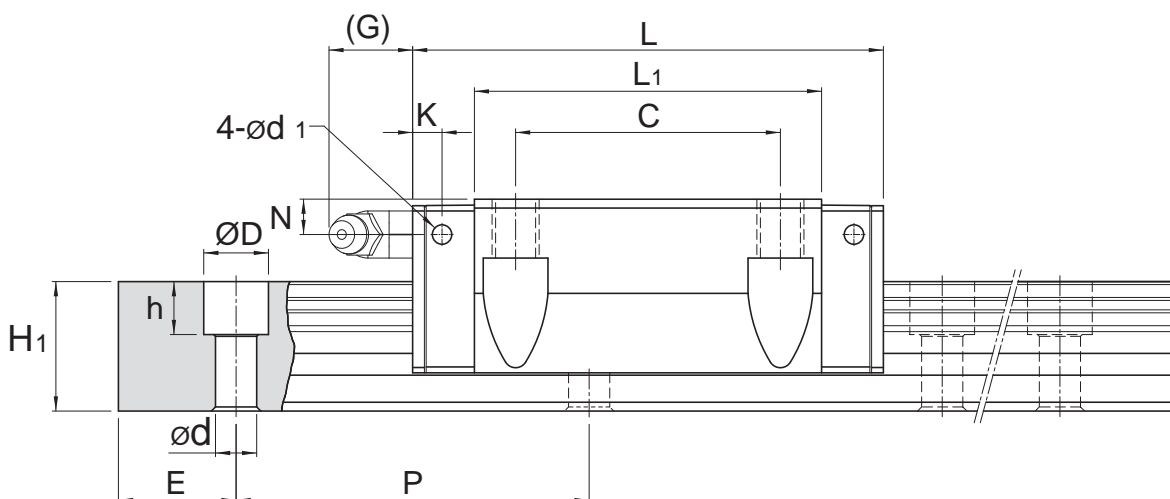


# Dimensions of MSA-E / MSA-LE

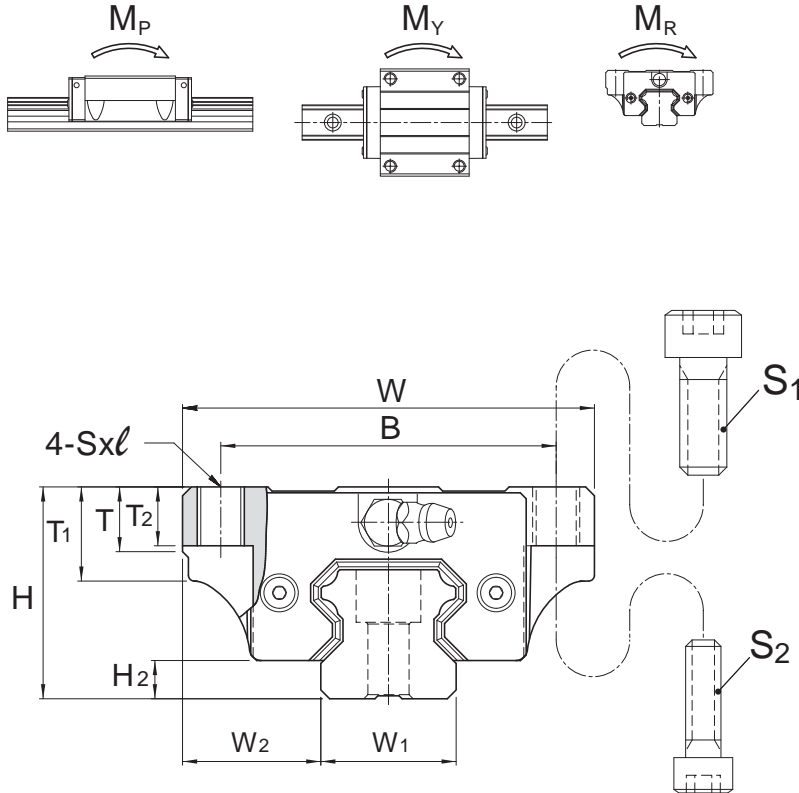


Unit: mm

Model No.	External dimension					Carriage dimension											Grease Nipple
	Height H	Width W	Length L	W <sub>2</sub>	H <sub>2</sub>	B	C	S × ℓ	L <sub>1</sub>	T	T <sub>1</sub>	T <sub>2</sub>	N	G	K	d <sub>1</sub>	
<b>MSA 15 E</b>	24	47	56.3	16	4.2	38	30	M5×7	39.3	7	11	7	4.3	7	3.2	3.3	G-M4
<b>MSA 20 E</b> MSA 20 LE	30	63	72.9 88.8	21.5	5	53	40	M6×10	51.3 67.2	7	10	10	5	12	5.8	3.3	G-M6
<b>MSA 25 E</b> MSA 25 LE	36	70	81.6 100.6	23.5	6.5	57	45	M8×10	59 78	11	16	10	6	12	5.8	3.3	G-M6
MSA 30 E MSA 30 LE	42	90	97 119.2	31	8	72	52	M10×10	71.4 93.6	11	18	10	7	12	6.5	3.3	G-M6
<b>MSA 35 E</b> MSA 35 LE	48	100	111.2 136.6	33	9.5	82	62	M10×13	81 106.4	13	21	13	8	11.5	8.6	3.3	G-M6
MSA 45 E MSA 45 LE	60	120	137.7 169.5	37.5	10	100	80	M12×15	102.5 134.3	13	25	15	10	13.5	10.6	3.3	G-PT 1/8
<b>MSA 55 E</b> MSA 55 LE	70	140	161.5 199.5	43.5	13	116	95	M14×17	119.5 157.5	19	32	17	11	13.5	8.6	3.3	G-PT 1/8
MSA 65 E MSA 65 LE	90	170	199 253	53.5	15	142	110	M16×23	149 203	21.5	37	23	19	13.5	8.6	3.3	G-PT 1/8

Note: The basic dynamic load rating C of ball type is based on the 50 km for nominal life. The conversion between C for 50 km and C<sub>100</sub> for 100 km is C=1.26 × C<sub>100</sub>.

Note\*: Single: Single carriage/ Double: Double carriages closely contacting with each other.

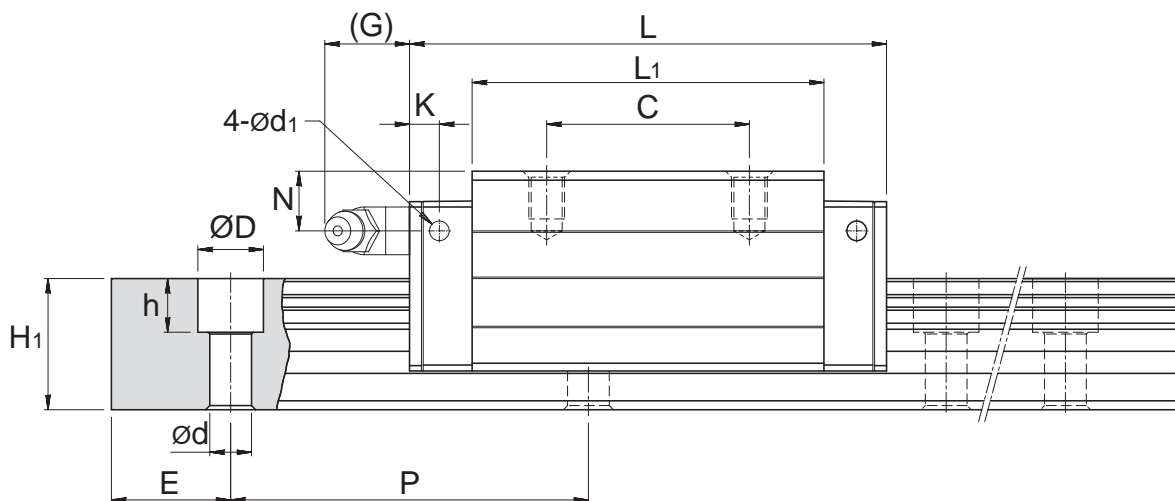


Model No.	Bolt Size	
	S <sub>1</sub>	S <sub>2</sub>
MSA 15	M5	M4
MSA 20	M6	M5
MSA 25	M8	M6
MSA 30	M10	M8
MSA 35	M10	M8
MSA 45	M12	M10
MSA 55	M14	M12
MSA 65	M16	M14

Unit: mm

Model No.	Rail dimension					Basic load rating		Static moment rating				Weight		
	Width W <sub>1</sub>	Height H <sub>1</sub>	Pitch P	E std.	D × h × d	Dynamic C kN	Static C <sub>o</sub> kN	M <sub>p</sub> kN-m		M <sub>y</sub> kN-m		M <sub>r</sub> kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
MSA 15 E	15	15	60	20	7.5×5.3×4.5	11.8	18.9	0.12	0.68	0.12	0.68	0.14	0.18	1.5
MSA 20 E	20	18	60	20	9.5×8.5×6	19.2	29.5	0.23	1.42	0.23	1.42	0.29	0.4	2.4
MSA 20 LE						23.3	39.3	0.39	2.23	0.39	2.23	0.38	0.52	
MSA 25 E	23	22	60	20	11×9×7	28.1	42.4	0.39	2.20	0.39	2.20	0.48	0.62	3.4
MSA 25 LE						34.4	56.6	0.67	3.52	0.67	3.52	0.63	0.82	
MSA 30 E	28	26	80	20	14×12×9	39.2	57.8	0.62	3.67	0.62	3.67	0.79	1.09	4.8
MSA 30 LE						47.9	77.0	1.07	5.81	1.07	5.81	1.05	1.43	
MSA 35 E	34	29	80	20	14×12×9	52.0	75.5	0.93	5.47	0.93	5.47	1.25	1.61	6.6
MSA 35 LE						63.6	100.6	1.60	8.67	1.60	8.67	1.67	2.11	
MSA 45 E	45	38	105	22.5	20×17×14	83.8	117.9	1.81	10.67	1.81	10.67	2.57	2.98	11.5
MSA 45 LE						102.4	157.3	3.13	16.95	3.13	16.95	3.43	3.9	
MSA 55 E	53	44	120	30	23×20×16	123.6	169.8	3.13	17.57	3.13	17.57	4.50	4.17	15.5
MSA 55 LE						151.1	226.4	5.40	28.11	5.40	28.11	6.00	5.49	
MSA 65 E	63	53	150	35	26×22×18	198.8	265.3	6.11	33.71	6.11	33.71	8.36	8.73	21.9
MSA 65 LE						253.5	375.9	11.84	57.32	11.84	57.32	11.84	11.89	

# Dimensions of MSA-S / MSA-LS

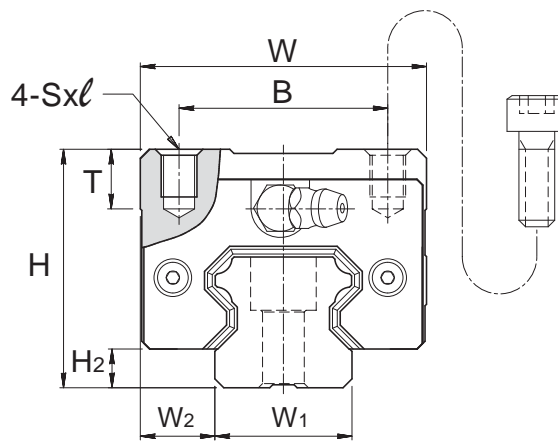
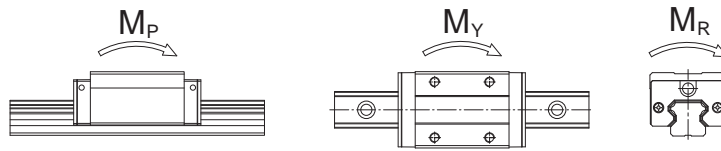


Unit: mm

Model No.	External dimension					Carriage dimension										Grease Nipple
	Height H	Width W	Length L	W <sub>2</sub>	H <sub>2</sub>	B	C	S × l	L <sub>1</sub>	T	N	G	K	d <sub>1</sub>		
<b>MSA 15 S</b>	28	34	56.3	9.5	4.2	26	26	M4×5	39.3	7.2	8.3	7	3.2	3.3	G-M4	
<b>MSA 20 S</b> <b>MSA 20 LS</b>	30	44	72.9 88.8	12	5	32	36 50	M5×6	51.3 67.2	8	5	12	5.8	3.3	G-M6	
<b>MSA 25 S</b> <b>MSA 25 LS</b>	40	48	81.6 100.6	12.5	6.5	35	35 50	M6×8	59 78	10	10	12	5.8	3.3	G-M6	
<b>MSA 30 S</b> <b>MSA 30 LS</b>	45	60	97 119.2	16	8	40	40 60	M8×10	71.4 93.6	11.7	10	12	6.5	3.3	G-M6	
<b>MSA 35 S</b> <b>MSA 35 LS</b>	55	70	111.2 136.6	18	9.5	50	50 72	M8×12	81 106.4	12.7	15	11.5	8.6	3.3	G-M6	
<b>MSA 45 S</b> <b>MSA 45 LS</b>	70	86	137.7 169.5	20.5	10	60	60 80	M10×17	102.5 134.3	16	20	13.5	10.6	3.3	G-PT 1/8	
<b>MSA 55 S</b> <b>MSA 55 LS</b>	80	100	161.5 199.5	23.5	13	75	75 95	M12×18	119.5 157.5	18	21	13.5	8.6	3.3	G-PT 1/8	
<b>MSA 65 S</b> <b>MSA 65 LS</b>	90	126	199 253	31.5	15	76	70 120	M16×20	149 203	23	19	13.5	8.6	3.3	G-PT 1/8	

Note: The basic dynamic load rating C of ball type is based on the 50 km for nominal life. The conversion between C for 50 km and C<sub>100</sub> for 100 km is C=1.26 × C<sub>100</sub>.

Note\*: Single: Single carriage/ Double: Double carriages closely contacting with each other.



Unit: mm

Model No.	Rail dimension					Basic load rating		Static moment rating				Weight		
	Width W <sub>1</sub>	Height H <sub>1</sub>	Pitch P	E std.	D × h × d	Dynamic C kN	Static C <sub>0</sub> kN	M <sub>p</sub> kN-m		M <sub>y</sub> kN-m		M <sub>r</sub> kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
<b>MSA 15 S</b>	15	15	60	20	7.5×5.3×4.5	11.8	18.9	0.12	0.68	0.12	0.68	0.14	0.18	1.5
<b>MSA 20 S</b> <b>MSA 20 LS</b>	20	18	60	20	9.5×8.5×6	19.2 23.3	29.5 39.3	0.23 0.39	1.42 2.23	0.23 0.39	1.42 2.23	0.29 0.38	0.3 0.39	2.4
<b>MSA 25 S</b> <b>MSA 25 LS</b>	23	22	60	20	11×9×7	28.1 34.4	42.4 56.6	0.39 0.67	2.20 3.52	0.39 0.67	2.20 3.52	0.48 0.63	0.52 0.68	3.4
<b>MSA 30 S</b> <b>MSA 30 LS</b>	28	26	80	20	14×12×9	39.2 47.9	57.8 77.0	0.62 1.07	3.67 5.81	0.62 1.07	3.67 5.81	0.79 1.05	0.86 1.12	4.8
<b>MSA 35 S</b> <b>MSA 35 LS</b>	34	29	80	20	14×12×9	52.0 63.6	75.5 100.6	0.93 1.60	5.47 8.67	0.93 1.60	5.47 8.67	1.25 1.67	1.45 1.9	6.6
<b>MSA 45 S</b> <b>MSA 45 LS</b>	45	38	105	22.5	20×17×14	83.8 102.4	117.9 157.3	1.81 3.13	10.67 16.95	1.81 3.13	10.67 16.95	2.57 3.43	2.83 3.7	11.5
<b>MSA 55 S</b> <b>MSA 55 LS</b>	53	44	120	30	23×20×16	123.6 151.1	169.8 226.4	3.13 5.40	17.57 28.11	3.13 5.40	17.57 28.11	4.50 6.00	4.12 4.91	15.5
<b>MSA 65 S</b> <b>MSA 65 LS</b>	63	53	150	35	26×22×18	198.8 253.5	265.3 375.9	6.11 11.84	33.71 57.32	6.11 11.84	33.71 57.32	8.36 11.84	6.43 8.76	21.9