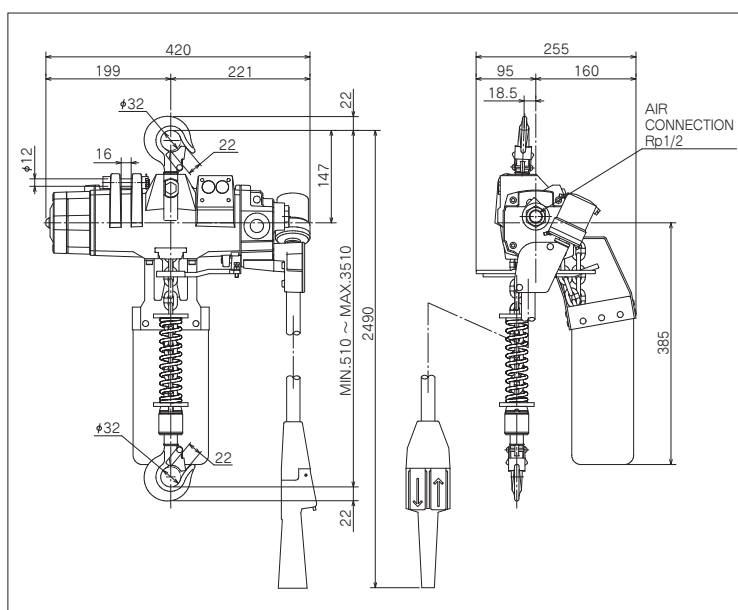
EHL-05TS

EHL-05TS



*The length of control chain is 2m.

EHL-05TS PCS-1



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

Ex II 2 G / D II B T 5 (X)

Ex ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
EHL-05TS	500	3	0.4 {4}	7.5	0.95	6.3x1	Rp 1/2	20.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			

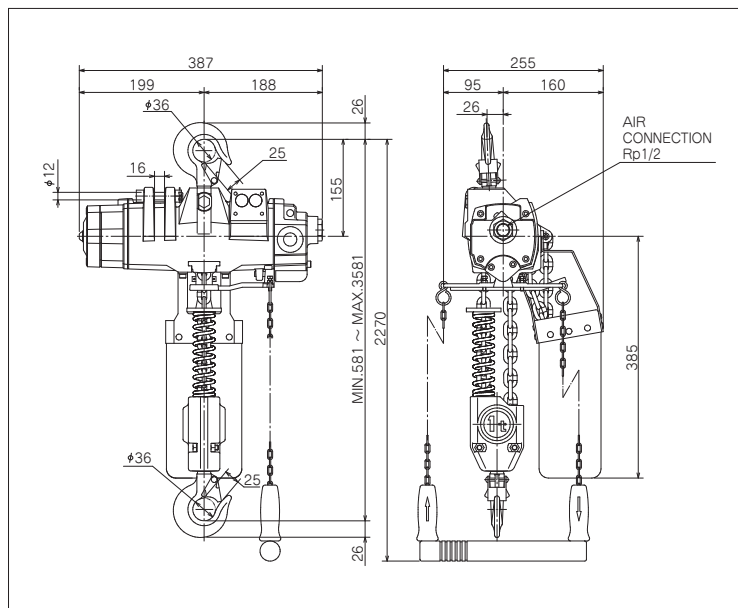
(Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

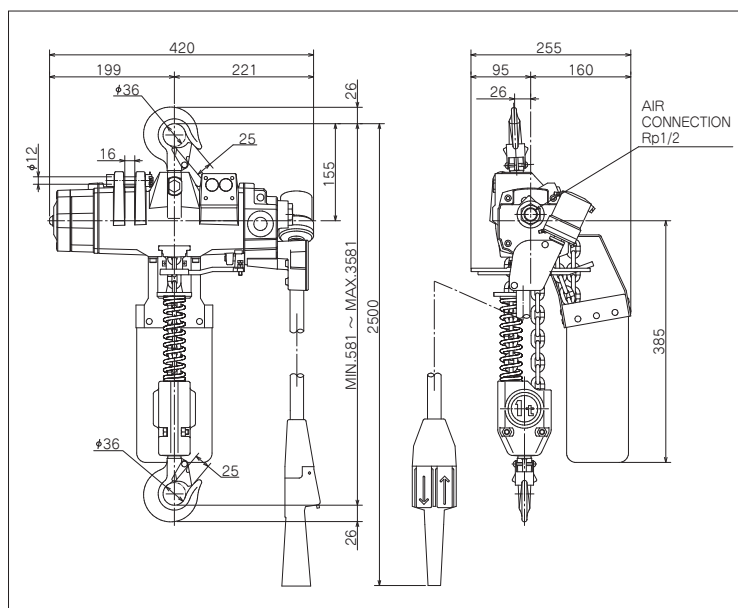
EHL-1TW

EHL-1TW



*The length of control chain is 2m.

EHL-1TW PCS-1



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

II 2 G / D II B T 5 (X)



ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size × fall	Air inlet	Mass (kg)
EHL-1TW	1	3	0.4 {4}	3.7	0.95	6.3×2	Rp 1/2	26.0
			0.5 {5}	4.5	1.3			
			0.6 {6}	5.2	1.65			

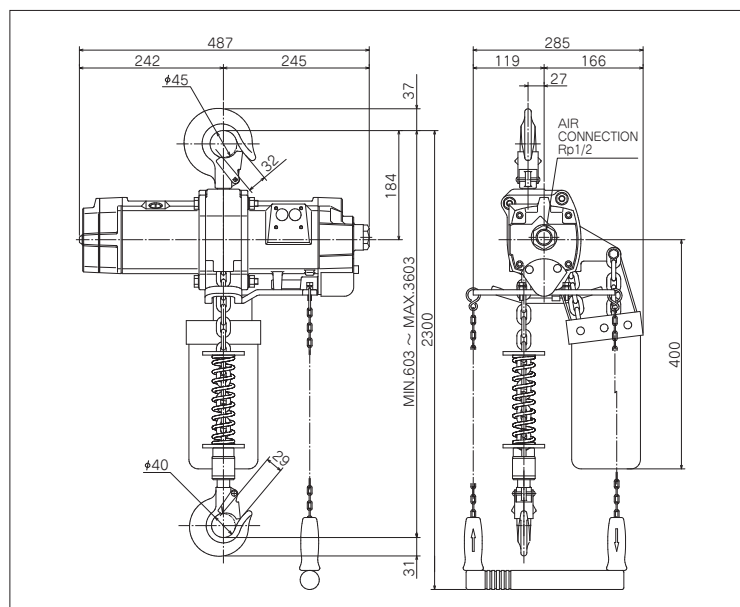
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

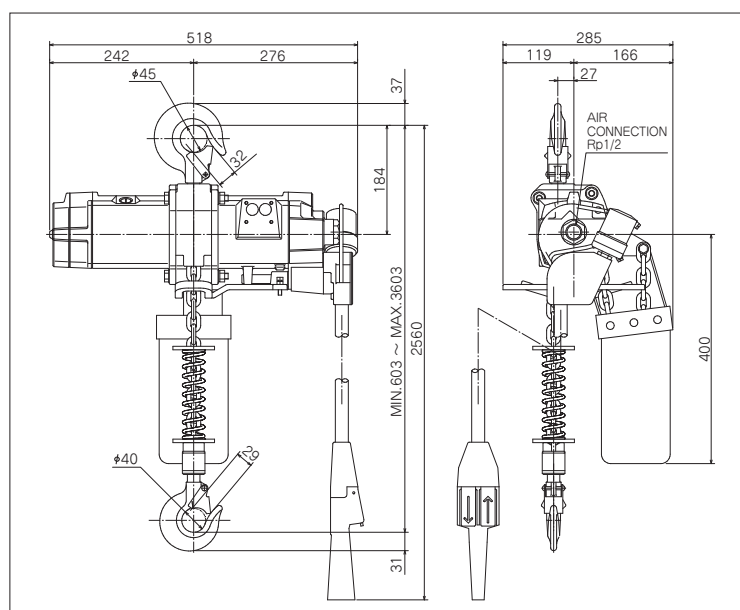
EHL-1TS

EHL-1TS



*The length of control chain is 2m.

EHL-1TS PCS-2



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Emergency stop button (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

Ex II 2 G / D II B T 5 (X)

Ex ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
EHL-1TS	1	3	0.4 {4}	4.0	1.0	7.1 x 1	Rp 1/2	34.0
			0.5 {5}	5.2	1.4			
			0.6 {6}	6.0	1.8			

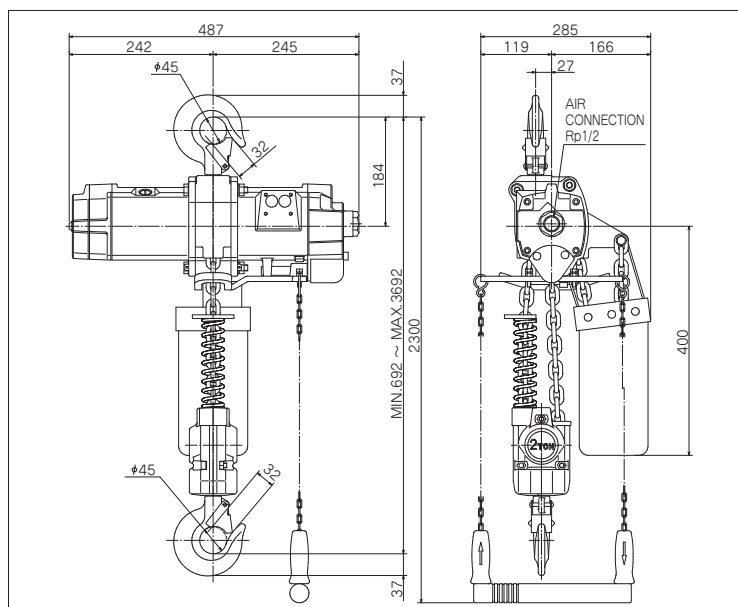
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C ~ +50°C (Temperature)

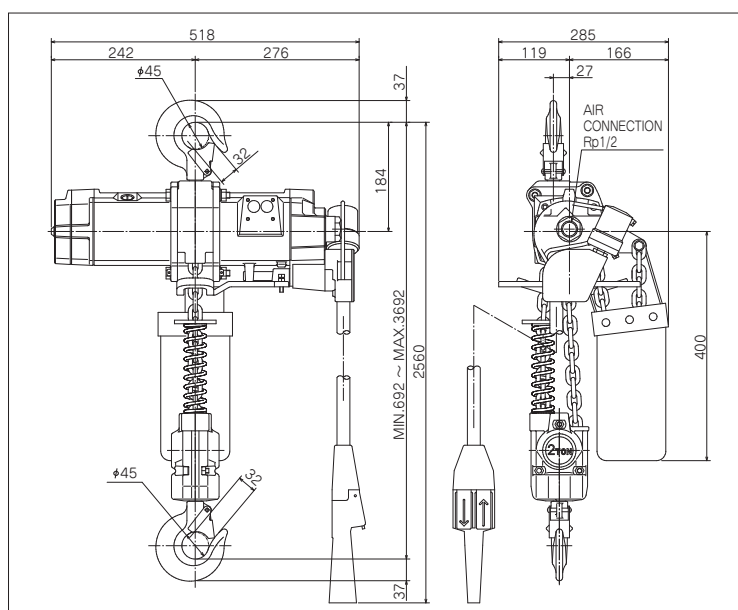
EHL-2TW

EHL-2TW



*The length of control chain is 2m.

EHL-2TW PCS-2



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Emergency stop button (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

II 2 G / D II B T 5 (X)

ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
EHL-2TW	2	3	0.4 {4}	2.0	1.0	7.1x2	Rp 1/2	42.0
			0.5 {5}	2.6	1.4			
			0.6 {6}	3.0	1.8			

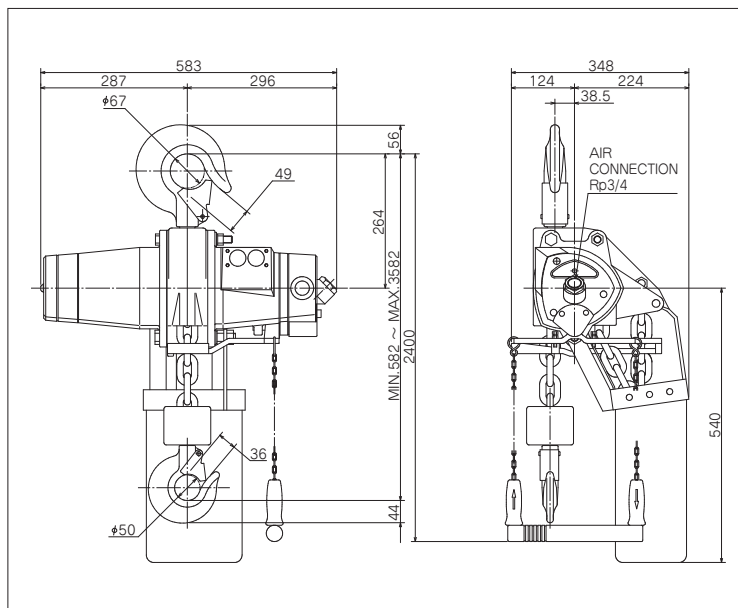
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

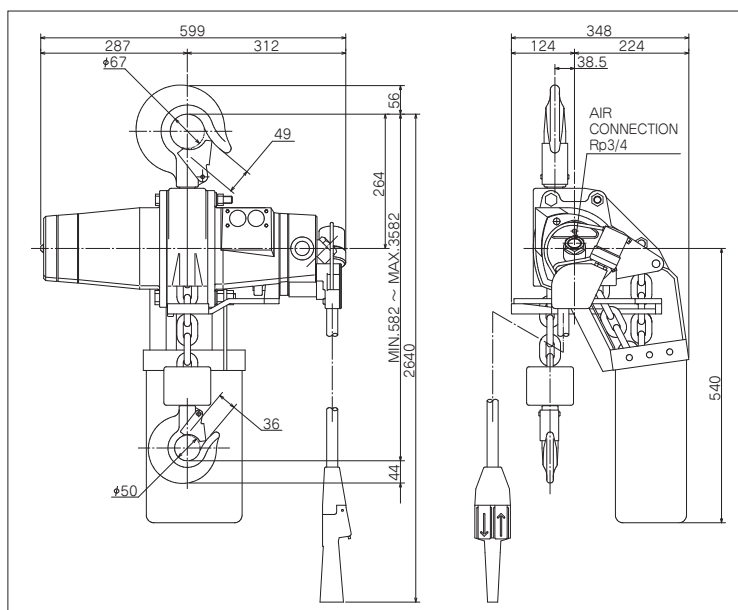
EHL-3TS

EHL-3TS



*The length of control chain is 2m.

EHL-3TS PCS-2



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Emergency stop button (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

Ex II 2 G / D II B T 4 (X)

Ex ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
EHL-3TS	3	3	0.4 {4}	2.0	1.75	12.5x1	Rp 3/4	79.0
			0.5 {5}	2.6	2.47			
			0.6 {6}	3.0	3.14			

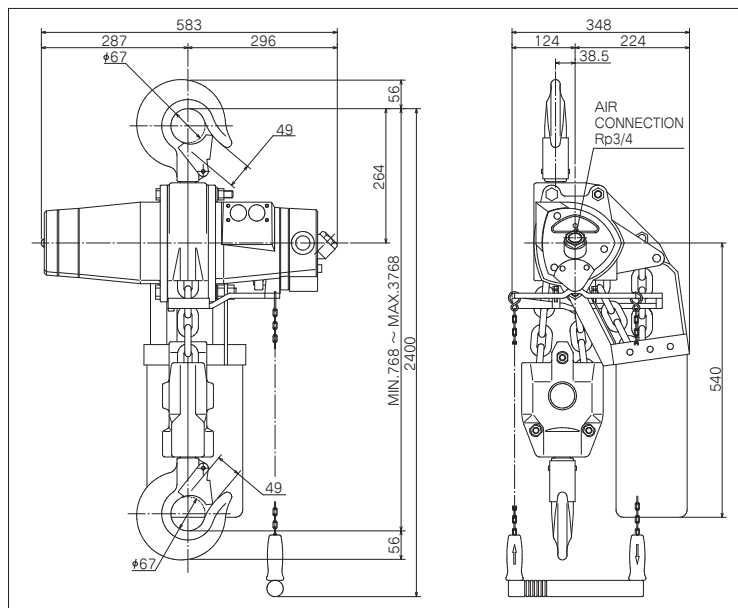
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

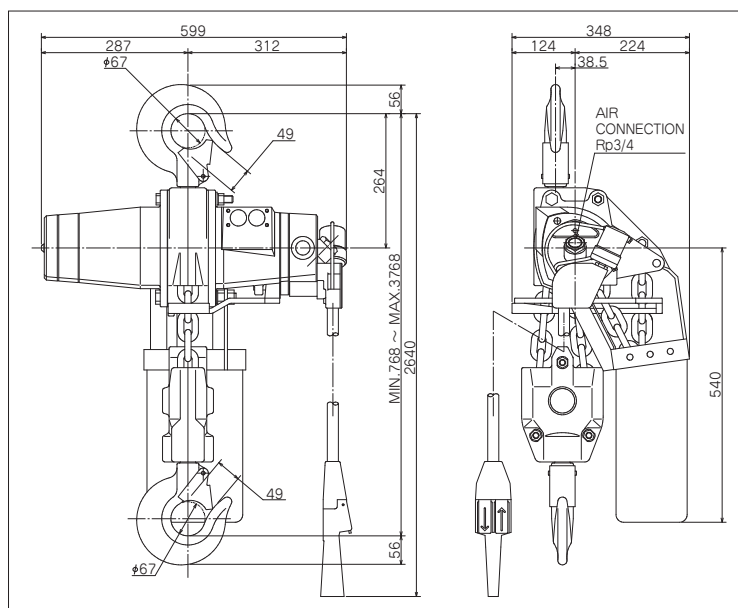
EHL-6TW

EHL-6TW



*The length of control chain is 2m.

EHL-6TW PCS-2



*The Length of control tube is 2m.

FUNCTION



Chain type



Pendant control switch (on request)



Emergency stop button (on request)



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

II 2 G / D II B T 4 (X)

ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size x fall	Air inlet	Mass (kg)
EHL-6TW	6	3	0.4 {4}	1.0	1.75	12.5x2	Rp 3/4	101.0
			0.5 {5}	1.3	2.47			
			0.6 {6}	1.5	3.14			

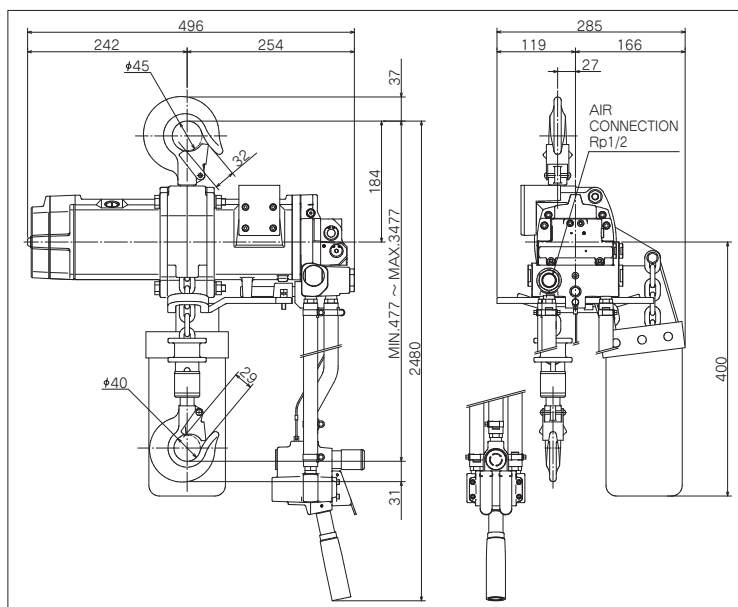
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

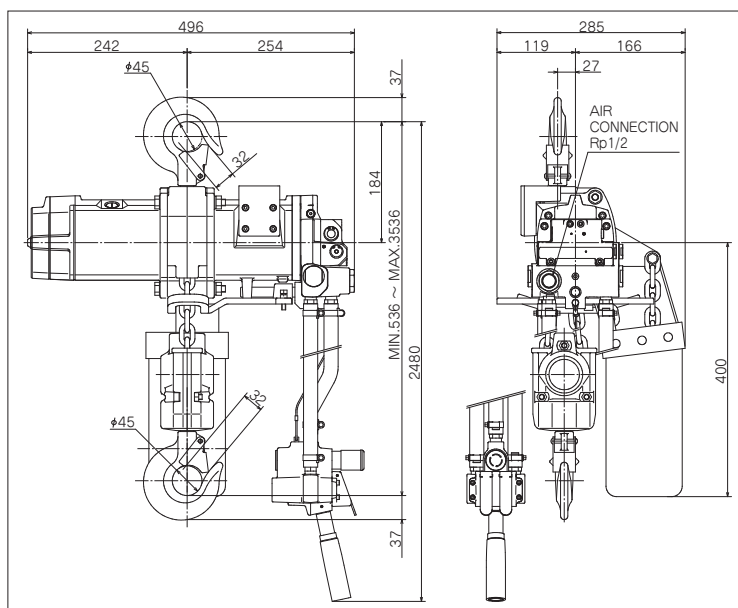
Built-in Overload protector

EHLK-1TS



*The Length of control tube is 2m.

EHLK-2TW



*The Length of control tube is 2m.

FUNCTION



Chain type



Button control



Emergency stop button



Built-in overload protector



Chain extension (on request)

Ex II 2 G / D II B T 5 (X)

Ex ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

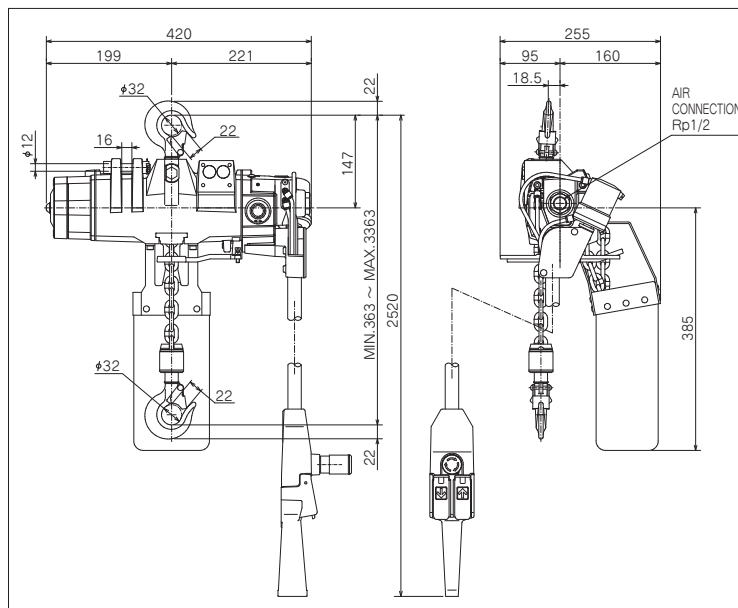
Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm²}	Lifting speed m/min	Air consumption m³/min (normal)	Chain size×fall	Air inlet	Mass (kg)	
EHLK-1TS	1	3	0.4 {4}	3.3	1.3	7.1×1	Rp 1/2	38.0	
			0.5 {5}	4.3	1.4				
			0.6 {6}	5.3	1.5				
EHLK-2TW	2			0.4 {4}	1.6	1.3		7.1×2	46.0
				0.5 {5}	2.1	1.4			
				0.6 {6}	2.6	1.5			

Note) The extension of control tube is available up to 6m (total 8m length).

Note

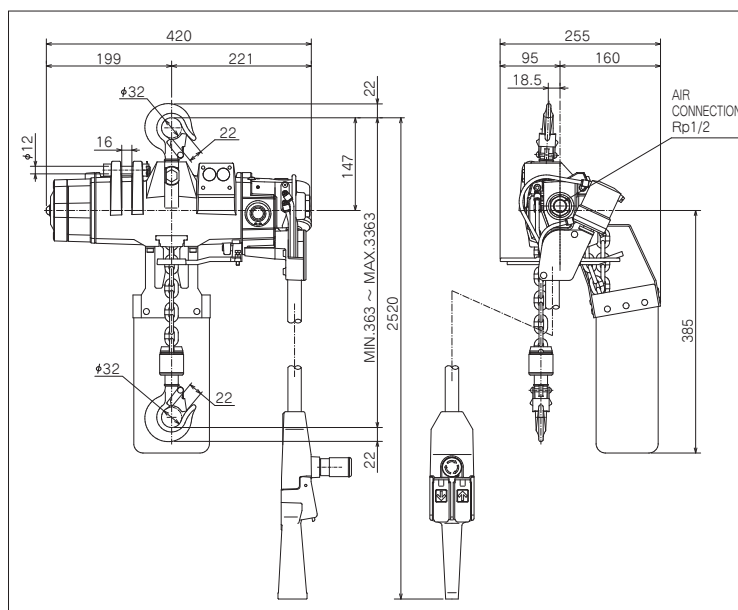
1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C ~ +50°C (Temperature)

EHV25SP



*The Length of control tube is 2m.

EHV49SP



*The Length of control tube is 2m.

FUNCTION



Chain type



Button control



Emergency stop button



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

II 2 G / D II B T 5 (X)

ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size×fall	Air inlet	Mass (kg)
EHV25SP	250	3	0.4 {4}	12.0	0.9	6.3×1	Rp 1/2	23.0
			0.5 {5}	16.0	1.3			
			0.6 {6}	18.0	1.6			
EHV49SP	490		0.4 {4}	7.5	0.95			
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			

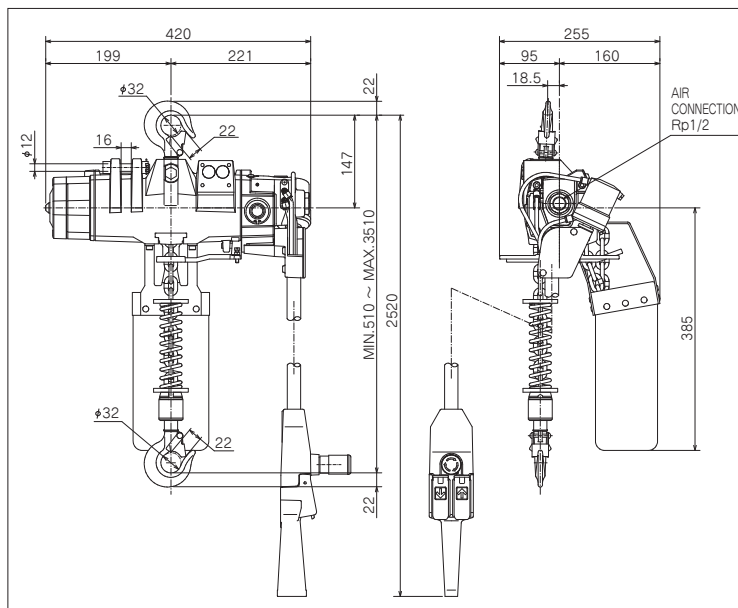
Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

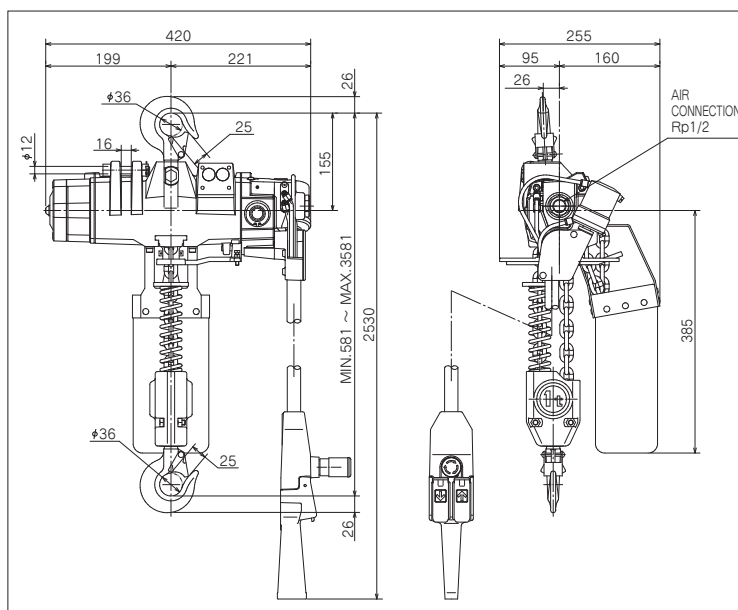
EHV50SP, EHV100WP

EHV50SP



*The Length of control tube is 2m.

EHV100WP



*The Length of control tube is 2m.

FUNCTION



Chain type



Button control



Emergency stop button



Chain extension (on request)



Air motor trolley (on request)



Overload protector (on request)

ⒺⅡ 2 G / D Ⅱ B T 5 (X)

ⒺⅡ ATEX: This is the explosion-proof standard required to conform regarding equipment which is used in potentially explosive atmospheres.

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size×fall	Air inlet	Mass (kg)
EHV50SP	500	3	0.4 {4}	7.5	0.95	6.3×1	Rp 1/2	23.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			
EHV100WP	1000		0.4 {4}	3.7	0.95	6.3×2		29.0
			0.5 {5}	4.5	1.3			
			0.6 {6}	5.2	1.65			

Note) The extension of control tube is available up to 6m (total 8m length).

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)



AIR MOTOR TROLLEY

Air motor trolley - MTH series -

ENDO trolleys are ideal for hazardous locations, such as a chemical factory because the power source is not electricity, but compressed air.

The unit uses stepless speed controls for precise and efficient operation.



EHL-1TS
with MTH-2T-5
PCS-42

Pendant control switch

Model	Air motor trolley	Mass (kg)
PCS-41	MTH-1T-5+EHL-025TS/05TS/1TW	3.2
PCS-41BV	MTH-1T-5+EHL-025TS/05TS/1TW EHV25SP/49SP/50SP/100WP	3.7
PCS-42	MTH-2T-5+EHL-1TS/2TW, MTH-6.3T+EHL-3TS/6TW	3.6
PCS-42BV	MTH-2T-5+EHL-1TS/2TW, MTH-6.3T+EHL-3TS/6TW	4.4

Note) "BV" indicates "Emergency stop button equipped".

*The extension of control tube is available up to 5.6m (total 8m length).

Specification

Model	Rated load (t)	Air pressure MPa {kgf/cm²}	Travelling speed m/min	Air consumption m³/min (normal)	Available rail width (mm)	Min.radius for curve (mm)	Air inlet	Mass (kg)
MTH-1T-5	1	0.4 {4}	20	0.55	75	3500	Rc 1/2	35.0
		0.5 {5}	25	0.6	100 · 125	800		
		0.6 {6}	28	0.65				
MTH-2T-5	2	0.4 {4}	16	1.05	125 · 150	1000	Rc 1/2	63.0
		0.5 {5}	17	1.3				
		0.6 {6}	18	1.6				
MTH-6.3T	6.3	0.4 {4}	17	1.05	150·175·190	2500	Rc 3/4	127.0
		0.5 {5}	18	1.3				
		0.6 {6}	19	1.6				

Note) Four push buttons control (4 directions) is available as well as two push buttons control (2 directions). It depends on the customer request. Low head room application is available on request.

Corresponding Table - Air hoist / Air motor trolley -

Model	EHL-025TS	EHL-05TS	EHL-098TW	EHL-1TW	EHL-1TS	EHL-2TW	EHL-3TS	EHL-6TW	EHV25SP	EHV49SP	EHV50SP	EHV100WP
MTH-1T-5	○	○	○	○					○	○	○	○
MTH-2T-5					○	○						
MTH-6.3T							○	○				

ENDO AIR HOIST MTH SERIES

MTH-1T-5 PCS-41

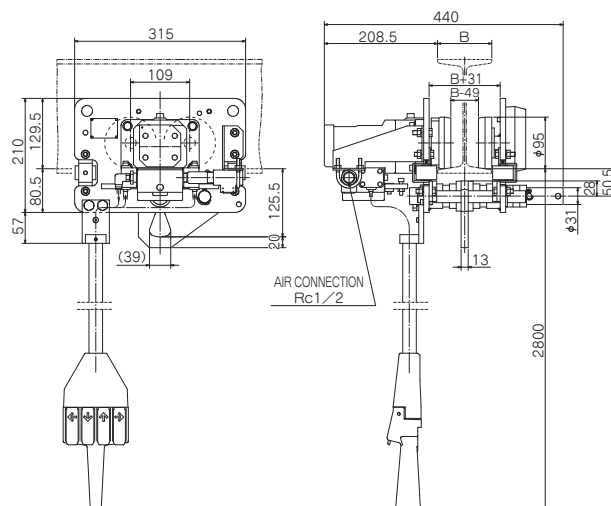
FUNCTION



4 directions
pendant control
PCS-41
PCS-41BV



Emergency
stop button
(on request)



*The Length of control tube is 2.4m.

MTH-2T-5 PCS-42

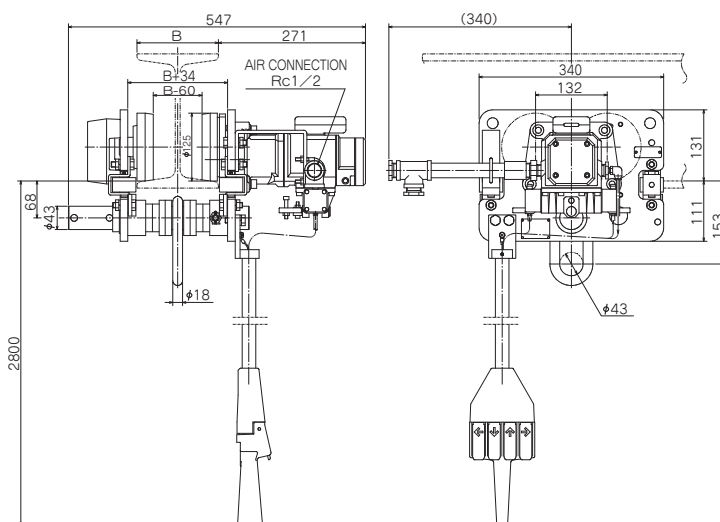
FUNCTION



4 directions
pendant control
PCS-42
PCS-42BV



Emergency
stop button
(on request)



*The Length of control tube is 2.4m.

MTH-6.3T PCS-42

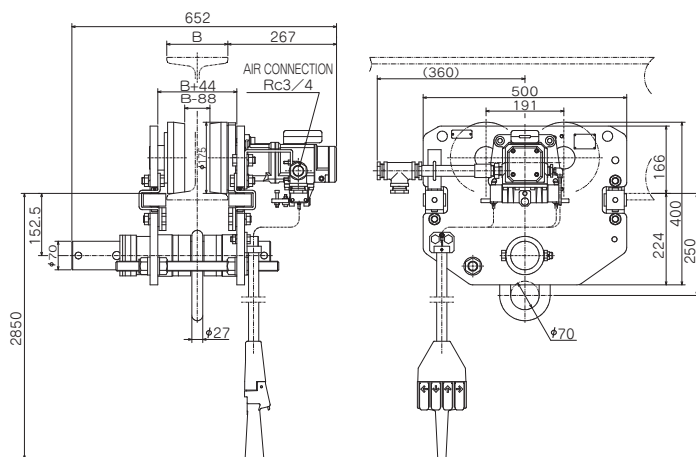
FUNCTION



4 directions
pendant control
PCS-42
PCS-42BV



Emergency
stop button
(on request)



*The Length of control tube is 2.4m.

Note

1. Install a filter and lubricator to the hoist as close as possible.
2. Application; Indoor -10°C~+50°C (Temperature)

Accessories

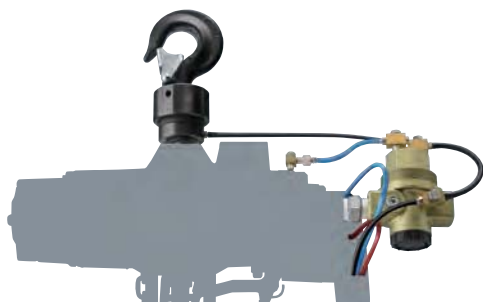
Cleaner set



This device is available for eliminating noisy volume and gathering the exhausted oil from the exhaust hole. The device contributes to clean environment.

Parts Number	Air hoist		Mass (kg)
LHP001343	EHL-025TS	EHL-049TS	1.0
	EHL-1TW	EHV25SP	
	EHV50SP	EHV100WP	
LHP001388	EHL-1TS	EHL-2TW	1.0
LHP001389	EHL-3TS	EHL-6TW	1.6

Overload protector



This device stops the operation automatically when it exceeds the rated load.

Model	Air hoist		Mass (kg)
OP-05TS	EHL-05TS	EHV50SP	2.0
OP-1TW	EHL-1TW	EHV100WP	2.2
OP-1TS	EHL-1TS		6.2
OP-2TW	EHL-2TW		6.2
OP-3TS	EHL-3TS		22.0
OP-6TW	EHL-6TW		22.0

Pendant control switch PCS-1 / PCS-2

Optional pendant controls are available to replace the standard pull rope.

Model	Air hoist		Mass (kg)
PCS-1	EHL-025TS	EHL-049TS	2.3
	EHL-05TS	EHL-1TW	2.7
PCS-2	EHL-1TS	EHL-2TW	2.7
	EHL-3TS	EHL-6TW	2.7
PCS-2BV1	EHL-1TS	EHL-2TW	3.2
PCS-2BV2	EHL-3TS	EHL-6TW	3.5



PCS-1/2



PCS-2BV1/2BV2



(Emergency stop button and shut-off valve equipped)

Note) 1. Max. control tube extension is up to 6m (total length of hose must be less than 8m).

2. EHV has the pendant control switch including emergency stop button as standard.

Options

Stainless steel load chain

Due to the lower breaking load of the stainless steel chain, the loading capacity of EHL-1TS and 2TW would be reduced to 80% of the rated capacity. For 3 tons and 6 tons hoist, no stainless chain is available.

Chain buckets

ENDO supplies a chain bucket for the undermentioned chain lengths.

Model / chain lengths	6m	10m	12m	20m
AT-60K / AT-125K	○		△	△
EHL-025TS / EHL-049TS / EHV25SP / EHV49SP	○		△	△
EHL-05TS / EHL-1TW / EHV50SP / EHV100WP	○		△	△
EHL-1TS / EHL-2TW	○		△	△
EHL-3TS / EHL-6TW	○	△		

Note) 1. ○ mark means a standard bucket.

2. △ mark means an optional bucket.

3. When you need the bucket capable of the other chain lengths, contact our distributors or ENDO.

Specification

Wire rope series EHW / AH

Model	Rated load (kg)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Air inlet	Mass (kg)
EHW-60	60	1.9	0.4 {4}	18.5	0.55	R 3/8	9.2
			0.5 {5}	22.5	0.7		
			0.6 {6}	26.0	0.88		
EHW-60R	60	1.9	0.4 {4}	18.5	0.55	Rc 3/8	9.5
			0.5 {5}	22.5	0.7		
			0.6 {6}	26.0	0.88		
EHW-120	120	1.9	0.4 {4}	11.0	0.59	R 3/8	9.4
			0.5 {5}	13.5	0.75		
			0.6 {6}	16.0	0.93		
EHW-120R	120	1.9	0.4 {4}	11.0	0.59	Rc 3/8	9.7
			0.5 {5}	13.5	0.75		
			0.6 {6}	16.0	0.93		
AH-250R	160	2.5	0.4 {4}	9.0	0.75	Rc 1/2	18.2
	200		0.5 {5}	10.0	0.92		
	250		0.6 {6}	11.0	1.1		

(Note) Application; Indoor -10℃~+50℃(Temperature)

Load chain series AT / ATC / EHL / EHLK / EHV

Model	Rated load (t)	Stroke (m)	Air pressure MPa {kgf/cm ² }	Lifting speed m/min	Air consumption m ³ /min (normal)	Chain size×fall	Air inlet	Mass (kg)
AT-60K AT-60K-5	60kg	3	0.4 {4}	16.5	0.52	4.0×1	Rc 3/8	12.3 (13.0)
			0.5 {5}	20.0	0.67			
			0.6 {6}	23.5	0.85			
ATC-60K ATC-60K-5	60kg	2	0.4 {4}	14.0	0.52	4.0×1	Rc 3/8	14.3
			0.5 {5}	17.5	0.67			
			0.6 {6}	20.0	0.85			
AT-125K AT-125K-5	125kg	3	0.4 {4}	10.0	0.55	4.0×1	Rc 3/8	12.5 (13.2)
			0.5 {5}	12.0	0.71			
			0.6 {6}	14.5	0.9			
ATC-125K ATC-125K-5	125kg	2	0.4 {4}	6.5	0.42	4.0×1	Rc 3/8	14.5
			0.5 {5}	10.5	0.55			
			0.6 {6}	12.0	0.65			
EHL-025TS	250kg	3	0.4 {4}	12.0	0.9	6.3×1	Rp 1/2	20.0
			0.5 {5}	16.0	1.3			
			0.6 {6}	18.0	1.6			
EHL-049TS	490kg	3	0.4 {4}	7.5	0.95	6.3×1	Rp 1/2	20.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			
EHL-05TS	500kg	3	0.4 {4}	7.5	0.95	6.3×1	Rp 1/2	20.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			
EHL-1TW	1	3	0.4 {4}	3.7	0.95	6.3×2	Rp 1/2	26.0
			0.5 {5}	4.5	1.3			
			0.6 {6}	5.2	1.65			
EHL-1TS	1	3	0.4 {4}	4.0	1.0	7.1×1	Rp 1/2	34.0
			0.5 {5}	5.2	1.4			
			0.6 {6}	6.0	1.8			
EHL-2TW	2	3	0.4 {4}	2.0	1.0	7.1×2	Rp 1/2	42.0
			0.5 {5}	2.6	1.4			
			0.6 {6}	3.0	1.8			
EHL-3TS	3	3	0.4 {4}	2.0	1.75	12.5×1	Rp 3/4	79.0
			0.5 {5}	2.6	2.47			
			0.6 {6}	3.0	3.14			
EHL-6TW	6	3	0.4 {4}	1.0	1.75	12.5×2	Rp 3/4	101.0
			0.5 {5}	1.3	2.47			
			0.6 {6}	1.5	3.14			
EHLK-1TS	1	3	0.4 {4}	3.3	1.3	7.1×1	Rp 1/2	38.0
			0.5 {5}	4.3	1.4			
			0.6 {6}	5.3	1.5			
EHLK-2TW	2	3	0.4 {4}	1.6	1.3	7.1×2	Rp 1/2	46.0
			0.5 {5}	2.1	1.4			
			0.6 {6}	2.6	1.5			
EHV25SP	250kg	3	0.4 {4}	12.0	0.9	6.3×1	Rp 1/2	23.0
			0.5 {5}	16.0	1.3			
			0.6 {6}	18.0	1.6			
EHV49SP	490kg	3	0.4 {4}	7.5	0.95	6.3×1	Rp 1/2	23.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			
EHV50SP	500kg	3	0.4 {4}	7.5	0.95	6.3×1	Rp 1/2	23.0
			0.5 {5}	9.0	1.3			
			0.6 {6}	10.5	1.65			
EHV100WP	1	3	0.4 {4}	3.7	0.95	6.3×2	Rp 1/2	29.0
			0.5 {5}	4.5	1.3			
			0.6 {6}	5.2	1.65			

(Note) ENDO air hoists are available for only indoor, with temperature of -10℃~+50℃. The figures () indicate AT-60K-5 and AT-125K-5.



AIR HOIST

ENDO ENDO KOGYO CO., LTD.



ISO9001 JP97/010458
SCOPE : Head office, Plant



ISO14001 JP10/070952
SCOPE : Head office, Plant

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Counter reaction balancer HKS series

Spring balancer + Reduce counter reaction

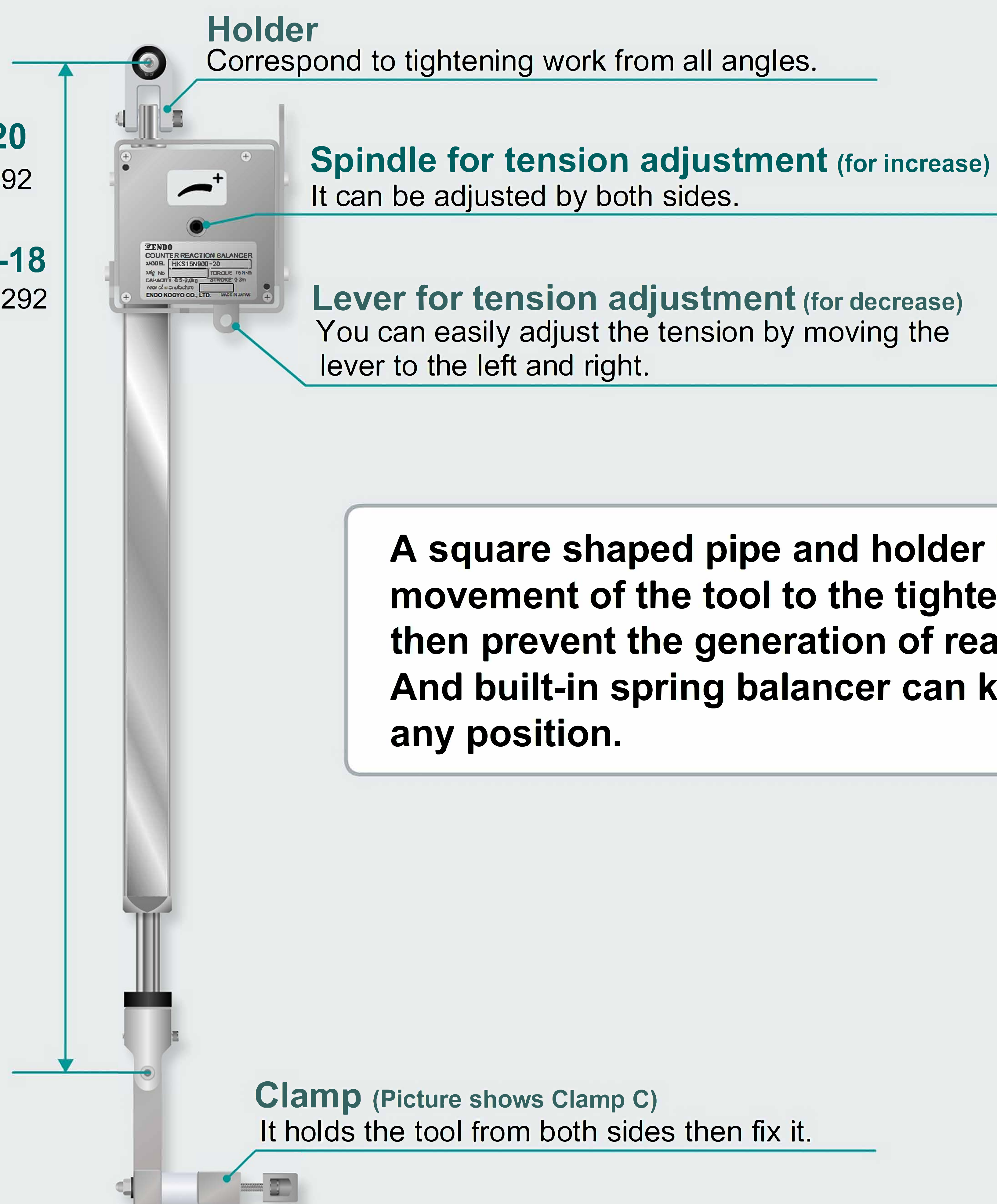
**New
Model**

HKS15N900-20

MIN.592~MAX.892
Stroke 300mm

HKS15N1300-18

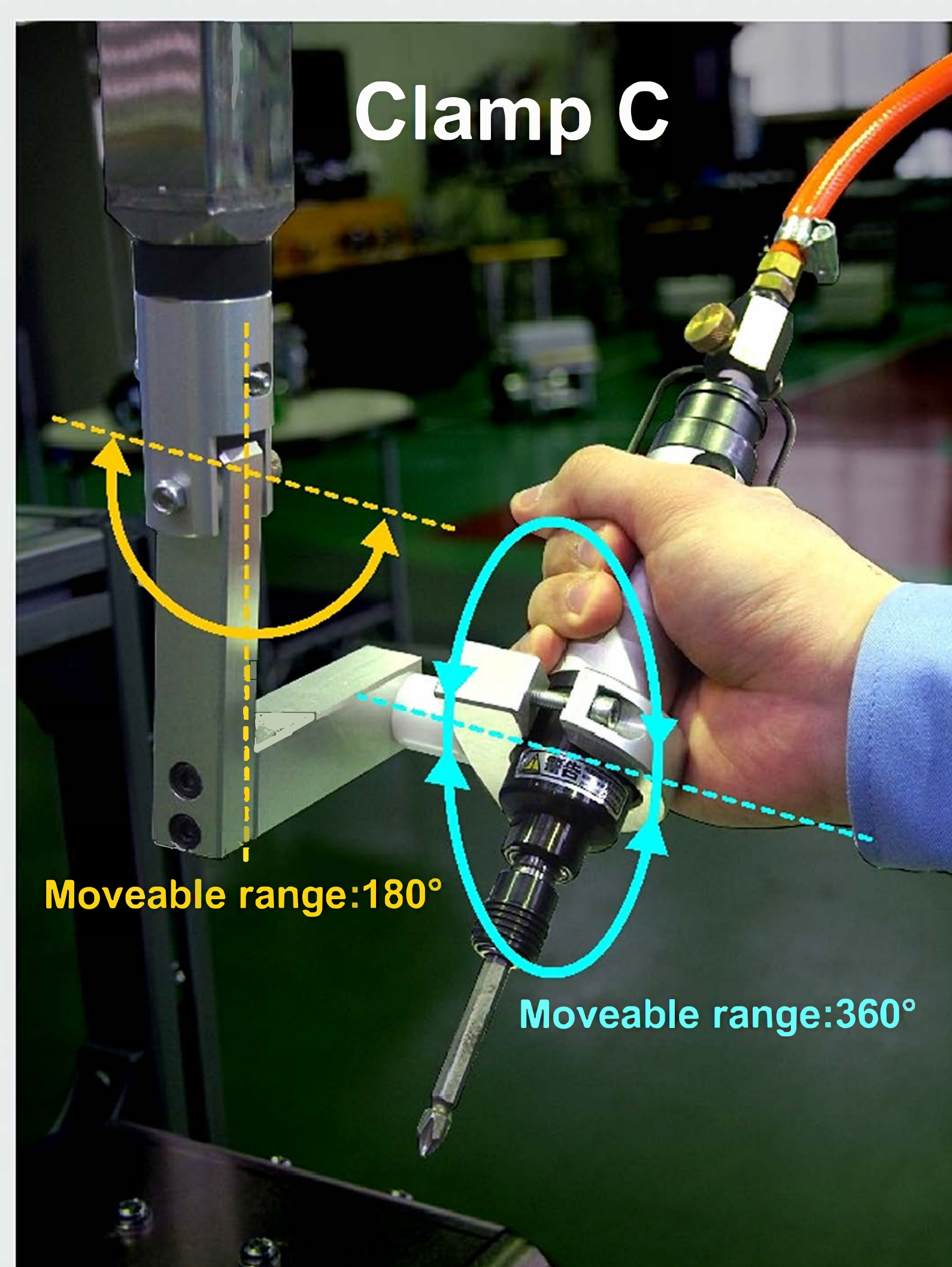
MIN.792~MAX.1292
Stroke 500mm



This is a good product suitable for low torque fine tightening work on the workbench.



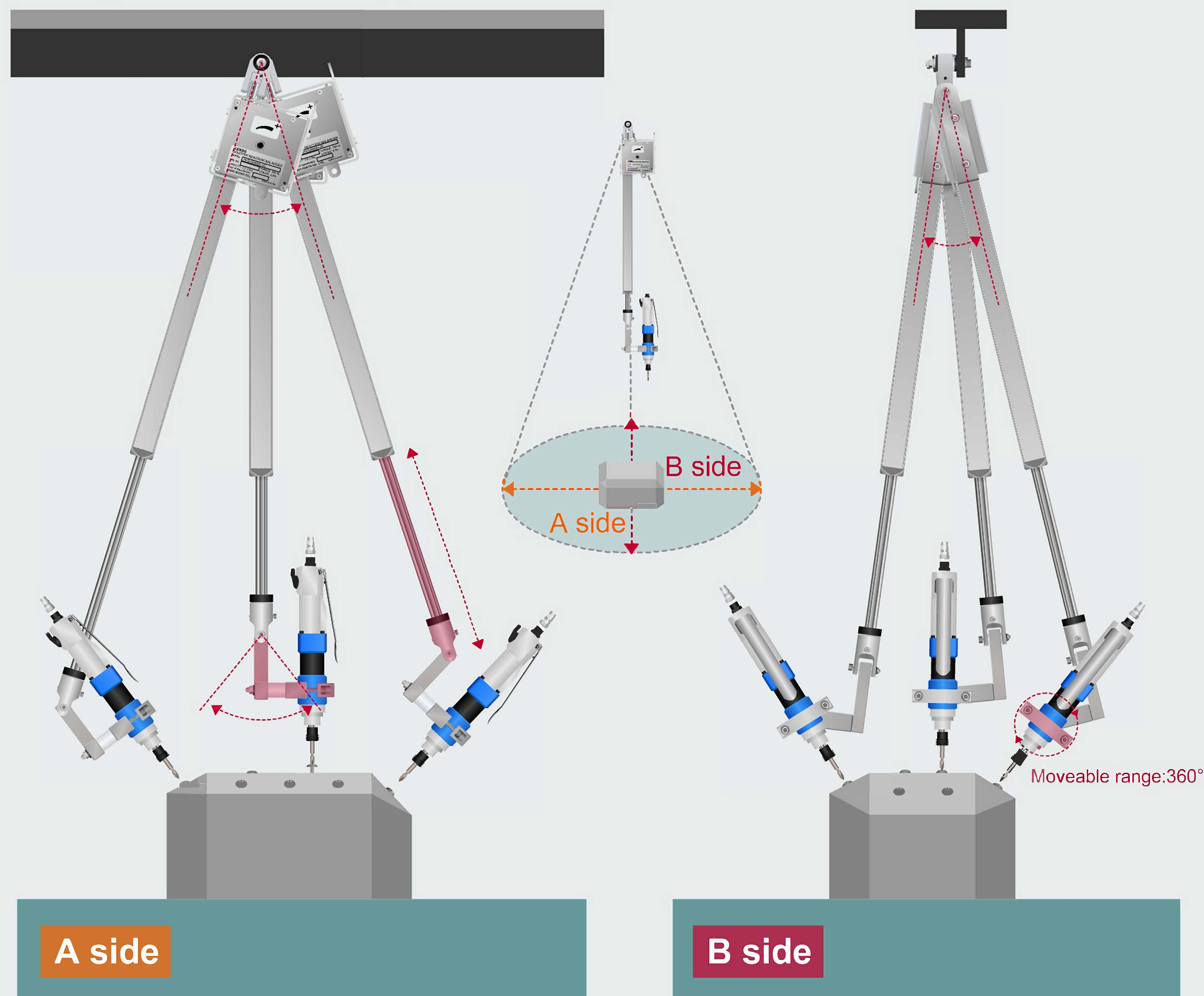
Clamp



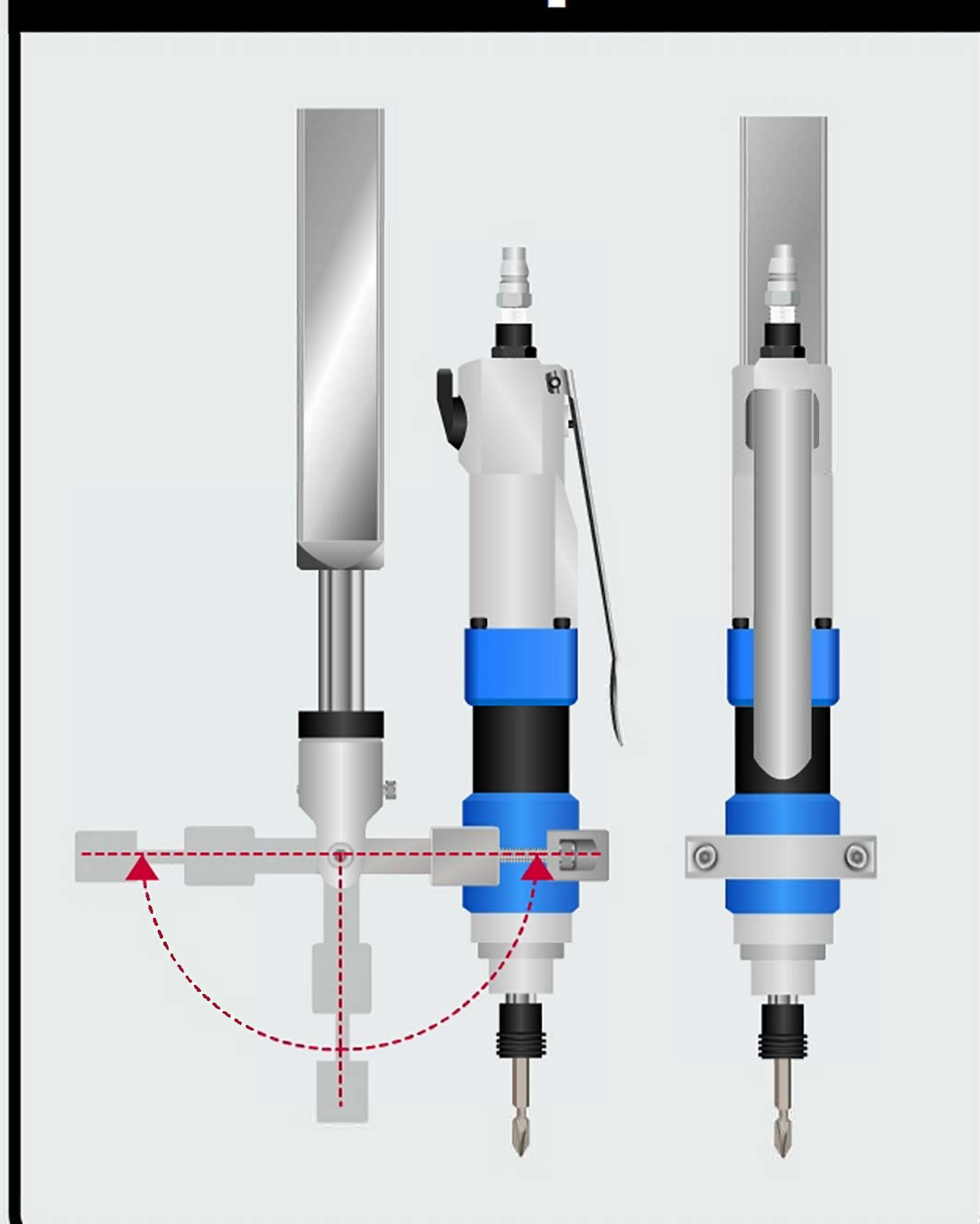
Clamp C

The upper holder moving in the 360 ° direction and the clamp at hand makes the range of motion wider and make tightening work from all angles easy.

* The working range depends on the main unit installation position from the tightening surface, the pulling angle, the length of the tool and the clamp position.



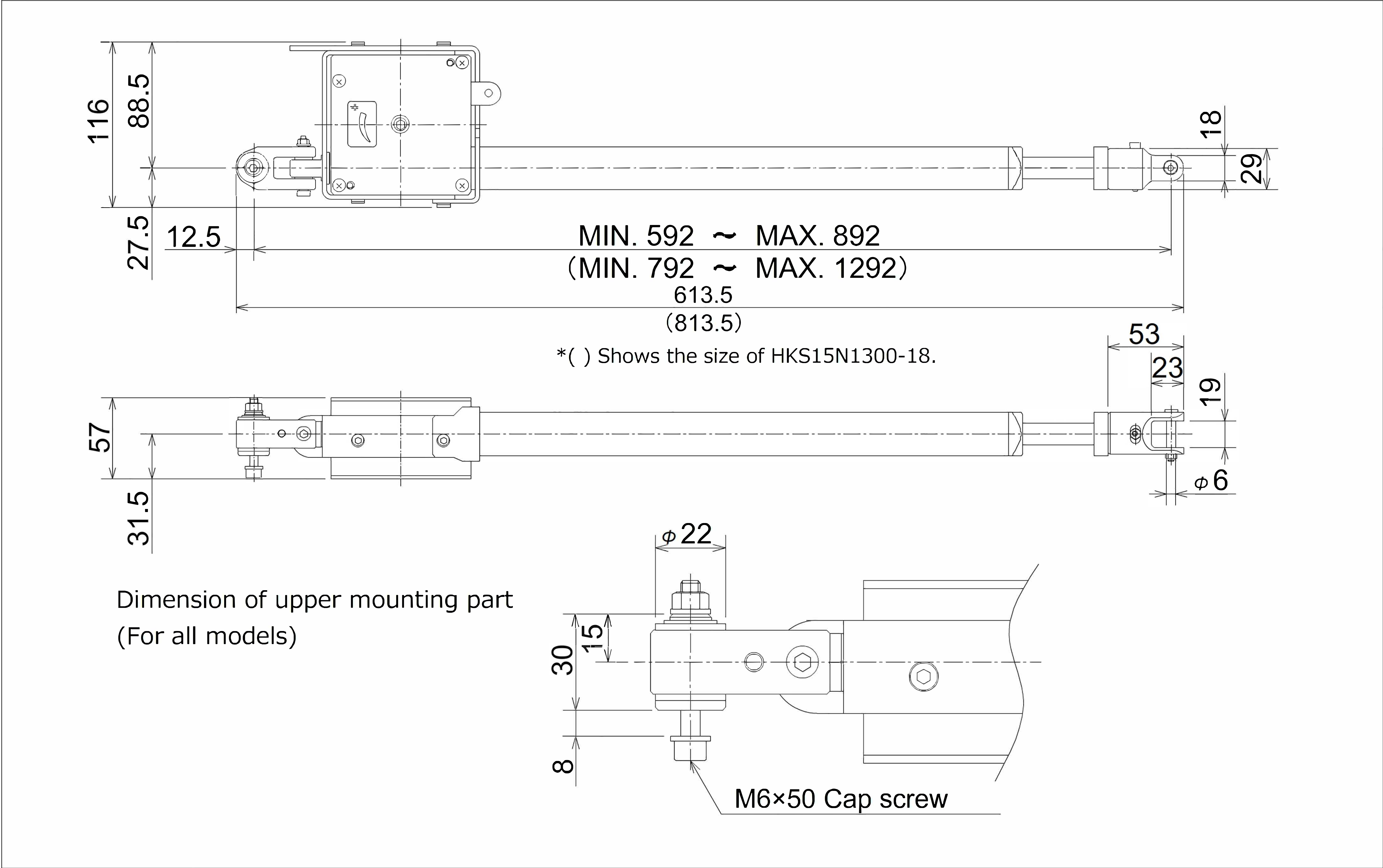
Clamp A



Counter reaction balancer

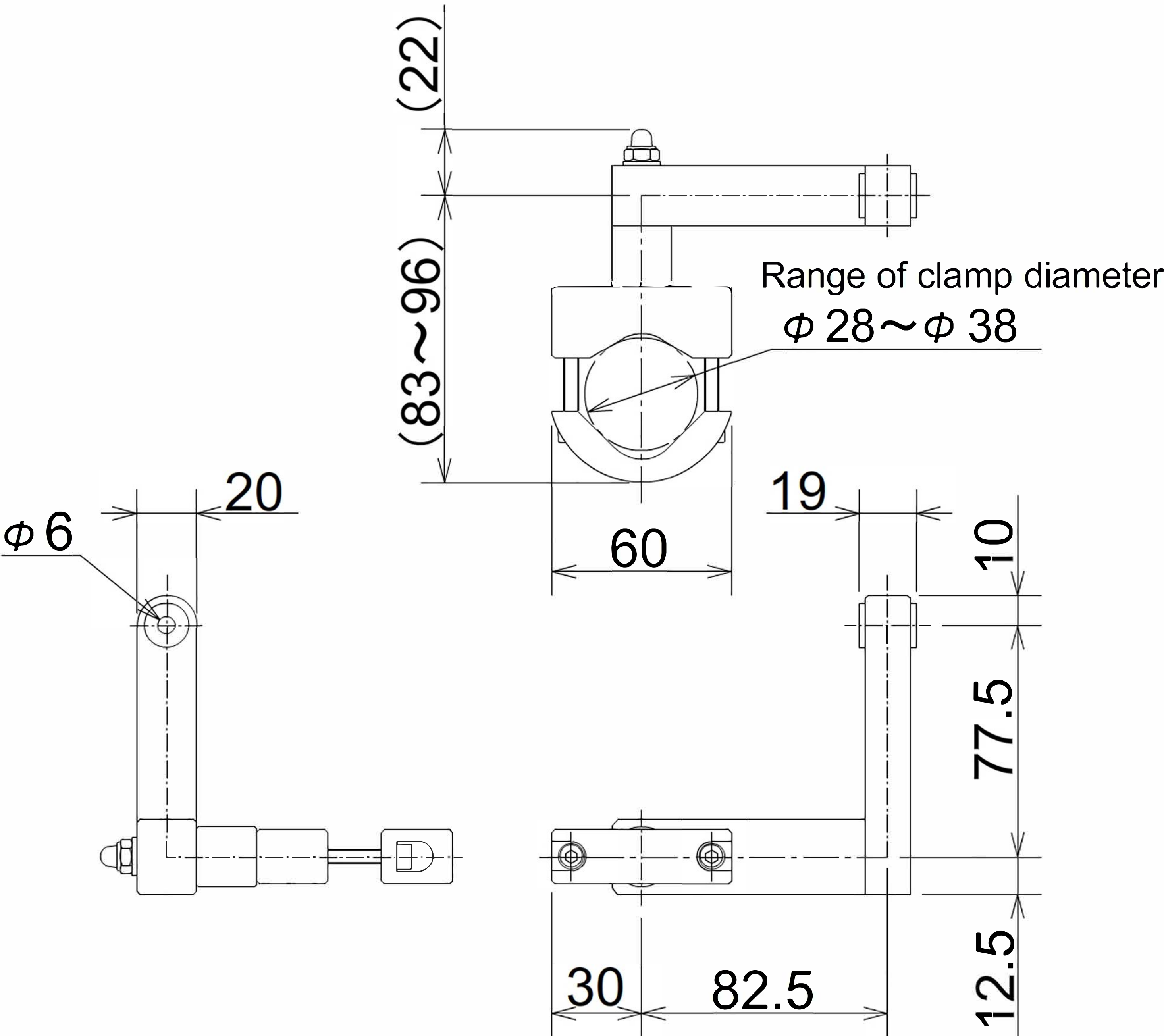
Model	Tightening torque (N·m)	Length (mm)	Stroke (mm)	Mass (kg)
HKS15N900-20	15	892	300	0.5~2
HKS15N1300-18	15	1292	500	0.5~1.8

Dimensions HKS15N900-20 / HKS15N1300-18

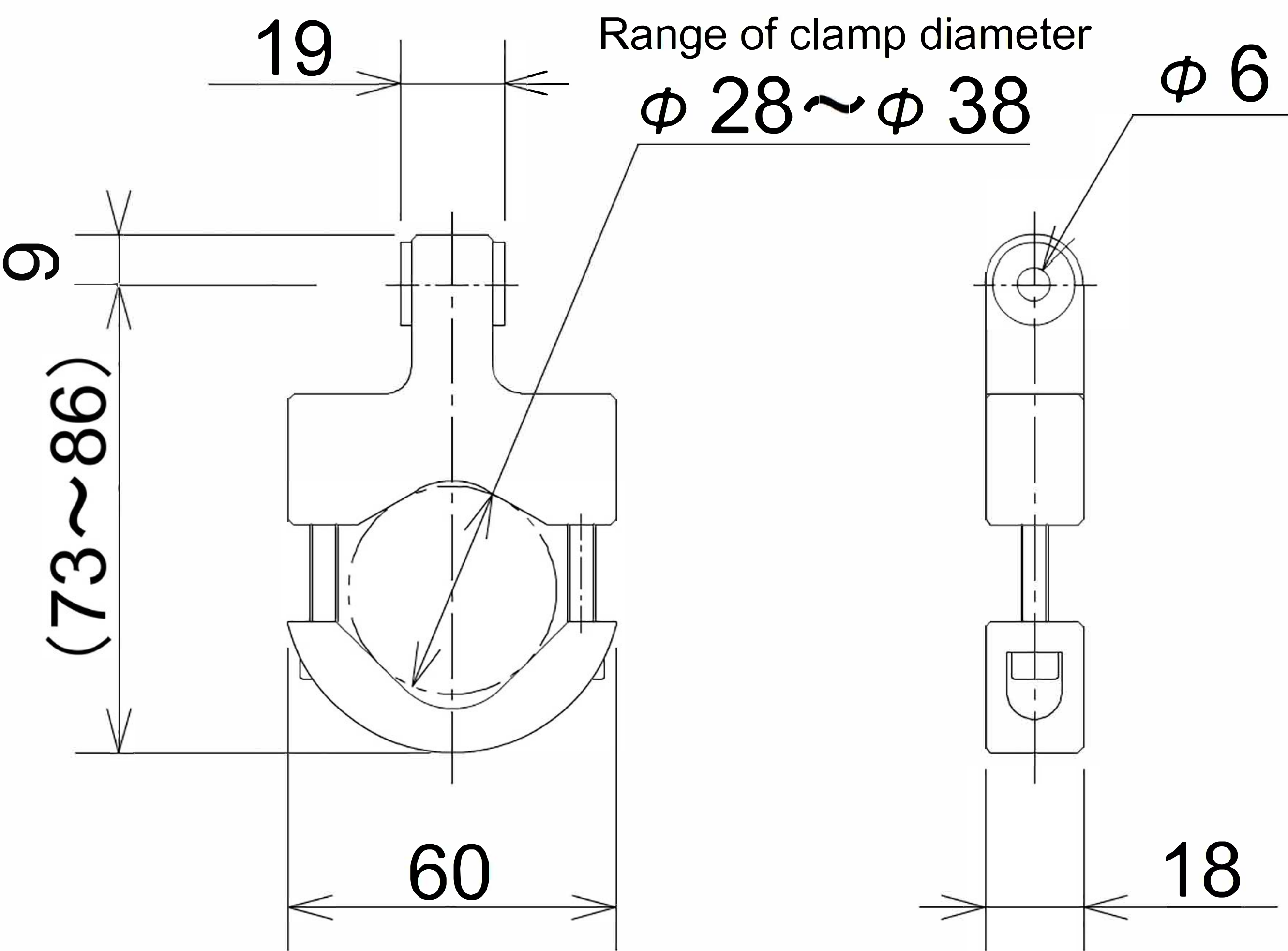


Accessories

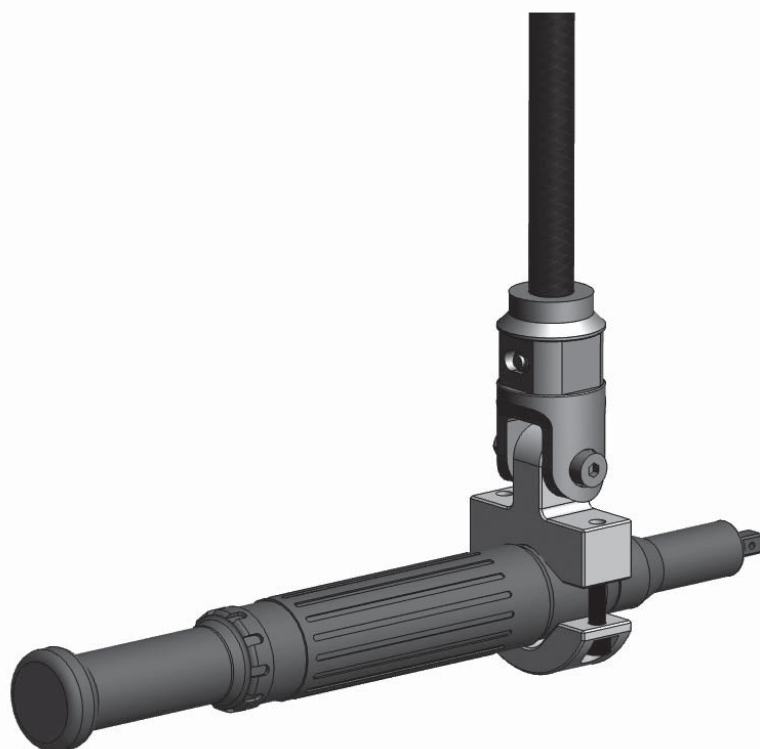
Clamp C



Clamp A



COUNTER REACTION BALANCER COUNTER REACTION ARM



Innovative design integrates torque reaction arm and spring balancer.

The arm can accommodate difficult work environments that cause oblique pulling movements or swaying and shaking of the tool.

Counter reaction balancer

Model	Tightening torque (N·m)	Length (mm)	Stroke (mm)	Number of rod	Capacity (kg)
HKC60N1800-20	60	1761	1000	4	0.5~2
HKC60N1800-40	60	1761	1000	4	2~4
HKC60N1800-60	60	1761	1000	4	4~6
HKC200N1800-50	200	1775	1000	4	3~5
HKC200N1800-70	200	1775	1000	4	5~7

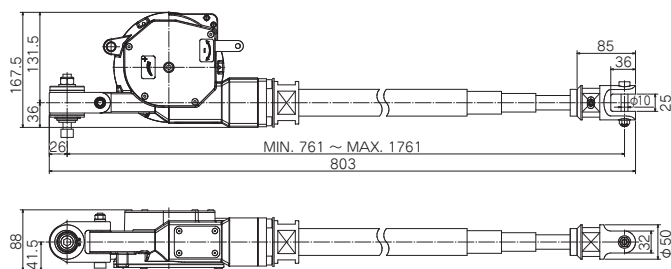
Counter reaction arm

Model	Tightening torque (N·m)	Length (mm)	Stroke (mm)	Number of rod
HKA60N2050	60	2039	1200	3
HKA200N2050	200	2053	1200	3

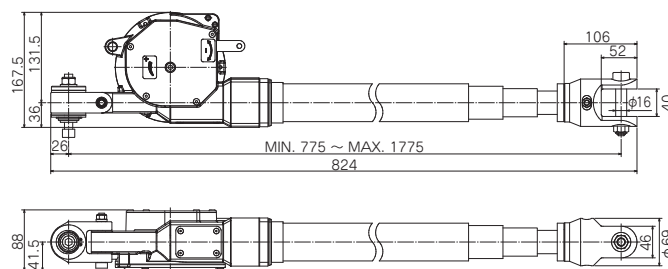
COUNTER REACTION BALANCER / COUNTER REACTION ARM

Dimensions

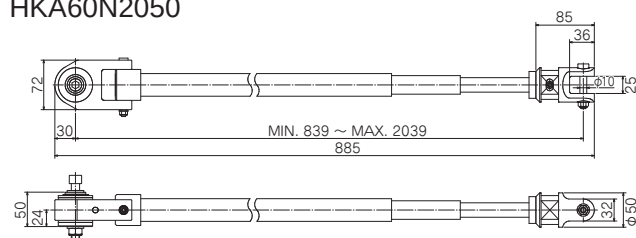
HKC60N series



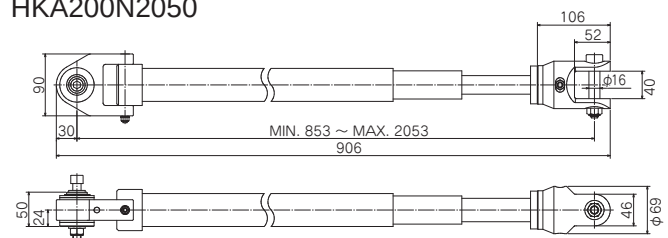
HKC200N series



HKA60N2050



HKA200N2050



Dimension of upper mounting part (For all models)



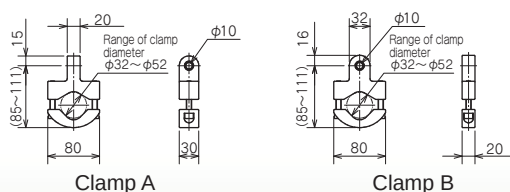
Accessories

[Clamp]

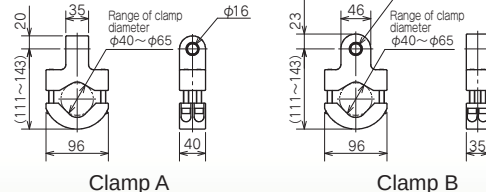
Model
Clamp A for HKC60N, HKA60N
Clamp B for HKC60N, HKA60N
Clamp A for HKC200N, HKA200N
Clamp B for HKC200N, HKA200N



■60N·m



■200N·m



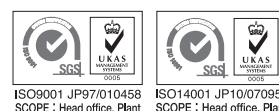
[Spring balancer for HKA series (External use)]

Model	Capacity (kg)	Stroke (mm)
EW-3	1~3	1300
EW-5	2.5~5	1300
ELF-3	1.5~3	2500
ELF-5	3~5	2500

The mounting bolts of spring balancer for HKA series are included in the package.



ENDO ENDO KOGYO CO., LTD.



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Product Lineup

ENDO

Japan's Leading Balancer Brand



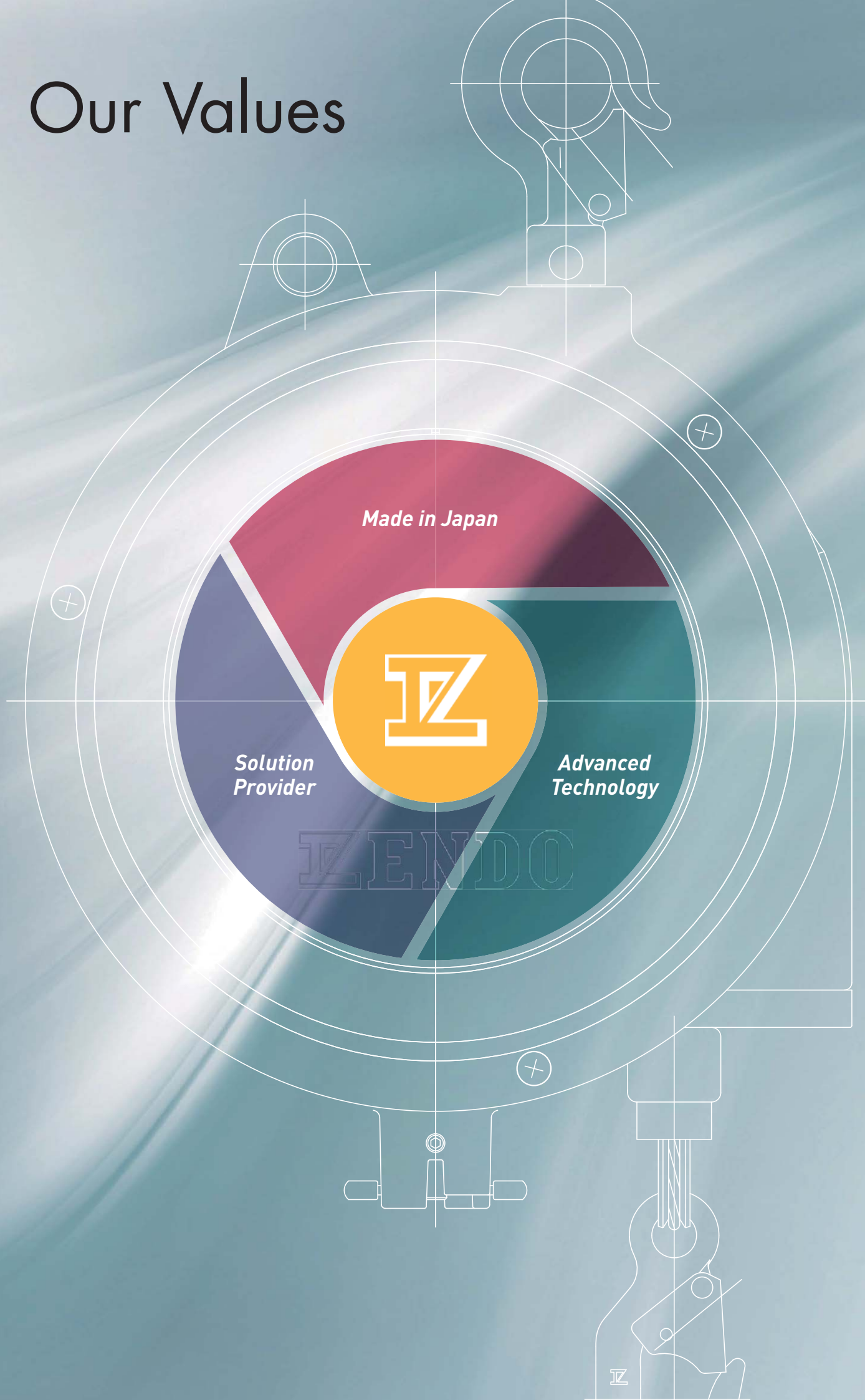
Endo Kogyo products can be found on many of Japan's world-leading production lines, supporting the manufacturing and assembly of automobiles, consumer electronics and a wide range of industrial equipment. Devices such as our spring balancers and air hoists, used to suspend tools on these production lines, dominate the domestic market with a combined share of over 90 percent. The proven reliability of our Japanese engineering and advanced development capabilities can bring the same innovation to your production line.

Die Produkte von Endo Kogyo sind in vielen weltweit führenden Produktionsanlagen aus Japan zu finden, die die Herstellung und Montage von Kraftfahrzeugen, Geräten der Unterhaltungselektronik und eine breite Palette von Industrieanlagen unterstützen. Die Geräte, wie zum Beispiel unsere Federzüge und Hebezüge, die verwendet werden, um Werkzeuge auf diesen Produktionsanlagen aufzuhängen, beherrschen den heimischen Markt mit einem Gesamtanteil von 90 Prozent. Die erwiesene Zuverlässigkeit unserer japanischen Ingenieurleistungen und fortgeschrittenen Entwicklungskompetenz können die gleiche Innovation auch für Ihre Produktionsanlage bewirken.

Les produits Endo Kogyo peuvent être trouvés sur la plupart des lignes de production des leaders mondiaux japonais, assistant dans la fabrication et l'assemblage d'automobiles, de l'électronique grand public et une large gamme d'équipements industriels. Les dispositifs tels que nos équilibreurs de charge à ressort et palans pneumatiques, utilisés pour suspendre des outils sur ces lignes de production, dominent le marché intérieur avec une part de marché cumulée de plus de 90 pour cent. La fiabilité éprouvée de nos capacités d'ingénierie et de développement de pointe japonais peut apporter la même innovation à votre ligne de production.

Los productos Endo Kogyo se encuentran en numerosas líneas de producción japonesas líderes del mercado, colaborando en la fabricación y montaje de automóviles, electrónica de consumo y una amplia gama de equipamiento industrial. Dispositivos tales como nuestros equilibradores de muelle o polipastos neumaticos, utilizados para colgar herramientas en estas líneas de producción, dominan el mercado nacional con una participación combinada de aproximadamente el 90 por ciento. La fiabilidad probada de nuestras capacidades japonesas de ingeniería y desarrollo avanzado pueden proporcionar la misma innovación a su línea de producción.

Our Values



Made in Japan



All of our products are created in Japan. You are assured of Japanese quality in every step of this process, from product planning, development and designing to manufacturing and quality control, and finally after-sales service.

Alle unsere Produkte sind in Japan hergestellt. Wir sichern Ihnen japanische Qualität in allen Stufen dieses Prozesses zu, von der Produktplanung über die Entwicklung und Konstruktion bis hin zur Fertigung und Qualitätskontrolle und schließlich zum Kundendienst.

Tous nos produits sont créés au Japon. Vous êtes assuré de la qualité japonaise à chaque étape de ce processus, de la planification des produits, le développement et la conception à la fabrication et le contrôle qualité, et enfin le service après-vente.

Todos nuestros productos son creados en Japón. De tal modo que podrá estar seguro de disponer de la calidad japonesa en cada paso del proceso, desde la planificación, desarrollo y diseño de productos hasta la fabricación y control de calidad, incluyendo el servicio de posventa.

Advanced Technology



The two wings of our cutting-edge production base, Eco-Factory East and West, are located on an expansive 50,400 square meter site. Our product development incorporates the latest advances in machinery, control, material and hydraulic technologies.

Die zwei tragenden Säulen unserer modernen Produktionsbasis, die umweltfreundlichen Werke Ost und West, befinden sich an einem weitläufigen Standort mit 50.400 Quadratmetern. Unsere Produktentwicklung berücksichtigt die aktuellsten Fortschritte im Maschinenbau, der Steuerungs-, Werkstoff- und Hydrauliktechnik.

Les deux ailes de notre base de production de pointe, Eco-Factory Est et Ouest, sont situés sur un site couvrant 50 400 mètres carrés. Notre développement de produits intègre les dernières avancées en matière de machinerie, de contrôle, de matériel et de technologies hydrauliques.

Las dos alas de nuestra base de producción de vanguardia, la fábrica ecológica este y oeste, se expanden por una amplia zona de 50.400 metros cuadrados. El desarrollo de nuestros productos incorpora los principales avances en maquinaria, control, material y tecnología hidráulica.

Solution Provider



Our mission is to solve the many different issues our customers face in their operations every day. We value speaking face to face with the people who use our products and believe their input is a key part of developing new solutions.

Unsere Berufung ist es, die vielen verschiedenen Probleme unserer Kunden zu lösen, mit denen sie täglich in ihrer Arbeit befasst sind. Wir legen Wert darauf, von Angesicht zu Angesicht mit den Menschen zu sprechen, die unsere Produkte verwenden und daran glauben, dass ihr Einsatz eine Schlüsselrolle bei der Entwicklung neuer Lösungen spielt.

Notre mission est de résoudre les nombreux problèmes auxquels nos clients sont confrontés dans leurs activités chaque jour. Nous apprécions de parler en face à face avec les personnes qui utilisent nos produits et sommes convaincu que leurs contributions sont un élément clé dans le développement de nouvelles solutions.

Nuestra misión es resolver los numerosos y diversos problemas a los que se enfrentan diariamente nuestros clientes. Valoramos la comunicación cara a cara con las personas que utilizan nuestros productos y creemos que sus aportaciones juegan una función fundamental en el desarrollo de nuevas soluciones.

Worldwide Network

Endo Kogyo now has more than 30 years of sales experience in the European market. Over this period, we have also expanded worldwide and are currently represented in 48 countries, with dealers in every region. While our reach is global, we are closely focused on satisfying the unique standards, business customs, user needs and after-sales service requirements of each area.

Endo Kogyo a désormais plus de 30 ans d'expérience dans la vente sur le marché européen. Au cours de cette période, nous nous sommes développés au niveau mondial et sommes actuellement présents dans 48 pays, avec des concessionnaires dans toutes les régions. Tandis que notre portée est mondiale, nous nous concentrons étroitement sur à la satisfaction des normes uniques, des pratiques du commerce, des besoins des utilisateurs et des exigences en matière de service après-vente de chaque région.

Sustainability

Endo Kogyo actively promotes a range of activities designed to create a more environmentally friendly society. Our core spring-based technologies, for example, require no electricity, and we are working to expand their use in current markets as well as to develop applications for a variety of other fields. Embracing a wider perspective, we are also engaged in projects to reduce waste and create thermal storage air conditioning systems that can be installed in factories to save energy.

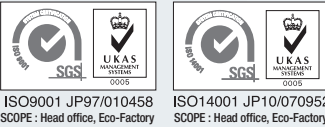
Endo Kogyo arbeitet aktiv an der Förderung einer Vielfalt von Aktivitäten, die darauf ausgerichtet sind, eine umweltfreundlichere Gesellschaft herauszubilden. Unser Herzstück, die Federtechnik, braucht beispielsweise keinen Strom, und wir arbeiten laufend daran, ihre Verwendung in den aktuellen Märkten auszubauen, als auch Anwendungen für eine Vielzahl neuer Gebiete zu finden. Wenn wir an die fernere Zukunft denken, beteiligen wir uns auch an Projekten zur Verringerung des Abfallaufkommens und zur Erstellung von Wärmespeicher- und Klimaanlageanlagen, die in Produktionsanlagen errichtet werden können, um Energie zu sparen.

Endo Kogyo promeut activement une gamme d'activités visant à créer une société plus respectueuse de l'environnement. Nos technologies des ressorts, par exemple, ne nécessitent pas d'électricité, et nous travaillons à étendre leur utilisation dans les marchés actuels, ainsi qu'à développer des applications pour une variété d'autres domaines. En adoptant une perspective plus large, nous menons également des projets visant à réduire les déchets et développer des systèmes de climatisations thermodynamiques pouvant être installés dans les usines pour économiser l'énergie.

Endo Kogyo promueve activamente una serie de actividades diseñadas para crear una sociedad más respetuosa con el medio ambiente. Nuestras principales tecnologías basadas en resortes, por ejemplo, no requieren electricidad, y estamos trabajando para ampliar su uso en los mercados actuales, así como para desarrollar aplicaciones para muchos otros campos. Con una perspectiva más amplia en mente, estamos participando en proyectos de reducción de residuos y creación de sistemas de aire acondicionado con almacenamiento térmico que puedan instalarse en las fábricas para ahorrar energía.

Endo Kogyo verfügt heute über mehr als 30 Jahre Vertriebserfahrung auf dem europäischen Markt. In diesem Zeitraum konnten wir auch weltweit expandieren, und wir sind gegenwärtig in 48 Ländern vertreten, mit Händlern in jeder Region. Unsere Reichweite ist weltweit, wir richten aber gleichzeitig unser Augenmerk auf die jeweiligen Normen, Geschäftsgebaren, Kundenbedürfnisse und Anforderungen an den Kundendienst der jeweiligen Region.

Endo Kogyo tiene ya más de 30 años de experiencia en ventas en el mercado europeo. Durante este período, también nos hemos expandido a nivel mundial y actualmente estamos representados en 48 países, con distribuidores en todas las regiones. Si bien nuestro alcance es global, estamos muy centrados en satisfacer los estándares, costumbres comerciales, necesidades del usuario y requisitos del servicio de posventa exclusivos de cada zona.



145 Years History

1871

Established Shogakudo as a private shop for the production of hammered copperware.

Shogakudo wurde als privates Geschäft zur Produktion von gehämmerten Kupferarbeiten gegründet.

Shogakudo a été établi comme un magasin privé pour la production de cuivre martelé.

Establecimiento de Shogakudo como comercio privado para la producción de artículos de cobre martillado.



1944

Started the production of circular sawing machines.

Die Produktion von Kreissägemaschinen wurde aufgenommen.

Lancement de la production de scies circulaires.

Comienzo de la producción de máquinas de coser circulares.



1952

Started the development of spring balancers.

Die Entwicklung von Federzügen wurde aufgenommen.

Lancement du développement d'équilibreurs à ressort.

Comienzo del desarrollo de los equilibradores de muelle.



1969

Received the Niigata Prefecture Technology Award.

Wir haben den Technologiepreis der Präfektur Niigata erhalten.

Réception du Prix de la Préfecture de Technologie Niigata.

Recibimos el Premio de Tecnología de la Prefectura de Niigata.

1971

Developed air hoists.

Die Druckluftbezüge wurden entwickelt.

Développement de palans pneumatiques.

Desarrollo de grúas neumáticas.



1973

Constructed Koike Plant.

Das Koike-Werk wurde errichtet.

A construit l'usine Koike.

Construimos la Planta de Koike.



1974

Started the development, production and sales of cable reels and hose reels.

Die Entwicklung, Produktion und der Verkauf von Kabel- und Schlauchtrommeln wurde aufgenommen.

Lancement du développement, de la production et la vente d'enrouleurs de câbles et tuyaux d'arrosage.

Comienzo del desarrollo, producción y venta de carretes de cable y bobinas de manguera.



1975

Delivered Western flatware created in cooperation with celebrated designers including Ward Bennett and Christian Dior to Tiffany and Bloomingdale's.

In Zusammenarbeit mit berühmten Designern wie Ward Bennett und Christian Dior entstand das westliche Besteck für Tiffany und Bloomingdale's.

Livraison de couverts occidentaux créés en collaboration avec des designers célèbres, dont Ward Bennett et Christian Dior à Tiffany et Bloomingdale.

Entrega de la cubertería occidental creada en cooperación con famosos diseñadores, incluyendo desde Ward Bennett y Christian Dior a Tiffany y Bloomingdale.

1980

Received confirmation of the selection of the Tryron series of Western flatware for the permanent collection of the Museum of Modern Art (MoMA) in New York City.

Die Bestätigung der Auswahl der Tryron-Serie von westlichem Besteck für die Dauerausstellung des Museums für moderne Kunst (MoMA) in New York City wurde erlangt.

Réception de la confirmation de la sélection de la série Tryron de couverts occidentaux pour la collection permanente du Museum of Modern Art (MoMA) à New York City.

Confirmación de la selección de la serie Tryron de la cubertería occidental para la colección permanente del Museo de Arte Moderno (MoMA) en Nueva York.



1996

Started the development, production and sales of crushers.

Die Entwicklung, Produktion und der Verkauf von Brechern wurde aufgenommen.

Lancement du développement, la production et la vente de concasseurs.

Comienzo del desarrollo, producción y venta de trituradoras.



1997

Acquired ISO 9001:1944 certification.

Die Zertifizierung nach ISO 9001:1944 wurde erlangt.

Certification ISO 9001:1944 délivrée.

Adquisición de la certificación ISO 9001:1944.

2000

Constructed Yoshida Plant.

Das Yoshida-Werk wurde errichtet.

A construit l'usine Yoshida.

Construimos la Planta de Yoshida.

2006

Renamed Koike and Yoshida Plants as Eco-Factory, with the introduction of environmental protection activities. Opened a technical center inside Eco-Factory.

Mit der Einführung von Umweltschutzaktivitäten wurden die Koike- und Yoshida-Werke zu Ökofabriken umbenannt. Wir haben ein technisches Zentrum innerhalb der Ökofabrik eröffnet.

A renommé les usines Koike et Yoshida en Eco-Factory, avec l'introduction d'activités de protection de l'environnement. Ouverture d'un centre technique au sein d'Eco-Factory.

Cambiamos el nombre de las plantas de Koike y Yoshida a Eco-Fábricas, con la introducción de actividades de protección medioambiental. Apertura de un centro técnico dentro de la fábrica ecológica.



2009

Developed air balancers.

Die Druckluftbalancer wurden entwickelt.

Développement d'équilibreurs de charge pneumatiques.

Desarrollo de los equilibradores de muelle.



2010

Acquired ISO 14001:2004 certification.

Certification ISO 14001:2004 délivrée.

2011

Established Endo Kogyo India Pvt. Ltd. in India.

Etablissement de Endo Kogyo India Pvt. Ltd. en Inde.

2012

Established Endo Kogyo Shanghai Co., Ltd. in China.

Etablissement de Endo Kogyo Shanghai Co., Ltd. en Chine.

2014

Started the supply of shore connection reels to the shipping industry.

Die Auslieferung von Landanschlusstrommeln für die Schiffsindustrie wurde aufgenommen.

Début de la distribution de bobines d'alimentation de navires à quai à l'industrie du transport maritime.

Comienzo del suministro de bobinas de conexión litorales a la industria de transporte marítimo.



ZENMAI MOTOR

Maximizing the functionality and dynamic power of springs

Maximierung der Funktionalität und dynamischen Kraft von Federn

Maximiser la fonctionnalité et la puissance dynamique des ressorts

Maximización de la funcionalidad y potencia dinámica de los resortes

Construction

1 Zenmai (spring)

Provides the driving force for the motor.

2 Mechanism to prevent reverse winding¹

Prevents reverse winding after the spring has completely unwound and the number of windings has reached zero.

ZW type

ZS type

3 Mechanism to prevent excess winding²

Prevents damage that could be caused by winding the spring beyond its maximum number of permitted rotations.

1. Do not release the spring in an unloaded state as this could damage it.
2. The mechanism will begin to operate with a clicking sound if the spring is wound beyond its maximum permitted number of rotations. Avoid forced winding that regularly activates the mechanism.

4 Shaft (option)

Transfers the rotation to the attached component. Either single or dual axes shafts can be selected with key attachment.

Single type (1 spring)

Model	Torque	Max. rotation	Mass
ZS-08	0.8 N·m	15	1.3 kg
ZS-16	1.6 N·m	12	
ZS-24	2.4 N·m	10	

Double type (2 springs)

Model	Torque	Max. rotation	Mass
ZW-16	1.6 N·m	15	2.3 kg
ZW-32	3.2 N·m	12	
ZW-48	4.8 N·m	10	

Features

The Zenmai motor allows the dynamic power of springs to be used more directly for a wider range of applications. The motor shaft can be connected directly to a component, eliminating the need for an intermediate cable or drum.

Operation

The spring is first fully wound using the shaft to charge it with potential energy. When this stored power is released, it becomes the energy required to turn the shaft. After the spring has completely unwound, the shaft detaches and inertia continues the rotation.

Eigenschaften

Mit dem Zenmai Motor kann die dynamische Kraft von Federn direkter für eine größere Palette von Anwendungen verwendet werden. Die Motorwelle kann direkt mit einer Komponente verbunden werden, ohne Zwischenschaltung eines Drahtseils oder einer Kabeltrommel.

Anwendung

Die Feder wird zuerst mit der Welle vollständig aufgezogen, um sie mit potentieller Energie aufzuladen. Wenn diese gespeicherte Energie freigesetzt wird, wird sie zur Energie, die die Welle dreht. Wenn die Feder vollständig entspannt ist, löst sich die Welle und durch die Trägheit setzt sich die Drehung fort.

Caractéristiques

Le Zenmai motor permet la puissance dynamique des ressorts pour une utilisation directe sur une large gamme d'applications. L'arbre du moteur peut être relié directement à un composant, ce qui élimine la nécessité d'un câble ou d'un tambour intermédiaire.

Utilisation

Le ressort est d'abord complètement enroulé à l'aide de l'arbre pour le charger avec l'énergie potentielle. Lorsque cette énergie emmagasinée est libérée, elle devient l'énergie nécessaire pour faire tourner l'arbre. Lorsque le ressort est complètement déroulé, l'arbre se détache et l'inertie poursuit la rotation.

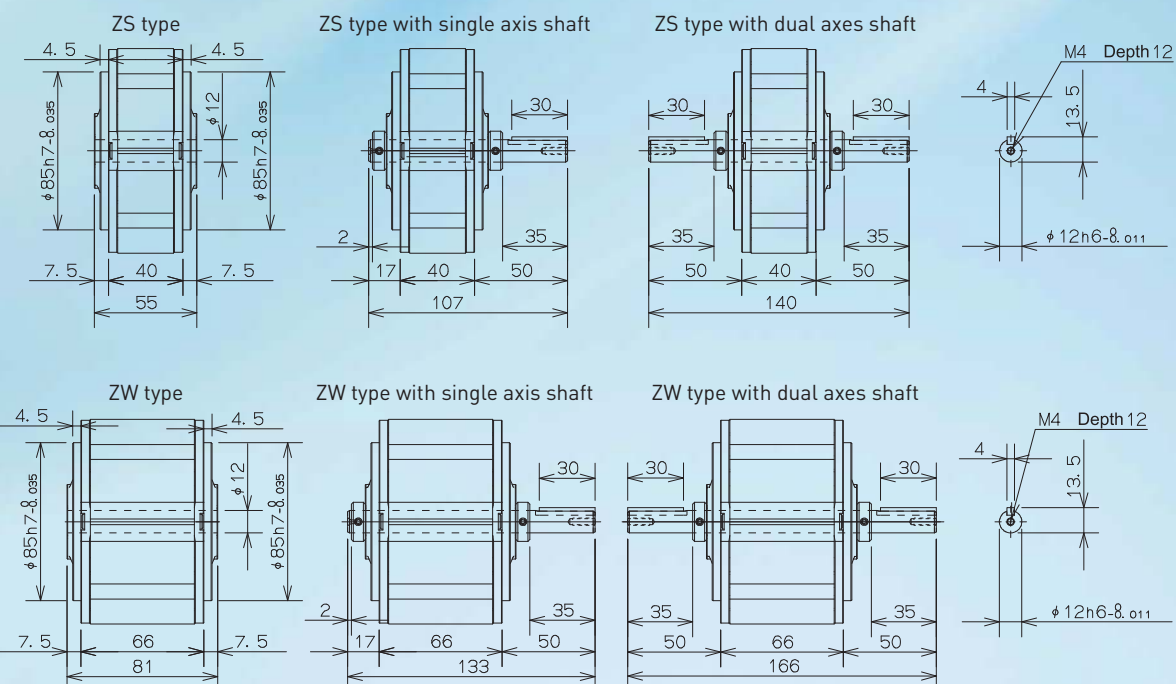
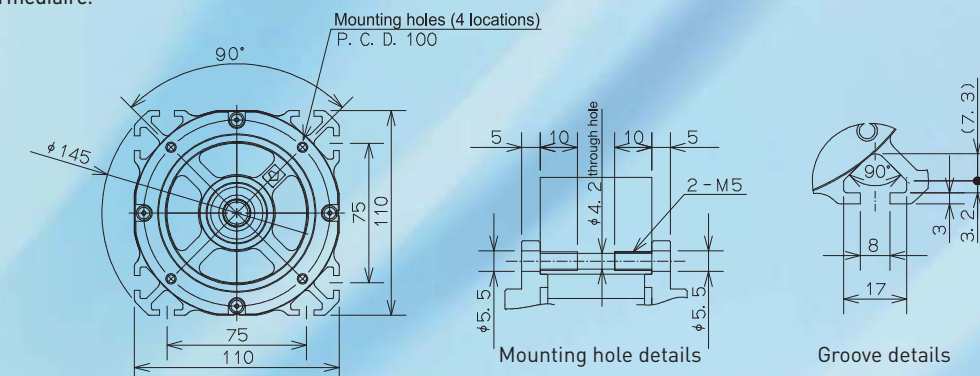


Características

Zenmai motor permite usar más directamente la potencia dinámica de los muelles en una mayor gama de aplicaciones. El eje del motor puede conectarse directamente a un componente, lo que elimina la necesidad de un estrobo de acero intermedio o tambor.

Operación

En primer lugar, el muelle es enrollado completamente usando el eje para cargarlo con energía potencial. Al liberar esta potencia almacenada, se transforma en la energía necesaria para girar el eje. Una vez se ha desenrollado completamente el muelle, el eje se desacopla y la inercia continúa la rotación.



ZS-08
ZS-16
ZS-24

ZW-16
ZW-32
ZW-48

SQUARE BALANCER

Unique device upgrades production lines

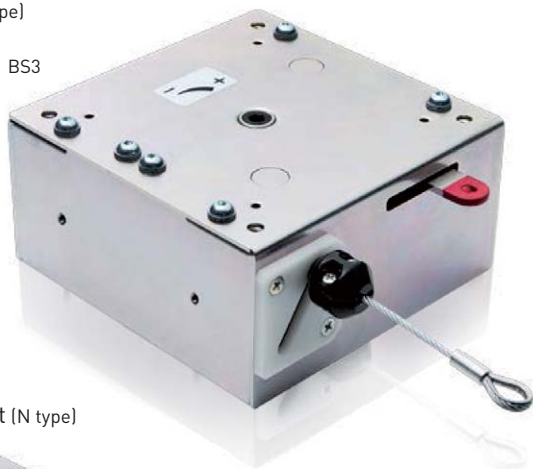
Einzigartiges Gerät aktualisiert Produktionsanlagen

Le dispositif unique améliore les chaînes de production

Dispositivo único que moderniza las líneas de producción

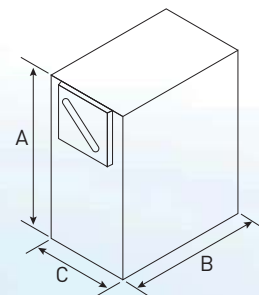
■ Cable unit (W type)

BS3



■ Nylon rope unit (N type)

SBS3N



Balancer type

Model	Capacity [kg]	Stroke [m]	A [mm]	B [mm]	C [mm]
BS3W	1.5-3.0	1.3	144	144	73
BS5W	3.0-5.0				
BS7W	5.0-7.0				
BS3N	1.5-3.0				
BS5N	3.0-5.0				
BS7N	5.0-7.0	0.5	98	98	57
SBS3W	1.5-3.0				
SBS5W	3.0-5.0				
SBS3N	1.5-3.0				
SBS5N	3.0-5.0				

Retractor type

Model	Max. tension N [kgf]	Stroke [m]	A [mm]	B [mm]	C [mm]
RS3W	29N [3.0 kgf]	3.0	144	144	73
RS5W	49N [5.0 kgf]				
RS3N	29N [3.0 kgf]				
RS5N	49N [5.0 kgf]				

"W" indicates a cable type model. "N" indicates a nylon rope type model.

- Square shape of the spring balancer enables more flexible installation and reliable attachment.
- Device operates without air or electricity, helping to reduce the physical strain created by performing work in stressful positions.
- Adoption of a flexible lever type mechanism for the BS and RS series enables extremely accurate tension adjustment.
- Balancer type BS and SBS series provide fixed tension during cable extension while the retractor type RS series supports variable tension, enabling a longer stroke length.
- Unit can easily be fixed in place using only two M5 metric thread screws.

- Die quadratische Form des Federzugs ermöglicht eine flexiblere Installation und zuverlässige Befestigung.
- Das Gerät funktioniert ohne Druckluft oder Strom, dies hilft, die durch das Arbeiten in anstrengenden Haltungen auftretende körperliche Belastung zu verringern.
- Die Anwendung eines Mechanismus mit flexiblen Hebeln für die BS- und RS-Serie ermöglicht eine extrem genaue Spannungseinstellung.
- Die Balancer der BS- und SBS-Serie bieten eine feststehende Spannung bei der Kabelverlängerung, während die einziehbare Ausführung der RS-Serie eine variable Spannung unterstützt, die eine längere Hublänge ermöglicht.
- Das Gerät kann mit nur zwei metrischen M5-Gewindeschrauben einfach an Ort und Stelle befestigt werden.

- La forme carrée de l'équilibre de charge à ressort permet une installation plus souple et une fixation fiable.
- L'appareil fonctionne sans air ou électricité, aidant ainsi à réduire l'effort physique créé en effectuant le travail dans des positions stressantes.
- L'adoption d'un mécanisme souple de type levier pour la série BS et RS permet un réglage de tension extrêmement précis.
- Les équilibreurs des séries BS et SBS fournissent une tension fixe lors de l'extension du câble tandis que la série RS de type écarteur supporte une tension variable permettant une plus longue durée de la course.
- L'unité peut facilement être fixée en place en utilisant seulement deux vis M5 filetage métrique.

- La forma cuadrada del equilibrador de muelle permite una instalación más flexible y una fijación fiable.
- El dispositivo funciona sin aire o electricidad, ayudando a reducir el esfuerzo físico creado por la realización de trabajos en posiciones estresantes.
- La adopción de un mecanismo de tipo de palanca flexible para la serie BS y RS permite un ajuste de tensión extremadamente preciso.
- El tipo de equilibrador de la serie SBS y BS proporciona una tensión fija durante la extensión del cable mientras que la serie RS de tipo retractor proporciona tensión variable, permitiendo una mayor longitud de carrera.
- La unidad puede instalarse fácilmente con solo dos tornillos de rosca métrica M5.

COUNTER REACTION BALANCER

Innovative design integrates torque reaction arm and spring balancer

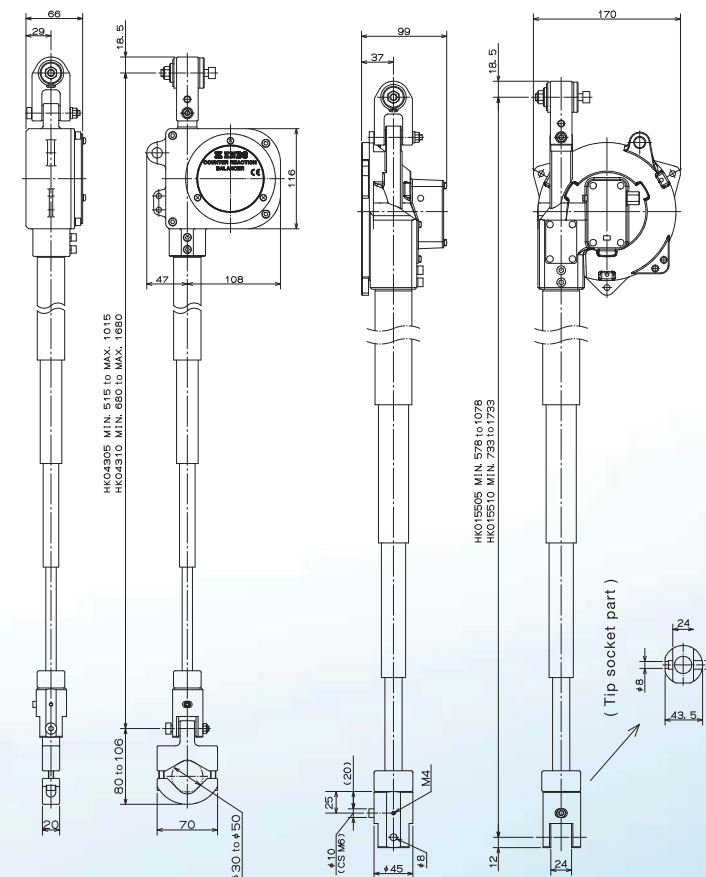
Innovatives Design mit integriertem Drehmomentreaktionsarm und Federzug

Le design innovant intègre un bras de réaction et un équilibre de charge à ressort

El diseño innovador integra un brazo de reacción de torsión y un equilibrador de resorte

■ HK04 series

■ HK15 series



- The torque reaction arm reduces the counterforce to tightening operations during work. It also fully integrates with the electric tool to create a single unit, decreasing the overall weight.
- The arm can accommodate difficult work environments that cause oblique pulling movements or swaying and shaking of the tool.
- More accurate torque control can be achieved using the arm.
- Two models are available to support tightening torques of 40 and 150 N-m.

- Le bras de réaction réduit le contrepoids lors des opérations de serrage pendant le travail. Il s'intègre aussi pleinement avec l'outil électrique pour créer une seule unité, diminuant ainsi le poids total.
- Le bras peut s'adapter à des environnements de travail difficiles qui causent des mouvements de tractions obliques ou de balancier et des tremblements de l'outil.
- Un contrôle plus précis du couple peut être réalisé en utilisant le bras.
- Deux modèles sont disponibles pour soutenir les couples de serrage de 40 et 150 N-m.



Model	Capacity [kg]	Torque [N-m]	Stroke [m]	Mass [kg]
HK04305	0.5-3	40	0.5	3.5
HK04310			1.0	3.8
HK15505	2.5-5	150	0.5	5.3
HK15510			1.0	6.2

- Der Drehmomentreaktionsarm mindert die Gegenkraft zum Aufziehen während der Arbeit. Er ist vollständig in das Elektrowerkzeug integriert, um eine geschlossene Einheit zu bilden und das Gesamtgewicht zu verringern.
- Der Arm kann an schwierige Arbeitsumgebungen angepasst werden, die schräge Zugsbewegungen oder das Schaukeln und Schwanken des Werkzeugs hervorrufen.
- Mit dem Arm können genauere Drehmomentsteuerungen erzielt werden.
- Es sind zwei Modelle verfügbar, die Anzugsmomente von 40 und 150 N-m unterstützen.

- El brazo de reacción de torsión reduce la contrafuerza de las operaciones de apriete durante las tareas. También se integra completamente con la herramienta eléctrica para crear una sola unidad, disminuyendo el peso total.
- El brazo tiene la capacidad de acomodarse a entornos de trabajo difíciles que provocan movimientos de tracción oblicua o balanceos y sacudidas de la herramienta.
- Al usar el brazo puede lograrse un control de torsión más preciso.
- Hay disponibles dos modelos que acomodan los pares de apriete de 40 y 150 N-m.

POSITION BALANCER

Patent pending

Delivers the right item to the right place at the right time

Liefert zur rechten Zeit am rechten Ort den passenden Gegenstand

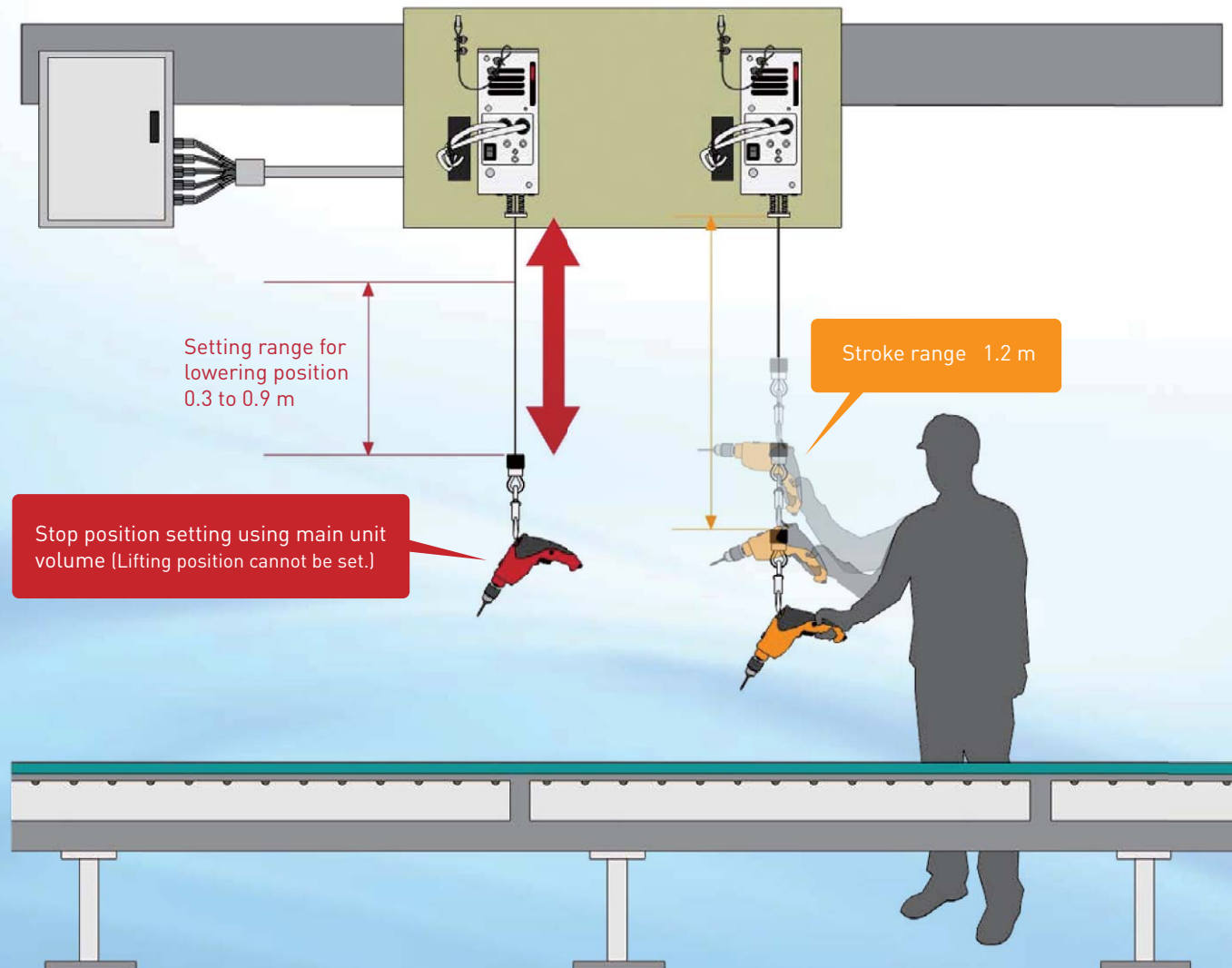
Livre le bon article au bon endroit au bon moment

Proporciona el artículo correcto en el lugar exacto en el momento adecuado

Automatic lifting or lowering by motor



Position balancing by spring



This device combines a spring balancer with a stepping motor to create a balancer that offers precise electrical control. Any tools or jigs needed for assembly are automatically lowered to the required position, helping to prevent errors during work.

Linking balancers to devices such as sensors also enables multiple units to be automatically raised or lowered. This simplifies the management of tact times and shortens work periods. When the motor is not required for operation, a unit can be used as a standard balancer.

Ce dispositif combine un équilibreur de charge à ressort avec un moteur pas à pas pour créer un équilibreur qui offre un contrôle électrique précis. Tous les outils ou gabarits nécessaires pour le montage sont automatiquement abaissés à la position souhaitée, aidant à prévenir les erreurs pendant le travail.

Lier les équilibreurs à des dispositifs tels que des capteurs permet également à de multiples unités d'être automatiquement relevées ou abaissées. Cela simplifie la gestion des temps de traitement et raccourcit les périodes de travail. Lorsque le moteur n'est pas nécessaire pour l'opération, une unité peut être utilisée comme un équilibreur standard.

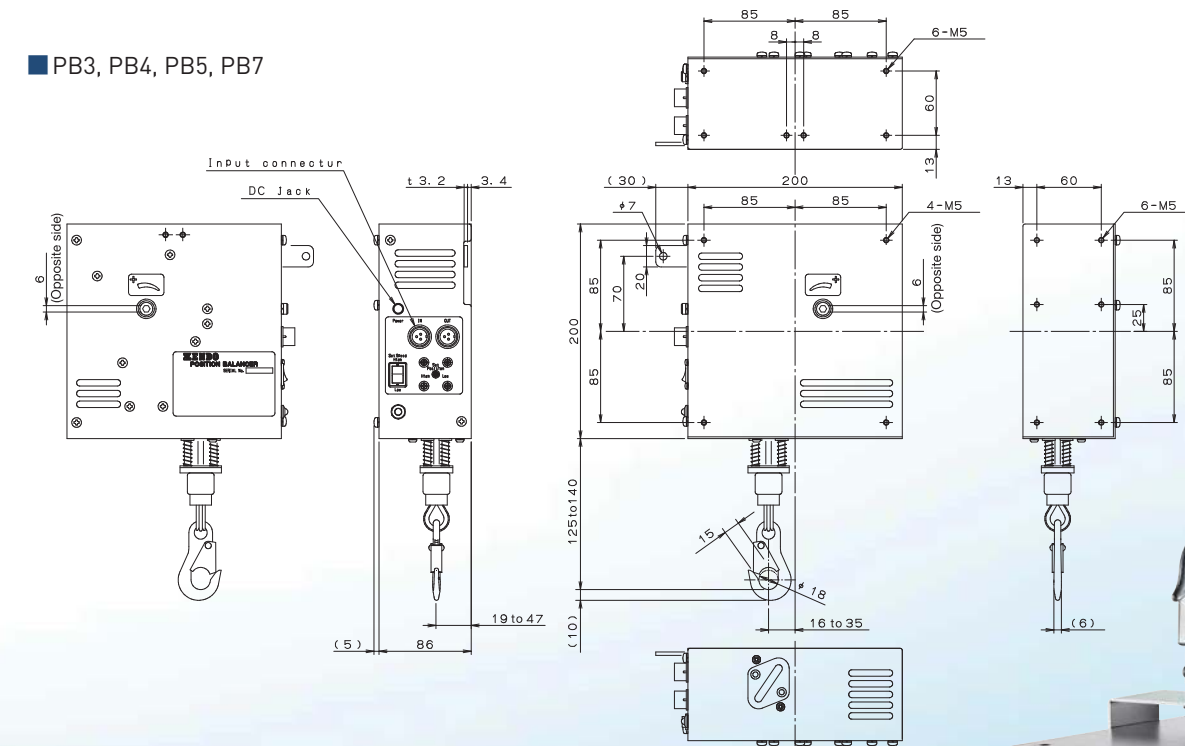
Dieses Gerät kombiniert einen Federzug mit einem Schrittmotor, um einen Balancer zu schaffen, der eine genaue elektrische Steuerung bietet. Sämtliche Werkzeuge oder Vorrichtungen, die für die Montage benötigt werden, werden automatisch auf die geforderte Stellung abgesenkt, dies hilft, Fehler bei der Arbeit zu vermeiden.

Die Anbindung der Balancer an Geräte, wie zum Beispiel Sensoren, ermöglicht das automatische Anheben oder Absenken mehrerer Geräte. Dies vereinfacht die Steuerung der Taktzeiten und verkürzt die Arbeitsakte. Wenn für den Betrieb kein Motor erforderlich ist, kann das Gerät als Standardbalancer verwendet werden.

Este dispositivo combina un equilibrador de muelle con un motor de pasos para crear un equilibrador que ofrece un control eléctrico preciso. Las herramientas y plantillas necesarias para el montaje descenden automáticamente a la posición necesaria, ayudando a evitar errores durante el trabajo.

Enlazar los equilibradores a dispositivos tales como sensores, permite igualmente elevar y descender automáticamente múltiples unidades. Esto simplifica la gestión de los tiempos de cadencia y acorta los períodos de trabajo. Si el motor no es necesario para la operación, la unidad puede usarse como equilibrador estándar.

■ PB3, PB4, PB5, PB7



Specifications

Model	PB3	PB4	PB5	PB7
Capacity	1.5-3.0 kg	2.5-4.0 kg	3.5-5.0 kg	5.0-7.0 kg
Stroke	1.2 m			
Mass	4.2 kg	4.3 kg	4.4 kg	4.5 kg
Downward position range	0.3-0.9 m			
Downward speed	Low speed: 0.2-0.3 m/s High speed: 0.3-0.5 m/s			
Upward speed	0.2-0.3 m/s			
Power source	24 V DC			
Maximum power consumption	56W			

Automatic lifting or lowering is not possible if there is no load or the balance is not adjusted.

Input

	Model	Manufacturer
Adaptive plug (provided by user)	PRC03-12A10-3AM10.5	Tajimi Electronics Co., Ltd.
Input connector	PRC03-23A10-3AF	

Output

	Model	Manufacturer
Adaptive plug (provided by user)	PRC03-12A10-4F10.5	Tajimi Electronics Co., Ltd.
Output connector	PRC03-23A10-4M	



SPRING BALANCER

Operators can easily raise or lower suspended items by hand after setting the spring tension of the balancer to a weight equal to the item. This boosts work efficiency and also helps to reduce operator fatigue.

Die Anwender können die aufgehängten Gegenstände leicht mit der Hand anheben oder absenken, nachdem die Federkraft des Balancers auf das Gewicht des Gegenstandes eingestellt wurde. Dies steigert die Arbeitseffektivität und hilft auch, die Ermüdung des Anwenders zu verringern.

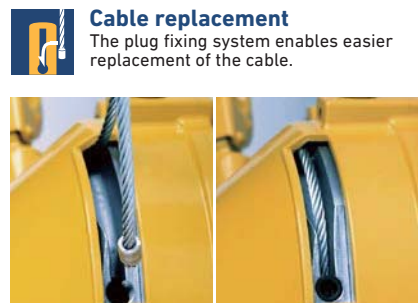
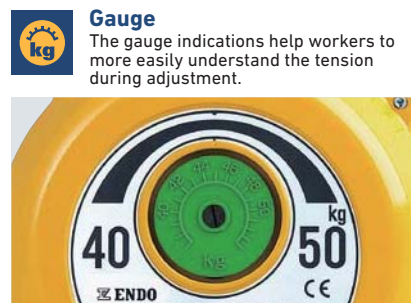
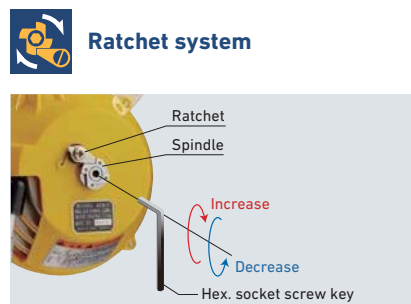
Les opérateurs peuvent facilement lever ou abaisser les éléments suspendus à la main après avoir réglé la tension du ressort de l'équilibreur à un poids égal à l'élément. Cela renforce l'efficacité du travail et contribue à réduire la fatigue du manutentionnaire.

Los operarios pueden elevar y descender manualmente y con facilidad los artículos suspendidos después de ajustar la tensión del muelle del equilibrador a un peso equivalente al artículo. Esto aumenta la eficiencia del trabajo y también ayuda a reducir la fatiga del operario.



Functions

All features are not always available on all balancers.



Recommended applications

- Suspension of welding guns
- Suspension of nut runners
- Suspension of attached cables for machines

Purchasing guidelines

- Ambient temperature: -10°C to +50°C
- Installation location: standard indoor areas
- Please ensure you select the correct model for your needs.

Model selection procedure

Please ensure you select a model that is appropriate for the weight of the tool or device to be suspended. When choosing a balancer capacity, use the combined weight of the main unit to be suspended plus any additional accessory items.

Examples

1. If the main tool weighs 14 kg and the accessory items weigh 3 kg, the total weight is 17 kg. In this case, select the EWF-22 model for weights of 15 to 22 kg.
2. If the total weight bridges two models in the catalog, choose the upper model. This will help to extend the life of the spring. If the main tool weighs 19 kg and the accessory items weigh 3 kg, the total weight is 22 kg. In this case, select the EWF-30 model for weights of 22 to 30 kg.

Installation guidelines

- When installing a series of balancers, suspend the units at varying heights (high, low) so the bodies do not contact each other.
- Adjust the spring within the balancer capacity based on the weight of the suspended tool or device and intended use.
- When the suspended tool or device is intended to rotate, install a swivel hook or other mechanism so the force of rotation is not applied directly to the cable.
- Ensure the balancer is installed so the cable is not pulled out in an oblique direction.
- Always fit a secondary support cable or chain before using a balancer.

Utilisations recommandées

- Suspension des pistolets de soudage
- Suspension de visseuse
- Suspension des câbles fixés des machines

Directives d'achat

- Température ambiante : de -10°C à +50°C
- Lieu d'installation : espaces intérieurs standards
- Assurez-vous, s'il vous plaît, de choisir le bon modèle adapté à vos besoins.

Procédure de sélection du modèle

Assurez-vous, s'il vous plaît, de choisir un modèle adapté au poids de l'outil ou l'appareil à suspendre. Lors du choix d'une capacité d'équilibrage, utilisez le poids cumulé de l'unité principale à suspendre ainsi que tous les éléments accessoires supplémentaires.

Exemples

1. Si l'outil principal pèse 14 kg et les accessoires pèsent 3 kg, le poids total est de 17 kg. Dans ce cas, sélectionnez le modèle EWF-22 pour les poids de 15 à 22 kg.
2. Si le poids total se trouve entre deux modèles dans le catalogue, choisissez le modèle supérieur. Ceci contribuera à prolonger la durée de vie du ressort. Si l'outil principal pèse 19 kg et les accessoires pèsent 3 kg, le poids total est de 22 kg. Dans ce cas, sélectionnez le modèle EWF-30 pour les poids de 22 à 30 kg.

Conseils d'installation

- Lors de l'installation d'une série d'équilibreurs, veuillez suspendre les unités à différentes hauteurs (haut, bas) de sorte que les corps ne soient pas en contact les uns avec les autres.
- Réglez le ressort dans les limites de la capacité d'équilibrage, sur la base du poids de l'outil ou appareil suspendu et de l'utilisation prévue.
- Lorsque l'outil ou le dispositif suspendu est destiné à tourner, installer un crochet pivotant ou un autre mécanisme pour que la force de rotation ne soit pas exercée directement sur le câble.
- Veillez à ce que l'équilibreur soit installé de sorte que le câble ne soit pas tiré dans un sens oblique.
- Installez toujours un fil ou une chaîne de support secondaire avant d'utiliser un équilibreur.

Empfohlene Anwendungen

- Aufhängung von Schweißpistolen
- Aufhängung von Drehschraubern
- Aufhängung von angeschlossenen Kabeln für Maschinen

Einkaufsrichtlinien

- Umgebungstemperatur: -10°C bis +50°C
- Installationsort: Standardinnenräume
- Bitte achten Sie darauf, dass Sie das richtige Modell für Ihre Bedürfnisse auswählen.

Modellauswahlverfahren

Bitte achten Sie darauf, dass Sie ein Modell auswählen, das für das Gewicht des Werkzeugs oder Geräts, das aufgehängt werden soll, geeignet ist. Wenn Sie die Tragfähigkeit eines Balancers auswählen, verwenden Sie das Gesamtgewicht des Hauptgeräts, das aufgehängt werden soll, plus aller zusätzlichen Zubehörteile.

Beispiele

1. Wenn das Hauptgerät 14 kg wiegt und die Zubehörteile 3 kg wiegen, beträgt das Gesamtgewicht 17 kg. Wählen Sie in diesem Falle das Modell EWF-22 für Gewichte von 15 bis 22 kg aus.
2. Wenn das Gesamtgewicht auf zwei Modelle im Katalog zutrifft, wählen Sie das obere Modell. Dies hilft, die Lebensdauer der Feder zu verlängern. Wenn das Hauptgerät 19 kg wiegt und die Zubehörteile 3 kg wiegen, beträgt das Gesamtgewicht 22 kg. Wählen Sie in diesem Falle das Modell EWF-30 für Gewichte von 22 bis 30 kg aus.

Installationsrichtlinien

- Wenn Sie mehrere Balancer installieren, hängen Sie die Geräte in unterschiedlichen Höhen (hoch, niedrig) auf, sodass sich die Geräte nicht gegenseitig berühren.
- Stellen Sie die Feder innerhalb der Tragfähigkeit des Balancers ein, die sich aus dem Gewicht des aufgehängten Werkzeugs oder Geräts und dem Verwendungszweck ergibt.
- Wenn sich das aufgehängte Werkzeug oder Gerät drehen soll, bringen Sie einen drehbaren Haken oder einen anderen Mechanismus an, sodass die Drehkraft nicht direkt auf das Drahtseil übertragen wird.
- Achten Sie darauf, dass der Balancer so installiert wird, dass das Kabel nicht in einer schrägen Richtung herausgezogen wird.
- Bringen Sie stets eine zweiten Stützdraht oder eine zweite Kette an, bevor Sie einen Balancer verwenden.

Aplicaciones recomendadas

- Suspensión de pistolas de soldadura
- Suspensión de equipos de atornillado
- Suspensión de cables conectados para máquinas

Guías de compra

- Temperatura ambiente: -10 °C a +50 °C
- Lugar de instalación: zonas de interior estándar
- Asegúrese de seleccionar el modelo adecuado para sus necesidades.

Procedimiento de selección de modelo

Asegúrese de seleccionar un modelo apropiado para el peso de la herramienta o dispositivo a suspender. Al elegir una capacidad de equilibrador, use el peso combinado de la unidad principal a ser suspendida además de los elementos accesorios adicionales.

Ejemplos

1. Si la herramienta principal pesa 14 kg y los elementos accesorios pesan 3 kg, el peso total es 17 kg. En este caso, seleccione el modelo EWF-22 para pesos de 15 a 22 kg.
2. Si el peso total se encuentra entre dos modelos del catálogo, seleccione el modelo superior. Esto ayudará a extender la vida útil del muelle. Si la herramienta principal pesa 19 kg y los elementos accesorios pesan 3 kg, el peso total es 22 kg. En este caso, seleccione el modelo EWF-30 para pesos de 22 a 30 kg.

Directrices de instalación

- Al instalar una serie de equilibradores, suspenda las unidades a distintas alturas (alta, baja) de tal modo que los cuerpos no entren en contacto entre sí.
- Ajuste el muelle con la capacidad del equilibrador basada en el peso de la herramienta o dispositivo suspendidos y el uso previsto.
- Cuando la herramienta o dispositivo suspendidos vayan a ser girados, instale un gancho giratorio u otro mecanismo de modo que la fuerza de giro no sea aplicada directamente al gancho de seguridad.
- Asegúrese de que el equilibrador está instalado de tal forma que el cable no sea extraído en dirección oblicua.
- Use siempre un cable o cadena de soporte secundario antes de usar un equilibrador.

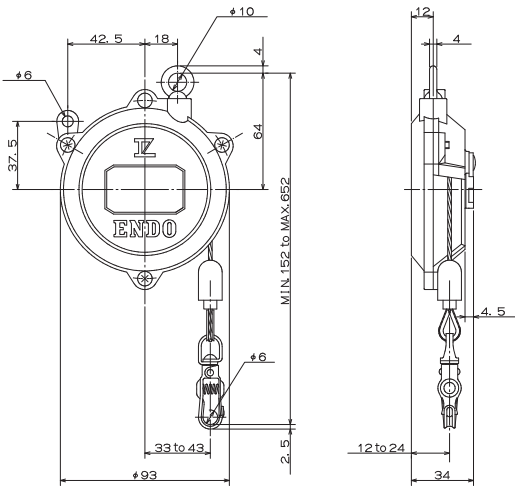


Summary

Type	Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)	
Light capacity	EK-00	0.5 - 1.5	0.5	2.0	0.2	Suitable for lightweight tools such as electric drivers. Page 17
	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 welding guns, pneumatic tools, etc. Equipped with many safety features. Page 18
	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 devices such as multiple nut runners. EWF-90A/105A/120A are designed to allow easy replacement of the top hook without dismantling. Page 20
	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	Suitable for high ceiling applications. Page 21
	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	14.5	
	ELF-50	40.0 - 50.0	2.5	4.76	14.9	
	ELF-60	50.0 - 60.0	2.5	4.76	17.1	
	ELF-70	60.0 - 70.0	2.5	4.76	18.0	

Type	Model	Capacity (kg)	Stroke (m)	Cable/Hose dia. (mm)	Mass (kg)	
With arrest device to prevent cable snapping back	EWA-15	9.0 - 15.0	1.5	4.0	4.7	Has an arrest device to prevent the cable snapping back if it is cut or a suspended tool is dis-engaged. Device can protect workers from injury or related hazards. Page 23
	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	Has a brake system with one-way clutch lining. Raises tools smoothly to ensure quick and safe work. Page 24
	EWF-5B	3.0 - 5.0	1.3	3.0	8.9	
	EWF-7B	5.0 - 7.0	1.3	3.0	9.3	
Hose balancer	ATB-0	0.5 - 1.5	1.3	6.3	1.58	Functions as both a hose reel and balancer. Winds urethane hoses and easily raises or lowers air tools. Internal diameter of the hose is larger than the ATB series at ø8.5 mm. This ensures sufficient air supply to operate suspended air tools or devices. Page 28 Page 29
	ATB-1	1.5 - 3.0	1.3	6.3	1.66	
	THB-15	0.5 - 1.5	1.3	8.5	1.9	
	THB-25	1.5 - 2.5	1.3	8.5	2.0	
	THB-35	2.5 - 3.5	1.3	8.5	2.1	
	THB-50	3.5 - 5.0	1.3	8.5	2.1	
	THB-65	5.0 - 6.5	1.3	8.5	2.2	
Type	Model	Max. tension (N [kgf])	Stroke (m)	Cable/Hose dia. (mm)	Mass (kg)	
Torque reel	ER-3A	18 (1.8)	3.0	2.38	1.4	Long travel cable is suitable for hanging pendant switches, etc. A type has a ratchet system that can be stopped during cable travel. Page 27
	ER-3B	18 (1.8)	3.0	2.38	1.3	
Hose balancer	ATR-5	4.9 (5.0)	2.0	10.0	3.8	Automatically retracts the hose into the device. Page 30
	ATR-5-1	4.9 (5.0)	2.0	10.0	4.2	

EK-00



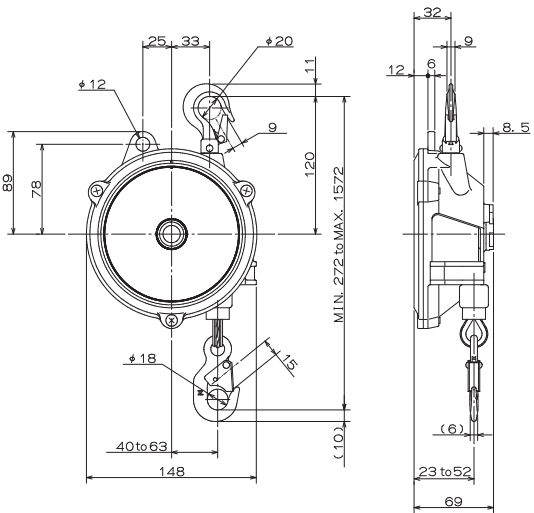
Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EK-00	0.5 - 1.5	0.5	2.0	0.2

Functions



Ratchet system
spring adjustment

EW-3



Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EW-3	1.0 - 3.0	1.3	3.0	1.4

Functions

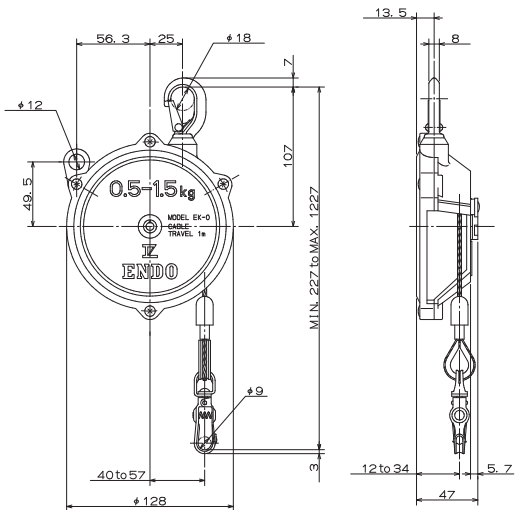


Plug type cable set



Ratchet system
spring adjustment

EK-0



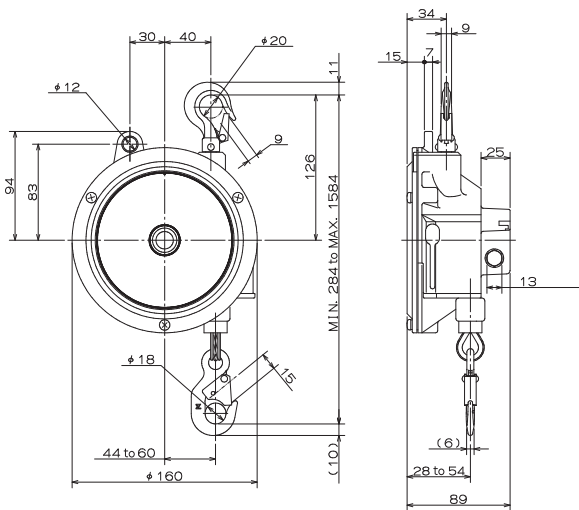
Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EK-0	0.5 - 1.5	1.0	3.0	0.5

Functions



Ratchet system
spring adjustment

EWS-3/5/7



Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	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

Functions



Plug type cable set



Fall-arrest device

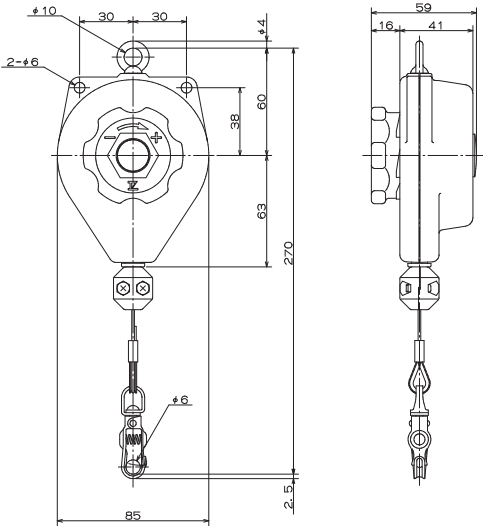


Drum lock device



Worm gear spring
adjustment

ERP-06E/
1E/2E



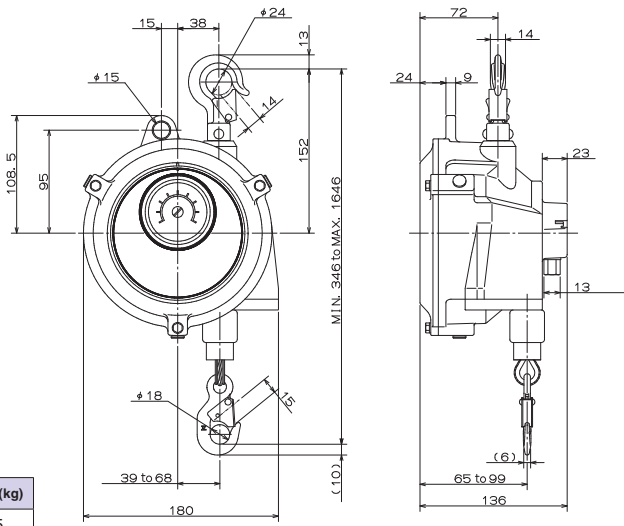
Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ERP-06E	0.3 - 0.6	1.5	2.0	0.4
ERP-1E	0.5 - 1.0	1.5	2.0	0.4
ERP-2E	1.0 - 2.0	1.5	2.0	0.4

Functions



Handle system
spring adjustment

EWF-9/15



Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	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

Functions



Gauge



Cartridge spring
assembly



Plug type cable set



Fall-arrest device

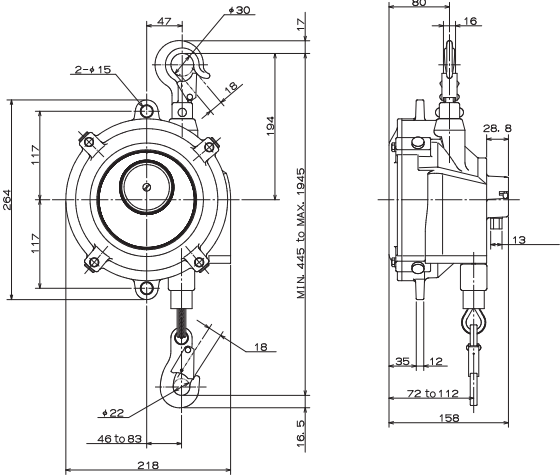


Drum lock device



Worm gear spring
adjustment

EWF-22/30

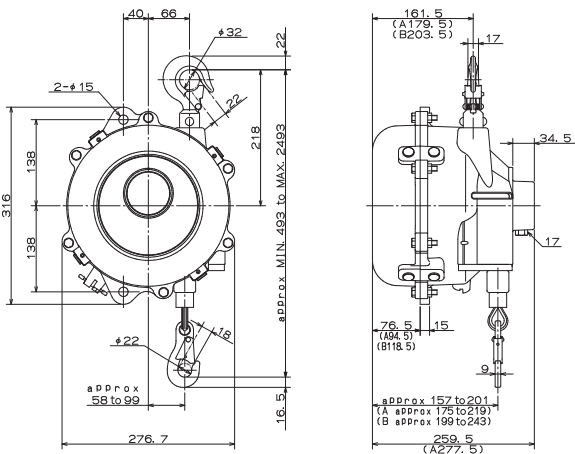


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EWF-22	15.0 - 22.0	1.5	4.76	7.3
EWF-30	22.0 - 30.0	1.5	4.76	7.7

Functions

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

EWF-90/
105/120

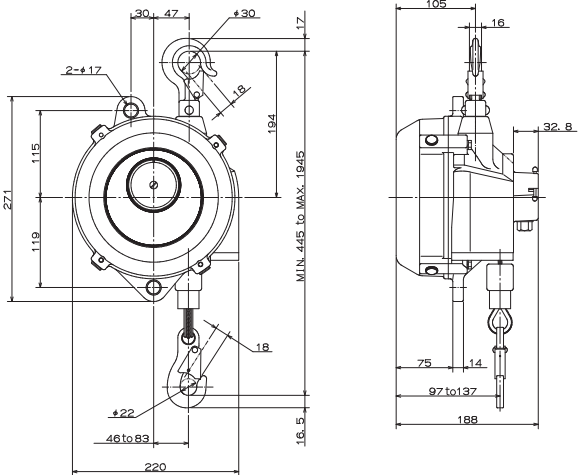


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EWF-90	70.0 - 90.0	2.0	4.76	21.9
EWF-105	85.0 - 105.0	2.0	4.76	24.0
EWF-120	100.0 - 120.0	2.0	4.76	27.5

Functions

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

EWF-40/50

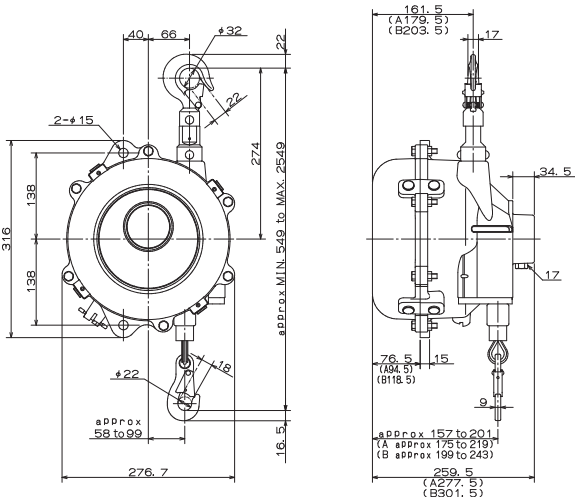


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EWF-40	30.0 - 40.0	1.5	4.76	9.7
EWF-50	40.0 - 50.0	1.5	4.76	10.1

Functions

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

EWF-90A/
105A/120A

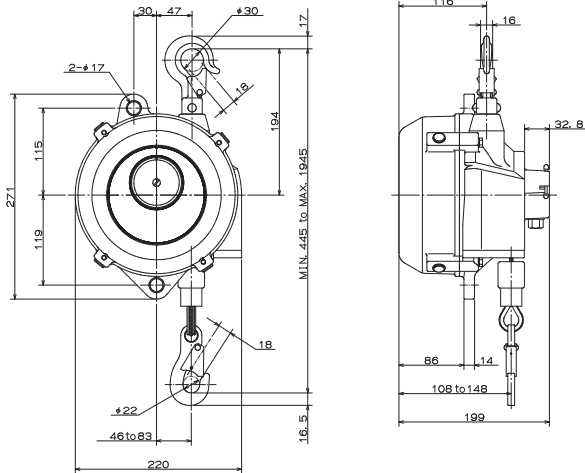


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EWF-90A	70.0 - 90.0	2.0	4.76	21.9
EWF-105A	85.0 - 105.0	2.0	4.76	24.0
EWF-120A	100.0 - 120.0	2.0	4.76	27.5

Functions

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

EWF-60/70

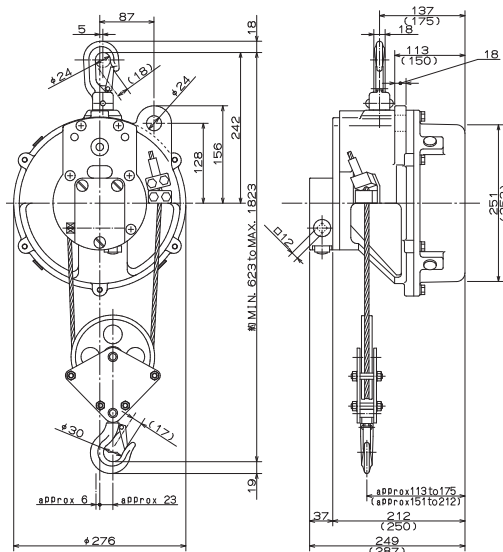


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
EWF-60	50.0 - 60.0	1.5	4.76	11.1
EWF-70	60.0 - 70.0	1.5	4.76	11.4

Functions

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

ETP-14/
15/16

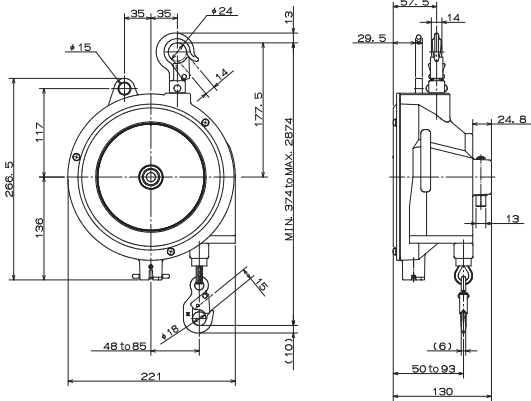


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ETP-14	120.0 - 140.0	1.2	6.0	24.1
ETP-15	140.0 - 170.0	1.2	6.0	28.7
ETP-16	170.0 - 200.0	1.2	6.0	29.7

Functions

- Fall-arrest device
- Worm gear spring adjustment

ELF-3/5/9

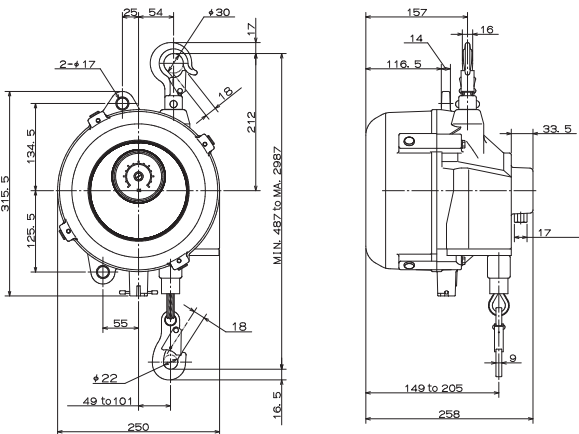


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ELF- 3	1.5 - 3.0	2.5	3.0	4.6
ELF- 5	3.0 - 5.0	2.5	3.0	4.8
ELF- 9	5.0 - 9.0	2.5	3.0	5.4

Functions

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

ELF-60/70

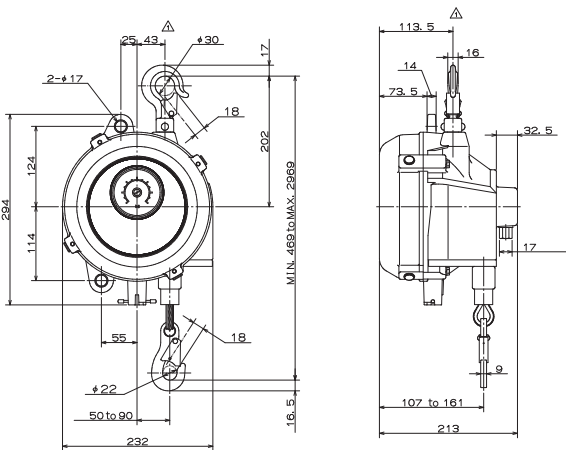


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ELF-60	50.0 - 60.0	2.5	4.76	17.1
ELF-70	60.0 - 70.0	2.5	4.76	18.0

Functions

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

ELF-15/
22/30

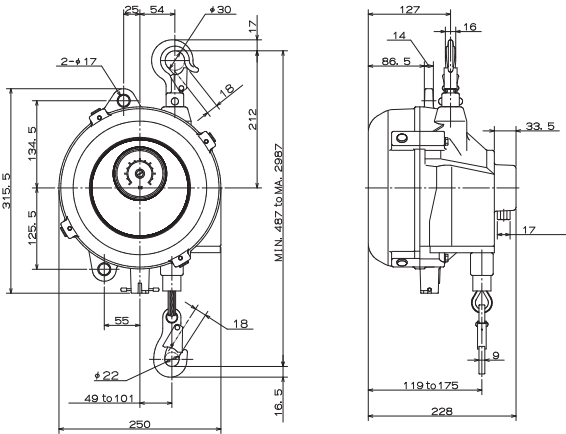


Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ELF-15	9.0 - 15.0	2.5	4.76	10.0
ELF-22	15.0 - 22.0	2.5	4.76	10.2
ELF-30	22.0 - 30.0	2.5	4.76	11.0

Functions

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

ELF-40/50



Model	Capacity (kg)	Stroke (m)	Cable dia. (mm)	Mass (kg)
ELF-40	30.0 - 40.0	2.5	4.76	14.5
ELF-50	40.0 - 50.0	2.5	4.76	14.9

Functions

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

EWF-C

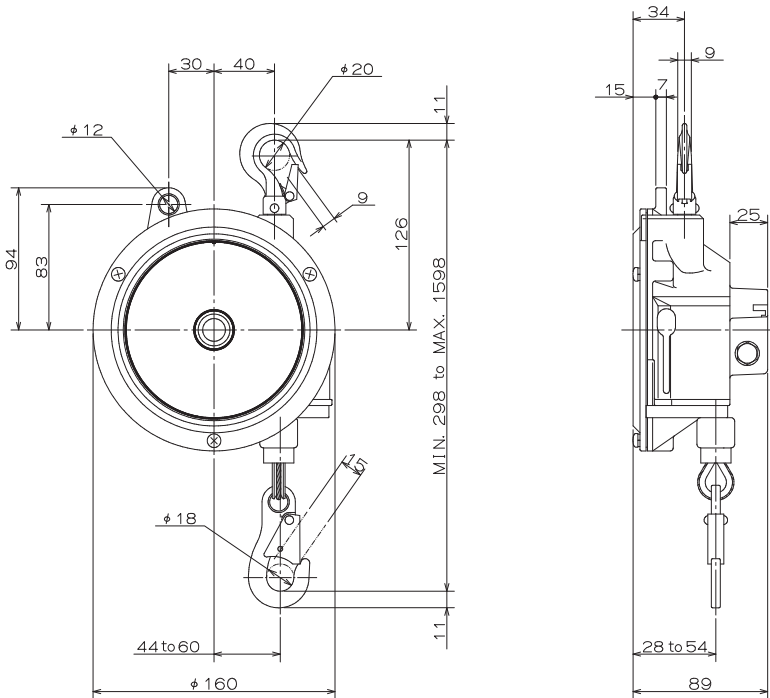


EWF-C type features a plastic drum plus unpainted casing. Special design effectively reduces metal particles from abrasion and paint particles from flaking.

Die Ausführung EWF-C verfügt über eine Plastiktrommel mit einem unlackierten Gehäuse. Diese spezielle Ausführung mindert wirkungsvoll den Abrieb von Metallteilchen und das Abplatzen von Lackteilchen.

Le type EWF-C dispose d'un tambour en plastique ainsi qu'un boîtier non peint. Notre conception spéciale permet de réduire efficacement les particules métalliques dues à l'abrasion et les particules de peinture écaillée.

El tipo EWF-C cuenta con un tambor de plástico y una carcasa sin pintar. El diseño especial reduce con eficacia la abrasión de las partículas metálicas y la descamación de las partículas de pintura.



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

Functions

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

EWF-X
EWF-Y

Eco-friendly balancer uses H1 food grade grease.
Wide range of models accommodates weights from 1 up to 120 kg.

Der umweltfreundliche Balancer verwendet H1-Schmierfett in Lebensmittelqualität.
Die große Auswahl der Modelle deckt Gewichte von 1 bis zu 120 kg ab.

L'équilibreur est éco-énergétique et utilise des graisses de qualité alimentaire H1.
Notre large gamme de modèles peut supporter des poids allant de 1 à 120 kg.

El equilibrador ecológico usa grasa de calidad alimentaria H1.
La amplia gama de modelos acomoda pesos desde 1 hasta 120 kg.



Specifications

Treatment method						
Type	X type			Y type		
Casing	Unpainted			Unpainted		
Cover	Unpainted			Unpainted		
Upper hook	Zinc plating			Zinc plating		
Rivet	Stainless steel			Clear painting		
Rope	Nylon rope	White	White EW (EWS)-3X to 7X	Nylon rope	White	EW (EWS)-3Y to 7Y
		Black	Black EWF-9X to 15X		Black	EW-9Y to 15Y
	SUS cable		EW-22X to 120X	SUS cable		EW-22Y to 120Y
Lower hook	Stainless steel			Standard (Zinc plated)		
Pin (EW-9 to 120)	Zinc plating			Zinc plating		
Plug	Stainless steel			Standard		
Bolt	Stainless steel			Standard (zinc plated)		
Screw	Stainless steel			Standard (zinc plated)		
Grease	Food grease (on spring)			Standard grease (on spring)		

ER



This retractable type balancer features a lightweight and compact body with an extended stroke length. It is ideal for suspending items such as pendant switches. The cable length that is released can be changed by adjusting the tension setting. Please refer to the tension curves below for more details.

Dieser Balancer in einziehbarer Ausführung verfügt über ein leichtes und kompaktes Gehäuse mit einer erweiterten Hublänge. Er ist ideal für das Aufhängen von Gegenständen wie zum Beispiel Hängeschaltern. Die freigesetzte Kabellänge kann durch Einstellung der mechanischen Spannung geändert werden. Weitere Details finden Sie in den Spannungskurven unten.

Ce type d'équilibre rétractable dispose d'un corps léger et compact avec une longueur de course prolongée. Il est idéal pour suspendre des articles tels que des commandes suspendues. La longueur du câble qui est libérée peut être modifiée en ajustant le réglage de la tension. Référez-vous, s'il vous plaît, aux courbes de tension ci-dessous pour plus de détails.

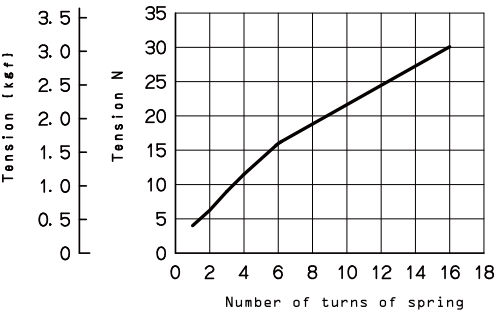
Este equilibrador de tipo retráctil posee un cuerpo ligero y compacto con una gran longitud de carrera. Es ideal para la suspensión de artículos tales como interruptores colgantes. La longitud del cable que se libera puede modificarse mediante el ajuste de la tensión. Consulte las curvas de tensión indicadas a continuación para más detalles.

Model	Max. initial tension (tension at retracted)		Active cable travel (m)	Tension build-up, full length of cable		Available spring windings	Ratchet	Cable dia. (mm)	Mass (kg)
	N	kgf		N	kgf				
ER-3A	18	1.8	3	12	1.2	Approx. 16	Included	2.38	1.4
ER-3B	18	1.8	3	12	1.2	Approx. 16	Not included	2.38	1.3

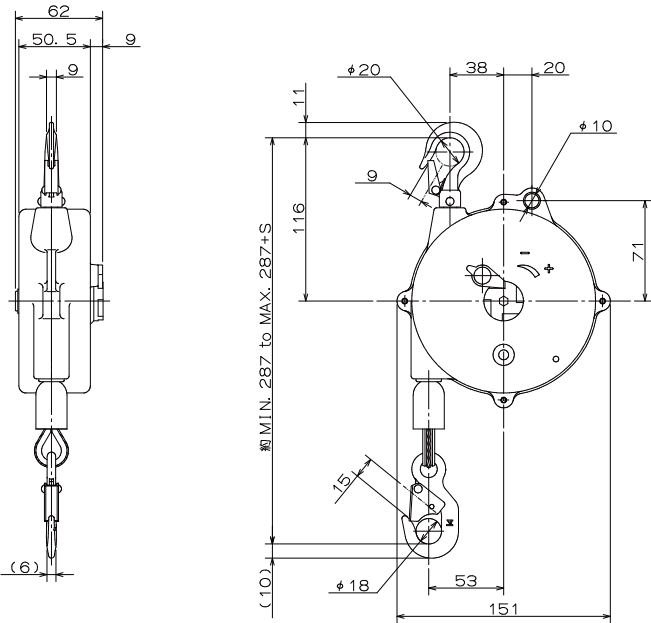
Tension curves

Relationship between drum revolutions and cable winding
For the ER-3A/3B, about 350 mm of cable is wound per one revolution of the drum.

ER-3A/3B



Dimensions (mm)
ER-3A/3B



Functions



ATB



ATB (zero gravity type)

- Hose: polyurethane
- Drum, case: resin

ATB (type zéro gravité)

- Tuyau : polyuréthane
- Tambour, boîtier : résine

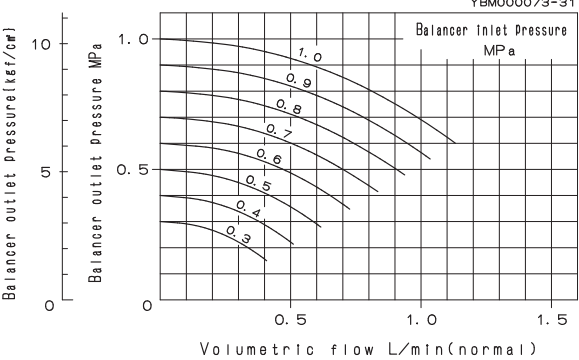
ATB (schwerelos Typ)

- Schlauch: Polyurethan
- Trommel, Gehäuse: Kunstharz

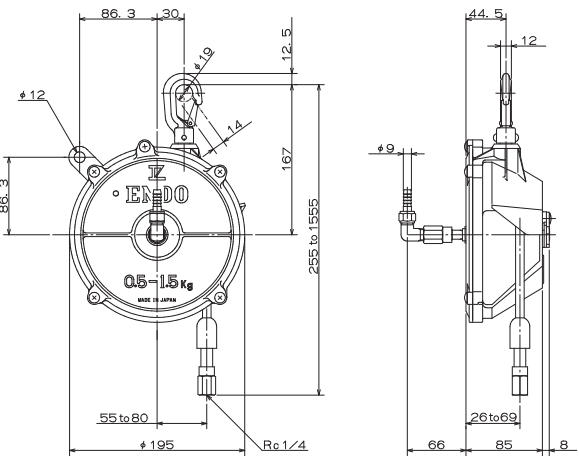
ATB (tipo gravedad cero)

- Manguera: poliuretano
- Tambor, carcasa: resina

Flow characteristics



Dimensions (mm)



Model	Capacity (kg)	Hose travel (m)	Air inlet dia. (mm)	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

Accessories

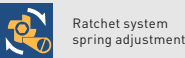
Protective cable set

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

The protector helps to prevent an air tool being dropped if it is unintentionally detached from a coupling.



Functions



THB

THB (zero gravity type)

- Hose: polyurethane
- Drum, case: resin
- Higher capacity than ATB type.
- Larger airflow volume than ATB type.

THB (type zéro gravité)

- Tuyau : polyuréthane
- Tambour, boîtier : résine
- Une plus grande capacité que le type ATB.
- Volume d'air plus important que le type ATB.

THB (schwereloser Typ)

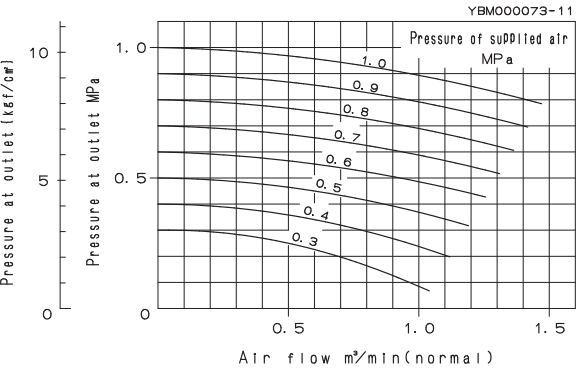
- Schlauch: Polyurethan
- Trommel, Gehäuse: Kunstharz
- Höhere Tragfähigkeit als die ATB-Ausführung.
- Höherer Luftvolumenstrom als die ATB-Ausführung.

THB (tipo gravedad cero)

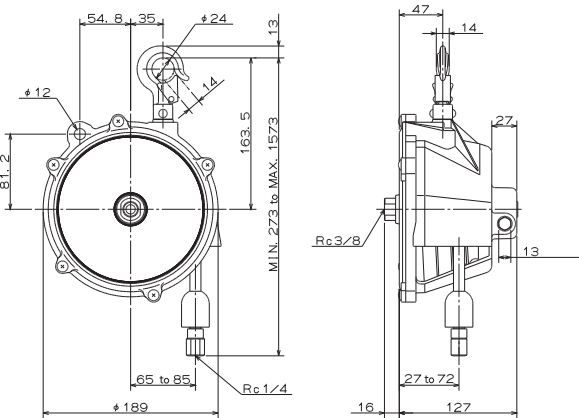
- Manguera: poliuretano
- Tambor, carcasa: resina
- Mayor capacidad que el tipo ATB.
- Mayor volumen de flujo de aire que el tipo ATB.



Flow characteristics



Dimensions (mm)



Model	Capacity (kg)	Hose travel (m)	Hose inner dia. (mm)	Mass (kg)
THB-15	0.5 - 1.5	1.3	8.5	1.9
THB-25	1.5 - 2.5	1.3	8.5	2.0
THB-35	2.5 - 3.5	1.3	8.5	2.1
THB-50	3.5 - 5.0	1.3	8.5	2.1
THB-65	5.0 - 6.5	1.3	8.5	2.2

Functions



Worm gear spring adjustment



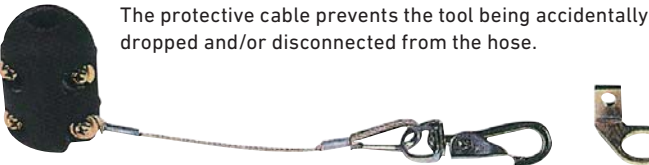
Fall-arrest device

Accessories

el elbow fitting
for air inlet (outer dia.: 10.5 mm)
Parts No. LBP000654

Swivel joint
Parts No. LBP000659

Protective cable
Parts No. LBP000801



Coupling socket
(outer dia.: 11.3 mm)
Parts No. LBP000784



Adjustable hose stopper
Parts No. LBP000800

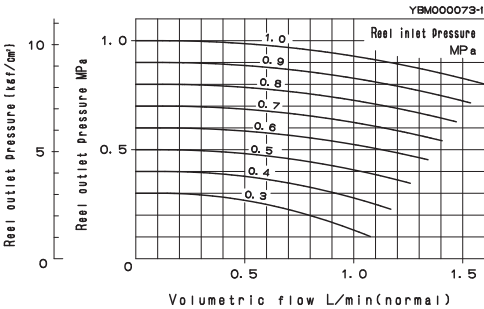
Special hose for an
extended length
(with a swivel joint; 1 m)
Parts No. LBP000785
(max. 2 m extension)

ATR



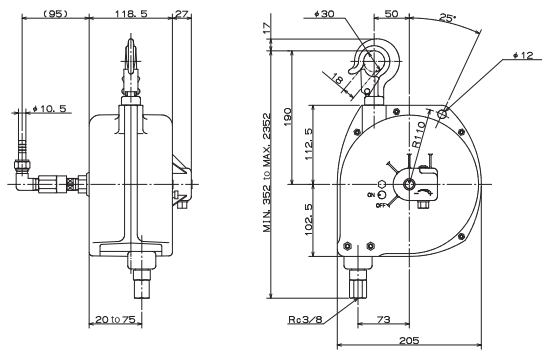
Model	Max. tension (N (kgf))	Hose travel (m)	Air inlet dia. (mm)	Mass (kg)
ATR-5	4.9 (5.0)	2.0	10.0	3.8
ATR-5-1	4.9 (5.0)	2.0	10.0	4.2

Flow characteristics



Dimensions (mm)

ATR-5



ATR (retractable type)

- Hose: polyurethane
- Drum, case: resin
- ATR-5-1 ceiling-mounted type is available.

ATR (einziehbare Ausführung)

- Schlauch: Polyurethan
- Trommel, Gehäuse: Kunstharz
- Der ATR-5-1 ist in der Ausführung für die Deckenmontage erhältlich.

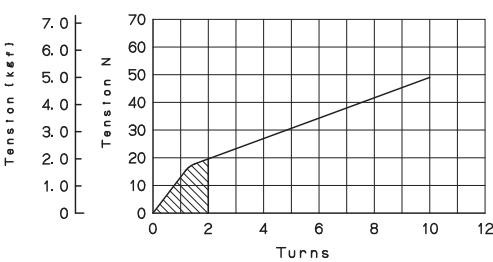
ATR (type rétractable)

- Tuyau : polyuréthane
- Tambour, boîtier : résine
- ATR-5-1 fixable au plafond disponible.

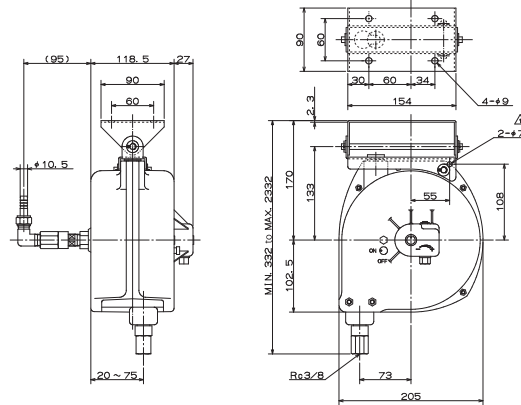
ATR (tipo retráctil)

- Manguera: poliuretano
- Tambor, carcasa: resina
- Está disponible el tipo de montaje en techo ATR-5-1.

Tension curves



ATR-5-1



Accessories



Special hose for extended length (with a swivel joint)
1 m: Parts No. LBP000659
2 m: Parts No. LBP000664
3 m: Parts No. LBP000665



Adjustable hose stopper
Parts No. LRP007933

Functions



Ratchet system
spring adjustment



Fall-arrest device

Cushion

TYPE-A
Parts No. P2B300789
EWF-22 to 120
EWF-90A to 120A



TYPE-B
Parts No. P2B300799
ATB series
THB series



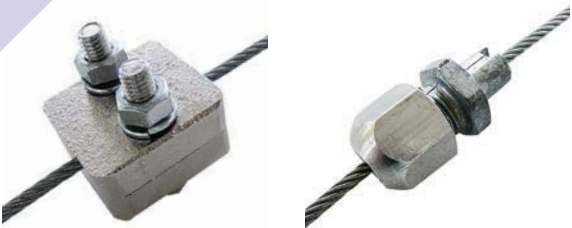
Insulation hook



Parts No.	Cable dia. (mm)	Available model
LBP000145	4.0	EWF-9 to 15
LBP000146	4.76	EWF-22 to 70, EWA-22 to 70
LBP001185	4.76	EWF-90 to 120, EWF-90A to 120A

Insulation of the holder eliminates the need to use ceramic or other insulation.
The insulation hook comes with an exclusive cable set.

Adjustable cable stopper

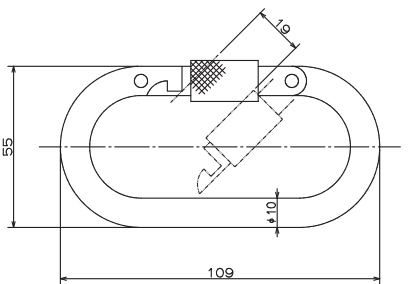
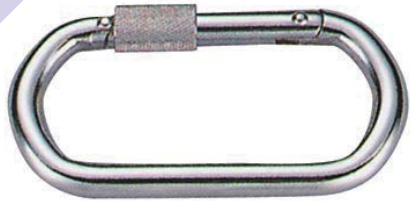


Split type

Plug-in type

Type	Parts No.	Available model
Split	LBP000150	ER-3A/3B, ER-10A/10B
	LBP000151	EW (EWS)-3 to 7, ELF-3 to 9
Plug-in	LBP000131	EWF-9/15
	LBP000132	EWF-22 to 70, ELF-15 to 70, EWF-90 to 120, EWF-90A to 120A

Karabina



Parts No.	Breaking load
P2S400104	16.7 kN (1,700 kgf)

S type hook



Model	Parts No.	Working load	Mass (kg)
SH-60	LBP000231	590N (60 kgf)	0.16
SH-150	LBP000232	1470N (150 kgf)	0.43

Swivel hook



The swivel hook enables 360 degree flexible operation.
The swivel hook helps to reduce cable damage during rotation work.

Parts No.	Available model
P2B401118	EWF-22 to 70

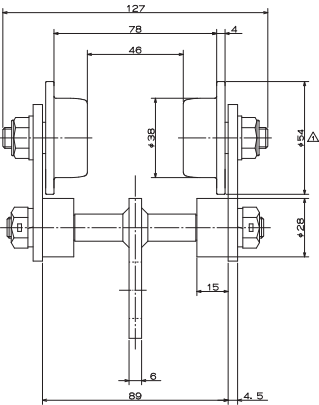
Plain trolley



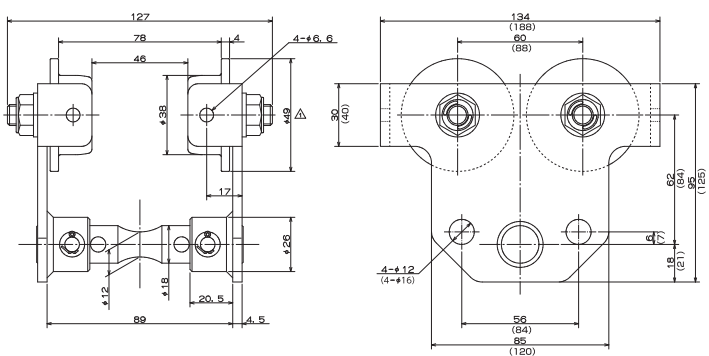
Model	Capacity (kg)	Minimum radius for corner (mm)	Beam widths (B) (mm)	Mass (kg)
PTF-60	60	—	75	0.8
PTF-125	125	600	50/75	1.6
PTF-250	250	900	75/100/125	4.2

Please use a karabina when the balancer can not be connected directly to a plain trolley.

PTF-60



PTF-125-250



Dimensions in brackets are for the PTF-250.

Corresponding accessories

Parts No.	Name	EW	EWS	EWF 9 to 15	EWF 22 to 70	EWF 90 to 120	EWA	ELF 3 to 9	ELF 15 to 70	ER	ATB	THB	ATR
LBP000145	Insulation hook	φ4.0		√									
LBP000146	Insulation hook	φ4.76			√		√						
LBP001185	Insulation hook	φ4.76				√							
P2B401118	Swivel hook				√								
LBP000150	Stopper									√			
LBP000151	Stopper	√	√					√					
LBP000131	Stopper			√									
LBP000132	Stopper				√	√	√		√				
P2B300789	Cushion	TYPE-A			√		√						
P2B300799	Cushion	TYPE-B									√	√	
P2S400104	Karabina	√	√	√	√	√	√	√	√	√	√	√	√

Details for the EWF-90 to 120 also apply to the EWF-90A to 120A.

AIR HOIST



These hoists use compressed air and an air motor. Their compact, lightweight bodies make them extremely easy to install while their flexible speed control means they are just as easy to use. They are also highly durable even under continuous operation and are specifically designed to be explosion-proof.

Diese Hebezüge verwenden Druckluft und einen Druckluftmotor. Ihre kompakten, leichtgewichtigen Gehäuse erlauben eine extrem einfache Installation, und ihre flexible Geschwindigkeitssteuerung bedeutet, dass sie genauso einfach in der Bedienung sind. Sie sind auch im Dauerbetrieb sehr langlebig und wurden speziell für explosionsgefährdete Bereiche entwickelt.

Ces palans fonctionnent avec de l'air comprimé et un moteur à air. Leurs corps compacts et légers les rendent extrêmement facile à installer tandis que la souplesse des contrôles de vitesse les rend tout aussi facile à utiliser. Ils sont également très durables, même en fonctionnement continu et sont spécifiquement conçus pour résister aux explosions.

Estas polipastos usan aire comprimido y un motor neumático. Sus cuerpos compactos y ligeros facilitan extraordinariamente su instalación, y su control flexible de la velocidad facilita enormemente su uso. También son muy duraderos, incluso durante el funcionamiento continuo y están diseñados específicamente para superar la prueba de explosiones.

Recommended applications

- Chemical factories, shipyards, steelworks
- Locations with adverse work conditions or requiring a high frequency of use

Purchasing guidelines

- Ambient temperature: -10°C to +50°C
- Installation location: standard indoor areas
- Please install a filter, regulator and lubricator close to the main hoist unit.
- Note that it is not possible to increase the lifting height or extend the cable length for the EHW or AH series wire rope type.

Installation guidelines

- Ensure the supply of lubricant conforms to the instructions. Use the hoist with an operating pressure of between 0.4 and 0.6 MPa (4–6 kgf/cm², 60–85 psi).
- When selecting the support components for installing the hoist, choose parts that can accommodate the unit's total weight and rated capacity with a sufficient degree of safety.
- Perform thorough flushing and air blow of the inside of the pipes to be connected to the unit.

Empfohlene Anwendungen

- Chemieanlagen, Schiffswerften, Stahlwerke
- Standorte mit ungünstigen Arbeitsbedingungen oder einer hohen Nutzungshäufigkeit

Einkaufsrichtlinien

- Umgebungstemperatur: -10°C bis +50°C
- Installationsort: Standardinnenräume
- Bitte installieren Sie einen Filter, Regler und Schmierstoffgeber in der Nähe des Hebezug-Hauptgerätes.
- Beachten Sie, dass es für die Drahtseilausführung der EHW- oder AH-Serie nicht möglich ist, die Hubhöhe zu steigern oder die Kabellänge zu erweitern.

Installationsrichtlinien

- Sorgen Sie dafür, dass die Schmiermittelzufuhr den Anweisungen entspricht. Verwenden Sie den Hebezug mit einem Betriebsdruck zwischen 0,4 und 0,6 MPa (4–6 kgf/cm², 60–85 psi).
- Wenn Sie die Trageteile für die Installation des Hebezugs auswählen, verwenden Sie Trageteile, die dem Gesamtgewicht des Geräts und der Nenntragfähigkeit mit einem angemessenen Sicherheitsaufschlag entsprechen.
- Führen Sie eine gründliche Durchspülung und das Durchblasen des Innern der Rohre, die an das Gerät angeschlossen werden sollen, mit Druckluft durch.

Utilisations recommandées

- Les usines chimiques, les chantiers navals, les aciéries
- Les lieux avec des conditions de travail défavorables ou nécessitant une haute fréquence d'utilisation

Directives d'achat

- Température ambiante : de -10°C à +50°C
- Lieu d'installation : espaces intérieurs standards
- Veuillez installer un filtre et le régulateur à proximité de l'unité de levage principale.
- Veuillez noter qu'il est impossible d'augmenter la hauteur de levage ou de prolonger la longueur du câble pour de la série EHW ou AH utilisant un câble métallique.

Conseils d'installation

- Veiller à ce que le lubrifiant soit conforme aux instructions. Utilisez le palan avec une pression de fonctionnement comprise entre 0,4 et 0,6 MPa (4–6 kgf/cm², 60–85 psi).
- Lors de la sélection des composants de support pour l'installation du palan, choisir des pièces qui peuvent accueillir le poids total de l'unité et de la capacité nominale avec un degré de sécurité suffisant.
- Effectuer un rinçage minutieux et un nettoyage par soufflage de l'intérieur des tuyaux à connecter à l'unité.



Aplicaciones recomendadas

- Fábricas de productos químicos, astilleros, acerías
- Lugares con condiciones de trabajo adversas o que requieran una alta frecuencia de uso

Guías de compra

- Temperatura ambiente: -10 °C a +50 °C
- Lugar de instalación: zonas de interior estándar
- Instale un filtro, regulador y lubricador cerca de la unidad de elevación principal.
- Tenga en cuenta que no es posible aumentar la altura de elevación ni ampliar la longitud del cable en el tipo estrobo de la serie AH o EHW.

Directrices de instalación

- Asegúrese de que el suministro de lubricante esté en conformidad con las instrucciones. Use la grúa con una presión operativa de entre 0,4 y 0,6 MPa (4–6 kgf/cm², 60–85 psi).
- Al seleccionar los componentes de soporte para la instalación de la grúa, seleccione piezas que puedan acomodarse al peso total de la unidad y una capacidad nominal con el suficiente nivel de seguridad.
- Aclare concienzudamente y aplique aire al interior de las tuberías a conectar a la unidad.

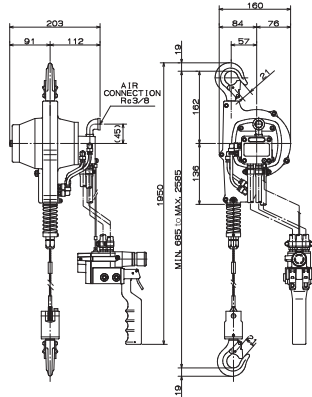
Compact models (EHW, AT, ATC series)
Require little space and can be installed in small areas.
Deliver greater speed from a highly compact body.

Les modèles compacts (séries EHW, AT, ATC)
Nécessite peu d'espace et peut être installé dans des petites zones.
Fournit une plus grande vitesse dans un corps très compact.

Kompakte Modelle (EHW-, AT-, ATC-Serie)
Benötigen wenig Platz und können in beengten Bereichen installiert werden.
Liefen bei einem sehr kompakten Gehäuse eine höhere Schnelligkeit.

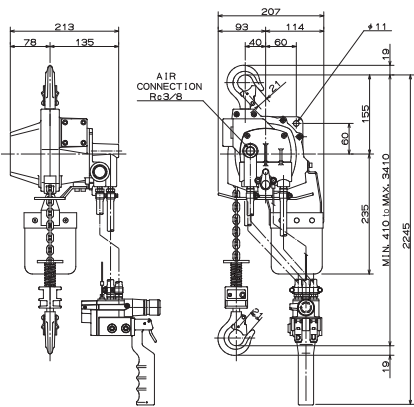
Modelos compactos (serie ATC, AT, EHW)
Requieren poco espacio y se pueden instalar en áreas pequeñas.
Ofrece una mayor velocidad en un cuerpo muy compacto.

EHW-60R-5,
EHW-120R-5



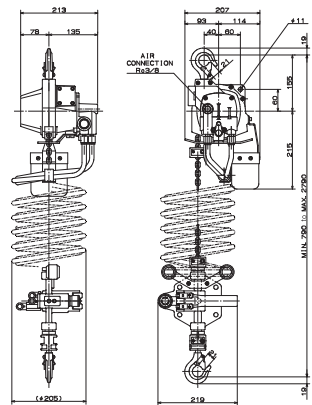
Model	Rated load (kg)	Stroke (m)	Air pressure (MPa [kgf/cm ²])	Lifting speed (m/min)	Air consumption (m ³ /min) (normal)	Air inlet	Mass (kg)
EHW-60R-5	60	1.9	0.4 (4)	18.5	0.55	Rc 3/8	9.5
			0.5 (5)	22.5	0.7		
			0.6 (6)	26.0	0.88		
EHW-120R-5	120	1.9	0.4 (4)	11.0	0.59	Rc 3/8	9.7
			0.5 (5)	13.5	0.75		
			0.6 (6)	16.0	0.93		

AT-60K-5,
AT-125K-5



Model	Rated load (kg)	Stroke (m)	Air pressure (MPa [kgf/cm ²])	Lifting speed (m/min)	Air consumption (m ³ /min) (normal)	Chain size x fall	Air inlet	Mass (kg)
AT-60K-5	60	3	0.4 (4)	16.5	0.52	4.0 x 1	Rc 3/8	13.0
			0.5 (5)	20.0	0.67			
			0.6 (6)	23.5	0.85			
AT-125K-5	125	3	0.4 (4)	10.0	0.55	4.0 x 1	Rc 3/8	13.2
			0.5 (5)	12.0	0.71			
			0.6 (6)	14.5	0.9			

ATC-60K-5,
ATC-125K-5



Model	Rated load (kg)	Stroke (m)	Air pressure (MPa [kgf/cm ²])	Lifting speed (m/min)	Air consumption (m ³ /min) (normal)	Chain size x fall	Air inlet	Mass (kg)
ATC-60K-5	60	2	0.4 (4)	14.0	0.45	4.0 x 1	Rc 3/8	14.3
			0.5 (5)	17.5	0.58			
			0.6 (6)	20.0	0.68			
ATC-125K-5	125	2	0.4 (4)	6.5	0.42	4.0 x 1	Rc 3/8	14.5
			0.5 (5)	10.5	0.55			
			0.6 (6)	12.0	0.65			

EHLK-1TS,
EHLK-2TW

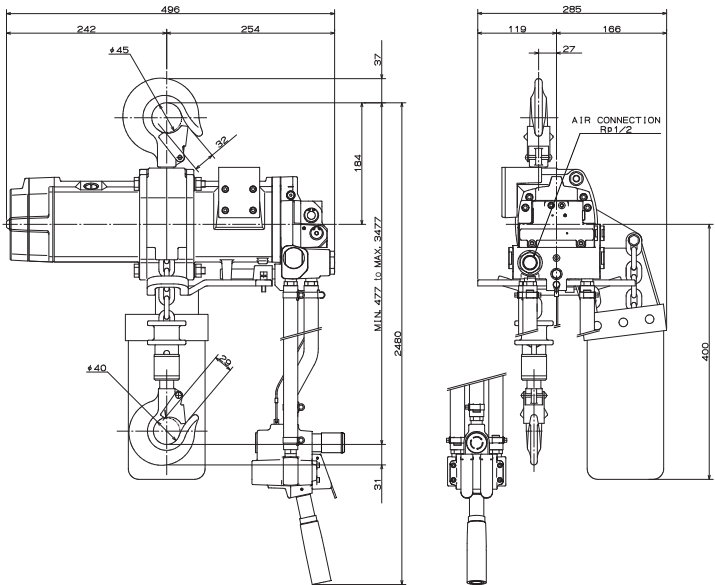
Mid-size models (EHLK series)
Equipped with a built-in overload protector as a standard feature.

Modelle mittlerer Größe (EHLK-Serie)
Mit einem Überlastschutz als Standardfunktion ausgestattet.

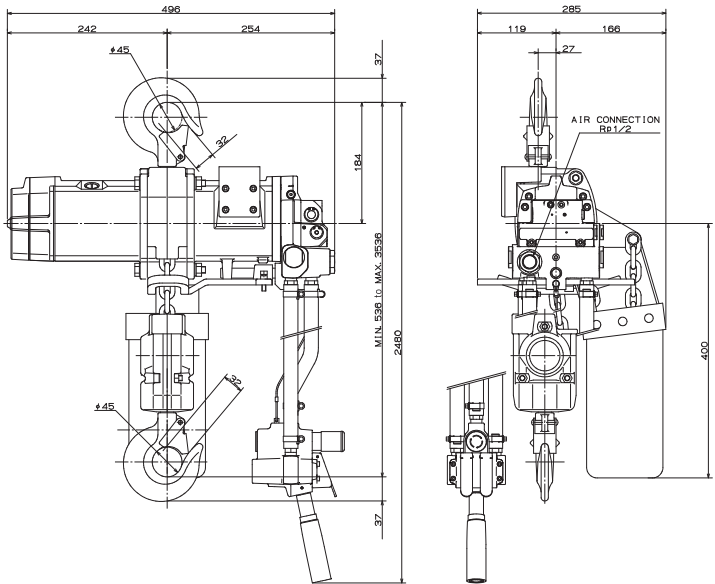
Modèles de taille moyenne (série EHLK)
Équipé d'un protecteur de surcharge en standard.

Modelos de tamaño medio (serie EHLK)
Equipada con una protección de sobrecarga como característica estándar.

EHLK-1TS



EHLK-2TW



Model	Rated load (t)	Stroke (m)	Air pressure (MPa [kgf/cm ²])	Lifting speed (m/min)	Air consumption (m ³ /min) (normal)	Chain size x fall	Air inlet	Mass (kg)
EHLK-1TS	1	3	0.4 (4)	3.3	1.3	7.1 x 1	Rp 1/2	38
			0.5 (5)	4.3	1.4			
			0.6 (6)	5.3	1.5			
EHLK-2TS	2	3	0.4 (4)	1.6	1.3	7.1 x 2	Rp 1/2	46
			0.5 (5)	2.1	1.4			
			0.6 (6)	2.6	1.5			

AIR BALANCER

These units are driven by compressed air and mainly used for loading and unloading. All feature either a floating or balancing function. The functions eliminate the need for inching operation, enabling more flexible handling of suspended loads. The unique construction also reduces air consumption to just 15 percent of Air Hoist units (Endo testing) and no lubrication is necessary.

Diese Geräte werden mit Druckluft betrieben und hauptsächlich für das Be- und Entladen verwendet. Alle verfügen entweder über eine Schweb- oder Ausgleichsfunktion. Die Funktionen beseitigen die Notwendigkeit des Tipbetriebes und ermöglichen eine flexiblere Handhabung der schwebenden Lasten. Der einzigartige Aufbau verringert ebenfalls den Verbrauch an Druckluft auf nur 15 Prozent der Drucklufthebezüge (Endo-Prüfungen) und ist schmierungsfrei.

Ces unités sont entraînées par l'air comprimé et principalement utilisées pour le chargement et le déchargement. Toutes disposent soit d'une fonction flottante ou d'équilibrage. Les fonctions éliminent le besoin pour le fonctionnement d'approche lente, ce qui permet une manipulation plus souple des charges suspendues. La construction unique permet également de réduire la consommation d'air à seulement 15 pourcent des unités Air Hoist (test Endo) et aucune lubrification n'est nécessaire.

Estas unidades son impulsadas por aire comprimido y se usan principalmente para la carga y descarga. Todas cuentan con una función flotante o equilibradora. Las funciones eliminan la necesidad de operaciones de marcha lenta, lo que permite un manejo más flexible de las cargas suspendidas. La construcción única también reduce el consumo de aire a apenas 15 por ciento del de las unidades de elevación neumáticas (prueba Endo) y no se requiere lubricación.

Recommended applications

- Continuous transfer work
- Operation of machining tools
- Installation of jigs

Purchasing guidelines

- Ambient temperature: -10°C to +50°C
- Installation location: standard indoor areas
- Please install a filter and regulator close to the main hoist unit.
- Lubrication is not required.
- The capacity of the hoist changes based on the operating pressure.

Installation guidelines

- Use the hoist with an operating pressure of between 0.4 and 0.7 MPa (4–7 kgf/cm², 60–101.5 psi).
Note: Use the full-auto module between 0.3 and 0.5 MPa (3–5 kgf/cm², 43.5–72.5 psi).
- When selecting the support components for installing the hoist, choose parts that can accommodate the total weight of the unit, module and suspended load with a sufficient degree of safety.
- Perform thorough flushing and air blow of the inside of the pipes to be connected to the unit.

Empfohlene Anwendungen

- Durchgehende Überführungsarbeiten
- Betrieb von Bearbeitungswerkzeugen
- Installation von Spannvorrichtungen

Einkaufsrichtlinien

- Umgebungstemperatur: -10°C bis +50°C
- Installationsort: Standardinnenräume
- Bitte installieren Sie einen Filter und Regler in der Nähe des Hebezug-Hauptgerätes.
- Es ist keine Schmierung erforderlich.
- Die Tragfähigkeit des Hebezugs ist vom Betriebsdruck abhängig.

Installationsrichtlinien

- Verwenden Sie den Hebezug mit einem Betriebsdruck zwischen 0,4 und 0,7 MPa (4–7 kgf/cm², 60–101,5 psi).
Hinweis: Verwenden Sie das vollautomatische Modul zwischen 0,3 und 0,5 MPa (3–5 kgf/cm², 43,5–72,5 psi).
- Wenn Sie die Trageteile für die Installation des Hebezugs auswählen, verwenden Sie Trageteile, die dem Gesamtgewicht des Geräts, Moduls und der schwebenden Last mit einem angemessenen Sicherheitsaufschlag entsprechen.
- Führen Sie eine gründliche Durchspülung und das Durchblasen des Innern der Rohre, die an das Gerät angeschlossen werden sollen, mit Druckluft durch.

Utilisations recommandées

- Les travaux de transfert en continu
- Fonctionnement des outils d'usage
- Installation de gabarits

Directives d'achat

- Température ambiante : de -10°C à +50°C
- Lieu d'installation : espaces intérieurs standards
- Veuillez installer un filtre et le régulateur à proximité de l'unité de levage principale.
- La lubrification n'est pas nécessaire.
- La capacité des palans varie en fonction de la pression de fonctionnement.

Conseils d'installation

- Utilisez le palan avec une pression de fonctionnement comprise entre 0,4 et 0,7 MPa (4–7 kgf/cm², 60–101,5 psi).
Remarque : Utilisez le module entièrement automatique entre 0,3 et 0,5 MPa (3–5 kgf/cm², 43,5–72,5 psi).
- Lors de la sélection des composants de support pour l'installation du palan, choisir des pièces qui peuvent accueillir le poids total de l'unité, du module et la charge en suspension avec une marge de sécurité suffisante.
- Effectuer un rinçage minutieux et un nettoyage par soufflage de l'intérieur des tuyaux à connecter à l'unité.

Aplicaciones recomendadas

- Trabajo de transferencia continua
- Operación de herramientas de mecanizado
- Instalación de plantillas

Guías de compra

- Temperatura ambiente: -10 °C a +50 °C
- Lugar de instalación: zonas de interior estándar
- Instale un filtro y regulador cerca de la unidad de elevación principal.
- Lubricación no necesaria.
- La capacidad de elevación cambia en función de la presión de operación.

Directrices de instalación

- Use la grúa con una presión operativa de entre 0,4 y 0,7 MPa (4–7 kgf/cm², 60–101,5 psi).
Nota: Use el módulo completamente automático entre 0,3 y 0,5 MPa (3–5 kgf/cm², 43,5–72,5 psi).
- Al seleccionar los componentes de soporte para la instalación de la grúa, seleccione piezas que puedan acomodarse al peso total de la unidad, módulo y capacidad suspendida con el suficiente nivel de seguridad.
- Aclare concienzudamente y aplique aire al interior de las tuberías a conectar a la unidad.



EHB series



EHB-50S

EHB-50

EHB-85

EHB-130

EHB-270



EHB-50SC

EHB-50C

EHB-85C

EHB-130C

EHB-270C

MS-A type

Lift control module

- Equipped with:
- Floating function
 - Fall-arrest device

Module de commande de levage

- Équipé de:
- Une fonction flottante
 - Un dispositif anti-chute

Aufzugssteuerungsmodul

- Ausgestattet mit:
- Schwebefunktion
 - Fallschutzvorrichtung

Módulo de control de elevación

- Equipado con:
- Función flotante
 - Dispositivo de detención de caídas



Pendant type
EHB-85 MS-A



Grip type
EHB-85 MS-AG



Combined hook/pendant type
EHB-85 MS-ATC

ABC type

Lift, automatic balance control module

- Equipped with:
- Fall-arrest device
 - Automatic load sensing with full stroke balancing function

Levage, module de contrôle automatique de l'équilibre

- Équipé de:
- Un dispositif anti-chute
 - Détection automatique de la charge avec la fonction d'équilibrage de la course complète

Aufzug, automatisches Ausgleichssteuerungsmodul

- Ausgestattet mit:
- Fallschutzvorrichtung
 - Automatischer Lasterkennung mit Vollhub-Ausgleichsfunktion

Módulo de control de equilibrio automático, elevación

- Equipado con:
- Dispositivo de detención de caídas
 - Sensor de carga automático con función de equilibrio de carrera completa



Pendant type
EHB-85 ABC-5P-B



Grip type
EHB-85 ABC-5G-B

BC type



Dual load setting with switching function
EHB-85 BC2

Single load setting
EHB-85 BC1

Balance control module

- Equipped with:
- Manual full stroke balancing function
 - Balancing of loads specified in a range from zero (kg) up to the maximum hoisting capacity

Ausgleichssteuerungsmodul

- Ausgestattet mit:
- Manueller Vollhub-Ausgleichsfunktion
 - Ausgleich der festgelegten Lasten in einem Bereich von Null (kg) bis zur maximalen Tragfähigkeit des Hebezugs

Module de commande de l'équilibre
Équipé de:

- Fonction manuelle d'équilibrage de course complète
- L'équilibrage des charges spécifiées dans une plage de zéro (kg) jusqu'à la capacité de levage maximale

Módulo de control de equilibrio
Equipado con:

- Función de equilibrado de carrera completa manual
- Equilibrado de cargas especificadas en una gama de cero (kg) hasta la capacidad de elevación máxima

MSD type



EHB-85D MSD

Lift control module with inertia arrest

- Equipped with:
- Fall-arrest device
 - Built-in brake that prevents inertia and swinging of suspended loads

Aufzugssteuerungsmodul mit Trägheitshemmung
Ausgestattet mit:

- Fallschutzeinrichtung
- Eingebauter Bremsen zur Vermeidung der Trägheit und des Schwingens der schwebenden Lasten

Module de commande de levage avec fonction anti-inertie
Équipé de:

- Un dispositif anti-chute
- Freinage intégré qui empêche l'inertie et balancement des charges suspendues

Módulo de control de elevación con detención de inercia
Equipado con:

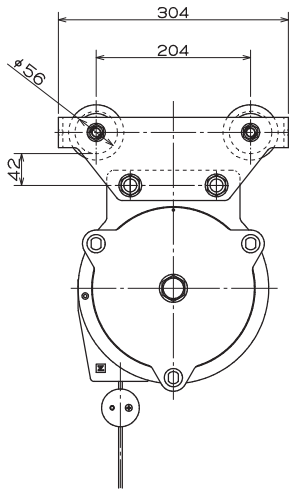
- Dispositivo de detención de caídas
- Freno integrado que evita la inercia y la oscilación de las cargas suspendidas

EHB trolley,
EHB hook set

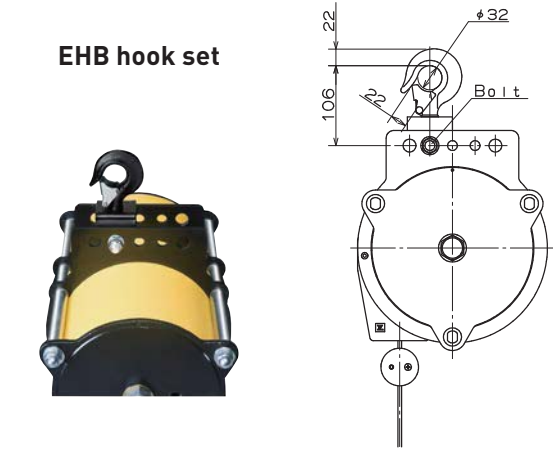
EHB trolley



Part No.	Applicable width of beam
LHP001899	75 mm, 100 mm

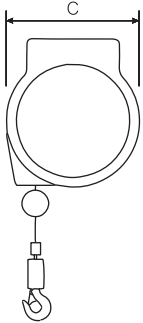
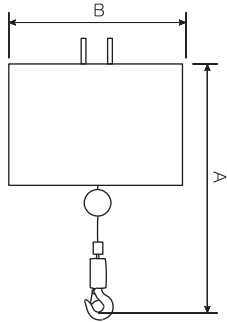


EHB hook set



For MS, MS-A, MS-AG, MS-ATC, BC1 Part No.	For MSD Part No.	For BC2, BC2-H, ABC Part No.
LHP001900	LHP001991	LHP002146

Dimensions



Model	Module	Dimensions (mm)			
		A		B	C
		Min.	Max.		
EHB-50S / 50SC	MS-A	526 / 517	1,226 / 1,167	362 / 362	211 / 211
	MS-AG	921 / 912	1,621 / 1,562	362 / 362	211 / 211
	MS-ATC	704 / 695	1,404 / 1,345	362 / 362	211 / 211
	BC1	526 / 517	1,226 / 1,167	416 / 416	211 / 211
	BC2	526 / 517	1,226 / 1,167	347 / 347	319 / 319
	ABC-5G-B	811 / 802	1,511 / 1,452	478 / 478	363 / 363
EHB-50 / 50C	ABC-5P-B	526 / 517	1,226 / 1,167	478 / 478	363 / 363
	MS-A	526 / 517	2,426 / 2,317	498 / 498	211 / 211
	MS-AG	921 / 912	2,821 / 2,712	498 / 498	211 / 211
	MS-ATC	704 / 695	2,604 / 2,495	498 / 498	211 / 211
	BC1	526 / 517	2,426 / 2,317	552 / 552	211 / 211
	BC2	526 / 517	2,426 / 2,317	495 / 495	319 / 319
EHB-85 / 85C	ABC-5G-B	811 / 802	2,711 / 2,602	516 / 516	363 / 363
	ABC-5P-B	526 / 517	2,426 / 2,317	516 / 516	363 / 363
	MS-A	570 / 560	2,470 / 2,360	491 / 491	252 / 252
	MS-AG	965 / 955	2,865 / 2,755	491 / 491	252 / 252
	MS-ATC	746 / 736	2,646 / 2,536	491 / 491	252 / 252
	BC1	570 / 560	2,470 / 2,360	545 / 545	252 / 252
EHB-85D	BC2	570 / 560	2,470 / 2,360	495 / 495	340 / 340
	ABC-5G-B	853 / 843	2,753 / 2,643	516 / 516	386 / 386
	ABC-5P-B	570 / 560	2,470 / 2,360	516 / 516	386 / 386
	MS-A	570	2,470	520	326
	MS-AG	652 / 629	2,552 / 2,429	494 / 494	305 / 305
	MS-ATC	1,020 / 997	2,920 / 2,797	494 / 494	305 / 305
EHB-130 / 130C	BC1	803 / 780	2,703 / 2,580	494 / 494	305 / 305
	BC2	652 / 629	2,552 / 2,429	547 / 547	305 / 305
	ABC-5G-B	652 / 629	2,552 / 2,429	495 / 495	393 / 393
	ABC-5P-B	910 / 887	2,810 / 2,687	516 / 516	440 / 440
	MS-A	652 / 629	2,552 / 2,429	516 / 516	440 / 440
	MS-A	652 / 629	2,452 / 2,329	616 / 616	305 / 305

Items shown in this catalogue are subject to change without notice. Please note that we bear no responsibility for any errors or omissions in this information.

MS-A

Control module	Model	Operation	Weight (kg)
Hoisting	MS-A	Pendant	3.5
Hoisting	MS-AG	Grip	6
Hoisting	MS-ATC	Pendant	6

BC

Control module	Model	Operation	Weight (kg)
Balance	BC2	Manual	4
Balance	BC1	Manual	1

ABC

Control module	Model	Operation	Weight (kg)
Full auto module	ABC-5P-B	Pendant / manual	11
Full auto module	ABC-5G-B	Grip / manual	11

Specifications

Model	Air pressure (Mpa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg)	Cable dia/Chain size (mm)	Air inlet
EHB-50S	0.7	55	0.7	19	φ4.76	Rc 3 / 8
	0.6	48				
EHB-50	0.5	40	1.9	28	φ4.76	Rc 3 / 8
	0.4	32				
EHB-85	0.7	90	1.9	29	φ4.76	Rc 3 / 8
	0.6	75				
EHB-85C	0.5	62	1.8	30	4.0	Rc 3 / 8
	0.4	50				
EHB-130	0.7	140	1.9	36	φ4.76	Rc 3 / 8
	0.6	120				
EHB-130C	0.5	100	1.8	37	4.0	Rc 3 / 8
	0.4	80				
EHB-270	0.7	270	1.8	43	φ6.0	Rc 3 / 8
	0.6	230				
EHB-270C	0.5	190	1.7	44	4.0	Rc 3 / 8
	0.4	150				

MSD inertia prevention

Control module	Model	Operation	Weight (kg)
Hoisting	MSD	Pendant	6

Specifications

Model	Air pressure (Mpa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg)	Cable dia/Chain size (mm)	Air inlet
EHB-85D MSD	0.7	90	1.9	38	φ4.76	Rc 3 / 8
	0.6	75				
	0.5	62				
	0.4	50				

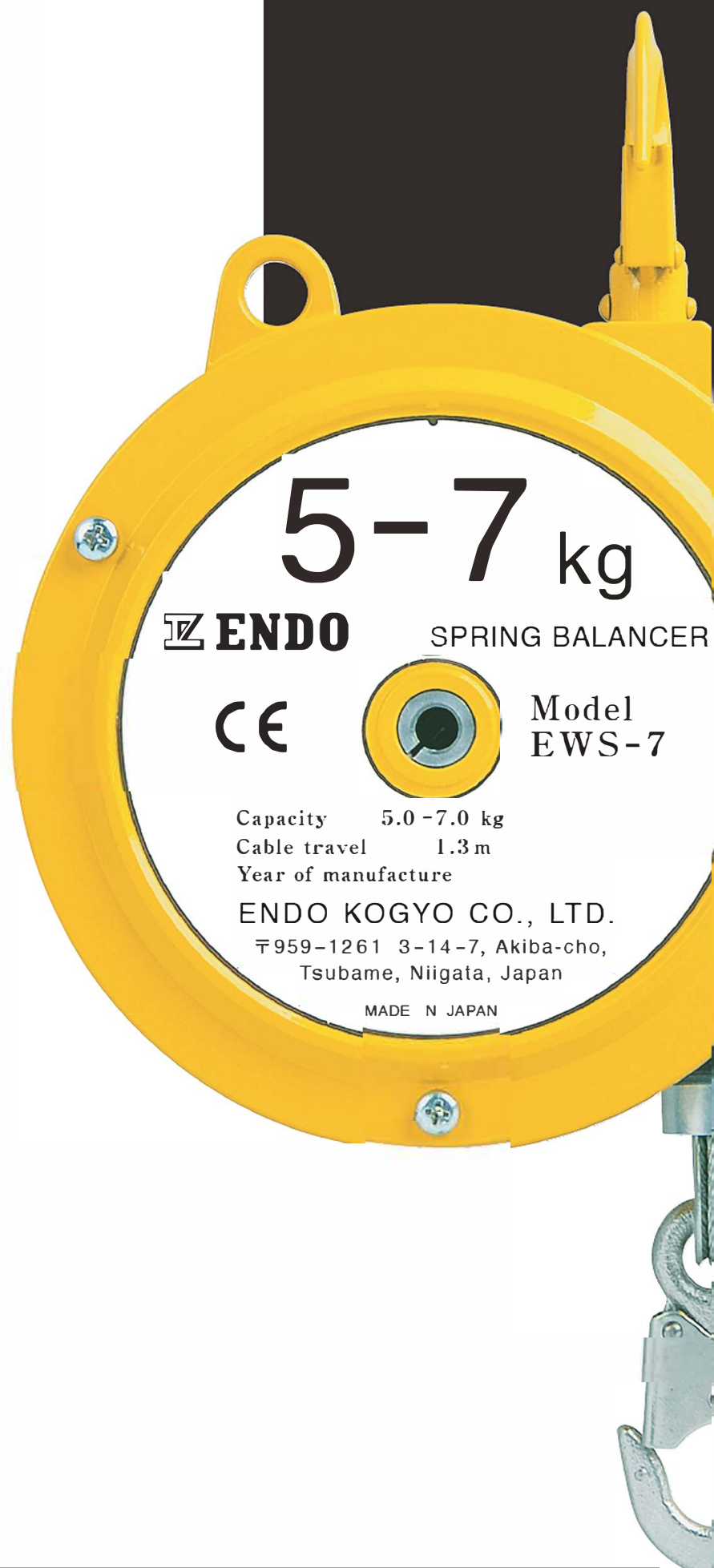
(ABC, BC1 and BC2 are not available for the EHB-270.)
The size of the air inlet for the BC1 module is Rc 1/4.



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SPRING BALANCER

ENDO



SPRING BALANCER



What is Spring balancers?

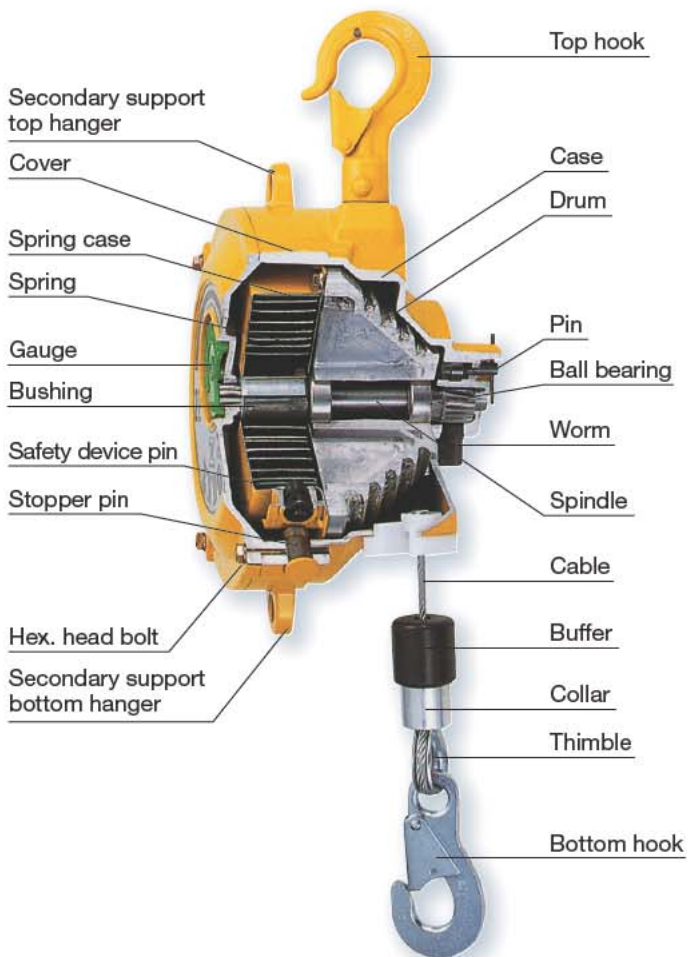
The tension is kept stable on even if the cable is pulled out or retrieved because of the tapered drum. So Spring balancers can hold the tools suspended in hollow and work for flexible positioning of the tools. Workers can enjoy comfortable operation with less fatigue.

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)

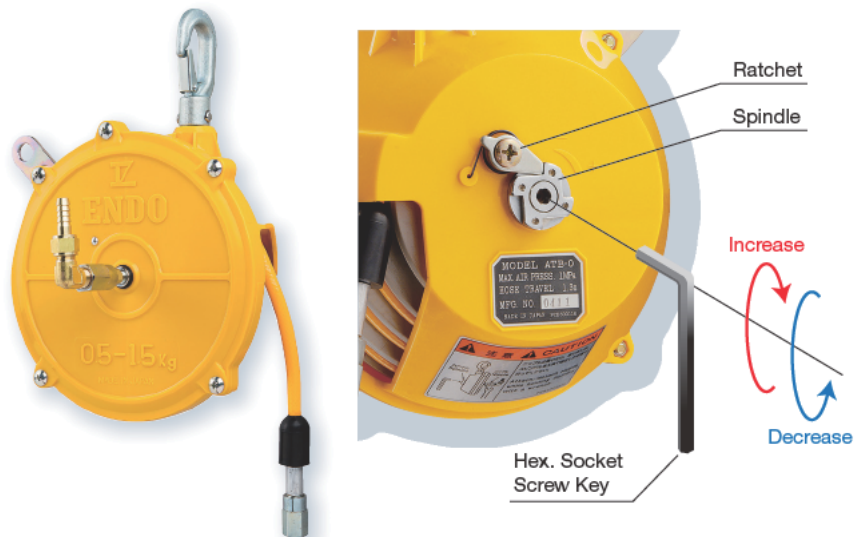
Handle system	ERP model				
Ratchet system	EK-00,EK-0	EW-3,5	SBC	ER model	ATB model
Worm gear system	EWS model	EWF model	ELF model	RSB model	
	ETP model	THB model	ATR model	EWA model	



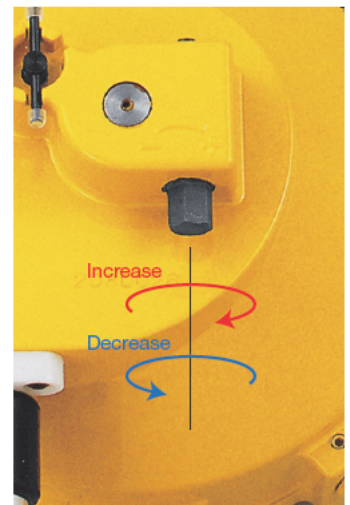
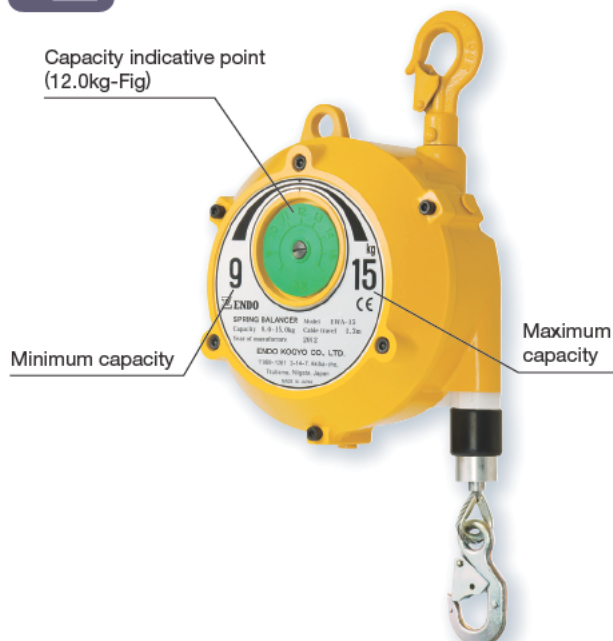
Handle system



Ratchet system



Worm gear system



Read the instruction manual carefully for details.

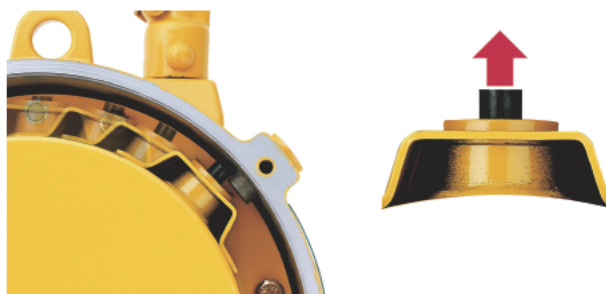
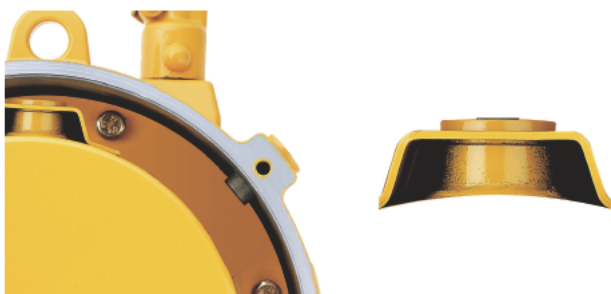
Features

※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.



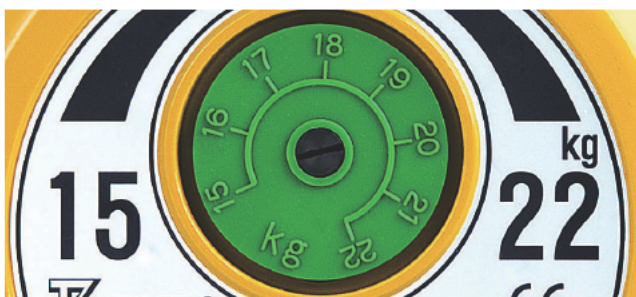
Drum lock device

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



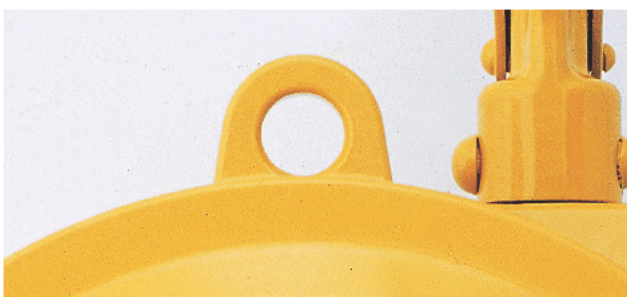
Gauge

The gauge indication contributes to worker recognition on tension adjustment.



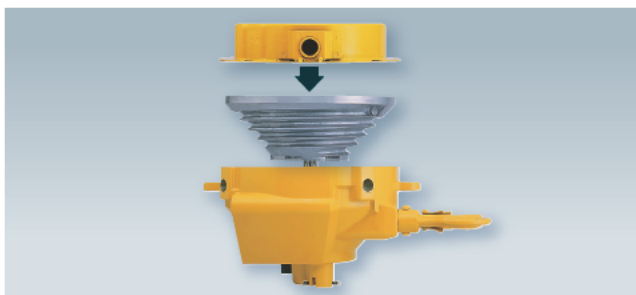
Secondary support hanger

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	EWB-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 
	EWB-5B	3.0 - 5.0	1.3	3.0	8.9	○	
	EWB-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-15	0.5 - 1.5	1.3	8.5	1.9	○	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-25	1.5 - 2.5	1.3	8.5	2.0	○	
	THB-35	2.5 - 3.5	1.3	8.5	2.1	○	
	THB-50	3.5 - 5.0	1.3	8.5	2.1	○	
	THB-65	5.0 - 6.5	1.3	8.5	2.2	○	

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}	4.0	2.38	4.5	—	
	ER-10B	49 {5.0}	4.0	2.38	3.8	—	

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

EK-00

Light capacity

FUNCTION



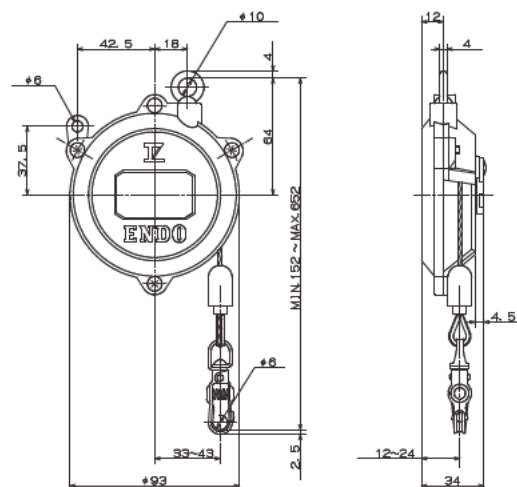
Ratchet system
spring adjustment



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



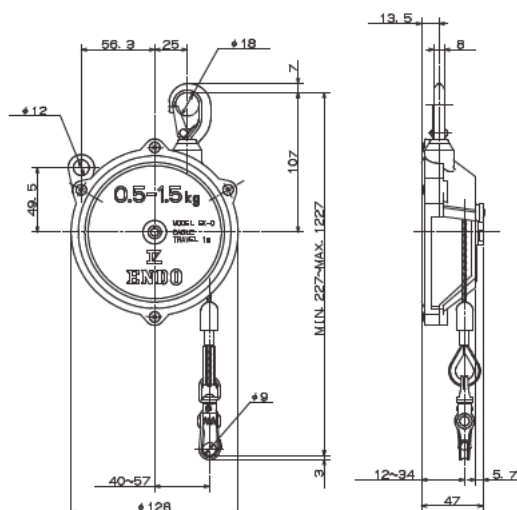
Ratchet system
spring adjustment



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



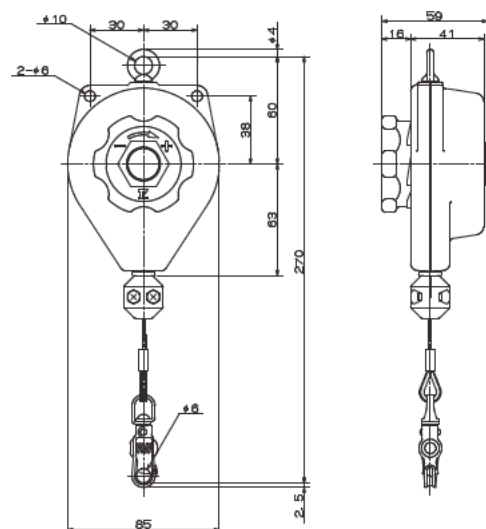
Handle system
spring adjustment



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

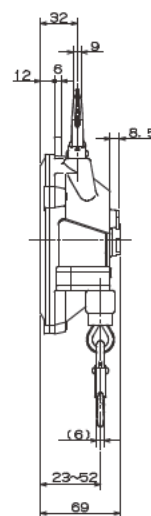
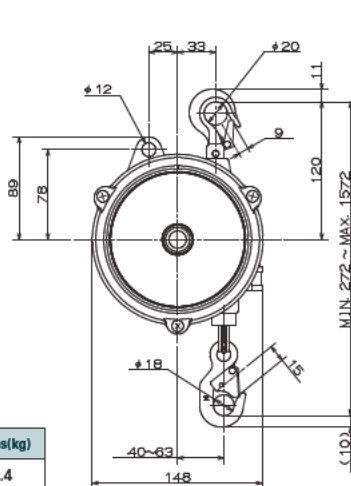


CE Mark available

* 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



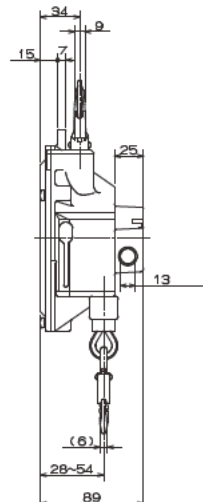
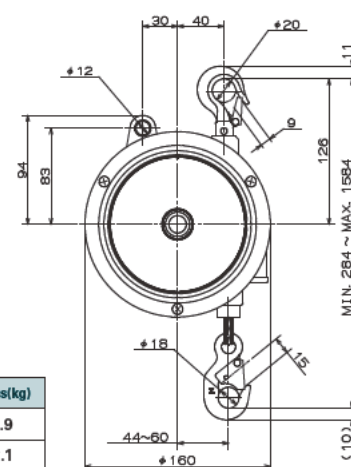
Worm gear spring adjustment



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



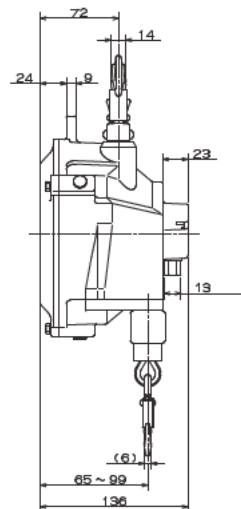
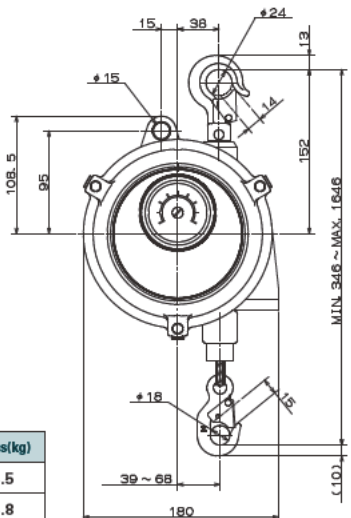
Worm gear spring adjustment



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.

EWF-22/30

Standard

FUNCTION



Gauge



Cartridge spring assembly



Plug type cable set



Fall arrest device



Drum lock device



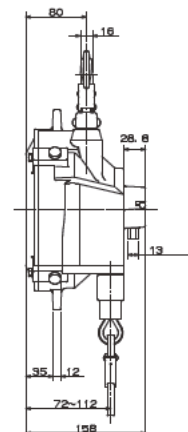
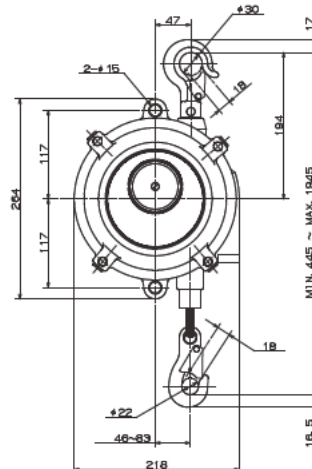
Worm gear spring adjustment



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



EWF-40/50

Standard

FUNCTION



Gauge



Cartridge spring assembly



Plug type cable set



Fall arrest device



Drum lock device



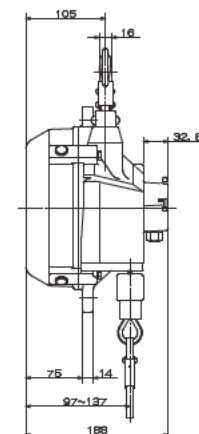
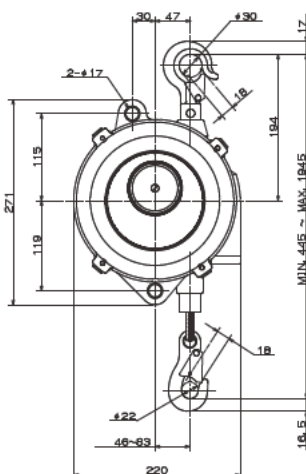
Worm gear spring adjustment



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



EWF-60/70

Standard

FUNCTION



Gauge



Cartridge spring assembly



Plug type cable set



Fall arrest device



Drum lock device



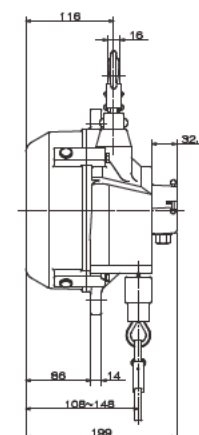
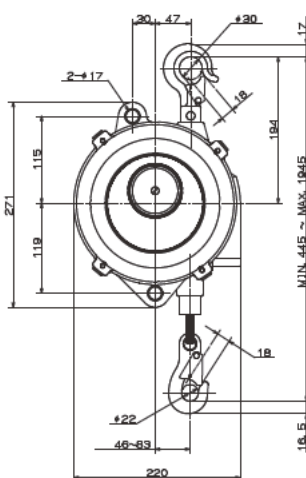
Worm gear spring adjustment



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.

Large capacity^{EWF ETP}

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

EWF-90/105/120

Large capacity

FUNCTION



Gauge



Cartridge spring assembly



Plug type cable set



Fall arrest device



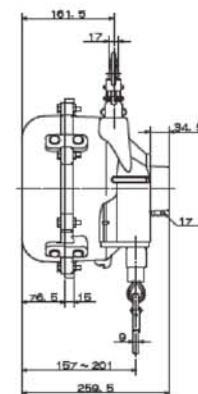
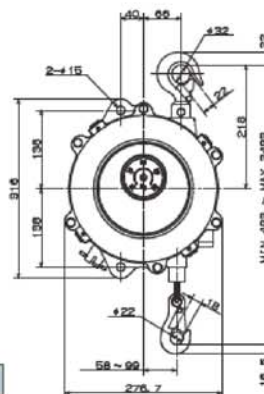
Drum lock device



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

ETP-14/15/16

Large capacity

FUNCTION



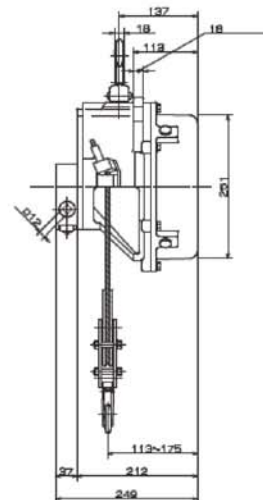
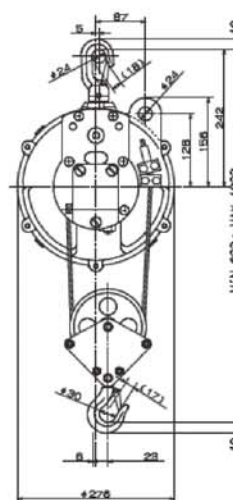
Fall arrest device



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

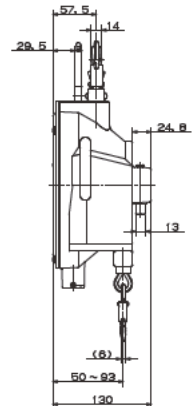
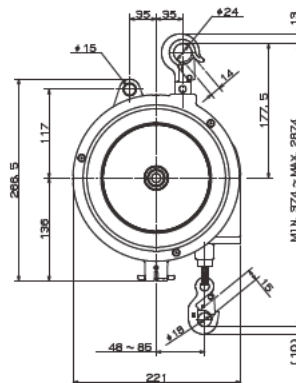
Long stroke

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

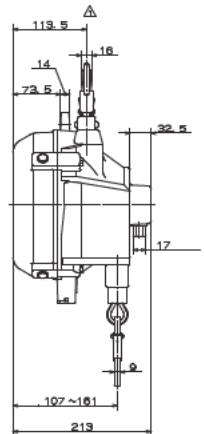
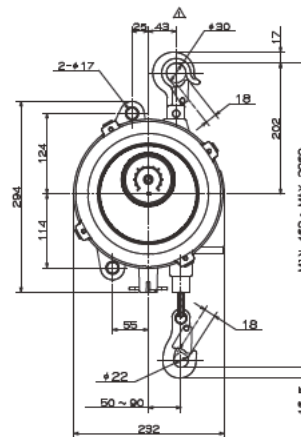
Long stroke

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

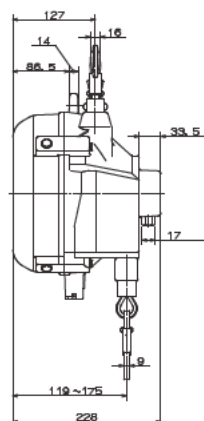
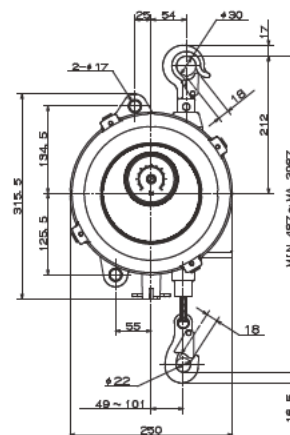
Long stroke

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

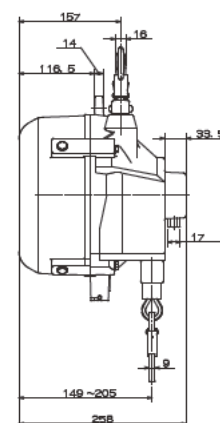
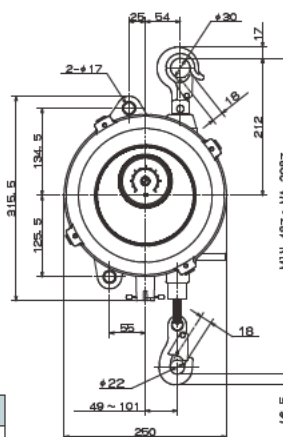
- Install Spring balancers uneven not to hit each other when the balancers are installed in a line.
- Always employ a secondary support chain and leave the slack for smooth swivel.
- Always adjust the spring tension to meet the total weight of tool and the application.

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



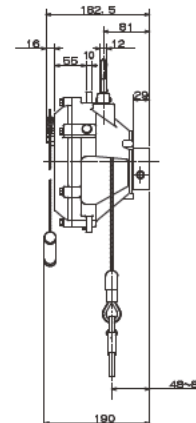
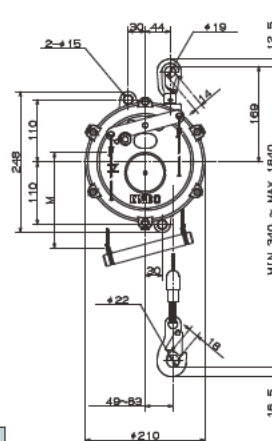
Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
ELF-60	50.0~60.0	2.5	4.76	17.1
ELF-70	60.0~70.0	2.5	4.76	18.0

RSB-15

With Ratchet

FUNCTION

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



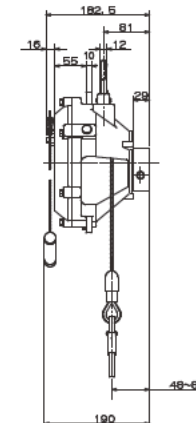
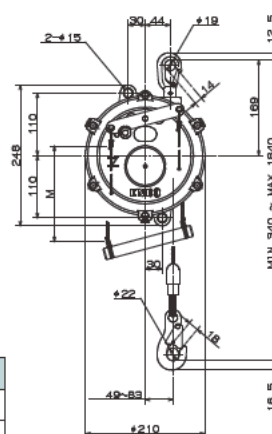
Model	Capacity(kg)	Stroke(m)	Cable dia(φmm)	Mass(kg)
RSB-15	9.0~15.0	1.5	5.0	7.4

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



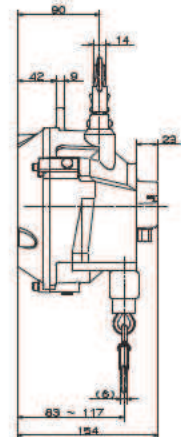
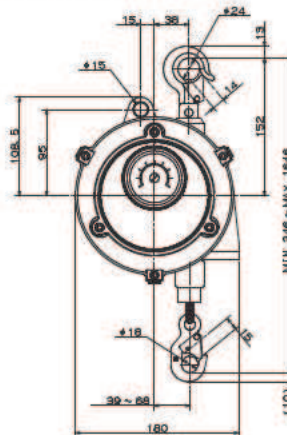
Worm gear spring adjustment



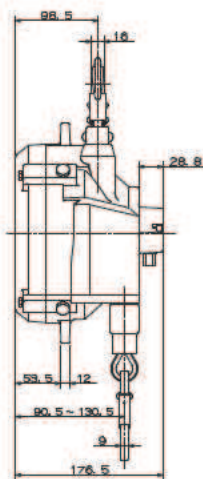
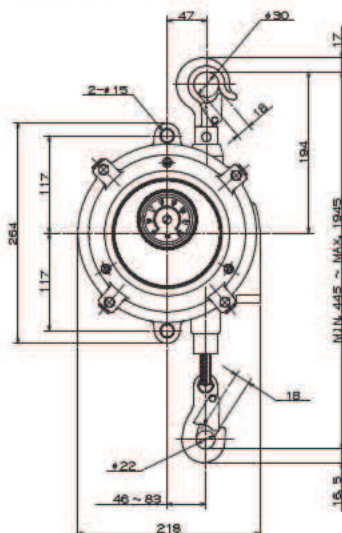
CE Mark available



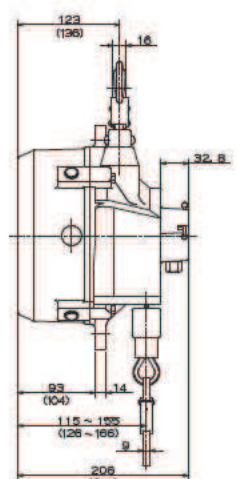
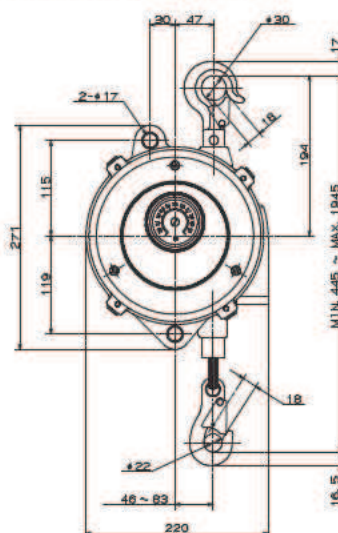
EWA-15



EWA-22/30



EWA-40/50/60/70



*() dimension shows EWA-60~70.

Spring balancer with brake system

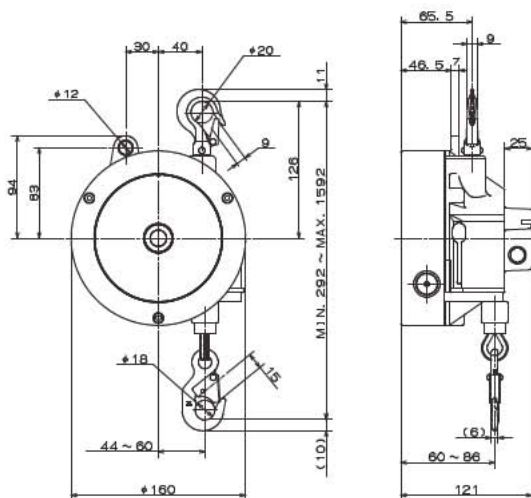
Features

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)
EWF-3B	1.5-3.0	1.3	3.0	4.7
EWF-5B	3.0-5.0	1.3	3.0	8.9
EWF-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

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.

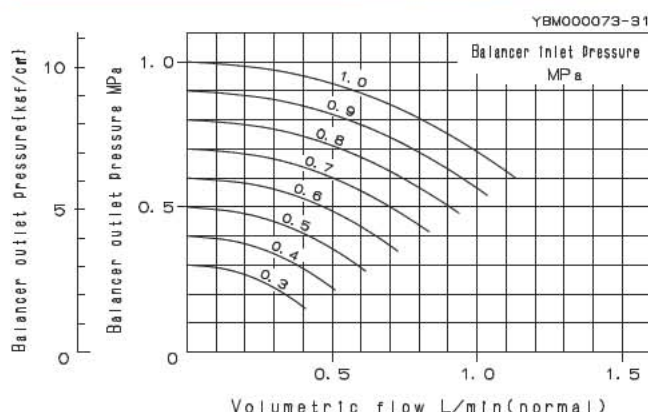
And swivel joint size Rc.1/4 at outlet portion.

Working conditions

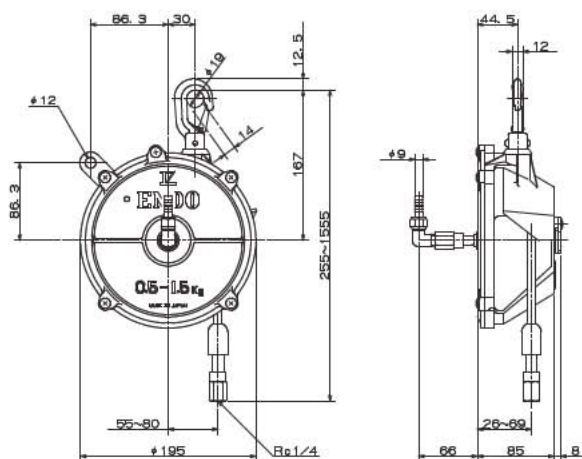
- Application area : Indoor and normal atmospheric conditions
- Temperature rang : -10°C to $+40^{\circ}\text{C}$
- Application fluid : Air
- Maximum air pressure : 1.0MPa {10kgf/cm²}

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



Ratchet system
spring adjustment



Cushion cover
available



CE Mark available

※ATB-2 is not available for CE Mark.

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.



Tool hose balancers THB

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.

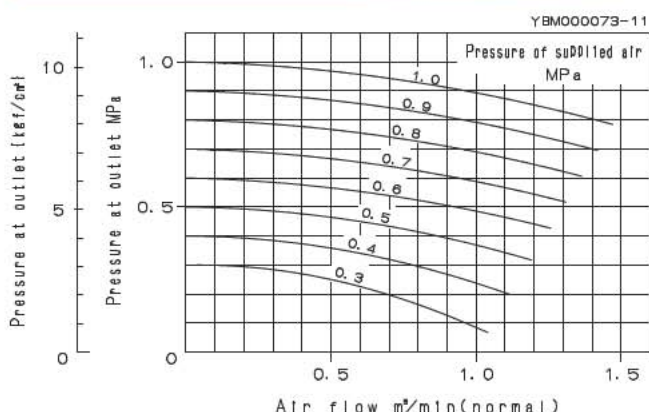
The inside diameter of hose is $\phi 8.5\text{mm}$ which supplies enough air to operate the suspended air tool or device.

Working conditions

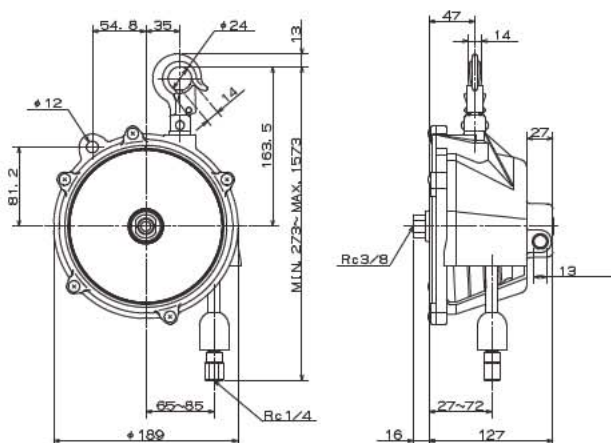
- Application area : Indoor and normal atmospheric conditions
- Temperature rang : -10°C to $+40^{\circ}\text{C}$
- Application fluid : Air
- Maximum air pressure : 1.0MPa $\{10\text{kgf/cm}^2\}$

Model	Capacity(kg)	Hose travel (m)	Hose inside diameter. (φmm)	Mass(kg)
THB-15	0.5-1.5	1.3	8.5	1.9
THB-25	1.5-2.5	1.3	8.5	2.0
THB-35	2.5-3.5	1.3	8.5	2.1
THB-50	3.5-5.0	1.3	8.5	2.1
THB-65	5.0-6.5	1.3	8.5	2.2

Flow characteristics



Dimensions(mm)



FUNCTION



Worm gear spring adjustment



Cushion cover available



Fall arrest device



CE Mark available

Special accessories

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

Parts No. LBP000654

Swivel Joint

Parts No. LBP000659

Protect wire

Parts No. LBP000801



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. LBP000800

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.

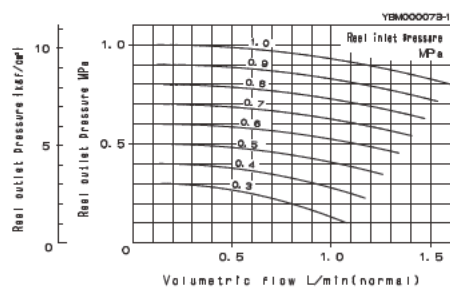
※On-off work of ratchet system is available through knob operation.

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

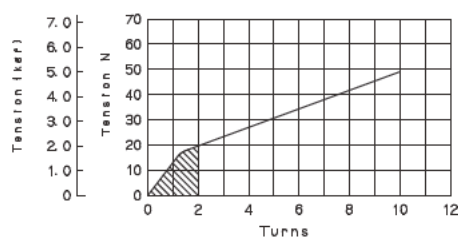
ATR-5 is installed with top hook and ATR-5-1 is installed with bracket.

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



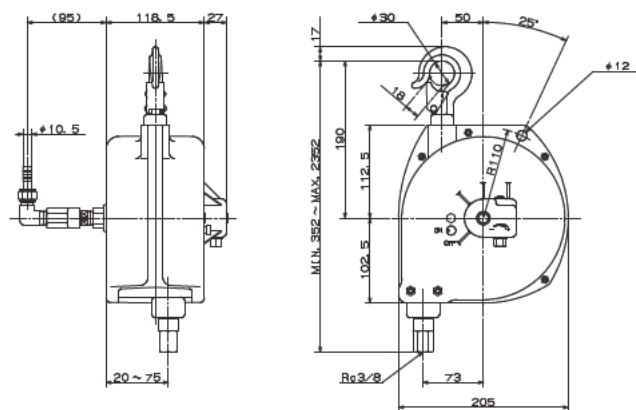
**Adjustable hose
stopper**

Parts No. LRP007933

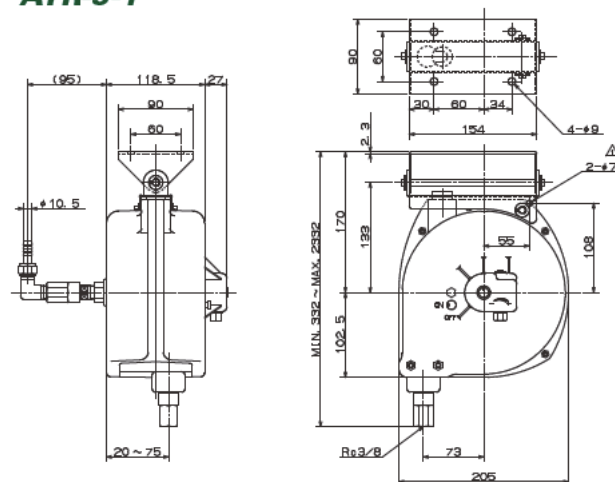


Dimensions(mm)

ATR-5



ATR-5-1



FUNCTION



Worm gear
spring adjustment



Ratchet device

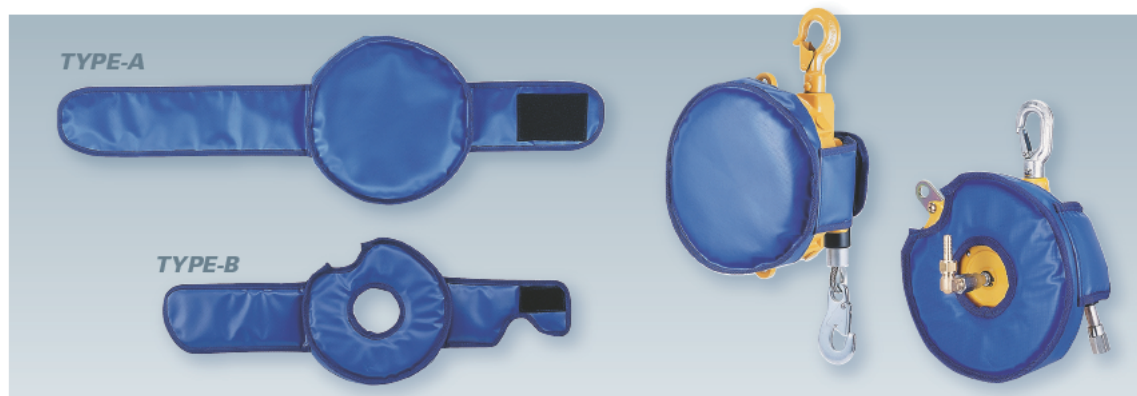


Fall arrest device



CE Mark available

Cushion



TYPE-A

Parts No. **P2B300789**

EWF-22 - 120

EWF-90A - 120A

TYPE-B

Parts No. **P2B300799**

ATB series

THB series

Insulation Hook

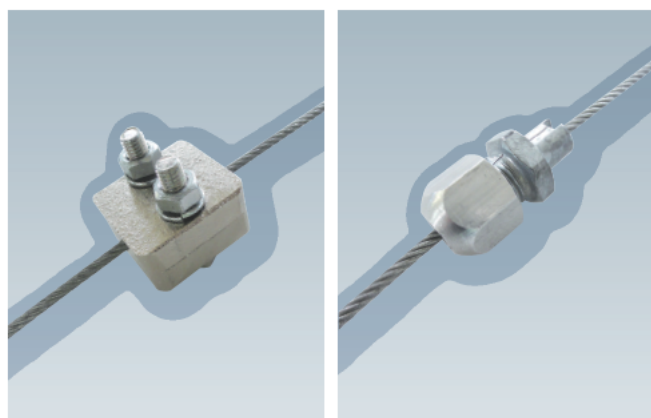


Parts No.	Diameter of cable (φmm)	Available model
LBP000145	4.0	EWF-9・15
LBP000146	4.76	EWF-22-70, EWA-22-70
LBP001185	4.76	EWF-90-120, EWF-90A-120A

Owing to insulation of holder, it becomes unnecessary to use the insulation made of ceramic (or others) which is casual at present.
This composes one set with special cable.



Adjustable cable stopper

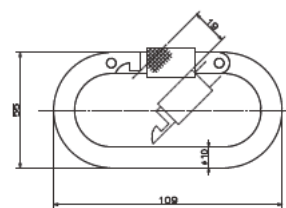


Split type

Plug-in type

Type	Parts No.	Available model
Split	LBP000127	RSB-15-40
	LBP000150	ER-3A/3B-ER-10A/10B
Plug-in	LBP000151	EW(EWS)-3-7, ELF-3-9
	LBP000131	EWF-9/15
	LBP000132	EWF-22-70, ELF-15-70, EWF-90-120, EWF-90A-120A

Karabina



Parts No.	Breaking load
P2S400104	16.7kN {1700kgf}

S Type hook



Model	Parts No.	Working load	Mass(kg)
SH-60	LBP000231	590N {60kgf}	0.16
SH-150	LBP000232	1470N {150kgf}	0.43



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

Type	Treating Method					
	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	White EW(EWS)-3X-7X
		Black	EW-9Y-15Y		Black	Black EWF-9X-15X
	SUS Wire rope		EW-22Y-120Y	SUS Wire rope		EW-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)		

For the next generation

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

EWF-Type-C



Plastic Drum

Abrasion Powder is greatly reduced comparing with the existing model.



Fall Arrest Device

Drum lock system is equipped to prevent 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

TEENDO



AIR BALANCER RAIL SYSTEM

ENDO

YouTube

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SCOPE : Head office, Plant



ISO14001 JP10/070952
SCOPE : Head office, Plant

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JAGMAR

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Type- MS-A

Hoisting "WITH"
DOWN STOP

AIR BALANCER is handling equipment powered by compressed air.

Adjustment of lifting and lowering speed

Both speeds are adjustable by turning the knob on control module.

Floating capability

By adding or reducing force directly onto the hung load, the load will move down or up respectively. The range of floating is about 35cm up and down from stable position.



Grip for operation

Pendant for operation

Grip for operation

EHB-85+MS-AG

Control module MS-A

Pendant for operation

EHB-85+MS-A

Control module	Model	Hose	Operation	Weight
Hoisting	MS-A	Straight hose×3	Pendant	3.5kg
Hoisting	MS-AG	Coil hose×3	Grip	5kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-50S	0.7	55	0.7	21	φ4.76	Rc 3/8
	0.6	48				
	0.5	40				
	0.4	32				
EHB-50	0.7	55	1.9	28		
	0.6	48				
	0.5	40				
	0.4	32				
EHB-85	0.7	90	1.9	29		
	0.6	75				
	0.5	62				
	0.4	50				
EHB-130	0.7	140	1.9	36		
	0.6	120				
	0.5	100				
	0.4	80				
EHB-270	0.7	270	1.8	43	φ6	
	0.6	230				
	0.5	190				
	0.4	150				

(*) Weight: Without module

POINT

● **Grip type controller**
Grip type controller allows a more sensitive control of height of lift.

DOWN STOP

Added safety measure. Hung load will not fall even if the air supply is cut off or when hoses are broken.

Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

Clean design

No lubrication is needed and produces no oil mist.

Quiet design

With no air motor, AIR BALANCER produces very little noise in operation.

Type- **MS/MSS** Hoisting "WITHOUT" DOWN STOP

● Adjustment of lifting and lowering speed

Both speeds are adjustable by turning the knob on control module

● Floating capability

By adding or reducing force directly onto the hung load, the load will move down or up respectively. The range of floating is about 35cm up and down from stable position.



Control module	Model	Hose	Operation	Weight
Hoisting	MS*	Straight hose×2	Pendant	2kg
Hoisting	MSS	Straight hose×2	Pendant	2.2kg

*MS module is not adopted to EHB-270.

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-50S	0.7	55	0.7	21	φ 4.76	Rc 3/8
	0.6	48				
	0.5	40				
	0.4	32				
EHB-50	0.7	55	1.9	28		
	0.6	48				
	0.5	40				
	0.4	32				
EHB-85	0.7	90	1.9	29		
	0.6	75				
	0.5	62				
	0.4	50				
EHB-130	0.7	140	1.9	36		
	0.6	120				
	0.5	100				
	0.4	80				
EHB-270	0.7	270	1.8	43	φ 6	
	0.6	230				
	0.5	190				
	0.4	150				

(*) Weight: Without module

● Economical model

● energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

● Clean design

No lubrication is needed and produces no oil mist.

● Quiet design

With no air motor, AIR BALANCER produces very little noise in operation.

NOTICE

DOWN STOP is available when the air supply is stopped but it is "NOT" available when hose for lowering control is cut.

POINT

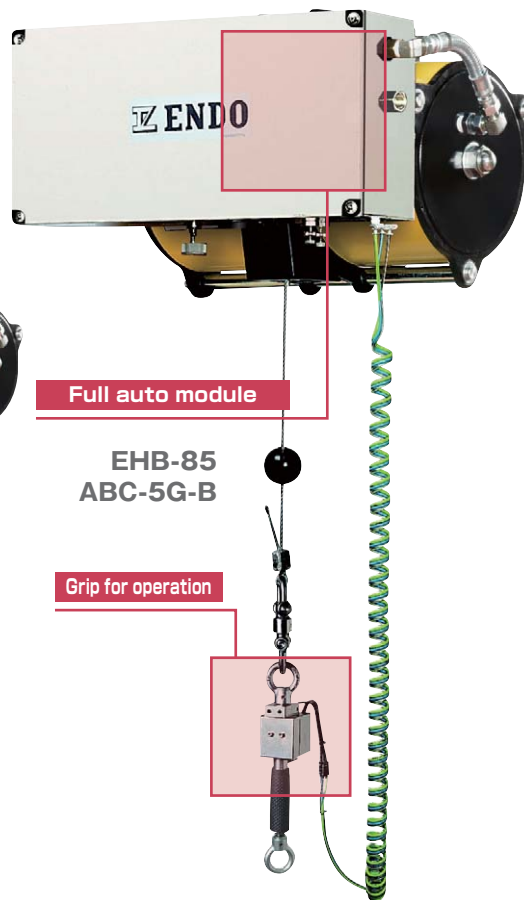
Type-ABC Full auto module

●Auto Balance

With Full auto module, the AIR BALANCER can automatically adjust itself to the weight of the hung load. The load can then be lifted and lowered by hand without using the controller.

●Adjustment of lifting and lowering speed

Both speeds are adjustable by turning the knob on control module.



Control module	Model	Hose	Operation	Weight
Full auto module	ABC-5P-B	Coil hose×3	Pendant	11kg
Full auto module	ABC-5G-B	Coil hose×3	Grip	11kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet				
EHB-50	0.5	40	1.9	28	φ4.76	Rc 3/8				
	0.4	30								
	0.3	20								
EHB-85	0.5	60	1.9	29			φ4.76	Rc 3/8		
	0.4	45								
	0.3	30								
EHB-130	0.5	85	1.9	36					φ4.76	Rc 3/8
	0.4	62.5								
	0.3	40								

(*) Weight: Without module

POINT

●Auto Balance

Full auto module can recognize the weight of hung device from 0kg to Max lifting capacity so that the balancing can be controlled.

●DOWN STOP

Added safety measure. Hung load will not fall even if the air supply is cut off or when hoses are broken.

●Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

●Clean design

No lubrication is needed and produces no oil mist.

●Quiet design

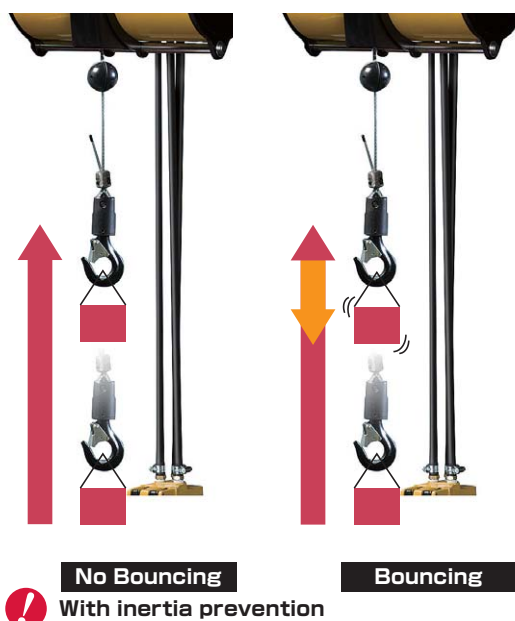
With no air motor, AIR BALANCER produces very little noise in operation.

Type-MSD Hoisting with inertia prevention unit

Adjustment of lifting and lowering speed

Both speeds are adjustable by turning the knob on control module.

Inertia prevention unit



EHB-85D MSD

Control module MSD

Pendant for operation

Control module	Model	Hose	Operation	Weight
Hoisting	MSD	Straight hose×3	Pendant	6kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-85D	0.7	90	1.9	34	φ4.76	Rc 3/8
	0.6	75				
	0.5	62				
	0.4	50				

(*) Weight: Without module

POINT Inertia prevention unit

Accurate positioning by pendant control is made possible. (Brake eliminates the bouncing effect)

DOWN STOP

Added safety measure. Hung load will not fall even if the air supply is cut off or when hoses are broken.

Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

Clean design

No lubrication is needed and produces no oil mist.

Quiet design

With no air motor, AIR BALANCER produces very little noise in operation.

Type- BC2 Dual Balance module

Dual Balancing

The Dual Balance Module with its 2 regulators allows the balancing of 2 different weights, which provides easier transfer or mounting of load.

- Full stroke balancing by hand.
- 2 different weights can be balanced.
- 2 different kinds of balanced weight set in advance can be changed by pushing button on pendant.

Weight switching button

Optional design



Control module	Model	Hose	Weight
Dual Balance module	BC2	Straight hose×3	4kg
Dual Balance module	BC2-H	Straight hose×3	4kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-50S	0.7	55	0.7	21	φ4.76	Rc 3/8
	0.6	48				
	0.5	40				
	0.4	32				
EHB-50	0.7	55	1.9	28		
	0.6	48				
	0.5	40				
	0.4	32				
EHB-85	0.7	90	1.9	29		
	0.6	75				
	0.5	62				
	0.4	50				
EHB-130	0.7	140	1.9	36		
	0.6	120				
	0.5	100				
	0.4	80				

(*) Weight: Without module



EHB-85+BC2

Dual Balance module

Switching button

POINT

Dual Balance

2 weights whose range is from 0kg to Max lifting capacity can be set to regulator. The loads with this 2 different weights can be balanced.

DOWN STOP

Hung load will go down slowly when the air supply is cut off or silver hose is broken.

Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

Clean design

No lubrication is needed and produces no oil mist.

Quiet design

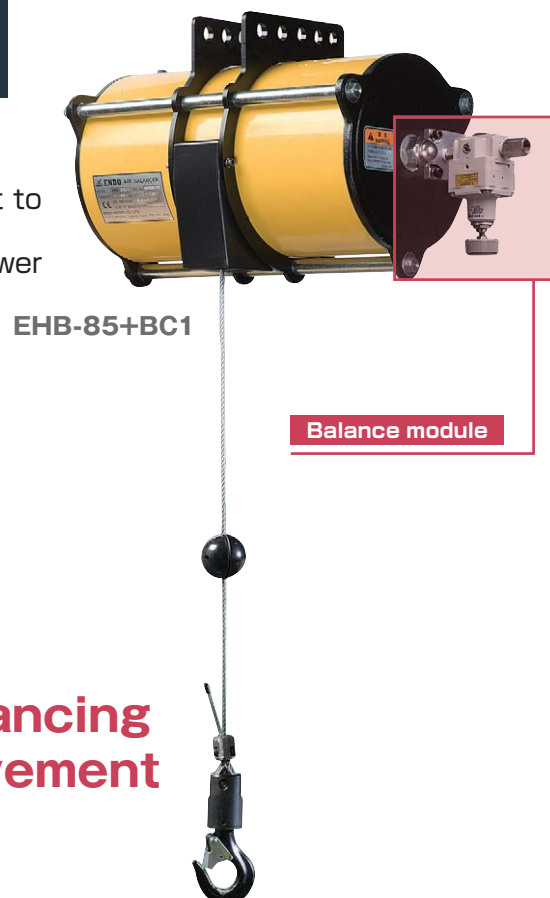
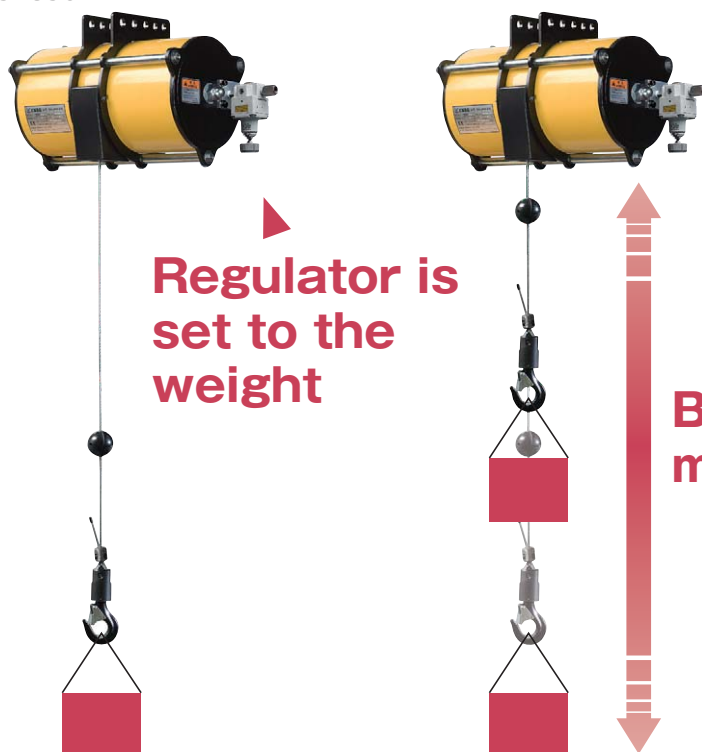
With no air motor, AIR BALANCER produces very little noise in operation.

Type- **BC1** Single Balance module

● Single Balancing

The hung load will be balanced after the regulator is set to the weight.

This module makes it easy for an operator to lift and lower a load.



EHB-85+BC1

Balance module

Control module	Model	Weight
Single Balance module	BC1	1kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-50S	0.7	55	0.7	21	φ4.76	Rc 1/4
	0.6	48				
	0.5	40				
	0.4	32				
EHB-50	0.7	55	1.9	28		
	0.6	48				
	0.5	40				
	0.4	32				
EHB-85	0.7	90	1.9	29		
	0.6	75				
	0.5	62				
	0.4	50				
EHB-130	0.7	140	1.9	36		
	0.6	120				
	0.5	100				
	0.4	80				

(*) Weight: Without module

POINT

● Single Balance

Range of 0kg to Max lifting capacity can be balanced.

● DOWN STOP

Hung load will go down slowly when the air supply is cut off.

● Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

● Clean design

No lubrication is needed and produces no oil mist.

● Quiet design

With no air motor, AIR BALANCER produces very little noise in operation.

NOTICE

Suspending load will go down slowly with time if the air supply is stopped.

Type- MS-ATC

Hoisting for at-hand operation

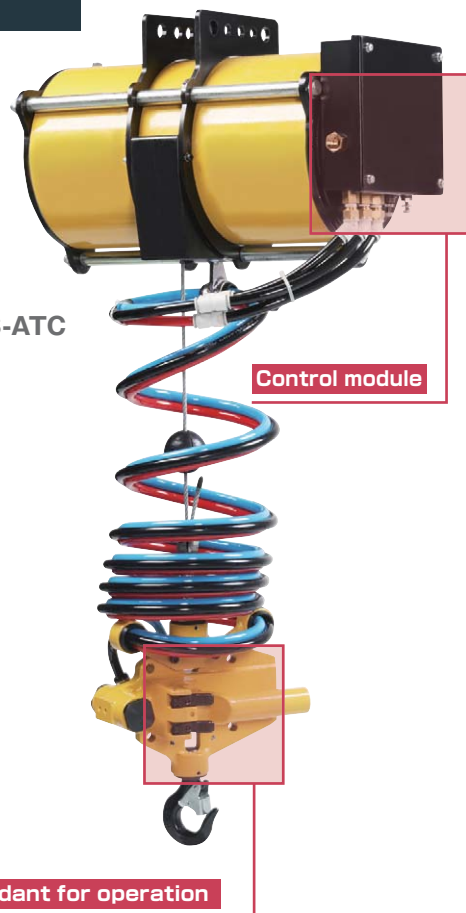
● Much smoother operation

UP and Down button and handle are equipped on lower hook. Comparing with independent pendant control, load lifts and lowers smoother and stably.



Hook built-in pendant for operation

EHB-85+MS-ATC



Control module

Pendant for operation

Control module	Model	Hose	Operation	Weight
Hoisting	MS-ATC	Coil hose×3	Pendant	6kg

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Cable dia (mm)	Air inlet
EHB-50S	0.7	55	0.7	21	φ4.76	Rc 3/8
	0.6	48				
	0.5	40				
	0.4	32				
EHB-50	0.7	55	1.9	28		
	0.6	48				
	0.5	40				
	0.4	32				
EHB-85	0.7	90	1.9	29		
	0.6	75				
	0.5	62				
	0.4	50				
EHB-130	0.7	140	1.9	36		
	0.6	120				
	0.5	100				
	0.4	80				

(*) Weight: Without module

POINT

● at-hand operation

This module is pendant type which can be operated at-hand and enables you to control hoisting and lowering with stable condition of the load.

● DOWN STOP

Added safety measure. Hung load will not fall even if the air supply is cut off or when hoses are broken.

● Energy-saving design

Air consumption of AIR BALANCER is only 1/7 of that of AIR HOIST. (comparing our existing model)

● Clean design

No lubrication is needed and produces no oil mist.

● Quiet design

With no air motor, AIR BALANCER produces very little noise in operation.

Type- C Load chain

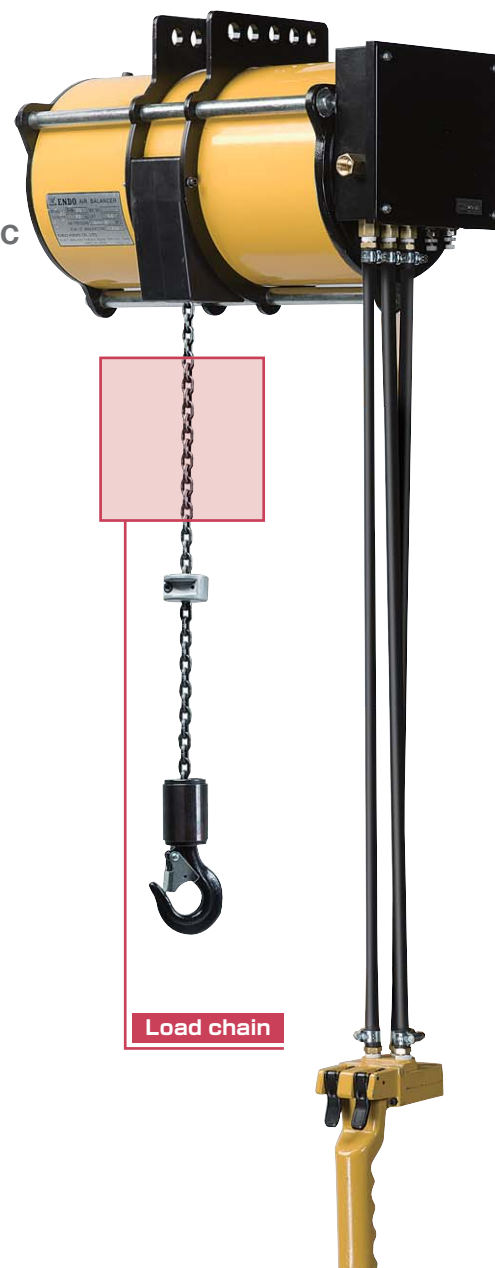
● **AIR BALANCER with alloy steel load chain. Tougher and more durable.**

Specification

Model	Air pressure (MPa)	Max lifting capacity (kg)	Stroke (m)	Weight (kg) (*)	Size×Fall
EHB-50SC	0.7	55	0.65	20	4.0×1
	0.6	48			
	0.5	40			
	0.4	32			
EHB-50C	0.7	55	1.8	29	4.0×1
	0.6	48			
	0.5	40			
	0.4	32			
EHB-85C	0.7	90	1.8	30	4.0×1
	0.6	75			
	0.5	62			
	0.4	50			
EHB-130C	0.7	140	1.8	37	4.0×1
	0.6	120			
	0.5	100			
	0.4	80			
EHB-270C	0.7	270	1.7	44	4.0×1
	0.6	230			
	0.5	190			
	0.4	150			

(*) Weight: Without module

EHB-85C



Applicable modules

MS



MS-A
MS-AG



MS-ATC



BC1



BC2

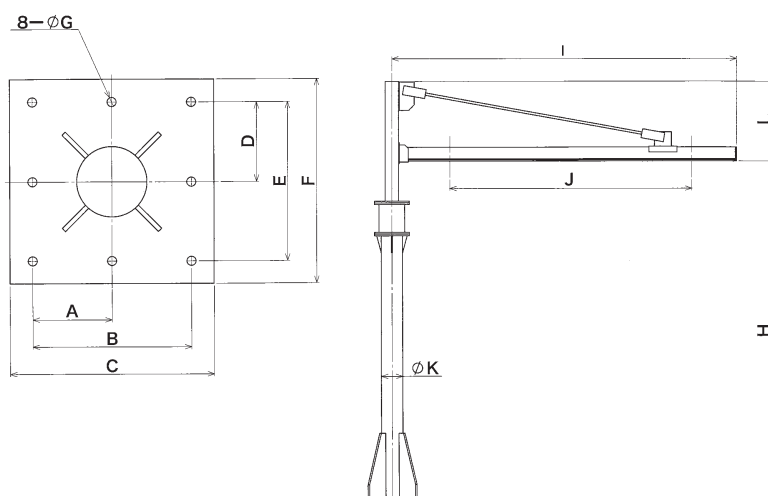


ABC-5P-B
ABC-5G-B



JIB CRANE

● Rail system for less space



Dimensions

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)	Weight (kg)
EJS-2-20-300	230	460	500	230	460	500	φ20	2,000	2,095	1,140	φ216.8	700	300
EJS-2-30-265	230	460	500	230	460	500	φ20	3,000	2,095	1,315	φ216.8	700	265
EJS-3-20-170	230	460	500	230	460	500	φ20	2,000	3,095	2,235	φ216.8	900	170
EJS-3-30-150	230	460	500	230	460	500	φ20	3,000	3,095	2,235	φ216.8	900	150
EJB-2-20-400	280	560	600	280	560	600	φ20	2,000	2,110	1,140	φ267.4	700	400
EJB-2-30-400	280	560	600	280	560	600	φ20	3,000	2,110	1,140	φ267.4	700	400
EJB-3-30-250	280	560	600	280	560	600	φ20	3,000	3,110	2,235	φ267.4	900	250
EJB-4-30-120	280	560	600	280	560	600	φ20	3,000	4,110	3,235	φ267.4	900	120

※More models are available. Feel free to ask us.

Attachment

■ Pantograph type



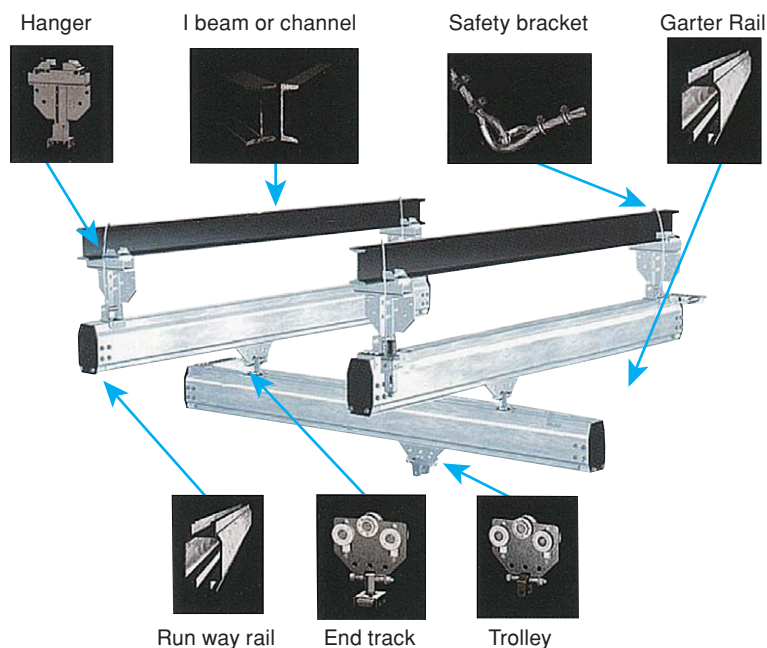
■ 2 points hook type



※We can customize for your request.

An excellent transfer system employing the benefits of aluminum and rail system

- 1 Great movability. Enables load transfer with the shortest distance travel and thus faster working time.
- 2 Standardization for parts makes it easy for relocation and expansion.
- 3 The parts come with kits and are joint using bolts; easy to assemble and repair.
- 4 Compared to steel rail, aluminum is lighter and stronger. With anodized treatment, our aluminum rails are more corrosive resistant, more durable, and looks better.
- 5 Precision machining on our rails and resin wheels allow smooth travel with little friction.



Aluminum alloy rail

Model	Measurement (mm)	Unit weight	Rail length
TR2000		3.6kg/m	2inch
RAD4110		6.44kg/m	4inch
RAD7510		12.26kg/m	8inch

There are various trolley suited to your needs.
Special trolleys are available for 2, 4 and 8 inch rails.
Maximum loadings are;
2 inch ... 180kg
4 inch ... 250kg
8 inch ... 490kg

Relation between lifting span and lifting load Unit:Kgf

Rail length	TR2000	RAD4110	RAD7510
	Lifting load	Lifting load	Lifting load
1m	200	500	500
2m	100	500	500
3m	45	250	500
4m	25	140	500
5m	16	90	470
6m	11	60	330

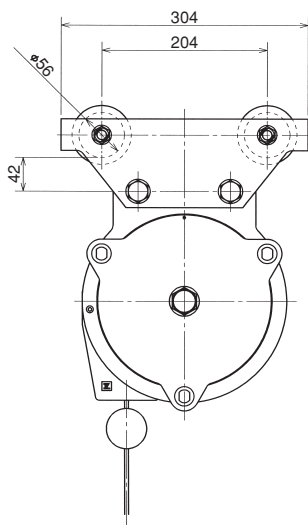
Accessories

EHB Trolley



Part No.
LHP001899
Applicable width of beam
75mm, 100mm

Dimensions

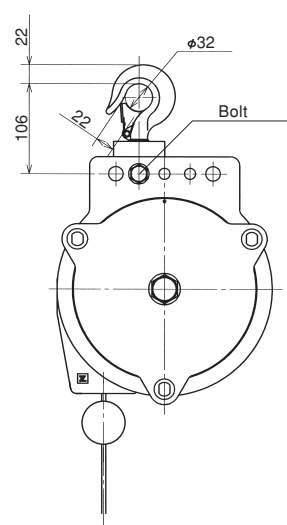


EHB Hook set

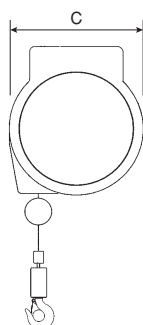
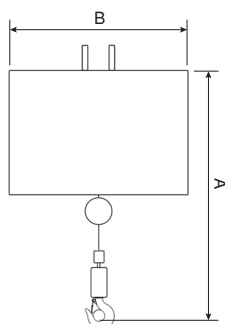


For MS • MS-A • MS-AG • MS-ATC • BC1
Part No.
LHP001900
For MSD
Part No.
LHP001991
For BC2 • BC2-H • ABC
Part No.
LHP002146

Dimensions



Dimensions



Model	Module	Dimensions (mm)			
		A		B	C
		MIN.	MAX.		
EHB-50S	MS	526 (517)	1226 (1167)	337	211
	MS-A	526 (517)	1226 (1167)	362	211
	MS-AG	921 (912)	1621 (1562)	362	211
	MS-ATC	704 (695)	1404 (1345)	362	211
	ABC-5P-B	526 (517)	1226 (1167)	478	363
	ABC-5G-B	811 (802)	1511 (1452)	478	363
	BC1	526 (517)	1226 (1167)	416	211
	BC2	526 (517)	1226 (1167)	347	319
EHB-50	MS	526 (517)	2426 (2317)	473	211
	MS-A	526 (517)	2426 (2317)	498	211
	MS-AG	921 (912)	2821 (2712)	498	211
	MS-ATC	704 (695)	2604 (2495)	498	211
	ABC-5P-B	526 (517)	2426 (2317)	516	363
	ABC-5G-B	811 (802)	2711 (2602)	516	363
	BC1	526 (517)	2426 (2317)	552	211
	BC2	526 (517)	2426 (2317)	495	319
EHB-85	MS	570 (560)	2470 (2360)	466	252
	MS-A	570 (560)	2470 (2360)	491	252
	MS-AG	965 (955)	2865 (2755)	491	252
	MS-ATC	746 (736)	2646 (2536)	491	252
	ABC-5P-B	570 (560)	2470 (2360)	516	386
	ABC-5G-B	853 (843)	2753 (2643)	516	386
	BC1	570 (560)	2470 (2410)	545	252
	BC2	570 (560)	2470 (2410)	495	340
EHB-85D	MSD	570	2470	520	326
EHB-130	MS	652 (629)	2552 (2429)	469	305
	MS-A	652 (629)	2552 (2429)	494	305
	MS-AG	1020 (997)	2920 (2797)	494	305
	MS-ATC	803 (780)	2703 (2580)	494	305
	ABC-5P-B	652 (629)	2552 (2429)	516	440
	ABC-5G-B	910 (887)	2810 (2687)	516	440
	BC1	652 (629)	2552 (2429)	547	305
	BC2	652 (629)	2552 (2429)	495	393
EHB-270	MSS	652 (629)	2452 (2329)	591	305
	MS-A	652 (629)	2452 (2329)	616	305

() means dimensions of chain type.

*Items shown in this catalogue are subject to change without notice. Please note we have no responsibility for missing and fault on this printing.

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