

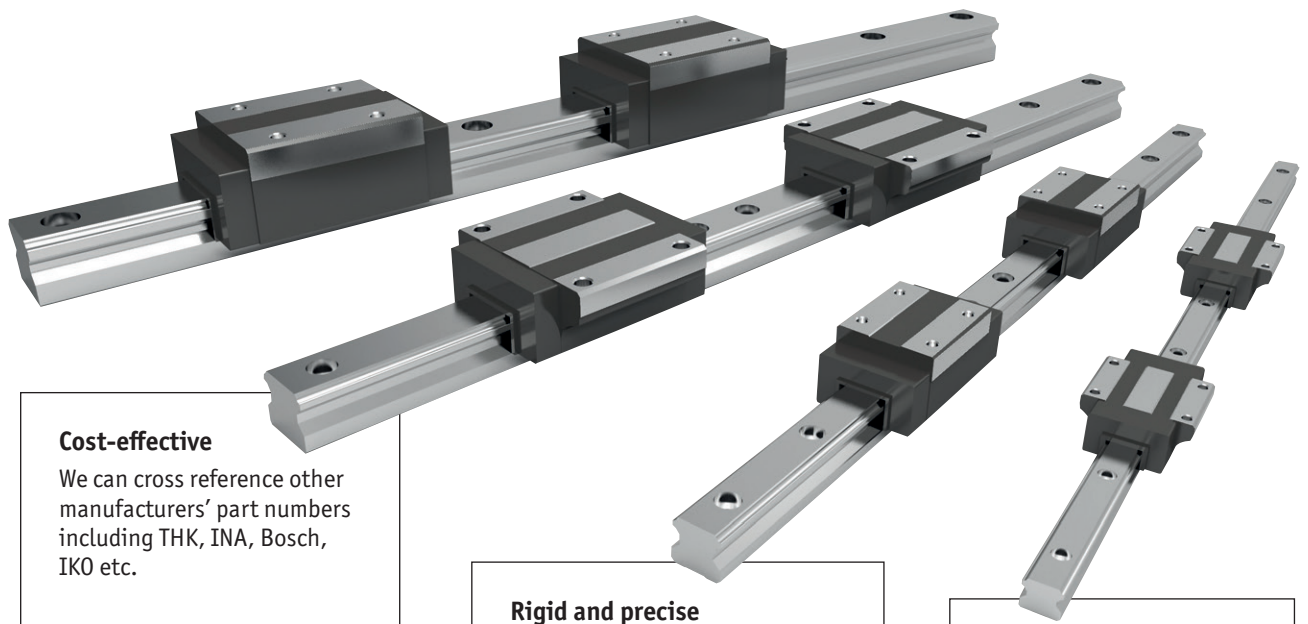


L1016 Linear guideways

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.

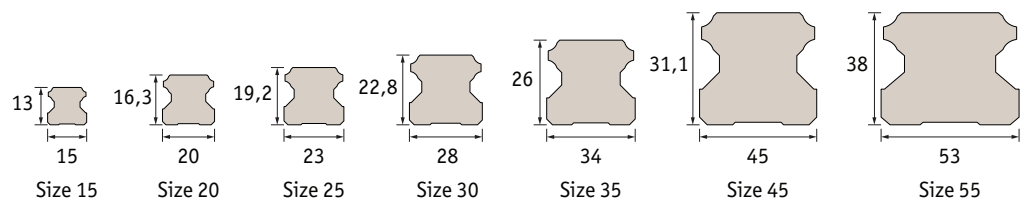
Rigid and precise

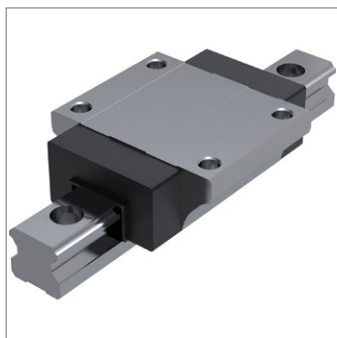
- High load rating.
- High moment load capacity.

Stocked

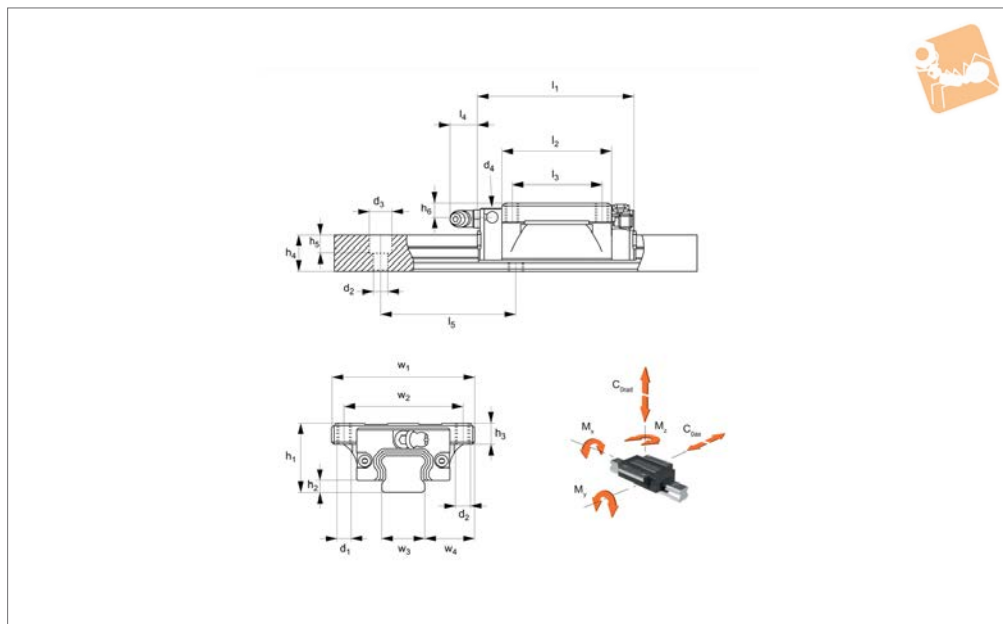
7 rail profiles ready for same day despatch. Lengths up to 4 metres.

Rail sizes





L1016.F



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

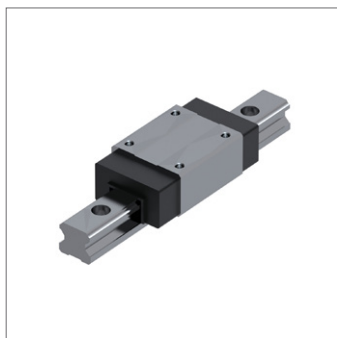
Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad \& ax}$ kN	Static load $C_{Orad \& ax}$ kN
L1016.F15	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F15-L	60	7.5	M3 x 0,5	166	171	171	14.12	24.05
L1016.F20	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F20-L	60	9.5	M6 x 1,0	376	366	366	23.30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



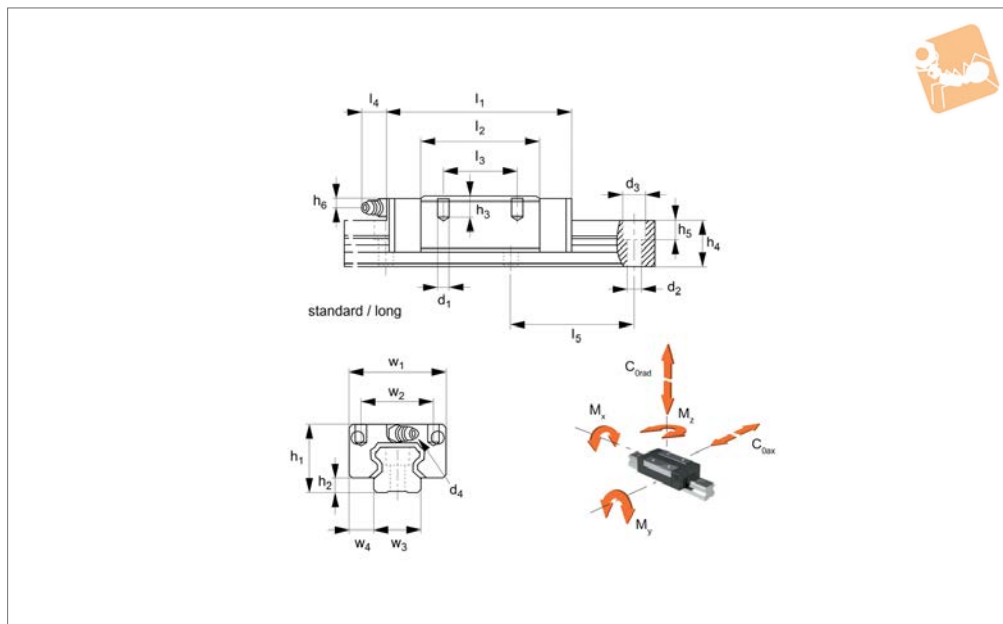
Flanged Carriages - Standard with retained ball cage

Linear Guide-
ways

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



L1016.U



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 ($0,02 \times$ 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 $C_{Orad \& ax}$ 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



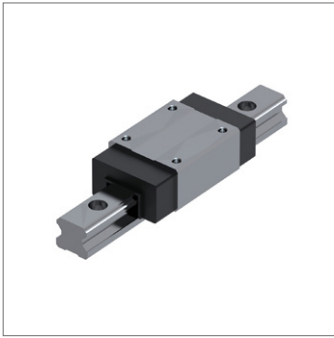
Unflanged Carriages - Standard with retained ball cage

Linear Guide-
ways

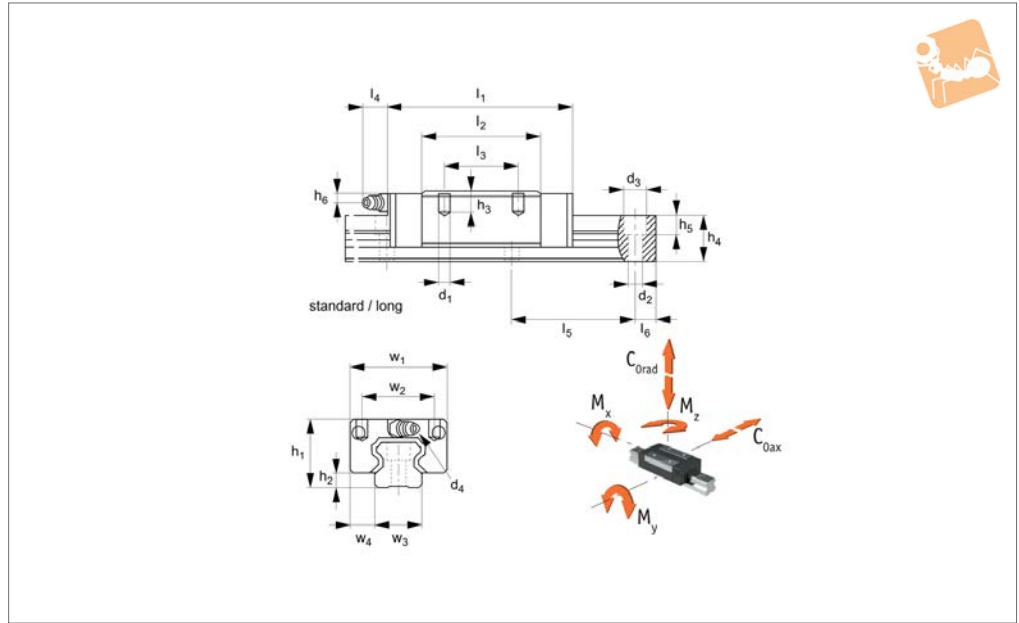
Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad \& ax}$ kN	Static load $C_{0rad \& ax}$ kN
L1016.U35-XL	80	14.0	M6 x 1,0	2020	2330	2330	73.29	127.68
L1016.U45	105	20.0	M8 x 1,25	2353	1559	1559	73.14	111.30
L1016.U45-L	105	20.0	M8 x 1,25	2798	2170	2170	86.99	132.39
L1016.U45-XL	105	20.0	M8 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



LINEAR GUIDEWAYS



L1016.UL



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

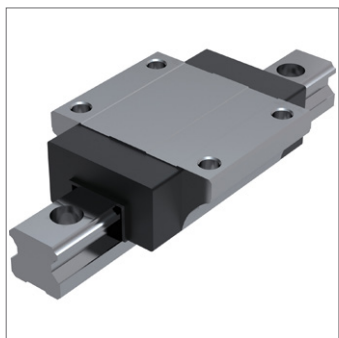
Order No.	l_5	l_6	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad \& ax}$ kN	Static load $C_{0rad \& ax}$ kN
L1016.UL15-S	60	20.0	7.5	M3x0,5	69	32	32	5.81	9.90
L1016.UL15	60	20.0	7.5	M3x0,5	137	120	120	11.67	19.90
L1016.UL15-L	60	20.0	7.5	M3x0,5	166	171	171	14.12	24.05
L1016.UL20-S	60	20.0	9.5	M6x1,0	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



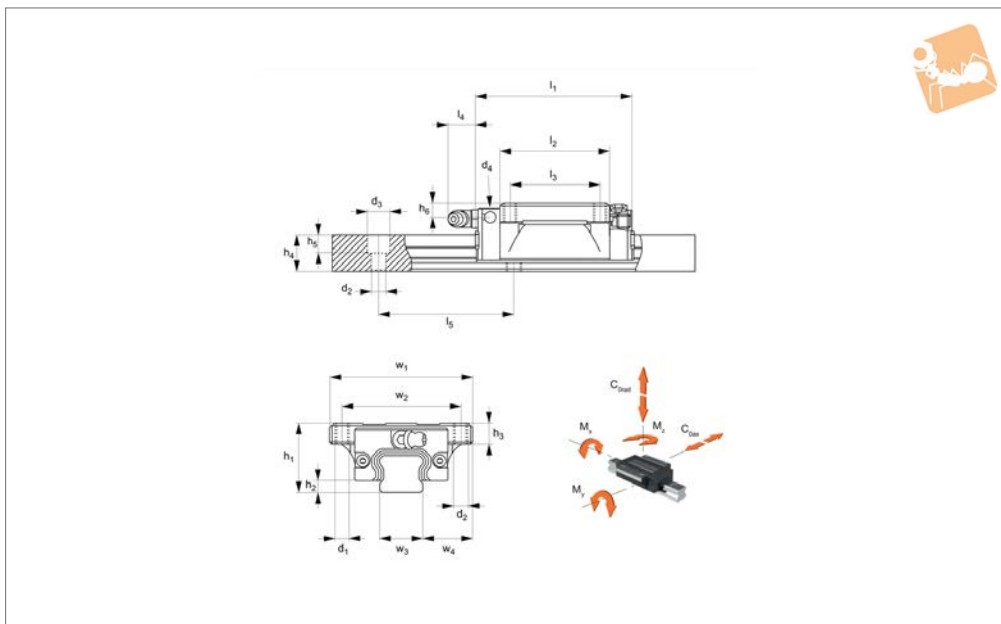
Unflanged Carriages - Low with retained ball cage

Linear Guide-
ways

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



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 ($0,02 \times$ dynamic load capacity). Other preloads available on request.

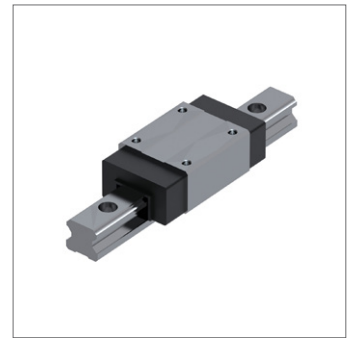
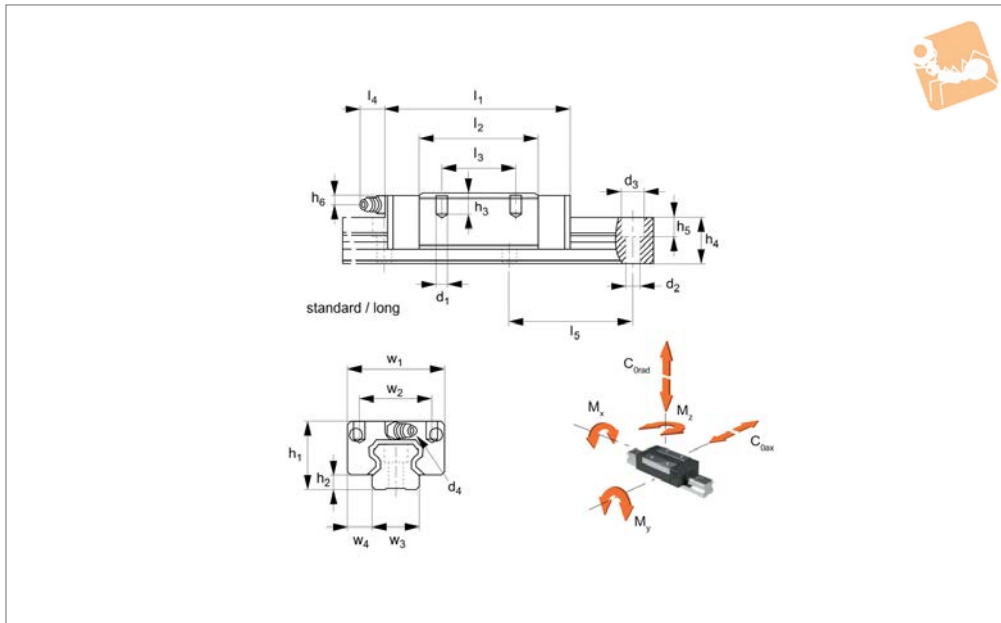
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight g
L1016.F15-NC	15	58.6	24	40.2	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	210
L1016.F20-NC	20	70.1	30	48.5	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	400
L1016.F25-NC	25	79.2	36	57.5	70	45	5.8	10.1	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



Unflanged Carriages - Standard no ball cage

Linear Guide-
ways



L1016.U-NC

LINEAR GUIDEWAYS

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

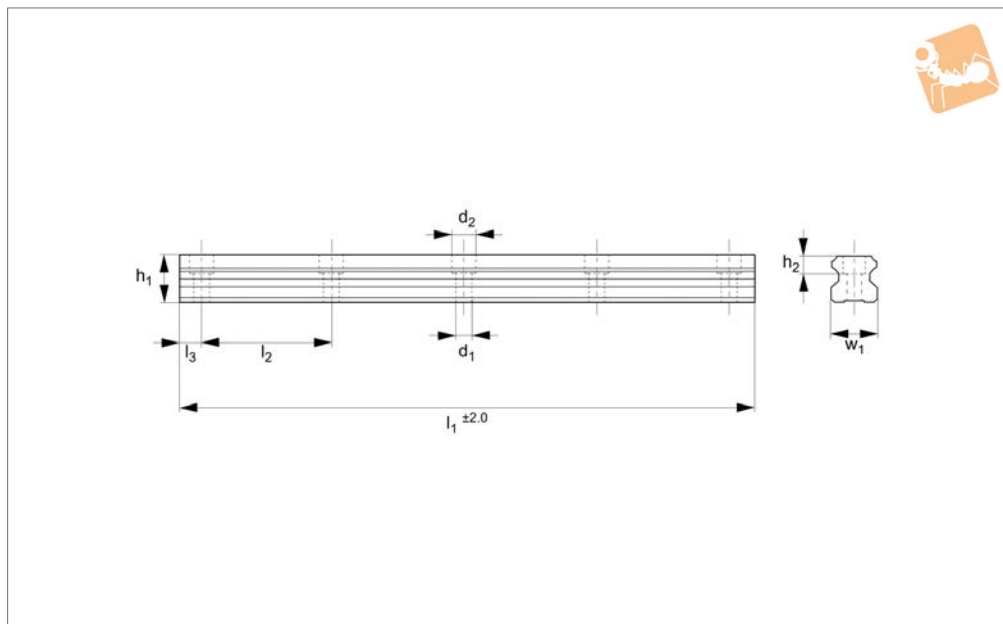
preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

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 $C_{Orad \& ax}$ 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



L1016.15



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



15mm Linear Guide Rail standard

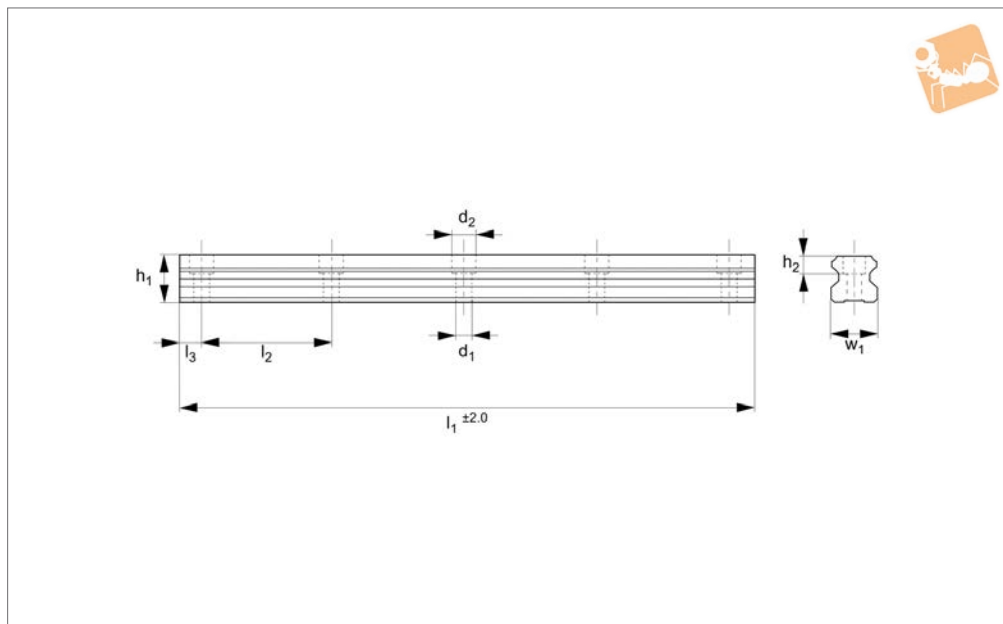
Linear Guide-
ways

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

LINEAR GUIDEWAYS



L1016.20



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



20mm Linear Guide Rail

standard

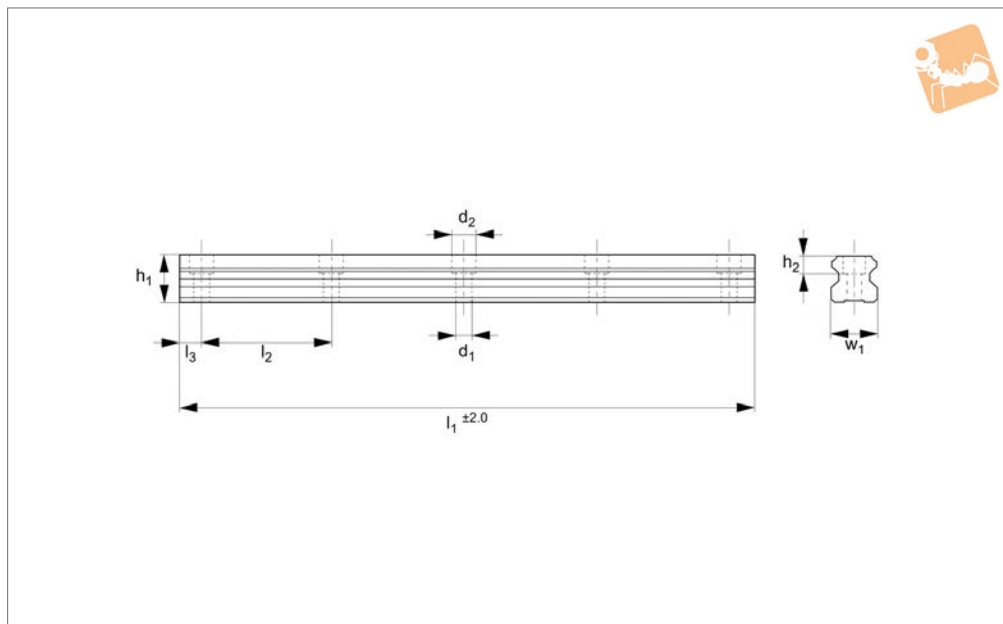
Linear Guide-ways

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

LINEAR GUIDEWAYS



L1016.25



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



25mm Linear Guide Rail standard

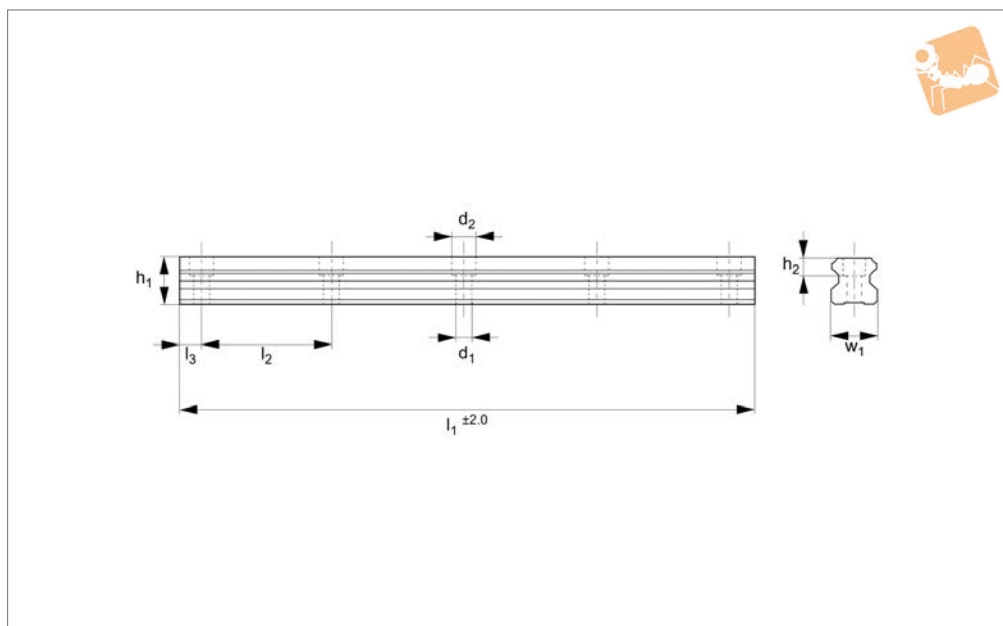
Linear Guide-
ways

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

LINEAR GUIDEWAYS



L1016.30



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



30mm Linear Guide Rail

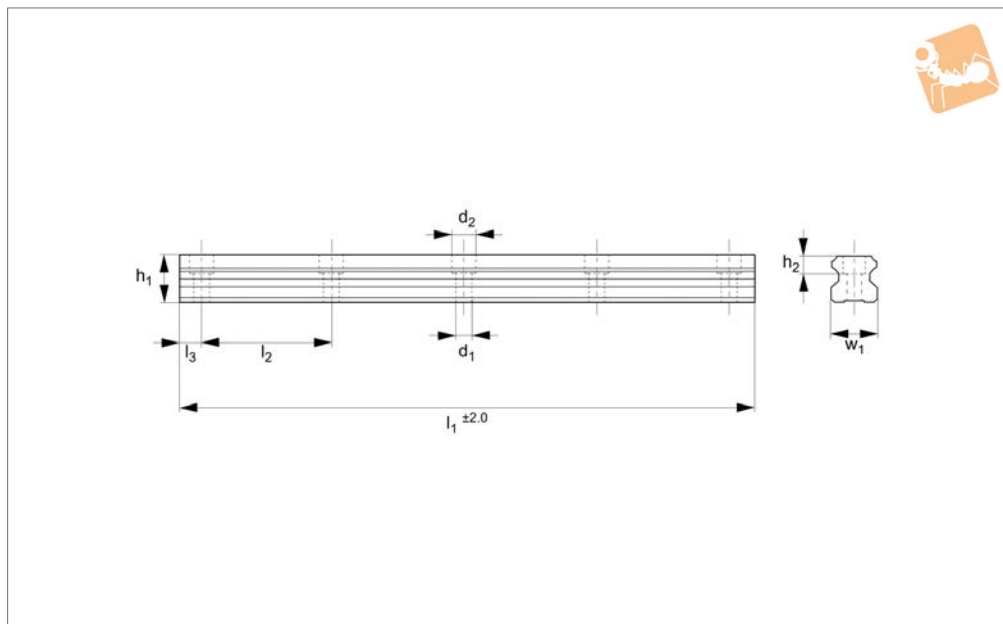
standard

Linear Guide-
ways

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



L1016.35



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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

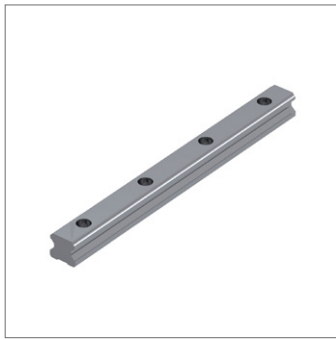
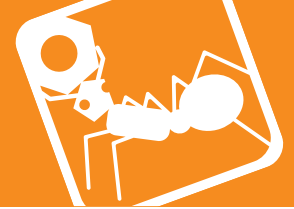


35mm Linear Guide Rail

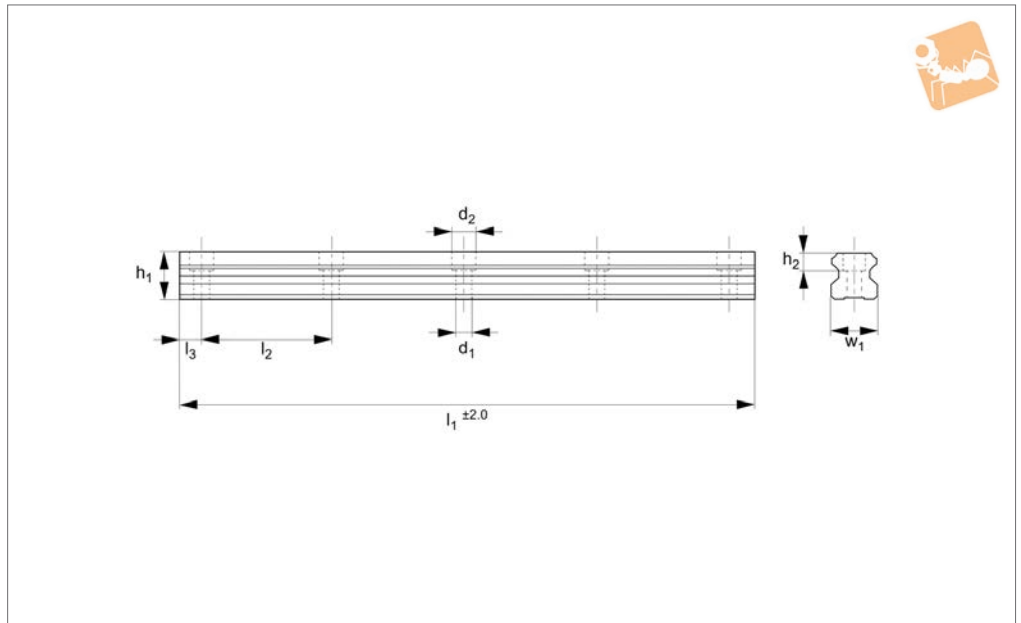
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Linear Guide-
ways

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



L1016.45



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



45mm Linear Guide Rail standard

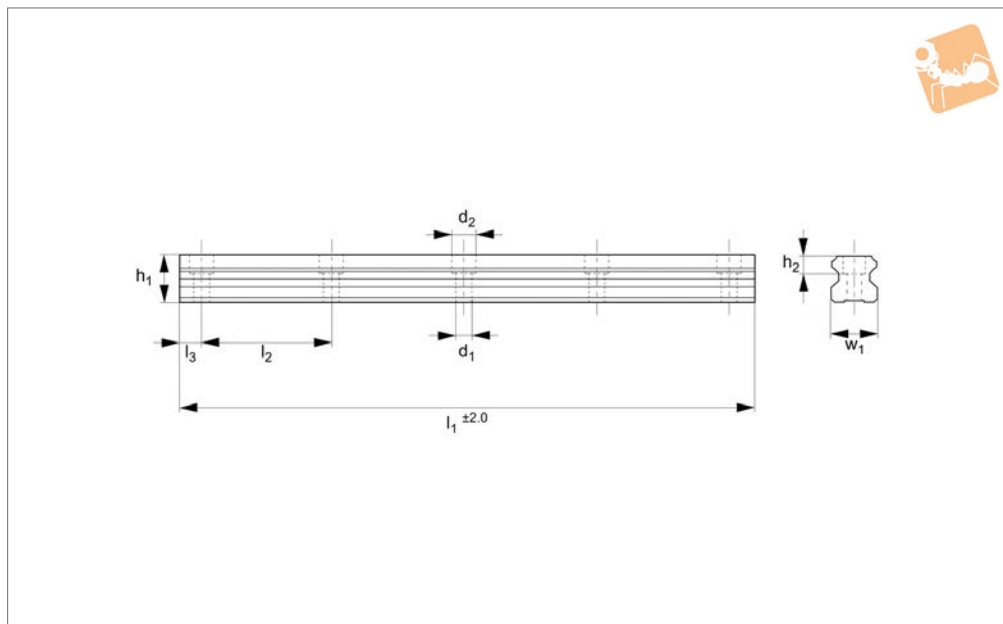


Linear Guide-
ways

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



L1016.55



Material

Hardened and ground steel (typically 60 HRc).

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.

Technical Notes

For carriages to suit the required load see

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



15mm Linear Guide Rail

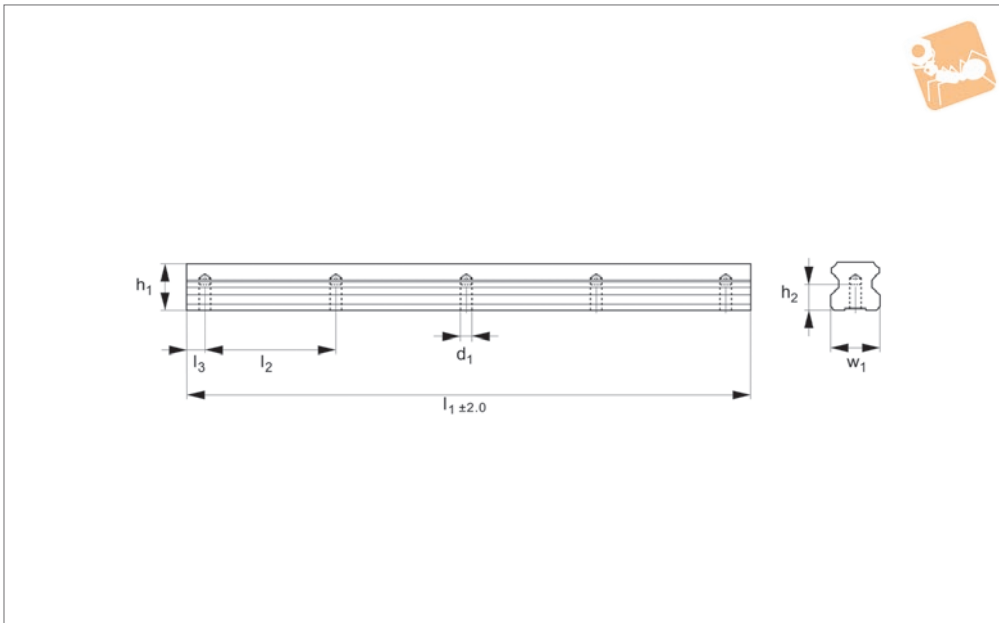
rear fixing

Linear Guide-ways



L1016.RF15

LINEAR GUIDEWAYS



Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 1,4 Kg/m.

Technical Notes

For carriages to suit the required load see

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



LINEAR GUIDEWAYS

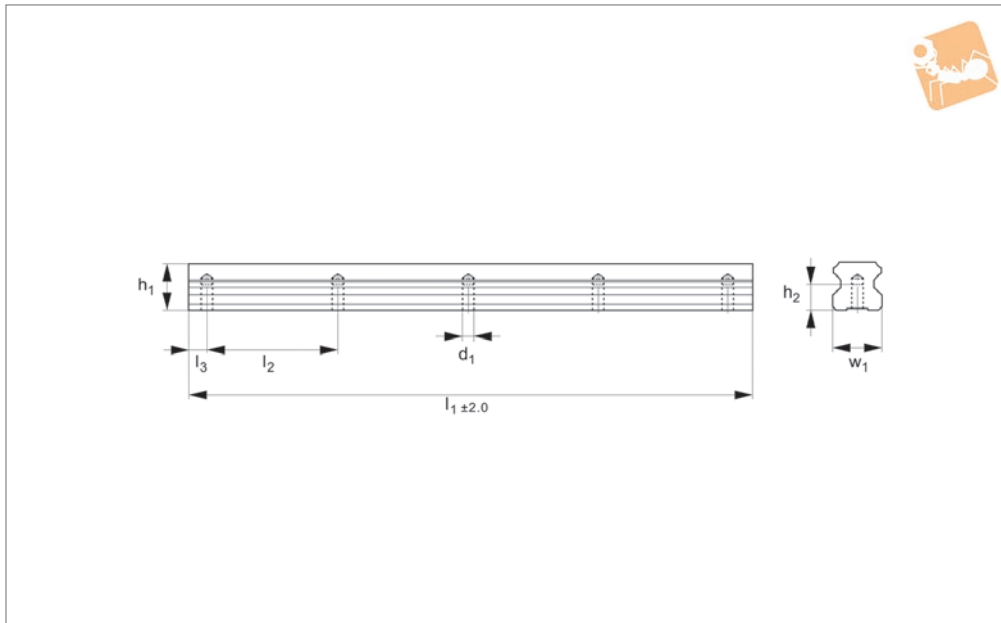
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF15-2080	15	2080	13.0	60	15	20	8	M5	2.91
L1016.RF15-2140	15	2140	13.0	60	15	20	8	M5	3.00
L1016.RF15-2200	15	2220	13.0	60	15	20	8	M5	3.08
L1016.RF15-2260	15	2260	13.0	60	15	20	8	M5	3.16
L1016.RF15-2320	15	2320	13.0	60	15	20	8	M5	3.25
L1016.RF15-2380	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



20mm Linear Guide Rail

rear fixing

Linear Guide-ways



L1016.RF20

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 2,6 Kg/m.

Technical Notes

For carriages to suit the required load see

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



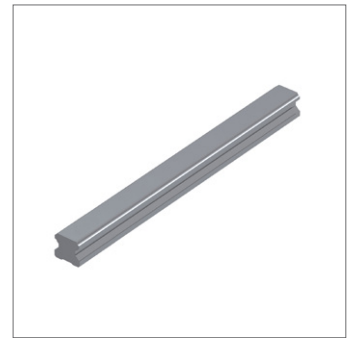
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF20-2080	20	2080	16.3	60	20	20	10	M6	5.41
L1016.RF20-2140	20	2140	16.3	60	20	20	10	M6	5.56
L1016.RF20-2200	20	2200	16.3	60	20	20	10	M6	5.72
L1016.RF20-2260	20	2260	16.3	60	20	20	10	M6	5.88
L1016.RF20-2320	20	2320	16.3	60	20	20	10	M6	6.03
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



25mm Linear Guide Rail

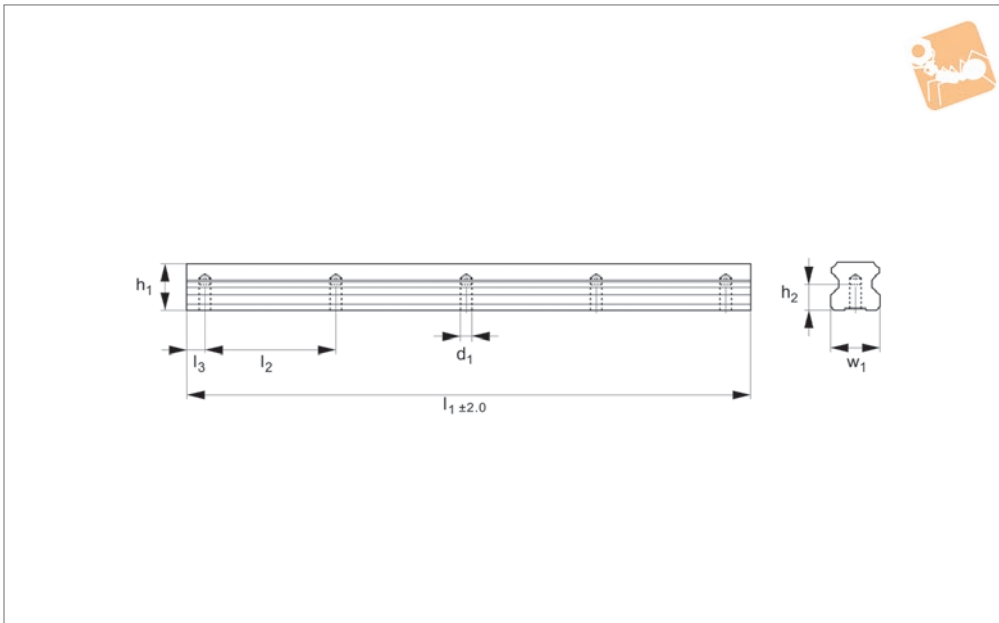
rear fixing

Linear Guide-ways



L1016.RF25

LINEAR GUIDEWAYS



Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 3,6 Kg/m.

Technical Notes

For carriages to suit the required load see

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



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



30mm Linear Guide Rail

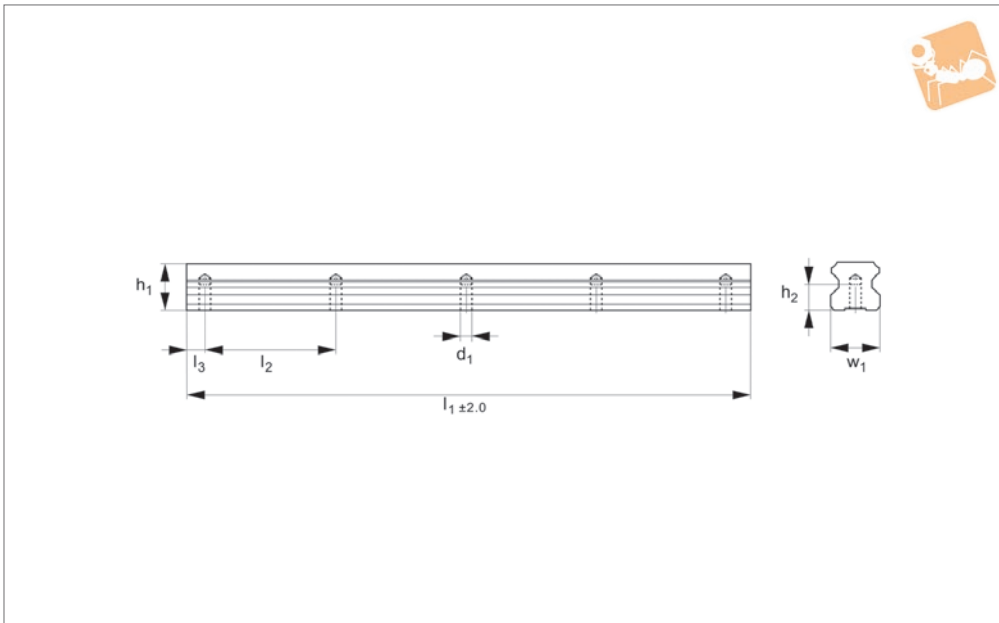
rear fixing

Linear Guide-ways



L1016.RF30

LINEAR GUIDEWAYS



Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 5,2 Kg/m.

Technical Notes

For carriages to suit the required load see

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



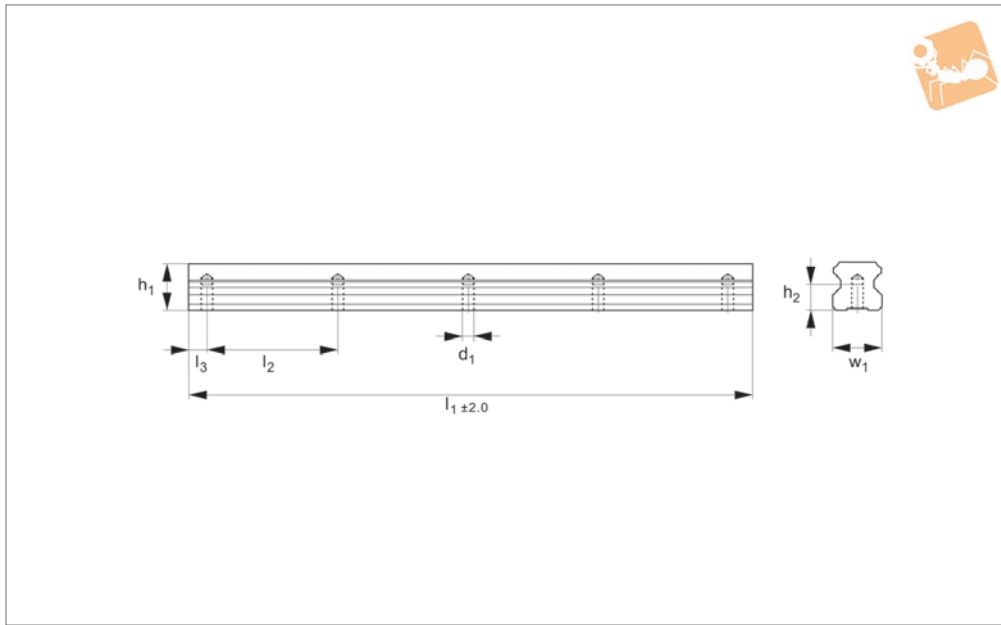
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF30-2760	30	2760	22.8	80	28	20	15	M8	14.35
L1016.RF30-2840	30	2840	22.8	80	28	20	15	M8	14.77
L1016.RF30-2920	30	2920	22.8	80	28	20	15	M8	15.18
L1016.RF30-3000	30	3000	22.8	80	28	20	15	M8	15.60
L1016.RF30-3080	30	3080	22.8	80	28	20	15	M8	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



35mm Linear Guide Rail

rear fixing

Linear Guide-ways



L1016.RF35

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 7,2 Kg/m.

Technical Notes

For carriages to suit the required load see

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



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



45mm Linear Guide Rail

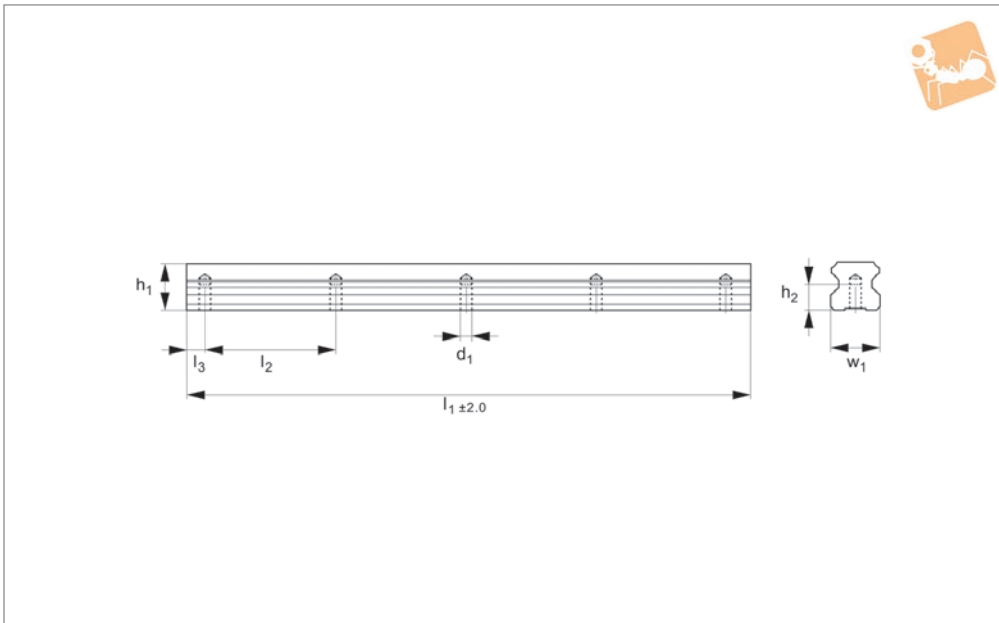
rear fixing

Linear Guide-ways



L1016.RF45

LINEAR GUIDEWAYS



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

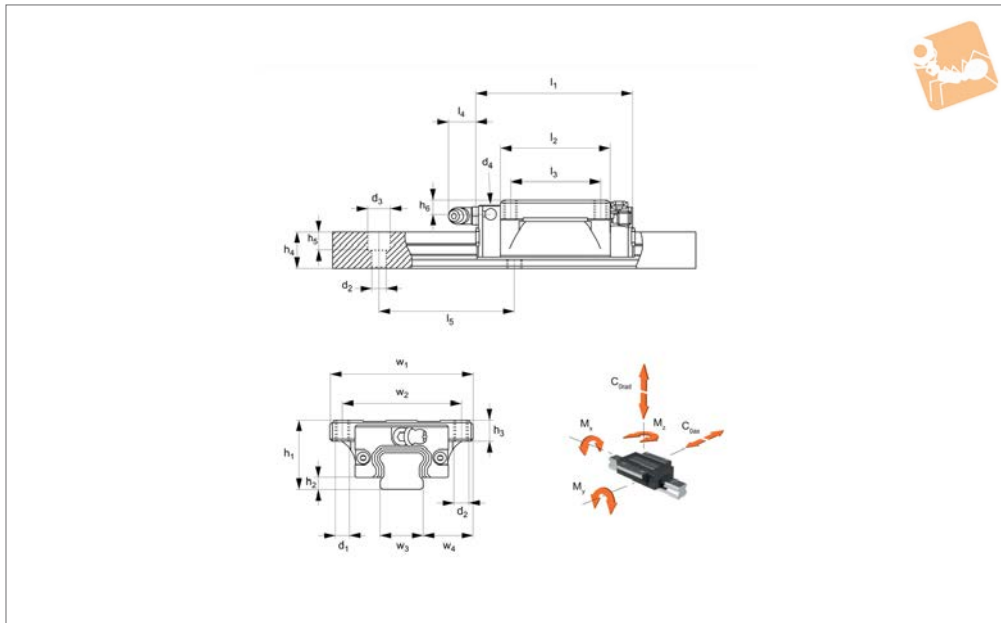


Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF45-3615	45	3615	31.1	105	45	22.5	24	M12	44.46
L1016.RF45-3720	45	3720	31.1	105	45	22.5	24	M12	45.76
L1016.RF45-3825	45	3825	31.1	105	45	22.5	24	M12	47.05
L1016.RF45-3930	45	3930	31.1	105	45	22.5	24	M12	48.34
L1016.RF45-4000	45	4000	31.1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



Flanged Carriages - Standard blackened

Linear Guideways



L1016.F-BC

LINEAR GUIDEWAYS

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 K₀ (no

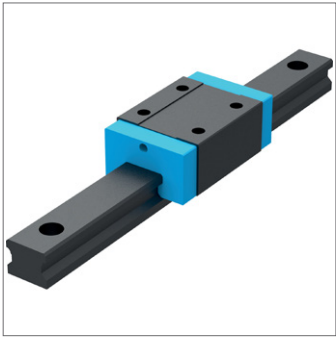
preload) or K₁ (0,02 x dynamic load capacity). Other preloads available on request.

Tips

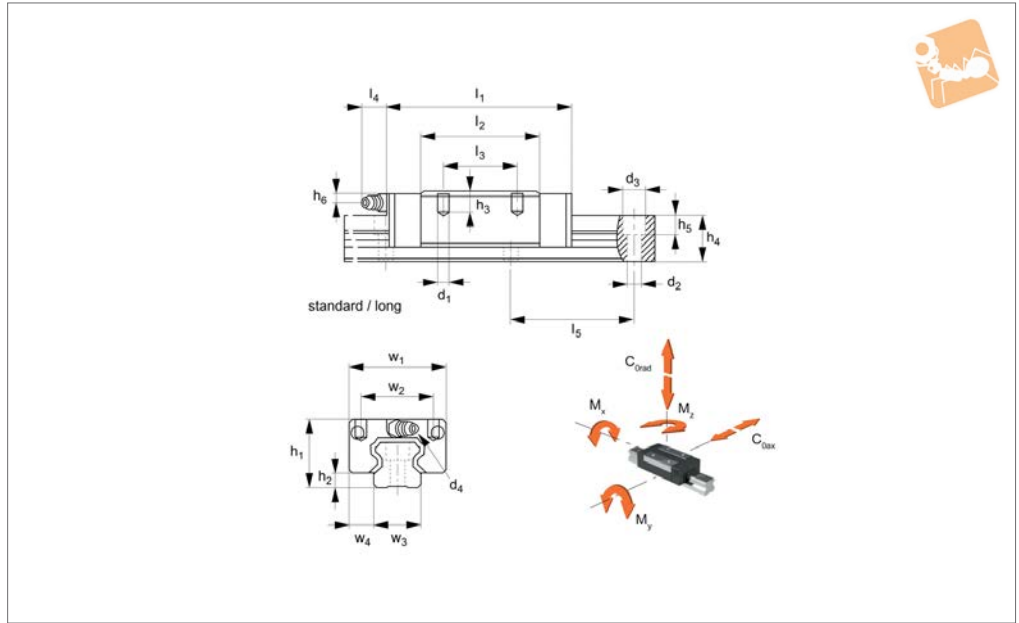
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

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



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

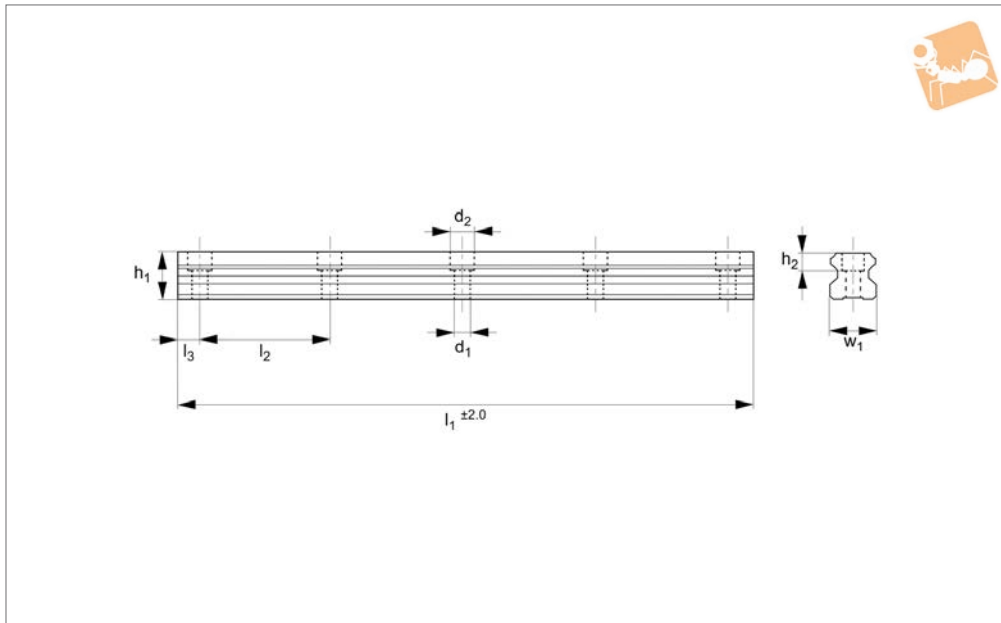
Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad \& ax}$ kN	Static load $C_{0rad \& ax}$ kN
L1016.U15-BC	60	7.5	M 3x0,5	137	120	120	11.67	19.90
L1016.U20-BC	60	9.5	M 6x1,0	289	224	224	17.98	30.96
L1016.U20-L-BC	60	9.5	M 6x1,0	376	366	366	23.30	40.11
L1016.U25-BC	60	11.0	M 6x1,0	447	358	358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



15mm Linear Guide Rail

standard, blackened

Linear Guide-ways



L1016.BL15

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC). Black oxide.

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.

Technical Notes

For carriages to suit the required load see

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



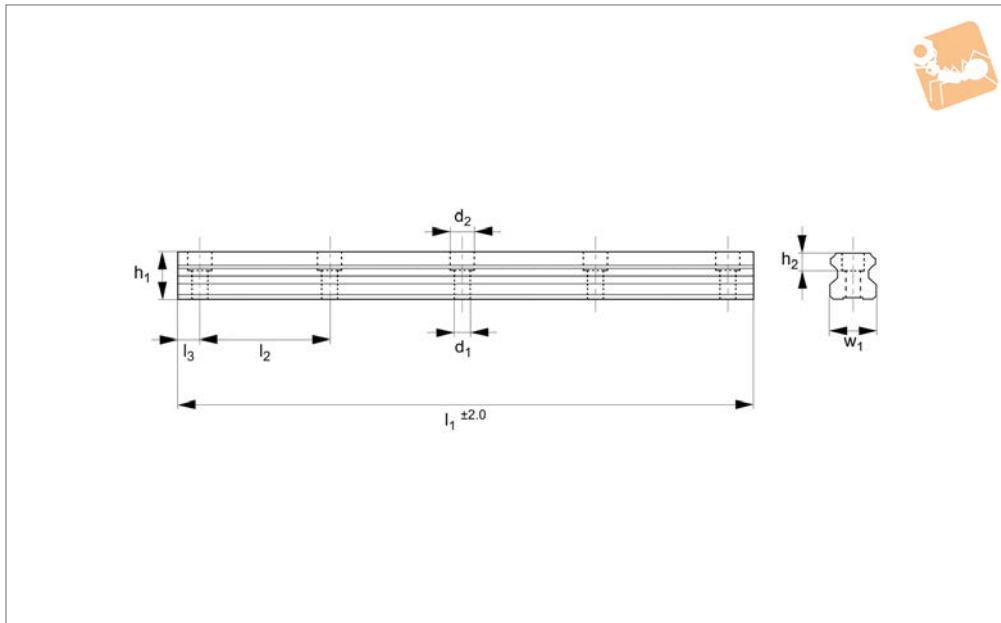
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL15-2080	15	2080	13	60	15	20	6.0	4.5	7.5	M 4	2.91
L1016.BL15-2140	15	2140	13	60	15	20	6.0	4.5	7.5	M 4	3.00
L1016.BL15-2200	15	2220	13	60	15	20	6.0	4.5	7.5	M 4	3.08
L1016.BL15-2260	15	2260	13	60	15	20	6.0	4.5	7.5	M 4	3.16
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



20mm Linear Guide Rail

standard, blackened

Linear Guide-ways



L1016.BL20

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC). Black oxide.

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.

Technical Notes

For carriages to suit the required load see

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



LINEAR GUIDEWAYS

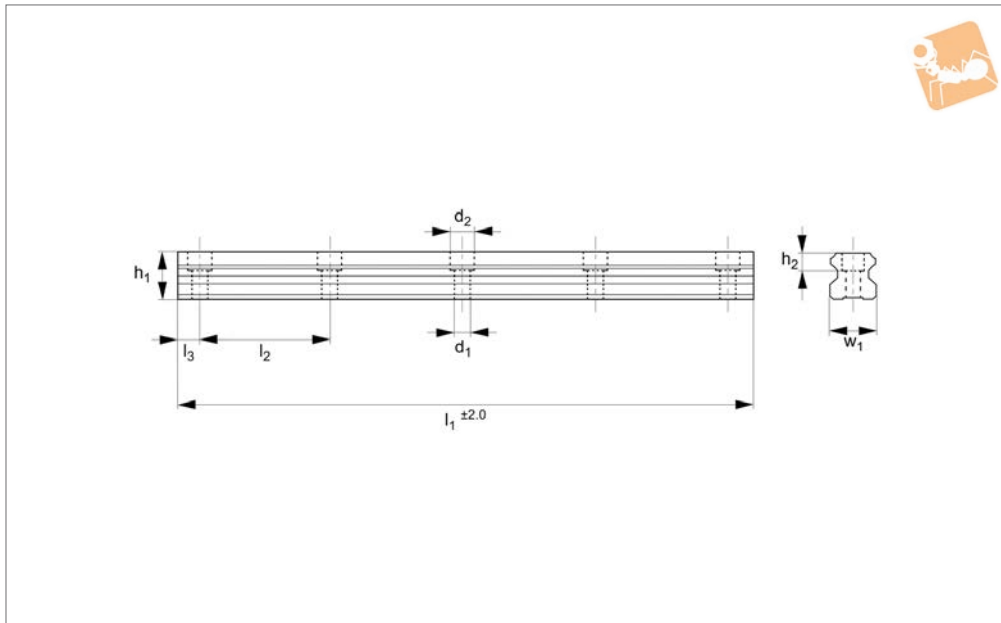
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL20-2080	20	2080	16.3	60	20	20	8.5	6	9.5	M 5	5.41
L1016.BL20-2140	20	2140	16.3	60	20	20	8.5	6	9.5	M 5	5.56
L1016.BL20-2200	20	2200	16.3	60	20	20	8.5	6	9.5	M 5	5.72
L1016.BL20-2260	20	2260	16.3	60	20	20	8.5	6	9.5	M 5	5.88
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



25mm Linear Guide Rail

standard, blackened

Linear Guide-ways



L1016.BL25

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC). Black oxide.

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.

Technical Notes

For carriages to suit the required load see

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



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



15mm Linear Guide Rail

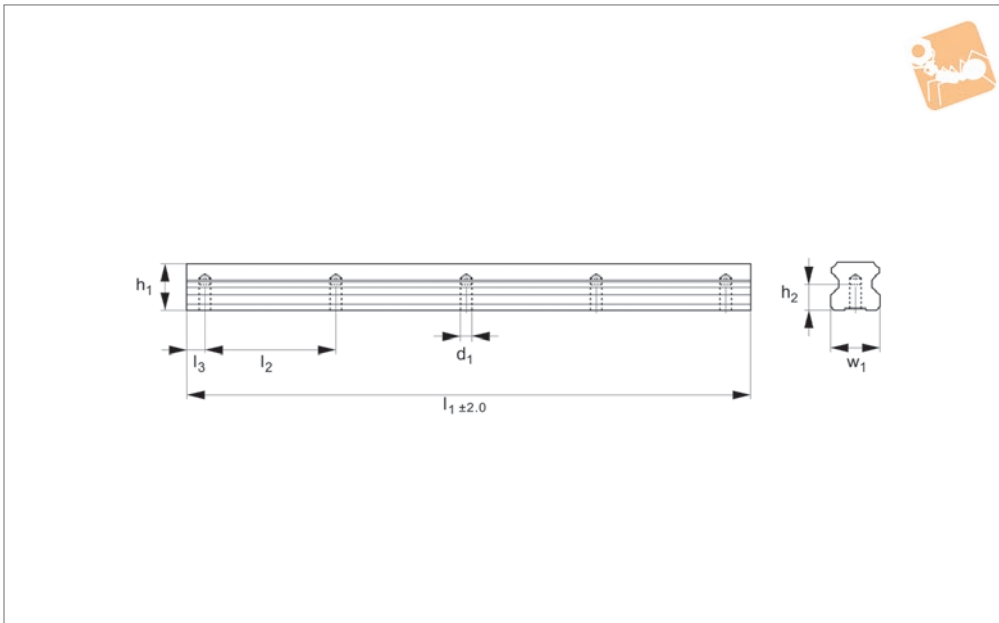
rear fixing, blackened

Linear Guide-ways



L1016.BRF15

LINEAR GUIDEWAYS



Material

Hardened and ground steel (typically 60 HRC). Black Oxide

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 1,4 Kg/m.

Technical Notes

For carriages to suit the required load see

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



LINEAR GUIDEWAYS

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



20mm Linear Guide Rail

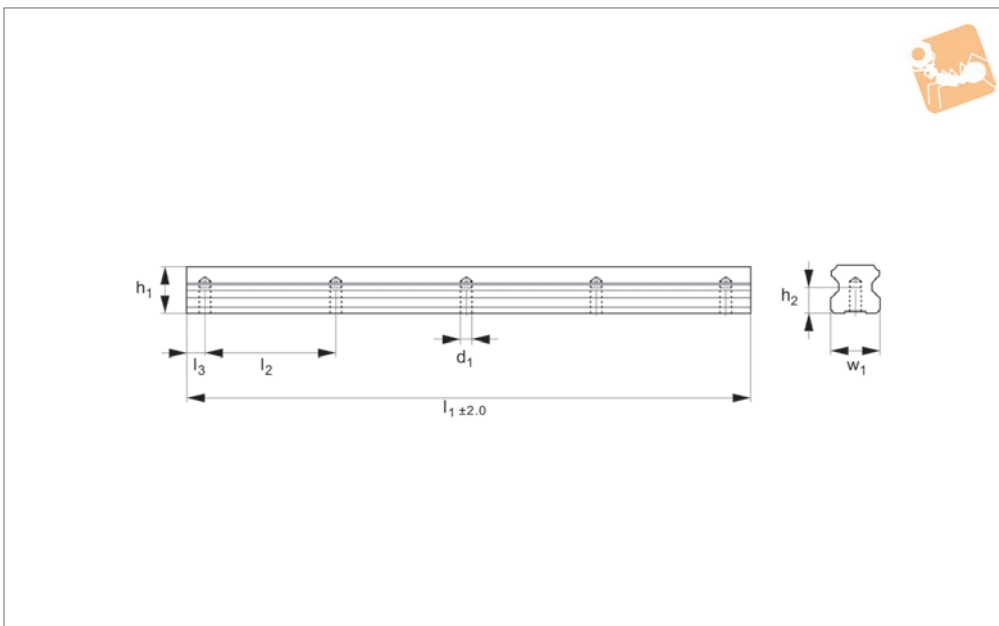
rear fixing, blackened

Linear Guide-ways



L1016.BRF20

LINEAR GUIDEWAYS



Material

Hardened and ground steel (typically 60 HRC). Black Oxide

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 2,6 Kg/m.

Technical Notes

For carriages to suit the required load see

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



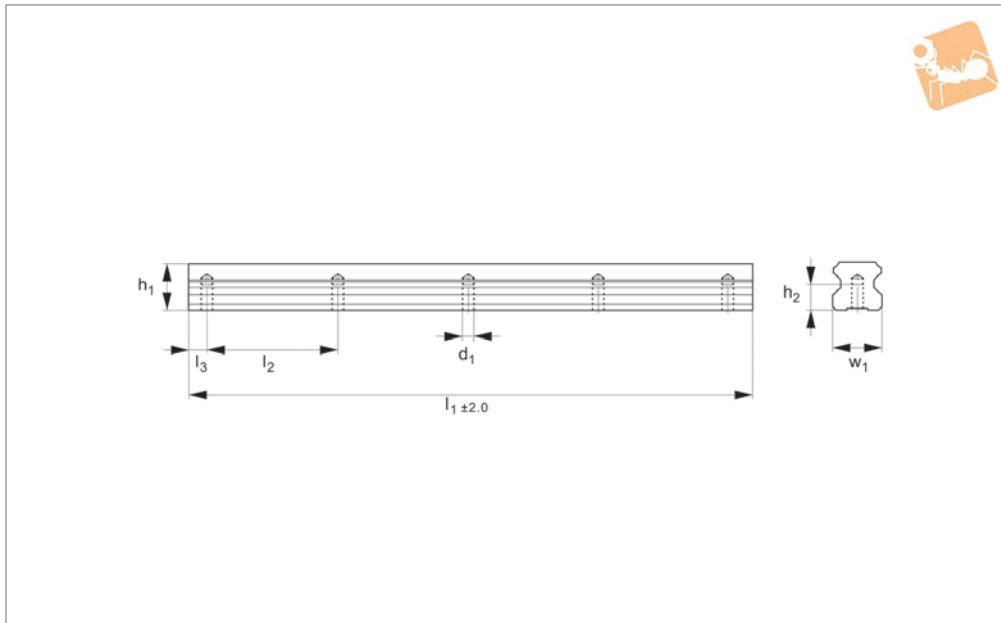
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF20-2080	20	2080	16.3	60	20	20	10	M 6	5.41
L1016.BRF20-2140	20	2140	16.3	60	20	20	10	M 6	5.56
L1016.BRF20-2200	20	2200	16.3	60	20	20	10	M 6	5.72
L1016.BRF20-2260	20	2260	16.3	60	20	20	10	M 6	5.88
L1016.BRF20-2320	20	2320	16.3	60	20	20	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



25mm Linear Guide Rail

rear fixing, blackened

Linear Guide-ways



L1016.BRF25

LINEAR GUIDEWAYS

Material

Hardened and ground steel (typically 60 HRC) Black Oxide.

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 3,6 Kg/m.

Technical Notes

For carriages to suit the required load see

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



LINEAR GUIDEWAYS

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.

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?

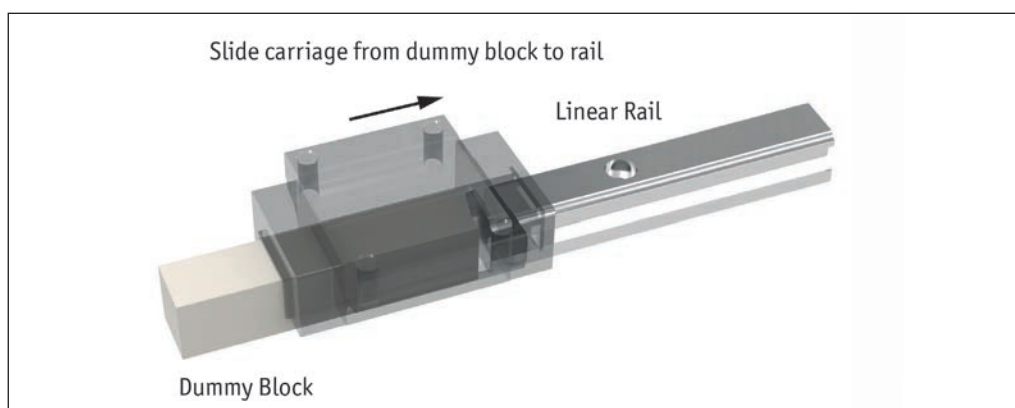
- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required to the first hole.
- In general our cutting procedures allow for a ± 2 mm 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.

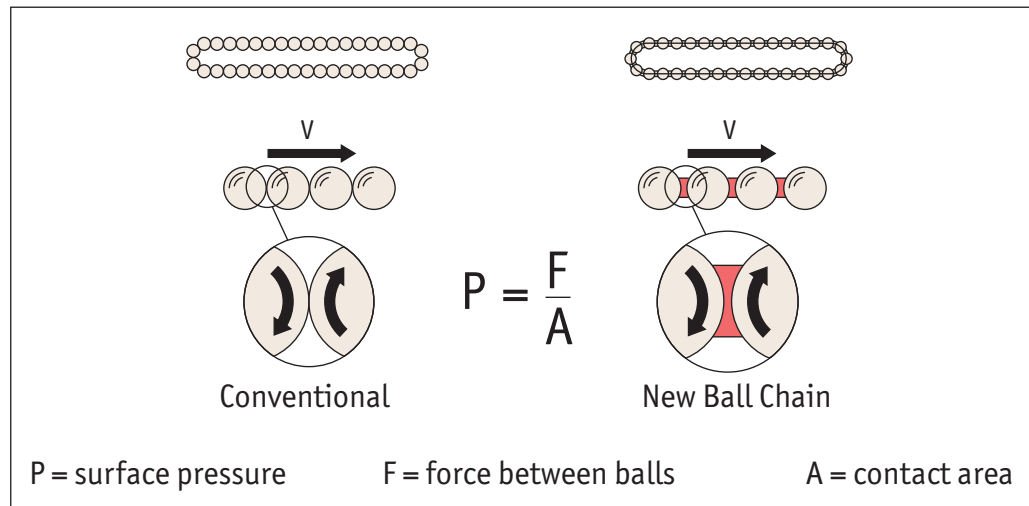




New ball chain technology

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

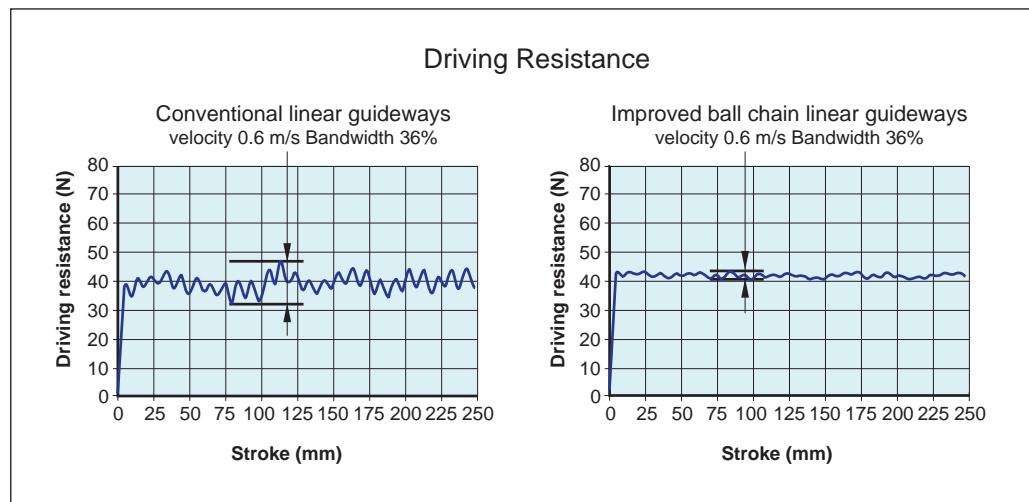
- Higher maximum velocity.
- Lower heat generation
- Lower noise generation.
- Very smooth running.
- Optimised lubrication system
- Even load distribution
- Longer service life



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.

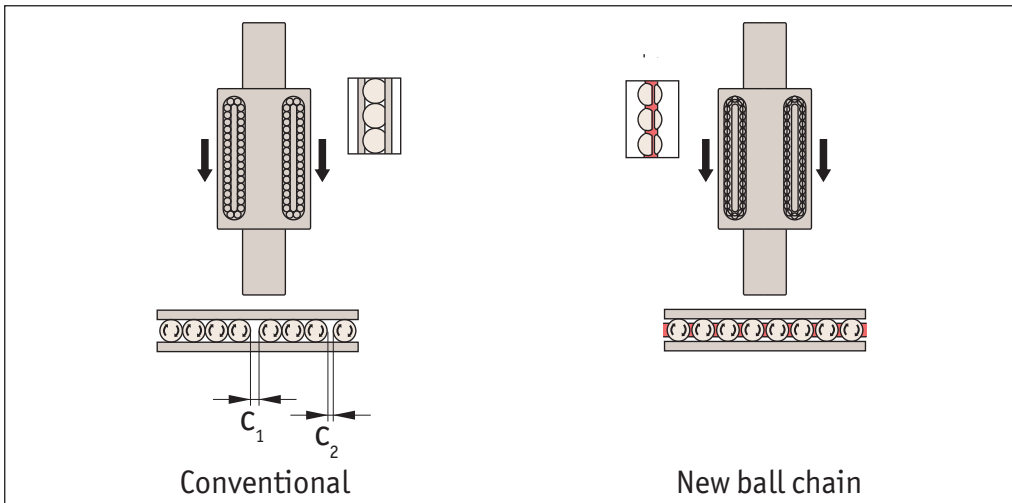
This design of the of the ball chain ends in connection with the spacer ball closes the circulation and makes the movement of the carriage smooth and quiet.



Linear Guideways from Automation Components

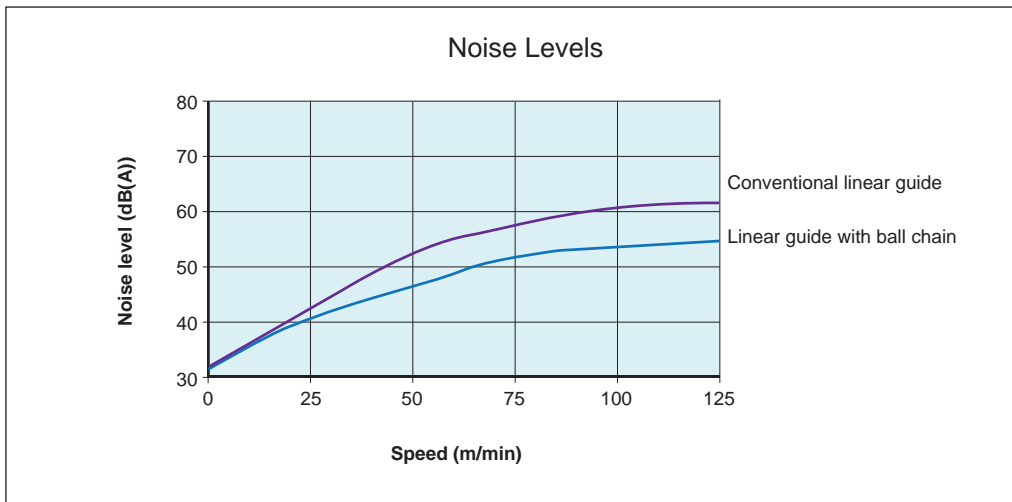
LINEAR GUIDEWAYS

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 with 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 0C 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.

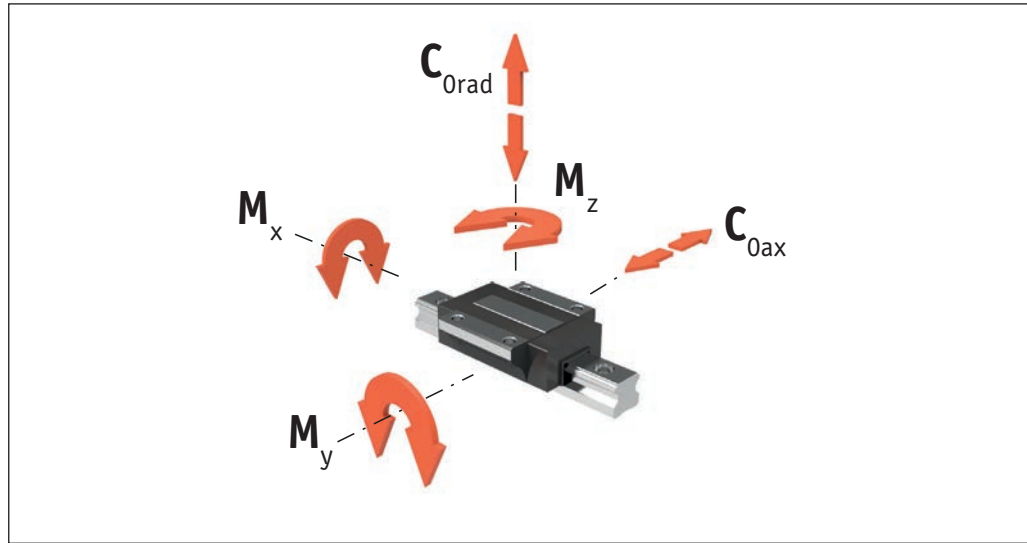
Please ask our technical department to help you select the best coating.

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.



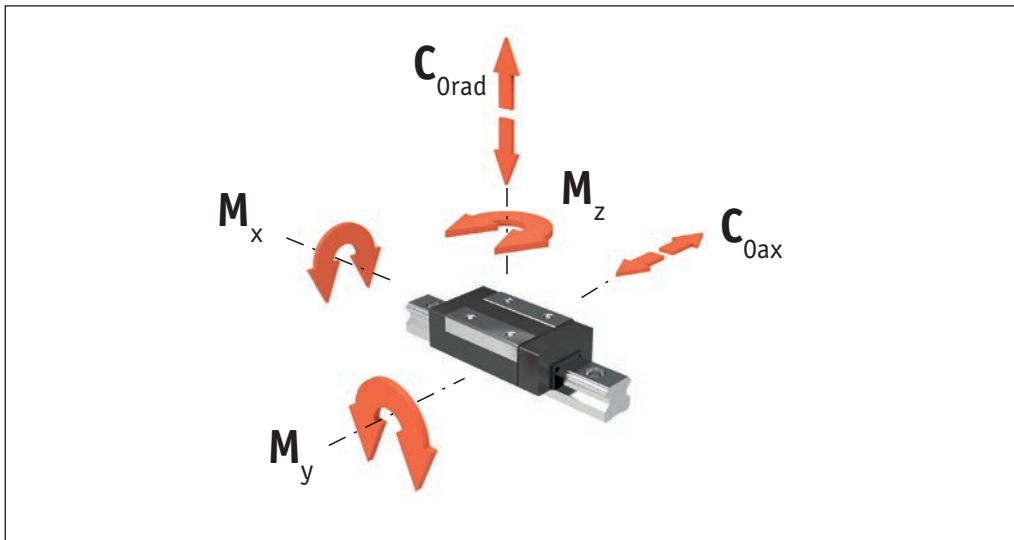
Load capacity overview - L1016.F Flanged carriages



Linear Guideways from Automation Components

Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			Dynamic Load C _{kN}	Static load C _{Orad+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



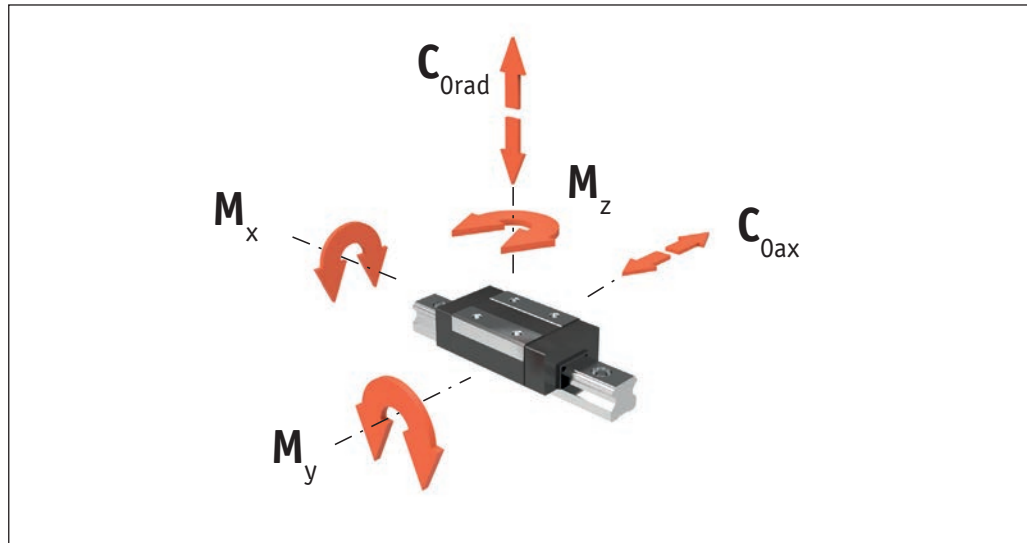
Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{Orad} stat. C_{Oax}	M_x	M_y	M_z
L1016.U15	Unflanged	Standard	11,67	19,90	137	120	120
L1016.U20	Unflanged	Standard	17,98	30,96	289	224	224
L1016.U20-L	Unflanged	Long	23,30	40,11	376	366	366
L1016.U25	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 Automation Components

LINEAR GUIDEWAYS



Load capacity overview - L1016.UL Unflanged low height carriages



Linear Guideways from Automation Components

Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{Orad} stat. C_{Oax}	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.

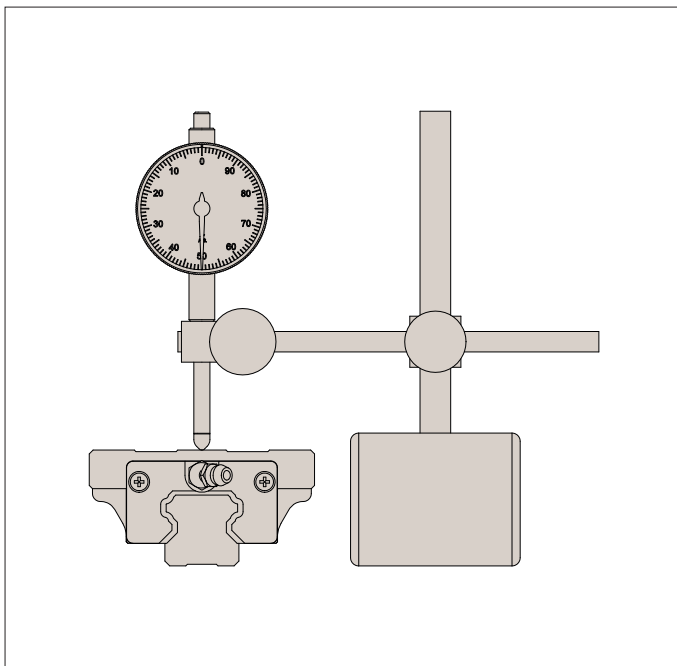
The preload influences the rigidity, precision and torque resistance and also affects the service life and displacement force.

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	$0,02 \times C^*$

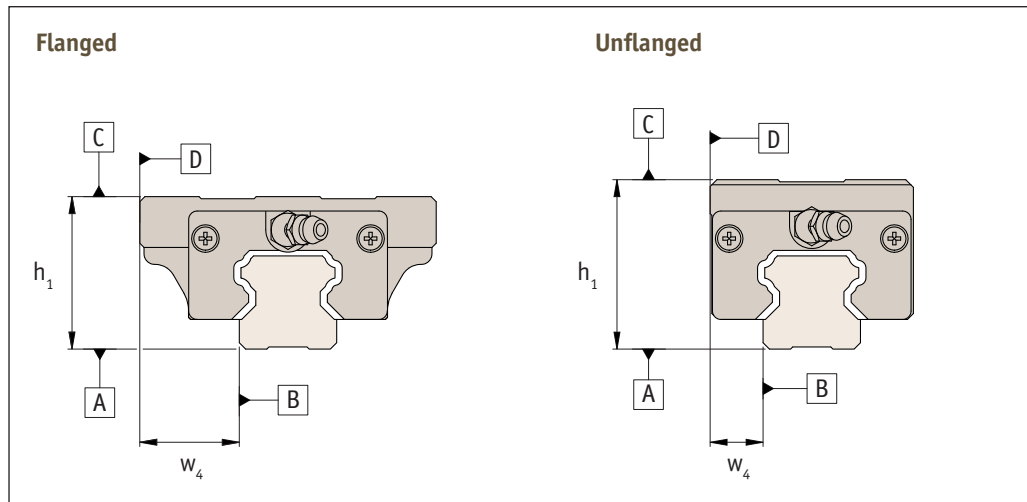
*C is the dynamic load capacity.

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



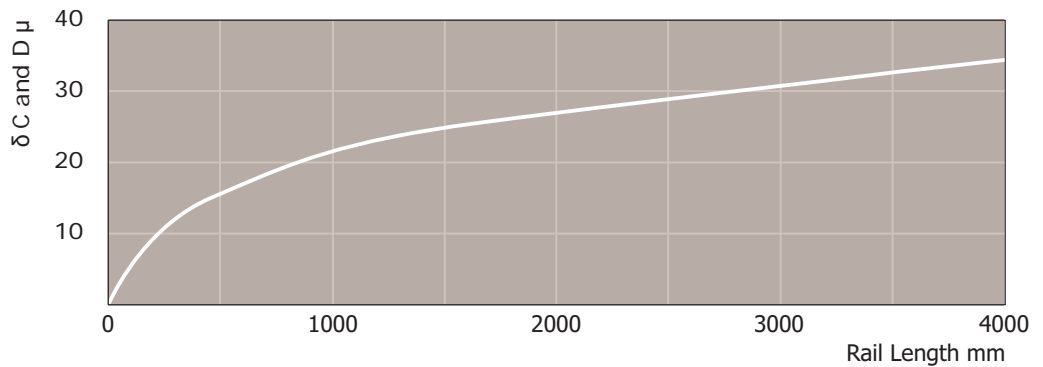


Precision means the guide accuracy or the maximum deviation of the carriage based on the side and support surfaces during the movement along the rails.



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

Running tolerances



Linear Guideways from Automation Components

LINEAR GUIDEWAYS

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.

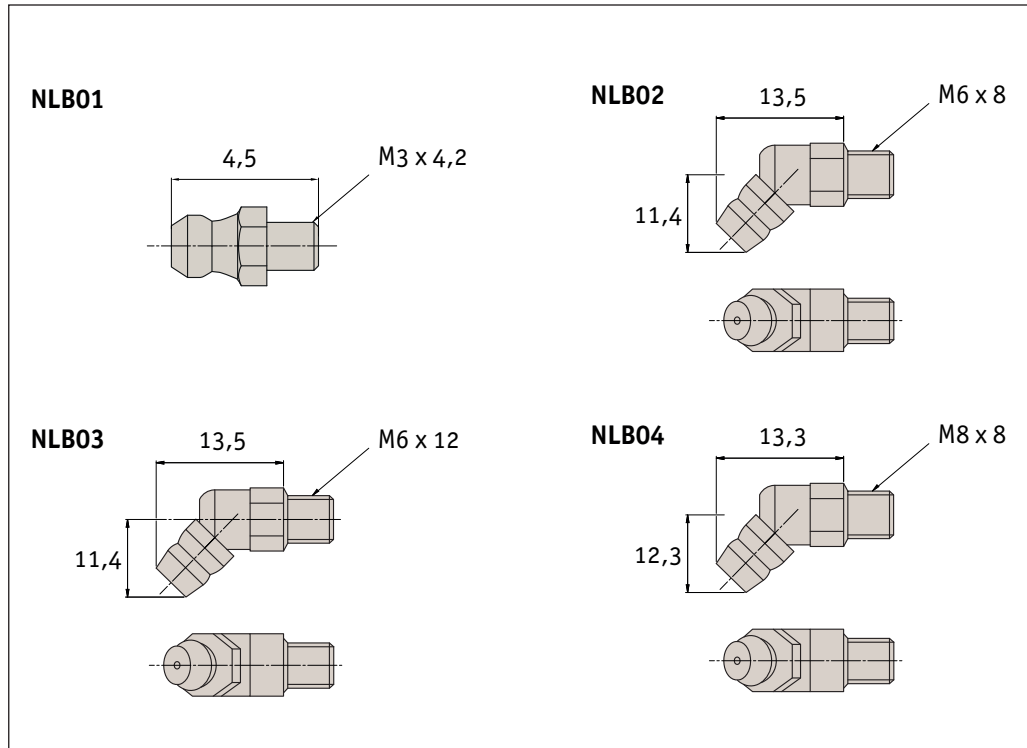


Lubrication nipple

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.



Technical Information

Friction/displacement resistance

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).

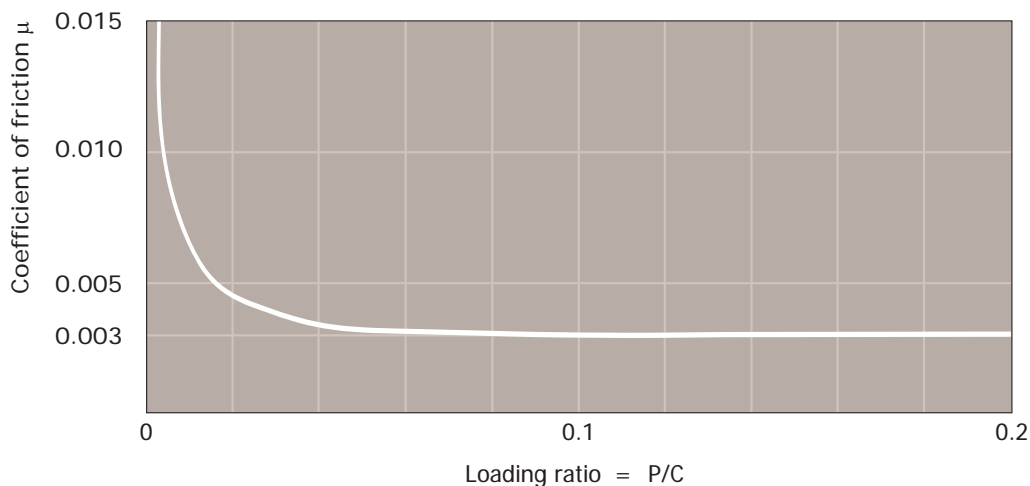
The displacement resistance (F_m) is dependent upon several factors:

- 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.

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

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. $\mu = 0.002 - 0.003$



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.

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

F_x, F_y = radial and axial resultants of external forces (N)

M_1, M_2, M_3 = external moments (Nm)

C_0 = static load capacity (N)

M_x, M_y, M_z = maximum permissible moments in the different loading directions (Nm)

f_c = contact factor (see next page)

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

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.

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

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.

$$P = |F_x| + |F_y| + \left(\frac{|M_x|}{M_x} + \frac{|M_y|}{M_y} + \frac{|M_z|}{M_z} \right) C_0$$

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.

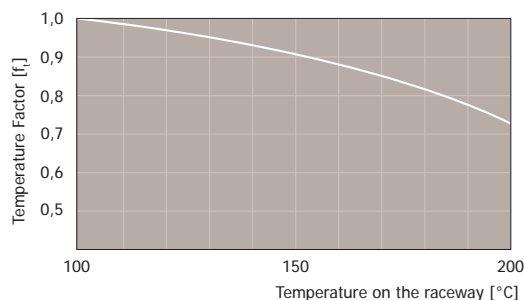
Operating conditions	Speed	f_i
Neither external impacts nor vibrations	Low speed $V \leq 15$ m/min.	1 - 1,5
Light impacts or vibrations	Average speed $V \leq 60$ m/min.	1,5 - 2
Average and high external impacts or vibration	High speed $V > 60$ m/min.	2 - 3,5

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.



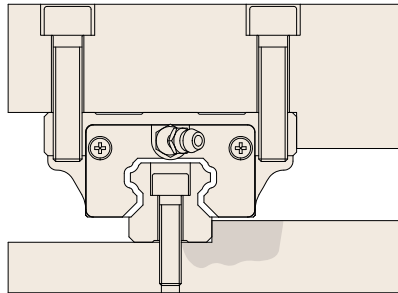


Installation examples

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

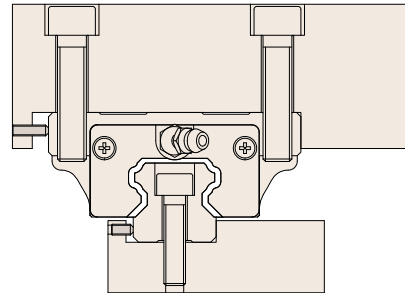
Example 1

Assembly of carriage and rail on shoulder edges



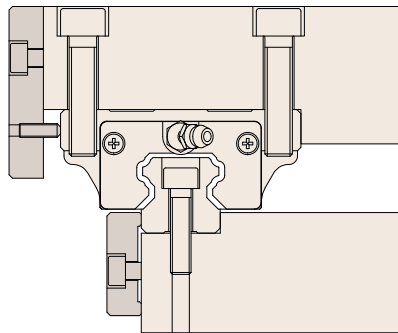
Example 2

Securing carriage and rail using set screws



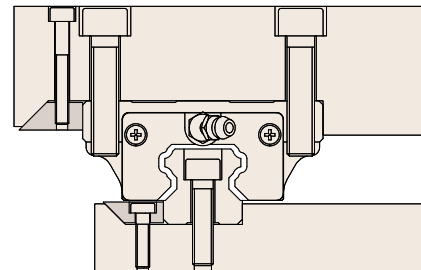
Example 3

Securing carriage and rail using pressure plates



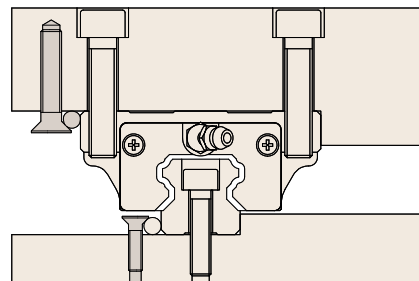
Example 4

Securing carriage and rail using taper gibs

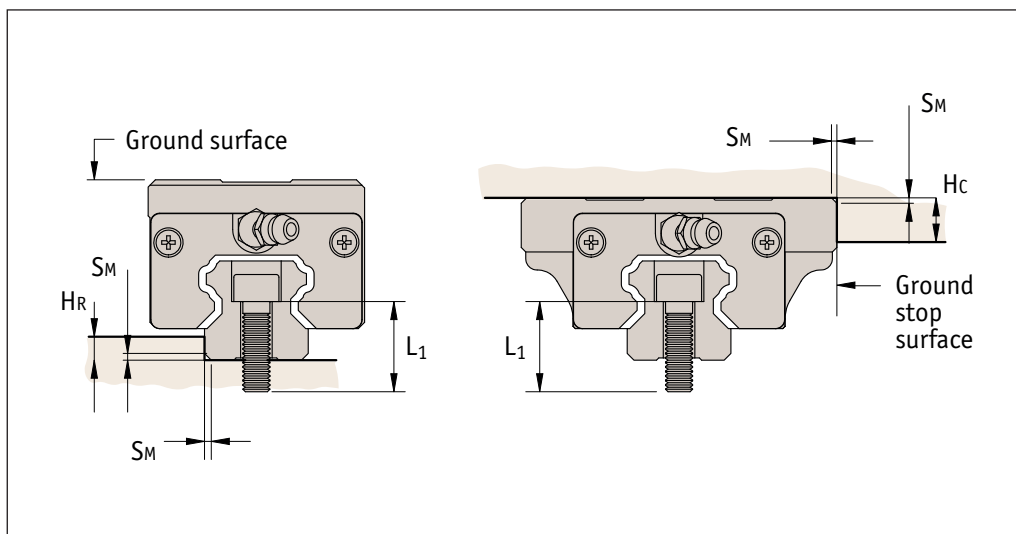


Example 5

Securing carriage and rail using bolts



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.

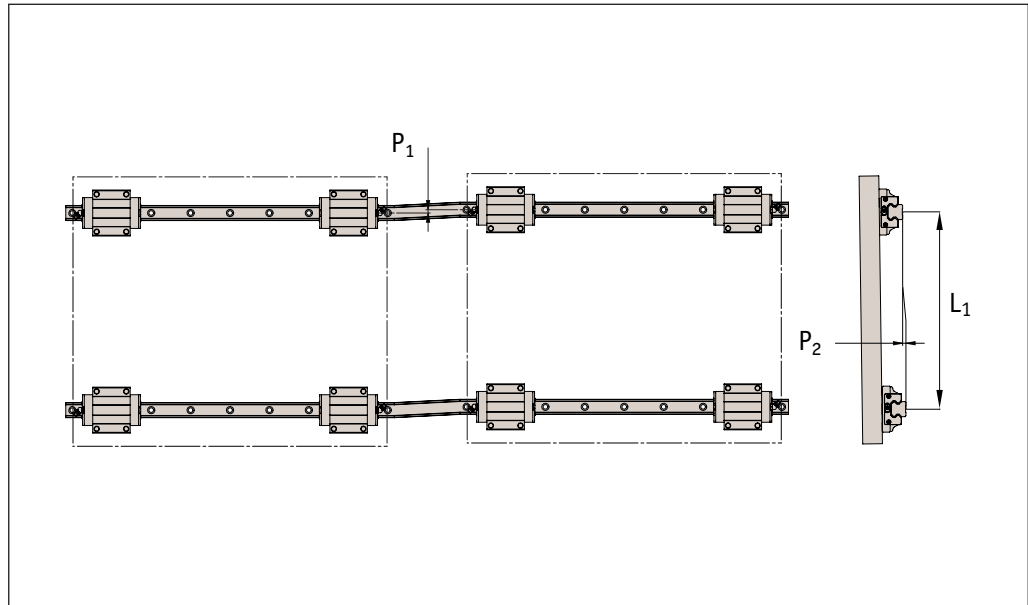
Linear Guideways from Automation Components

LINEAR GUIDEWAYS



Assembly precision

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

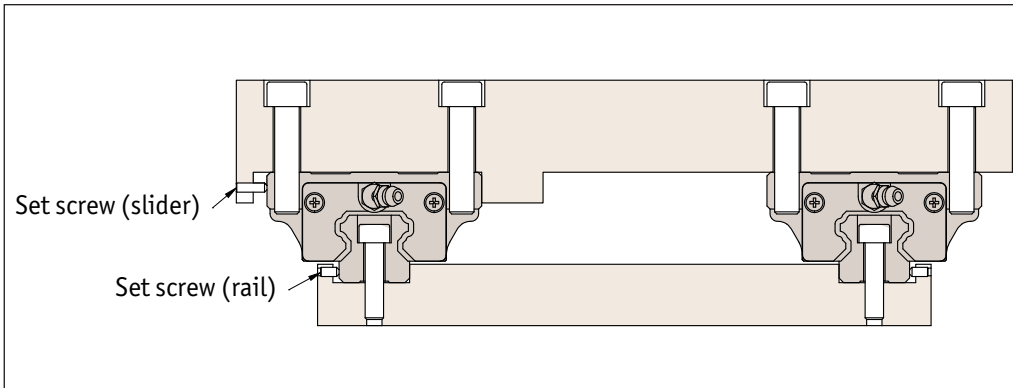


Size	Permissible tolerance for parallelism $P_1 \mu$		$P_2 = L_1 \times$ (calculation factor)		
	K_1	K_0	Calculator factor (x) $P_2 \mu$	K_1	K_0
15	18	25	0,17	0,26	
20	20	25	0,17	0,26	
25	22	30	0,17	0,26	
30	30	40	0,22	0,34	
35	35	50	0,30	0,42	
45	40	60	0,34	0,50	
55	50	70	0,42	0,60	

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

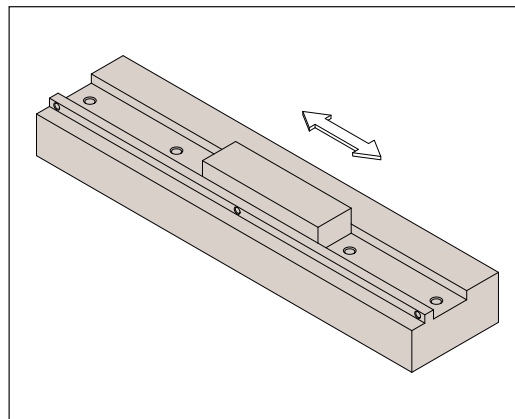
Bolt	Tightening torque M_t Nm	
	Steel 10,9	Steel 12,9
M 4	4,4	5,1
M 5	8,7	10
M 6	15	18
M 8	36	43
M12	125	145
M14	200	235

Assembly process



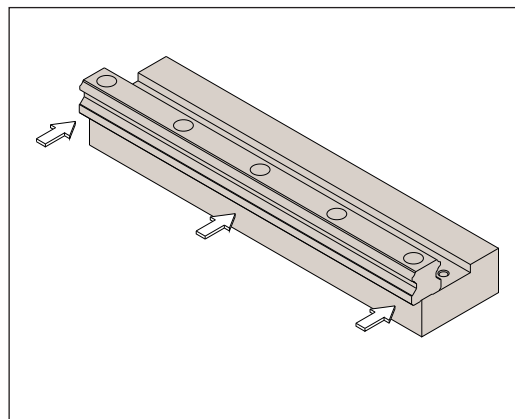
Fixing guide rails 1

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.

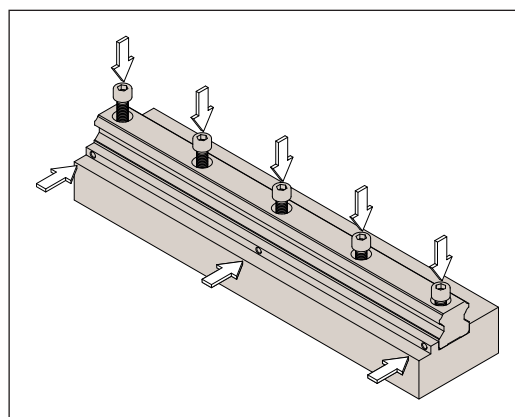


Fixing guide rails 2

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.



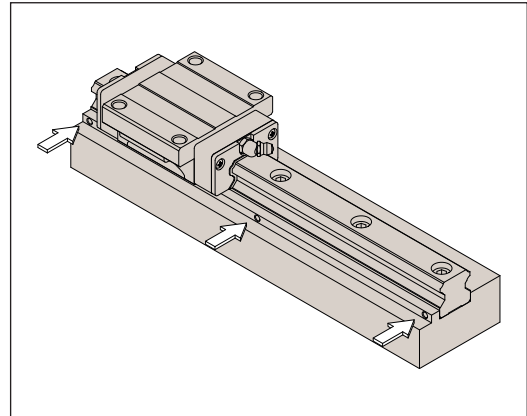
Fixing guide rails 2 continued





Fixing guide rails 3

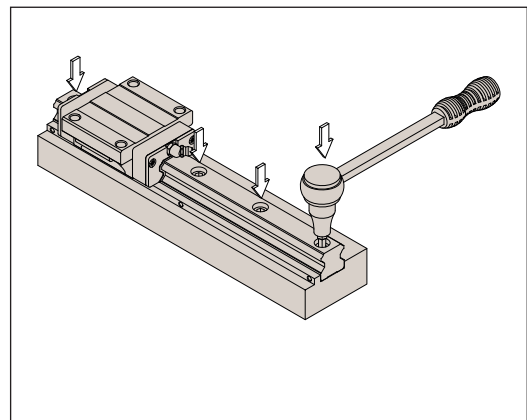
Tighten the thrust bolts on the guide rail until there is close contact on the side stop surface.



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.

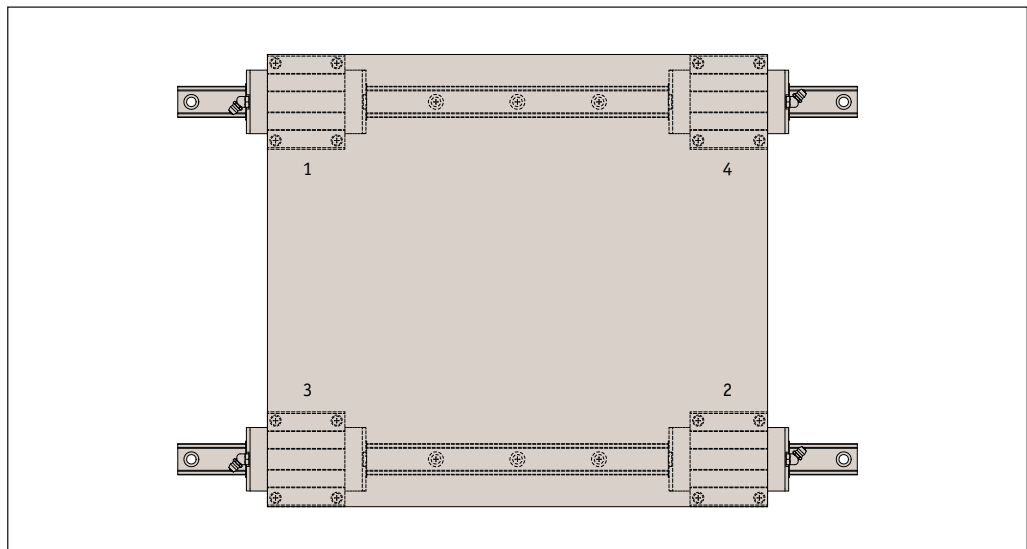
Table assembly 2

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

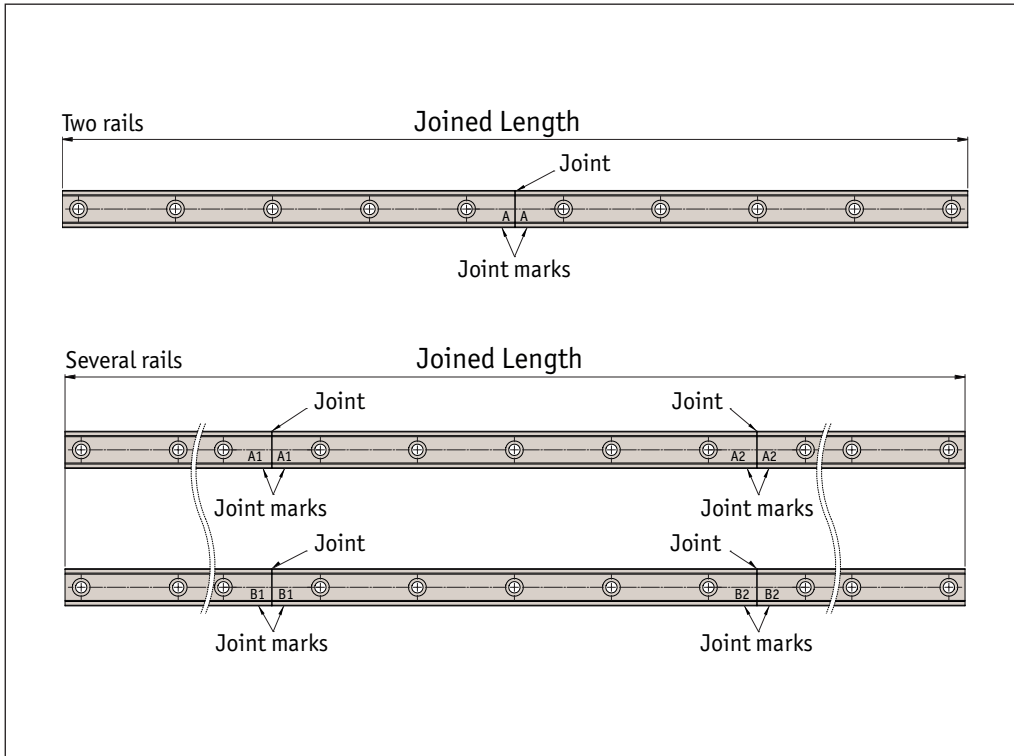
Tighten the fixing screws on the main side and the lateral side completely tight to finish the installation. Note: To attach the table uniformly, tighten the fixing screws diagonally (1, 2, 3, 4).

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



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 Automation Components

LINEAR GUIDEWAYS