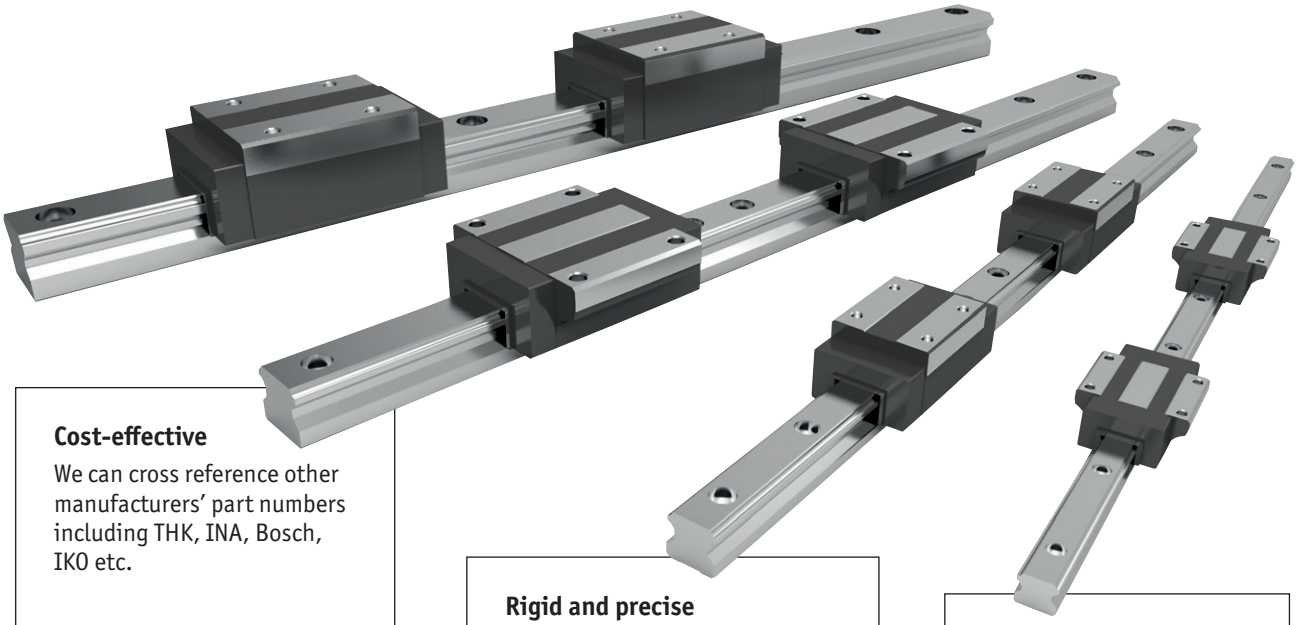
L1016 Linear guideways

Linear guideways are widely used throughout industry for heavy-duty and precise applications.

Precision high load rails

The use of steel balls and the design of the carriages and guideways mean that the rails can accept very heavy loads and significant moment loads. Our rails have circular as opposed to friction coefficient, lower driving resistance, lower wear and lower energy consumption.



Cost-effective

We can cross reference other manufacturers' part numbers including THK, INA, Bosch, IKO etc.

Rigid and precise

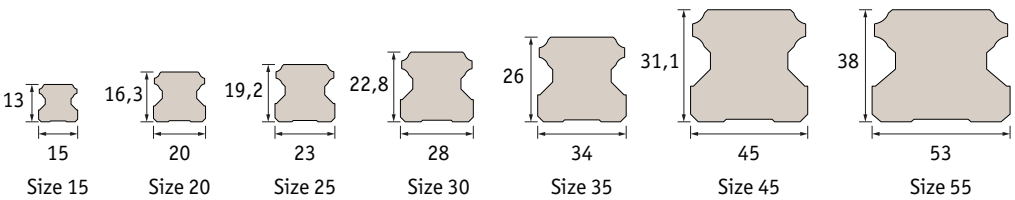
- High load rating.
- High moment load capacity.

Stocked

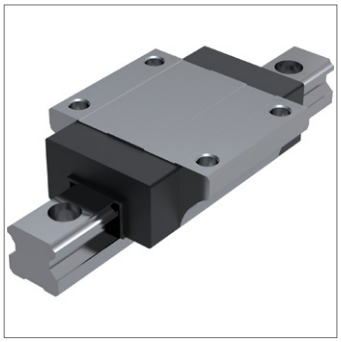
7 rail profiles ready for same day despatch.

Lengths up to 4 metres.

Rail sizes



Flanged Carriages - Standard
with retained ball cage



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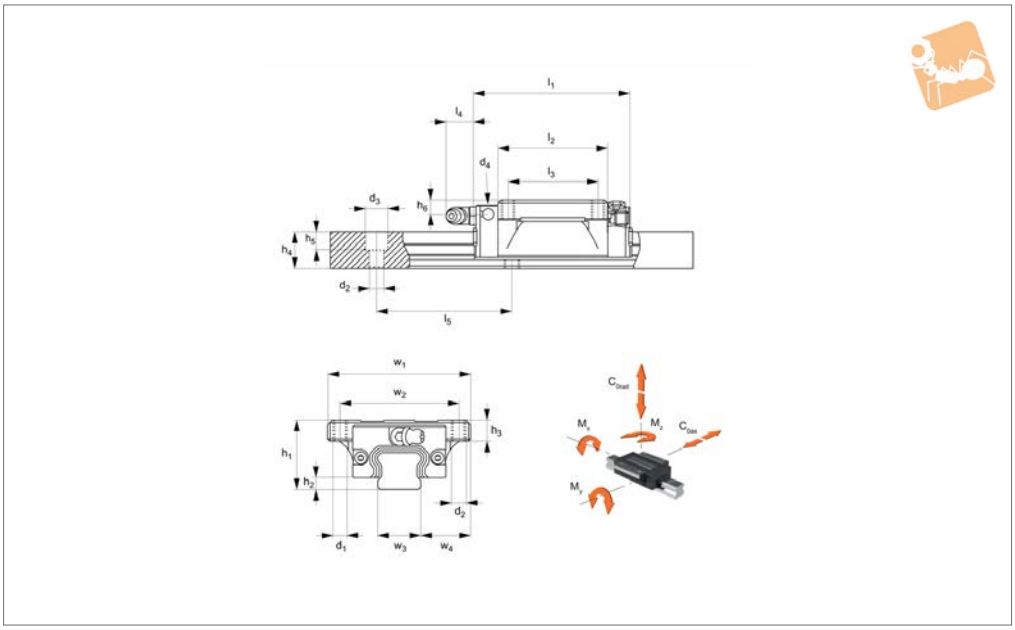


Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

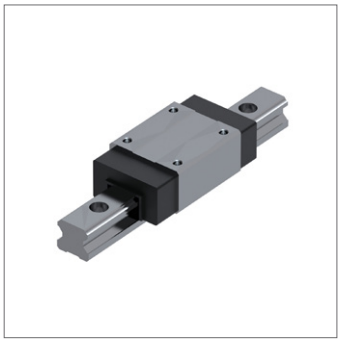
Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.F15	15	58.6	24	40.2	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	0.21
L1016.F15-L	15	66.1	24	47.7	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	0.23
L1016.F20	20	70.1	30	48.5	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	0.40
L1016.F20-L	20	82.9	30	61.3	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	0.46
L1016.F25	25	79.2	36	57.5	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.57
L1016.F25-L	25	93.9	36	72.2	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.72
L1016.F25-XL	25	108.6	36	86.9	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.89
L1016.F30	30	94.8	42	67.8	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.10
L1016.F30-L	30	105.0	42	78.0	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.34
L1016.F30-XL	30	130.5	42	103.5	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.66
L1016.F35	35	111.5	48	80.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	1.50
L1016.F35-L	35	123.5	48	92.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	1.90
L1016.F35-XL	35	153.5	48	122.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	2.54
L1016.F45	45	129.0	60	94.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	2.27
L1016.F45-L	45	145.0	60	110.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	2.68
L1016.F45-XL	45	174.0	60	139.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	3.42
L1016.F55	55	155.0	70	116.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	3.44
L1016.F55-L	55	193.0	70	154.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	4.63
L1016.F55-XL	55	210.0	70	171.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	5.16

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F15	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F15-L	60	7.5	M3 x 0,5	166	171	171	14.12	24.05
L1016.F20	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F20-L	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.F25	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F25-L	60	11.0	M6 x 1,0	576	577	577	32.44	53.63
L1016.F25-XL	60	11.0	M6 x 1,0	691	833	833	36.58	64.30
L1016.F30	80	14.0	M6 x 1,0	719	560	560	37.33	55.50
L1016.F30-L	80	14.0	M6 x 1,0	931	836	836	48.35	71.88
L1016.F30-XL	80	14.0	M6 x 1,0	1142	1361	1361	53.83	88.18

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F35	80	14.0	M6 x 1,0	1307	991	991	53.31	82.66
L1016.F35-L	80	14.0	M6 x 1,0	1633	1424	1424	66.61	103.29
L1016.F35-XL	80	14.0	M6 x 1,0	2020	2330	2330	73.29	127.68
L1016.F45	105	20.0	M8 x 1,25	2353	1559	1559	73.14	111.30
L1016.F45-L	105	20.0	M8 x 1,25	2798	2170	2170	86.99	132.39
L1016.F45-XL	105	20.0	M8 x 1,25	3527	3455	3455	100.52	166.87
L1016.F55	120	23.0	M8 x 1,25	3385	2361	2361	88.26	136.62
L1016.F55-L	120	23.0	M8 x 1,25	4538	4202	4202	119.10	183.14
L1016.F55-XL	120	23.0	M8 x 1,25	6430	6617	6617	161.43	259.71

Unflanged Carriages - Standard
with retained ball cage



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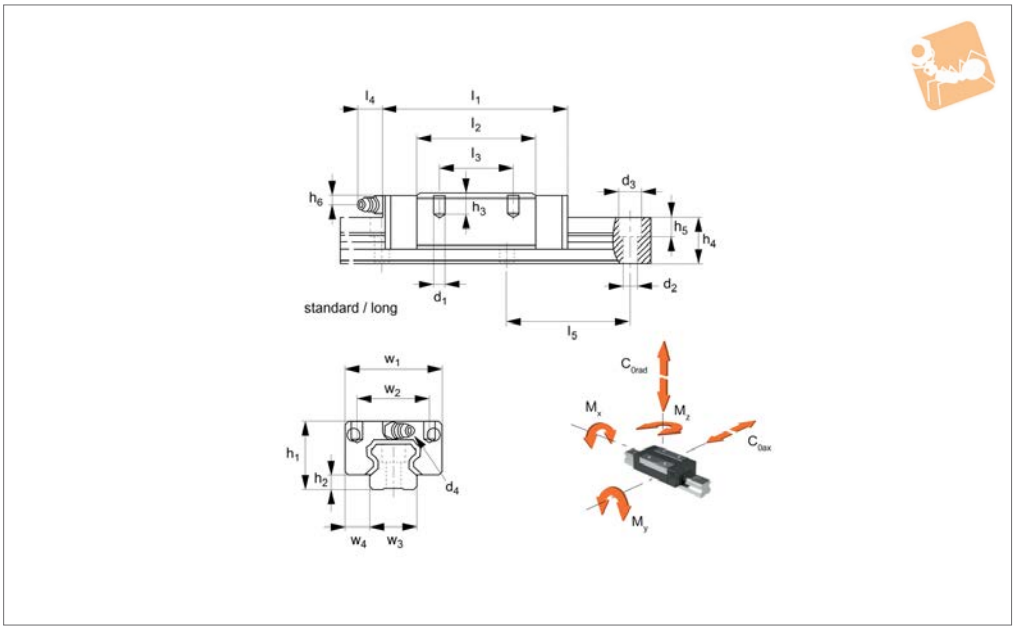


Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

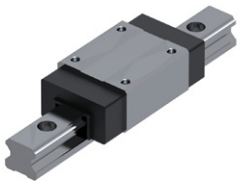
Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.U15	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	0.19
L1016.U20	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.31
L1016.U20-L	20	82.1	30	61.3	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.36
L1016.U25	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.45
L1016.U25-L	25	93.9	40	72.2	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.66
L1016.U25-XL	25	108.6	40	86.9	48	50	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.80
L1016.U30	30	94.8	45	67.8	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	0.91
L1016.U30-L	30	105.0	45	78.0	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	1.04
L1016.U30-XL	30	130.5	45	103.5	60	60	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	1.36
L1016.U35	35	111.5	55	80.5	70	50	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	1.50
L1016.U35-L	35	123.5	55	92.5	70	50	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	1.80
L1016.U35-XL	35	153.5	55	122.5	70	72	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	2.34
L1016.U45	45	129.0	70	94.0	86	60	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	2.28
L1016.U45-L	45	145.0	70	110.0	86	60	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	2.67
L1016.U45-XL	45	174.0	70	139.0	86	80	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	3.35
L1016.U55	55	155.0	80	116.0	100	75	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	3.42
L1016.U55-L	55	193.0	80	154.0	100	75	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	4.57
L1016.U55-XL	55	210.0	80	171.0	100	95	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	5.08

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.U20	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.U20-L	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.U25	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.U25-L	60	11.0	M6 x 1,0	576	577	577	32.44	53.63
L1016.U25-XL	60	11.0	M6 x 1,0	691	833	833	36.58	64.30
L1016.U30	80	14.0	M6 x 1,0	719	560	560	37.33	55.50
L1016.U30-L	80	14.0	M6 x 1,0	931	836	836	48.35	71.88
L1016.U30-XL	80	14.0	M6 x 1,0	1142	1361	1361	53.83	88.18
L1016.U35	80	14.0	M6 x 1,0	1307	991	991	53.31	82.66
L1016.U35-L	80	14.0	M6 x 1,0	1633	1424	1424	66.61	103.29

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U35-XL	80	14.0	M6 x 1,0	2020	2330	2330	73.29	127.68
L1016.U45	105	20.0	M8 x 1,25	2353	1559	1559	73.14	111.30
L1016.U45-L	105	20.0	M8 x 1,25	2798	2170	2170	86.99	132.39
L1016.U45-XL	105	20.0	M8 x 1,25	3527	3455	3455	100.52	166.87
L1016.U55	120	23.0	M8 x 1,25	3385	2361	2361	88.26	136.62
L1016.U55-L	120	23.0	M8 x 1,25	4538	4202	4202	119.10	183.14
L1016.U55-XL	120	23.0	M8 x 1,25	6430	6617	6617	161.43	259.71

Unflanged Carriages - Low
with retained ball cage



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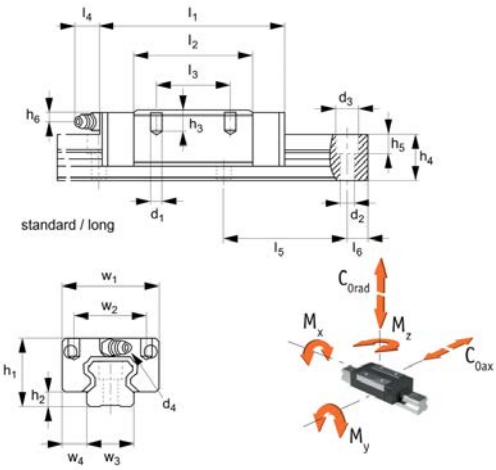


Material
Hardened and ground steel.

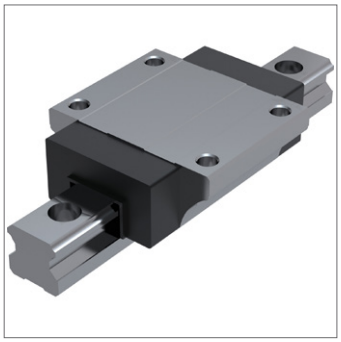
Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.UL15-S	15	40.6	24	22.2	34	-	3.3	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.10
L1016.UL15	15	58.6	24	40.2	34	26	3.3	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.17
L1016.UL15-L	15	66.1	24	47.7	34	26	3.0	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.18
L1016.UL20-S	20	48.3	28	27.5	42	-	4.5	5.5	16.3	M 5	8.5	6.0	5.1	32	20	11.0	15.6	0.17
L1016.UL20	20	69.3	28	48.5	42	32	4.5	5.5	16.3	M 5	8.5	6.0	7.1	32	20	11.0	15.6	0.26
L1016.UL25-S	25	54.0	33	32.3	48	-	5.8	6.8	19.2	M 6	9.0	7.0	7.2	35	23	12.5	15.6	0.21
L1016.UL25	25	79.2	33	57.5	48	35	5.8	6.8	19.2	M 6	9.0	7.0	7.2	35	23	12.5	15.6	0.38
L1016.UL30-S	30	64.2	42	37.2	60	-	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.50
L1016.UL30	30	94.8	42	67.8	60	40	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.80
L1016.UL30-L	30	105.0	42	78.0	60	40	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.94
L1016.UL30-XL	30	130.5	42	103.5	60	60	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	1.16
L1016.UL35-S	35	75.5	48	44.5	70	-	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	0.80
L1016.UL35	35	111.5	48	80.5	70	50	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.20
L1016.UL35-L	35	123.5	48	92.5	70	50	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.40
L1016.UL35-XL	35	153.5	48	122.5	70	72	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.84
L1016.UL45	45	129.0	60	94.0	86	60	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	1.64
L1016.UL45-L	45	145.0	60	110.0	86	60	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	1.93
L1016.UL45-XL	45	174.0	60	139.0	86	80	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	2.42
L1016.UL55	55	155.0	70	116.0	100	75	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	2.67
L1016.UL55-L	55	193.0	70	154.0	100	75	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	3.57
L1016.UL55-XL	55	210.0	70	171.0	100	95	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	3.97

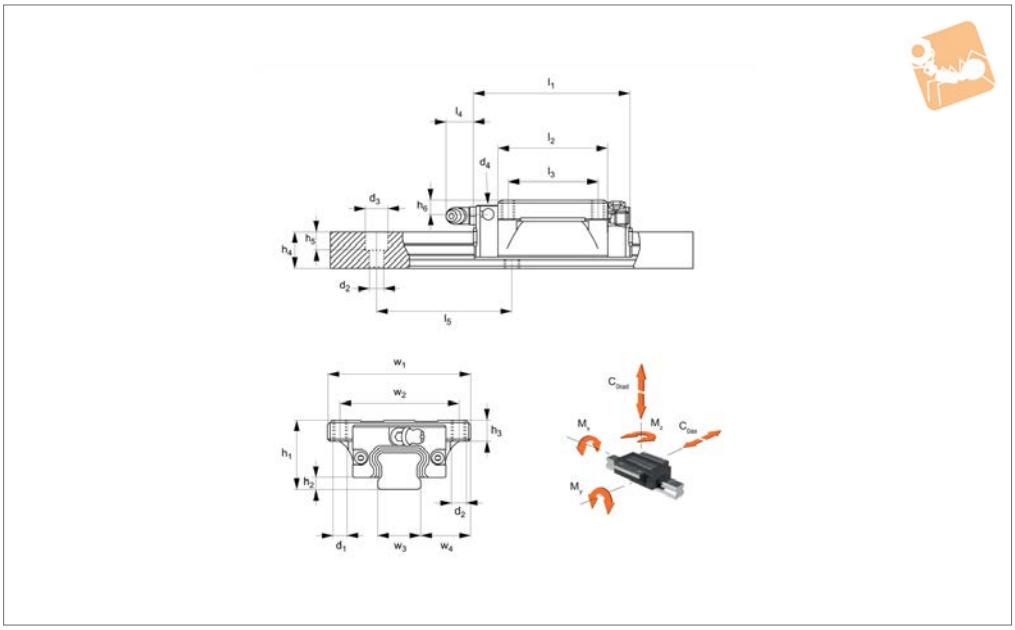
Order No.	l_5	l_6	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.UL15-S	60	20.0	7.5	M3x0,5	69	32	32	5.81	9.90
L1016.UL15	60	20.0	7.5	M3x0,5	137	120	120	11.67	19.90
L1016.UL15-L	60	20.0	7.5	M3x0,5	166	171	171	14.12	24.05
L1016.UL20-S	60	20.0	9.5	M6x1,0	148	66	66	9.25	15.93
L1016.UL20	60	20.0	9.5	M6x1,0	289	224	224	17.98	30.96
L1016.UL25-S	60	20.0	11.0	M6x1,0	230	103	103	12.87	21.34
L1016.UL25	60	20.0	11.0	M6x1,0	447	358	358	25.25	41.73
L1016.UL30-S	80	20.0	14.0	M6x1,0	356	153	153	18.50	27.51
L1016.UL30	80	20.0	14.0	M6x1,0	719	560	560	37.33	55.50

Order No.	l_5	l_6	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.UL30-L	80	20.0	14.0	M6x1,0	931	836	836	48.35	71.88
L1016.UL30-XL	80	20.0	14.0	M6x1,0	1142	1361	1361	53.83	88.18
L1016.UL35-S	80	20.0	14.0	M6x1,0	655	275	275	26.72	41.43
L1016.UL35	80	20.0	14.0	M6x1,0	1307	991	991	53.31	82.66
L1016.UL35-L	80	20.0	14.0	M6x1,0	1633	1424	1424	66.61	103.29
L1016.UL35-XL	80	20.0	14.0	M6x1,0	2020	2330	2330	73.29	127.68
L1016.UL45	105	22.5	20.0	M8x1,25	2353	1559	1559	73.14	111.30
L1016.UL45-L	105	22.5	20.0	M8x1,25	2798	2170	2170	86.99	132.39
L1016.UL45-XL	105	22.5	20.0	M8x1,25	3527	3455	3455	100.52	166.87
L1016.UL55	120	30.0	23.0	M8x1,25	3385	2361	2361	88.26	136.62
L1016.UL55-L	120	30.0	23.0	M8x1,25	4538	4202	4202	119.10	183.14
L1016.UL55-XL	120	30.0	23.0	M8x1,25	6430	6617	6617	161.43	259.71

Flanged Carriages - Standard
no ball cage



L1016.F-NC

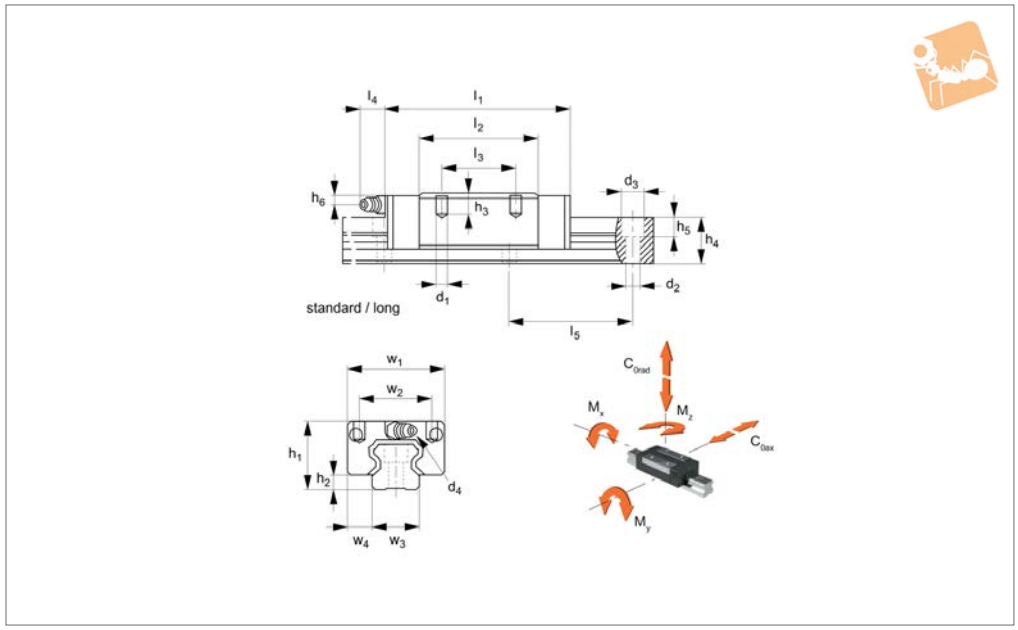


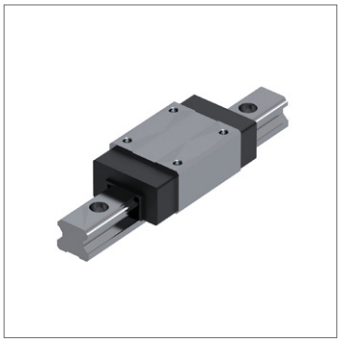
Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.30). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight g
L1016.F15-NC	15	58.6	24	40.2	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	210
L1016.F20-NC	20	70.1	30	48.5	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	400
L1016.F25-NC	25	79.2	36	57.5	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	570
L1016.F30-NC	30	94.8	42	67.8	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1100

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load C kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F15-NC	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F20-NC	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F25-NC	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F30-NC	80	14.0	M6 x 1,0	719	560	560	37.33	55.50





L1016.U-NC

Material
Hardened and ground steel.

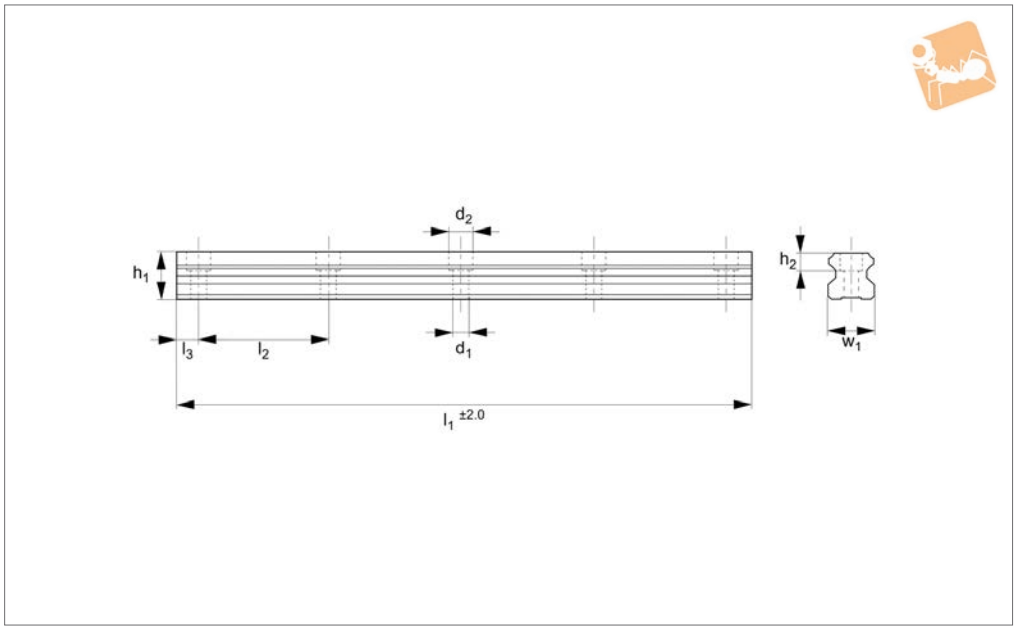
Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.30)
Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight g
L1016.U15-NC	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	190
L1016.U20-NC	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	310
L1016.U25-NC	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	450
L1016.U30-NC	30	94.8	45	67.8	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	910

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load C kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15-NC	60	7.5	M 3x0,5	137	120	120	11.67	19.90
L1016.U20-NC	60	9.5	M 6x1,0	289	224	224	17.98	30.96
L1016.U25-NC	60	11.0	M 6x1,0	447	358	358	25.25	41.73
L1016.U30-NC	80	14.0	M 6x1,0	719	560	560	37.33	55.50

15mm Linear Guide Rail
standard

L1016.15

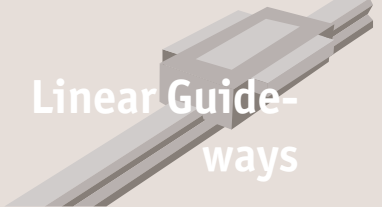


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Tips
Plastic screw covers issued with the rails to protect screw holes from debris.

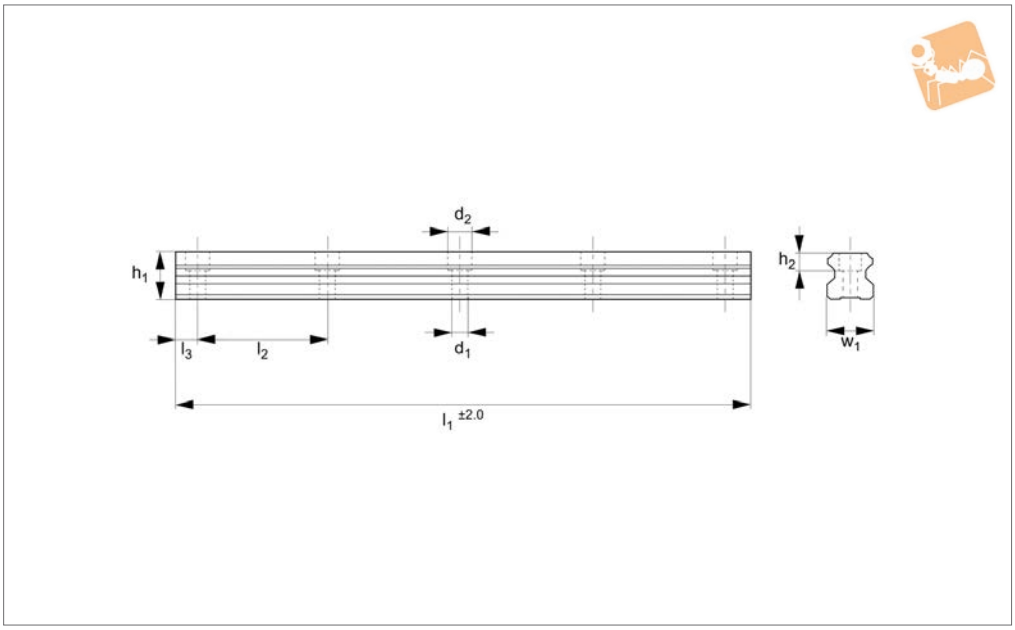
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.15-0220	15	220	13.0	60	15	20	6.0	4.5	7.5	M4	0.31
L1016.15-0280	15	280	13.0	60	15	20	6.0	4.5	7.5	M4	0.39
L1016.15-0340	15	340	13.0	60	15	20	6.0	4.5	7.5	M4	0.48
L1016.15-0400	15	400	13.0	60	15	20	6.0	4.5	7.5	M4	0.56
L1016.15-0460	15	460	13.0	60	15	20	6.0	4.5	7.5	M4	0.64
L1016.15-0520	15	520	13.0	60	15	20	6.0	4.5	7.5	M4	0.73
L1016.15-0580	15	580	13.0	60	15	20	6.0	4.5	7.5	M4	0.81
L1016.15-0640	15	640	13.0	60	15	20	6.0	4.5	7.5	M4	0.90
L1016.15-0700	15	700	13.0	60	15	20	6.0	4.5	7.5	M4	0.98
L1016.15-0760	15	760	13.0	60	15	20	6.0	4.5	7.5	M4	1.06
L1016.15-0820	15	820	13.0	60	15	20	6.0	4.5	7.5	M4	1.15
L1016.15-0880	15	880	13.0	60	15	20	6.0	4.5	7.5	M4	1.23
L1016.15-0940	15	940	13.0	60	15	20	6.0	4.5	7.5	M4	1.32
L1016.15-1000	15	1000	13.0	60	15	20	6.0	4.5	7.5	M4	1.40
L1016.15-1060	15	1060	13.0	60	15	20	6.0	4.5	7.5	M4	1.48
L1016.15-1120	15	1120	13.0	60	15	20	6.0	4.5	7.5	M4	1.57
L1016.15-1180	15	1180	13.0	60	15	20	6.0	4.5	7.5	M4	1.65
L1016.15-1240	15	1240	13.0	60	15	20	6.0	4.5	7.5	M4	1.74
L1016.15-1300	15	1300	13.0	60	15	20	6.0	4.5	7.5	M4	1.82
L1016.15-1360	15	1360	13.0	60	15	20	6.0	4.5	7.5	M4	1.90
L1016.15-1420	15	1420	13.0	60	15	20	6.0	4.5	7.5	M4	1.99
L1016.15-1480	15	1480	13.0	60	15	20	6.0	4.5	7.5	M4	2.07
L1016.15-1540	15	1540	13.0	60	15	20	6.0	4.5	7.5	M4	2.16
L1016.15-1600	15	1600	13.0	60	15	20	6.0	4.5	7.5	M4	2.24
L1016.15-1660	15	1660	13.0	60	15	20	6.0	4.5	7.5	M4	2.32
L1016.15-1720	15	1720	13.0	60	15	20	6.0	4.5	7.5	M4	2.41
L1016.15-1780	15	1780	13.0	60	15	20	6.0	4.5	7.5	M4	2.49
L1016.15-1840	15	1840	13.0	60	15	20	6.0	4.5	7.5	M4	2.58
L1016.15-1900	15	1900	13.0	60	15	20	6.0	4.5	7.5	M4	2.66
L1016.15-1960	15	1960	13.0	60	15	20	6.0	4.5	7.5	M4	2.74
L1016.15-2020	15	2020	13.0	60	15	20	6.0	4.5	7.5	M4	2.83
L1016.15-2080	15	2080	13.0	60	15	20	6.0	4.5	7.5	M4	2.91



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.15-2140	15	2140	13.0	60	15	20	6.0	4.5	7.5	M4	3.00
L1016.15-2200	15	2220	13.0	60	15	20	6.0	4.5	7.5	M4	3.08
L1016.15-2260	15	2260	13.0	60	15	20	6.0	4.5	7.5	M4	3.16
L1016.15-2320	15	2320	13.0	60	15	20	6.0	4.5	7.5	M4	3.25
L1016.15-2380	15	2380	13.0	60	15	20	6.0	4.5	7.5	M4	3.33
L1016.15-2440	15	2440	13.0	60	15	20	6.0	4.5	7.5	M4	3.42
L1016.15-2500	15	2500	13.0	60	15	20	6.0	4.5	7.5	M4	3.50
L1016.15-2560	15	2560	13.0	60	15	20	6.0	4.5	7.5	M4	3.58
L1016.15-2620	15	2620	13.0	60	15	20	6.0	4.5	7.5	M4	3.67
L1016.15-2680	15	2680	13.0	60	15	20	6.0	4.5	7.5	M4	3.75
L1016.15-2740	15	2740	13.0	60	15	20	6.0	4.5	7.5	M4	3.84
L1016.15-2800	15	2800	13.0	60	15	20	6.0	4.5	7.5	M4	3.92
L1016.15-2860	15	2860	13.0	60	15	20	6.0	4.5	7.5	M4	4.00
L1016.15-2920	15	2920	13.0	60	15	20	6.0	4.5	7.5	M4	4.09
L1016.15-2980	15	2980	13.0	60	15	20	6.0	4.5	7.5	M4	4.17
L1016.15-3040	15	3040	13.0	60	15	20	6.0	4.5	7.5	M4	4.26
L1016.15-3100	15	3100	13.0	60	15	20	6.0	4.5	7.5	M4	4.34
L1016.15-3160	15	3160	13.0	60	15	20	6.0	4.5	7.5	M4	4.42
L1016.15-3220	15	3220	13.0	60	15	20	6.0	4.5	7.5	M4	4.51
L1016.15-3280	15	3280	13.0	60	15	20	6.0	4.5	7.5	M4	4.59
L1016.15-3340	15	3340	13.0	60	15	20	6.0	4.5	7.5	M4	4.68
L1016.15-3400	15	3400	13.0	60	15	20	6.0	4.5	7.5	M4	4.76
L1016.15-3460	15	3460	13.0	60	15	20	6.0	4.5	7.5	M4	4.84
L1016.15-3520	15	3520	13.0	60	15	20	6.0	4.5	7.5	M4	4.93
L1016.15-3580	15	3580	13.0	60	15	20	6.0	4.5	7.5	M4	5.01
L1016.15-3640	15	3640	13.0	60	15	20	6.0	4.5	7.5	M4	5.10
L1016.15-3700	15	3700	13.0	60	15	20	6.0	4.5	7.5	M4	5.18
L1016.15-3760	15	3760	13.0	60	15	20	6.0	4.5	7.5	M4	5.26
L1016.15-3820	15	3820	13.0	60	15	20	6.0	4.5	7.5	M4	5.35
L1016.15-3880	15	3880	13.0	60	15	20	6.0	4.5	7.5	M4	5.43
L1016.15-3940	15	3940	13.0	60	15	20	6.0	4.5	7.5	M4	5.52
L1016.15-4000	15	4000	13.0	60	15	20	6.0	4.5	7.5	M4	5.60

20mm Linear Guide Rail
standard

L1016.20

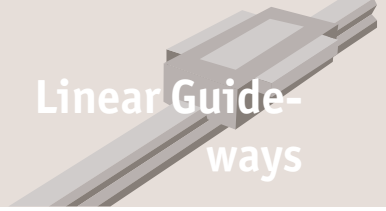


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

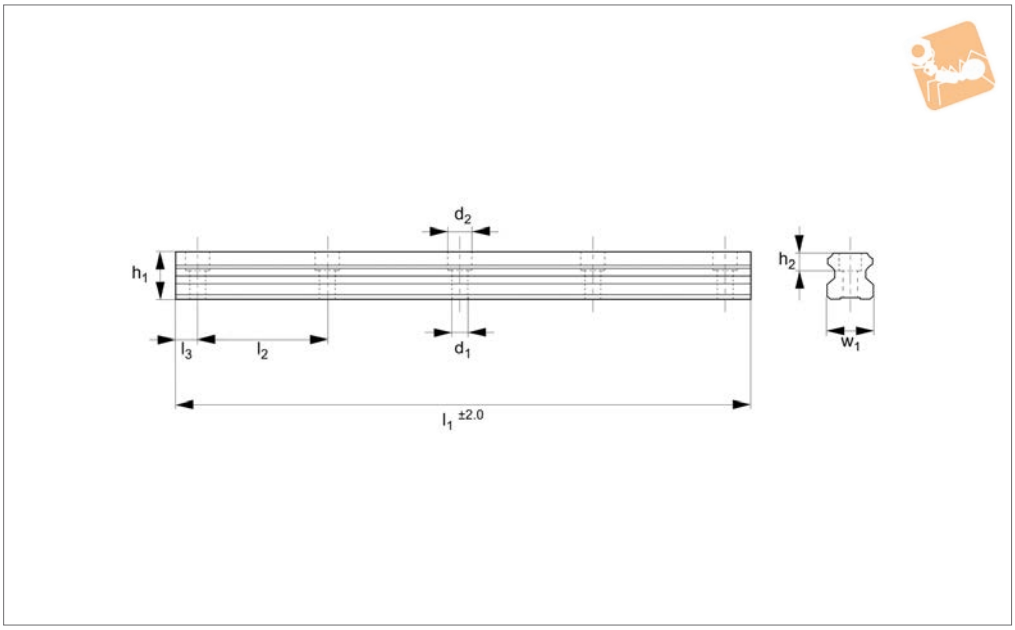
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.20-0160	20	160	16.3	60	20	20	8.5	6	9.5	M5	0.42
L1016.20-0220	20	220	16.3	60	20	20	8.5	6	9.5	M5	0.57
L1016.20-0280	20	280	16.3	60	20	20	8.5	6	9.5	M5	0.73
L1016.20-0340	20	340	16.3	60	20	20	8.5	6	9.5	M5	0.88
L1016.20-0400	20	400	16.3	60	20	20	8.5	6	9.5	M5	1.04
L1016.20-0460	20	460	16.3	60	20	20	8.5	6	9.5	M5	1.20
L1016.20-0520	20	520	16.3	60	20	20	8.5	6	9.5	M5	1.35
L1016.20-0580	20	580	16.3	60	20	20	8.5	6	9.5	M5	1.51
L1016.20-0640	20	640	16.3	60	20	20	8.5	6	9.5	M5	1.66
L1016.20-0700	20	700	16.3	60	20	20	8.5	6	9.5	M5	1.82
L1016.20-0760	20	760	16.3	60	20	20	8.5	6	9.5	M5	1.98
L1016.20-0820	20	820	16.3	60	20	20	8.5	6	9.5	M5	2.13
L1016.20-0880	20	880	16.3	60	20	20	8.5	6	9.5	M5	2.29
L1016.20-0940	20	940	16.3	60	20	20	8.5	6	9.5	M5	2.44
L1016.20-1000	20	1000	16.3	60	20	20	8.5	6	9.5	M5	2.60
L1016.20-1060	20	1060	16.3	60	20	20	8.5	6	9.5	M5	2.76
L1016.20-1120	20	1120	16.3	60	20	20	8.5	6	9.5	M5	2.91
L1016.20-1180	20	1180	16.3	60	20	20	8.5	6	9.5	M5	3.07
L1016.20-1240	20	1240	16.3	60	20	20	8.5	6	9.5	M5	3.22
L1016.20-1300	20	1300	16.3	60	20	20	8.5	6	9.5	M5	3.38
L1016.20-1360	20	1360	16.3	60	20	20	8.5	6	9.5	M5	3.54
L1016.20-1420	20	1420	16.3	60	20	20	8.5	6	9.5	M5	3.69
L1016.20-1480	20	1480	16.3	60	20	20	8.5	6	9.5	M5	3.85
L1016.20-1540	20	1540	16.3	60	20	20	8.5	6	9.5	M5	4.00
L1016.20-1600	20	1600	16.3	60	20	20	8.5	6	9.5	M5	4.16
L1016.20-1660	20	1660	16.3	60	20	20	8.5	6	9.5	M5	4.32
L1016.20-1720	20	1720	16.3	60	20	20	8.5	6	9.5	M5	4.47
L1016.20-1780	20	1780	16.3	60	20	20	8.5	6	9.5	M5	4.63
L1016.20-1840	20	1840	16.3	60	20	20	8.5	6	9.5	M5	4.78
L1016.20-1900	20	1900	16.3	60	20	20	8.5	6	9.5	M5	4.94
L1016.20-1960	20	1960	16.3	60	20	20	8.5	6	9.5	M5	5.10
L1016.20-2020	20	2020	16.3	60	20	20	8.5	6	9.5	M5	5.25



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.20-2080	20	2080	16.3	60	20	20	8.5	6	9.5	M5	5.41
L1016.20-2140	20	2140	16.3	60	20	20	8.5	6	9.5	M5	5.56
L1016.20-2200	20	2200	16.3	60	20	20	8.5	6	9.5	M5	5.72
L1016.20-2260	20	2260	16.3	60	20	20	8.5	6	9.5	M5	5.88
L1016.20-2320	20	2320	16.3	60	20	20	8.5	6	9.5	M5	6.03
L1016.20-2380	20	2380	16.3	60	20	20	8.5	6	9.5	M5	6.19
L1016.20-2440	20	2440	16.3	60	20	20	8.5	6	9.5	M5	6.34
L1016.20-2500	20	2500	16.3	60	20	20	8.5	6	9.5	M5	6.50
L1016.20-2560	20	2560	16.3	60	20	20	8.5	6	9.5	M5	6.66
L1016.20-2620	20	2620	16.3	60	20	20	8.5	6	9.5	M5	6.81
L1016.20-2680	20	2680	16.3	60	20	20	8.5	6	9.5	M5	6.97
L1016.20-2740	20	2740	16.3	60	20	20	8.5	6	9.5	M5	7.12
L1016.20-2800	20	2800	16.3	60	20	20	8.5	6	9.5	M5	7.28
L1016.20-2860	20	2860	16.3	60	20	20	8.5	6	9.5	M5	7.44
L1016.20-2920	20	2920	16.3	60	20	20	8.5	6	9.5	M5	7.59
L1016.20-2980	20	2980	16.3	60	20	20	8.5	6	9.5	M5	7.75
L1016.20-3040	20	3040	16.3	60	20	20	8.5	6	9.5	M5	7.90
L1016.20-3100	20	3100	16.3	60	20	20	8.5	6	9.5	M5	8.06
L1016.20-3160	20	3160	16.3	60	20	20	8.5	6	9.5	M5	8.22
L1016.20-3220	20	3220	16.3	60	20	20	8.5	6	9.5	M5	8.37
L1016.20-3280	20	3280	16.3	60	20	20	8.5	6	9.5	M5	8.53
L1016.20-3340	20	3340	16.3	60	20	20	8.5	6	9.5	M5	8.68
L1016.20-3400	20	3400	16.3	60	20	20	8.5	6	9.5	M5	8.84
L1016.20-3460	20	3460	16.3	60	20	20	8.5	6	9.5	M5	9.00
L1016.20-3520	20	3520	16.3	60	20	20	8.5	6	9.5	M5	9.15
L1016.20-3580	20	3580	16.3	60	20	20	8.5	6	9.5	M5	9.31
L1016.20-3640	20	3640	16.3	60	20	20	8.5	6	9.5	M5	9.46
L1016.20-3700	20	3700	16.3	60	20	20	8.5	6	9.5	M5	9.62
L1016.20-3760	20	3760	16.3	60	20	20	8.5	6	9.5	M5	9.78
L1016.20-3820	20	3820	16.3	60	20	20	8.5	6	9.5	M5	9.93
L1016.20-3880	20	3880	16.3	60	20	20	8.5	6	9.5	M5	10.09
L1016.20-3940	20	3940	16.3	60	20	20	8.5	6	9.5	M5	10.24
L1016.20-4000	20	4000	16.3	60	20	20	8.5	6	9.5	M5	10.40

25mm Linear Guide Rail
standard

L1016.25

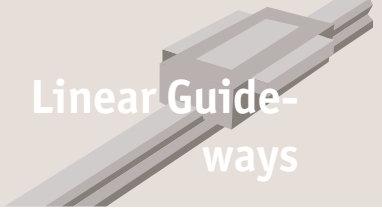


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

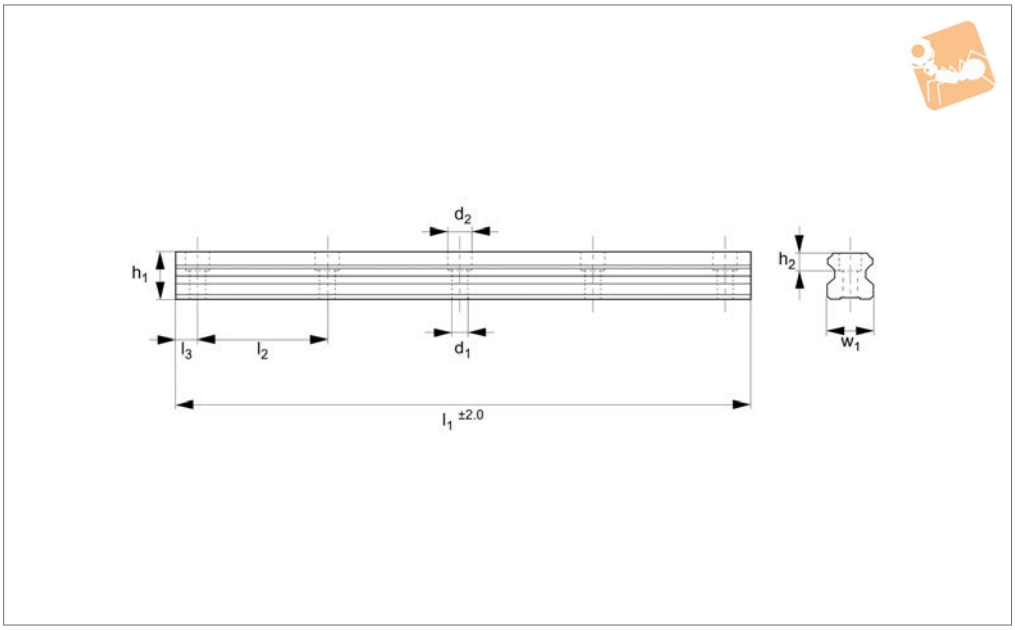
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.25-0160	25	160	19.2	60	23	20	9	7	11	M6	0.58
L1016.25-0220	25	220	19.2	60	23	20	9	7	11	M6	0.79
L1016.25-0280	25	280	19.2	60	23	20	9	7	11	M6	1.01
L1016.25-0340	25	340	19.2	60	23	20	9	7	11	M6	1.22
L1016.25-0400	25	400	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0440	25	440	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0460	25	460	19.2	60	23	20	9	7	11	M6	1.66
L1016.25-0520	25	520	19.2	60	23	20	9	7	11	M6	1.87
L1016.25-0580	25	580	19.2	60	23	20	9	7	11	M6	2.09
L1016.25-0640	25	640	19.2	60	23	20	9	7	11	M6	2.30
L1016.25-0700	25	700	19.2	60	23	20	9	7	11	M6	2.52
L1016.25-0760	25	760	19.2	60	23	20	9	7	11	M6	2.74
L1016.25-0820	25	820	19.2	60	23	20	9	7	11	M6	2.95
L1016.25-0880	25	880	19.2	60	23	20	9	7	11	M6	3.17
L1016.25-0940	25	940	19.2	60	23	20	9	7	11	M6	3.38
L1016.25-1000	25	1000	19.2	60	23	20	9	7	11	M6	3.60
L1016.25-1060	25	1060	19.2	60	23	20	9	7	11	M6	3.82
L1016.25-1120	25	1120	19.2	60	23	20	9	7	11	M6	4.03
L1016.25-1180	25	1180	19.2	60	23	20	9	7	11	M6	4.25
L1016.25-1240	25	1240	19.2	60	23	20	9	7	11	M6	4.46
L1016.25-1300	25	1300	19.2	60	23	20	9	7	11	M6	4.68
L1016.25-1360	25	1360	19.2	60	23	20	9	7	11	M6	4.90
L1016.25-1420	25	1420	19.2	60	23	20	9	7	11	M6	5.11
L1016.25-1480	25	1480	19.2	60	23	20	9	7	11	M6	5.33
L1016.25-1540	25	1540	19.2	60	23	20	9	7	11	M6	5.54
L1016.25-1600	25	1600	19.2	60	23	20	9	7	11	M6	5.76
L1016.25-1660	25	1660	19.2	60	23	20	9	7	11	M6	5.98
L1016.25-1720	25	1720	19.2	60	23	20	9	7	11	M6	6.19
L1016.25-1780	25	1780	19.2	60	23	20	9	7	11	M6	6.41
L1016.25-1840	25	1840	19.2	60	23	20	9	7	11	M6	6.62
L1016.25-1900	25	1900	19.2	60	23	20	9	7	11	M6	6.84
L1016.25-1960	25	1960	19.2	60	23	20	9	7	11	M6	7.06



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.25-2020	25	2020	19.2	60	23	20	9	7	11	M6	7.27
L1016.25-2080	25	2080	19.2	60	23	20	9	7	11	M6	7.49
L1016.25-2140	25	2140	19.2	60	23	20	9	7	11	M6	7.70
L1016.25-2200	25	2200	19.2	60	23	20	9	7	11	M6	7.92
L1016.25-2260	25	2260	19.2	60	23	20	9	7	11	M6	8.14
L1016.25-2320	25	2320	19.2	60	23	20	9	7	11	M6	8.35
L1016.25-2380	25	2380	19.2	60	23	20	9	7	11	M6	8.57
L1016.25-2440	25	2440	19.2	60	23	20	9	7	11	M6	8.78
L1016.25-2500	25	2500	19.2	60	23	20	9	7	11	M6	9.00
L1016.25-2560	25	2560	19.2	60	23	20	9	7	11	M6	9.22
L1016.25-2620	25	2620	19.2	60	23	20	9	7	11	M6	9.43
L1016.25-2680	25	2680	19.2	60	23	20	9	7	11	M6	9.65
L1016.25-2740	25	2740	19.2	60	23	20	9	7	11	M6	9.86
L1016.25-2800	25	2800	19.2	60	23	20	9	7	11	M6	10.08
L1016.25-2860	25	2860	19.2	60	23	20	9	7	11	M6	10.30
L1016.25-2920	25	2920	19.2	60	23	20	9	7	11	M6	10.51
L1016.25-2980	25	2980	19.2	60	23	20	9	7	11	M6	10.73
L1016.25-3040	25	3040	19.2	60	23	20	9	7	11	M6	10.94
L1016.25-3100	25	3100	19.2	60	23	20	9	7	11	M6	11.16
L1016.25-3160	25	3160	19.2	60	23	20	9	7	11	M6	11.38
L1016.25-3220	25	3220	19.2	60	23	20	9	7	11	M6	11.59
L1016.25-3280	25	3280	19.2	60	23	20	9	7	11	M6	11.81
L1016.25-3340	25	3340	19.2	60	23	20	9	7	11	M6	12.02
L1016.25-3400	25	3400	19.2	60	23	20	9	7	11	M6	12.24
L1016.25-3460	25	3460	19.2	60	23	20	9	7	11	M6	12.46
L1016.25-3520	25	3520	19.2	60	23	20	9	7	11	M6	12.67
L1016.25-3580	25	3580	19.2	60	23	20	9	7	11	M6	12.89
L1016.25-3640	25	3640	19.2	60	23	20	9	7	11	M6	13.10
L1016.25-3700	25	3700	19.2	60	23	20	9	7	11	M6	13.32
L1016.25-3760	25	3760	19.2	60	23	20	9	7	11	M6	13.54
L1016.25-3820	25	3820	19.2	60	23	20	9	7	11	M6	13.75
L1016.25-3880	25	3880	19.2	60	23	20	9	7	11	M6	13.97
L1016.25-3940	25	3940	19.2	60	23	20	9	7	11	M6	14.18
L1016.25-4000	25	4000	19.2	60	23	20	9	7	11	M6	14.40

30mm Linear Guide Rail
standard

L1016.30



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 5,2 Kg/m.

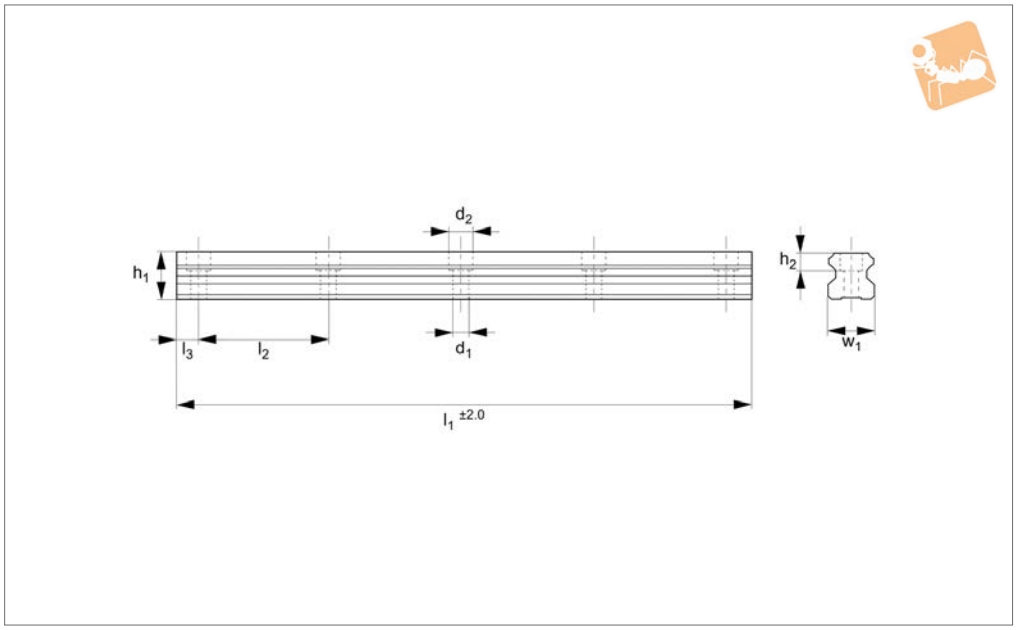
Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.30-0200	30	200	22.8	80	28	20	12	9	14	M8	1.04
L1016.30-0280	30	280	22.8	80	28	20	12	9	14	M8	1.46
L1016.30-0360	30	360	22.8	80	28	20	12	9	14	M8	1.87
L1016.30-0440	30	440	22.8	80	28	20	12	9	14	M8	2.29
L1016.30-0520	30	520	22.8	80	28	20	12	9	14	M8	2.70
L1016.30-0600	30	600	22.8	80	28	20	12	9	14	M8	3.12
L1016.30-0680	30	680	22.8	80	28	20	12	9	14	M8	3.54
L1016.30-0760	30	760	22.8	80	28	20	12	9	14	M8	3.95
L1016.30-0840	30	840	22.8	80	28	20	12	9	14	M8	4.37
L1016.30-0920	30	920	22.8	80	28	20	12	9	14	M8	4.78
L1016.30-1000	30	1000	22.8	80	28	20	12	9	14	M8	5.20
L1016.30-1080	30	1080	22.8	80	28	20	12	9	14	M8	5.62
L1016.30-1160	30	1160	22.8	80	28	20	12	9	14	M8	6.03
L1016.30-1240	30	1240	22.8	80	28	20	12	9	14	M8	6.45
L1016.30-1320	30	1320	22.8	80	28	20	12	9	14	M8	6.86
L1016.30-1400	30	1400	22.8	80	28	20	12	9	14	M8	7.28
L1016.30-1480	30	1480	22.8	80	28	20	12	9	14	M8	7.70
L1016.30-1560	30	1560	22.8	80	28	20	12	9	14	M8	8.11
L1016.30-1640	30	1640	22.8	80	28	20	12	9	14	M8	8.53
L1016.30-1720	30	1720	22.8	80	28	20	12	9	14	M8	8.94
L1016.30-1800	30	1800	22.8	80	28	20	12	9	14	M8	9.36
L1016.30-1880	30	1880	22.8	80	28	20	12	9	14	M8	9.78
L1016.30-1960	30	1960	22.8	80	28	20	12	9	14	M8	10.19
L1016.30-2040	30	2040	22.8	80	28	20	12	9	14	M8	10.61
L1016.30-2120	30	2120	22.8	80	28	20	12	9	14	M8	11.02
L1016.30-2200	30	2200	22.8	80	28	20	12	9	14	M8	11.44
L1016.30-2280	30	2280	22.8	80	28	20	12	9	14	M8	11.86
L1016.30-2360	30	2360	22.8	80	28	20	12	9	14	M8	12.27
L1016.30-2440	30	2440	22.8	80	28	20	12	9	14	M8	12.69
L1016.30-2520	30	2520	22.8	80	28	20	12	9	14	M8	13.10
L1016.30-2600	30	2600	22.8	80	28	20	12	9	14	M8	13.52
L1016.30-2680	30	2680	22.8	80	28	20	12	9	14	M8	13.94

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.30-2760	30	2760	22.8	80	28	20	12	9	14	M8	14.35
L1016.30-2840	30	2840	22.8	80	28	20	12	9	14	M8	14.77
L1016.30-2920	30	2920	22.8	80	28	20	12	9	14	M8	15.18
L1016.30-3000	30	3000	22.8	80	28	20	12	9	14	M8	15.60
L1016.30-3080	30	3080	22.8	80	28	20	12	9	14	M8	16.02
L1016.30-3160	30	3160	22.8	80	28	20	12	9	14	M8	16.43
L1016.30-3240	30	3240	22.8	80	28	20	12	9	14	M8	16.85
L1016.30-3320	30	3320	22.8	80	28	20	12	9	14	M8	17.26
L1016.30-3400	30	3400	22.8	80	28	20	12	9	14	M8	17.68
L1016.30-3480	30	3480	22.8	80	28	20	12	9	14	M8	18.10
L1016.30-3560	30	3560	22.8	80	28	20	12	9	14	M8	18.51
L1016.30-3640	30	3640	22.8	80	28	20	12	9	14	M8	18.93
L1016.30-3720	30	3720	22.8	80	28	20	12	9	14	M8	19.34
L1016.30-3800	30	3800	22.8	80	28	20	12	9	14	M8	19.76
L1016.30-3880	30	3880	22.8	80	28	20	12	9	14	M8	20.18
L1016.30-3960	30	3960	22.8	80	28	20	12	9	14	M8	20.59
L1016.30-4000	30	4000	22.8	80	28	20	12	9	14	M8	20.80

35mm Linear Guide Rail
standard

L1016.35



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 7,2 Kg/m.

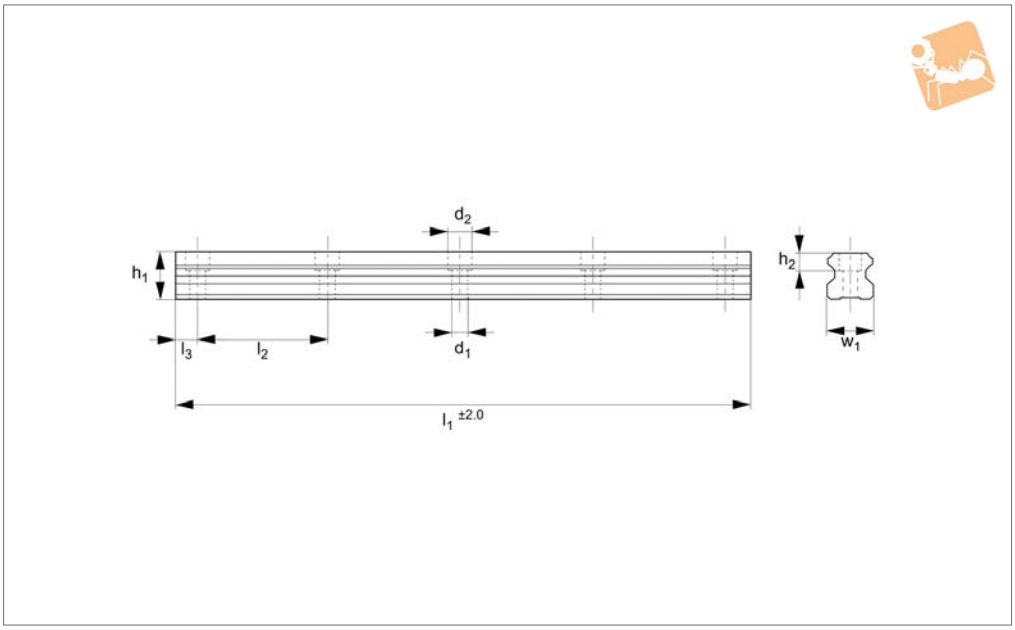
Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.35-0200	35	200	26.0	80	34	20	12	9	14	M8	1.44
L1016.35-0280	35	280	26.0	80	34	20	12	9	14	M8	2.02
L1016.35-0360	35	360	26.0	80	34	20	12	9	14	M8	2.59
L1016.35-0440	35	440	26.0	80	34	20	12	9	14	M8	3.17
L1016.35-0520	35	520	26.0	80	34	20	12	9	14	M8	3.74
L1016.35-0600	35	600	26.0	80	34	20	12	9	14	M8	4.32
L1016.35-0680	35	680	26.0	80	34	20	12	9	14	M8	4.90
L1016.35-0760	35	760	26.0	80	34	20	12	9	14	M8	5.47
L1016.35-0840	35	840	26.0	80	34	20	12	9	14	M8	6.05
L1016.35-0920	35	920	26.0	80	34	20	12	9	14	M8	6.62
L1016.35-1000	35	1000	26.0	80	34	20	12	9	14	M8	7.20
L1016.35-1080	35	1080	26.0	80	34	20	12	9	14	M8	7.78
L1016.35-1160	35	1160	26.0	80	34	20	12	9	14	M8	8.35
L1016.35-1240	35	1240	26.0	80	34	20	12	9	14	M8	8.93
L1016.35-1320	35	1320	26.0	80	34	20	12	9	14	M8	9.50
L1016.35-1400	35	1400	26.0	80	34	20	12	9	14	M8	10.08
L1016.35-1480	35	1480	26.0	80	34	20	12	9	14	M8	10.66
L1016.35-1560	35	1560	26.0	80	34	20	12	9	14	M8	11.23
L1016.35-1640	35	1640	26.0	80	34	20	12	9	14	M8	11.81
L1016.35-1720	35	1720	26.0	80	34	20	12	9	14	M8	12.38
L1016.35-1800	35	1800	26.0	80	34	20	12	9	14	M8	12.96
L1016.35-1880	35	1880	26.0	80	34	20	12	9	14	M8	13.54
L1016.35-1960	35	1960	26.0	80	34	20	12	9	14	M8	14.11
L1016.35-2040	35	2040	26.0	80	34	20	12	9	14	M8	14.69
L1016.35-2120	35	2120	26.0	80	34	20	12	9	14	M8	15.26
L1016.35-2200	35	2200	26.0	80	34	20	12	9	14	M8	15.84
L1016.35-2280	35	2280	26.0	80	34	20	12	9	14	M8	16.42
L1016.35-2360	35	2360	26.0	80	34	20	12	9	14	M8	16.99
L1016.35-2440	35	2440	26.0	80	34	20	12	9	14	M8	17.57
L1016.35-2520	35	2520	26.0	80	34	20	12	9	14	M8	18.14
L1016.35-2600	35	2600	26.0	80	34	20	12	9	14	M8	18.72
L1016.35-2680	35	2680	26.0	80	34	20	12	9	14	M8	19.30

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.35-2760	35	2760	26.0	80	34	20	12	9	14	M8	19.87
L1016.35-2840	35	2840	26.0	80	34	20	12	9	14	M8	20.45
L1016.35-2920	35	2920	26.0	80	34	20	12	9	14	M8	21.02
L1016.35-3000	35	3000	26.0	80	34	20	12	9	14	M8	21.60
L1016.35-3080	35	3080	26.0	80	34	20	12	9	14	M8	22.18
L1016.35-3160	35	3160	26.0	80	34	20	12	9	14	M8	22.75
L1016.35-3240	35	3240	26.0	80	34	20	12	9	14	M8	23.33
L1016.35-3320	35	3320	26.0	80	34	20	12	9	14	M8	23.90
L1016.35-3400	35	3400	26.0	80	34	20	12	9	14	M8	24.48
L1016.35-3480	35	3480	26.0	80	34	20	12	9	14	M8	25.06
L1016.35-3560	35	3560	26.0	80	34	20	12	9	14	M8	25.63
L1016.35-3640	35	3640	26.0	80	34	20	12	9	14	M8	26.21
L1016.35-3720	35	3720	26.0	80	34	20	12	9	14	M8	26.78
L1016.35-3800	35	3800	26.0	80	34	20	12	9	14	M8	27.36
L1016.35-3880	35	3880	26.0	80	34	20	12	9	14	M8	27.94
L1016.35-3960	35	3960	26.0	80	34	20	12	9	14	M8	28.51
L1016.35-4000	35	4000	26.0	80	34	20	12	9	14	M8	28.80

45mm Linear Guide Rail
standard

L1016.45



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 12,3 Kg/m.

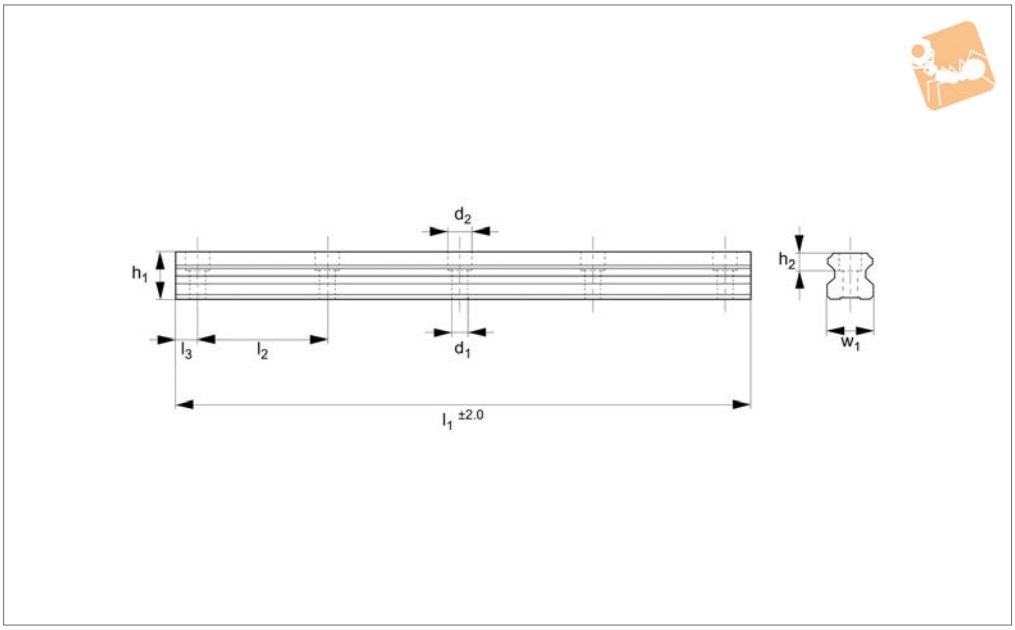
Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.45-0255	45	255	31.1	105	45	22.5	17	14	20	M12	3.14
L1016.45-0360	45	360	31.1	105	45	22.5	17	14	20	M12	4.43
L1016.45-0465	45	465	31.1	105	45	22.5	17	14	20	M12	5.72
L1016.45-0570	45	570	31.1	105	45	22.5	17	14	20	M12	7.01
L1016.45-0675	45	675	31.1	105	45	22.5	17	14	20	M12	8.30
L1016.45-0780	45	780	31.1	105	45	22.5	17	14	20	M12	9.59
L1016.45-0885	45	885	31.1	105	45	22.5	17	14	20	M12	10.89
L1016.45-0990	45	990	31.1	105	45	22.5	17	14	20	M12	12.18
L1016.45-1095	45	1095	31.1	105	45	22.5	17	14	20	M12	13.47
L1016.45-1200	45	1200	31.1	105	45	22.5	17	14	20	M12	14.76
L1016.45-1305	45	1305	31.1	105	45	22.5	17	14	20	M12	16.05
L1016.45-1410	45	1410	31.1	105	45	22.5	17	14	20	M12	17.34
L1016.45-1515	45	1515	31.1	105	45	22.5	17	14	20	M12	18.63
L1016.45-1620	45	1620	31.1	105	45	22.5	17	14	20	M12	19.93
L1016.45-1725	45	1725	31.1	105	45	22.5	17	14	20	M12	21.22
L1016.45-1830	45	1830	31.1	105	45	22.5	17	14	20	M12	22.51
L1016.45-1935	45	1935	31.1	105	45	22.5	17	14	20	M12	23.80
L1016.45-2040	45	2040	31.1	105	45	22.5	17	14	20	M12	25.09
L1016.45-2145	45	2145	31.1	105	45	22.5	17	14	20	M12	26.38
L1016.45-2250	45	2250	31.1	105	45	22.5	17	14	20	M12	27.68
L1016.45-2355	45	2355	31.1	105	45	22.5	17	14	20	M12	28.97
L1016.45-2460	45	2460	31.1	105	45	22.5	17	14	20	M12	30.26
L1016.45-2565	45	2565	31.1	105	45	22.5	17	14	20	M12	31.55
L1016.45-2670	45	2670	31.1	105	45	22.5	17	14	20	M12	32.84
L1016.45-2775	45	2775	31.1	105	45	22.5	17	14	20	M12	34.13
L1016.45-2880	45	2880	31.1	105	45	22.5	17	14	20	M12	35.42
L1016.45-2985	45	2985	31.1	105	45	22.5	17	14	20	M12	36.72
L1016.45-3090	45	3090	31.1	105	45	22.5	17	14	20	M12	38.01
L1016.45-3195	45	3195	31.1	105	45	22.5	17	14	20	M12	39.30
L1016.45-3300	45	3300	31.1	105	45	22.5	17	14	20	M12	40.59
L1016.45-3405	45	3405	31.1	105	45	22.5	17	14	20	M12	41.88
L1016.45-3510	45	3510	31.1	105	45	22.5	17	14	20	M12	43.17

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.45-3615	45	3615	31.1	105	45	22.5	17	14	20	M12	44.46
L1016.45-3720	45	3720	31.1	105	45	22.5	17	14	20	M12	45.76
L1016.45-3825	45	3825	31.1	105	45	22.5	17	14	20	M12	47.05
L1016.45-3930	45	3930	31.1	105	45	22.5	17	14	20	M12	48.34
L1016.45-4000	45	4000	31.1	105	45	22.5	17	14	20	M12	49.20

55mm Linear Guide Rail
standard

L1016.55

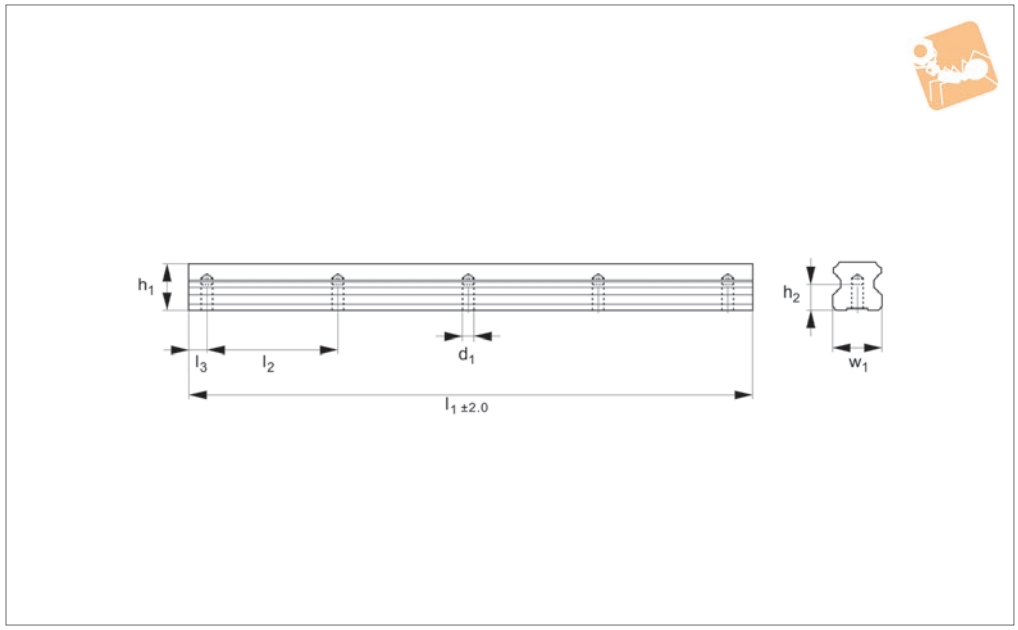


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 14,5 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.55-0300	55	300	38.0	120	53	30	20	16	23	M14	4.35
L1016.55-0420	55	420	38.0	120	53	30	20	16	23	M14	6.09
L1016.55-0540	55	540	38.0	120	53	30	20	16	23	M14	7.83
L1016.55-0660	55	660	38.0	120	53	30	20	16	23	M14	9.57
L1016.55-0780	55	780	38.0	120	53	30	20	16	23	M14	11.31
L1016.55-0900	55	900	38.0	120	53	30	20	16	23	M14	13.05
L1016.55-1020	55	1020	38.0	120	53	30	20	16	23	M14	14.79
L1016.55-1140	55	1140	38.0	120	53	30	20	16	23	M14	16.53
L1016.55-1260	55	1260	38.0	120	53	30	20	16	23	M14	18.27
L1016.55-1380	55	1380	38.0	120	53	30	20	16	23	M14	20.01
L1016.55-1500	55	1500	38.0	120	53	30	20	16	23	M14	21.75
L1016.55-1620	55	1620	38.0	120	53	30	20	16	23	M14	23.49
L1016.55-1740	55	1740	38.0	120	53	30	20	16	23	M14	25.23
L1016.55-1860	55	1860	38.0	120	53	30	20	16	23	M14	26.97
L1016.55-1980	55	1980	38.0	120	53	30	20	16	23	M14	28.71
L1016.55-2100	55	2100	38.0	120	53	30	20	16	23	M14	30.45
L1016.55-2220	55	2220	38.0	120	53	30	20	16	23	M14	32.19
L1016.55-2340	55	2340	38.0	120	53	30	20	16	23	M14	33.93
L1016.55-2460	55	2460	38.0	120	53	30	20	16	23	M14	35.67
L1016.55-2580	55	2580	38.0	120	53	30	20	16	23	M14	37.41
L1016.55-2700	55	2700	38.0	120	53	30	20	16	23	M14	39.15
L1016.55-2820	55	2820	38.0	120	53	30	20	16	23	M14	40.89
L1016.55-2940	55	2940	38.0	120	53	30	20	16	23	M14	42.63
L1016.55-3060	55	3060	38.0	120	53	30	20	16	23	M14	44.37
L1016.55-3180	55	3180	38.0	120	53	30	20	16	23	M14	46.11
L1016.55-3300	55	3300	38.0	120	53	30	20	16	23	M14	47.85
L1016.55-3420	55	3420	38.0	120	53	30	20	16	23	M14	49.59
L1016.55-3540	55	3540	38.0	120	53	30	20	16	23	M14	51.33
L1016.55-3660	55	3660	38.0	120	53	30	20	16	23	M14	53.07
L1016.55-3780	55	3780	38.0	120	53	30	20	16	23	M14	54.81
L1016.55-3900	55	3900	38.0	120	53	30	20	16	23	M14	56.55
L1016.55-4000	55	4000	38.0	120	53	30	20	16	23	M14	58.00



L1016.RF15

Material
Hardened and ground steel (typically 60 HRc).

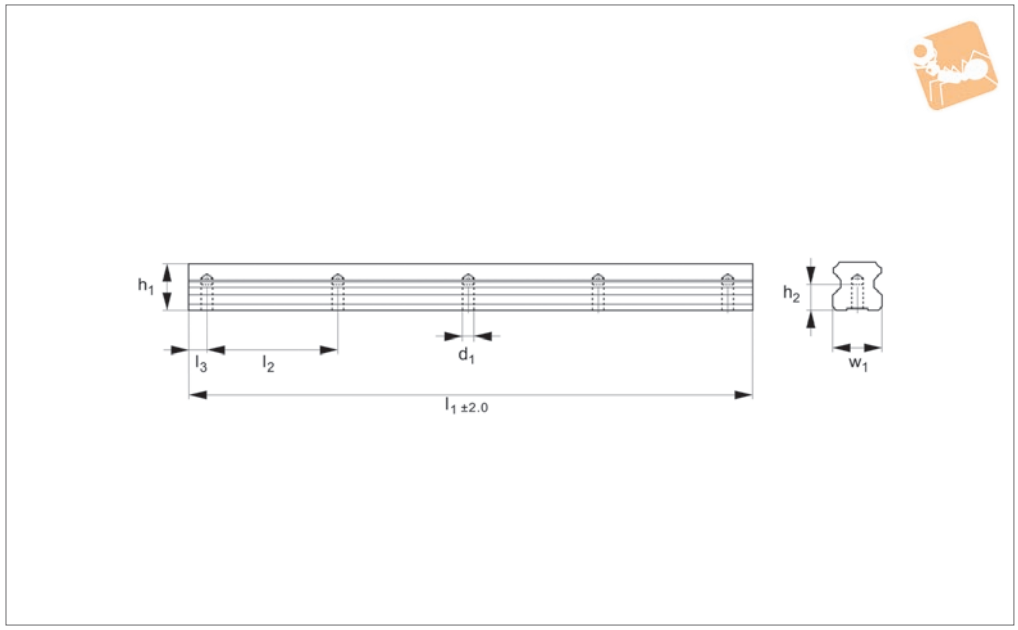
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF15-0160	15	160	13.0	60	15	20	8	M5	0.22
L1016.RF15-0220	15	220	13.0	60	15	20	8	M5	0.31
L1016.RF15-0280	15	280	13.0	60	15	20	8	M5	0.39
L1016.RF15-0340	15	340	13.0	60	15	20	8	M5	0.48
L1016.RF15-0400	15	400	13.0	60	15	20	8	M5	0.56
L1016.RF15-0460	15	460	13.0	60	15	20	8	M5	0.64
L1016.RF15-0520	15	520	13.0	60	15	20	8	M5	0.73
L1016.RF15-0580	15	580	13.0	60	15	20	8	M5	0.81
L1016.RF15-0640	15	640	13.0	60	15	20	8	M5	0.90
L1016.RF15-0700	15	700	13.0	60	15	20	8	M5	0.98
L1016.RF15-0760	15	760	13.0	60	15	20	8	M5	1.06
L1016.RF15-0820	15	820	13.0	60	15	20	8	M5	1.15
L1016.RF15-0880	15	880	13.0	60	15	20	8	M5	1.23
L1016.RF15-0940	15	940	13.0	60	15	20	8	M5	1.32
L1016.RF15-1000	15	1000	13.0	60	15	20	8	M5	1.40
L1016.RF15-1060	15	1060	13.0	60	15	20	8	M5	1.48
L1016.RF15-1120	15	1120	13.0	60	15	20	8	M5	1.57
L1016.RF15-1180	15	1180	13.0	60	15	20	8	M5	1.65
L1016.RF15-1240	15	1240	13.0	60	15	20	8	M5	1.74
L1016.RF15-1300	15	1300	13.0	60	15	20	8	M5	1.82
L1016.RF15-1360	15	1360	13.0	60	15	20	8	M5	1.90
L1016.RF15-1420	15	1420	13.0	60	15	20	8	M5	1.99
L1016.RF15-1480	15	1480	13.0	60	15	20	8	M5	2.07
L1016.RF15-1540	15	1540	13.0	60	15	20	8	M5	2.16
L1016.RF15-1600	15	1600	13.0	60	15	20	8	M5	2.24
L1016.RF15-1660	15	1660	13.0	60	15	20	8	M5	2.32
L1016.RF15-1720	15	1720	13.0	60	15	20	8	M5	2.41
L1016.RF15-1780	15	1780	13.0	60	15	20	8	M5	2.49
L1016.RF15-1840	15	1840	13.0	60	15	20	8	M5	2.58
L1016.RF15-1900	15	1900	13.0	60	15	20	8	M5	2.66
L1016.RF15-1960	15	1960	13.0	60	15	20	8	M5	2.74
L1016.RF15-2020	15	2020	13.0	60	15	20	8	M5	2.83

15mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF15-2080	15	2080	13.0	60	15	20	8	M5	2.91
L1016.RF15-2140	15	2140	13.0	60	15	20	8	M5	3.00
L1016.RF15-2200	15	2220	13.0	60	15	20	8	M5	3.08
L1016.RF15-2260	15	2260	13.0	60	15	20	8	M5	3.16
L1016.RF15-2320	15	2320	13.0	60	15	20	8	M5	3.25
L1016.RF15-2380	15	2380	13.0	60	15	20	8	M5	3.33
L1016.RF15-2440	15	2440	13.0	60	15	20	8	M5	3.42
L1016.RF15-2500	15	2500	13.0	60	15	20	8	M5	3.50
L1016.RF15-2560	15	2560	13.0	60	15	20	8	M5	3.58
L1016.RF15-2620	15	2620	13.0	60	15	20	8	M5	3.67
L1016.RF15-2680	15	2680	13.0	60	15	20	8	M5	3.75
L1016.RF15-2740	15	2740	13.0	60	15	20	8	M5	3.84
L1016.RF15-2800	15	2800	13.0	60	15	20	8	M5	3.92
L1016.RF15-2860	15	2860	13.0	60	15	20	8	M5	4.00
L1016.RF15-2920	15	2920	13.0	60	15	20	8	M5	4.09
L1016.RF15-2980	15	2980	13.0	60	15	20	8	M5	4.17
L1016.RF15-3040	15	3040	13.0	60	15	20	8	M5	4.26
L1016.RF15-3100	15	3100	13.0	60	15	20	8	M5	4.34
L1016.RF15-3160	15	3160	13.0	60	15	20	8	M5	4.42
L1016.RF15-3220	15	3220	13.0	60	15	20	8	M5	4.51
L1016.RF15-3280	15	3280	13.0	60	15	20	8	M5	4.59
L1016.RF15-3340	15	3340	13.0	60	15	20	8	M5	4.68
L1016.RF15-3400	15	3400	13.0	60	15	20	8	M5	4.76
L1016.RF15-3460	15	3460	13.0	60	15	20	8	M5	4.84
L1016.RF15-3520	15	3520	13.0	60	15	20	8	M5	4.93
L1016.RF15-3580	15	3580	13.0	60	15	20	8	M5	5.01
L1016.RF15-3640	15	3640	13.0	60	15	20	8	M5	5.10
L1016.RF15-3700	15	3700	13.0	60	15	20	8	M5	5.18
L1016.RF15-3760	15	3760	13.0	60	15	20	8	M5	5.26
L1016.RF15-3820	15	3820	13.0	60	15	20	8	M5	5.35
L1016.RF15-3880	15	3880	13.0	60	15	20	8	M5	5.43
L1016.RF15-3940	15	3940	13.0	60	15	20	8	M5	5.52
L1016.RF15-4000	15	4000	13.0	60	15	20	8	M5	5.60



L1016.RF20

Material
Hardened and ground steel (typically 60 HRc).

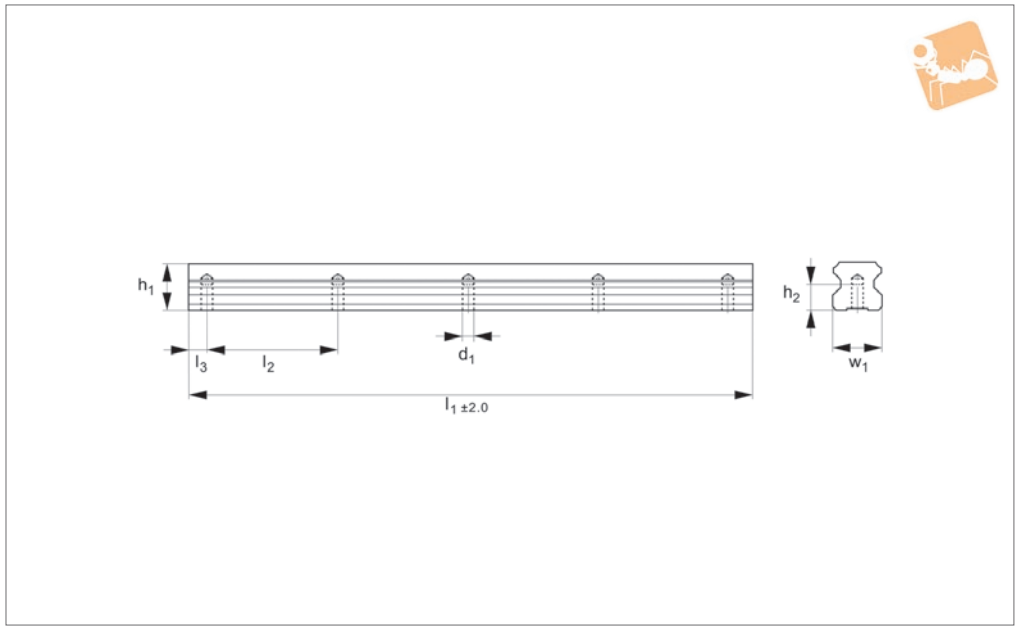
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF20-0160	20	160	16.3	60	20	20	10	M6	0.42
L1016.RF20-0220	20	220	16.3	60	20	20	10	M6	0.57
L1016.RF20-0280	20	280	16.3	60	20	20	10	M6	0.73
L1016.RF20-0340	20	340	16.3	60	20	20	10	M6	0.88
L1016.RF20-0400	20	400	16.3	60	20	20	10	M6	1.04
L1016.RF20-0460	20	460	16.3	60	20	20	10	M6	1.20
L1016.RF20-0520	20	520	16.3	60	20	20	10	M6	1.35
L1016.RF20-0580	20	580	16.3	60	20	20	10	M6	1.51
L1016.RF20-0640	20	640	16.3	60	20	20	10	M6	1.66
L1016.RF20-0700	20	700	16.3	60	20	20	10	M6	1.82
L1016.RF20-0760	20	760	16.3	60	20	20	10	M6	1.98
L1016.RF20-0820	20	820	16.3	60	20	20	10	M6	2.13
L1016.RF20-0880	20	880	16.3	60	20	20	10	M6	2.29
L1016.RF20-0940	20	940	16.3	60	20	20	10	M6	2.44
L1016.RF20-1000	20	1000	16.3	60	20	20	10	M6	2.60
L1016.RF20-1060	20	1060	16.3	60	20	20	10	M6	2.76
L1016.RF20-1120	20	1120	16.3	60	20	20	10	M6	2.91
L1016.RF20-1180	20	1180	16.3	60	20	20	10	M6	3.07
L1016.RF20-1240	20	1240	16.3	60	20	20	10	M6	3.22
L1016.RF20-1300	20	1300	16.3	60	20	20	10	M6	3.38
L1016.RF20-1360	20	1360	16.3	60	20	20	10	M6	3.54
L1016.RF20-1420	20	1420	16.3	60	20	20	10	M6	3.69
L1016.RF20-1480	20	1480	16.3	60	20	20	10	M6	3.85
L1016.RF20-1540	20	1540	16.3	60	20	20	10	M6	4.00
L1016.RF20-1600	20	1600	16.3	60	20	20	10	M6	4.16
L1016.RF20-1660	20	1660	16.3	60	20	20	10	M6	4.32
L1016.RF20-1720	20	1720	16.3	60	20	20	10	M6	4.47
L1016.RF20-1780	20	1780	16.3	60	20	20	10	M6	4.63
L1016.RF20-1840	20	1840	16.3	60	20	20	10	M6	4.78
L1016.RF20-1900	20	1900	16.3	60	20	20	10	M6	4.94
L1016.RF20-1960	20	1960	16.3	60	20	20	10	M6	5.10
L1016.RF20-2020	20	2020	16.3	60	20	20	10	M6	5.25

20mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF20-2080	20	2080	16.3	60	20	20	10	M6	5.41
L1016.RF20-2140	20	2140	16.3	60	20	20	10	M6	5.56
L1016.RF20-2200	20	2200	16.3	60	20	20	10	M6	5.72
L1016.RF20-2260	20	2260	16.3	60	20	20	10	M6	5.88
L1016.RF20-2320	20	2320	16.3	60	20	20	10	M6	6.03
L1016.RF20-2380	20	2380	16.3	60	20	20	10	M6	6.19
L1016.RF20-2440	20	2440	16.3	60	20	20	10	M6	6.34
L1016.RF20-2500	20	2500	16.3	60	20	20	10	M6	6.50
L1016.RF20-2560	20	2560	16.3	60	20	20	10	M6	6.66
L1016.RF20-2620	20	2620	16.3	60	20	20	10	M6	6.81
L1016.RF20-2680	20	2680	16.3	60	20	20	10	M6	6.97
L1016.RF20-2740	20	2740	16.3	60	20	20	10	M6	7.12
L1016.RF20-2800	20	2800	16.3	60	20	20	10	M6	7.28
L1016.RF20-2860	20	2860	16.3	60	20	20	10	M6	7.44
L1016.RF20-2920	20	2920	16.3	60	20	20	10	M6	7.59
L1016.RF20-2980	20	2980	16.3	60	20	20	10	M6	7.75
L1016.RF20-3040	20	3040	16.3	60	20	20	10	M6	7.90
L1016.RF20-3100	20	3100	16.3	60	20	20	10	M6	8.06
L1016.RF20-3160	20	3160	16.3	60	20	20	10	M6	8.22
L1016.RF20-3220	20	3220	16.3	60	20	20	10	M6	8.37
L1016.RF20-3280	20	3280	16.3	60	20	20	10	M6	8.53
L1016.RF20-3340	20	3340	16.3	60	20	20	10	M6	8.68
L1016.RF20-3400	20	3400	16.3	60	20	20	10	M6	8.84
L1016.RF20-3460	20	3460	16.3	60	20	20	10	M6	9.00
L1016.RF20-3520	20	3520	16.3	60	20	20	10	M6	9.15
L1016.RF20-3580	20	3580	16.3	60	20	20	10	M6	9.31
L1016.RF20-3640	20	3640	16.3	60	20	20	10	M6	9.46
L1016.RF20-3700	20	3700	16.3	60	20	20	10	M6	9.62
L1016.RF20-3760	20	3760	16.3	60	20	20	10	M6	9.78
L1016.RF20-3820	20	3820	16.3	60	20	20	10	M6	9.93
L1016.RF20-3880	20	3880	16.3	60	20	20	10	M6	10.09
L1016.RF20-3940	20	3940	16.3	60	20	20	10	M6	10.24
L1016.RF20-4000	20	4000	16.3	60	20	20	10	M6	10.40



L1016.RF25

Material
Hardened and ground steel (typically 60 HRc).

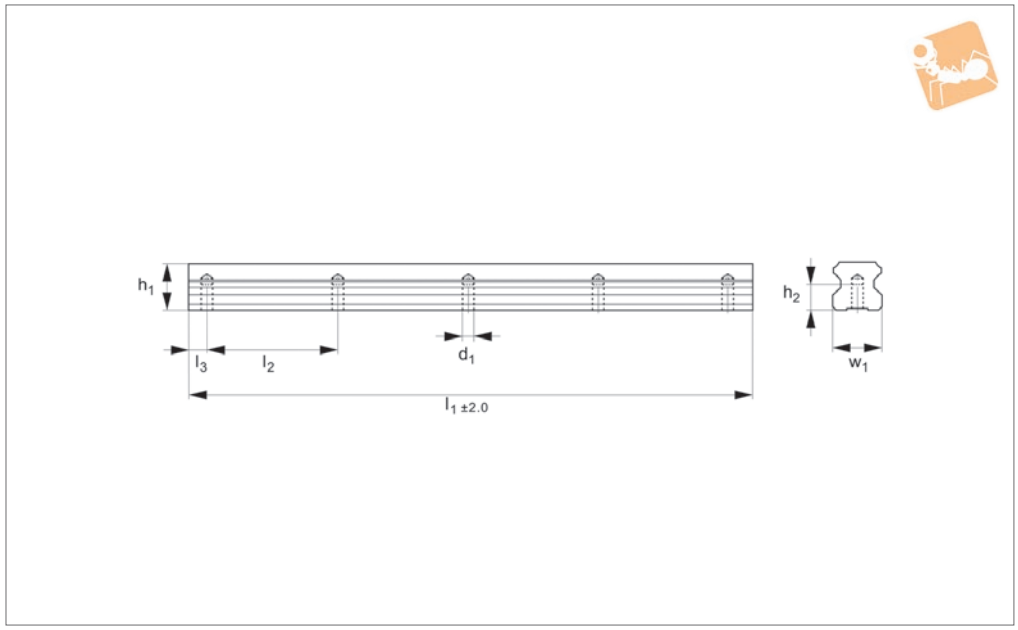
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF25-0160	25	160	19.2	60	23	20	12	M6	0.58
L1016.RF25-0220	25	220	19.2	60	23	20	12	M6	0.79
L1016.RF25-0280	25	280	19.2	60	23	20	12	M6	1.01
L1016.RF25-0340	25	340	19.2	60	23	20	12	M6	1.22
L1016.RF25-0400	25	400	19.2	60	23	20	12	M6	1.44
L1016.RF25-0460	25	460	19.2	60	23	20	12	M6	1.66
L1016.RF25-0520	25	520	19.2	60	23	20	12	M6	1.87
L1016.RF25-0580	25	580	19.2	60	23	20	12	M6	2.09
L1016.RF25-0640	25	640	19.2	60	23	20	12	M6	2.30
L1016.RF25-0700	25	700	19.2	60	23	20	12	M6	2.52
L1016.RF25-0760	25	760	19.2	60	23	20	12	M6	2.74
L1016.RF25-0820	25	820	19.2	60	23	20	12	M6	2.95
L1016.RF25-0880	25	880	19.2	60	23	20	12	M6	3.17
L1016.RF25-0940	25	940	19.2	60	23	20	12	M6	3.38
L1016.RF25-1000	25	1000	19.2	60	23	20	12	M6	3.60
L1016.RF25-1060	25	1060	19.2	60	23	20	12	M6	3.82
L1016.RF25-1120	25	1120	19.2	60	23	20	12	M6	4.03
L1016.RF25-1180	25	1180	19.2	60	23	20	12	M6	4.25
L1016.RF25-1240	25	1240	19.2	60	23	20	12	M6	4.46
L1016.RF25-1300	25	1300	19.2	60	23	20	12	M6	4.68
L1016.RF25-1360	25	1360	19.2	60	23	20	12	M6	4.90
L1016.RF25-1420	25	1420	19.2	60	23	20	12	M6	5.11
L1016.RF25-1480	25	1480	19.2	60	23	20	12	M6	5.33
L1016.RF25-1540	25	1540	19.2	60	23	20	12	M6	5.54
L1016.RF25-1600	25	1600	19.2	60	23	20	12	M6	5.76
L1016.RF25-1660	25	1660	19.2	60	23	20	12	M6	5.98
L1016.RF25-1720	25	1720	19.2	60	23	20	12	M6	6.19
L1016.RF25-1780	25	1780	19.2	60	23	20	12	M6	6.41
L1016.RF25-1840	25	1840	19.2	60	23	20	12	M6	6.62
L1016.RF25-1900	25	1900	19.2	60	23	20	12	M6	6.84
L1016.RF25-1960	25	1960	19.2	60	23	20	12	M6	7.06
L1016.RF25-2020	25	2020	19.2	60	23	20	12	M6	7.27

25mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF25-2080	25	2080	19.2	60	23	20	12	M6	7.49
L1016.RF25-2140	25	2140	19.2	60	23	20	12	M6	7.70
L1016.RF25-2200	25	2200	19.2	60	23	20	12	M6	7.92
L1016.RF25-2260	25	2260	19.2	60	23	20	12	M6	8.14
L1016.RF25-2320	25	2320	19.2	60	23	20	12	M6	8.35
L1016.RF25-2380	25	2380	19.2	60	23	20	12	M6	8.57
L1016.RF25-2440	25	2440	19.2	60	23	20	12	M6	8.78
L1016.RF25-2500	25	2500	19.2	60	23	20	12	M6	9.00
L1016.RF25-2560	25	2560	19.2	60	23	20	12	M6	9.22
L1016.RF25-2620	25	2620	19.2	60	23	20	12	M6	9.43
L1016.RF25-2680	25	2680	19.2	60	23	20	12	M6	9.65
L1016.RF25-2740	25	2740	19.2	60	23	20	12	M6	9.86
L1016.RF25-2800	25	2800	19.2	60	23	20	12	M6	10.08
L1016.RF25-2860	25	2860	19.2	60	23	20	12	M6	10.30
L1016.RF25-2920	25	2920	19.2	60	23	20	12	M6	10.51
L1016.RF25-2980	25	2980	19.2	60	23	20	12	M6	10.73
L1016.RF25-3040	25	3040	19.2	60	23	20	12	M6	10.94
L1016.RF25-3100	25	3100	19.2	60	23	20	12	M6	11.16
L1016.RF25-3160	25	3160	19.2	60	23	20	12	M6	11.38
L1016.RF25-3220	25	3220	19.2	60	23	20	12	M6	11.59
L1016.RF25-3280	25	3280	19.2	60	23	20	12	M6	11.81
L1016.RF25-3340	25	3340	19.2	60	23	20	12	M6	12.02
L1016.RF25-3400	25	3400	19.2	60	23	20	12	M6	12.24
L1016.RF25-3460	25	3460	19.2	60	23	20	12	M6	12.46
L1016.RF25-3520	25	3520	19.2	60	23	20	12	M6	12.67
L1016.RF25-3580	25	3580	19.2	60	23	20	12	M6	12.89
L1016.RF25-3640	25	3640	19.2	60	23	20	12	M6	13.10
L1016.RF25-3700	25	3700	19.2	60	23	20	12	M6	13.32
L1016.RF25-3760	25	3760	19.2	60	23	20	12	M6	13.54
L1016.RF25-3820	25	3820	19.2	60	23	20	12	M6	13.75
L1016.RF25-3880	25	3880	19.2	60	23	20	12	M6	13.97
L1016.RF25-3940	25	3940	19.2	60	23	20	12	M6	14.18
L1016.RF25-4000	25	4000	19.2	60	23	20	12	M6	14.40



L1016.RF30

Material
Hardened and ground steel (typically 60 HRc).

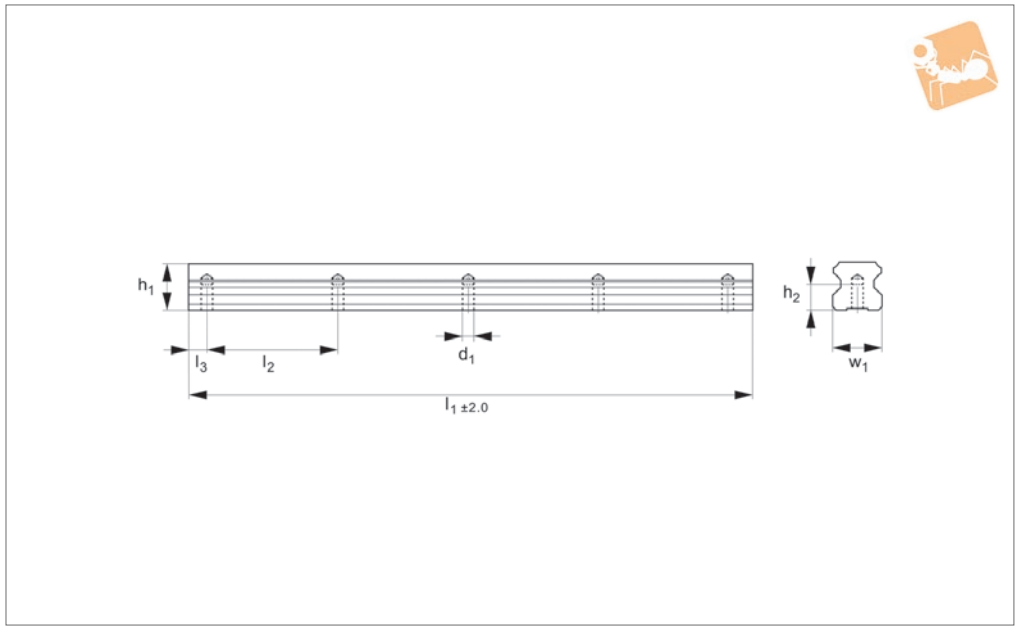
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 5,2 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF30-0200	30	200	22.8	80	28	20	15	M8	1.04
L1016.RF30-0280	30	280	22.8	80	28	20	15	M8	1.46
L1016.RF30-0360	30	360	22.8	80	28	20	15	M8	1.87
L1016.RF30-0440	30	440	22.8	80	28	20	15	M8	2.29
L1016.RF30-0520	30	520	22.8	80	28	20	15	M8	2.70
L1016.RF30-0600	30	600	22.8	80	28	20	15	M8	3.12
L1016.RF30-0680	30	680	22.8	80	28	20	15	M8	3.54
L1016.RF30-0760	30	760	22.8	80	28	20	15	M8	3.95
L1016.RF30-0840	30	840	22.8	80	28	20	15	M8	4.37
L1016.RF30-0920	30	920	22.8	80	28	20	15	M8	4.78
L1016.RF30-1000	30	1000	22.8	80	28	20	15	M8	5.20
L1016.RF30-1080	30	1080	22.8	80	28	20	15	M8	5.62
L1016.RF30-1160	30	1160	22.8	80	28	20	15	M8	6.03
L1016.RF30-1240	30	1240	22.8	80	28	20	15	M8	6.45
L1016.RF30-1320	30	1320	22.8	80	28	20	15	M8	6.86
L1016.RF30-1400	30	1400	22.8	80	28	20	15	M8	7.28
L1016.RF30-1480	30	1480	22.8	80	28	20	15	M8	7.70
L1016.RF30-1560	30	1560	22.8	80	28	20	15	M8	8.11
L1016.RF30-1640	30	1640	22.8	80	28	20	15	M8	8.53
L1016.RF30-1720	30	1720	22.8	80	28	20	15	M8	8.94
L1016.RF30-1800	30	1800	22.8	80	28	20	15	M8	9.36
L1016.RF30-1880	30	1880	22.8	80	28	20	15	M8	9.78
L1016.RF30-1960	30	1960	22.8	80	28	20	15	M8	10.19
L1016.RF30-2040	30	2040	22.8	80	28	20	15	M8	10.61
L1016.RF30-2120	30	2120	22.8	80	28	20	15	M8	11.02
L1016.RF30-2200	30	2200	22.8	80	28	20	15	M8	11.44
L1016.RF30-2280	30	2280	22.8	80	28	20	15	M8	11.86
L1016.RF30-2360	30	2360	22.8	80	28	20	15	M8	12.27
L1016.RF30-2440	30	2440	22.8	80	28	20	15	M8	12.69
L1016.RF30-2520	30	2520	22.8	80	28	20	15	M8	13.10
L1016.RF30-2600	30	2600	22.8	80	28	20	15	M8	13.52
L1016.RF30-2680	30	2680	22.8	80	28	20	15	M8	13.94

30mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF30-2760	30	2760	22.8	80	28	20	15	M8	14.35
L1016.RF30-2840	30	2840	22.8	80	28	20	15	M8	14.77
L1016.RF30-2920	30	2920	22.8	80	28	20	15	M8	15.18
L1016.RF30-3000	30	3000	22.8	80	28	20	15	M8	15.60
L1016.RF30-3080	30	3080	22.8	80	28	20	15	M8	16.02
L1016.RF30-3160	30	3160	22.8	80	28	20	15	M8	16.43
L1016.RF30-3240	30	3240	22.8	80	28	20	15	M8	16.85
L1016.RF30-3320	30	3320	22.8	80	28	20	15	M8	17.26
L1016.RF30-3400	30	3400	22.8	80	28	20	15	M8	17.68
L1016.RF30-3480	30	3480	22.8	80	28	20	15	M8	18.10
L1016.RF30-3560	30	3560	22.8	80	28	20	15	M8	18.51
L1016.RF30-3640	30	3640	22.8	80	28	20	15	M8	18.93
L1016.RF30-3720	30	3720	22.8	80	28	20	15	M8	19.34
L1016.RF30-3800	30	3800	22.8	80	28	20	15	M8	19.76
L1016.RF30-3880	30	3880	22.8	80	28	20	15	M8	20.18
L1016.RF30-3960	30	3960	22.8	80	28	20	15	M8	20.59
L1016.RF30-4000	30	4000	22.8	80	28	20	15	M8	20.80



L1016.RF35

Material
Hardened and ground steel (typically 60 HRc).

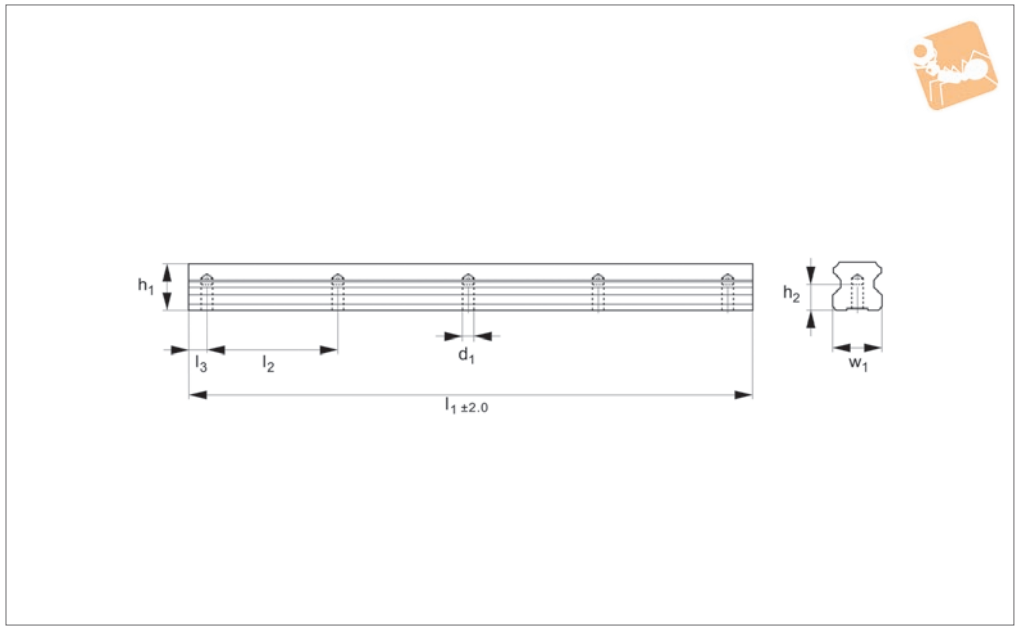
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 7,2 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF35-0200	35	200	26.0	80	34	20	15	M8	1.44
L1016.RF35-0280	35	280	26.0	80	34	20	15	M8	2.02
L1016.RF35-0360	35	360	26.0	80	34	20	15	M8	2.59
L1016.RF35-0440	35	440	26.0	80	34	20	15	M8	3.17
L1016.RF35-0520	35	520	26.0	80	34	20	15	M8	3.74
L1016.RF35-0600	35	600	26.0	80	34	20	15	M8	4.32
L1016.RF35-0680	35	680	26.0	80	34	20	15	M8	4.90
L1016.RF35-0760	35	760	26.0	80	34	20	15	M8	5.47
L1016.RF35-0840	35	840	26.0	80	34	20	15	M8	6.05
L1016.RF35-0920	35	920	26.0	80	34	20	15	M8	6.62
L1016.RF35-1000	35	1000	26.0	80	34	20	15	M8	7.20
L1016.RF35-1080	35	1080	26.0	80	34	20	15	M8	7.78
L1016.RF35-1160	35	1160	26.0	80	34	20	15	M8	8.35
L1016.RF35-1240	35	1240	26.0	80	34	20	15	M8	8.93
L1016.RF35-1320	35	1320	26.0	80	34	20	15	M8	9.50
L1016.RF35-1400	35	1400	26.0	80	34	20	15	M8	10.08
L1016.RF35-1480	35	1480	26.0	80	34	20	15	M8	10.66
L1016.RF35-1560	35	1560	26.0	80	34	20	15	M8	11.23
L1016.RF35-1640	35	1640	26.0	80	34	20	15	M8	11.81
L1016.RF35-1720	35	1720	26.0	80	34	20	15	M8	12.38
L1016.RF35-1800	35	1800	26.0	80	34	20	15	M8	12.96
L1016.RF35-1880	35	1880	26.0	80	34	20	15	M8	13.54
L1016.RF35-1960	35	1960	26.0	80	34	20	15	M8	14.11
L1016.RF35-2040	35	2040	26.0	80	34	20	15	M8	14.69
L1016.RF35-2120	35	2120	26.0	80	34	20	15	M8	15.26
L1016.RF35-2200	35	2200	26.0	80	34	20	15	M8	15.84
L1016.RF35-2280	35	2280	26.0	80	34	20	15	M8	16.42
L1016.RF35-2360	35	2360	26.0	80	34	20	15	M8	16.99
L1016.RF35-2440	35	2440	26.0	80	34	20	15	M8	17.57
L1016.RF35-2520	35	2520	26.0	80	34	20	15	M8	18.14
L1016.RF35-2600	35	2600	26.0	80	34	20	15	M8	18.72
L1016.RF35-2680	35	2680	26.0	80	34	20	15	M8	19.30

35mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF35-2760	35	2760	26.0	80	34	20	15	M8	19.87
L1016.RF35-2840	35	2840	26.0	80	34	20	15	M8	20.45
L1016.RF35-2920	35	2920	26.0	80	34	20	15	M8	21.02
L1016.RF35-3000	35	3000	26.0	80	34	20	15	M8	21.60
L1016.RF35-3080	35	3080	26.0	80	34	20	15	M8	22.18
L1016.RF35-3160	35	3160	26.0	80	34	20	15	M8	22.75
L1016.RF35-3240	35	3240	26.0	80	34	20	15	M8	23.33
L1016.RF35-3320	35	3320	26.0	80	34	20	15	M8	23.90
L1016.RF35-3400	35	3400	26.0	80	34	20	15	M8	24.48
L1016.RF35-3480	35	3480	26.0	80	34	20	15	M8	25.06
L1016.RF35-3560	35	3560	26.0	80	34	20	15	M8	25.63
L1016.RF35-3640	35	3640	26.0	80	34	20	15	M8	26.21
L1016.RF35-3720	35	3720	26.0	80	34	20	15	M8	26.78
L1016.RF35-3800	35	3800	26.0	80	34	20	15	M8	27.36
L1016.RF35-3880	35	3880	26.0	80	34	20	15	M8	27.94
L1016.RF35-3960	35	3960	26.0	80	34	20	15	M8	28.51
L1016.RF35-4000	35	4000	26.0	80	34	20	15	M8	28.80



L1016.RF45

Material
Hardened and ground steel (typically 60 HRc).

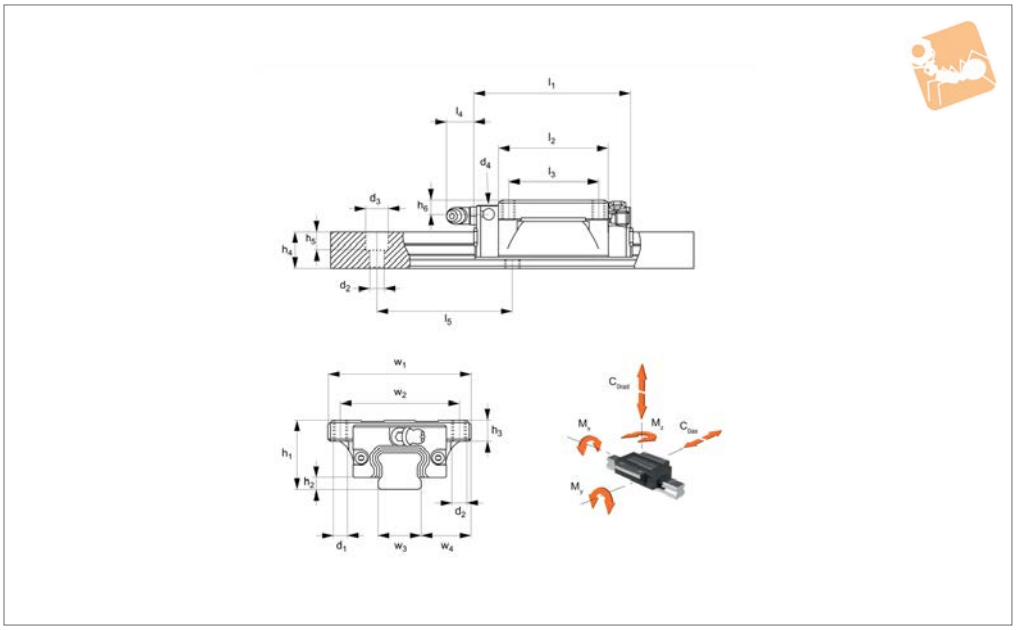
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 12,3 Kg/m.

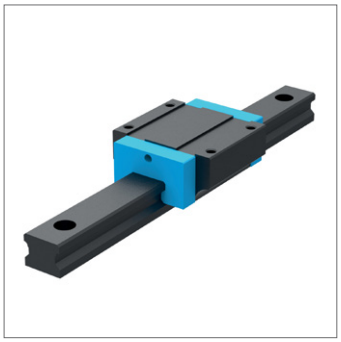
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF45-0255	45	255	31.1	105	45	22.5	24	M12	26.09
L1016.RF45-0360	45	360	31.1	105	45	22.5	24	M12	36.83
L1016.RF45-0465	45	465	31.1	105	45	22.5	24	M12	47.57
L1016.RF45-0570	45	570	31.1	105	45	22.5	24	M12	58.31
L1016.RF45-0675	45	675	31.1	105	45	22.5	24	M12	69.05
L1016.RF45-0780	45	780	31.1	105	45	22.5	24	M12	79.79
L1016.RF45-0885	45	885	31.1	105	45	22.5	24	M12	90.54
L1016.RF45-0990	45	990	31.1	105	45	22.5	24	M12	101.28
L1016.RF45-1095	45	1095	31.1	105	45	22.5	24	M12	13.47
L1016.RF45-1200	45	1200	31.1	105	45	22.5	24	M12	14.76
L1016.RF45-1305	45	1305	31.1	105	45	22.5	24	M12	16.05
L1016.RF45-1410	45	1410	31.1	105	45	22.5	24	M12	17.34
L1016.RF45-1515	45	1515	31.1	105	45	22.5	24	M12	18.63
L1016.RF45-1620	45	1620	31.1	105	45	22.5	24	M12	19.93
L1016.RF45-1725	45	1725	31.1	105	45	22.5	24	M12	21.22
L1016.RF45-1830	45	1830	31.1	105	45	22.5	24	M12	22.51
L1016.RF45-1935	45	1935	31.1	105	45	22.5	24	M12	23.80
L1016.RF45-2040	45	2040	31.1	105	45	22.5	24	M12	25.09
L1016.RF45-2145	45	2145	31.1	105	45	22.5	24	M12	26.38
L1016.RF45-2250	45	2250	31.1	105	45	22.5	24	M12	27.68
L1016.RF45-2355	45	2355	31.1	105	45	22.5	24	M12	28.97
L1016.RF45-2460	45	2460	31.1	105	45	22.5	24	M12	30.26
L1016.RF45-2565	45	2565	31.1	105	45	22.5	24	M12	31.55
L1016.RF45-2670	45	2670	31.1	105	45	22.5	24	M12	32.84
L1016.RF45-2775	45	2775	31.1	105	45	22.5	24	M12	34.13
L1016.RF45-2880	45	2880	31.1	105	45	22.5	24	M12	35.42
L1016.RF45-2985	45	2985	31.1	105	45	22.5	24	M12	36.72
L1016.RF45-3090	45	3090	31.1	105	45	22.5	24	M12	38.01
L1016.RF45-3195	45	3195	31.1	105	45	22.5	24	M12	39.30
L1016.RF45-3300	45	3300	31.1	105	45	22.5	24	M12	40.59
L1016.RF45-3405	45	3405	31.1	105	45	22.5	24	M12	41.88
L1016.RF45-3510	45	3510	31.1	105	45	22.5	24	M12	43.17

45mm Linear Guide Rail

rear fixing

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF45-3615	45	3615	31.1	105	45	22.5	24	M12	44.46
L1016.RF45-3720	45	3720	31.1	105	45	22.5	24	M12	45.76
L1016.RF45-3825	45	3825	31.1	105	45	22.5	24	M12	47.05
L1016.RF45-3930	45	3930	31.1	105	45	22.5	24	M12	48.34
L1016.RF45-4000	45	4000	31.1	105	45	22.5	24	M12	49.20





L1016.F-BC

Material

Hardened and ground steel. Matt black oxide ceramic layer, Thickness 2-10 µ. No deformation of the parts. Resistant to acids, alkalis and solvents. Relatively soft layer (up to 350 HV), which clears away by rolling over in the area of the raceways. Suitable for applications in the optic and medical industry.

Technical Notes

Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

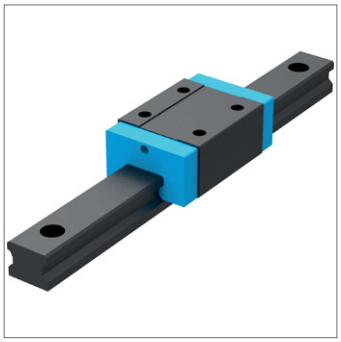
Tips

Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

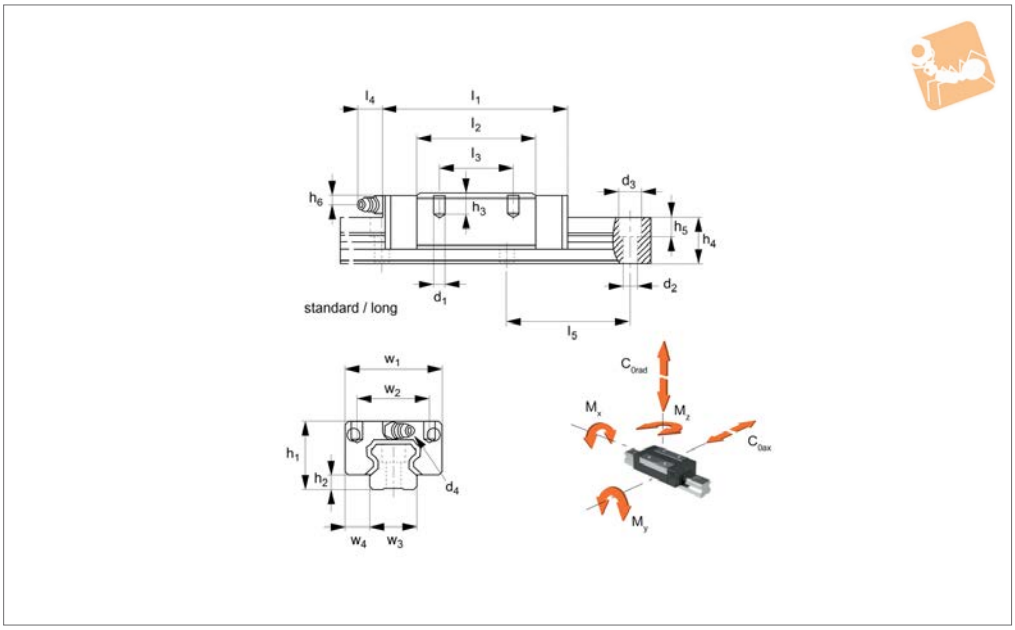
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.F15-BC	15	58.6	24	40.2	47	30	3.3	8.0	13.0	M 5	6.0	4.5	5.5	38	15	16.0	5.0	0.21
L1016.F15-L-BC	15	66.1	24	47.7	47	30	3.3	8.0	13.0	M 5	6.0	4.5	5.5	38	15	16.0	5.0	0.23
L1016.F20-BC	20	69.3	30	48.5	63	40	4.5	9.0	16.3	M 6	8.5	6.0	7.1	53	20	21.5	15.6	0.40
L1016.F20-L-BC	20	82.1	30	61.3	63	40	4.5	9.0	16.3	M 6	8.5	6.0	7.1	53	20	21.5	15.6	0.46
L1016.F25-BC	25	79.2	36	57.5	70	45	5.8	10.0	19.2	M 8	9.0	7.0	10.2	57	23	23.5	15.6	0.57
L1016.F25-L-BC	25	93.9	36	72.2	70	45	5.8	10.0	19.2	M 8	9.0	7.0	10.2	57	23	23.5	15.6	0.72

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F15-BC	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F15-L-BC	60	7.5	M3 x 0,5	166	171	171	14.12	24.05
L1016.F20-BC	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F20-L-BC	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.F25-BC	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F25-L-BC	60	11.0	M6 x 1,0	576	577	577	32.44	53.63

Unflanged Carriages - Standard
blackened



L1016.U-BC



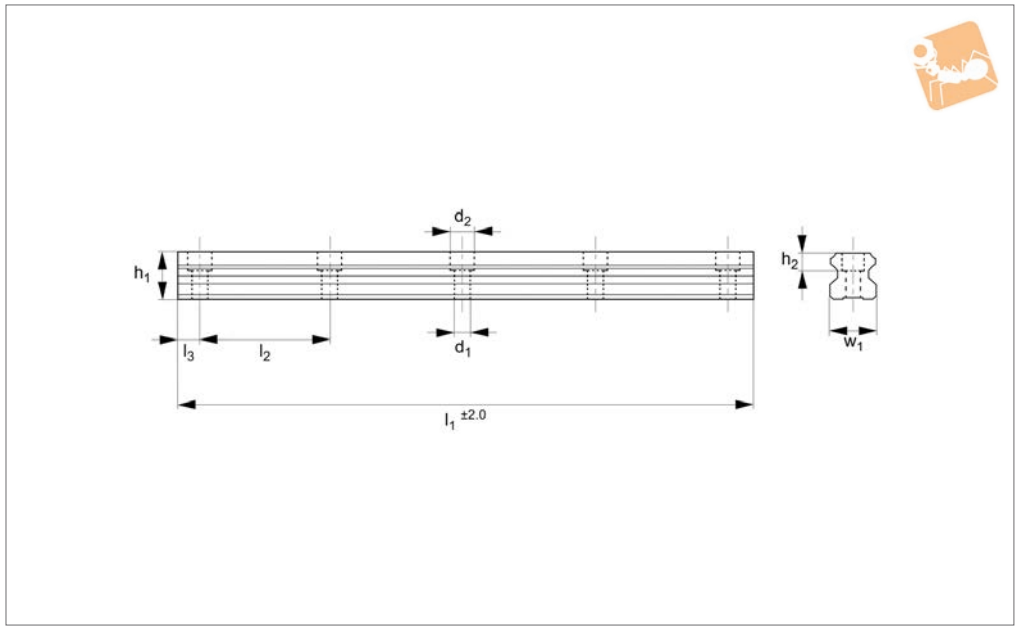
Material
Hardened and ground steel. Matt black oxide ceramic layer. Thickness 2-10 µ. No deformation of the parts. Resistant to acids, alkalis and solvents. Relatively soft layer (up to 350 HV), which clears away by rolling over in the area of the raceways. Suitable for applications in the optic and medical industry.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.U15-BC	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	0.19
L1016.U20-BC	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.31
L1016.U20-L-BC	20	82.1	30	61.3	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.36
L1016.U25-BC	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.45
L1016.U25-L-BC	25	93.9	40	72.2	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.66

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15-BC	60	7.5	M 3x0,5	137	120	120	11.67	19.90
L1016.U20-BC	60	9.5	M 6x1,0	289	224	224	17.98	30.96
L1016.U20-L-BC	60	9.5	M 6x1,0	376	366	366	23.30	40.11
L1016.U25-BC	60	11.0	M 6x1,0	447	358	358	25.25	41.73
L1016.U25-L-BC	60	11.0	M 6x1,0	576	577	577	32.44	53.63



L1016.BL15

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

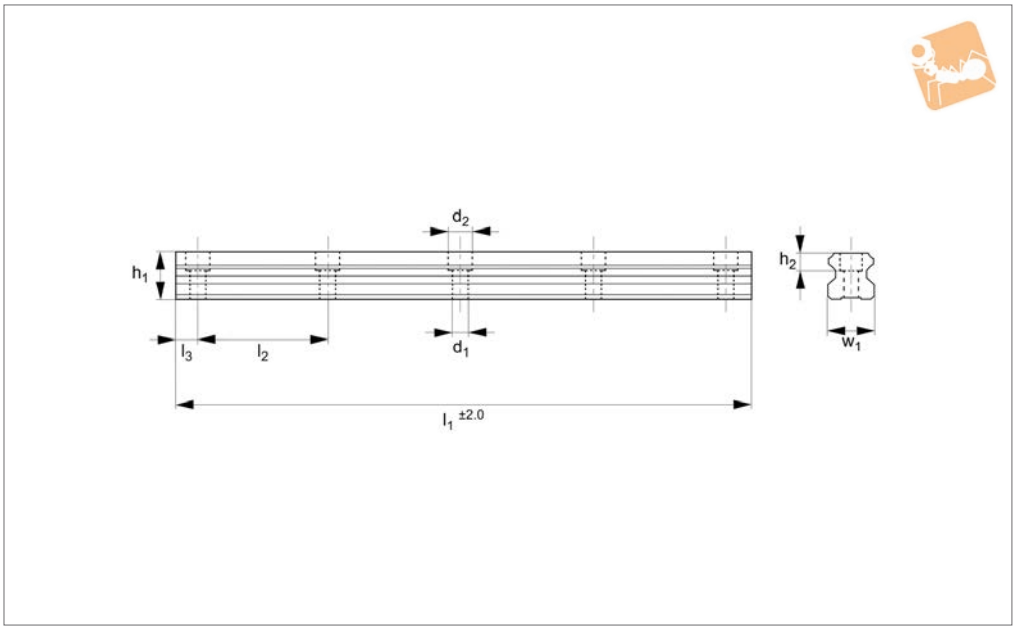
Tips
Plastic screw covers issued with the rails to protect screw holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL15-0160	15	160	13	60	15	20	6.0	4.5	7.5	M 4	0.22
L1016.BL15-0220	15	220	13	60	15	20	6.0	4.5	7.5	M 4	0.31
L1016.BL15-0280	15	280	13	60	15	20	6.0	4.5	7.5	M 4	0.39
L1016.BL15-0340	15	340	13	60	15	20	6.0	4.5	7.5	M 4	0.48
L1016.BL15-0400	15	400	13	60	15	20	6.0	4.5	7.5	M 4	0.56
L1016.BL15-0460	15	460	13	60	15	20	6.0	4.5	7.5	M 4	0.64
L1016.BL15-0520	15	520	13	60	15	20	6.0	4.5	7.5	M 4	0.73
L1016.BL15-0580	15	580	13	60	15	20	6.0	4.5	7.5	M 4	0.81
L1016.BL15-0640	15	640	13	60	15	20	6.0	4.5	7.5	M 4	0.90
L1016.BL15-0700	15	700	13	60	15	20	6.0	4.5	7.5	M 4	0.98
L1016.BL15-0760	15	760	13	60	15	20	6.0	4.5	7.5	M 4	1.06
L1016.BL15-0820	15	820	13	60	15	20	6.0	4.5	7.5	M 4	1.15
L1016.BL15-0880	15	880	13	60	15	20	6.0	4.5	7.5	M 4	1.23
L1016.BL15-0940	15	940	13	60	15	20	6.0	4.5	7.5	M 4	1.32
L1016.BL15-1000	15	1000	13	60	15	20	6.0	4.5	7.5	M 4	1.40
L1016.BL15-1060	15	1060	13	60	15	20	6.0	4.5	7.5	M 4	1.48
L1016.BL15-1120	15	1120	13	60	15	20	6.0	4.5	7.5	M 4	1.57
L1016.BL15-1180	15	1180	13	60	15	20	6.0	4.5	7.5	M 4	1.65
L1016.BL15-1240	15	1240	13	60	15	20	6.0	4.5	7.5	M 4	1.74
L1016.BL15-1300	15	1300	13	60	15	20	6.0	4.5	7.5	M 4	1.82
L1016.BL15-1360	15	1360	13	60	15	20	6.0	4.5	7.5	M 4	1.90
L1016.BL15-1420	15	1420	13	60	15	20	6.0	4.5	7.5	M 4	1.99
L1016.BL15-1480	15	1480	13	60	15	20	6.0	4.5	7.5	M 4	2.07
L1016.BL15-1540	15	1540	13	60	15	20	6.0	4.5	7.5	M 4	2.16
L1016.BL15-1600	15	1600	13	60	15	20	6.0	4.5	7.5	M 4	2.24
L1016.BL15-1660	15	1660	13	60	15	20	6.0	4.5	7.5	M 4	2.32
L1016.BL15-1720	15	1720	13	60	15	20	6.0	4.5	7.5	M 4	2.41
L1016.BL15-1780	15	1780	13	60	15	20	6.0	4.5	7.5	M 4	2.49
L1016.BL15-1840	15	1840	13	60	15	20	6.0	4.5	7.5	M 4	2.58
L1016.BL15-1900	15	1900	13	60	15	20	6.0	4.5	7.5	M 4	2.66
L1016.BL15-1960	15	1960	13	60	15	20	6.0	4.5	7.5	M 4	2.74
L1016.BL15-2020	15	2020	13	60	15	20	6.0	4.5	7.5	M 4	2.83

15mm Linear Guide Rail

standard, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL15-2080	15	2080	13	60	15	20	6.0	4.5	7.5	M 4	2.91
L1016.BL15-2140	15	2140	13	60	15	20	6.0	4.5	7.5	M 4	3.00
L1016.BL15-2200	15	2220	13	60	15	20	6.0	4.5	7.5	M 4	3.08
L1016.BL15-2260	15	2260	13	60	15	20	6.0	4.5	7.5	M 4	3.16
L1016.BL15-2320	15	2320	13	60	15	20	6.0	4.5	7.5	M 4	3.25
L1016.BL15-2380	15	2380	13	60	15	20	6.0	4.5	7.5	M 4	3.33
L1016.BL15-2440	15	2440	13	60	15	20	6.0	4.5	7.5	M 4	3.42
L1016.BL15-2500	15	2500	13	60	15	20	6.0	4.5	7.5	M 4	3.50
L1016.BL15-2560	15	2560	13	60	15	20	6.0	4.5	7.5	M 4	3.58
L1016.BL15-2620	15	2620	13	60	15	20	6.0	4.5	7.5	M 4	3.67
L1016.BL15-2680	15	2680	13	60	15	20	6.0	4.5	7.5	M 4	3.75
L1016.BL15-2740	15	2740	13	60	15	20	6.0	4.5	7.5	M 4	3.84
L1016.BL15-2800	15	2800	13	60	15	20	6.0	4.5	7.5	M 4	3.92
L1016.BL15-2860	15	2860	13	60	15	20	6.0	4.5	7.5	M 4	4.00
L1016.BL15-2920	15	2920	13	60	15	20	6.0	4.5	7.5	M 4	4.09
L1016.BL15-2980	15	2980	13	60	15	20	6.0	4.5	7.5	M 4	4.17
L1016.BL15-3040	15	3040	13	60	15	20	6.0	4.5	7.5	M 4	4.26
L1016.BL15-3100	15	3100	13	60	15	20	6.0	4.5	7.5	M 4	4.34
L1016.BL15-3160	15	3160	13	60	15	20	6.0	4.5	7.5	M 4	4.42
L1016.BL15-3220	15	3220	13	60	15	20	6.0	4.5	7.5	M 4	4.51
L1016.BL15-3280	15	3280	13	60	15	20	6.0	4.5	7.5	M 4	4.59
L1016.BL15-3340	15	3340	13	60	15	20	6.0	4.5	7.5	M 4	4.68
L1016.BL15-3400	15	3400	13	60	15	20	6.0	4.5	7.5	M 4	4.76
L1016.BL15-3460	15	3460	13	60	15	20	6.0	4.5	7.5	M 4	4.84
L1016.BL15-3520	15	3520	13	60	15	20	6.0	4.5	7.5	M 4	4.93
L1016.BL15-3580	15	3580	13	60	15	20	6.0	4.5	7.5	M 4	5.01
L1016.BL15-3640	15	3640	13	60	15	20	6.0	4.5	7.5	M 4	5.10
L1016.BL15-3700	15	3700	13	60	15	20	6.0	4.5	7.5	M 4	5.18
L1016.BL15-3760	15	3760	13	60	15	20	6.0	4.5	7.5	M 4	5.26
L1016.BL15-3820	15	3820	13	60	15	20	6.0	4.5	7.5	M 4	5.35
L1016.BL15-3880	15	3880	13	60	15	20	6.0	4.5	7.5	M 4	5.43
L1016.BL15-3940	15	3940	13	60	15	20	6.0	4.5	7.5	M 4	5.52
L1016.BL15-4000	15	4000	13	60	15	20	6.0	4.5	7.5	M 4	5.60



L1016.BL20

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

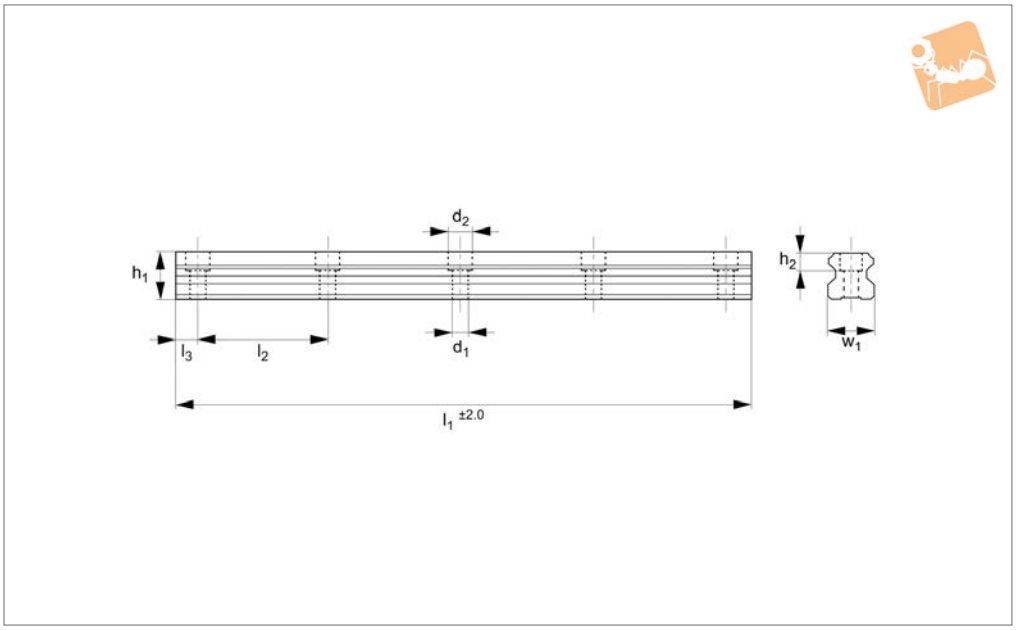
Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL20-0160	20	160	16.3	60	20	20	8.5	6	9.5	M 5	0.42
L1016.BL20-0220	20	220	16.3	60	20	20	8.5	6	9.5	M 5	0.57
L1016.BL20-0280	20	280	16.3	60	20	20	8.5	6	9.5	M 5	0.73
L1016.BL20-0340	20	340	16.3	60	20	20	8.5	6	9.5	M 5	0.88
L1016.BL20-0400	20	400	16.3	60	20	20	8.5	6	9.5	M 5	1.04
L1016.BL20-0460	20	460	16.3	60	20	20	8.5	6	9.5	M 5	1.20
L1016.BL20-0520	20	520	16.3	60	20	20	8.5	6	9.5	M 5	1.35
L1016.BL20-0580	20	580	16.3	60	20	20	8.5	6	9.5	M 5	1.51
L1016.BL20-0640	20	640	16.3	60	20	20	8.5	6	9.5	M 5	1.66
L1016.BL20-0700	20	700	16.3	60	20	20	8.5	6	9.5	M 5	1.82
L1016.BL20-0760	20	760	16.3	60	20	20	8.5	6	9.5	M 5	1.98
L1016.BL20-0820	20	820	16.3	60	20	20	8.5	6	9.5	M 5	2.13
L1016.BL20-0880	20	880	16.3	60	20	20	8.5	6	9.5	M 5	2.29
L1016.BL20-0940	20	940	16.3	60	20	20	8.5	6	9.5	M 5	2.44
L1016.BL20-1000	20	1000	16.3	60	20	20	8.5	6	9.5	M 5	2.60
L1016.BL20-1060	20	1060	16.3	60	20	20	8.5	6	9.5	M 5	2.76
L1016.BL20-1120	20	1120	16.3	60	20	20	8.5	6	9.5	M 5	2.91
L1016.BL20-1180	20	1180	16.3	60	20	20	8.5	6	9.5	M 5	3.07
L1016.BL20-1240	20	1240	16.3	60	20	20	8.5	6	9.5	M 5	3.22
L1016.BL20-1300	20	1300	16.3	60	20	20	8.5	6	9.5	M 5	3.38
L1016.BL20-1360	20	1360	16.3	60	20	20	8.5	6	9.5	M 5	3.54
L1016.BL20-1420	20	1420	16.3	60	20	20	8.5	6	9.5	M 5	3.69
L1016.BL20-1480	20	1480	16.3	60	20	20	8.5	6	9.5	M 5	3.85
L1016.BL20-1540	20	1540	16.3	60	20	20	8.5	6	9.5	M 5	4.00
L1016.BL20-1600	20	1600	16.3	60	20	20	8.5	6	9.5	M 5	4.16
L1016.BL20-1660	20	1660	16.3	60	20	20	8.5	6	9.5	M 5	4.32
L1016.BL20-1720	20	1720	16.3	60	20	20	8.5	6	9.5	M 5	4.47
L1016.BL20-1780	20	1780	16.3	60	20	20	8.5	6	9.5	M 5	4.63
L1016.BL20-1840	20	1840	16.3	60	20	20	8.5	6	9.5	M 5	4.78
L1016.BL20-1900	20	1900	16.3	60	20	20	8.5	6	9.5	M 5	4.94
L1016.BL20-1960	20	1960	16.3	60	20	20	8.5	6	9.5	M 5	5.10
L1016.BL20-2020	20	2020	16.3	60	20	20	8.5	6	9.5	M 5	5.25

20mm Linear Guide Rail

standard, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL20-2080	20	2080	16.3	60	20	20	8.5	6	9.5	M 5	5.41
L1016.BL20-2140	20	2140	16.3	60	20	20	8.5	6	9.5	M 5	5.56
L1016.BL20-2200	20	2200	16.3	60	20	20	8.5	6	9.5	M 5	5.72
L1016.BL20-2260	20	2260	16.3	60	20	20	8.5	6	9.5	M 5	5.88
L1016.BL20-2320	20	2320	16.3	60	20	20	8.5	6	9.5	M 5	6.03
L1016.BL20-2380	20	2380	16.3	60	20	20	8.5	6	9.5	M 5	6.19
L1016.BL20-2440	20	2440	16.3	60	20	20	8.5	6	9.5	M 5	6.34
L1016.BL20-2500	20	2500	16.3	60	20	20	8.5	6	9.5	M 5	6.50
L1016.BL20-2560	20	2560	16.3	60	20	20	8.5	6	9.5	M 5	6.66
L1016.BL20-2620	20	2620	16.3	60	20	20	8.5	6	9.5	M 5	6.81
L1016.BL20-2680	20	2680	16.3	60	20	20	8.5	6	9.5	M 5	6.97
L1016.BL20-2740	20	2740	16.3	60	20	20	8.5	6	9.5	M 5	7.12
L1016.BL20-2800	20	2800	16.3	60	20	20	8.5	6	9.5	M 5	7.28
L1016.BL20-2860	20	2860	16.3	60	20	20	8.5	6	9.5	M 5	7.44
L1016.BL20-2920	20	2920	16.3	60	20	20	8.5	6	9.5	M 5	7.59
L1016.BL20-2980	20	2980	16.3	60	20	20	8.5	6	9.5	M 5	7.75
L1016.BL20-3040	20	3040	16.3	60	20	20	8.5	6	9.5	M 5	7.90
L1016.BL20-3100	20	3100	16.3	60	20	20	8.5	6	9.5	M 5	8.06
L1016.BL20-3160	20	3160	16.3	60	20	20	8.5	6	9.5	M 5	8.22
L1016.BL20-3220	20	3220	16.3	60	20	20	8.5	6	9.5	M 5	8.37
L1016.BL20-3280	20	3280	16.3	60	20	20	8.5	6	9.5	M 5	8.53
L1016.BL20-3340	20	3340	16.3	60	20	20	8.5	6	9.5	M 5	8.68
L1016.BL20-3400	20	3400	16.3	60	20	20	8.5	6	9.5	M 5	8.84
L1016.BL20-3460	20	3460	16.3	60	20	20	8.5	6	9.5	M 5	9.00
L1016.BL20-3520	20	3520	16.3	60	20	20	8.5	6	9.5	M 5	9.15
L1016.BL20-3580	20	3580	16.3	60	20	20	8.5	6	9.5	M 5	9.31
L1016.BL20-3640	20	3640	16.3	60	20	20	8.5	6	9.5	M 5	9.46
L1016.BL20-3700	20	3700	16.3	60	20	20	8.5	6	9.5	M 5	9.62
L1016.BL20-3760	20	3760	16.3	60	20	20	8.5	6	9.5	M 5	9.78
L1016.BL20-3820	20	3820	16.3	60	20	20	8.5	6	9.5	M 5	9.93
L1016.BL20-3880	20	3880	16.3	60	20	20	8.5	6	9.5	M 5	10.09
L1016.BL20-3940	20	3940	16.3	60	20	20	8.5	6	9.5	M 5	10.24
L1016.BL20-4000	20	4000	16.3	60	20	20	8.5	6	9.5	M 5	10.40



L1016.BL25

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

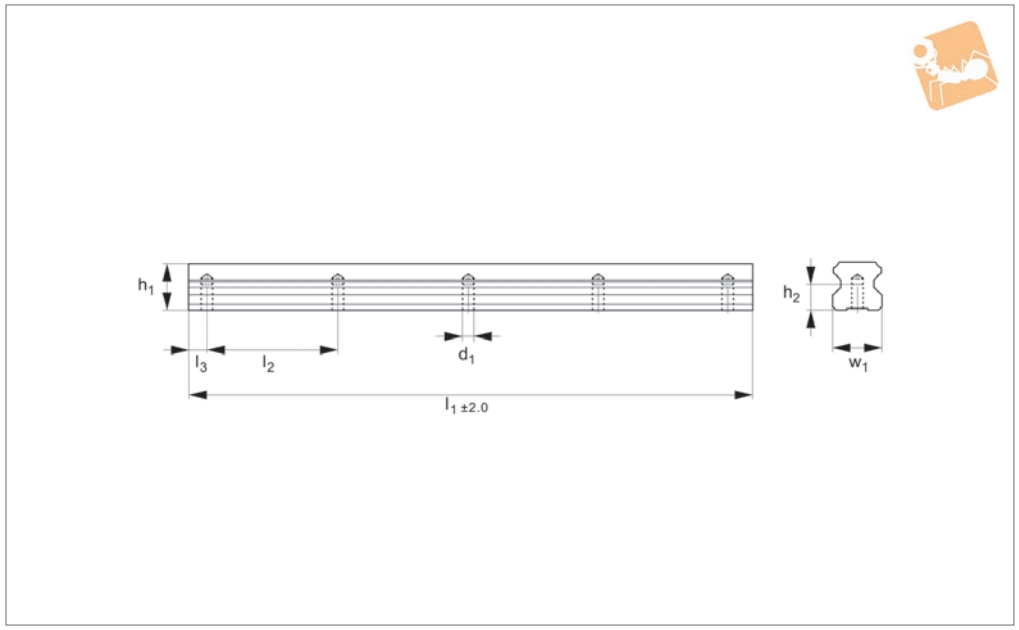
Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL25-0160	25	160	19.2	60	23	20	9	7	11	M 6	0.58
L1016.BL25-0220	25	220	19.2	60	23	20	9	7	11	M 6	0.79
L1016.BL25-0280	25	280	19.2	60	23	20	9	7	11	M 6	1.01
L1016.BL25-0340	25	340	19.2	60	23	20	9	7	11	M 6	1.22
L1016.BL25-0400	25	400	19.2	60	23	20	9	7	11	M 6	1.44
L1016.BL25-0460	25	460	19.2	60	23	20	9	7	11	M 6	1.66
L1016.BL25-0520	25	520	19.2	60	23	20	9	7	11	M 6	1.87
L1016.BL25-0580	25	580	19.2	60	23	20	9	7	11	M 6	2.09
L1016.BL25-0640	25	640	19.2	60	23	20	9	7	11	M 6	2.30
L1016.BL25-0700	25	700	19.2	60	23	20	9	7	11	M 6	2.52
L1016.BL25-0760	25	760	19.2	60	23	20	9	7	11	M 6	2.74
L1016.BL25-0820	25	820	19.2	60	23	20	9	7	11	M 6	2.95
L1016.BL25-0880	25	880	19.2	60	23	20	9	7	11	M 6	3.17
L1016.BL25-0940	25	940	19.2	60	23	20	9	7	11	M 6	3.38
L1016.BL25-1000	25	1000	19.2	60	23	20	9	7	11	M 6	3.60
L1016.BL25-1060	25	1060	19.2	60	23	20	9	7	11	M 6	3.82
L1016.BL25-1120	25	1120	19.2	60	23	20	9	7	11	M 6	4.03
L1016.BL25-1180	25	1180	19.2	60	23	20	9	7	11	M 6	4.25
L1016.BL25-1240	25	1240	19.2	60	23	20	9	7	11	M 6	4.46
L1016.BL25-1300	25	1300	19.2	60	23	20	9	7	11	M 6	4.68
L1016.BL25-1360	25	1360	19.2	60	23	20	9	7	11	M 6	4.90
L1016.BL25-1420	25	1420	19.2	60	23	20	9	7	11	M 6	5.11
L1016.BL25-1480	25	1480	19.2	60	23	20	9	7	11	M 6	5.33
L1016.BL25-1540	25	1540	19.2	60	23	20	9	7	11	M 6	5.54
L1016.BL25-1600	25	1600	19.2	60	23	20	9	7	11	M 6	5.76
L1016.BL25-1660	25	1660	19.2	60	23	20	9	7	11	M 6	5.98
L1016.BL25-1720	25	1720	19.2	60	23	20	9	7	11	M 6	6.19
L1016.BL25-1780	25	1780	19.2	60	23	20	9	7	11	M 6	6.41
L1016.BL25-1840	25	1840	19.2	60	23	20	9	7	11	M 6	6.62
L1016.BL25-1900	25	1900	19.2	60	23	20	9	7	11	M 6	6.84
L1016.BL25-1960	25	1960	19.2	60	23	20	9	7	11	M 6	7.06
L1016.BL25-2020	25	2020	19.2	60	23	20	9	7	11	M 6	7.27

25mm Linear Guide Rail

standard, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL25-2080	25	2080	19.2	60	23	20	9	7	11	M 6	7.49
L1016.BL25-2140	25	2140	19.2	60	23	20	9	7	11	M 6	7.70
L1016.BL25-2200	25	2200	19.2	60	23	20	9	7	11	M 6	7.92
L1016.BL25-2260	25	2260	19.2	60	23	20	9	7	11	M 6	8.14
L1016.BL25-2320	25	2320	19.2	60	23	20	9	7	11	M 6	8.35
L1016.BL25-2380	25	2380	19.2	60	23	20	9	7	11	M 6	8.57
L1016.BL25-2440	25	2440	19.2	60	23	20	9	7	11	M 6	8.78
L1016.BL25-2500	25	2500	19.2	60	23	20	9	7	11	M 6	9.00
L1016.BL25-2560	25	2560	19.2	60	23	20	9	7	11	M 6	9.22
L1016.BL25-2620	25	2620	19.2	60	23	20	9	7	11	M 6	9.43
L1016.BL25-2680	25	2680	19.2	60	23	20	9	7	11	M 6	9.65
L1016.BL25-2740	25	2740	19.2	60	23	20	9	7	11	M 6	9.86
L1016.BL25-2800	25	2800	19.2	60	23	20	9	7	11	M 6	10.08
L1016.BL25-2860	25	2860	19.2	60	23	20	9	7	11	M 6	10.30
L1016.BL25-2920	25	2920	19.2	60	23	20	9	7	11	M 6	10.51
L1016.BL25-2980	25	2980	19.2	60	23	20	9	7	11	M 6	10.73
L1016.BL25-3040	25	3040	19.2	60	23	20	9	7	11	M 6	10.94
L1016.BL25-3100	25	3100	19.2	60	23	20	9	7	11	M 6	11.16
L1016.BL25-3160	25	3160	19.2	60	23	20	9	7	11	M 6	11.38
L1016.BL25-3220	25	3220	19.2	60	23	20	9	7	11	M 6	11.59
L1016.BL25-3280	25	3280	19.2	60	23	20	9	7	11	M 6	11.81
L1016.BL25-3340	25	3340	19.2	60	23	20	9	7	11	M 6	12.02
L1016.BL25-3400	25	3400	19.2	60	23	20	9	7	11	M 6	12.24
L1016.BL25-3460	25	3460	19.2	60	23	20	9	7	11	M 6	12.46
L1016.BL25-3520	25	3520	19.2	60	23	20	9	7	11	M 6	12.67



L1016.BRF15

Material
Hardened and ground steel (typically 60 HRc). Black Oxide

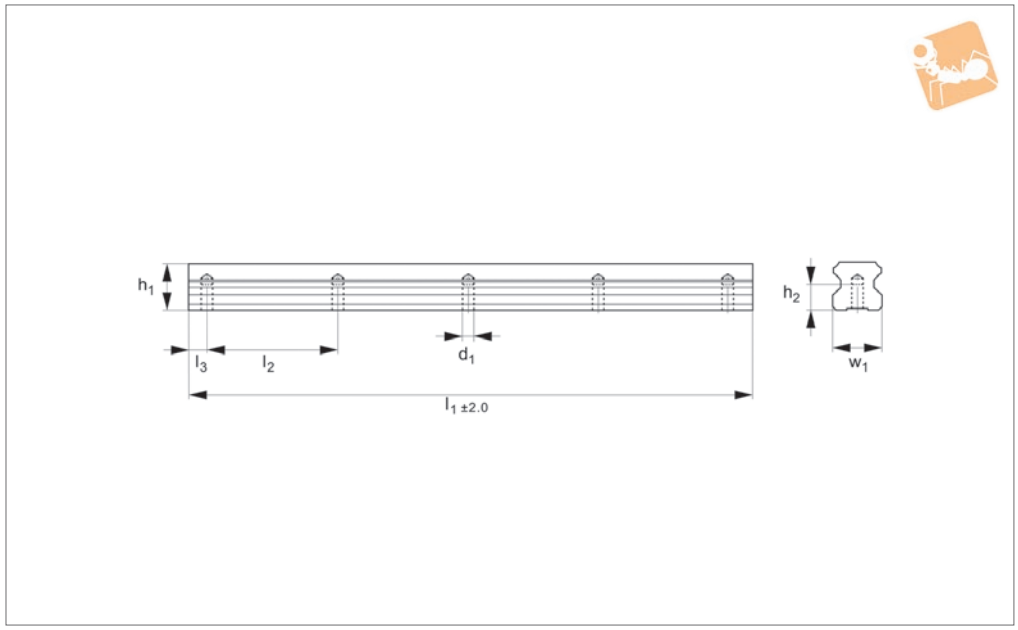
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF15-0160	15	160	13	60	15	20	8	M 5	0.22
L1016.BRF15-0220	15	220	13	60	15	20	8	M 5	0.31
L1016.BRF15-0280	15	280	13	60	15	20	8	M 5	0.39
L1016.BRF15-0340	15	340	13	60	15	20	8	M 5	0.48
L1016.BRF15-0400	15	400	13	60	15	20	8	M 5	0.56
L1016.BRF15-0460	15	460	13	60	15	20	8	M 5	0.64
L1016.BRF15-0520	15	520	13	60	15	20	8	M 5	0.73
L1016.BRF15-0580	15	580	13	60	15	20	8	M 5	0.81
L1016.BRF15-0640	15	640	13	60	15	20	8	M 5	0.90
L1016.BRF15-0700	15	700	13	60	15	20	8	M 5	0.98
L1016.BRF15-0760	15	760	13	60	15	20	8	M 5	1.06
L1016.BRF15-0820	15	820	13	60	15	20	8	M 5	1.15
L1016.BRF15-0880	15	880	13	60	15	20	8	M 5	1.23
L1016.BRF15-0940	15	940	13	60	15	20	8	M 5	1.32
L1016.BRF15-1000	15	1000	13	60	15	20	8	M 5	1.40
L1016.BRF15-1060	15	1060	13	60	15	20	8	M 5	1.48
L1016.BRF15-1120	15	1120	13	60	15	20	8	M 5	1.57
L1016.BRF15-1180	15	1180	13	60	15	20	8	M 5	1.65
L1016.BRF15-1240	15	1240	13	60	15	20	8	M 5	1.74
L1016.BRF15-1300	15	1300	13	60	15	20	8	M 5	1.82
L1016.BRF15-1360	15	1360	13	60	15	20	8	M 5	1.90
L1016.BRF15-1420	15	1420	13	60	15	20	8	M 5	1.99
L1016.BRF15-1480	15	1480	13	60	15	20	8	M 5	2.07
L1016.BRF15-1540	15	1540	13	60	15	20	8	M 5	2.16
L1016.BRF15-1600	15	1600	13	60	15	20	8	M 5	2.24
L1016.BRF15-1660	15	1660	13	60	15	20	8	M 5	2.32
L1016.BRF15-1720	15	1720	13	60	15	20	8	M 5	2.41
L1016.BRF15-1780	15	1780	13	60	15	20	8	M 5	2.49
L1016.BRF15-1840	15	1840	13	60	15	20	8	M 5	2.58
L1016.BRF15-1900	15	1900	13	60	15	20	8	M 5	2.66
L1016.BRF15-1960	15	1960	13	60	15	20	8	M 5	2.74
L1016.BRF15-2020	15	2020	13	60	15	20	8	M 5	2.83

15mm Linear Guide Rail

rear fixing, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF15-2080	15	2080	13	60	15	20	8	M 5	2.91
L1016.BRF15-2140	15	2140	13	60	15	20	8	M 5	3.00
L1016.BRF15-2200	15	2220	13	60	15	20	8	M 5	3.08
L1016.BRF15-2260	15	2260	13	60	15	20	8	M 5	3.16
L1016.BRF15-2320	15	2320	13	60	15	20	8	M 5	3.25
L1016.BRF15-2380	15	2380	13	60	15	20	8	M 5	3.33
L1016.BRF15-2440	15	2440	13	60	15	20	8	M 5	3.42
L1016.BRF15-2500	15	2500	13	60	15	20	8	M 5	3.50
L1016.BRF15-2560	15	2560	13	60	15	20	8	M 5	3.58
L1016.BRF15-2620	15	2620	13	60	15	20	8	M 5	3.67
L1016.BRF15-2680	15	2680	13	60	15	20	8	M 5	3.75
L1016.BRF15-2740	15	2740	13	60	15	20	8	M 5	3.84
L1016.BRF15-2800	15	2800	13	60	15	20	8	M 5	3.92
L1016.BRF15-2860	15	2860	13	60	15	20	8	M 5	4.00
L1016.BRF15-2920	15	2920	13	60	15	20	8	M 5	4.09
L1016.BRF15-2980	15	2980	13	60	15	20	8	M 5	4.17
L1016.BRF15-3040	15	3040	13	60	15	20	8	M 5	4.26
L1016.BRF15-3100	15	3100	13	60	15	20	8	M 5	4.34
L1016.BRF15-3160	15	3160	13	60	15	20	8	M 5	4.42
L1016.BRF15-3220	15	3220	13	60	15	20	8	M 5	4.51
L1016.BRF15-3280	15	3280	13	60	15	20	8	M 5	4.59
L1016.BRF15-3340	15	3340	13	60	15	20	8	M 5	4.68
L1016.BRF15-3400	15	3400	13	60	15	20	8	M 5	4.76
L1016.BRF15-3460	15	3460	13	60	15	20	8	M 5	4.84
L1016.BRF15-3520	15	3520	13	60	15	20	8	M 5	4.93
L1016.BRF15-3580	15	3580	13	60	15	20	8	M 5	5.01
L1016.BRF15-3640	15	3640	13	60	15	20	8	M 5	5.10
L1016.BRF15-3700	15	3700	13	60	15	20	8	M 5	5.18
L1016.BRF15-3760	15	3760	13	60	15	20	8	M 5	5.26
L1016.BRF15-3820	15	3820	13	60	15	20	8	M 5	5.35
L1016.BRF15-3880	15	3880	13	60	15	20	8	M 5	5.43
L1016.BRF15-3940	15	3940	13	60	15	20	8	M 5	5.52
L1016.BRF15-4000	15	4000	13	60	15	20	8	M 5	5.60



L1016.BRF20

Material
Hardened and ground steel (typically 60 HRc). Black Oxide

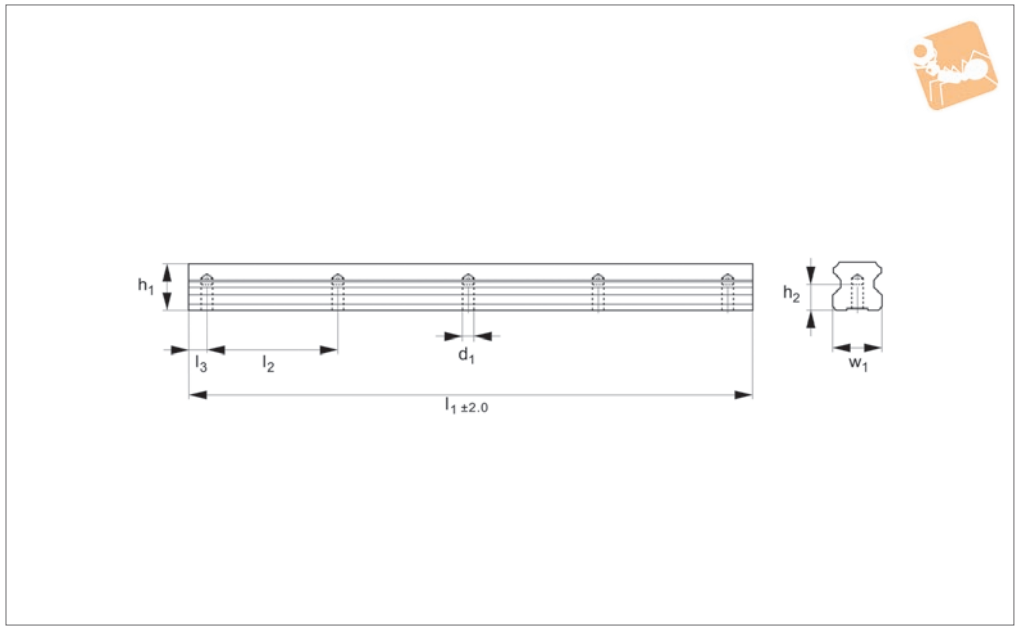
Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF20-0160	20	160	16.3	60	20	20	10	M 6	0.42
L1016.BRF20-0220	20	220	16.3	60	20	20	10	M 6	0.57
L1016.BRF20-0280	20	280	16.3	60	20	20	10	M 6	0.73
L1016.BRF20-0340	20	340	16.3	60	20	20	10	M 6	0.88
L1016.BRF20-0400	20	400	16.3	60	20	20	10	M 6	1.04
L1016.BRF20-0460	20	460	16.3	60	20	20	10	M 6	1.20
L1016.BRF20-0520	20	520	16.3	60	20	20	10	M 6	1.35
L1016.BRF20-0580	20	580	16.3	60	20	20	10	M 6	1.51
L1016.BRF20-0640	20	640	16.3	60	20	20	10	M 6	1.66
L1016.BRF20-0700	20	700	16.3	60	20	20	10	M 6	1.82
L1016.BRF20-0760	20	760	16.3	60	20	20	10	M 6	1.98
L1016.BRF20-0820	20	820	16.3	60	20	20	10	M 6	2.13
L1016.BRF20-0880	20	880	16.3	60	20	20	10	M 6	2.29
L1016.BRF20-0940	20	940	16.3	60	20	20	10	M 6	2.44
L1016.BRF20-1000	20	1000	16.3	60	20	20	10	M 6	2.60
L1016.BRF20-1060	20	1060	16.3	60	20	20	10	M 6	2.76
L1016.BRF20-1120	20	1120	16.3	60	20	20	10	M 6	2.91
L1016.BRF20-1180	20	1180	16.3	60	20	20	10	M 6	3.07
L1016.BRF20-1240	20	1240	16.3	60	20	20	10	M 6	3.22
L1016.BRF20-1300	20	1300	16.3	60	20	20	10	M 6	3.38
L1016.BRF20-1360	20	1360	16.3	60	20	20	10	M 6	3.54
L1016.BRF20-1420	20	1420	16.3	60	20	20	10	M 6	3.69
L1016.BRF20-1480	20	1480	16.3	60	20	20	10	M 6	3.85
L1016.BRF20-1540	20	1540	16.3	60	20	20	10	M 6	4.00
L1016.BRF20-1600	20	1600	16.3	60	20	20	10	M 6	4.16
L1016.BRF20-1660	20	1660	16.3	60	20	20	10	M 6	4.32
L1016.BRF20-1720	20	1720	16.3	60	20	20	10	M 6	4.47
L1016.BRF20-1780	20	1780	16.3	60	20	20	10	M 6	4.63
L1016.BRF20-1840	20	1840	16.3	60	20	20	10	M 6	4.78
L1016.BRF20-1900	20	1900	16.3	60	20	20	10	M 6	4.94
L1016.BRF20-1960	20	1960	16.3	60	20	20	10	M 6	5.10
L1016.BRF20-2020	20	2020	16.3	60	20	20	10	M 6	5.25

20mm Linear Guide Rail

rear fixing, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF20-2080	20	2080	16.3	60	20	20	10	M 6	5.41
L1016.BRF20-2140	20	2140	16.3	60	20	20	10	M 6	5.56
L1016.BRF20-2200	20	2200	16.3	60	20	20	10	M 6	5.72
L1016.BRF20-2260	20	2260	16.3	60	20	20	10	M 6	5.88
L1016.BRF20-2320	20	2320	16.3	60	20	20	10	M 6	6.03
L1016.BRF20-2380	20	2380	16.3	60	20	20	10	M 6	6.19
L1016.BRF20-2440	20	2440	16.3	60	20	20	10	M 6	6.34
L1016.BRF20-2500	20	2500	16.3	60	20	20	10	M 6	6.50
L1016.BRF20-2560	20	2560	16.3	60	20	20	10	M 6	6.66
L1016.BRF20-2620	20	2620	16.3	60	20	20	10	M 6	6.81
L1016.BRF20-2680	20	2680	16.3	60	20	20	10	M 6	6.97
L1016.BRF20-2740	20	2740	16.3	60	20	20	10	M 6	7.12
L1016.BRF20-2800	20	2800	16.3	60	20	20	10	M 6	7.28
L1016.BRF20-2860	20	2860	16.3	60	20	20	10	M 6	7.44
L1016.BRF20-2920	20	2920	16.3	60	20	20	10	M 6	7.59
L1016.BRF20-2980	20	2980	16.3	60	20	20	10	M 6	7.75
L1016.BRF20-3040	20	3040	16.3	60	20	20	10	M 6	7.90
L1016.BRF20-3100	20	3100	16.3	60	20	20	10	M 6	8.06
L1016.BRF20-3160	20	3160	16.3	60	20	20	10	M 6	8.22
L1016.BRF20-3220	20	3220	16.3	60	20	20	10	M 6	8.37
L1016.BRF20-3280	20	3280	16.3	60	20	20	10	M 6	8.53
L1016.BRF20-3340	20	3340	16.3	60	20	20	10	M 6	8.68
L1016.BRF20-3400	20	3400	16.3	60	20	20	10	M 6	8.84
L1016.BRF20-3460	20	3460	16.3	60	20	20	10	M 6	9.00
L1016.BRF20-3520	20	3520	16.3	60	20	20	10	M 6	9.15
L1016.BRF20-3580	20	3580	16.3	60	20	20	10	M 6	9.31
L1016.BRF20-3640	20	3640	16.3	60	20	20	10	M 6	9.46
L1016.BRF20-3700	20	3700	16.3	60	20	20	10	M 6	9.62
L1016.BRF20-3760	20	3760	16.3	60	20	20	10	M 6	9.78
L1016.BRF20-3820	20	3820	16.3	60	20	20	10	M 6	9.93
L1016.BRF20-3880	20	3880	16.3	60	20	20	10	M 6	10.09
L1016.BRF20-3940	20	3940	16.3	60	20	20	10	M 6	10.24
L1016.BRF20-4000	20	4000	16.3	60	20	20	10	M 6	10.40



L1016.BRF25

Material
Hardened and ground steel (typically 60 HRc) Black Oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF25-0160	25	160	19.2	60	23	20	12	M6	0.58
L1016.BRF25-0220	25	220	19.2	60	23	20	12	M6	0.79
L1016.BRF25-0280	25	280	19.2	60	23	20	12	M6	1.01
L1016.BRF25-0340	25	340	19.2	60	23	20	12	M6	1.22
L1016.BRF25-0400	25	400	19.2	60	23	20	12	M6	1.44
L1016.BRF25-0460	25	460	19.2	60	23	20	12	M6	1.66
L1016.BRF25-0520	25	520	19.2	60	23	20	12	M6	1.87
L1016.BRF25-0580	25	580	19.2	60	23	20	12	M6	2.09
L1016.BRF25-0640	25	640	19.2	60	23	20	12	M6	2.30
L1016.BRF25-0700	25	700	19.2	60	23	20	12	M6	2.52
L1016.BRF25-0760	25	760	19.2	60	23	20	12	M6	2.74
L1016.BRF25-0820	25	820	19.2	60	23	20	12	M6	2.95
L1016.BRF25-0880	25	880	19.2	60	23	20	12	M6	3.17
L1016.BRF25-0940	25	940	19.2	60	23	20	12	M6	3.38
L1016.BRF25-1000	25	1000	19.2	60	23	20	12	M6	3.60
L1016.BRF25-1060	25	1060	19.2	60	23	20	12	M6	3.82
L1016.BRF25-1120	25	1120	19.2	60	23	20	12	M6	4.03
L1016.BRF25-1180	25	1180	19.2	60	23	20	12	M6	4.25
L1016.BRF25-1240	25	1240	19.2	60	23	20	12	M6	4.46
L1016.BRF25-1300	25	1300	19.2	60	23	20	12	M6	4.68
L1016.BRF25-1360	25	1360	19.2	60	23	20	12	M6	4.90
L1016.BRF25-1420	25	1420	19.2	60	23	20	12	M6	5.11
L1016.BRF25-1480	25	1480	19.2	60	23	20	12	M6	5.33
L1016.BRF25-1540	25	1540	19.2	60	23	20	12	M6	5.54
L1016.BRF25-1600	25	1600	19.2	60	23	20	12	M6	5.76
L1016.BRF25-1660	25	1660	19.2	60	23	20	12	M6	5.98
L1016.BRF25-1720	25	1720	19.2	60	23	20	12	M6	6.19
L1016.BRF25-1780	25	1780	19.2	60	23	20	12	M6	6.41
L1016.BRF25-1840	25	1840	19.2	60	23	20	12	M6	6.62
L1016.BRF25-1900	25	1900	19.2	60	23	20	12	M6	6.84
L1016.BRF25-1960	25	1960	19.2	60	23	20	12	M6	7.06
L1016.BRF25-2020	25	2020	19.2	60	23	20	12	M6	7.27

25mm Linear Guide Rail

rear fixing, blackened

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF25-2080	25	2080	19.2	60	23	20	12	M6	7.49
L1016.BRF25-2140	25	2140	19.2	60	23	20	12	M6	7.70
L1016.BRF25-2200	25	2200	19.2	60	23	20	12	M6	7.92
L1016.BRF25-2260	25	2260	19.2	60	23	20	12	M6	8.14
L1016.BRF25-2320	25	2320	19.2	60	23	20	12	M6	8.35
L1016.BRF25-2380	25	2380	19.2	60	23	20	12	M6	8.57
L1016.BRF25-2440	25	2440	19.2	60	23	20	12	M6	8.78
L1016.BRF25-2500	25	2500	19.2	60	23	20	12	M6	9.00
L1016.BRF25-2560	25	2560	19.2	60	23	20	12	M6	9.22
L1016.BRF25-2620	25	2620	19.2	60	23	20	12	M6	9.43
L1016.BRF25-2680	25	2680	19.2	60	23	20	12	M6	9.65
L1016.BRF25-2740	25	2740	19.2	60	23	20	12	M6	9.86
L1016.BRF25-2800	25	2800	19.2	60	23	20	12	M6	10.08
L1016.BRF25-2860	25	2860	19.2	60	23	20	12	M6	10.30
L1016.BRF25-2920	25	2920	19.2	60	23	20	12	M6	10.51
L1016.BRF25-2980	25	2980	19.2	60	23	20	12	M6	10.73
L1016.BRF25-3040	25	3040	19.2	60	23	20	12	M6	10.94
L1016.BRF25-3100	25	3100	19.2	60	23	20	12	M6	11.16
L1016.BRF25-3160	25	3160	19.2	60	23	20	12	M6	11.38
L1016.BRF25-3220	25	3220	19.2	60	23	20	12	M6	11.59
L1016.BRF25-3280	25	3280	19.2	60	23	20	12	M6	11.81
L1016.BRF25-3340	25	3340	19.2	60	23	20	12	M6	12.02
L1016.BRF25-3400	25	3400	19.2	60	23	20	12	M6	12.24
L1016.BRF25-3460	25	3460	19.2	60	23	20	12	M6	12.46
L1016.BRF25-3520	25	3520	19.2	60	23	20	12	M6	12.67
L1016.BRF25-3580	25	3580	19.2	60	23	20	12	M6	12.89
L1016.BRF25-3640	25	3640	19.2	60	23	20	12	M6	13.10
L1016.BRF25-3700	25	3700	19.2	60	23	20	12	M6	13.32
L1016.BRF25-3760	25	3760	19.2	60	23	20	12	M6	13.54
L1016.BRF25-3820	25	3820	19.2	60	23	20	12	M6	13.75
L1016.BRF25-3880	25	3880	19.2	60	23	20	12	M6	13.97
L1016.BRF25-3940	25	3940	19.2	60	23	20	12	M6	14.18
L1016.BRF25-4000	25	4000	19.2	60	23	20	12	M6	14.40

Manual rail clamps

- Many of our customers wish to lock their moving element in position on the rails. Whilst this can be relatively simply achieved with the use of an adjustable clamping handle and thrust pad, we also offer a clamping element which can be integrated into your rail/system design.
- This is available in the standard manual version as well as (on request) a pneumatic version for linear guideways only (not compact rail systems).
- These manual clamps have a holding force of up to 2,000N.
- They are relatively compact in shape. Please bear in mind the extra space required for the clamping element when calculating the total stroke you require.

Applications

- Table cross beams.
- Sliding beds.
- Width adjustment stops.
- Positioning of optical equipment.

The manual rail clamps are used alongside the standard flanged or unflanged rail carriages. When selecting ensure:

a) the rail clamp suits the rail that you are using.

b) that the total assembly height of the rail clamp is the same as that of the rail carriage L1016.U or L1016.F.

Linear Guideways from Automotion Components

Linear Guideways

Overview

Linear Guideways from Automotion Components

- **Carriage types**

Flanged

Unflanged

Carriage lengths

Long Standard Short

Rail types

Standard - stocked

(Counterbore holes in top face)

Bottom threaded - on request

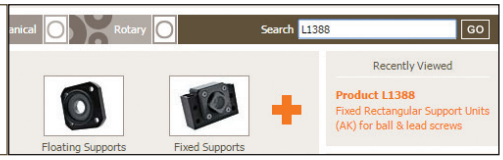
(No holes in top face)

CAD - Download in 3 easy steps

Most of our products are available to download directly from our website. Get the CAD you need for your application in minutes, no registration required.

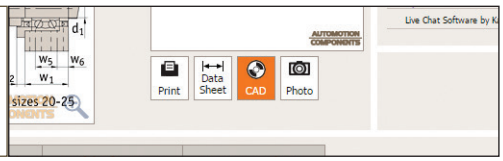
Step: 1 find the part you need

Find the part or enter the Automotion part number into the search bar.



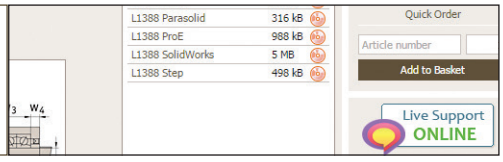
Step 2: Choose the CAD option

Click on the CAD button below the product window to the right of the drawing.



Step 3: Download your format

Choose the the format you require, and download it to your computer.



Load capacities – explained

- A number of load figures are stated for load capacity:

  Dynamic Load – this is the main figure considered for linear guideways. It is the moving load that the system can bear. It takes account of the total moving load as well as considerations such as impact, vibration and fatigue.

  Static Load – this is a load that is constant for an extended time (i.e. the dead load the system can bear before any movement). It can be in tension or compression.

  For these linear guideways the radial and axial load capacities are the same.

  Moment loads are twisting loads generated by offset loads in either X, Y or Z planes. Moment loads can be reduced by adding further carriages or rails to reduce any twisting of the carriage due to the load offset.

Straightness of rails

- The measurements of the straightness of the system are taken from the running accuracy of the sliders over the length of the rails (given in microns) – see system precision page.
- For standard accuracy this equates to around 20 microns for a metre length, increasing to 35 microns for a 4 metre length.

What lengths can be provided?

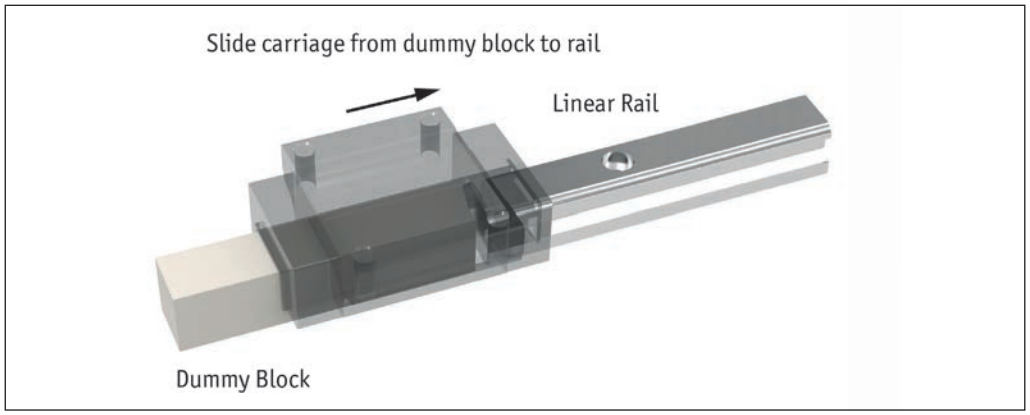
- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required to the first hole.
- In general our cutting procedures allow for a ±2mm accuracy on the overall rail length. If greater accuracy than this is required then we have to machine the end accurately (rather than cut it) and this involves extra time and cost.
- Standard maximum length for each rail size is around 4 metres. Rails can be joined together but the preparation needs to be made in our workshop. The rails will be marked clearly with the ends to be placed adjacent to each other.

Installation

- The linear guideways are very accurate and as a result need to be installed on accurately prepared surfaces – please see installation instructions. If the two rails are installed parallel to each other, they need to be accurately aligned – see assembly precision page.
- If you are not able to prepare the surface as accurately as required you might want to consider using our Compact Rail system, as this has a master rail (T rail) and a slave rail (U rail) that allows for structural inaccuracies.

Mounting the carriages to the rails

- In general the carriages will be supplied separately to the rails. To install the carriage onto the rails, offer the carriage up to the rails and slide it onto the rail itself.

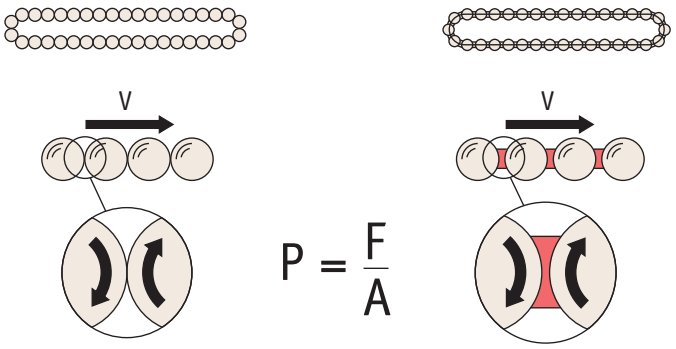


Linear Guideways from Automotion Components

New ball chain technology

Our new and improved linear guideway systems include the latest "ball chain" technology with the following benefits:

- Higher maximum velocity.
- Lower heat generation
- Lower noise generation.
- Very smooth running.
- Optimised lubrication system
- Even load distribution
- Longer service life

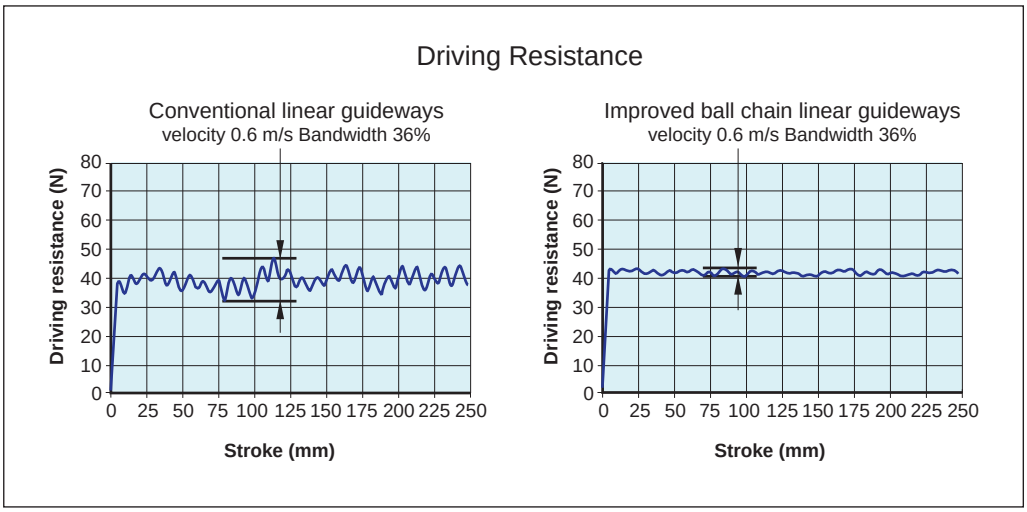


P = surface pressure F = force between balls A = contact area

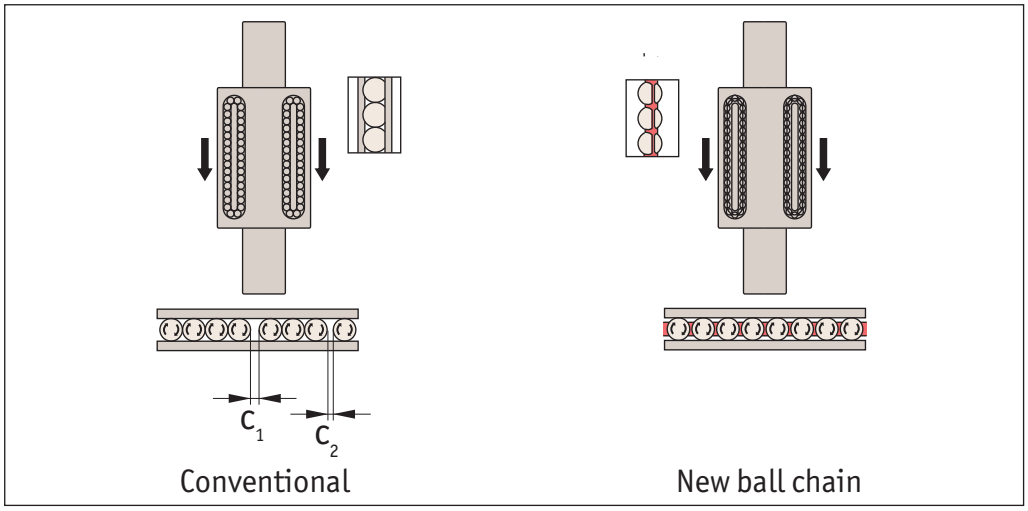
The rotating balls in conventional profile rail guides have point contact between each other. The rotation speed at the contact point is double the speed of the balls. The contact area (A) is so small that the surface pressure (P) tends towards infinity. This leads to heating and wear of the balls and the linear guide system.

The chain system in our new linear guides have a relatively large contact area (A), this significantly reduces the surface area pressure (P). The rotation speeds at the contact surfaces of ball and chain are the same. The ball chain is used to transport the lubricant and to create a lubrication film on the balls. The design of the carriage allows effective supply of lubricant from the lubricant connection to the circulation areas of the ball chains.

This design of the of the ball chain ends in connection with the spacer ball closes the circulation and makes the movement of the carriage smooth and quiet.

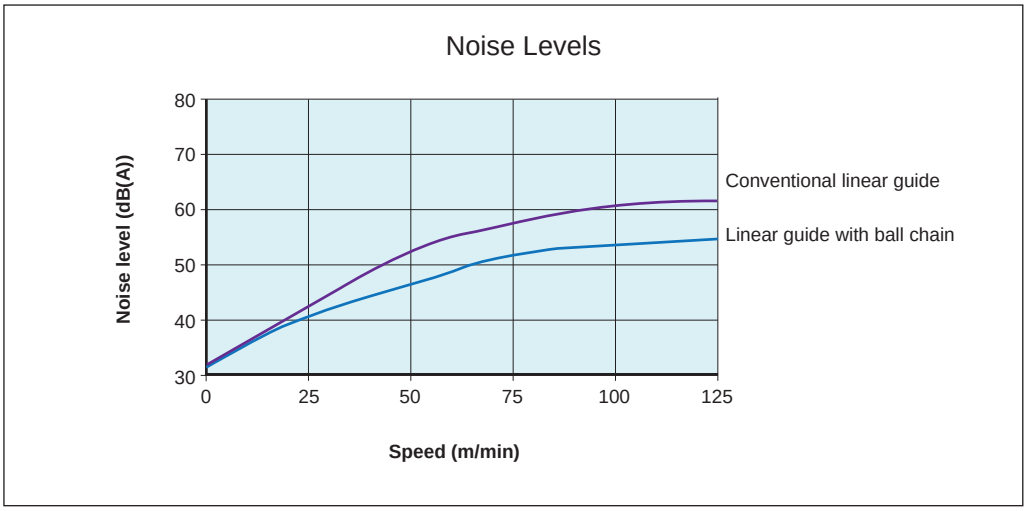


New technology



It is not possible to keep the distance of the balls (C_1, C_2) constant in conventional linear guides. These irregular distances between the balls lead to uneven running behaviour.

The new ball chain system also allows the balls to be continuously supplied with lubricant, which reduces wear of the metal. This significantly extends the service life of the system and reduces lubricant and the maintenance intervals.



We can coat our rail wih two types of corrosion protective finishes:

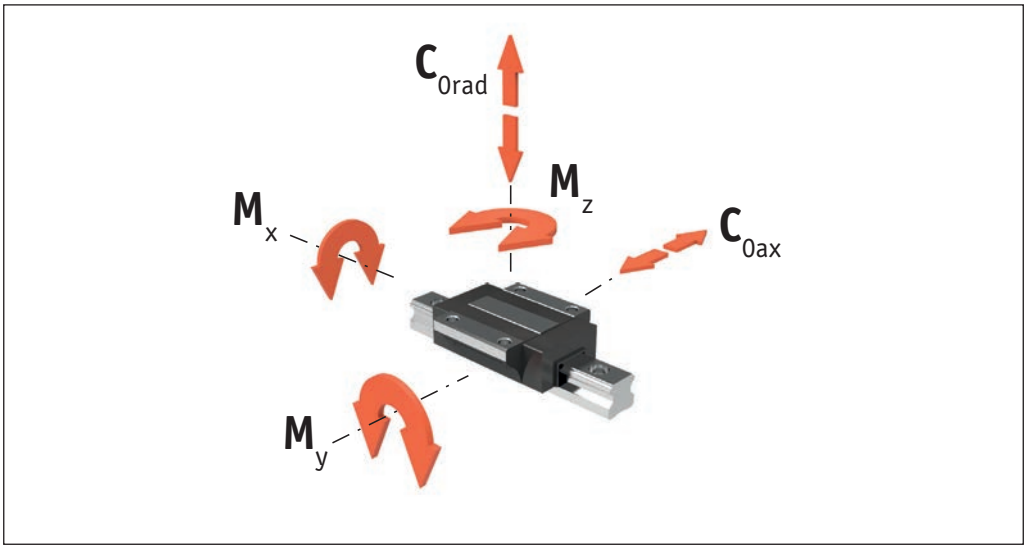
- Raydent coating; this is an electro-chemical process that applies a black oxide-ceramic layer (approx. 1 micron thick) that penetrates into the metal. As coating takes place at OC the parts are not deformed. Good resistance against acids, bases and solvents.
- Chemical nickel coating; this offers a good resistance to corrosion, abrasion and chemicals. Black finish.

  Please ask our technical department to help you select the best coating.

All of our rails are issued with oil-resistant plastic caps used to cover the screw holes. If there are aggressive chemicals present we can also provide brass versions of these caps.

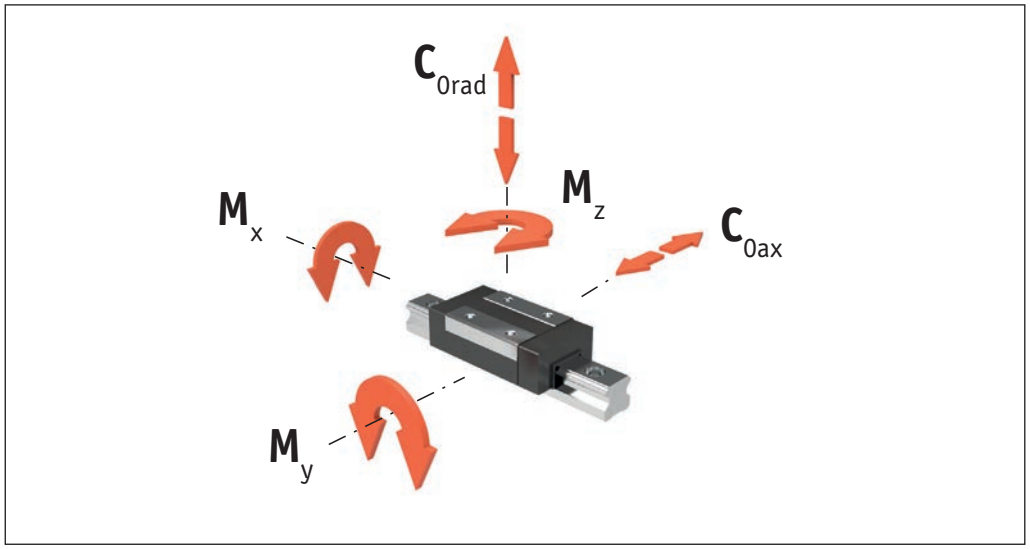
Where there may be a high level of dust, dirt, weld splatters etc. we can provide bellows covers to protect the rails.

Load capacity overview - L1016.F Flanged carriages



Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			Dynamic Load C kN	Static load $C_{0rad+ax}$ kN	M_x Nm	M_y Nm	M_z Nm
L1016.F15	Flanged	Standard	11,67	19,90	137	120	120
L1016.F15-L	Flanged	Long	14,12	24,05	166	171	171
L1016.F20	Flanged	Standard	17,98	30,96	289	224	224
L1016.F20-L	Flanged	Long	23,30	40,11	376	366	366
L1016.F25	Flanged	Standard	25,25	41,73	447	358	358
L1016.F25-L	Flanged	Long	32,44	53,63	576	577	577
L1016.F25-XL	Flanged	Extra Long	36,58	64,30	691	833	833
L1016.F30	Flanged	Standard	37,33	55,50	719	560	560
L1016.F30-L	Flanged	Long	48,35	71,88	931	836	836
L1016.F30-XL	Flanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.F35	Flanged	Standard	53,31	82,66	1307	991	991
L1016.F35-L	Flanged	Long	66,61	103,29	1633	1424	1424
L1016.F35-XL	Flanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.F45	Flanged	Standard	73,14	111,30	2353	1559	1559
L1016.F45-L	Flanged	Long	86,99	132,39	2798	2170	2170
L1016.F45-XL	Flanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.F55	Flanged	Standard	88,26	136,62	3385	2361	2361
L1016.F55-L	Flanged	Long	119,10	183,14	4538	4202	4202
L1016.F55-XL	Flanged	Extra Long	161,43	259,71	6430	6617	6617

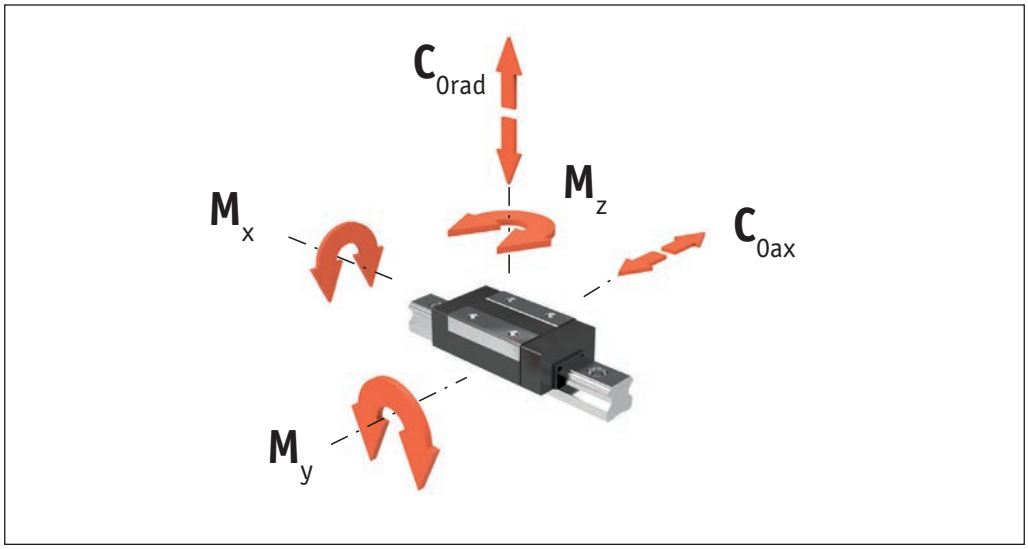
Load capacity overview - L1016.U Unflanged carriages



Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{0rad} stat. C_{0ax}	M_x	M_y	M_z
L1016.U15	Unflanged	Standard	11,67	19,90	137	120	120
L1016.U20	Unflanged	Standard	17,98	30,96	289	224	224
L1016.U20-L	Unflanged	Long	23,30	40,11	376	366	366
L1016.U25	Unflanged	Standard	25,25	41,73	447	358	358
L1016.U25-L	Unflanged	Long	32,44	53,63	576	577	577
L1016.U25-XL	Unflanged	Extra Long	36,58	64,30	691	833	833
L1016.U30	Unflanged	Standard	37,33	55,50	719	560	560
L1016.U30-L	Unflanged	Long	48,35	71,88	931	836	836
L1016.U30-XL	Unflanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.U35	Unflanged	Standard	53,31	82,66	1307	991	991
L1016.U35-L	Unflanged	Long	66,61	103,29	1633	1424	1424
L1016.U35-XL	Unflanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.U45	Unflanged	Standard	73,14	111,30	2353	1559	1559
L1016.U45-L	Unflanged	Long	86,99	132,39	2798	2170	2170
L1016.U45-XL	Unflanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.U55	Unflanged	Standard	88,26	136,62	3385	2361	2361
L1016.U55-L	Unflanged	Long	119,10	183,14	4538	4202	4202
L1016.U55-XL	Unflanged	Extra Long	161,43	259,71	6430	6617	6617

Linear Guideways from Automotion Components

Load capacity overview - L1016.UL Unflanged low height carriages



Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{0rad} stat. C_{0ax}	M_x	M_y	M_z
L1016.UL15-S	Unflanged	Short	5,81	9,90	69	32	32
L1016.UL15	Unflanged	Standard	11,67	19,90	137	120	120
L1016.UL15-L	Unflanged	Long	14,12	24,05	166	171	171
L1016.UL20-S	Unflanged	Short	9,25	15,63	148	66	66
L1016.UL20	Unflanged	Standard	17,98	30,96	289	224	224
L1016.UL25-S	Unflanged	Short	12,87	21,34	230	103	103
L1016.UL25	Unflanged	Standard	25,25	41,73	447	358	358
L1016.UL30-S	Unflanged	Short	18,50	27,51	356	153	153
L1016.UL30	Unflanged	Standard	37,33	55,50	719	560	560
L1016.UL30-L	Unflanged	Long	48,35	71,88	931	836	836
L1016.UL30-XL	Unflanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.UL35-S	Unflanged	Short	26,72	41,43	655	275	275
L1016.UL35	Unflanged	Standard	53,31	82,66	1307	991	991
L1016.UL35-L	Unflanged	Long	66,61	103,29	1633	1424	1424
L1016.UL35-XL	Unflanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.UL45	Unflanged	Standard	73,14	111,30	2353	1559	1559
L1016.UL45-L	Unflanged	Long	86,99	132,39	2798	2170	2170
L1016.UL45-XL	Unflanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.UL55	Unflanged	Standard	88,26	136,62	3385	2361	2361
L1016.UL55-L	Unflanged	Long	119,10	183,14	4538	4202	4202
L1016.UL55-XL	Unflanged	Extra Long	161,43	259,71	6430	6617	6617

Radial clearance/preload

Radial clearance describes the value for the radial movement of the carriage at a constant vertical load, while the carriage moves in longitudinal direction.

Preload is defined as an effective load on the rolling element in the interior of the carriage in order to remove an existing clearance or to increase the rigidity.

The linear guideways are available in the two different preload classes K_0 or K_1, see table below.

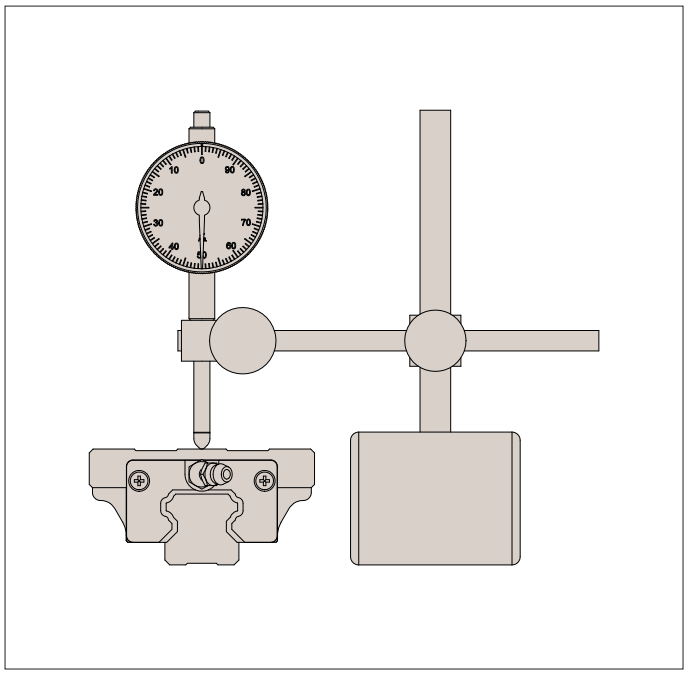
The preload influences the rigidity, precision and torque resistance and also affects the service life and displacement force.

The radial clearance for the respective preload classes are listed below.

Degree of preload	Preload class	Preload
No clearance	K_0	0
Small preload	K_1	0,02 x C*

*C is the dynamic load capacity.

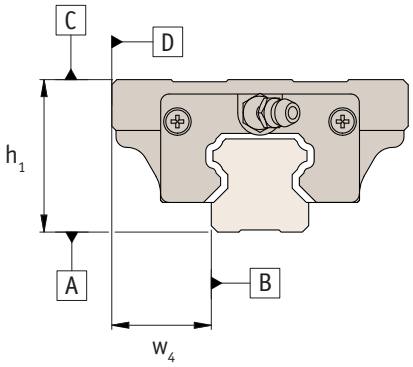
Size	Radial clearance of the preload classes µ	
	K_0 Impact free and easy movement	K_1 Small moments, one rail application, low vibrations
15	-3 to +3	-8 to -4
20	-3 to +3	-8 to -4
25	-4 to +4	-10 to -5
30	-4 to +4	-11 to -5
35	-5 to +5	-12 to -6
45	-6 to +6	-15 to -7
55	-7 to +7	-19 to -8



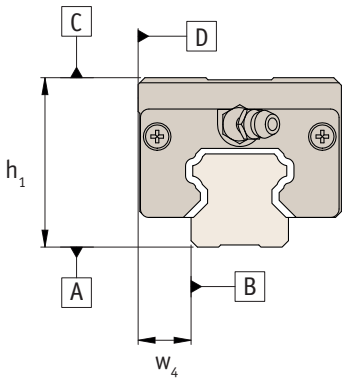
Linear Guideways from Automotion Components

Precision means the guide accuracy or the maximum deviation of the carriage based on the side and support surfaces during the movement along the rails.

Flanged

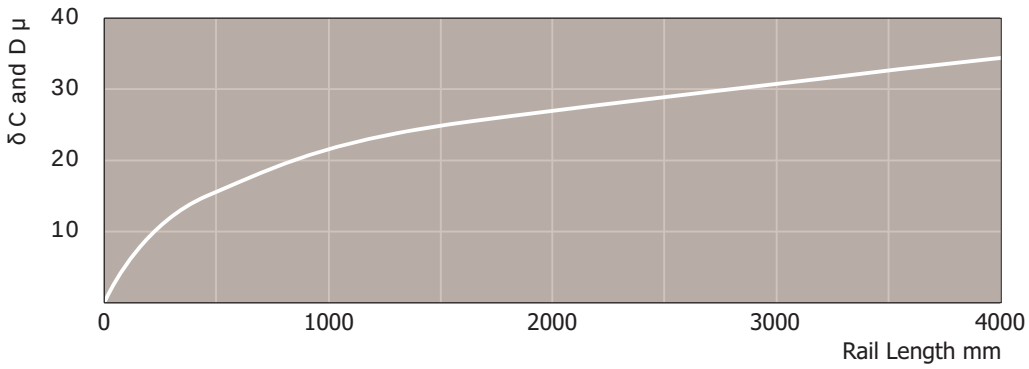


Unflanged



	Normal Precision (N)	H Precision (H)	P Precision (P)
Height tolerance h_1	±0,1	±0,4	0
Width tolerance w_4			-0,04
Guide accuracy of raceway C based on surface A	δ C see graph below		
Guide accuracy of raceway D based on surface B	δ D see graph below		

Running tolerances



Lubrication

Linear guideway rails must generally be lubricated before commissioning. They can be lubricated with oil or grease. The correct lubricant selection has a large influence on the service life and the function of the rail, insufficient lubrication and tribocorrosion can ultimately lead to total failure.

As well as reducing friction and wear, lubricants also serve as sealant, noise reducer and corrosion protection for the linear guide. Different lubricants for special applications are available upon request (e.g. lubricant with FDA approval for use in the food industry).

Our linear guideways are coated with an anti-corrosion resistant oil at the factory.
This coating needs to be removed prior to installation, then lubricated as follows:

Important instructions for lubrication

- Linear guideways must be lubricated for operation.
- The carriage must be moved back and forth during lubrication.
- The lubricant is inserted through a lubrication nipple.
- There should be a thin film of lubricant on the rail surface at all times.
- Primary lubricated systems have an increased displacement resistance.
- Please contact us if oil lubrication is used for vertical use.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be reduced.

Grease lubrication

We recommend the use of a lithium emulsified lubricant NLGI Class 2 for lubrication.

Oil lubrication

We recommend a synthetic oil for operating temperatures between 0°C and +70°C.

Relubrication

- Relubrication of the system must be done before the lubricant used has become dirty or shows signs of discolouration.
- Relubrication should be performed at operating temperature. The carriage must be moved back and forth during re-lubrication.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Lubrication intervals

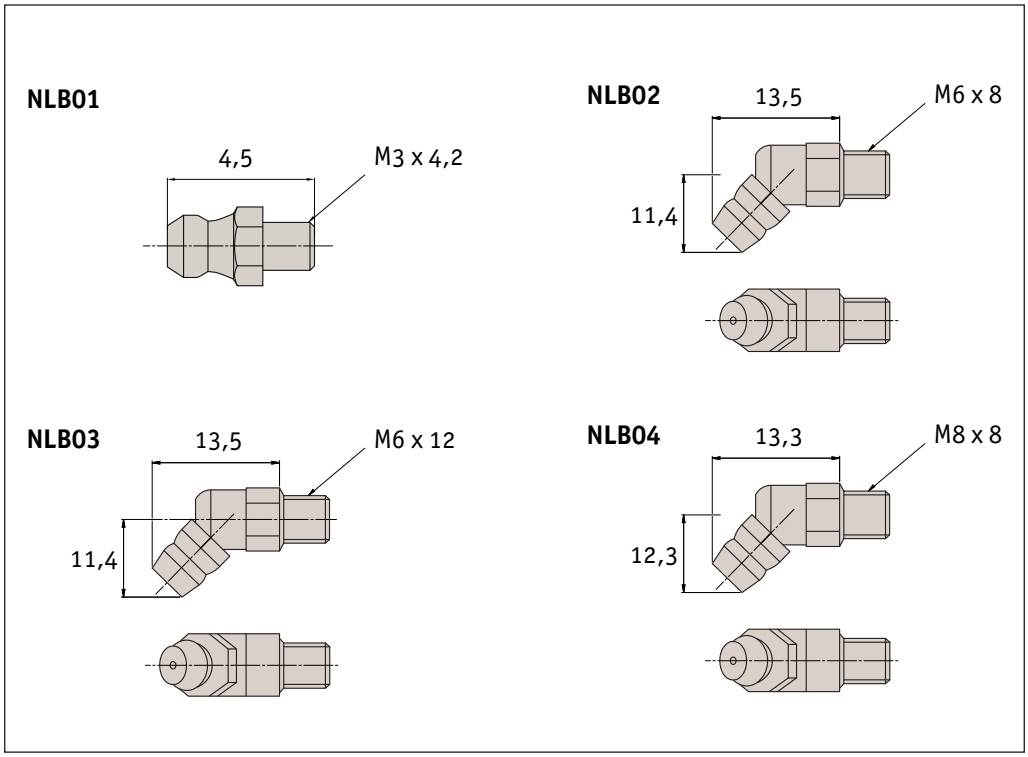
Operating speed, stroke length and ambient conditions influence the selection of time between lubrication intervals. Establishing a safe lubrication interval is based solely on the applications and conditions. However, a lubrication interval should not be longer than one year.

Lubrication nipple

The following lubrication nipples are supplied.

Other lubrication nipples, such as lubrication adapters with hose inlet or with quick-coupling, are available on request.

Lubrication nipple	Size
NLB01	15
NLB02	20
	25
NLB03	30
	35
NLB04	45
	55



Surface treatment

There are numerous application-specific surface treatments available for profile rails of the linear guideway product family, for example, black oxide coating (X), hard chrome plating (XC) or nickel plating (NIC) and an FDA-approval type for use in the food industry. For more information please contact us on 0845 850 99 40.

Linear guideways have a low friction characteristic and thus low displacement resistance. The low start-up friction (breakaway force) is almost identical to the moving friction (running resistance).

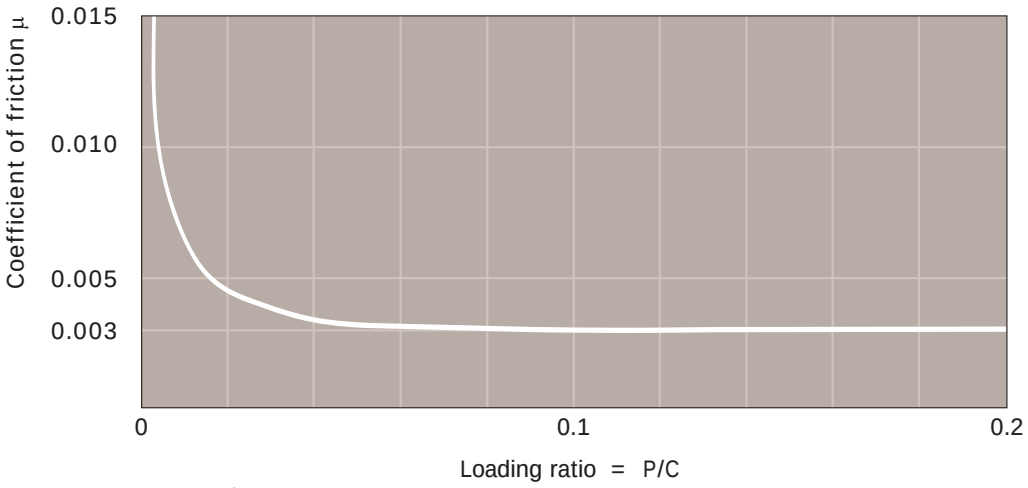
The displacement resistance (F_m) is dependent upon several factors:

- Friction of the sealing system.
- Friction of the balls with each other.
- Friction between balls and redirection.
- Rolling resistance of the balls in the running grooves.
- Resistance of lubricant in the carriage.
- Resistance caused by contamination in the lubricant.
- Preload for increased rigidity.
- Moment load.

Resistance of the seals f

Type	Max. seal resistance N
L1016.15	2,5 N
L1016.20	3,5 N
L1016.25	5,0 N
L1016.30	10,0 N
L1016.35	12,0 N
L1016.45	20,0 N
L1016.55	22,0 N

Coefficient of friction μ



P = Load
C = Dynamic load capacity

Displacement resistance F_m

The following formula is used for approximate calculation of the displacement resistance. Please note that the level of preload or the viscosity of the lubricant used can also influence the displacement resistance.

$$F_m = \mu \cdot F + n.f$$

F_m = Displacement resistance (N)
μ = Coefficient of friction
F = Load (N)
f = Resistance of the seals (N)
n = Number of sliders

Linear guideways have a coefficient of friction of approx. μ = 0.002 - 0.003

The given static load capacity (C_0) for each carriage represents the maximum permissible load value, which if exceeded causes permanent deformations of the raceways and adversely affects the operating performance.

Checking the load must be done as follows:

- Through determination of the simultaneously occurring forces and moments for each carriage.
- By checking these values with the corresponding load capacities.

$$S_0 > \frac{C_0}{(F_x \bullet f_c)} \quad S_0 > \frac{C_0}{(F_y \bullet f_c)} \quad S_0 > \frac{M_x}{(M_1 \bullet f_c)} \quad S_0 > \frac{M_y}{(M_2 \bullet f_c)} \quad S_0 > \frac{M_z}{(M_3 \bullet f_c)}$$

F_x, F_y	=	radial and axial resultants of external forces (N)	M_x, M_y, M_z	=	maximum permissible moments in the different loading directions (Nm)
M_1, M_2, M_3	=	external moments (Nm)	f_c	=	contact factor (see next page)
C_0	=	static load capacity (N)	S_0	=	safety factor

The safety factors

The safety factor S_0 can lie on the lower given limit if the forces can be determined with sufficient precision. If impacts and vibrations affect the system, overloads might occur, then the higher value should be selected.

Reduced safety results from simultaneously occurring forces and moments.

For more information please contact our technical department.

Operating conditions	S_0
Normal operation	1,0 ~ 1,5
Loading with vibration or shock effect	1,5 ~ 2,0
Loading with strong vibration or impacts	2,0 ≥ 3,5

Linear Guideways from Automotion Components

Calculation of service life

The dynamic load capacity C is a conventional variable used for calculating the service life. This load corresponds to a nominal service life of 50 Km. The relationship between calculated service life L_{Km} (in Km), dynamic load capacity C (in N) and equivalent load P (in N) is given in the formula below.

$$L_{Km} = \left(\frac{C}{P} \cdot \frac{f_c \cdot f_t}{f_i} \right)^3 \cdot 50\ Km$$

f_c = Contact factor
f_i = Application coefficient
f_t = Temperature factor

C = Dynamic load (N)
P = See below (N)

The equivalent load P corresponds in its effects to the sum of the forces and moments working simultaneously on a slider. If these different load components are known, P results from the formula below.

$$P = |F_X| + |F_Y| + \left(\frac{|M_1|}{M_x} + \frac{|M_2|}{M_y} + \frac{|M_3|}{M_z} \right) C_0$$

Contact factor f_c

The contact factor f_c refers to applications in which several carriages pass the same rail section. If two or more carriages are moved over the same point on a rail, the static and dynamic loading values must be multiplied with the numbers from the table below.

Number of carriages	1	2	3	4	5
f_c	1	0,81	0,72	0,66	0,61

Application coefficient f_i

The application coefficient f_i can be understood as the dynamic safety factor.
Refer to the table below for the values.

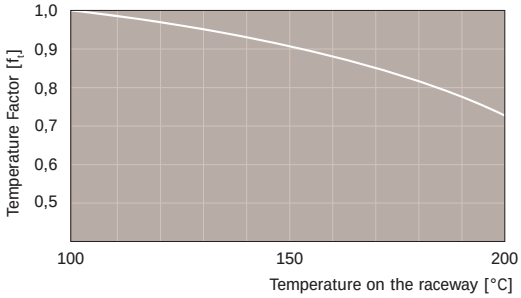
Operating conditions	Speed	f_i
Neither external impacts nor vibrations	Low speed V ≤ 15 m/min.	1 - 1,5
Light impacts or vibrations	Average speed < V ≤ 60 m/min.	1,5 - 2
Average and high external impacts or vibration	High speed V > 60 m/min.	2 - 3,5

Temperature factor f_t

If the temperature affecting the system exceeds 100°C, the temperature factor f_t must be included in the service life calculation.

Note 1: For temperatures above 80°C, the seals and end caps must be designed for higher thermal resistance.

Note 2: Special processing to ensure the movement of the guides is required for temperatures above 120°C.

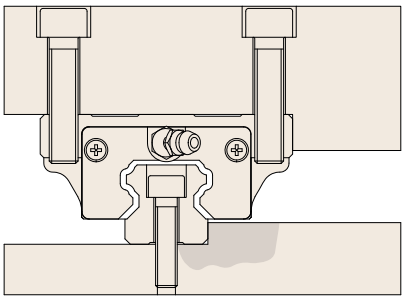


Linear Guideways from Automotion Components

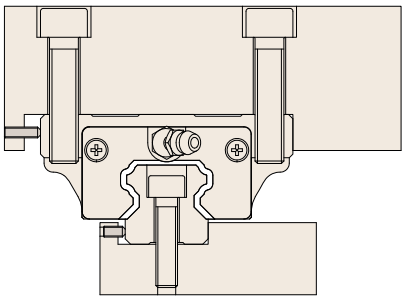
Linear Guideways from Automotion Components

Installation examples
The following drawings illustrate some assembly examples for rail/carriage combinations corresponding to the structure of various machine frames.

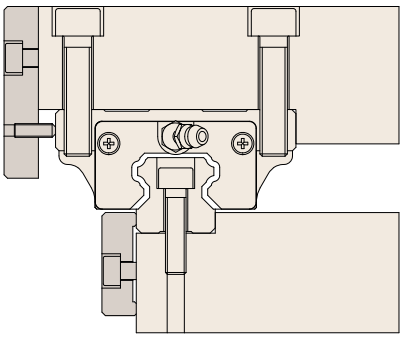
Example 1
Assembly of carriage and rail on shoulder edges



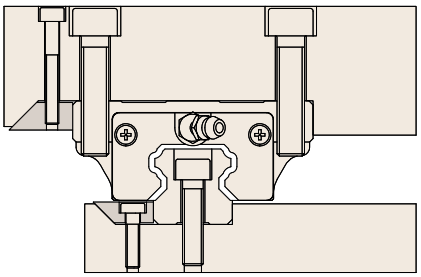
Example 2
Securing carriage and rail using set screws



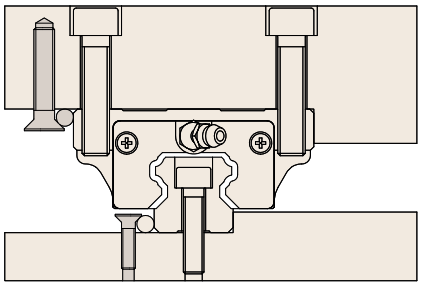
Example 3
Securing carriage and rail using pressure plates



Example 4
Securing carriage and rail using taper gibs



Example 5
Securing carriage and rail using bolts



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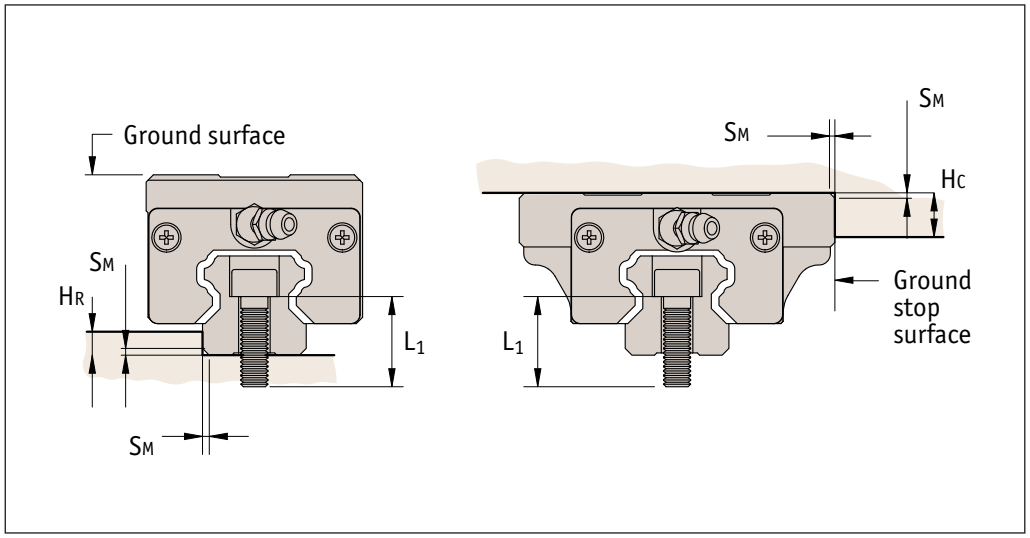
The given radii and shoulder heights in the table must be observed when assembling rails and carriages on the stop edges to ensure perfect seating of carriages or guideways.

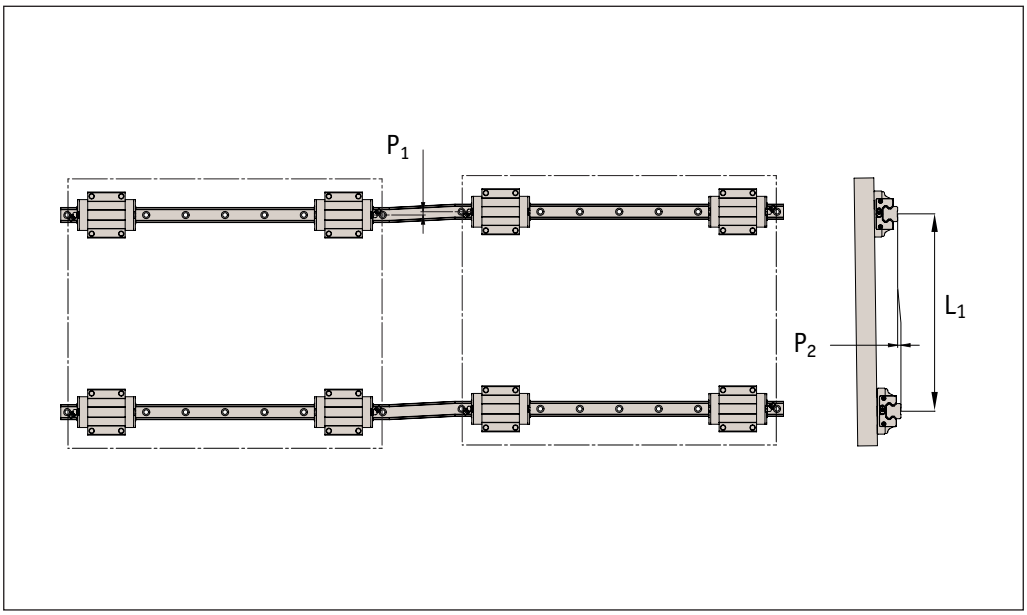


Size	SM	HR	HC	L_1
15	0,6	3,1	5	M4 x 16
20	0,9	4,3	6	M5 x 20
25	1,1	5,6	7	M6 x 25
30	1,4	6,8	8	M8 x 30
35	1,4	7,3	9	M8 x 30
45	1,6	8,7	11	M12 x 40
55	1,6	11,8	12	M14 x 45

Values in mm. HR* is the maximum height when using side seal on carriage.

Linear Guideways from Automotion Components

Assembly precision
The maximum permissible deviations of the rail surfaces for assembly are given in the following drawing and the table below.

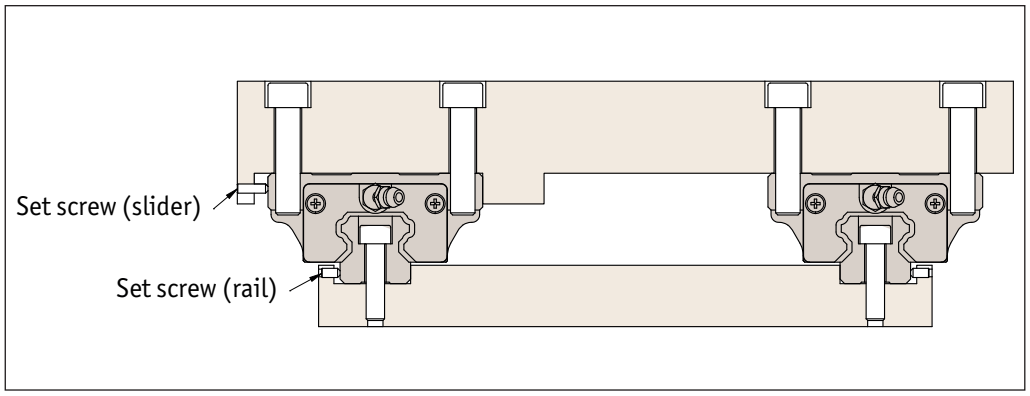


Size	Permissible tolerance for parallelism P_1 µ		$P_2 = L_1$ x (calculation factor) Calculator factor (x) P_2 µ	
	K_1	K_0	K_1	K_0
15	18	25	0,17	0,26
20	20	25	0,17	0,26
25	22	30	0,17	0,26
30	30	40	0,22	0,34
35	35	50	0,30	0,42
45	40	60	0,34	0,50
55	50	70	0,42	0,60

The bolt sizes to be used and optimum tightening torques for rail assembly are listed in the table below.

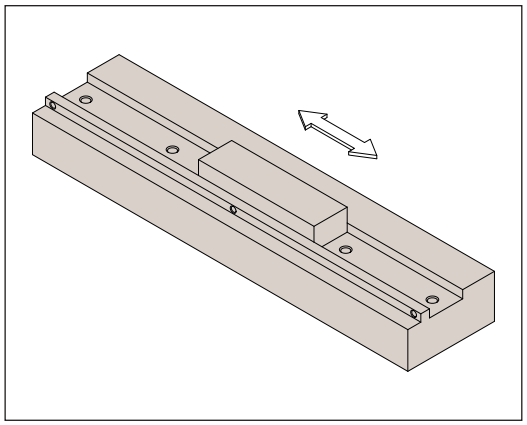
Bolt	Tightening torque M_t Nm	
	Steel 10,9	Steel 12,9
M 4	4,4	5,1
M 5	8,7	10
M 6	15	18
M 8	36	43
M12	125	145
M14	200	235

Assembly process



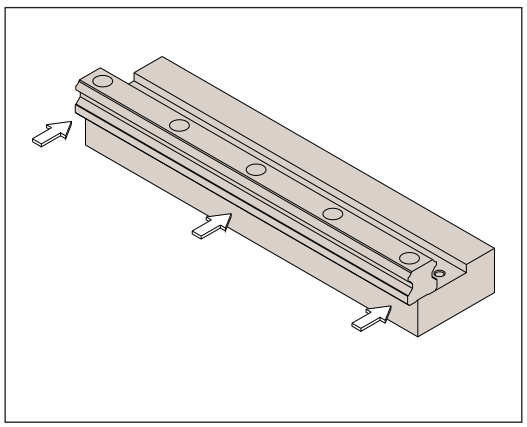
Fixing guide rails 1

Whet the assembly surface with a whetstone and also remove burrs, unevenness and dirt. Note: All linear guides are preserved with anti-corrosion oil at the factory. This protection must be removed before installation. In doing so, please ensure that the surfaces are coated with low-viscosity oil for the purpose of further protection against corrosion.

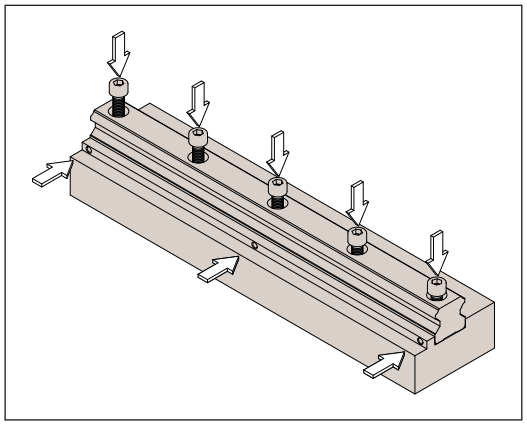


Fixing guide rails 2

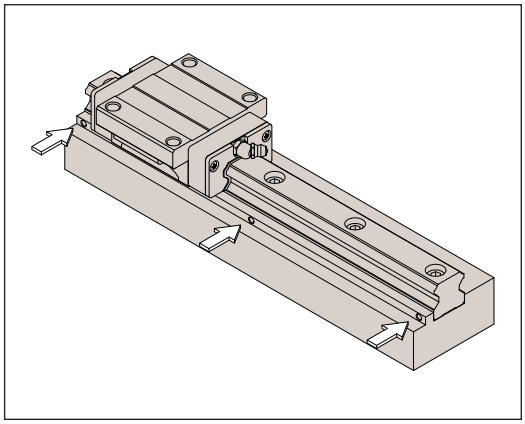
Carefully lay the guide rail on the assembly surface and slightly tighten the fixing screws so that the guide rail lightly touches the assembly surface (align the guide rail along the shoulder edge of the assembly surface). Note: The fixing screws of the linear guide must be clean. Check if the fixing holes are located in the correct place when you insert the bolts. A forced tightening of a fixing screw in an offset hole can negatively affect accuracy.



Fixing guide rails 2 continued



Fixing guide rails 3
Tighten the thrust bolts on the guide rail until there is close contact on the side stop surface.



Fixing guide rails 4
Tighten the fixing screws with a torque wrench to the prescribed torque.
Note: For a high degree of accuracy, the fixing screws of the guide rail must be tightened in sequence outward from the centre.

Fixing guide rails 5
Assemble the other rails in the same manner to complete the installation of the guide rails.

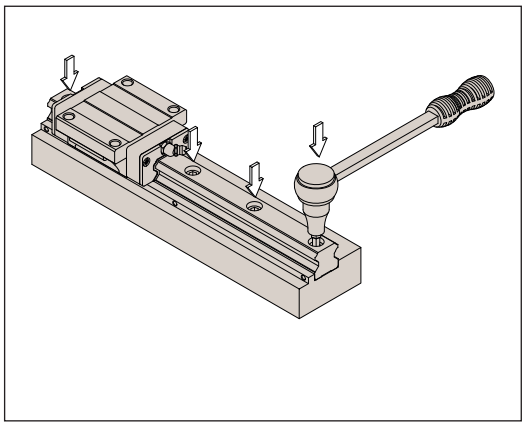
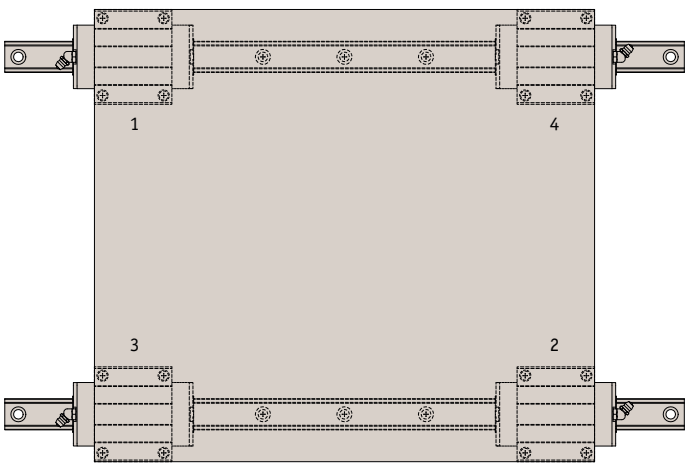


Table assembly 1
Set the table carefully on the carriage and tighten the fixing screws only lightly.

Table assembly 2
Press the carriage on the main guide side with the thrust bolts against the shoulder edge of the table and position the table.

Table assembly 3
Tighten the fixing screws on the main side and the lateral side completely tight to finish the installation. Note: To attach the table uniformly, tighten the fixing screws diagonally (1, 2, 3, 4).

This method saves time when straightening the guide rail and makes the manufacture of positioning pins unnecessary, which considerably reduces assembly time.



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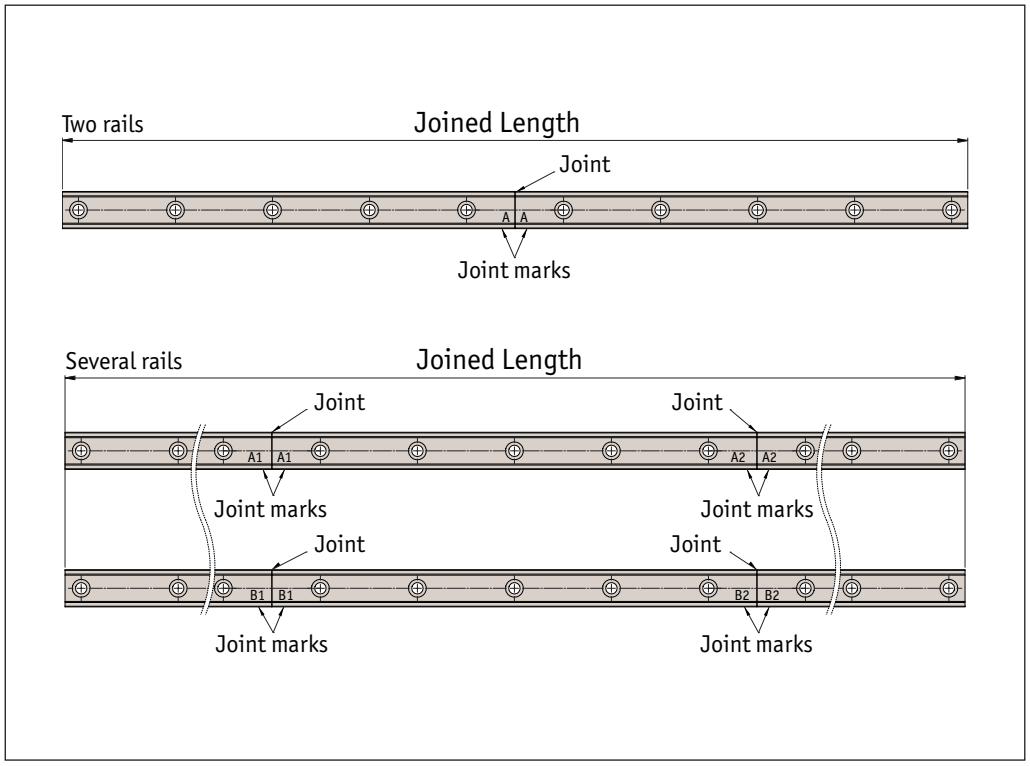
Joining rails

Guide rails longer than the one part maximum length are put together from two or more rails. When putting guide rails together, ensure the register marks are positioned correctly.



Linear Guideways from Automotion Components

Miniature Linear Guideways

Introduction

Miniature linear guideway systems are widely used throughout industry for precise, compact applications.

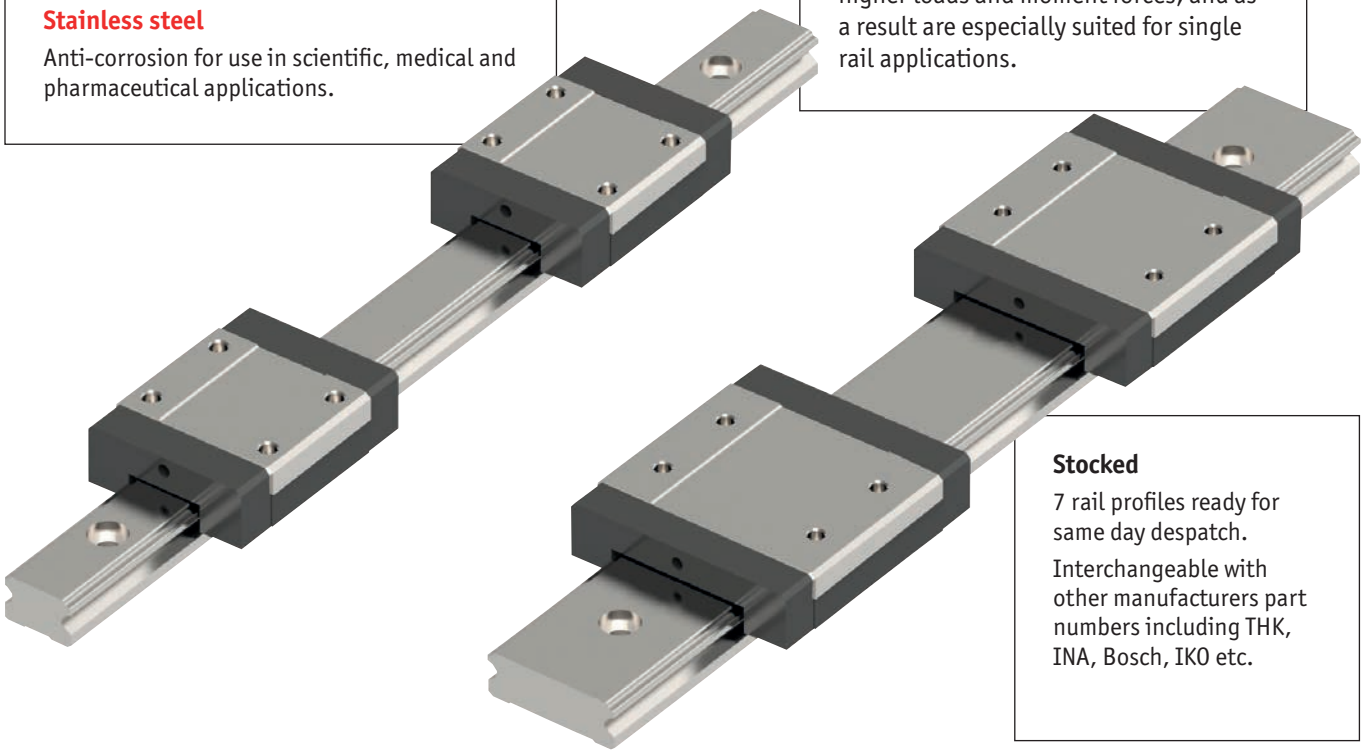
Precise and stainless

The gothic arch shape of the rails have a 45° contact ensuring similar load capacities in all directions. Use of a large number of stainless steel balls enables a high moment and load capacity within a compact space. These smooth running rails have low break-away forces and a low coefficient of friction.

Stainless steel
Anti-corrosion for use in scientific, medical and pharmaceutical applications.

Standard and wide versions
Our standard width is a compact, high performance rail in six sizes.

The wide version can generally accept higher loads and moment forces, and as a result are especially suited for single rail applications.

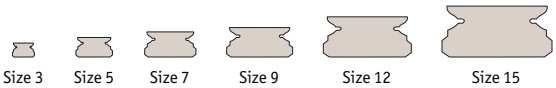


Stocked
7 rail profiles ready for same day despatch.

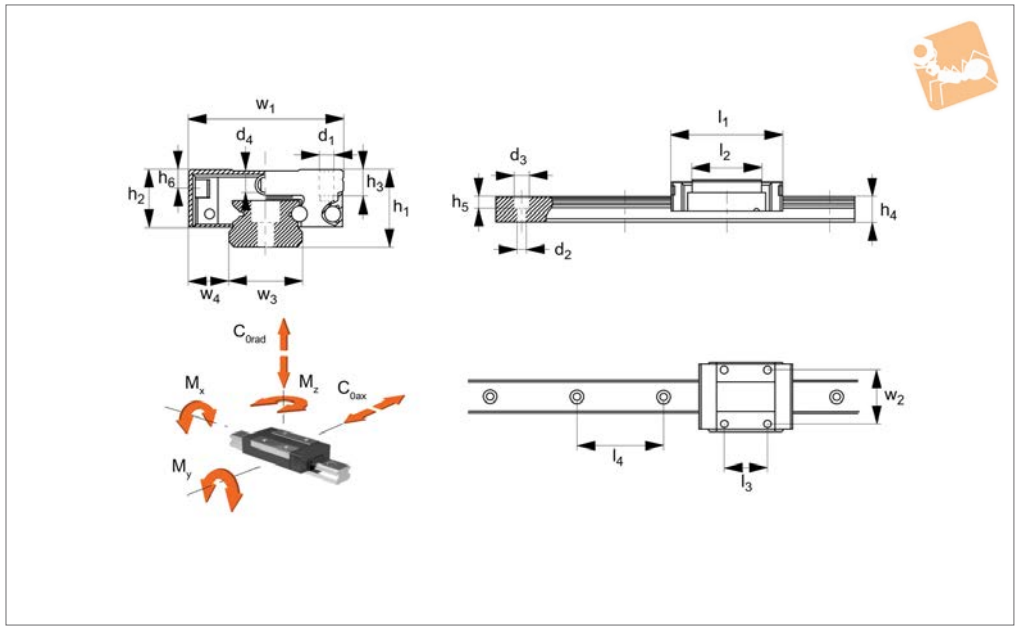
Interchangeable with other manufacturers part numbers including THK, INA, Bosch, IKO etc.

Rail sizes

L1010 Standard Version



L1012 Wide Version



L1010.C

Material
Corrosion resistant stainless steel body (440C), with hardened stainless steel ball bearings.
Black plastic end plates and ball bearing retainers.

Technical Notes
Max.speed 3 m/s. max. acceleration 40m/s^2.
Temperature range -40°C to +80°C.
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1010.07 through to L1010.15).

Tips
Carriages are supplied with a dummy plastic rail. When mounting carriages onto rail, slide directly from the dummy rail onto the steel rail. Do not simply remove the carriage from the dummy rail - the balls will become loose making the carriage unusable.

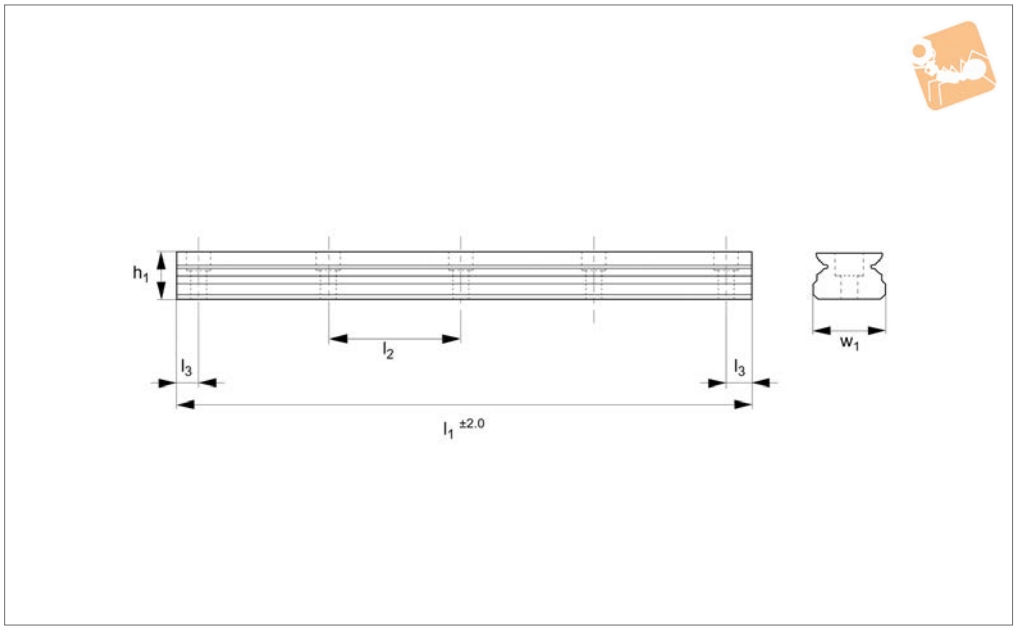
Important Notes
*Size 3 and Size 5 carriage must be ordered with rails.

Order No.	For rail	l_1	l_2	l_3	l_4	h_1	h_2	h_3	h_4	h_5	h_6	d_2	d_3	d_4	For screws d_1	Weight g
L1010.C03	3*	11.9	6.7	3.5	10	4	3.2	1.1	2.6	-	1.5	-	M1,6	0.3	M1,6	0.9
L1010.C03L	3*	16.1	11.0	5.5	10	4	3.2	1.1	2.6	-	1.5	-	M1,6	0.3	M2	1.2
L1010.C05	5*	16.3	10.0	-	15	6	4.7	1.5	3.5	1.0	2.0	2.4	3.5	0.7	M2	3.5
L1010.C05L	5*	19.7	13.5	7	15	6	4.6	2.0	3.5	1.0	2.0	2.4	3.5	0.7	M2,6	4.0
L1010.C07	7	24.1	14.3	8	15	8	6.6	2.5	4.7	2.3	2.8	2.4	4.2	1.1	M2	8.0
L1010.C07L	7	31.5	21.8	13	15	8	6.7	2.5	4.7	2.3	2.8	2.4	4.2	1.1	M2	14.0
L1010.C09	9	30.9	20.5	10	20	10	7.9	3.0	5.5	3.5	3.3	3.5	6.0	1.3	M3	18.0
L1010.C09L	9	41.1	30.8	16	20	10	8.0	3.0	5.5	3.5	3.3	3.5	6.0	1.3	M3	28.0
L1010.C12	12	35.8	22.0	15	25	13	10.1	3.5	7.5	4.5	4.3	3.5	6.0	1.3	M3	34.0
L1010.C12L	12	47.8	34.0	20	25	13	10.2	3.5	7.5	4.5	4.3	3.5	6.0	1.3	M3	51.0
L1010.C15	15	43.4	27.0	20	40	16	12.2	5.5	9.5	4.5	4.3	3.5	6.0	1.8	M3	61.0
L1010.C15L	15	60.2	44.0	25	40	16	12.2	5.5	9.5	4.5	4.3	3.5	6.0	1.8	M3	90.0

Order No.	Static load $C_{0rad\ \&\ ax}$ N	w_1	w_2	w_3	w_4	Dyn. load $C_{rad\ \&\ ax}$ N	M_x Nm	M_y Nm	M_z Nm
L1010.C03	310	8	-	3	2.5	190	0.6	0.4	0.4
L1010.C03L	575	8	-	3	2.5	295	0.9	1.1	1.1
L1010.C05	550	12	8	5	3.5	335	1.7	1.0	1.0
L1010.C05L	900	12	-	5	3.5	470	2.4	2.1	2.1
L1010.C07	1440	17	12	7	5.0	890	5.2	3.3	3.3
L1010.C07L	2440	17	12	7	5.0	1310	9.0	7.7	7.7
L1010.C09	2495	20	15	9	5.5	1570	11.7	6.4	6.4
L1010.C09L	3880	20	15	9	5.5	2135	18.2	12.4	12.4
L1010.C12	3465	27	20	12	7.5	2308	21.5	12.9	12.9
L1010.C12L	5630	27	20	12	7.5	3240	34.9	30.2	30.2
L1010.C15	5590	32	25	15	8.5	3810	43.6	27.0	27.0
L1010.C15L	9080	32	25	15	8.5	5350	70.0	63.3	63.3

3mm Miniature Linear Rail
standard width

L1010.03



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Supplied with special low profile hex screws.
Select the size and number of carriages to suit the required load (see part L1010.C).
Other rail lengths on request.
Weight: 0,05 Kg/m.

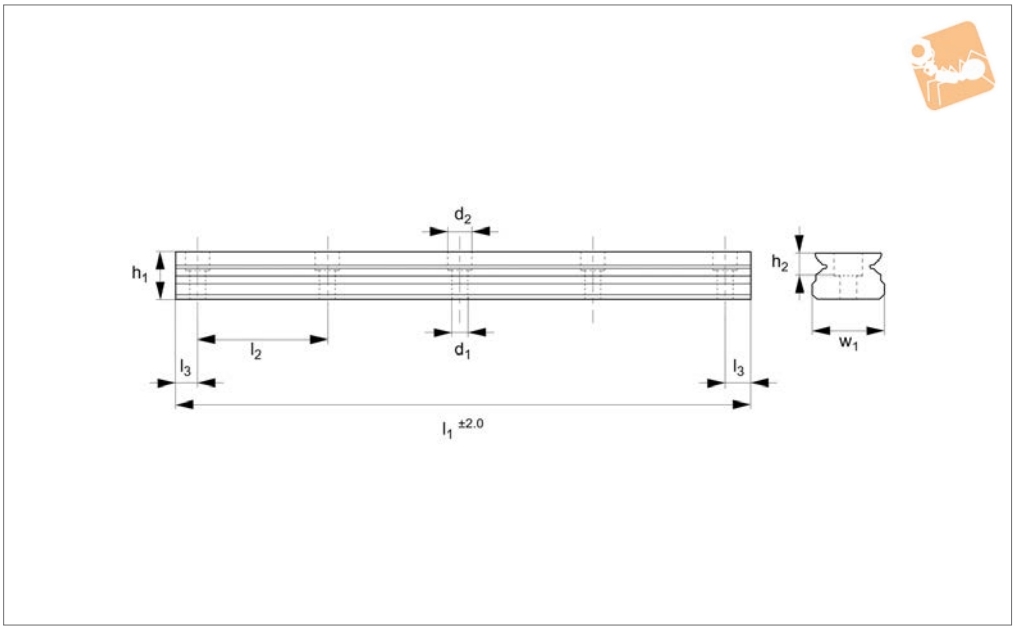
Important Notes
This size rail has a through thread from underside.
Must be ordered with corresponding sized carriage.

Order No.	l_1	l_2	l_3	h_1	For screws	w_1
L1010.03-0025	25	10	2.5	2.6	M1,6	3
L1010.03-0035	35	10	2.5	2.6	M1,6	3
L1010.03-0045	45	10	2.5	2.6	M1,6	3
L1010.03-0055	55	10	2.5	2.6	M1,6	3
L1010.03-0065	65	10	2.5	2.6	M1,6	3
L1010.03-0075	75	10	2.5	2.6	M1,6	3
L1010.03-0085	85	10	2.5	2.6	M1,6	3
L1010.03-0095	95	10	2.5	2.6	M1,6	3
L1010.03-0105	105	10	2.5	2.6	M1,6	3
L1010.03-0115	115	10	2.5	2.6	M1,6	3
L1010.03-0125	125	10	2.5	2.6	M1,6	3
L1010.03-0135	135	10	2.5	2.6	M1,6	3
L1010.03-0145	145	10	2.5	2.6	M1,6	3
L1010.03-0155	155	10	2.5	2.6	M1,6	3
L1010.03-0165	165	10	2.5	2.6	M1,6	3
L1010.03-0175	175	10	2.5	2.6	M1,6	3
L1010.03-0185	185	10	2.5	2.6	M1,6	3
L1010.03-0195	195	10	2.5	2.6	M1,6	3
L1010.03-0205	205	10	2.5	2.6	M1,6	3
L1010.03-0215	215	10	2.5	2.6	M1,6	3
L1010.03-0225	225	10	2.5	2.6	M1,6	3
L1010.03-0235	235	10	2.5	2.6	M1,6	3
L1010.03-0245	245	10	2.5	2.6	M1,6	3
L1010.03-0255	255	10	2.5	2.6	M1,6	3
L1010.03-0265	265	10	2.5	2.6	M1,6	3
L1010.03-0275	275	10	2.5	2.6	M1,6	3
L1010.03-0285	285	10	2.5	2.6	M1,6	3
L1010.03-0295	295	10	2.5	2.6	M1,6	3
L1010.03-0305	305	10	2.5	2.6	M1,6	3
L1010.03-0315	315	10	2.5	2.6	M1,6	3
L1010.03-0325	325	10	2.5	2.6	M1,6	3
L1010.03-0335	335	10	2.5	2.6	M1,6	3
L1010.03-0345	345	10	2.5	2.6	M1,6	3

Order No.	l_1	l_2	l_3	h_1	For screws	w_1
L1010.03-0355	355	10	2.5	2.6	M1,6	3
L1010.03-0365	365	10	2.5	2.6	M1,6	3
L1010.03-0375	375	10	2.5	2.6	M1,6	3
L1010.03-0385	385	10	2.5	2.6	M1,6	3
L1010.03-0395	395	10	2.5	2.6	M1,6	3
L1010.03-0405	405	10	2.5	2.6	M1,6	3
L1010.03-0415	415	10	2.5	2.6	M1,6	3
L1010.03-0425	425	10	2.5	2.6	M1,6	3
L1010.03-0435	435	10	2.5	2.6	M1,6	3
L1010.03-0445	445	10	2.5	2.6	M1,6	3
L1010.03-0455	455	10	2.5	2.6	M1,6	3
L1010.03-0465	465	10	2.5	2.6	M1,6	3
L1010.03-0475	475	10	2.5	2.6	M1,6	3
L1010.03-0485	485	10	2.5	2.6	M1,6	3
L1010.03-0495	495	10	2.5	2.6	M1,6	3
L1010.03-0505	505	10	2.5	2.6	M1,6	3
L1010.03-0515	515	10	2.5	2.6	M1,6	3
L1010.03-0525	525	10	2.5	2.6	M1,6	3
L1010.03-0535	535	10	2.5	2.6	M1,6	3
L1010.03-0545	545	10	2.5	2.6	M1,6	3
L1010.03-0555	555	10	2.5	2.6	M1,6	3
L1010.03-0565	565	10	2.5	2.6	M1,6	3
L1010.03-0575	575	10	2.5	2.6	M1,6	3
L1010.03-0585	585	10	2.5	2.6	M1,6	3
L1010.03-0595	595	10	2.5	2.6	M1,6	3
L1010.03-0605	605	10	2.5	2.6	M1,6	3
L1010.03-0615	615	10	2.5	2.6	M1,6	3
L1010.03-0625	625	10	2.5	2.6	M1,6	3
L1010.03-0635	635	10	2.5	2.6	M1,6	3
L1010.03-0645	645	10	2.5	2.6	M1,6	3
L1010.03-0655	655	10	2.5	2.6	M1,6	3
L1010.03-0665	665	10	2.5	2.6	M1,6	3
L1010.03-0675	675	10	2.5	2.6	M1,6	3
L1010.03-0685	685	10	2.5	2.6	M1,6	3
L1010.03-0695	695	10	2.5	2.6	M1,6	3
L1010.03-0705	705	10	2.5	2.6	M1,6	3
L1010.03-0715	715	10	2.5	2.6	M1,6	3
L1010.03-0725	725	10	2.5	2.6	M1,6	3
L1010.03-0735	735	10	2.5	2.6	M1,6	3
L1010.03-0745	745	10	2.5	2.6	M1,6	3
L1010.03-0755	755	10	2.5	2.6	M1,6	3
L1010.03-0765	765	10	2.5	2.6	M1,6	3
L1010.03-0775	775	10	2.5	2.6	M1,6	3
L1010.03-0785	785	10	2.5	2.6	M1,6	3
L1010.03-0795	795	10	2.5	2.6	M1,6	3
L1010.03-0805	805	10	2.5	2.6	M1,6	3
L1010.03-0815	815	10	2.5	2.6	M1,6	3
L1010.03-0825	825	10	2.5	2.6	M1,6	3
L1010.03-0835	835	10	2.5	2.6	M1,6	3
L1010.03-0845	845	10	2.5	2.6	M1,6	3
L1010.03-0855	855	10	2.5	2.6	M1,6	3
L1010.03-0865	865	10	2.5	2.6	M1,6	3
L1010.03-0875	875	10	2.5	2.6	M1,6	3
L1010.03-0885	885	10	2.5	2.6	M1,6	3
L1010.03-0895	895	10	2.5	2.6	M1,6	3
L1010.03-0905	905	10	2.5	2.6	M1,6	3
L1010.03-0915	915	10	2.5	2.6	M1,6	3
L1010.03-0925	925	10	2.5	2.6	M1,6	3
L1010.03-0935	935	10	2.5	2.6	M1,6	3
L1010.03-0945	945	10	2.5	2.6	M1,6	3
L1010.03-0955	955	10	2.5	2.6	M1,6	3
L1010.03-0965	965	10	2.5	2.6	M1,6	3
L1010.03-0975	975	10	2.5	2.6	M1,6	3
L1010.03-0985	985	10	2.5	2.6	M1,6	3
L1010.03-0995	995	10	2.5	2.6	M1,6	3

5mm Miniature Linear Rail
standard width

L1010.05

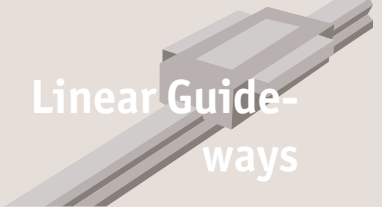


Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Supplied with special low profile hex screws.
Select the size and number of carriages to suit the required load (see part L1010.C).
Other rail lengths on request.
Weight: 0,12 Kg/m.

Important Notes
Must be ordered with corresponding sized carriage.

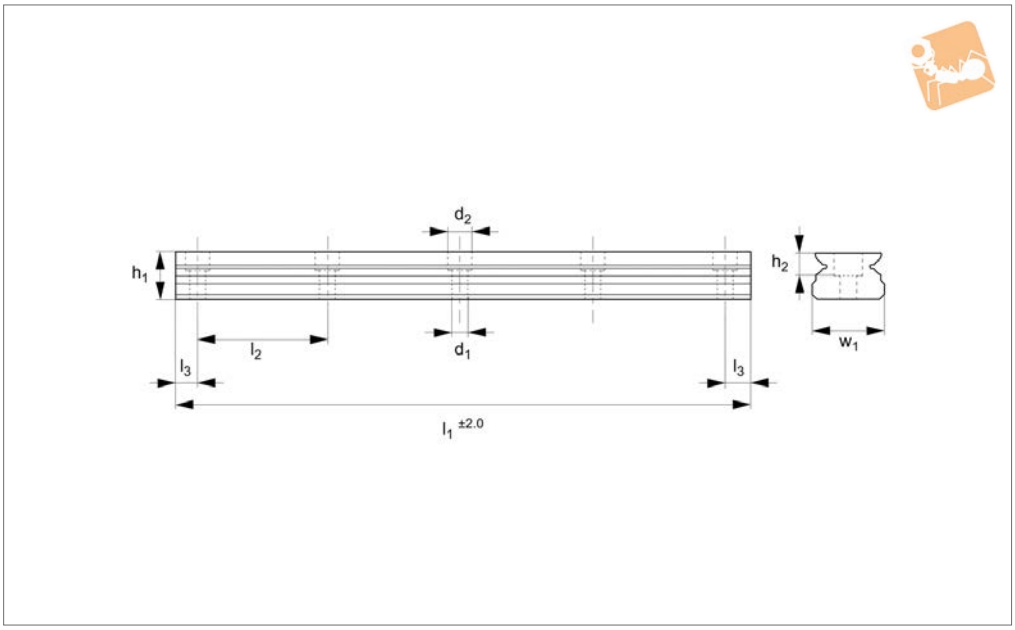
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.05-0040	40	15	5	3.5	1	2.4	3.5	M2	5	4.8
L1010.05-0055	55	15	5	3.5	1	2.4	3.5	M2	5	6.6
L1010.05-0070	70	15	5	3.5	1	2.4	3.5	M2	5	8.4
L1010.05-0085	85	15	5	3.5	1	2.4	3.5	M2	5	10.2
L1010.05-0100	100	15	5	3.5	1	2.4	3.5	M2	5	12.0
L1010.05-0115	115	15	5	3.5	1	2.4	3.5	M2	5	13.8
L1010.05-0130	130	15	5	3.5	1	2.4	3.5	M2	5	15.6
L1010.05-0145	145	15	5	3.5	1	2.4	3.5	M2	5	17.4
L1010.05-0160	160	15	5	3.5	1	2.4	3.5	M2	5	19.2
L1010.05-0175	175	15	5	3.5	1	2.4	3.5	M2	5	21.0
L1010.05-0190	190	15	5	3.5	1	2.4	3.5	M2	5	22.8
L1010.05-0205	205	15	5	3.5	1	2.4	3.5	M2	5	24.6
L1010.05-0220	220	15	5	3.5	1	2.4	3.5	M2	5	26.4
L1010.05-0235	235	15	5	3.5	1	2.4	3.5	M2	5	28.2
L1010.05-0250	250	15	5	3.5	1	2.4	3.5	M2	5	30.0
L1010.05-0265	265	15	5	3.5	1	2.4	3.5	M2	5	31.8
L1010.05-0280	280	15	5	3.5	1	2.4	3.5	M2	5	33.6
L1010.05-0295	295	15	5	3.5	1	2.4	3.5	M2	5	35.4
L1010.05-0310	310	15	5	3.5	1	2.4	3.5	M2	5	37.2
L1010.05-0325	325	15	5	3.5	1	2.4	3.5	M2	5	39.0
L1010.05-0340	340	15	5	3.5	1	2.4	3.5	M2	5	40.8
L1010.05-0355	355	15	5	3.5	1	2.4	3.5	M2	5	42.6
L1010.05-0370	370	15	5	3.5	1	2.4	3.5	M2	5	44.4
L1010.05-0385	385	15	5	3.5	1	2.4	3.5	M2	5	46.2
L1010.05-0400	400	15	5	3.5	1	2.4	3.5	M2	5	48.0
L1010.05-0415	415	15	5	3.5	1	2.4	3.5	M2	5	49.8
L1010.05-0430	430	15	5	3.5	1	2.4	3.5	M2	5	51.6
L1010.05-0445	445	15	5	3.5	1	2.4	3.5	M2	5	53.4
L1010.05-0460	460	15	5	3.5	1	2.4	3.5	M2	5	55.2
L1010.05-0475	475	15	5	3.5	1	2.4	3.5	M2	5	57.0
L1010.05-0490	490	15	5	3.5	1	2.4	3.5	M2	5	58.8
L1010.05-0505	505	15	5	3.5	1	2.4	3.5	M2	5	60.6



Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.05-0520	520	15	5	3.5	1	2.4	3.5	M2	5	62.4
L1010.05-0535	535	15	5	3.5	1	2.4	3.5	M2	5	64.2
L1010.05-0550	550	15	5	3.5	1	2.4	3.5	M2	5	66.0
L1010.05-0565	565	15	5	3.5	1	2.4	3.5	M2	5	67.8
L1010.05-0580	580	15	5	3.5	1	2.4	3.5	M2	5	69.6
L1010.05-0595	595	15	5	3.5	1	2.4	3.5	M2	5	71.4
L1010.05-0610	610	15	5	3.5	1	2.4	3.5	M2	5	73.2
L1010.05-0625	625	15	5	3.5	1	2.4	3.5	M2	5	75.0
L1010.05-0640	640	15	5	3.5	1	2.4	3.5	M2	5	76.8
L1010.05-0655	655	15	5	3.5	1	2.4	3.5	M2	5	78.6
L1010.05-0670	670	15	5	3.5	1	2.4	3.5	M2	5	80.4
L1010.05-0685	685	15	5	3.5	1	2.4	3.5	M2	5	82.2
L1010.05-0700	700	15	5	3.5	1	2.4	3.5	M2	5	84.0
L1010.05-0715	715	15	5	3.5	1	2.4	3.5	M2	5	85.8
L1010.05-0730	730	15	5	3.5	1	2.4	3.5	M2	5	87.6
L1010.05-0745	745	15	5	3.5	1	2.4	3.5	M2	5	89.4
L1010.05-0760	760	15	5	3.5	1	2.4	3.5	M2	5	91.2
L1010.05-0775	775	15	5	3.5	1	2.4	3.5	M2	5	93.0
L1010.05-0790	790	15	5	3.5	1	2.4	3.5	M2	5	94.8
L1010.05-0805	805	15	5	3.5	1	2.4	3.5	M2	5	96.6
L1010.05-0820	820	15	5	3.5	1	2.4	3.5	M2	5	98.4
L1010.05-0835	835	15	5	3.5	1	2.4	3.5	M2	5	100.2
L1010.05-0850	850	15	5	3.5	1	2.4	3.5	M2	5	102.0
L1010.05-0865	865	15	5	3.5	1	2.4	3.5	M2	5	103.8
L1010.05-0880	880	15	5	3.5	1	2.4	3.5	M2	5	105.6
L1010.05-0895	895	15	5	3.5	1	2.4	3.5	M2	5	107.4
L1010.05-0910	910	15	5	3.5	1	2.4	3.5	M2	5	109.2
L1010.05-0925	925	15	5	3.5	1	2.4	3.5	M2	5	111.0
L1010.05-0940	940	15	5	3.5	1	2.4	3.5	M2	5	112.8
L1010.05-0955	955	15	5	3.5	1	2.4	3.5	M2	5	114.6
L1010.05-0970	970	15	5	3.5	1	2.4	3.5	M2	5	116.4
L1010.05-0985	985	15	5	3.5	1	2.4	3.5	M2	5	118.2
L1010.05-1000	1000	15	5	3.5	1	2.4	3.5	M2	5	120.0

7mm Miniature Linear Rail
standard width

L1010.07



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

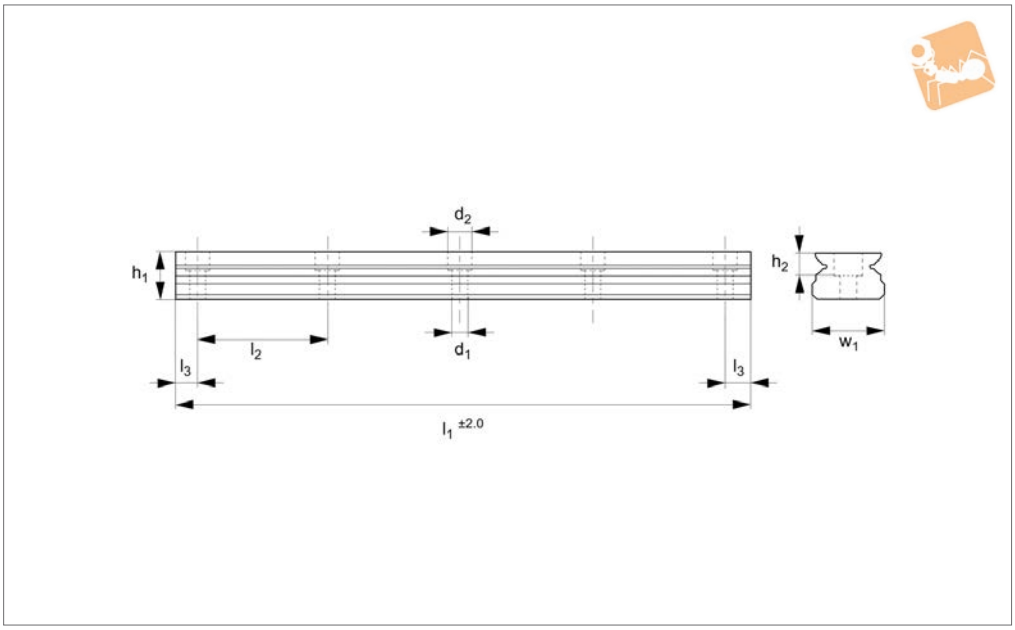
Other rail lengths on request.
Weight: 0,22 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.07-0040	40	15	5	4.7	2.3	2.4	4.2	M2	7	8.8
L1010.07-0055	55	15	5	4.7	2.3	2.4	4.2	M2	7	12.1
L1010.07-0070	70	15	5	4.7	2.3	2.4	4.2	M2	7	15.4
L1010.07-0085	85	15	5	4.7	2.3	2.4	4.2	M2	7	18.7
L1010.07-0100	100	15	5	4.7	2.3	2.4	4.2	M2	7	22.0
L1010.07-0115	115	15	5	4.7	2.3	2.4	4.2	M2	7	25.3
L1010.07-0130	130	15	5	4.7	2.3	2.4	4.2	M2	7	28.6
L1010.07-0145	145	15	5	4.7	2.3	2.4	4.2	M2	7	31.9
L1010.07-0160	160	15	5	4.7	2.3	2.4	4.2	M2	7	35.2
L1010.07-0175	175	15	5	4.7	2.3	2.4	4.2	M2	7	38.5
L1010.07-0190	190	15	5	4.7	2.3	2.4	4.2	M2	7	41.8
L1010.07-0205	205	15	5	4.7	2.3	2.4	4.2	M2	7	45.1
L1010.07-0220	220	15	5	4.7	2.3	2.4	4.2	M2	7	48.4
L1010.07-0235	235	15	5	4.7	2.3	2.4	4.2	M2	7	51.7
L1010.07-0250	250	15	5	4.7	2.3	2.4	4.2	M2	7	55.0
L1010.07-0265	265	15	5	4.7	2.3	2.4	4.2	M2	7	58.3
L1010.07-0280	280	15	5	4.7	2.3	2.4	4.2	M2	7	61.6
L1010.07-0295	295	15	5	4.7	2.3	2.4	4.2	M2	7	64.9
L1010.07-0310	310	15	5	4.7	2.3	2.4	4.2	M2	7	68.2
L1010.07-0325	325	15	5	4.7	2.3	2.4	4.2	M2	7	71.5
L1010.07-0340	340	15	5	4.7	2.3	2.4	4.2	M2	7	74.8
L1010.07-0355	355	15	5	4.7	2.3	2.4	4.2	M2	7	78.1
L1010.07-0370	370	15	5	4.7	2.3	2.4	4.2	M2	7	81.4
L1010.07-0385	385	15	5	4.7	2.3	2.4	4.2	M2	7	84.7
L1010.07-0400	400	15	5	4.7	2.3	2.4	4.2	M2	7	88.0
L1010.07-0415	415	15	5	4.7	2.3	2.4	4.2	M2	7	91.3
L1010.07-0430	430	15	5	4.7	2.3	2.4	4.2	M2	7	94.6
L1010.07-0445	445	15	5	4.7	2.3	2.4	4.2	M2	7	97.9
L1010.07-0460	460	15	5	4.7	2.3	2.4	4.2	M2	7	101.2
L1010.07-0475	475	15	5	4.7	2.3	2.4	4.2	M2	7	104.5
L1010.07-0490	490	15	5	4.7	2.3	2.4	4.2	M2	7	107.8
L1010.07-0505	505	15	5	4.7	2.3	2.4	4.2	M2	7	111.1
L1010.07-0520	520	15	5	4.7	2.3	2.4	4.2	M2	7	114.4
L1010.07-0535	535	15	5	4.7	2.3	2.4	4.2	M2	7	117.7

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.07-0550	550	15	5	4.7	2.3	2.4	4.2	M2	7	121.0
L1010.07-0565	565	15	5	4.7	2.3	2.4	4.2	M2	7	124.3
L1010.07-0580	580	15	5	4.7	2.3	2.4	4.2	M2	7	127.6
L1010.07-0595	595	15	5	4.7	2.3	2.4	4.2	M2	7	130.9
L1010.07-0610	610	15	5	4.7	2.3	2.4	4.2	M2	7	134.2
L1010.07-0625	625	15	5	4.7	2.3	2.4	4.2	M2	7	137.5
L1010.07-0640	640	15	5	4.7	2.3	2.4	4.2	M2	7	140.8
L1010.07-0655	655	15	5	4.7	2.3	2.4	4.2	M2	7	144.1
L1010.07-0670	670	15	5	4.7	2.3	2.4	4.2	M2	7	147.4
L1010.07-0685	685	15	5	4.7	2.3	2.4	4.2	M2	7	150.7
L1010.07-0700	700	15	5	4.7	2.3	2.4	4.2	M2	7	154.0
L1010.07-0715	715	15	5	4.7	2.3	2.4	4.2	M2	7	157.3
L1010.07-0730	730	15	5	4.7	2.3	2.4	4.2	M2	7	160.6
L1010.07-0745	745	15	5	4.7	2.3	2.4	4.2	M2	7	163.9
L1010.07-0760	760	15	5	4.7	2.3	2.4	4.2	M2	7	167.2
L1010.07-0775	775	15	5	4.7	2.3	2.4	4.2	M2	7	170.5
L1010.07-0790	790	15	5	4.7	2.3	2.4	4.2	M2	7	173.8
L1010.07-0805	805	15	5	4.7	2.3	2.4	4.2	M2	7	177.1
L1010.07-0820	820	15	5	4.7	2.3	2.4	4.2	M2	7	180.4
L1010.07-0835	835	15	5	4.7	2.3	2.4	4.2	M2	7	183.7
L1010.07-0850	850	15	5	4.7	2.3	2.4	4.2	M2	7	187.0
L1010.07-0865	865	15	5	4.7	2.3	2.4	4.2	M2	7	190.3
L1010.07-0880	880	15	5	4.7	2.3	2.4	4.2	M2	7	193.6
L1010.07-0895	895	15	5	4.7	2.3	2.4	4.2	M2	7	196.9
L1010.07-0910	910	15	5	4.7	2.3	2.4	4.2	M2	7	200.2
L1010.07-0925	925	15	5	4.7	2.3	2.4	4.2	M2	7	203.5
L1010.07-0940	940	15	5	4.7	2.3	2.4	4.2	M2	7	206.8
L1010.07-0955	955	15	5	4.7	2.3	2.4	4.2	M2	7	210.1
L1010.07-0970	970	15	5	4.7	2.3	2.4	4.2	M2	7	213.4
L1010.07-0985	985	15	5	4.7	2.3	2.4	4.2	M2	7	216.7
L1010.07-1000	1000	15	5	4.7	2.3	2.4	4.2	M2	7	220.0

9mm Miniature Linear Rail
standard width

L1010.09



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

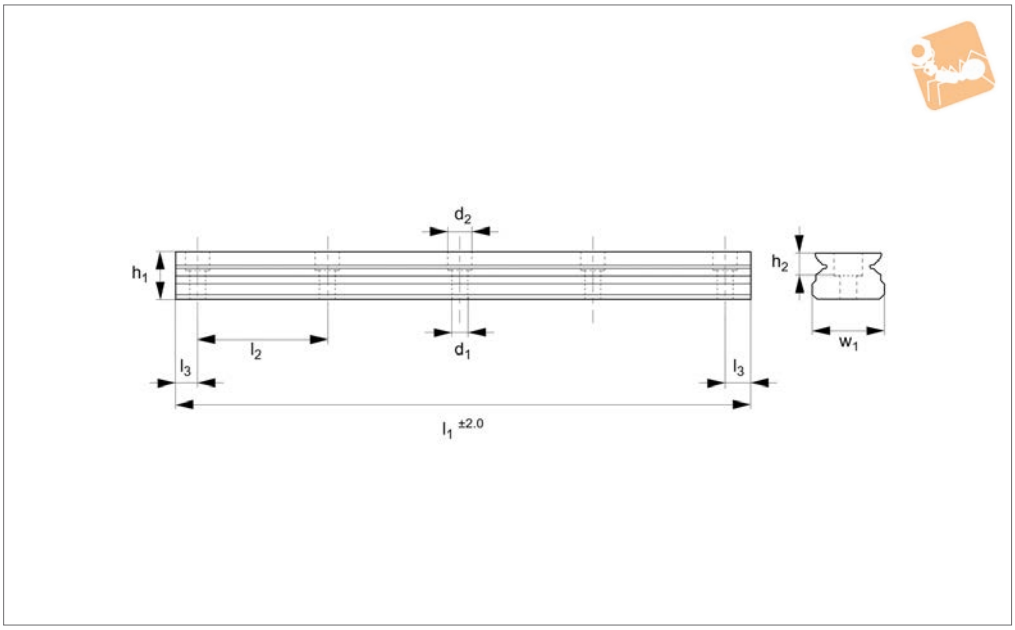
Other rail lengths on request.
Weight: 0,30 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.09-0055	55	20	7.5	5.5	3.5	3.5	6	M3	9	16.5
L1010.09-0075	75	20	7.5	5.5	3.5	3.5	6	M3	9	22.5
L1010.09-0095	95	20	7.5	5.5	3.5	3.5	6	M3	9	28.5
L1010.09-0115	115	20	7.5	5.5	3.5	3.5	6	M3	9	34.5
L1010.09-0135	135	20	7.5	5.5	3.5	3.5	6	M3	9	40.5
L1010.09-0155	155	20	7.5	5.5	3.5	3.5	6	M3	9	46.5
L1010.09-0175	175	20	7.5	5.5	3.5	3.5	6	M3	9	52.5
L1010.09-0195	195	20	7.5	5.5	3.5	3.5	6	M3	9	58.5
L1010.09-0215	215	20	7.5	5.5	3.5	3.5	6	M3	9	64.5
L1010.09-0235	235	20	7.5	5.5	3.5	3.5	6	M3	9	70.5
L1010.09-0255	255	20	7.5	5.5	3.5	3.5	6	M3	9	76.5
L1010.09-0275	275	20	7.5	5.5	3.5	3.5	6	M3	9	82.5
L1010.09-0295	295	20	7.5	5.5	3.5	3.5	6	M3	9	88.5
L1010.09-0315	315	20	7.5	5.5	3.5	3.5	6	M3	9	94.5
L1010.09-0335	335	20	7.5	5.5	3.5	3.5	6	M3	9	100.5
L1010.09-0355	355	20	7.5	5.5	3.5	3.5	6	M3	9	106.5
L1010.09-0375	375	20	7.5	5.5	3.5	3.5	6	M3	9	112.5
L1010.09-0395	395	20	7.5	5.5	3.5	3.5	6	M3	9	118.5
L1010.09-0415	415	20	7.5	5.5	3.5	3.5	6	M3	9	124.5
L1010.09-0435	435	20	7.5	5.5	3.5	3.5	6	M3	9	130.5
L1010.09-0455	455	20	7.5	5.5	3.5	3.5	6	M3	9	136.5
L1010.09-0475	475	20	7.5	5.5	3.5	3.5	6	M3	9	142.5
L1010.09-0495	495	20	7.5	5.5	3.5	3.5	6	M3	9	148.5
L1010.09-0515	515	20	7.5	5.5	3.5	3.5	6	M3	9	154.5
L1010.09-0535	535	20	7.5	5.5	3.5	3.5	6	M3	9	160.5
L1010.09-0555	555	20	7.5	5.5	3.5	3.5	6	M3	9	166.5
L1010.09-0575	575	20	7.5	5.5	3.5	3.5	6	M3	9	172.5
L1010.09-0595	595	20	7.5	5.5	3.5	3.5	6	M3	9	178.5
L1010.09-0615	615	20	7.5	5.5	3.5	3.5	6	M3	9	184.5
L1010.09-0635	635	20	7.5	5.5	3.5	3.5	6	M3	9	190.5
L1010.09-0655	655	20	7.5	5.5	3.5	3.5	6	M3	9	196.5
L1010.09-0675	675	20	7.5	5.5	3.5	3.5	6	M3	9	202.5
L1010.09-0695	695	20	7.5	5.5	3.5	3.5	6	M3	9	208.5
L1010.09-0715	715	20	7.5	5.5	3.5	3.5	6	M3	9	214.5

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.09-0735	735	20	7.5	5.5	3.5	3.5	6	M3	9	220.5
L1010.09-0755	755	20	7.5	5.5	3.5	3.5	6	M3	9	226.5
L1010.09-0775	775	20	7.5	5.5	3.5	3.5	6	M3	9	232.5
L1010.09-0795	795	20	7.5	5.5	3.5	3.5	6	M3	9	238.5
L1010.09-0815	815	20	7.5	5.5	3.5	3.5	6	M3	9	244.5
L1010.09-0835	835	20	7.5	5.5	3.5	3.5	6	M3	9	250.5
L1010.09-0855	855	20	7.5	5.5	3.5	3.5	6	M3	9	256.5
L1010.09-0875	875	20	7.5	5.5	3.5	3.5	6	M3	9	262.5
L1010.09-0895	895	20	7.5	5.5	3.5	3.5	6	M3	9	268.5
L1010.09-0915	915	20	7.5	5.5	3.5	3.5	6	M3	9	274.5
L1010.09-0935	935	20	7.5	5.5	3.5	3.5	6	M3	9	280.5
L1010.09-0955	955	20	7.5	5.5	3.5	3.5	6	M3	9	286.5
L1010.09-0975	975	20	7.5	5.5	3.5	3.5	6	M3	9	292.5
L1010.09-0995	995	20	7.5	5.5	3.5	3.5	6	M3	9	298.5

12mm Miniature Linear Rail
standard width

L1010.12



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

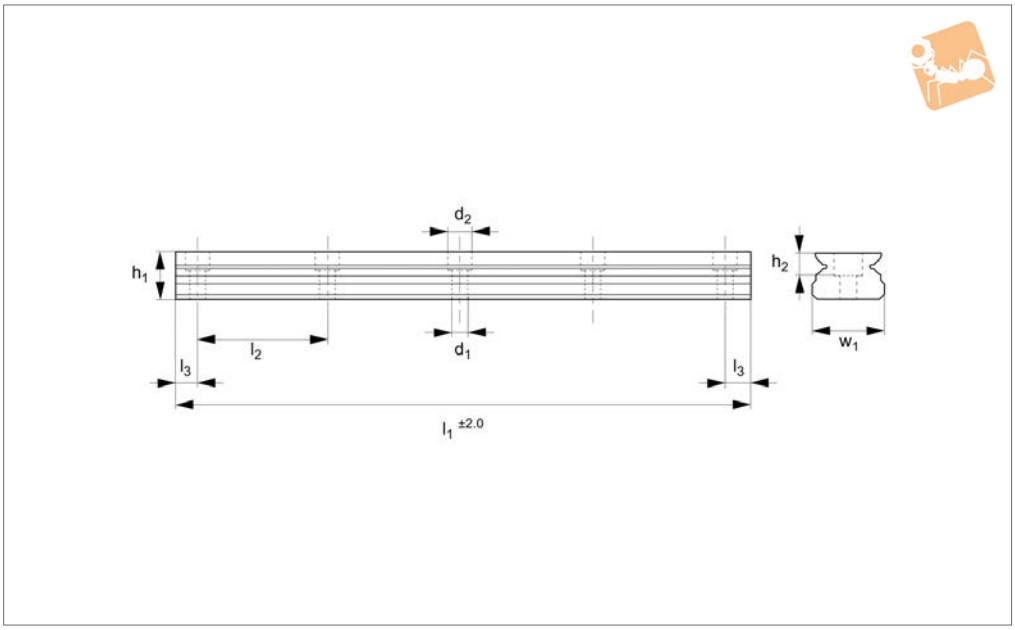
Other rail lengths on request.
Weight: 0,60 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.12-0070	70	25	10	7.5	4.5	3.5	6	M3	12	42
L1010.12-0095	95	25	10	7.5	4.5	3.5	6	M3	12	57
L1010.12-0120	120	25	10	7.5	4.5	3.5	6	M3	12	72
L1010.12-0145	145	25	10	7.5	4.5	3.5	6	M3	12	87
L1010.12-0170	170	25	10	7.5	4.5	3.5	6	M3	12	102
L1010.12-0195	195	25	10	7.5	4.5	3.5	6	M3	12	117
L1010.12-0220	220	25	10	7.5	4.5	3.5	6	M3	12	132
L1010.12-0245	245	25	10	7.5	4.5	3.5	6	M3	12	147
L1010.12-0270	270	25	10	7.5	4.5	3.5	6	M3	12	162
L1010.12-0295	295	25	10	7.5	4.5	3.5	6	M3	12	177
L1010.12-0320	320	25	10	7.5	4.5	3.5	6	M3	12	192
L1010.12-0345	345	25	10	7.5	4.5	3.5	6	M3	12	207
L1010.12-0370	370	25	10	7.5	4.5	3.5	6	M3	12	222
L1010.12-0395	395	25	10	7.5	4.5	3.5	6	M3	12	237
L1010.12-0420	420	25	10	7.5	4.5	3.5	6	M3	12	252
L1010.12-0445	445	25	10	7.5	4.5	3.5	6	M3	12	267
L1010.12-0470	470	25	10	7.5	4.5	3.5	6	M3	12	282
L1010.12-0495	495	25	10	7.5	4.5	3.5	6	M3	12	297
L1010.12-0520	520	25	10	7.5	4.5	3.5	6	M3	12	312
L1010.12-0545	545	25	10	7.5	4.5	3.5	6	M3	12	327
L1010.12-0570	570	25	10	7.5	4.5	3.5	6	M3	12	342
L1010.12-0595	595	25	10	7.5	4.5	3.5	6	M3	12	357
L1010.12-0620	620	25	10	7.5	4.5	3.5	6	M3	12	372
L1010.12-0645	645	25	10	7.5	4.5	3.5	6	M3	12	387
L1010.12-0670	670	25	10	7.5	4.5	3.5	6	M3	12	402
L1010.12-0695	695	25	10	7.5	4.5	3.5	6	M3	12	417
L1010.12-0720	720	25	10	7.5	4.5	3.5	6	M3	12	432
L1010.12-0745	745	25	10	7.5	4.5	3.5	6	M3	12	447
L1010.12-0770	770	25	10	7.5	4.5	3.5	6	M3	12	462
L1010.12-0795	795	25	10	7.5	4.5	3.5	6	M3	12	477
L1010.12-0820	820	25	10	7.5	4.5	3.5	6	M3	12	492
L1010.12-0845	845	25	10	7.5	4.5	3.5	6	M3	12	507
L1010.12-0870	870	25	10	7.5	4.5	3.5	6	M3	12	522
L1010.12-0895	895	25	10	7.5	4.5	3.5	6	M3	12	537

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.12-0920	920	25	10	7.5	4.5	3.5	6	M3	12	552
L1010.12-0945	945	25	10	7.5	4.5	3.5	6	M3	12	567
L1010.12-0970	970	25	10	7.5	4.5	3.5	6	M3	12	582
L1010.12-0995	995	25	10	7.5	4.5	3.5	6	M3	12	597

15mm Miniature Linear Rail
standard width

L1010.15

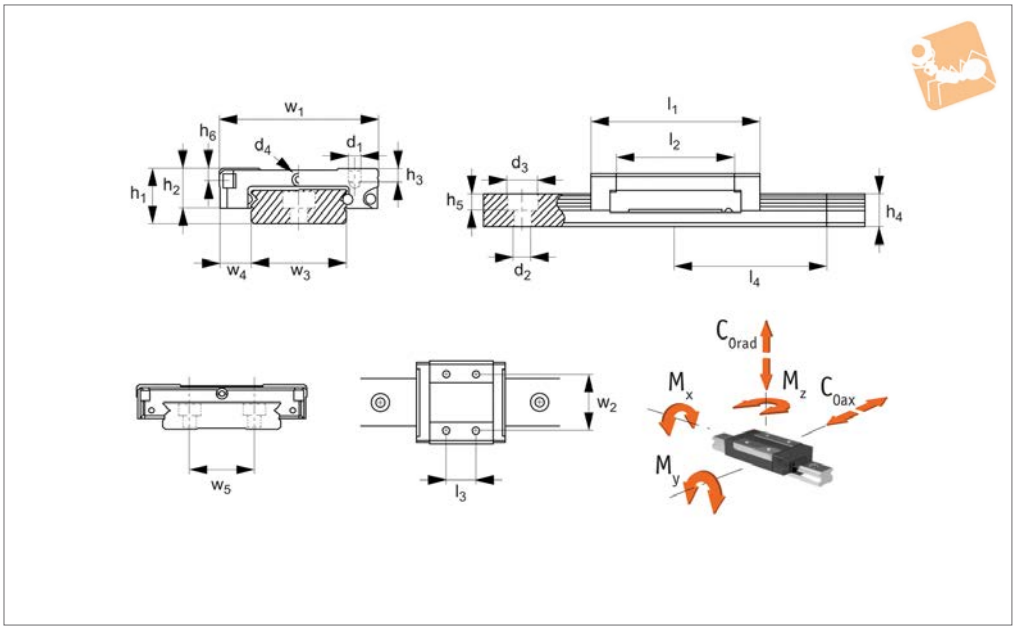


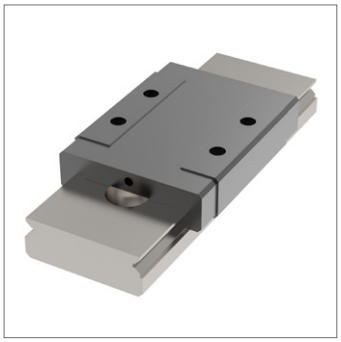
Material
Corrosion resistant stainless steel, hardened to 58-60 HRC (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

Other rail lengths on request.
Weight: 0,93 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.15-0070	70	40	15	9.5	4.5	3.5	6	M3	15	65.1
L1010.15-0110	110	40	15	9.5	4.5	3.5	6	M3	15	102.3
L1010.15-0150	150	40	15	9.5	4.5	3.5	6	M3	15	139.5
L1010.15-0190	190	40	15	9.5	4.5	3.5	6	M3	15	176.7
L1010.15-0230	230	40	15	9.5	4.5	3.5	6	M3	15	213.9
L1010.15-0270	270	40	15	9.5	4.5	3.5	6	M3	15	251.1
L1010.15-0310	310	40	15	9.5	4.5	3.5	6	M3	15	288.3
L1010.15-0350	350	40	15	9.5	4.5	3.5	6	M3	15	325.5
L1010.15-0390	390	40	15	9.5	4.5	3.5	6	M3	15	362.7
L1010.15-0430	430	40	15	9.5	4.5	3.5	6	M3	15	399.9
L1010.15-0470	470	40	15	9.5	4.5	3.5	6	M3	15	437.1
L1010.15-0510	510	40	15	9.5	4.5	3.5	6	M3	15	474.3
L1010.15-0550	550	40	15	9.5	4.5	3.5	6	M3	15	511.5
L1010.15-0590	590	40	15	9.5	4.5	3.5	6	M3	15	548.7
L1010.15-0630	630	40	15	9.5	4.5	3.5	6	M3	15	585.9
L1010.15-0670	670	40	15	9.5	4.5	3.5	6	M3	15	623.1
L1010.15-0710	710	40	15	9.5	4.5	3.5	6	M3	15	660.3
L1010.15-0750	750	40	15	9.5	4.5	3.5	6	M3	15	697.5
L1010.15-0790	790	40	15	9.5	4.5	3.5	6	M3	15	734.7
L1010.15-0830	830	40	15	9.5	4.5	3.5	6	M3	15	771.9
L1010.15-0870	870	40	15	9.5	4.5	3.5	6	M3	15	809.1
L1010.15-0910	910	40	15	9.5	4.5	3.5	6	M3	15	846.3
L1010.15-0950	950	40	15	9.5	4.5	3.5	6	M3	15	883.5
L1010.15-0990	990	40	15	9.5	4.5	3.5	6	M3	15	920.7





L1012.C

Material
Corrosion resistant stainless steel body (440C), with hardened stainless steel ball bearings.
Black plastic end plates and ball bearing retainers.

Technical Notes
Max.speed 3 m/s. max. acceleration 40m/s^2.
Temperature range -40°C to +80°C.
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1012.10 through to L1012.42).

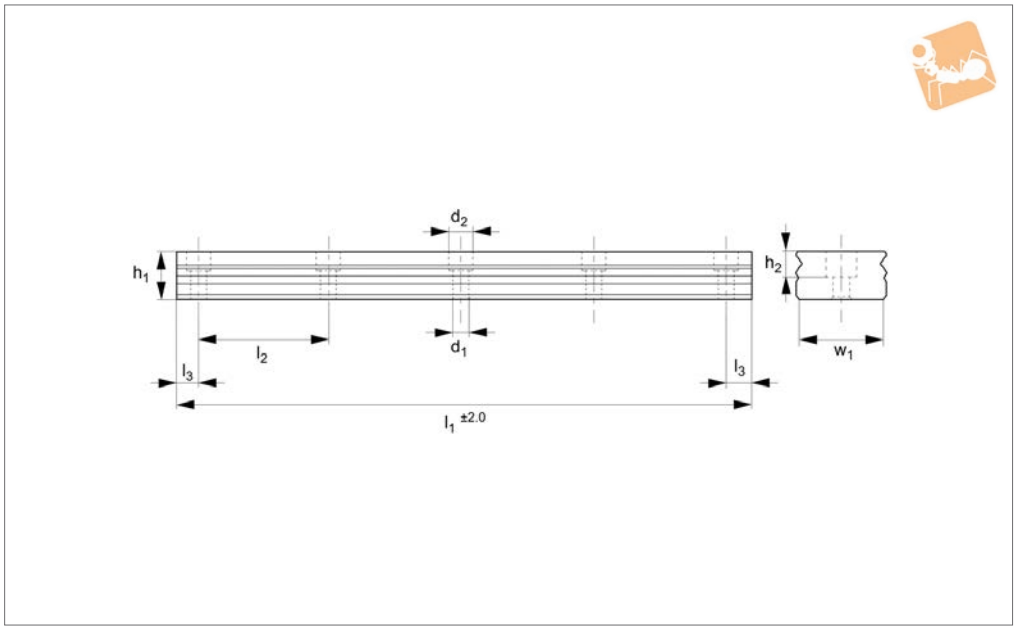
Tips
Carriages are supplied with a dummy (plastic) rail. When mounting carriages onto rail, slide directly from the dummy rail onto the steel rail. Do not simply remove the carriage from the dummy rail - the balls will become loose making the carriage unusable.

Order No.	For rail	l_1	l_2	l_3	l_4	h_1	h_2	h_3	h_4	h_5	h_6	d_1	d_2	d_3	d_4	Static load $C_{0rad\ \&\ ax}$ N	Weight g
L1012.C10	10	21.1	15.1	6.5	20	6.5	5.0	1.5	4	1.6	2.3	M2,5	3.0	5.5	0.9	900	8
L1012.C10L	10	27.2	21.2	11	20	6.5	5.0	1.5	4	1.6	2.3	M2,5	3.0	5.5	0.9	1315	19
L1012.C14	14	31.6	21.2	10	30	9	7.0	3	5.2	3.5	3.2	M3	3.5	6	1.1	2095	27
L1012.C14L	14	40.5	30.1	19	30	9	7.0	3	5.2	3.5	3.2	M3	3.5	6	1.1	3140	37
L1012.C18	18	39.1	27.9	12	30	12	8.6	3.0	7.3	4.5	4.0	M3	3.5	6	1.3	3605	37
L1012.C18L	18	50.7	39.5	24	30	12	8.6	3.0	7.3	4.5	4.0	M3	3.5	6	1.3	4990	57
L1012.C24	24	44.4	31.0	15	40	14	10.1	3.5	8.5	4.5	4.5	M3	4.5	8	1.3	5200	65
L1012.C24L	24	59.4	46.0	28	40	14	10.1	3.5	8.5	4.5	4.5	M3	4.5	8	1.3	7800	93
L1012.C42	42	55.3	38.5	20	40	16	12.0	4.5	9.5	4.5	4.5	M4	4.5	8	1.8	8385	137
L1012.C42L	42	74.4	57.6	35	40	16	12.0	4.5	9.5	4.5	4.5	M4	4.5	8	1.8	12580	200

Order No.	w_1	w_2	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ N	M_x Nm	M_y Nm	M_z Nm
L1012.C10	17	13	10	3.5	-	475	4.6	2.2	2.2
L1012.C10L	17	13	10	3.5	-	615	6.8	4.1	4.1
L1012.C14	25	19	14	5.5	-	1180	15	7.3	7.3
L1012.C14L	25	19	14	5.5	-	1570	22.6	14.9	14.9
L1012.C18	30	21	18	6	-	2030	33.2	13.7	13.7
L1012.C18L	30	23	18	6	-	2550	45.9	26.7	26.7
L1012.C24	40	28	24	8	-	3065	63.7	26.3	26.3
L1012.C24L	40	28	24	8	-	4070	95.6	56.4	56.4
L1012.C42	60	45	42	9	23	5065	171.7	45.7	45.7
L1012.C42L	60	45	42	9	23	6725	257	93.1	93.1

10mm Miniature Linear Rail
wide version

L1012.10



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

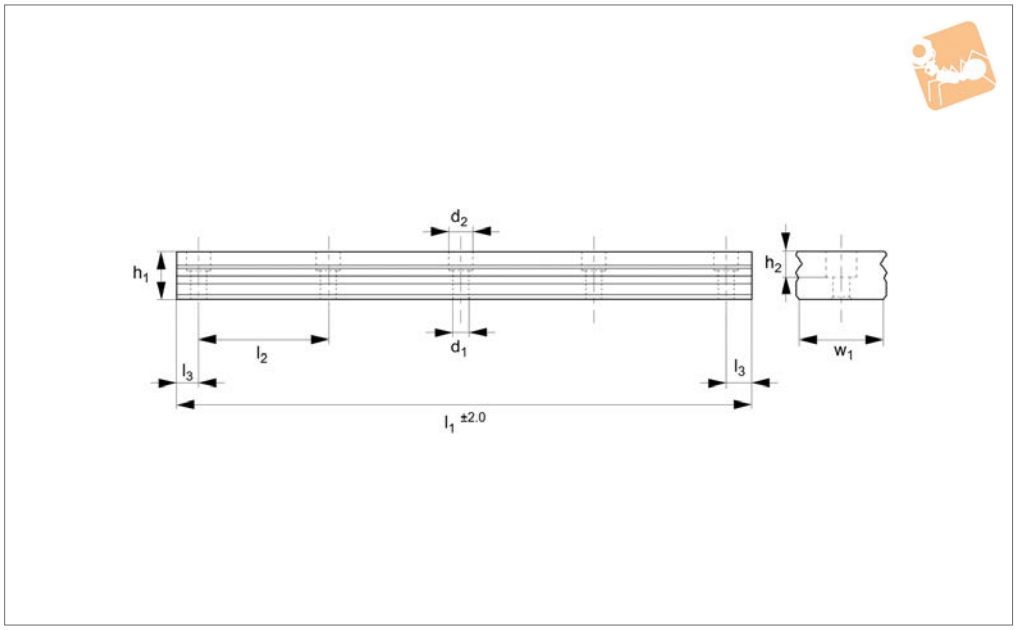
Other rail lengths on request.
Weight: 0,3 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.10-0055	55	20	7.5	4	1.6	3	5.5	M2,5	10	16.5
L1012.10-0075	75	20	7.5	4	1.6	3	5.5	M2,5	10	22.5
L1012.10-0095	95	20	7.5	4	1.6	3	5.5	M2,5	10	28.5
L1012.10-0115	115	20	7.5	4	1.6	3	5.5	M2,5	10	34.5
L1012.10-0135	135	20	7.5	4	1.6	3	5.5	M2,5	10	40.5
L1012.10-0155	155	20	7.5	4	1.6	3	5.5	M2,5	10	46.5
L1012.10-0175	175	20	7.5	4	1.6	3	5.5	M2,5	10	52.5
L1012.10-0195	195	20	7.5	4	1.6	3	5.5	M2,5	10	58.5
L1012.10-0215	215	20	7.5	4	1.6	3	5.5	M2,5	10	64.5
L1012.10-0235	235	20	7.5	4	1.6	3	5.5	M2,5	10	70.5
L1012.10-0255	255	20	7.5	4	1.6	3	5.5	M2,5	10	76.5
L1012.10-0275	275	20	7.5	4	1.6	3	5.5	M2,5	10	82.5
L1012.10-0295	295	20	7.5	4	1.6	3	5.5	M2,5	10	88.5
L1012.10-0315	315	20	7.5	4	1.6	3	5.5	M2,5	10	94.5
L1012.10-0335	335	20	7.5	4	1.6	3	5.5	M2,5	10	100.5
L1012.10-0355	355	20	7.5	4	1.6	3	5.5	M2,5	10	106.5
L1012.10-0375	375	20	7.5	4	1.6	3	5.5	M2,5	10	112.5
L1012.10-0395	395	20	7.5	4	1.6	3	5.5	M2,5	10	118.5
L1012.10-0415	415	20	7.5	4	1.6	3	5.5	M2,5	10	124.5
L1012.10-0435	435	20	7.5	4	1.6	3	5.5	M2,5	10	130.5
L1012.10-0455	455	20	7.5	4	1.6	3	5.5	M2,5	10	136.5
L1012.10-0475	475	20	7.5	4	1.6	3	5.5	M2,5	10	142.5
L1012.10-0495	495	20	7.5	4	1.6	3	5.5	M2,5	10	148.5
L1012.10-0515	515	20	7.5	4	1.6	3	5.5	M2,5	10	154.5
L1012.10-0535	535	20	7.5	4	1.6	3	5.5	M2,5	10	160.5
L1012.10-0555	555	20	7.5	4	1.6	3	5.5	M2,5	10	166.5
L1012.10-0575	575	20	7.5	4	1.6	3	5.5	M2,5	10	172.5
L1012.10-0595	595	20	7.5	4	1.6	3	5.5	M2,5	10	178.5
L1012.10-0615	615	20	7.5	4	1.6	3	5.5	M2,5	10	184.5
L1012.10-0635	635	20	7.5	4	1.6	3	5.5	M2,5	10	190.5
L1012.10-0655	655	20	7.5	4	1.6	3	5.5	M2,5	10	196.5
L1012.10-0675	675	20	7.5	4	1.6	3	5.5	M2,5	10	202.5
L1012.10-0695	695	20	7.5	4	1.6	3	5.5	M2,5	10	208.5
L1012.10-0715	715	20	7.5	4	1.6	3	5.5	M2,5	10	214.5

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.10-0735	735	20	7.5	4	1.6	3	5.5	M2,5	10	220.5
L1012.10-0755	755	20	7.5	4	1.6	3	5.5	M2,5	10	226.5
L1012.10-0775	775	20	7.5	4	1.6	3	5.5	M2,5	10	232.5
L1012.10-0795	795	20	7.5	4	1.6	3	5.5	M2,5	10	238.5
L1012.10-0815	815	20	7.5	4	1.6	3	5.5	M2,5	10	244.5
L1012.10-0835	835	20	7.5	4	1.6	3	5.5	M2,5	10	250.5
L1012.10-0855	855	20	7.5	4	1.6	3	5.5	M2,5	10	256.5
L1012.10-0875	875	20	7.5	4	1.6	3	5.5	M2,5	10	262.5
L1012.10-0895	895	20	7.5	4	1.6	3	5.5	M2,5	10	268.5
L1012.10-0915	915	20	7.5	4	1.6	3	5.5	M2,5	10	274.5
L1012.10-0935	935	20	7.5	4	1.6	3	5.5	M2,5	10	280.5
L1012.10-0955	955	20	7.5	4	1.6	3	5.5	M2,5	10	286.5
L1012.10-0975	975	20	7.5	4	1.6	3	5.5	M2,5	10	292.5
L1012.10-0995	995	20	7.5	4	1.6	3	5.5	M2,5	10	298.5

14mm Miniature Linear Rail
wide version

L1012.14

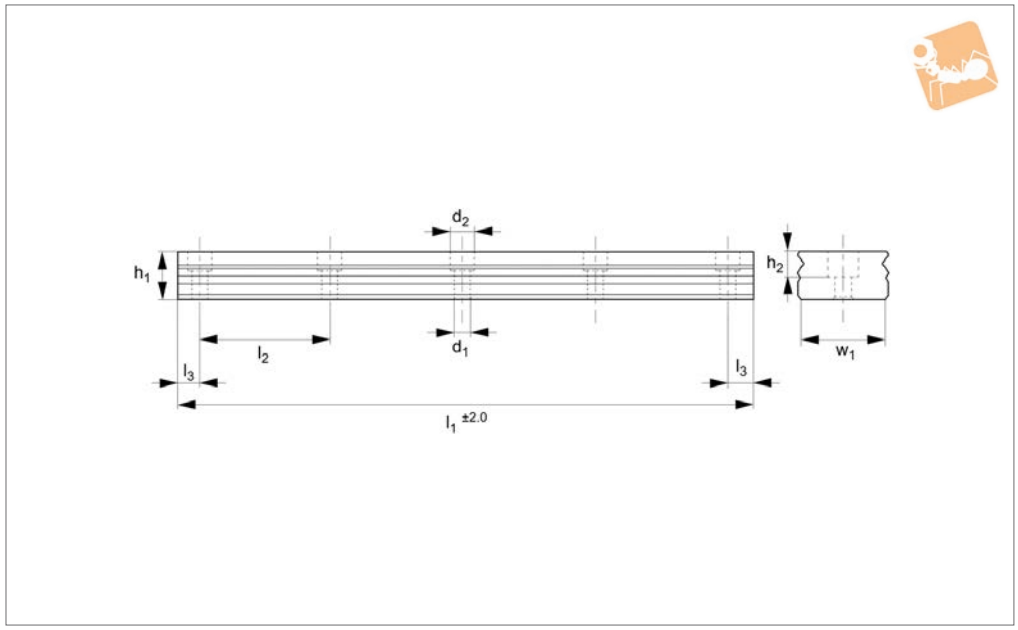


Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight: 0,5 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.14-0050	50	30	10	5.2	3.5	3.5	6	M3	14	25
L1012.14-0080	80	30	10	5.2	3.5	3.5	6	M3	14	40
L1012.14-0110	110	30	10	5.2	3.5	3.5	6	M3	14	55
L1012.14-0140	140	30	10	5.2	3.5	3.5	6	M3	14	70
L1012.14-0170	170	30	10	5.2	3.5	3.5	6	M3	14	85
L1012.14-0200	200	30	10	5.2	3.5	3.5	6	M3	14	100
L1012.14-0230	230	30	10	5.2	3.5	3.5	6	M3	14	115
L1012.14-0260	260	30	10	5.2	3.5	3.5	6	M3	14	130
L1012.14-0290	290	30	10	5.2	3.5	3.5	6	M3	14	145
L1012.14-0320	320	30	10	5.2	3.5	3.5	6	M3	14	160
L1012.14-0350	350	30	10	5.2	3.5	3.5	6	M3	14	175
L1012.14-0380	380	30	10	5.2	3.5	3.5	6	M3	14	190
L1012.14-0410	410	30	10	5.2	3.5	3.5	6	M3	14	205
L1012.14-0440	440	30	10	5.2	3.5	3.5	6	M3	14	220
L1012.14-0470	470	30	10	5.2	3.5	3.5	6	M3	14	235
L1012.14-0500	500	30	10	5.2	3.5	3.5	6	M3	14	250
L1012.14-0530	530	30	10	5.2	3.5	3.5	6	M3	14	265
L1012.14-0560	560	30	10	5.2	3.5	3.5	6	M3	14	280
L1012.14-0590	590	30	10	5.2	3.5	3.5	6	M3	14	295
L1012.14-0620	620	30	10	5.2	3.5	3.5	6	M3	14	310
L1012.14-0650	650	30	10	5.2	3.5	3.5	6	M3	14	325
L1012.14-0680	680	30	10	5.2	3.5	3.5	6	M3	14	340
L1012.14-0710	710	30	10	5.2	3.5	3.5	6	M3	14	355
L1012.14-0740	740	30	10	5.2	3.5	3.5	6	M3	14	370
L1012.14-0770	770	30	10	5.2	3.5	3.5	6	M3	14	385
L1012.14-0800	800	30	10	5.2	3.5	3.5	6	M3	14	400
L1012.14-0830	830	30	10	5.2	3.5	3.5	6	M3	14	415
L1012.14-0860	860	30	10	5.2	3.5	3.5	6	M3	14	430
L1012.14-0890	890	30	10	5.2	3.5	3.5	6	M3	14	445
L1012.14-0920	920	30	10	5.2	3.5	3.5	6	M3	14	460
L1012.14-0950	950	30	10	5.2	3.5	3.5	6	M3	14	475
L1012.14-0980	980	30	10	5.2	3.5	3.5	6	M3	14	490



L1012.18

Material
Corrosion resistant stainless steel, hardened (similar to 440C).

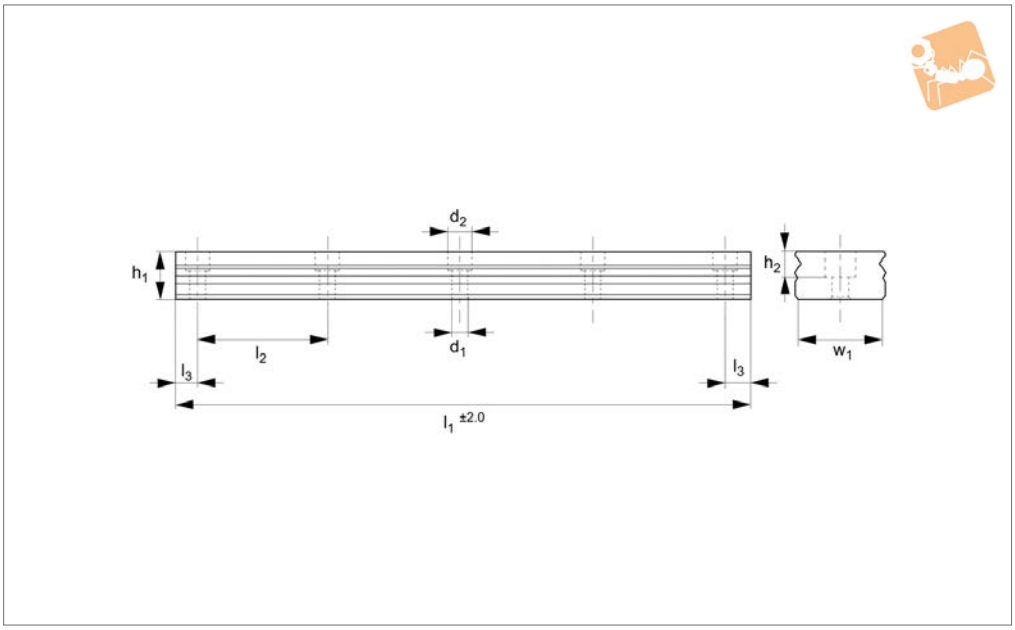
Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight: 0,9 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.18-0050	50	30	10	7.3	4.5	3.5	6	M3	18	45
L1012.18-0080	80	30	10	7.3	4.5	3.5	6	M3	18	72
L1012.18-0110	110	30	10	7.3	4.5	3.5	6	M3	18	99
L1012.18-0140	140	30	10	7.3	4.5	3.5	6	M3	18	126
L1012.18-0170	170	30	10	7.3	4.5	3.5	6	M3	18	153
L1012.18-0200	200	30	10	7.3	4.5	3.5	6	M3	18	180
L1012.18-0230	230	30	10	7.3	4.5	3.5	6	M3	18	207
L1012.18-0260	260	30	10	7.3	4.5	3.5	6	M3	18	234
L1012.18-0290	290	30	10	7.3	4.5	3.5	6	M3	18	261
L1012.18-0320	320	30	10	7.3	4.5	3.5	6	M3	18	288
L1012.18-0350	350	30	10	7.3	4.5	3.5	6	M3	18	315
L1012.18-0380	380	30	10	7.3	4.5	3.5	6	M3	18	342
L1012.18-0410	410	30	10	7.3	4.5	3.5	6	M3	18	369
L1012.18-0440	440	30	10	7.3	4.5	3.5	6	M3	18	396
L1012.18-0470	470	30	10	7.3	4.5	3.5	6	M3	18	423
L1012.18-0500	500	30	10	7.3	4.5	3.5	6	M3	18	450
L1012.18-0530	530	30	10	7.3	4.5	3.5	6	M3	18	477
L1012.18-0560	560	30	10	7.3	4.5	3.5	6	M3	18	504
L1012.18-0590	590	30	10	7.3	4.5	3.5	6	M3	18	531
L1012.18-0620	620	30	10	7.3	4.5	3.5	6	M3	18	558
L1012.18-0650	650	30	10	7.3	4.5	3.5	6	M3	18	585
L1012.18-0680	680	30	10	7.3	4.5	3.5	6	M3	18	612
L1012.18-0710	710	30	10	7.3	4.5	3.5	6	M3	18	639
L1012.18-0740	740	30	10	7.3	4.5	3.5	6	M3	18	666
L1012.18-0770	770	30	10	7.3	4.5	3.5	6	M3	18	693
L1012.18-0800	800	30	10	7.3	4.5	3.5	6	M3	18	720
L1012.18-0830	830	30	10	7.3	4.5	3.5	6	M3	18	747
L1012.18-0860	860	30	10	7.3	4.5	3.5	6	M3	18	774
L1012.18-0890	890	30	10	7.3	4.5	3.5	6	M3	18	801
L1012.18-0920	920	30	10	7.3	4.5	3.5	6	M3	18	828
L1012.18-0950	950	30	10	7.3	4.5	3.5	6	M3	18	855
L1012.18-0980	980	30	10	7.3	4.5	3.5	6	M3	18	882

24mm Miniature Linear Rail
wide version

L1012.24

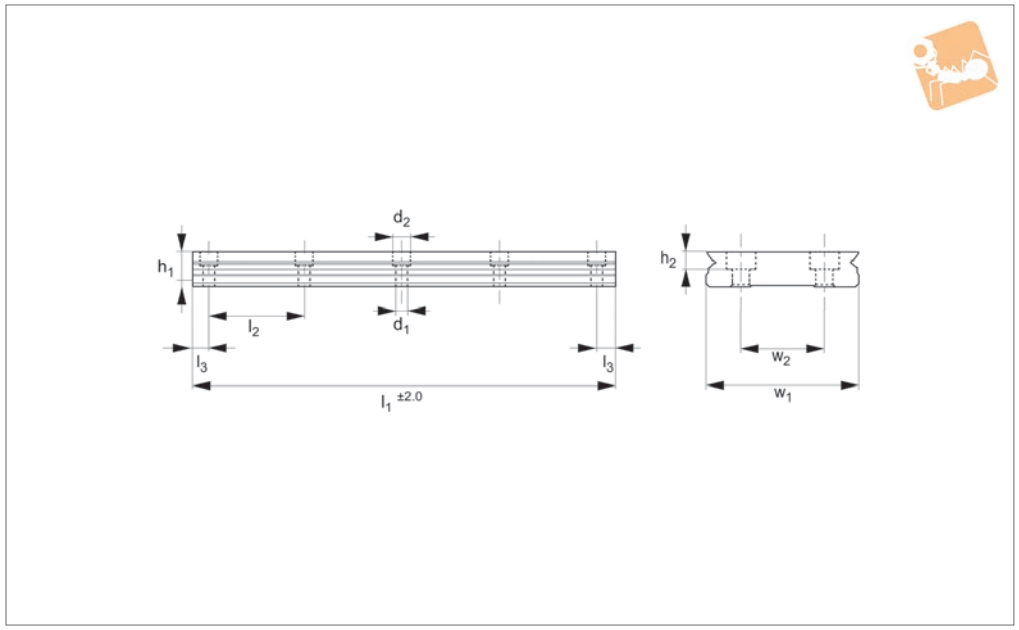


Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight:1,5 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.24-0070	70	40	15	8.5	4.5	4.5	8	M4	24	0.105
L1012.24-0110	110	40	15	8.5	4.5	4.5	8	M4	24	0.165
L1012.24-0150	150	40	15	8.5	4.5	4.5	8	M4	24	0.225
L1012.24-0190	190	40	15	8.5	4.5	4.5	8	M4	24	0.285
L1012.24-0230	230	40	15	8.5	4.5	4.5	8	M4	24	0.345
L1012.24-0270	270	40	15	8.5	4.5	4.5	8	M4	24	0.405
L1012.24-0310	310	40	15	8.5	4.5	4.5	8	M4	24	0.465
L1012.24-0350	350	40	15	8.5	4.5	4.5	8	M4	24	0.525
L1012.24-0390	390	40	15	8.5	4.5	4.5	8	M4	24	0.585
L1012.24-0430	430	40	15	8.5	4.5	4.5	8	M4	24	0.645
L1012.24-0470	470	40	15	8.5	4.5	4.5	8	M4	24	0.705
L1012.24-0510	510	40	15	8.5	4.5	4.5	8	M4	24	0.765
L1012.24-0550	550	40	15	8.5	4.5	4.5	8	M4	24	0.825
L1012.24-0590	590	40	15	8.5	4.5	4.5	8	M4	24	0.885
L1012.24-0630	630	40	15	8.5	4.5	4.5	8	M4	24	0.945
L1012.24-0670	670	40	15	8.5	4.5	4.5	8	M4	24	1.005
L1012.24-0710	710	40	15	8.5	4.5	4.5	8	M4	24	1.065
L1012.24-0750	750	40	15	8.5	4.5	4.5	8	M4	24	1.125
L1012.24-0790	790	40	15	8.5	4.5	4.5	8	M4	24	1.185
L1012.24-0830	830	40	15	8.5	4.5	4.5	8	M4	24	1.245
L1012.24-0870	870	40	15	8.5	4.5	4.5	8	M4	24	1.305
L1012.24-0910	910	40	15	8.5	4.5	4.5	8	M4	24	1.365
L1012.24-0950	950	40	15	8.5	4.5	4.5	8	M4	24	1.425
L1012.24-0990	990	40	15	8.5	4.5	4.5	8	M4	24	1.485



L1012.42

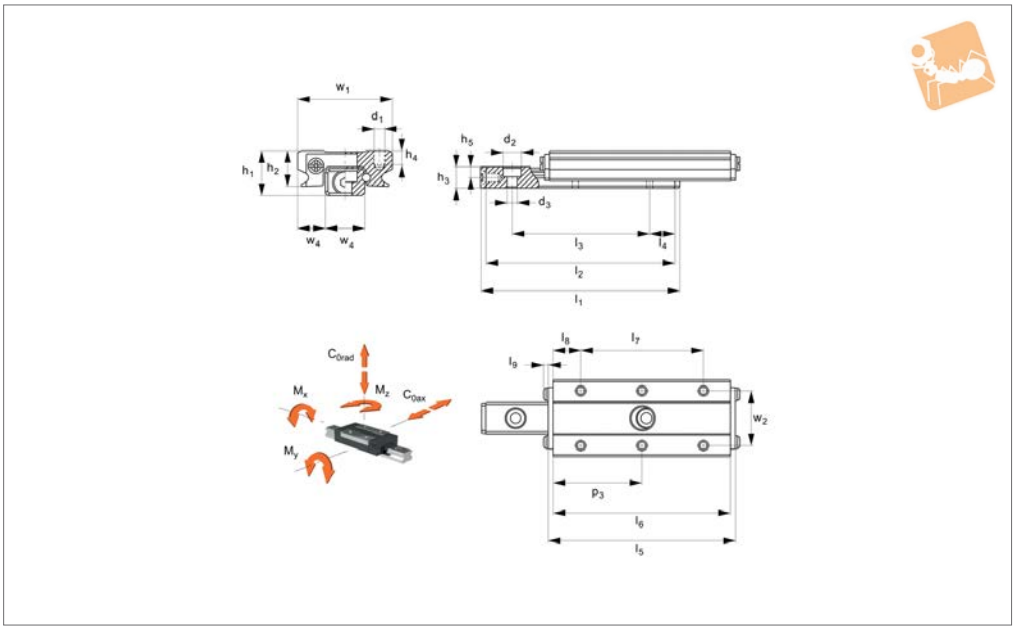
Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight: 2.8 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	w_2	Weight kg
L1012.42-0110	110	40	15	9.5	4.5	4.5	8	M 4	42	23	0.308
L1012.42-0150	150	40	15	9.5	4.5	4.5	8	M 4	42	23	0.420
L1012.42-0190	190	40	15	9.5	4.5	4.5	8	M 4	42	23	0.532
L1012.42-0230	230	40	15	9.5	4.5	4.5	8	M 4	42	23	0.644
L1012.42-0270	270	40	15	9.5	4.5	4.5	8	M 4	42	23	0.756
L1012.42-0310	310	40	15	9.5	4.5	4.5	8	M 4	42	23	0.868
L1012.42-0350	350	40	15	9.5	4.5	4.5	8	M 4	42	23	0.980
L1012.42-0390	390	40	15	9.5	4.5	4.5	8	M 4	42	23	1.092
L1012.42-0430	430	40	15	9.5	4.5	4.5	8	M 4	42	23	1.204
L1012.42-0470	470	40	15	9.5	4.5	4.5	8	M 4	42	23	1.316
L1012.42-0510	510	40	15	9.5	4.5	4.5	8	M 4	42	23	1.428
L1012.42-0550	550	40	15	9.5	4.5	4.5	8	M 4	42	23	1.540
L1012.42-0590	590	40	15	9.5	4.5	4.5	8	M 4	42	23	1.652
L1012.42-0630	630	40	15	9.5	4.5	4.5	8	M 4	42	23	1.764
L1012.42-0670	670	40	15	9.5	4.5	4.5	8	M 4	42	23	1.876
L1012.42-0710	710	40	15	9.5	4.5	4.5	8	M 4	42	23	1.988
L1012.42-0750	750	40	15	9.5	4.5	4.5	8	M 4	42	23	2.100
L1012.42-0790	790	40	15	9.5	4.5	4.5	8	M 4	42	23	2.212
L1012.42-0830	830	40	15	9.5	4.5	4.5	8	M 4	42	23	2.324
L1012.42-0870	870	40	15	9.5	4.5	4.5	8	M 4	42	23	2.436
L1012.42-0910	910	40	15	9.5	4.5	4.5	8	M 4	42	23	2.548
L1012.42-0950	950	40	15	9.5	4.5	4.5	8	M 4	42	23	2.660
L1012.42-0990	990	40	15	9.5	4.5	4.5	8	M 4	42	23	2.772

L1013



Material

Rail and carriage: Hardened stainless steel.
Back plate and screws: Stainless steel.
Ball: Steel.

Technical Notes

The carriage has two rows of steel balls.
The ball track has a gothic profile with a 45° contact angle to achieve equal load capacity in a mono block.
This enables greater space to accommodate larger rolling elements.
The steel balls roll without recirculation resulting in smooth operation, low friction and no vibration.

Important Notes

Max. Temperature +150°C

Order No.	Stroke max.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	h_1	h_2	h_3	h_4	h_5
L1013.07-030	27	30	28.0	15	6.5	30	28.0	15	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.07-045	41	45	43.0	30	6.5	45	43.0	30	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.07-060	55	60	58.0	45	6.5	60	58.0	45	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.09-040	38	40	38.0	20	9.0	40	38.0	20	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.09-060	58	60	58.0	40	9.0	60	58.0	40	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.09-080	78	80	78.0	60	9.0	80	78.0	60	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.12-050	44	50	47.4	25	11.2	50	47.4	25	11.2	1.3	13	10.0	7.5	3.5	4.5
L1013.12-075	69	75	72.4	50	11.2	75	72.4	50	11.2	1.3	13	10.0	7.5	3.5	4.5
L1013.12-100	94	100	97.4	75	11.2	100	97.4	75	11.2	1.3	13	10.0	7.5	3.5	4.5

Order No.	d_1	d_2	d_3	w_1	w_2	w_3	w_4	Static load C_0 N	M_y Nm	M_z Nm
L1013.07-030	M2	4.2	2.4	17	12	7	5.0	1580	5.9	3.4
L1013.07-045	M2	4.2	2.4	17	12	7	5.0	2500	3.1	8.0
L1013.07-060	M2	4.2	2.4	17	12	7	5.0	3330	12.4	14.6
L1013.09-040	M3	6.0	3.5	20	15	9	5.5	2773	13.1	6.8
L1013.09-060	M3	6.0	3.5	20	15	9	5.5	4170	19.7	16.0
L1013.09-080	M3	6.0	3.5	20	15	9	5.5	5547	26.2	29.2
L1013.12-050	M3	6.0	3.5	27	20	12	7.5	4340	27.0	16.0
L1013.12-075	M3	6.0	3.5	27	20	12	7.5	6510	40.1	35.6
L1013.12-100	M3	6.0	3.5	27	20	12	7.5	8670	54.0	62.8

Load capacities – explained

- A number of load figures are stated for load capacity:

  Dynamic loads – this is the main figure considered for miniature linear guideways. It is the moving load that the system can bear. It takes account of the total moving load as well as considerations such as impact, vibration and fatigue.

  Static loads – this is a load that is constant for an extended time (i.e. the dead load the system can bear before any movement). It can be in tension or compression.

  For these miniature linear guideways the radial and axial load capacities are the same.

  Moment loads are twisting loads generated by offset loads in either X, Y or Z planes. Moment loads can be reduced by adding further carriages or rails to reduce any twisting of the carriage due to the load offset.

Why is there a standard width and a wide version rail?

- The wider version system is generally used as a single rail system as it can accept higher loads and moment loads, whilst maintaining a very low height.
- The standard width rail can be used either as stand-alone rails or are more frequently used as a pair of rails in parallel.

Straightness of rails

- The measurements of the straightness of the system are taken from the running accuracy of the sliders over the length of the rails (given in microns) – see accuracy and preload page. For standard accuracy this equates to around 15µ for a 300mm length, increasing to 25µ for a 1 metre length.

What lengths can be provided?

- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required for the first hole.
- In general our cutting procedures allow for a ±2mm accuracy on the overall rail length. If greater accuracy than this is required then we have to machine the end accurately (rather than cut it) and this involves extra time and cost.
- Standard maximum length for each rail size is around 1 metre. Rails can be joined together but the preparation needs to be made in our workshop. The rails will be marked clearly with the ends to be placed adjacent to each other.

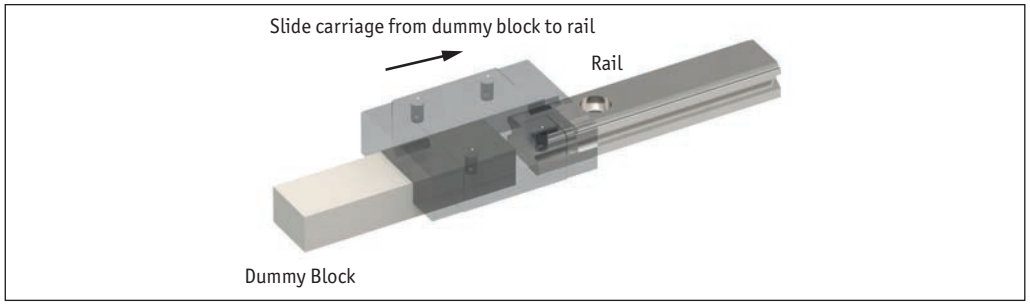
Installation

- The miniature linear guideways are very accurate and as a result need to be installed on accurately prepared surfaces - please see installation instructions. If two rails are installed in parallel, they need to be precisely aligned - see assembly precision page.

Mounting the carriages to the rails

- In general the carriages will be supplied separately to the rails. The carriages are supplied mounted on plastic "dummy" blocks. To install the carriage onto the rails, offer the carriage (still on its dummy block) up to the rails and slide off the dummy block and onto the rail itself.

Do not simply remove the carriage from the dummy block, as some of the bearings might become displaced, rendering the carriage unusable.



Precision

	Dimensions	µ
h_1	Height tolerance h_1	±40
h_1	Permissible height difference of different carriages at the same position on the rail	25
W_4	Width tolerance w_4	±40
W_4	Permissible width difference of different carriages at the same position on the rail	30

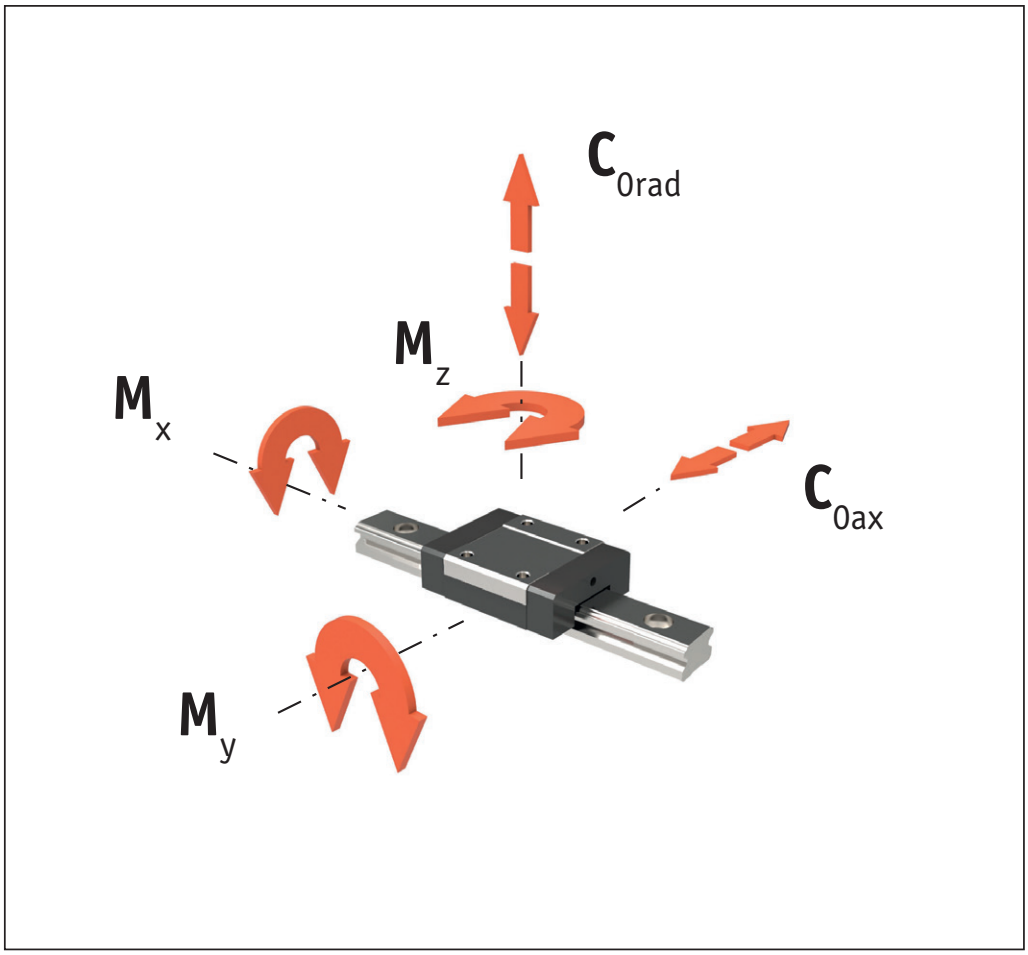
Running accuracy

Preload

The miniature linear guideways are available in the two different preload classes K_0 and K_s. The preload influences the rigidity, precision and torque resistance as well as offering the product service life and displacement force. The standard preload is K_0.

Type	Preload classes	
	Small K_0	Standard K_s
	Very quiet running (µ)	Quiet and precise running (µ)
L1010.03 & L1012.06	+3 to 0	+1 to 0
L1010.05 & L1012.10	+3 to 0	+1 to 0
L1010.07 & L1012.14	+4 to 0	+2 to 0
L1010.09 & L1012.18	+4 to 0	+2 to 0
L1010.12 & L1012.24	+5 to 0	+2 to 0
L1010.15 & L1012.42	+6 to 0	+3 to 0

L1010 - Standard width



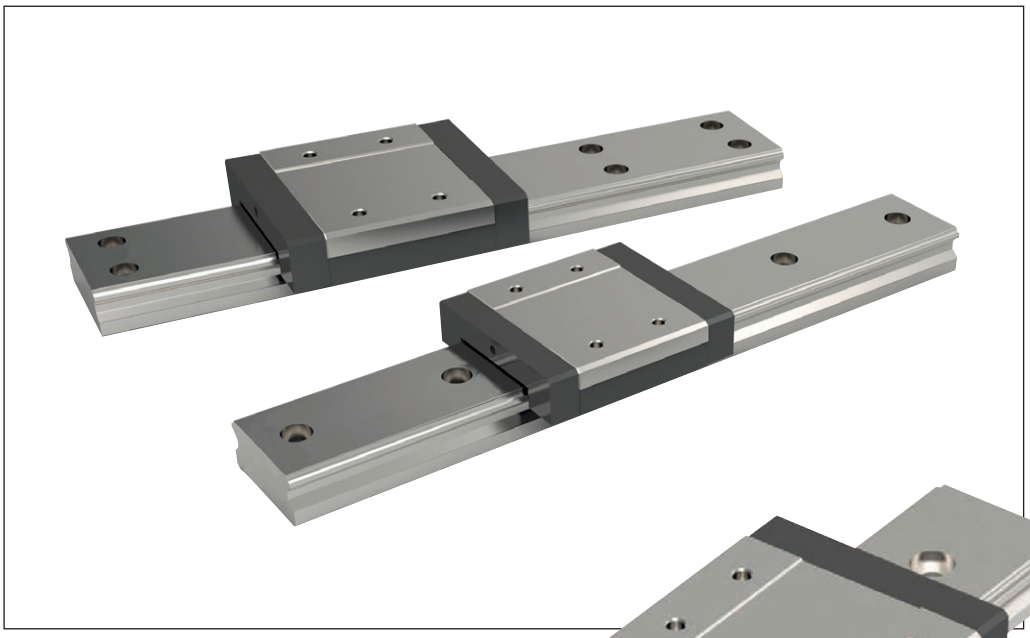
Type	Max. load capacities		Max. static moment loads		
	dyn. C_{rad} & C_{ax} N	stat. C_{0rad} & C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
L1010.C03	190	310	0,6	0,4	0,4
L1010.C03L	295	575	0,9	1,1	1,1
L1010.C05	335	550	1,7	1,0	1,0
L1010.C05L	470	900	2,4	2,1	2,1
L1010.C07	890	1400	5,2	3,3	3,3
L1010.C07L	1310	2440	9,0	7,7	7,7
L1010.C09	1570	2495	11,7	6,4	6,4
L1010.C09L	2135	3880	18,2	12,4	12,4s
L1010.C12	2308	3465	21,5	12,9	12,9
L1010.C12L	3240	5630	34,9	30,2	30,2
L1010.C15	3810	5590	43,6	27,0	27,0
L1010.C15L	5350	9080	70,0	63,0	63,0

Miniature Linear Guideways

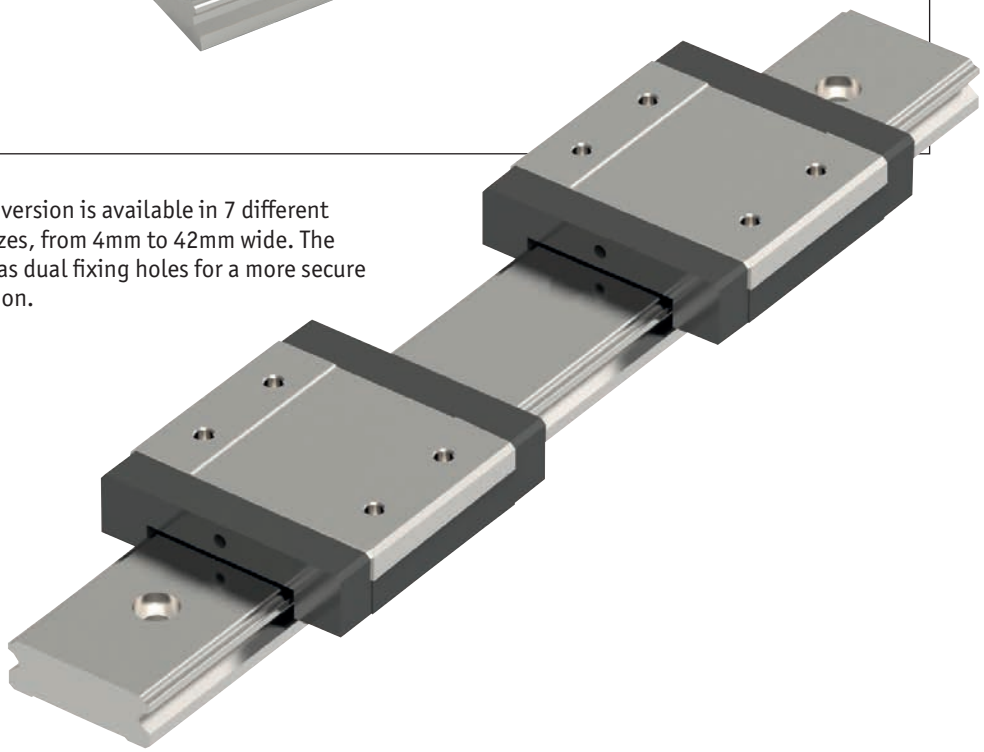
Wide version

Wide version

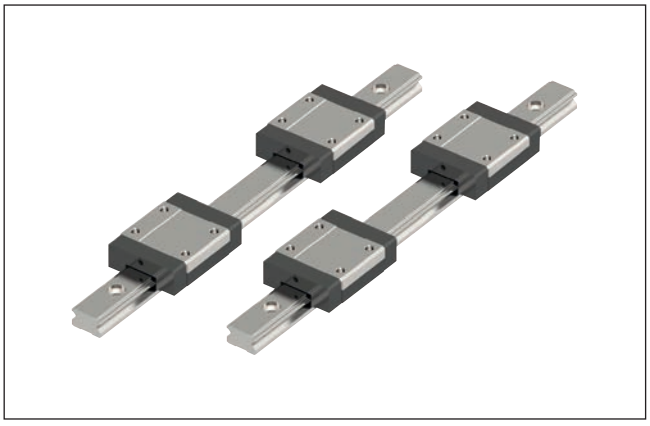
Miniature linear guideways come in two types - standard width and wide version. The standard width is a compact, high performance rail, often used in pairs as it takes smaller load forces than the wide version. For standard width products, please see part no. L1010.



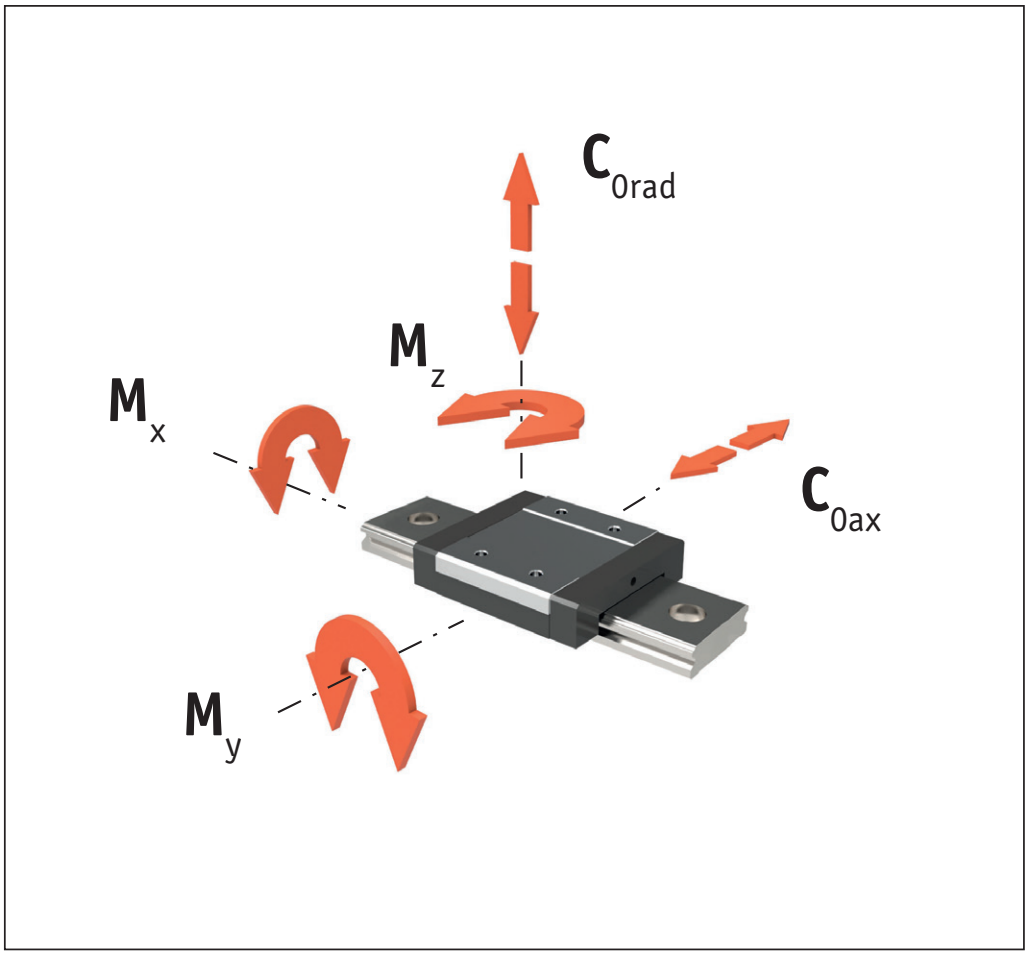
The wide version is available in 7 different profile sizes, from 4mm to 42mm wide. The size 42 has dual fixing holes for a more secure installation.



The wide version is often used in single rail applications due to its increase load capacities, unlike the standard width, which is predominately used in pairs.



L1012 - Wide version



Type	Max. load capacities		Max. static moment loads		
	dyn. C_{rad} & C_{ax} N	stat. C_{0rad} & C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
L1012.C04L	310	625	1,6	1,2	1,2
L1012.C06	280	530	1,6	0,9	0,9
L1012.C06L	370	800	2,5	1,9	1,9
L1012.C10	475	900	4,6	2,2	2,2
L1012.C10L	615	1315	6,8	4,1	4,1
L1012.C14	1180	2095	15	7,3	7,3
L1012.C14L	1570	3140	22,6	14,9	14,9
L1012.C18	2030	3605	33,2	13,7	13,7
L1012.C18L	2550	4990	45,9	26,7	26,7
L1012.C24	3065	5200	63,7	26,3	26,3
L1012.C24L	4070	7800	33,2	13,7	13,7
L1012.C42	5065	8385	171,7	45,7	45,7
L1012.C42L	6725	12580	257	93,1	93,1

Friction

The miniature linear guideways profile system has a low friction characteristic with constant running resistance and low breakaway force.

Causes of friction

- Friction of the sealing system.
- Friction of the balls with each other.
- Friction between balls and redirection.
- Rolling resistance of the balls in the gothic arch running grooves.
- Resistance of lubricant in the carriage.
- Resistance caused by contamination in the lubricant.

Friction with lubricated end seal			
Type	$N_{max.}$	Type	$N_{max.}$
L1010.05	0,08	L1012.06	0,2
L1010.07	0,1	L1012.10	0,2
L1010.09	0,1	L1012.14	0,4
L1010.12	0,4	L1012.18	0,8
L1010.15	1,0	L1012.24	1,0
		L1012.42	1,0

$$F_m = \mu \bullet F$$

F_m = friction force (N)

F = load (N)

Miniature linear guideways rails have a coefficient of friction of approximately $\mu = 0{,}002 - 0{,}003$

Seal

The carriages of the miniature linear guideways are equipped with end seals on both sides.

The design of the end seal ensures a good and dust-proof seal. This extends the product service life, reduces the loss of lubricant and guarantees the optimum system lubrication over a long time. The special design of the stripper allows a low seal resistance and has no adverse influence on the running of the system.

Lubrication

The contact points between ball and track are separated from each other by a microscopically thin oil film. The lubrication ensures:

- Reduced friction.
- Reduced wear.
- Corrosion protection.
- Better thermal distribution and therefore increase in life.

Important instructions for lubrication

- The profile rails must be lubricated for operation.
- The carriage must be moved back and forth during lubrication.
- The lubricant can also be applied to the tracks.
- The lubricant can be injected into the lubrication holes on both sides of the carriage.
- There should be a thin film of lubricant on the rail surface at all times.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Type	First lubrication cm^3
L1010.C05	0,04
L1010.C07	0,12
L1010.C09	0,23
L1010.C12	0,41
L1010.C15	0,78

Type	First lubrication cm^3
L1012.C10	0,05
L1012.C14	0,23
L1012.C18	0,30
L1012.C24	0,52
L1012.C42	0,87

Grease lubrication

When using grease lubrication, we recommend synthetic-oil based lithium grease with a viscosity according to ISO VG 32-100.

Oil lubrication

We recommend CLP or CGLP synthetic oil (DIN 51517) or HLP (DIN 51524) and a viscosity range conforming to ISO VG32-100 for operating temperatures between 0°C and +70°C. We recommend a viscosity according to ISO VG 10 for use at low temperatures. For application-specific special lubrication please contact the sales department.

Relubrication

- Relubrication of the system must be done before the lubricant has become dirty or shows signs of discolouration.
- An application of approx. 50% of the quantity used for first lubrication is sufficient for re-lubrication.
- Relubrication is performed at operating temperature. During relubrication, the carriage should be moved back and forth.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Lubrication intervals

Operating speed, stroke length and ambient conditions influence the selection of time between lubrication intervals.

Establishing a safe lubrication interval is based on the specific applications and operating conditions. However, a lubrication interval should not be greater than one year.

Static Load (P_0) and static moment load (M_0)

Permissible static load

The permissible static load of the miniature linear guideways profile rail is limited by:

- Static load of each linear guide.
- Permissible load of the fixing screws.
- Permissible load of all components used in the surrounding construction.
- Static safety factor, which is required by the application.

The equivalent static load and the static moment are the largest load, or the largest moment load, which are calculated based on formulae 3 and 4.

Static load capacity C_0

The static load capacity C_0 of ball recirculating guides is defined according to DIN 636, Part 2 as the load which gives a Hertzian stress of 4,200 MPa with the existing lubrication between track and balls in the centre of the highest loaded contact surface.

Note: In the loading centre, there is a permanent deformation of approx. 0.01 % of the ball diameter under this load (according to DIN 636, Part 2).

Static safety factor S_0

When observing the static safety factor S_0 the miniature linear guideways profile rails allow a permissible operation and high running precision as is required for each application.

For calculation of the static safety factor S_0, see below.

Dynamic load capacity C

If the dynamic loads work vertically with equal size and direction, the calculated service life of the linear guide can theoretically reach 100 Km travel (as per DIN 636, Part 2).

Combined load in combination with a moment

If both load and moment loads work on the profile rails, the equivalent dynamic load is calculated with formula 9. According to DIN 636, Part 1, the equivalent load should not exceed 0.5 x C.

Equivalent dynamic load and speed

With changing load and speed, these must be considered individually since each parameter influences the service life.

Equivalent dynamic load

If only the load changes, the equivalent dynamic load can be calculated with formula 5.

Equivalent speed

If only the speed changes, the equivalent speed is calculated with formula 6.

If speed and load change, the equivalent dynamic load is calculated with formula 7.

Combined dynamic load

With combined exterior load in an arbitrary angle, the equivalent dynamic load is calculated with formula 8.

$$P = \sqrt[3]{\frac{q_1 \cdot F_1^{\,3} + q_2 \cdot F_2^{\,3} + \cdots q_n \cdot F_n^{\,3}}{100}}$$ **Formula 5**

$$\bar{v} = \frac{q_1 \cdot v_1 + q_2 \cdot v_2 + \ldots q_n \cdot v_n}{100}$$ **Formula 6**

$$P = \sqrt[3]{\frac{q_1 \cdot v_1 \cdot F_1^{\,3} + q_2 \cdot v_2 \cdot F_2^{\,3} + \cdots q_n \cdot v_n \cdot F_n^{\,3}}{100}}$$ **Formula 7**

$$P = |F_X| + |F_Y|$$ **Formula 8**

$$P = |F_X| + |F_Y| + \left(\frac{|M_1|}{M_x} + \frac{|M_2|}{M_y} + \frac{|M_3|}{M_z} \right) \cdot C_0$$ **Formula 9**

P	=	equivalent dynamic load (N)	F_X	=	external dynamic load – horizontal (N)
q	=	stroke (in %)	C_0	=	static load capacity (N)
F_1	=	individual load levels (N)	M_1, M_2, M_3	=	external moments (Nm)
v	=	average speed (m/min)	M_x, M_y, M_z	=	maximum permissible moments in the different loading directions (Nm)
$\bar{v}$	=	individual speed levels (m/min)			
F	=	external dynamic load (N)			
F_Y	=	external dynamic load – vertical (N)			

An example of a profile rail or a batch of identical profile rails under the same running conditions, which use ordinary materials with normal service life and operating conditions, can reach 90% of the calculated service life (as per DIN 636 Part 2).

By taking 50 Km travel as a basis, the dynamic load capacity is usually 20% over thevalues as per the DIN standard. The relationship between the two load capacities can be seen from formulae 10 and 11.

Calculation of service life

Formulae 12 and 13 are used for calculating the service life, if equivalent dynamic load and average speed are constant.

$$C_{(50)} = 1{,}26 \cdot C_{(100)}$$ **Formula 10**

$$C_{(100)} = 0{,}79 \cdot C_{(50)}$$ **Formula 11**

$$L = \left(\frac{C_{(100)}}{P}\right)^3 \cdot 10^5$$ **Formula 12**

$$L_h = \frac{L}{2 \cdot s \cdot n \cdot 60} = \frac{L}{V_m} \cdot \left(\frac{C}{P}\right)^3$$ **Formula 13**

L = service life based on 100,000 (m)
L_h = service life (h)
C = dynamic load capacity (N)
P = equivalent dynamic load (N)
s = stroke length (m)
n = stroke frequency (min^{-1})
V_m = average speed (m/min)

$e1\ (mm) = b\ (mm) \cdot f_1 \cdot 10^{-4}$ Formula 14

$e2\ (mm) = d\ (mm) \cdot f_2 \cdot 10^{-5}$ Formula 15

$e3\ (mm) = f_3 \cdot 10^{-3}$ Formula 16

Type	f_1	f_2	f_3
L1010.C05	4	8	2
L1010.C05L	3	5	2
L1010.C07	5	11	4
L1010.C07L	4	6	4
L1010.C09	5	11	6
L1010.C09L	5	7	5
L1010.C12	6	13	8
L1010.C12L	5	8	8
L1010.C15	7	11	12
L1010.C15L	7	8	11
L1012.C04	2	5	2
L1012.C04L	2	3	1
L1012.C06	2	5	2
L1012.C06L	2	3	2
L1012.C10	2	6	4
L1012.C10L	2	4	4
L1012.C18	2	7	6
L1012.C18L	2	5	5
L1012.C24	3	8	8
L1012.C24L	2	5	7
L1012.C42	2	9	11
L1012.C42L	2	5	10

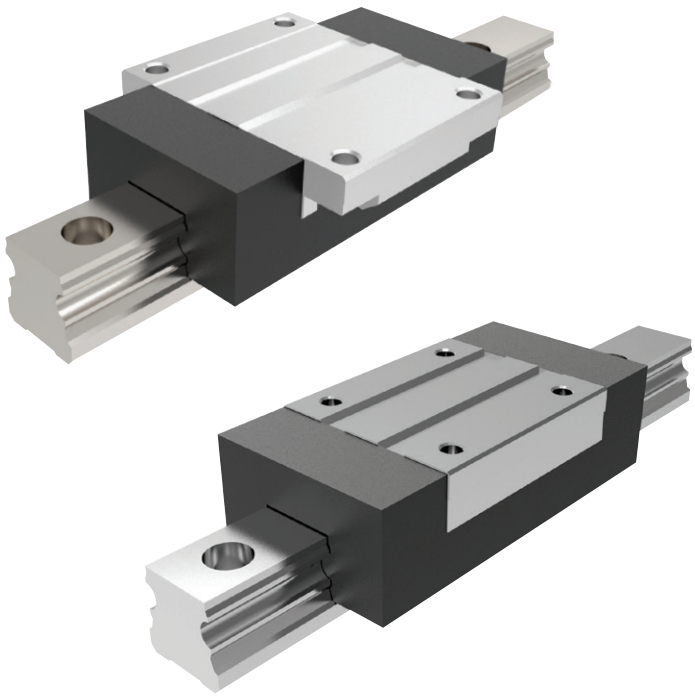
Tightening torque for fixing screws Nm			
Screw Quality 12,9	Steel	Cast iron	Non-ferrous metal
M2	0,6	0,4	0,3
M3	1,8	1,3	1,0
M4	4,0	2,5	2,0

Aluminium Linear Guideways

Introduction

Product overview

Automotion aluminium profile rails and ball bearing runner blocks are designed especially for all sorts of linear movements and are therefore suitable for use in most type of applications.
The rails consist of profiled aluminium, having two pressed-in hardened stainless steel shafts serving as the raceways for the balls of the runner blocks. Advantages are the light-weight and corrosive resistant materials. Fixing holes in the attachment surfaces enable machine parts to be directly mounted onto the runner blocks.
With this combination, it is possible for us to offer a guide system, which achieves a good price/performance ratio.



Product range

- There are two versions of our carriages: flanged and unflanged.
- There are two accuracies for our carriages: standard precision (0) and a high precision called “P” (available on request).
- The standard carriage is not pre-loaded.
- The dynamic load rating (C in the data tables) is based on a service life of 100 Km.

Advantages

- Compact, light-weight design with a weight saving of 60% compared to steel versions.
- Same fixing hole dimensions as steel, ball linear guideway systems.
- Much greater parallelism and height offsets of mounting bases possible, providing a degree of misalignment.
- Performs well in aggressive environments (dust, shavings etc.).
- Significantly better corrosion resistance compared to steel versions.
- Carriages initially greased in-factory, therefore provided with long-term lubrication.
- Due to ball retainers in the carriages, carriages can be removed from the rail without any loss of balls.
- Complete interchangeability between other manufacturers steel rail systems.
- Both sides of rail are reference edges. The carriages have one reference edge, which can be verified by turning it on the rail.

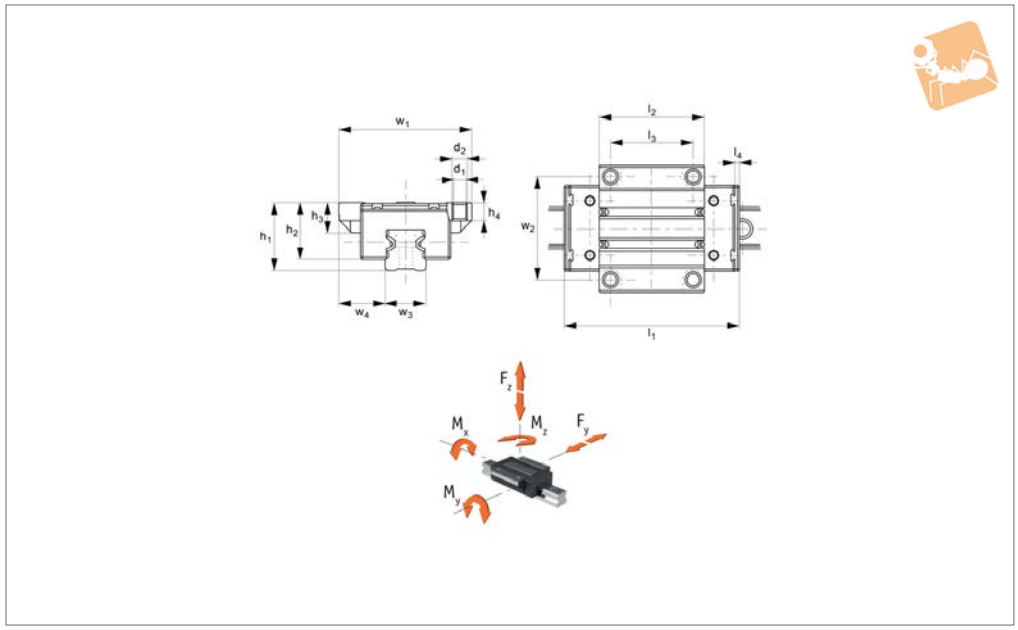
Application range:

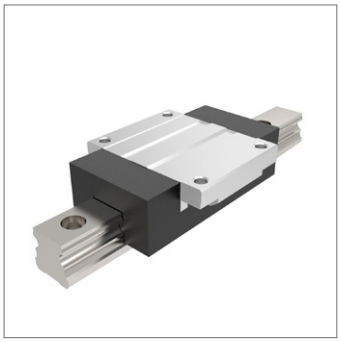
Speed	**v_{max} = 2 m/s**
Acceleration	**a_{max} = 30 m/s²**
Temperature	**T = 0° - 60°C**

Applications

Our rails can be used in a broad range of applications - especially in light machinery, handling technology, jigs and fixtures, assembly technology, manual displacement systems, machine enclosures, door – and window technology, display systems, aerospace, medical, food and many more.
Our aluminium rail guides cannot be used in the following applications:

- Main axis of a CNC or tooling machine.
- Aggressive and dusty enviroments.
- Oscillating conveyor systems.
- Danger of life or physical systems (for example unsecured overhead installation).





L1018.F

Material
Aluminium block (X46Cr13 hardened to F35), tensile strength 350N/mm².
Stainless steel inserts hardened, and stainless ball bearings (DIN 1.4034).

Technical Notes
Compact, light-weight design. 60% saving versus steel versions.
Select the size and number of carriages to suit the required load then select the required rail length, (see rail part nos. L1018). Standard carriages are not preloaded.
Mounting dimensions are identical to those of most steel linear guide rails, making them interchangeable.

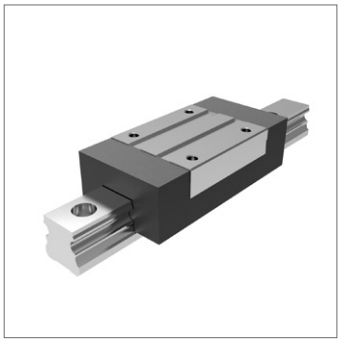
Tips
These are aluminium rail carriages and can only be used with corresponding aluminium linear rails L1018. For standard steel linear guideways and carriages see part no. L1016.

Important Notes
Static loads ratings are difficult to calculate clearly due to the combination of materials. Do not exceed $F_{max.}$ or maximum static moment load rating. See load calculations on technical pages.

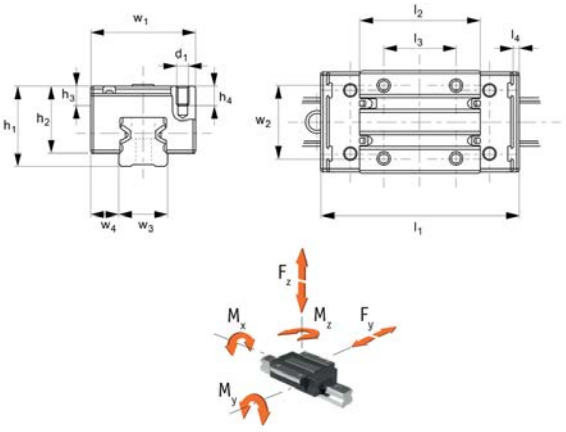
Order No.	Rail size	l_1	w_1	h_1 ±0.03	d_1	d_2	h_2	h_3	h_4	l_2	l_3	l_4	w_2	Weight kg
L1018.F15	15	64.0	47	24	4.3	M5	19.8	11	6.0	37.8	30	2.5	38	0.08
L1018.F20	20	85.9	63	30	5.3	M6	24.7	13	8.0	51.5	40	2.8	53	0.18
L1018.F25	25	96.0	70	36	6.7	M8	29.9	17	9.3	58.0	45	3.0	57	0.26

Order No.	w_3	w_4 ±0.05	F max. $C_{0\ rad\ \&\ ax}$ N	Dyn. load C N	Dyn. moment M_x Nm	Dyn. moment $M_{y\ \&\ z}$ Nm	Static moment M_x Nm	Static moment $M_{y\ \&\ z}$ Nm
L1018.F15	15	16.0	2.000	5.000	36	29	14	12
L1018.F20	20	21.5	4.400	11.000	101	89	40	35
L1018.F25	23	23.5	6.400	16.000	165	147	66	59

Unflanged Aluminium Carriages
with retained ball cage



L1018.U



Material
Aluminium block (X46Cr13 hardened to F35), tensile strength 350N/mm².
Stainless steel inserts hardened, and stainless ball bearings (DIN 1.4034).

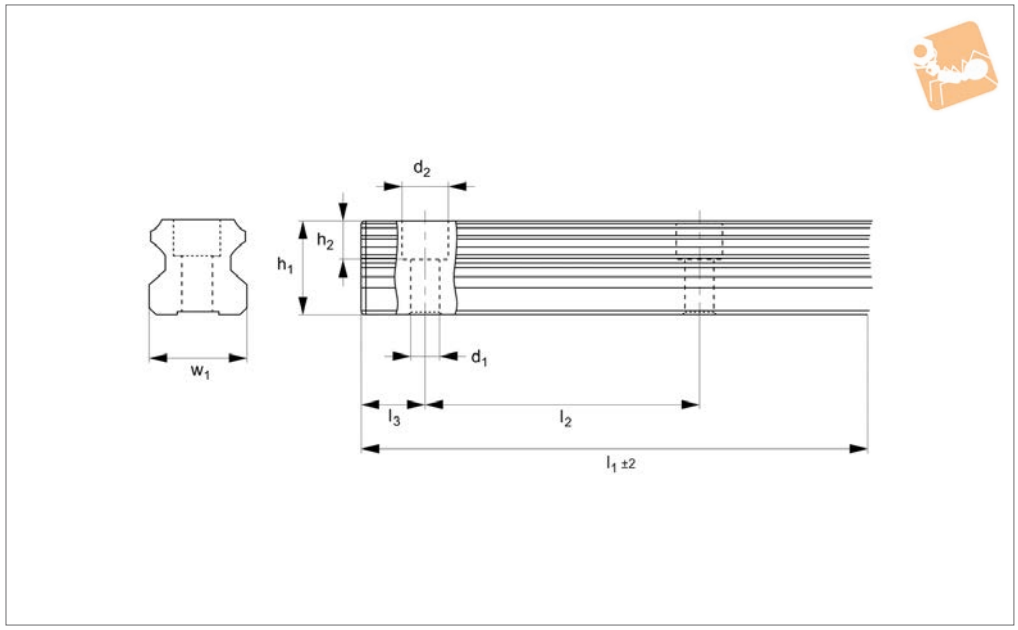
Technical Notes
Compact, light-weight design. 60% saving versus steel versions.
Select the size and number of carriages to suit the required load then select the required rail length, (see rail part nos. L1018). Standard carriages are not preloaded.
Mounting dimensions are identical to those of most steel linear guide rails, making them interchangeable.

Tips
These are aluminium rail carriages and can only be used with corresponding aluminium linear rails L1018. For standard steel linear guideways and carriages see part no. L1016.

Important Notes
Static loads ratings are difficult to calculate clearly due to the combination of materials. Do not exceed $F_{max.}$ or maximum static moment load rating. See load calculations on technical pages.

Order No.	Rail size	l_1	w_1	h_1 ±0.03	d_1	h_2	h_3	h_4	l_2	l_3	l_4	w_2	w_3	Weight kg
L1018.U15	15	64.0	34	24	M4	19.8	4.1	6.0	37.8	26	2.5	26	15	0.07
L1018.U20	20	85.9	44	30	M5	24.7	5.5	7.5	51.5	36	2.8	32	20	0.15
L1018.U25	25	96.0	48	36	M6	29.9	6.4	9.0	58.0	35	3.0	35	23	0.22

Order No.	w_4 ±0.05	F N max.	Dyn. load $C_{rad\ \&\ ax}$ N	M_x dyn. Nm	M_x static Nm max.	M_y +M_z dyn. Nm	M_y +M_z static Nm max.
L1018.U15	9.5	2.000	5.000	36	14	29	12
L1018.U20	12.0	4.400	11.000	101	40	89	35
L1018.U25	12.5	6.400	16.000	165	66	147	59



L1018.15

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

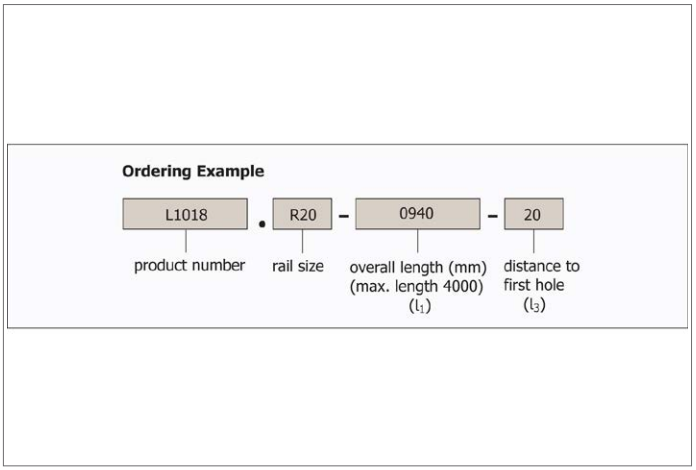
Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

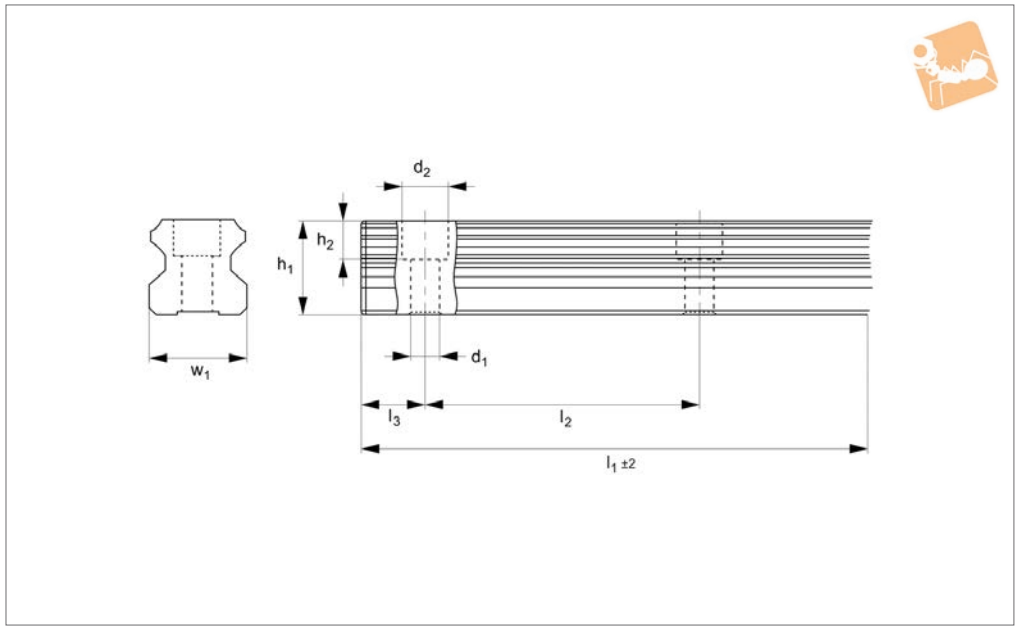
Order No.	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.15-0180	180	15	14.0	4.4	7.5	6.2	60	28	10.30
L1018.15-0240	240	15	14.0	4.4	7.5	6.2	60	28	13.70
L1018.15-0300	300	15	14.0	4.4	7.5	6.2	60	28	17.10
L1018.15-0360	360	15	14.0	4.4	7.5	6.2	60	28	20.50
L1018.15-0420	420	15	14.0	4.4	7.5	6.2	60	28	23.90
L1018.15-0480	480	15	14.0	4.4	7.5	6.2	60	28	27.40
L1018.15-0540	540	15	14.0	4.4	7.5	6.2	60	28	30.80
L1018.15-0600	600	15	14.0	4.4	7.5	6.2	60	28	34.20
L1018.15-0660	660	15	14.0	4.4	7.5	6.2	60	28	37.60
L1018.15-0720	720	15	14.0	4.4	7.5	6.2	60	28	41.00
L1018.15-0780	780	15	14.0	4.4	7.5	6.2	60	28	44.50
L1018.15-0840	840	15	14.0	4.4	7.5	6.2	60	28	47.90
L1018.15-0900	900	15	14.0	4.4	7.5	6.2	60	28	51.30
L1018.15-0960	960	15	14.0	4.4	7.5	6.2	60	28	54.70
L1018.15-1020	1020	15	14.0	4.4	7.5	6.2	60	28	58.14
L1018.15-1080	1080	15	14.0	4.4	7.5	6.2	60	28	61.56
L1018.15-1140	1140	15	14.0	4.4	7.5	6.2	60	28	64.98
L1018.15-1200	1200	15	14.0	4.4	7.5	6.2	60	28	68.40
L1018.15-1260	1260	15	14.0	4.4	7.5	6.2	60	28	71.82
L1018.15-1320	1320	15	14.0	4.4	7.5	6.2	60	28	75.24
L1018.15-1380	1380	15	14.0	4.4	7.5	6.2	60	28	78.66
L1018.15-1440	1440	15	14.0	4.4	7.5	6.2	60	28	82.08
L1018.15-1500	1550	15	14.0	4.4	7.5	6.2	60	28	88.35
L1018.15-1560	1560	15	14.0	4.4	7.5	6.2	60	28	88.92
L1018.15-1620	1620	15	14.0	4.4	7.5	6.2	60	28	92.34
L1018.15-1680	1680	15	14.0	4.4	7.5	6.2	60	28	95.76
L1018.15-1740	1740	15	14.0	4.4	7.5	6.2	60	28	99.18
L1018.15-1800	1800	15	14.0	4.4	7.5	6.2	60	28	102.60
L1018.15-1860	1860	15	14.0	4.4	7.5	6.2	60	28	106.02
L1018.15-1920	1920	15	14.0	4.4	7.5	6.2	60	28	109.44
L1018.15-1980	1980	15	14.0	4.4	7.5	6.2	60	28	112.86

15mm Aluminium Linear Guide Rail

with stainless raceways

Order No.	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.15-2040	2040	15	14.0	4.4	7.5	6.2	60	28	116.28
L1018.15-2100	2100	15	14.0	4.4	7.5	6.2	60	28	119.70
L1018.15-2160	2160	15	14.0	4.4	7.5	6.2	60	28	123.12
L1018.15-2220	2220	15	14.0	4.4	7.5	6.2	60	28	126.54
L1018.15-2280	2280	15	14.0	4.4	7.5	6.2	60	28	129.96
L1018.15-2340	2340	15	14.0	4.4	7.5	6.2	60	28	133.38
L1018.15-2400	2400	15	14.0	4.4	7.5	6.2	60	28	136.80
L1018.15-2460	2460	15	14.0	4.4	7.5	6.2	60	28	140.22
L1018.15-2520	2520	15	14.0	4.4	7.5	6.2	60	28	143.64
L1018.15-2580	2580	15	14.0	4.4	7.5	6.2	60	28	147.06
L1018.15-2640	2640	15	14.0	4.4	7.5	6.2	60	28	150.48
L1018.15-2700	2700	15	14.0	4.4	7.5	6.2	60	28	153.90
L1018.15-2760	2760	15	14.0	4.4	7.5	6.2	60	28	157.32
L1018.15-2820	2820	15	14.0	4.4	7.5	6.2	60	28	160.74
L1018.15-2880	2880	15	14.0	4.4	7.5	6.2	60	28	164.16
L1018.15-2940	2940	15	14.0	4.4	7.5	6.2	60	28	167.58
L1018.15-3000	3000	15	14.0	4.4	7.5	6.2	60	28	171.00
L1018.15-3060	3060	15	14.0	4.4	7.5	6.2	60	28	174.42
L1018.15-3120	3120	15	14.0	4.4	7.5	6.2	60	28	177.84
L1018.15-3180	3180	15	14.0	4.4	7.5	6.2	60	28	181.26
L1018.15-3240	3240	15	14.0	4.4	7.5	6.2	60	28	184.68
L1018.15-3300	3300	15	14.0	4.4	7.5	6.2	60	28	188.10
L1018.15-3360	3360	15	14.0	4.4	7.5	6.2	60	28	191.52
L1018.15-3420	3420	15	14.0	4.4	7.5	6.2	60	28	194.94
L1018.15-3480	3480	15	14.0	4.4	7.5	6.2	60	28	198.36
L1018.15-3540	3540	15	14.0	4.4	7.5	6.2	60	28	201.78
L1018.15-3600	3600	15	14.0	4.4	7.5	6.2	60	28	205.20
L1018.15-3660	3660	15	14.0	4.4	7.5	6.2	60	28	208.62
L1018.15-3720	3720	15	14.0	4.4	7.5	6.2	60	28	212.04
L1018.15-3780	3780	15	14.0	4.4	7.5	6.2	60	28	215.46
L1018.15-3840	3840	15	14.0	4.4	7.5	6.2	60	28	218.88
L1018.15-3900	3900	15	14.0	4.4	7.5	6.2	60	28	222.30
L1018.15-3960	3960	15	14.0	4.4	7.5	6.2	60	28	225.72
L1018.15-4000	4000	15	14.0	4.4	7.5	6.2	60	28	228.00





L1018.20

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

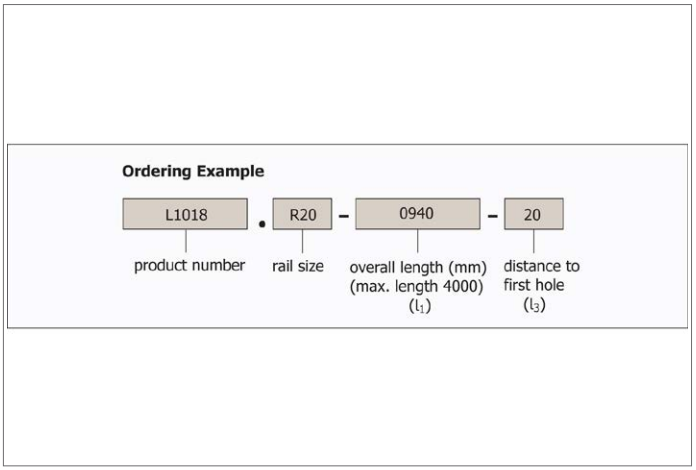
Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

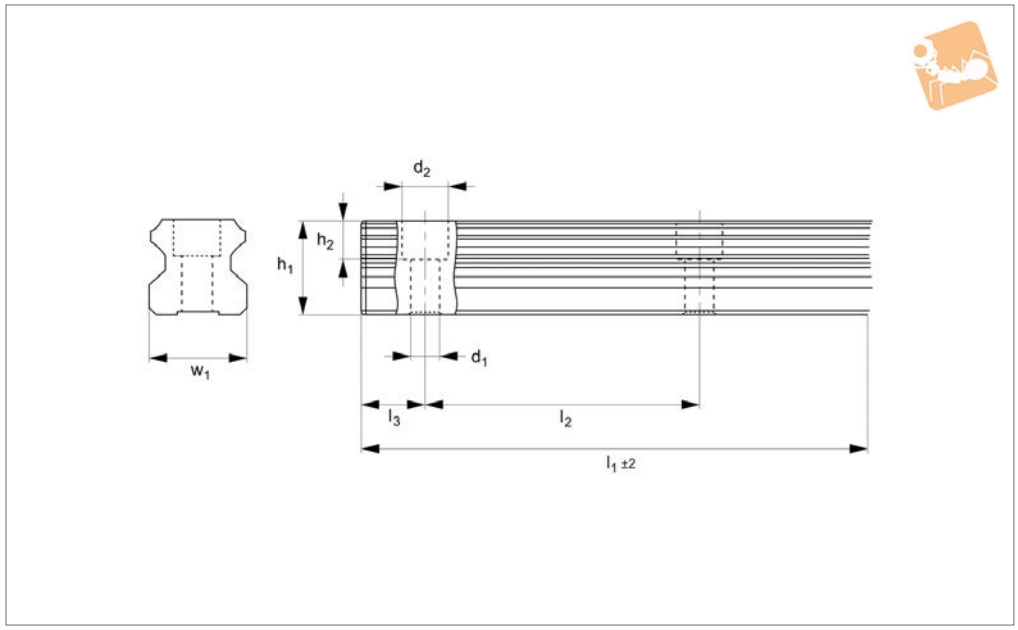
Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.20-0180	20	180	20	19.3	6.0	9.4	7.7	60	30	0.1
L1018.20-0240	20	240	20	19.3	6.0	9.4	7.7	60	30	0.1
L1018.20-0300	20	300	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0360	20	360	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0420	20	420	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0480	20	480	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0540	20	540	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0600	20	600	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0660	20	660	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0720	20	720	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0780	20	780	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0840	20	840	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-0900	20	900	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-0960	20	960	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-1020	20	1020	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1080	20	1080	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1140	20	1140	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1200	20	1200	20	19.3	6.0	9.4	7.7	60	30	0.7
L1018.20-1260	20	1260	20	19.3	6.0	9.4	7.7	60	30	0.7
L1018.20-1320	20	1320	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1380	20	1380	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1440	20	1440	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1500	20	1500	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1560	20	1560	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1620	20	1620	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1680	20	1680	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1740	20	1740	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1800	20	1800	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1860	20	1860	20	19.3	6.0	9.4	7.7	60	30	1.1
L1018.20-1920	20	1920	20	19.3	6.0	9.4	7.7	60	30	1.1
L1018.20-1980	20	1980	20	19.3	6.0	9.4	7.7	60	30	1.1

20mm Aluminium Linear Guide Rail

with stainless raceways

Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.20-2040	20	2040	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2100	20	2100	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2160	20	2160	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2220	20	2220	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2280	20	2280	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2340	20	2340	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2400	20	2400	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2460	20	2460	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2520	20	2520	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2580	20	2580	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2640	20	2640	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2700	20	2700	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2760	20	2760	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2820	20	2820	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2880	20	2880	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2940	20	2940	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3000	20	3000	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3060	20	3060	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3120	20	3120	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3180	20	3180	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3240	20	3240	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3300	20	3300	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3360	20	3360	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3420	20	3420	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3480	20	3480	20	19.3	6.0	9.4	7.7	60	30	2.0
L1018.20-3540	20	3540	20	19.3	6.0	9.4	7.7	60	30	2.0
L1018.20-3600	20	3600	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3660	20	3660	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3720	20	3720	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3780	20	3780	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3840	20	3840	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3900	20	3900	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3960	20	3960	20	19.3	6.0	9.4	7.7	60	30	2.3
L1018.20-4000	20	4000	20	19.3	6.0	9.4	7.7	60	30	2.3





L1018.25

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

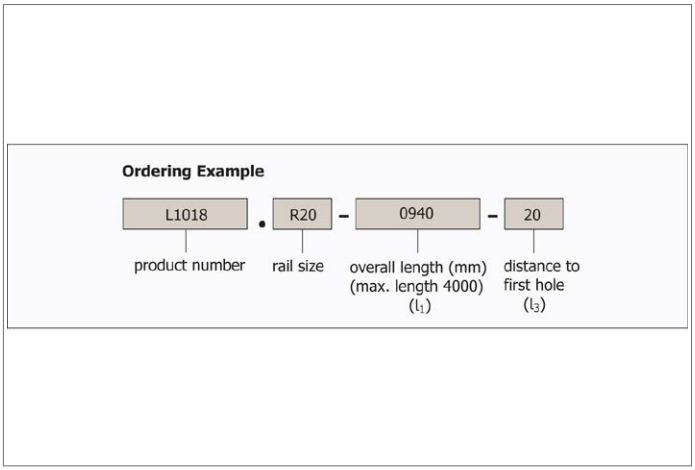
Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.25-0180	25	180	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-0240	25	240	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-0300	25	300	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-0360	25	360	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-0420	25	420	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-0480	25	480	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-0540	25	540	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-0600	25	600	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-0660	25	660	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-0720	25	720	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-0780	25	780	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-0840	25	840	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-0900	25	900	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-0960	25	960	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-1020	25	1020	25	21.8	7.0	11.0	8.9	60	30	0.0
L1018.25-1080	25	1080	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-1140	25	1140	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-1200	25	1200	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-1260	25	1260	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-1320	25	1320	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-1380	25	1380	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-1440	25	1440	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-1500	25	1500	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-1560	25	1560	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-1620	25	1620	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-1680	25	1680	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-1740	25	1740	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-1800	25	1800	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-1860	25	1860	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-1920	25	1920	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-1980	25	1980	25	21.8	7.0	11.0	8.9	60	30	1.2

25mm Aluminium Linear Guide Rail

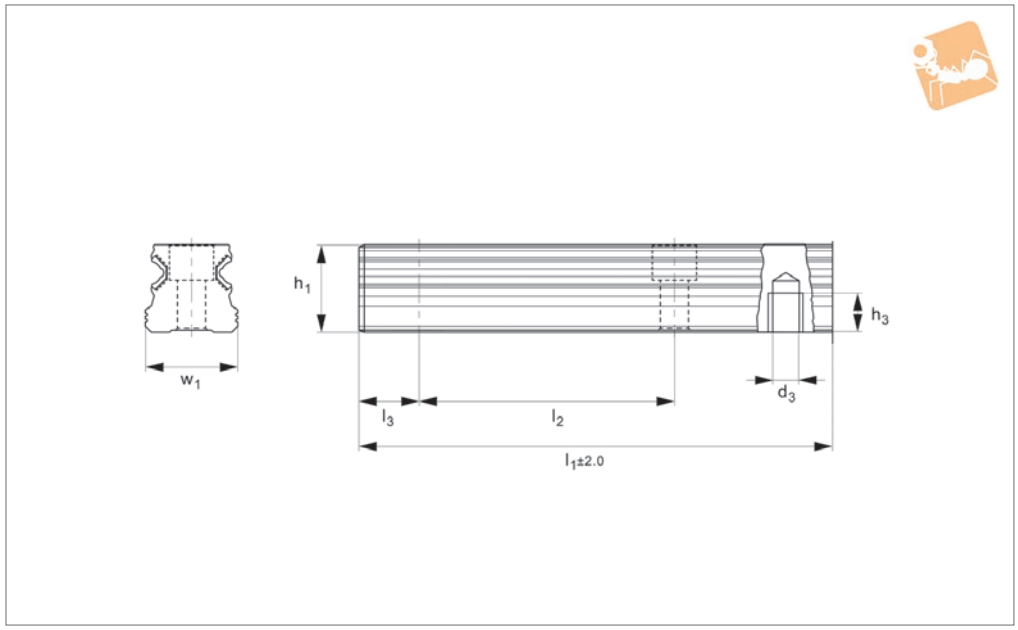
with stainless raceways

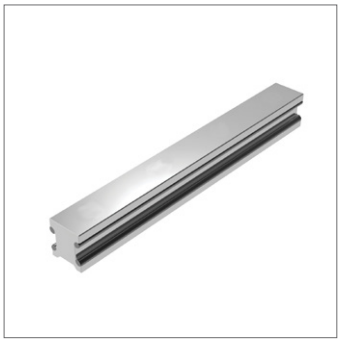
Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.25-2040	25	2040	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-2100	25	2100	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-2160	25	2160	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-2220	25	2220	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-2280	25	2280	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-2340	25	2340	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-2400	25	2400	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-2460	25	2460	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-2520	25	2520	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-2580	25	2580	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-2640	25	2640	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-2700	25	2700	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-2760	25	2760	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-2820	25	2820	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-2880	25	2880	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-2940	25	2940	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-3000	25	3000	25	21.8	7.0	11.0	8.9	60	30	0.0
L1018.25-3060	25	3060	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-3120	25	3120	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-3180	25	3180	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-3240	25	3240	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-3300	25	3300	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-3360	25	3360	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-3420	25	3420	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-3480	25	3480	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-3540	25	3540	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-3600	25	3600	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-3660	25	3660	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-3720	25	3720	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-3780	25	3780	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-3840	25	3840	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-3900	25	3900	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-3960	25	3960	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-4000	25	4000	25	21.8	7.0	11.0	28	60	30	5.0



15mm Aluminium Linear Guide Rail

rear fixing with stainless raceways





L1018.15R

Material

Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes

Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips

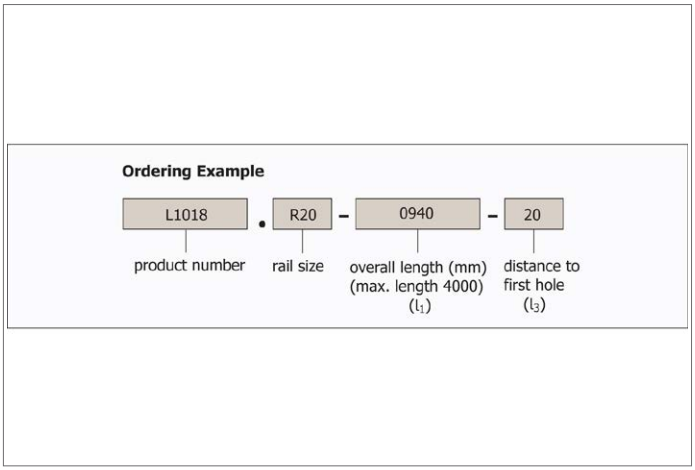
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.15-0180-R	15	180	15	14.3	M5	7	60	28	0.1
L1018.15-0240-R	15	240	15	14.3	M5	7	60	28	0.1
L1018.15-0300-R	15	300	15	14.3	M5	7	60	28	0.2
L1018.15-0360-R	15	360	15	14.3	M5	7	60	28	0.2
L1018.15-0420-R	15	420	15	14.3	M5	7	60	28	0.2
L1018.15-0480-R	15	480	15	14.3	M5	7	60	28	0.3
L1018.15-0540-R	15	540	15	14.3	M5	7	60	28	0.3
L1018.15-0600-R	15	600	15	14.3	M5	7	60	28	0.3
L1018.15-0660-R	15	660	15	14.3	M5	7	60	28	0.4
L1018.15-0720-R	15	720	15	14.3	M5	7	60	28	0.4
L1018.15-0780-R	15	780	15	14.3	M5	7	60	28	0.4
L1018.15-0840-R	15	840	15	14.3	M5	7	60	28	0.5
L1018.15-0900-R	15	900	15	14.3	M5	7	60	28	0.5
L1018.15-0960-R	15	960	15	14.3	M5	7	60	28	0.5
L1018.15-1020-R	15	1020	15	14.3	M5	7	60	28	0.6
L1018.15-1080-R	15	1080	15	14.3	M5	7	60	28	0.6
L1018.15-1140-R	15	1140	15	14.3	M5	7	60	28	0.6
L1018.15-1200-R	15	1200	15	14.3	M5	7	60	28	0.7
L1018.15-1260-R	15	1260	15	14.3	M5	7	60	28	0.7
L1018.15-1320-R	15	1320	15	14.3	M5	7	60	28	0.8
L1018.15-1380-R	15	1380	15	14.3	M5	7	60	28	0.8
L1018.15-1440-R	15	1440	15	14.3	M5	7	60	28	0.8
L1018.15-1500-R	15	1500	15	14.3	M5	7	60	28	0.9
L1018.15-1560-R	15	1560	15	14.3	M5	7	60	28	0.9
L1018.15-1620-R	15	1620	15	14.3	M5	7	60	28	0.9
L1018.15-1680-R	15	1680	15	14.3	M5	7	60	28	1.0
L1018.15-1740-R	15	1740	15	14.3	M5	7	60	28	1.0
L1018.15-1800-R	15	1800	15	14.3	M5	7	60	28	1.0
L1018.15-1860-R	15	1860	15	14.3	M5	7	60	28	1.1
L1018.15-1940-R	15	1940	15	14.3	M5	7	60	28	1.1
L1018.15-1980-R	15	1980	15	14.3	M5	7	60	28	1.1

15mm Aluminium Linear Guide Rail

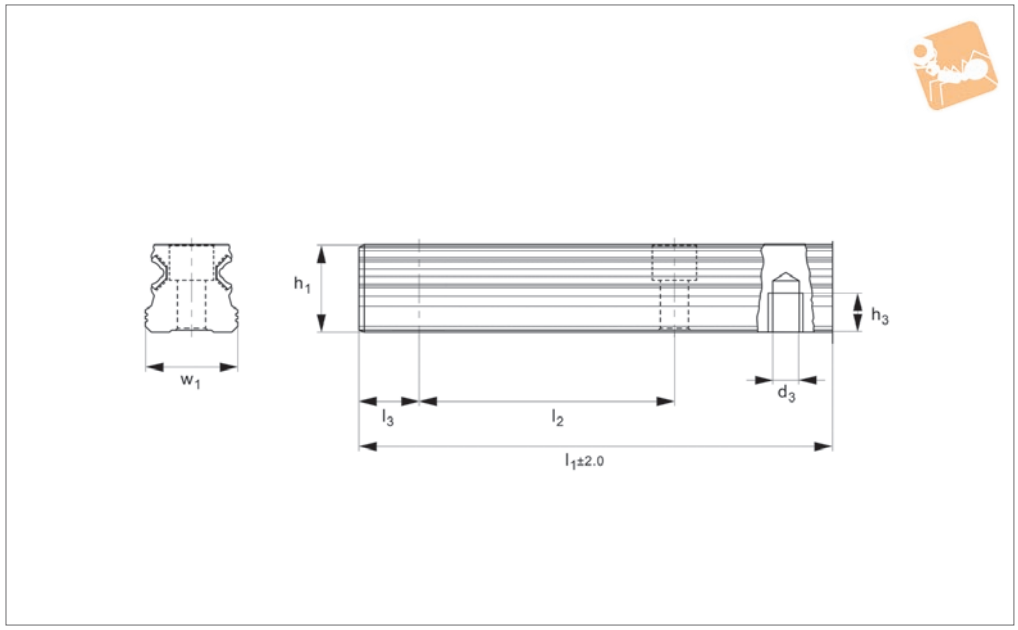
rear fixing with stainless raceways

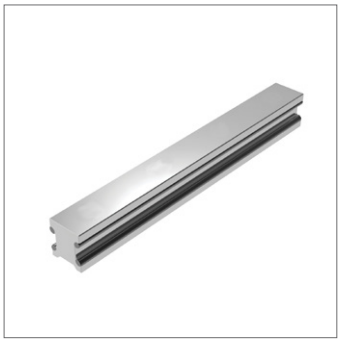
Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.15-2040-R	15	2040	15	14.3	M5	7	60	28	1.2
L1018.15-2100-R	15	2100	15	14.3	M5	7	60	28	1.2
L1018.15-2160-R	15	2160	15	14.3	M5	7	60	28	1.2
L1018.15-2220-R	15	2220	15	14.3	M5	7	60	28	1.3
L1018.15-2280-R	15	2280	15	14.3	M5	7	60	28	1.3
L1018.15-2340-R	15	2340	15	14.3	M5	7	60	28	1.3
L1018.15-2400-R	15	2400	15	14.3	M5	7	60	28	1.4
L1018.15-2460-R	15	2460	15	14.3	M5	7	60	28	1.4
L1018.15-2520-R	15	2520	15	14.3	M5	7	60	28	1.4
L1018.15-2580-R	15	2580	15	14.3	M5	7	60	28	1.5
L1018.15-2640-R	15	2640	15	14.3	M5	7	60	28	1.5
L1018.15-2700-R	15	2700	15	14.3	M5	7	60	28	1.5
L1018.15-2760-R	15	2760	15	14.3	M5	7	60	28	1.6
L1018.15-2820-R	15	2820	15	14.3	M5	7	60	28	1.6
L1018.15-2880-R	15	2880	15	14.3	M5	7	60	28	1.6
L1018.15-2940-R	15	2940	15	14.3	M5	7	60	28	1.7
L1018.15-3000-R	15	3000	15	14.3	M5	7	60	28	1.7
L1018.15-3060-R	15	3060	15	14.3	M5	7	60	28	1.7
L1018.15-3120-R	15	3120	15	14.3	M5	7	60	28	1.8
L1018.15-3180-R	15	3180	15	14.3	M5	7	60	28	1.8
L1018.15-3240-R	15	3240	15	14.3	M5	7	60	28	1.8
L1018.15-3300-R	15	3300	15	14.3	M5	7	60	28	1.9
L1018.15-3360-R	15	3360	15	14.3	M5	7	60	28	1.9
L1018.15-3420-R	15	3420	15	14.3	M5	7	60	28	1.9
L1018.15-3480-R	15	3480	15	14.3	M5	7	60	28	2.0
L1018.15-3540-R	15	3540	15	14.3	M5	7	60	28	2.0
L1018.15-3600-R	15	3600	15	14.3	M5	7	60	28	2.1
L1018.15-3660-R	15	3660	15	14.3	M5	7	60	28	2.1
L1018.15-3720-R	15	3720	15	14.3	M5	7	60	28	2.1
L1018.15-3780-R	15	3780	15	14.3	M5	7	60	28	2.2
L1018.15-3840-R	15	3840	15	14.3	M5	7	60	28	2.2
L1018.15-3900-R	15	3900	15	14.3	M5	7	60	28	2.2
L1018.15-3960-R	15	3960	15	14.3	M5	7	60	28	2.3
L1018.15-4000-R	15	4000	15	14.3	M5	7	60	28	2.3



20mm Aluminium Linear Guide Rail

rear fixing with stainless raceways





L1018.20R

Material

Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes

Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips

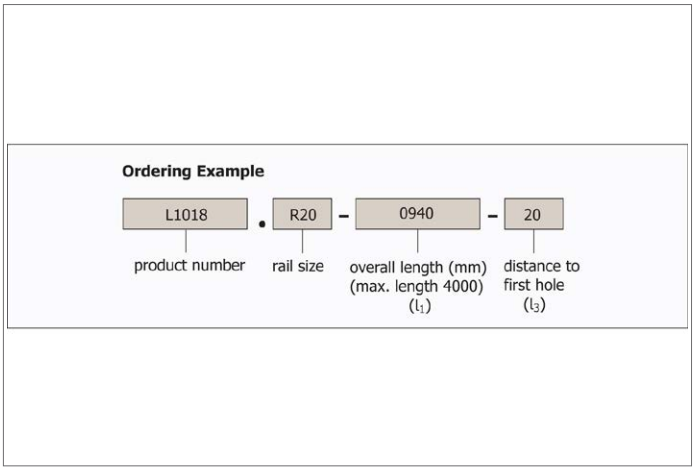
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

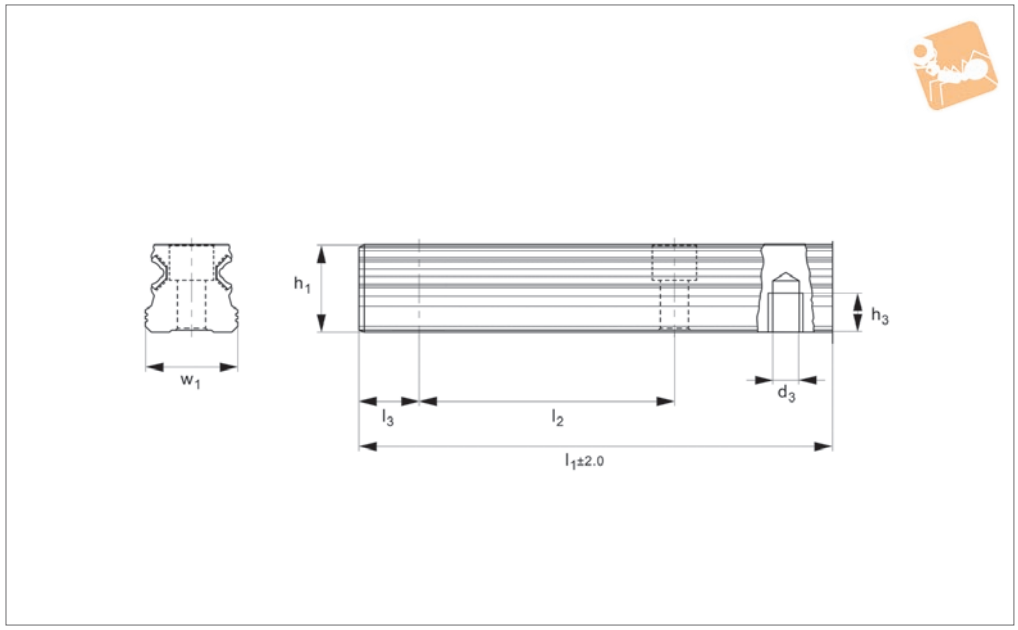
Order No.	Rail size	w_1	h_1	d_1	d_3	h_3	l_2	l_3	Weight kg
L1018.20-0180-R	20	20	19.3	180	M6	9	60	28	0.2
L1018.20-0240-R	20	20	19.3	240	M6	9	60	28	0.2
L1018.20-0300-R	20	20	19.3	300	M6	9	60	28	0.3
L1018.20-0360-R	20	20	19.3	360	M6	9	60	28	0.4
L1018.20-0420-R	20	20	19.3	420	M6	9	60	28	0.4
L1018.20-0480-R	20	20	19.3	480	M6	9	60	28	0.5
L1018.20-0540-R	20	20	19.3	540	M6	9	60	28	0.5
L1018.20-0600-R	20	20	19.3	600	M6	9	60	28	0.6
L1018.20-0660-R	20	20	19.3	660	M6	9	60	28	0.6
L1018.20-0720-R	20	20	19.3	720	M6	9	60	28	0.7
L1018.20-0780-R	20	20	19.3	780	M6	9	60	28	0.8
L1018.20-0840-R	20	20	19.3	840	M6	9	60	28	0.8
L1018.20-0900-R	20	20	19.3	900	M6	9	60	28	0.9
L1018.20-0960-R	20	20	19.3	960	M6	9	60	28	0.9
L1018.20-1020-R	20	20	19.3	1020	M6	9	60	28	1.0
L1018.20-1080-R	20	20	19.3	1080	M6	9	60	28	1.1
L1018.20-1140-R	20	20	19.3	1140	M6	9	60	28	1.1
L1018.20-1200-R	20	20	19.3	1200	M6	9	60	28	1.2
L1018.20-1260-R	20	20	19.3	1260	M6	9	60	28	1.2
L1018.20-1320-R	20	20	19.3	1320	M6	9	60	28	1.3
L1018.20-1380-R	20	20	19.3	1380	M6	9	60	28	1.4
L1018.20-1440-R	20	20	19.3	1440	M6	9	60	28	1.4
L1018.20-1500-R	20	20	19.3	1500	M6	9	60	28	1.5
L1018.20-1560-R	20	20	19.3	1560	M6	9	60	28	1.5
L1018.20-1620-R	20	20	19.3	1620	M6	9	60	28	1.6
L1018.20-1680-R	20	20	19.3	1680	M6	9	60	28	1.6
L1018.20-1740-R	20	20	19.3	1740	M6	9	60	28	1.7
L1018.20-1800-R	20	20	19.3	1800	M6	9	60	28	1.8
L1018.20-1860-R	20	20	19.3	1860	M6	9	60	28	1.8
L1018.20-1920-R	20	20	19.3	1920	M6	9	60	28	1.9
L1018.20-1980-R	20	20	19.3	1980	M6	9	60	28	1.9

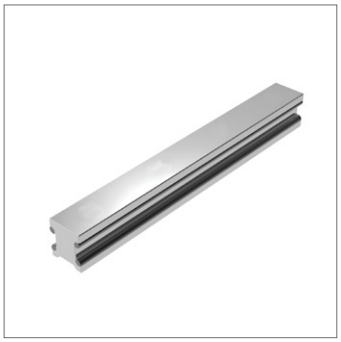
20mm Aluminium Linear Guide Rail

rear fixing with stainless raceways

Order No.	Rail size	w_1	h_1	d_1	d_3	h_3	l_2	l_3	Weight kg
L1018.20-2040-R	20	20	19.3	2040	M6	9	60	28	2.0
L1018.20-2100-R	20	20	19.3	2100	M6	9	60	28	2.1
L1018.20-2160-R	20	20	19.3	2160	M6	9	60	28	2.1
L1018.20-2220-R	20	20	19.3	2220	M6	9	60	28	2.2
L1018.20-2280-R	20	20	19.3	2280	M6	9	60	28	2.2
L1018.20-2340-R	20	20	19.3	2340	M6	9	60	28	2.3
L1018.20-2400-R	20	20	19.3	2400	M6	9	60	28	2.4
L1018.20-2460-R	20	20	19.3	2460	M6	9	60	28	2.4
L1018.20-2520-R	20	20	19.3	2520	M6	9	60	28	2.5
L1018.20-2580-R	20	20	19.3	2580	M6	9	60	28	2.5
L1018.20-2640-R	20	20	19.3	2640	M6	9	60	28	2.6
L1018.20-2700-R	20	20	19.3	2700	M6	9	60	28	2.6
L1018.20-2760-R	20	20	19.3	2760	M6	9	60	28	2.7
L1018.20-2820-R	20	20	19.3	2820	M6	9	60	28	2.8
L1018.20-2880-R	20	20	19.3	2880	M6	9	60	28	2.8
L1018.20-2940-R	20	20	19.3	2940	M6	9	60	28	2.9
L1018.20-3000-R	20	20	19.3	3000	M6	9	60	28	2.9
L1018.20-3060-R	20	20	19.3	3060	M6	9	60	28	3.0
L1018.20-3120-R	20	20	19.3	3120	M6	9	60	28	3.1
L1018.20-3180-R	20	20	19.3	3180	M6	9	60	28	3.1
L1018.20-3240-R	20	20	19.3	3240	M6	9	60	28	3.2
L1018.20-3300-R	20	20	19.3	3300	M6	9	60	28	3.2
L1018.20-3360-R	20	20	19.3	3360	M6	9	60	28	3.3
L1018.20-3420-R	20	20	19.3	3420	M6	9	60	28	3.4
L1018.20-3480-R	20	20	19.3	3480	M6	9	60	28	3.4
L1018.20-3540-R	20	20	19.3	3540	M6	9	60	28	3.5
L1018.20-3600-R	20	20	19.3	3600	M6	9	60	28	3.5
L1018.20-3660-R	20	20	19.3	3660	M6	9	60	28	3.6
L1018.20-3720-R	20	20	19.3	3720	M6	9	60	28	3.6
L1018.20-3780-R	20	20	19.3	3780	M6	9	60	28	3.7
L1018.20-3840-R	20	20	19.3	3840	M6	9	60	28	3.8
L1018.20-3900-R	20	20	19.3	3900	M6	9	60	28	3.8
L1018.20-3960-R	20	20	19.3	3960	M6	9	60	28	3.9
L1018.20-4000-R	20	20	19.3	4000	M6	9	60	28	3.9







L1018.25R

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

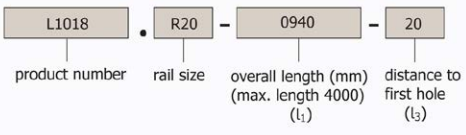
Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.25-0180-R	25	180	25	21.8	M6	12	60	28	0.2
L1018.25-0240-R	25	240	25	21.8	M6	12	60	28	0.3
L1018.25-0300-R	25	300	25	21.8	M6	12	60	28	0.4
L1018.25-0360-R	25	360	25	21.8	M6	12	60	28	0.5
L1018.25-0420-R	25	420	25	21.8	M6	12	60	28	0.5
L1018.25-0480-R	25	480	25	21.8	M6	12	60	28	0.6
L1018.25-0540-R	25	540	25	21.8	M6	12	60	28	0.7
L1018.25-0600-R	25	600	25	21.8	M6	12	60	28	0.8
L1018.25-0660-R	25	660	25	21.8	M6	12	60	28	0.8
L1018.25-0720-R	25	720	25	21.8	M6	12	60	28	0.9
L1018.25-0780-R	25	780	25	21.8	M6	12	60	28	1.0
L1018.25-0840-R	25	840	25	21.8	M6	12	60	28	1.1
L1018.25-0900-R	25	900	25	21.8	M6	12	60	28	1.1
L1018.25-0960-R	25	960	25	21.8	M6	12	60	28	1.2
L1018.25-1020-R	25	1020	25	21.8	M6	12	60	28	1.3
L1018.25-1080-R	25	1080	25	21.8	M6	12	60	28	1.4
L1018.25-1140-R	25	1140	25	21.8	M6	12	60	28	1.4
L1018.25-1200-R	25	1200	25	21.8	M6	12	60	28	1.5
L1018.25-1260-R	25	1260	25	21.8	M6	12	60	28	1.6
L1018.25-1320-R	25	1320	25	21.8	M6	12	60	28	1.7
L1018.25-1380-R	25	1380	25	21.8	M6	12	60	28	1.7
L1018.25-1440-R	25	1440	25	21.8	M6	12	60	28	1.8
L1018.25-1500-R	25	1500	25	21.8	M6	12	60	28	1.9
L1018.25-1560-R	25	1560	25	21.8	M6	12	60	28	2.0
L1018.25-1620-R	25	1620	25	21.8	M6	12	60	28	2.0
L1018.25-1680-R	25	1680	25	21.8	M6	12	60	28	2.1
L1018.25-1740-R	25	1740	25	21.8	M6	12	60	28	2.2
L1018.25-1800-R	25	1800	25	21.8	M6	12	60	28	2.3
L1018.25-1860-R	25	1860	25	21.8	M6	12	60	28	2.3
L1018.25-1920-R	25	1920	25	21.8	M6	12	60	28	2.4
L1018.25-1980-R	25	1980	25	21.8	M6	12	60	28	2.5

25mm Aluminium Linear Guide Rail

rear fixing with stainless raceways

Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.25-2040-R	25	2040	25	21.8	M6	12	60	28	2.6
L1018.25-2100-R	25	2100	25	21.8	M6	12	60	28	2.6
L1018.25-2160-R	25	2160	25	21.8	M6	12	60	28	2.7
L1018.25-2220-R	25	2220	25	21.8	M6	12	60	28	2.8
L1018.25-2280-R	25	2280	25	21.8	M6	12	60	28	2.9
L1018.25-2340-R	25	2340	25	21.8	M6	12	60	28	2.9
L1018.25-2400-R	25	2400	25	21.8	M6	12	60	28	3.0
L1018.25-2460-R	25	2460	25	21.8	M6	12	60	28	3.1
L1018.25-2520-R	25	2520	25	21.8	M6	12	60	28	3.2
L1018.25-2580-R	25	2580	25	21.8	M6	12	60	28	3.2
L1018.25-2640-R	25	2640	25	21.8	M6	12	60	28	3.3
L1018.25-2700-R	25	2700	25	21.8	M6	12	60	28	3.4
L1018.25-2760-R	25	2760	25	21.8	M6	12	60	28	3.5
L1018.25-2820-R	25	2820	25	21.8	M6	12	60	28	3.5
L1018.25-2880-R	25	2880	25	21.8	M6	12	60	28	3.6
L1018.25-2940-R	25	2940	25	21.8	M6	12	60	28	3.7
L1018.25-3000-R	25	3000	25	21.8	M6	12	60	28	3.8
L1018.25-3060-R	25	3060	25	21.8	M6	12	60	28	3.8
L1018.25-3120-R	25	3120	25	21.8	M6	12	60	28	3.9
L1018.25-3180-R	25	3180	25	21.8	M6	12	60	28	4.0
L1018.25-3240-R	25	3240	25	21.8	M6	12	60	28	4.1
L1018.25-3300-R	25	3300	25	21.8	M6	12	60	28	4.1
L1018.25-3360-R	25	3360	25	21.8	M6	12	60	28	4.2
L1018.25-3420-R	25	3420	25	21.8	M6	12	60	28	4.3
L1018.25-3480-R	25	3480	25	21.8	M6	12	60	28	4.4
L1018.25-3540-R	25	3540	25	21.8	M6	12	60	28	4.4
L1018.25-3600-R	25	3600	25	21.8	M6	12	60	28	4.5
L1018.25-3660-R	25	3660	25	21.8	M6	12	60	28	4.6
L1018.25-3720-R	25	3720	25	21.8	M6	12	60	28	4.7
L1018.25-3780-R	25	3780	25	21.8	M6	12	60	28	4.7
L1018.25-3840-R	25	3840	25	21.8	M6	12	60	28	4.8
L1018.25-3900-R	25	3900	25	21.8	M6	12	60	28	4.9
L1018.25-3960-R	25	3960	25	21.8	M6	12	60	28	5.0
L1018.25-4000-R	25	4000	25	21.8	M6	12	60	28	5.0

Ordering Example



Determination of the carriage size:

1. Pre-select the carriages
2. Determine F_{comb} (see below)
3. Calculate the ratio of the dynamic load capacity "C" of the selected carriages relative to F_{comb} (F_{comb} divided by "C")

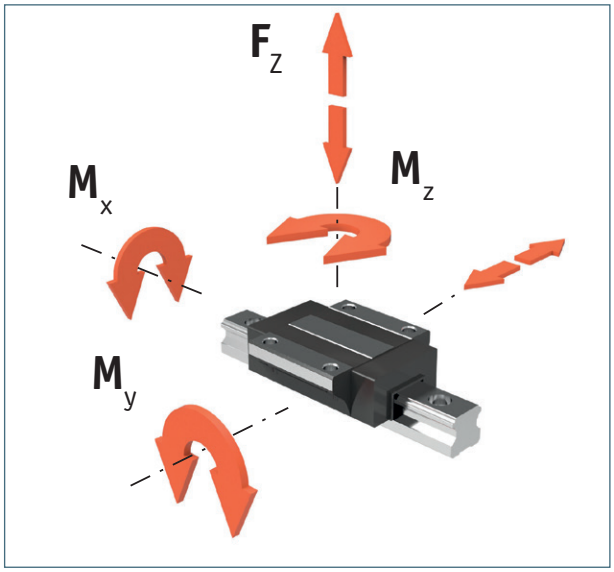
If F_{comb} /C > 0.4: carriages is sized too small, select the next largest size and repeat the calculation (step 2 and 3).

The ratio must always be F_{comb} / C≤ 0.4, otherwise F_{max} will be exceeded.

Note:
The load ratio F_{comb} / C is the quotient of the equivalent dynamic load on the bearing divided by the dynamic load capacity "C".

Calculation of load on bearing for a carriage:

$$F_{comb} = b \cdot \left(|F_Z| + |F_Y| + C \cdot \frac{|M_x|}{M_t} + C \cdot \frac{|M_y|}{M_L} + C \cdot \frac{|M_Z|}{M_L} \right)$$



F_{comb}	=	combined equivalent load	(N)	
F_Y, F_Z	=	Dynamic load	(N)	
M_X	=	torque of the X-axis [1]	(Nm)	
M_Y	=	torque of the Y-axis [2]	(Nm)	
M_Z	=	Moment um die Z-Achse [2]	(Nm)	
M_t	=	dynamic torsional moment load capacity	(Nm)	For values, see carriage data tables
M_L	=	dynamic longitudinal moment load capacity	(Nm)	For values, see carriage data tables
C	=	dynamic load capacity	(N)	For values, see carriage data tables
b	=	operating factor, (see below)		For values, see table "Recommended values for operating factors "b".

1) Torque M_X will only be fully effective in an application with a single guide rail.
2) Torque M_Y or M_X will only be fully effective when only a single carriage is mounted on one guide rail.

Recommended operating factors b:

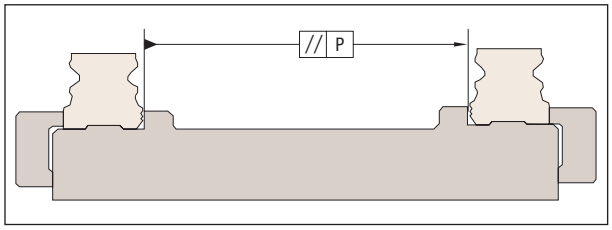
Values for operating factors b	
1,0	Clean environment, low technical demands, manual operation
1,5	In a linear motion axis with ball screw drive
2,0	Linear motion axis with toothed belt drive
6,0	Linear motion axis with pneumatic drive
9,0	In very dirty environments

Static load rating

A static load rating can not be easily determined, because of the composite material (aluminium/stainless steel combination). Instead of this, you can find the values F_{max} and M_{max}.

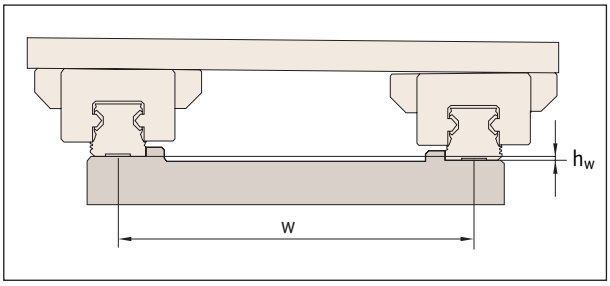
Parallelism

Please note the parallelism is required in the structure for correct installation. Parallelism of the installed rails is measured at the guide rails and the carriages.
Any parallelism offset will cause a slight increase in preload on one side of the assembly.
As long as values specified in the table are met, the effect of parallelism offsets on the service life can generally be neglected.



Size	Permissible deviation in parallelism P_{max}	
	Standard	Preload
15	0,027	0,018
20	0,031	0,021
25	0,034	0,022

mm



Calculation factor	Standard	Preload
f	$1,2 \cdot 10^{-3}$	$0,75 \cdot 10^{-3}$

Height deviation

Permissible height deviation in lateral direction "h_w"

$$h_w \leq w.f$$

h_w = Allowable height deviation (mm)
w = Distance between rails (mm)
f = Calculation factor

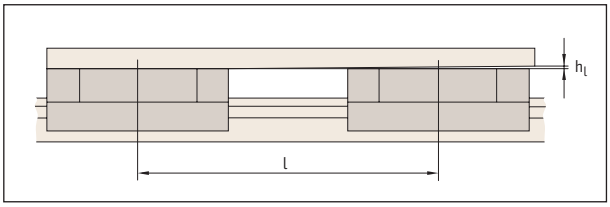
Allowable height deviation in longitudinal direction

Allowable height deviation in longitudinal direction "h_l"

$$h_l \leq b \cdot g$$

h_l = Permissible height deviation (mm)
b = Distance between carriages (mm)
g = Calculation factor

$$h_l = l \times [6 \times 10^{-4}]$$



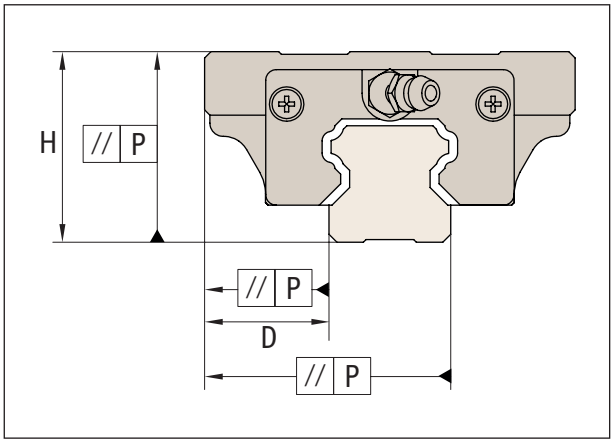
Calculation factor	Standard	Preload
g	6×10^{-4}	$2,1 \times 10^{-4}$

Height tolerance "H"

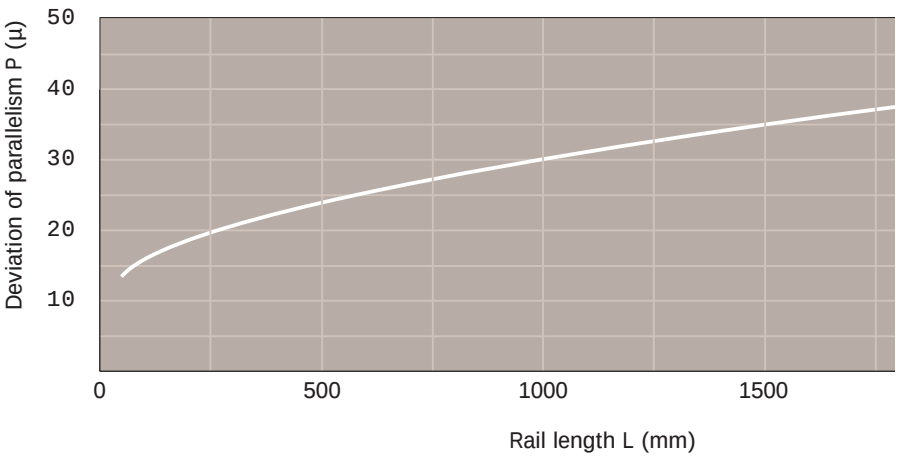
The height tolerance of several carriages on a rail is maximum ±30µ. In a combination of several carriages and rails the maximum is ±120µ.

Side tolerance "D"

The maximum side tolerance of several carriages on a rail is ±30 µ. In a combination of several carriages and rails, the maximum is ±70 µ.



Deviation of parallelism



We aim to achieve a lifetime lubrication, which we define as at least 30,000Km. The following conditions apply:

- Initial greasing with Dynalub 510
- Mounted seal unit
- No exposure to metal-working fluids
- Ambient temperature T = 20° to 30°C

First, the ratio F_{comb} / C is calculated with F_{comb} according to the formula on the previous page and the dynamic load rating C from the data tables. With this value you go then in to the diagram below.

If F_{comb} / C ≤ 0,15, it lies in the zone A of the diagram bellow.

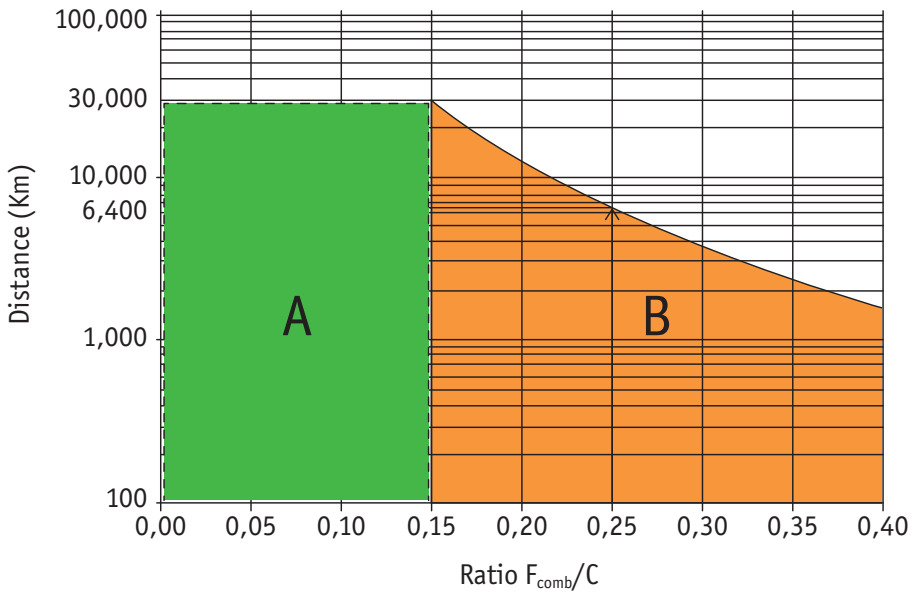
This means it will have lifetime lubrication.

With 0,15 < F_{comb}/C ≤ 0,4 it lies in the zone B of the diagram below.

For this you must distinguish two cases:
For example F_{comb} / C = 0,25 goes up to 6400km.

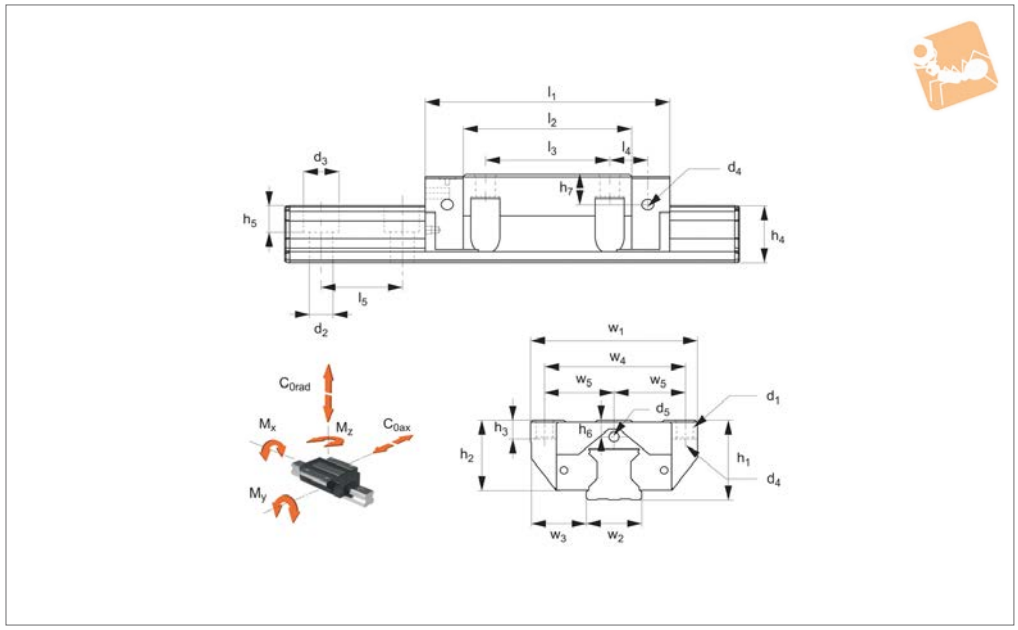
a) If the running distance required is < 6400 km, then there is a lifetime lubrication here.
b) If the running distance required is > 6400 km, then instead of the sealed unit, you should use the lubrication unit option.

If value F_{comb}/C > 0,4 then F_{max} is exceeded.



Note

- Take account of the general service life of lubricants.
- If other lubricants are used, this may lead to a reduction in the re-lubrication intervals, the achievable travel in short-stroke applications and the load capacities. Possible chemical interactions between the plastic materials, lubricants and preservative oils must also be taken into account.
- Do not use greases with solid particles such as graphite or MoS_2.
- If your application involves more demanding environmental requirements such as clean room, vacuum, food industry, increased exposure to fluids or aggressive media, extreme temperatures, please consult us. These situations must be investigated on a case by case basis and may require the use of a special lubricant.



L1017.F

Material
Hardened and ground steel.

Technical Notes
Needle roller linear guideways can take significantly higher loads than the same size standard (ball) linear guideways. Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1017.25 through to L1017.65). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips
These are very heavy duty needle roller rail carriages and can only be used with corresponding needle roller rails L1017. For standard linear guideways and carriages see part no. L1016.

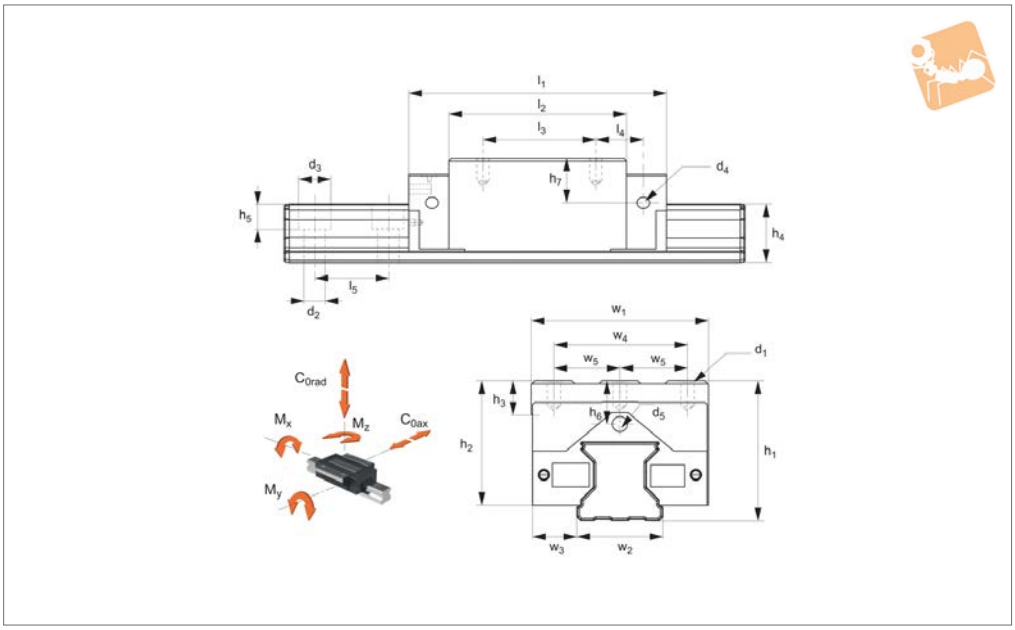
Order No.	Rail size	w_1	w_2	h_1	l_1	l_2	h_2	h_3	h_4	h_5	h_6	h_7	d_1	Weight g
L1017.F35	35	100	34	48	122	84	42	13	31	17.0	5	16.4	M10	1700
L1017.F45	45	120	45	60	156	110	52	15	38	19.0	6	21.8	M12	3400

Order No.	d_2	d_3	l_3	l_4	l_5	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ kN max.	Static load $C_{0rad\ \&\ ax}$ kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1017.F35	9	14	62	19	40	33	82	41	57	154	2742	1946	1946
L1017.F45	14	20	80	29.2	52.5	37.5	100	50	95.9	255	6350	4450	4450

Needle Roller - Unflanged Carriages

needle roller

L1017.U



Material

Hardened and ground steel.

Technical Notes

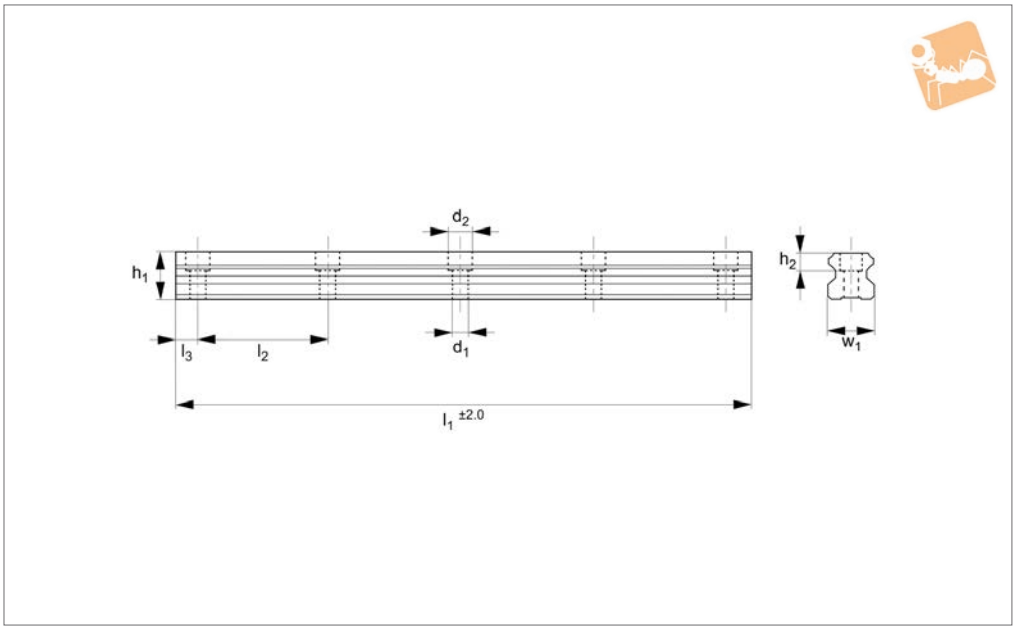
Needle roller linear guideways can take significantly higher loads than the same size standard (ball) linear guideways. Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1017.25 through to L1017.65). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips

These are very heavy duty needle roller rail carriages and can only be used with corresponding needle roller rails L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	w_2	h_1	l_1	l_2	h_2	h_3	h_4	h_5	h_6	h_7	d_1	d_2
L1017.U35	35	70	34	55	122	84	49	13	31	17.0	17	23.4	M8x16	9
L1017.U45	45	86	45	70	156	110	62	13	38	17.0	24.6	31.8	M10x20	14

Order No.	d_3	d_4	d_5	l_3	l_4	l_5	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ kN max.	Static load $C_{0rad\ \&\ ax}$ kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1017.U35	14	M6x8	M6x12	50	25	40	18	50	25	57	154	2742	1946	1946
L1017.U45	20	M6x8	M6x12	60	39.2	52.5	20.5	60	30	95.9	255	6350	4450	4450



L1017.25

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

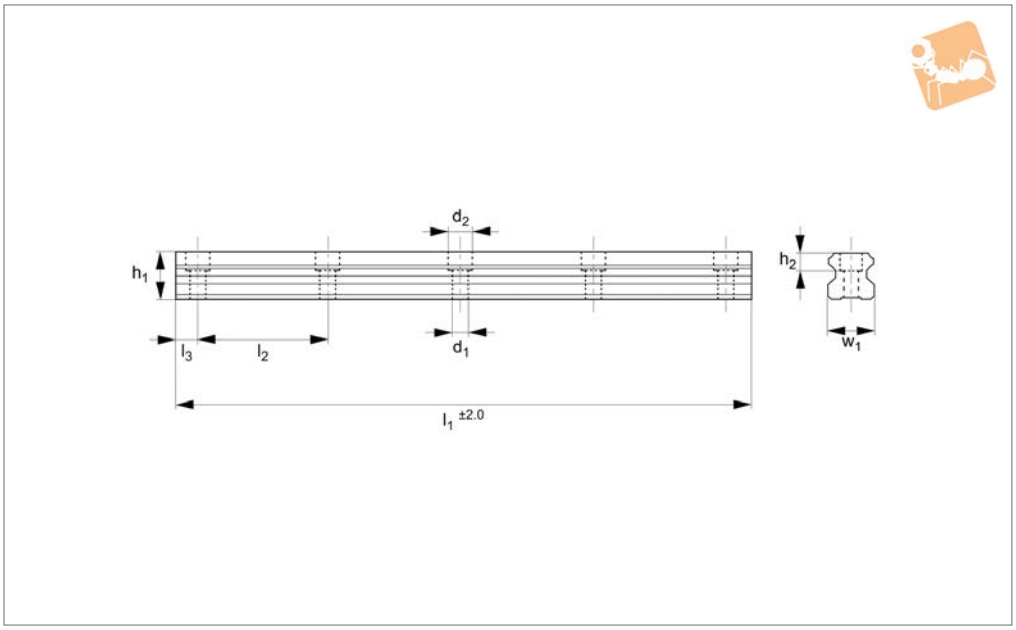
Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.25-0120	25	23	24.5	120	30	M6	9	7	11	14	0.41
L1017.25-0180	25	23	24.5	180	30	M6	9	7	11	14	0.61
L1017.25-0240	25	23	24.5	240	30	M6	9	7	11	14	0.82
L1017.25-0300	25	23	24.5	300	30	M6	9	7	11	14	1.02
L1017.25-0360	25	23	24.5	360	30	M6	9	7	11	14	1.22
L1017.25-0420	25	23	24.5	420	30	M6	9	7	11	14	1.43
L1017.25-0480	25	23	24.5	480	30	M6	9	7	11	14	1.63
L1017.25-0540	25	23	24.5	540	30	M6	9	7	11	14	1.84
L1017.25-0600	25	23	24.5	600	30	M6	9	7	11	14	2.04
L1017.25-0660	25	23	24.5	660	30	M6	9	7	11	14	2.24
L1017.25-0720	25	23	24.5	720	30	M6	9	7	11	14	2.45
L1017.25-0780	25	23	24.5	780	30	M6	9	7	11	14	2.65
L1017.25-0840	25	23	24.5	840	30	M6	9	7	11	14	2.86
L1017.25-0900	25	23	24.5	900	30	M6	9	7	11	14	3.06
L1017.25-0960	25	23	24.5	960	30	M6	9	7	11	14	3.26
L1017.25-1020	25	23	24.5	1020	30	M6	9	7	11	14	3.47
L1017.25-1080	25	23	24.5	1080	30	M6	9	7	11	14	3.67
L1017.25-1140	25	23	24.5	1140	30	M6	9	7	11	14	3.88
L1017.25-1200	25	23	24.5	1200	30	M6	9	7	11	14	4.08
L1017.25-1260	25	23	24.5	1260	30	M6	9	7	11	14	4.28
L1017.25-1320	25	23	24.5	1320	30	M6	9	7	11	14	4.49
L1017.25-1380	25	23	24.5	1380	30	M6	9	7	11	14	4.69
L1017.25-1440	25	23	24.5	1440	30	M6	9	7	11	14	4.90
L1017.25-1500	25	23	24.5	1500	30	M6	9	7	11	14	5.10
L1017.25-1560	25	23	24.5	1560	30	M6	9	7	11	14	5.30
L1017.25-1620	25	23	24.5	1620	30	M6	9	7	11	14	5.51
L1017.25-1680	25	23	24.5	1680	30	M6	9	7	11	14	5.71
L1017.25-1740	25	23	24.5	1740	30	M6	9	7	11	14	5.92
L1017.25-1800	25	23	24.5	1800	30	M6	9	7	11	14	6.12
L1017.25-1860	25	23	24.5	1860	30	M6	9	7	11	14	6.32
L1017.25-1920	25	23	24.5	1920	30	M6	9	7	11	14	6.53
L1017.25-1980	25	23	24.5	1980	30	M6	9	7	11	14	6.73

25mm Needle Roller Linear Rail

heavy duty

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.25-2040	25	23	24.5	2040	30	M6	9	7	11	14	6.94
L1017.25-2100	25	23	24.5	2100	30	M6	9	7	11	14	7.14
L1017.25-2160	25	23	24.5	2160	30	M6	9	7	11	14	7.34
L1017.25-2220	25	23	24.5	2220	30	M6	9	7	11	14	7.55
L1017.25-2280	25	23	24.5	2280	30	M6	9	7	11	14	7.75
L1017.25-2340	25	23	24.5	2340	30	M6	9	7	11	14	7.96
L1017.25-2400	25	23	24.5	2400	30	M6	9	7	11	14	8.16
L1017.25-2460	25	23	24.5	2460	30	M6	9	7	11	14	8.36
L1017.25-2520	25	23	24.5	2520	30	M6	9	7	11	14	8.57
L1017.25-2580	25	23	24.5	2580	30	M6	9	7	11	14	8.77
L1017.25-2640	25	23	24.5	2640	30	M6	9	7	11	14	8.98
L1017.25-2700	25	23	24.5	2700	30	M6	9	7	11	14	9.18
L1017.25-2760	25	23	24.5	2760	30	M6	9	7	11	14	9.38
L1017.25-2820	25	23	24.5	2820	30	M6	9	7	11	14	9.59
L1017.25-2880	25	23	24.5	2880	30	M6	9	7	11	14	9.79
L1017.25-2940	25	23	24.5	2940	30	M6	9	7	11	14	10.00
L1017.25-3000	25	23	24.5	3000	30	M6	9	7	11	14	10.20
L1017.25-3060	25	23	24.5	3060	30	M6	9	7	11	14	10.40
L1017.25-3120	25	23	24.5	3120	30	M6	9	7	11	14	10.61
L1017.25-3180	25	23	24.5	3180	30	M6	9	7	11	14	10.81
L1017.25-3240	25	23	24.5	3240	30	M6	9	7	11	14	11.02
L1017.25-3300	25	23	24.5	3300	30	M6	9	7	11	14	11.22
L1017.25-3360	25	23	24.5	3360	30	M6	9	7	11	14	11.42
L1017.25-3420	25	23	24.5	3420	30	M6	9	7	11	14	11.63
L1017.25-3480	25	23	24.5	3480	30	M6	9	7	11	14	11.83
L1017.25-3540	25	23	24.5	3540	30	M6	9	7	11	14	12.04
L1017.25-3600	25	23	24.5	3600	30	M6	9	7	11	14	12.24
L1017.25-3660	25	23	24.5	3660	30	M6	9	7	11	14	12.44
L1017.25-3720	25	23	24.5	3720	30	M6	9	7	11	14	12.65
L1017.25-3780	25	23	24.5	3780	30	M6	9	7	11	14	12.85
L1017.25-3840	25	23	24.5	3840	30	M6	9	7	11	14	13.06
L1017.25-3900	25	23	24.5	3900	30	M6	9	7	11	14	13.26
L1017.25-3960	25	23	24.5	3960	30	M6	9	7	11	14	13.46



L1017.35

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

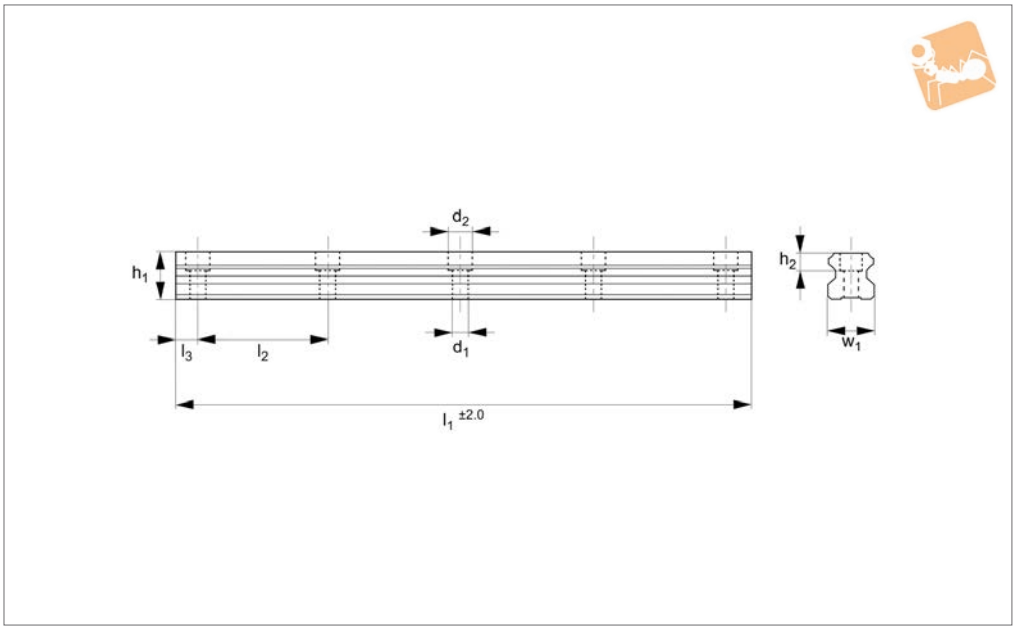
Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.35-0320	30	34	32	320	40	M8	17	9	15	20	18.4
L1017.35-0400	30	34	32	400	40	M8	17	9	15	20	23.0
L1017.35-0480	30	34	32	480	40	M8	17	9	15	20	27.6
L1017.35-0560	30	34	32	560	40	M8	17	9	15	20	32.1
L1017.35-0640	30	34	32	640	40	M8	17	9	15	20	36.7
L1017.35-0720	30	34	32	720	40	M8	17	9	15	20	41.3
L1017.35-0800	30	34	32	800	40	M8	17	9	15	20	45.9
L1017.35-0880	30	34	32	880	40	M8	17	9	15	20	50.5
L1017.35-0960	30	34	32	960	40	M8	17	9	15	20	55.1
L1017.35-1040	30	34	32	1040	40	M8	17	9	15	20	2.3
L1017.35-1120	30	34	32	1120	40	M8	17	9	15	20	6.9
L1017.35-1200	30	34	32	1200	40	M8	17	9	15	20	11.5
L1017.35-1280	30	34	32	1280	40	M8	17	9	15	20	16.1
L1017.35-1360	30	34	32	1360	40	M8	17	9	15	20	20.7
L1017.35-1440	30	34	32	1440	40	M8	17	9	15	20	25.3
L1017.35-1520	30	34	32	1520	40	M8	17	9	15	20	29.8
L1017.35-1600	30	34	32	1600	40	M8	17	9	15	20	34.4
L1017.35-1680	30	34	32	1680	40	M8	17	9	15	20	39.0
L1017.35-1760	30	34	32	1760	40	M8	17	9	15	20	43.6
L1017.35-1840	30	34	32	1840	40	M8	17	9	15	20	48.2
L1017.35-1920	30	34	32	1920	40	M8	17	9	15	20	52.8
L1017.35-2000	30	34	32	2000	40	M8	17	9	15	20	0.0
L1017.35-2080	30	34	32	2080	40	M8	17	9	15	20	4.6
L1017.35-2160	30	34	32	2160	40	M8	17	9	15	20	9.2
L1017.35-2240	30	34	32	2240	40	M8	17	9	15	20	13.8
L1017.35-2320	30	34	32	2320	40	M8	17	9	15	20	18.4
L1017.35-2400	30	34	32	2400	40	M8	17	9	15	20	23.0
L1017.35-2480	30	34	32	2480	40	M8	17	9	15	20	27.6
L1017.35-2560	30	34	32	2560	40	M8	17	9	15	20	32.1
L1017.35-2640	30	34	32	2640	40	M8	17	9	15	20	36.7
L1017.35-2720	30	34	32	2720	40	M8	17	9	15	20	41.3
L1017.35-2800	30	34	32	2800	40	M8	17	9	15	20	45.9

35mm Needle Roller Linear Rail

heavy duty

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.35-2880	30	34	32	2880	40	M8	17	9	15	20	50.5
L1017.35-2960	30	34	32	2960	40	M8	17	9	15	20	55.1
L1017.35-3040	30	34	32	3040	40	M8	17	9	15	20	2.3
L1017.35-3120	30	34	32	3120	40	M8	17	9	15	20	6.9
L1017.35-3200	30	34	32	3200	40	M8	17	9	15	20	11.5
L1017.35-3280	30	34	32	3280	40	M8	17	9	15	20	16.1
L1017.35-3360	30	34	32	3360	40	M8	17	9	15	20	20.7
L1017.35-3440	30	34	32	3440	40	M8	17	9	15	20	25.3
L1017.35-3520	30	34	32	3520	40	M8	17	9	15	20	29.8
L1017.35-3600	30	34	32	3600	40	M8	17	9	15	20	34.4
L1017.35-3680	30	34	32	3680	40	M8	17	9	15	20	39.0
L1017.35-3760	30	34	32	3760	40	M8	17	9	15	20	43.6
L1017.35-3840	30	34	32	3840	40	M8	17	9	15	20	48.2
L1017.35-3920	30	34	32	3920	40	M8	17	9	15	20	52.8
L1017.35-4000	30	34	32	4000	40	M8	17	9	15	20	229.6



L1017.45

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

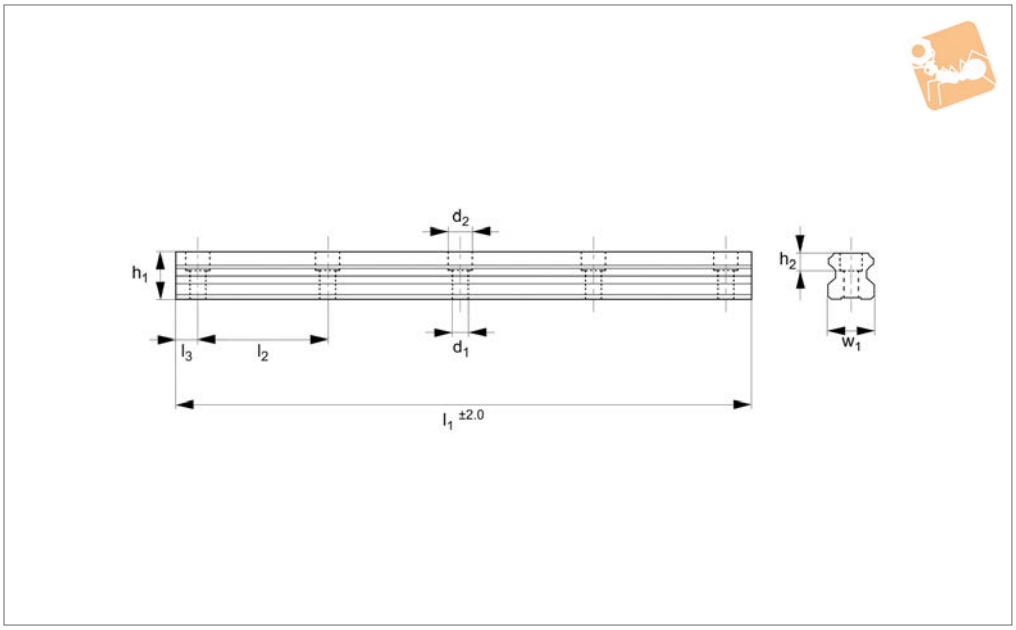
Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	h_1	l_1	l_2	For screw	h_2	d_1	d_2	l_3	Weight kg
L1017.45-0320	45	45	40	320	52.5	M12	17	14	20	25	3.42
L1017.45-0400	45	45	40	400	52.5	M12	17	14	20	25	4.28
L1017.45-0480	45	45	40	480	52.5	M12	17	14	20	25	5.14
L1017.45-0560	45	45	40	560	52.5	M12	17	14	20	25	5.99
L1017.45-0640	45	45	40	640	52.5	M12	17	14	20	25	6.85
L1017.45-0720	45	45	40	720	52.5	M12	17	14	20	25	7.70
L1017.45-0800	45	45	40	800	52.5	M12	17	14	20	25	8.56
L1017.45-0880	45	45	40	880	52.5	M12	17	14	20	25	9.42
L1017.45-0960	45	45	40	960	52.5	M12	17	14	20	25	10.27
L1017.45-1040	45	45	40	1040	52.5	M12	17	14	20	25	11.13
L1017.45-1120	45	45	40	1120	52.5	M12	17	14	20	25	11.98
L1017.45-1200	45	45	40	1200	52.5	M12	17	14	20	25	12.84
L1017.45-1280	45	45	40	1280	52.5	M12	17	14	20	25	13.70
L1017.45-1360	45	45	40	1360	52.5	M12	17	14	20	25	14.55
L1017.45-1440	45	45	40	1440	52.5	M12	17	14	20	25	15.41
L1017.45-1520	45	45	40	1520	52.5	M12	17	14	20	25	16.26
L1017.45-1600	45	45	40	1600	52.5	M12	17	14	20	25	17.12
L1017.45-1680	45	45	40	1680	52.5	M12	17	14	20	25	17.98
L1017.45-1760	45	45	40	1760	52.5	M12	17	14	20	25	18.83
L1017.45-1840	45	45	40	1840	52.5	M12	17	14	20	25	19.69
L1017.45-1920	45	45	40	1920	52.5	M12	17	14	20	25	20.54
L1017.45-2000	45	45	40	2000	52.5	M12	17	14	20	25	21.40
L1017.45-2080	45	45	40	2080	52.5	M12	17	14	20	25	22.26
L1017.45-2160	45	45	40	2160	52.5	M12	17	14	20	25	23.11
L1017.45-2240	45	45	40	2240	52.5	M12	17	14	20	25	23.97
L1017.45-2320	45	45	40	2320	52.5	M12	17	14	20	25	24.82
L1017.45-2400	45	45	40	2400	52.5	M12	17	14	20	25	25.68
L1017.45-2480	45	45	40	2480	52.5	M12	17	14	20	25	26.54
L1017.45-2560	45	45	40	2560	52.5	M12	17	14	20	25	27.39
L1017.45-2640	45	45	40	2640	52.5	M12	17	14	20	25	28.25
L1017.45-2720	45	45	40	2720	52.5	M12	17	14	20	25	29.10
L1017.45-2800	45	45	40	2800	52.5	M12	17	14	20	25	29.96

45mm Needle Roller Linear Rail

heavy duty

Order No.	Rail size	w_1	h_1	l_1	l_2	For screw	h_2	d_1	d_2	l_3	Weight kg
L1017.45-2880	45	45	40	2880	52.5	M12	17	14	20	25	30.82
L1017.45-2960	45	45	40	2960	52.5	M12	17	14	20	25	31.67
L1017.45-3040	45	45	40	3040	52.5	M12	17	14	20	25	32.53
L1017.45-3120	45	45	40	3120	52.5	M12	17	14	20	25	33.38
L1017.45-3200	45	45	40	3200	52.5	M12	17	14	20	25	34.24
L1017.45-3280	45	45	40	3280	52.5	M12	17	14	20	25	35.10
L1017.45-3360	45	45	40	3360	52.5	M12	17	14	20	25	35.95
L1017.45-3440	45	45	40	3440	52.5	M12	17	14	20	25	36.81
L1017.45-3520	45	45	40	3520	52.5	M12	17	14	20	25	37.66
L1017.45-3600	45	45	40	3600	52.5	M12	17	14	20	25	38.52
L1017.45-3680	45	45	40	3680	52.5	M12	17	14	20	25	39.38
L1017.45-3760	45	45	40	3760	52.5	M12	17	14	20	25	40.23
L1017.45-3840	45	45	40	3840	52.5	M12	17	14	20	25	41.09
L1017.45-3920	45	45	40	3920	52.5	M12	17	14	20	25	41.94
L1017.45-4000	45	45	40	4000	52.5	M12	17	14	20	25	42.80



L1017.55

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

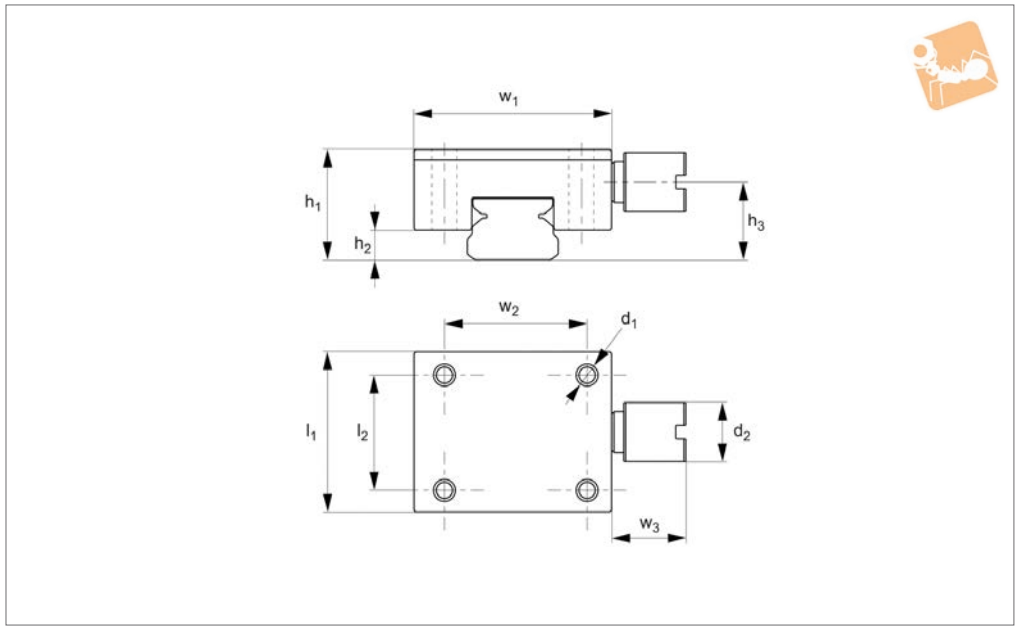
Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.55-0315	55	53	48	315	60	M14	20	16	24	29	4.79
L1017.55-0420	55	53	48	420	60	M14	20	16	24	29	6.38
L1017.55-0525	55	53	48	525	60	M14	20	16	24	29	7.98
L1017.55-0630	55	53	48	630	60	M14	20	16	24	29	9.58
L1017.55-0735	55	53	48	735	60	M14	20	16	24	29	11.17
L1017.55-0840	55	53	48	840	60	M14	20	16	24	29	12.77
L1017.55-0945	55	53	48	945	60	M14	20	16	24	29	14.36
L1017.55-0960	55	53	48	960	60	M14	20	16	24	29	14.59
L1017.55-1050	55	53	48	1050	60	M14	20	16	24	29	15.96
L1017.55-1155	55	53	48	1155	60	M14	20	16	24	29	17.56
L1017.55-1260	55	53	48	1260	60	M14	20	16	24	29	19.15
L1017.55-1365	55	53	48	1365	60	M14	20	16	24	29	20.75
L1017.55-1470	55	53	48	1470	60	M14	20	16	24	29	22.34
L1017.55-1575	55	53	48	1575	60	M14	20	16	24	29	23.94
L1017.55-1680	55	53	48	1680	60	M14	20	16	24	29	25.54
L1017.55-1785	55	53	48	1785	60	M14	20	16	24	29	27.13
L1017.55-1890	55	53	48	1890	60	M14	20	16	24	29	28.73
L1017.55-1995	55	53	48	1995	60	M14	20	16	24	29	30.32
L1017.55-2100	55	53	48	2100	60	M14	20	16	24	29	31.92
L1017.55-2205	55	53	48	2205	60	M14	20	16	24	29	33.52
L1017.55-2310	55	53	48	2310	60	M14	20	16	24	29	35.11
L1017.55-2415	55	53	48	2415	60	M14	20	16	24	29	36.71
L1017.55-2520	55	53	48	2520	60	M14	20	16	24	29	38.30
L1017.55-2625	55	53	48	2625	60	M14	20	16	24	29	39.90
L1017.55-2730	55	53	48	2730	60	M14	20	16	24	29	41.50
L1017.55-2835	55	53	48	2835	60	M14	20	16	24	29	43.09
L1017.55-2940	55	53	48	2940	60	M14	20	16	24	29	44.69
L1017.55-3045	55	53	48	3045	60	M14	20	16	24	29	46.28
L1017.55-3150	55	53	48	3150	60	M14	20	16	24	29	47.88
L1017.55-3255	55	53	48	3255	60	M14	20	16	24	29	49.48
L1017.55-3360	55	53	48	3360	60	M14	20	16	24	29	51.07
L1017.55-3465	55	53	48	3465	60	M14	20	16	24	29	52.67

55mm Needle Roller Linear Rail

heavy duty

Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.55-3570	55	53	48	3570	60	M14	20	16	24	29	54.26
L1017.55-3675	55	53	48	3675	60	M14	20	16	24	29	55.86
L1017.55-3780	55	53	48	3780	60	M14	20	16	24	29	57.46
L1017.55-3885	55	53	48	3885	60	M14	20	16	24	29	59.05
L1017.55-3990	55	53	48	3990	60	M14	20	16	24	29	60.65



L1010.CL

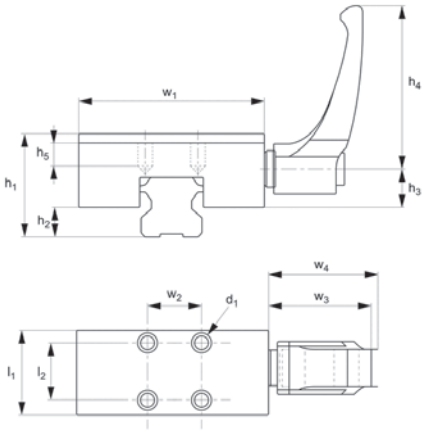
Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
The manual rail clamps are used alongside the rail carriges. Activating the clamping knob presses the clamp contact surfaces onto the rail, clamping it in place.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	l_2	w_2	w_3	d_1	d_2	Holding force kgf	Torque to Nm
L1010.CL07	L1010.07	8	12	17	2	4.3	8	12	7	M2	6	65	0.11
L1010.CL09	L1010.09	10	17	20	2.7	5.35	11	15	9	M3	8	100	0.17
L1010.CL12	L1010.12	13	19	27	3.5	7.15	13	20	10	M3	10	150	0.35
L1010.CL15	L1010.15	16	20	32	5	8.05	14	25	14	M3	12	180	0.75
L1012.CL14	L1012.14	9	12	25	3	4.3	8	19	6.65	M2	6	65	0.10
L1012.CL18	L1012.18	12	17	30	4.2	5.85	11	23	9	M3	8	100	0.17
L1012.CL24	L1012.24	14	19	40	4	7.65	13	30	10	M3	10	150	0.35
L1012.CL42	L1012.42	16	22	60	4.5	8.55	15	45	14.7	M4	12	180	0.75

Rail Clamp
manual

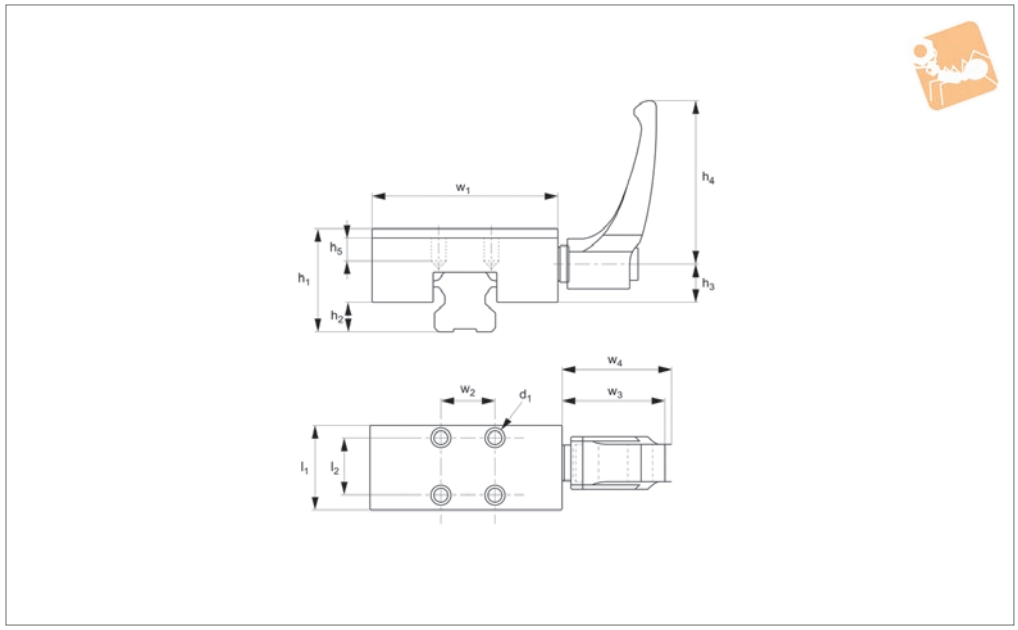
L1016.CL



Material
Aluminium body, steel contact faces.

Technical Notes
The manual rail clamps are used in conjunction with the rail carriages L1016.F and L1016.U (flanged and unflanged). By adjusting the clamping lever, the contact sections are pressed into contact with the rail, clamping the carriage in place.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	h_4	l_2	w_2	w_3	w_4	d_1	Holding force N	Torque to Nm
L1016.CL15-24	15	24	25	47	4.5	12.5	44	17	17	30.5	33.5	M 4	1200	5
L1016.CL15-28	15	28	25	47	4.5	12.5	44	17	17	30.5	33.5	M 4	1200	5
L1016.CL20-28	20	28	24	60	8.0	13.0	63	15	15	38.5	41.5	M 5	1200	7
L1016.CL20-30	20	30	24	60	8.0	13.0	63	15	15	38.5	41.5	M 5	1200	7
L1016.CL25-33	25	33	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL25-36	25	36	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL25-40	25	40	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL30-42	30	42	39	90	12.0	21.5	78	22	22	46.5	50.5	M 6	2000	15
L1016.CL35-48	35	48	39	100	13.0	21.5	78	24	24	46.5	50.5	M 8	2000	15
L1016.CL45-60	45	60	44	120	12.0	26.5	78	26	26	46.5	50.5	M10	2000	15
L1016.CL55-70	55	70	49	140	17.0	31.0	95	30	30	56.5	61.5	M14	2000	22



L1018.CL

Material
Aluminium body, plastic contact faces.

Technical Notes
By adjusting the clamping lever, the contact sections are pressed into contact with the rail, clamping the carriage in place.
Suitable for our aluminium linear rails L1018.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	h_4	l_2	w_2	w_3	w_4	d_1	Holding force N	Torque to Nm max.
L1018.CL15-24	15	24	20	34	4.5	12.9	40	10	10	29.9	33.3	M 3	130	3
L1018.CL20-30	20	30	24	44	6.0	16.0	40	12	12	29.9	33.4	M 4	250	3
L1018.CL25-36	25	36	30	48	7.0	19.6	44	15	15	29.8	33.3	M 5	330	3