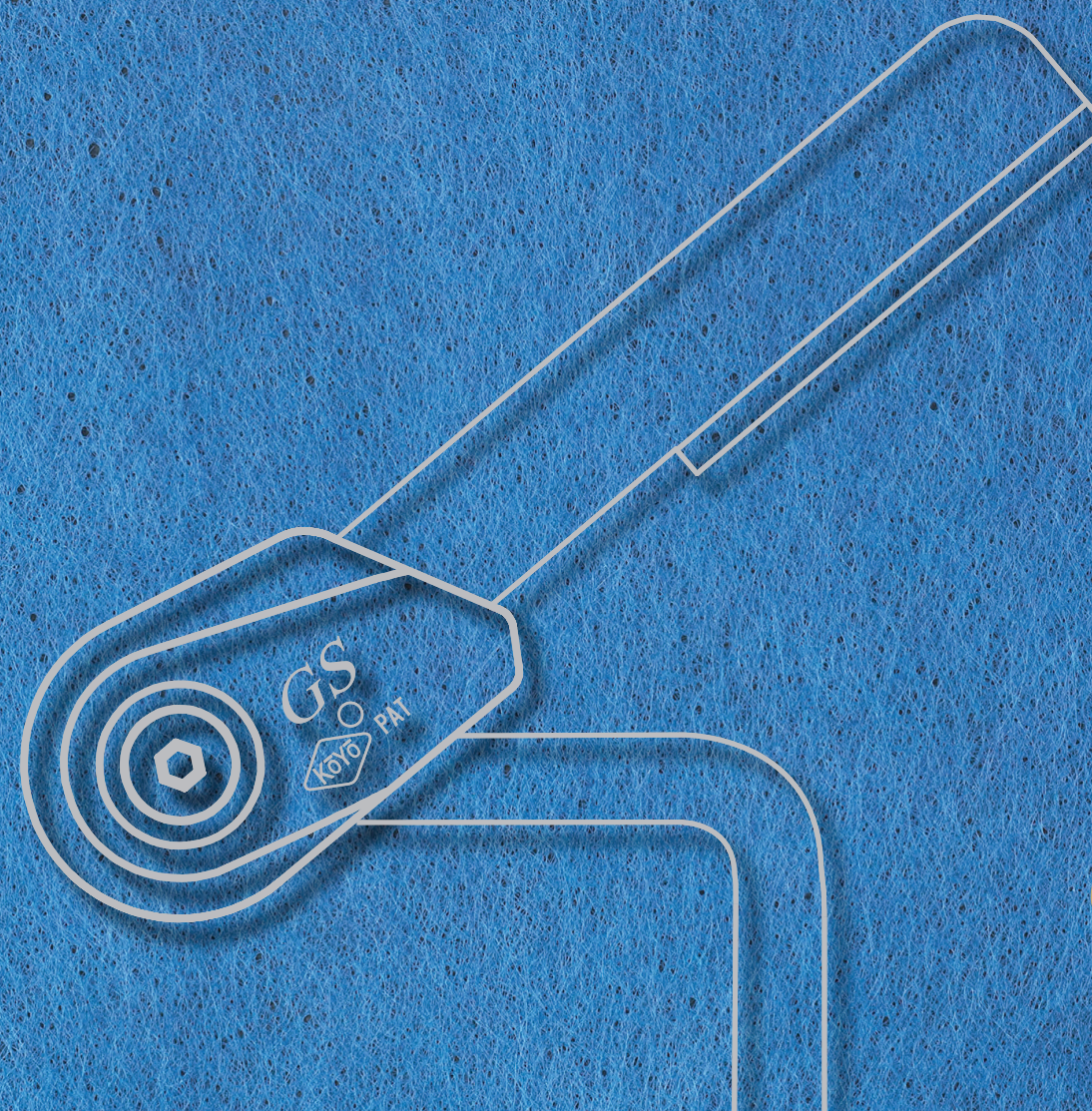


The original solution for your sofa Catalogue Rev.6



Heart & Technology

Craftsmanship
with
Heart & Technology



The KOYO Philosophy

KOYO was established in 1926 and started to manufacture a wide variety of functional components that make the 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



P.03-04 JAPAN QUALITY

P.05-06 Product Spec List

P.07-10 GS Gear



P.11-12 FH



P.13-16 α Gear



P.17-20 LS Gear 100N·m



P.21-24 LS Gear 200N·m



P.25-26 LS Gear 300N·m



P.27-30 Sound Zero



P.31-36 IS Gear 250N·m



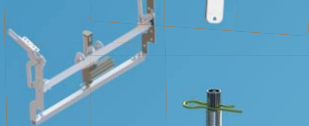
P.37-40 IS Gear 450N·m



P.41-44 Stretch



P.45-48 EL Series



P.49 Joint



JAPAN QUALITY

KOYO has been improving our production efficiency and our quality standard based on our Kaizen, 5S (Seiri, Seiton, Seisou, Seiketsu, Shitsuke) principles. We are to make our best efforts to supply our products throughout the world.



Head Office (Osaka, Japan)

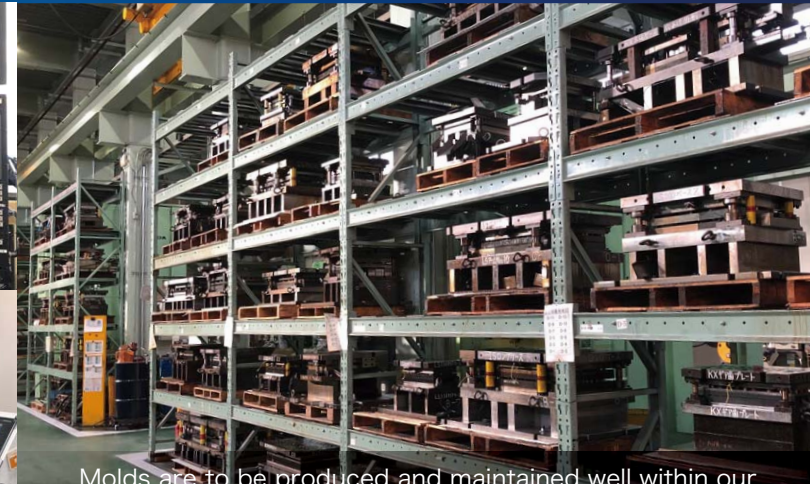
KOYO head factory is located in Sakai City, Osaka, Japan. Sakai is an industrial center of traditional craftsmanship.



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



KOYO flexible production is endorsed by own made precision molds with our "Made in Japan" equipment.



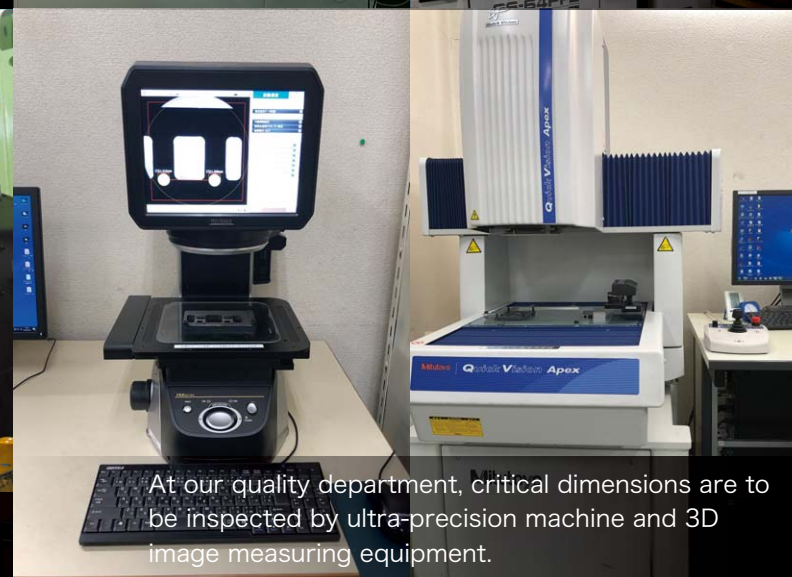
Molds are to be produced and maintained well within our engineering teams. This is to help support our production in a timely manner.



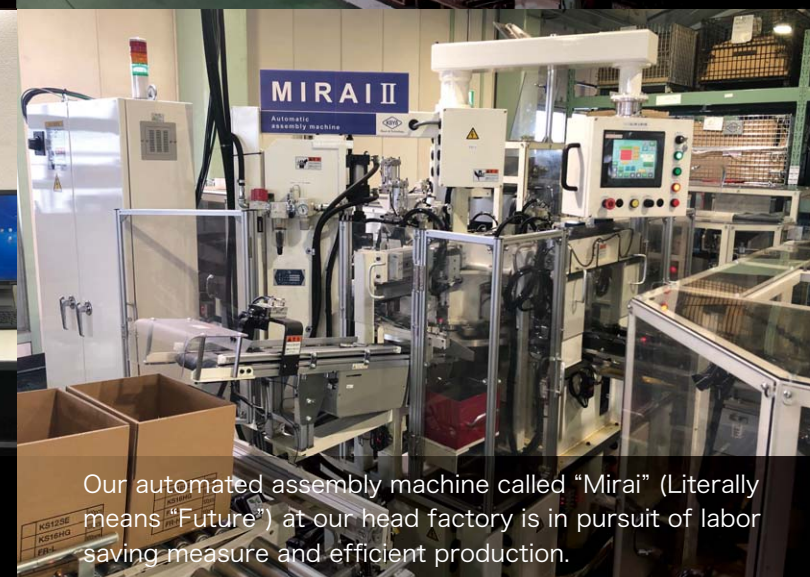
Our products have been made of Japanese selected high tension steel.



Our newest servo-press machines realized the most efficient stamping process.



At our quality department, critical dimensions are to be inspected by ultra-precision machine and 3D image measuring equipment.



Our automated assembly machine called "Mirai" (Literally means "Future") at our head factory is in pursuit of labor saving measure and efficient production.



China Factory (Guangdong)



Vietnam Factory (Hanoi)

The labor oriented assembly process is to be completed at our China and Vietnam factories. Overseas facilities are managed and operated by members of the KOYO head office and established delivery system according to any needs around the world.

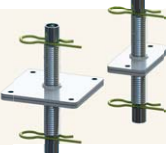
(Assembly line at Vietnam Factory)



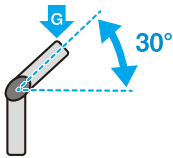
Quality control management system, based on ISO 9001

Product Spec List

Product	Feature	Strength (N·m)	Steps	Pitch	Range of movement	Repetition	Socket	Spring	Stretchable (mm)
 GS P.07-10		90	Free	—	48° 120°	10,000	○	○	—
 FH P.11-12	Friction	2·8	Free	—	255°	10,000	—	—	—
 LS200α P.13-16		200	24 60	2°	48° 120°	50,000	○	—	—
 LS100-MP P.17-20	Micro Pitch +Compact	100	10 40	3°	30° 120°	50,000	○	○	—
 LS200-MP P.21-24	Micro Pitch	200	15 60	2°	30° 120°	50,000	○	○	—
 LS300-MP P.25-26	Micro Pitch +Strong	300	15 60	2°	30° 120°	50,000	○	—	—
 ST250 P.27-30		220	15 60	2°	30° 120°	10,000	○	○	—
 IS250 P.31-36	Fine Pitch	250	5 15	6°	30° 90°	10,000	○	○	—
 IS450Y P.37-40	Fine Pitch +Strong	450	5 15	6°	30° 90°	10,000	—	○	—
 IS150T P.41	Fine Pitch +50mm Stretch	150	15	6°	90°	10,000	○	○	50

Product	Feature	Strength (N·m)	Steps	Pitch	Range of movement	Repetition	Socket	Spring	Stretchable (mm)
 IS150LT P.41	Fine Pitch +80mm Stretch	150	15	6°	90°	10,000	—	○	80
 LS100-MP-TR P.43	Micro Pitch +50mm Stretch	100	40	3°	120°	20,000	—	○	50
 LS100-MP-LT P.43	Micro Pitch +80mm Stretch	100	40	3°	120°	20,000	—	○	80
 EL-02H P.45-46	Motorized +Stretch for headrest	—	Free	—	116°	—	—	—	80
 MA-02H P.46	Manual +Stretch for headrest	100×2Pcs	30	—	100°	50,000	—	—	76
 EL-03H P.47-48	Motor lift +Angle adjustment for headrest	—	Selective	Selective	Selective	—	—	—	—
 MS-2 P.49	Detachable	—	—	—	—	—	—	—	—

※ As our standard measure, we are applying a load to the tip of the product at an angle of 30 degree.



- Many of our products are patented in Japan, and some of our products are also patented in major global markets. Our trademark is registered not only in Japan but also in major global markets.
- Dimensional data not binding. We reserve the right to alter specifications without prior notice.
- Our warranty and liability is governed by the statutory provisions, however, subject to the following: Warranty and liability is excluded in the event of improper use and processing of the products (e.g. by shortening or welding the fittings).

Stepless/Torque Limiter

GS

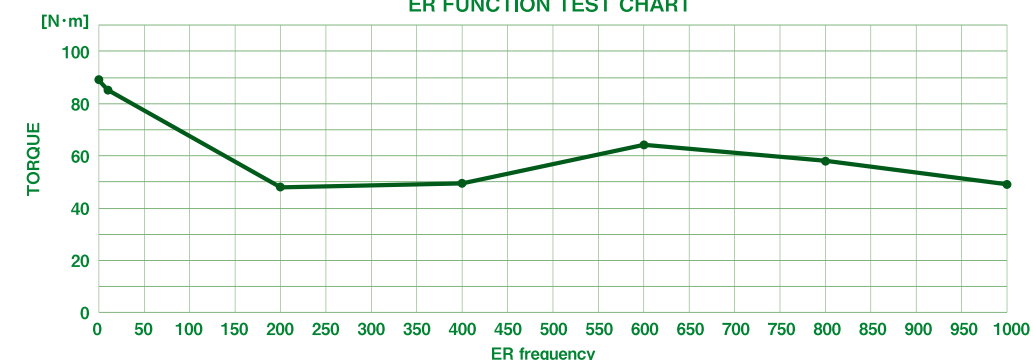
Packing Spec

Sets / Carton	15
Weight / Set	0.76kg
Weight / Carton	11.8kg
LxWxH/Carton(mm)	250x330x150

Model Name **GS-ER90L-32AF**

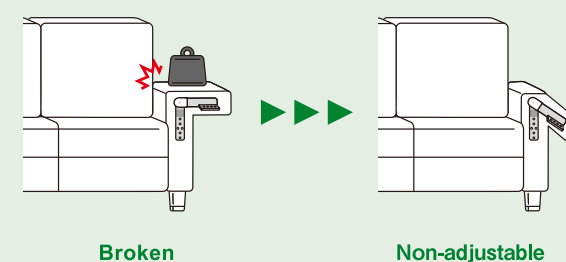


ER FUNCTION TEST CHART

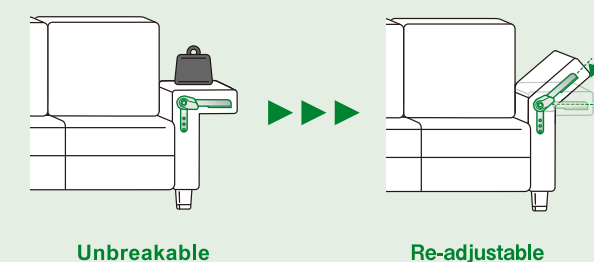


- ※The upper graph shows an average of 30 samples measured at every 200 cycles.
- ※Please avoid continued ER operation in a short period of time.
- ※We will not guarantee ER function after using 1,000 times or more.
- ※Please use it as a reference value only.

Conventional Gear



GS-ER Gear



Noiseless Gear



No click sound expands the possibility of functional sofas.

ER Function (Emergency Recovery Function)

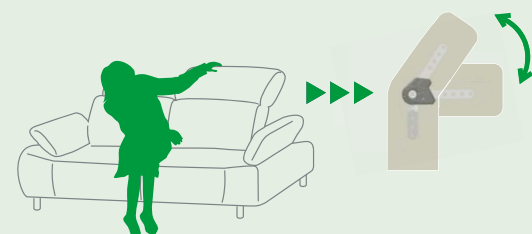


In emergency, the torque limiter enables the overload to be released and prevents the fitting from a malfunction.
※Please avoid from constant ER operation within a short time.

Stepless Gear



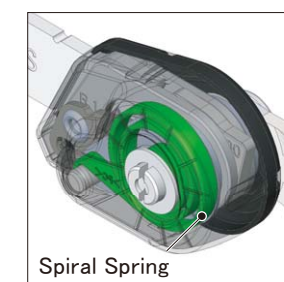
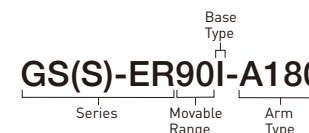
Repetition



More than 10,000 cycles
*For simple repetition.

Spring Type

Model Name **GS(S)-ER90I-A180**

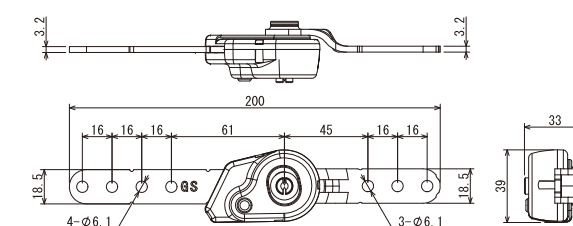


Spiral Spring

Specification

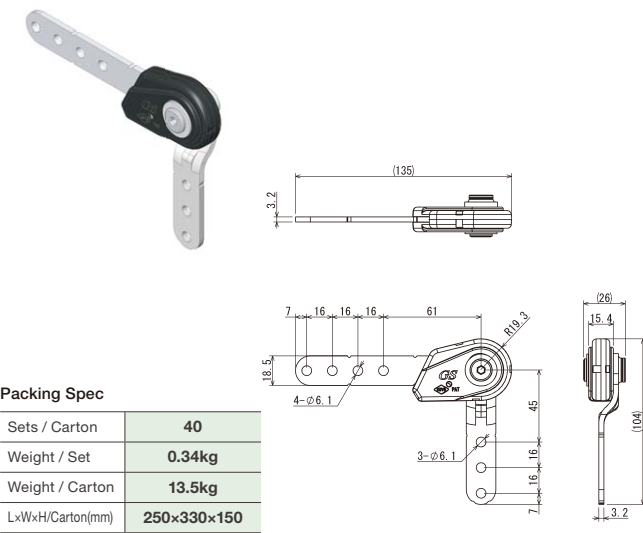
GS(S)-ER90I-A180

Finish : Unichrome plating

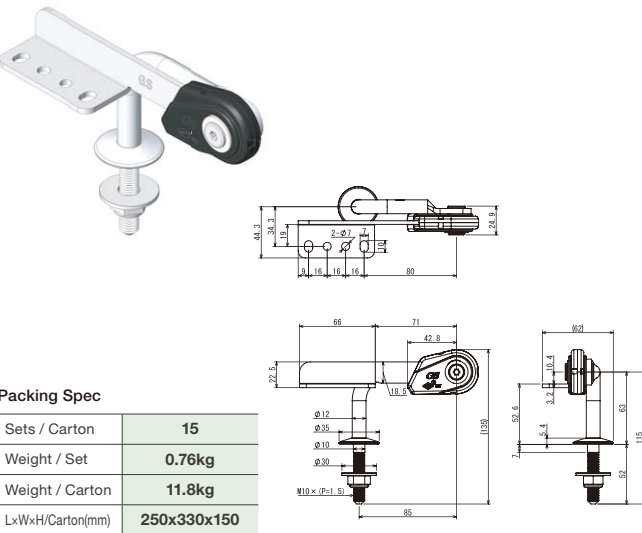


Specification

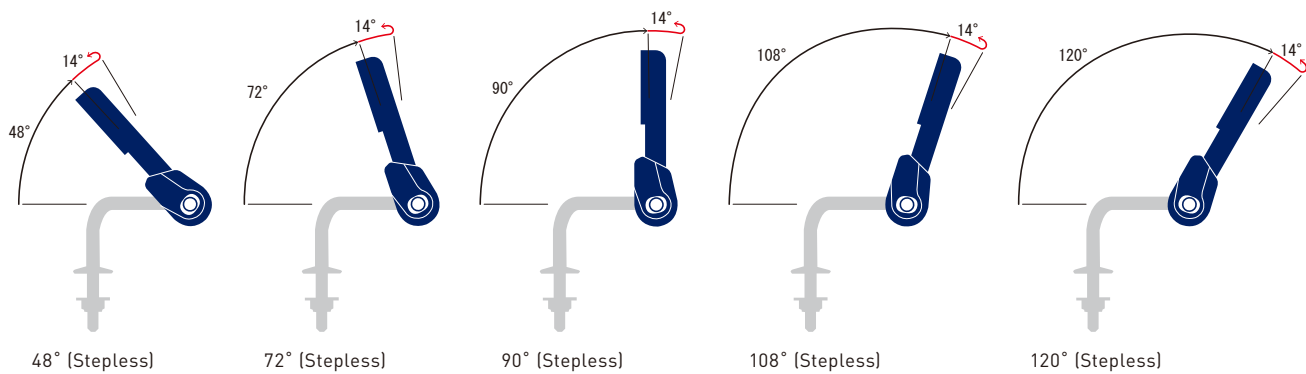
GS90-90I-A90



GS-ER90L-32AF



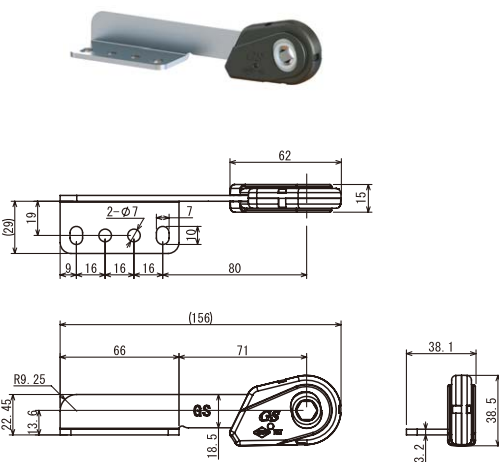
Movable Range



Bases

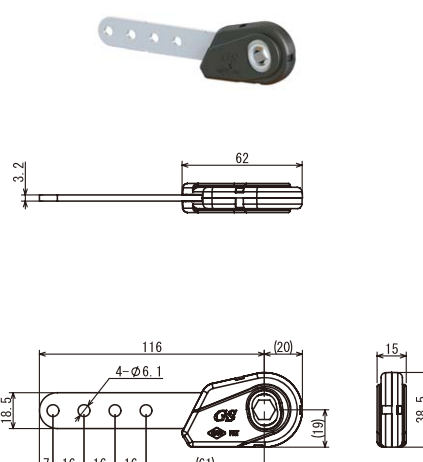
L-type

Finish : Unichrome plating



I-type

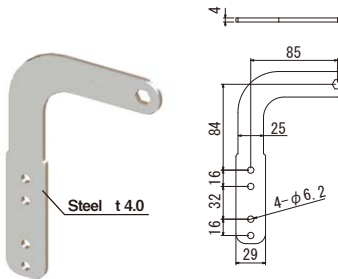
Finish : Unichrome plating



Arms

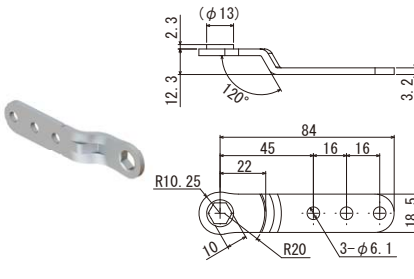
No.10

Finish : Chrome plating



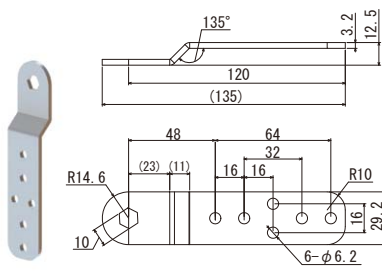
No.A

Finish : Unichrome plating



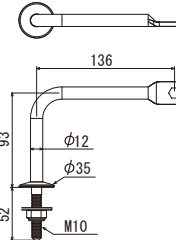
No.15

Finish : Unichrome plating

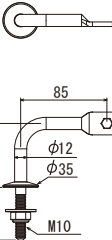


No.31AF~33AF

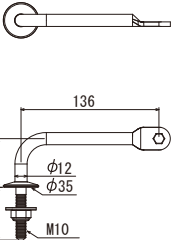
Finish : Chrome plating



No.31AF



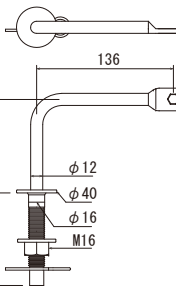
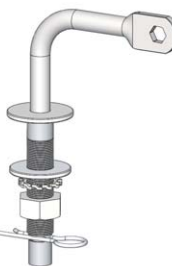
No.32AF



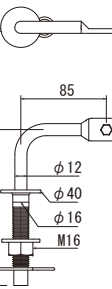
No.33AF

No.31B~33B

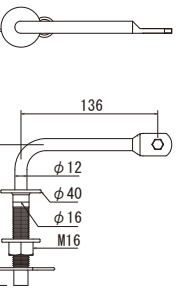
Finish : Chrome plating



No.31B



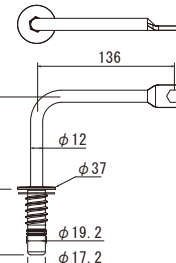
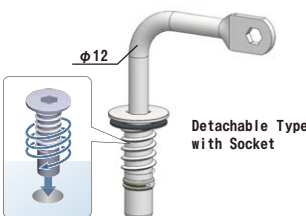
No.32B



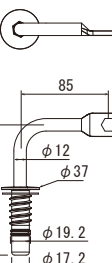
No.33B

No.31G~33G

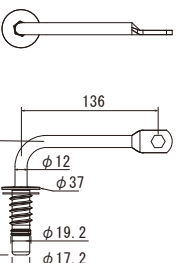
Finish : Chrome plating



No.31G



No.32G



No.33G

Stepless/2~8(N·m)

FH



Packing Spec

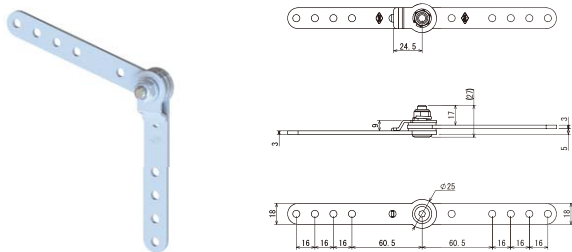
Sets / Carton	50
Weight / Set	0.36kg
Weight / Carton	17.9kg
LxWxH/Carton(mm)	260x325x200

Model Name **FH02-L**
Torque
Series Type

Specification

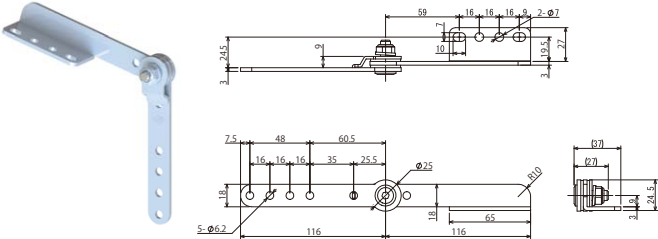
I-type

Finish : Unichrome plating



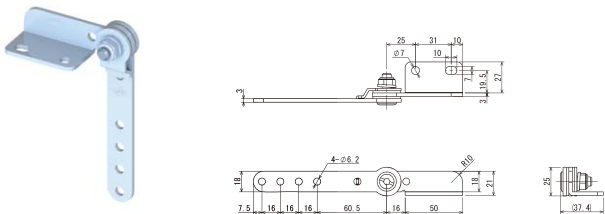
L-type

Finish : Unichrome plating



L Short type

Finish : Unichrome plating



Model Name	Torque
FH02-I	(2N·m)
FH02-L	(2N·m)
FH08-I	(8N·m)
FH08-L	(8N·m)

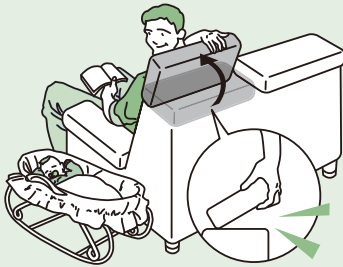
※Initial torque setting at the time of shipment from the factory.

Stepless

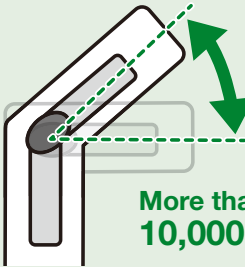


Stepless adjustment ensures better fit.

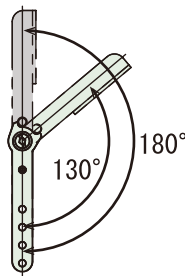
Noiseless



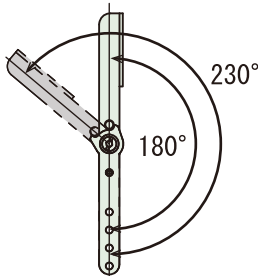
Repetition



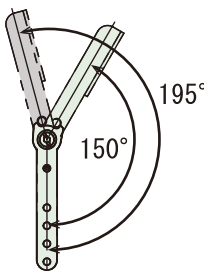
Movable Range



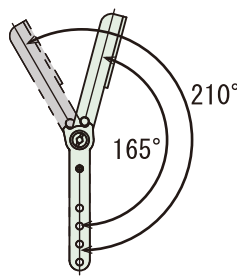
FH00-L(130-180)



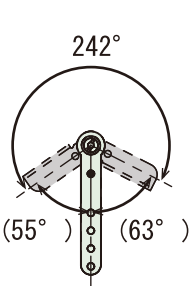
FH00-L(180-230)



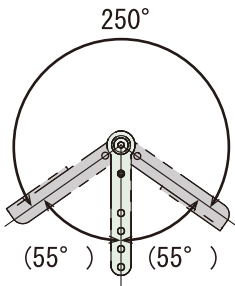
FH00-L(150-195)



FH00-L(165-210)



FH00-L(S)



FH00-L



Micro Pitch/200(N·m)/Free-Lock

LS200α

Packing Spec

Sets / Carton	15
Weight / Set	0.92kg
Weight / Carton	14.3kg
L×W×H/Carton(mm)	250×330×160

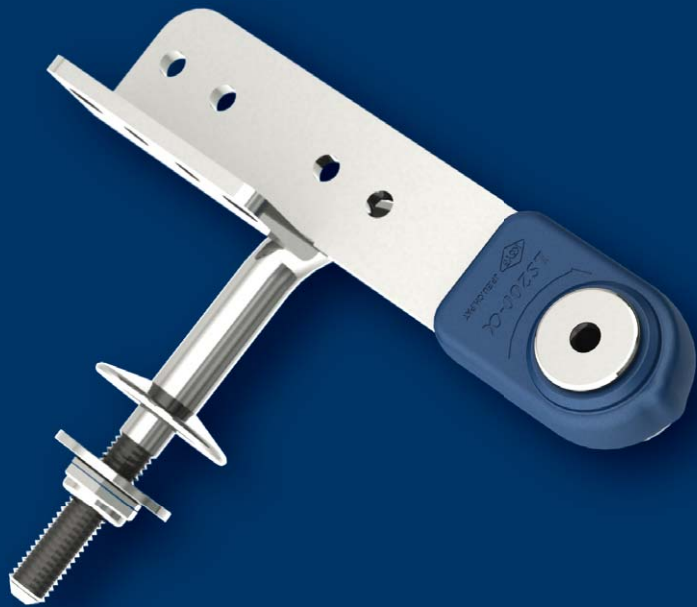
Model Name **LS200α-90L-32AF**

Series

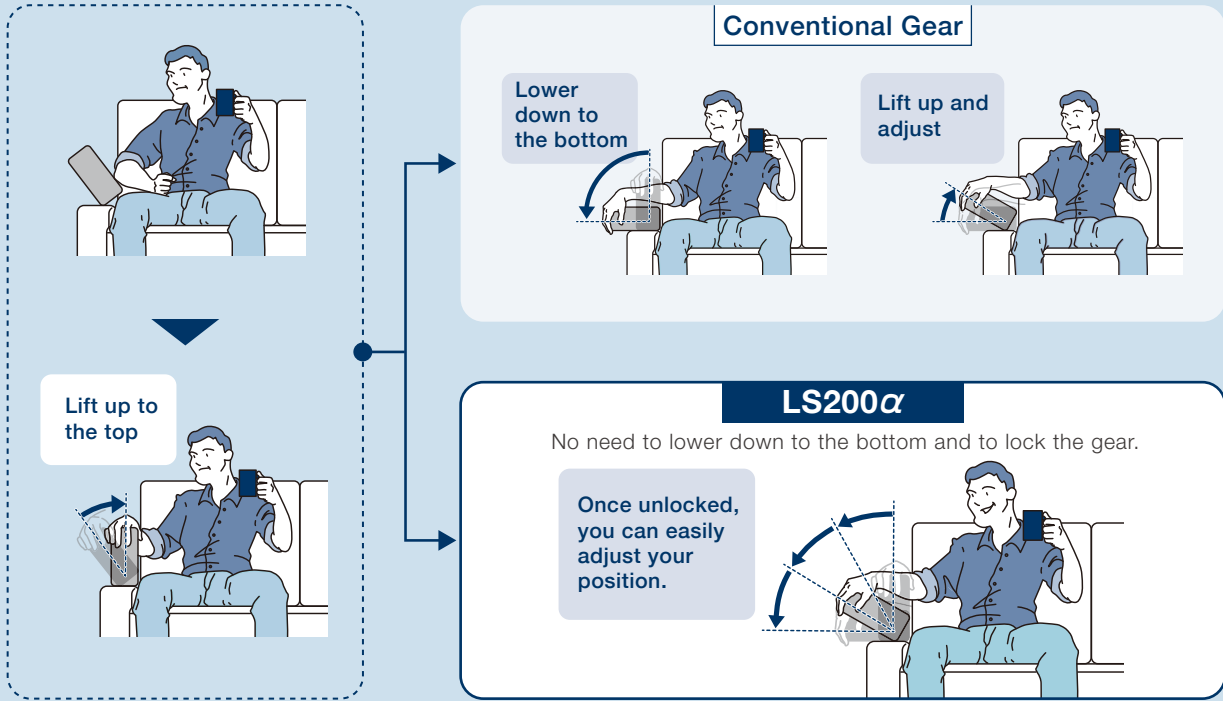
Base Type

Movable Range

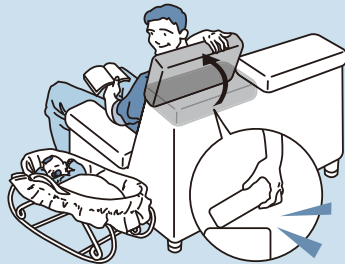
Arm Type



Innovative Free-Lock Mechanism

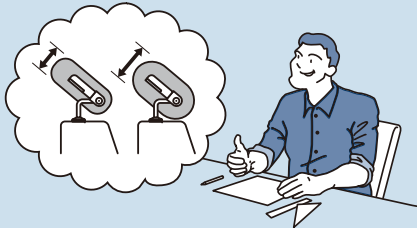


Quieter Click



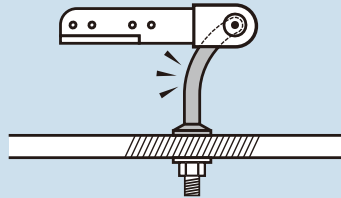
Operational noise is minimized.

Fit



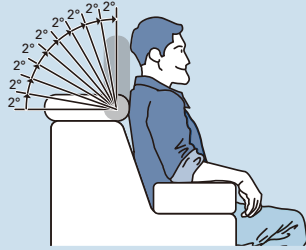
No concern about urethane thickness needed, easier to design the sofa

Flexibility



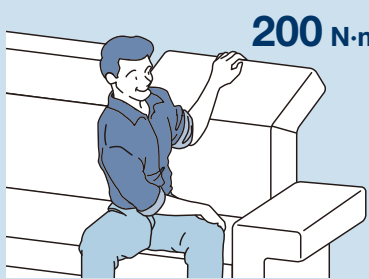
Still functional even after any possible deformation in use

Micro Pitch



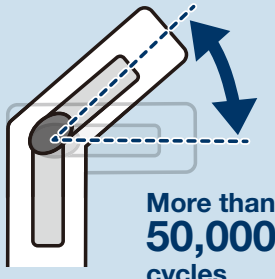
2° ultra fine pitch gear ensures better fit.

Durability



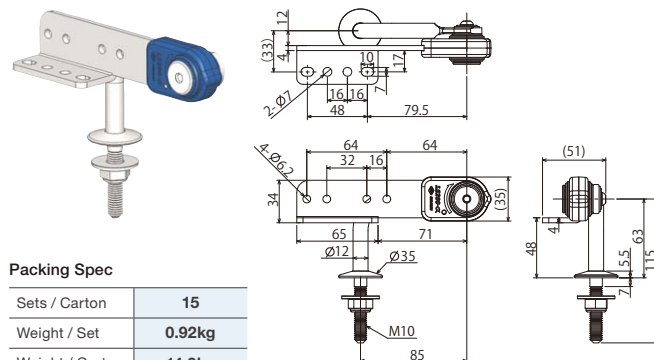
200 N·m

Repetition

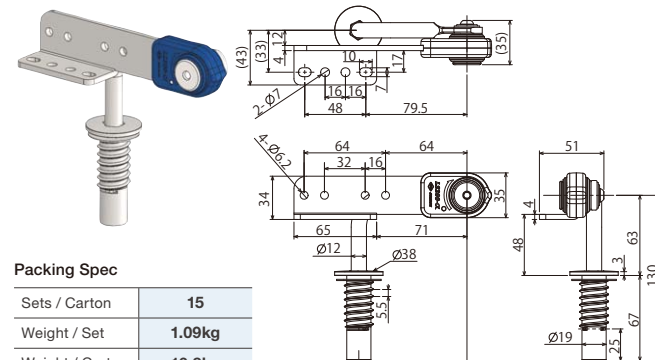


More than 50,000 cycles

Specification

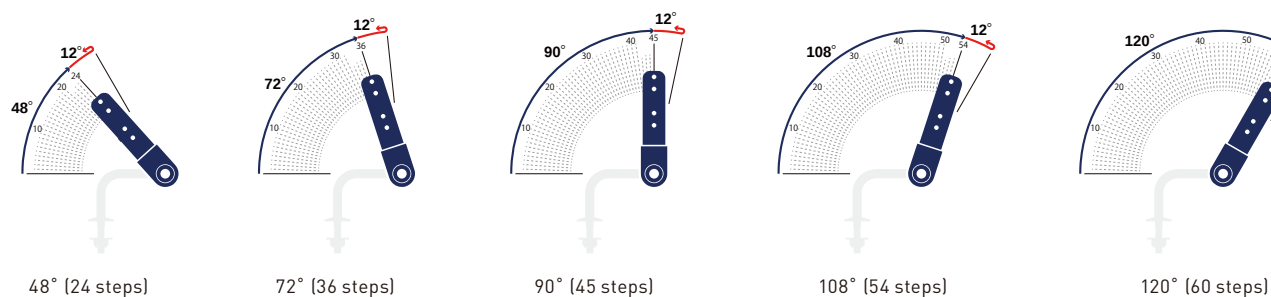
LS200 α -90L-32AF

Sets / Carton	15
Weight / Set	0.92kg
Weight / Carton	14.3kg
LxWxH/Carton(mm)	250x330x160

LS200 α -90L-32G

Packing Spec	
Sets / Carton	15
Weight / Set	1.09kg
Weight / Carton	16.8kg
LxWxH/Carton(mm)	250x330x160

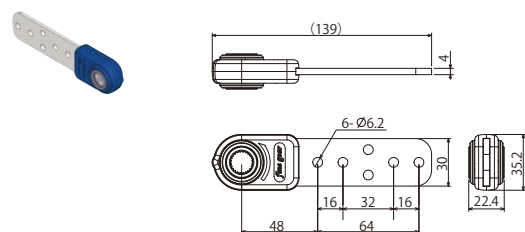
Gear Steps with Movable Range



Bases

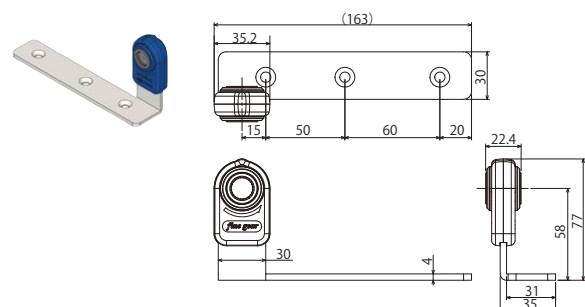
I-type

Finish : Unichrome plating



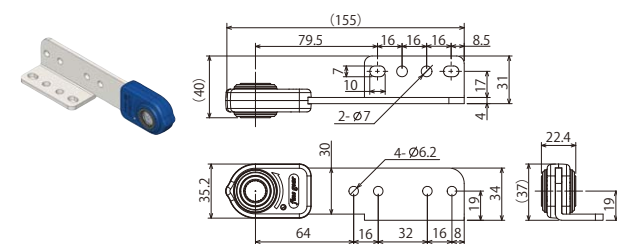
Z-type

Finish : Unichrome plating



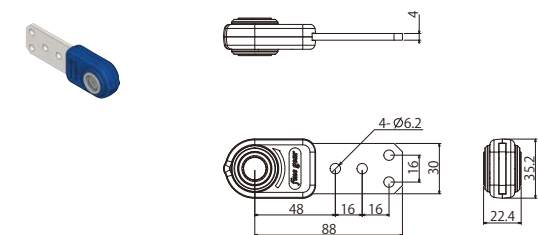
L-type

Finish : Unichrome plating



IC-type

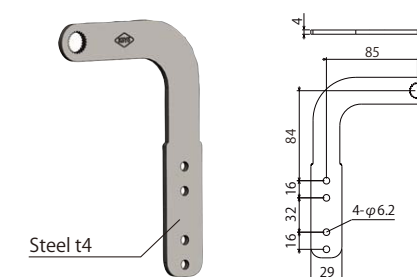
Finish : Unichrome plating



Arms

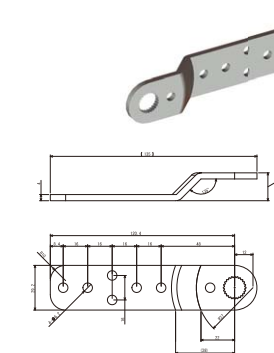
No.10

Finish : Chrome plating



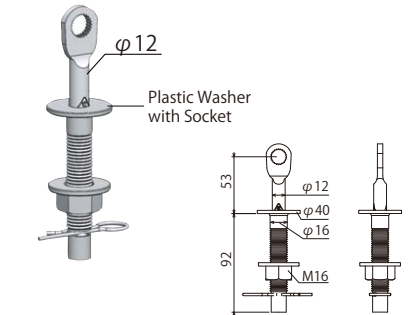
No.15

Finish : Unichrome plating

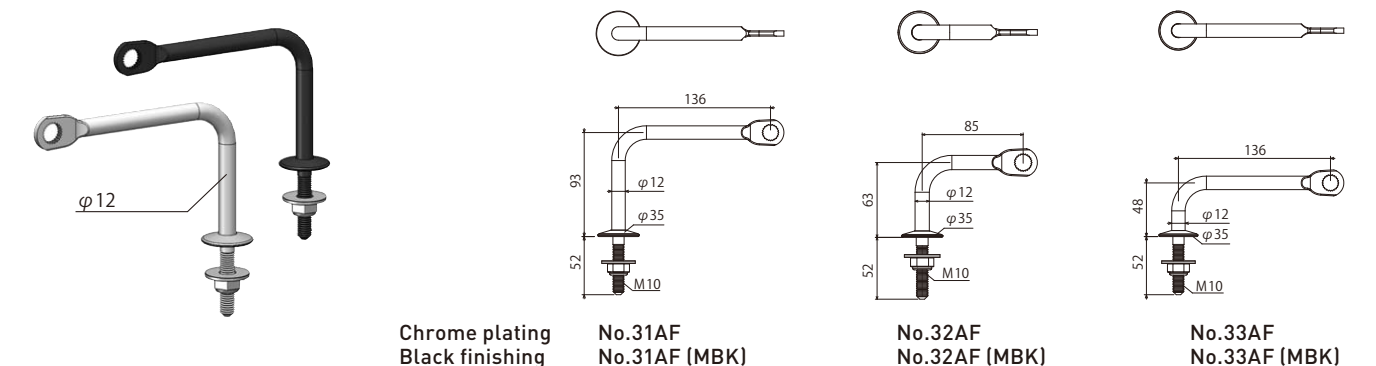


No.40B

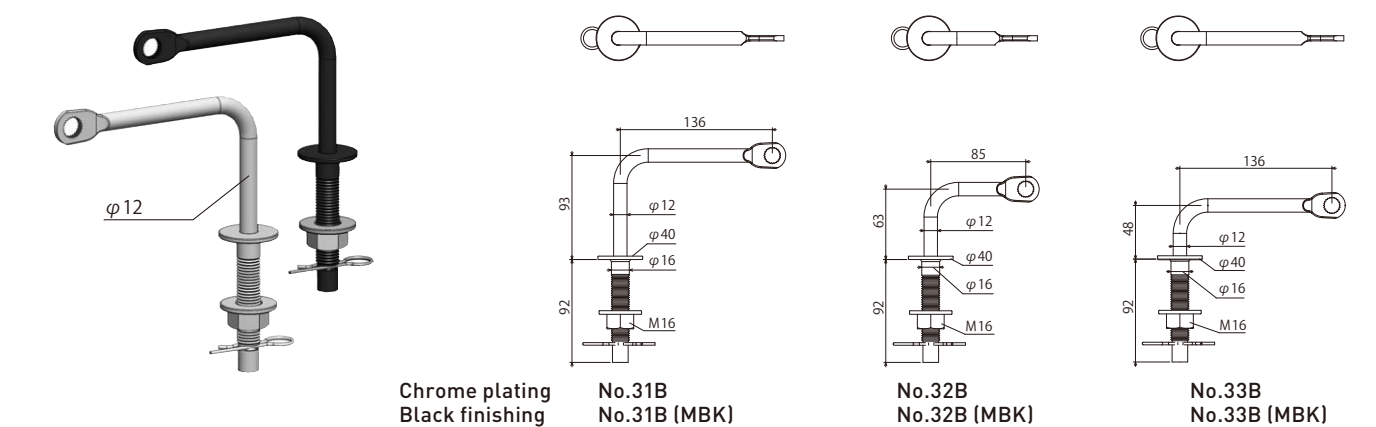
Finish : Unichrome plating



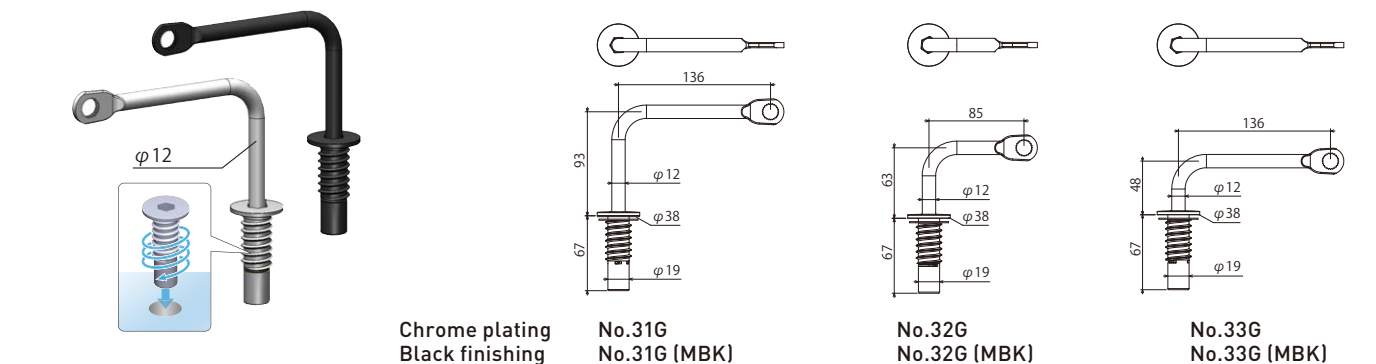
No.31AF~33AF



No.31B～33B



No.31G~33G



Micro Pitch/100(N·m)

LS100-MP

Packing Spec

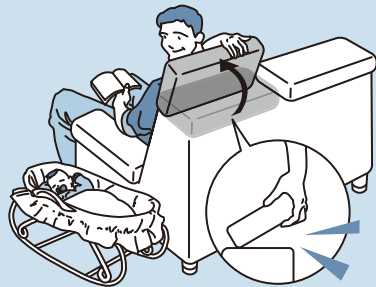
Sets / Carton	15
Weight / Set	0.56kg
Weight / Carton	9kg
L×W×H/Carton(mm)	250×330×150

Model Name **LS100-MP90L-30A**

Series: LS100, Micro Pitch: MP, Base Type: 90L, Arm Type: 30A

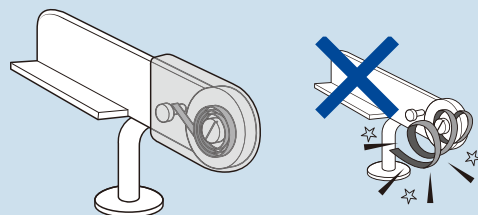


Quieter Click



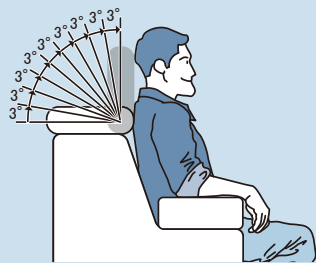
Operational noise is minimized.

Protected by Safety Plastic Cover



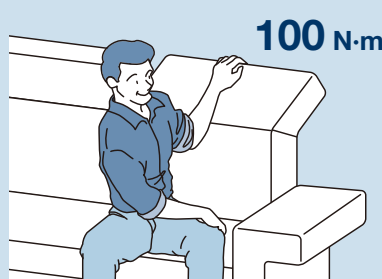
Safety design never to expose the inner parts outside

Micro Pitch



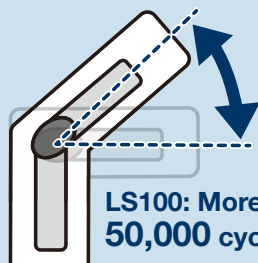
3° ultra fine pitch gear ensures better fit.

Durability



100 N·m

Repetition



LS100: More than 50,000 cycles
LS100(S): More than 20,000 cycles

Spring Type

Model Name **LS100(S)-MP72I-A180**

Series: LS100(S), Micro Pitch: MP, Base Type: 72I, Arm Type: A180

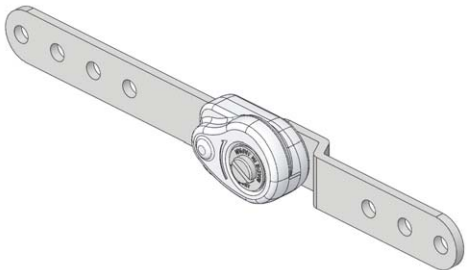


Spiral Spring

Specification

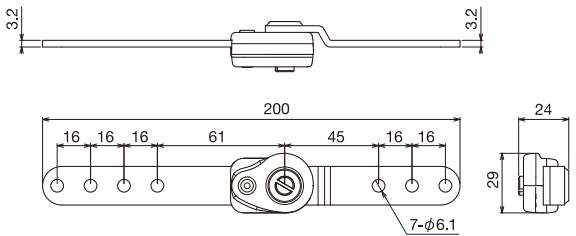
LS100(S)-MP72I-A180

Finish : Unichrome plating



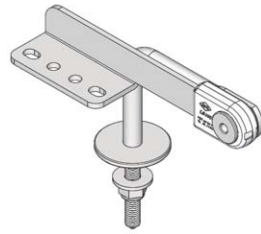
Packing Spec

Sets / Carton	50
Weight / Set	0.26kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150



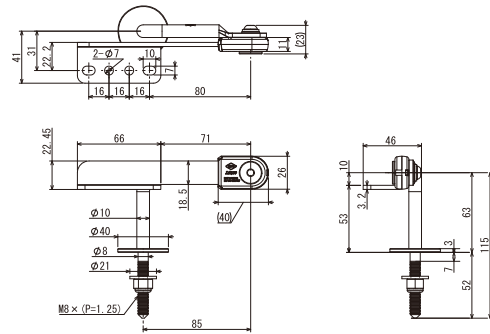
Specification

LS100-MP90L-30A

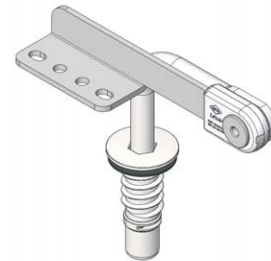


Packing Spec

Sets / Carton	15
Weight / Set	0.56kg
Weight / Carton	9kg
LxWxH/Carton(mm)	250x330x150

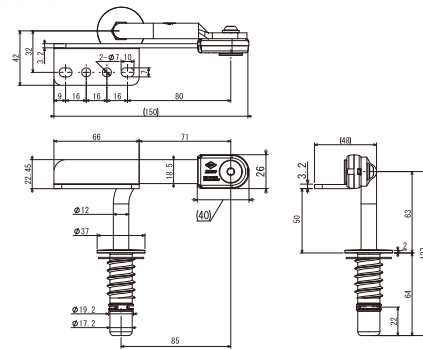


LS100-MP90L-32G

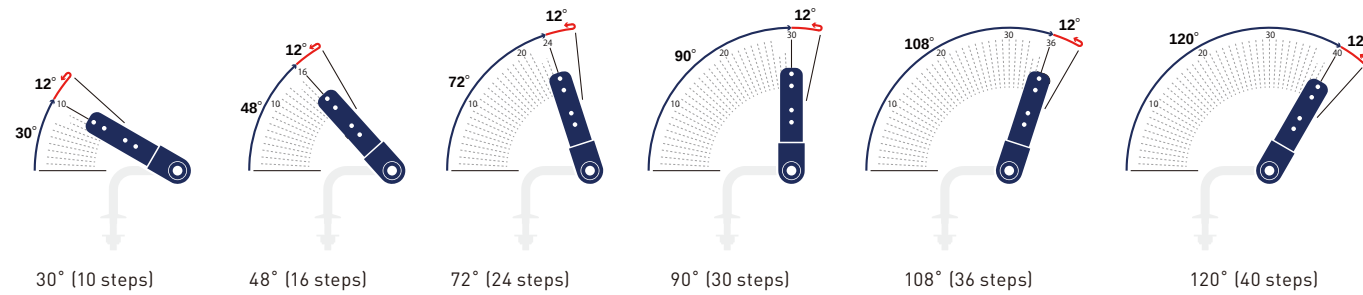


Packing Spec

Sets / Carton	15
Weight / Set	0.86kg
Weight / Carton	13.4kg
LxWxH/Carton(mm)	250x330x150



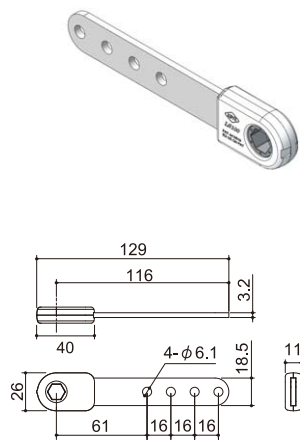
Gear Steps with Movable Range



Bases

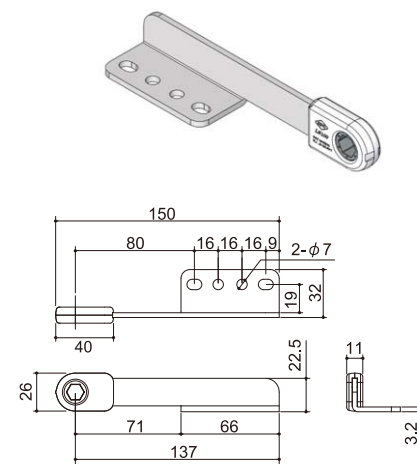
I-type

Finish : Unichrome plating



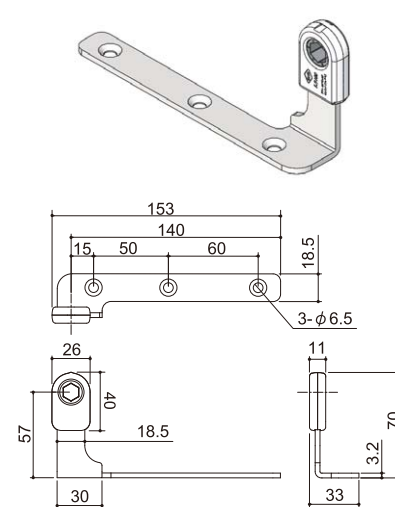
L-type

Finish : Unichrome plating



Z-type

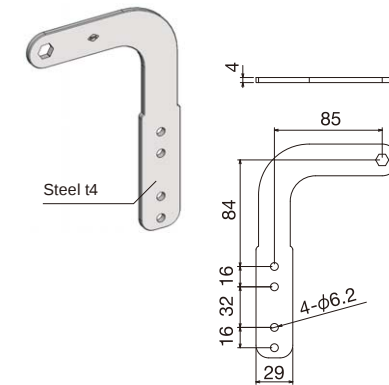
Finish : Unichrome plating



Arms

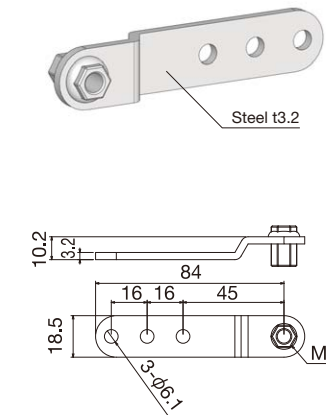
No.10

Finish :
Chrome plating



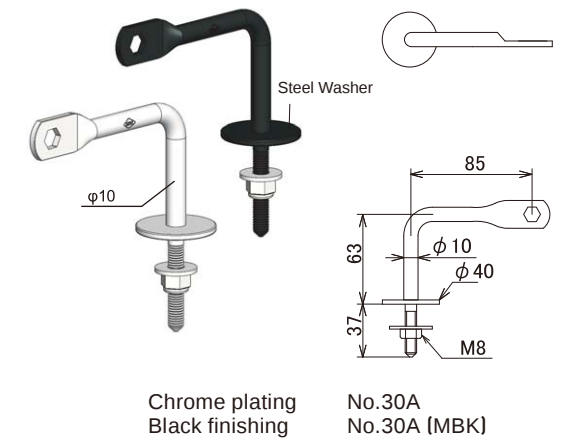
No. A

Finish : Unichrome
plating

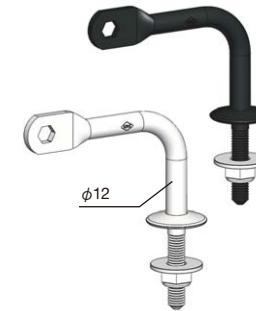


No. 30A

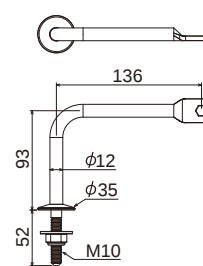
※ Shaft $\phi 10$



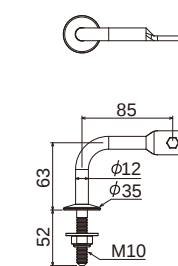
No. 31AF~33AF



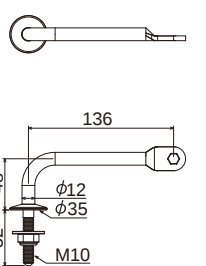
Chrome plating
Black finishing



No.31AF
No.31AF (MBK)

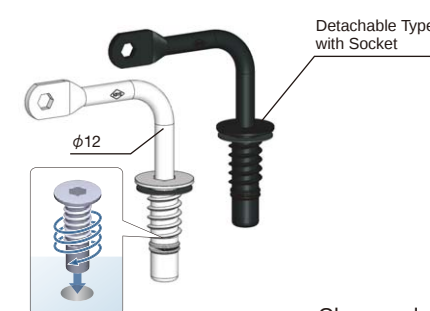


No.32AF
No.32AF (MBK)

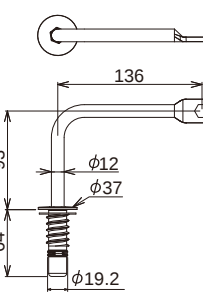


No.33AF
No.33AF (MBK)

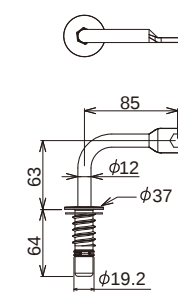
No. 31G~33G



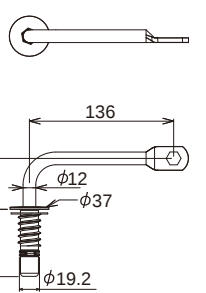
Chrome plating
Black finishing



No.31G
No.31G (MBK)



No.32G
No.32G (MBK)



No.33G
No.33G (MBK)

Micro Pitch/200(N·m)

LS200-MP

Packing Spec

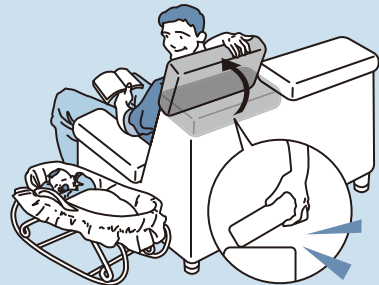
Sets / Carton	15
Weight / Set	1.04kg
Weight / Carton	16.1kg
LxWxH/Carton(mm)	250x330x150

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

Series: LS200, Micro Pitch: MP, Base Type: 90L, Movable Range: 90, Arm Type: 32G

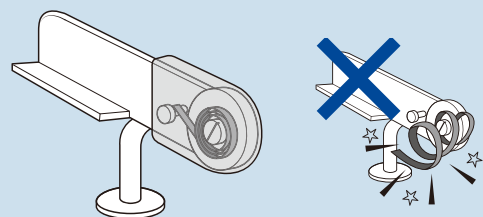


Quieter Click



Operational noise is minimized.

Protected by Safety Plastic Cover



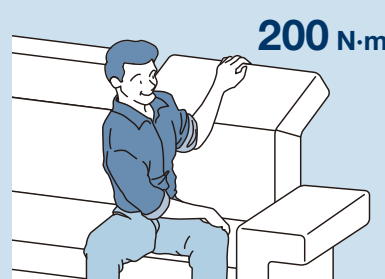
Safety design never to expose the inner parts outside

Micro Pitch



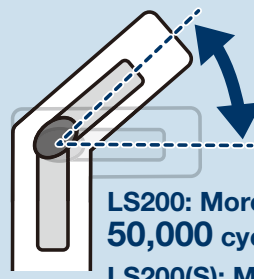
2° ultra fine pitch gear ensures better fit.

Durability



200 N·m

Repetition

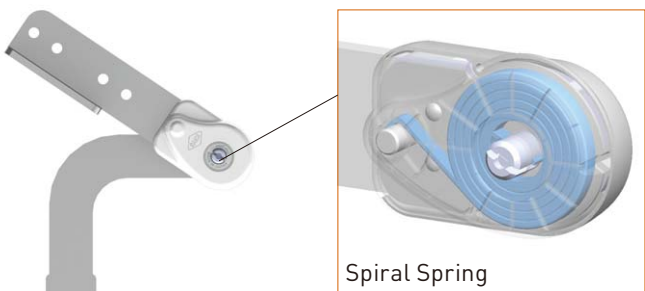


LS200: More than 50,000 cycles
LS200(S): More than 30,000 cycles

Spring Type

Model Name **LS200(S)-MP90L-10**

Series: LS200(S), Micro Pitch: MP, Base Type: 90L, Movable Range: 90, Arm Type: 10

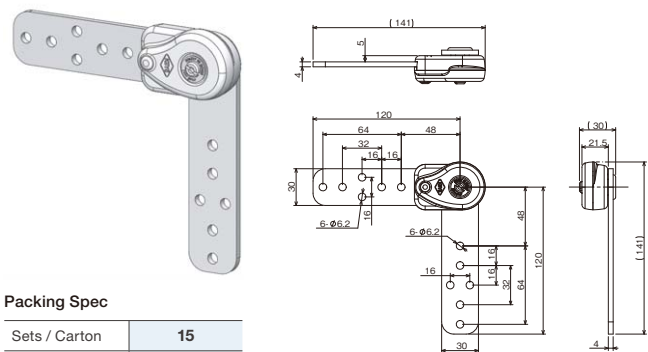


Spiral Spring

Specification

LS200(S)-MP90L-R11

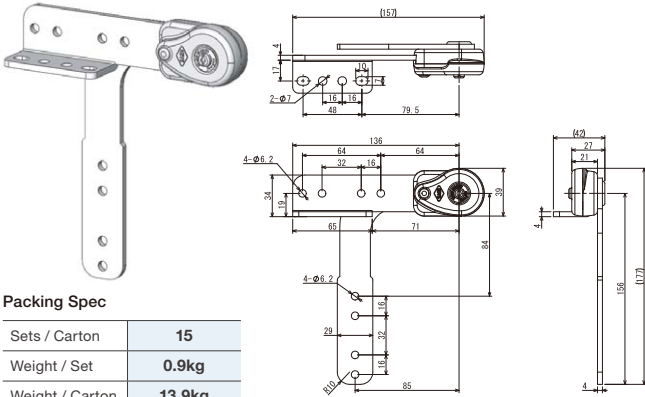
R11: Zero position 90°



Packing Spec

Sets / Carton	15
Weight / Set	0.65kg
Weight / Carton	10.2kg
LxWxH/Carton(mm)	250x330x150

LS200(S)-MP90L-10

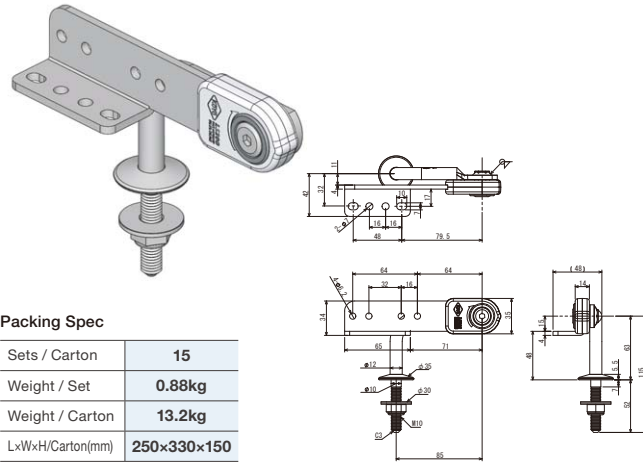


Packing Spec

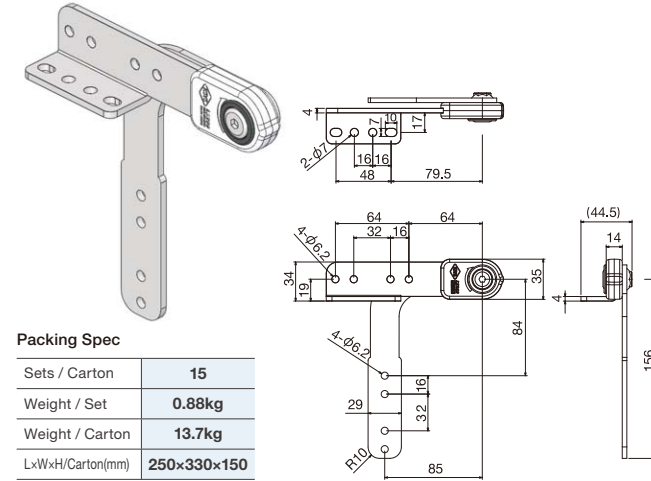
Sets / Carton	15
Weight / Set	0.9kg
Weight / Carton	13.9kg
LxWxH/Carton(mm)	250x330x150

Specification

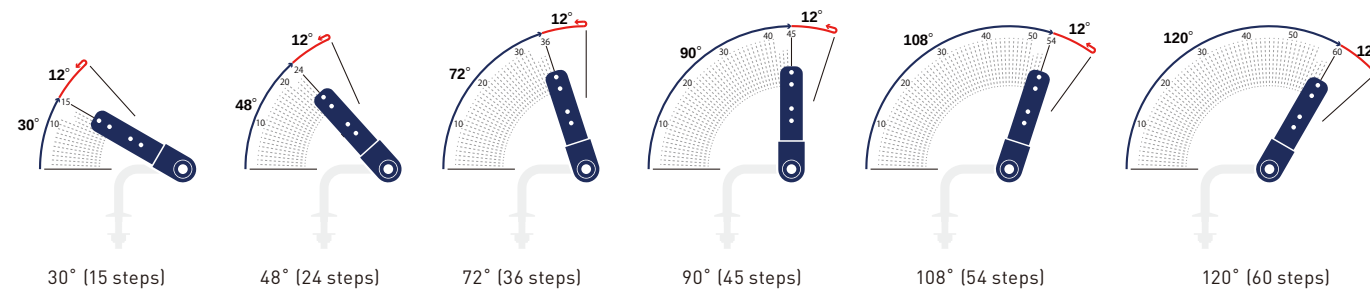
LS200-MP90L-32AF



LS200-MP90L-10



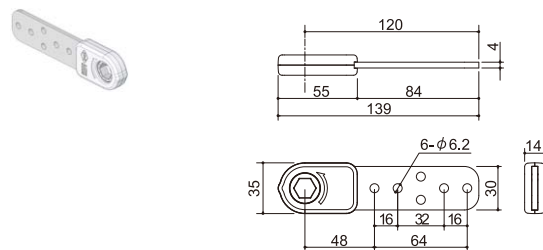
Gear Steps with Movable Range



Bases

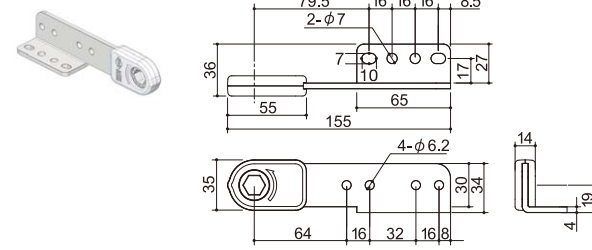
I-type

Finish : Unichrome plating



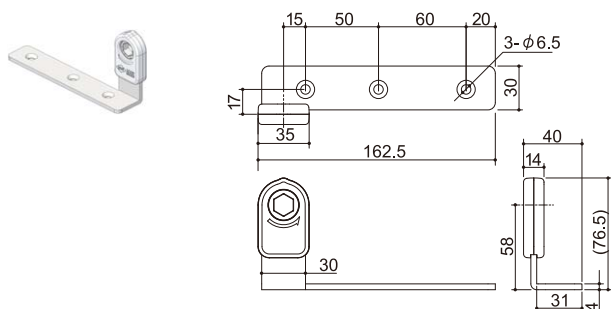
L-type

Finish : Unichrome plating



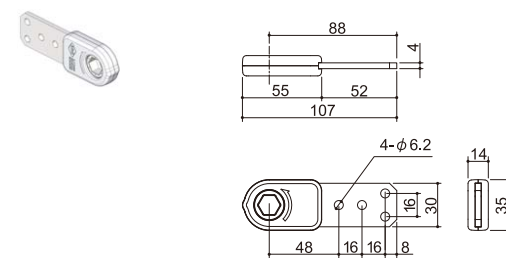
Z-type

Finish : Unichrome plating



IC-type

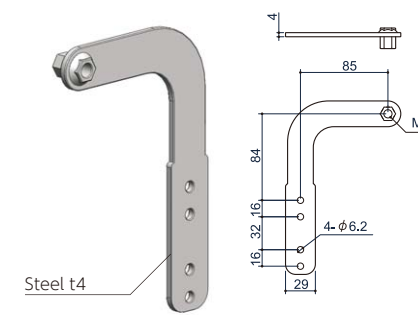
Finish : Unichrome plating



Arms

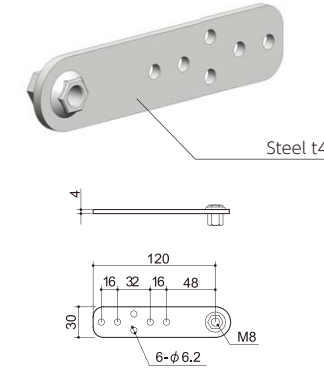
No.10

Finish : Chrome plating



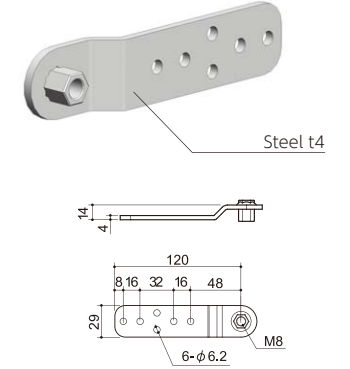
No.11

Finish : Unichrome plating



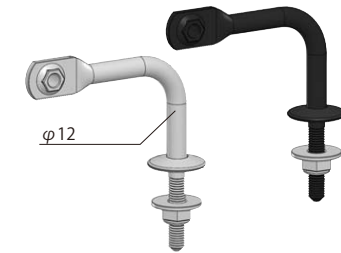
No.15

Finish : Unichrome plating

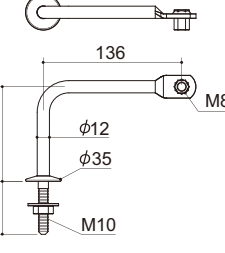


Combination with the I base e.g.)
Arm : No.15 Base : I-TYPE

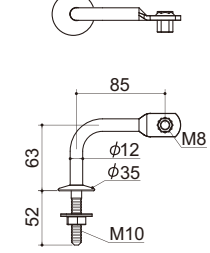
No. 31AF~33AF



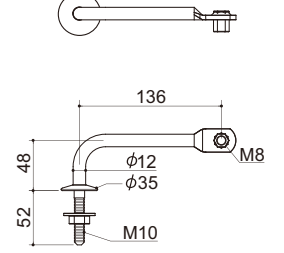
Chrome plating
Black finishing



No.31AF
No.31AF (MBK)

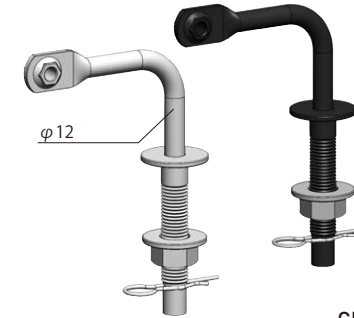


No.32AF
No.32AF (MBK)

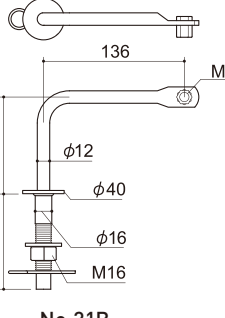


No.33AF
No.33AF (MBK)

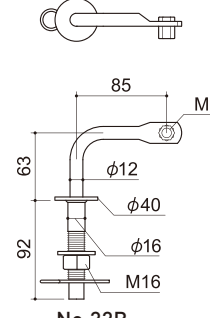
No. 31B~33B



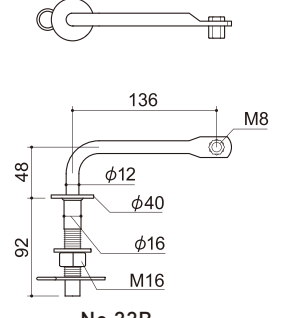
Chrome plating
Black finishing



No.31B
No.31B (MBK)

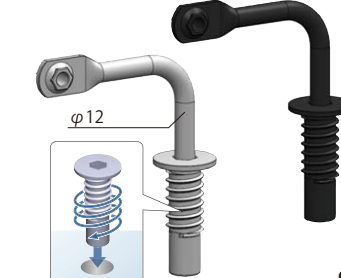


No.32B
No.32B (MBK)

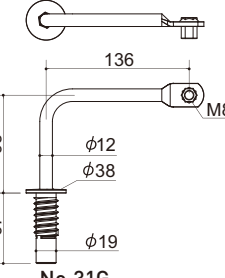


No.33B
No.33B (MBK)

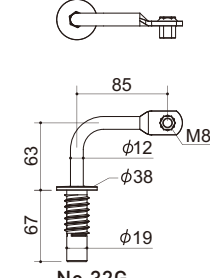
No. 31G~33G



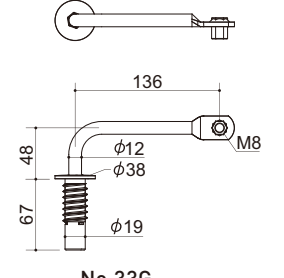
Chrome plating
Black finishing



No.31G
No.31G (MBK)



No.32G
No.32G (MBK)



No.33G
No.33G (MBK)

Micro Pitch/300(N·m)

LS300-MP

Packing Spec	
Sets / Carton	15
Weight / Set	1.02kg
Weight / Carton	15.8kg
L×W×H/Carton(mm)	250×330×150

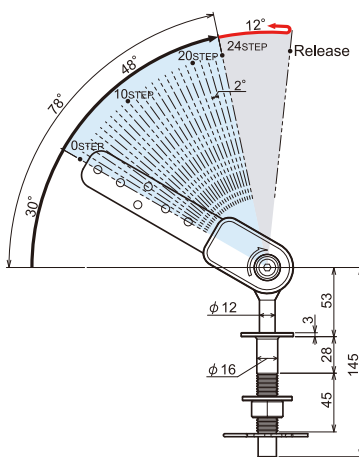
Model Name **LS300-MP48I-40B**

Series Micro Pitch Base Type
 Movable Range Arm Type

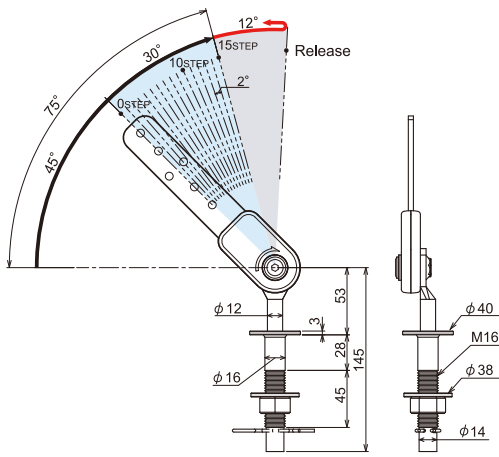


Specification

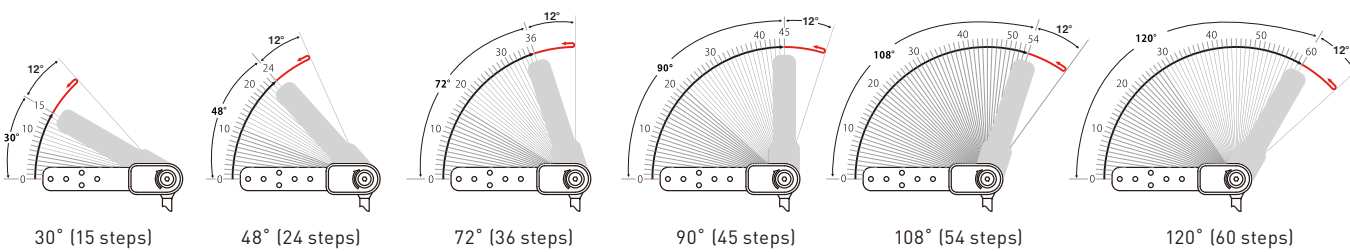
LS300-MP48I-40B



LS300-MP30I-41B



Gear Steps with Movable Range



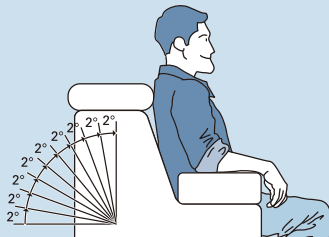
Base

I-type

Finish : Unichrome plating



Micro Pitch



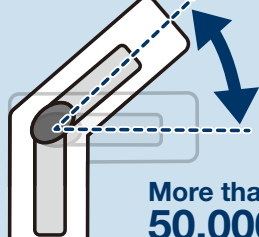
2° ultra fine pitch gear ensures better fit.

Durability



For 500 mm backrest, 120 kg is durable as one set (2 pcs).

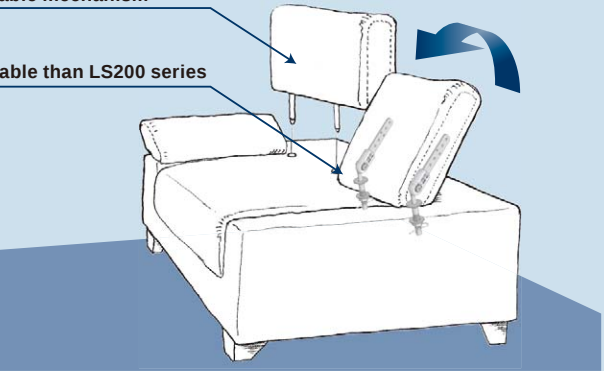
Repetition



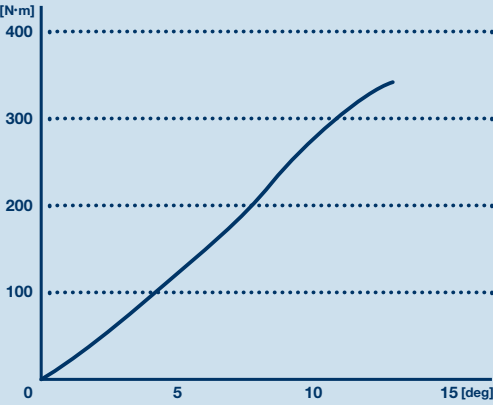
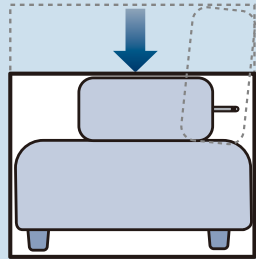
More than 50,000 cycles

Easier detachable mechanism

50% more durable than LS200 series



Compact packing saving your shipping cost



We started to load the torque until breakage of LS300-MP. This graph shows the strength.

Micro Pitch/220(N·m)/ Silent

ST250

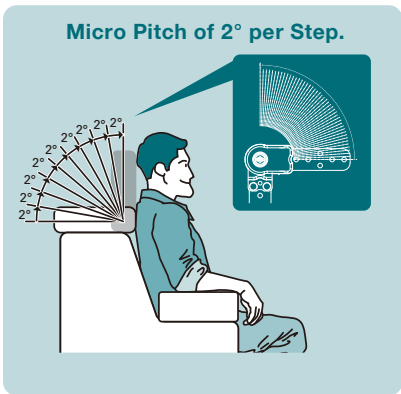
Packing Spec

Pcs / Carton	50
Weight / Pc	0.29kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150

Model Name **ST250-90-90**
Series Movable Range Zero Position

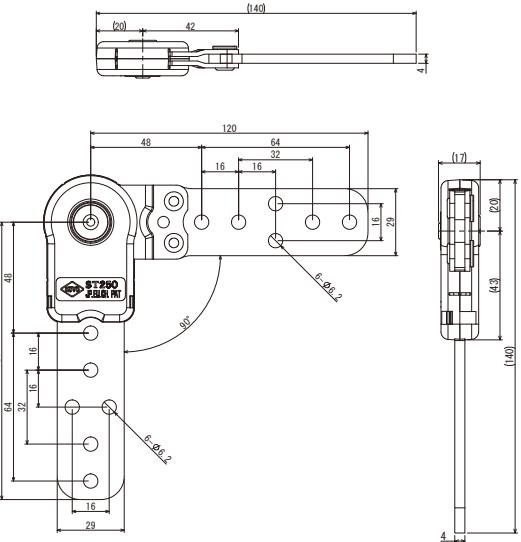


ST250-90-90
(non-spring type)



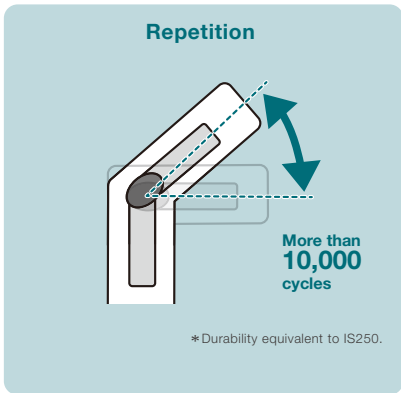
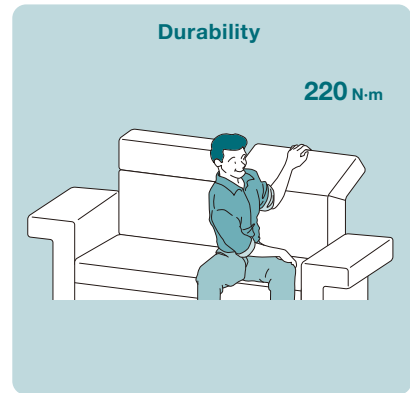
Specification

ST250-90-90 Finish : Unichrome plating



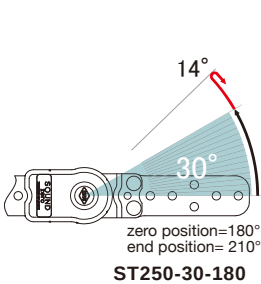
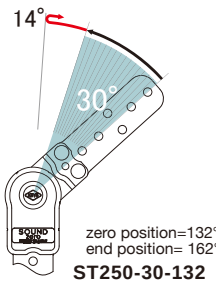
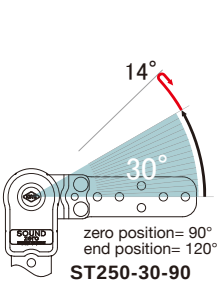
Packing Spec

Pcs / Carton	50
Weight / Pc	0.29kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150

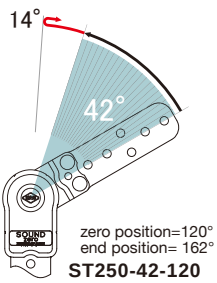


Gear Steps with Movable Range

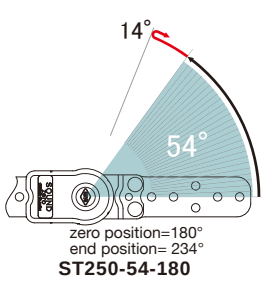
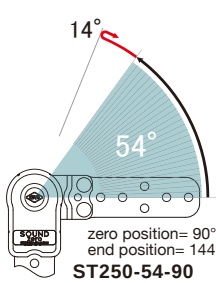
30° (15 steps)



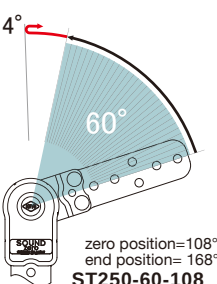
42° (21 steps)



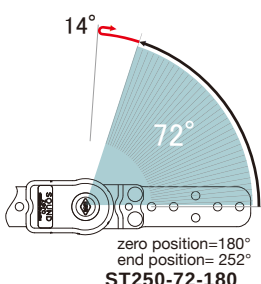
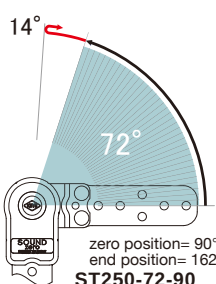
54° (27 steps)



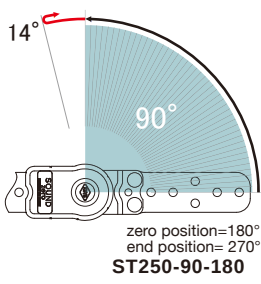
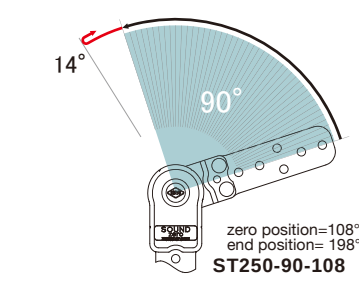
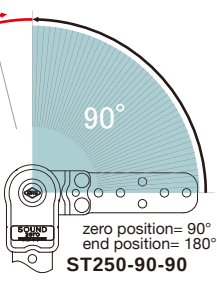
60° (30 steps)



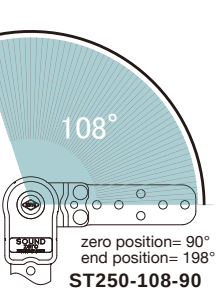
72° (36 steps)



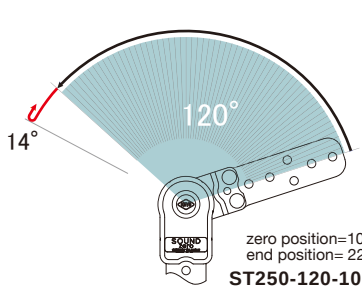
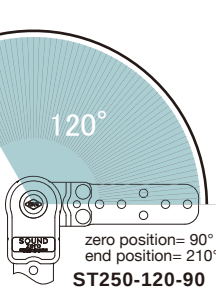
90° (45 steps)



108° (54 steps)

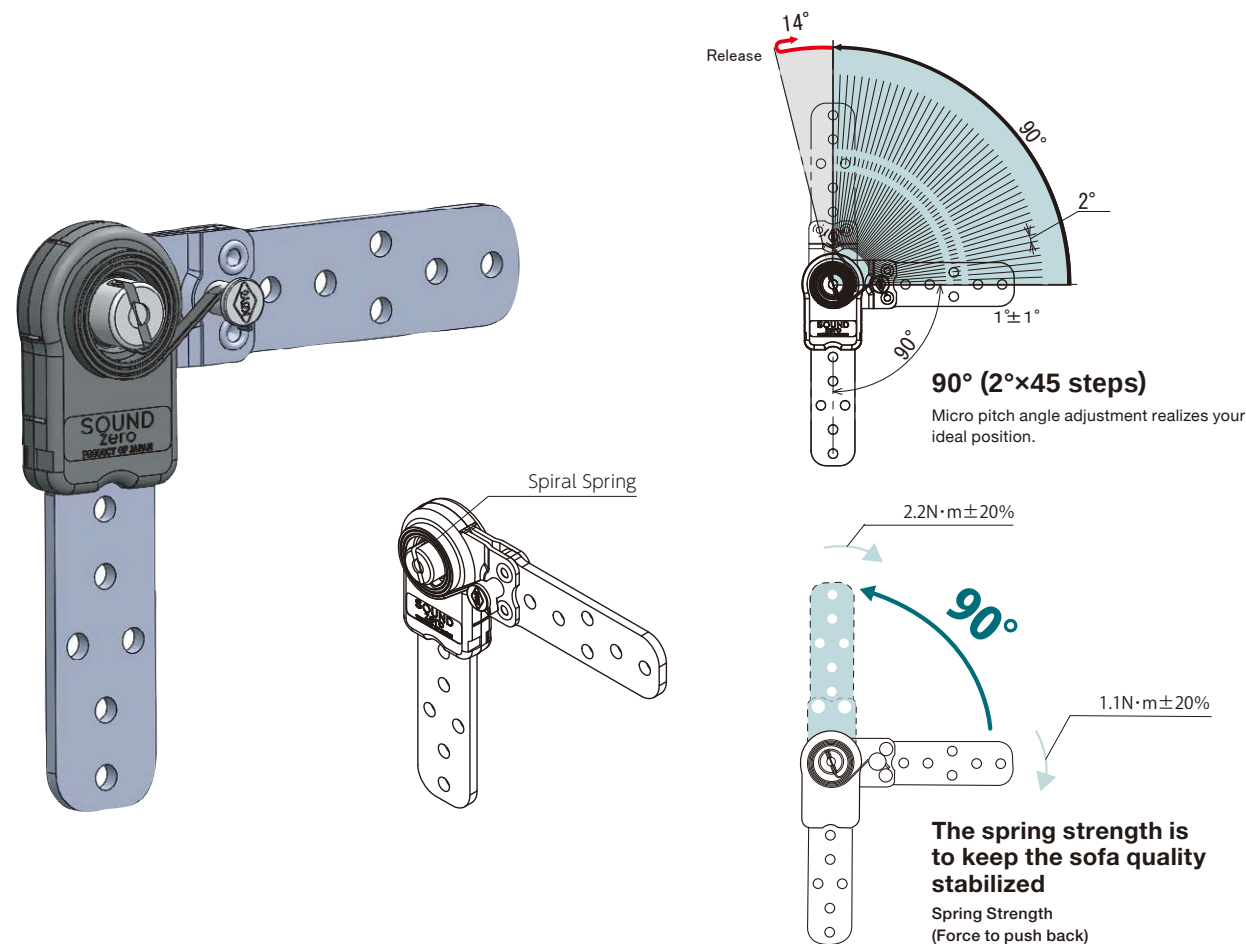


120° (60 steps)

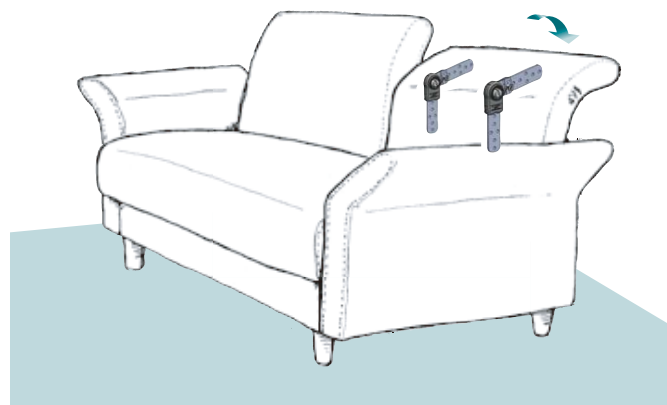


ST250 Spring Type

The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.



The integrated spring prevents a pulling up of the cushion by the upholstery and pushes the cushion down, so it will rest in a flat position when released.

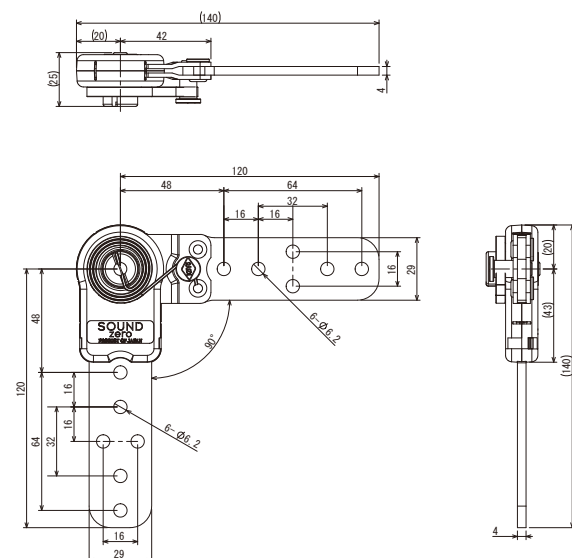


Packing Spec			
Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
20	0.65kg	13.3kg	250×330×150

Specification

ST250 Spring Type

Finish : Unichrome plating



ST Options

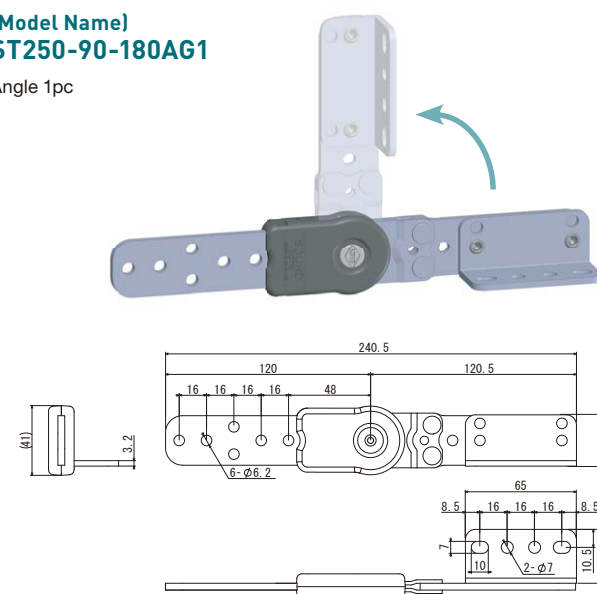
Angle Riveted Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.

(Model Name) ST250-90-180AG1

Angle 1pc

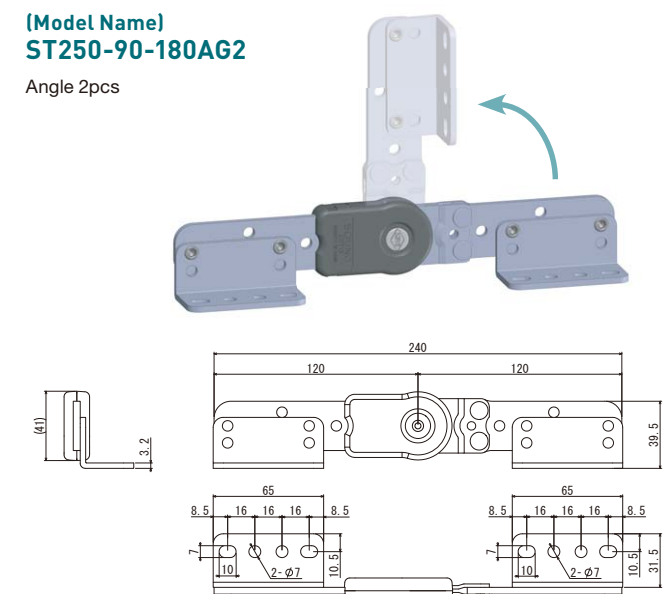


Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
25	0.8kg	20.5kg	250×330×150

(Model Name) ST250-90-180AG2

Angle 2pcs



Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
20	0.93kg	19.1kg	250×330×150

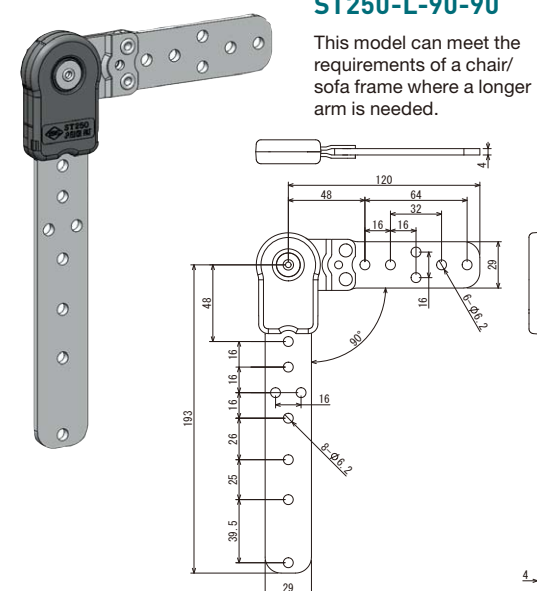
Long Arm Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.

(Model Name) ST250-L-90-90

This model can meet the requirements of a chair/sofa frame where a longer arm is needed.

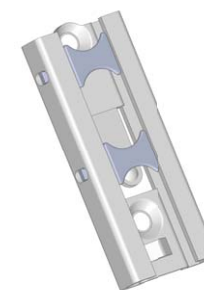


Packing Spec

Pcs / Carton	Weight / Pc	Weight / Carton	LxWxH/Carton(mm)
50	0.35kg	18kg	250×330×150

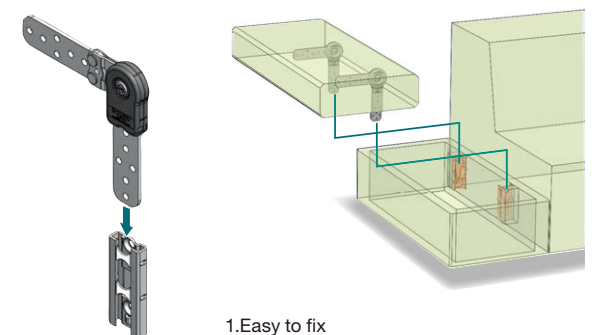
Socket

Finish : Unichrome plating



This is developed as a knock down fitting for headrests & armrests. This socket allows quick and easy assembly of reclining parts.

One-touch operation Just insert a gear into the socket



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

Classic/250(N·m)

IS250

Packing Spec

Pcs / Carton	50
Weight / Pc	0.30kg
Weight / Carton	15.5kg
L×W×H/Carton(mm)	250×330×105

Model Name **IS250-12-90**

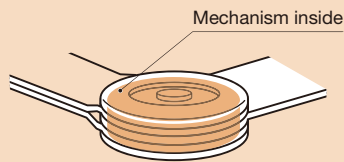
Step
Series
Zero Position



Slim Design



Protection for Inner Mechanism



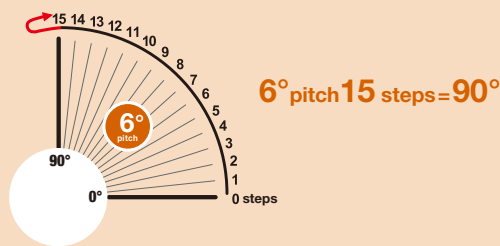
Durability & Repetition

Durability
250N·m

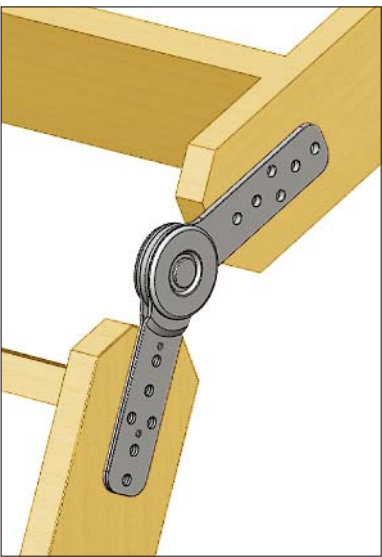
Repetition
More than
10,000 cycles



Fine Pitch Gear

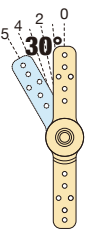


Ideal adjustment possible for headrest



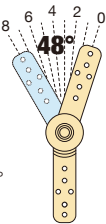
5
steps

IS250-5-180
zero position=180°
end position=210°

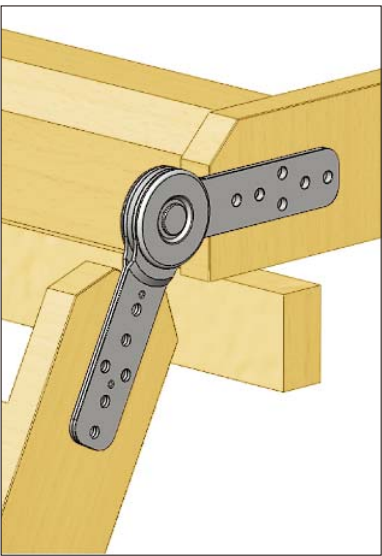


8
steps

IS250-8-162
zero position=162°
end position=210°

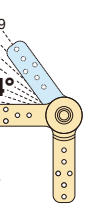


Ideal for armrest



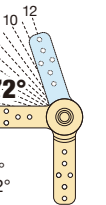
9
steps

IS250-9-90
zero position=90°
end position=144°

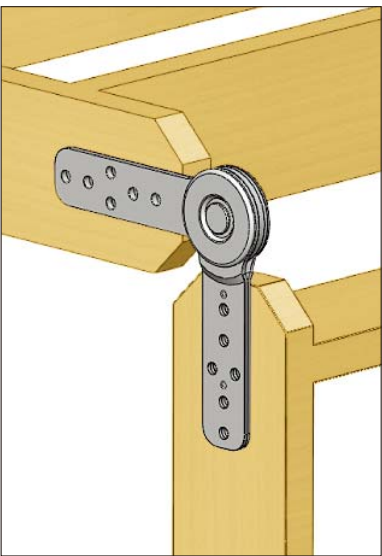


12
steps

IS250-12-90
zero position=90°
end position=162°

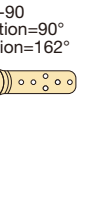


Ideal for footrest



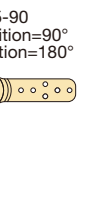
12
steps

IS250-12-90
zero position=90°
end position=162°



15
steps

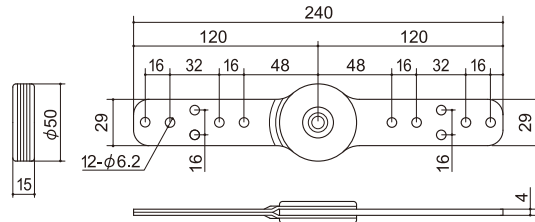
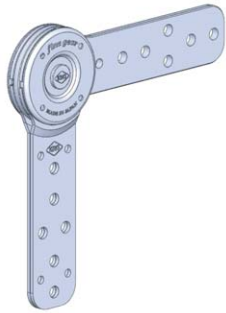
IS250-15-90
zero position=90°
end position=180°



Specification

IS250-12-90

Finish : Unichrome plating

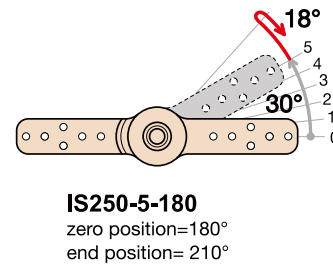
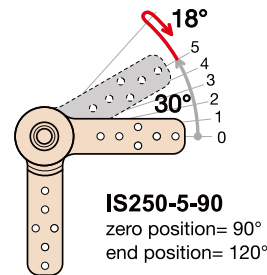
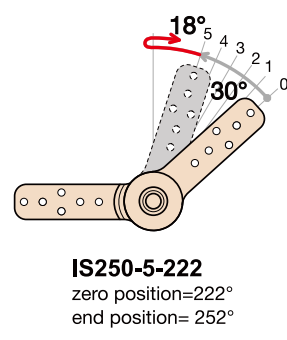
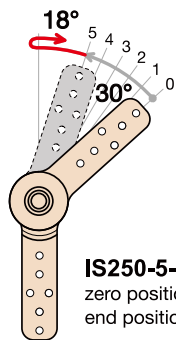


Packing Spec

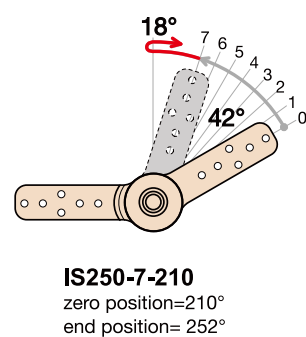
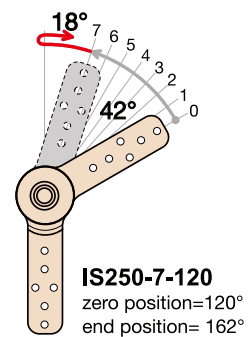
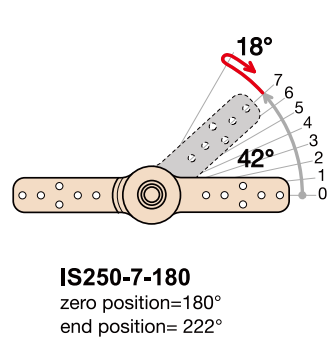
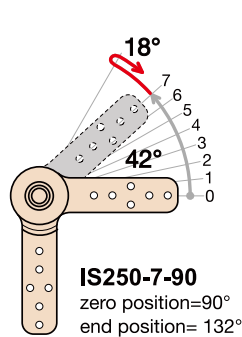
Pcs / Carton	50
Weight / Pc	0.30kg
Weight / Carton	15.5kg
LxWxH(Carton)(mm)	250x330x105

Gear Steps with Movable Range

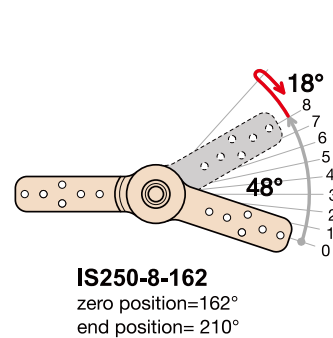
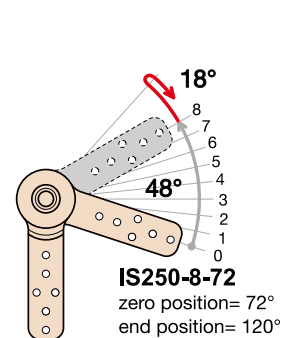
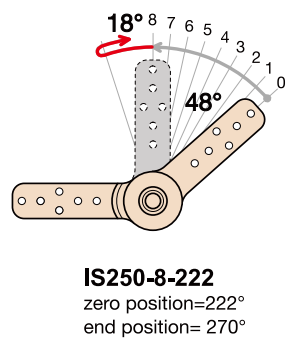
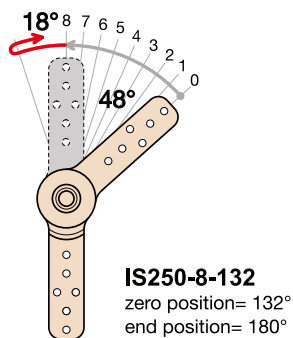
5 steps (30°)



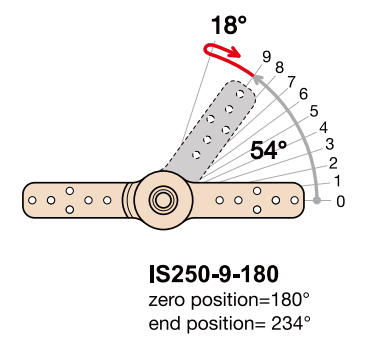
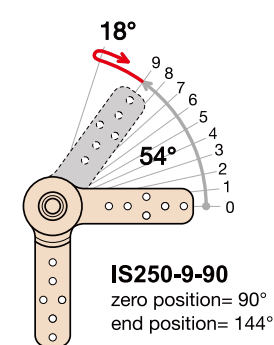
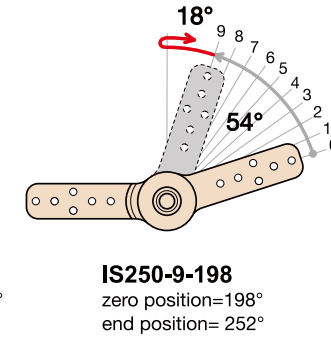
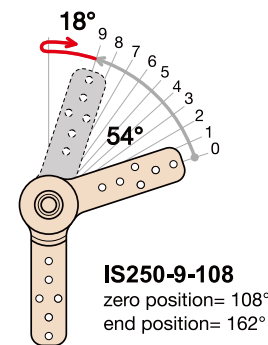
7 steps (42°)



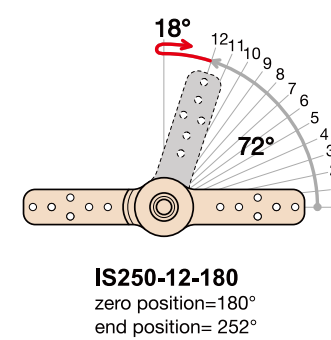
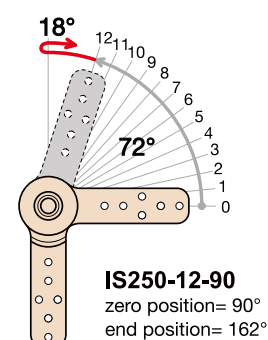
8 steps (48°)



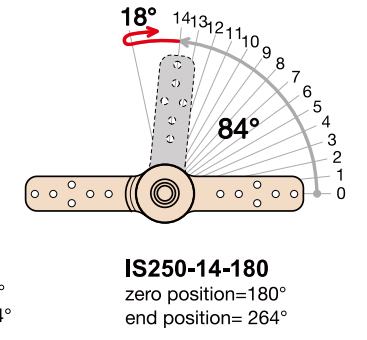
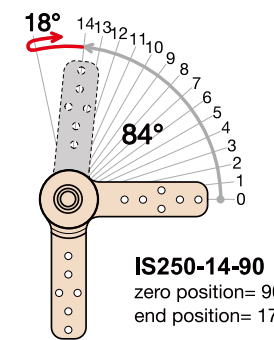
9 steps (54°)



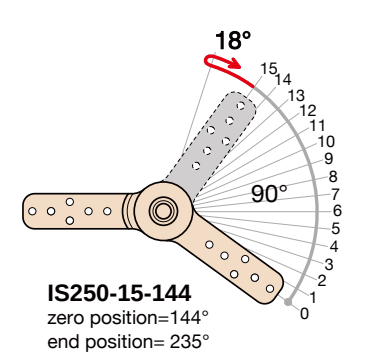
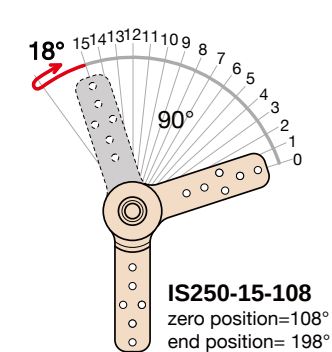
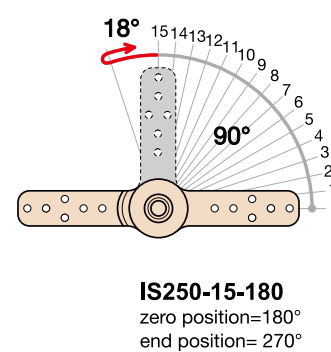
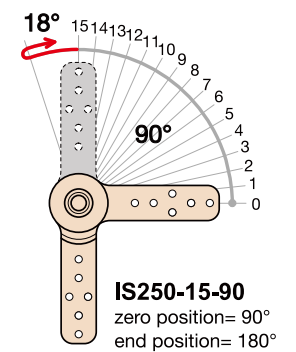
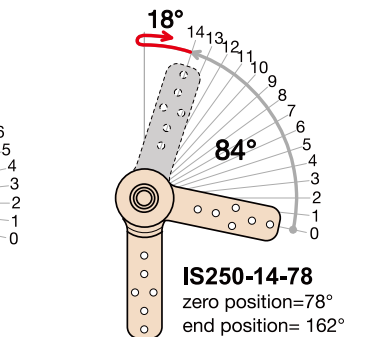
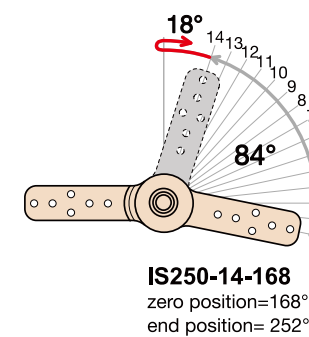
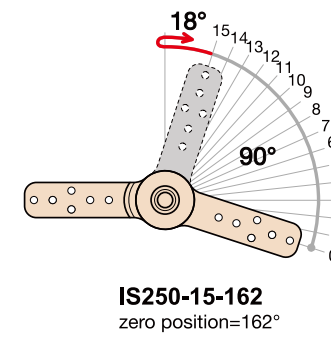
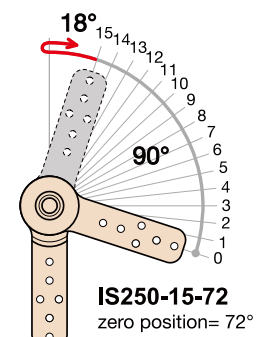
12 steps (72°)



14 steps (84°)

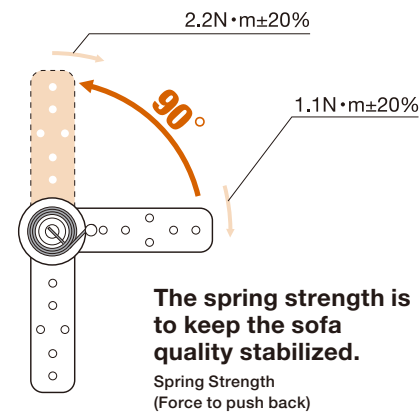
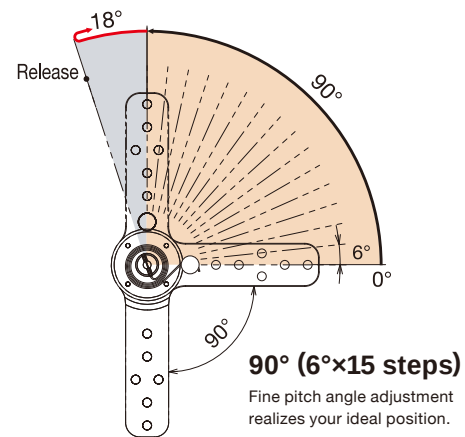


15 steps (90°)

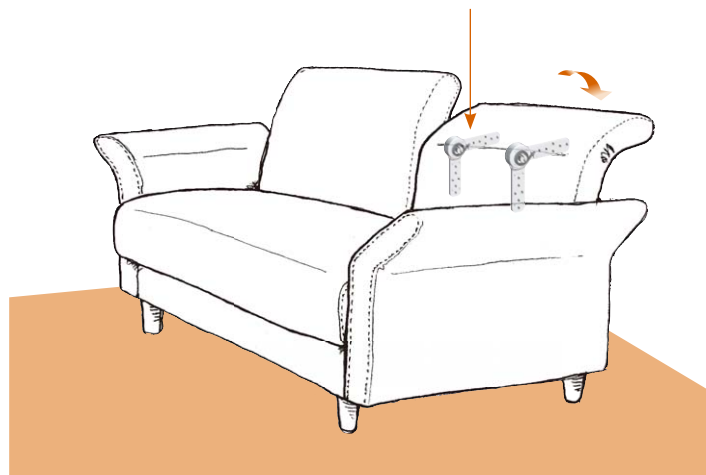


IS250 Spring Type

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.



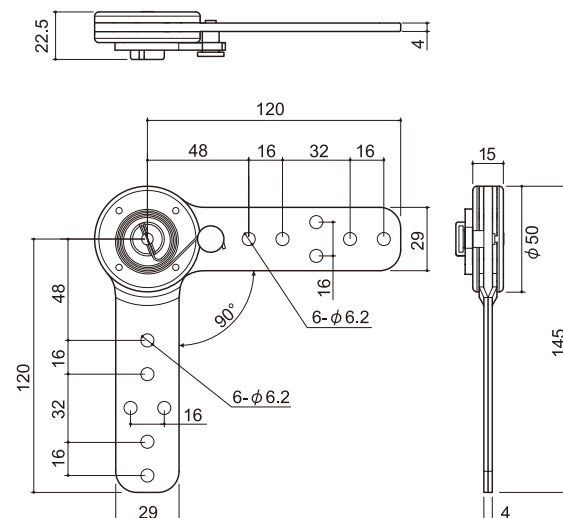
The integrated spring prevents a pulling up of the cushion by the upholstery and pushes the cushion down, so it will rest in a flat position when released.



Packing Spec			
Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
40	0.33kg	13.7kg	250×330×105

IS250-SS45-15-90

Finish : Unichrome plating



IS Options

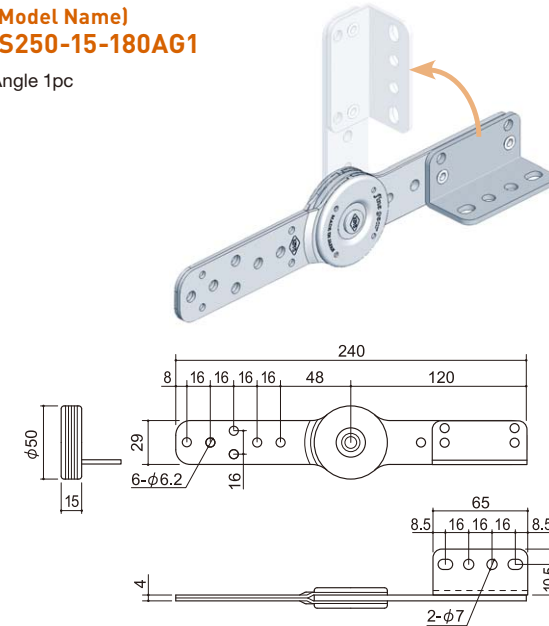
Angle Riveted Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.

(Model Name)
IS250-15-180AG1

Angle 1pc

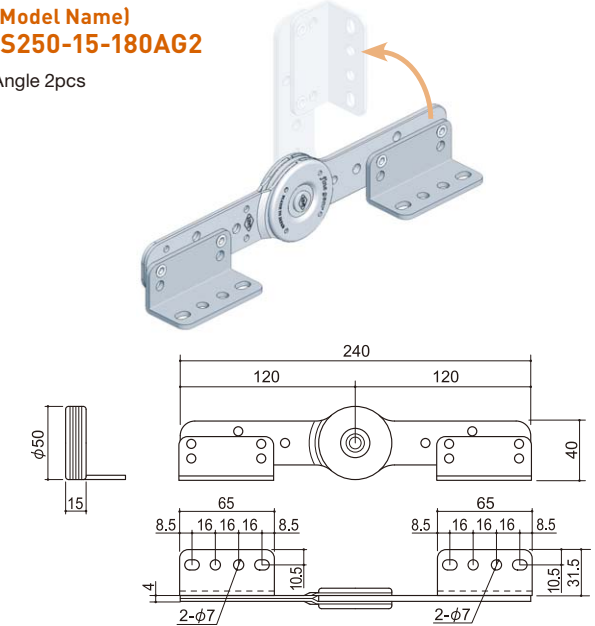


Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
25	0.78kg	20kg	250×330×150

(Model Name)
IS250-15-180AG2

Angle 2pcs



Packing Spec

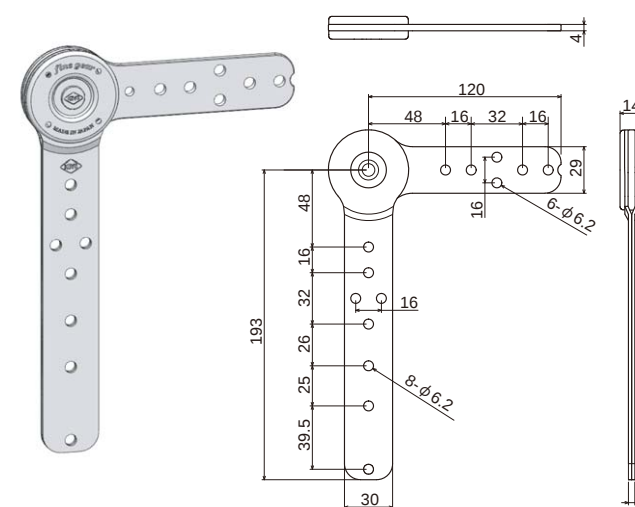
Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
40	0.48kg	19.7kg	250×330×150

Long Arm Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.

(Model Name)
IS250-L-15-90



Packing Spec

Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
50	0.38kg	19.5kg	250×330×150

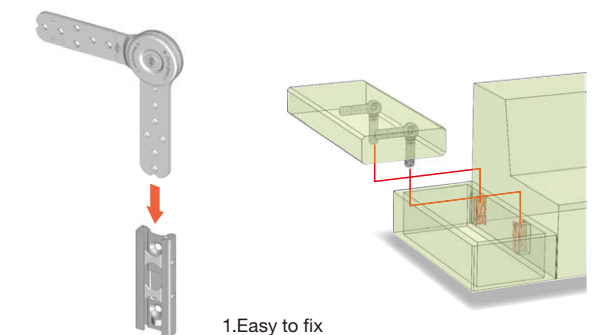
Socket

Finish : Unichrome plating



This is developed as a knock down fitting for headrests & armrests.
This socket allows quick and easy assembly of reclining parts.

One-touch operation
Just insert a gear into the socket



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

Fitting for heavier load/ 450(N·m)

IS450Y

Packing Spec

Pcs / Carton	40
Weight / Pc	0.5kg
Weight / Carton	20.5kg
L×W×H/Carton(mm)	250×330×150

Model Name **IS450Y-SS45-12-90**

Series Spring Type Zero Position Step

IS450Y-12-180
(non-spring type)

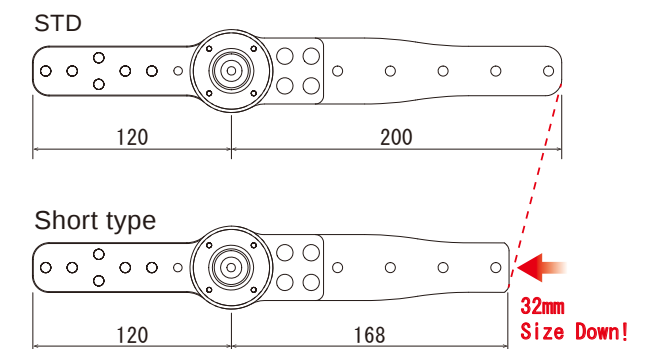
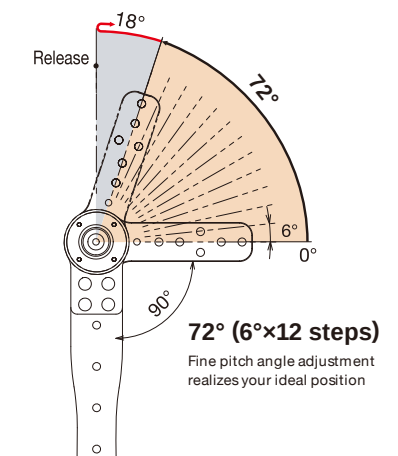
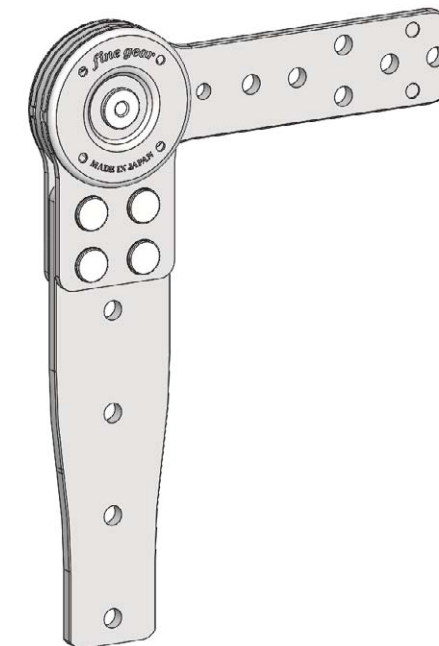


IS450Y-SS45-12-90
(spring type)

IS450Y Short Type

Model Name **IS450Y-12-90(S)**

Series Step Zero Short type Positon



Being shorter fits more into your sofa frame.

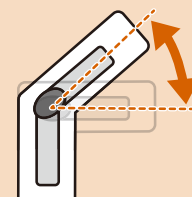
Durability

450 N·m



*Only the 15 steps version has 15% lower durability.

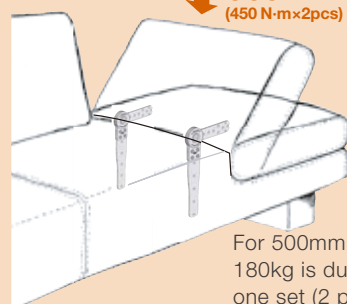
Repetition



More than
10,000 cycles

Strength

900 N·m
(450 N·m×2pcs)



For 500mm backrest,
180kg is durable as
one set (2 pcs).

Fine Pitch Gear



Ideal for armrest



Ideal for backrest

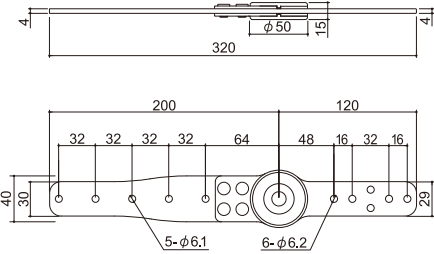


Ideal for footrest

Specification

IS450Y-12-180

Finish : Unichrome

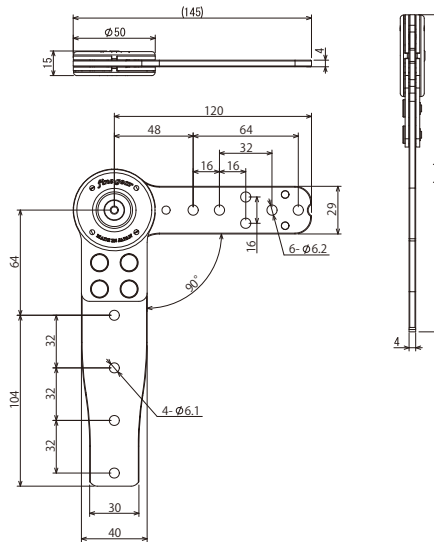


Packing Spec

Pcs / Carton	50
Weight / Pc	0.46kg
Weight / Carton	23.5kg
LxWxH/Carton(mm)	250x330x150

IS450Y-12-90(S)

Finish : Unichrome

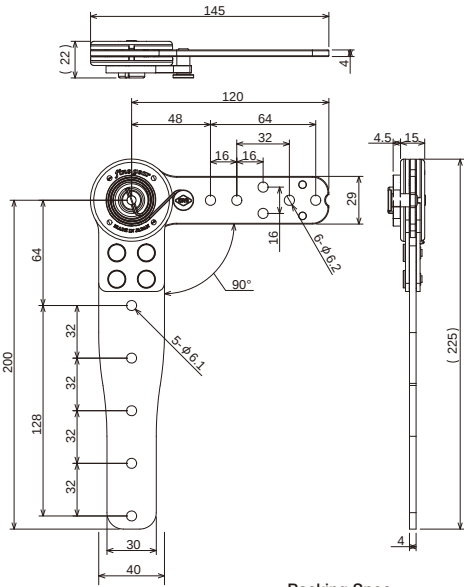


Packing Spec

Pcs / Carton	50
Weight / Pc	0.44kg
Weight / Carton	22kg
LxWxH/Carton(mm)	250x330x150

IS450Y-SS45-12-90

Finish : Unichrome

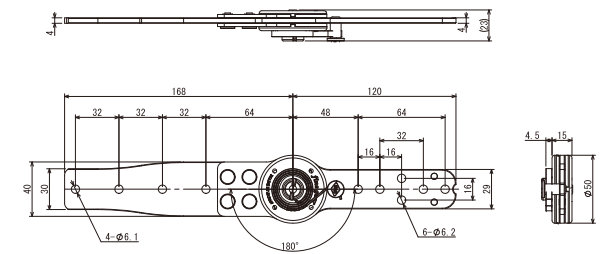


Packing Spec

Pcs / Carton	40
Weight / Pc	0.5kg
Weight / Carton	20.5kg
LxWxH/Carton(mm)	250x330x150

IS450Y-SS45-12-180(S)

Finish : Unichrome

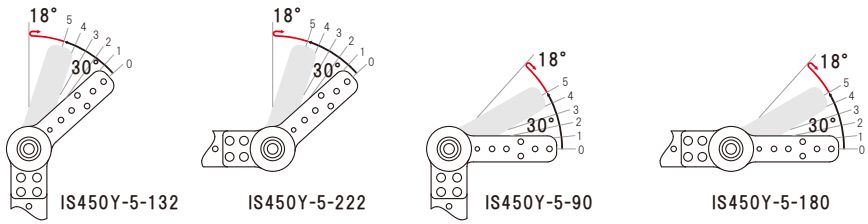


Packing Spec

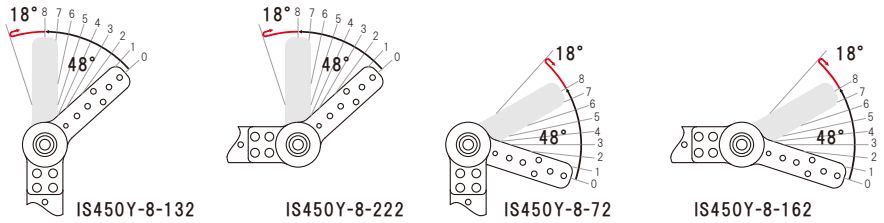
Pcs / Carton	40
Weight / Pc	0.44kg
Weight / Carton	17.6kg
LxWxH/Carton(mm)	250x330x150

Gear Steps with Movable Range

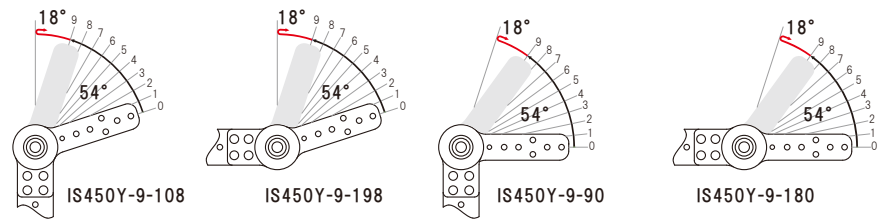
5 steps (30°)



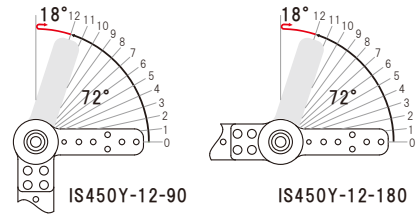
8 steps (48°)



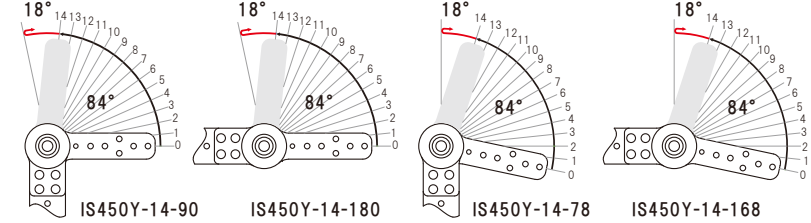
9 steps (54°)



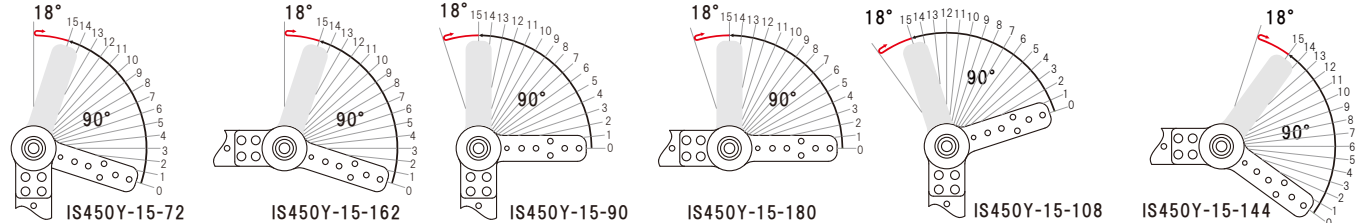
12 steps (72°)



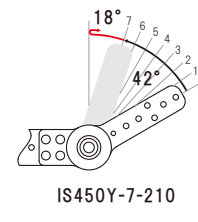
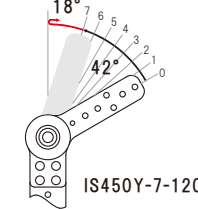
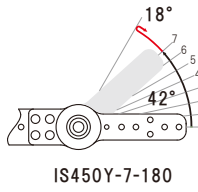
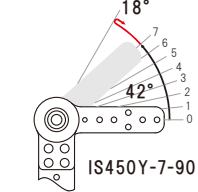
14 steps (84°)



15 steps (90°)



7 steps (42°)



+50mm Stretch/150(N·m)

IS150T

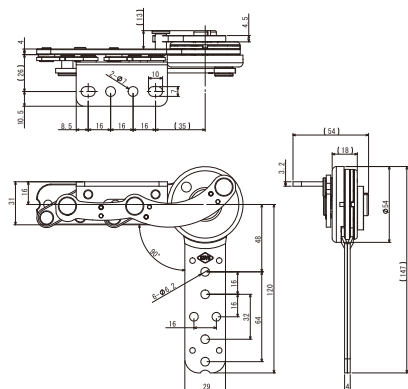
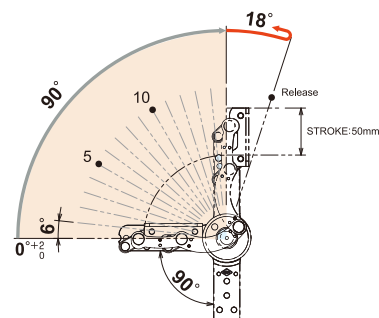


IS150T-SS45-15-90

Durability: 150N·m
Finish: Unichrome

Model Name
IS150T-15-90
(non-spring type)

IS150T-SS45-15-90
(spring type)



Packing Spec for IS150T-SS45-15-90

Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
20	1.07kg	21.4kg	250×330×180

+80mm Stretch/150(N·m)

IS150LT

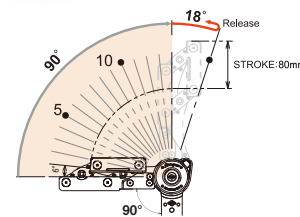


IS150LT-L-SS45-15-108

Durability: 150N·m
Finish: Unichrome

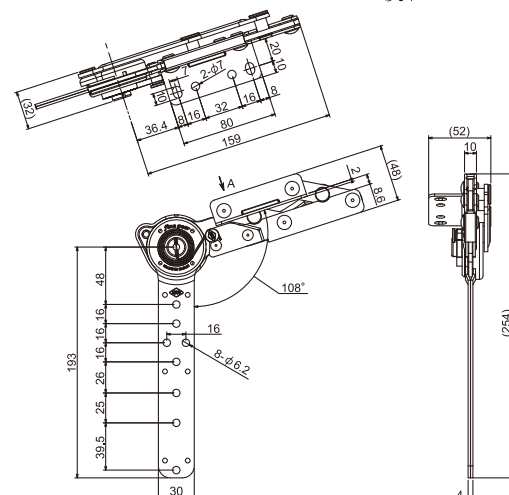
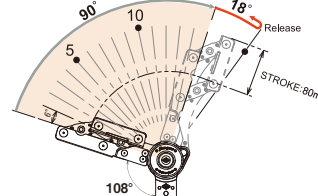
Model Name
IS150LT-L-15-90
(non-spring type)

IS150LT-L-SS45-15-90
(spring type)



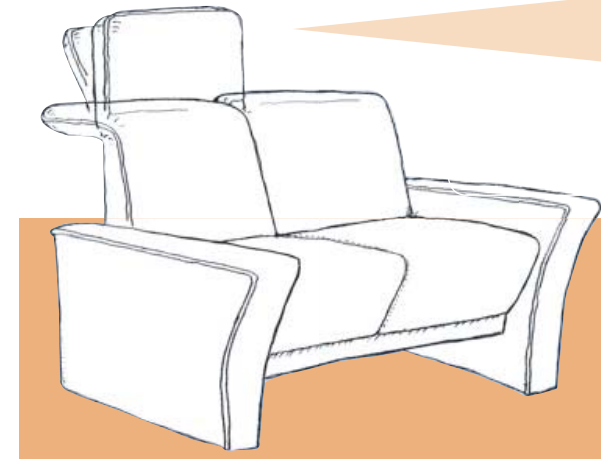
Model Name
IS150LT-L-15-108
(non-spring type)

IS150LT-L-SS45-15-108
(spring type)

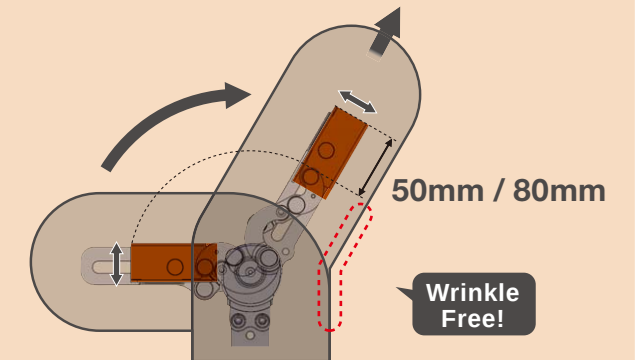


Packing Spec for IS150LT-L-SS45-15-90

Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
10	1.5kg	15.5kg	250×330×180



Stroke
50mm(IS150T) / 80mm(IS150LT)



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

Fine Pitch Gear

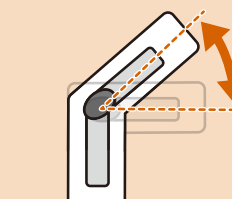


Durability

Durability
150N·m

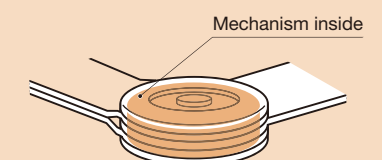


Repetition



More than
10,000 cycles

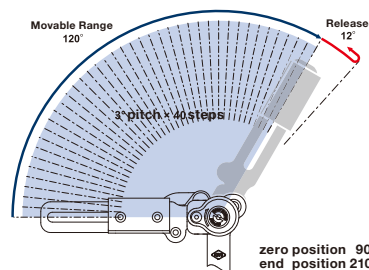
**Protection
for Inner Mechanism**



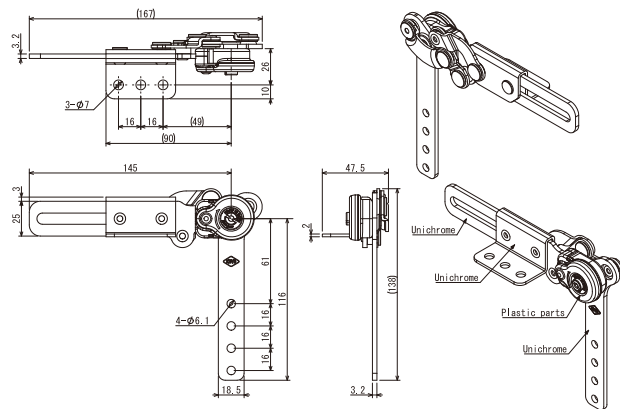
LS100-MP-TR



Model Name
LS100(S)-MP120TR-TA01(90)



120°(40 steps)

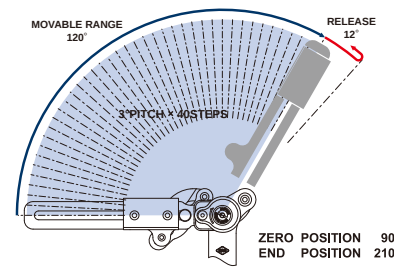


Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
15	0.6kg	9.5kg	250×330×150

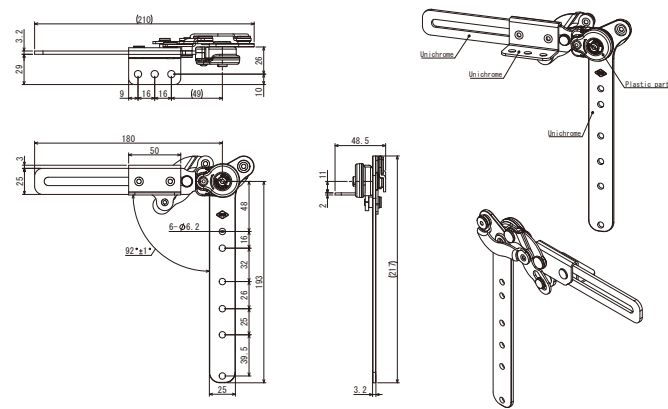
LS100-MP-LT



Model Name
LS100(S)-MP120LT-LR01(90)



120°(40 steps)



Sets / Carton	Weight / Set	Weight / Carton	LxWxH/Carton(mm)
10	0.8kg	8.5kg	250×330×150

50mm / 80mm

1

2

Wrinkle Free!

2 The angle plate slides along the gear base without extending its width.
(LS100-MP-TR•LS100-MP-LT)

A black and white line drawing of a woman with long hair, wearing a dress and high heels, sitting on a modern-style sofa. She is holding an open book and looking at it. There are three small circles above her head, suggesting a thought or a signal.

Movable Range 90°



Movable Range 120°

You can easily adjust the angle of the headrest to your favorite position for reading or watching TV.

Operational noise is minimized.

Safety design never to expose the inner parts outside

3° ultra fine pitch gear ensures better fit.

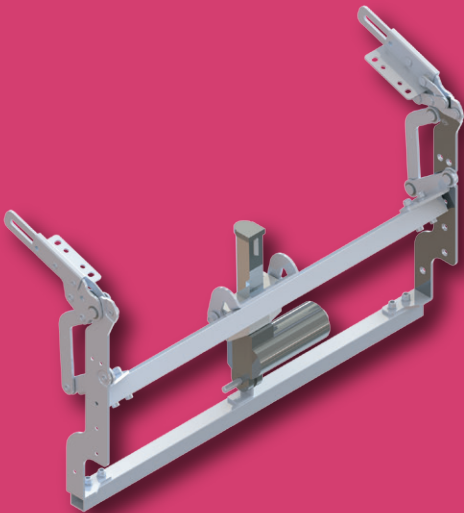
A diagram of a lever arm. A horizontal dashed line represents the fulcrum. A vertical dashed line represents the effort arm. A blue arrow points upwards from the fulcrum, representing the effort. A blue arrow points downwards from the end of the effort arm, representing the load.

LS100(S): More than 20,000 cycles

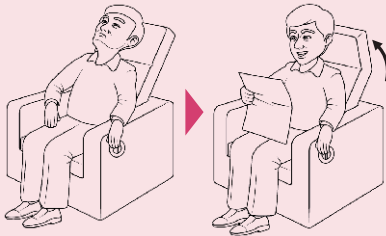
100 N·m

Motorized Angle Adjustable Gear

EL-02H



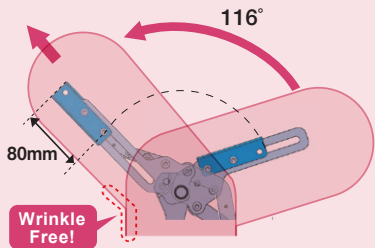
Adjust the angle of the headrest by just pushing a button



Motorized adjustment of the headrest

You can easily adjust the angle of the back and headrest to your favorite position for reading or watching TV.

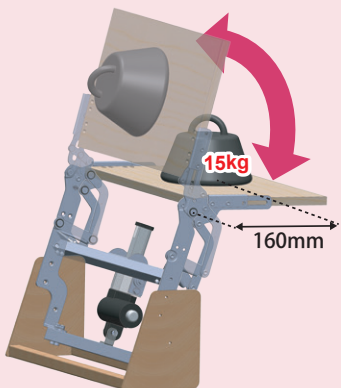
Stroke 80mm



Wrinkle Free!

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

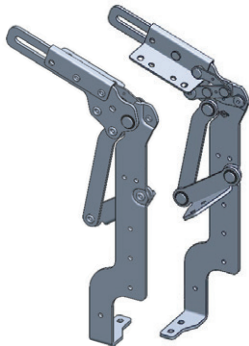
Test Data



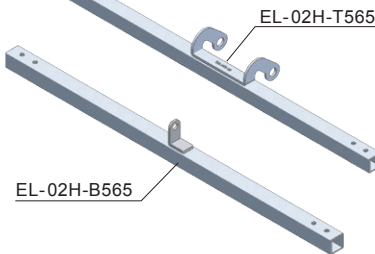
25,000 cycles while loading 15kg weight at 160mm from rotary axis.

Mechanical Components

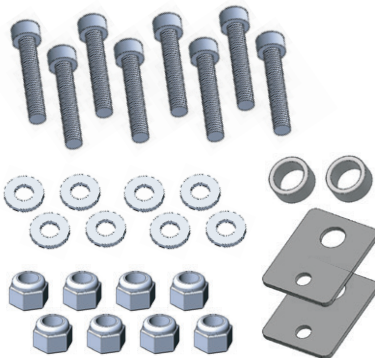
EL-02H2
arm parts/pair



EL-02H2-T565 (641·680·791)
EL-02H2-B565 (641·680·791)
Joint Pipe



EL-02H2-AC
accessory

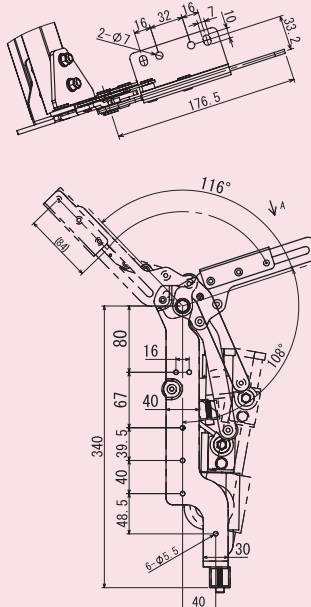
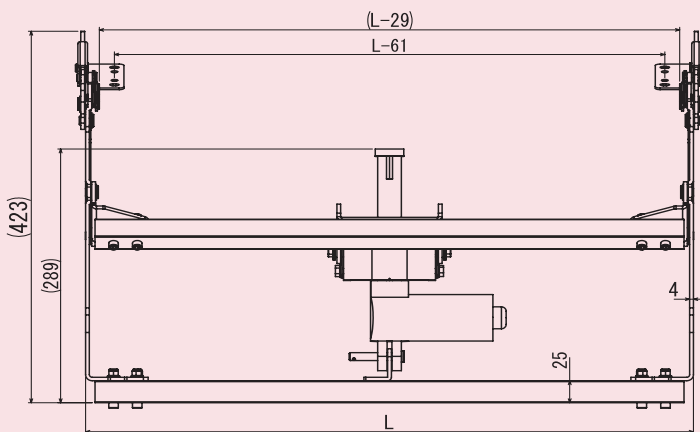


Manual Angle Adjustable Gear

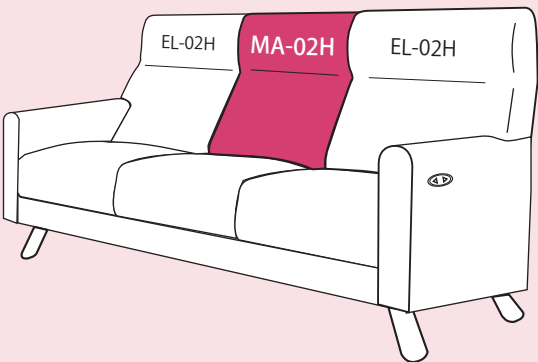
MA-02H



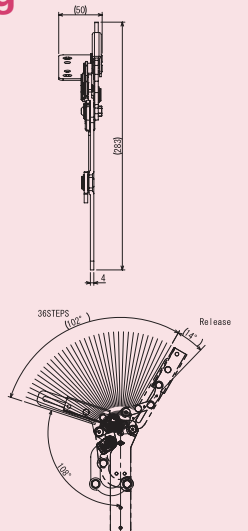
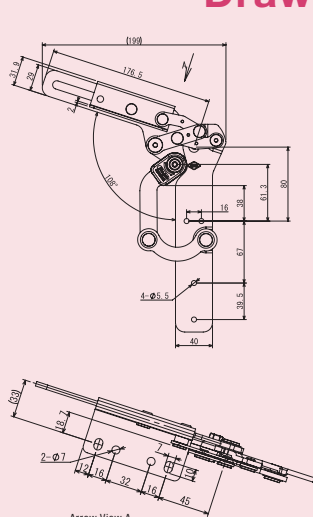
Drawing



For 3 seaters' sofa, you can locate the MA (manual) model between the EL (electric) ones, enabling manual adjustment in the same motion as EL-02H.

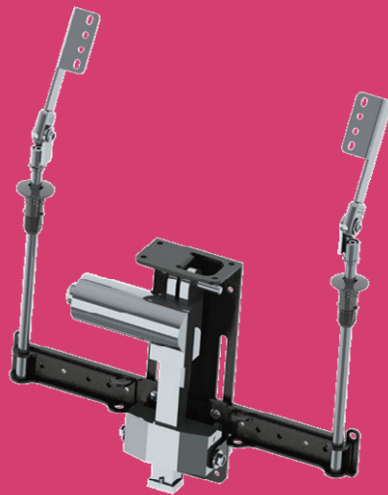


Drawing

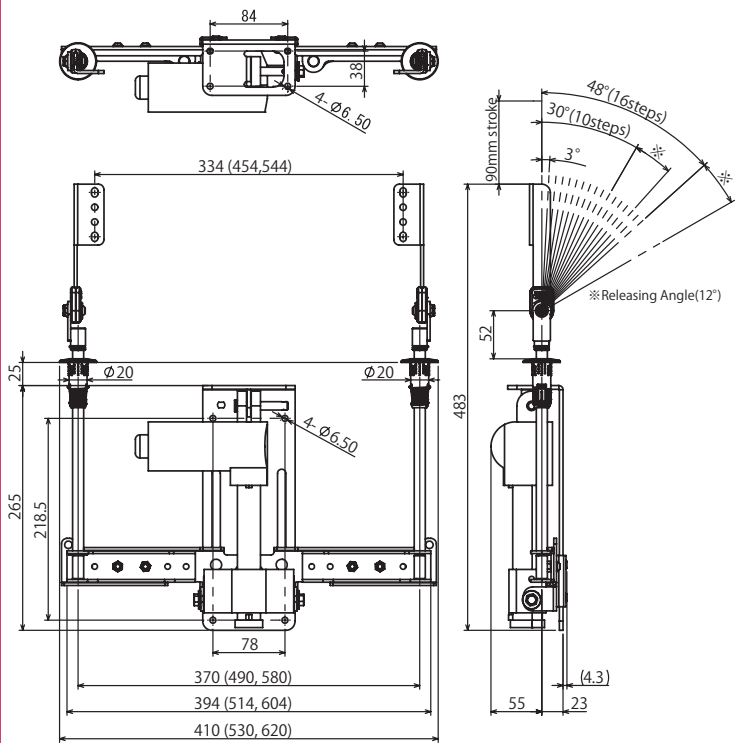


Motorized Lift Up Mechanism

EL-03H



Specification



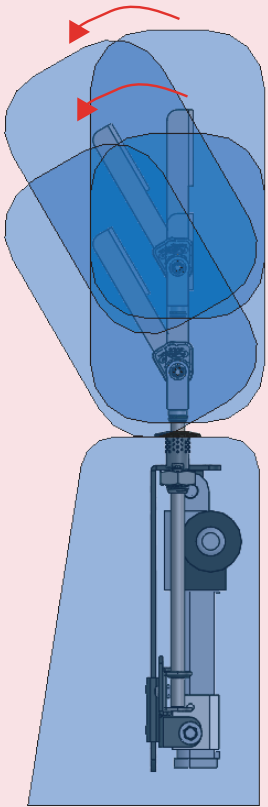
Movability



Angle adjustment is possible. You can choose your desired fitting among the options. Please refer to the chart.



The height can be controlled by operation of the button installed in the sofa.



The angle can adjust easily by one hand.

MAX 90mm

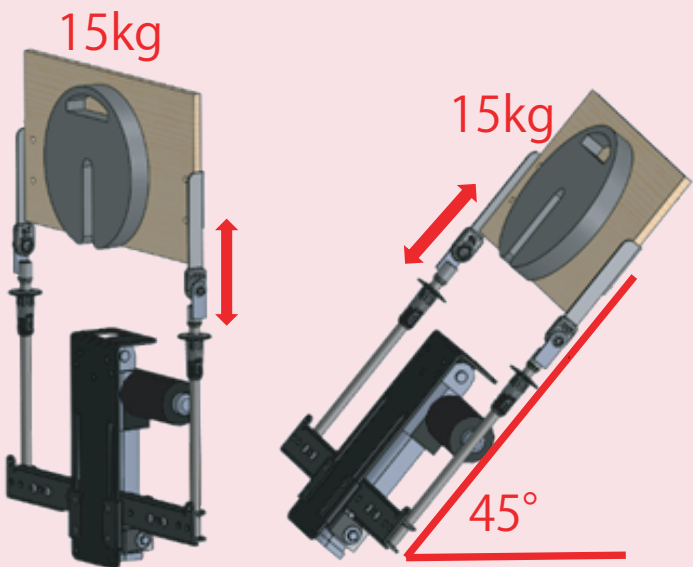
Height adjustment by motorized at most 90 mm.

Specification

Load Test

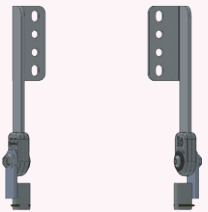
20,000 cycles passed while loading 15Kg weight in vertical motion, and at 45 degree setting.

No unusual sound, or no irregular vibration occurs.

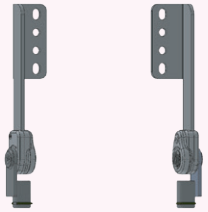


Optional Angle Adjustable Parts

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

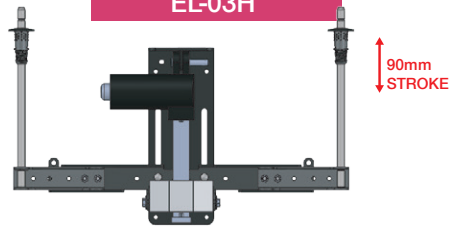


LS100(S)-MP30L FOR EL-03H or LS100(S)-MP48L FOR EL-03H



Lift Up Mechanism

EL-03H



Motorized

Electric Accesories



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

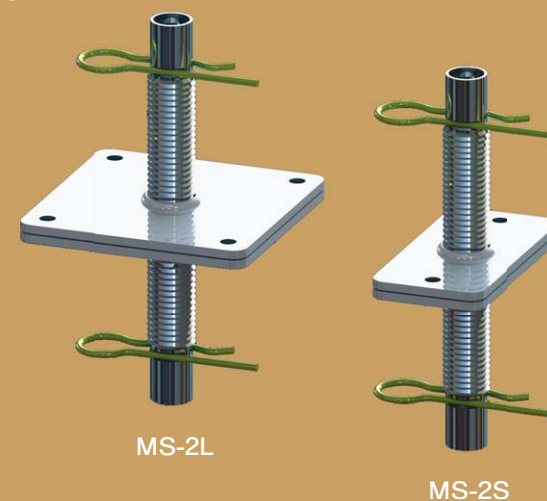
Detachable Support Fitting for Your Sofa Assembly

MS-2

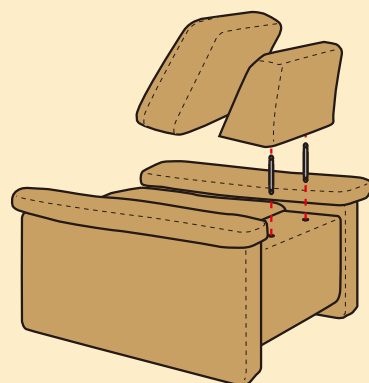
Product Spec

Finish	Unichrome
Weight / Pc (MS-2L)	0.45kg
Weight / Pc (MS-2S)	0.3kg

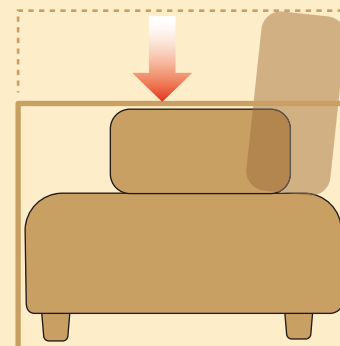
Model Name **MS-2L**
Series Large or small



Easier assembly in your factory



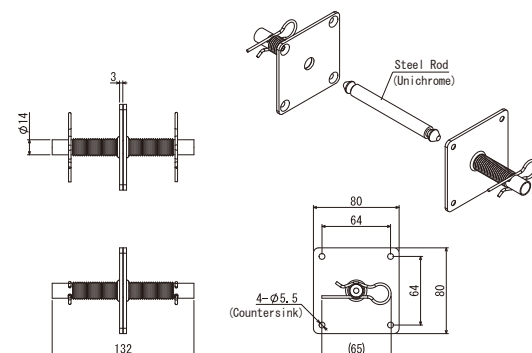
Compact packing, saving your shipping cost



Drawing

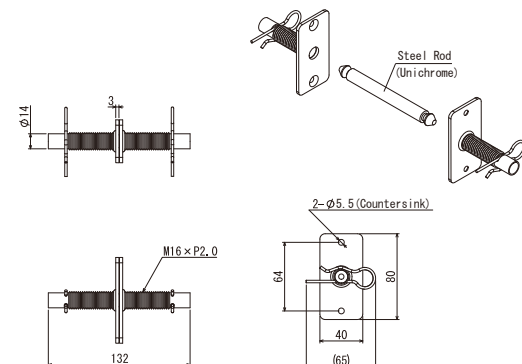
MS-2L

Finish : Unichrome plating



MS-2S

Finish : Unichrome plating



KOYO Global Network



Web Site

(English) <http://www.koyogear.com>
(Japanese) <http://www.koyoeng.co.jp>
(Chinese) <http://www.koyoeng.co.jp/chinese/>

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Email. hiro@koyoeng.co.jp

3 KOYO China Co., Ltd.

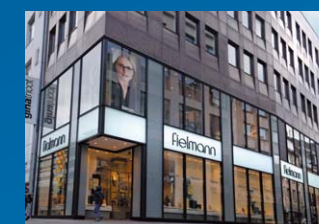
No. 5, Fushi Industrial Zone, West Binhe Road, Qingxi Town,
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1 Head Office (Osaka, Japan)



2 Germany Office (Düsseldorf)



3 China Factory (Guangdong)



4 Vietnam Factory (Hanoi)