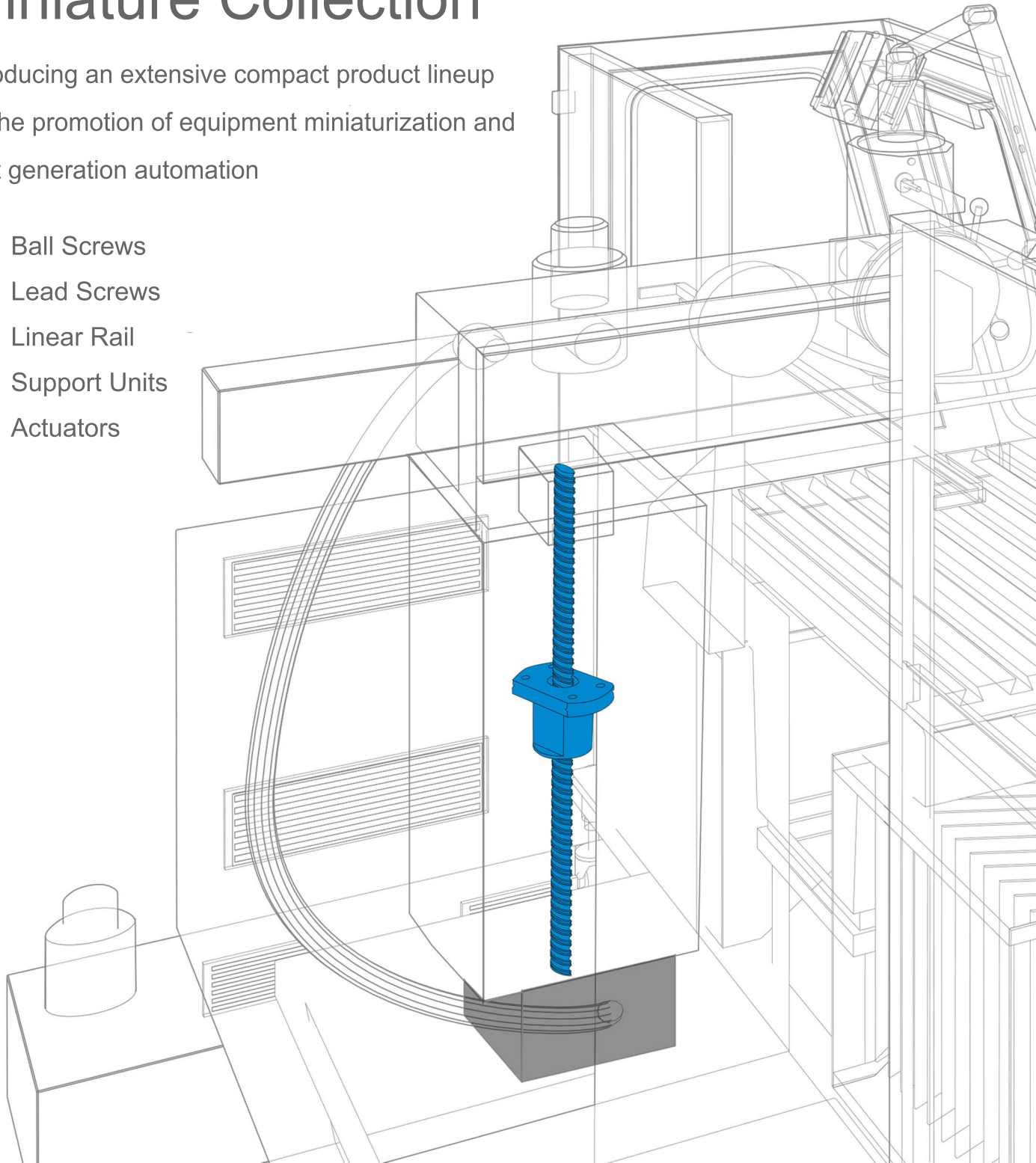


COMPACT

Miniature Collection

Introducing an extensive compact product lineup
for the promotion of equipment miniaturization and
next generation automation

- Ball Screws
- Lead Screws
- Linear Rail
- Support Units
- Actuators



Chemical Coating Analysis Equipment

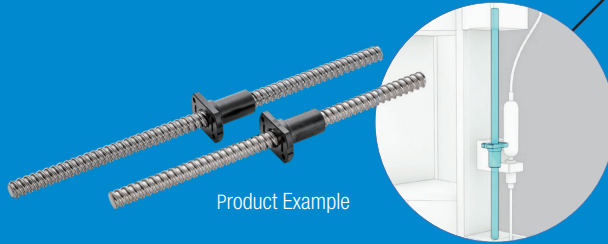
Used in Z-axis mechanism of chemical coating analysis equipment. The screw shaft is made of stainless steel for corrosion resistance. The nut is made of engineering plastic for chemical resistance, weight reduction and improved service life.

Additionally, the sliding/rolling motion combined with a gothic arch thread structure offers excellent sound performance, suitable for inspection environments.

Compact

Quiet

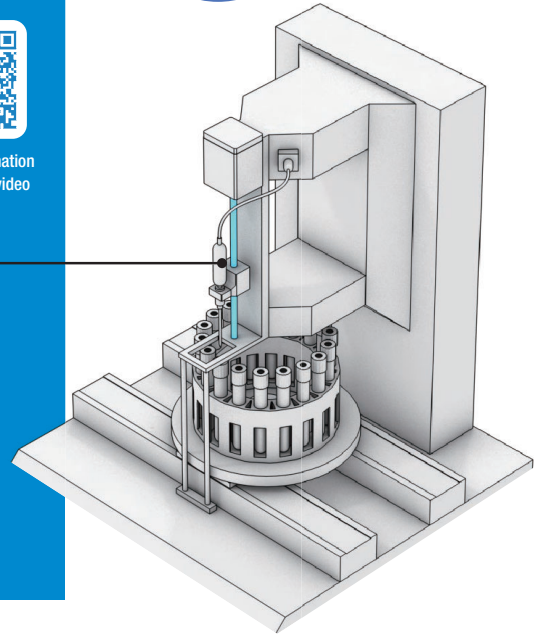
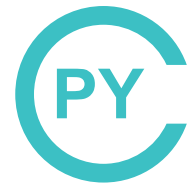
Corrosion-resistant



Product Example



For more information
check out our video



When you are faced with design dilemmas,
the Compact Family offers solutions

Semiconductor Manufacturing Equipment (Bonder)

Used in the X-axis and Z-axis mechanism of semiconductor manufacturing equipment "bonders".

In semiconductor manufacturing equipment, where chip scaling and tact time reduction are advancing, our wide variety of precision products with high leads and small diameter ball screws with compact nut designs enable high-speed, high-accuracy positioning and the multi-functionalization of equipment.

Compact

High-Speed Conveyance

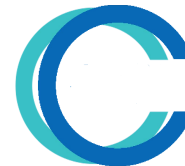
Precision Positioning



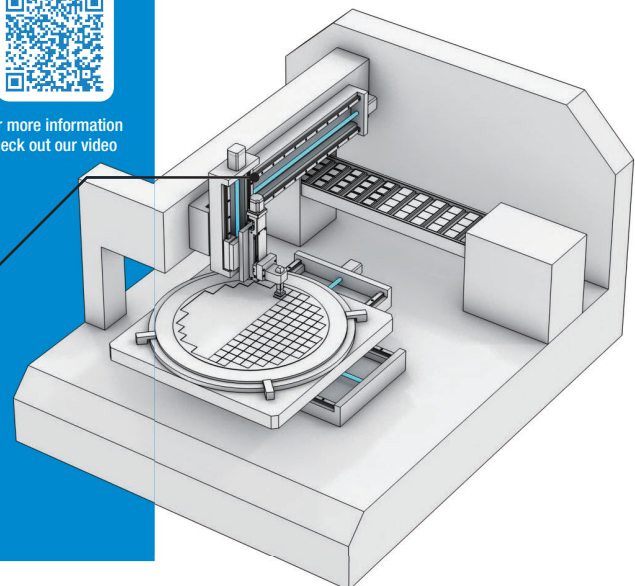
Product Example

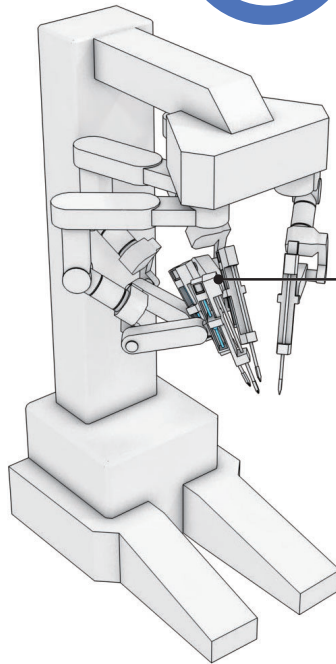


For more information
check out our video



Compatible
with ALL
Compact Series





For more information
check out our video

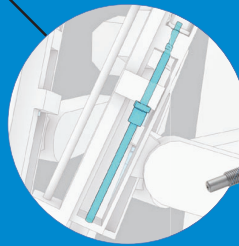
Robotic Assisted Surgical Systems

DP-C3 is used in the Y-axis mechanism of robotic assisted surgical systems. Simultaneously realizing industry-leading nut size reduction, the deflector recirculation system is designed in such a way that the ball recirculation components are evenly distributed around the circumference of the nut body, resulting in excellent rotational balance. This provides smooth operation that gives the surgeon full control and confidence in the absolute safety of the instruments he or she uses to perform surgeries.

Accuracy Grade C3

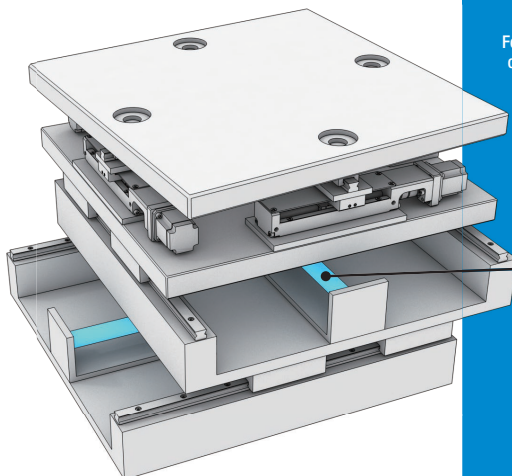
Stable Operation

Quiet



Product Example

Full range of product offerings are
available for viewing on our website
www.kurodajenatec.com



For more information
check out our video

XYθ Stages

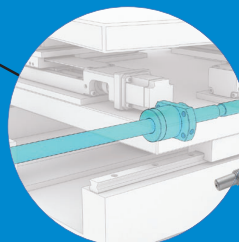
DP-C1 is used in the drive mechanism of XYθ stages. By selecting one of our many mass produced batches, KURODA JENATEC can offer C1 accuracy grade ball screw as a standard product.

The ball screw minimizes torque fluctuation while contributing to reduced assembly time and a stable production system.

Accuracy Grade C1

Stable Operation

Stable Torque

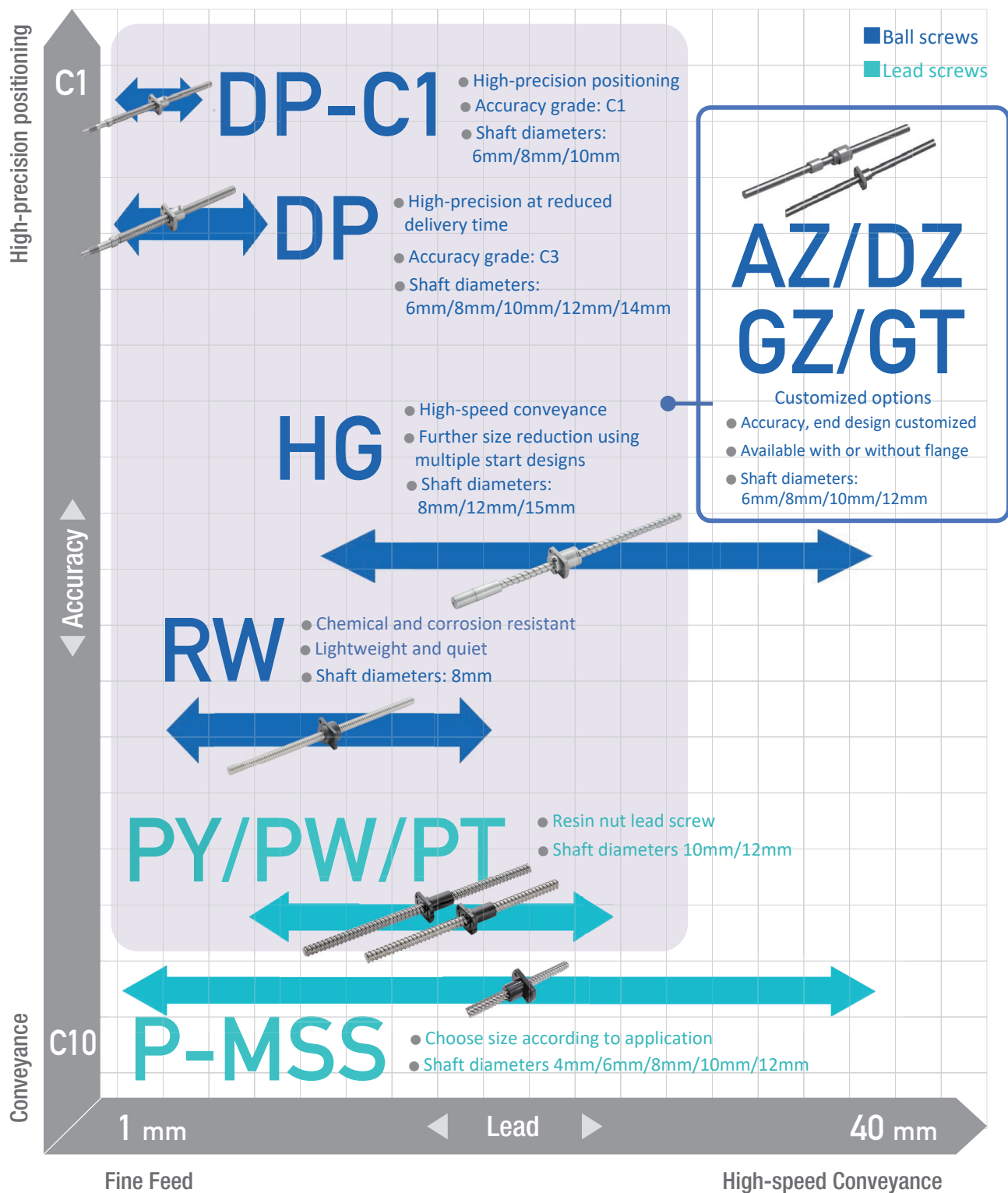


Product Example

Compact Ball Screw Series

Ball Screw and Lead Screws

Selection Series Guide based on Accuracy and Lead



Compact Support Unit Series

Features

● Lightweight and Compact

- 60% weight reduction (when compared to BUK-6)
- Contributes to downsizing, weight reduction, and high responsiveness of equipment

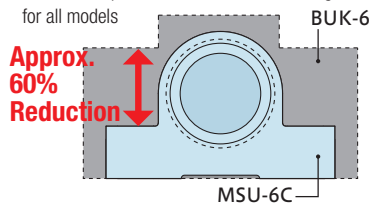
● High Rigidity

- Miniature thrust angular contact ball bearings with strictly controlled preload are used to achieve high axial rigidity

Comparison with BUK-6

- Same dimensions for shaft center height
- Axial load performance is the same or higher for all models

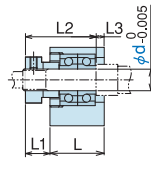
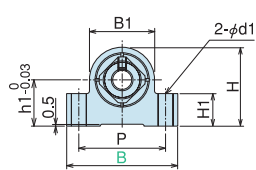
Approx.
60%
Reduction



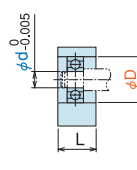
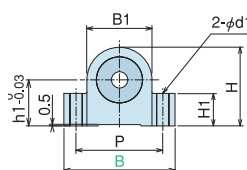
Specifications and Accuracy

Description	Standard Specification	Description	Standard Specification
Housing	Rectangular SMF material + Low temperature black chrome plating	Lock nut	SUS303+black dye
	Round SUM material + Low temperature black chrome plating SUS303 + black dye	Spacer	SUS303+black dye
Retaining Nut	SUS303+black dye	Set piece	C3604
Bearing	Miniature Thrust Angular Contact Ball Bearings	Hexagonal socket set screw	SUSXM7

Shape and Dimensions



Fixed Side



Supported Side

SQUARE TYPE FIXED END UNIT

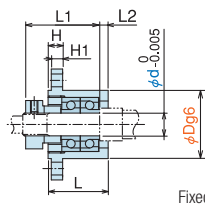
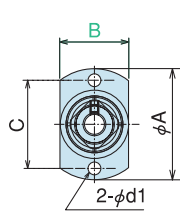
[Unit: mm]

Model Number	d	L	L1	L2	L3	B	H	h1	B1	H1	P	d1
MSU-4C	4	14	5.5	17.5	2	27	17	10	14	6	21	3.5
MSU-6C	6	17	7.5	22	2.5	35	22.5	13	19	8	26	5.5
MSU-8C	8	20	9	26	3	41	29	17	24	12	32	5.5

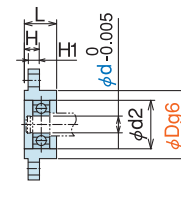
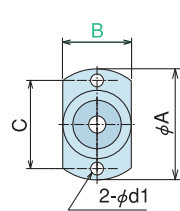
SQUARE TYPE SUPPORTED END UNIT

[Unit: mm]

Model Number	d	L	B	H	h1	B1	H1	P	d1	D
MSU-6CS	6	12	35	22.5	13	19	8	26	5.5	15



Fixed Side



Supported Side

ROUND TYPE FIXED END UNIT

[Unit: mm]

Model Number	d	L	L1	L2	H	D	A	B	C	d1	H1
MSU-4G	4	13.5	17.5	1.5	5	14	26	14	20	3.5	3
MSU-6G	6	17	22	2.5	5	19	34	19	26	4.5	4
MSU-8G	8	20	26	3	4	24	39	24	31	4.5	4

ROUND TYPE SUPPORTED END UNIT

[Unit: mm]

Model Number	d	L	H	D	d2	A	B	C	d1	H1
MSU-6GS	6	10	5	19	15	34	19	26	4.5	4

Limited Availability

Accuracy Grade C1 Miniature Ball Screws DP-C1

- Lead Accuracy C1 conditionally available as a Standard Product

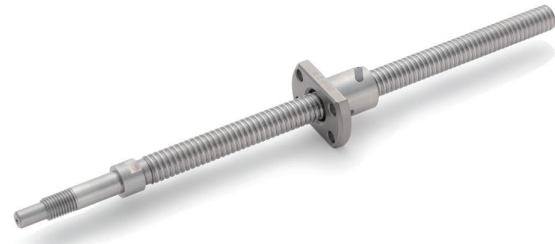
Ultra-high precision at a reduced delivery time

- Supports high-precision positioning

Lead Accuracy C1 enables high-precision equipment

- Screw shaft end(s) machined prior to shipment

Overall length and supported side design are customizable



Technical Specifications

Model Number	Nominal Diameter [mm]	Lead [mm]	Root Diameter [mm]	Number of Circuits	Basic Dynamic Load Rating [N]	Basic Static Load Rating [N]	Axial Clearance [mm]	Accuracy Grade	Grease
DP0601JS-HDNR-□□□□B-C1S	6	1	5.3	1×3	550	1,150	0	C1	Multemp PS No.2
DP0601JS-HDNR-□□□□B-C1F							0.005 mm or less		
DP0801JS-HDNR-□□□□B-C1S	8	1	7.3	1×3	650	1,600	0		
DP0801JS-HDNR-□□□□B-C1F							0.005 mm or less		
DP0802JS-HDNR-□□□□B-C1S		2	7	1×3	1,350	2,300	0		
DP0802JS-HDNR-□□□□B-C1F							0.005 mm or less		
DP1002JS-HDNR-□□□□B-C1S	10	2	9	1×3	1,550	3,000	0		
DP1002JS-HDNR-□□□□B-C1F							0.005 mm or less		

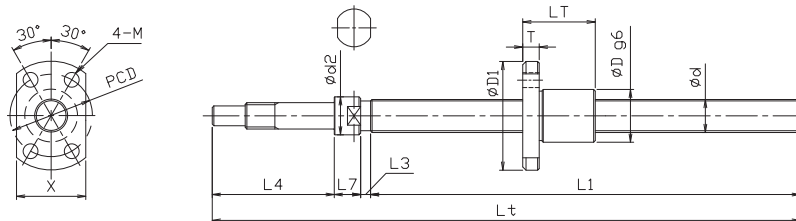
Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft Dimensions							Nut Dimensions						
	Nominal Diameter d	Total Length Lt	Thread Length L1	Length L3	Diameter d2	Length L7	Length L4	Body Diameter D	Total Length LT	Thickness T	Diameter D1	Width X	PCD	Mounting Hole M
DP0601JS-HDNR-□□□□B-C1S	6	130 / 210	90 / 170	3	9.5	7	30	10	14.5	3.5	22	14	16	For M3
DP0601JS-HDNR-□□□□B-C1F														
DP0801JS-HDNR-□□□□B-C1S	8	180 / 260	132 / 212	3	11.5	8	37	12	15	4	25	16	19	For M3
DP0801JS-HDNR-□□□□B-C1F														
DP0802JS-HDNR-□□□□B-C1S	8	180 / 260	132 / 212	3	11.5	8	37	14	21	4	27	17	21	For M3
DP0802JS-HDNR-□□□□B-C1F														
DP1002JS-HDNR-□□□□B-C1S	10	220 / 320	172 / 272	3	11.5	8	37	16	22	5	33	21	25	For M3
DP1002JS-HDNR-□□□□B-C1F														

• Accuracy of bearing support sections are C3 Grade.

• Please refer to the Ball Screw Catalog for the shape, dimensions, and tolerances of each part.



Example Model Number: When there is additional end machining on the supported side

DP 06 01 JS - HDNR - 0210 X 0170 - C1 F



Standard Product

Accuracy Grade C3 Miniature Ball Screws DP

● High precision at a reduced delivery time

Standard Accuracy Grade C3 Ball Screws

● Compact Nut Design

Achieve minimal dimensions using the deflector recirculation system

● Screw shaft end(s) machined prior to shipment

Overall length and supported side design are customizable

Technical Specifications

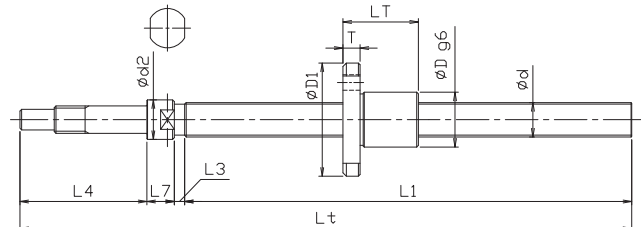
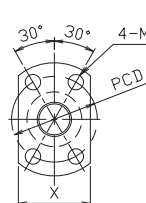
Model Number	Nominal Diameter [mm]	Lead [mm]	Root Diameter [mm]	Number of Circuits	Basic Dynamic Load Rating [N]	Basic Static Load Rating [N]	Axial Clearance [mm]	Accuracy Grade	Grease
DP0601JS-HDNR-□□□□B-C3S	6	1	5.3	1×3	550	1,150	0	C3	Multemp PS No.2
DP0601JS-HDNR-□□□□B-C3F							0.005 mm or less		
DP0801JS-HDNR-□□□□B-C3S	8	1	7.3	1×3	650	1,600	0		
DP0801JS-HDNR-□□□□B-C3F							0.005 mm or less		
DP0802JS-HDNR-□□□□B-C3S		2	7	1×3	1,350	2,300	0		
DP0802JS-HDNR-□□□□B-C3F							0.005 mm or less		
DP1002JS-HDNR-□□□□B-C3S	10	2	9	1×3	1,550	3,000	0		
DP1002JS-HDNR-□□□□B-C3F							0.005 mm or less		
DP1202JS-HDNR-□□□□B-C3S	12	2	11	1×3	1,650	3,600	0		
DP1202JS-HDNR-□□□□B-C3F							0.005 mm or less		
DP1203JS-HDPR-□□□□B-C3S		3	10.3	1×3	3,450	6,100	0		
DP1203JS-HDPR-□□□□B-C3F							0.005 mm or less		
DP1404JS-HDPR-□□□□B-C3S	14	4	12.1	1×3	4,600	8,600	0		
DP1404JS-HDPR-□□□□B-C3F							0.005 mm or less		

Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft Dimensions							Nut Dimensions						
	Nominal Diameter ϕd	Total Length L_t	Thread Length L_1	Length L_3	Diameter ϕd_2	Length L_7	Length L_4	Body Diameter ϕD	Total Length L_T	Thickness T	Diameter ϕD_1	Width X	PCD	Mounting Hole M
DP0601JS-HDNR-□□□□B-C3S	6	130 / 210	90 / 170	3	9.5	7	30	10	14.5	3.5	22	14	16	For M3
DP0601JS-HDNR-□□□□B-C3F														
DP0801JS-HDNR-□□□□B-C3S	8	180 / 260	132 / 212	3	11.5	8	37	12	15	4	25	16	19	For M3
DP0801JS-HDNR-□□□□B-C3F														
DP0802JS-HDNR-□□□□B-C3S	8	180 / 260	132 / 212	3	11.5	8	37	14	21	4	27	17	21	For M3
DP0802JS-HDNR-□□□□B-C3F														
DP1002JS-HDNR-□□□□B-C3S	10	220 / 320	172 / 272	3	11.5	8	37	16	22	5	33	21	25	For M4
DP1002JS-HDNR-□□□□B-C3F														
DP1202JS-HDNR-□□□□B-C3S	12	300 / 400	242 / 342	3	14	10	45	18	22	5	35	22	27	For M4
DP1202JS-HDNR-□□□□B-C3F														
DP1203JS-HDPR-□□□□B-C3S	12	300 / 400	240 / 340	5	14	10	45	21	36	5	38	23	30	For M4
DP1203JS-HDPR-□□□□B-C3F														
DP1404JS-HDPR-□□□□B-C3S	14	330 / 530	270 / 470	5	15	10	45	26	40	10	45	29	35	For M4
DP1404JS-HDPR-□□□□B-C3F														

• Please refer to the Ball Screw Catalog for the shape, dimensions, and tolerances of each part.



Order Made (Not Stocked)

Miniature Flanged Ball Screws AZ/DZ/GT

- Shaft length and shaft end design are customizable

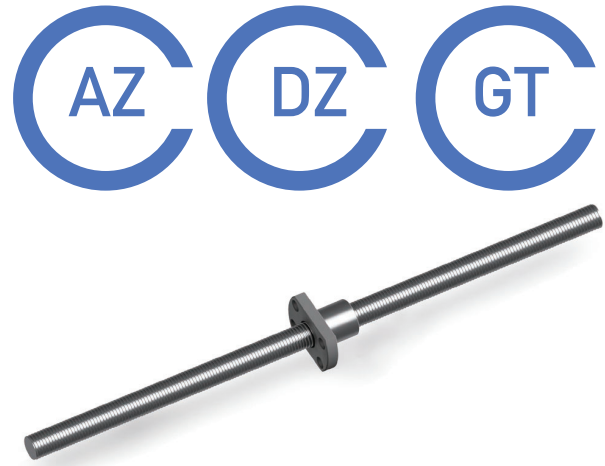
Overall shaft length and thread length can be dictated to 1 mm increments

- Ground thread finish options available

Ground ball screws are ideal for applications that require precision positioning

- Flange design is customizable

Flange dimensions, shape, and features can be freely aligned to customers' design requirements



Technical Specifications

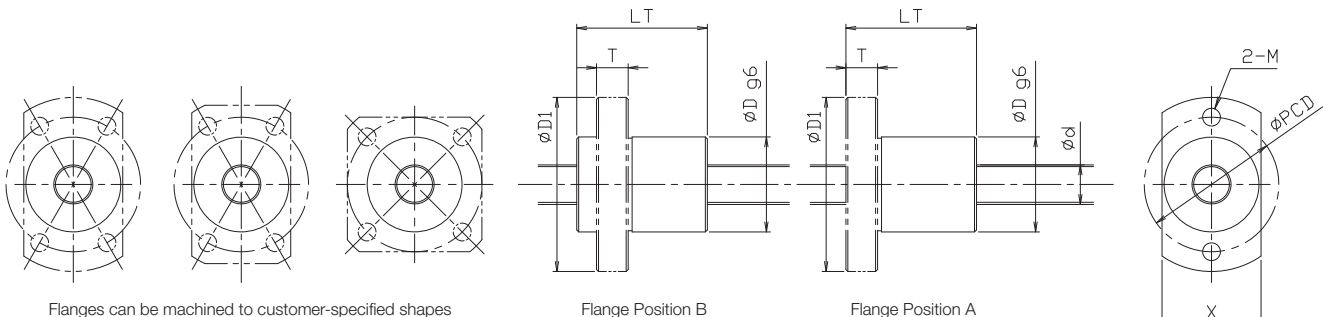
Model Number	Nominal Diameter [mm]	Lead [mm]	Ball Diameter [mm]	Number of Circuits	Basic Dynamic Load Rating [N]	Basic Static Load Rating [N]	Accuracy Grade
GT0601HS	6	1	0.800	1×2	390	770	C10
DZ0601HS		1	0.800	1×2	390	770	Contact us for details
DZ0602HS		2	1.000	1×2	540	760	
AZ06064S		6	1.200	1.7×2	1,310	1,650	
AZ06084S	8	8	1.200	1.7×2	1,250	1,600	C7 / C10
GT0801HS		1	0.800	1×2	460	1,070	
DZ0801HS		1	0.800	1×2	460	1,070	
DZ0802HS		2	1.200	1×2	950	1,530	
AZ08124S	10	12	1.5875	1.7×2	2,000	2,730	Contact us for details
AZ10053S		5	2.381	2.7×1	3,940	5,140	
AZ10102S		10	2.3812	1.7×1	2,540	3,130	
AZ12053S		5	2.3812	2.7×1	4,250	5,980	
AZ12103S	12	10	2.3812	2.7×1	4,300	6,200	Contact us for details
AZ12202S		20	2.3812	1.7×1	2,700	3,800	

Shape / Dimensions

[Unit: mm]

Model Number	Nut Dimensions							
	Body Diameter D	Total Length LT	Thickness T	Diameter D1	Width X	PCD	Mounting Hole M	Flange Position
GT0601HS	10	13	4	22	11	16	For M3	A
DZ0601HS	10	12	3					A
DZ0602HS	10	14	3					A
AZ06064S	12	16	3					B
AZ06084S	12	20	3	24	13	18	For M3	B
GT0801HS	12	15	4					A
DZ0801HS	12	13	4					A
DZ0802HS	14	17	4					A
AZ08124S	16	28	4	24	13	18	For M3	B
AZ10053S	23	24	11					A
AZ10102S	23	29	11					A
AZ12053S	24	35	11					A
AZ12103S	24	38	11					A
AZ12202S	24	48	11					A

·The shape and features of the flange to be determined through technical consultation.



Flanges can be machined to customer-specified shapes

Flange Position B

Flange Position A



Order Made (Not Stocked)

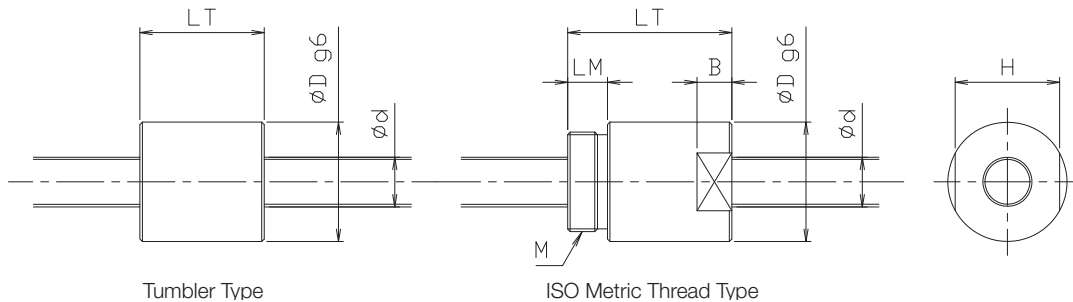
Miniature Flangeless Ball Screws AZ/DZ/GT

- **Accuracy grade is customizable**
You can choose the desired accuracy grade from C0 to C10
- **Rolled ball screws for conveyance applications**
Rolled ball screws are an option
- **In the pursuit of miniaturization**
Achieving minimum nut dimensions with flangeless designs

Technical Specifications, Shape / Dimensions

[Unit: mm]

Model Number	Nominal Diameter	Lead	Ball Diameter	Number of Circuits	Basic Dynamic Load Rating [N]	Basic Static Load Rating [N]	Accuracy Grade	Nut Dimensions						Nut Type
								Body Diameter D	Total Length LT	Length B	Thread M	Length B	Width H	
DZ0601HS	6	1	0.800	1x2	390	770	Contact us for details	14	15	6	M12x1	4	13	ISO Metric Thread Type
DZ0602HS		2	1.000	1x2	540	760		14	17	6	M12x1	4	13	
DZ0801HS	8	1	0.800	1x2	460	1,070		16	15	6	M14x1	5	14	
DZ0802HS		2	1.200	1x2	950	1,530		16	19	6	M14x1	5	14	
GZ1005DS	10	5	2.3812	2.5x1	3,350	5,900		24	33	8	M20x1	7	21	
GZ1010AS		10	2.3812	1.5x1	2,200	3,500		24	35	8	M20x1	7	21	
AZ12053S	12	5	2.778	2.7x1	5,900	8,100		26	39	10	M22x1	8	23	Tumbler Type
AZ12102S		10	2.778	1.7x1	3,700	6,200		26	42	10	M22x1	8	23	
DZ0601HS	6	1	0.800	1x2	390	770		10	9	---	---	---	---	
DZ0602HS		2	1.000	1x2	540	760		10	11	---	---	---	---	
AZ06064S		6	1.200	1.7x2	1,310	1,650		12	16	---	---	---	---	
AZ06084S		8	1.200	1.7x2	1,250	1,600		12	20	---	---	---	---	
DZ0801HS	8	1	0.800	1x2	460	1,070		12	9	---	---	---	---	
DZ0802HS		2	1.200	1x2	950	1,530		14	13	---	---	---	---	
AZ08124S		12	1.5875	1.7x2	2,000	2,730		16	28	---	---	---	---	
AZ10053S	10	5	2.3812	2.7x1	3,940	5,140		23	22	---	---	---	---	
AZ10102S		10	2.3812	1.7x1	2,540	3,130		23	27	---	---	---	---	
AZ12053S	12	5	2.3812	2.7x1	4,250	5,980		24	33	---	---	---	---	
AZ12103S		10	2.3812	2.7x1	4,300	6,200		24	36	---	---	---	---	
AZ12202S		20	2.3812	1.7x1	2,700	3,800		24	46	---	---	---	---	



Standard Product

High-speed Conveyance Ball Screws HG

● High Lead for High Speed

Utilizing a high lead enables high speed conveyance even at low rotational speeds

● Screw Thread Multiple Starts

Multiple starts at high leads shorten overall nut length, giving the equipment engineer more flexibility

● High Load Capacity in a Compact Design

Multiple starts also enhance performance with increased load ratings



■ Technical Specifications

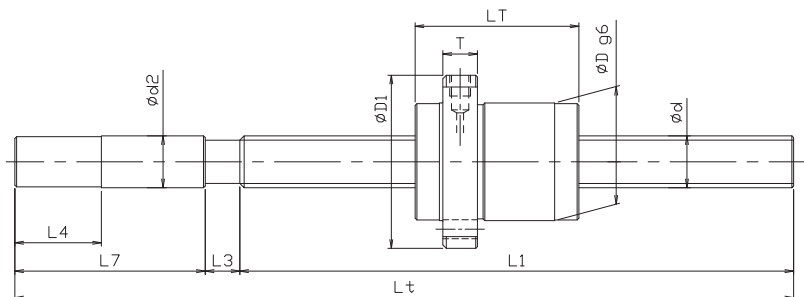
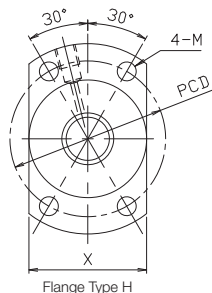
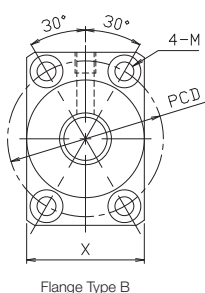
Model Number	Nominal Diameter [mm]	Lead [mm]	Root Diameter [mm]	Number of Circuits	Basic Dynamic Load Rating [N]	Basic Static Load Rating [N]	Axial Clearance [mm]	Accuracy Grade	Grease
HG0812QS-HEZR-□□□□A	8	12	6.6	1.67×2	2,490	3,460	0.010 mm or less	C5	Multemp PS No.2
HG1230QS-BEZR-□□□□A	12	30	9.5	0.67×3	4,800	6,650	0.010 mm or less		Alvania Grease S2
HG1520QS-HEZR-□□□□A	15	20	12.5	1.67×2	8,740	17,550	0.010 mm or less		
HG1540QS-BEZR-□□□□A		40	12.5	0.67×3	5,600	8,600	0.010 mm or less		

■ Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft Dimensions							Nut Dimensions						
	Nominal Diameter d	Total Length Lt	Thread Length L1	Length L3	Diameter d2	Length L7	Length L4	Body Diameter D	Total Length LT	Thickness T	Diameter D1	Width X	PCD	Mounting Hole M
HG0812QS-HEZR-□□□□A	8	340	289	6	12	45	20	18	27.2	4	31	20	25	For M5
HG1230QS-BEZR-□□□□A	12	500/800	430/730	15	12	55	20	32	35	10	56	32	43	For M5
HG1520QS-HEZR-□□□□A	15	600/1100	535/1035	10	15	55	25	34	47.3	10	55	34	45	For M5
HG1540QS-BEZR-□□□□A		600/1100	530/1030	15	15	55	25	34	41.7	12	58	34	45	For M5

* Please refer to the Ball Screw Catalog for the shape, dimensions, and tolerances of each part.





Standard Product

Resin Nut Ball Screws RW

- **Ideal for light load applications**
Nut is made of engineering plastic and maintains high accuracy as a optimal solution for lighter workloads
- **Long Service Life for a Resin Nut**
Mechanical properties of the nut greatly improved through the utilization of polyphenylene sulfide (PPS) resin
- **Environmentally Resistant Materials**
Enhanced protection with SUS304 and PPS Resin

Technical Specifications

Model Number	Nominal Diameter [mm]	Lead [mm]	Permissible Axial Load (Practical Index) [N]	Permissible Rotational Speed [min ⁻¹]	Total Life Travel [km]	Initial Axial Clearance [mm]
RW0802PS-BPNR-0400A	8	2	40	3,000	250	0.030 mm or less
RW08124S-BPNR-0340A		12	40	3,000	250	0.030 mm or less

*RW08124S-BPNR-0340A is order made.

Materials

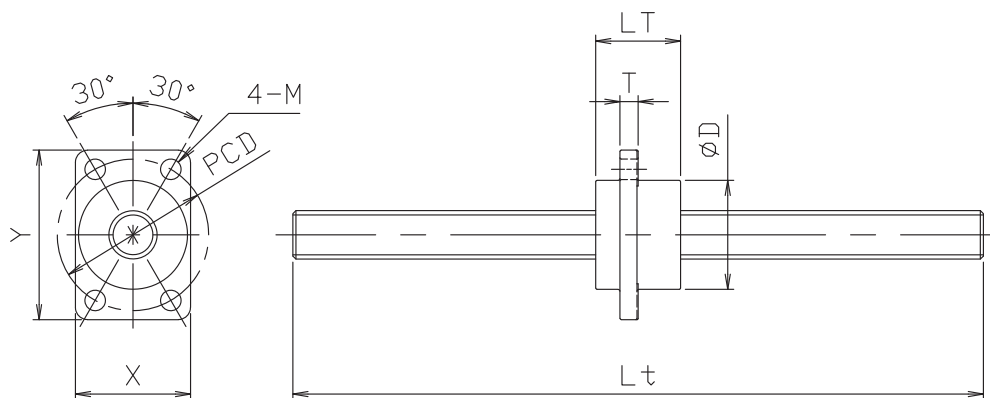
Description	Materials	Grease
Screw Shaft	Stainless Steel (SUS304)	Alvania Grease S2
Nut	Super Engineering Plastic (PPS)	
Ball	Stainless Steel (SUS440C)	

Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft Dimensions			Nut Dimensions						
	Nominal Diameter d	Total Length Lt	Thread Length L1	Body Diameter D	Total Length LT	Thickness T	Diameter D1	Width X	PCD P	Mounting Hole M
RW0802PS-BPNR-0400A	8	400	400	18	14	3	19	28	25	For M3
RW08124S-BPNR-0340A	8	340	340	16	27.5	3	17	25	21	For M2.5

*Please refer to the Ball Screw Catalog for the shape, dimensions, and tolerances of each part.



Maximized Service Life, Minimized Sliding Resistance

Resin Nut Lead Screws PY/PW/PT

Precision Lead Screws

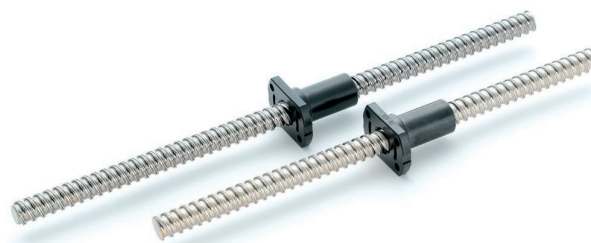
Lead screws that incorporate the knowhow required for high quality ball screw manufacturing

Environmentally Resistant Materials

Enhanced protection with SUS304 and PPS Resin

Lightweight, Long-life Lead Screws

Contributes to the weight reduction of tabletop devices



Technical Specifications

Model Number	Nominal Diameter [mm]	Lead [mm]	Permissible Axial Load (Practical Index) [N]	Permissible Rotational Speed [min ⁻¹]	Lead Accuracy Cumulative Lead Error [mm]	Axial Clearance [mm]	Grease
PY1004SPR-□□□□A	10	4	70	3,000	±0.21/300	0.10 mm or less	Alvania Grease S2
PY1010SPR-□□□□A		10					
PY1204SPR-□□□□A	12	4	100	3,000			
PY1210SPR-□□□□A		10					
PW1004SPR-□□□□A	10	4	70	3,000	±0.05/300	0.05 mm or less	
PW1010SPR-□□□□A		10					
PW1204SPR-□□□□A	12	4	100	3,000			
PW1210SPR-□□□□A		10					
PT1004SPR-□□□□A	10	4	70	3,000	±0.05/300	0	
PT1204SPR-□□□□A	12		100				

* The PT series uses a coil spring preload system

Physical properties of nut material PPS

Item	Unit	PPS	PET GF30%	Aluminum Die Casting	Test Method
Specific gravity	-	2.55	1.6	2.7	ASTM-D792
Tensile strength	MPa	165	118	343	ASTM-D638
Bending strength	MPa	225	181	-	ASTM-D790
Coefficient of linear expansion	×10 ⁻⁵ /K	1.7~1.8	2.5	2.1	ASTM-D696

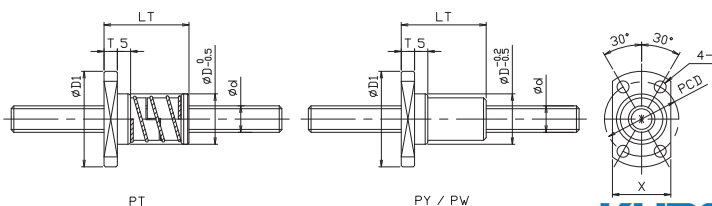
Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft			Nut						
	Nominal Diameter d	Lead L	Total Length Lt	Body Diameter D	Total Length LT	Thickness T	Diameter D1	Width X	PCD P	Mounting Hole M
PY1004SPR-0400A	10	4	400	19	32	5	36	22	28	For M4
PY1004SPR-0600A			600							
PY1010SPR-0400A		10	400							
PY1010SPR-0600A			600							
PY1204SPR-0400A	12	4	400	22	38	5	39	26	31	For M4
PY1204SPR-0800A			800							
PY1210SPR-0400A		10	400							
PY1210SPR-0800A			800							
PW1004SPR-0400A	10	4	400	19	32	5	36	22	28	For M4
PW1004SPR-0600A			600							
PW1010SPR-0400A		10	400							
PW1010SPR-0600A			600							
PW1204SPR-0400A	12	4	400	22	38	5	39	26	31	For M4
PW1204SPR-0800A			800							
PW1210SPR-0400A		10	400							
PW1210SPR-0800A			800							
PT1004SPR-0400A	10	4	400	19	32	5	36	22	28	For M4
PT1004SPR-0600A			600							
PT1204SPR-0400A	12		400	22	40		39	26	31	
PT1204SPR-0800A			800							

Example Model Number: When there is additional end machining on the supported side

PY	10	04	SPR	-	0600	X	0546	-	CAY
PW	10	04	SPR	-	0600	X	0546	-	C7Y
PT	10	04	SPR	-	0600	X	0546	-	C7Y





Maximized Service Life, Minimized Sliding Resistance

Resin Nut Lead Screws P-MSS

Wide Range of Available Sizes

Choose from nominal diameter 4 mm to 12 mm,
lead 1 mm to 36 mm

Optional screw shaft end machining

Screw shaft end(s) can be machined according to
customer designs prior to shipment

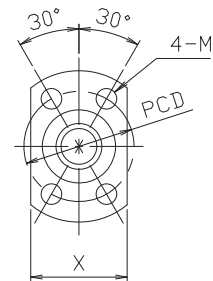
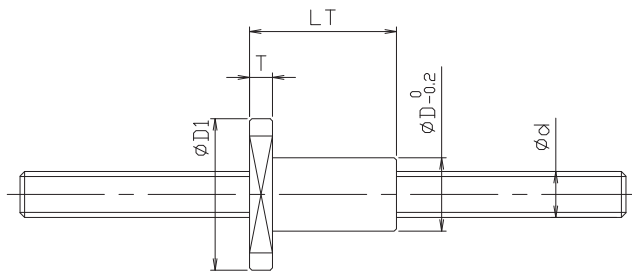
Environmentally Resistant Materials

Enhanced protection with SUS304 and PPS Resin

Shape / Dimensions

[Unit: mm]

Model Number	Screw Shaft			Nut						Lead Accuracy Cumulative Lead Error	Permissible Axial Load [N]	Permissible Rotational Speed [min ⁻¹]
	Nominal Diameter d	Lead	Total Length	Body Diameter D	Total Length LT	Flange		Mounting Hole		Width X		
P-MSS0401	4	1	500	10	11.5	23	3.5	15	2.9	15	50	2,500
P-MSS0402		2										
P-MSS0601	6	1	600	12	14.5	26	3.5	18	3.4	17	110	2,000
P-MSS0602		2									60	
P-MSS0606		6									50	
P-MSS0609		9									90	
P-MSS0618		18									100	
P-MSS0801	8	1	600	14	18	29	4	21	3.4	18	200	2,000
P-MSS0802		2									280	
P-MSS0806		6									200	
P-MSS0812		12									200	
P-MSS0818		18									200	
P-MSS0824		24									200	
P-MSS1003	10	3	1,000	16	22	33	5	24	4.5	21	450	1,500
P-MSS1005		5									370	
P-MSS1010		10									250	
P-MSS1015		15									410	
P-MSS1020		20									410	
P-MSS1030		30									410	
P-MSS1202	12	2	1,000	18	25	35	5	26	4.5	22	660	1,000
P-MSS1206		6									500	
P-MSS1210		10									500	
P-MSS1212		12									450	
P-MSS1220		20									470	
P-MSS1230		30									470	
P-MSS1236		36									520	

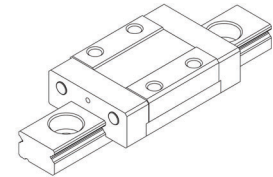
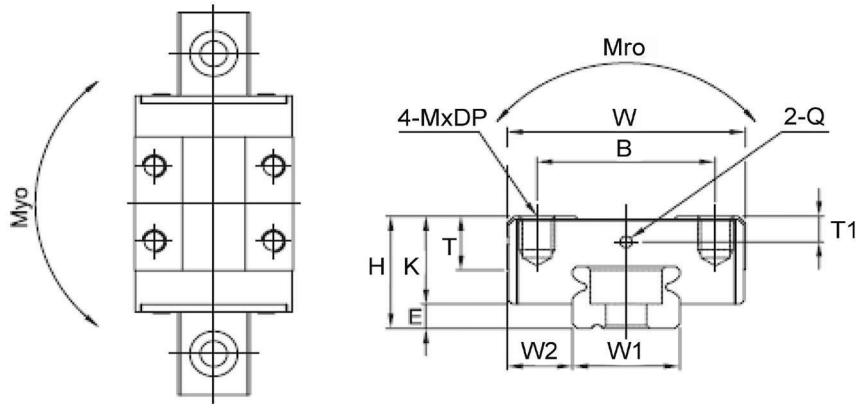


Example Model Number

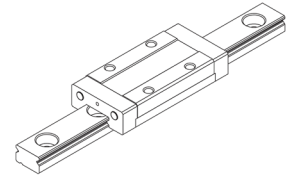
P-MSS 04 01

Miniature Linear Rail Series

Block Dimensions: SBM, SBML



SBM
Standard Miniature



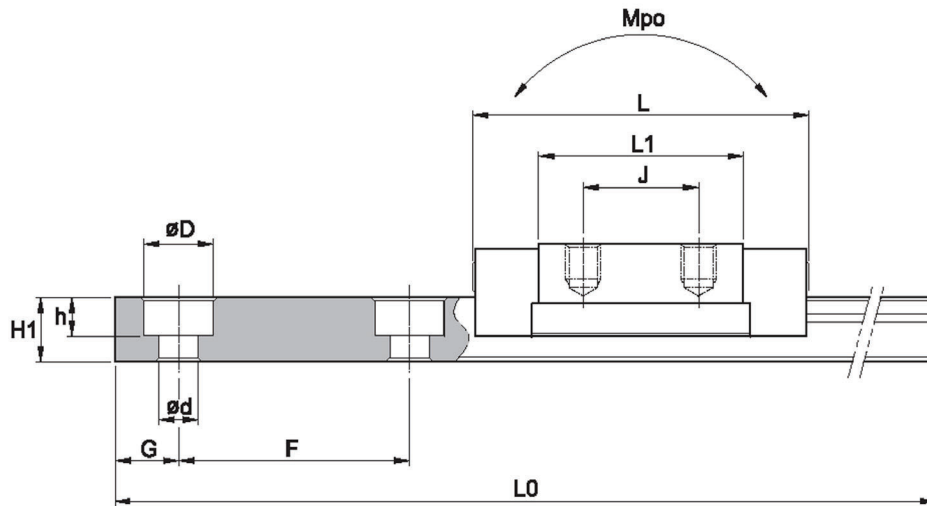
SBML
Block Length is modified to increase load capacity

Model	Mounting dimension				Block dimensions								
	H	W	L	E	Mounting tap hole				L1	T±1	K	Grease fitting	
					B	J	M	DP				T1	Q
SBM 07	8	17	22.8	1.5	12	8	M2	2.5	13.4	3.3	6.5	1.6	ø1
SBML 07	8	17	32.4	1.5	12	13	M2	2.5	23	3.3	6.5	1.6	ø1
SBM 09	10	20	30.1	2	15	10	M3	3	19.3	4.5	7.8	2.3	ø1
SBML 09	10	20	39.6	2	15	16	M3	3	28.8	4.5	7.8	2.3	ø1
SBM 12	13	27	34.6	3	20	15	M3	3.5	21	5.5	10	2.8	ø1
SBML 12	13	27	44.3	3	20	20	M3	3.5	30.7	5.5	10	2.8	ø1
SBM 15	16	32	43	4	25	20	M3	4	25.4	6.5	12	3.1	ø1
SBML 15	16	32	58.8	4	25	25	M3	4	41.2	6.5	12	3.1	ø1

C (Basic dynamic load rating), Co (Basic static load rating)

Miniature Linear Rail Series

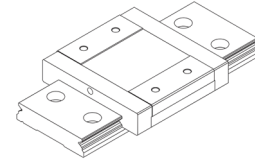
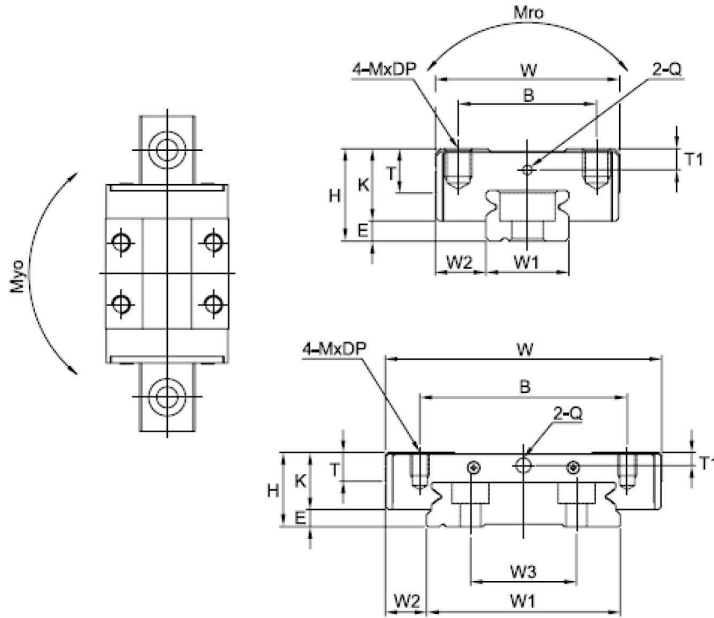
Rail Dimensions: SBM, SBML



Model	Rail dimensions									Basic load rating (kN)		Permissible static moment (kN•m)			Mass	
	W1	W2	H1	F	Bolt hole			G	Max Rail Length L0	C	Co	Mro	Mpo	Myo	Block (kg)	Rail (kg/m)
	d	D	h		d	D	h									
SBM 07	7	5	4.7	15	2.6	4.3	2.3	5	490	0.88	1.37	4.9	2.94	2.94	0.006	0.23
SBML 07	7	5	4.7	15	2.6	4.3	2.3	5	490	1.59	2.5	8.82	7.84	7.84	0.015	0.23
SBM 09	9	6	5.5	20	4	6	3.3	7.5	1195	1.42	2.9	10.39	5.1	5.1	0.013	0.32
SBML 09	9	6	5.5	20	4	6	3.3	7.5	1195	2.59	3.92	18.33	17.54	14.54	0.023	0.32
SBM 12	12	8	7.5	25	4	6	4.5	10	1195	2.46	3.64	14.7	8.04	8.72	0.029	0.59
SBML 12	12	8	7.5	25	4	6	4.5	10	1195	4.21	6.56	26.66	24.01	26.07	0.043	0.59
SBM 15	15	9	9.5	40	4	6	4.5	15	1190	4.02	5.97	37.24	16.46	17.93	0.52	0.99
SBML 15	15	9	9.5	40	4	6	4.5	15	1190	7.15	10.68	53.02	49.3	53.51	0.079	0.99

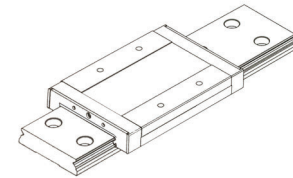
Miniature Linear Rail Series

Block Dimensions: SBMW, SBMWL



SBMW

Width and length of block are modified to increase load ratings and permissible moments.



SBMWL

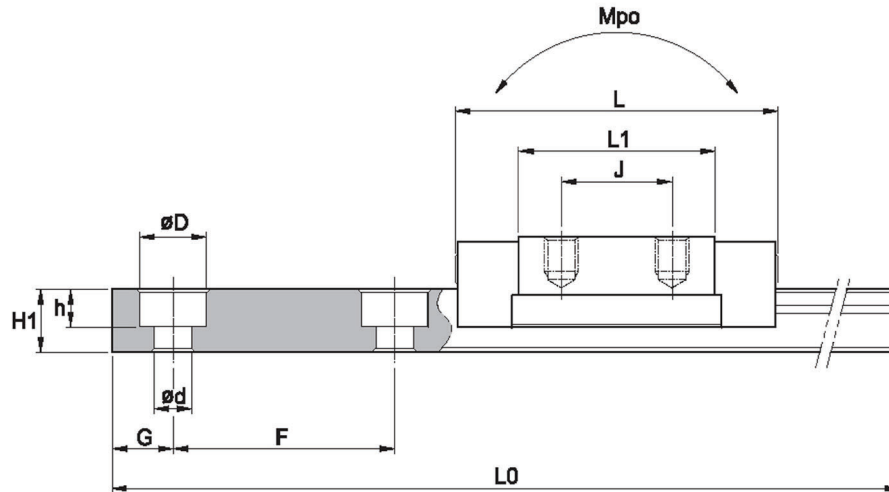
Uses same rail as SBMW type with longest whole length for heaviest load.

Model	Mounting dimension				Block dimensions								
	H	W	L	E	Mounting tap hole				L1	T±1	K	Grease fitting	
					B	J	M	DP				T1	Q
SBMW 09	12	30	42.3	3.7	21	12	M3	3	27	4.5	8.3	2	ø1
SBMWL 09	12	30	50.3	3.7	23	24	M3	3	35	4.5	8.3	2	ø1
SBMW 12	14	40	48.4	4	28	15	M3	3.5	30.9	5.5	10	2.4	ø1
SBMWL 12	14	40	59.5	4	28	28	M3	3.5	42	5.5	10	2.4	ø1
SBMW 15	16	60	57.5	3.7	45	20	M4	4.5	38.9	6.5	12.3	2.6	ø2.7
SBMWL 15	16	60	73.4	3.7	45	20	M4	4.5	54.8	6.5	12.3	2.6	ø2.7

C (Basic dynamic load rating), Co (Basic static load rating)

Miniature Linear Rail Series

Rail Dimensions: SBMW, SBMWL



Model	Rail dimensions										Basic load rating (kN)		Permissible static moment (kN·m)			Mass	
	W1	W2	H1	W3	F	Bolt hole			G	Max Rail Length L0	C	Co	Mro	Mpo	Myo	Block (kg)	Rail (kg/m)
						d	D	h									
SBMW 09	18	6	7.5	-	30	4	6	4.5	10	1190	2.45	3.92	36	16.3	16.3	0.03	0.99
SBMWL 09	18	6	7.5	-	30	4	6	4.5	10	1190	3.52	5.37	48.4	30.4	30.4	0.05	0.99
SBMW 12	24	8	8.5	-	40	5	8	4.5	15	1190	4.02	6.08	47.6	17.2	18.6	0.03	1.42
SBMWL 12	24	8	8.5	-	40	5	8	4.5	15	1190	5.96	9.21	89.2	46.4	52.8	0.1	1.42
SBMW 15	42	9	9.5	23	40	5	8	4.5	15	1190	6.66	9.8	137	35.3	38.2	0.12	2.93
SBMWL 15	42	9	9.5	23	40	5	8	4.5	15	1190	9.91	14.9	250	35.4	108	0.21	2.93

Standard Product

Ball Screw Actuators SG/SE/SC

● High Accuracy, High Rigidity

The U-shaped guide rail has a four-point contact structure

● No Need for Time-consuming Adjustment at Installation

Linear guidance component and ball screw are integrated into a single unit

● Space Saving

Low profile and compact dimensions

KURODA Ball Screw Actuators are single-axis units that combine a ball screw and linear guidance system to form an integrated, compact assembly. By designing the slide block to fit inside the U-shaped guide rail, a low profile and compact structure are achieved, enabling a significant reduction in spatial footprint when compared to conventional linear table mechanisms.

Despite its compact form, the U-shaped guide rail exhibits high rigidity against bending moment and deflection, even allowing it to be arranged as a cantilever. The linear guideway has a four-point contact structure and a gothic-arch thread form, achieving high accuracy and high rigidity.

The high-precision SG Series, general-purpose SE Series, and the particle interference-mitigating, full cover SC Series are available to meet a wide range of customer needs.

Additional design options include various motor mounting configurations for connection to customer-specified motors, foreign element-preventative top covers, various sensors, and integrated lubrication units.



■ Technical Specifications

Model Number	SG Series					SE Series				SC Series (Note 2)		
	SG20	SG26	SG33	SG46	SG55	SE15	SE23	SE30	SE45	SC23	SC30	SC45
Performance Grade (Note 1)	P: Repeated positioning accuracy $\pm 1 \mu\text{m}$ H: Repeated positioning accuracy $\pm 3 \mu\text{m}$					H: Repeated positioning accuracy $\pm 3 \mu\text{m}$ U: Repeated positioning accuracy $\pm 5 \mu\text{m}$ W: Repeated positioning accuracy $\pm 10 \mu\text{m}$						
Shaft Diameter [mm]	6	8	10	15	20	6	8	10 / 12	15	8	10 / 12	15
Lead [mm]	1	◎				◎						
	2		◎	△		◎	◎	△		◎	△	
	4						△	◎		△	◎	
	5	◎	◎	◎	△		◎	◎	◎	◎	◎	◎
	6							◎			◎	
	8						△			△		
	10		◎	◎	△			◎	◎		◎	◎
	20		◎	◎	◎			◎	◎		◎	◎
Standard Guide Rail Length [mm]	100 ~ 200	150 ~ 300	150 ~ 600	340 ~ 1240	980 ~ 1380	100 ~ 200	150 ~ 300	150 ~ 750	340 ~ 940	150 ~ 300	150 ~ 750	540 ~ 940
Slide Block Type (Note 3)	A · B	A · B	A · B C · D	A · B C · D	A · B	A · B	A · B	A · B	A · B C · D	A · B	A · B	A · B

◎ : Standard product △ : Order made product

(Note 1) The performance figures above are examples representing the repeated positioning accuracy at various accuracies. Actual values may vary depending on optional specifications or usage method. Refer to the Ball Screw Actuator Catalog for details.

(Note 2) The SC Series is a full cover Ball Screw Actuator based on the SE Series. For details, please refer to the Ball Screw Actuator Catalog.

(Note 3) A: One long block included. B: Two long blocks included. C: One short block included. D: Two short blocks included.

ADDITIONAL OPTIONS

Category	Item		SG Series					SE Series				SC Series		
			SG20	SG26	SG33	SG46	SG55	SE15	SE23	SE30	SE45	SC23	SC30	SC45
Options	Motor Mounting Part Shape	Motor Bracket	○	○	○	○	○	○	○	○	○	○	○	○
		Intermediate Flange	○	○	○	○	○	○	○	○	○	○	○	○
		R0 Type/RN Type Bracket ^(Note 1)	○	○	○	○	○	---	---	○	○	---	○	○
		Parallel Motor Mount Unit	---	---	○	○	---	---	---	○	○	---	○	○
	Cover Type	No Dustproof Cover	○	○	○	○	○	○	○	○	○	---	---	---
		With Dustproof Cover	○	○	○	○	○	○	○	○	○	---	---	---
		Standard Full-Cover ^(Note 2)	---	---	---	---	---	---	---	---	---	○	○	○
		Full-Cover with Grease Nipple ^(Note 2)	---	---	---	---	---	---	---	---	---	○	○	○
		Full-Cover with Wiper ^(Note 2)	---	---	---	---	---	---	---	---	---	○	○	○
		Full-Cover with Grease Nipple and Wiper ^(Note 2)	---	---	---	---	---	---	---	---	---	○	○	○
	Sensors	Photo-Microsensor	○	○	○	○	○	---	○	○	○	○	○	○
		Proximity Sensor	○	○	○	○	○	○	○	○	○	○	○	○
		Sensor Rail only	○	○	○	○	○	○	○	○	○	○	○	○
	Surface Treatment ^(Note 3)		○	○	○	○	○	○	○	○	○	○	○	○
	Dust Preventive Grease		○	○	○	○	○	○	○	○	○	○	○	○
	Dowel Pin Hole (slide block)		○	○	○	○	○	---	○	○	○	---	---	---
	Dowel Pin Hole (guide rail)		○	○	○	○	○	---	○	○	○	○	○	○
	Lubrication unit LUBSEALTM ^(Note 4)			---	---	---	---	---	○	○	○	○	○	○

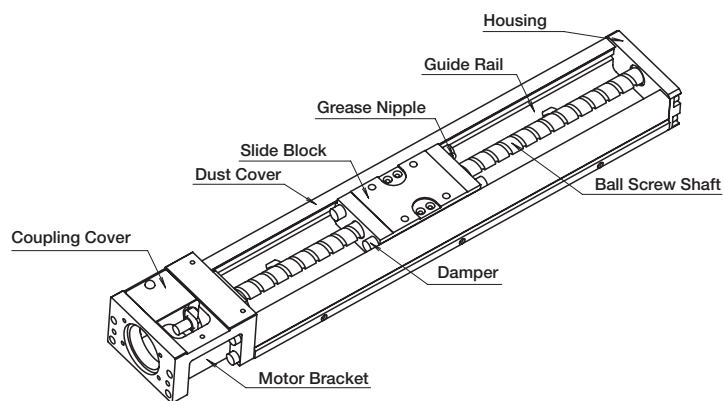
(Note 1) R0 type brackets are for the SG Series, while RN type brackets are for the SE Series and SC Series.

(Note 2) Fully covered specifications with wiper and with grease fitting are for the SC Series only.

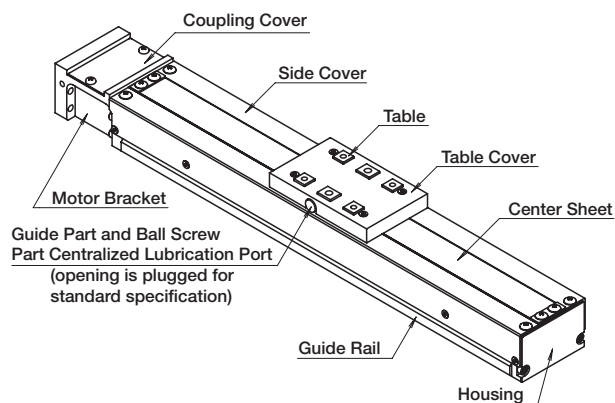
(Note 3) Surface treatment here indicates anti-rust black oxide film treatment (film thickness 1 to 2 μm). Please contact us for information on other types of surface treatment.

(Note 4) LUBSEAL™ is mounted on both ends of the slide block, so it may not be compatible with some guide rail lengths.

SG・SE Exterior Appearance



SC Exterior Appearance



Model Number Interpretation Key

Model	Lead	Slide block	Guide Rail Length	Performance Grade	Motor Mounting Part Shape	Cover	Sensor	Surface Treatment	Grease	Dowel Pin Hole
SG33	10	A	500	P	A1	C	C	N	N	PS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

Product model

Option model

- (1) This indicates the ball screw actuator model.
- (2) This indicates the ball screw lead.
- (3) This indicates the slide block type and the number assembled.

- (4) This indicates the guide rail length.
- (5) This indicates the performance of the ball screw actuator, such as positioning accuracy and travel parallelism.

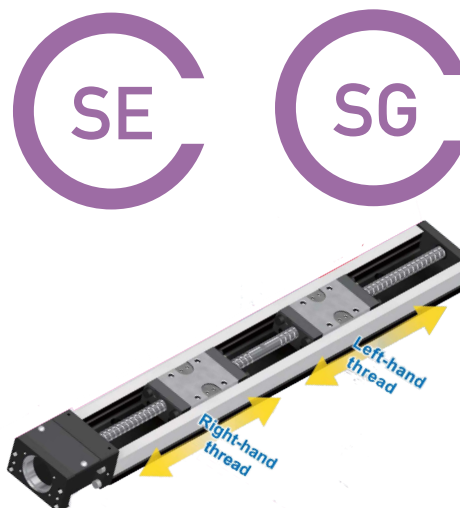
- (6) This indicates the motor mounting part shape.
- (7) This indicates the cover shape.
- (8) This indicates sensor presence / absence and type.

- (9) This indicates whether the guide rail and ball screw have been surface treated.
- (10) This indicates the type of grease used on the ball screw actuator slide block part and ball screw part.
- (11) This indicates dowel pin hole presence / absence.

Standard Product

Bidirectional Actuators SE/SG

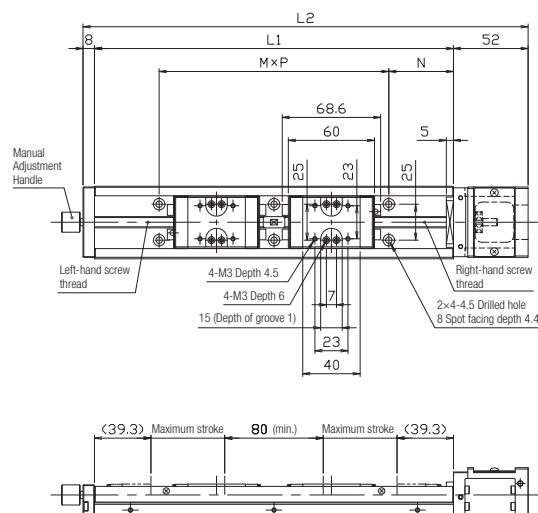
- **Realizing Symmetrical Back-and-forth Motion**
Dual motion functions achieved with a single actuator
- **Mounting Posture Considerations Eliminated**
Can be used either vertically or horizontally
- **Includes Manual Adjustment Handle**
The screw shaft can be easily rotated to check the position or operation of the slide block during installation



SE23

SE2305B-250B/300B			
Specifications and Accuracy		Basic Dynamic Load Rating [kN]	
Ball Screw Lead [mm]	5	Ball Screw Ca	1.9
Gripping Force	(Note 2)	Guide C	4.3
Maximum Stroke [mm]	70	Bearing Cb	1.79
Repeated Positioning Accuracy [mm]	±0.010	Basic Static Load Rating [kN]	
Positioning Accuracy [mm]	0.090	Ball Screw C0a	3.1
Travelling Parallelism B [mm]	0.015	Guide C0	7.0
Backlash [mm]	0.020	Bearing C0b	1.76
Starting Torque [N·m]	0.04	Static Permissible Moment [N·m]	
Inertia [kg·m ²] (250B)	1.10×10 ⁻⁶	M _P	46
Inertia [kg·m ²] (300B)	1.26×10 ⁻⁶	M _Y	51
		M _R	134

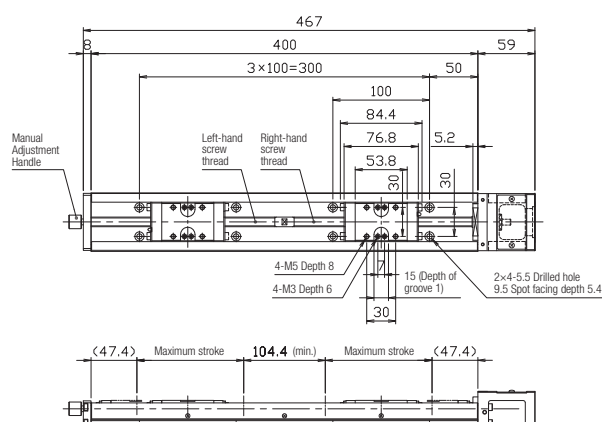
SE23



SE30

SE3005B-400B			
Specifications and Accuracy		Basic Dynamic Load Rating [kN]	
Ball Screw Lead [mm]	5	Ball Screw Ca	3.0
Gripping Force	(Note 2)	Guide C	7.0
Maximum Stroke [mm]	100	Bearing Cb	4.4
Repeated Positioning Accuracy [mm]	±0.010	Basic Static Load Rating [kN]	
Positioning Accuracy [mm]	0.095	Ball Screw C0a	5.3
Travelling Parallelism B [mm]	0.025	Guide C0	11.8
Backlash [mm]	0.020	Bearing C0b	4.36
Starting Torque [N·m]	0.15	Static Permissible Moment [N·m]	
Inertia [kg·m ²]	3.74×10 ⁻⁶	M _P	101
		M _Y	120
		M _R	260

SE30



(Note 1): The maximum stroke and block center position may vary depending on the phase of the ball screw. (Note 2): Gripping force depends on motor performance. Please contact us for more information.

Technical Specifications

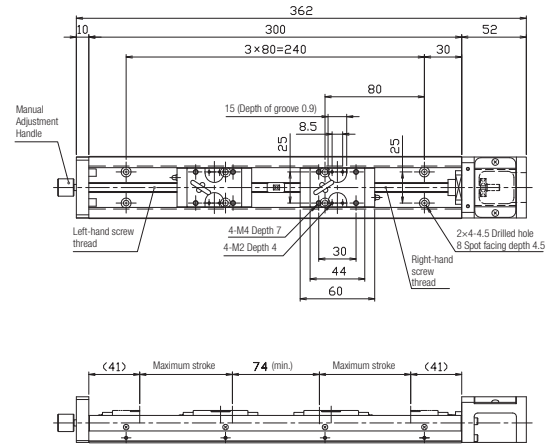
Model Number	Maximum Stroke [mm]	Repeated Positioning Accuracy [mm]	◎ : Standard product
SE2305B-250B-****-S	45	±0.010	◎
SE2305B-300B-****-S	70		◎
SE3005B-400B-****-S	100		◎
SG2605B-300B-****-S	70	±0.005	◎
SG3310B-400B-****-S	100		◎

Grease used: KURODA S Grease

SG26

SG2605B-300B			
Specifications and Accuracy		Basic Dynamic Load Rating [kN]	
Ball Screw Lead [mm]	5	Ball Screw Ca	2.35
Gripping Force	(Note 2)	Guide C	7.78
Maximum Stroke [mm]	70	Bearing Cb	1.79
Repeated Positioning Accuracy [mm]	±0.005	Basic Static Load Rating [kN]	
		Ball Screw C0a	3.3
Positioning Accuracy [mm]	0.050	Guide C0	14.98
Travelling Parallelism B [mm]	0.025	Bearing C0b	1.76
Backlash [mm]	0.020	Static Permissible Moment [N·m]	
Starting Torque [N·m]	0.04	M _P	99
Inertia [kg·m ²]	1.28×10 ⁻⁶	M _V	118
		M _R	255

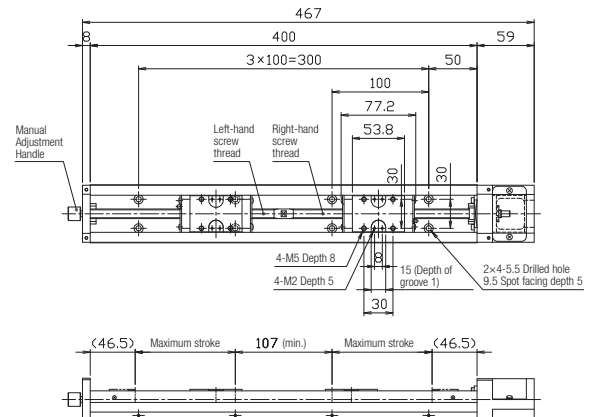
SG26



SG33

SG3310B-400B			
Specifications and Accuracy		Basic Dynamic Load Rating [kN]	
Ball Screw Lead [mm]	10	Ball Screw Ca	2.2
Gripping Force	(Note 2)	Guide C	12.6
Maximum Stroke [mm]	100	Bearing Cb	4.4
Repeated Positioning Accuracy [mm]	±0.005	Basic Static Load Rating [kN]	
		Ball Screw C0a	3.5
Positioning Accuracy [mm]	0.035	Guide C0	22.7
Travelling Parallelism B [mm]	0.025	Bearing C0b	4.36
Backlash [mm]	0.020	Static Permissible Moment [N·m]	
Starting Torque [N·m]	0.15	M _P	181
Inertia [kg·m ²]	4.90×10 ⁻⁶	M _V	215
		M _R	500

SG33



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COMPACT

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