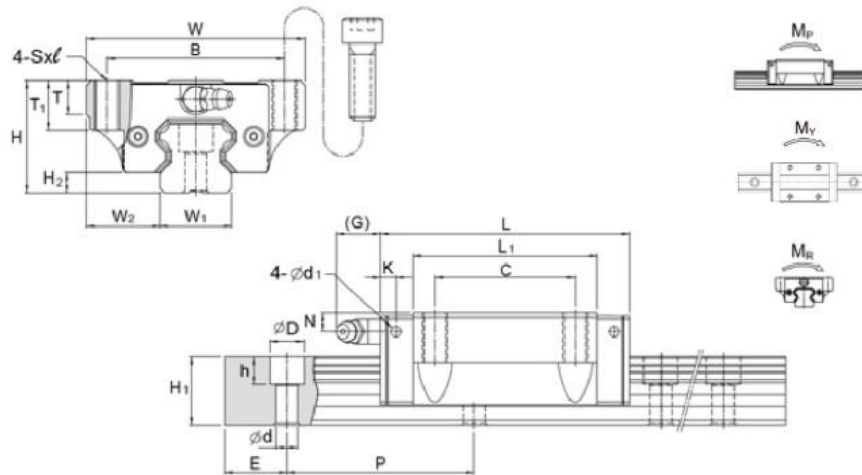


MSA A/LA



Note: Request for size 55 and 65 MSA-A / MSA-LA carriage, please refer to MSA-E / MSA-LE carriage type.

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 C₁₀₀ for 100 km is C=1.26 x C₁₀₀.

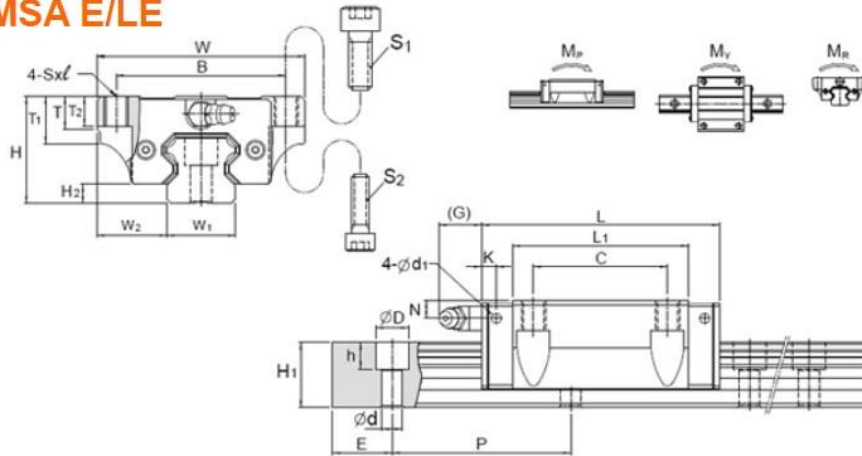
Note*: Single: Single carriage/ Double: Double carriages closely contacting with each other.

Unit:mm

Model No.	External dimension						Carriage dimension										Grease Nipple
	Height H	Width W	Length L	W ₂	H ₂	B	C	S x ℓ	L ₁	T	T ₁	N	G	K	d ₁		
MSA 15A	24	47	56.3	16	4.2	38	30	M5 × 11	39.3	7	11	4.3	7	3.2	3.3	G-M4	
MSA 20A MSA 20LA	30	63	72.9 88.8	21.5	5	53	40	M6 × 10	51.3 67.2	7	10	5	12	5.8	3.3	G-M6	
MSA 25A MSA 25LA	36	70	81.6 100.6	23.5	6.5	57	45	M8 × 16	59 78	11	16	6	12	5.8	3.3	G-M6	
MSA 30A MSA 30LA	42	90	97 119.2	31	8	72	52	M10 × 18	71.4 93.6	11	18	7	12	6.8	3.3	G-M6	
MSA 35A MSA 35LA	48	100	111.2 136.6	33	9.5	82	62	M10 × 21	81 106.4	13	21	8	11.5	8.6	3.3	G-M6	
MSA 45A MSA 45LA	60	120	137.7 169.5	37.5	10	100	80	M12 × 25	102.5 134.3	13	25	10	13.5	10.6	3.3	G-PT1/8	

Model No.	Rail dimension					Basic load rating		Static moment rating				Weight		
	Width W ₁	Height H ₁	Pitch P	E std.	D × h × d	Dynamic C kN	Static Co kN	M _p kN-m		M _y kN-m		M _R kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
MSA 15A	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 20A MSA 20LA	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	0.4 0.52	2.4
MSA 25A MSA 25LA	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	0.62 0.82	3.4
MSA 30A MSA 30LA	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	1.09 1.43	4.8
MSA 35A MSA 35LA	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	1.61 2.11	6.6
MSA 45A MSA 45LA	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	2.98 3.9	11.5

MSA E/LE



Model No.	Bolt Size	
	S ₁	S ₂
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

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 C₁₀₀ for 100 km is C=1.26 x C₁₀₀.

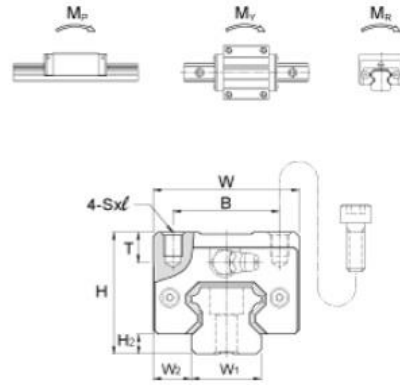
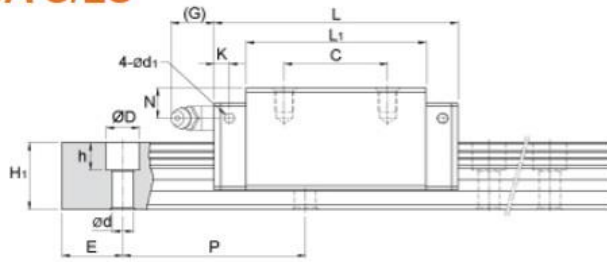
Note*: Single: Single carriage / Double: Double carriages closely contacting with each other.

Unit:mm

Model No.	External dimension					Carriage dimension												Grease Nipple
	Height H	Width W	Length L	W ₂	H ₂	B	C	S × ℓ	L ₁	T	T ₁	T ₂	N	G	K	d ₁		
MSA 15E	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	
MSA 20E MSA 20LE	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	
MSA 25E MSA 25LE	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 30E MSA 30LE	42	90	97 119.2	31	8	72	52	M10 × 10	71.4 93.6	11	18	10	7	12	6.8	3.3	G-M6	
MSA 35E MSA 35LE	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 45E MSA 45LE	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	
MSA 55E MSA 55LE	70	140	161.5 199.5	43.5	13	116	95	M14 × 17	119.5 157.5	19	32	17	11	13.5	8.9	3.3	G-PT 1/8	
MSA 65E MSA 65LE	90	170	199 253	53.5	15	142	110	M16 × 23	149 203	21.5	37	23	19	13.5	8.9	3.3	G-PT 1/8	

Model No.	Rail dimension					Basic load rating		Static moment rating				Weight		
	Width W ₁	Height H ₁	Pitch P	E std.	D × h × d	Dynamic C kN	Static Co kN	M _p kN-m		M _y kN-m		M _r kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
MSA 15E	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 20E MSA 20LE	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	0.4 0.52	2.4
MSA 25E MSA 25LE	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	0.62 0.82	3.4
MSA 30E MSA 30LE	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	1.09 1.43	4.8
MSA 35E MSA 35LE	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	1.61 2.11	6.6
MSA 45E MSA 45LE	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	2.98 3.9	11.5
MSA 55E MSA 55LE	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	4.17 5.49	15.5
MSA 65E MSA 65LE	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	8.73 11.89	21.9

MSA S/LS



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 C₁₀₀ for 100 km is C=1.26 x C₁₀₀.
 Note*: Single: Single carriage / Double: Double carriages closely contacting with each other.

Unit:mm

Model No.	External dimension					Carriage dimension									
	Height H	Width W	Length L	W ₂	H ₂	B	C	S x ℓ	L ₁	T	N	G	K	d ₁	Grease Nipple
MSA 15S	28	34	56.3	9.5	4.2	26	26	M4 x 5	39.3	7.2	8.3	7	3.2	3.3	G-M4
MSA 20S MSA 20LS	30	44	72.9 88.8	12	5	32	36 50	M5 x 6	51.3 67.2	8	5	12	5.8	3.3	G-M6
MSA 25S MSA 25LS	40	48	81.6 100.6	12.5	6.5	35	35 50	M6 x 8	59 78	10	10	12	5.8	3.3	G-M6
MSA 30S MSA 30LS	45	60	97 119.2	16	8	40	40 60	M8 x 10	71.4 93.6	11.7	10	12	6.8	3.3	G-M6
MSA 35S MSA 35LS	55	70	111.2 136.6	18	9.5	50	50 72	M8 x 12	81 106.4	12.7	15	11.5	8.6	3.3	G-M6
MSA 45S MSA 45LS	70	86	137.7 169.5	20.5	10	60	60 80	M10 x 17	102.5 134.3	16	20	13.5	10.6	3.3	G-PT1/8
MSA 55S MSA 55LS	80	100	161.5 199.5	23.5	13	75	75 95	M12 x 18	119.5 157.5	18	21	13.5	8.9	3.3	G-PT1/8
MSA 65S MSA 65LS	90	126	199 253	31.5	15	76	70 120	M16 x 20	149 203	23	19	13.5	8.9	3.3	G-PT1/8

Model No.	Rail dimension					Basic load rating		Static moment rating				Weight		
	Width W ₁	Height H ₁	Pitch P	E std.	D x h x d	Dynamic C kN	Static Co kN	M _p kN-m		M _y kN-m		M _R kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
MSA 15S	15	15	60	20	7.5 x 5.3 x 4.5	11.8	18.9	0.12	0.68	0.12	0.68	0.14	0.18	1.5
MSA 20S MSA 20LS	20	18	60	20	9.5 x 8.5 x 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
MSA 25S MSA 25LS	23	22	60	20	11 x 9 x 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
MSA 30S MSA 30LS	28	26	80	20	14 x 12 x 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
MSA 35S MSA 35LS	34	29	80	20	14 x 12 x 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
MSA 45S MSA 45LS	45	38	105	22.5	20 x 17 x 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
MSA 55S MSA 55LS	53	44	120	30	23 x 20 x 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
MSA 65S MSA 65LS	63	53	150	35	26 x 22 x 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