Economy Series 2023 Catalog (English version)

Catalog Correction Information

Updated : 1st of December, 2023

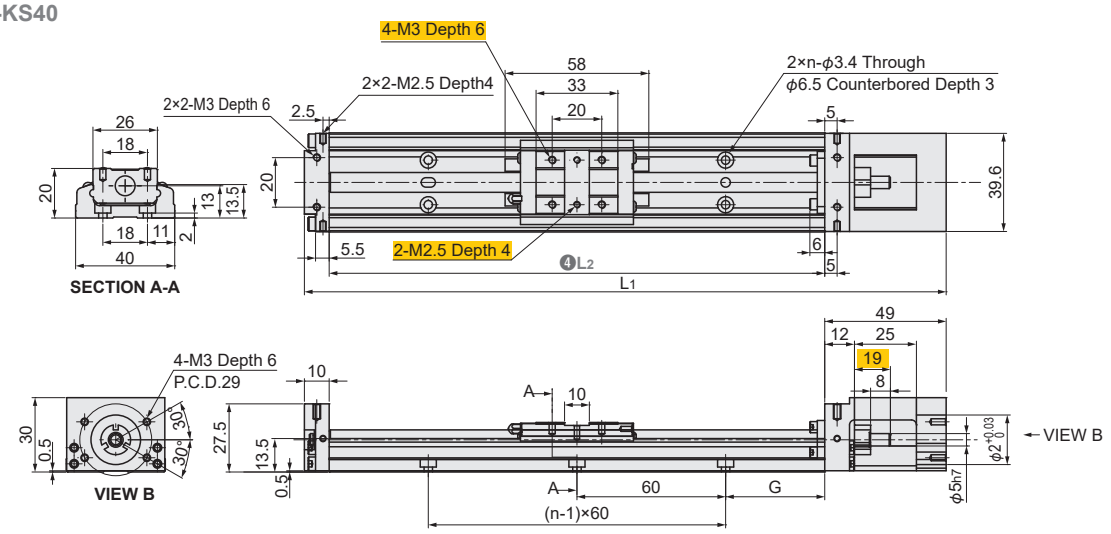
There are an amendment information in the Paper catalog of
Economy Series 2023 Catalog (English version).

The highlighted parts in this booklet are correct information after correction.

P.133 <drawing>

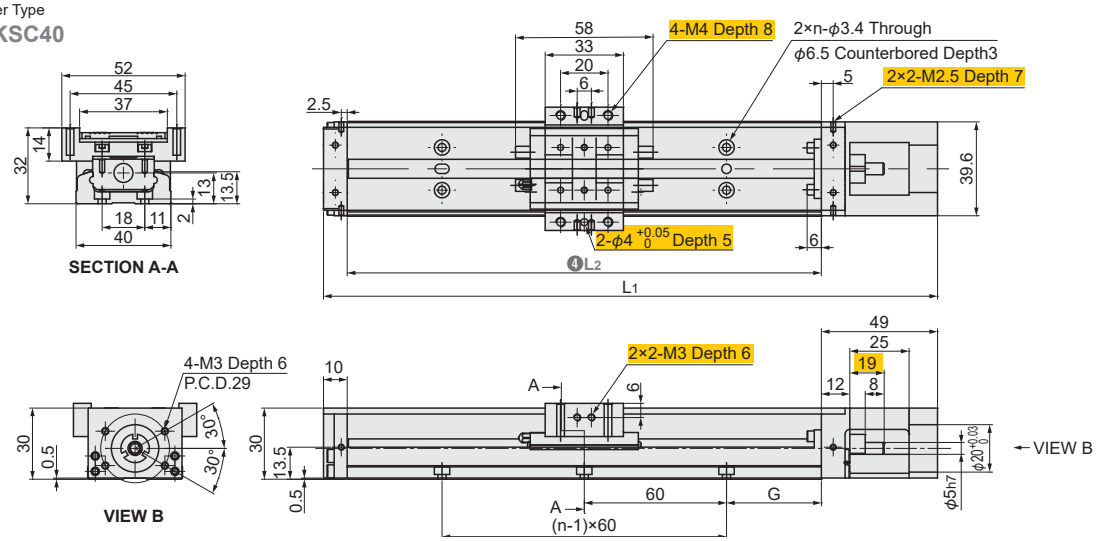
Standard Type

C-KS40



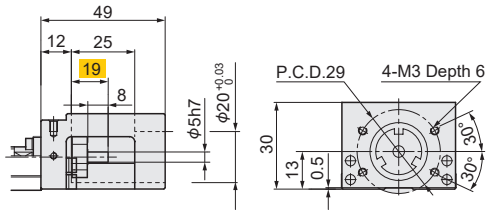
Cover Type

C-KSC40

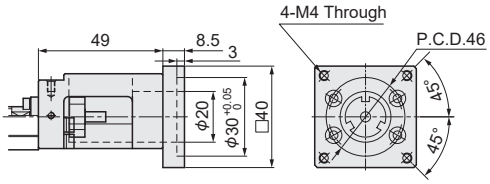


P.134 <drawing, spec. table>

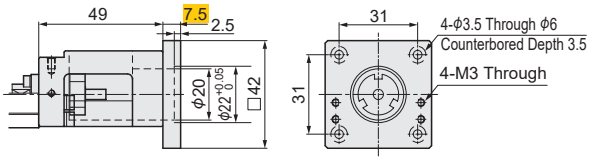
Motor Bracket F0



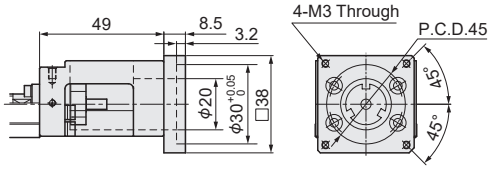
Motor Bracket and Attachment F1



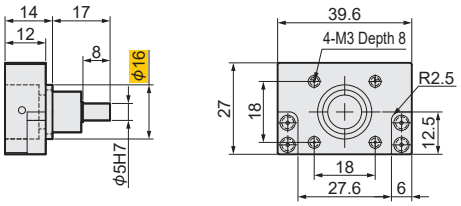
Motor Bracket and Attachment F3



Motor Bracket and Attachment F2

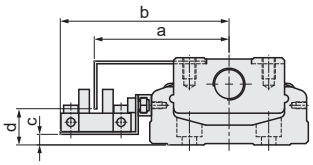


Without Motor Bracket H0

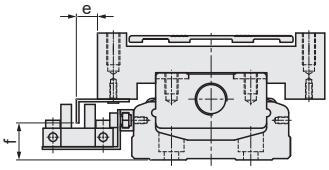


Sensor Drawing

Standard Type



Cover Type



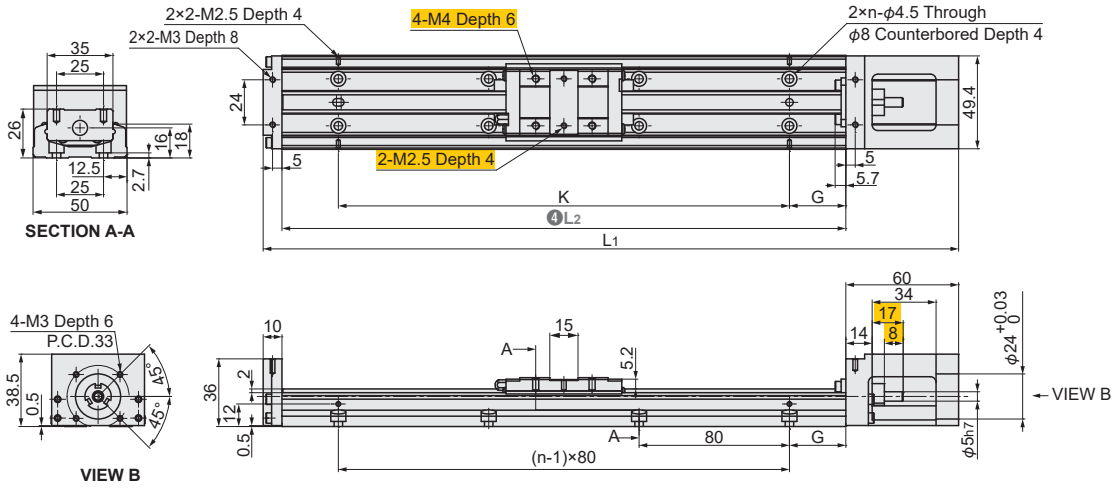
Dimension	d
40 Series	11.3

Note: The applicable sensor is L-Shape Photo Microsensors with NPN Type “C-MSX671N-2M”. For detail please refer to P.903.

P.135 <drawing>

Standard Type

C-KS50



Cover Type

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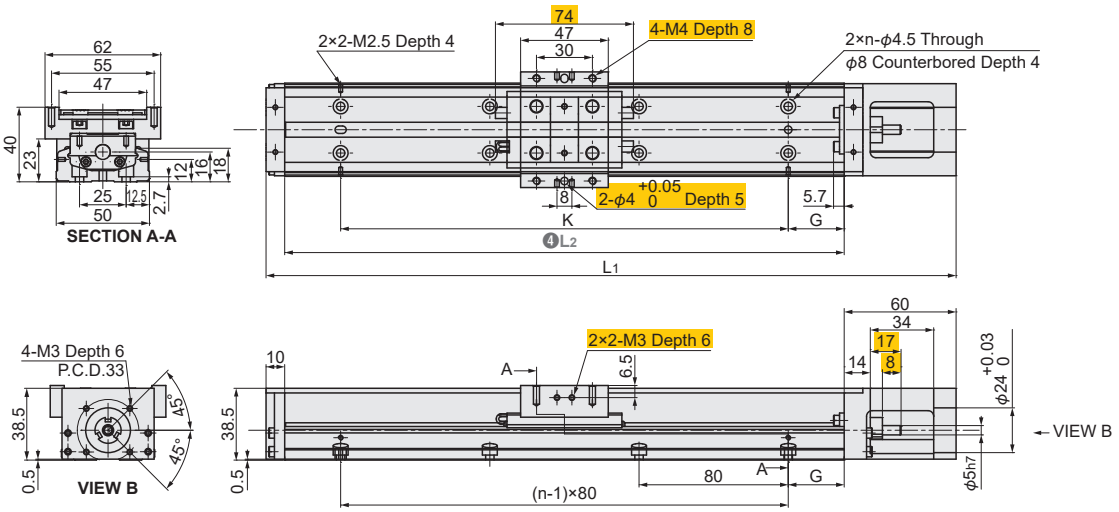
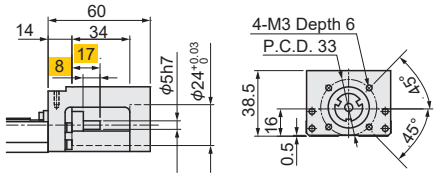
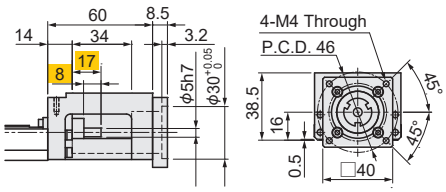


P.136 <drawing, spec. table>

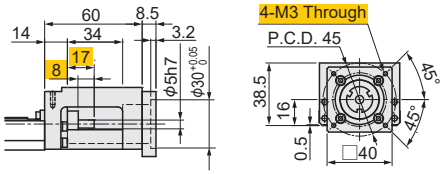
Motor Bracket F0



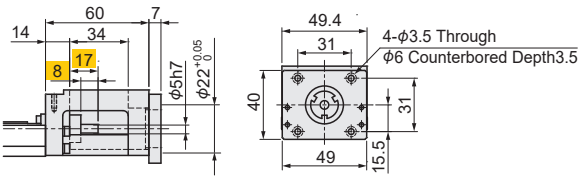
Motor Bracket and Attachment F1



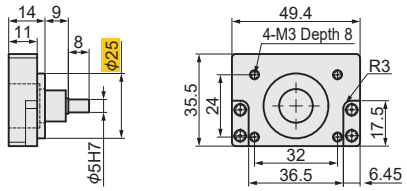
Motor Bracket and Attachment F2



Motor Bracket and Attachment F3

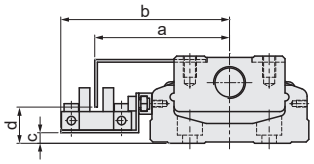


Without Motor Bracket H0

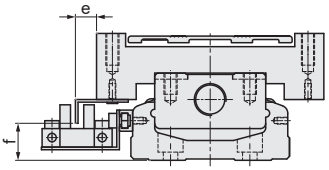


Sensor Drawing

Standard Type



Cover Type



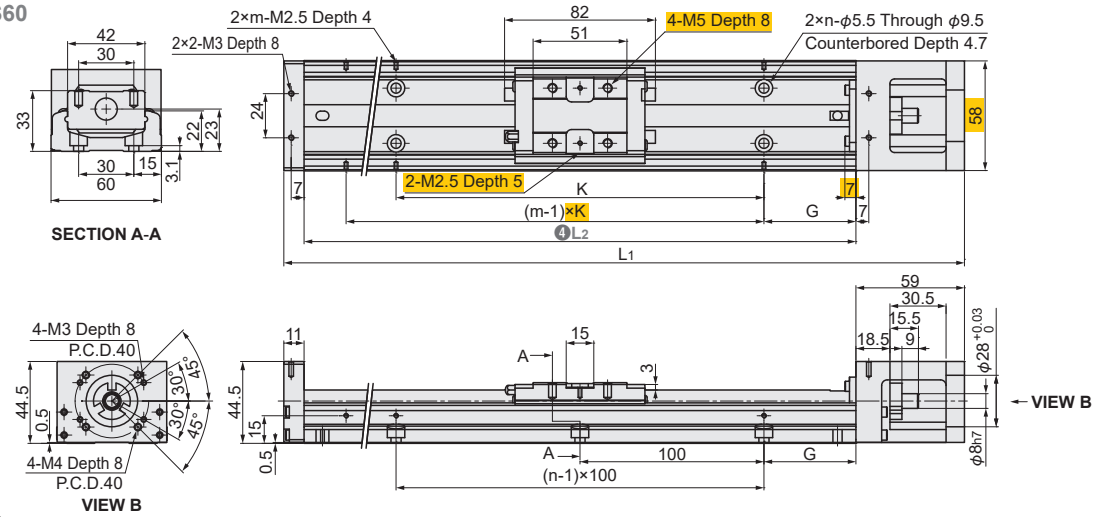
Dimension	d
50 Series	12

Note: The applicable sensor is L-Shape Photo Microsensors with NPN Type “C-MSX671N-2M”. For detail please refer to P.903.

P.137 <drawing>

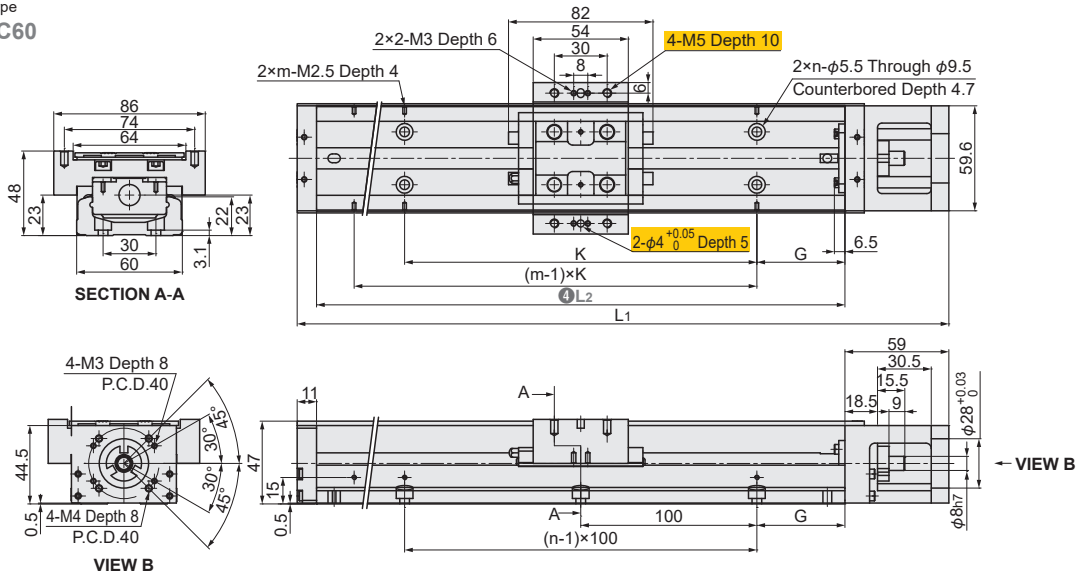
Standard Type

C-KS60



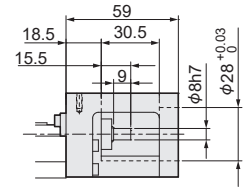
Cover Type

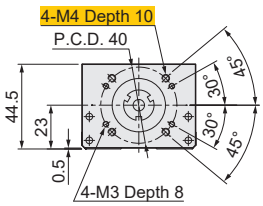
C-KSC60



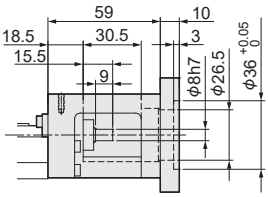
P.138 <drawing>

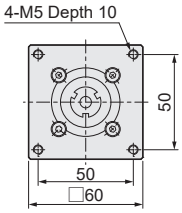
Motor Bracket F0



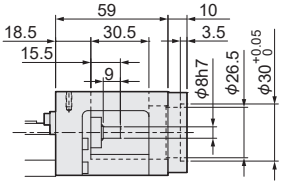


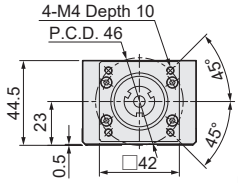
Motor Bracket and Attachment F3



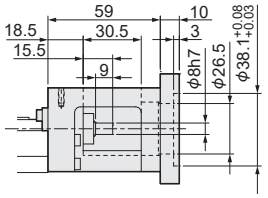


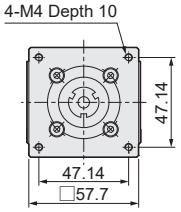
Motor Bracket and Attachment F1



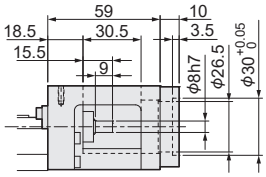


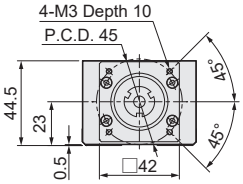
Motor Bracket and Attachment F4



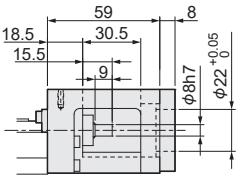


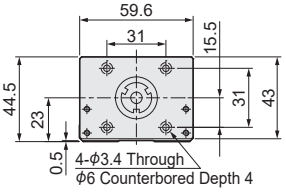
Motor Bracket and Attachment F2



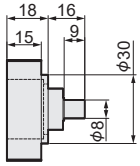


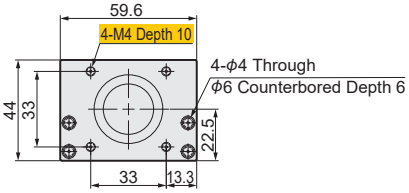
Motor Bracket and Attachment F5





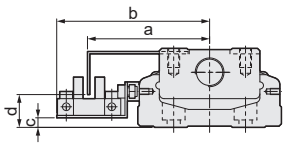
Without Motor Bracket H0



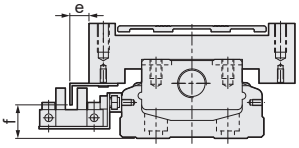


Sensor Drawing

Standard Type



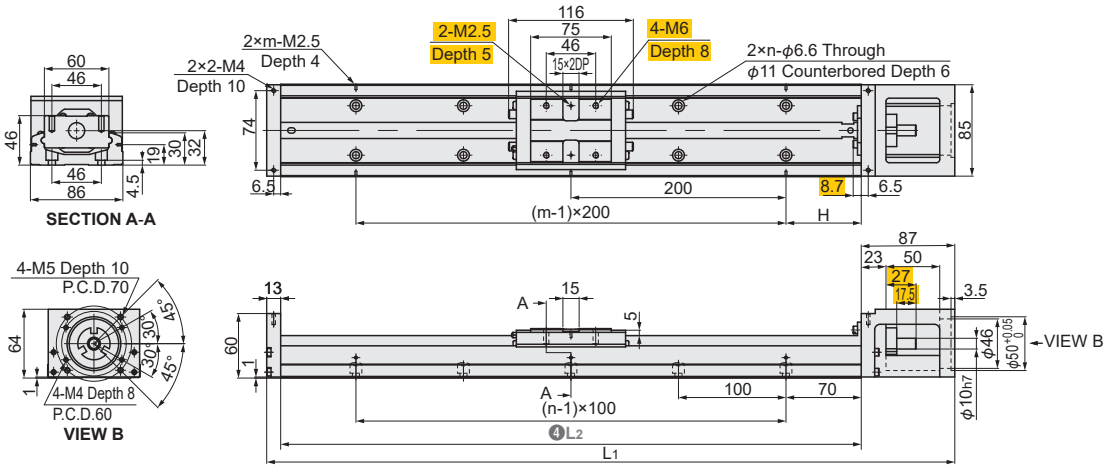
Cover Type



P.139 <drawing>

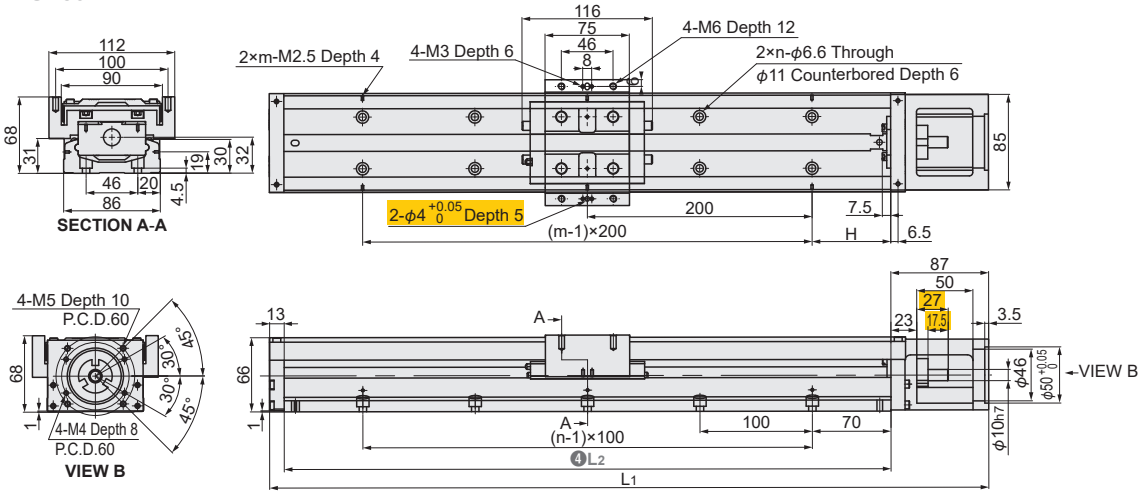
Standard Type

C-KS86



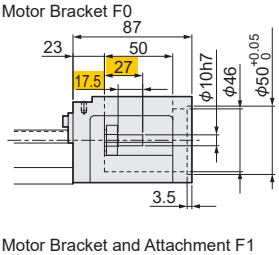
Cover Type

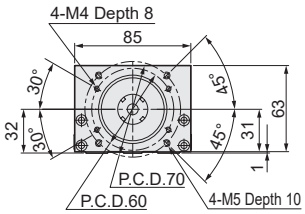
C-KSC86



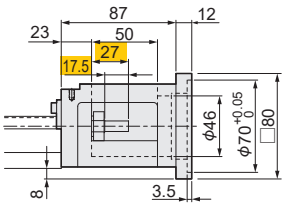
P.140 <drawing>

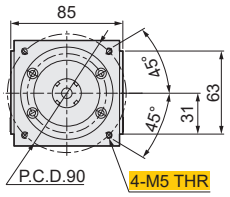
Motor Bracket F0



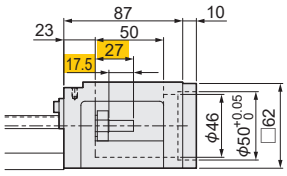


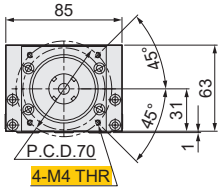
Motor Bracket and Attachment F4



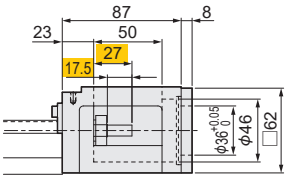


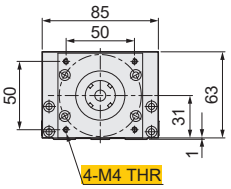
Motor Bracket and Attachment F1



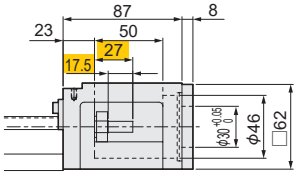


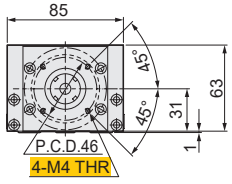
Motor Bracket and Attachment F5



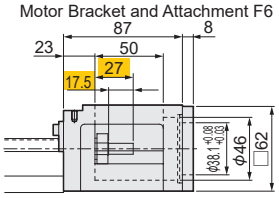


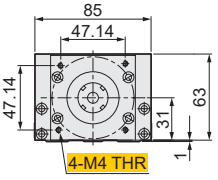
Motor Bracket and Attachment F2



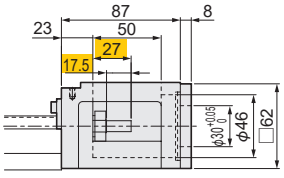


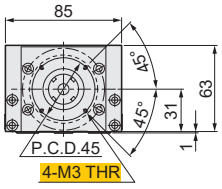
Motor Bracket and Attachment F6



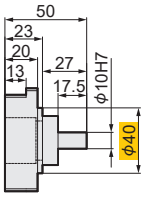


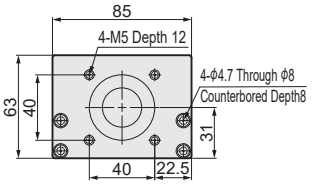
Motor Bracket and Attachment F3





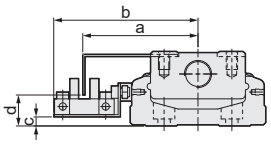
Without Motor Bracket H0



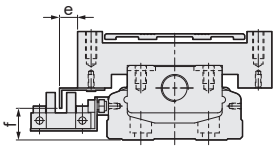


Sensor Drawing

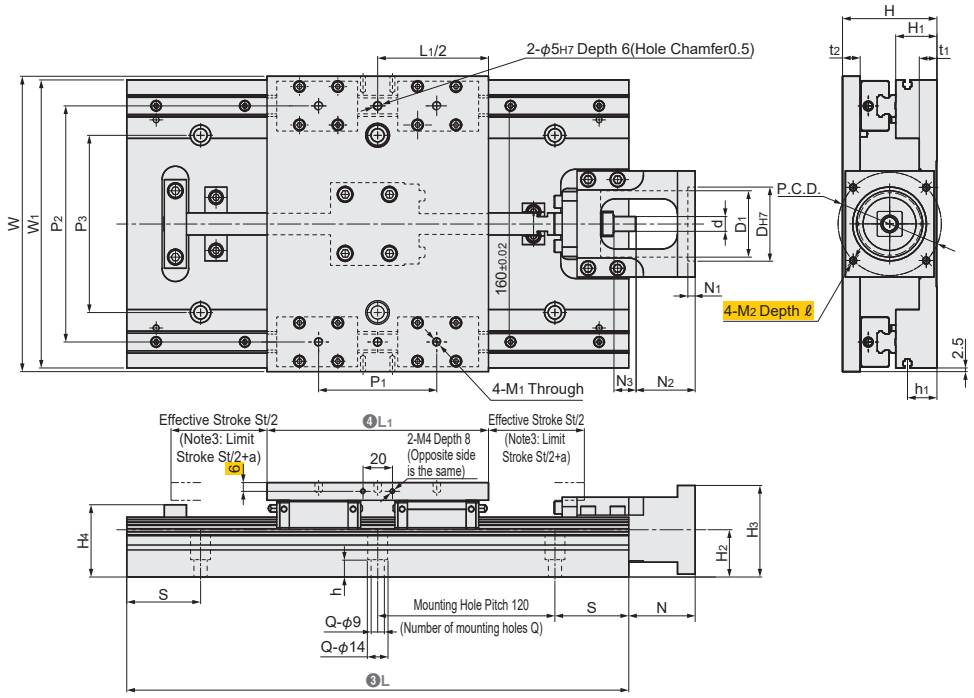
Standard Type



Cover Type



P.143 <drawing>



P.144 <spec. table>

Part Number		Selection	
❶Type	❷No.	❸L* Base Length	❹L1 Table Length
E-KUA	1510L 1520L	340 400 460 520	150
	2010L 2020L	580 640 700 760 820	

Part Number		Related Dimensions					
Type	No.	N1	N2	N3	d	M2	ℓ
E-KUA	1510L 1520L		40	15	10	M5	10
	2010L		39.5	20	12		
	2020L				12		

*L=340 is suitable for 1510L only, and L=400 is suitable for 1510L and 2010L only.

P.146 <spec. table>

Part Number		Selection	
❶Type	❷No.	❸L* Base Length	❹L1 Table Length
E-KUAC	1510L 1520L	340 400 460 520	150
	2010L 2020L	580 640 700 760 820	

Part Number		Base				Base Mounting		
Type	No.	W1	H4	t1	h1	P3	h	Q
E-KUAC	1510L 1520L	208	49	12	20	120	11.5	L / Q 340 / 6 400 / 8 460 / 8 520 / 10
	2010L		61		29			580 / 10 640 / 12 700 / 12 760 / 14
	2020L		55		20			820 / 14

*L=340 is suitable for 1510L only, and L=400 is suitable for 1510L and 2010L

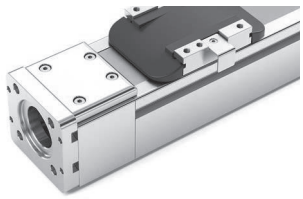
P.175 <spec. table>

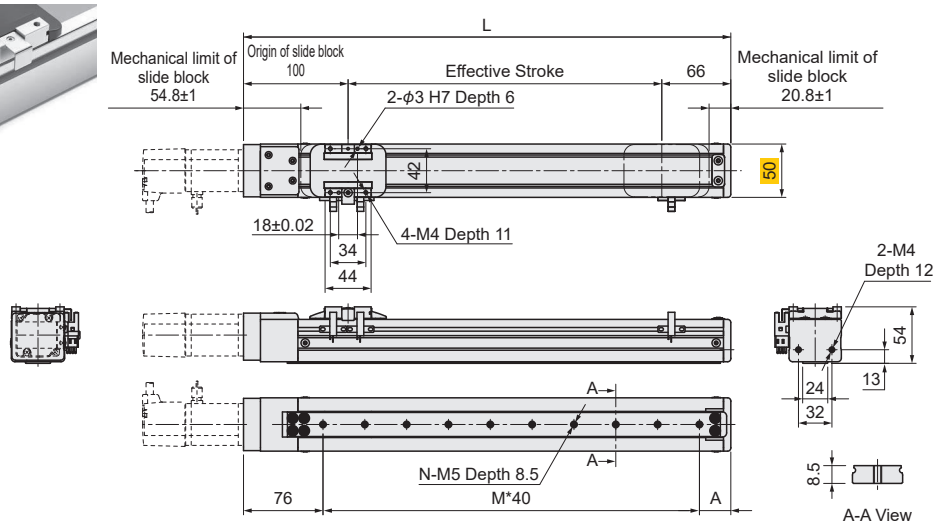
Part Number	Body width (mm)	Ball Screws Specs.		Motor Output (W)	Positioning Repeatability (mm)	Max. payload (kg)		Max. Speed (mm/sec)	Stroke (mm)	Rated Thrust (N)
		O.D. (mm)	Lead (mm)			Horizontal	Vertical			
E-MTH5	50	12	5	100	±0.01	10	3	250	50~800	341
			10			5	1.5	500		170
E-MTH6	65	12	5	100	±0.01	30	10	250	100~800	341
			10			15	5	500		170
			20			10	2	1000		85

P.180 <drawing>

BC

Motor Direct





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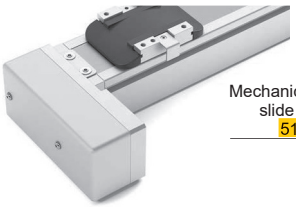

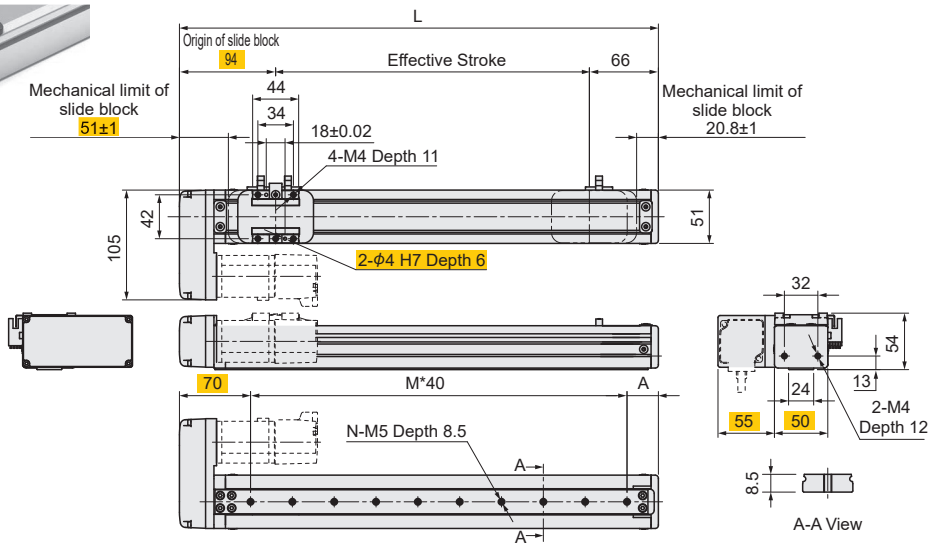

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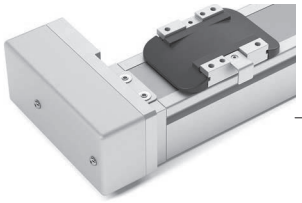

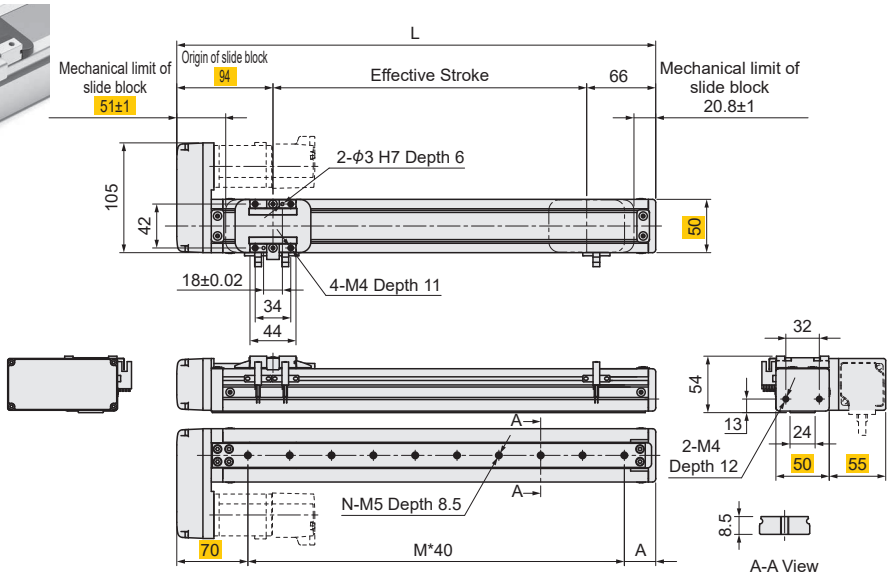

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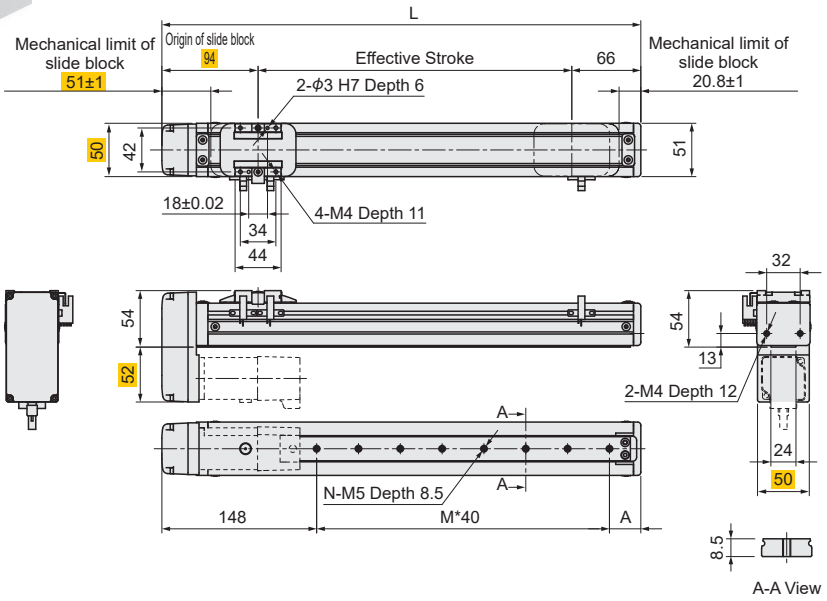

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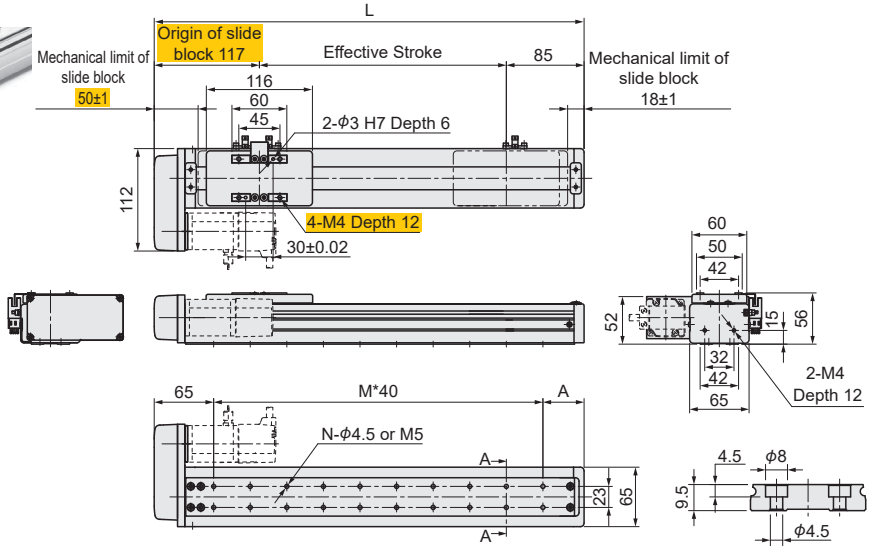

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
N	12	14	16	18	22	24	26	28	32	34	36	38	42	44	46
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.185 <drawing, spec. table>

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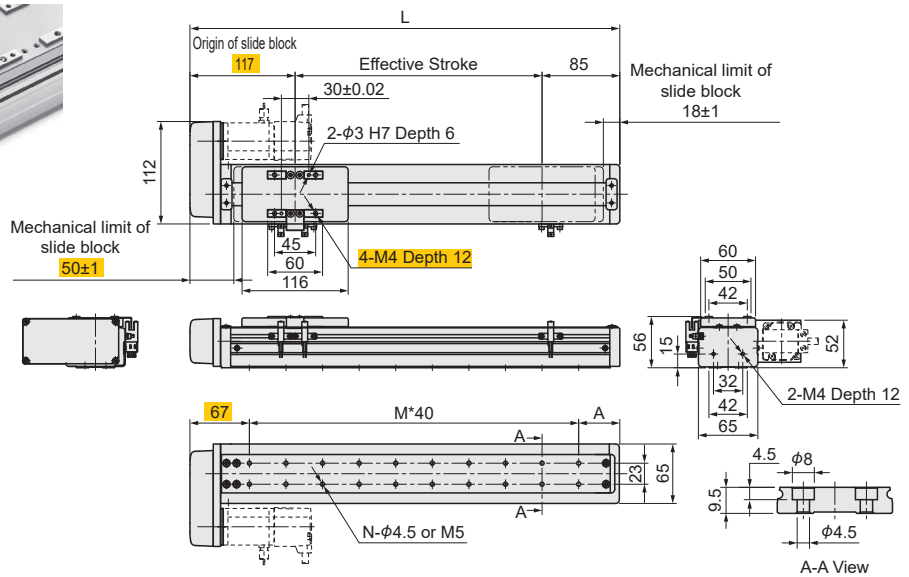

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
N	12	14	16	18	22	24	26	28	32	34	36	38	42	44	46
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.185 <drawing, spec. table>

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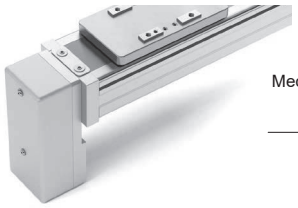

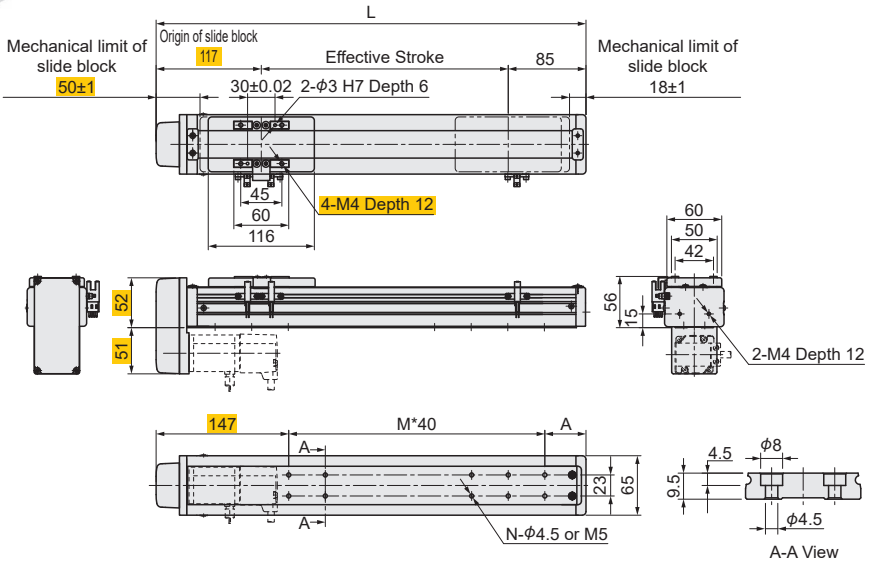

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20
N	8	10	12	14	18	20	22	24	28	30	32	34	38	40	42
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.188 <drawing>

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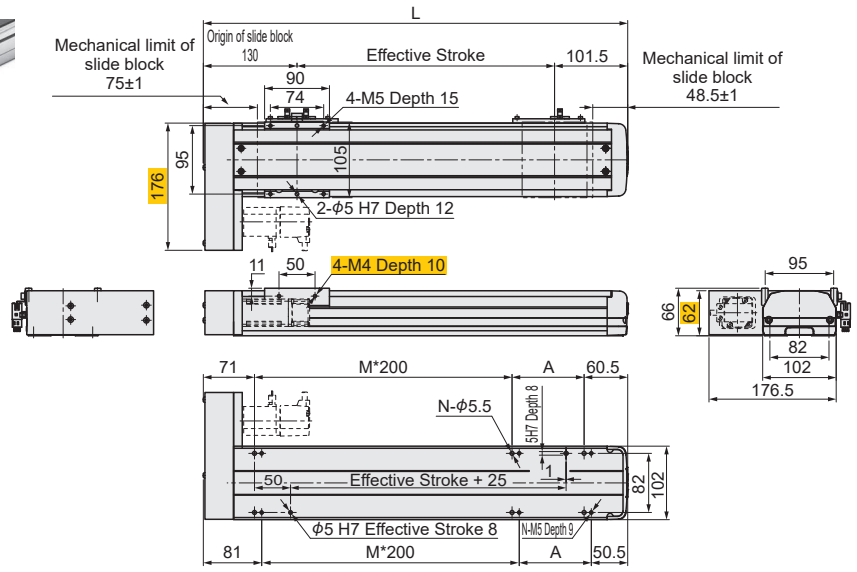

P.189 <drawing>

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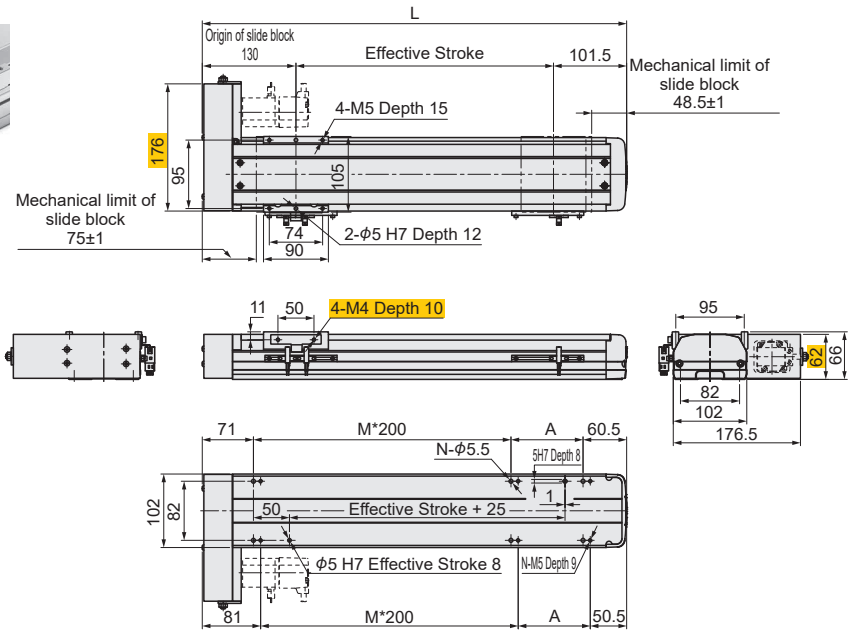

P.192 <drawing>

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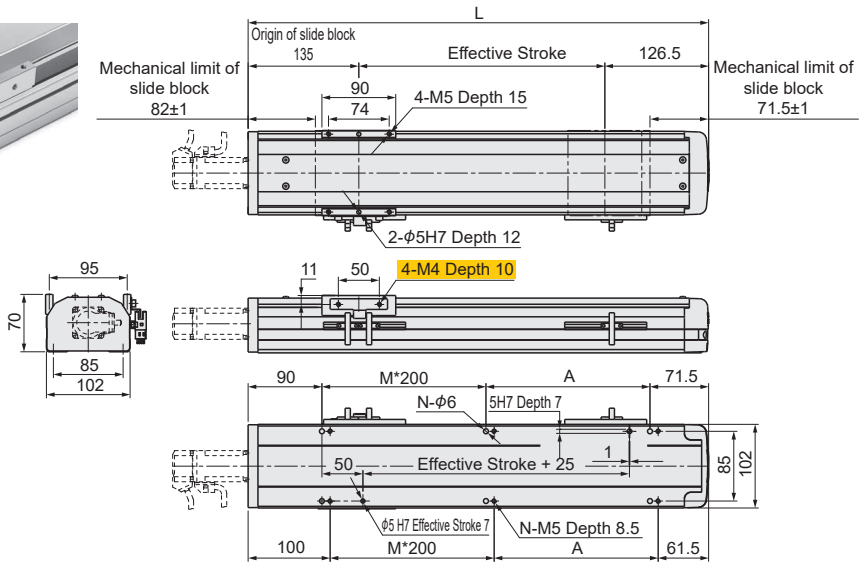
Motor Direct



P.192 <drawing>

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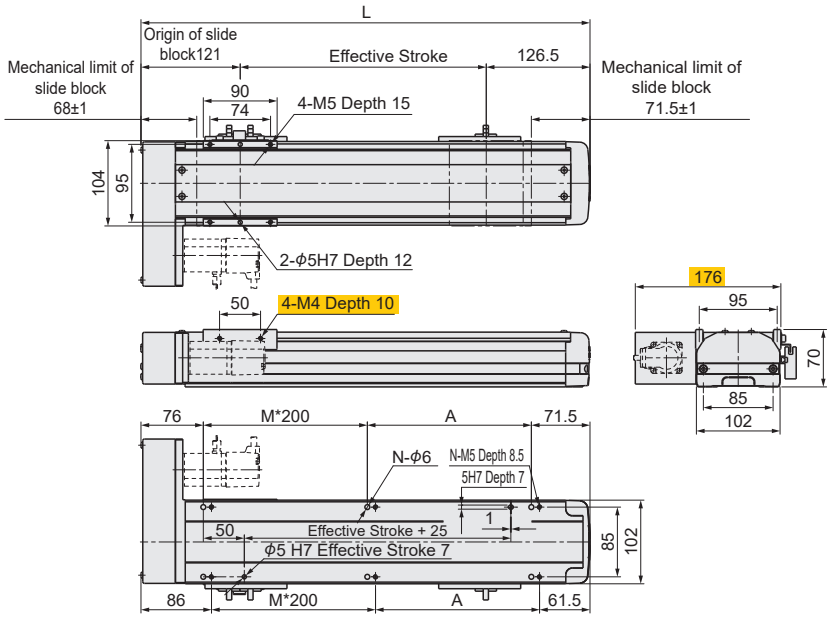

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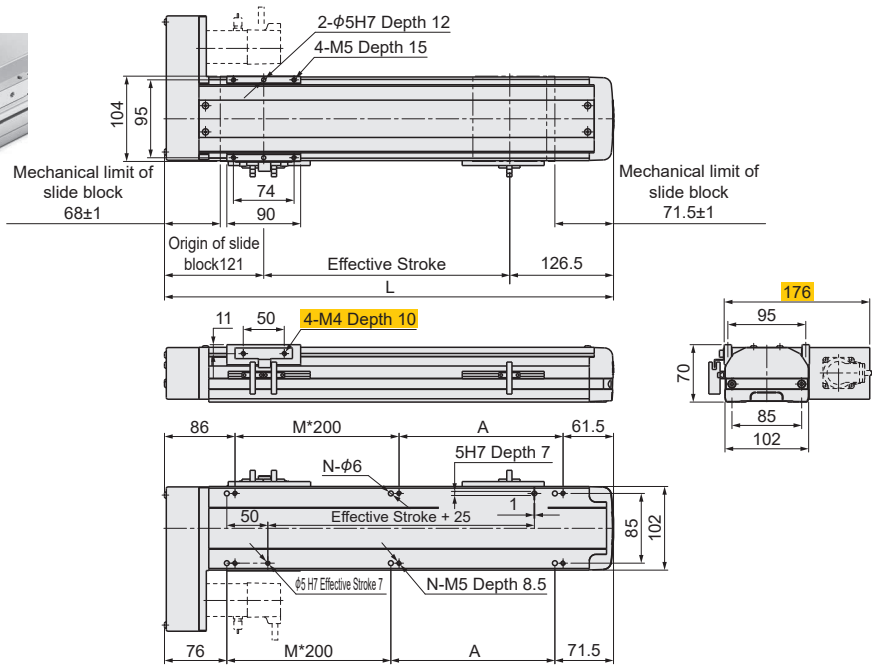

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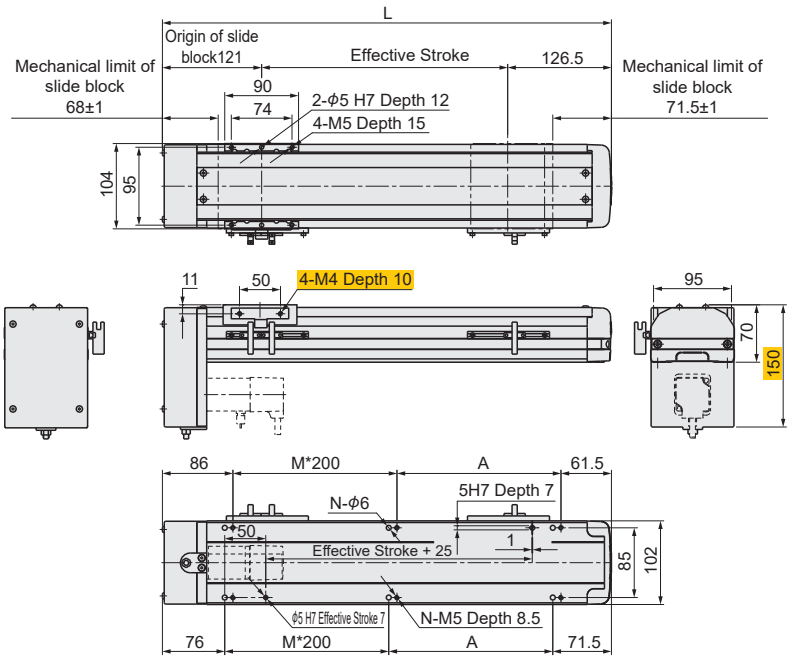

P.196 <drawing>

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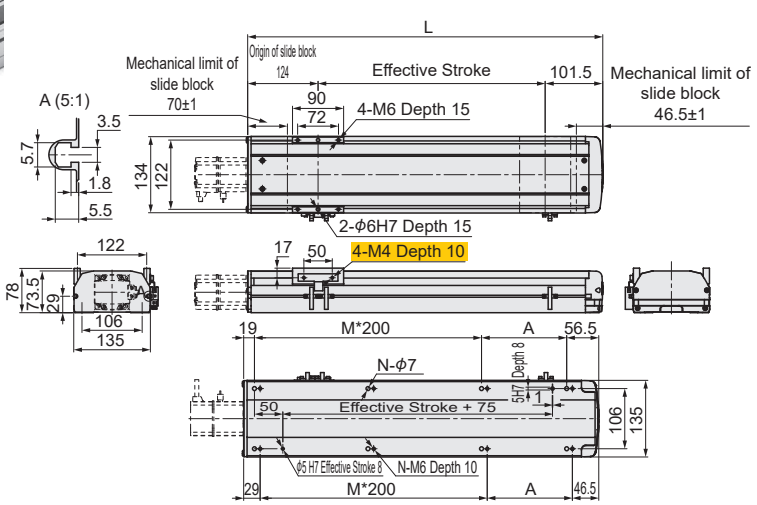

P.196 <drawing>

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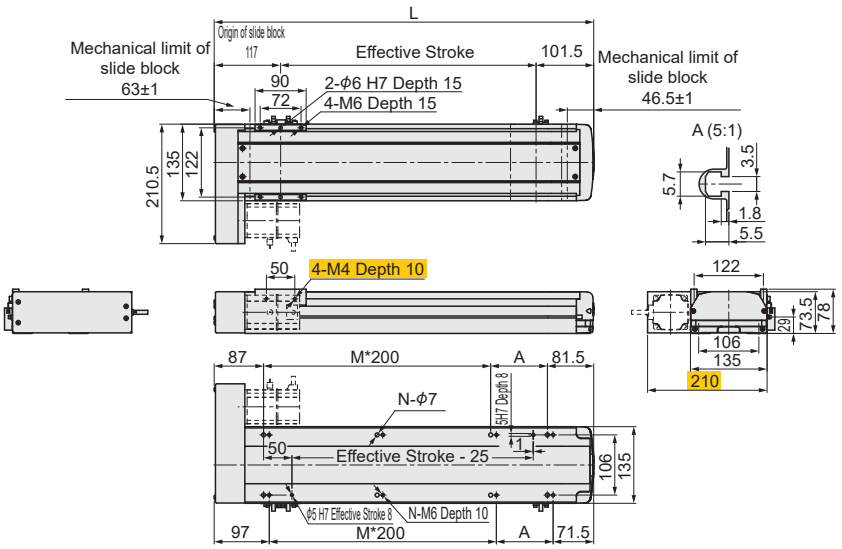

P.197 <drawing>

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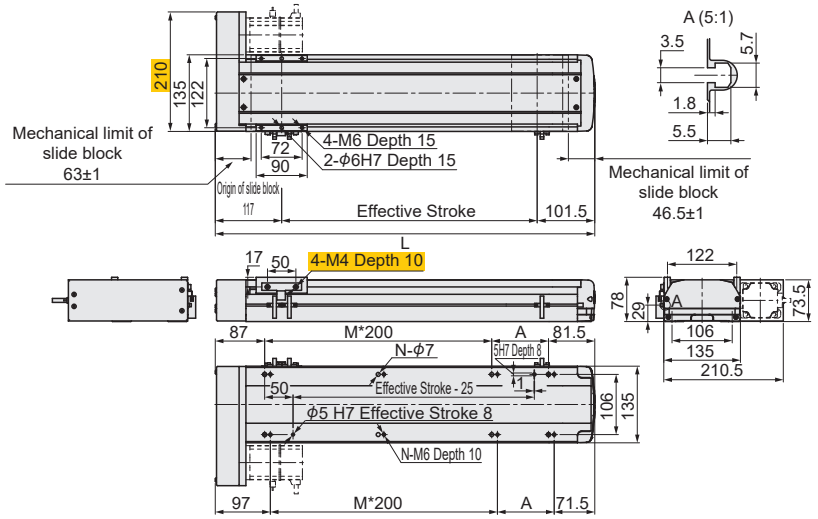

P.197 <drawing>

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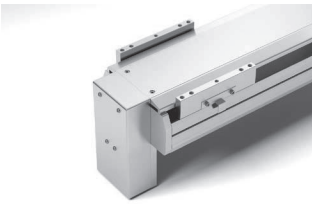

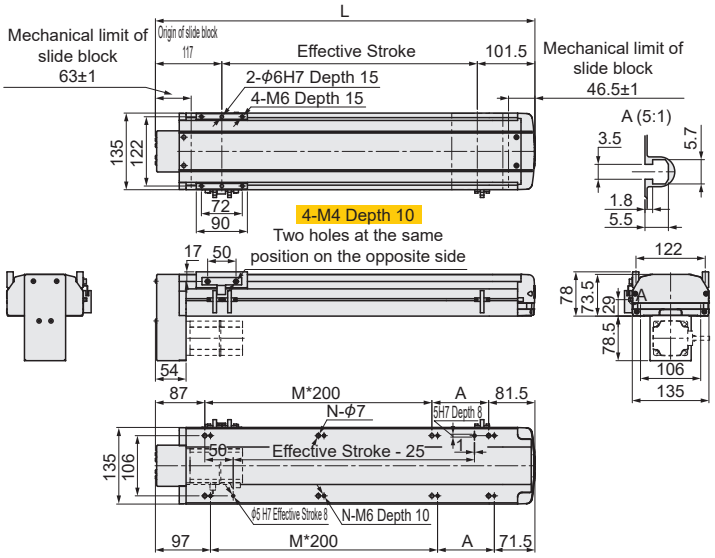

P.200 <drawing, spec. table>

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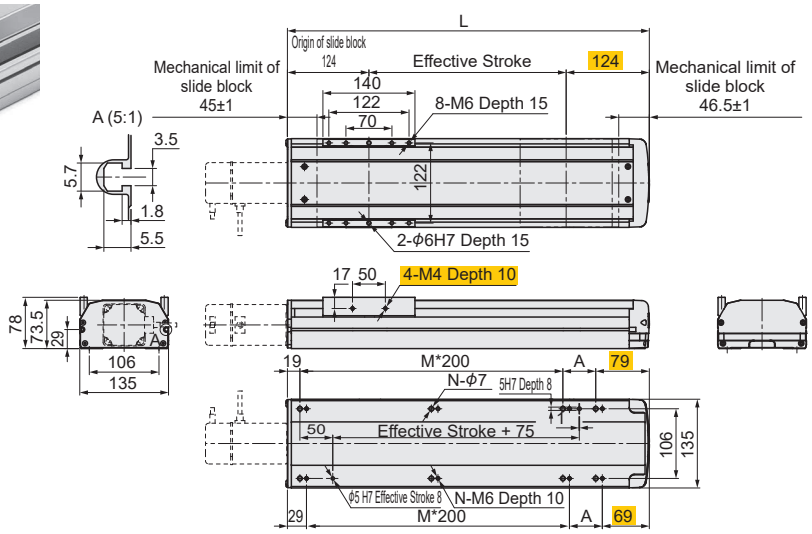
Motor Direct



Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
Mass	7.6	8	8.5	9	9.5	10	10.4	11	11.4	12	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.3	16.9

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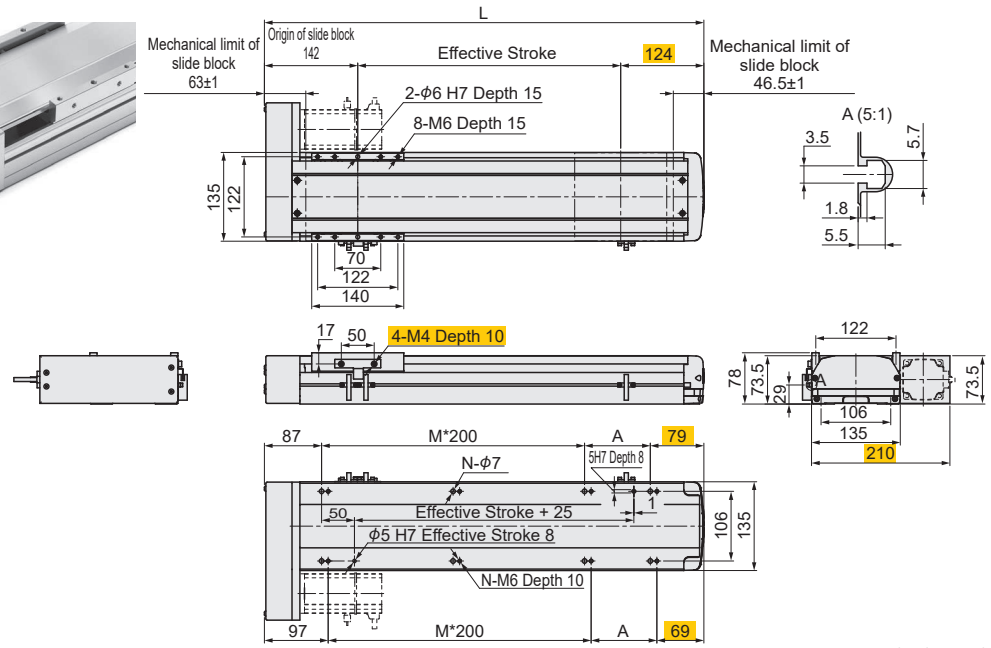

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
Mass	7.6	8	8.5	9	9.5	10	10.4	11	11.4	12	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.3	16.9

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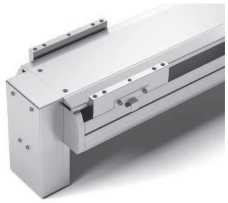
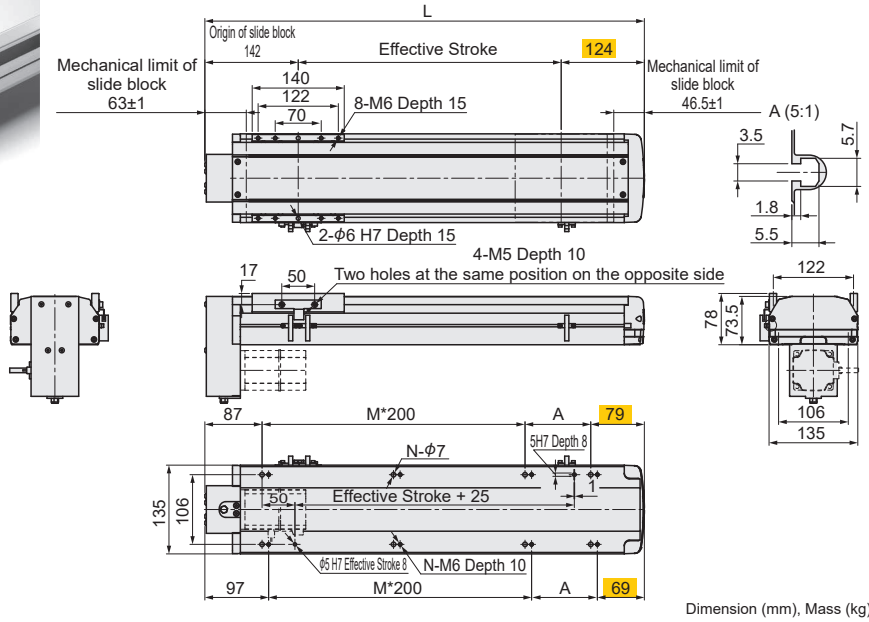


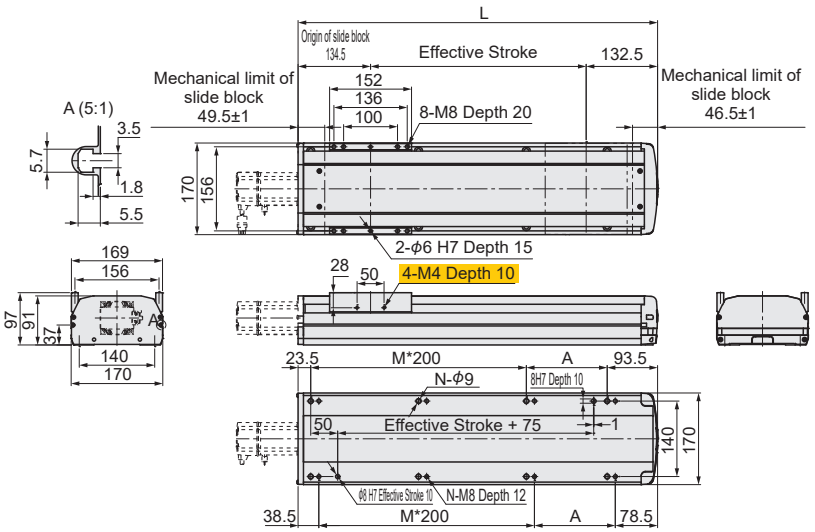


Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
Mass	7.6	8	8.5	9	9.5	10	10.4	11	11.4	12	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.3	16.9

BC

Motor Direct



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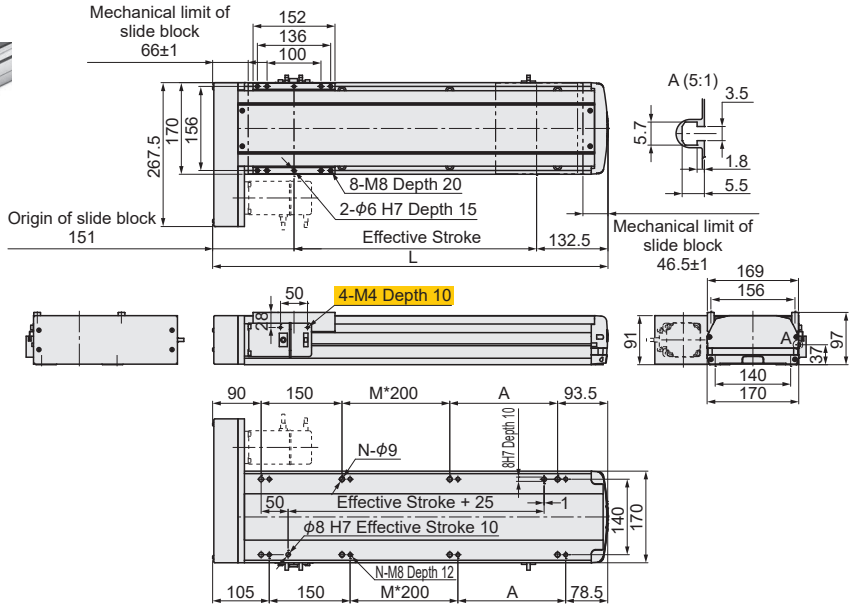

P.205 <drawing>

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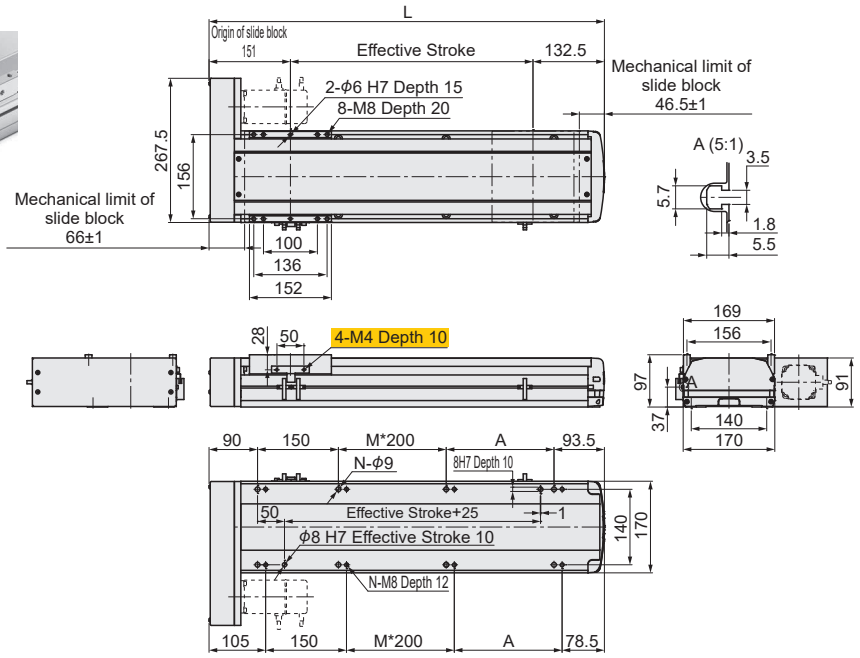

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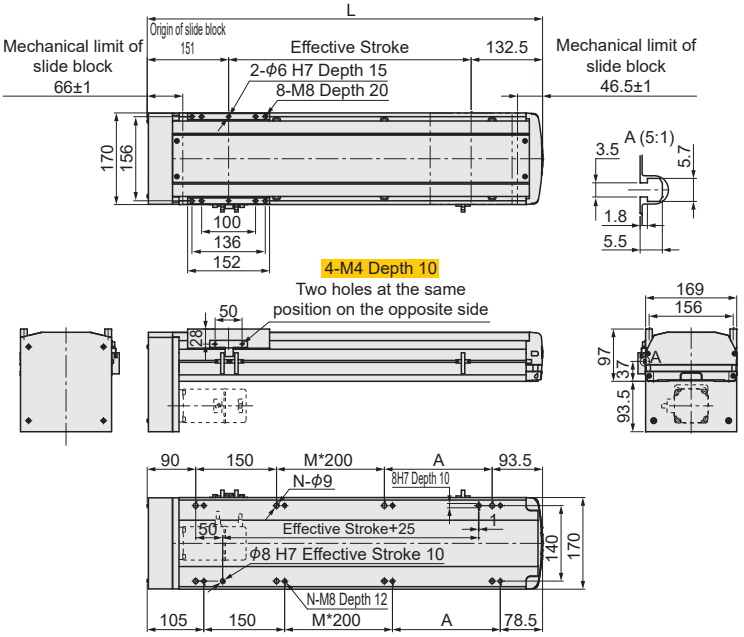

P.212 <drawing, spec. table>

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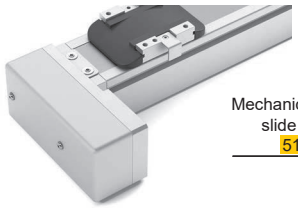

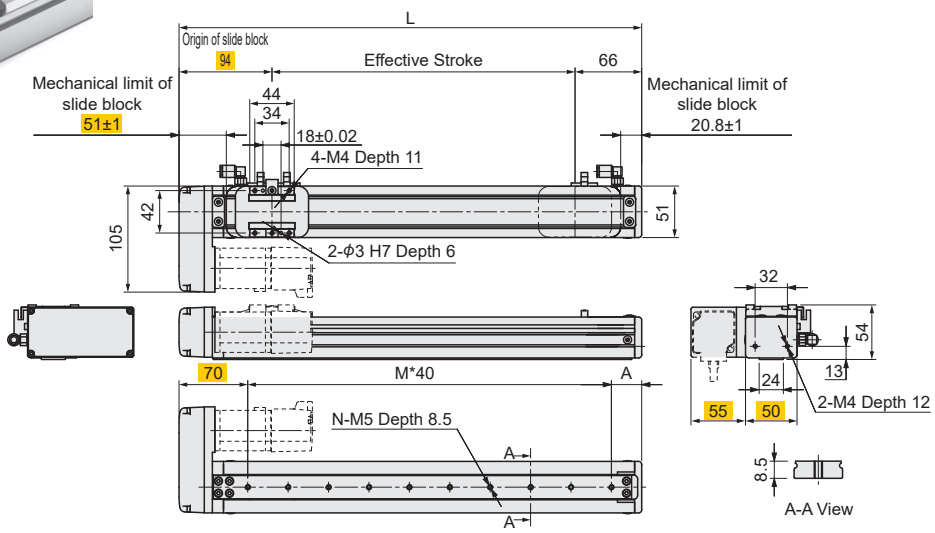

Dimension (mm), Mass (kg)

Effective Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
A	60	30	40	50	60	30	40	50	60	30	40	50	60	30	40	50
M	2	4	5	6	7	9	10	11	12	14	15	16	17	19	20	21
N	3	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
Mass	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.8	3	3.1	3.2	3.3	3.4	3.5	3.6	3.7

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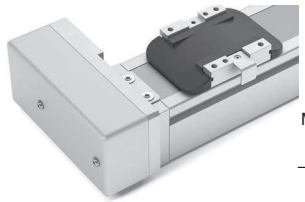
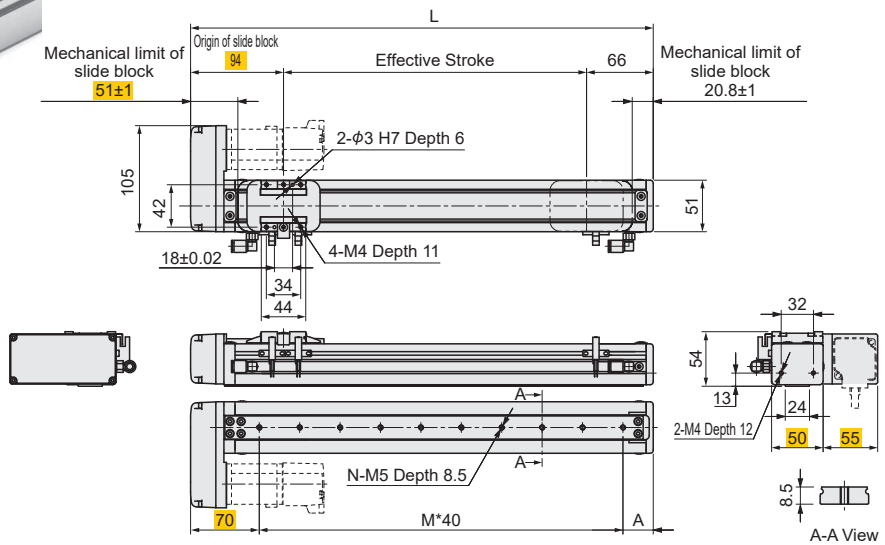


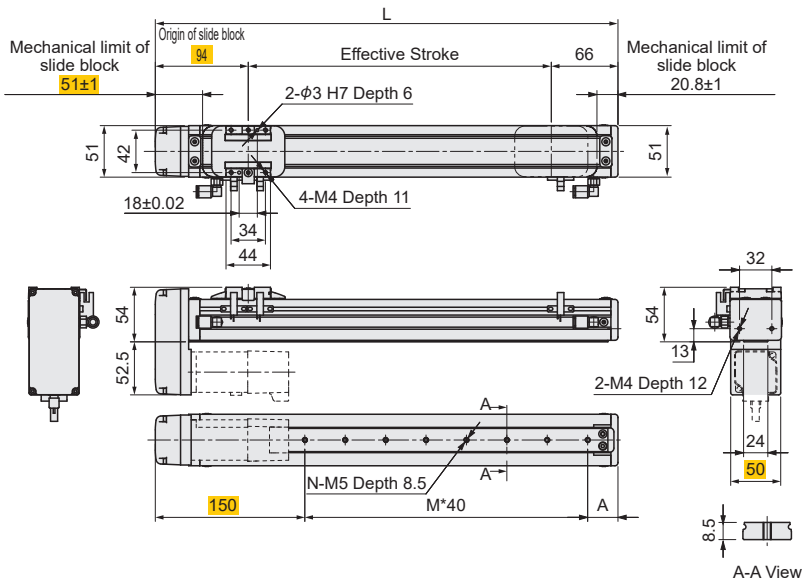


Dimension (mm), Mass (kg)

Effective Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
A	60	30	40	50	60	30	40	50	60	30	40	50	60	30	40	50
M	2	4	5	6	7	9	10	11	12	14	15	16	17	19	20	21
N	3	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
Mass	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.8	3	3.1	3.2	3.3	3.4	3.5	3.6	3.7

BM

Bottom Down



Dimension (mm), Mass (kg)

Effective Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
A	60	30	40	50	60	30	40	50	60	30	40	50	60	30	40	50
M	0	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19
N	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20
Mass	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.8	3	3.1	3.2	3.3	3.4	3.5	3.6	3.7

P.216 <drawing, spec. table>

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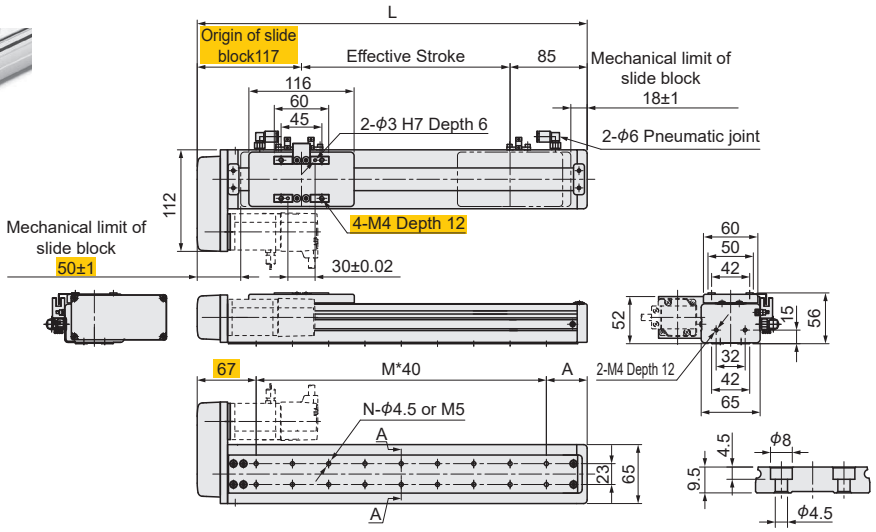

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
N	12	14	16	18	22	24	26	28	32	34	36	38	42	44	46
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.217 <drawing, spec. table>

BR

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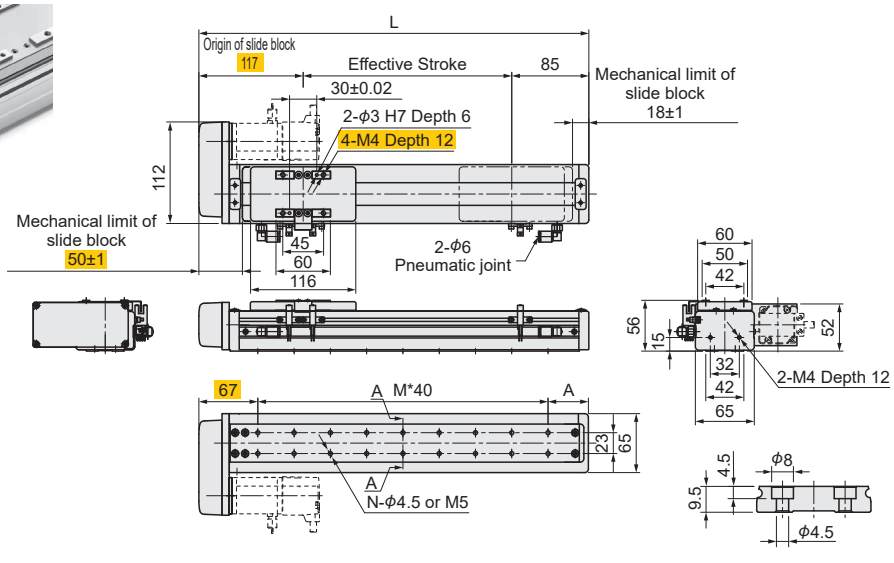

Dimension (mm), Mass (kg)

Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
N	12	14	16	18	22	24	26	28	32	34	36	38	42	44	46
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.217 <drawing, spec. table>

BM

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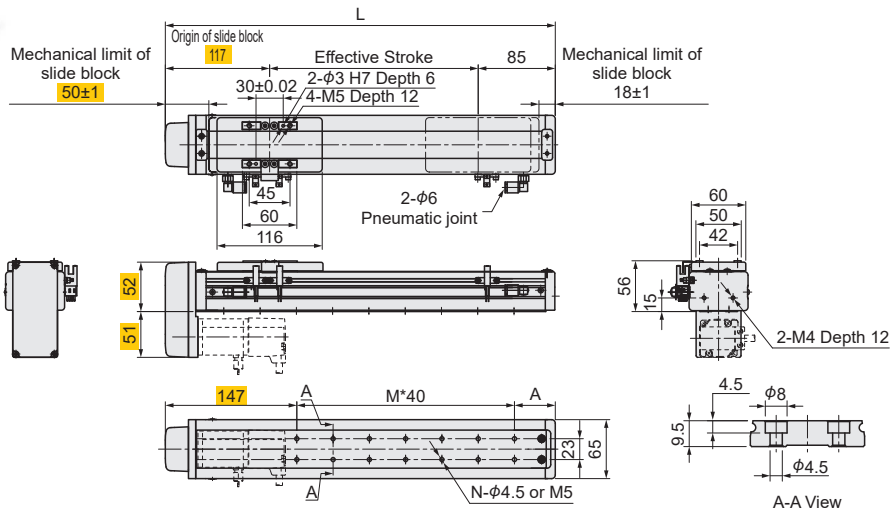


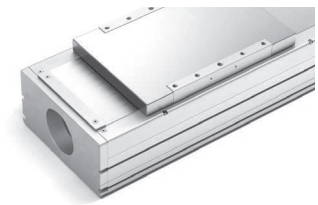
Dimension (mm), Mass (kg)

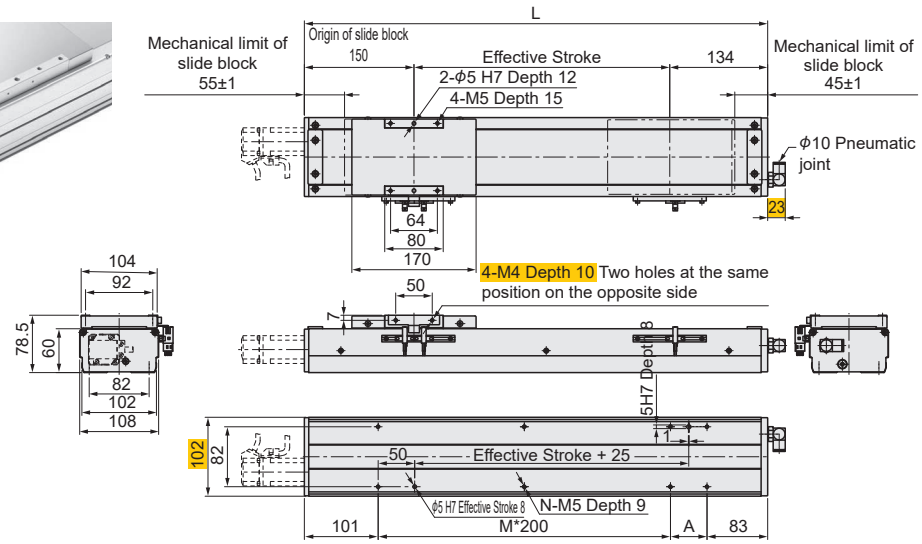
Effective Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
A	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55
M	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20
N	8	10	12	14	18	20	22	24	28	30	32	34	38	40	42
Mass	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5	5.1

P.220 <drawing>

BC

Motor Direct





P.220 <drawing>

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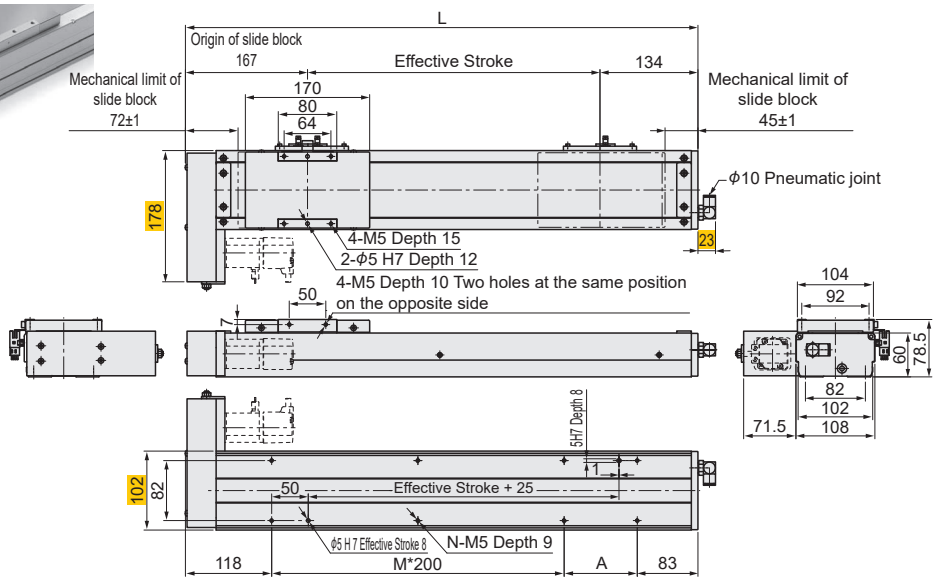

P.221 <drawing>

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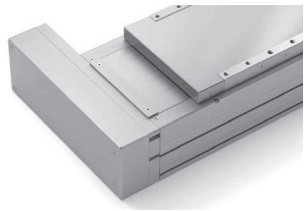

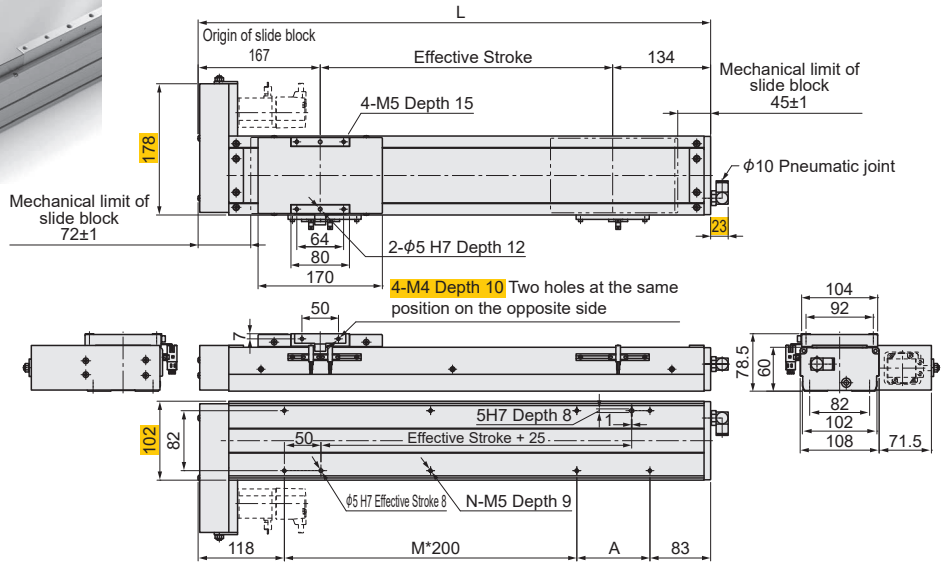

P.221 <drawing>

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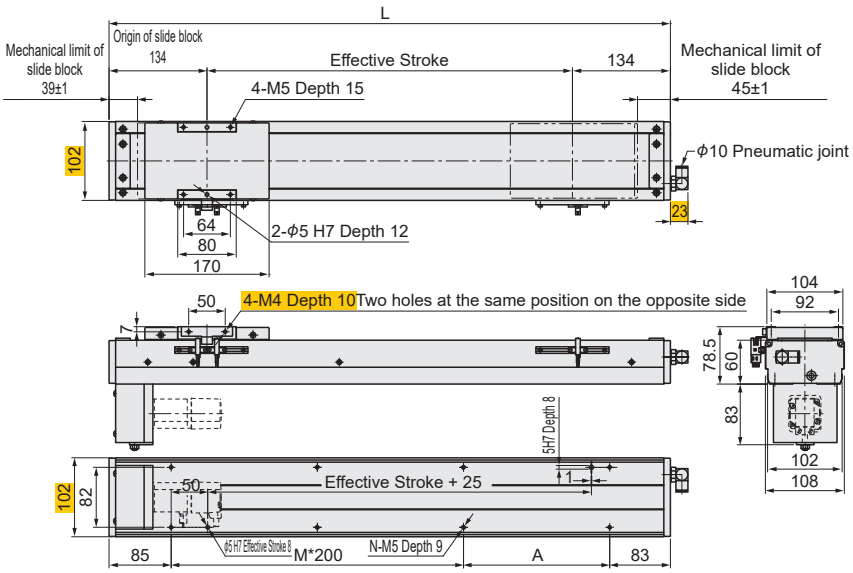
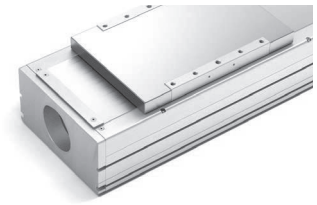
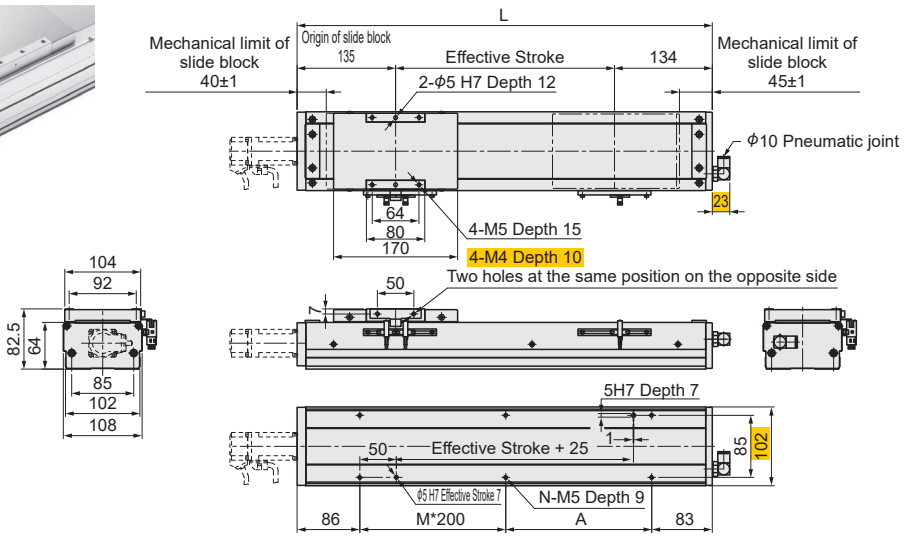


P.224 <drawing>

BC

Motor Direct





P.224 <drawing>

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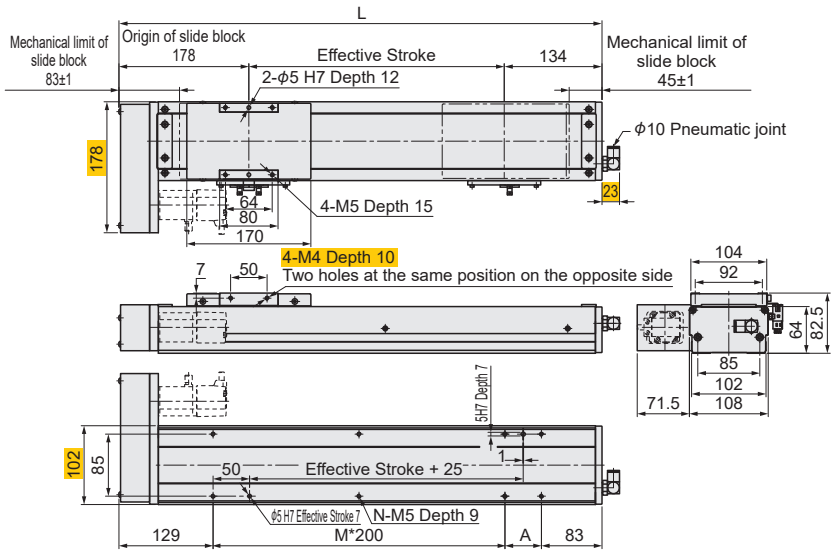

P.225 <drawing>

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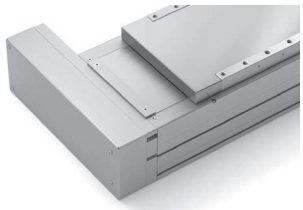

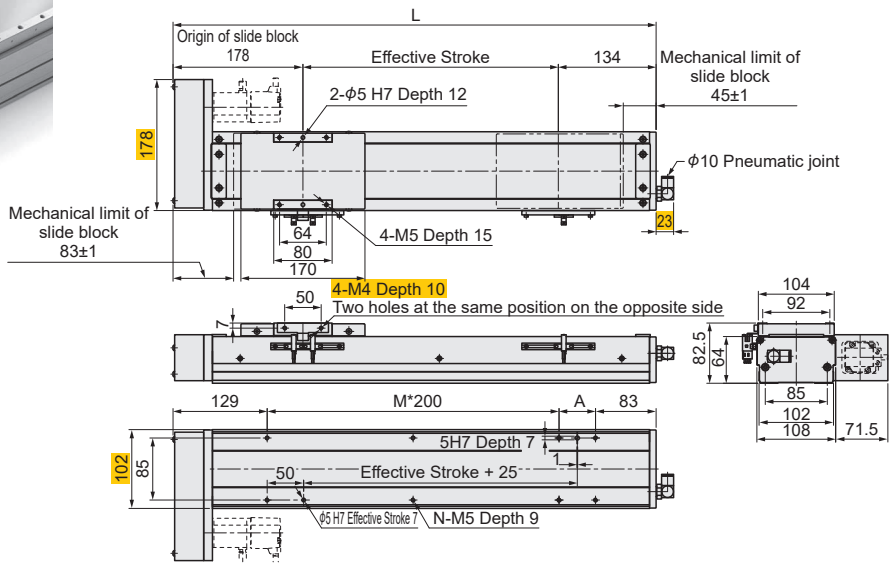

P.225 <drawing>

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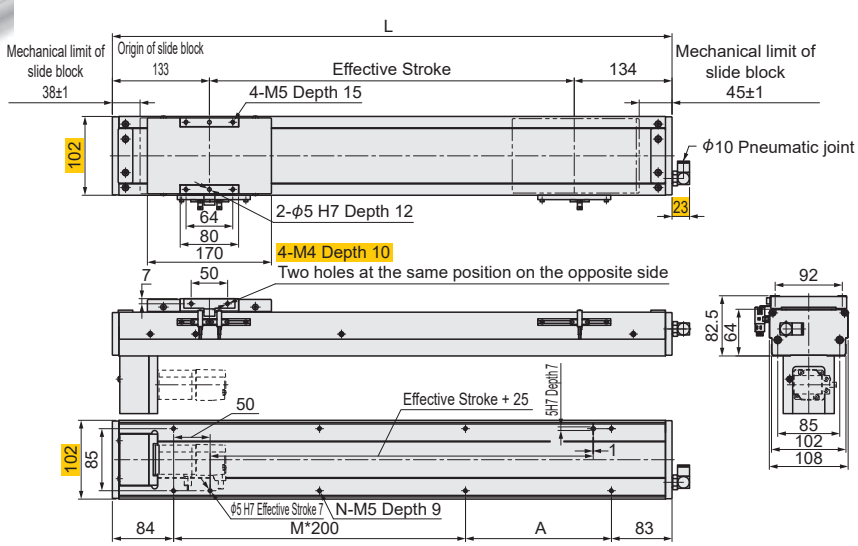

P.228 <drawing>

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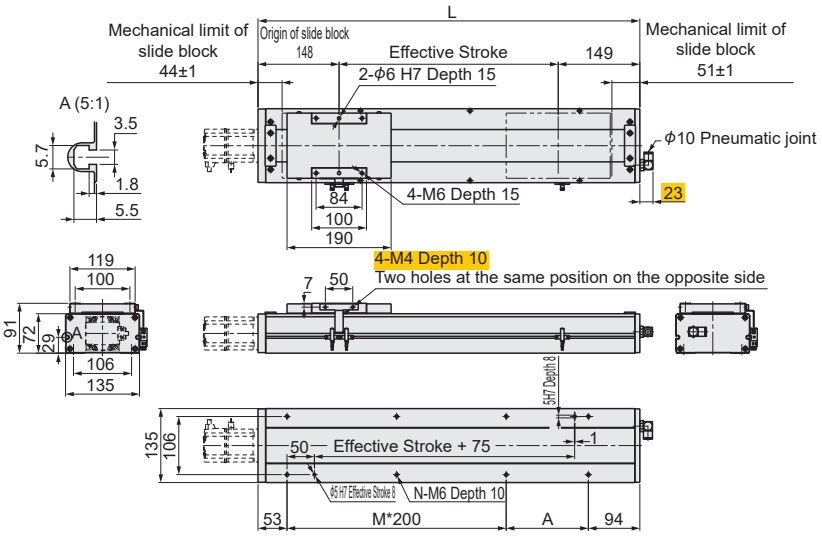
Motor Direct



P.228 <drawing>

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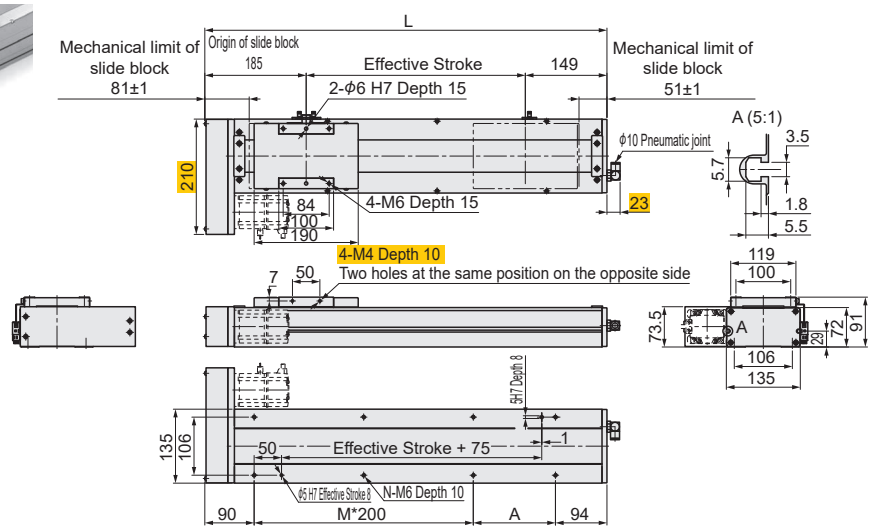

P.229 <drawing>

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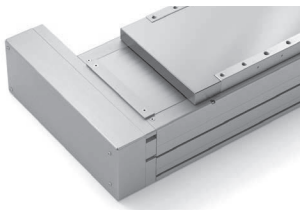
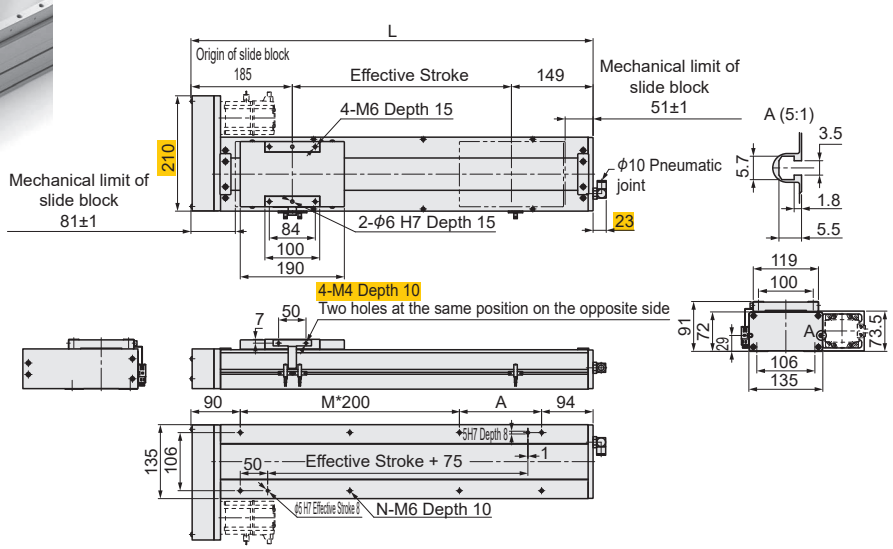
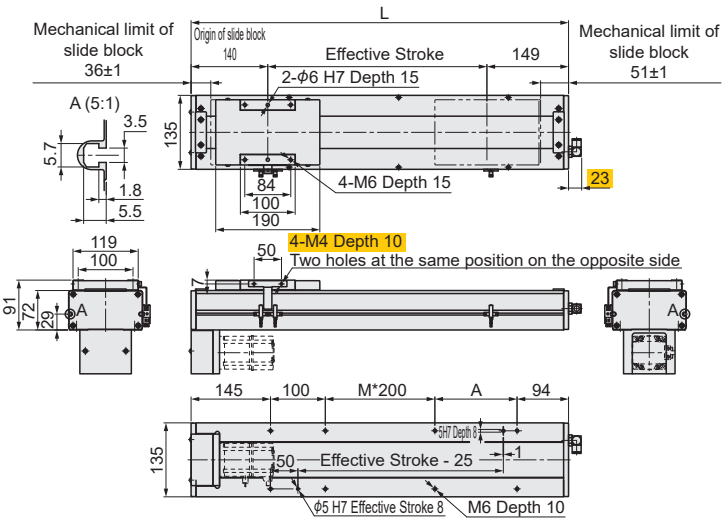




P.229 <drawing>

BM

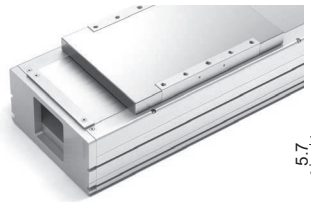
Bottom Down

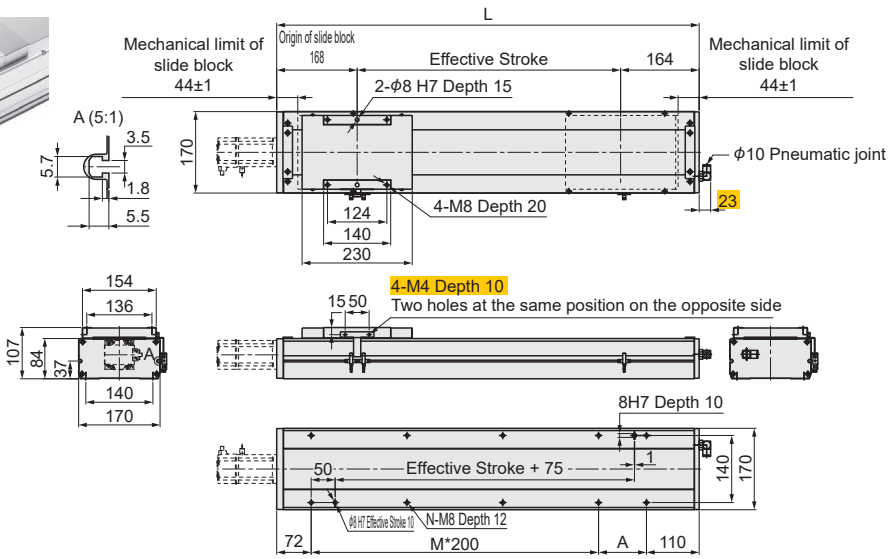


P.232 <drawing>

BC

Motor Direct





P.232 <drawing>

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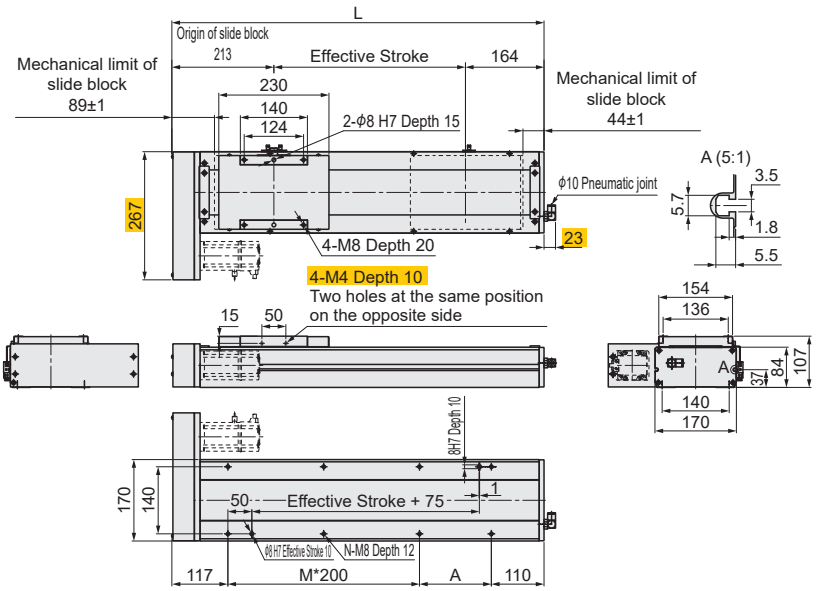

P.233 <drawing>

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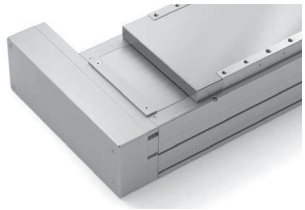
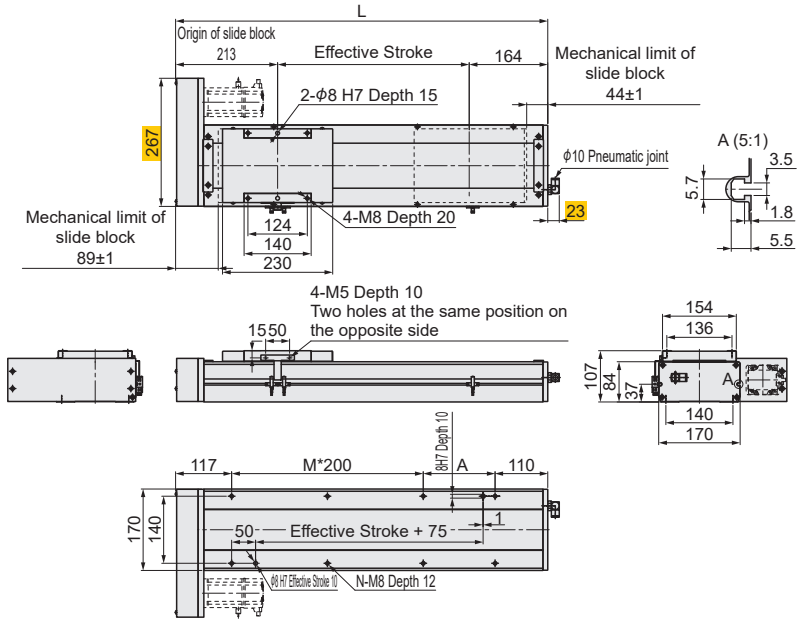
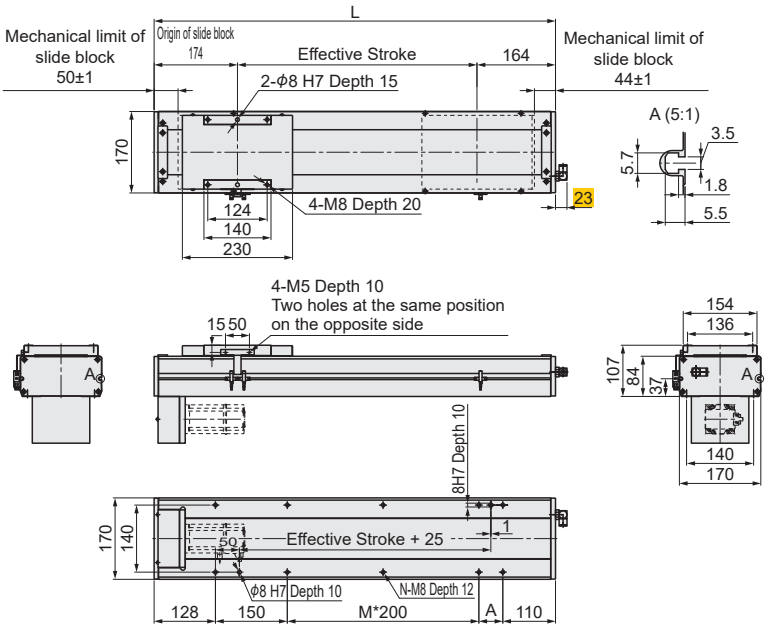




P.233 <drawing>

BM

Bottom Down



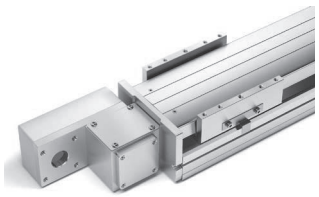
P.253 <spec. table>

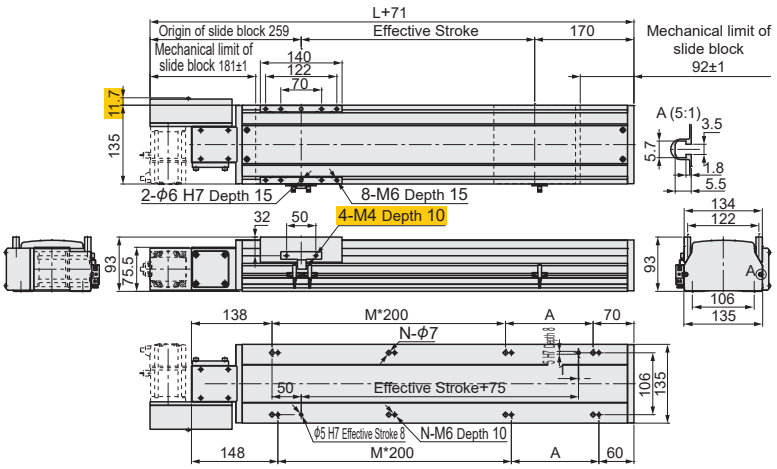
Part Number	Lead (mm)	Reducer	Max. Movement Speed (mm/sec)															
			100	400	600	800	1000	1200	1400	1600	1800	2000	2150	2300	2450	2600	2750	2900	3050
E-MTB14	40	Provided	2000																

P.254 <drawing>

L / R

L: Motor On Left Side

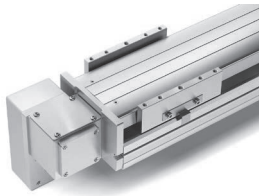


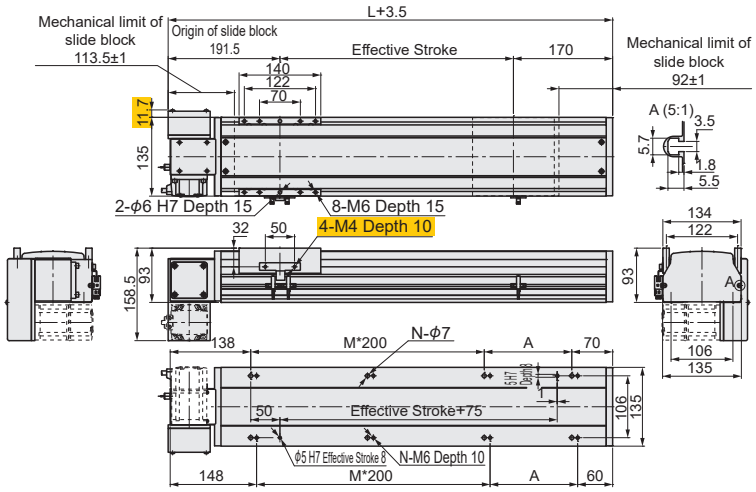


P.254 <drawing>

LD / RD

LD: Motor On Lower Left Side

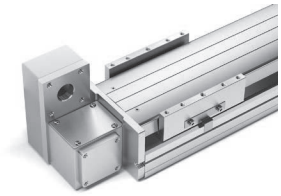


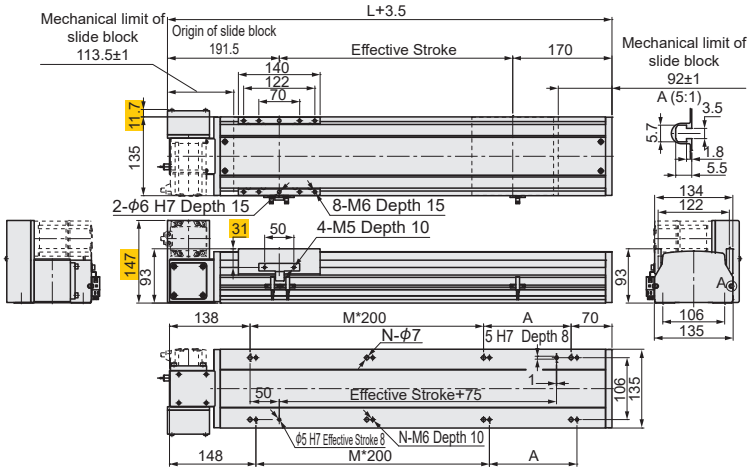


P.255 <drawing>

LU / RU

LU: Motor On Upper Left Side





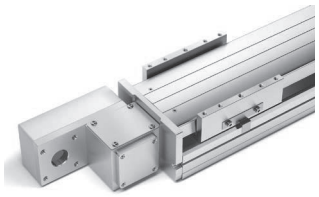
P.257 <spec. table>

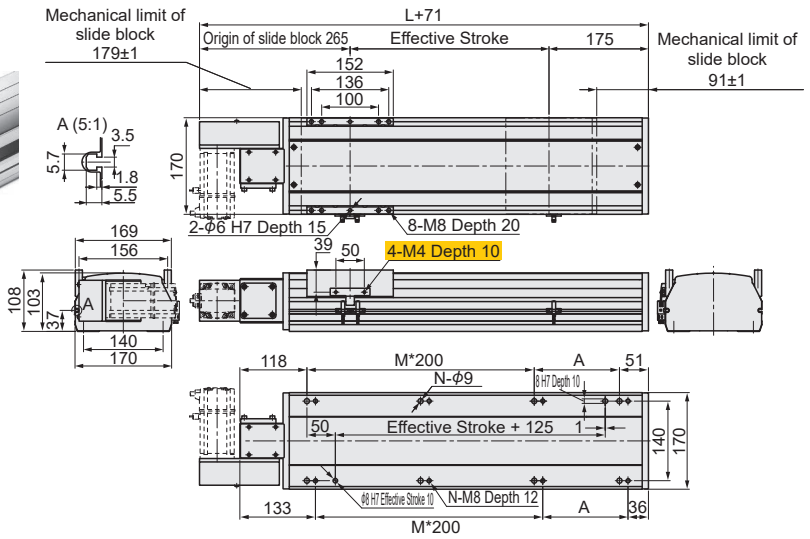
Part Number	Lead (mm)	Reducer	Max. Movement Speed (mm/sec)															
			100	400	600	800	1000	1200	1400	1600	1800	2000	2150	2300	2450	2600	2750	2900	3050
E-MTB17	40	Provided	2000																

P.258 <drawing>

L / R

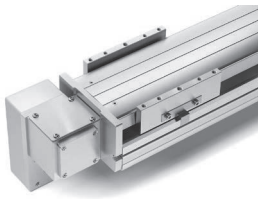
L: Motor On Left Side

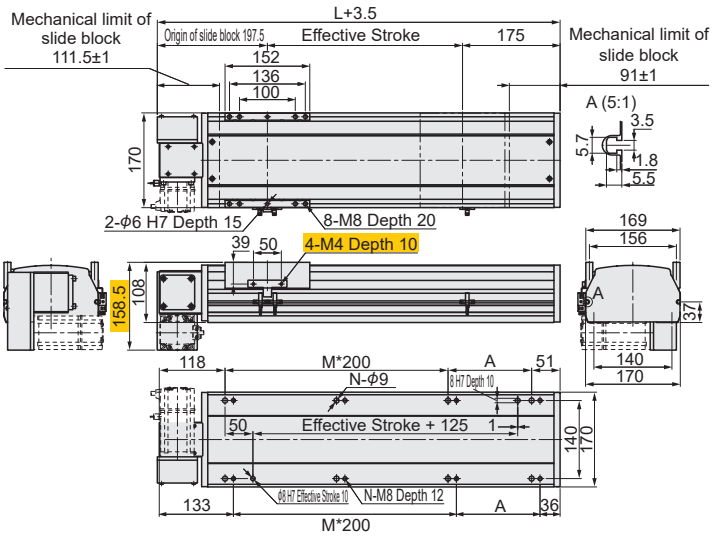




LD / RD

LD: Motor On Lower Left Side

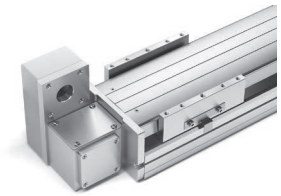


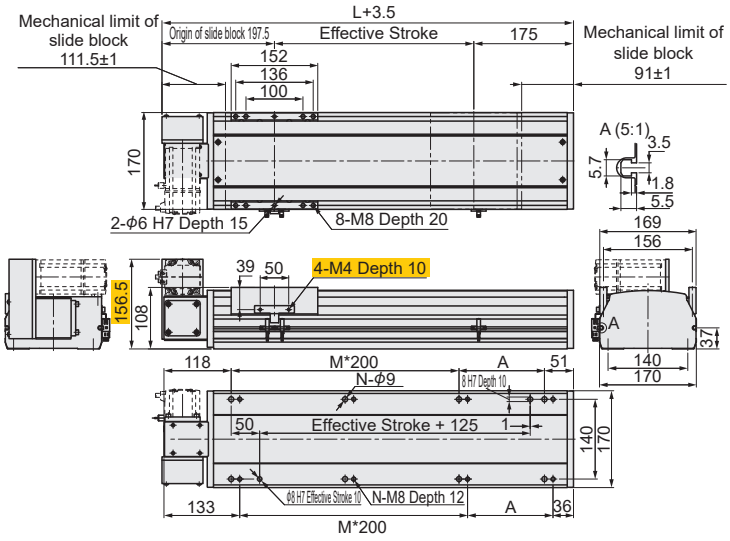


P.259 <drawing>

LU / RU

LU: Motor On Upper Left Side

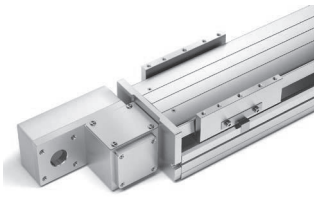


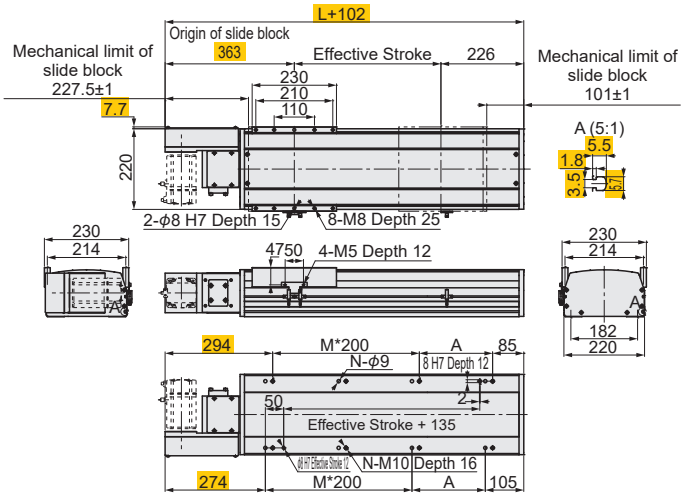


P.262 <drawing>

L / R

L: Motor On Left Side

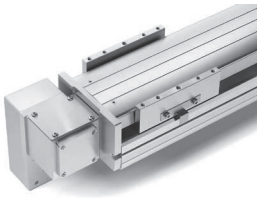


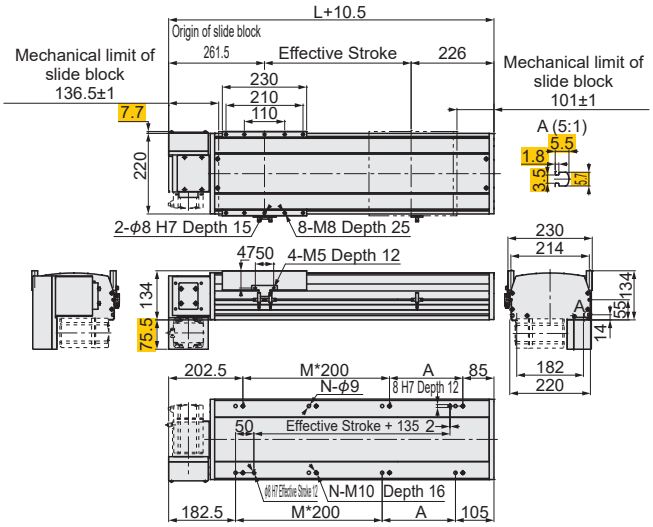


P.262 <drawing>

LD / RD

LD: Motor On Lower Left Side

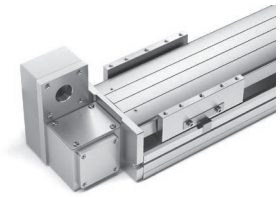


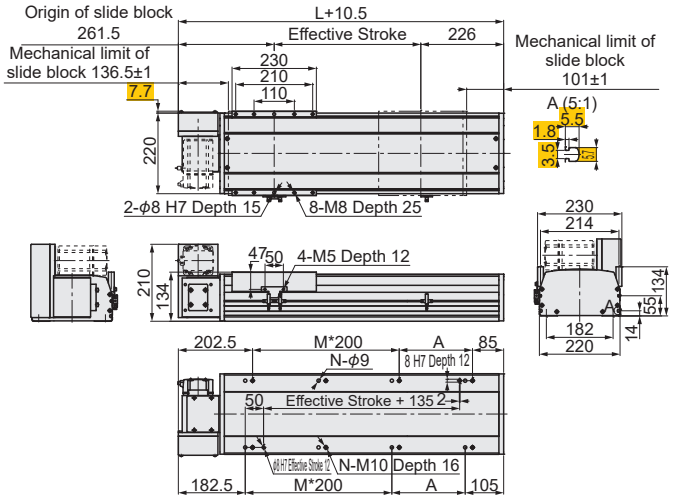


P.263 <drawing>

LU / RU

LU: Motor On Upper Left Side

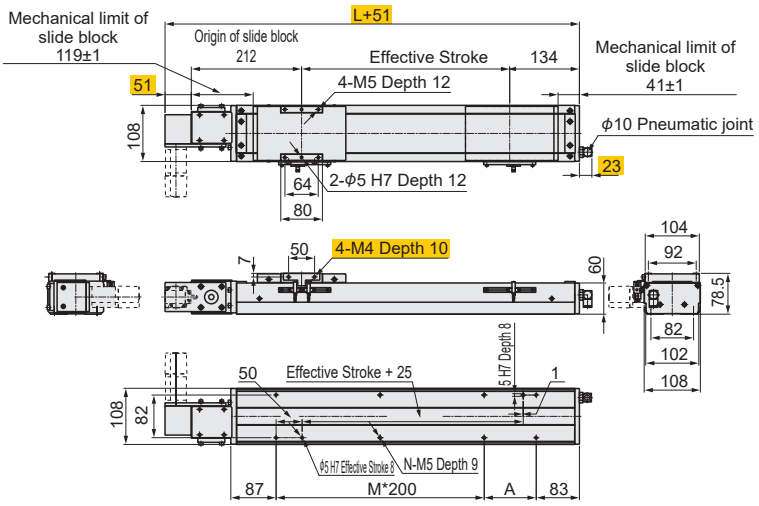




P.272 <drawing>

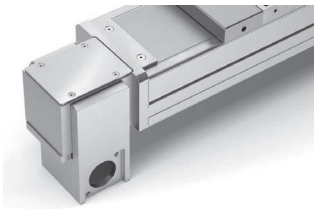
L / R

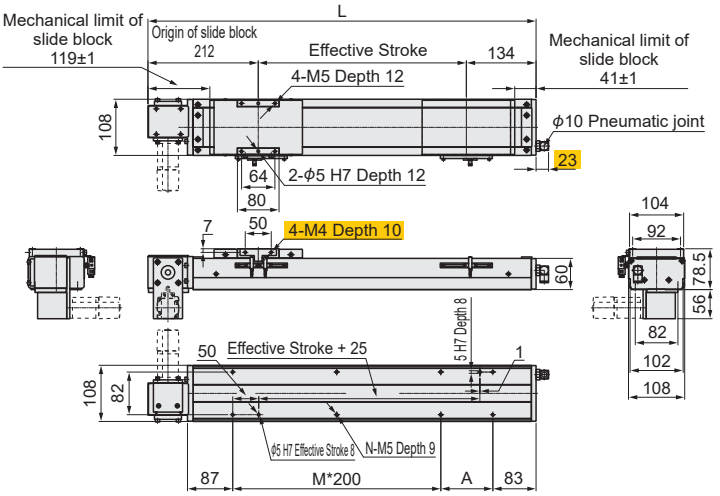
L: Motor On Left Side



LD / RD

LD: Motor On Lower Left Side

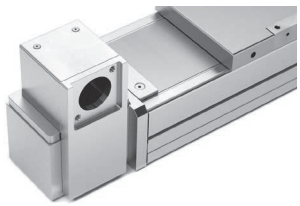


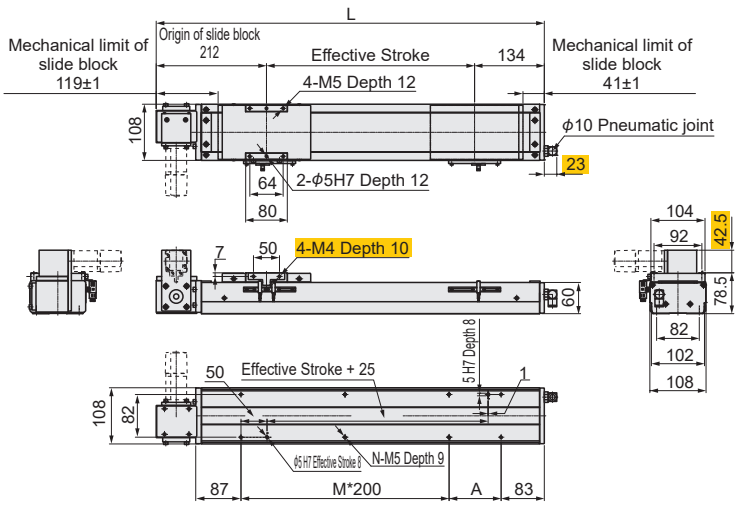


P.273 <drawing>

LU / RU

LU: Motor On Upper Left Side





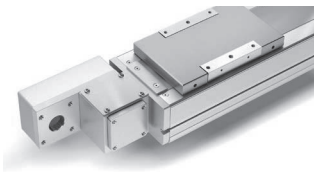
P.275 <spec. table>

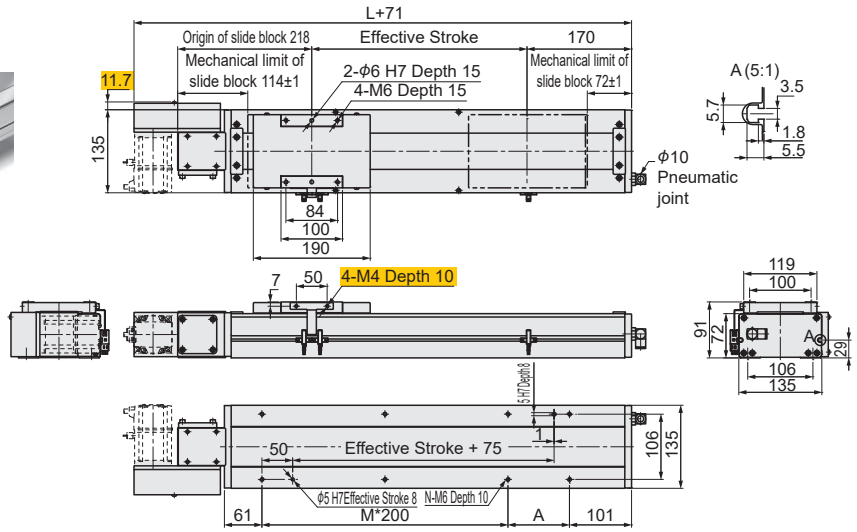
Part Number	Lead (mm)	Reducer	Max. Movement Speed (mm/sec)															
			100	400	600	800	1000	1200	1400	1600	1800	2000	2150	2300	2450	2600	2750	2900	3050
E-MCB14	40	Provided	2000																

P.276 <drawing>

L / R

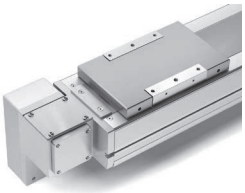
L: Motor On Left Side

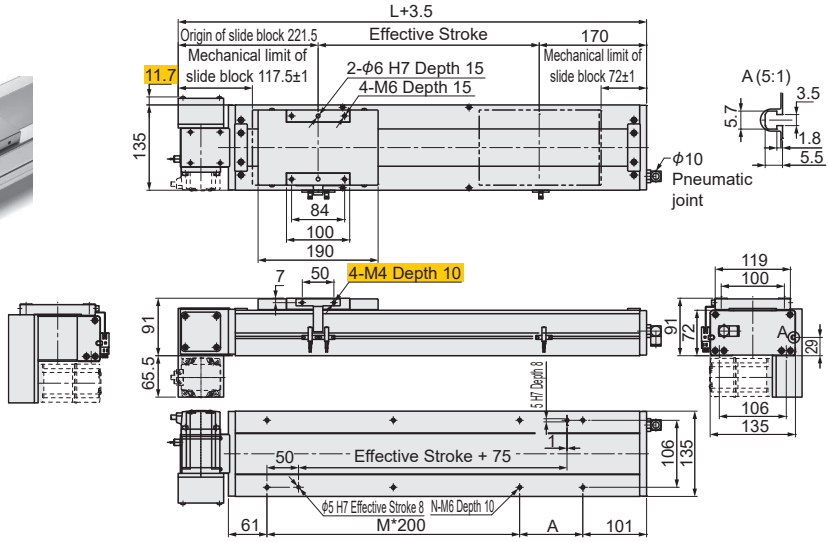




LD / RD

LD: Motor On Lower Left Side

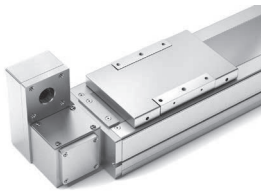


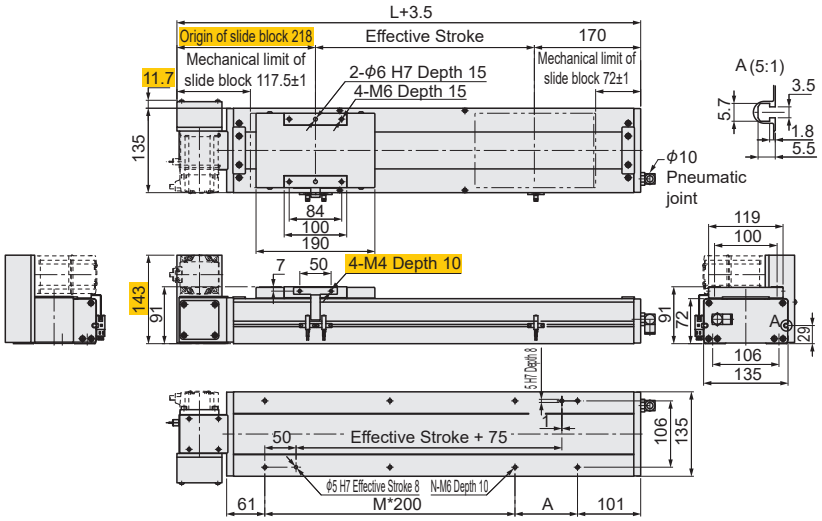


P.277 <drawing>

LU / RU

LU: Motor On Upper Left Side





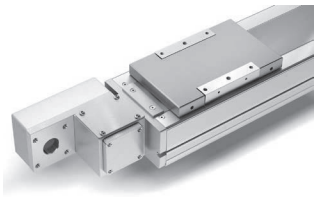
P.279 <spec. table>

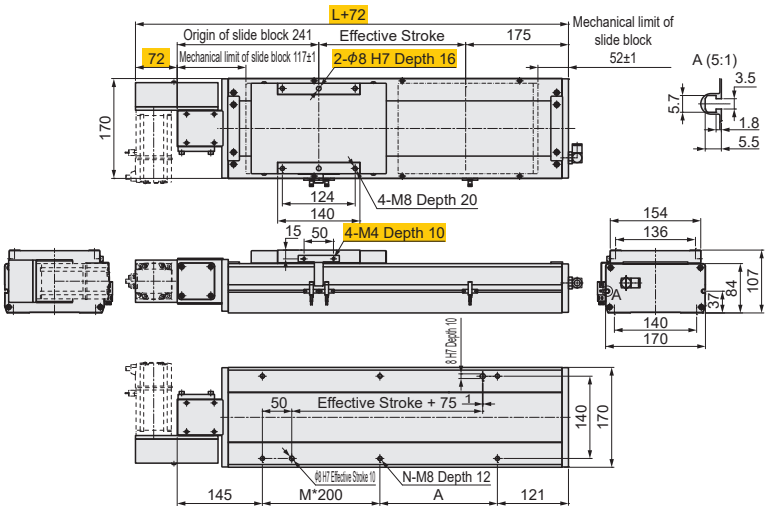
Part Number	Lead (mm)	Reducer	Max. Movement Speed (mm/sec)																
			100	400	600	800	1000	1200	1400	1600	1800	2000	2150	2300	2450	2600	2750	2900	4050
E-MCB17	40	Provided	2000																

P.280 <drawing>

L / R

L: Motor On Left Side

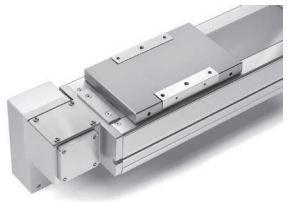


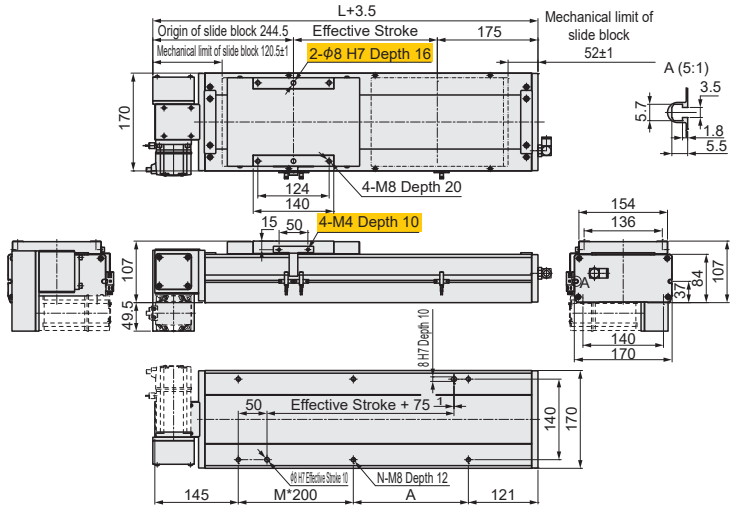


P.280 <drawing>

LD / RD

LD: Motor On Lower Left Side

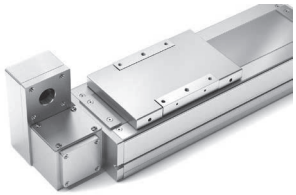


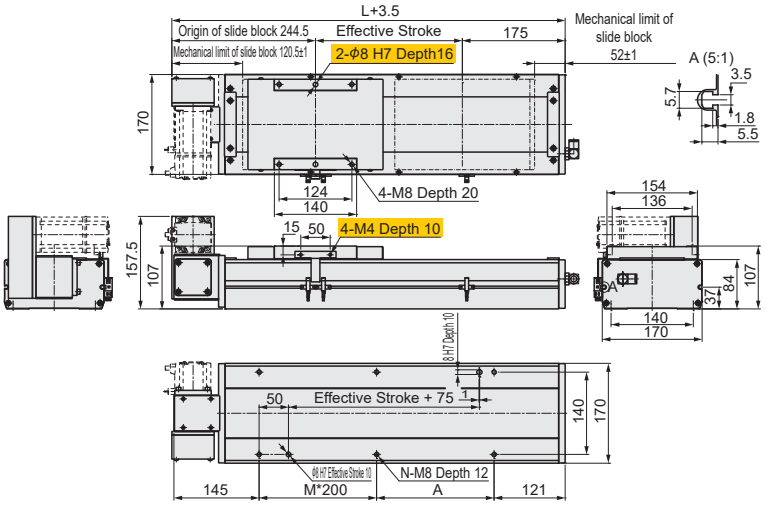


P.281 <drawing>

LU / RU

LU: Motor On Upper Left Side





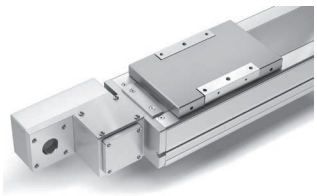
P.283 <spec. table>

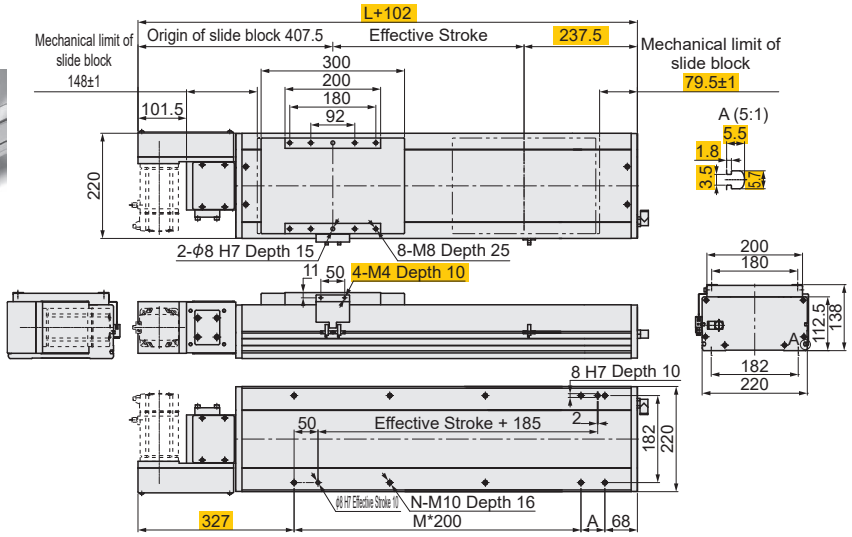
Part Number	Lead (mm)	Reducer	Max. Movement Speed (mm/sec)															
			100	400	600	800	1000	1200	1400	1600	1800	2000	2150	2300	2450	2600	2750	2900	3050
E-MCB22	40	Provided	2000																

P.284 <drawing>

L / R

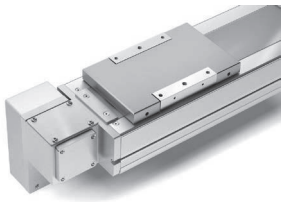
L: Motor On Left Side

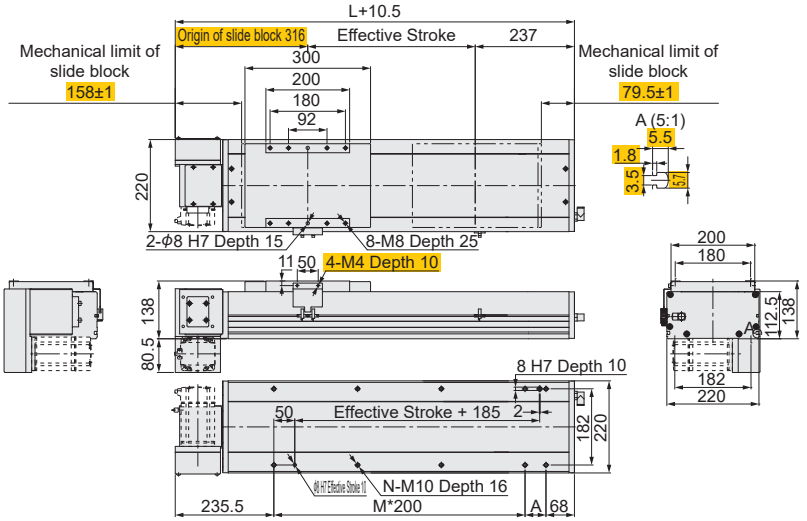




LD / RD

LD: Motor On Lower Left Side

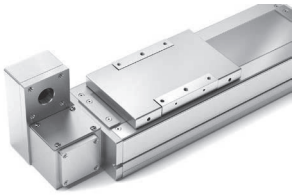


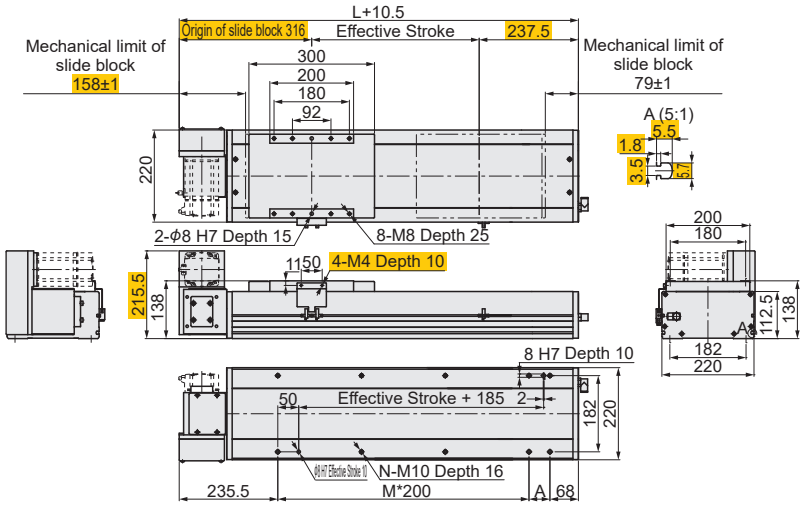


P.285 <drawing>

LU / RU

LU: Motor On Upper Left Side





P.321 <table>

■Precision

· Dimensional Precision

Unit: mm

Dimensional Precision Type	Precision Standard	15,20	25,30,35,45
Linear Guide - Medium / Heavy Load Type	Height H Tolerance	±0.1	±0.1
	Height H Pair Variation	0.02	0.02
	Width N Tolerance	0 -0.1	0 -0.1
	Width N Pair Variation	0.02	0.03

*There is a difference in accuracy compared to the standard product, but the price is more affordable.

P.324 <spec. table>

■Product Dimension

Nominal model	Block Dimensions (mm)										
	W	B	B_1	L_1	L_2	K_1	K_2	G	M×ℓ	T	H_2
15	34	26	4	23.1	41.3	14.8	3.5	4.3	M4×6	6	5.2
20	42	32	5	29	61.3	18.9	4.3	13.3	M5×7	8	5.8
25	48	35	6.5	35.5	64.6	22.7	4.55	9.7	M6×9		8.1
30	60	40	10	41.6	69.9	26.9	6	14.2	M8×12	9	8.3

P.326 <spec. table>

Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M×ℓ	T	H_2
15	34	26	4	26	39.8	58.1	10.3	3.5	4.5	M4×6	6	5.6
20	42	32	5	32	48.1	71.2	12.3	4.15	13.9	M5×7	7.5	6
25	48	35	6.5	35	59	82.9	17.6	4.55	14.3	M6×9	8	8
30	60	40	10	40	70.2	98.5	21.05	6	14.2	M8×12	9	

P.328 <spec. table>

Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M	T	H_2
15	52	41.1	5.5	26.1	39.8	57.6	10.15	3.5	5.2	M5	6.3	5.5
20	58.9	48.1	5	32	48.1	71.8	12.2	4.15	11.8	M6	7	6
25	72.9	60	6.5	35	58.8	82.9	16.9	4.55	12.8	M8	7.5	8
30	90	72	9	40	70.2	98.7	21.05	6	12.8	M10	7.6	

P.330 <spec. table>

Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M×ℓ	T	H_2
15	34	26	4	26	39.4	61.4	10.6	4.85	5.6	M4×5	5.5	7.8
20	44	32	6	36	50.5	76.34	12.1	4.9	14.1	M5×6	8	6.2
25	48	35	6.5	35	58	85.2	16.3	6	12.4	M6×8	8.2	10
30	60	40	10	40	70	103.8	20.3	5.7	13.5	M8×10	8.6	9.5
35	70	50	10	50	80	117.8	20.8	7	13.4	M8×12	10.2	16
45	86	60	13	60	97	139.5	22.7	10	13.5	M10×17	16	18.4

P.332 <spec. table>

Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M×ℓ	T	H_2
20	44	32	6	50	65.2	91	12.8	5.9	14.11	M5×6	8	6
25	48	35	6.5		78.6	103.3	19.1	6	13.9	M6×8		10
30	60	40	10	60	93	128.7	21.8	5.7	13.4	M8×10	8.5	9.5
35	70	50		72	105.8	151.7	22.5	6.9	11.9	M8×12	9.8	16
45	86	60	13	80	128.8	169.9	30.1	10	13.5	M10×17	16.6	18.4

P.334 <spec. table>

Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M	T	H_2
15	47	38	4.5	30	39.4	58.9	8	4.85	5.2	M5	6	3.95
20	63	53	5	40	50.2	76.1	11.1	6	13.9	M6	7.5	6
25	70	57	6.5	45	58	84.8	11.8		11.6	M8	8.4	
30	90	72	9	52	70	102.5	14.25		13.2	M10	8.7	6.4
35	100	82		62	80	116.9	17.72	7	11.2		10.1	9
45	120	100	10	80	97	138.1	13.87	10	12.3	M12	14.5	8

P.336 <spec. table>

■Product Dimension

Nominal model	Block Dimensions (mm)											
	W	B	B_1	C	L_1	L_2	K_1	K_2	G	M	T	H_2
20	63	53	5	40	65.2	91.9	17.4	6	13.6	M6	7.5	6
25	70	57	6.5	45	78.6	106.6	21.4		10.7	M8	8.4	
30	90	72	9	52	93	124.7	29.89		14.9	M10	8.7	6.4
35	100	82		62	105.8	142.17	25.75	7	13.2		10.1	9
45	120	100	10	80	128.8	166.7	30.1	10	12.6	M12	14.5	8.5

P.353 <spec. table>

Part Number					
❶Type	❷dr	Tolerance	❸Length		Single No Surface Treatment
E-LBFZ E-LBF E-LBFM	6	+0.003 -0.013	UU (Single) LUU (Double)	12	0 -0.015
	8			15	
	10			19	
	12			21	0 -0.018
	13			23	
	16			28	
	20	+0.003 -0.015		32	0 -0.021
	25			40	
	30			45	
E-LBF E-LBFM	35	+0.003 -0.016		52	0 -0.028
	40			60	
	50			80	0 -0.03

P.354 <spec. table>

Part Number				O.D. D Tolerance		
❶Type	❷dr	Tolerance	❸Length		No Surface Treatment	With Surface Treatment
E-LBF	6	0 -0.012	DUU (No Surface Treatment) DMUU (Electroless Nickel Plating)	12	0 -0.013	0 -0.018
	8			15		
	10			19	0 -0.016	0 -0.023
	12			21		
	16			28	0 -0.018	0 -0.025
	20	0 -0.015		32	0 -0.021	0 -0.028
	25			40		
	30	0 -0.018		45		

P.355 <spec. table>

Part Number					
❶Type	❷dr	Tolerance	❸Length		Single No Surface Treatment
E-LBKZ E-LBK E-LBKM	6	+0.003 -0.013	UU (Single) LUU (Double)	12	0 -0.015
	8			15	
	10			19	
	12			21	0 -0.018
	13			23	
	16			28	
	20	+0.003 -0.015		32	0 -0.021
	25			40	
	30			45	
E-LBK E-LBKM	35	+0.003 -0.016		52	0 -0.028
	40			60	
	50			80	0 -0.03

P.356 <spec. table>

Part Number				O.D. D Tolerance		
❶Type	❷dr	Tolerance	❸Length		No Surface Treatment	With Surface Treatment
E-LBK	6	0 -0.012	DUU (No Surface Treatment) DMUU (Electroless Nickel Plating)	12	0 -0.013	0 -0.018
	8			15		
	10			19	0 -0.016	0 -0.023
	12			21		
	16			28	0 -0.018	0 -0.025
	20	0 -0.015		32	0 -0.021	0 -0.028
	25			40		
	30	0 -0.018		45		

P.357 <spec. table>

Part Number					
❶Type	❷dr	Tolerance	❸Length		Single No Surface Treatment
E-LBH	5	+0.003 -0.013	UU	10	0 -0.015
E-LBHZ E-LBH E-LBHM	6		UU (Single) LUU (Double)	12	
	8			15	
	10			19	
	12			21	0 -0.018
	13			23	
	16			28	
	20	+0.003 -0.015		32	0 -0.021
	25			40	
	30			45	
E-LBH E-LBHM	35	+0.003 -0.016		52	0 -0.028
	40			60	
	50			80	0 -0.03

❷dr	t	A	F	Eccentricity	
				Single	Double
5		17	-	0.02	-
6	3.3	20		0.024	0.028
8		24			
10	4.1	29			0.03
12		32			
13		33			
16		31	22		
20	5.1	36	24	0.03	0.04
25		40	32		
30	6.1	49	35		
35		55	38		
40	8.1	64	45	0.04	0.045
50		77	62		

P.358 <spec. table>

Part Number				O.D. D Tolerance			Overall Length L		H	T	d	d1	t	F	A	Eccentricity (maximum)	Rows of balls	Perpendicularity	Mass (g)
❶Type	❷dr	Tolerance	❸Length		No Surface Treatment	With Surface Treatment		Tolerance											
E-LBH	6	0 -0.012	DUU (No Surface Treatment) DMUU (Electroless Nickel Plating)	12	0 -0.013	0 -0.018	29	±0.4	28	5	3.5	6	3.1	-	20	0.018	4	0.018	24
	8			15			37		32						24				43
	10			19	0 -0.016	0 -0.023	47		40	6	4.5	7.5	4.1		29				77
	12			21					42						32				81
	16			28	0 -0.018	0 -0.025	56		48					22	31		5	0.02	149
	20	0 -0.015		32	0 -0.021	0 -0.028	65		54	8	5.5	9	5.1	24	36	0.025		0.025	219
	25			40			83		62					32	40		6		450
	30	0 -0.018		45			90		74	10	6.6	11	6.1	35	49				492

P.372 <spec. table>

Part Number				Max. Stroke		Rows of balls		D		L		ℓ		B		W	D1
❶Type	❷dr	Tolerance	❸Length	Single	Double	Single	Double		Tolerance		Tolerance	Single	Double		Tolerance		
E-LBB	5	0 -0.009	Not Specified (Single) L (Double)	16	7	3	6	10	0 -0.016	15	±0.2	5	10	8	0 -0.5	1.1	9.6
	6			20	7.2			12		19		6.2	12.4	11.3			11.5
	8			24	8.5			15		24		8	16	15.3			14.3
	10			33	14			19	0 -0.019	29		9	18	19.4		1.3	18
	12			34	17			21		30		10	20	20.4			20
	13			36				23		32							22
	16			40	18	4	8	28		37		13	26	23.3			27
	20	0 -0.010		47	22			32	0 -0.022	42		14	28	27.3		1.6	30.5
	25			50				37		45		15	30	28.3			35.3
	30			85	47	3	6	45		64		18	36	40.8		1.85	43
	35	0 -0.012		90	55			52	0 -0.03	70	±0.3	20	40	45.3		2.1	49
	40			110	69			60		80				56.3			57
	45							65				24	48			2.15	62
	50			140	89			72		100				72.3		2.65	70

dr	Basic Load Rating			
	C (Dynamic) N		Co (Static) N	
	Single	Double	Single	Double
5	118	160	102	146
6	232	380	160	320
8	358	590	262	520
10	656	1140	490	1030
12	1120	1810	850	1720
13	1180	1830	880	1750
16	1590	2230	1660	2360
20	1640	2310	1730	2520
25	1710	2420	1860	2780
30	3120	4920	3220	6710
35	3260	5180	3610	7200
40	4380	6930	4960	9810
45	4420	7060	5120	9960
50	5810	9210	7130	14300

P.373 <spec. table>

Part Number				H	T	d	d1	t	P.C.D	Eccentricity	Perpendicularity
❶Type	❷dr	Tolerance	❸Length								
E-LBBF	6	0 -0.009	No Specified (Single) L (Double)	28	5	3.5	6	3.1	20	0.015	0.015
	8			32					24		
	10			40	6	4.5	7.5	4.1	29		
	12			42					32		
	13			43					33		
	16			48					38		
	20	0 -0.010		54	8	5.5	9	5.1	43		
	25			60					48	0.018	0.018
	30			74	10	6.6	11	6.1	60		
	35	0 -0.012		82					67		
	40			96	13	9	14	8.1	78		
	45			102					84		
	50			110					92		

dr	Basic Load Rating			
	C (Dynamic) N		Co (Static) N	
	Single	Double	Single	Double
6	232	380	160	320
8	358	590	262	520
10	656	1140	490	1030
12	1120	1810	850	1720
13	1180	1830	880	1750
16	1590	2230	1660	2360
20	1640	2310	1730	2520
25	1710	2420	1860	2780
30	3120	4920	3220	6710
35	3260	5180	3610	7200
40	4380	6930	4960	9810
45	4420	7060	5120	9960
50	5810	9210	7130	14300

P.374 <spec. table>

Part Number				Maximum Stroke		P.C.D	W	Eccentricity	Perpendicularity
❶Type	❷dr	Tolerance	❸Length	Single	Double				
E-LBBK	6	0 -0.009	Not Specified (Single) L (Double)	20	7.	20	22	0.015	0.015
	8			24	8.	24	25		
	10			33	1	29	30		
	12			34	17	32	32		
	13			36		33	33		
	16			40	18	38	37		
	20	0 -0.010		47	22	3	42		
	25			50		8	47	0.018	0.018
	30			85	47	0	57		
	35	0 -0.012		90	55	7	64		
	40			110	69	3	75		
	45					4	81		
	50			140	89	2	86		

dr	Basic Load Rating			
	C (Dynamic) N		Co (Static) N	
	Single	Double	Single	Double
6	232	380	160	320
8	358	590	262	520
10	656	1140	490	1030
12	1120	1810	850	1720
13	1180	1830	880	1750
16	1590	2230	1660	2360
20	1640	2310	1730	2520
25	1710	2420	1860	2780
30	3120	4920	3220	6710
35	3260	5180	3610	7200
40	4380	6930	4960	9810
45	4420	7060	5120	9960
50	5810	9210	7130	14300

P.375 <spec. table>

Part Number				H	T	d	d_1	t	F	A	Eccentricity	Perpendicularity
❶Type	❷dr	Tolerance	❸Length									
E-LBBH	6	0 -0.009	Not Specifi (Single) L (Double)	28	5	3.5	6	3.1	-	20	0.015	0.015
	8			32					-	24		
	10			40	6	4.5	7.5	4.1	-	29		
	12			42					-	32		
	13			43					-	33		
	16			48					22	31		
	20	0 -0.010		54	8	5.5	9	5.1	24	36		
	25			60					29	37	0.018	0.018
	30			74	10	6.6	11	6.1	35	49		
	35	0 -0.012		92					38	55		
	40			96	13	9	14	8.1	45	64		
	45			102					49	68		
	50			110					54	74		

dr	Basic Load Rating			
	C (Dynamic) N		Co (Static) N	
	Single	Double	Single	Double
6	232	380	160	320
8	358	590	262	520
10	656	1140	490	1030
12	1120	1810	850	1720
13	1180	1830	880	1750
16	1590	2230	1660	2360
20	1640	2310	1730	2520
25	1710	2420	1860	2780
30	3120	4920	3220	6710
35	3260	5180	3610	7200
40	4380	6930	4960	9810
45	4420	7060	5120	9960
50	5810	9210	7130	14300

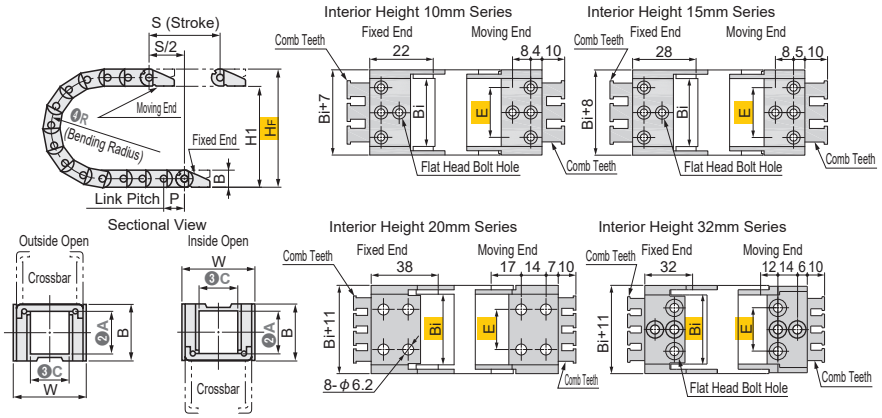
P.378 <spec. table>

Part Number					❹				
❶Type	❷dr	Tolerance		❸ Length	With or Without Dowel Hole	L		L_1	
		Single	Medium			Single	Medium	Single	Medium
E-LBHN	6	+0.003 -0.012	0 -0.12	Not Specified (Single) D (Medium)	Not Specified (Without Positioning Hole)	25	35	15	24
	8				Not Specified (Without Dowel Hole) P (With Dowel Hole)	30	43	18	28
	10					35	53	21	34
	12					36		26	38
	(13)		-			39	-		-
	16		0 -0.12			44	63	34	48
	20	+0.003 -0.013	0 -0.15			50	73	40	56
	25					67	93	50	66
	30					72	100	58	70
	(35)	+0.003 -0.015	-			80	-	60	-
	(40)					90			
	(50)					110		80	

P.380 <spec. table>

Part Number						❹With or Without Dowel Hole	L			
❶Type	❷dr	Tolerance			❸ Length		Double	Medium Long	Long	Double
		Double	Medium Long	Long						
E-LBHNW	(8)	0 -0.01	-	-	Not Specified (Double) D (Medium Long) L (Long)	Not Specified (Without Dowel Hole) P (With Dowel Hole)	58	-	-	42
	(10)						68			46
	12*			0 -0.012			70		96	50
	(13)			-			75		-	
	16		0 -0.015	0 -0.015			85	100	118	60
	20	0 -0.012	0 -0.018	0 -0.018			96	115	134	70
	25						130	160	185	100
	30						140	170	200	110
	(35)	0 -0.015	-	-			155	-	-	120
	(40)						175			140
	(50)						215			160

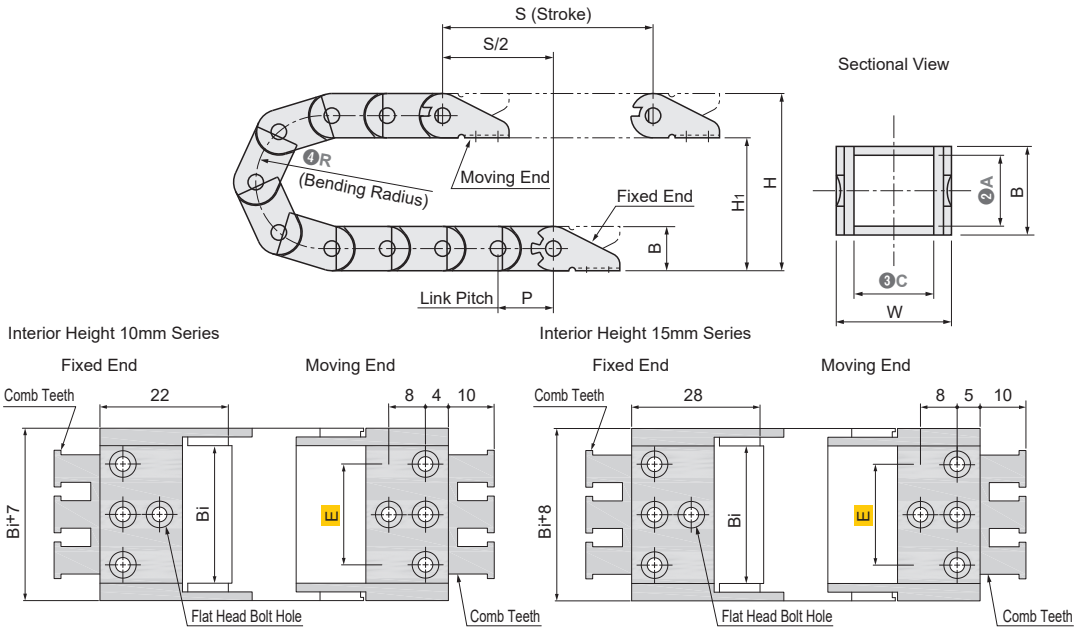
P.448 <drawing, spec. table>



Material: PA+Glass Fiber

Part Number ❶Type	❷A Interior Height	B Exterior Height	❸C Interior Width	W Exterior Width	P Pitch	❹R Bending Radius	❺ Number of Links	❻ Separator type	❼ Number of separators	Cable Insertion Surface	H Mounting Height	Required Space Height HF	Recommended Height Safety Margin	Bi	E	Number of Joint Teeth
C-MPU (Crossbar Opens Outside)	10	14	10	17	20	18	10~65	-	-	Outer	50	60	100	10	-	1
			20	27		28					70	80	130	20	-	2
			30	37		38					90	100	160	30	22	3
			40	47										40	32	4
	15	19	10	18		28		S15	4~65		75	90	130	10	-	1
			15	23										15	-	2
			20	28		38					95	110	160	20	-	2
			30	38							115	130	195	30	22	3
			40	48		48								40	32	4
			50	58										50	42	5
	20	25	15	26	30	38		S20			101	121	180	15	-	2
			25	36										25	10	3
			40	51		48					121	141	215	40	23	4
			50	61		75					175	195	300	50	35	5
			60	71		100					225	245	375	60	48	6
			70	81										70	54	7
			80	91										80	65	8
	32	39	40	51		50		S32			139	164	220	40	25	4
			50	61		60					159	184	250	50	37	5
			60	71		75					189	214	300	60	48	6
			80	91		100					239	264	375	80	65	8
C-MPD (Crossbar Opens Inside)	10	14	10	17	20	18		-	-	Inner	50	60	100	10	-	1
			20	27		28					70	80	130	20	-	2
			30	37		38					90	100	160	30	22	3
			40	47										40	32	4
	15	19	10	18		28		S15	4~65		75	90	130	10	-	1
			15	23										15	-	2
			20	28		38					95	110	160	20	-	2
			30	38							115	130	195	30	22	3
			40	48		48								40	32	4
			50	58										50	42	5
	20	25	15	26	30	38		S20			101	121	180	15	-	2
			25	36										25	10	3
			40	51		48					121	141	215	40	23	4
			50	61		75					175	195	300	50	35	5
			60	71		100					225	245	375	60	48	6
			70	81										70	54	7
			80	91										80	65	8
	32	39	40	51		50		S32			139	164	220	40	25	4
			50	61		60					159	184	250	50	37	5
			60	71		75					189	214	300	60	48	6
			80	91		100					239	264	375	80	65	8

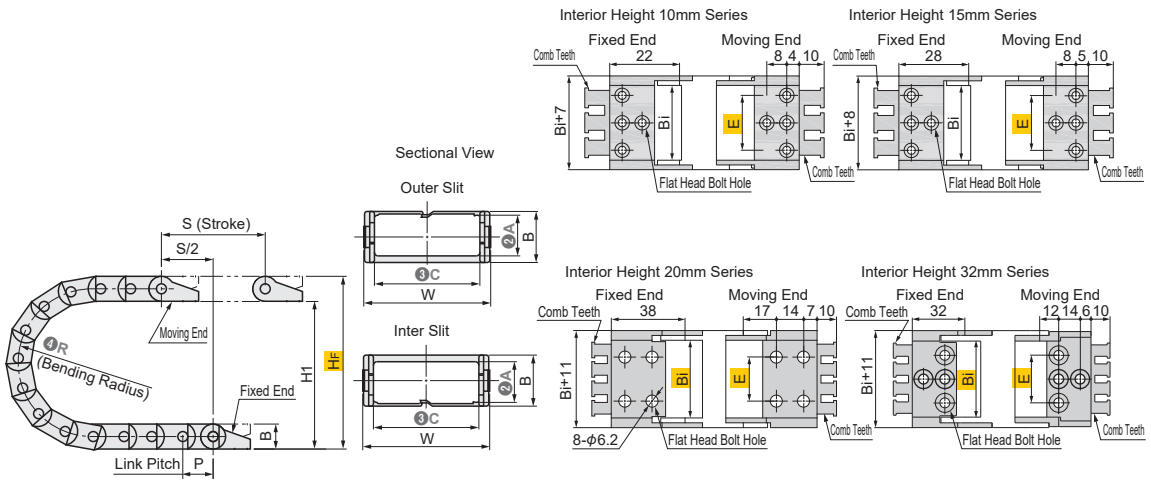
P.449 <drawing, spec. table>



Material: PA+Glass Fiber

Part Number															
❶Type	❷A Interior Height	Flap Open-Close System	B Exterior Height	❸C Interior Width	W Exterior Width	P Pitch	❹R Bending Radius	❺Number of Links	H (Mounting Height)	Required Space Height	Recommended Height Safety Margin	Bi	E	Number of Joint Teeth
C-MHF	10	Always Closed	14	10	17	20	18 28 38	10 ~ 65	50 70 90	60 80 100	100 130 160	10	-	1
				15	22							15	-	2
				20	27							20	-	
				30	37							30	22	3
				40	47							40	32	4
	15		19	15	23		28 38 48		75 95 115	90 110 130	130 160 195	15	-	2
				20	28							20	-	
				30	38							30	22	3
				40	48							40	32	4
				50	58							50	42	5

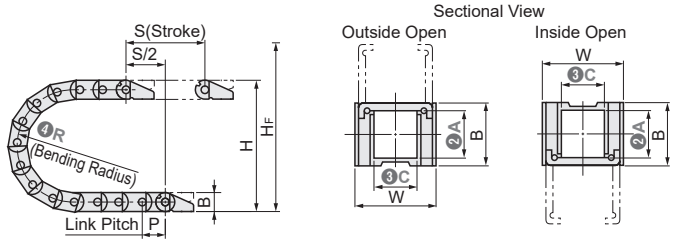
P.450 <drawing, spec. table>

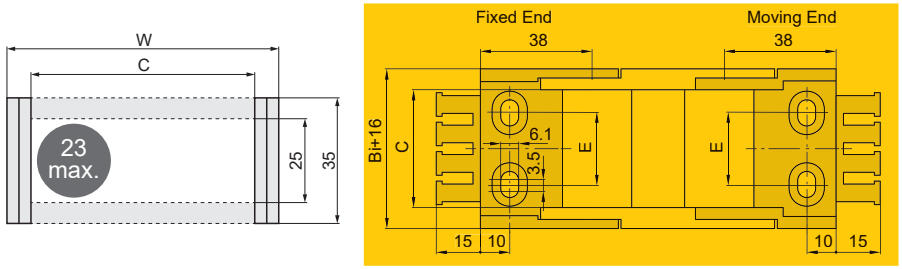


Material: PA+Glass Fiber

Part Number		B	3C	W	P	4R	5Number of Links	Cable Insertion Surface	H	Required Space Height HF	Recommended Height Safety Margin	Bi	E	Number of Joint Teeth
1Type	2A Interior Height	Exterior Height	Interior Width	Exterior Width	Pitch	Bending Radius			(Mounting Height)					
C-MSU	10	14	15	22	20	18 28 38	10 ~ 65	Outer	50 70 90	60 80 100	100 130 160	15	-	2
	15	19	15	23		28			75	85	130	15	-	
			20	28		38			95	105	160	20	-	
			30	38		48			115	125	195	30	22	3
	20	25	25	36	30	28 38			81 101	91 111	150 180	25	10	
			40	51		48 75			121 175	131 185	215 300	40	23	4
	32	39	25	36		50			139	154	220	25	-	3
			40	51		60			159	174	250	40	25	4
			50	61		75 100			189 239	204 254	300 375	50	37	5
C-MSD	10	14	15	22	20	18 28 38		Inner	50 70 90	60 80 100	100 130 160	15	-	2
	15	19	15	23		28			75	85	130	15	-	
			20	28		38			95	105	160	20	-	
			30	38		48			115	125	195	30	22	3
	20	25	25	36	30	28 38			81 101	91 111	150 180	25	10	
			40	51		48 75			121 175	131 185	215 300	40	23	4
	32	39	25	36		50			139	154	220	25	-	3
			40	51		60			159	174	250	40	25	4
			50	61		75 100			189 239	204 254	300 375	50	37	5

P.451 <drawing, spec. table>

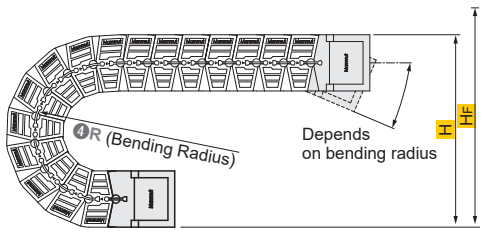


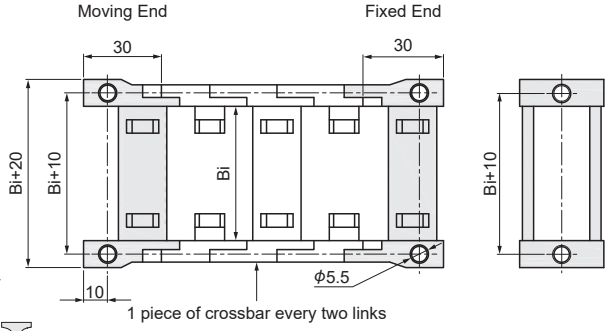


Material: PA + Glass Fiber

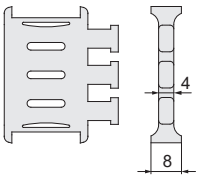
Part Number											Mounting Dimension (Corresponding Bending Radius)					
1 Type	2 Interior Height A*	3 Interior Width C*	4 Available Bending Radius R*	5 Number of Links* (Corresponding Length)	6 Vertical Separator: Separator	6 Vertical Separator: Number of Separators	Exterior Height B	Exterior Width W	Pitch P	Mounting Height H	Required Space Height HF	Arc Length + Margin	Bi	E	Number of Joint Teeth
E-MPU (Outside Open) E-MPD (Inside Open)	25	25	55 75 100 125 150	10~68 (450mm~ 3060mm)	Not Provided 0 Provided S25	4~68*	35	41	45	145 185 235 285 335	H+25	265 330 405 485 565	25	14	3
		40						56					40	25	4
		55						71					55	44	6
		75						91					75	64	8
		90						106					90	77	9
		100						116					100	90	10
		125						141					125	112	12

P.453 <drawing, spec. table>



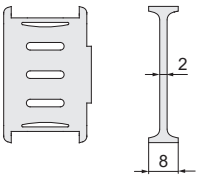


Teeth Separator
Z30

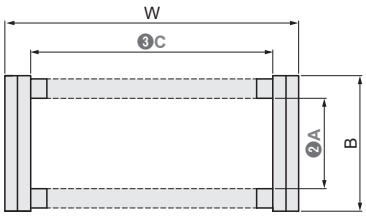


Teeth type is dedicated for end link and its teeth can be used for binding cables.

Separator
S30



Recommended to be use 1-2 pieces for every 2-3 sections.
Installation position is flexible.



Material PA+Glass Fiber

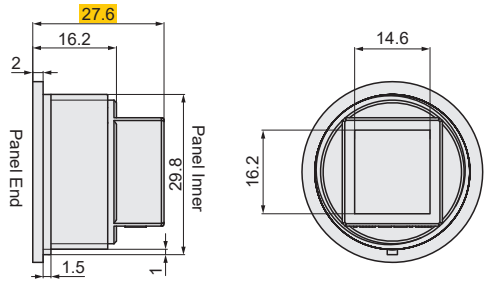
Part Number ❶Type	Part Number ❷A Interior Height	Flap Open-Close System	B Exterior Height	❸C Interior Width	W Exterior Width	P Pitch	❹R Bending Radius	❺Number of Links	Teeth Separator ❻Teeth Separator	Teeth Separator ❼Number of Separators	Separator ❽Separator	Separator ❾Number of Separators	H (Mounting Height)	Required Space Height HF	Recommended Height Safety Margin	Bi
E-MXA	30	Allows both inside and outside pening	40	30	46	25	55 75 100 125 150	10~65	Not Provided - Provided Z30	2~10*	Not Provided - Provided S30	4~65*	150 190 240 290 340	190 230 280 330 380	225 290 365 445 525	30
				40	56											40
				50	66											50
				60	76											60
				70	86											70
				75	91											75
				80	96											80
				90	106											90
				100	116											100

P.454 <material, spec. table>

Material: PA + Glass Fiber

Flap Open-Close System	Part Number ❶Type	Part Number ❷Interior Height A	❸ Interior Width C	❹ Bending Radius R	❺ Number of Links	❻Separator Teeth Type Code & Number of Separators		❻Separator Non-Teeth Type Code & Number of Separators		Exterior Height B	Exterior Width W	Pitch P	Mounting Height H	Required Space Height HF	Recommended Height Safety Margin	Bi
Allows both inside and outside opening	E-MXA	40	40	60 75 100 125 150	10~65	Not Provided - Provided Z40	2~10*	Not Provided - Provided S40	4~65*	50	60	28	170 200 250 300 350	210 240 290 340 390	245 295 375 450 530	40
			50								70					50
			60								80					60
			70								90					70
			75								95					75
			80								100					80
			90								110					90
			100								120					100

P.487 <drawing>



P.502 <table>

■Individual Model

	Motor		Driver
Part Number	C-57GSTM02	C-57GSTM04	C-DR57A

P.532 <spec. table>

Remove spec. 24～30

Part Number ❶Type	❷Number of Teeth	❸Belt Type	❹Pulley Shape	❺Shaft Bore Specs. P Hole Dia. d	P.D.	O.D.	D	F	E
C-HTPA	14	S2M040	K	4	8.91	8.4	12	12	6
		S2M060		3·4					
	16	S2M040		5	10.19	9.68	14	14	8
		S2M060		4·5					
		S2M100		5					
	18	S2M040		4·5	11.46	10.95	14	14	8
		S2M060		4·5					
		S2M100		5					
	20	S2M040		3·4·5·6	12.73	12.22	16	16	10
		S2M060		5·6					
		S2M100		5·6					
	22	S2M060		5	14.01	13.5	18	18	11

Part Number ❶Type	❷Number of Teeth	❸Belt Type	❹Pulley Shape	❺Shaft Bore Specs. H Hole Dia. d	P.D.	O.D.	D	F	E
C-HTPA	14	S2M040	K	3	8.91	8.4	12	12	6
	20	S2M040		5	12.73	12.22	16	16	10

P.534 <spec. table>

Remove spec. 24～32

Part Number ❶Type	❷Number of Teeth	❸Belt Type	❹Pulley Shape	❺Shaft Bore Specs.P Hole Dia. d	P.D.	O.D.	D	F	E
C-HTPA	14	S3M060	K	4·5·6	13.37	12.61	16	16	10
		S3M100		4·5·6					
	15	S3M060		5·6	14.32	13.56	18	18	11
		S3M100		5·6					
	16	S3M060		4·5·6·6.35	15.28	14.52	18	18	11
		S3M100		5·6·7·6.35					
		S3M150		6.35					
	18	S3M060		5·6·6.35·8	17.19	16.43	20	20	13
		S3M100		5·6·6.35·8					
		S3M150		8					
	20	S3M060		4·5·6·6.35·8	19.1	18.34	22	22	14
		S3M100		5·6·6.35·8					
		S3M150		8					
	22	S3M060		5·6·6.35·8	21.01	20.25	25	25	16
		S3M100		5·6·6.35·8·10					
		S3M150		10					

Please visit MISUMI website for details of the models available for sale.

P.535 <spec. table>

Part Number ❶Type	❷Number of Teeth	❸Belt Type	❹Pulley Shape	❺Shaft Bore Specs.P Hole Dia. d	P.D.
C-HTPA	14	S5M100	A	5·6·6.35·8·10	22.28
		S5M150		10	
	15	S5M100		5·6·8·10	23.87
		S5M150		8·10	
	16	S5M100		5·6·6.35·8·10·12	25.46
		S5M150		8·10·12	
		S5M250		10	
	18	S5M100		6.35·8·10·12	28.65
		S5M150		8·10·12	
	19	S5M100		6·8·10	30.24
	20	S5M100		6·6.35·8·10·12·13·14·15	31.83
		S5M150		6·6.35·8·10·11·12·12.7·14·15	
		S5M250		15	
	22	S5M100		8·10·12	35.01
		S5M150		8·10·12·15	
	24	S5M100		8·10·12·20	38.2
		S5M150		8·10·12·14·15	
		S5M250		15	
	25	S5M100		8·10·12·17	39.79
		S5M150		8·10·12·14·15·18·20	
	26	S5M100		8·10·14	41.38
		S5M150		8·10·12·14	

P.543 <spec. table>

Part Number			❹ Pulley Shape	❺ Shaft Bore Specs. H Hole Dia. d (1mm increments)	P.D.	O.D.	D	F	E
❶Type	❷ Number of Teeth	❸Belt Type							
C-HTPA	18	H8M200 *A:22 *W:27	A B	12~28	45.84	44.47	32	51	36
	19			12~32	48.38	47.01	35	55	39
	20			12~32	50.93	49.56	36	57	41
	21			12~37	53.47	52.10	40	60	46
	22			12~37	56.02	54.65	41	60	46
	24			12~42	61.12	59.75	46	67	50
	25	H8M250 *A:28 *W:33		12~48	63.66	62.29	48	69	54
	26			14~50	66.21	64.84	51	75	55
	28			14~52	71.30	69.93	55	78	58
	30			14~59	76.39	75.02	60	86	66
	32	H8M300 *A:33 *W:38		14~59	81.49	80.12	63	86	66
	34			16~67	86.58	85.21	70	94	74
	36			16~72	91.67	90.30	75	99	78
	38			16~76	96.77	95.40	80	105	84
	40	H8M400 *A:44 *W:49		20~80	101.86	100.49	85	112	90
	44			20~80	112.05	110.68	90	119	100
	48			20~80	122.23	120.86	100	131	111
	50			20~80	127.32	125.95	100	135	115
	60			20~80	152.79	151.42	100	160	140

P.544 <spec. table>

Part Number			❹ Pulley Shape	❺ Shaft Bore Specs. P Hole Dia. d (1mm increments)	P.D.	O.D.	D	F	E
❶Type	❷ Number of Teeth	❸Belt Type							
C-HTPA	18	H8M200 *A:22 *W:27	A B	12~26	45.84	44.47	32	51	36
	19			12~28	48.38	47.01	35	55	39
	20			12~30	50.93	49.56	36	57	41
	21			12~32	53.47	52.10	40	60	46
	22			12~34	56.02	54.65	41	60	46
	24			12~40	61.12	59.75	46	67	50
	25	H8M250 *A:28 *W:33		12~40	63.66	62.29	48	69	54
	26			14~45	66.21	64.84	51	75	55
	28			14~48	71.30	69.93	55	78	58
	30			14~50	76.39	75.02	60	86	66
	32	H8M300 *A:33 *W:38		14~55	81.49	80.12	63	86	66
	34			16~60	86.58	85.21	70	94	74
	36			16~65	91.67	90.30	75	99	78
	38			16~65	96.77	95.40	80	105	84
	40	H8M400 *A:44 *W:49		20~65	101.86	100.49	85	112	90
	44			20~65	112.05	110.68	90	119	100
	48			20~65	122.23	120.86	100	131	111
	50			20~65	127.32	125.95	100	135	115
	60			20~65	152.79	151.42	100	160	140

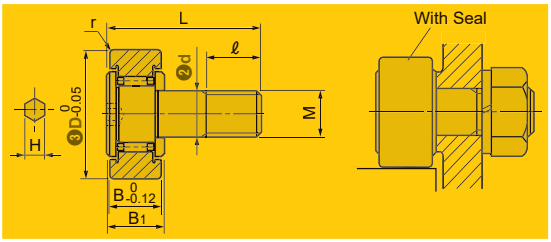
Part Number			❹ Pulley Shape	❺ Shaft Bore Specs. N Hole Dia. d (1mm increments)	P.D.	O.D.	D	F	E
❶Type	❷ Number of Teeth	❸Belt Type							
C-HTPA	18	H8M200 *A:22 *W:27	A B	12~26	45.84	44.47	32	51	36
	19			12~28	48.38	47.01	35	55	39
	20			12~30	50.93	49.56	36	57	41
	21			12~32	53.47	52.10	40	60	46
	22			12~34	56.02	54.65	41	60	46
	24			12~40	61.12	59.75	46	67	50
	25	H8M250 *A:28 *W:33		12~40	63.66	62.29	48	69	54
	26			14~45	66.21	64.84	51	75	55
	28			14~48	71.30	69.93	55	78	58
	30			14~50	76.39	75.02	60	86	66
	32	H8M300 *A:33 *W:38		14~50	81.49	80.12	63	86	66
	34			16~50	86.58	85.21	70	94	74
	36			16~50	91.67	90.30	75	99	78
	38			16~50	96.77	95.40	80	105	84
	40	H8M400 *A:44 *W:49		20~50	101.86	100.49	85	112	90
	44			20~50	112.05	110.68	90	119	100
	48			20~50	122.23	120.86	100	131	111
	50			20~50	127.32	125.95	100	135	115
	60			20~50	152.79	151.42	100	160	140

P.595 <spec. table>

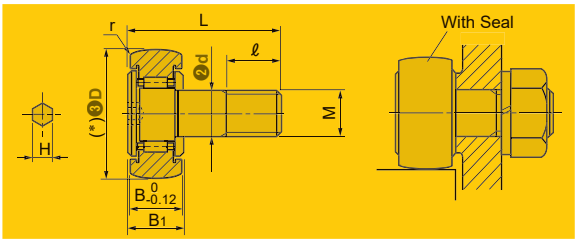
Types	Nominal Width	Pitch (mm)	2θ	Lr	h	H	Rr	Ra	Unit weight g/m (Width: 10mm)
XL	025 (6.4mm) 031 (7.9mm) 037 (9.5mm) 050 (12.7mm)	5.08	50°	2.57	1.27	2.27	0.38	0.38	22.0

P.731 <drawing>

Flat, Hex Socket

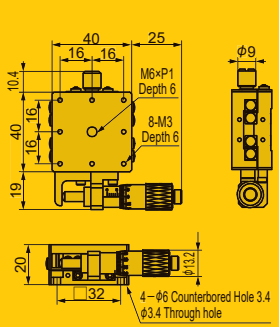


Crown, Hex Socket

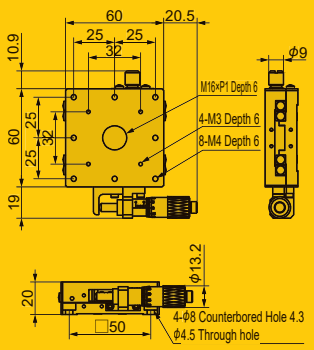


P.771 <drawing>

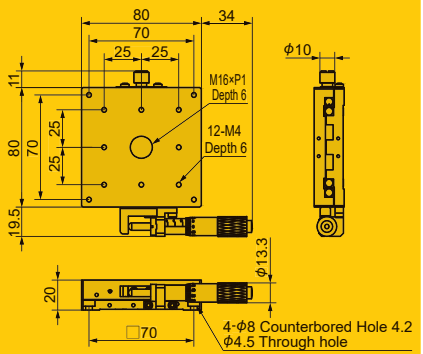
E-XPG40



E-XPG60

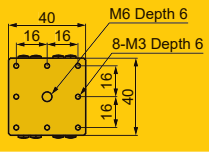


E-XPG80

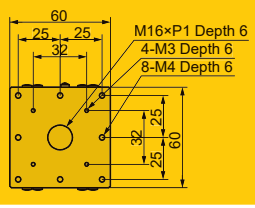


●Dimensions of stage surface mounting hole

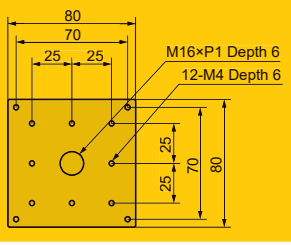
No.40

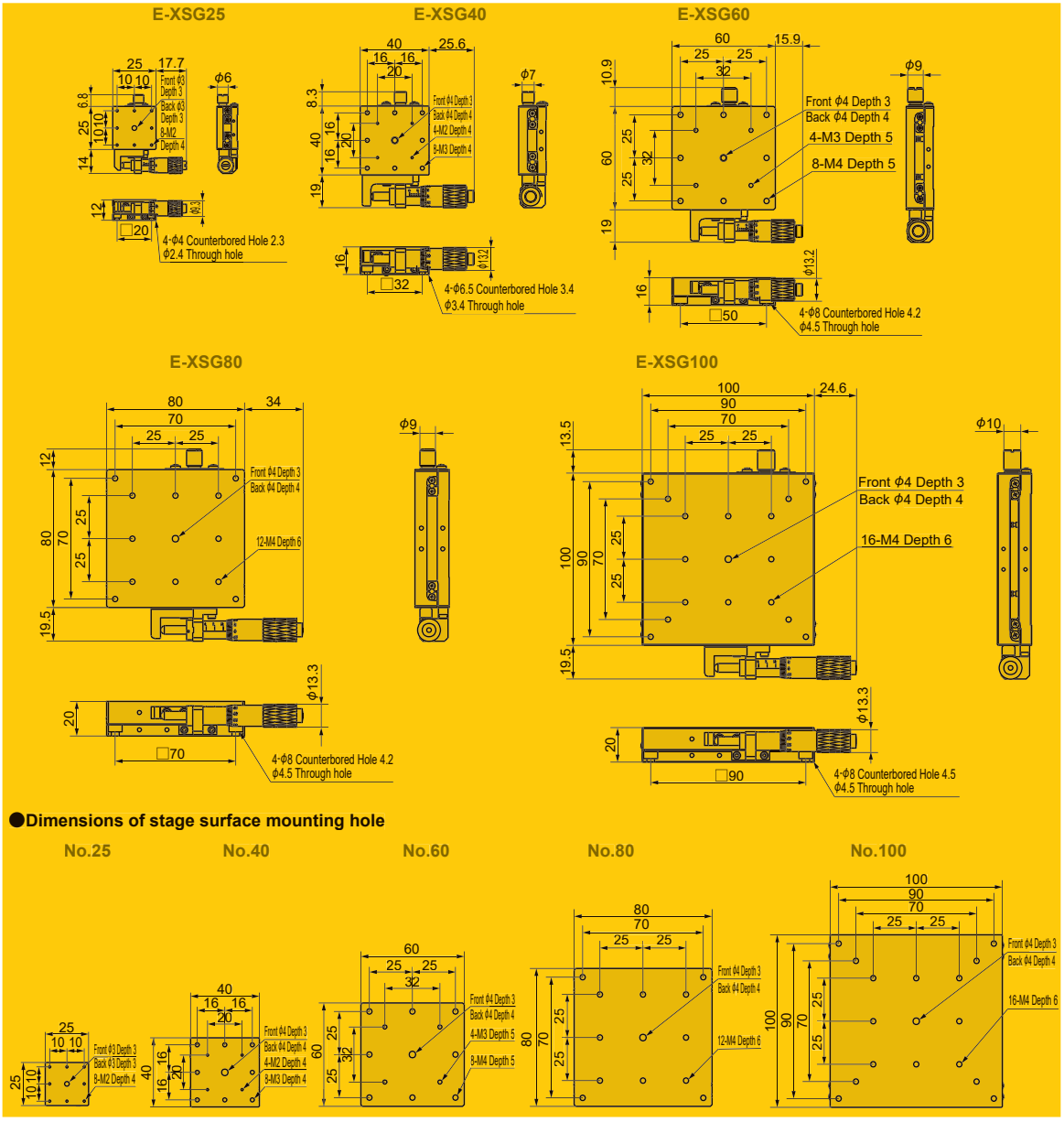


No.60



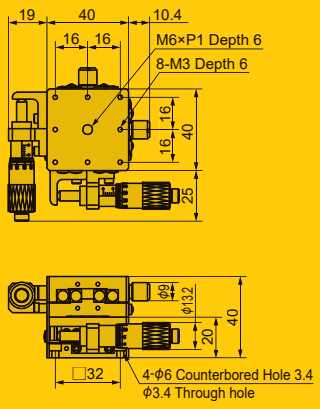
No.80



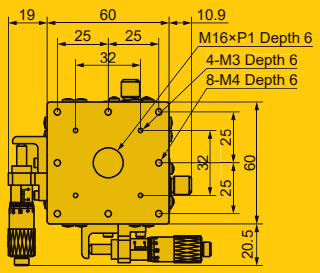

E-XSG25
E-XSG40
E-XSG60
E-XSG80
E-XSG100
Front Φ4 Depth 3
Back Φ4 Depth 4
4-M3 Depth 5
8-M4 Depth 5
16-M4 Depth 6
12-M4 Depth 6
4-Φ4 Counterbored Hole 2.3
Φ2.4 Through hole
4-Φ6.5 Counterbored Hole 3.4
Φ3.4 Through hole
4-Φ8 Counterbored Hole 4.2
Φ4.5 Through hole
4-Φ8 Counterbored Hole 4.5
Φ4.5 Through hole
●Dimensions of stage surface mounting hole
No.25
No.40
No.60
No.80
No.100

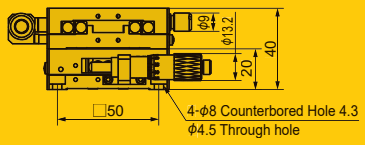
P.775 <drawing>

E-XYPG40

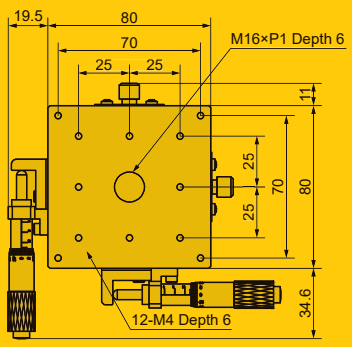


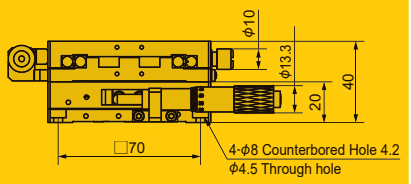
E-XYPG60





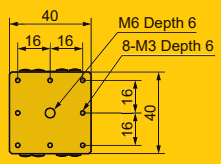
E-XYPG80



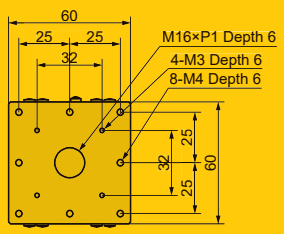


●Dimensions of stage surface mounting hole

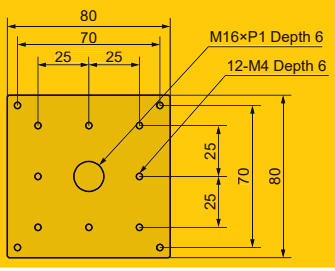
No.40

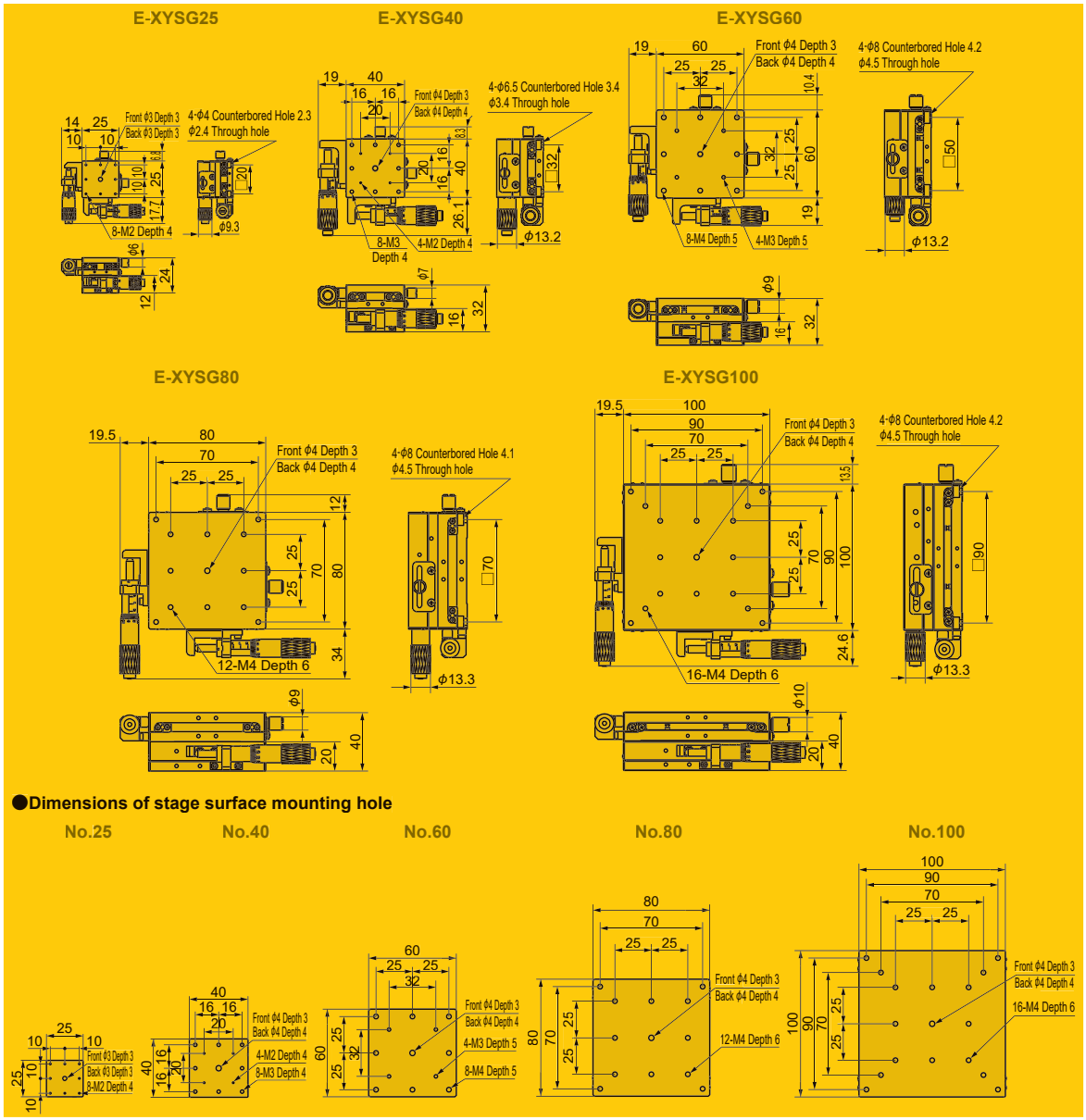


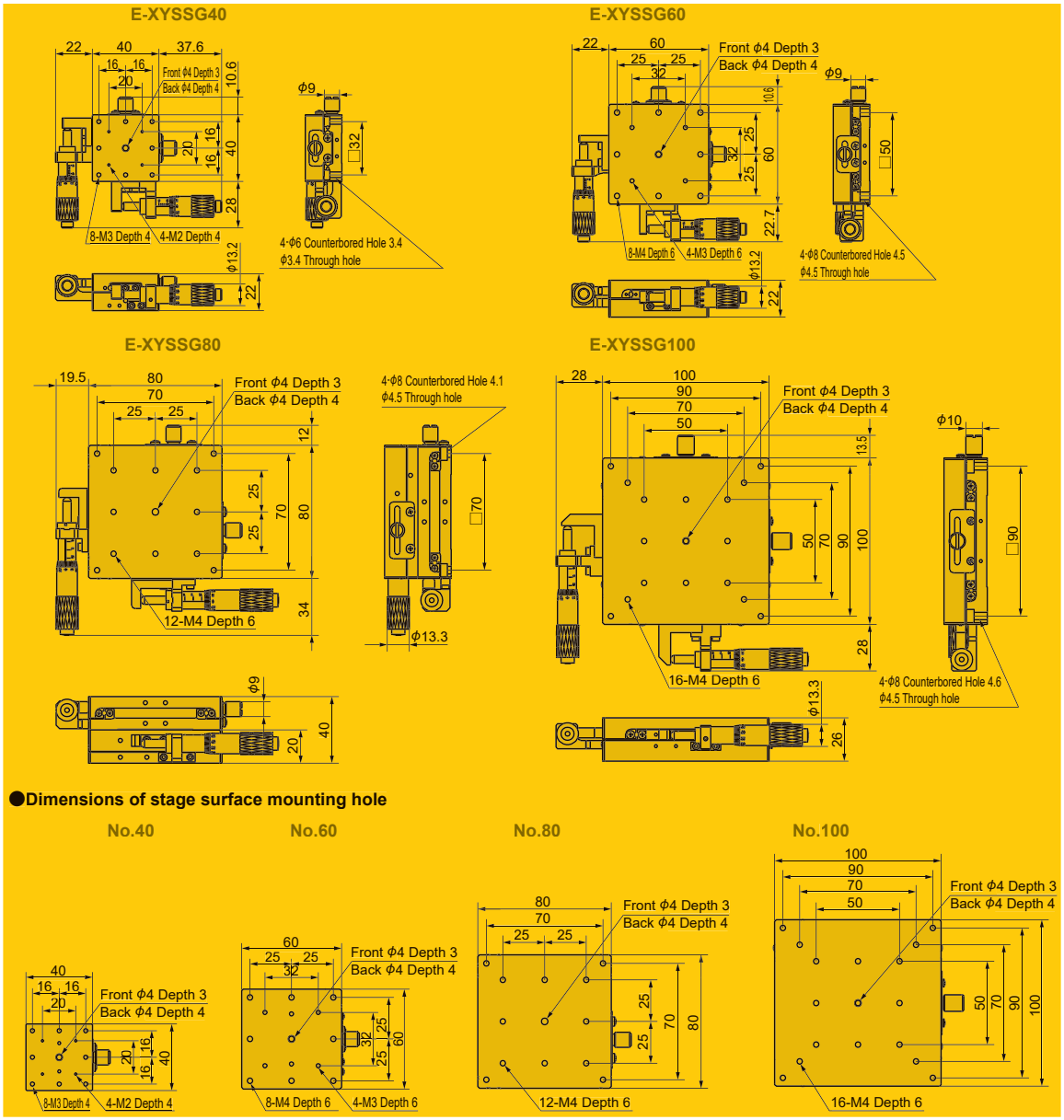
No.60



No.80



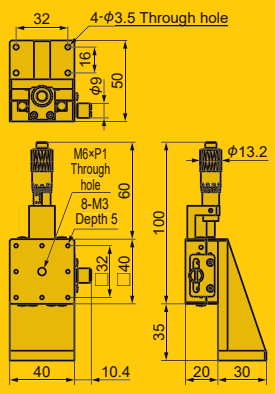

E-XYSG25
E-XYSG40
E-XYSG60
E-XYSG80
E-XYSG100
Front ϕ3 Depth 3
Back ϕ3 Depth 3
4-ϕ4 Counterbored Hole 2.3
Φ2.4 Through hole
8-M2 Depth 4
Front ϕ4 Depth 3
Back ϕ4 Depth 4
4-ϕ6.5 Counterbored Hole 3.4
ϕ3.4 Through hole
8-M3
Depth 4
4-M2 Depth 4
ϕ13.2
8-M4 Depth 5
4-M3 Depth 5
4-ϕ8 Counterbored Hole 4.2
ϕ4.5 Through hole
4-ϕ8 Counterbored Hole 4.1
12-M4 Depth 6
16-M4 Depth 6
ϕ13.3
●Dimensions of stage surface mounting hole
No.25
No.40
No.60
No.80
No.100
4-M2 Depth 4
8-M3 Depth 4
4-M3 Depth 5
8-M4 Depth 5
12-M4 Depth 6
16-M4 Depth 6



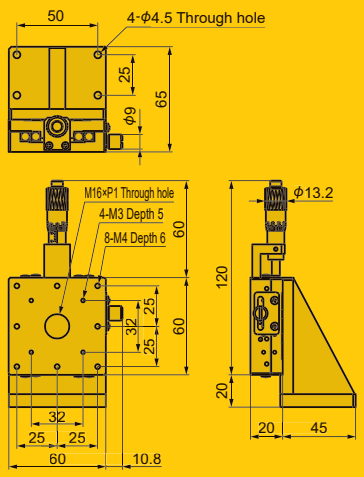
●Dimensions of stage surface mounting hole

P.781 <drawing>

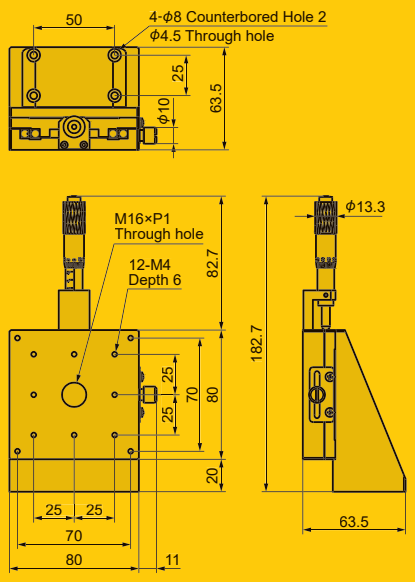
E-ZPG40



E-ZPG60

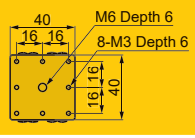


E-ZPG80

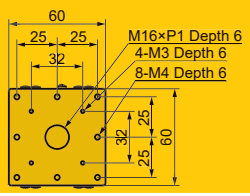


●**Dimensions of stage surface mounting hole**

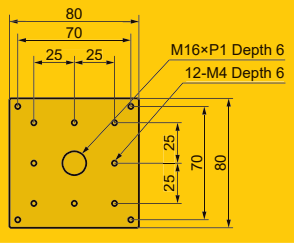
No.40

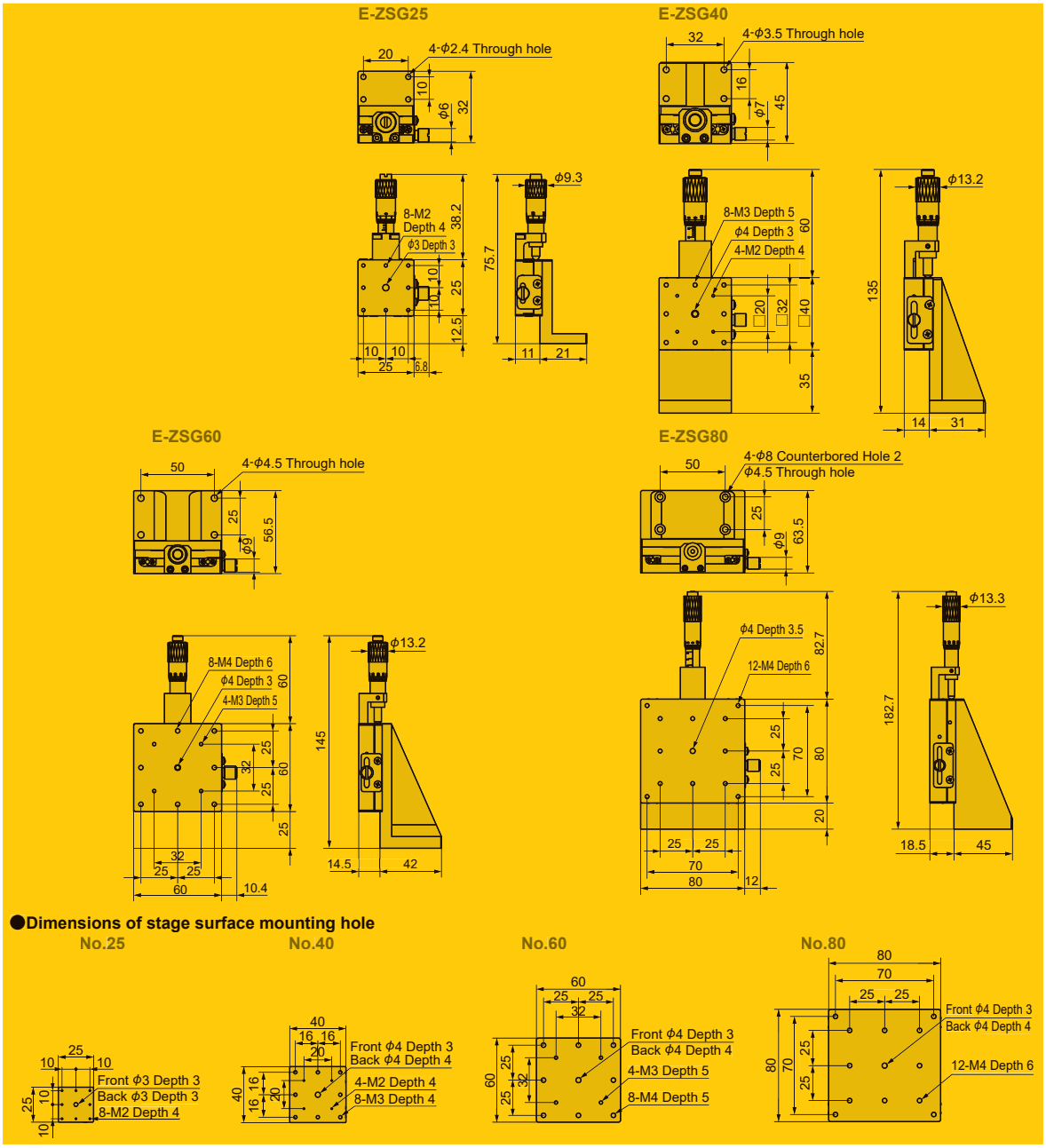


No.60



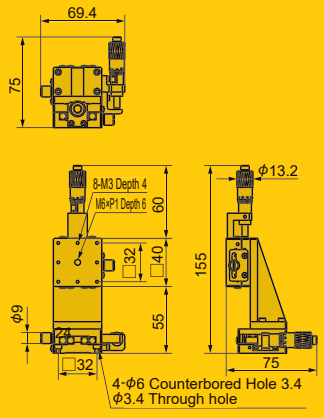
No.80



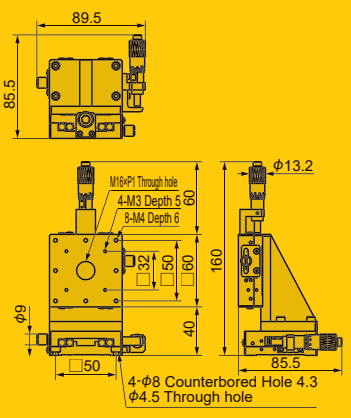

E-ZSG25
20
4-ϕ2.4 Through hole
10
ϕ6
32
8-M2
Depth 4
ϕ3 Depth 3
38.2
10
10
25
12.5
10
10
25
6.8
ϕ9.3
75.7
11
21
E-ZSG40
32
4-ϕ3.5 Through hole
16
ϕ7
45
8-M3 Depth 5
ϕ4 Depth 3
4-M2 Depth 4
60
□20
□32
□40
35
ϕ13.2
135
14
31
E-ZSG60
50
4-ϕ4.5 Through hole
25
ϕ9
56.5
8-M4 Depth 6
ϕ4 Depth 3
4-M3 Depth 5
60
25
32
25
60
25
32
25
25
60
10.4
ϕ13.2
145
14.5
42
E-ZSG80
50
4-ϕ8 Counterbored Hole 2
ϕ4.5 Through hole
25
ϕ9
63.5
ϕ4 Depth 3.5
12-M4 Depth 6
82.7
25
70
80
25
20
25
25
70
80
12
ϕ13.3
182.7
18.5
45
●Dimensions of stage surface mounting hole
No.25
10
25
10
Front ϕ3 Depth 3
Back ϕ3 Depth 3
8-M2 Depth 4
25
10
10
No.40
40
16
16
20
Front ϕ4 Depth 3
Back ϕ4 Depth 4
4-M2 Depth 4
8-M3 Depth 4
40
16
16
20
No.60
60
25
25
32
Front ϕ4 Depth 3
Back ϕ4 Depth 4
4-M3 Depth 5
8-M4 Depth 5
60
25
32
25
No.80
80
70
25
25
Front ϕ4 Depth 3
Back ϕ4 Depth 4
12-M4 Depth 6
80
70
25
25

P.785 <drawing>

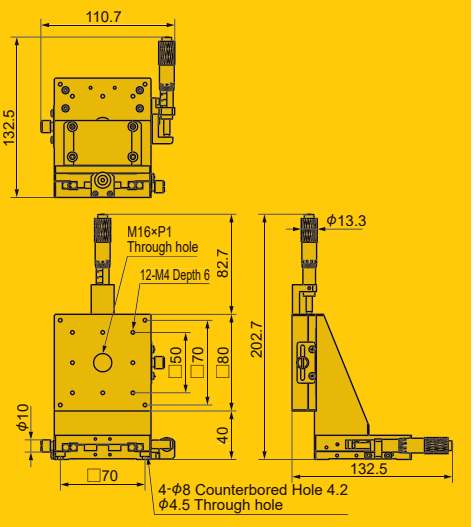
E-XZPG40



E-XZPG60

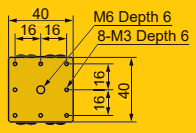


E-XZPG80

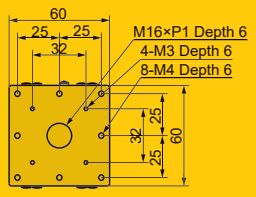


●Dimensions of stage surface mounting hole

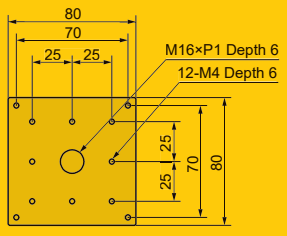
No.40



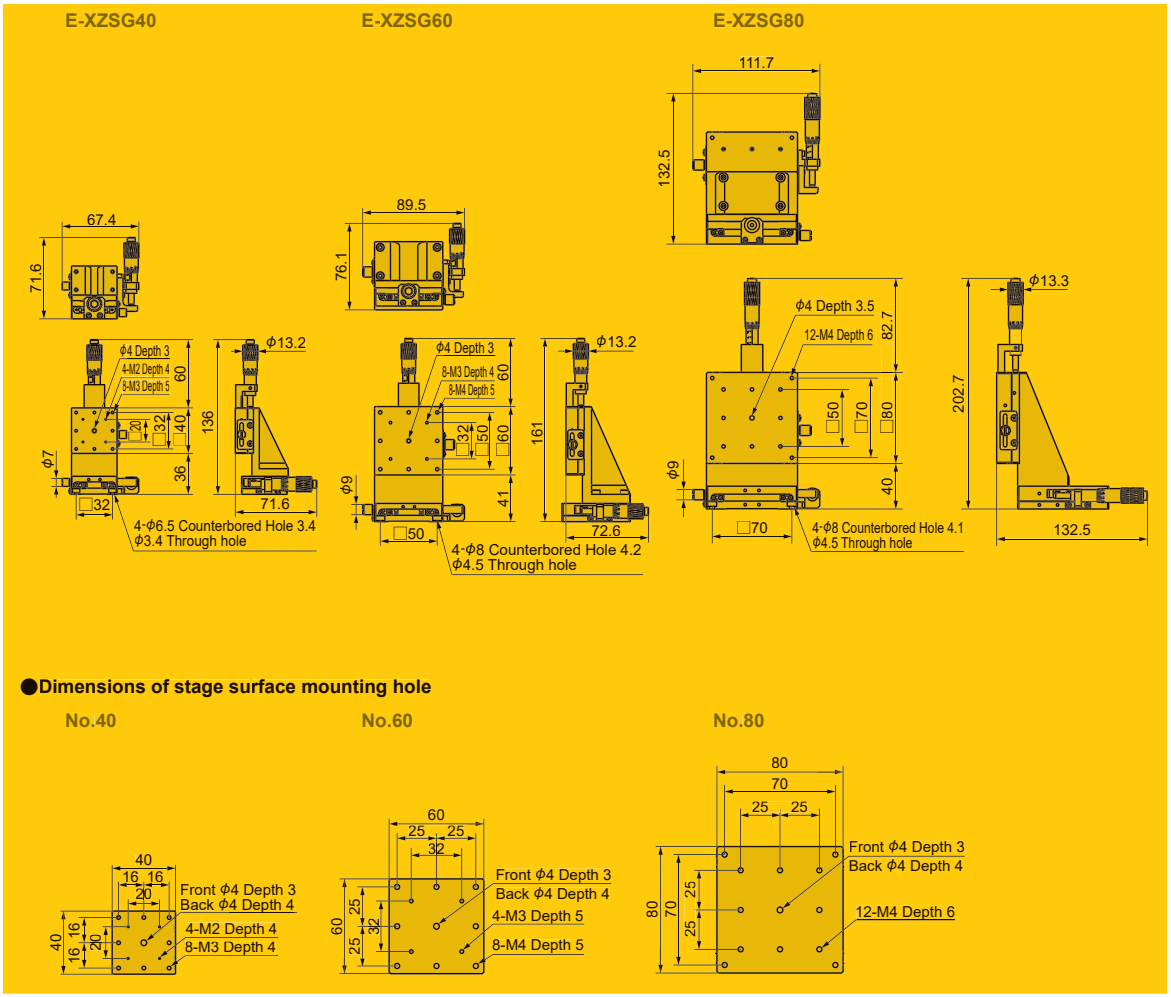
No.60



No.80



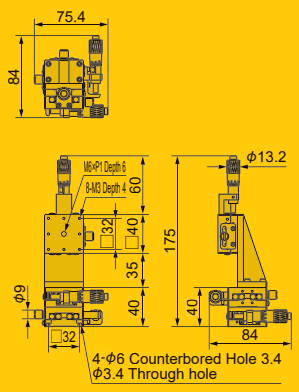
P.787 <drawing>



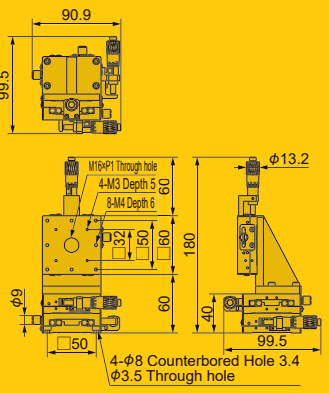
●Dimensions of stage surface mounting hole

P.789 <drawing>

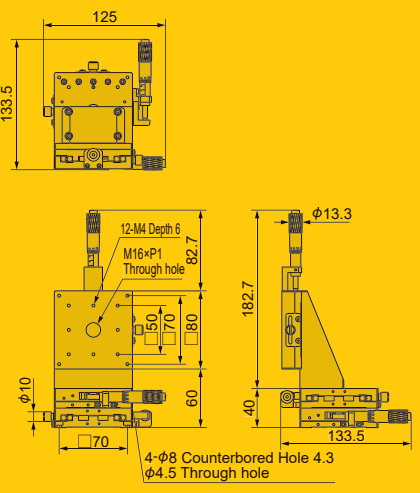
E-XYZPG40



E-XYZPG60

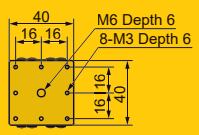


E-XYZPG80

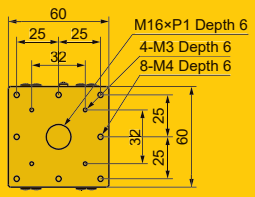


●Dimensions of stage surface mounting hole

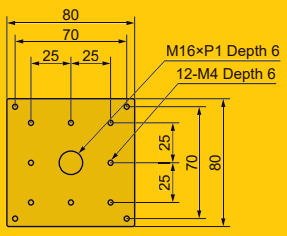
No.40



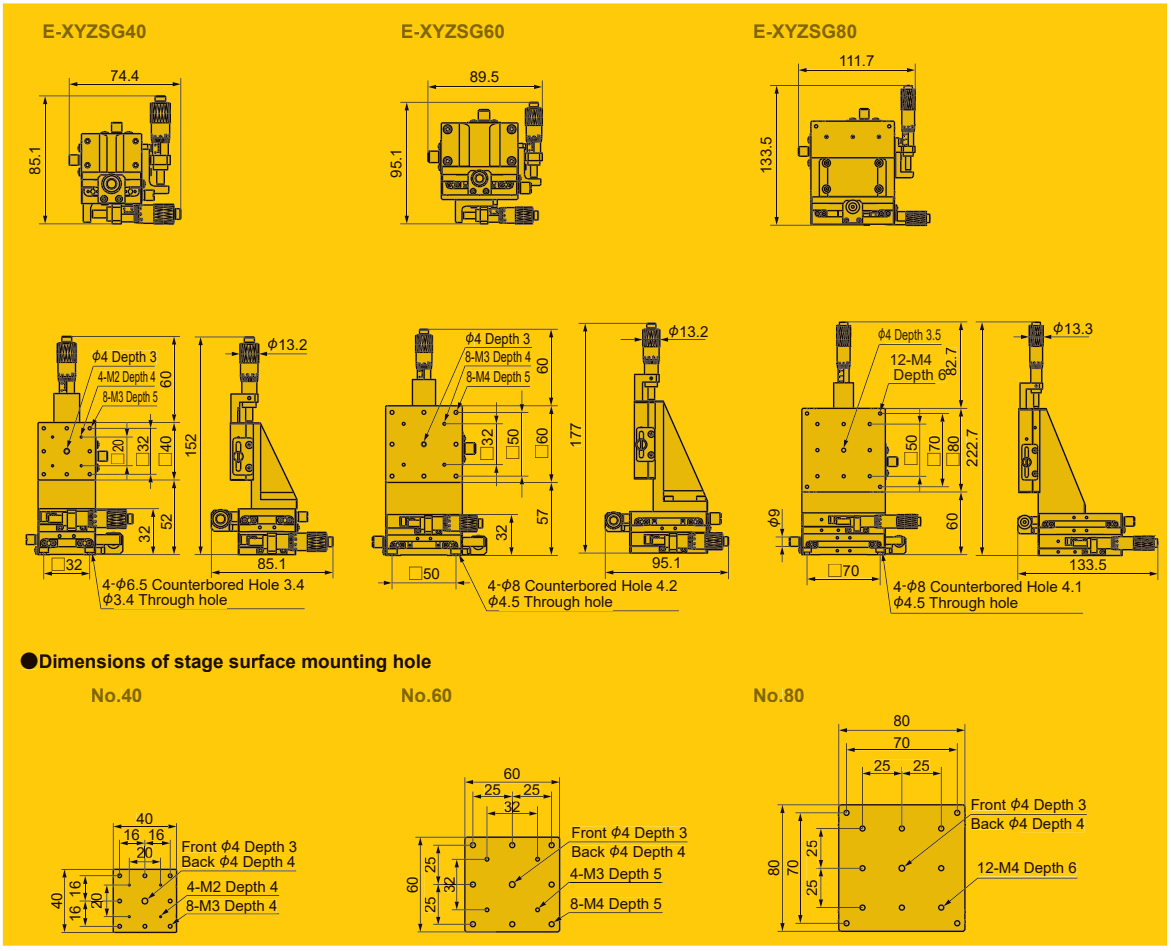
No.60



No.80

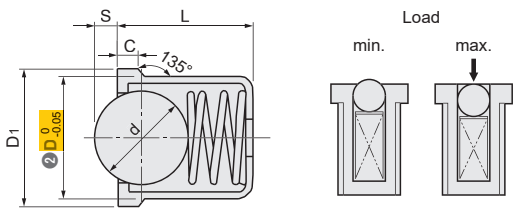


P.791 <drawing>

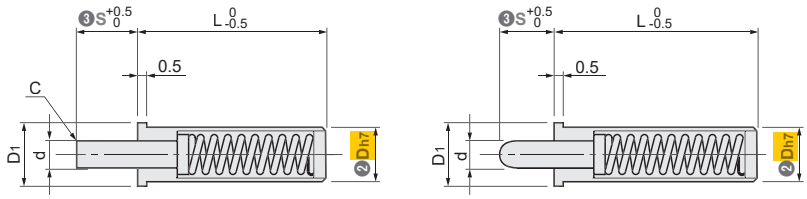


P.824 <drawing>

C-PFSSN (Stainless Steel Body, Light Load)
C-PFSSR (Stainless Steel Body, Heavy Load)



P.829 <drawing, spec. table, ordering example>



Part Number		❸Stroke S	d	D1	L	C	Light Load (N)	
❶Type	❷Dh7						min.	max.
C-MPFS (Flat Head) C-MPJS (Spherical)	2	1.5	1	2.5	8	0.1	0.5	1
	3	3	2	3.5	10	0.15		1.5
	4		3	4.5		0.2	0.6	
	5	4	4	5.5	11.5	0.3		2

The min. load represents the initial load, and the max. load represents the load at the maximum press-in limit of convex pin.
The recommended mounting hole size is Dh7.
Please use it after applying adhesive to prevent it from falling off.

kgf=N×0.101972

Ordering Example

Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Dh7)	-	❸S
C-MPJS2	-	1.5

P.836 <material, spec. table>

Type		Knob	Body		Pin	Spring
Return Type	Reset Position Type	Material	Material	Surface Treatment	Material	Material
C-PHX	C-PHXY	PA6 Plastics (Blue)	1215	Zinc Plating	SUS303	SUS304
C-SPHX	C-SPHXY		SUS303	-		

Part Number		Thread Pitch (Fine)	D	D1	S	B	L	L1	Sw	Load (N)	
❶Type	❷Thread O.D. M									min.	max.
Return Type C-PHX (Steel) C-SPHX (Stainless Steel)	8	0.75	21	15	5	5	26.5	5	10	2.5	8.7
	10	1	25	18	7	7	34	7	12	3	16.5
Reset Position Type C-PHXY (Steel) C-SPHXY (Stainless Steel)	12	1.5	28	20			40.5	10	14	4.7	
	16		33	23	10	10	47.5	12	17	10.2	30.5

P.841 <spec. table>

Part Number	C-LD-201HB
Body Material	A3
Handle Material	PVC
Surface Treatment	Blue Zinc Electroplating
Closing Pressure (N)	MAX 400
Mass (g)	48
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessories	Rubber Head Bolt
Bolt	M5

Actual product color may be a bit different from photo.

P.845 <spec. table>

Part Number	C-LD-204GB
Body Material	A3
Handle Material	PVC
Surface Treatment	Blue Zinc Electroplating
Closing Pressure (N)	MAX 6300
Mass (g)	1134
Arm Open-Close Angle	103°
Handle Open-Close Angle	84°
Accessories	Steel Hexagon Flat Head Bolt
Bolt	M12

Actual product color may be a bit different from photo.

Part Number	C-LD-22185
Body Material	A3
Handle Material	PVC
Surface Treatment	Blue Zinc Electroplating
Closing Pressure (N)	MAX 2500
Mass (g)	338
Arm Open-Close Angle	93°
Handle Open-Close Angle	87°
Accessories	Rubber Head Bolt
Bolt	M8

Actual product color may be a bit different from photo.

P.852 <spec. table>

Part Number	C-LD-301AM
Body Material	A3
Handle Material	PVC
Body Surface Treatment	Blue Zinc Electroplating
Shaft Surface Treatment	None
Closing Pressure (N)	MAX 450
Mass (g)	40
Arm Open-Close Angle	-
Handle Open-Close Angle	185°
Accessories	Nylon Bolt
Bolt	M4

Actual product color may be a bit different from photo.

P.864 <spec.>

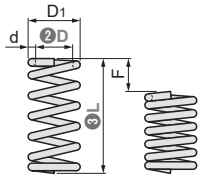
03 Coil Springs P.868

Coil I.D. 8mm
Free Length 20mm
Spring Constant 2.94N/mm
C-VUM8-20

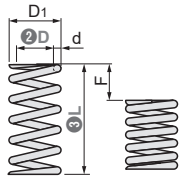
25
THB/pcs

Quantity	Unit price	Total price
50	25	1,250
70	22	1,540

P.867 <spec. table, ordering example>



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

I.D. D	ϕ8 or Less	+0.6mm +0.1mm
	ϕ10 or More	+0.8mm +0.1mm
Free Length L	50 or Less	±1mm
	60 or more	±2mm

Material: SUS304-WPB (Imported from Japan)

■Spring Constant 0.29N/mm: Fmax. (Allowable Deflection)=L×60%

(?)I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D- ❸Free Length L	O.D. D1	Wire Dia d	F max.	N{kgf} max.		Reference		
							Pitch	Solid Length	Total Number of Coils
C-VUR	5-15*	5.9	0.45	9	2.65	{0.27}	1.7	5	10
	20*	5.9	0.45	12	3.53	{0.36}	2.2	5	10
	25*	6	0.50	15	4.41	{0.45}	1.9	7.5	14
	30*	6	0.50	18	5.29	{0.54}	2.3	7.5	14
	6-15*	7	0.50	9	2.65	{0.27}	1.9	5	9
	20*	7.1	0.55	12	3.53	{0.36}	2.0	6.6	11
	25*	7.1	0.55	15	4.41	{0.45}	2.5	6.6	11
	30*	7.1	0.55	18	5.29	{0.54}	3.0	6.6	11
	35*	7.2	0.60	21	6.17	{0.63}	2.7	9	14
	40*	7.2	0.60	24	7.06	{0.72}	3.0	9	14
	45*	7.3	0.65	27	7.94	{0.81}	2.4	13.2	19.5
	50*	7.3	0.65	30	8.82	{0.90}	2.7	13.2	19.5
	60*	7.4	0.70	36	10.59	{1.08}	2.5	18.2	25
	8-20*	9.3	0.65	12	3.53	{0.36}	2.4	6.8	9.5
	25*	9.3	0.65	15	4.41	{0.45}	2.9	6.8	9.5
	30*	9.4	0.70	18	5.29	{0.54}	2.7	9.1	12
	35*	9.4	0.70	21	6.17	{0.63}	3.2	9.1	12
	40*	9.4	0.70	24	7.06	{0.72}	3.6	9.1	12
	60*	9.6	0.80	36	10.58	{1.08}	3.2	16.8	20
	10-20*	11.4	0.70	12	3.53	{0.36}	3.3	5.6	7
	25*	11.5	0.75	15	4.41	{0.45}	3.1	7.5	9
	30*	11.6	0.80	18	5.29	{0.54}	2.7	10.4	12
	35*	11.6	0.80	21	6.17	{0.63}	3.2	10.4	12
	40*	11.6	0.80	24	7.06	{0.72}	3.6	10.4	12
	12-25*	13.6	0.80	15	4.41	{0.45}	3.6	7.2	8
	16-35*	18	1.00	21	6.17	{0.63}	4.7	9.5	8.5
	40*	18	1.00	24	7.06	{0.72}	5.3	9.5	8.5

■Spring Constant 0.49N/mm: Fmax. (Allowable Deflection)=L×45%

(?)I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D- ❸Free Length L	O.D. D1	Wire Dia d	F max.	N{kgf} max.		Reference		
							Pitch	Solid Length	Total Number of Coils
C-VUF	5-15*	6.0	0.5	6.8	3.33	{0.34}	2.3	4.3	7.5
	6-15	7.2	0.6	6.8	3.33	{0.34}	1.9	6.0	9.0
	20	7.2	0.6	9.0	4.41	{0.45}	2.5	6.0	9.0
	25	7.2	0.6	11.3	5.49	{0.56}	3.1	6.0	9.0
	30	7.2	0.6	13.5	6.57	{0.67}	3.8	6.0	9.0
	35	7.4	0.7	15.8	7.64	{0.78}	2.7	10.5	14.0
	8-20	9.4	0.7	9.0	4.41	{0.45}	3.1	6.0	7.5
	10-40	11.8	0.9	18.0	8.82	{0.90}	4.4	9.9	10.0
	16-50	18.4	1.2	22.5	10.98	{1.12}	6.7	11.4	8.5

(?)Both ends marked with ＊ are not ground.

Load (kgf) = Load N × 0.101972

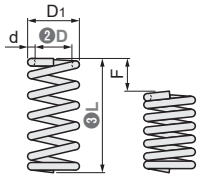
(?)The values of solid length are for reference only. There may be some variations depending on the lot. And if it is used under the limit condition of solid length, the spring may be deformed, or damaged after using only a limited number of cycles.

(?)Always use within the allowable deflection Fmax.(mm).

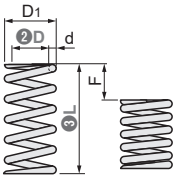
Ordering Example

Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Coil I.D. D)	-	❸Free Length L
C-VUR5	-	15



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

I.D. D	ϕ8 or Less	+0.6mm +0.1mm
	ϕ8.5 or More	+0.8mm +0.1mm
Free Length L	50 or Less	±1mm
	60 or more	±2mm

Material: SUS304-WPB (Imported from Japan)

■Spring Constant 0.98N/mm: Fmax. (Allowable Deflection)=L×40%

I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D-❸Free Length L	O.D. D_1	Wire Dia. d	F max.	N{kgf} max.		Reference Pitch	Reference Solid Length	Reference Number of Coils
C-VUL	5-15	6.2	0.6	6	5.88	{0.60}	2.5	4.8	7
	20	6.2	0.6	8	7.84	{0.80}	3.3	4.8	7
	25	6.4	0.7	10	9.80	{1.00}	2.3	9.1	12
	6-15	7.4	0.7	6	5.88	{0.60}	2.1	6.3	8
	20	7.4	0.7	8	7.84	{0.80}	2.9	6.3	8
	25	7.6	0.8	10	9.80	{1.00}	2.3	10.4	12
	30	7.6	0.8	12	11.76	{1.20}	2.7	10.4	12
	35	7.6	0.8	14	13.72	{1.40}	3.2	10.4	12
	40	7.8	0.9	16	15.68	{1.60}	2.5	16.2	17
	8-20	9.8	0.9	8	7.84	{0.80}	2.4	9.5	9.5
	25	9.8	0.9	10	9.80	{1.00}	2.9	9.5	9.5
	30	10.0	1.0	12	11.76	{1.20}	2.5	14.0	13
	35	10.0	1.0	14	13.72	{1.40}	2.9	14.0	13
	60	10.4	1.2	24	23.52	{2.40}	2.7	28.8	23
	10-20	12.0	1.0	8	7.84	{0.80}	3.1	8.5	7.5
	25	12.0	1.0	10	9.80	{1.00}	3.8	8.5	7.5
	30	12.2	1.1	12	11.76	{1.20}	3.2	12.7	10.5
	35	12.2	1.1	14	13.72	{1.40}	3.7	12.7	10.5
	40	12.2	1.1	16	15.68	{1.60}	4.2	12.7	10.5
	12-25	14.4	1.2	10	9.80	{1.00}	2.9	12.6	9.5
	35	14.4	1.2	14	13.72	{1.40}	4.1	12.6	9.5
	55	14.8	1.4	22	21.56	{2.20}	4.1	21.7	14.5

■Spring Constant 2.94N/mm: Fmax. (Allowable Deflection)=L×35%

I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D-❸Free Length L	O.D. D_1	Wire Dia. d	F max.	N{kgf} max.		Reference Pitch	Reference Solid Length	Reference Number of Coils
C-VUM	5-15	6.6	0.8	5.3	15.39	{1.57}	2.3	6.8	7.5
	20	6.8	0.9	7.0	20.58	{2.10}	1.8	11.7	12
	40	7.0	1.0	14.0	41.16	{4.20}	3.2	14.5	13.5
	6-15	7.8	0.9	5.3	15.39	{1.57}	2.3	7.7	7.5
	20	7.8	0.9	7.0	20.58	{2.10}	3.0	7.7	7.5
	25	8.0	1.0	8.8	25.68	{2.62}	2.8	11	10
	30	8.0	1.0	10.5	30.87	{3.15}	3.3	11	10
	8-20	10.2	1.1	7.0	20.58	{2.10}	3.3	8.8	7
	25	10.2	1.1	8.8	25.68	{2.62}	4.2	8.8	7
	30	10.2	1.1	10.5	30.87	{3.15}	5.0	8.8	7
	35	10.6	1.3	12.3	35.97	{3.67}	3.5	15.6	11
	40	10.6	1.3	14.0	41.16	{4.20}	4.0	15.6	11
	10-20	12.4	1.2	7.0	20.58	{2.10}	4.0	8.4	6
	25	12.6	1.3	8.8	25.68	{2.62}	4.2	10.4	7
	30	12.6	1.3	10.5	30.87	{3.15}	5.0	10.4	7
	40	13.0	1.5	14.0	41.16	{4.20}	3.8	18.8	11.5
	12-25	14.8	1.4	8.8	25.68	{2.62}	5.0	9.8	6
	16-35	19.6	1.8	12.3	35.97	{3.67}	5.8	14.4	7

■NWL: Fmax. (Allowable Compression)=L×40%

I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D-❸Free Length L	O.D. D_1	Wire Dia. d	F max.	N{kgf} max.	Spring Constant N/mm {kgf/mm}	Reference Compression Length
C-NWL	6.5-30*	8.1	0.8	12	13.7{1.4}	1.1{0.12}	9.6
	35*	8.1	0.8	14	13.7{1.4}	1.0{0.10}	10.8
	40*	8.1	0.8	16	13.7{1.4}	0.9{0.09}	12
	45*	8.1	0.8	18	13.7{1.4}	0.8{0.08}	13.2
	50*	8.1	0.8	20	13.7{1.4}	0.7{0.07}	14.4
	8.5-35*	10.5	1	14	20.6{2.1}	1.5{0.15}	10.8
	40*	10.5	1	16	20.6{2.1}	1.3{0.13}	12
	45*	10.5	1	18	20.6{2.1}	1.1{0.12}	13
	16.6-60*	19.8	1.6	24	27.5{2.8}	1.1{0.12}	20

■NWM: Fmax. (Allowable Compression)=L×32%

I.D. Referenced Type is manufactured giving priority to the inner diameter, with the outer diameter for reference only

❶Type	❷Coil I.D. D-❸Free Length L	O.D. D_1	Wire Dia. d	F max.	N{kgf} max.	Spring Constant N/mm {kgf/mm}	Reference Compression Length
C-NWM	6.5-40*	8.5	1	12.8	20.6{2.1}	1.6{0.16}	17.5
	45*	8.5	1	14.4	20.6{2.1}	1.4{0.15}	19.5
	50*	8.5	1	16	20.6{2.1}	1.3{0.13}	21
	13.5-35*	16.8	1.6	11.2	34.3{3.5}	3.1{0.31}	14.4
	50*	16.8	1.6	16	34.3{3.5}	2.1{0.22}	18.4
	60*	16.8	1.6	19.2	34.3{3.5}	1.8{0.18}	20.8

● Calculation method of coils (reference value):
Total number of coils = solid length ÷ Wire diameter (d)-1
Effective coils = Total number of coils-2

* The number of coils is a reference value. There may be some variations depending on the lot.

The values of solid length are for reference only. There may be some variations depending on the lot. And if it is used under the limit condition of solid length, the spring may be deformed, or damaged after using only a limited number of cycles.

Always use within the allowable deflection Fmax.(mm).

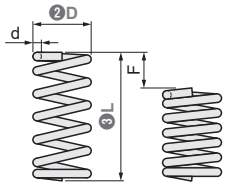
Both ends marked with ＊ are not ground.

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load {kgf} = Load N × 0.101972

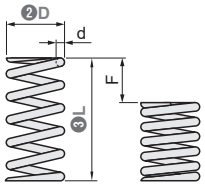
Ordering Example

Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Coil I.D. D)	-	❸Free Length L
C-VUL5	-	15



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

I.D. D	ϕ10 or Less	0 -0.5mm
	ϕ12 or More	0 -0.8mm
Free Length L	50 or Less	±1.5mm
	60 or more	±2.5mm

Material: SUS304-WPB (Imported from Japan)

■Spring Constant 0.05N/mm: Fmax. (Allowable Deflection)=L×Fa%

㊟O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UV	3- 5*	0.15	1.1	3.5	0.18	{0.018}	70
	10*	0.18	2.5	7	0.35	{0.036}	
	15*	0.18	2.5	10.5	0.53	{0.054}	
	20*	0.20	3.3	14	0.7	{0.071}	
	25*	0.23	6.2	17.5	0.88	{0.089}	
	30*	0.23	6.2	21	1.05	{0.107}	
	4- 5*	0.18	1.2	3.5	0.18	{0.018}	
	10*	0.20	1.7	7	0.35	{0.036}	
	15*	0.23	3.0	10.5	0.53	{0.054}	
	20*	0.29	4.5	14	0.70	{0.071}	
	5- 5*	0.20	1.2	3.5	1.18	{0.018}	
	10*	0.23	1.8	7	0.35	{0.036}	
	15*	0.26	2.9	10.5	0.53	{0.054}	
	20*	0.23	3.0	14	0.70	{0.071}	
	6-10*	0.26	2.0	7	0.35	{0.036}	
	15*	0.30	3.3	10.5	0.53	{0.054}	
	20*	0.30	3.3	14	0.7	{0.071}	
	8-10*	0.30	1.9	7	0.35	{0.036}	
	15*	0.35	3.2	10.5	0.53	{0.054}	
	20*	0.35	3.2	14	0.70	{0.071}	
	25*	0.40	5.6	17.5	0.88	{0.089}	
	30*	0.40	5.6	21	1.05	{0.107}	
	40*	0.45	9.3	28	1.40	{0.143}	
	50*	0.45	9.3	35	1.75	{0.179}	

Load (kgf) = Load N × 0.101972

■Spring Constant 0.098~0.2N/mm: Fmax. (Allowable Deflection)=L × Fa%

㊟O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UY	2- 5*	0.13	1.5	3.0	0.15	{0.015}	60
	10*	0.13	1.5	6.0	0.29	{0.03}	
	15*	0.15	2.7	9.0	0.44	{0.045}	
	20*	0.15	2.7	12.0	0.59	{0.06}	
	25*	0.18	6.3	15.0	0.74	{0.076}	
	30*	0.18	6.3	18.0	0.88	{0.089}	
	3- 5*	0.16	0.92	3.75	0.37	{0.0378}	75
	10*	0.20	2.0	7.5	0.74	{0.075}	
	15*	0.23	3.45	11.25	1.1	{0.1125}	
	20*	0.23	3.45	15.0	1.47	{0.15}	
	4- 5*	0.20	1.05	3.75	0.37	{0.0375}	
	10*	0.23	1.84	7.5	0.74	{0.075}	
	15*	0.26	2.86	11.25	1.1	{0.1125}	
	20*	0.29	4.64	15.0	1.47	{0.15}	
	25*	0.30	5.4	18.75	1.84	{0.1875}	
	30*	0.30	5.4	22.5	2.26	{0.23}	
	5- 5*	0.23	1.15	3.75	0.37	{0.0378}	
	10*	0.26	1.82	7.5	0.74	{0.075}	
	15*	0.30	3.15	11.25	1.1	{0.1125}	
	20*	0.30	3.15	15.0	1.47	{0.15}	
	25*	0.32	4.16	18.75	1.84	{0.1875}	
	6- 5*	0.26	1.24	3.5	0.34	{0.035}	70
	10*	0.30	2.1	7.5	0.74	{0.075}	75
	15*	0.32	2.64	11.25	1.1	{0.1125}	
	20*	0.35	3.85	15.0	1.47	{0.15}	
	25*	0.38	5.32	18.75	1.84	{0.1875}	
	30*	0.40	6.8	22.5	2.21	{0.225}	
	40*	0.40	6.8	30	2.94	{0.3}	
	8-10*	0.35	2.19	7.5	0.74	{0.075}	
	15*	0.40	3.4	11.25	1.1	{0.1125}	
	20*	0.40	3.4	15.0	1.47	{0.15}	
	25*	0.45	5.4	18.75	1.84	{0.1875}	
	30*	0.45	5.4	22.5	2.21	{0.225}	
	40*	0.50	8.3	30.0	2.94	{0.3}	
	10-10*	0.50	3.25	6.0	1.18	{0.1204}	60
	15*	0.50	3.25	11.25	2.21	{0.225}	75
	20*	0.55	4.4	15.0	2.94	{0.3}	
	25*	0.55	4.4	18.75	3.68	{0.375}	
	30*	0.60	6.15	22.5	4.41	{0.45}	
	35*	0.60	6.3	26.25	5.1	{0.52}	
	12-15*	0.55	3.3	11.25	2.206	{0.225}	

㊟Both ends marked with ＊ are not ground.

● Calculation method of coils (reference value):
Total number of coils = solid length ÷ Wire diameter (d)-1
Effective coils = Total number of coils-2

* The number of coils is a reference value. There may be some variations depending on the lot.

㊟The values of solid length are for reference only. There may be some variations depending on the lot.
And if it is used under the limit condition of solid length, the spring may be deformed, or damaged after using only a limited number of cycles.

㊟Always use within the allowable deflection Fmax.(mm).

■Spring Constant 0.29N/mm: Fmax. (Allowable Deflection)=L×Fa%

※O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UR	2- 5*	0.18	2.0	2.5	0.49	{0.05}	50
	10*	0.18	2.0	5	0.98	{0.1}	
	15*	0.23	6.0	7.5	1.5	{0.15}	
	20*	0.23	6.0	10	2.0	{0.2}	
	3- 5*	0.23	1.6	3	0.9	{0.09}	60
	10*	0.25	2.1	6	1.8	{0.18}	
	15*	0.30	4.5	9	2.6	{0.27}	
	20*	0.30	4.5	12	3.5	{0.36}	
	25*	0.32	6.4	15	4.4	{0.45}	
	30*	0.32	6.4	18	5.3	{0.45}	
	4- 5*	0.26	1.4	3	0.9	{0.09}	
	10*	0.29	2.0	6	1.8	{0.18}	
	15*	0.32	3.0	9	2.6	{0.27}	
	20*	0.38	6.1	12	3.5	{0.36}	
	25*	0.38	6.1	15	4.4	{0.45}	
	30*	0.40	8.0	18	5.3	{0.54}	
	45*	0.45	14.4	27	7.9	{0.81}	
	5-10*	0.35	2.71	6	1.8	{0.18}	
	15*	0.38	3.61	9	2.6	{0.27}	
	20*	0.38	3.61	12	3.5	{0.36}	
	25*	0.45	7.43	15	4.4	{0.45}	
	30*	0.45	7.43	18	5.3	{0.54}	
	35*	0.50	12.25	21	6.2	{0.63}	
	6- 5*	0.32	1.5	3	0.9	{0.09}	
	10*	0.40	3.0	6	1.8	{0.18}	
	15*	0.40	3.0	9	2.6	{0.27}	
	20*	0.50	7.0	12	3.5	{0.36}	
	25*	0.50	7.0	15	4.4	{0.45}	
	30*	0.50	7.0	18	5.3	{0.54}	
	8-10*	0.45	2.6	6	1.8	{0.18}	
	15*	0.50	3.6	9	2.6	{0.27}	
	20*	0.50	3.6	12	3.5	{0.36}	
	25*	0.55	5.9	15	4.4	{0.45}	
	30*	0.65	10.4	18	5.3	{0.54}	
	35*	0.65	10.4	21	6.2	{0.63}	
	40*	0.70	15.4	24	7.1	{0.72}	
	60*	0.80	27.6	31.2	10.6	{1.08}	52
	10-10*	0.55	3.3	6	1.8	{0.18}	60
	15*	0.60	4.2	9	2.6	{0.27}	
	20*	0.65	6.2	12	3.5	{0.36}	
	25*	0.65	6.2	15	4.4	{0.45}	
	30*	0.70	8.4	18	5.3	{0.54}	
	12-60*	0.90	16.2	36	10.6	{1.08}	
	16-20*	0.80	5.4	12	3.5	{0.36}	

■Spring Constant 0.49N/mm: Fmax. (Allowable Deflection)=L×45%

※O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UF	2- 5*	0.2	2.35	2.25	0.66	{0.068}	45
	10*	0.2	2.35	4.5	1.3	{0.14}	
	3- 5*	0.26	1.8	2.25	1.1	{0.11}	
	10*	0.32	4.5	4.5	2.2	{0.22}	
	15*	0.32	4.5	6.7	3.2	{0.33}	
	20*	0.35	6.3	9.0	4.4	{0.45}	
	25*	0.35	6.3	11.2	5.5	{0.56}	
	4- 5*	0.32	2.0	2.25	1.1	{0.11}	
	10*	0.35	3.0	4.5	2.2	{0.22}	
	15*	0.4	5.2	6.7	3.2	{0.33}	
	20*	0.4	5.2	9.0	4.4	{0.45}	
	25*	0.45	9.5	11.2	5.5	{0.56}	
	30*	0.45	9.5	13.5	6.6	{0.67}	
	5-10*	0.4	3.2	4.5	2.2	{0.23}	
	15*	0.4	3.2	6.75	3.3	{0.34}	
	20*	0.45	4.95	9.0	4.4	{0.45}	
	25*	0.45	4.95	11.25	5.5	{0.56}	
	30*	0.5	7.75	13.5	6.7	{0.68}	
	35*	0.5	7.75	15.75	7.7	{0.79}	
	6-10*	0.5	5.0	4.5	2.2	{0.22}	
	15*	0.55	7.7	6.7	3.2	{0.33}	
	20*	0.55	7.7	9.0	4.4	{0.45}	
	25	0.6	10.8	11.2	5.5	{0.56}	
	30	0.65	15.6	13.5	6.6	{0.67}	
	8-10	0.6	5.4	4.5	2.2	{0.22}	
	15	0.65	7.2	6.7	3.2	{0.33}	
	20	0.7	10.5	9.0	4.4	{0.45}	
	25	0.7	10.5	11.2	5.5	{0.56}	
	30	0.75	13.5	13.5	6.6	{0.67}	
	35	0.75	13.5	15.7	7.6	{0.78}	
	40	0.8	18.4	18	8.8	{0.89}	
	10-15	0.65	4.6	6.7	3.2	{0.33}	
	20	0.8	9.6	9.0	4.4	{0.45}	
	25	0.8	9.6	11.2	5.5	{0.56}	
	30	0.85	12.8	13.5	6.6	{0.67}	
	12-15	0.8	6.8	6.7	3.2	{0.33}	
	20	0.8	6.8	9.0	4.4	{0.45}	
	25	0.8	6.8	11.2	5.5	{0.56}	
	16-35	1.1	12.1	15.7	7.6	{0.78}	
	20-20	1.2	7.2	9.0	8.8	{0.89}	
	25	1.3	9.1	11.3	11.1	{1.13}	
	70	1.7	26.4	31.5	30.9	{3.15}	

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load (kgf) = Load N × 0.101972

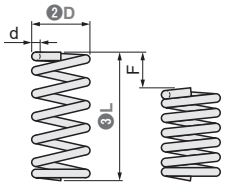
※Both ends marked with ＊ are not ground.
※The values of solid length are for reference only. There may be some variations depending on the lot.
※Always use within the allowable deflection Fmax.(mm).

Ordering Example

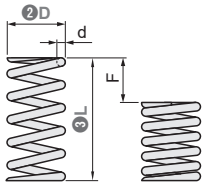
Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Coil O.D. D)	-	❸Free Length L
C-UV3	-	5

P.871 <spec. table>



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

I.D. D	φ10 or Less	0 -0.5mm
	φ12 or More	0 -0.8mm
Free Length L	50 or Less	±1mm
	60 or more	±2mm

Material: SUS304-WPB (Imported from Japan)

■Spring Constant 0.98~2.9N/mm: Fmax. (Allowable Deflection)=L×40%

※O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

①Type	②Coil O.D. D - ③Free Length L	d	Solid Length	F max.	N{kgf} max.	
C-UL	2- 5*	0.2	1.65	2	0.98	{0.1}
	10*	0.26	5.07	4	1.96	{0.2}
	15*	0.26	5.07	6	2.94	{0.3}
	3- 5*	0.3	2	2	2.0	{0.2}
	10*	0.35	3.7	4	3.9	{0.4}
	15*	0.4	6.6	6	5.9	{0.6}
	20*	0.4	6.6	8(6)	7.8	{0.8}
	25*	0.45	11.7	10	9.8	{1}
	30*	0.45	11.7	12	11.8	{1.2}
	4- 5*	0.35	2.1	2	2.0	{0.2}
	10*	0.45	5.3	4	3.9	{0.4}
	15*	0.45	5.3	6	5.9	{0.6}
	20*	0.5	8	8	7.8	{0.8}
	25*	0.5	8	10	9.8	{1 }
	30*	0.55	12.7	12(10)	11.8	{1.2}
	40	0.6	19.8	16	15.7	{1.6}
	5- 5*	0.4	2.2	2	2.0	{0.2}
	10*	0.5	4.75	4	3.9	{0.4}
	15*	0.5	4.75	6	5.9	{0.6}
	20*	0.55	6.88	8	7.8	{0.8}
	25*	0.55	6.88	10	9.8	{1}
	30	0.65	14.95	12	11.8	{1.2}
	40	0.65	14.95	16	15.7	{1.6}

※Both ends marked with ＊ are not ground.

● Calculation method of coils (reference value):
Total number of coils = solid length ÷ Wire diameter (d)-1
Effective coils = Total number of coils-2

* The number of coils is a reference value. There may be some variations depending on the lot.

※The values of solid length are for reference only. There may be some variations depending on the lot.
And if it is used under the limit condition of solid length, the spring may be deformed, or damaged after using only a limited number of cycles.

※Always use within the allowable deflection Fmax.(mm).

①Type	②Coil O.D. D - ③Free Length L	d	Solid Length	F max.	N{kgf} max.	
C-UL	6- 5*	0.45	2.3	2	2.0	{0.2}
	10*	0.55	4.4	4	3.9	{0.4}
	15*	0.55	4.4	6	5.9	{0.6}
	20	0.65	8.5	8	7.8	{0.8}
	25	0.65	8.5	10	9.8	{1 }
	30	0.7	12.6	12	11.8	{1.2}
	35	0.7	12.6	14	13.7	{1.4}
	8-10	0.65	4.6	4	3.9	{0.4}
	15	0.75	8.3	6	5.9	{0.6}
	20	0.75	8.3	8	7.8	{0.8}
	25	0.75	8.3	10	9.8	{1 }
	30	0.8	10.4	12	11.8	{1.2}
	35	0.8	10.4	14	13.7	{1.4}
	40	0.8	10.4	16	15.7	{1.6}
	45	0.85	14.5	18	17.7	{1.8}
	10-10	0.75	4.7	4	3.9	{0.4}
	15	0.8	6.2	6	5.9	{0.6}
	20	0.8	6.2	8	7.8	{0.8}
	25	0.9	9.5	10	9.8	{1 }
	30	0.9	9.5	12	11.8	{1.2}
	35	0.9	9.5	14	13.7	{1.4}
	50	1.0	15.5	20	19.6	{2 }
	60	1.1	23.7	24	23.5	{2.4}
	12-15	0.9	6.75	6	5.9	{0.6}
	20	1.0	10	8	7.8	{0.8}
	25	1.0	10	10	9.8	{1.0}
	40	1.2	21.6	16	15.7	{1.6}
	13-20	1.0	8.25	8	7.8	{0.8}
	30	1.1	12.1	12	11.8	{1.2}
	40	1.1	12.1	16	15.7	{1.6}
	16-15	1.1	7.7	6	5.9	{0.6}
	25	1.2	10.8	10	9.8	{1 }
	20-30	1.7	12.8	12	35.3	{3.6}

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load (kgf) = Load N × 0.101972

P.872 <spec. table>

■Spring Constant 1.5~2.0N/mm: Fmax. (Allowable Deflection)=L×Fa%

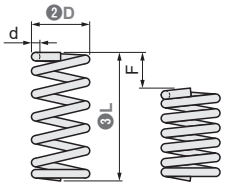
※O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UTT	3- 5*	0.35	2.8	2	2.9	{0.3}	40
	10*	0.4	4.8	4	5.9	{0.6}	
	15*	0.45	8.3	6	8.8	{0.9}	
	20*	0.45	8.3	8(6)	8.8	{0.9}	30
	4- 5*	0.4	2.6	2	2.9	{0.3}	40
	10*	0.45	3.9	4	5.9	{0.6}	
	15*	0.5	6	6	8.8	{0.9}	
	20*	0.55	9.4	8	11.8	{1.2}	
	30	0.6	14.4	12(10)	14.7	{1.5}	33
	5- 5*	0.45	2.6	2	2.9	{0.3}	40
	10*	0.5	3.6	4	5.9	{0.6}	
	15	0.6	7.5	6	8.8	{0.9}	
	20	0.6	7.5	8	11.8	{1.2}	
	25	0.65	10.7	10	14.7	{1.5}	
	30	0.7	15.4	12	17.7	{1.8}	
	6- 5*	0.5	2.4	2	3.9	{0.4}	
	10	0.6	4.2	4	7.8	{0.8}	
	15	0.7	7.4	6	11.8	{1.2}	
	20	0.7	7.4	8	15.7	{1.6}	
	25	0.8	13.6	10	19.6	{2.0}	
	30	0.8	13.6	12	23.5	{2.4}	
	35	0.85	17.5	14	27.5	{2.8}	
	40	0.9	23.4	16	31.4	{3.2}	
	45	0.9	23.4	18	35.3	{3.6}	

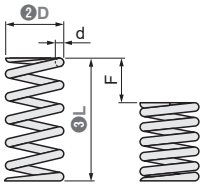
※Both ends marked with * are not ground.
※The values of solid length are for reference only. There may be some variations depending on the lot.
※The number of coils is a reference value. There may be some variations depending on the lot.
※Always use within the allowable deflection Fmax.(mm).

❶Type	❷Coil O.D. D - ❸Free Length L	d	Solid Length	F max.	N{kgf} max.		Fa%
C-UTT	8-10	0.75	5.3	4	7.8	{0.8}	40
	15	0.75	5.3	6	11.8	{1.2}	
	20	0.9	10.4	8	15.7	{1.6}	
	25	0.9	10.4	10	19.6	{2.0}	
	30	1.0	17	12	23.5	{2.4}	
	35	1.0	17	14	27.5	{2.8}	
	40	1.0	17	16	31.4	{3.2}	
	45	1.1	25.3	18	35.3	{3.6}	
	70	1.2	39.6	28	54.9	{5.6}	
	10-10	0.85	5.1	4	7.8	{0.8}	
	15	0.85	5.1	6	11.8	{1.2}	
	20	1.0	9.5	8	15.7	{1.6}	
	25	1.0	9.5	10	19.6	{2.0}	
	30	1.1	14.3	12	23.5	{2.4}	
	35	1.1	14.3	14	27.5	{2.8}	
	40	1.2	20.4	16	31.4	{3.2}	
	45	1.2	20.4	18	35.3	{3.6}	
	60	1.3	29.9	24	47.1	{4.8}	
	13-15	1.0	5.75	6	11.8	{1.2}	
	20	1.2	10.5	8	15.7	{1.6}	
	25	1.2	10.5	10	19.6	{2.0}	
	30	1.3	15	12	23.5	{2.4}	
	35	1.3	15	14	27.5	{2.8}	
	40	1.4	20.3	16	31.4	{3.2}	
	45	1.4	20.3	18	35.3	{3.6}	
	50	1.5	27.8	20	39.2	{4.0}	
	16-15	1.2	7.2	6	11.8	{1.2}	
	20	1.3	9.1	8	15.7	{1.6}	
	25	1.3	9.1	10	19.6	{2.0}	
	30	1.4	12.3	12	23.5	{2.4}	
	35	1.5	16.5	14	27.5	{2.8}	
	40	1.6	21.6	16	31.4	{3.2}	
	20-30	1.8	12.6	12	47.1	{4.8}	
	50	2.2	27.5	20	78.5	{8.0}	

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load (kgf) = Load N × 0.101972



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

O.D. D	ϕ10 or Less	$^{0}_{-0.5}$mm
	ϕ12 or More	$^{0}_{-0.8}$mm
Free Length L	50 or Less	±1mm
	60 or more	±2mm

Material: SUS304-WPB (Imported from Japan)

■Spring Constant 2.0~4.9N/mm: Fmax. (Allowable Deflection)=L×Fa%

㊟O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	Wire Dia. d	Solid Length	F max.	N{kgf} max.		Fa%
C-UM	4- 5*	0.4	2.2	1.75	3.4	{0.35}	35
	10*	0.5	4.9	3.5	6.8	{0.7}	
	15	0.55	7.5	5.25	10.3	{1.05}	
	20	0.6	11.1	7.0	13.7	{1.4}	
	5- 5*	0.45	2.25	1.75	3.4	{0.35}	
	10*	0.5	3.13	3.5	6.8	{0.7}	
	15	0.65	8.45	5.25	10.3	{1.05}	
	20	0.65	8.45	7.0	13.7	{1.4}	
	30	0.7	11.9	10.5	24.0	{2.45}	
	35	0.75	16.5	12.25	20.6	{2.1}	
	6- 5*	0.55	2.7	1.7	4.9	{0.5}	
	10	0.7	5.6	3.5	10.8	{1.1}	
	15	0.75	7.4	5.2	15.7	{1.6}	
	20	0.75	7.4	7.0	20.6	{2.1}	
	25	0.85	12.8	8.7	25.5	{2.6}	
	30	0.85	12.8	10.5	31.4	{3.2}	
	35	0.9	16.7	12.2	36.3	{3.7}	
	40	0.9	16.8	14.0	41.2	{4.2}	
	8-10	0.85	6.4	3.5	10.8	{1.1}	
	15	0.9	7.9	5.3	15.7	{1.6}	
	20	0.9	7.9	7.0	20.6	{2.1}	
	25	0.9	7.9	8.8	25.5	{2.6}	
	30	1.0	12.0	10.5	31.4	{3.2}	
	35	1.0	12.0	12.3	36.3	{3.7}	
	10-10	0.9	5.2	3.5	10.8	{1.1}	
	15	1.0	7.3	5.3	15.7	{1.6}	
	20	1.0	7.3	7.0	20.6	{2.1}	
	25	1.1	10.5	8.8	25.5	{2.6}	
	30	1.1	10.5	10.5	31.4	{3.2}	
	13-15	1.2	8.4	5.3	15.7	{1.6}	
	20	1.3	11.1	7.0	20.6	{2.1}	
	25	1.3	11.1	8.8	25.5	{2.6}	
	40	1.4	15.1	14	41.2	{4.2}	
	20-30	1.9	13.3	10.5	52.0	{5.3}	

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load (kgf) = Load N × 0.101972

■Spring Constant 2.9~9.8N/mm: Fmax. (Allowable Deflection)=L×Fa%

㊟O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D - ❸Free Length L	Wire Dia. d	Solid Length	F max.	N{kgf} max.		Fa%
C-UH	4- 5*	0.45	2.7	1.5	4.4	{0.45}	30
	10*	0.5	3.8	3.0	8.8	{0.9}	
	15	0.6	8.1	4.5	13.2	{1.35}	
	5- 5*	0.55	3.3	1.5	4.4	{0.45}	
	10	0.6	4.65	3.0	8.8	{0.9}	
	15	0.6	4.65	4.5	13.2	{1.35}	
	25	0.75	11.81	7.5	22.1	{2.25}	
	6- 5*	0.65	3.2	1.5	8.8	{0.9}	
	10	0.7	3.9	3.0	17.7	{1.8}	
	15	0.85	7.7	4.5	26.5	{2.7}	
	20	0.9	9.7	6.0	35.3	{3.6}	
	25	1.0	15.5	7.5	44.1	{4.5}	
	30	1.0	15.5	9.0	53.0	{5.41}	
	8-10	0.9	5.3	3.0	17.7	{1.8}	
	15	0.9	5.3	4.5	26.5	{2.7}	
	20	1.1	11	6.0	35.3	{3.6}	
	25	1.1	11	7.5	44.1	{4.5}	
	30	1.2	15.9	9.0	53.0	{5.4}	
	10-15	1.1	6.9	4.5	26.5	{2.7}	
	20	1.2	9.3	6.0	35.3	{3.6}	
	25	1.2	9.3	7.5	44.1	{4.5}	
	30	1.3	12.7	9.0	53.0	{5.4}	
	35	1.4	17.5	10.5	61.8	{6.3}	
	13-15	1.5	9.2	4.5	44.1	{4.5}	
	20	1.5	9.2	6.0	58.8	{6}	
	25	1.5	9.2	7.5	73.5	{7.5}	
	30	1.8	18	9.0	88.3	{9}	
	50	2.0	28.5	15.0	147.0	{15}	
	16-45	2.2	25.1	13.5	132.4	{13.51}	
	20-30	2.3	13.8	9.0	132.4	{13.51}	
	35	2.5	18.8	10.5	154.9	{15.81}	
	40	2.5	18.8	12.0	176.5	{18.01}	
	45	2.8	29.4	13.5	199.1	{20.32}	

㊟Both ends marked with ＊ are not ground.

● Calculation method of coils (reference value):
Total number of coils = solid length ÷ Wire diameter (d)-1
Effective coils = Total number of coils-2

* The number of coils is a reference value. There may be some variations depending on the lot.

㊟The values of solid length are for reference only. There may be some variations depending on the lot.
And if it is used under the limit condition of solid length, the spring may be deformed, or damaged after using only a limited number of cycles.

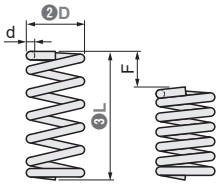
㊟Always use within the allowable deflection Fmax.(mm).

Ordering Example

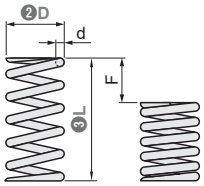
Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Coil O.D. D)	-	❸Free Length L
C-UM4	-	5

P.874 <spec. table, ordering example>



Closed Ends
(＊Both Ends Not Ground)



Closed Ends
(Both Ends Ground)

O.D. D	ϕ10 or Less	0 -0.5mm
	ϕ12 or More	0 -0.8mm
Free Length L	50 or Less	±1.5mm
	60 or more	±2.5mm

Material: SUS304-WPB (Imported from Japan)

■Fmax. (Allowable Deflection)=L×Fa%

℗O.D. Referenced Type is manufactured giving priority to the outer diameter, with the inner diameter for reference only.

❶Type	❷Coil O.D. D- ❸Free Length L	Wire Dia. d	Solid Length	F max.	N{kgf} max.		Fa%
C-UBB	4-10	0.65	7.0	2.5	12.3	{1.3}	25
	15	0.7	10.3	3.75	18.4	{1.9}	
	20	0.75	14.4	5.0	24.5	{2.5}	
	5- 5	0.6	2.9	1.25	6.1	{0.63}	
	10	0.75	6.9	2.5	12.3	{1.3}	
	15	0.8	9.8	3.75	18.4	{1.9}	
	20	0.85	13.4	5.0	24.5	{2.5}	
	25	0.9	17.8	6.25	30.6	{3.12}	
	6-10	0.9	6.8	2.5	24.5	{2.5}	
	15	1.0	10.5	3.75	36.8	{3.8}	
	20	1.1	14.6	5.0	49.0	{5.0}	
	25	1.1	17.9	6.25	61.3	{6.26}	
	8-10	1.1	6.9	2.5	24.5	{2.5}	
	15	1.2	9.9	3.75	36.8	{3.8}	
	20	1.3	14.0	5.0	49.0	{5.0}	
	25	1.3	14.5	6.25	61.3	{6.3}	
	10-10	1.3	7.2	2.5	24.5	{2.5}	
	15	1.4	10.2	3.75	36.8	{3.8}	
	20	1.5	13.9	5.0	49.0	{5.0}	
	25	1.5	16.1	6.25	61.3	{6.3}	
	30	1.6	20.4	7.5	73.5	{7.5}	
	12-15	1.5	9.4	3.75	36.8	{3.8}	
	20	1.6	12.4	5.0	49.0	{5.0}	
	30	1.8	20.3	7.5	73.5	{7.5}	
	13-15	1.8	9.5	3.75	73.5	{7.5}	
	20	1.9	12.9	5.0	98.1	{10.01}	
	25	2.0	17.0	6.25	123.0	{12.55}	
	30	2.1	20.5	7.5	147.0	{15.0}	
	40	2.3	28.2	10.0	196.0	{20.0}	
	16-20	2.1	12.1	5.0	98.1	{10.01}	
	30	2.4	21.0	7.5	147.0	{15.0}	
	20-25	2.9	16.7	6.25	184.0	{18.8}	
	60	3.5	44.6	12.0	353.0	{36.02}	

℗The values of solid length are for reference only. There may be some variations depending on the lot.
℗Always use within the allowable deflection Fmax.(mm).
℗The number of coils is a reference value. There may be some variations depending on the lot.

kgf (Load)=N/mm (Spring Constant) × 0.101972 × F (Deflection)
Load (kgf) = Load N × 0.101972

Ordering Example

Please order after selecting part number and parameters according to the selection steps ❶ to ❸.

Part Number (❶Type · ❷Coil O.D. D)	-	❸Free Length L
C-UBB4	-	10

P.877 <spec. table>

■Light load

❶Type	❷Coil O.D. D - ❸Free Length L	Wire Dia. d mm	Under dynamic load: Max. Displacement Fmax. Mm	Under dynamic load: Max. Load N	(Initial Tension) N	(Spring Constant) N/mm
C-AWY (Spring Steel) C-AUY (SUS304-WPB)	3- 10	0.3	8.7	2.25	0.29	0.23
	15		16.6			0.12
	20		25			0.08
	25		33.3			0.06
	4- 15	0.4	10	3.24	0.59	0.26
	20		16.8			0.16
	25		22.5			0.12
	30		28.4			0.09
	35		33.7			0.08
	40		38.5	3.24	0.59	0.07
	5- 15	0.5	6.8	4.22	0.88	0.49
	20		11.7			0.28
	25		17			0.2
	30		21.2			0.16
	35		26.1			0.13
	40		34			0.1
	45		37.7			0.09
	6- 20	0.6	14	8.14	1.27	0.49
	25		21.2			0.32
	30		28			0.25
	35		35			0.2
	40		41.1			0.17
	45		50			0.14
	50		53.8			0.13
	8- 25	0.8	15.1	12.75	2.35	0.69
	30		21.2			0.49
	35		26.5			0.39
	40		33.1			0.31

Load {kgf} = Load N × 0.101972

Please visit MISUMI website for details of the models available for sale.

P.886 <material, spec. table>

Type	Material	Surface Treatment	Hardness
E-SRBN	50CrVA	Phosphating	42~52HRC
E-SSRBN	SUS304	-	37~46HRC

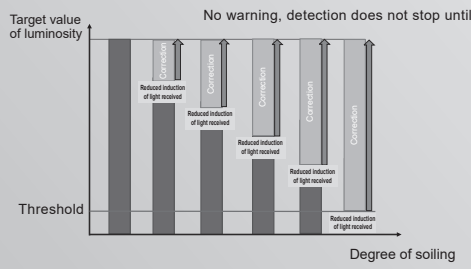
Part Number		
❶Type	❷O.D. (D) mm	❸Load Type
E-SRBN (50CrVA) E-SSRBN (SUS304)	8	A
		B
	10	A
		B
	12.5	A
		B
	14	A
		B
	16	A
		B
	18	A
		B
	20	A
		B
	22.5	A
		B
	25	A
		B
	28	A
		B
	31.5	A
		B
	35.5	A
		B
	40	A
		B
	45	A
		B
	50	A
		B

■ Advantages

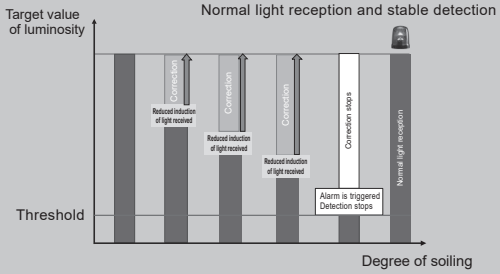
Advantage 1

Saves maintenance time, with optional function to set the reference value tracking cycle

Generic products on the market *



MISUMI Economy series



Advantage 2

Dual-screen display for clear visibility

Generic products on the market *

Single-screen display

MISUMI Economy series

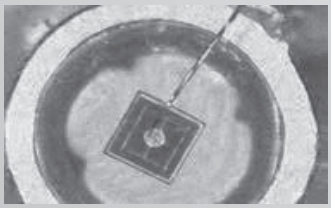
Dual-screen display

Advantage 3

Filled with chip for resistance to high temperature and vibration and increased value of luminosity

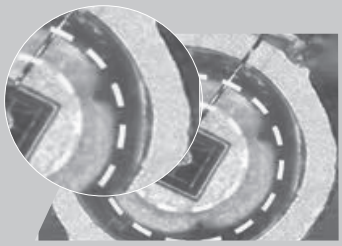
Generic products on the market *

Without filled resin



MISUMI Economy series

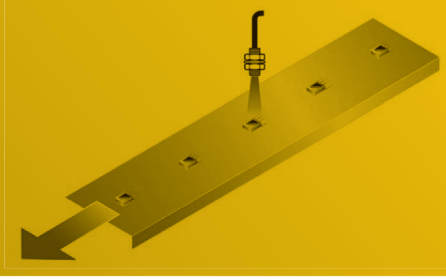
With filled resin



Advantage 4

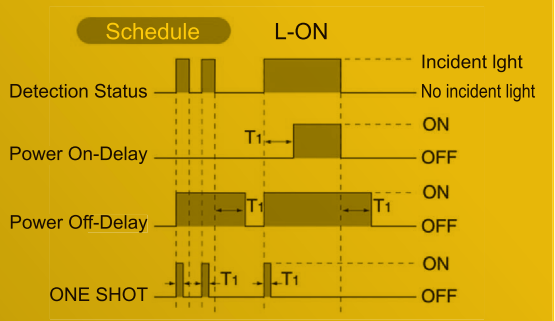
Reference value can be set via full auto teaching while moving the workpiece without stopping the assembly line.

☑ Full auto teaching



Advantage 5

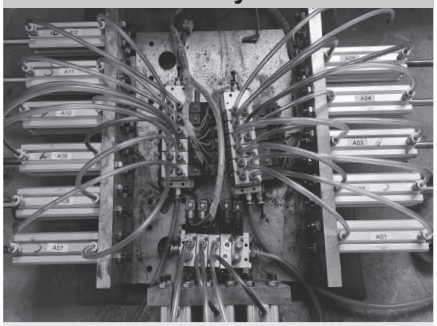
Available with 3 types of timers



On-Delay	Delays the output ON after detection.
Off-Delay	Holds the output ON for detection by PLC when the detection time is too short.
One-shot Timer	Keeps the output ON for a specified time regardless of the workpiece size variations.

* Generic products on the market are similar products randomly purchased by our company from online or offline markets.

Durability Test



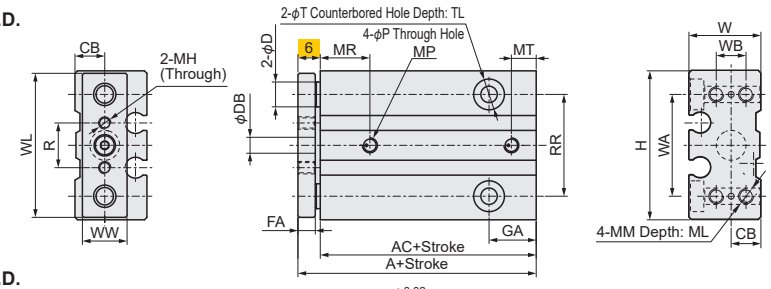
Test conditions:
Speed of 200mm/s, shaft rod longitudinal load of 5N

P.957 <spec. table>

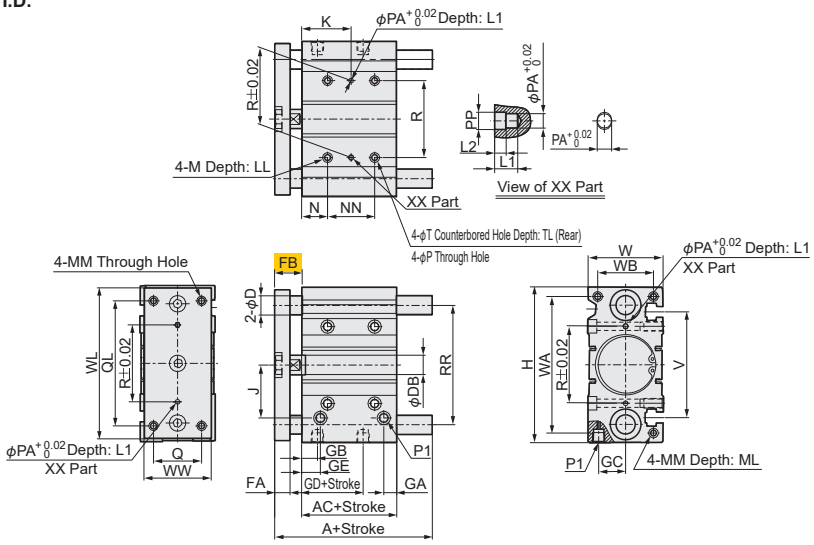
Part Number				Magnetic Switch*3	
❶Type	❷Cylinder I.D. (mm)	❸Stroke (mm)*1	❹Rod End Joint*2	❺Type	❻Quantity
E-MSDN (Female Threaded Without Magnetic Ring) E-MSDB (Male Threaded Without Magnetic Ring)	12 16	5 10 15 20 25 30 35 40 45 50 55* 60*	NR (Without Joint) SJ (Single Clevis Joint) DJ (Double Clevis Joint) FJ (Floating Joint)	NS(Without Magnetic Switch) CJM(Reed Magnetic Switch) DJM(Electronic Magnetic Switch-2-Wire Type) DJN(Electronic Magnetic Switch-3-Wire NPN Type) DJP(Electronic Magnetic Switch-3-Wire PNP Type)	(With NS Type, no need to specify Qty) 1 2
	20	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100			
E-MSDNS (Female Threaded With Magnetic Ring) E-MSDBS (Male Threaded With Magnetic Ring)	25 32 40 50 63 80 100	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 130*		NS(Without Magnetic Switch) CGM(Reed Magnetic Switch) DGM(Electronic Magnetic Switch-2-Wire Type) DGN(Electronic Magnetic Switch-3-Wire NPN Type) DGP(Electronic Magnetic Switch-3-Wire PNP Type)	

P.959 <drawing>

Cylinder I.D.
6~10



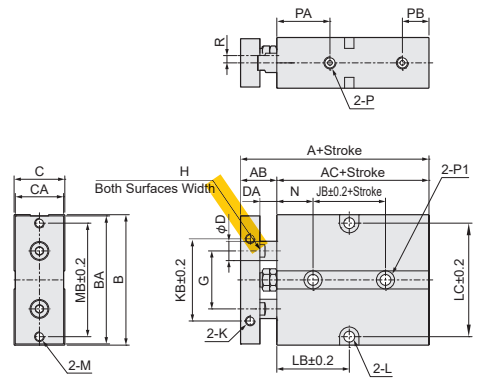
Cylinder I.D.
12~100



P.960 <spec. table>

Cylinder I.D. (mm)	RR	N	P	PA	PP	T	TL	M	LL
12	41	5	4.5	3	3.5	8	4.5	M5	10
16	46								
20	54	17	5.5	4	4.5	9.5	5.5	M6	12
25	64								
32	78	21	6.5			11	7.5	M8	16
40	86	22							
50	110	24	8.5	5	6	14	9	M10	20
63	124								
80	156	28	10.5	6		17.5	12	12	24
100	188	11	12.5			20	10	14	28

P.961 <drawing>

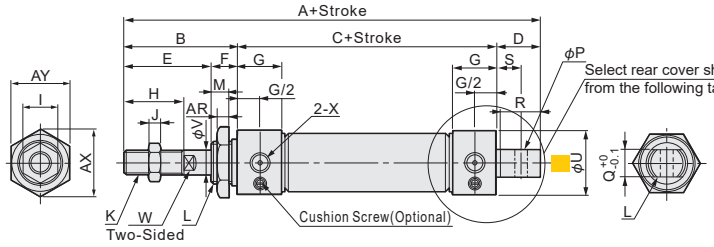


P.967 <spec. table>

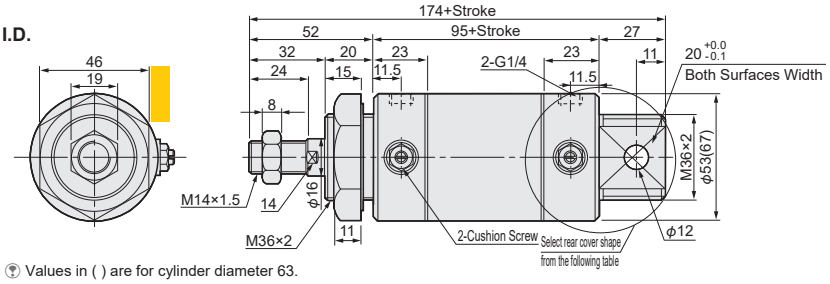
Part Number		Stroke (mm)	Fixing Method*1	Rod End Joint*2	Magnetic Switch*3	
Type	Cylinder I.D. (mm)				Type	Quantity
E-MCE (Without Magnetic Ring) E-MCES (With Magnetic Ring)	32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	NB(Without Bracket) FB(Foot Bracket) FR(Flange) SC(Single Clevis Bracket) DC(Double Clevis Bracket) CT(Trunnion Bracket)	NR(Without Joint) SJ(Single Clevis Joint) DJ(Double Clevis Joint) FJ(Floating Joint)	NS(Without Magnetic Switch) CEM(Reed Magnetic Switch) DEM(Electronic Magnetic Switch-2-Wire Type) DEN(Electronic Magnetic Switch-3-Wire NPN Type) DEP(Electronic Magnetic Switch-3-Wire PNP Type)	(With NS Type, no need to specify Qty) 1 2
	40					
	50					
	63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000				
	80					
	100					

P.969 <drawing>

Cylinder I.D.
16~40



Cylinder I.D.
50·63



Values in ( ) are for cylinder diameter 63.

P.970 <spec. table>

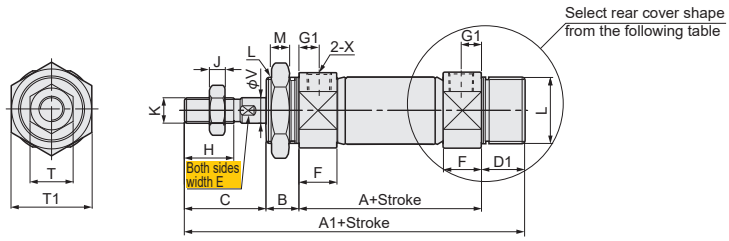
Delete column Y

Cylinder I.D. (mm)	L	M	P	Q	R	S	U	V	W	X	AR	AX	AY
16	M16×1.5	14	6	12	14	9	21	6	5	M5×0.8	6	25	22
20	M22×1.5	10	8	16	19	12	27	8	6	G1/8	7	33	29
25	M22×1.5	12	8	16	19	12	30	10	8	G1/8	7	33	29
32	M24×2.0	12	10	16	25	15	35	12	10	G1/8	8	37	32
40	M30×2.0	12	12	20	25	15	41.6	16	14	G1/8	8	47	41

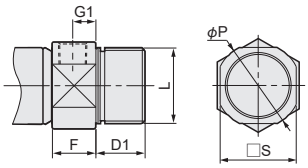
P.972 <spec. table>

Cylinder I.D. (mm)	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M22×1.25	10	8	16	19	10	12	29	8	6	G1/8	7	33	29
25	M22×1.5	12	8	16	19	12	12	34	10	8	G1/8	7	33	29
32	M24×2.0	12	10	16	25	12	15	39.5	12	10	G1/8	8	37	32
40	M30×2.0	12	12	20	25	12	15	49.5	16	14	G1/4	8	47	41

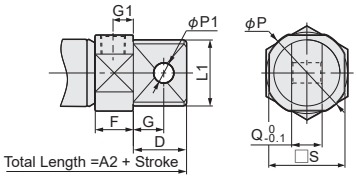
P.973 <drawing, spec. table>



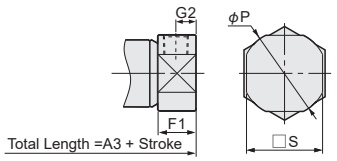
BA(Round End)



BB(Single Clevis)



BC(Flat End)



Material: Cylinder Block Material Stainless Steel

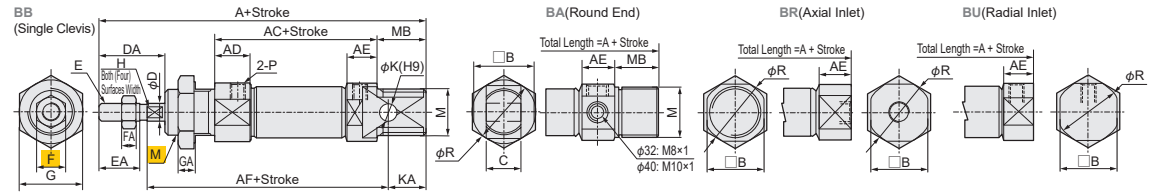
Part Number		❸Stroke (mm)	❹Cylinder End Type	❺Fixing Method*1	❻Rod End Joint*2	Magnetic Switch*3	
❶Type	❷Cylinder I.D. (mm)					❼Type	❽Quantity
E-MCPFS (Without Air Cushion) E-MCPFCS (With Air Cushion)	20 25 32 40	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	BA(Round End) BB(Single Clevis) BC(Flat End)	NB(Without Bracket) FB(Foot Bracket) FR(Flange) PB(Trunnion Support) CT(Trunnion Bracket)	NR(Without Joint) SJ(Single Clevis Joint) DJ(Double Clevis Joint) FJ(Floating Joint)	NS(Without Magnetic Switch) CGM(Reed Magnetic Switch) DGM(Electronic Magnetic Switch-2-Wire Type) DGN(Electronic Magnetic Switch-3-Wire NPN Type) DGP(Electronic Magnetic Switch-3-Wire PNP Type)	(With NS Type, no need to specify Qty) 1 2

P.974 <spec. table>

External Dimensions Table **Sizes with ( ) are for the type with air cushioning**

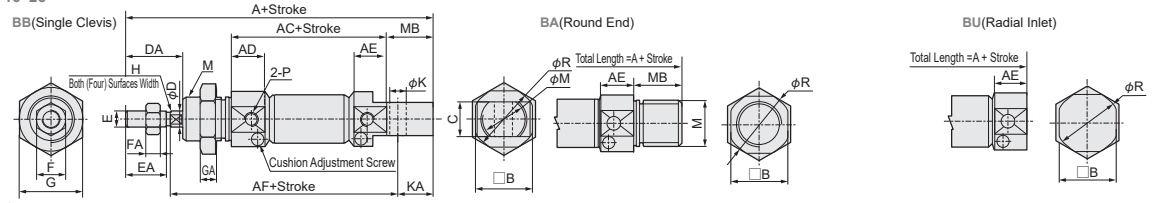
Cylinder I.D. (mm)	A	A1	A2	A3	B	C	D	D1	E	F	F1	G	G1	G2
20	62	116	124	103	14	27	21	13	6	14.5	14.5	12	7.5	7.5
25	62	120	128	108 (107)	14	31	21	13	8	14.5	14.5	12	7.5	8
32	64	122	136	110 (109)	14	31	27	13	10	14.5	14.5	15	7.5	8
40	88	154	165	138.5 (138)	16	34	27	16	14	21.5	21.5	15	11	11.5

P.975 <drawing>

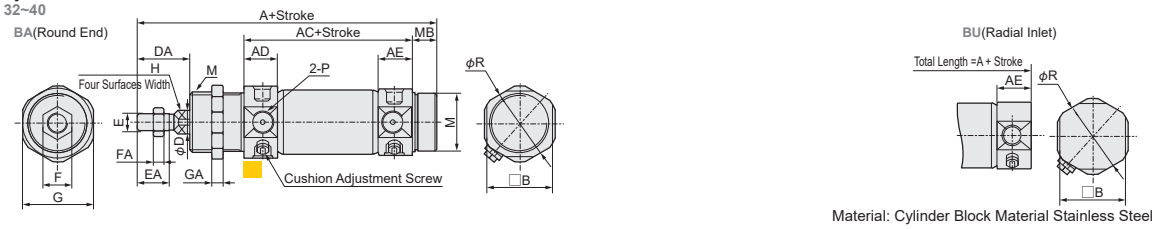


With Air Cushion E-MCPICS

Cylinder I.D.
16~25



Cylinder I.D.
32~40



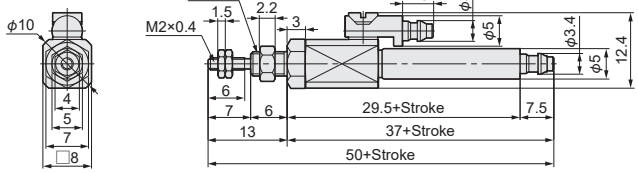
Material: Cylinder Block Material Stainless Steel

P.976 <spec. table>

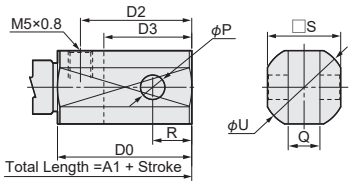
Cylinder I.D. (mm) / End Type	EA	F	FA	G	GA	H	K	KA	M	MB	P	R
10	10.5	7	3	17	6	-	4	10	M12×1.25	12	M5×0.8	17
12	14.5	10	5	22	6	5	6	14	M16×1.5	17	M5×0.8	20
16	14.5	10	5	22	6	5	6	13	M16×1.5	17	M5×0.8	22
20	18	12	6	29	7	6	8	11	M22×1.5	20	G1/8	29
25	20	17	6	29	7	8	8	11	M22×1.5	22	G1/8	33.5
32	18.5	17	6	36	7	10	-	-	M30×1.5	14	G1/8	37.5
40	22.5	17	7	46	8	14	-	-	M38×1.5	16	G1/4	46.5

P.977 <drawing>

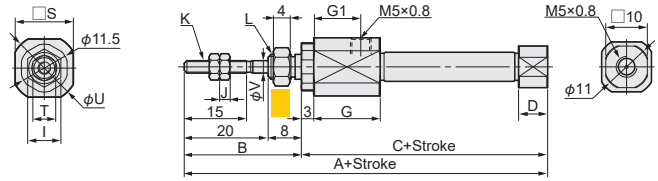
Cylinder I.D.
4



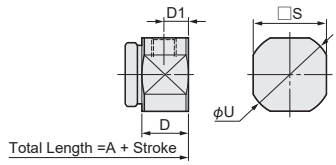
BD(Double Clevis)



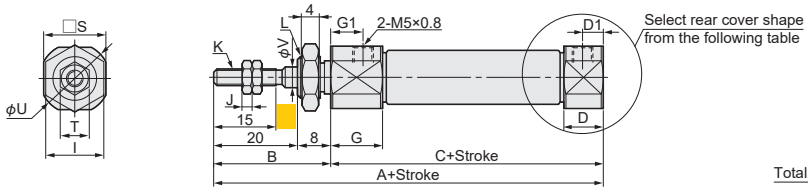
Cylinder I.D.
6



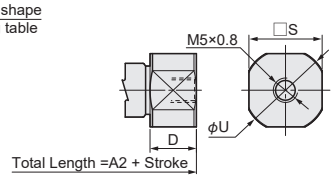
BU(Radial Inlet)



Cylinder I.D.
10~16



BR(Axial Inlet)



P.978 <spec. table>

External Dimensions Table Refer to the drawing for the dimensions of cylinder diameter ϕ4

Cylinder I.D. (mm)	A	A1	A2	B	C	D	D0	D1	D2	D3	G	G1
6	77.5	-	-	28	49.5	6.7	-	-	-	-	15.5	11.5
10	74	87	74	28	46	9.5	22.5	5	18	13	11.5	7.5
12	74	92	74	28	46	9.5	27.5	5	23	18	11.5	7.5
16	76	94	76	28	48	9.5	27.5	5	23	18	12	7.5

P.980 <spec. table>

Cylinder I.D. (mm)	A		AB	AC		B	C	CA	D	DA	E	EA	F	FA	G	GA	M	MA	P	PA	PB	R
	Non-magnetized	Magnetized		Non-magnetized	Magnetized																	
6	33	38	17	16	21	14	16.5	6	3	9	M3×0.5	7	5.5	2.4	13	4	M10×1.0	8	M3×0.5	5.5	6.5	2
8	38	43	20	18	23	14.5	17.5	7	4	12	M4×0.7	10	7	3	17	4	M12×1.0	8	M3×0.5	6	7	2
10	39.5	44.5	20	19.5	24.5	15	19	7	4	12	M4×0.7	10	7	3	17	4	M12×1.0	8	M3×0.5	6	7	2.5
12	43.5	48.5	24	19.5	24.5	17	21.5	8.5	6	14	M5×0.8	12	8	3	19	4	M14×1.0	10	M5×0.8	6.5	7.5	2.5
16	43.5	48.5	24	19.5	24.5	20	24.5	10	6	14	M5×0.8	12	8	3	19	4	M14×1.0	10	M5×0.8	6.5	7.5	3

P.981 <spec. table>

Part Number	Bracket		AA	AC	AD	AE	AF	AG	AH
❶Type	❷Type	❸Cylinder I.D. (mm)							
E-MCE	FB	32	158	142	8	47	32	24	32
		40	179	161	9	53	36	28	36
		50	190	170	10	65	45	32	45
		63	209	185	12	75	50	32	50
		80	248	210	19	95	63	41	63
		100	266	220	23	115	75	41	71

Shipped in pairs

Delete column A & C

P.982 <spec. table>

Part Number	Bracket		AA	BB	BC	BD	BG	BH	BJ
❶Type	❷Type	❸Cylinder I.D. (mm)							
E-MCPF	FB	20	7	3	20	8	25	40	118
		25	7	3	20	8	25	47	118
		40	7	3	23	10	30	54	154

Shipped in pairs

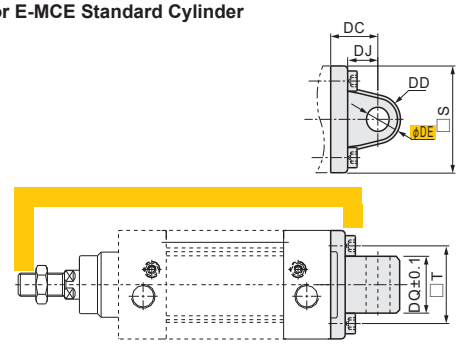
Cylinder Dia. 32 Universal Cylinder Dia. 25

P.983 <spec. table>

Part Number	Bracket		BB	BC	BD	BE	BF	BP	S	T
❶Type	❷Type	❸Cylinder I.D. (mm)								
E-MCC	FR	32	10	50	33	80	58	7	47	33
		40	10	55	36	90	70	7	53	37
		50	10	68	47	108	86	9	65	47
		63	12	78	56	120	98	9	75	56
		80	16	100	70	143	119	11	95	70
		100	16	120	84	162	138	11	115	84

P.985 <drawing, spec. table>

For E-MCE Standard Cylinder



Material: Cast Steel

Part Number	Bracket		S	T	DC	DD	DE	DJ	DQ
❶Type	❷Type	❸Cylinder I.D. (mm)							
E-MCE	SC	32	46.5	32.5	22	10.5	10	13	25.8
		40	54	38	25	12	12	16	27.8
		50	64	46.5	27	12	12	17	31.7
		63	75	56.5	32	15	16	22	39.7
		80	93	72	36	15.5	16	22	49.7
		100	110	89	41	20	20	27	59.7

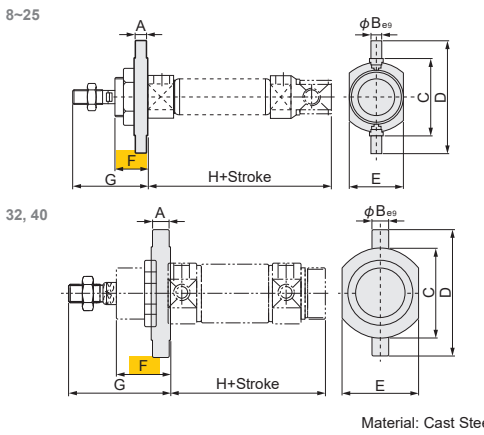
Delete column A & C

P.987 <spec. table>

Part Number	Support		CA	D	E	F	G	H	I	J	K	L	M	N
❶Type	❷Type	❸Cylinder I.D. (mm)												
E-MCE	CTB	32	40	11	9	60	80	52	12	20	50	62	77	12
		40	54	11	12	75	100	65	16	27	63	79	98	16
		50	54	11	12	75	100	75	16	31	75	91	110	16
		63	70	11	12	85	110	80	20	12	80	110	133	20
		80	70	11	12	85	110	112	20	54	110	130	153	20
		100	90	19	18	115	155	135	25	68	135	157	185	25

P.988 <drawing, spec. table>

For E-MCPI Pen Cylinder



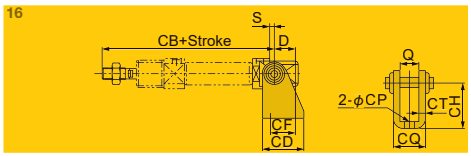
Material: Cast Steel

Part Number	Bracket		A	B	C	D	E	F	G	H
❶Type	❷Type	❸Cylinder I.D. (mm)								
E-MCPI	CT	10	6	4	26	38	20	12	28	58
		12	8	6	38	58	25	17	38	67
		20	8	6	46	66	32	20	44	82
		32	11	9	54	74	45	31.5	59.5	80.5
		40	12	10	64	84	55	36.5	70.5	103.5

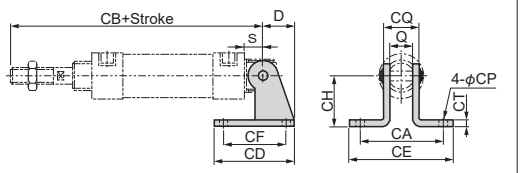
※Cylinder Dia. 16 Universal Cylinder Dia. 12, Cylinder Dia. 25 Universal Cylinder Dia. 20

P.989 <drawing, spec. table>

For E-MCPA/E-MCPAL Pen Cylinder

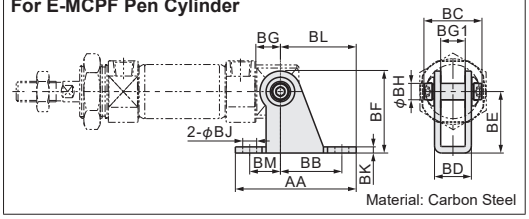


20~40



Material: Carbon Steel

For E-MCPF Pen Cylinder



Material: Carbon Steel

Part Number	Bracket		CA	CB	CD	CE	CF	CH	CT	CP	CQ	D	S	Q
❶Type	❷Type	❸Cylinder I.D. (mm)												
E-MCPA	PB	16	-	107	23	-	12	20	2	5.5	16	16	9	12
		20	51	128	48	67	32	32	2.5	7	21	21	12	16
		32	51	135	52	67	36	36	3	7	22	22	15	16
		40	55	137	56	71	40	40	3	7	26	26	15	20

Cylinder Dia. 25 Universal Cylinder Dia. 20, Cylinder Dia. 50, 60 Universal Cylinder Dia. 40

Part Number	Bracket		AA	BB	BC	BD	BE	BF	BG	BG1	BH	BK	BJ	BL	BM
❶Type	❷Type	❸Cylinder I.D. (mm)													
E-MCPF	PB	20	59	30	32	18.1	30	40	12	12.1	8	3	6.8	37	15
		32	75	40	44	28.1	40	53	15	20.1	10	4	9	50	15

Cylinder Dia. 25 Universal Cylinder Dia. 20, Cylinder Dia. 40 Universal Cylinder Dia. 32

Part Number	Bracket		D	Q	CA	CB	CD	CE	CF	CH	CP	CQ	CT
❶Type	❷Type	❸Cylinder I.D. (mm)											
E-MCPI	PB	10	11	8.1	16.4	76	20	-	12.5	24	4.5	12.1	2
		12	13	12.1	26	91	25	-	15	27	5.5	16.1	2
		20	16	16.1	35	115	32	-	20	30	7	21.1	2.5
		32	20	34.6	53.6	117	41	20	24	35	7	44.6	3
		40	27	42.6	65.6	146	52	28	30	40	9	54.6	3

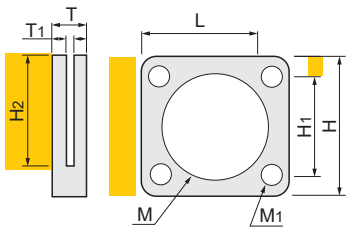
Cylinder Dia. 16 Universal Cylinder Dia. 12, Cylinder Dia. 25 Universal Cylinder Dia. 20

Delete column CR

P.990 <spec. table>

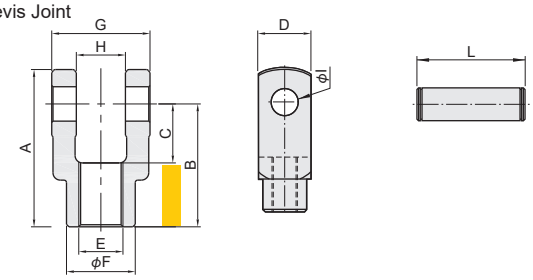
Magnetic Switch Type	A	B	C	D
G	25(26.8)	4.7(5.3)	3.2	4.4
H		4.6(5.2)	3	4
E		4.7(5.3)	5.2	6.3
J	10.5	12(21)	5.3	8.6

P.998 <drawing>



P.1003 <drawing, spec. table>

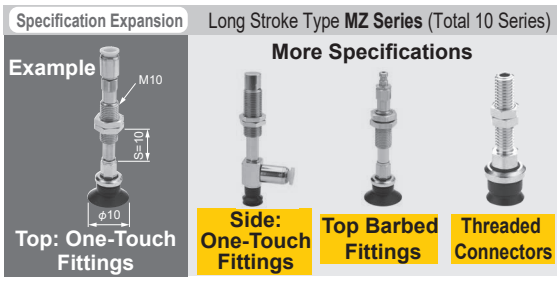
■Double Clevis Joint



Double Clevis Joint

Type	No.	A	B	C	D	E	F	G	H	I	L
E-MCCRY	M3-0.5	15.5	12	5	6	M3X0.5	6	6	3	3	9
	M4-0.7	22	16	8	8	M4X0.7	7	8	4	4	11.5
	M5-0.8	22	16	10	10	M5X0.8	9	10	5.3	5	14.6
	M6-1.0	28	21	10	12	M6X1.0	11	12	6.6	5	16.8
	M8-1.25	34	25	16.5	16	M8X1.25	15	16	8.3	8	21
	M10-1.25	41	30	19.5	20	M10X1.25	19	20	10.3	10	26.4
	M12-1.25	62	48	24	25.4	M12X1.25	23	25.4	12	12	32.4
	M14-1.5	42	30	14	22	M14X1.5	22	36	18.4	10	42.4
	M16-1.5	80	64	32	32	M16X1.5	30	32	16	16	39
	M18-1.5	56	40	20	28	M18X1.5	28	44	22.4	14	50.4
	M20-1.5	101	80	40	40	M20X1.5	42	44.4	20	20	53.4
	M22-1.5	71	50	27	38	M22X1.5	38	56	28.4	18	63.6
	M26-1.5	79	55	31	44	M26X1.5	44	64	32.4	22	72.6

P.1031 <product overview>



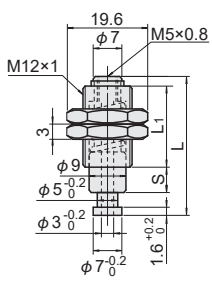
P.1034 <spec. table>

❹Cup Dia.	❷Fitting Type (L Shape)									
	B	D_2	E_1	E_2	L_2	L_3	Width Across H_1	Width Across H_2	M	S Stroke
2										
3	40				24					
4		10	17	12		13	10	8	M8×0.75	3
6	41				25					
8	39		18	13	23					
10	58				35					
15	59				36					
20	60				37					
25	61	16	20	18	38	20	17	12	M14×1.0	6
30										
40	64				41					
50	65				42					

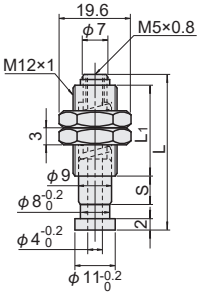
P.1049 <drawing>

■ Top Threaded Ports

Cup Dia. 10
Cup Dia. 1010
Cup Dia. 1015



Cup Dia. 20
Cup Dia. 2010
Cup Dia. 2015



P.1055 <spec. table>

■ Suction Cup Units and Female / Male Connector

Part Number		❸Suction Cup Material	❹Connector	Suction Cup Dimension			Connector M5 (M5×0.8)		Connector M6 (M6×1.0)		Connector FM5 (M5×0.8)		Connector FM6 (M6×1.0)	
❶Type	❷Cup Dia.			A_1	B_1	D_1	H	J	H	J	H	J	H	J
E-MZC	10	N (Nitrile Rubber) S (Silicon Rubber) GS (Conductive Silicon Rubber)	- (Suction Cup Units) M5 (Male Thread) M6 (Male Thread) FM5 (Female Thread) FM6 (Female Thread)	12	13	13	38	21	43	26	21	6	21	6
	13			15										
	16			18	12.5		38.5		43.5		21.5		21.5	
	20		- (Suction Cup Units) M6 (Male Thread) FM5 (Female Thread) FM6 (Female Thread)	23	14	15	-	-	45		23		23	
	25			28										
	32			35	14.5				45.5		23.5		23.5	
	40		- (Suction Cup Units) M6 (Male Thread) FM6 (Female Thread)	43	18.5	18			50.5		-	-	32	
	50			53	19.5				51.5				33	

P.1066 <spec. table>

Part Number		❸Suction Cup Material	❹Connector	A	B	C	D	E	F
❶Type	❷Cup Dia.								
E-MZ2MU	2	N (Nitrile Rubber) S (Silicon Rubber) GS (Conductive Silicon Rubber)	- (Suction Cup Units) M3 (Male Thread)	2.4	4	M3×0.5	4	9	-
	3.5			3.8					
	4			4.8					
	5			5.8					
	6		- (Suction Cup Units) M5 (Male Thread) FM5 (Female Thread)	6.7	6.5	M5×0.8	7.5	11.5	14.5
	8			8.8	7		8	12	15
	10			10.6					
	15			15.6	8		9	13	16

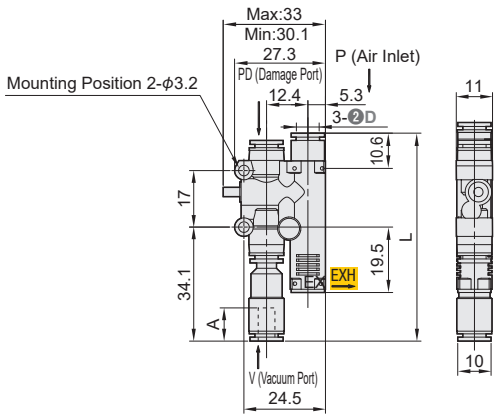
P.1069 <material>

Cushioning Stroke	Material	Surface Treatment
3/3-FM5	Aluminum Alloy	Clear Anodized
Other	Stainless Steel	-

P.1070 <material>

D	Material of Main Body	Surface Treatment
4~6	Stainless Steel	-
01	Aluminum Alloy	Clear Anodized

P.1071 <drawing>



P.1074 <spec. table>

Part Number		Nozzle Dia. (mm)	P	C	L_1	L_2	Vacuum Degree (-kPa)	Suction Flow (L/min(ANR))	Flow Consumption (L/min(ANR))
❶Type	❷D								
E-VUB	4	0.5	9.7	11	8	18	88	6.5	12
	6	0.7	10.8	11.6	7.5	17.5	90	12	22

P.1078 <spec. table>

Part Number			❹Number of Manifolds Used	Air Inlet Port	Vacuum Port	Air Consumption L/min	Vacuum Degree -kPa
❶Type	❷No.	❸Vacuum Pressure Switch					
E-MZK	10 (Standard)	- (Without Switch) N (NPN Output)	S (Single Item) 2F~10F (Multi-manifold)	6	6	33	90
	15 (High Flow Type)				8	68	88

■ Specifications

Type		E-MZK
Rated Pressure Range		-0.100~1.000MPa
Set Pressure Range		-0.105~1.000MPa
Withstanding Pressure		1.5MPa
General Gas		Air, non-corrosive, non-combustible
Pressure Unit Setting Minimum Scale	kPa	-
	MPa	0.001
	kgf/cm²	0.01
	bar	0.01
	psi	0.1
	inHg	-
	mmHg	-
Power Voltage		12~24VDC±10%, Peak value (P-P) 10% or less
Current Consumption		≤40mA (Without load)
Switching Output	Output Mode	2NPN or 2PNP open collector output
	Maximum Load Current	125mA
	Power Voltage	30VDC (NPN Output), 24VDC (PNP Output)
	Internal Pressure Drop	≤1.5V
Response Time		≤2.5ms (false-operation prevention function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)
Output Short Circuit Protection		Provided
Linear Analog Output	Output Voltage	0.6~5V±2.5%F.S. (Within rated pressure range)
	Output Impedance	About 1kΩ
	Linearity	±1%F.S.
Display		3 1/2-digit LED 7-segment display (red)
Operation Display Light		OUT1 Green/OUT2 Red
Repetitive Motion Accuracy		About 0.2 seconds
Display Accuracy		±2% F.S. ± 1 digit (at ambient temperature: 25+3°C)
Repetitive Display Accuracy		±0.2%F.S. + 1 digit
Environment Resistance	Protection Rating	IP40
	Ambient Temperature	Operation: 0~50°C, Storage: -10~60°C (no dew condensation, no freezing)
	Ambient Humidity	Operation & Storage: 35~85%RH (no dew condensation)
	Withstand Voltage	1000VAC 1 minute (between lead wire and plastic case)
	Insulation Impedance	50MΩ or more (500VDC) (between lead wire and plastic case)
	Vibration Resistance	Total amplitude 1.5mm,10Hz-150Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z
	Impact Resistance	980m/s² (100G), 3 times each direction of X, Y and Z
Temperature Characteristics		±2%F.S. comparison reference temperature 25°C (within the temperature range of 0~50°C)
Wire Specifications		Oil-resistant PVC wire (0.15mm²)
Weight		About 55g (Including 2 meters of wire)

■ Vacuum flow rate (L/min) for different vacuum degrees (-kPa)

Part Number	Air Supply Pressure (bar)	Air Consumption (L/min)	0	10	20	30	40	50	60	70	80	90
Standard	5	33	41.0	31.0	20.5	13.3	9.5	6.5	4.5	3.1	2.5	2.0
High Flow Type		68	68.0	55.0	43.0	27.0	15.0	8.3	5.2	4.3	2.3	-

P.1079 <spec. table>

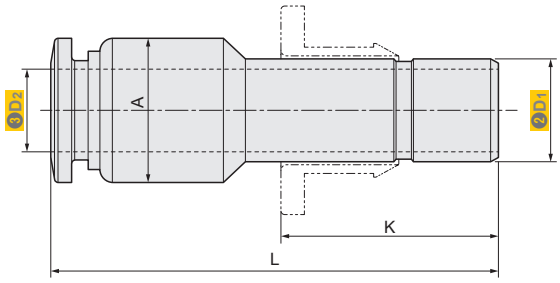
No.	Vacuum flow rate (L/min) for different vacuum degrees (-kPa)									Pumping time (S/L) for different vacuum degrees (-kPa)							
	0	10	20	30	40	50	60	70	80	10	20	30	40	50	60	70	80
5	37	26	16	14	10	8	6	2.4	0.66	0.218	0.056	1	1.576	2.356	3.44	5.27	10.216
10	74	52	31	28	20	16	12	4.8	1.32	0.109	0.25	0.5	0.788	1.178	1.72	2.635	5.158
20	149	99	62	54	40	32	22	10.5	2.7	0.054	0.139	0.25	0.394	0.589	0.86	1.317	2.579
30	220	147	92	73	60	47	32	16	4.1	0.041	0.104	0.186	0.295	0.441	0.647	0.898	1.935

P.1082 <spec. table>

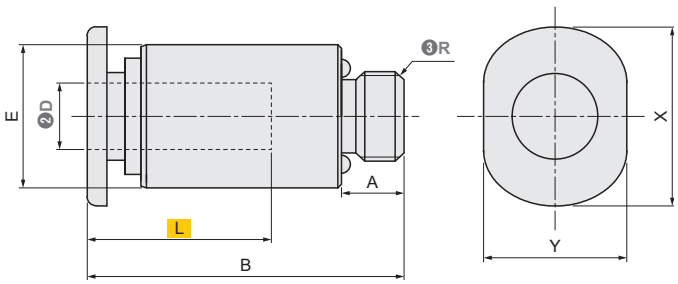
■ Specifications

Type	Positive Pressure Type (M)	Negative Pressure Type (V)
Rated Pressure Range	0~1.0MPa	-100~0kPa
Set Pressure Range	-0.1~1.0MPa	-101.3~+10kPa
Withstanding Pressure	1.5MPa	300kPa

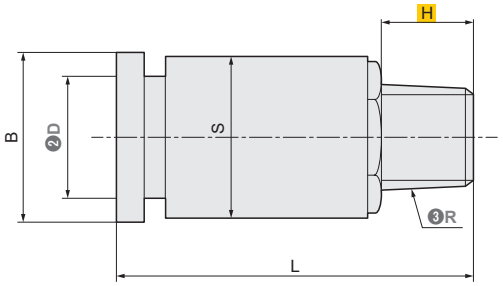
P.1110 <drawing>



P.1113 <drawing>

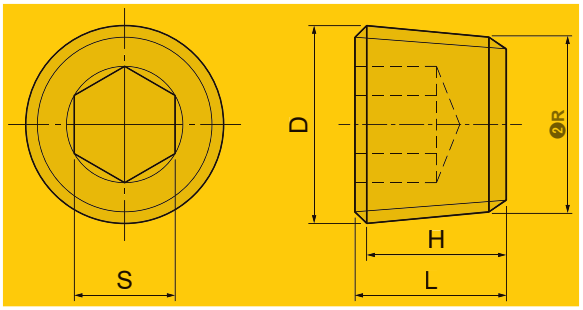


P.1119 <drawing, spec. table>



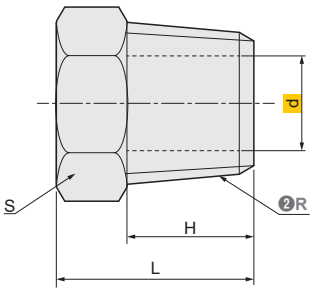
Part Number		❸Connecting Thread Nominal R	Thread Size R	B	L	Thread Length H	S
❶Type	❷Applicable Tube O.D. D						
	4	M5	M5	8.5	19.2	4	7.8
		1	R1/8	8.8	15.9	7	9
		2	R1/4	8.8	16.5	9	9
	6	M5	M5	11.5	23	4	11.3
		1	R1/8	11.5	22.4	7	11.3
		2	R1/4	11.5	19.4	9	11.3
		3	R3/8	11.5	19.4	10	11.3
		4	R1/2	11.5	20.9	11	11.3

P.1131 <drawing, spec. table>



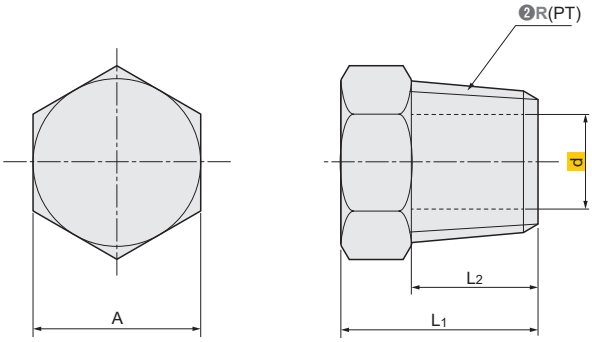
Part Number		Thread Size R	L	H	D	S
❶Type	❷Connecting Thread Nominal R					
E-PACK-MBPB (20~50 pcs included)	1	R1/8	8	5	12	4
	2	R1/4	10	7	15.6	6
	3	R3/8	11	7.5	19	10
	4	R1/2	12	8.5	24	12

P.1132 <drawing, spec. table>



Part Number		Thread Size R	L	H	S	d
❶Type	❷Connecting Thread Nominal R					
E-PACK-MBPZ (20 pcs included)	1	R1/8	11	7	10	6
	2	R1/4	12.5	8.5	14	9
	3	R3/8	13.5	9	17	12.5
	4	R1/2	14.5	10	21	15.4

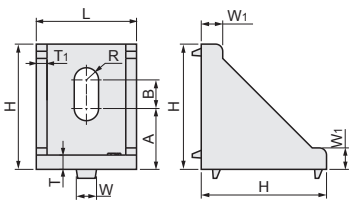
P.1149 <drawing, spec. table>



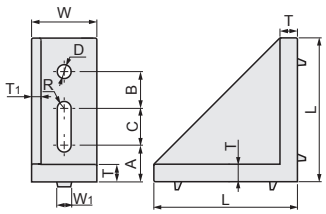
Part Number		Thread Size R	L1	L2	A	d
❶Type	❷Connecting Thread Nominal R					
E-PACK-MSFPZ (SUS304) / E-PACK-MSSPZ (SUS316) (20 pcs included)	1	R1/8	12.5	7.5	12	6
	2	R1/4	14.5	9.5	14	8
	3	R3/8	15.5	10.5	17	10.6
	4	R1/2	17.5	12.5	21	14.5

P.1215 <drawing>

Two-Sided Type 6-2028 / 8-3030 / 8-4040 / 10-4545

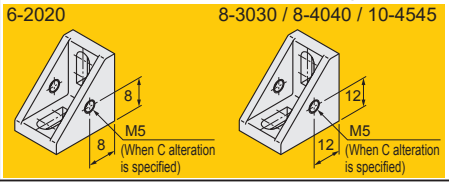


One-Sided Type 8-3060 / 8-4080 / 10-4590

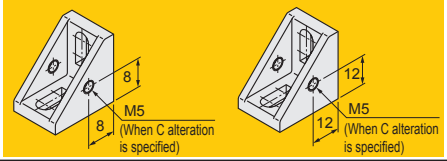


P.1216 <alterations>

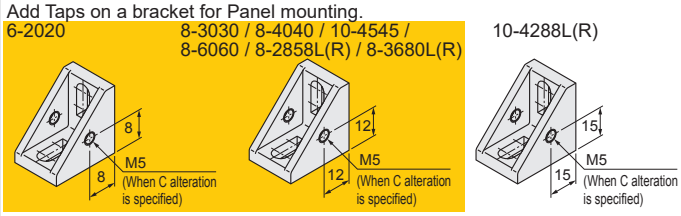
Alterations	Code	Spec.
Mounting Hole Alteration for Panel	C	Add Taps on a bracket for Panel mounting. 6-2020 / 8-3030 / 8-4040 / 10-4545



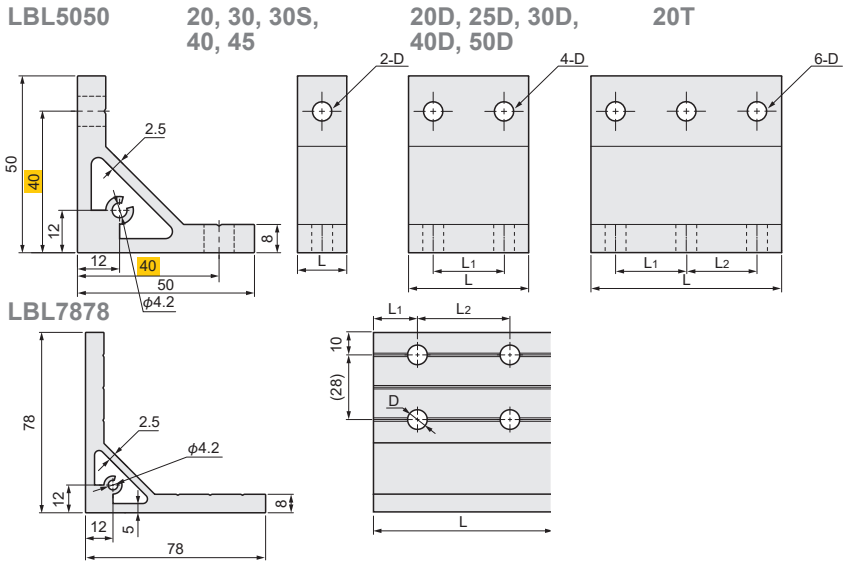
P.1218 <alterations>

Alterations	Code	Spec.
Mounting Hole Alteration for Panel	C	Add Taps on a bracket for Panel mounting. 6-2020 / 8-3030 / 8-4040 / 10-4545 

P.1220 <alterations>

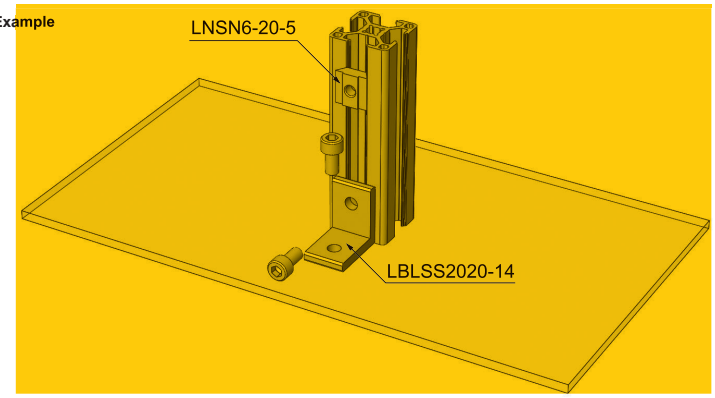
Alterations	Code	Spec.
Mounting Hole Alteration for Panel	C	Add Taps on a bracket for Panel mounting. 6-2020 / 8-3030 / 8-4040 / 10-4545 / 8-6060 / 8-2858L(R) / 8-3680L(R) / 10-4288L(R) 

P.1221 <drawing>

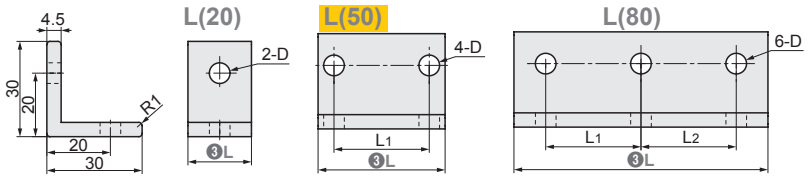


P.1222 <example>

Example

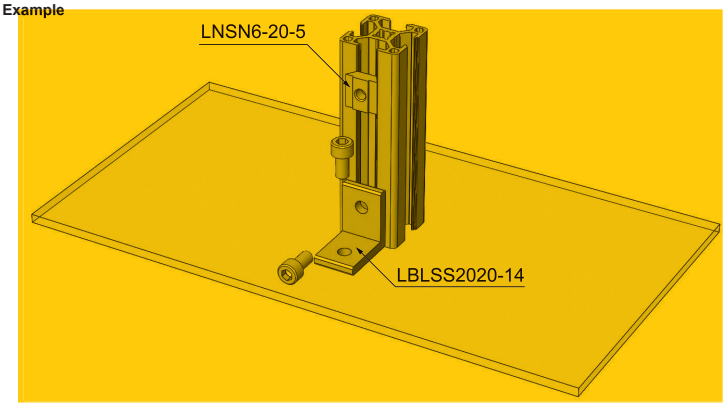


P.1223 <drawing, spec. table, example>

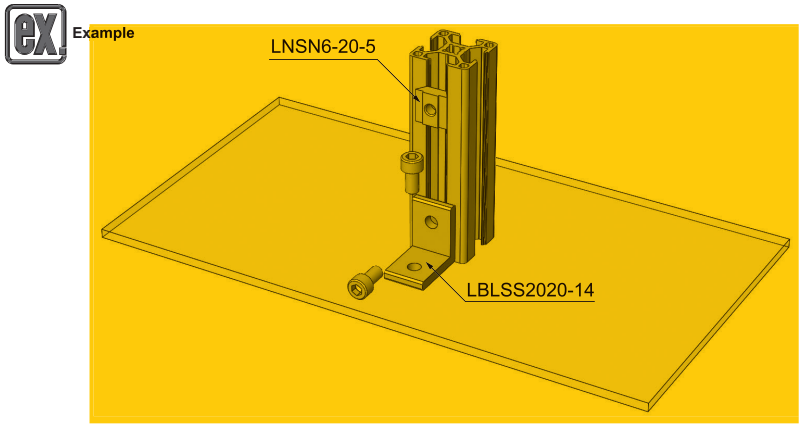


Part Number		❸L	Applicable Frame Size	L_1	L_2	D
❶Type	❷No.					
LBLSS	3030	20	3030	-	-	ϕ6.5
		50	3060	30		
		80	3090	30	30	

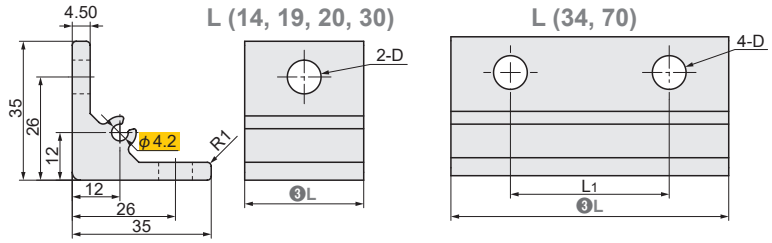
Example



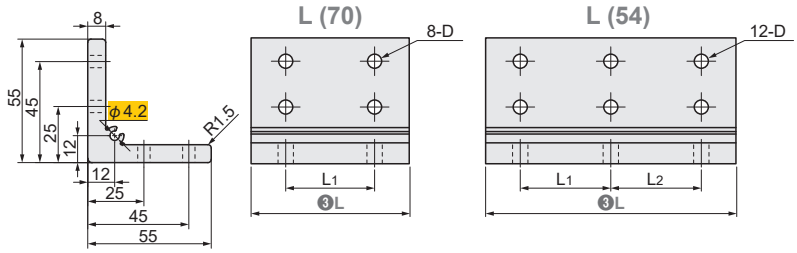
P.1224 <example>



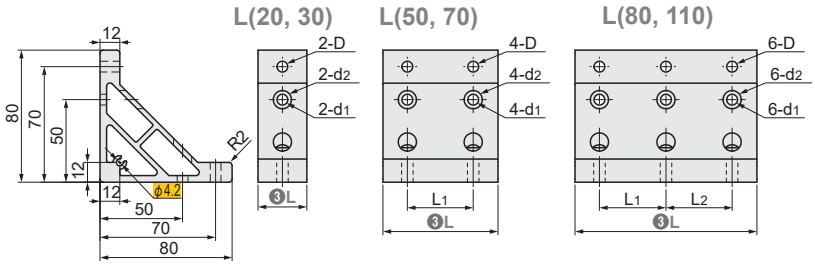
P.1225 <drawing>



P.1226 <drawing>



P.1227 <drawing>



P.1258 <spec. table>

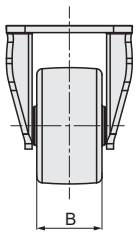
Part Number			❸Applicable Frame	❹Color	❺QTY per Package	Width A	Length B	Thickness C	Applicable Frame
❶Type	Types	❷Slot Width							
LCEC	Square Shape	6	2020	B (Black)	20P	20	-	3	2020
		8	3030			30		4	3030
			4040			40			4040
			5050		10P	50			8-5050
			6060		20P	60			8-6060
			8080		10P	80			8080
		10	4545		20P	45			4545
			5050		10P	50			10-5050
			6060			60			10-6060
			9090			90			9090
	Rectangle Shape	6	2040	G (Light Grey)	20P	20	40	3	2040
		8	3060			30	60	4	3060
			4060			40			4060
			4080				80		4080
		10	4560		10P	45	60		4560
			4590				90		4590
LCECR	Single Radius Shape	6	2020		20P	20	-	3	2020R
		8	3030		10P	30		4	3030R
			4040			40			4040R
		10	4545			45			4545R
LCEC	L Shape	8	8840		20P	88	40		8840

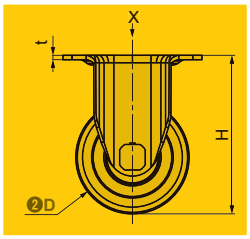
Light gray models are only available for 2020, 3030, 4040 and 4080 types and are sold in 20P packages. Ligth gray for other models can also be specially ordered if necessary, with a minimum order quantity of 50 pcs, for example: LCEC8-4060-G.

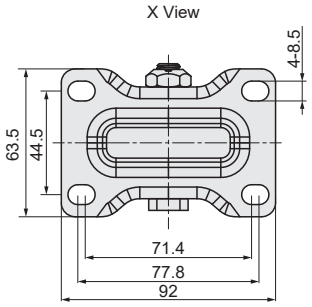
P is the abbreviation of pcs/pack, for example: 20P represents 20 pcs/pack.

P.1316 <drawing>

D=65 / 75mm

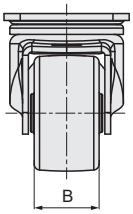


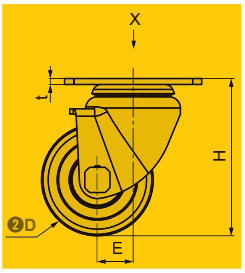


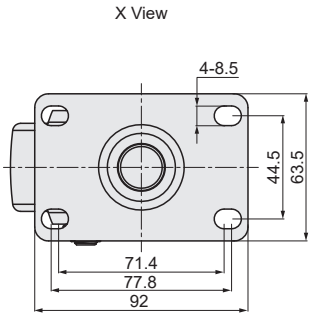


P.1317 <drawing>

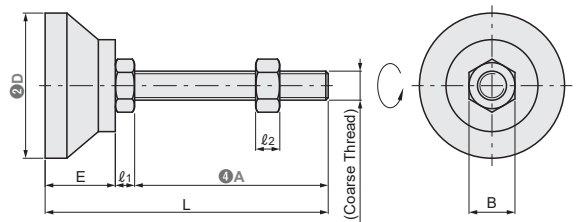
D=65 / 75mm







P.1347 ～ P.1360 <drawing>



❓The bottom of the product is hollow.

P.1351 <material>

Type	Material		Surface Treatment	
	Thread	Base	Thread	Base
C-CFJFN	Steel (Q235)	Steel (Q235)	Zinc Plating	Zinc Plating
C-CFJFNS	SUS304	SUS304	Natural Color	-

P.1356 <material>

Type	Surface Treatment	
	Thread	Base
C-CFJSN	Zinc Plating	Electro Plating (Black)
C-CFJSNS	Natural Color	Electrolytic polishing

P.1361 <contents>

Hinges (Steel / Stainless Steel)

P.1383

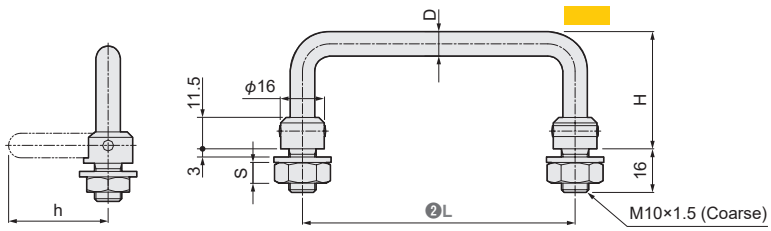
Flat Hinges HHSN
P.1385

Flat Hinges Mounting Pitch Fixed Type
P.1386

Stainless Steel Hinges Tapered Hole
P.1387

Stainless Steel Hinges
P.1388

P.1377 <drawing>



P.1379 <spec. table>

Part Number		Screw Mounting Pitch P	S	L_1	L_2
❶Type	❷L				
C-NUWAUNS	90	74	58	63	60
	120	100	86	93	87

MiSUMi economy

Stainless Steel Hinges

Representative model: C-SHHPSKN5-2

Save Up to 55% vs Standard Type

104 THB

Shipping from 1 day

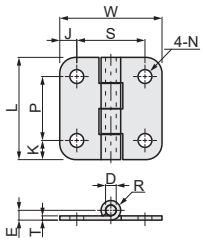
Volume Discount

Quantity	2~29	30~49	50~
Discount	Unit Price	15%	30%

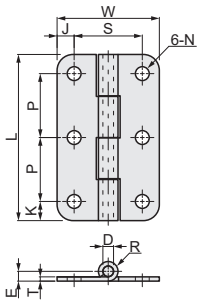
CAD 2D 3D

Shipping days may differ by Quantity.
Quantity of volume discount above is for representative Part No. It may differ by the Part.

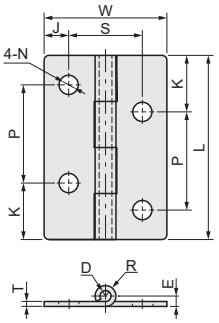
❸Symmetrical Type One Side 2 Holes



❸Symmetrical Type One Side 3 Holes



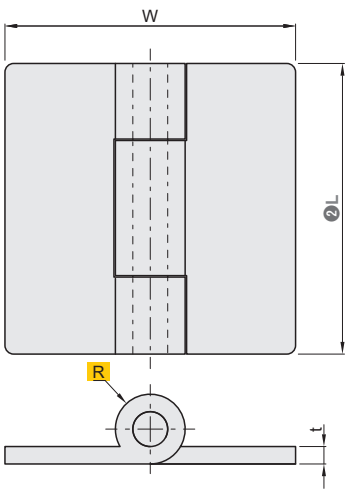
❸Asymmetric Type One Side 2 Holes



Material: SUS304
Surface Treatment: Sandblasting Grinding

Part Number		❸ Number of holes on one side	Type	* Allowable Load		Length L	Width W	K	P	J	S	N	T	E	R	D
❶Type	❷No.			kg	N											
C-SHHPSKN	5	2	Symmetrical Type	9	88	41	36	8	25	7.5	21	5.5	2	4.6	4.6	5
		3		11	108	66										
	6	2		12	117	48	48	9	30	8	32	6.5				
		3		15	147	78										
	8	2		25	245	59	62	11	37	10	42		3	5.6	5.6	
		3		38	372	96								6.1	6.1	6
C-SHHPSKN	5P	2	Asymmetric Type	9	88	40	35	15	20	6	23	4.2	1.5	3	3	3
	6P	2		15	147	75	50	23	40	10	30	5	2	4.5	4.5	4.5

P.1391 <drawing, spec. table>



Part Number		Width W	R	t	* Allowable Load (N)
❶Type	❷Length L				
C-HHSYZN	50	50	6	3	196
	60	64			245
	75	70			294
	100	100	10	4	588
	125				686
	150	120			882

P.1424 <material>

Color	Surface Treatment		
	Base	Knobs	Bolt
S (Silver)	Sliver Paint	Sliver Paint	Zinc Plating
B (Black)	Black Paint	Black Paint	

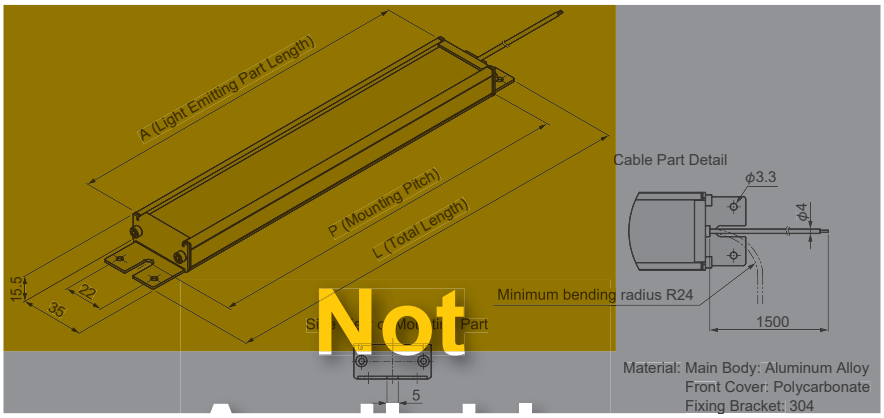
P.1426 <material>

Color	Surface Treatment		
	Base	Knobs	Bolt
S (Silver)	Sliver Paint	Sliver Paint	Zinc Plating
B (Black)	Black Paint	Black Paint	

P.1428 <material>

Lock Body Color	Surface Treatment		
	Base	Knobs	Bolt
S (Silver)	Sliver Paint	Sliver Paint	Zinc Plating
B (Black)	Black Paint	Black Paint	

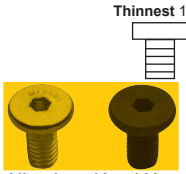
P.1470 <drawing>



P.1491 <contents>

Screws

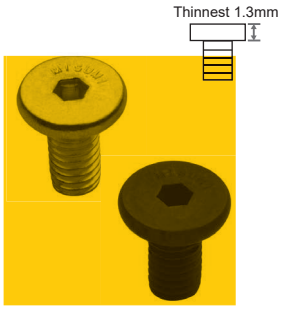
P.1496

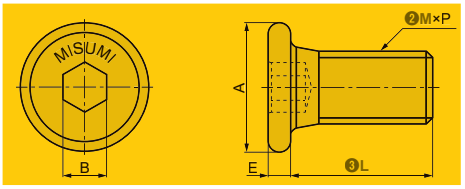


Ultra Low Head Hex Socket Head Cap Screws
P.1496

Ultra Low Cross Recessed Flat Head Screws
P.1497

P.1496 <product image, drawing>





P.1503 <ordering example>

Ordering Example

Please order after selecting part number and parameters according to the selection steps ❶ to ❹.

Part Number (❶Type · ❷Thickness T)	-	❸Set	-	❹Thickness Combination
C-SFGSML0.01				
C-SHIM	-	3	-	C