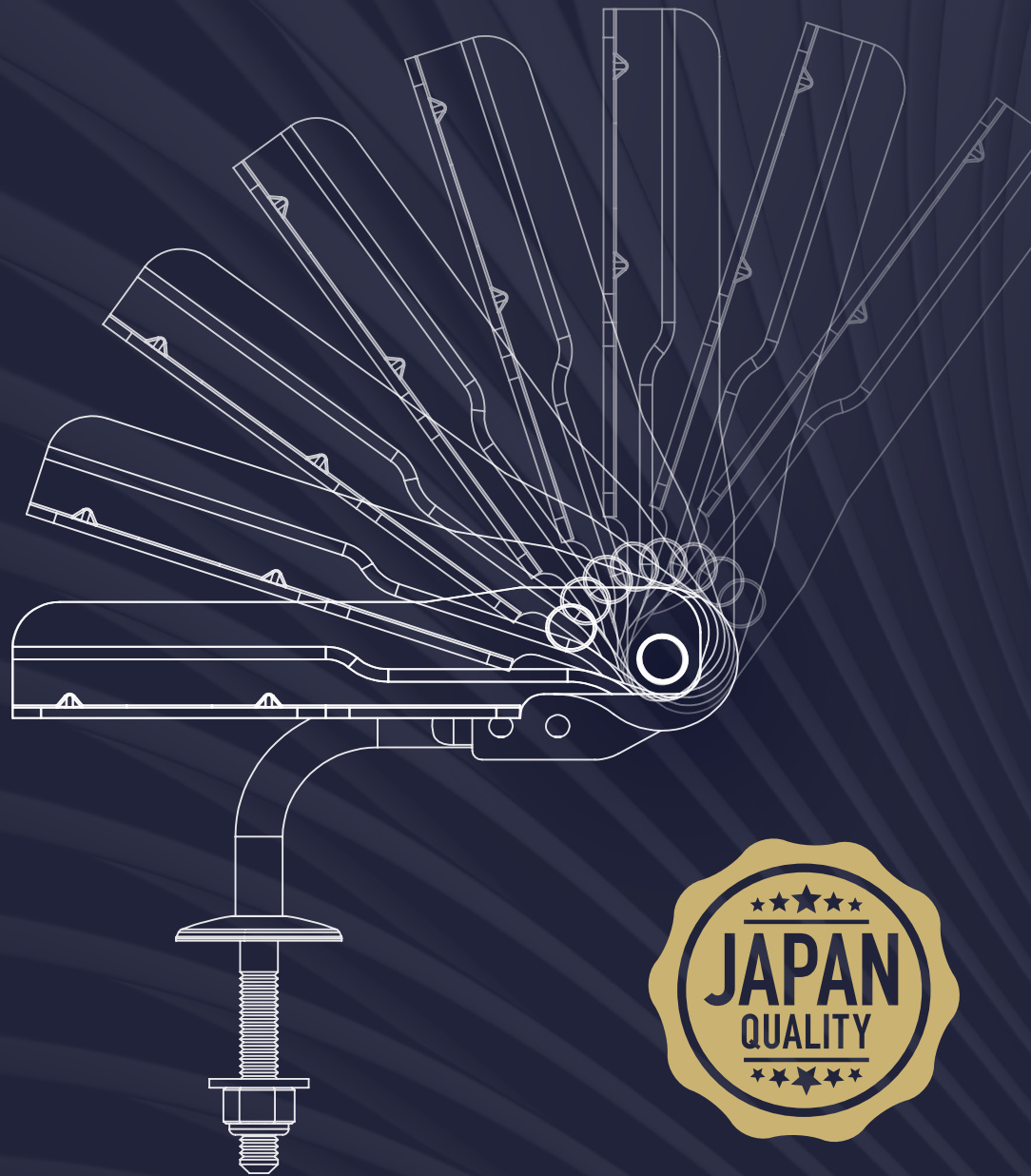




Heart & Technology

KOYO Corporation  
**PRODUCT  
CATALOGUE**  
Vol.7





# The KOYO Philosophy

KOYO was established in 1926 and started to manufacture a wide variety of functional components that make furniture and equipment we use today more user-friendly.

Our mission is to blend Heart and Technology to make a contribution to global markets through a corporate focus on human values, developing products of superior quality and safety.

We will continue to work hard to win the trust and respect of our customers and our partners all over the world.



## Craftsmanship with Heart & Technology





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**P.05-06** Product List

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  - P.10** ST
  - P.11** CB01
  - P.12** CB02
  - P.13** LS200a
  - P.14** LS300
  - P.15** LS200
  - P.16** LS100
  - P.17-18** IS450
  - P.19-20** IS250
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  - P.23** FH (Friction Hinge), KA (torque type)
  - P.24** BRM, MS-4
  - P.25** EL-02H
  - P.26** EL-03H
- 

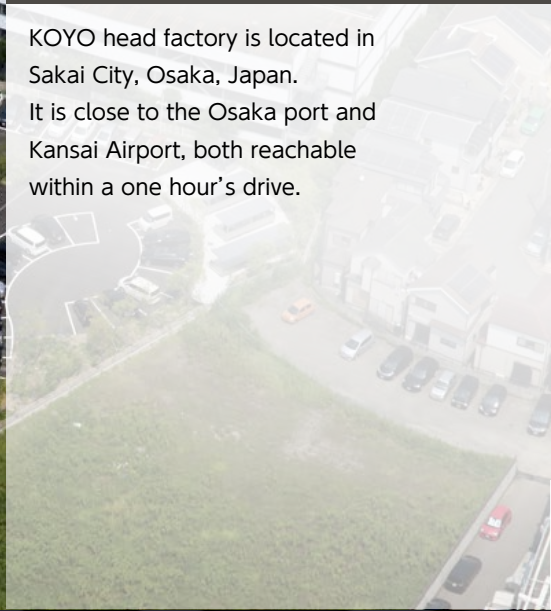
- P.29** KDR
  - P.30** FR
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  - P.32** KS-12HG, KS16HG (High Strength Type)
  - P.33** KS-12AT (For Headrest),  
KS-16URG, KS-12URG (For Square Pipe),  
KS-AMG (High Power Type)
  - P.34** KS-12HG(FD) (Folding Type)
  - P.35-36** KDS (Cam Type Reclining Fitting),  
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KX-U7 (Lever-Type Gear),  
KX-W Spring (Lever-Type Gear)
  - P.39** SPH (Spring Hinge),  
OLH (One Lock Hinge)
  - P.40** KR2 (Bending Hinge)
- 

- P.43** Swivel (Light),  
Swivel (Standard),  
Swivel (Standard RR),
  - P.44** Swivel (185 PITCH),  
Swivel (AR 360),  
Swivel (AR)
  - P.45** Swivel (Lever Stop),  
Swivel (Combo),
- 



### Head Office(Osaka, Japan)

KOYO head factory is located in Sakai City, Osaka, Japan. It is close to the Osaka port and Kansai Airport, both reachable within a one hour's drive.



Our core planning, development, and quality control are concentrated at our Japan factory.



KOYO Corporation is committed to quality. We are to use our full skills and knowledge to send high-quality and heartfelt parts out to the world.



At our quality department, critical dimensions are inspected by ultra-precision machines to maintain our high standard quality.

### Vietnam Factory (Hanoi)

Most of the final assembly is done at our Vietnam Factory. It has a total floor area of 7,690 square meters, and its quality control management system is based on ISO 9001. Our overseas facilities are all managed by members of the headquarter, allowing a smooth cooperation for a timely world wide delivery.





Our products are made with selected high tension Japanese steel, guaranteeing a high durability for each metal part.



The introduction of the newest servo-press machines allows us the most efficient stamping process with high productivity.



A variety of molds are produced and maintained by our engineering team supporting our flexible production.



We provide a fully integrated in-house service, covering the designing, manufacturing, and the test stamping of molds for seamless precision and efficiency.



The introduction of an automated assembly machine has significantly enhanced the company's productivity, driving greater operational efficiency and momentum.



Heart & Technology

## Angle Adjustment Parts (for Wood Frame) Product List



### GS

Application: Headrest  
Armrest  
Features: ER FUNCTION  
Page: P.09



### GS-S

Application: Headrest  
Armrest  
Features: ER FUNCTION  
Page: P.09



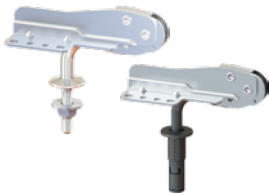
### ST (SOUND ZERO)

Application : Headrest  
Armrest  
Strength: 220N·m  
Page: P.10



### CB01 (SAKURA)

Application : Headrest  
Strength: 100N·m  
Page: P.11



### CB02 (SAKURA)

Application : Headrest  
Armrest  
Strength: 200N·m  
Page: P.12



### LS200α

Application : Headrest  
Armrest  
Strength: 200N·m  
Page: P.13



### LS300

Application: Backrest  
Armrest  
Strength: 300 N·m  
Page: P.14



### LS200

Application : Headrest  
Armrest  
Strength: 200N·m  
Page: P.15



### LS100

Application : Headrest  
Strength: 100N·m  
Page: P.16



### IS450

Application: Backrest  
Armrest  
Strength: 450N·m  
Page: P.17-18



### IS250

Application : Headrest  
Armrest  
Strength: 250 N·m  
Page: P.19-20



### LS100TR, LS100LT

Application: Headrest  
Strength: 100N·m  
Page: P.21



### IS150T, IS150LT

Application: Headrest  
Strength: 150N·m  
Page: P.22



### FH

Application: Headrest  
Armrest  
Strength: 2 or 8N·m  
Page: P.23



### KA

Torque Type  
Application: High-Back/  
Low-Back Adjustment  
Page: P.23



### BRM

Application: Backrest,  
Forward/  
Backward Slide  
Page: P.24



### MS-4

Application: Detachable Backrest  
Page: P.24



### EL-02H

Application: Headrest  
Page: P.25



### EL-03H

Application: Headrest  
Page: P.26

## Angle Adjustment Parts (for Pipes) Product List



### KDR

Application: Backrest  
Strength: 330N·m/230N·m  
Page: P.29



### FR

Application: Backrest  
strength: 260N·m/210N·m  
Page: P.30



### KS-12SE

Application: Backrest  
Strength: 210N·m  
Page: P.31



### KS-12HG, KS-16HG

Application: Backrest  
Strength: 270N·m  
Strengthened Type  
Page: P.32



### KS-12AT

Application: Headrest  
Strength: 100N·m  
Page: P.33



### KS-16URG, KS-12URG

Application: Backrest  
Compatible with  
Square Pipe  
Strength 210N·m/270N·m  
Page: P.33



### KS-AMG

Application: Backrest  
Compatible with  
Inch Pipes  
Strength: 360N·m  
Type: High Power  
Page: P.33



### KS-12HG (FD)

Application: Folding Backrest  
Strength: 260N·m  
Page: P.34



### KDS

Application: Backrest  
Strength: 180N·m/240N·m  
Page: P.35



### KDS-5V

Application: Footrest  
Strength: 180N·m  
Page: P.36



### KX

Lever-Type Gears  
Application: Backrest  
Strength: 390N·m  
Page: P.38



### KX-U7

With Stopper  
Application: Backrest  
Strength: 390N·m  
Page: P.38



### KX-W Spring

W-Spring Gear  
Application: Backrest  
Strength: 390N·m  
Page: P.38



### SPH

Spring Hinge  
Page: P.39



### OLH

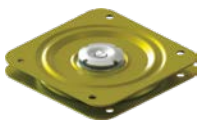
One Lock Hinge  
Page: P.39



### KR2

Folding Hinge  
Page: P.40

## Swivel Product List



### Light

Rotation: 360°  
Compatible Seat Width: 450mm  
Page: P.43



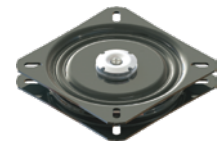
### STANDARD

Rotation: 360°  
Compatible Seat Width: 500mm  
Page: P.43



### Standard RR

Rotation: 360°  
Compatible Seat Width: 600mm  
Page: P.43



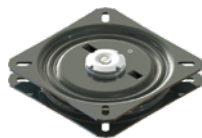
### 185 PITCH

Rotation: 360°  
Compatible Seat Width: 800mm  
Page P.44



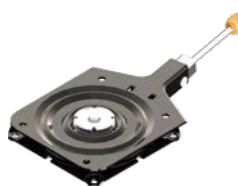
### Auto Return SWL AR360

Rotation: 360° Autoreturn  
Compatible Seat Width: 800mm  
Page: P.44



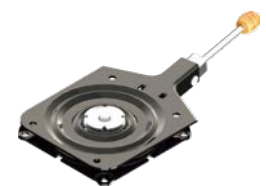
### Auto Return SWL AR

Rotation: 180°(90° adjustable to  
the left and right)  
Compatible Seat Width: 800mm  
Page: P.44



### Lever Stop

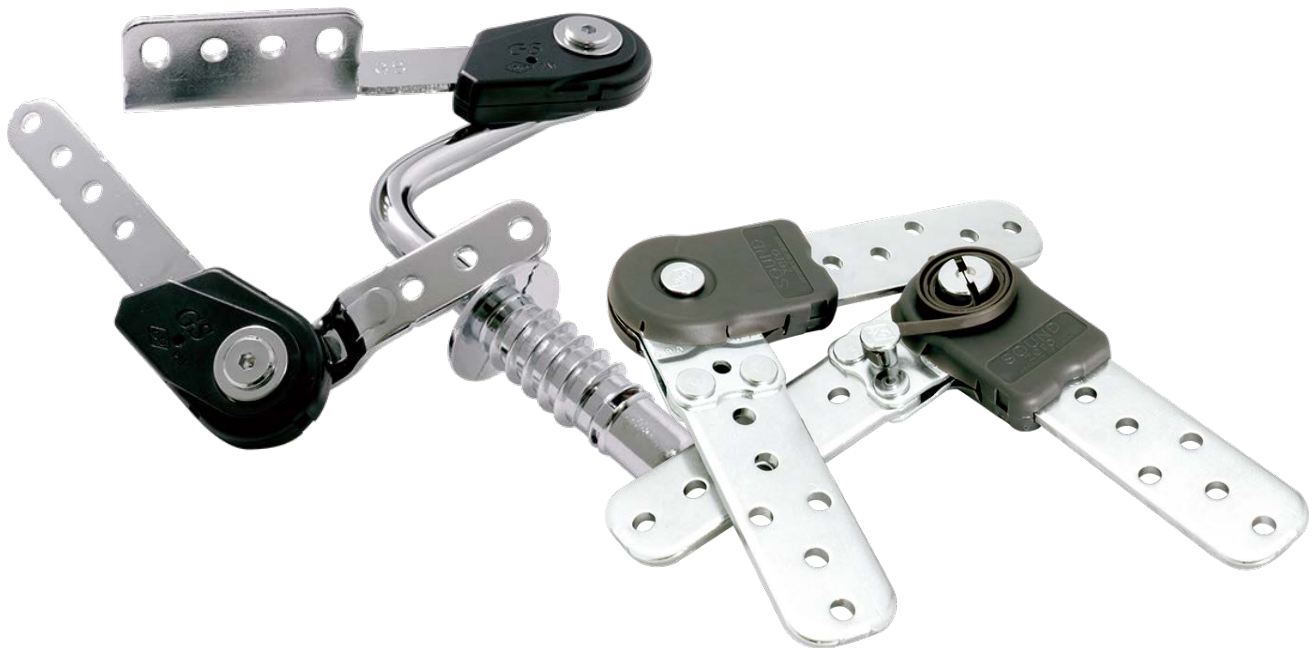
Rotation: Locked at every 90° pitch.  
Compatible Seat Width: 600mm  
Page: P.45



### COMBO

Rotation: Locked at every 90° pitch  
+ Free  
Compatible Seat Width: 600mm  
Page: P.45

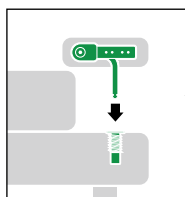
# Angle Adjustment Parts for Wood Frame



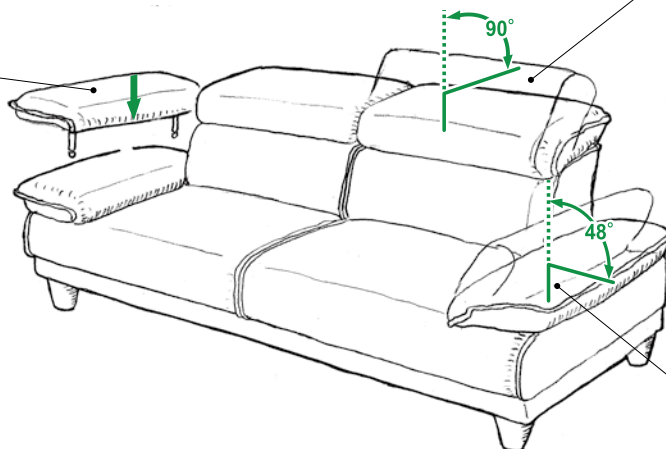
## Features

CB01, CB02, GS-ER, LS100, LS200, LS300, and LS200 $\alpha$  offer various combinations of bases and arms. You can select the base and arm to match your sofa's design and frame.

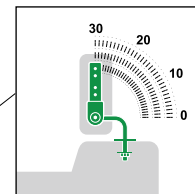
Easily attach and remove with the detachable socket.



- LS200 ▶ P.15
- LS300 ▶ P.14
- LS200- $\alpha$  ▶ P.13
- GS-ER ▶ P.09
- CB02 ▶ P.12

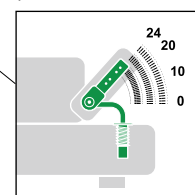


For the headrest, it adjusts from low-back to high-back.



- CB01 ▶ P.11
- GS-ER ▶ P.09
- LS100 ▶ P.16, P.21
- IS150 ▶ P.22

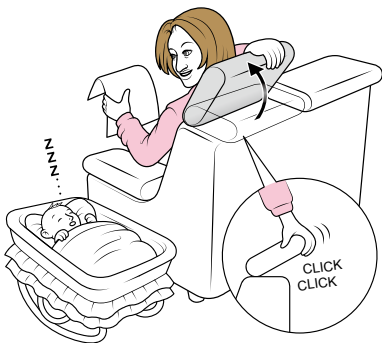
For the armrest, it adjusts height or can be used as a pillow.



- GS-ER ▶ P.09
- LS200- $\alpha$  ▶ P.13
- LS200 ▶ P.15
- CB02 ▶ P.12

## Quiet Operation with No Noise

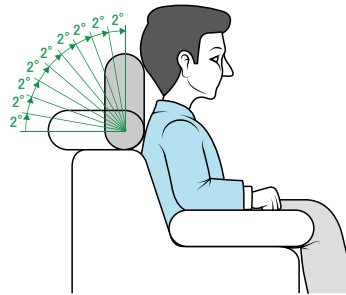
It operates silently, ideal for living rooms and quiet places such as theater and library.



- GS-ER** ▶ P.09
- ST** ▶ P.10

## Smooth Operation (stepless /2°Pitch)

The smooth stepless design and sophisticated 2° pitch structure allow for precise angle adjustments.



### Stepless

- GS-ER** ▶ P.09
- FH** ▶ P.23

### 2°Pitch

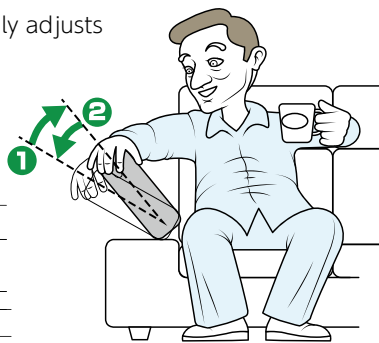
- ST** ▶ P.10
- LS200-α** ▶ P.13
- LS300** ▶ P.14
- LS200** ▶ P.15

## Free-Lock Mechanism

Once released, it easily adjusts to any angle.



1. Unlock at the top.
2. Lower it all the way down.
3. Lift and adjust to the angle.



1. Unlock at the top.
2. Locks at any angle.

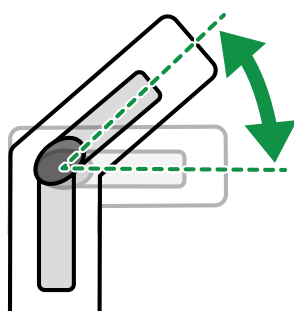
- CB01** ▶ P.11
- CB02** ▶ P.12
- LS200-α** ▶ P.13

## Load capacity



- 100 N·m** **CB01** ▶ P.11 **LS100** ▶ P.16
- 200 N·m** **CB02** ▶ P.12 **LS200-α** ▶ P.13
- LS200** ▶ P.15
- 220 N·m** **ST** ▶ P.10
- 250 N·m** **IS250** ▶ P.19
- 300 N·m** **LS300** ▶ P.14
- 450 N·m** **IS450** ▶ P.17

## Durability for Repeated Use



### Over 10,000 times

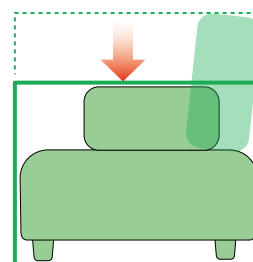
- GS-ER** ▶ P.09
- ST** ▶ P.10
- IS250** ▶ P.19
- IS450** ▶ P.17

### Over 50,000 times

- LS200-α** ▶ P.13
- LS100** ▶ P.16
- LS200** ▶ P.15
- LS300** ▶ P.14

## Save Shipping Costs

Compact packaging helps to minimize shipping costs.



- LS300** ▶ P.14
- MS-4** ▶ P.24

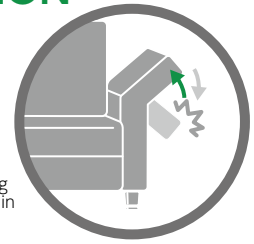
### Silent Stepless Gear

Enables silent, continuous angle adjustments.



### ER FUNCTION

Prevents failure from overload.

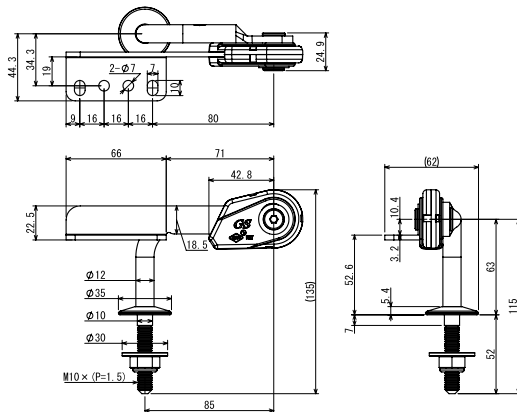


※Please avoid performing multiple ER operations in a short time.

### Lineup

**GS-ER90L-32AF**  
(Lock nut type)

Model Name **GS-ER-90L-32AF**  
Series Movable Range Arm Type Base Type



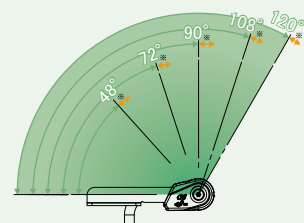
Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.74kg	11.64kg	15	260×360×135

**GS(S)-ER90I-A180**  
(Inner equipped type)



Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.34kg	14.0kg	40	260×360×180

### Operation Pattern (Stepless Adjustment)



### Base

L-type



I-type



### Arm

No.10



No.A



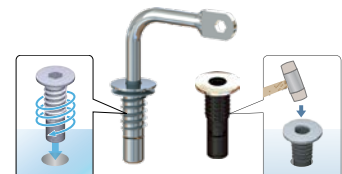
No.31AF~33AF



No.31B~33B



No.31G~33G



G4 Metal Socket

G5 Plastic Socket

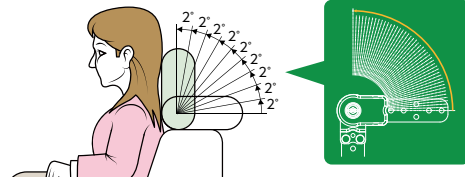
### No Operating Noise

It operates silently, making it ideal for living rooms, theaters, and libraries.



### Micro Pitch of 2° per Step

Silent operation and precise 2° pitch allow seamless, fine angle adjustments.

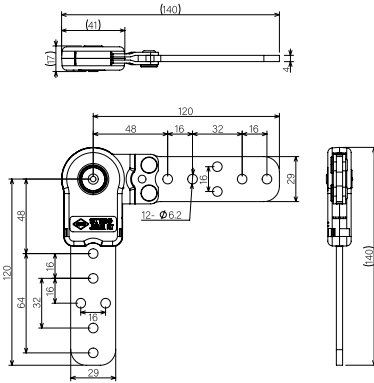


SOFA parts

### Lineup

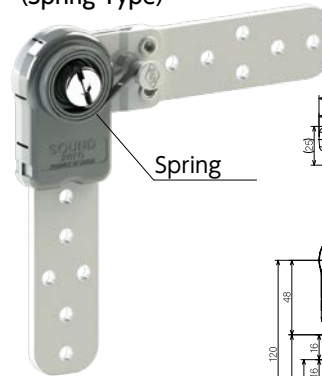
Model Name **ST250-SS45-90-90**  
Series Spring Type Movable Range Starting Position

#### ST250-90-90

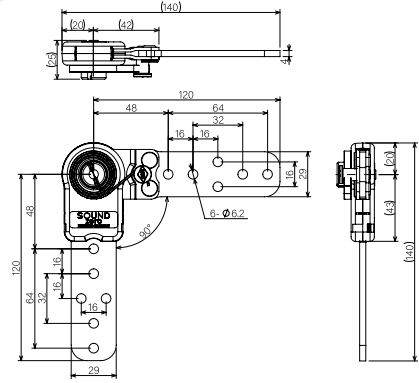


Weight/Pc	Weight/Cartron	Pcs/Cartron	Cartron(L×W×H)
0.3kg	15kg	50	260×360×100

#### ST250-SS45-90-90 (Spring Type)

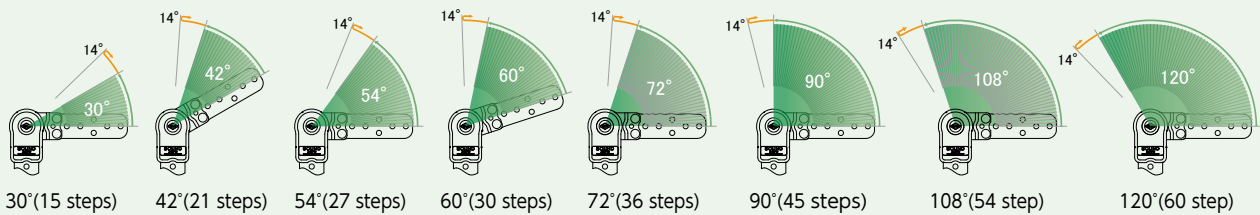


Spring



Weight/Set	Weight/Cartron	Set/Cartron	Cartron(L×W×H)
0.65kg	13.3kg	20	260×360×135

### Operation Pattern (2°Pitch) The start position cannot be customized.



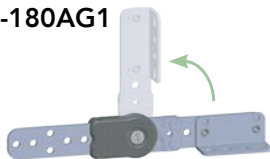
### Options

#### Angle Type

The same movable range as ST250.

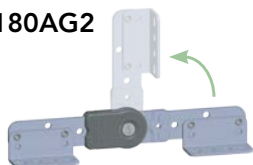
##### ST250-90-180AG1

Angle : 1pc



##### ST250-90-180AG2

Angle : 2pcs

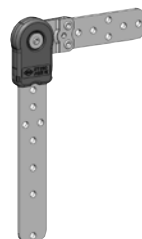


#### Long Arm Type

The same movable range as ST250.

##### ST250-L-90-90

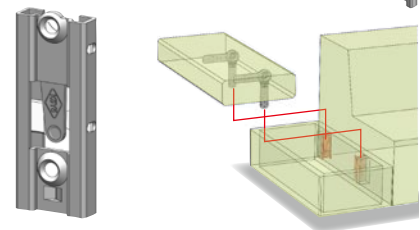
For chairs or sofas with long arms.



#### ST Socket

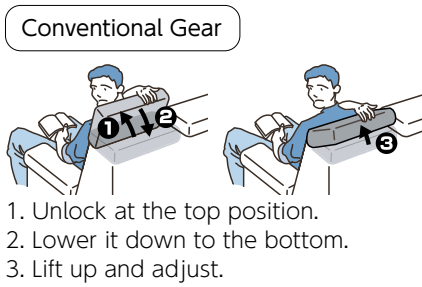
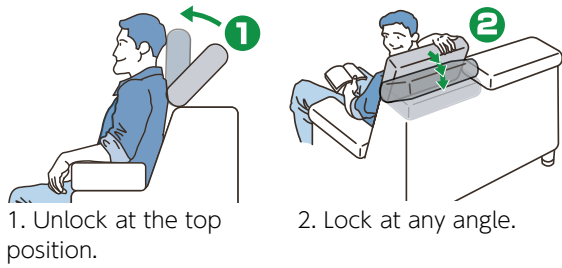
1. Easy to install
2. Improving efficiency of assembly
3. Expansion of design patterns

Sockets allow for the easy attachment of headrests and armrests, reducing packaging size.



# Free-Lock Mechanism

After release, you can easily adjust to your preferred angle.



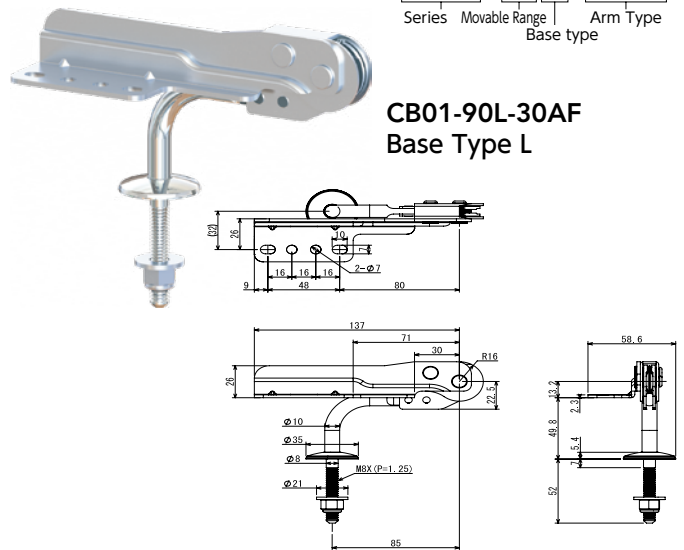
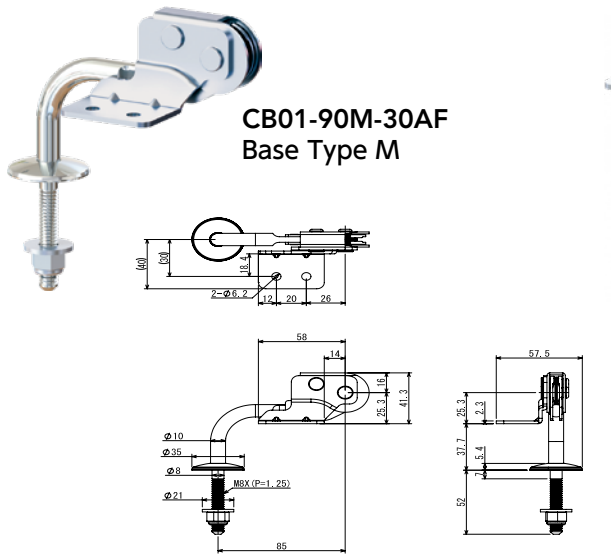
# SAKURA

Load capacity  
100N·m



## Lineup

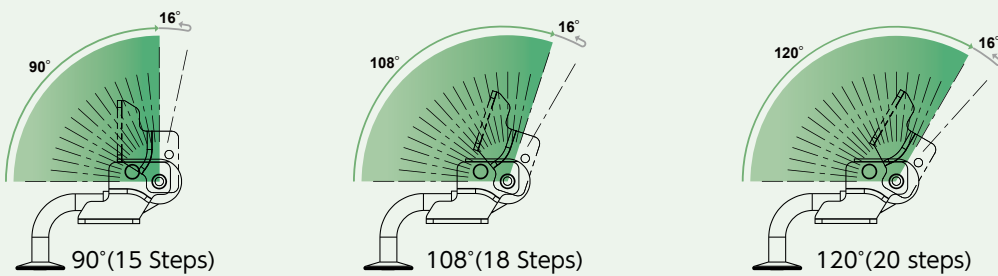
Model Name **CB01-90M-30AF**  
 Series Movable Range Arm Type Base type



Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.58kg	8.4kg	15	260×360×135

Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.58kg	9.2kg	15	260×360×135

## Operation Pattern (6° Pitch)



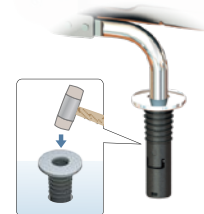
## Arm

No.30AF

No.31AF~33AF

No.31B~33B

No.31G5~33G5

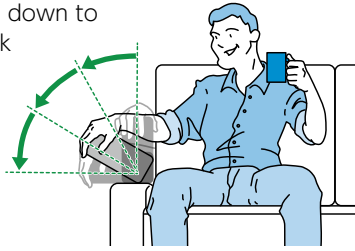


※The socket is made of plastic.

SOFA parts

### Free-Lock Mechanism

No need to lower down to the bottom to lock the gear.



Once unlocked, you can easily adjust your position.



Conventional Gear

Lower down to the bottom



Lift up and adjust

# SAKURA

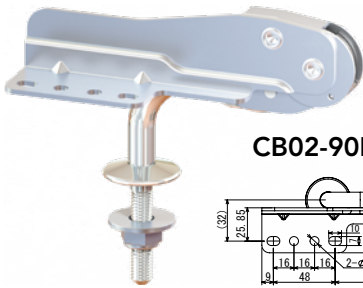
Load capacity 200N·m



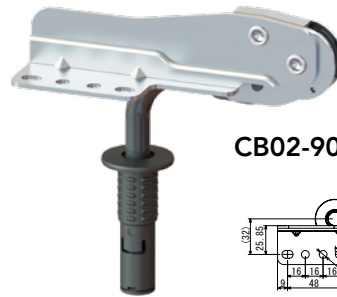
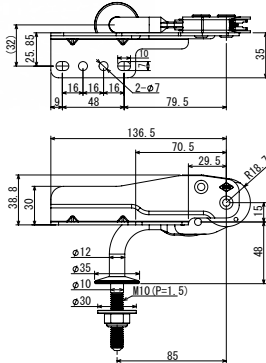
### Lineup

Model Name **CB02-90L-32AF**

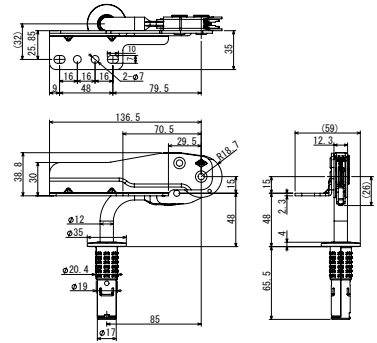
Series Movable Range Arm Type Base type



CB02-90L-32AF



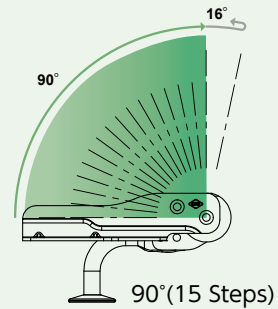
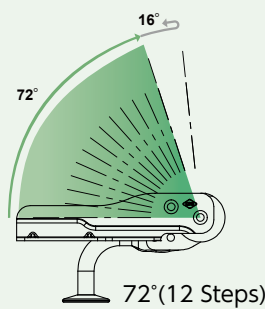
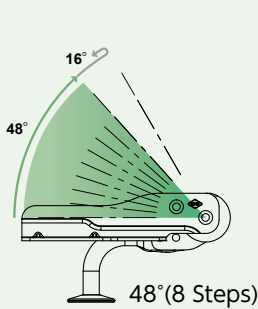
CB02-90L-32G5(MBK)



Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.78kg	12.1kg	15	260×360×135

Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.78kg	12.1kg	15	260×360×135

### Operation Pattern (6° Pitch)



### Arm

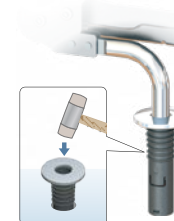
No.31AF~33AF



No.31B~33B



No.31G5~33G5

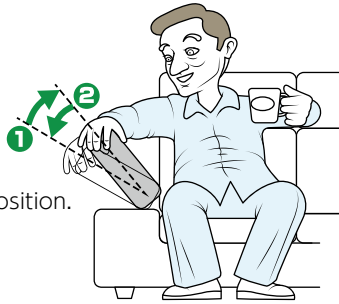


※The socket is made of plastic.



### Free-Lock Mechanism

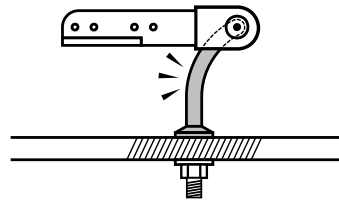
Once unlocked you can easily adjust your position



1. Unlock at the top position.
2. Lock at any angle.

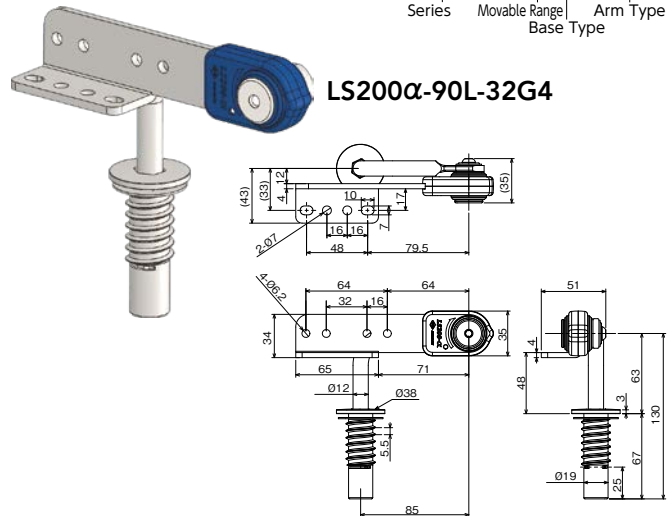
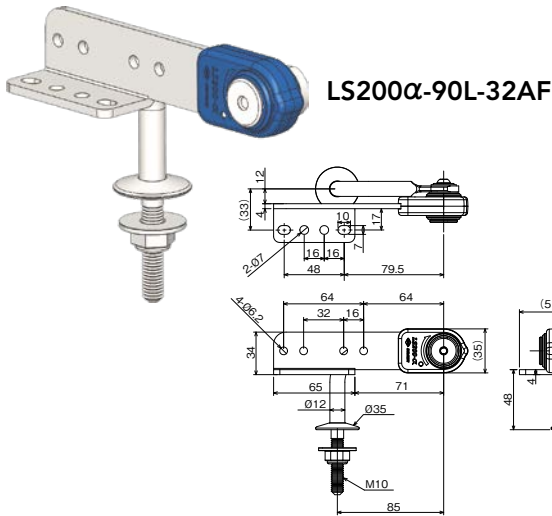
### Flexibility

Still functional even after any possible deformation in use



### Lineup

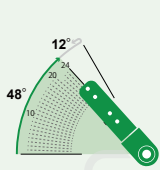
Model Name **LS200 $\alpha$ -90L-32AF**  
 Series Movable Range Arm Type Base Type



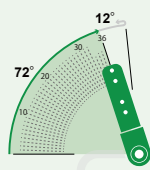
Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.92kg	14.3kg	15	260×360×150

Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
1.09kg	16.8kg	15	260×360×150

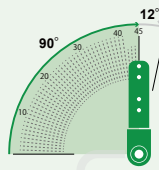
### Operation Pattern (2°Pitch)



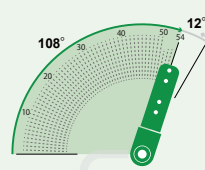
48°(24 steps)



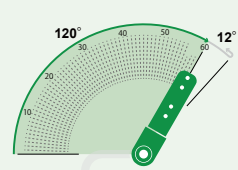
72°(36 steps)



90°(45 steps)

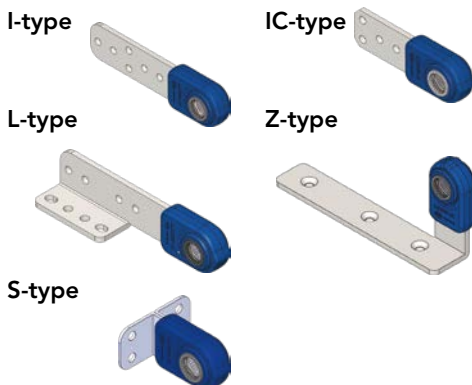


108°(54 steps)

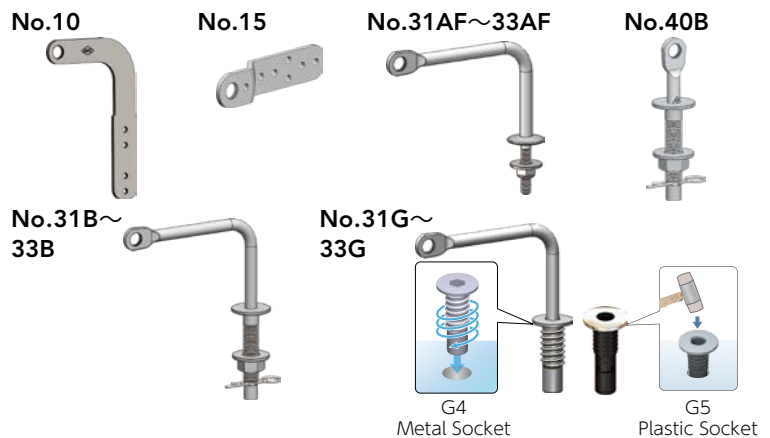


120°(60 steps)

### Base



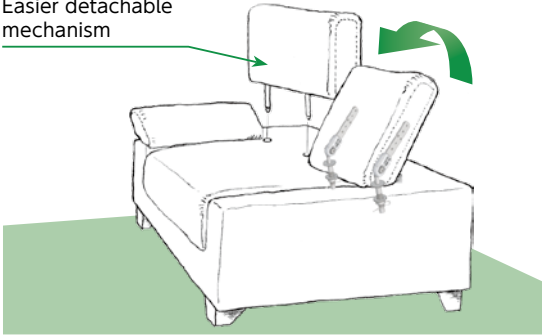
### Arm



### Detachable

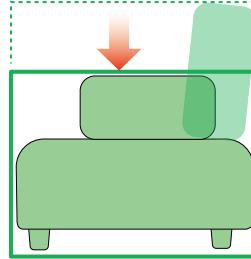
The detachable design allows for separate assembly of the sofa body and the movable parts.

Easier detachable mechanism



### Save Shipping Costs

The detachable design allows for compact packaging and saves shipping costs.



### Load capacity 300N·m

Load capacity improved by over 50% compared to the conventional LS200 series.

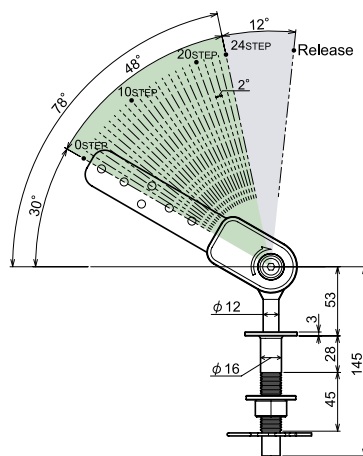


### Lineup

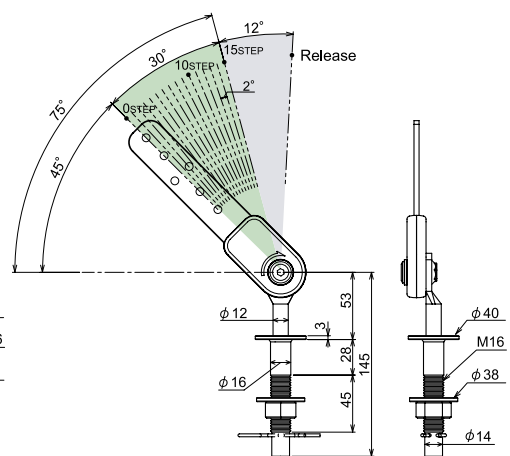
Model Name **LS300-MP48I-40B**  
 series Micro Pitch Base Type Arm Type Movable Range



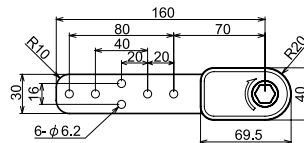
LS300-MP48I-40B



LS300-MP30I-41B

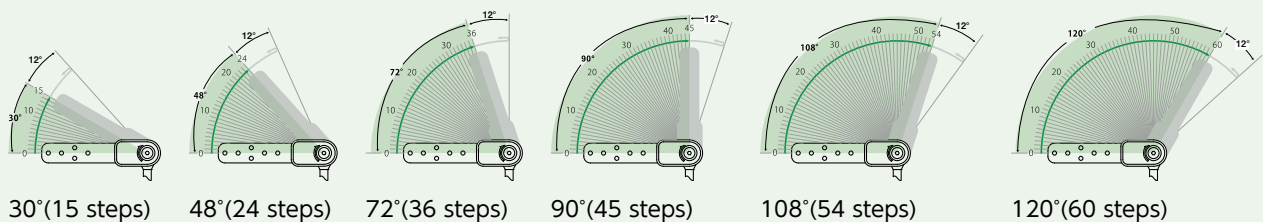


Base



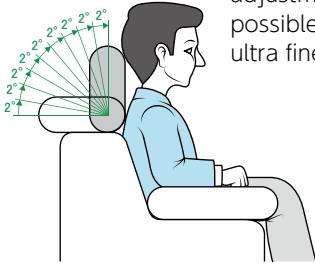
Weight/Set	Weight/Carton	Set/Carton	Carton(L×W×H)
1.02kg	15.8kg	15	200×360×135

### Operation Pattern (2°Pitch)



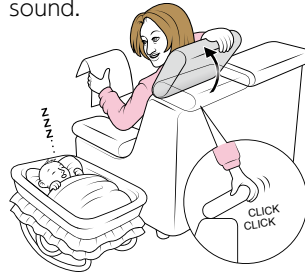
### 2°Pitch Adjustment

Reliable and precise adjustments are possible with 2° ultra fine pitch.

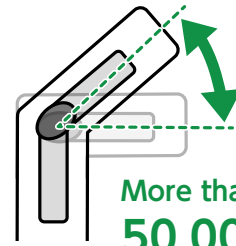


### Quiet click sound

It operates quietly with minimized sound.



### Repetition

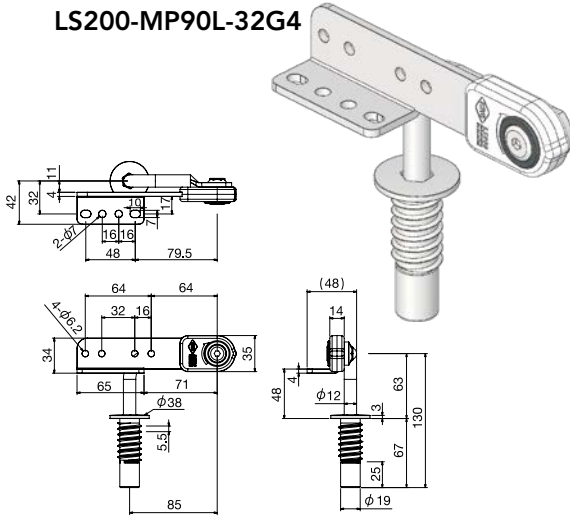


### Lineup

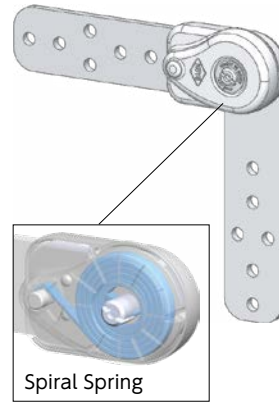
LS200-MP90L-32G4

Model Name **LS200-MP90L-32G**

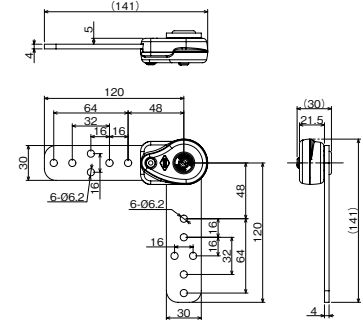
Series Micro Pitch Arm Type Base Type Movable Range



LS200(S)-MP90I-R11 (Spring Type)



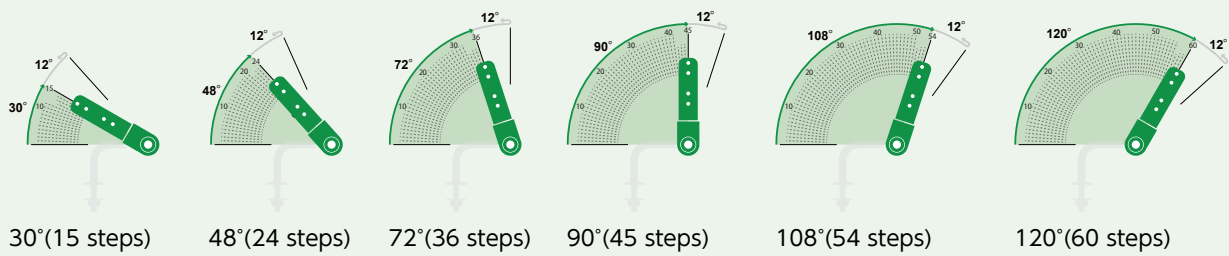
Spiral Spring



Weight/Set	Weight/ Carton	Set/ Carton	Carton (L×W×H)
1.04kg	16.1kg	15	260×360×135

Weight/Set	Weight/ Carton	Set/ Carton	Carton (L×W×H)
0.65kg	10.2kg	15	260×360×135

### Operation Pattern (2°Pitch)



### Base

I-type



IC-type



L-type



Z-type



S-type



### Arm

No.10



No.11



No.15



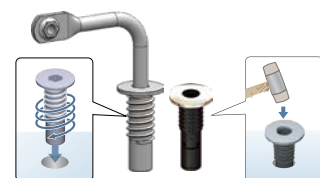
No.31AF~33AF



No.31B~33B



No.31G~33G

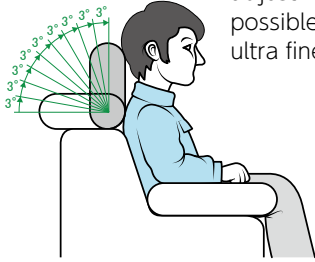


G4 Metal Socket

G5 Plastic Socket

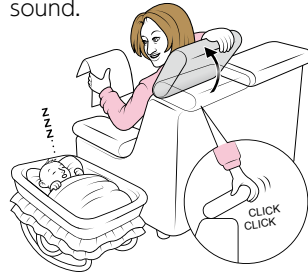
### 3°Pitch Adjustment

Reliable and precise adjustments are possible with 3° ultra fine pitch.

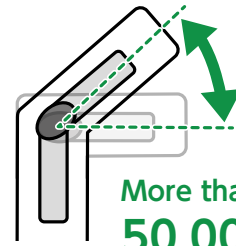


### Quiet click sound

It operates quietly with minimized sound.

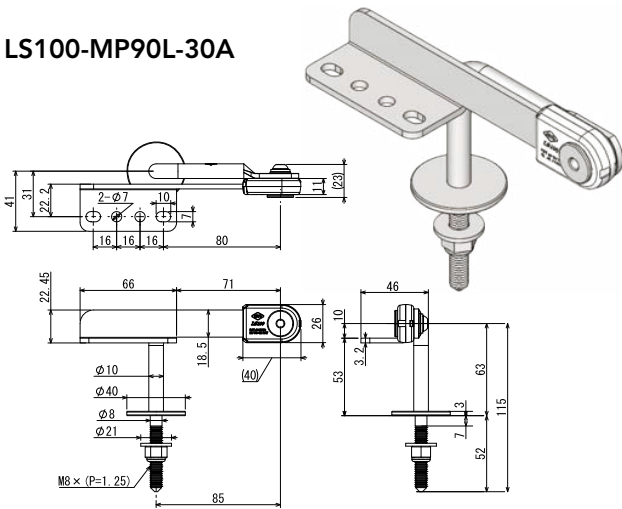


### Repetition



### Lineup

#### LS100-MP90L-30A

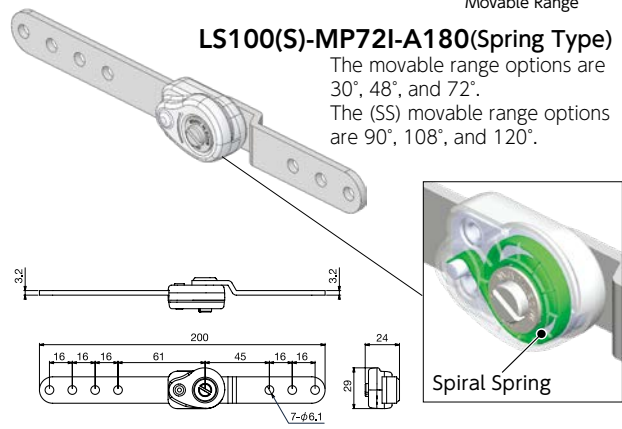


Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.56kg	9kg	15	260×360×135

Model Name **LS100-MP90L-30A**  
 Series: Micro Pitch, Base Type: Arm Type, Movable Range

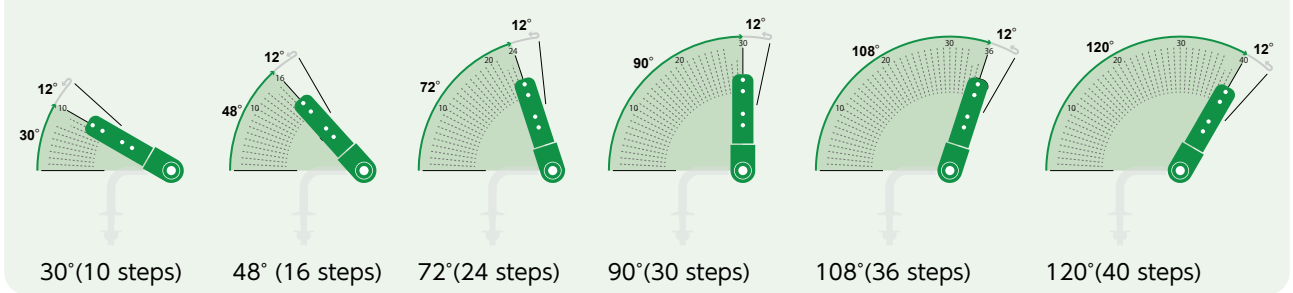
#### LS100(S)-MP72I-A180(Spring Type)

The movable range options are 30°, 48°, and 72°.  
 The (SS) movable range options are 90°, 108°, and 120°.



Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.26kg	15kg	50	260×360×135

### Operation Pattern (3°Pitch)

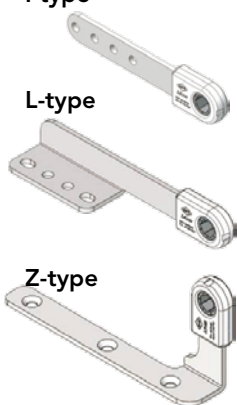


### Base

I-type

L-type

Z-type



### Arm

No.10

No.30A

No.31AF~33AF

No.A

No.31G~33G



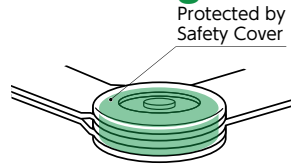
G4 Metal Socket

G5 Plastic Socket

**Slim Design**

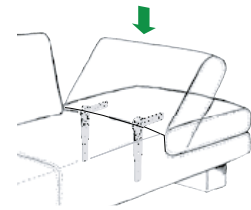


**Safe Design**



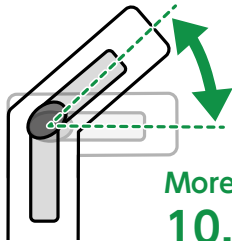
**Strength**

**900N·m**  
(450N·m×2pcs)



For the IS450 type, a set of two can support up to 180 kg with a backrest height of 500 mm.

**Repetition**



More than **10,000** cycles

**Load capacity 450N·m**



※The load capacity decreases by 15% only for the 15-step gear of the IS450 type.

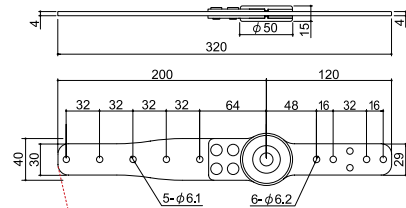
**Lineup**

IS450Y-12-180



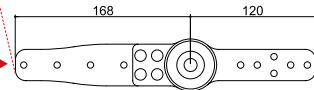
Model Name **IS450Y-12-180**  
Series Step Starting Position

STD



Short type

**32mm Size Down!**



Its shorter design allows it to fit better into the sofa frame.

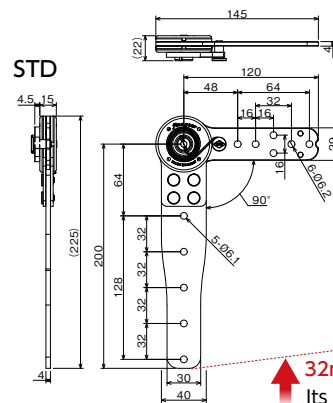
Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
0.46kg	23.5kg	50	260×360×135

IS450Y-SS45-12-90  
(Spring Type)

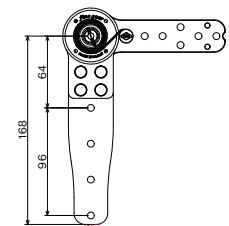


Model Name **IS450Y-SS45-12-90**  
Series Spring Type Step Starting Position

STD



Short type



**32mm Size Down!**

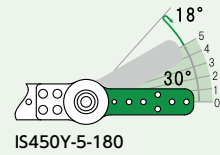
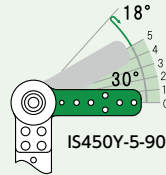
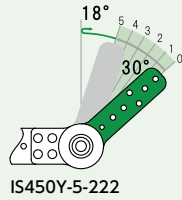
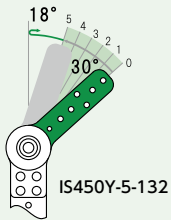
Its shorter design allows it to fit better into the sofa frame.

Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
0.5kg	20.5kg	40 pieces per box (right) + 40 pieces per box (left)	260×360×135

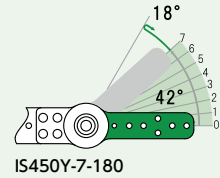
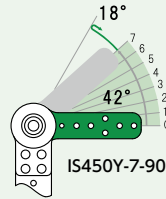
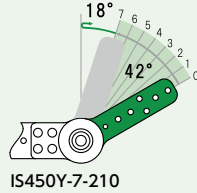
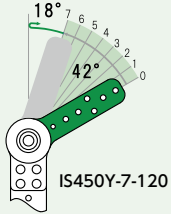
# Operation Pattern (6° Pitch)

For other operation patterns, please consult us.

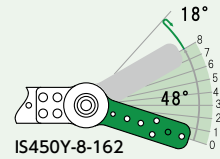
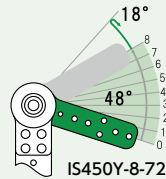
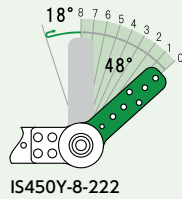
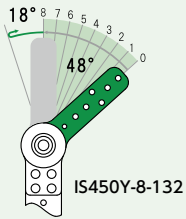
**5 STEPS**  
**(30°)**



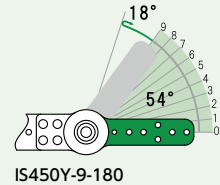
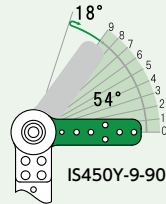
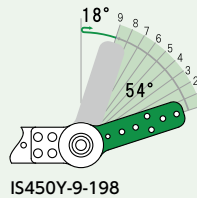
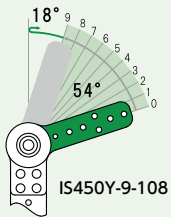
**7 STEPS**  
**(42°)**



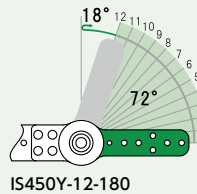
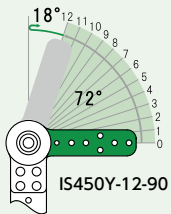
**8 STEPS**  
**(48°)**



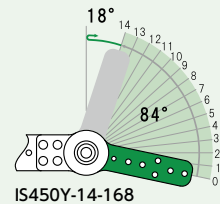
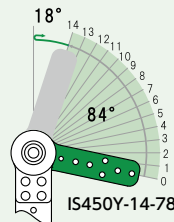
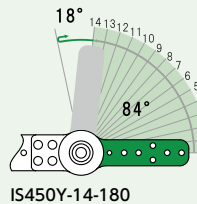
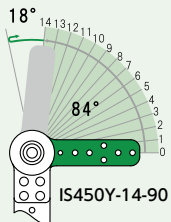
**9 STEPS**  
**(54°)**



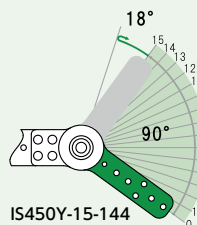
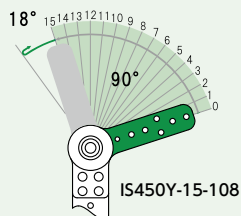
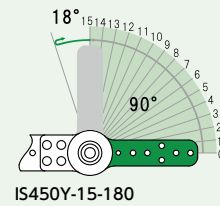
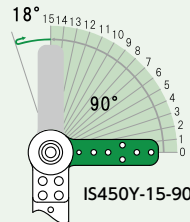
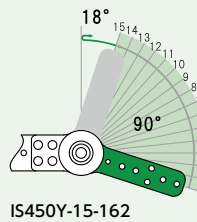
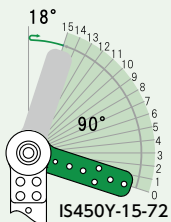
**12 STEPS**  
**(72°)**



**14 STEPS**  
**(84°)**



**15 STEPS**  
**(90°)**



Product lineup designed for the motion patterns of wooden frame sofas.

Load capacity 250N·m

For armrests



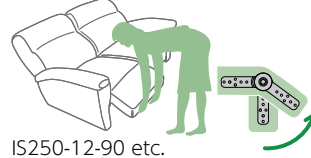
IS250-12-90  
IS250-12-180 etc.

For headrests



IS250-5-180  
IS250-15-90 etc.

For footrests

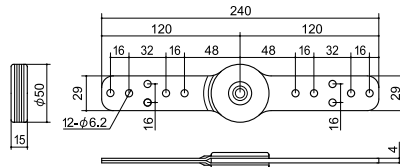


IS250-12-90 etc.



Lineup IS250

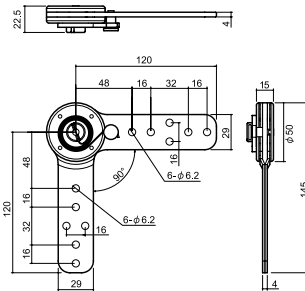
IS250-12-90



Model Name **IS250-12-90**  
Series Step Starting Position

Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (L×W×H)
0.3kg	15.5kg	50	260×360×100

IS250-SS45-15-90  
(Spring Type)



Model Name **IS250-SS45-12-90**  
Series Spring Type Step Starting Position

Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (L×W×H)
0.33kg	13.7kg	40	260×360×100

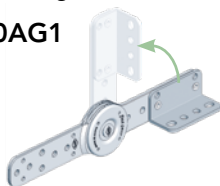
Options

Angle Type

The same movable range as IS250.

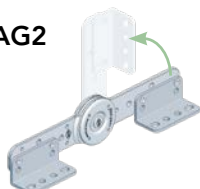
IS250-15-180AG1

Angle : 1pc



IS250-15-180AG2

Angle : 2pcs



Long Arm Type

The same movable range as IS250.

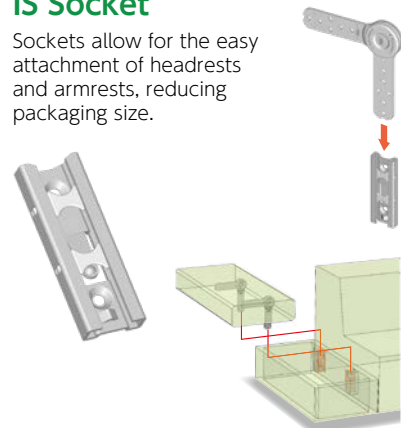
IS250-L-15-90

For chairs or sofas with long arms.



IS Socket

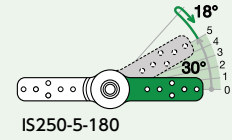
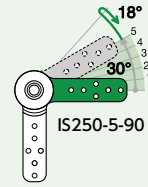
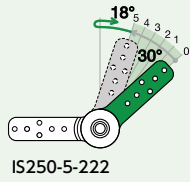
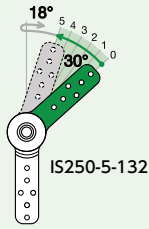
Sockets allow for the easy attachment of headrests and armrests, reducing packaging size.



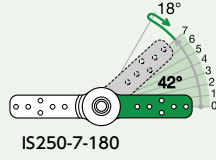
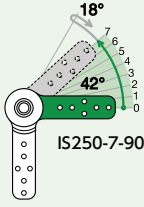
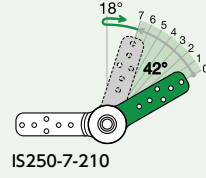
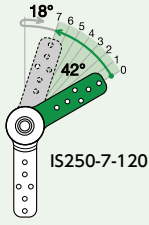
# Operation Pattern (6° Pitch)

For other operation patterns, please consult us.

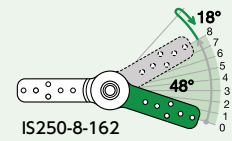
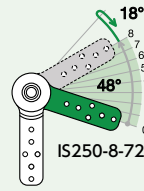
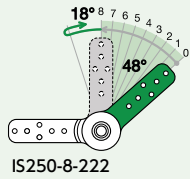
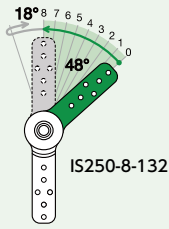
**5 STEPS**  
**(30°)**



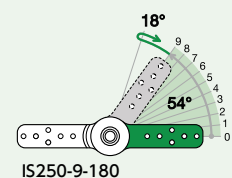
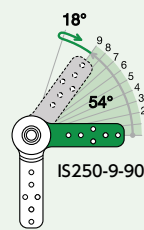
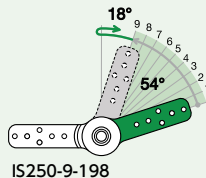
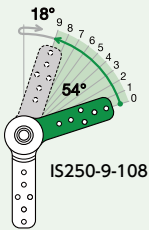
**7 STEPS**  
**(42°)**



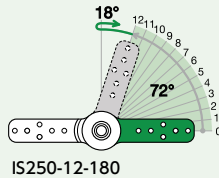
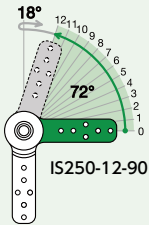
**8 STEPS**  
**(48°)**



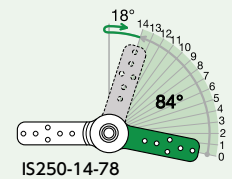
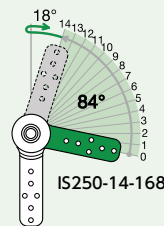
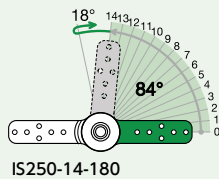
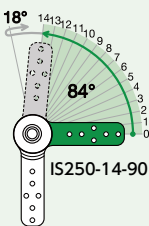
**9 STEPS**  
**(54°)**



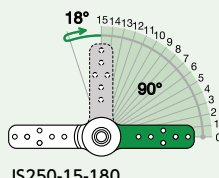
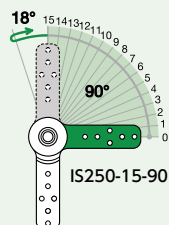
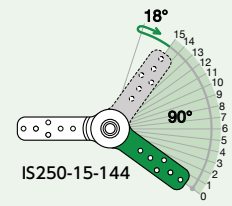
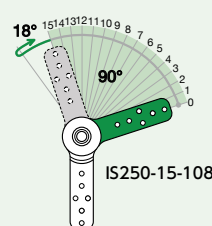
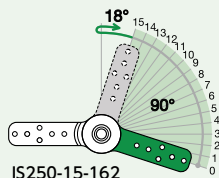
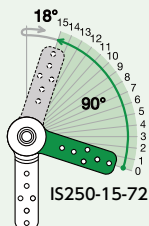
**12 STEPS**  
**(72°)**



**14 STEPS**  
**(84°)**



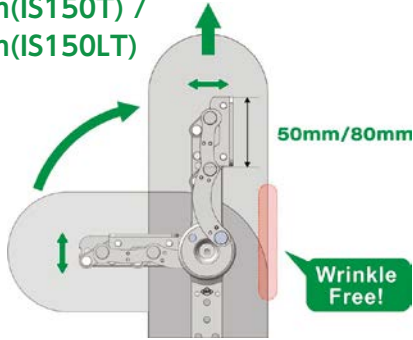
**15 STEPS**  
**(90°)**





**Stroke**

50mm(IS150T) /  
80mm(IS150LT)

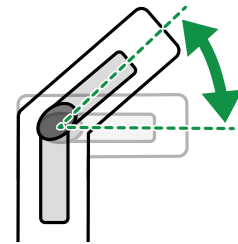


When moving the gear, the angle plate slides up 50mm / 80mm which prevents the fabric from wrinkling.

**Load capacity**  
150N·m



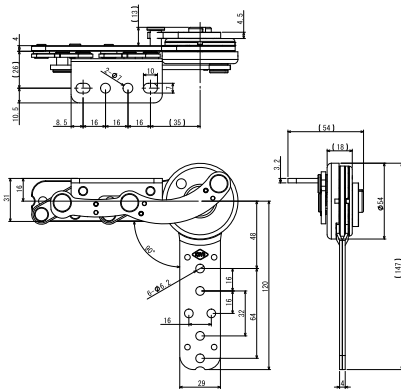
**Repetition**



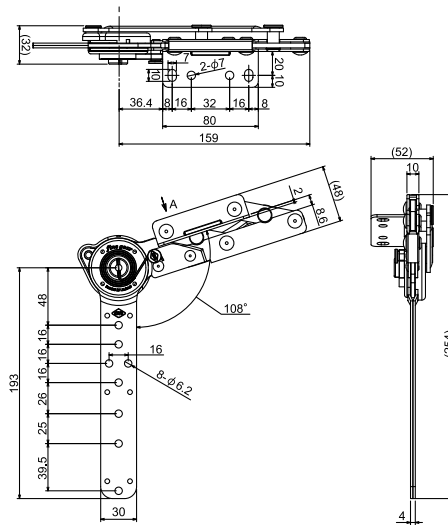
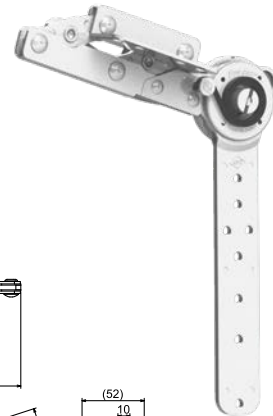
More than  
**10,000** cycles

**Lineup**

**IS150T-15-90**  
(50mm Stretch Type)



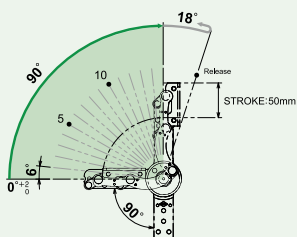
**IS150LT-L-SS45-15-108**  
(80mm Stretch Type)



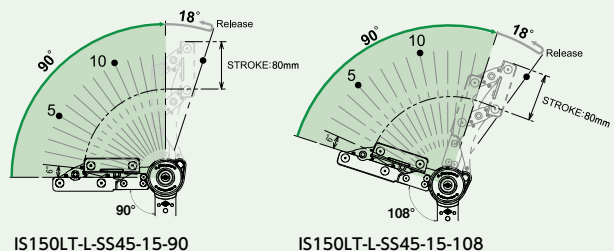
Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.97kg	20.0kg	20	260×360×180

Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
1.5kg	15.5kg	10	260×360×180

**Operation Pattern (6° Pitch)**



**Operation Pattern (6° Pitch)**



## Friction Hinge (FH)

### Silent Stepless Hinge

Allows silent, smooth angle adjustments.



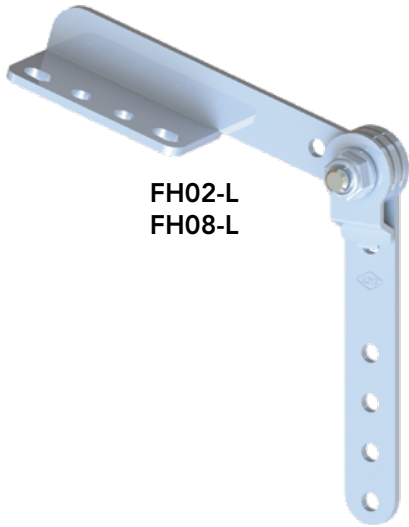
### Free Stop Specification



FH02-L:  $2 \pm 1 \text{ N}\cdot\text{m}$

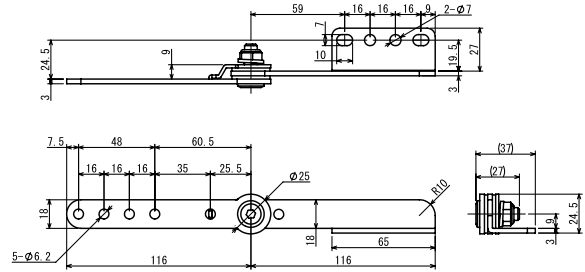
FH08-L:  $8 \pm 2 \text{ N}\cdot\text{m}$

The torque value is the figure at the time of shipment

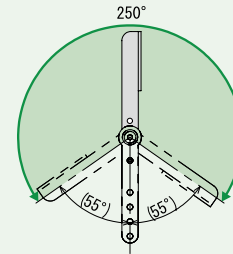


FH02-L  
FH08-L

FH-I



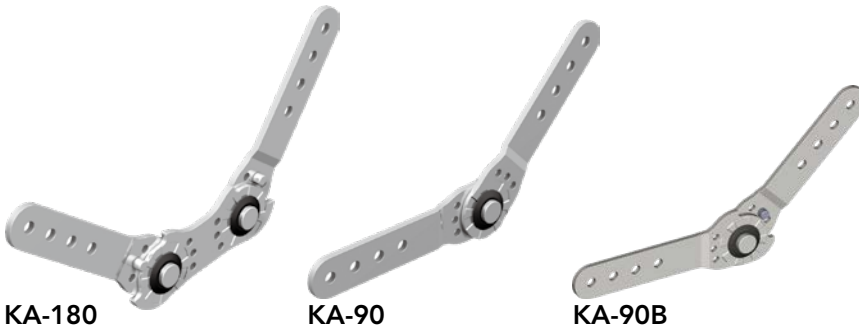
### Operation Pattern (Stepless Adjustment)



Weight/Set	Weight/Carton	Set/Carton	Carton (L×W×H)
0.33kg	17kg	50	260×360×180

## Torque Hinge (KA)

Unlike ratchet locks, it holds at 45° and switches angles in either direction

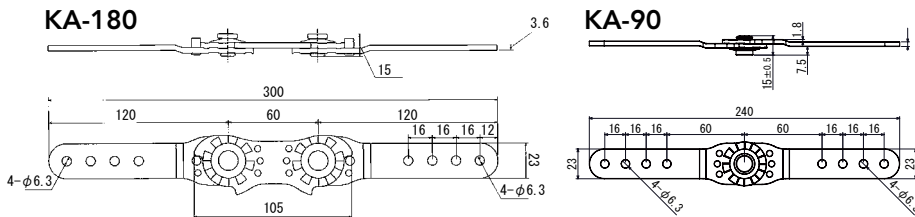
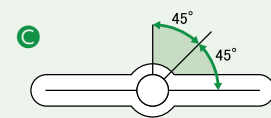
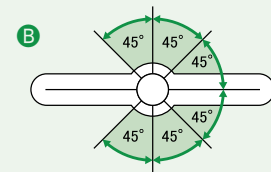
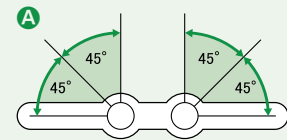


KA-180

KA-90

KA-90B

### Operation pattern



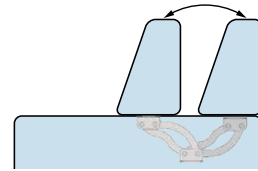
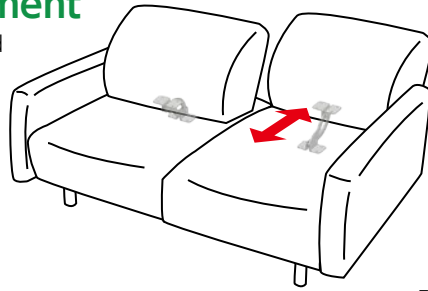
Rotation Torque: Strong: 3 springs, Medium: 2 springs, Weak: 1 spring, Finish: Unichrome Plating

Number	Model	Operation Pattern	Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
115982	KA-180	A	0.28kg	14.5kg		
115984	KA-90	B			50	160×360×135
115985	KA-90B	C	0.2kg	10.5kg		

## Depth Adjustment (BRM)

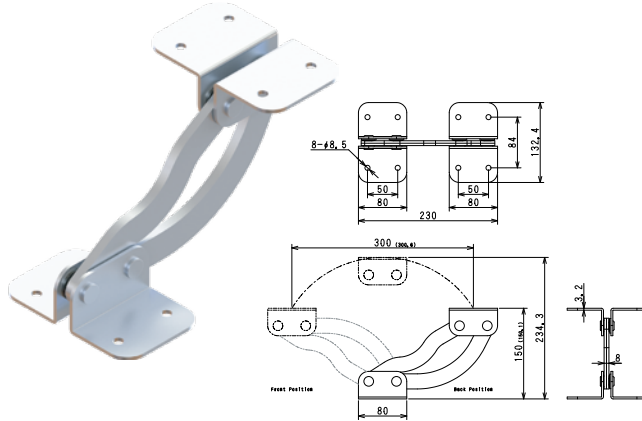
### Backrest Movement

The backrest can be moved to two different positions (front and back).

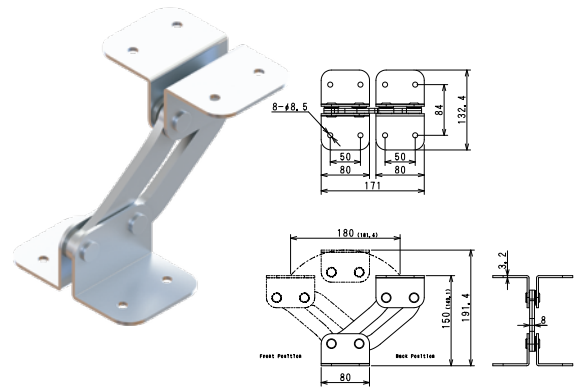


BRM-H15D30 : 300mm  
BRM-H15D18 : 180mm

BRM-H15D30



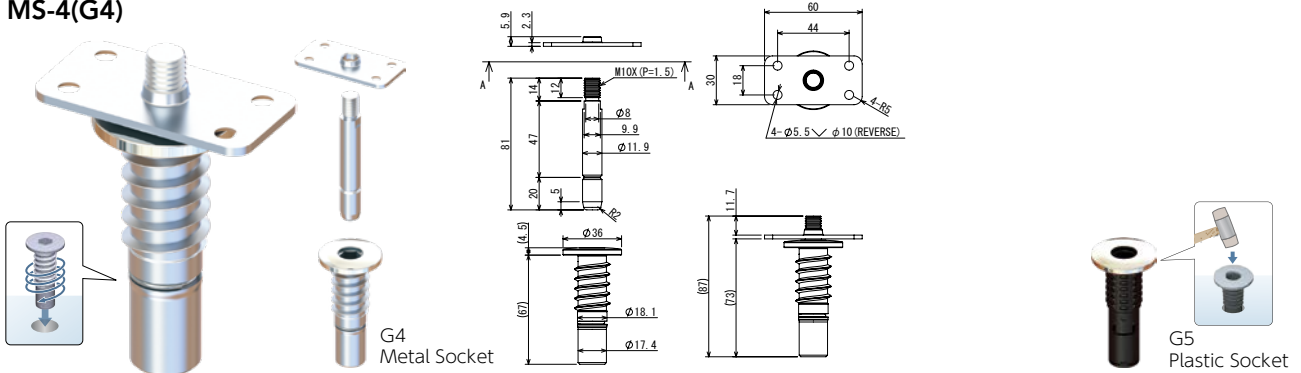
BRM-H15D18



Number	Model	Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
121053	BRM-H15D30	1.42kg	6.2kg	4	260×360×135
121054	BRM-H15D18	1.25kg	6.7kg	5	

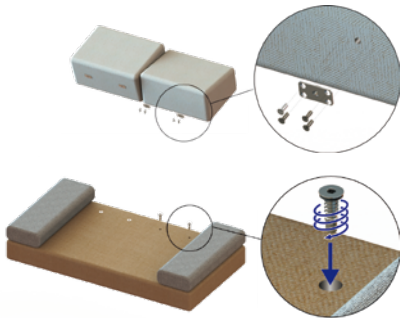
## Knockdown Parts (MS-4)

MS-4(G4)



### STEP1

Secure the plate to the backrest.  
Attach the socket to the base.

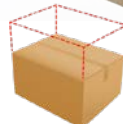


### STEP2

Make sure to include the support columns into the package.

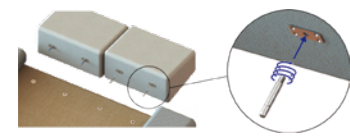


Compact packaging!



### STEP3

After delivery, attach and secure the support columns.



Complete!



Number	Model	Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
121128	MS-4(G4)	0.19kg	19.8kg	100	265×360×155
121131	MS-4(G5)	0.11kg	12.0kg		



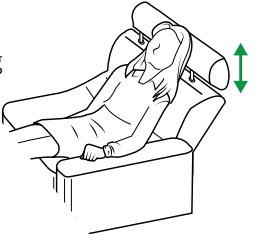
# Motorized Lift Up Mechanism (EL-03H)

## Movability

Refer to the chart for angle options.



Height can be controlled by using the button.



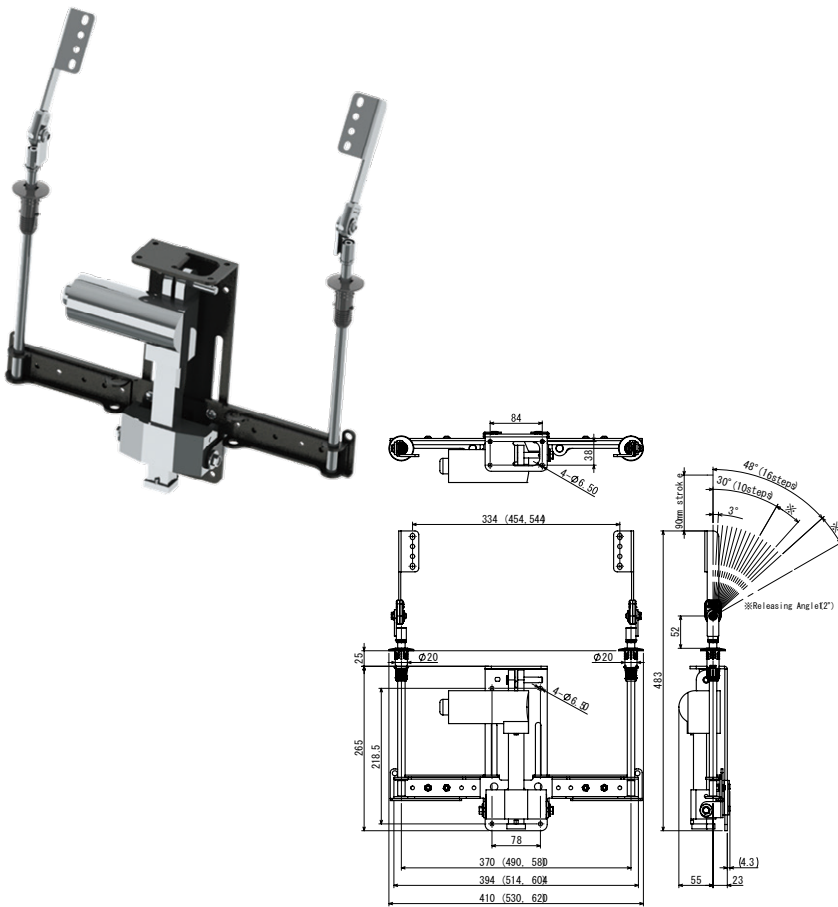
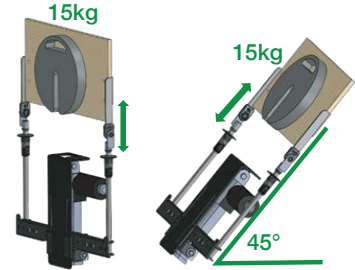
One-hand angle adjustment.

Max 90mm

Motorized height adjustment.

## Load Test

20,000 cycles tested with 15kg load vertically at 45°. No unusual sounds or vibrations.



## Optional Angle Adjustable Parts

LS100-MP30L FOR EL-03H or LS100-MP48L FOR EL-03H

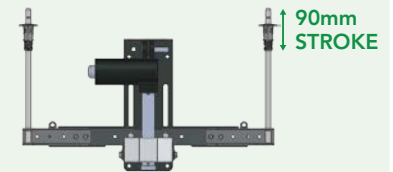


LS100(S)-MP30L FOR EL-03H or LS100(S)-MP48L FOR EL-03H



## Lift Up Mechanism

EL-03H



Motorized

## Electric Accessories

### EL-03H-ACT

Linear actuator



### EL-01H-PA

Power adaptor



### EL-01H-PC

Power cable



### EL-01H-CC

Connection cable



### EL-01H-YC

Split cable



### EL-01H-BA

Plastic oval handset



### EL-01H-BB

Aluminium oval handset



### EL-01H-BC

Soft touch handset



# Angle Adjustment Parts for Pipes



## Features

These chair fittings are designed for comfort and convenience, offering 6 to 42 adjustable positions with precise increments of 2°, 5°, and 6°. These range allows easy customization for optimal posture in any setting.

## Pipe Length Compatibility (Strength) Chart

This graph displays compatible backrest pipe lengths. Please use it as a reference for gear selection.



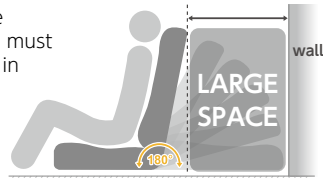
## Free-Lock Mechanism

After releasing the gear lock, you can adjust the angle without needing to flatten the back in advance. The angle adjustment can be operated even in small and narrow spaces.

KDR-L KDR-H FR ▶ P.29-30

### Conventional Gear

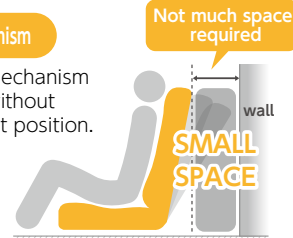
Before the angle adjustment, you must flatten the back in advance.



A large space is required

### Free-Lock Mechanism

The Free-Lock mechanism allows locking without returning to a flat position.



You can adjust at any angle even in small and narrow space

### How to operate

Scan to watch the operation video



#### STEP1

#### Release

Pull the back in front, and unlock



#### STEP2

#### Free

Adjust the angle you need



#### STEP3

#### Lock

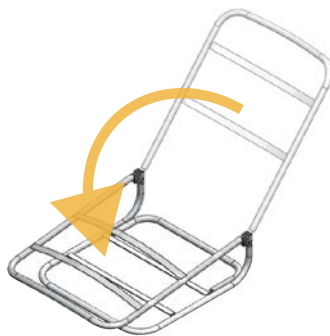
Pull the back slightly to the front to lock the position



## Folding Gear

Can be folded forward for compact storage. Save on Packaging and Shipping Costs.

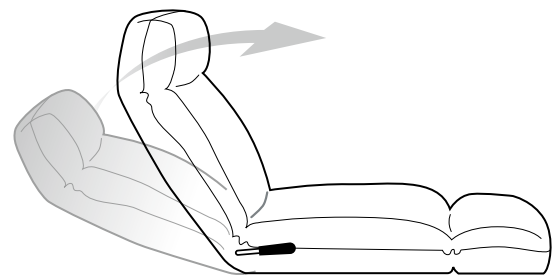
KS-12HG(FD) ▶ P.34



## Lever-Type Gears

It moves like a car reclining seat, allowing you to freely adjust the reclining angle with a lever.

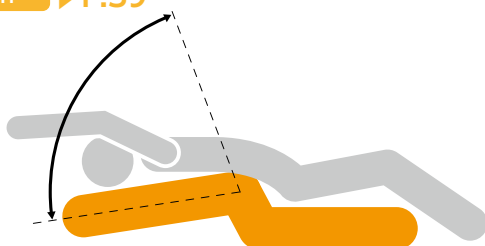
KX ▶ P.37-38



## Spring Hinge

By leaning back and applying weight to the backrest, it swings significantly around the waist area, allowing for stretching the lower back and spine while seated.

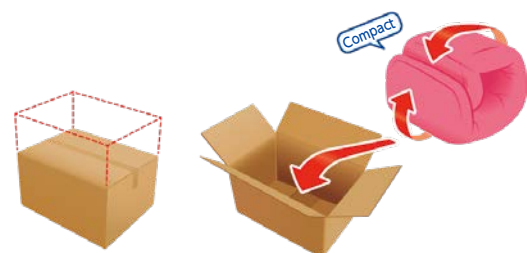
SPH ▶ P.39



## One Lock Hinge

The packaging size can be minimized, and it locks into place during use.

OLH ▶ P.39





**KDR-L**

230N·m

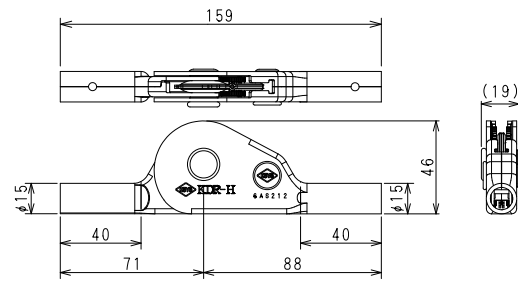
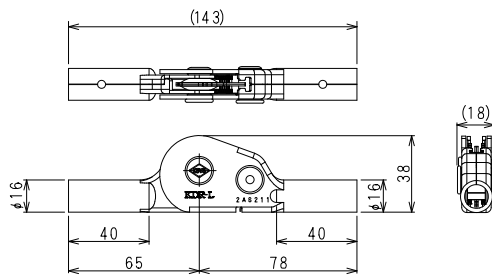
Free-Lock



**KDR-H**

330N·m

Free-Lock

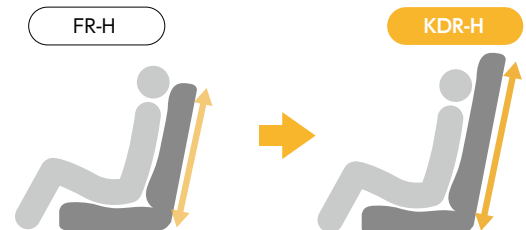
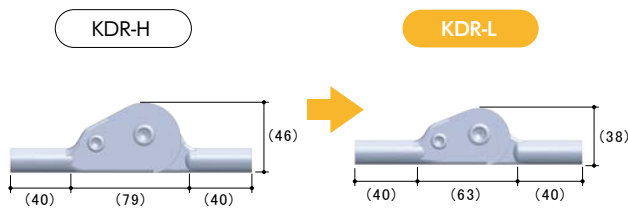


**Compact (KDR-L)**

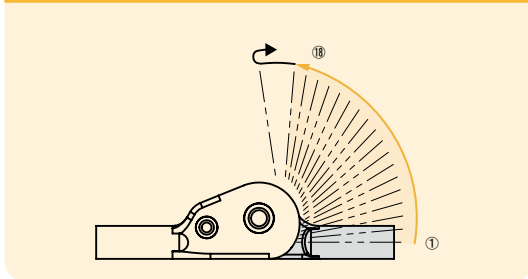
About 20% smaller than KDR-H.

**Increased Strength (KDR-H)**

Can be used for higher-back products compared to FR-H.



**Operation Pattern (18 steps/5°pitch)**



**Options**

Plastic Cover

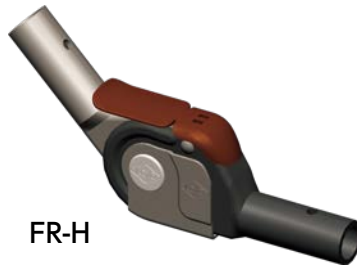


Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (L×W×H)
11020300	KDR-L1.2	18-step		230N·m	167g	17.1kg	100	260×360×135
11020100	KDR-H1.2			330N·m	234g	23.8kg	100	260×360×150
11020200	KDR-H1.6			330N·m	234g	23.8kg	100	260×360×150



FR-L

Super Multi-step Gear Free-Lock



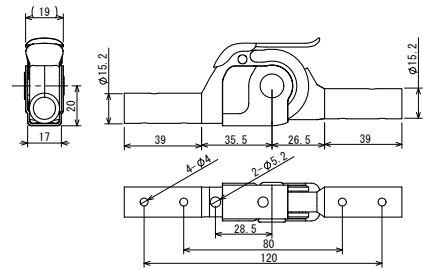
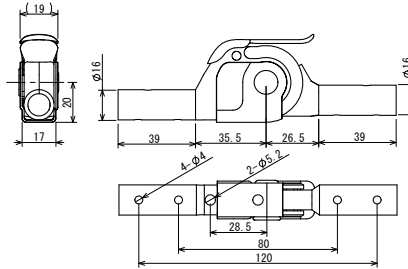
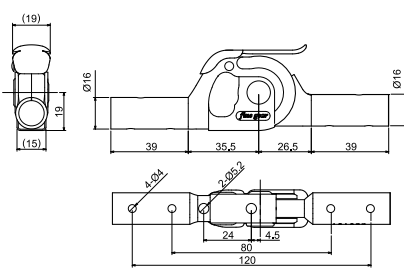
FR-H

Super Multi-step Gear Free-Lock



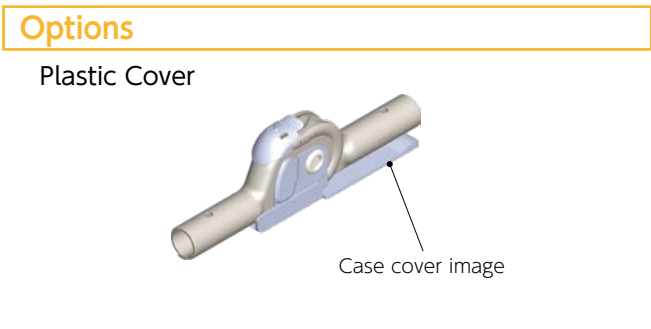
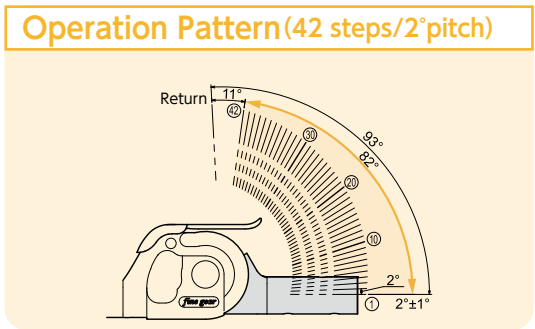
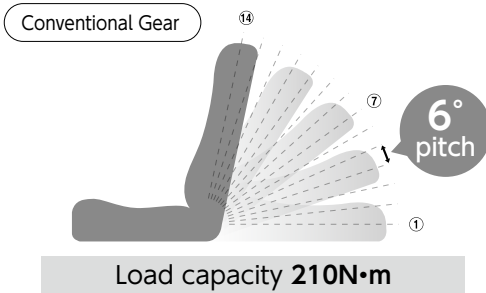
FR-H1.6

Super Multi-step Gear Free-Lock



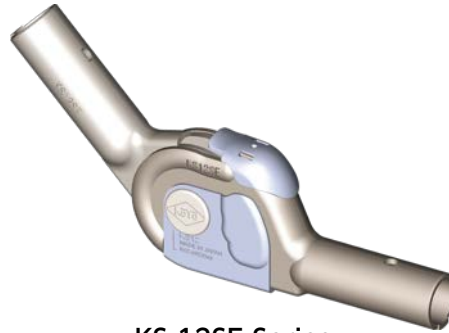
### Super Multi-step Reclining

Achieves ultra-multi-step reclining with a 2° pitch and 42 positions.



Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (L×W×H)
126023	FR-L	42-step		210N·m	152g	15.7kg	100	260×360×135
126024	FR-H			260N·m	190g	19.6kg		
126045	FR-H1.6			260N·m	191g	19.6kg		

FLOOR SEAT parts

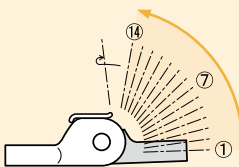


KS-12SE Series

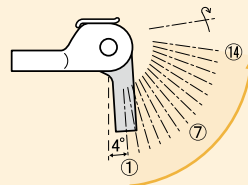
14-step Gear

**Operation Pattern (14 steps/6° pitch)** For other operation patterns, please consult us.

**A** 14-step



**B** Lower 14-step reverse

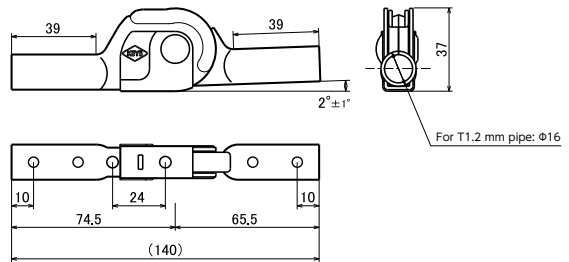


**Options**

Plastic Cover



Case Cover:  
Prevents scratches on  
the floor surface



Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/Carton	Pcs/Carton	Carton (L×W×H)
126022	KS-12SE	<b>A</b>		210N·m	140g	14.5kg	100	260×360×135
126026	KS-12SE-L14R	<b>B</b>		210N·m	140g	14.5kg		

# Strengthened Reclining Gear - KS-HG



**KS-12HG Series**  
(Gear cover : brown)

270N·m

14-step Gear·7-step Gear



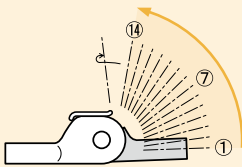
**KS-16HG Series**  
(Gear cover : black)

270N·m

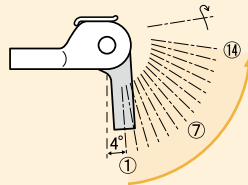
Compatible with 1.6 mm

## Operation Pattern (14steps/6°pitch) For other operation patterns, please consult us.

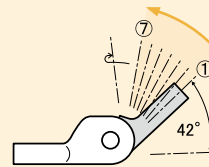
**A** 14-step



**B** Lower 14-step reverse



**C** Upper 7-step



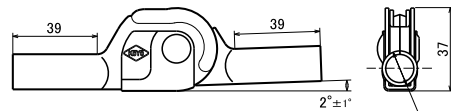
※Without Gear Cover

## Options

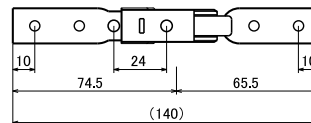
Plastic Cover



Case Cover:  
Prevents scratches  
on the floor surface



For T1.2 mm pipe:  $\phi 16$  - 12HG  
For T1.6 mm pipe:  $\phi 15$  - 16HG



Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (L×W×H)
126002	KS-12HG	A		270N·m	170g	17.5kg	100	260×360×135
126007	KS-12HG-U7	C		270N·m	170g	17.5kg		
126102	KS-16HG	A		270N·m	170g	17.5kg		
126103	KS-16HG-L14R	B		270N·m	170g	17.5kg		

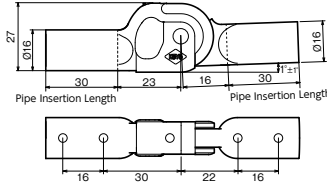
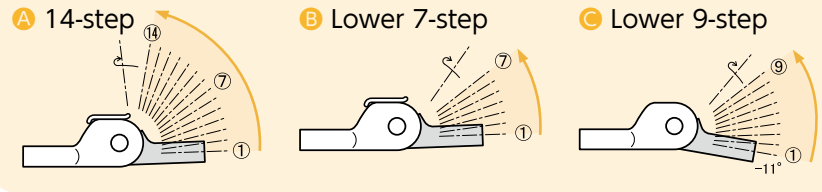
## Headrest Gear - KS-12AT



Headrest

14-step Gear

### Operation Pattern (6°pitch)



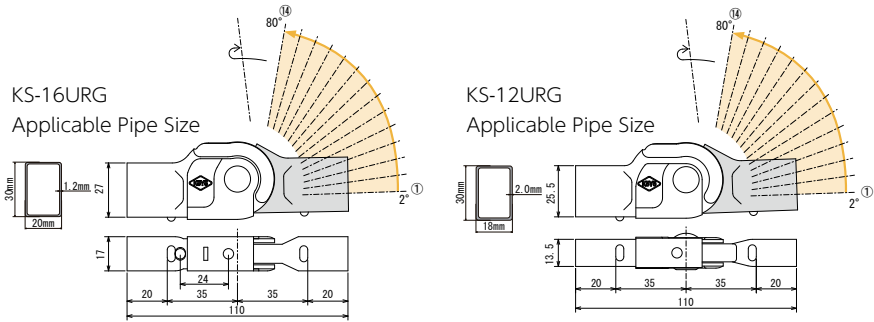
※Note  
The KS-12AT is designed for use in bending locations, such as headrests, where relatively low loads are expected.

Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton(L×W×H)
126040	KS-12AT	A		100N·m	85g	17.5kg	200	260×360×135
126042	KS-12AT-L7	B						
126043	KS-12AT-L9	C						

## Gear for square pipes - KS-URG



14-step Gear



Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton(L×W×H)
126301	KS-16URG	14-step Gear 6°pitch	30×20×t1.2	270N·m	180g	19.0kg	100	260×360×135
126302	KS-12URG		30×18×t2.0	210N·m	140g	15.0kg		

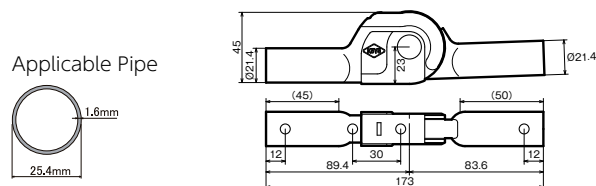
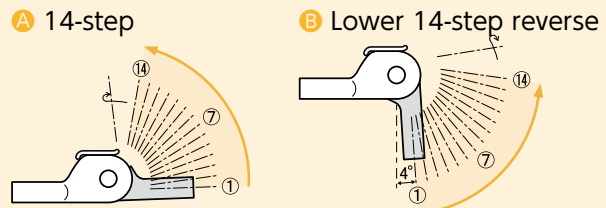
## High-power gear - KS-AMG



360N·m

14-step Gear

### Operation Pattern (6°pitch) For other operation patterns, please consult us.

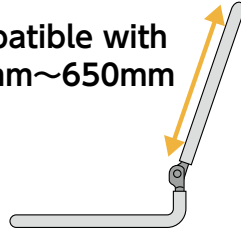


Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton(L×W×H)
126201	KS-AMG	A		360N·m	280g	14.5kg	50	260×360×135
126203	KS-AMG-L14R	B						

# Folding Gear - KS-FD

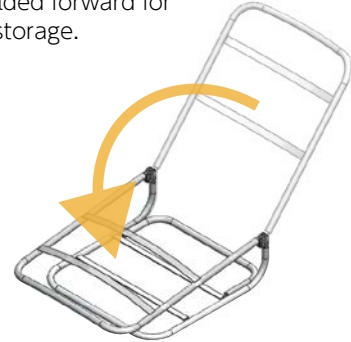


Compatible with  
550mm~650mm



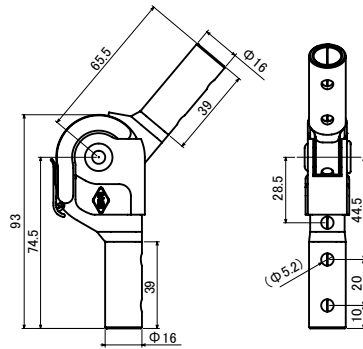
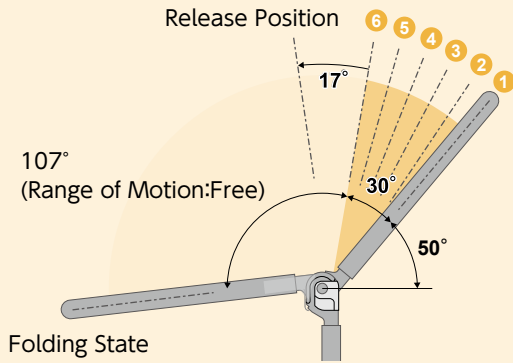
## Save on Packaging and Shipping Costs.

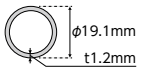
Can be folded forward for compact storage.



Free movement up to 107°

### Operation Pattern (Free movement +6-step gear / 6° pitch)



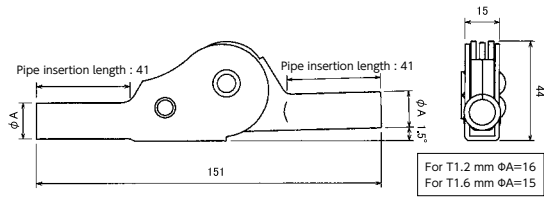
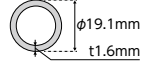
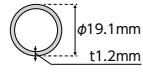
Number	Model	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (L×W×H)
126047	KS-12HG (FD)	 $\phi 19.1\text{mm}$ t1.2mm	270N·m	170g	17.5kg	100	260×360×135

# Cam-Type Reclining Gear - KDS



Compatible pipe sizes:  
1.6 mm and 1.2 mm

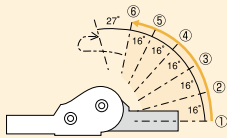
Applicable Pipe



## Operation Pattern (16° pitch)

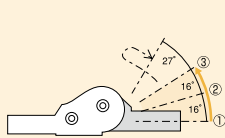
### A 6-step

KDS 1.2-6S / KDS 1.6-6S  
KDS 1.2-6 / KDS 1.6-6



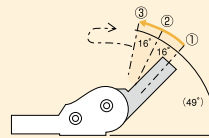
### B Lower 3-step

KDS 1.2-L3 / KDS 1.6-L3  
KDS 1.2-L3S / KDS 1.6-L3S



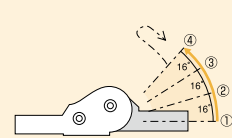
### C Upper 3-step

KDS 1.2-U3 / KDS 1.6-U3



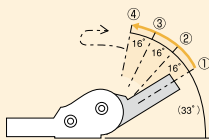
### D Lower 4-step

KDS 1.2-L4 / KDS 1.6-L4



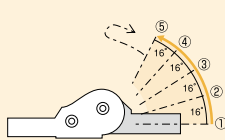
### E Upper 4-step

KDS 1.2-U4 / KDS 1.6-U4



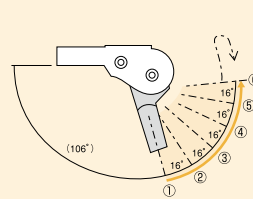
### F Lower 5-step

KDS 1.2-L5 / KDS 1.6-L5



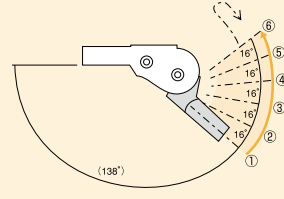
### G Lower 6-step reverse

KDS 1.2-L6R / KDS 1.6-L6R



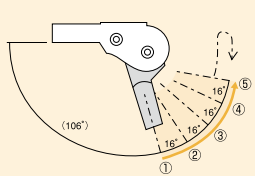
### H Upper 6-step reverse

KDS 1.2-U6R / KDS 1.6-U6R



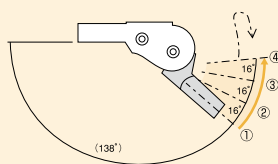
### I Lower 5-step reverse

KDS 1.2-L5R / KDS 1.6-L5R



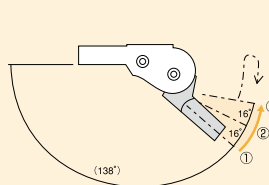
### J Lower 4-step reverse

KDS 1.2-L4R / KDS 1.6-L4R



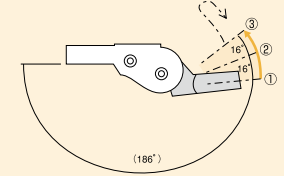
### K Lower 3-step reverse

KDS 1.2-L3R / KDS 1.6-L3R



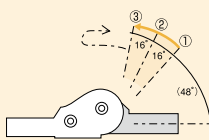
### L Upper 3-step reverse

KDS 1.2-U3R / KDS 1.6-U3R



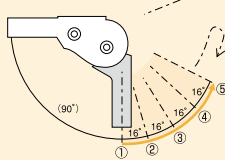
### M Upper 3-step free

KDS 1.6-U3F



### N Leg Gear

KDS 1.6-LEG



## Options

Case Cover

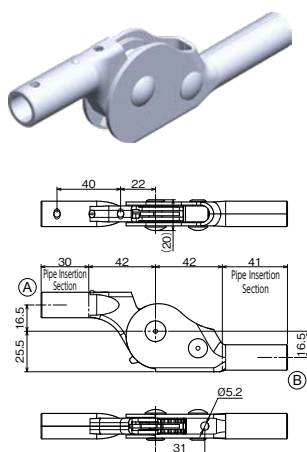


Prevents floor scratches and fabric or foam wrapping.

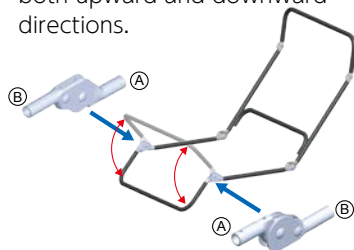
Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Pc
110001	KDS 1.2-6S	Stopper <b>A</b>	φ19.1×t1.2	180N·m
110040	KDS 1.6-6S		φ19.1×t1.6	240N·m
110002	KDS 1.2-6	Standard <b>A</b>	φ19.1×t1.2	180N·m
110004	KDS 1.6-6		φ19.1×t1.6	240N·m
110006	KDS 1.2-L3	Standard <b>B</b>	φ19.1×t1.2	180N·m
110008	KDS 1.6-L3		φ19.1×t1.6	240N·m
110044	KDS 1.2-L3S	Stopper <b>B</b>	φ19.1×t1.2	180N·m
110045	KDS 1.6-L3S		φ19.1×t1.6	240N·m
110005	KDS 1.2-U3	<b>C</b>	φ19.1×t1.2	180N·m
110007	KDS 1.6-U3		φ19.1×t1.6	240N·m
110010	KDS 1.2-L4	<b>D</b>	φ19.1×t1.2	180N·m
110012	KDS 1.6-L4		φ19.1×t1.6	240N·m
110009	KDS 1.2-U4	<b>E</b>	φ19.1×t1.2	180N·m
110011	KDS 1.6-U4		φ19.1×t1.6	240N·m
110037	KDS 1.2-L5	<b>F</b>	φ19.1×t1.2	180N·m
110041	KDS 1.6-L5		φ19.1×t1.6	240N·m
110013	KDS 1.2-L6R	<b>G</b>	φ19.1×t1.2	180N·m
110019	KDS 1.6-L6R		φ19.1×t1.6	240N·m
110018	KDS 1.2-U6R	<b>H</b>	φ19.1×t1.2	180N·m
110024	KDS 1.6-U6R		φ19.1×t1.6	240N·m
110016	KDS 1.2-L5R	<b>I</b>	φ19.1×t1.2	180N·m
110022	KDS 1.6-L5R		φ19.1×t1.6	240N·m
110015	KDS 1.2-L4R	<b>J</b>	φ19.1×t1.2	180N·m
110021	KDS 1.6-L4R		φ19.1×t1.6	240N·m
110014	KDS 1.2-L3R	<b>K</b>	φ19.1×t1.2	180N·m
110020	KDS 1.6-L3R		φ19.1×t1.6	240N·m
110017	KDS 1.2-U3R	<b>L</b>	φ19.1×t1.2	180N·m
110023	KDS 1.6-U3R		φ19.1×t1.6	240N·m
110042	KDS 1.6-U3F	<b>M</b>	φ19.1×t1.6	240N·m
110032	KDS 1.6-LEG	<b>N</b>	φ19.1×t1.6	180N·m

Weight/Pc	Weight/Carton	Pcs/Carton	Carton(L×W×H)
200g	21.0kg	100	260×360×150

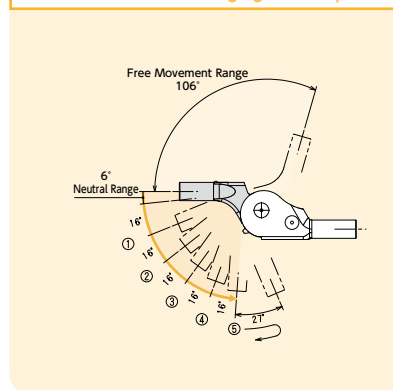
### Footrest Gear - KDS-5V




By installing the left and right gears in opposite directions, you can enable reclining in both upward and downward directions.



### Operation Pattern (Free movement + 5-stage gear / 16°pitch)



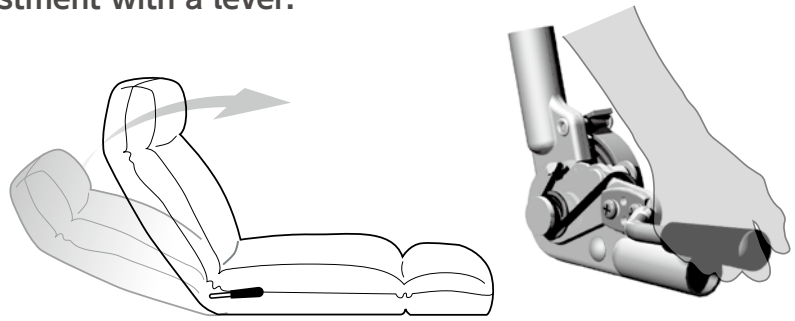
Number	Model	Applicable Pipe	Standard Strength / Pc	Weight/Pc	Weight/Carton	Pcs/Carton	Carton(L×W×H)
110077	KDS 1.2-5V	 φ19.1mm t1.2mm	180N·m	209g	21.2kg	100	260×360×150

## Features of Lever-Type Gears

This gear allows easy angle adjustment with a lever.

### Feature

- Adjust the reclining angle freely by operating the lever.
- It works like a car reclining seat, with the backrest rising due to spring force when the lever is used.
- Suitable for recliners, sofas, dining chairs, and also for wooden furniture and welfare applications.



### Usage

#### STEP1

#### Release

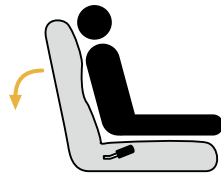
Raise the lever.



#### STEP2

#### Free

You can adjust the angle while the lever is raised.



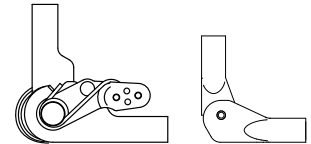
#### STEP3

#### Lock

Lower the lever.



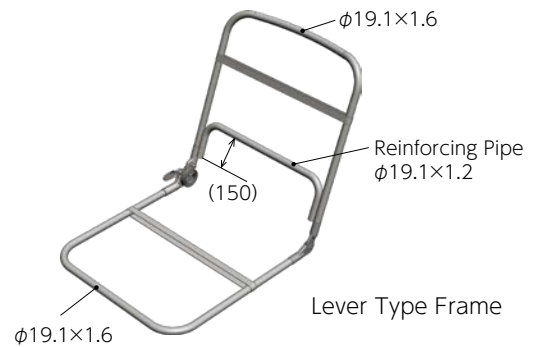
### Standard Set for Lever Type



- Main Gear
- Free Gear
- Screw M6×10 (2 pieces)
- Lever Rod

### Caution

1. Be careful of the force when raising the lever, as it can cause the backrest to rise unexpectedly (during processing).
  2. Do not pull up the lever while leaning against the backrest.
  3. Lean back only after securely locking the lever down.
  4. If the top position is difficult to engage, please lift it by hand.
- ※ Since the Lever-Type Gears have a free gear (pivot) on one side, it is recommended to use a reinforcing pipe to prevent twisting of the pipe frame.

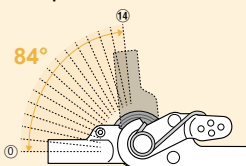


### Lever Type ※Dimensions are for reference only.

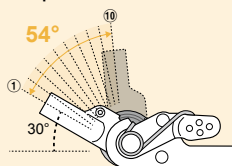
Number	115062	115066	115073	115124
Model	LEVER 1-B	LEVER 3-B	LEVER 5-B	LEVER P(BK-BK)
Made of Plastic				

### Operation Pattern(6°pitch) For other operation patterns, please consult us.

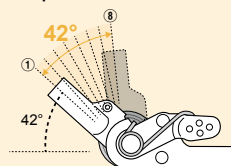
#### A 14-step



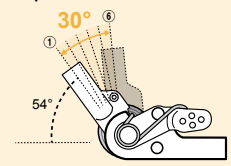
#### B 10-step



#### C 8-step



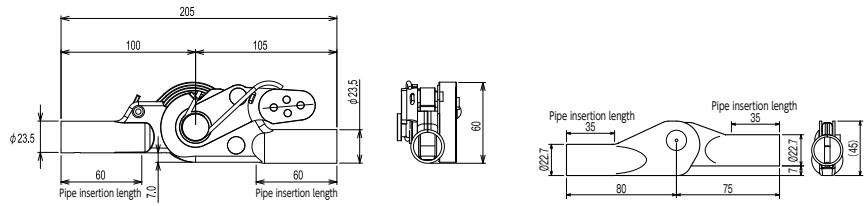
#### D 6-step



## Lever-Type Gears - KX

- You can adjust to your preferred angle with a hand-operated control.
- Available in both right-hand and left-hand operation options.

Right Lever Type



Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Set	Weight/Set	Weight/ Carton	Set/ Carton	Carton (L×W×H)
126454	KX-14M-R-F2	Right Lever Type A		390N·m	800g	16.5kg	20	260×360×150
126460	KX-U10M-R-F2	Right Lever Type B						
126462	KX-U8M-R-F2	Right Lever Type C						
126458	KX-U6M-R-F2	Right Lever Type D						

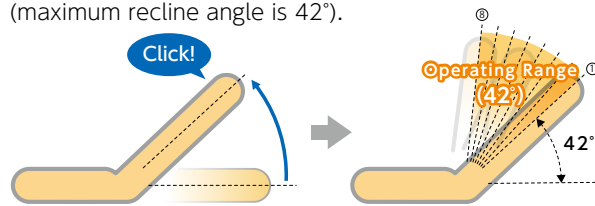
## Stopper Included Lever-Type Gears - KX-U7

Right Lever Type

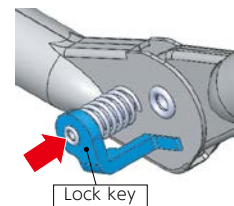


### About the Operating Range

When the backrest is raised to a position of 42°, the stopper mechanism engages, preventing the backrest from returning to a horizontal position (maximum recline angle is 42°).



By pressing the lock key on the free side while operating the lever, you can lower the backrest back to a horizontal position.

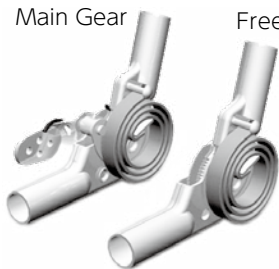


Number	Model	Applicable Pipe	Standard Strength / Set	Weight/Set	Weight/Carton	Set/ Carton	Carton (L×W×H)
126455	KX-14M-R-FU7		390N·m	826g	17kg	20	260×360×150

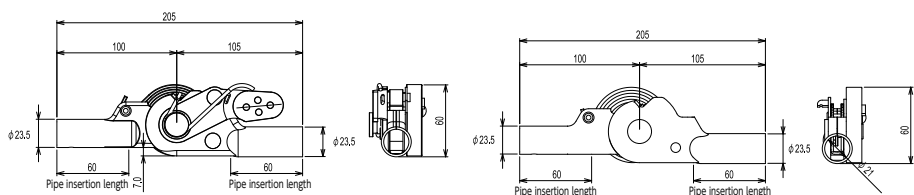
## Double Spring Lever-Type Gears - KX-W

Main Gear

Free Gear



- The free gear also has a built-in spring.
- Use it for products where the backrest is difficult to lift.



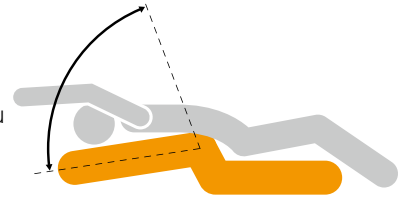
Number	Model	Operation Pattern	Applicable Pipe	Standard Strength / Set	Weight/Set	Weight/ Carton	Set/ Carton	Carton (L×W×H)
126402	KX-14MW-R-FM	A		390N·m	1.1kg	17.0kg 12.0kg	15	260×360×150

## Spring Hinge - SPH



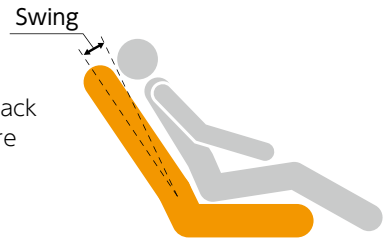
### Stretch While Seated

By leaning back on the backrest, it swings around the waist, allowing you to stretch your lower back and spine while seated.

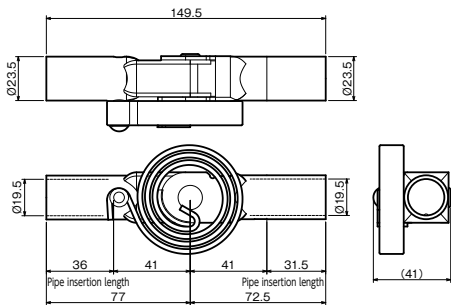


### For added relaxation

The backrest swings when you lean back on the chair, allowing for an even more comfortable experience.

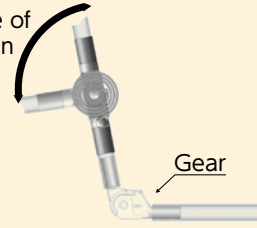


Applicable Pipe Size



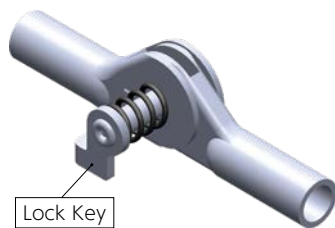
### Usage

Range of Motion  
90°



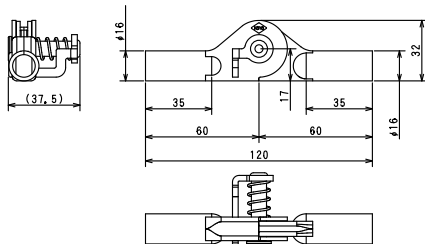
Number	Model	Applicable Pipe	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (LxWxH)
121014	SPH-STD	φ19.1x1.2	365g	15.0kg	40	260x360x150
		φ19.1x1.6				

## One Lock Hinge - OLH

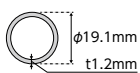


### Reduced Case Size

The packaging size can be minimized, and it locks in place during use.



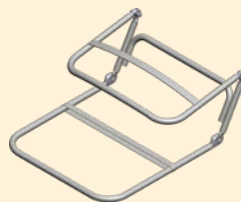
Applicable Pipe Size



### Usage

<During Packing> Free  
Please bend while pressing the lock key.

<During Use> Lock  
When extended, it will lock with a "click" sound.



Number	Model	Applicable Pipe	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (LxWxH)
121016	OLH-180	φ19.1x1.2	133g	19.8kg	150	260x360x180

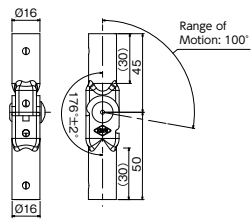
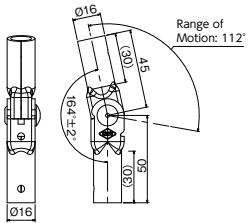
# Bending Hinge - KR2



KR2-168

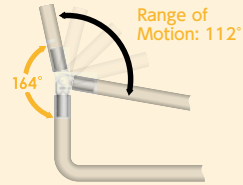


KR2-180

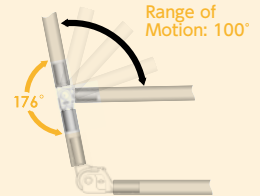


## Usage and Range of Motion

KR2-168

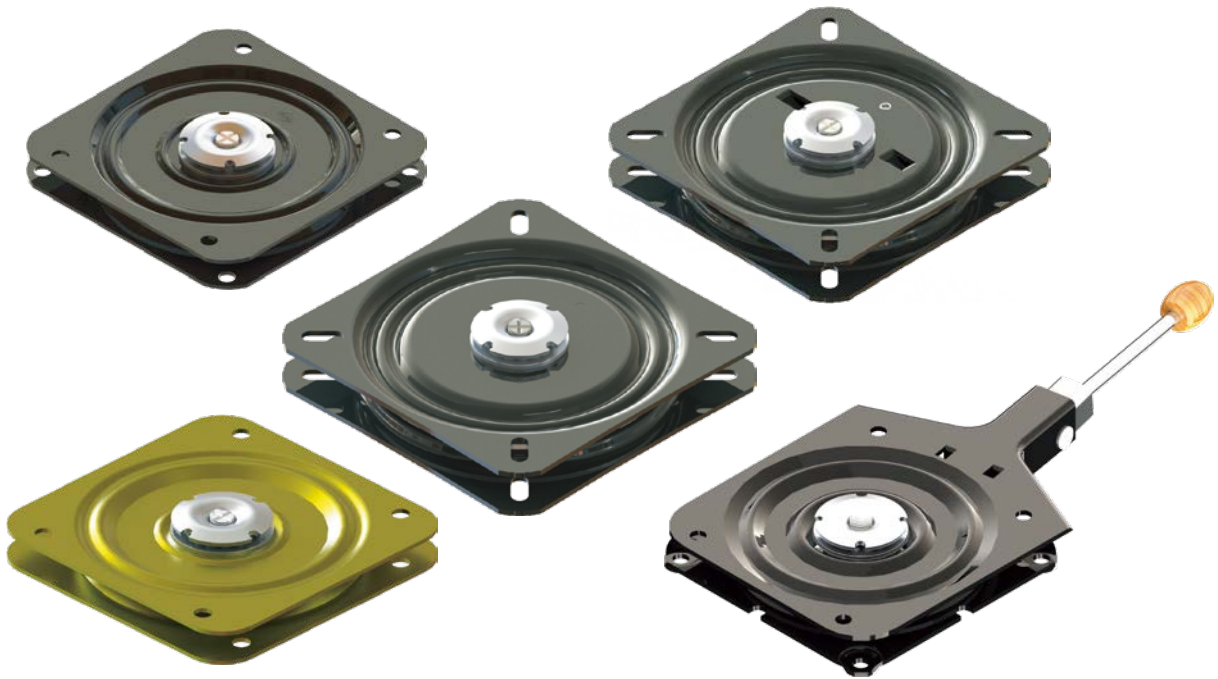


KR2-180



Number	Model	Applicable Pipe	Weight/Pc	Weight/ Carton	Pcs/Carton	Carton (L×W×H)
114033	KR2-168		81g	16.7kg	200	260×360×135
114032	KR2-180					

# SWIVEL



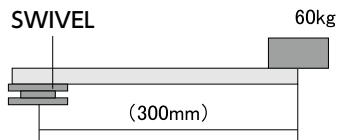
## Feature

Our original production expertise ensures smooth rotation and low noise. KOYO swivels are used for dining chairs, massage chairs and single-seater sofas. The durability and reliability are far beyond any other swivels.

## Durability test

### ■ Eccentric Load Test

Loading 60kg weight at the point of 300mm or 250mm from the center of a swivel, and rotate 38rpm.



Swivel	Rotation/Distance from center
LIGHT, Standard	CLEAR 10,000 CYCLES / 250mm
RR, LEVER STOP, COMBO	CLEAR 15,000 CYCLES / 250mm
185 PITCH, AR	CLEAR 15,000 CYCLES / 300mm

### ■ Vertical Load Test

Evaluation of the product applying a 150kg load at the center of the swivel.

Result: No abnormal noise during rotation or any other irregularities in any of the turntables.

The SWL-AR's reciprocating operation is rated for 10,000 cycles.

## Examples of SWIVEL Usage



Massage chair

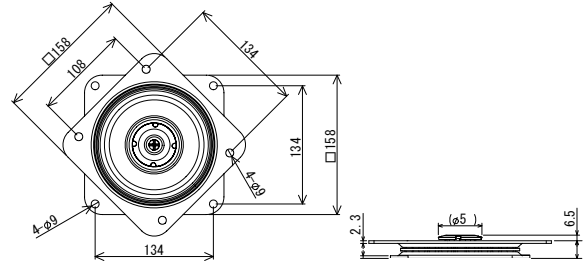


Dining chair

Types/Names of Swivel	Function	Width of chair	
<b>Light</b> SWIVEL LIGHT	Free swivel	<b>450mm</b>	
<b>Standard</b> SWIVEL STD	Free swivel	<b>500mm</b>	
<b>Standard Reinforcement</b> SWIVEL RR	Free swivel	<b>600mm</b>	
<b>185 Pitch</b> SWIVEL 185 PITCH	Free swivel	<b>800mm</b>	
<b>Auto Return</b> SWIVEL-AR360	Free swivel	<b>800mm</b>	
<b>Auto Return</b> SWIVEL-AR	Free swivel	<b>800mm</b>	
<b>LEVER STOP</b> SWL-LEVER STOP	Swivel lock by lever operation	<b>600mm</b>	
<b>COMBO</b> SWL-COMBO	Swivel lock or free swivel by lever operation	<b>600mm</b>	

## Light - SWIVEL LIGHT

- Ideal for chairs up to 450mm wide.

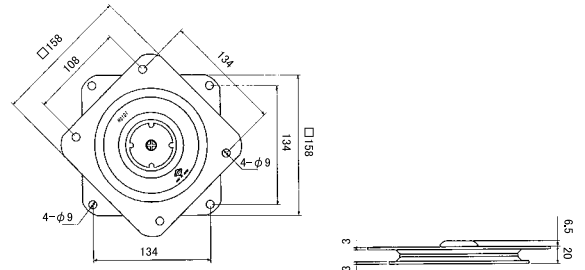


FINISH:Chromate Plating

Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton(L×W×H)
116055	SWIVEL LIGHT(BK)	360° (120°/180° stoppable)	See p.57 for the durability test	1.1kg	22.3kg	20	260×360×180
116003	SWIVEL LIGHT						

## Standard - SWIVEL-STD

- Ideal for chairs up to 500mm wide.

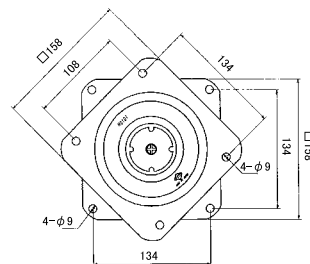


FINISH:Unichrome Plating

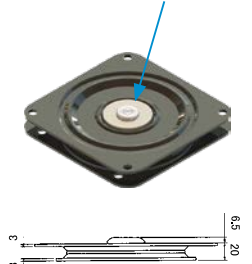
Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton(L×W×H)
116078	SWIVEL STD(BK)	360° (120°/180° stoppable)	See p.57 for the durability test	1.32kg	26.6kg	20	260×360×180
116001	SWIVEL STD						

## Standard Reinforced - SWIVEL-RR

- A 50mm diameter reinforcement plate is attached to the back of the STD swivel plate for improved stability.
- Ideal for chairs up to 600mm wide.



There is a reinforcement plate on the back.

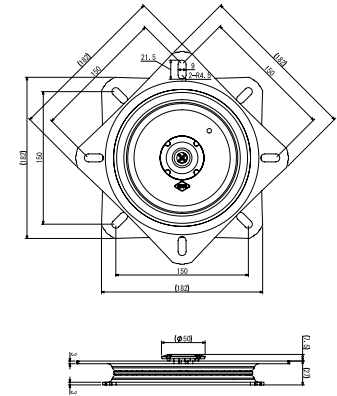


FINISH:Unichrome Plating

Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton(L×W×H)
116079	SWIVEL RR(BK)	360° (120°/180° stoppable)	See p.57 for the durability test	1.35kg	27.3kg	20	260×360×180
116002	SWIVEL RR						

## 185 Pitch - SWIVEL 185 PITCH

Ideal for chairs up to 800mm wide.

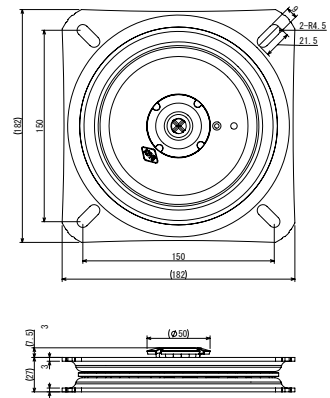


Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (LxWxH)
116070	SWIVEL 185 PITCH(BK)	360° (120°/180° stoppable)	See p.57 for the durability test	1.75kg	21.0kg	14	260x360x190
116004	SWIVEL 185 PITCH						

## Auto Return - SWL-AR360

PAT.

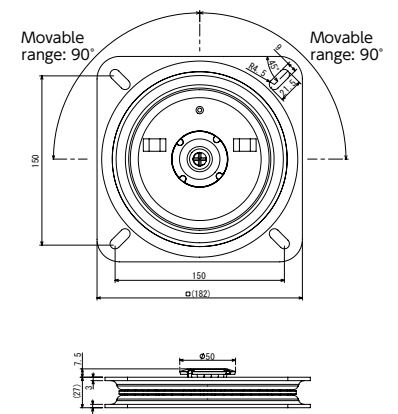
- No need to arrange the chair.
- Keeps the appearance tidy.



Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (LxWxH)
116083	SWL-AR 360(BK)	360° + auto return	See p.57 for the durability test	1.73kg	24.8kg	14	260x360x190
116082	SWL-AR 360						

## Auto Return - SWL-AR

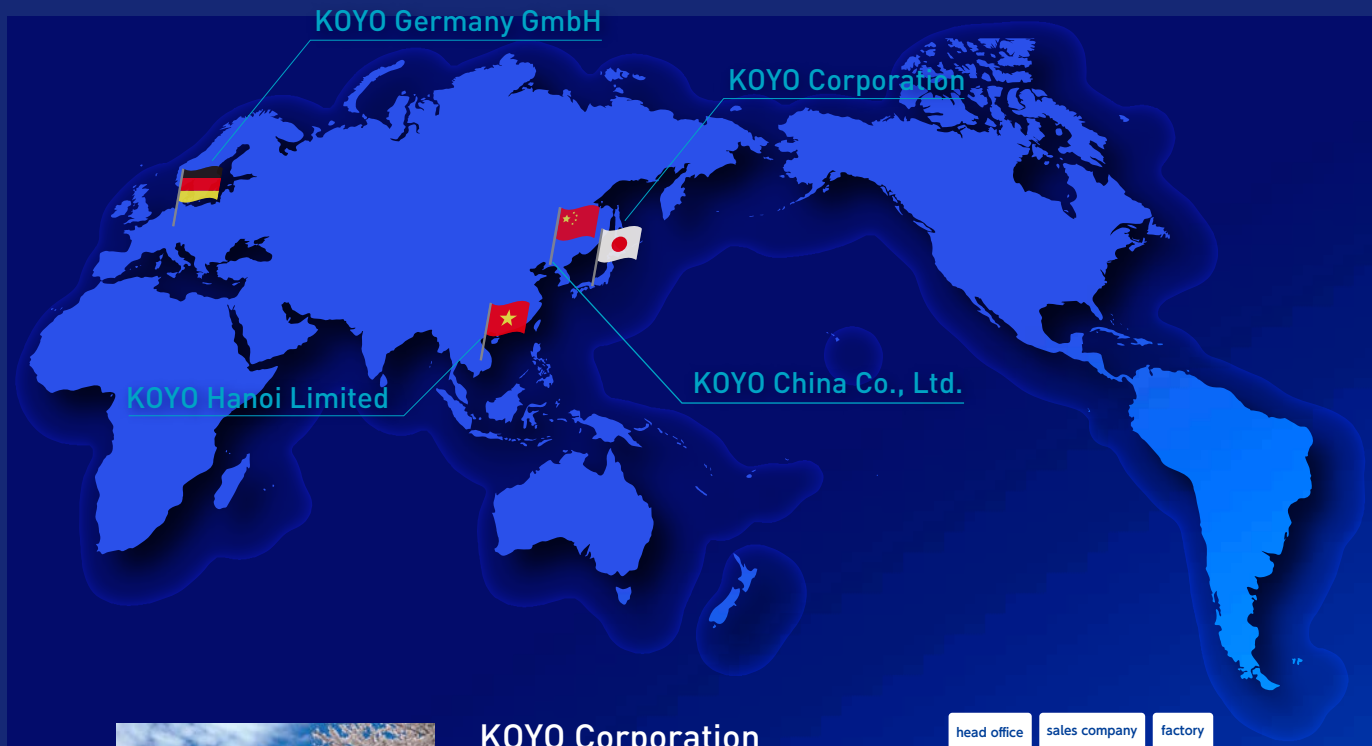
- No need to arrange the chair.
- Keeps the appearance tidy.



Number	Model	Movable Range	Durability	Weight/Pc	Weight/ Carton	Pcs/ Carton	Carton (LxWxH)
116069	SWL-AR(BK)	Left & Right 90°Each	See p.57 for the durability test	1.89kg	26.46kg	14	260x360x190
116056	SWL-AR						



# KOYO Global Network



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