

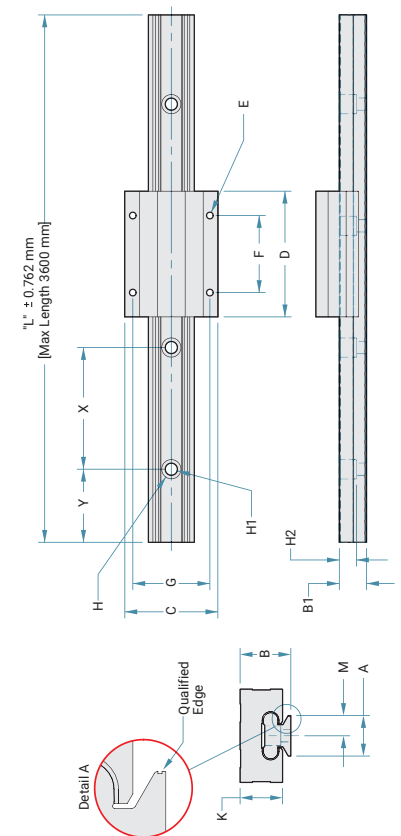


Bearing Interchange Chart Mini-Rail (MR7)



Dimension and Description		PBC Linear	CPC	THK		Tusk	Thomson	TSK	NB	NSK	Hiwin
		MR7	MR7MN	RSR 7M/7ZM	SRS 7M	SGS1/SGS1UU	TSR7Z	LMBM 7	SEBS 7B	PU07AR	MGN 7C
A	Base Width (mm)	7	7	7	7	7	7	7	7	7	7
B	Overall Height	8	8	8	8	8	8	8	8	8	8
B1	Rail Height	6.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.8
C	Carriage Width	17	17	17	17	17	17	17	17	17	17
D	Carriage Length	24	23.7	23.5	23.4	23.5	23.5	23.5	23	23.4	22.5
E	Carriage Mtg. Hole Size	M2 x 0.4	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 0.4 x 2.4	M2 x 2.5
F	Carriage mounting hole center to center	8	8	8	8	8	8	8	8	8	8
G		12	12	12	12	12	12	12	12	12	12
H C'bore dia		Rail hole size	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
H1 Thru dia	2.4		2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
H2 C'bore depth	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
K	Carriage height	6.2	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6
Y	Rail hole to end	5	--	5	5	--	5	5	5	5	5
X	Rail hole ctr to ctr	15	15	15	15	15	15	15	15	15	15
MSL	Max Static Load (N)	734	1400	1370	1290	1667	1440	1370	1690	1370	1245
Moment Loads	Roll moment (N-m)	1.8	5.2	5	5.02	--	5.1	--	6.18	5	4.7
	Pitch moment (N-m)	1.8	3.3	2.93	3.09	--	2.55	--	3.66	3	2.84
	Yaw moment (N-m)	2.3	3.3	2.95	3.69	--	2.55	--	3.07	3	2.84

Dimension and Description		PBC Linear	IKO	INA	Rexroth	SKF	Schneeberger
		MR7	LWL 7---B	KWEM7/TKDM7	R0442 794 01	LLMHS 7TA	MN 7
A	Base Width (mm)	7	7	7	7	7	7
B	Overall Height	8	8	8	8	8	8
B1	Rail Height	6.1	5	5	4.7	4.8	4.5
C	Carriage Width	17	17	17	17	17	17
D	Carriage Length	24	23.5	23.5	24	23.5	24.6
E	Carriage Mtg. Hole Size	M2 x 0.4	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5	M2 x 2.5
F	Carriage mounting hole center to center	8	8	8	8	8	8
G		12	12	12	12	12	12
H C'bore dia		Rail hole size	4.2	4.2	--	4.3	4.5
H1 Thru dia	2.4		2.4	--	2.5	2.5	2.4
H2 C'bore depth	2.3		2.3	--	2.5	2.5	2.2
K	Carriage height	6.2	6.5	6.5	6.5	6.5	6.5
Y	Rail hole to end	5	7.5	--	--	--	5
X	Rail hole ctr to ctr	15	15	15	15	15	15
MSL	Max Static Load (N)	734	1960	1890	1400	1670	1560
Moment Loads	Roll moment (N-m)	1.8	7.2	6.9	5.1	5.2	5.6
	Pitch moment (N-m)	1.8	4.9	4.7	1.9	4.9	4.3
	Yaw moment (N-m)	2.3	4.1	3.9	3.2	4.9	2.5



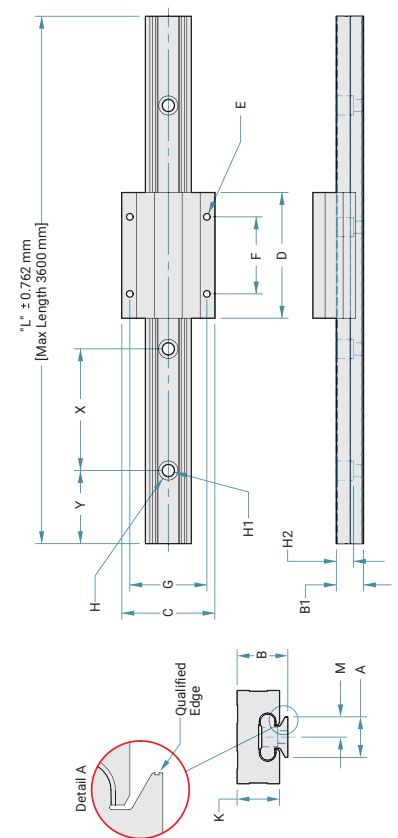


Bearing Interchange Chart Mini-Rail (MR9)



Dimension and Description		PBC Linear	CPC	IGUS	THK		Tusk	Thomson	TSK	INA	NB	NSK
		MR9	MR9MN	TK-04-09	RSR 9KM/9ZM	SRS 9M	SG2UU/SGS2UU	TSR9Z	LMBM 9	KWEM9/TKDM9	SEBS 9B	PU09TR
A	Base Width (mm)	9	9	9	9	9	9	9	9	9	9	9
B	Overall Height	10	10	10	10	10	10	10	10	10	10	10
B1	Rail Height	7.1	5.5	6.3	5.5	5.5	5.5	5.5	5.5	6	5.5	5.5
C	Carriage Width	20	20	20	20	20	20	20	20	20	20	20
D	Carriage Length	30	30.6	29	30.8	30.8	30.5	31	31	30	30.8	30
E	Carriage Mtg. Hole Size	M3 x 0.5	M3 x 3.0	M2	M3 x 3.0	M3 x 2.8	M3 x 3.0	M3 x 3.0	M3 x 3.0	M3 x 3.0	M3 x 3.0	M3 x 3.0
F	Carriage mounting hole center to center	13	10	10	10	10	10	10	10	10	10	10
G		15	15	15	15	15	15	15	15	15	15	15
H C'bore dia		Rail hole size	4.5	6	--	6	6	6	6	6	--	6
H1 Thru dia	2.6		3.5	--	3.5	3.5	3.5	3.5	3.5	--	3.5	3.5
H2 C'bore depth	3		3.5	--	3.3	3.3	3.5	3.5	3.3	--	3.5	4.5
K	Carriage height	8	7.8	8.3	7.8	9.1	7.8	7.8	7.8	8	7.8	7.8
Y	Rail hole to end	7.5	--	5	7.5	7.5	--	7.5	7.5	--	7.5	7.5
X	Rail hole ctr to ctr	20	20	20	20	20	20	20	20	20	20	20
MSL	Max Static Load (N)	1557	2495	480	2250	2310	2451	2360	2250	2760	2540	2150
Moment Loads	Roll moment (N-m)	3.2	11.7	3.4	10.4	10.6	--	10.4	--	12.8	11.81	10
	Pitch moment (N-m)	3.2	6.4	1.8	7.34	7.62	--	5.1	--	9.1	7.78	6
	Yaw moment (N-m)	5	6.4	1.8	7.34	9.03	--	5.1	--	7.6	6.53	6

Dimension and Description		PBC Linear	Hiwin	IKO	Rexroth	SKF	Schneeberger
		MR9	MGN 9C	LWL 9---B	R0442 894 01	LLMHS 9TA	MN 9
A	Base Width (mm)	9	9	9	9	9	9
B	Overall Height	10	10	10	10	10	10
B1	Rail Height	7.1	5.5	5.5	5.5	5.5	5.5
C	Carriage Width	20	20	20	20	20	20
D	Carriage Length	30	28.9	30	31	32	32
E	Carriage Mtg. Hole Size	M3 x 0.5	M3 x 3.0	M3 x 3.0	M3 x 3.0	M3 x 3.0	M3 x 3.0
F	Carriage mounting hole center to center	10	10	10	10	10	10
G		15	15	15	15	15	15
H C'bore dia		Rail hole size	4.5	6	6	6	6
H1 Thru dia	2.6		3.5	3.5	3.5	3.5	3.5
H2 C'bore depth	3		3.5	3.5	3.3	3.5	3
K	Carriage height	8	8	8	8	8	8
Y	Rail hole to end	7.5	7.5	10	--	--	7.5
X	Rail hole ctr to ctr	20	20	20	20	20	20
MSL	Max Static Load (N)	1557	2550	2860	2100	3130	2770
Moment Loads	Roll moment (N-m)	3.2	11.8	13.3	9.6	13.2	12.9
	Pitch moment (N-m)	3.2	7.35	9.4	3.6	11.2	10.2
	Yaw moment (N-m)	5	7.35	7.9	6.4	11.2	7.9



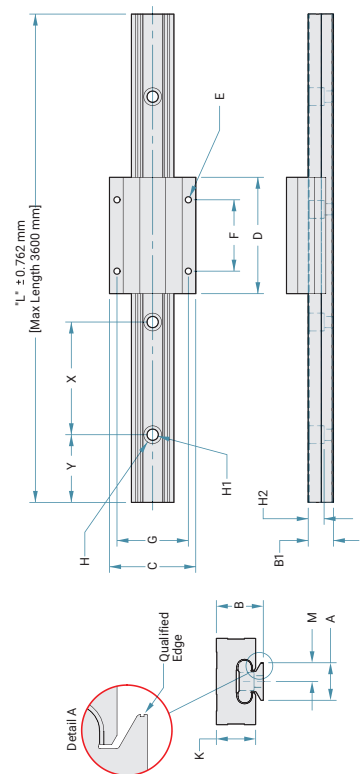


Bearing Interchange Chart Mini-Rail (MR12)



Dimension and Description		PBC Linear	CPC (Chieftek)	IGUS	THK		Tusk	Thomson	TSK	INA		NB
		MR12	MR12MN	TK-04-12	RSR 12KM/12ZM	SRS 12M	SG3UU	TSR12Z	LMBM 12	KUME 12	KWEM12/TKDM12	SEBS 12B
A	Base Width (mm)	12	12	12	12	12	12	12	12	12	12	12
B	Overall Height	13	13	13	13	13	13	13	13	13	13	13
B1	Rail Height	8	7.5	8.6	7.5	7.5	7.5	7.5	7.5	8.6	8	7.5
C	Carriage Width	27	27	27	27	27	27	27	27	27	27	27
D	Carriage Length	34	35.4	34	47.7/35	34.4	34	35	35	35.8	34	34.2
E	Carriage Mtg. Hole Size	M3 x 0.5	M3x3.5	M3	M3 x 3.5/3.2	M3 x 3.2	M3 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5
F	Carriage mounting hole center to center	15	15	15	15	15	15	15	15	15	15	15
G		20	20	20	20	20	20	20	20	20	20	20
H C'bore dia	Rail hole size	6	6	--	6	6	6	6	6	--	--	6
H1 Thru dia		3.5	3.5	--	3.5	3.5	3.5	3.5	3.5	--	--	3.5
H2 C'bore depth		3.5	3.5	--	4.5	4.5	4.5	4.5	4.5	--	--	4.5
K	Carriage height	10.7	10	10.8	10/10.6	11	6	10	10	10	10	10
Y	Rail hole to end	10	--	5	10	10	--	10	10	--	--	10
X	Rail hole ctr to ctr	25	25	25	25	25	25	25	25	25	25	25
MSL	Max Static Load (N)	1957	3465	956	4020	3530	3138	4220	4020	5200	4920	3830
Moment Loads	Roll moment (N-m)	5.6	21.5	9.2	19.2	23.1	--	14.7	--	33	26.6	23.91
	Pitch moment (N-m)	5.6	12.9	4.3	11.4	12	--	8.04	--	17	15.4	12.43
	Yaw moment (N-m)	9	12.9	4.3	10.1	12	--	8.72	--	17	12.9	10.43

Dimension and Description		PBC Linear	NSK	Hiwin	IKO	SKF	Schneeberger	Rexroth
		MR12	PU12TR	MGN 12C	LWL 12---B	LLMHS 12TA	MN12	R0442 294 01
A	Base Width (mm)	12	12	12	12	12	12	12
B	Overall Height	13	13	13	13	13	13	13
B1	Rail Height	8	7.5	8	8	8.8	7.5	7.5
C	Carriage Width	27	27	27	27	27	27	27
D	Carriage Length	34	35	34.7	34	36	36.4	34.8
E	Carriage Mtg. Hole Size	M3 x 0.5	M3 x 0.5 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5	M3 x 3.5
F	Carriage mounting hole center to center	15	15	15	15	15	15	15
G		20	20	20	20	20	20	20
H C'bore dia	Rail hole size	6	6	6	6.5	6	6	6
H1 Thru dia		3.5	3.5	3.5	3.5	3.5	3.5	3.5
H2 C'bore depth		3.5	4.5	4.5	4.5	4.5	3.5	4.8
K	Carriage height	10.7	10	10	10	10	10	10
Y	Rail hole to end	10	10	10	12.5	--	10	--
X	Rail hole ctr to ctr	25	25	25	25	25	25	25
MSL	Max Static Load (N)	1957	3500	3923	4450	4000	3900	3470
Moment Loads	Roll moment (N-m)	5.6	21	25.5	27.6	21.7	23.8	20.6
	Pitch moment (N-m)	5.6	11	13.7	16	15	16.3	7.9
	Yaw moment (N-m)	9	11	13.7	13.4	15	10.4	11.8



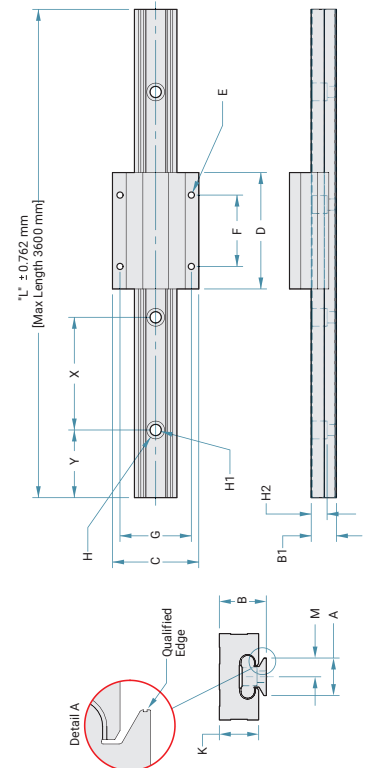


Bearing Interchange Chart Mini-Rail (MR15)



Dimension and Description		PBC Linear	CPC	IGUS	THK		Tusk	TSK	INA		NB	NSK
		MR15	MR15MN	TK-04-15	RSR 15VM/15ZM	SRS 15M	SGS4UU	LMBM 15	KUME 15	KWEM15/TKDM15	SEBS 15B	PU15AL
A	Base Width (mm)	15	15	15	15	15	15	15	15	15	15	15
B	Overall Height	16	16	16	16	16	16	16	16	16	16	16
B1	Rail Height	9.2	9.5	10.8	9.5	9.5	9.5	9.5	10.6	10	9.5	9.5
C	Carriage Width	32	32	32	32	32	32	32	32	32	32	32
D	Carriage Length	42	43	42	43	43	42.5	43	44	42	42	43
E	Carriage Mtg. Hole Size	M3 x 0.5	M3x5.5	M3	M3 x 4	M3 x 3.5	M3 x 4	M3 x 4	M3 x 4	M3 x 4	M3 x 4	M3 x 0.5 x 5
F	Carriage mounting hole center to center	20	20	20	20	20	20	20	20	20	20	20
G		25	25	25	25	25	25	25	25	25	25	25
H C'bore dia	Rail hole size	6	6	--	6	6	6	6	--	--	6	6
H1 Thru dia		3.5	3.5	--	3.5	3.5	3.5	3.5	--	--	3.5	3.5
H2 C'bore depth		4.5	4.5	--	4.5	4.5	4.5	4.5	--	--	4.5	4.5
K	Carriage height	14.1	12	13.2	13.3	9.5	12	12.5	12	12	12	12
Y	Rail hole to end	15	--	10	15	15	--	15	--	--	15	15
X	Rail hole ctr to ctr	40	40	40	40	40	40	40	40	40	40	40
MSL	Max Static Load (N)	3114	5590	1401	6570	5700	5394	6570	8300	6490	6760	6600
Moment Loads	Roll moment (N-m)	9	43.6	16.9	38.8	40.4	-	-	67	50	52.41	50
	Pitch moment (N-m)	9	27	8.1	23.7	26.2	-	-	34	29.7	29.29	26
	Yaw moment (N-m)	15.1	27	8.1	21.1	26.2	-	-	34	24.9	24.58	26

Dimension and Description		PBC Linear	Hiwin	IKO	Thomson	SKF	Schneeberger	Rexroth
		MR15	MGN 15C	LWL 15---B	TSR15Z	LLMHS 15TA	MN15	R0442 594 01
A	Base Width (mm)	15	15	15	15	15	15	15
B	Overall Height	16	16	16	16	16	16	16
B1	Rail Height	9.2	10	10	9.5	10.8	9.5	9.5
C	Carriage Width	32	32	32	32	32	32	32
D	Carriage Length	42	42.1	42	43	44.5	43.7	43
E	Carriage Mtg. Hole Size	M3 x 0.5	M3 x 4	M3 x 4	M3 x 6	M3 x 4	M3 x 4	M3 x 4
F	Carriage mounting hole center to center	20	20	20	20	20	20	20
G		25	25	25	25	25	25	25
H C'bore dia	Rail hole size	6	6	6.5	6	6	6	6
H1 Thru dia		3.5	3.5	3.5	3.5	3.5	4	3.5
H2 C'bore depth		4.5	4.5	4.5	4.5	4.5	5	4.8
K	Carriage height	14.1	12	12	12	12	12	12
Y	Rail hole to end	15	15	20	15	--	15	--
X	Rail hole ctr to ctr	40	40	40	40	40	40	40
MSL	Max Static Load (N)	3114	5590	6730	6570	5390	5620	6260
Moment Loads	Roll moment (N-m)	9	45.1	51.8	30.2	40.2	42.7	46.3
	Pitch moment (N-m)	9	21.6	30.8	16.5	21	28.1	18.3
	Yaw moment (N-m)	15.1	21.6	25.9	17.9	21	18.4	27





Bearing Interchange Chart Mini-Rail (MR20)



Dimension and Description		PBC Linear	THK		Tusk	TSK	NB	IKO	Rexroth
		MR20	RSR 20VM	SRS 20M	SGS5UU/ SGS5UU	LMBM 20	SEBS 20B	LWL 20---B	R0442 094 01
A	Base Width (mm)	20	20	20	20	20	20	20	20
B	Overall Height	25	25	20	25	25	25	20	25
B1	Rail Height	13.4	15	11	15	15	15	11	15
C	Carriage Width	46	46	40	46	46	46	40	46
D	Carriage Length	62	66.5	50	62	66.5	65.9	50	66
E	Carriage Mtg. Hole Size	M4 x 0.7	M4 x 6	M4 x 0.7 x 6	M4 x 6	M4 x 6	M4 x 6	M4 x 6	M4 x 6
F	Carriage mounting hole center to center	38	38	25	38	38	38	25	38
G		38	38	30	38	38	38	30	38
H C' bore dia	Rail hole size	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
H1 Thru dia		6	6	6	6	6	6	6	6
H2 C' bore depth		8.5	8.5	8	8.5	8.5	8.5	5.5	8.5
K	Carriage height	21.2	17.5	16.6	17.5	17.5	17.5	15	17.5
Y	Rail hole to end	20	20	20	--	20	20	20	--
X	Rail hole ctr to ctr	60	60	60	60	60	60	60	60
MSL	Max Static Load (N)	6005	12700	9770	9807	12700	1458	9420	12230
Moment Loads	Roll moment (N-m)	14.7	96.6	104	-	-	149.5	96.1	126
	Pitch moment (N-m)	14.7	75.4	54.3	-	-	103.69	54.6	51.7
	Yaw moment (N-m)	15.1	66.7	62.4	-	-	87	45.8	80

The data and specifications have been carefully compiled and are believed to be accurate and correct. Interchangeability is based purely on approximate nominal size and not on functional specifications. However, it is the responsibility of the user to determine and ensure the suitability of PBC Linear® products for a specific application. The only obligation on PBC Linear® will be to repair or replace without charge, any defective components if returned promptly. No liability is assumed beyond such replacement. Specifications are subject to change without notice.

