



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>	N	G	K	d <sub>1</sub>		
MSA 15 A	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 20 A MSA 20 LA	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 25 A MSA 25 LA	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 30 A MSA 30 LA	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 35 A MSA 35 LA	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 45 A MSA 45 LA	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	

**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 C<sub>100</sub> for 100 km is  $C=1.26 \times C_{100}$ .

**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 $W_1$	Height $H_1$	Pitch $P$	E std.	$D \times h \times d$	Dynamic $C$ kN	Static $C_o$ kN	$M_p$ kN-m		$M_y$ kN-m		$M_R$ kN-m	Carriage kg	Rail kg/m
								Single*	Double*	Single*	Double*			
<b>MSA 15 A</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 A</b> <b>MSA 20 LA</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	0.4 0.52	2.4
<b>MSA 25 A</b> <b>MSA 25 LA</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	0.62 0.82	3.4
<b>MSA 30 A</b> <b>MSA 30 LA</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	1.09 1.43	4.8
<b>MSA 35 A</b> <b>MSA 35 LA</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	1.61 2.11	6.6
<b>MSA 45 A</b> <b>MSA 45 LA</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	2.98 3.9	11.5