

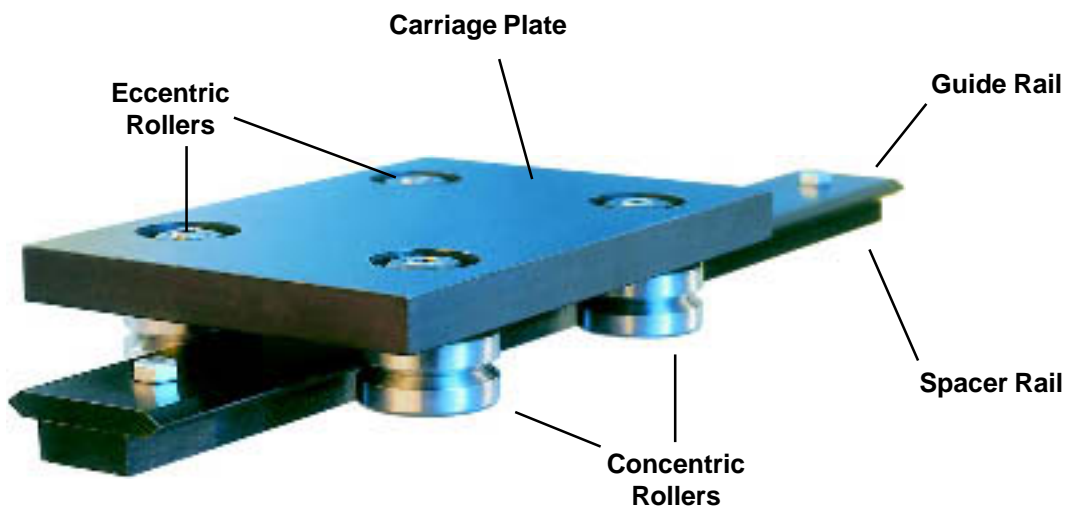


Precision V-Groove Rail System



FEATURES

- Ground on all sides
- Straightness is 0.2 mm/m
- Parallelism of guiding edges is 0.015 mm/m
- Hardness is HRC 60-62 on all guide edges
- Rails are burnished black
- Spacer rails available
- Single- or double-edged rails
- Loads to 1600 N per guide roller



Complete System Includes:

- Guide Rail
- 1 Carriage Plate
- 2 Concentric Guide Rollers
- 2 Eccentric Guide Rollers
- 1 Spacer Rail

90° V-Groove Parts and Assembly Quick Page Guide

Float-Mounted and Off-Center Assembly Application Examples	Page 55
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Application Examples

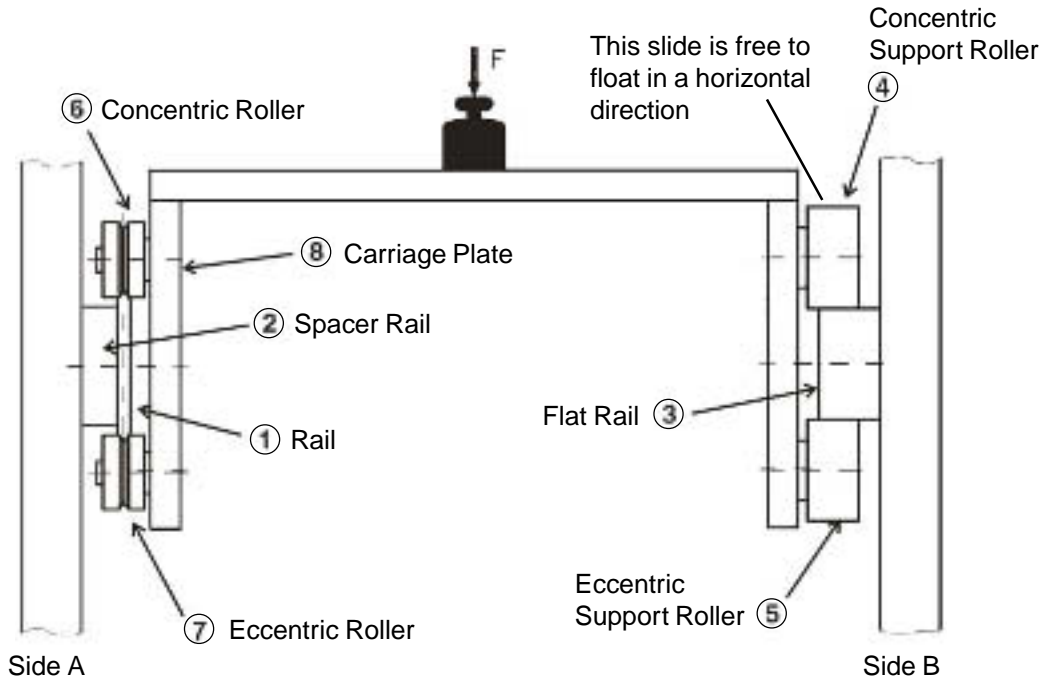


In this example, the B side is float-mounted and expansion due to heat or fitting inaccuracies cannot lead to jams.

Bill of Materials

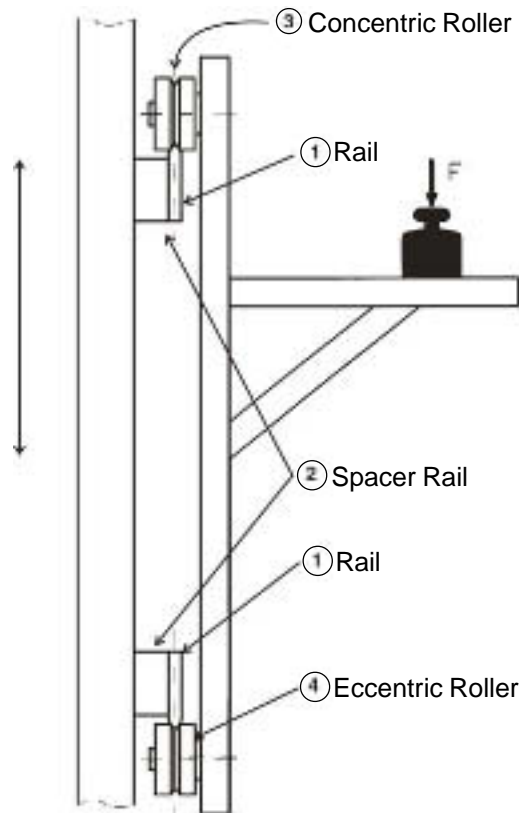
Catalog Numbers: Qty.

①	HIBS90M50-31000	1
②	HIDS50M1000	1
③	HIBS04F1000	1
④	HICC21MO	2
⑤	HIEC21MO	2
⑥	HIRK90M3ZD	2
⑦	HIRK90M3ED	2
⑧	HI9050M140	1



Where relatively large off center forces prevail, it is advantageous to use 2 single-sided guide rails with the largest possible distance between the rollers.

Increasing rail, center-to-center distance increases moment capacity of the system



Bill of Materials

Catalog Numbers: Qty.

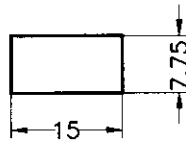
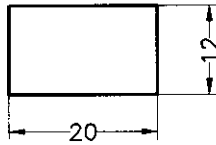
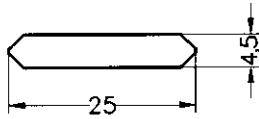
①	HIBS90M20H-22000	2
②	HIDS20MH200	2
③	HIRK90M2ZD	2
④	HIRK90M2ED	2



Precision V-Groove Rail System, 90°



Guide Rails, Double-Edged, 90° and Spacer Rails



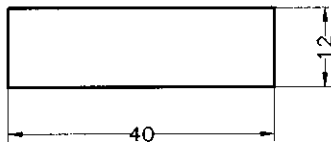
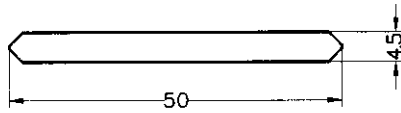
Matching Rollers: **HIRK90M2ZD, HIRK90M2ED**

Guide Rail

Length	Catalog Number
1 meter	HIBS90M25-21000
2 meters	HIBS90M25-22000
3 meters	HIBS90M25-23000

Spacer Rail

Rail	Length	Catalog Number
15	1 meter	HIDS25MK1000
15	2 meters	HIDS25MK2000
15	3 meters	HIDS25MK3000
20	1 meter	HIDS25ML1000
20	2 meters	HIDS25ML2000
20	3 meters	HIDS25ML3000



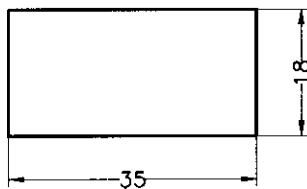
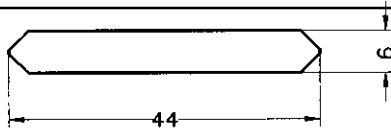
Matching Rollers: **HIRK90M3ZD, HIRK90M3ED**

Guide Rail

Length	Catalog Number
1 meter	HIBS90M50-31000
2 meters	HIBS90M50-32000
3 meters	HIBS90M50-33000

Spacer Rail

Length	Catalog Number
1 meter	HIDS50M1000
2 meters	HIDS50M2000
3 meters	HIDS50M3000



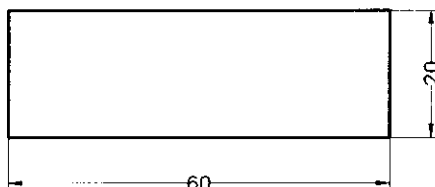
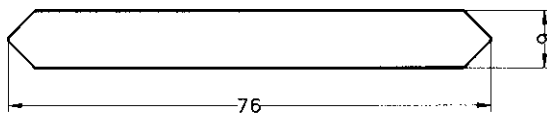
Matching Rollers: **HIRK90M4ZD, HIRK90M4ED**

Guide Rail

Length	Catalog Number
1 meter	HIBS90M44-41000
2 meters	HIBS90M44-42000
3 meters	HIBS90M44-43000

Spacer Rail

Length	Catalog Number
1 meter	HIDS44M1000
2 meters	HIDS44M2000
3 meters	HIDS44M3000



Matching Rollers: **HIRK90M5ZD, HIRK90M5ED**

Guide Rail

Length	Catalog Number
1 meter	HIBS90M76-51000
2 meters	HIBS90M76-52000
3 meters	HIBS90M76-53000

Spacer Rail

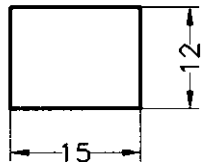
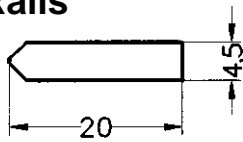
Length	Catalog Number
1 meter	HIDS76M1000
2 meters	HIDS76M2000
3 meters	HIDS76M3000



Precision V-Groove Rail System, 90°



Guide Rails, Single-Edged, 90° and Spacer Rails



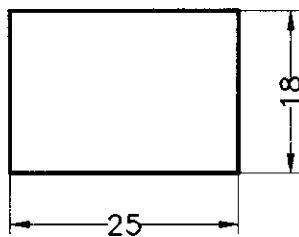
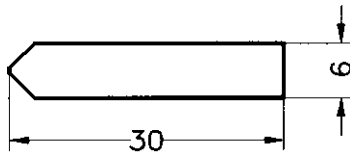
Matching Rollers: HIRK90M2ZD, HIRK90M2ED

Guide Rail

Length	Catalog Number
1 meter	HIBS90M20H-21000
2 meters	HIBS90M20H-22000
3 meters	HIBS90M20H-23000

Spacer Rail

Length	Catalog Number
1 meter	HIDS20MH1000
2 meters	HIDS20MH2000
3 meters	HIDS20MH3000



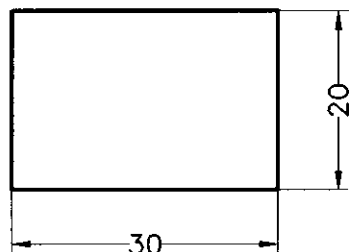
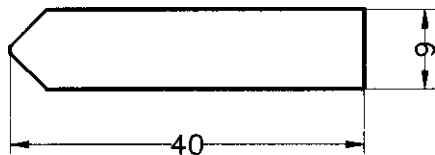
Matching Rollers: HIRK90M4ZD, HIRK90M4ED

Guide Rail

Length	Catalog Number
1 meter	HIBS90M30H-41000
2 meters	HIBS90M30H-42000
3 meters	HIBS90M30H-43000

Spacer Rail

Length	Catalog Number
1 meter	HIDS30MH1000
2 meters	HIDS30MH2000
3 meters	HIDS30MH3000



Matching Rollers: HIRK90M5ZD, HIRK90M5ED

Guide Rail

Length	Catalog Number
1 meter	HIBS90M40H-51000
2 meters	HIBS90M40H-52000
3 meters	HIBS90M40H-53000

Spacer Rail

Length	Catalog Number
1 meter	HIDS40MH1000
2 meters	HIDS40MH2000
3 meters	HIDS40MH3000

SPECIFICATIONS FOR DOUBLE & SINGLE SIDED RAILS

Material: Steel, Hardened HRC 60-62 on Guiding Edges

Finish: Ground on All Sides (N5) Black Burnished

Straightness: 0.2 mm/meter

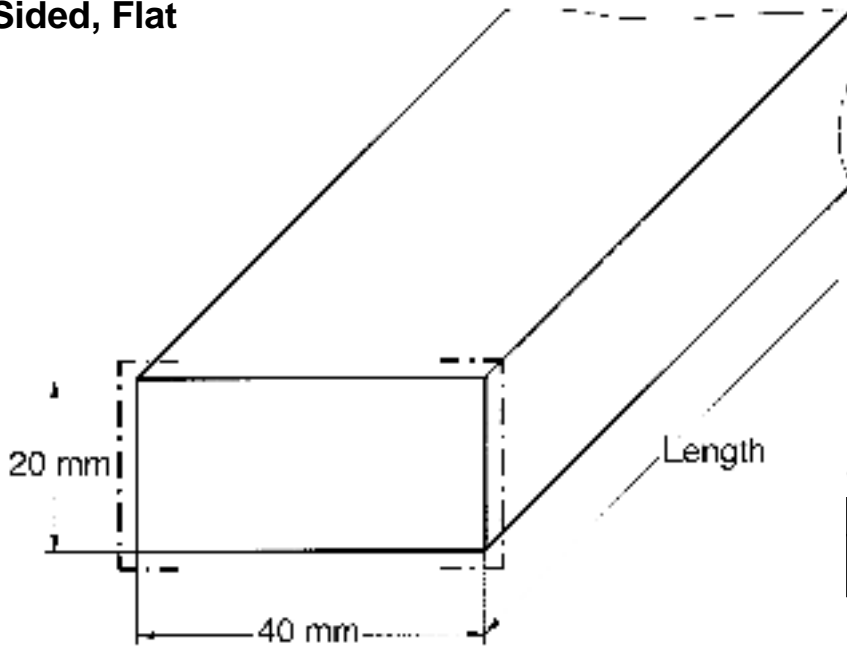
Parallelism: 0.015 mm/meter



Precision V-Groove Rail System, 90°



Guide Rails,
Double-Sided, Flat



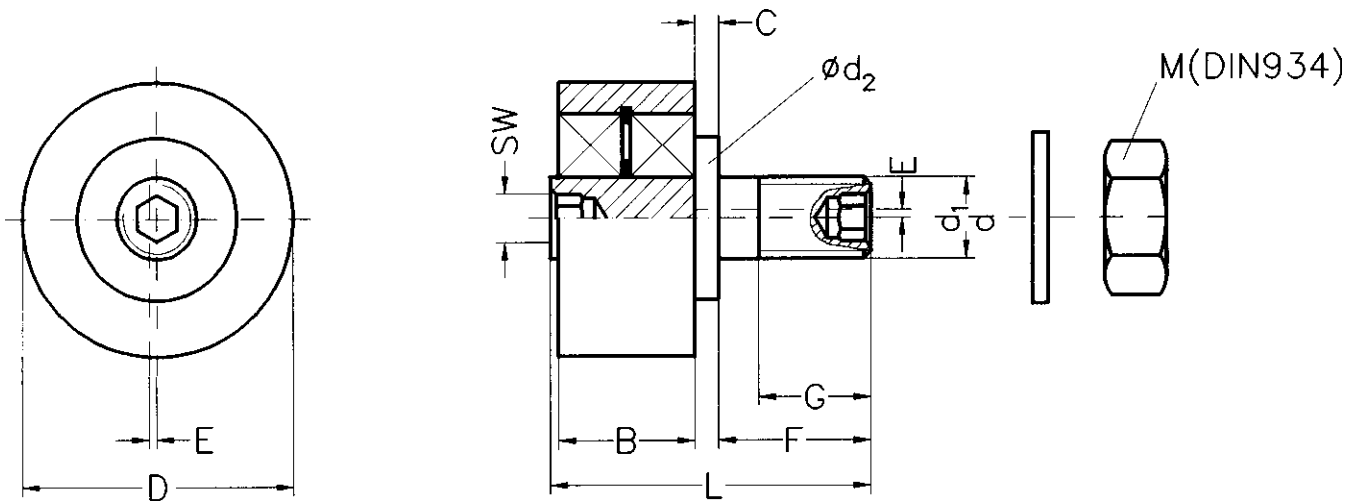
Guide Rail

Length	Catalog Number
1 meter	HIBS04F1000
2 meters	HIBS04F2000

Material: Steel, Hardened HRC 60-62 on Guiding Edges
Finish: Ground on All Sides (N5) Black Burnished

Straightness: 0.2 mm/meter
Parallelism: 0.015 mm/meter

Support Rollers



Support Roller Catalog Number		A	B	C	D	d	d1	d2	1.) E	F	G	L	DIN 934 M	SW	Radial load (N)
Concentric	Eccentric														
HICC21M0	HIEC21M0	-	17	3	34	M10	10	20	1	19	14	40	M10	5	1300

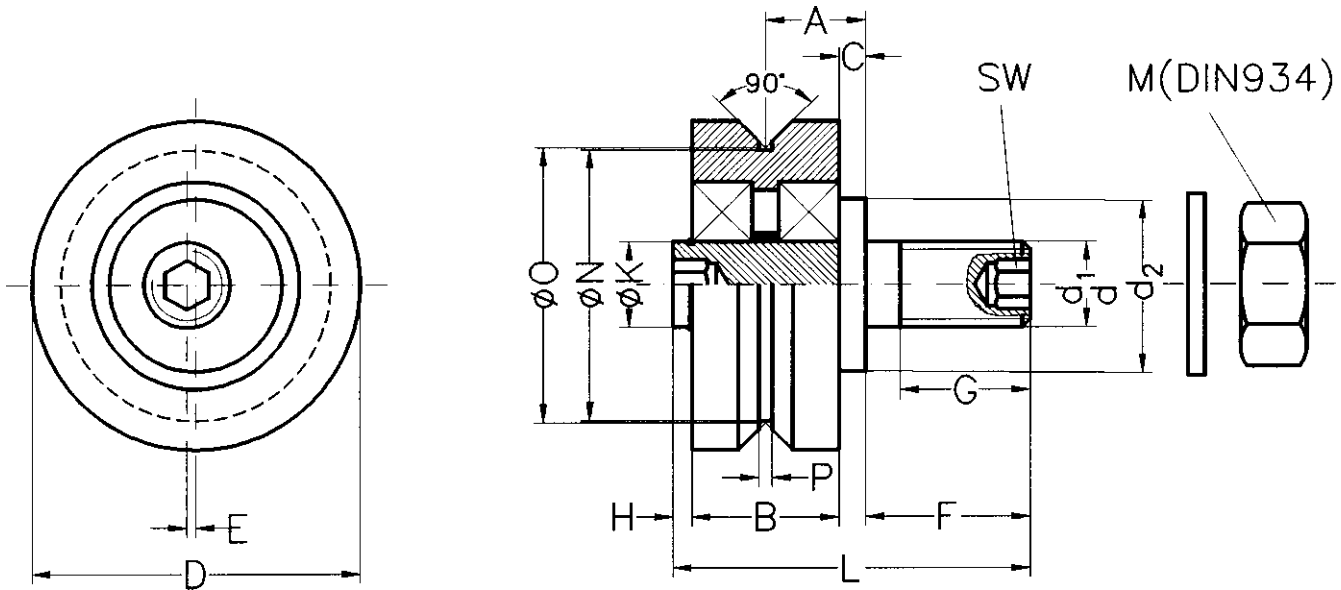
1.) Only with Eccentric Guide Roller.



Precision V-Groove Rail System, 90°



Guide Rollers



Catalog Number is for Individual Roller

Guide Roller Catalog Number		A	B	C	D	d	-0.02	d ₁	d ₂	1.)	E	F	G	H	Ø	K	L	DIN 934	M	N	O	SW	P
Concentric	Eccentric																						
HIRK90M2ZD	HIRK90M2ED	8	11	2.5	23	M6	6	12	1	9.5	7	1	5	24	M6	18.6	19.1	2.5	1.5				
HIRK90M3ZD	HIRK90M3ED	9	14	2	30	M8	8	14	1	13.6	9.3	0.4	7	30	M8	24	24.5	3	1.5				
HIRK90M4ZD	HIRK90M4ED	11.5	17	3	38	M10	10	20	1	19	15	2.2	10	41.2	M10	31.25	31.75	5	1.5				
HIRK90M5ZD	HIRK90M5ED	19	25	6.5	58	M16	16	25	1.5	24	14	2.5	17	58	M16	44.5	45.5	8	2				

1.) Only with Eccentric Guide Roller.

SPECIFICATIONS:

Material: Steel

Hardness: HRC 60-62

Metal Shield: Steel

Cages: Steel or Bronze

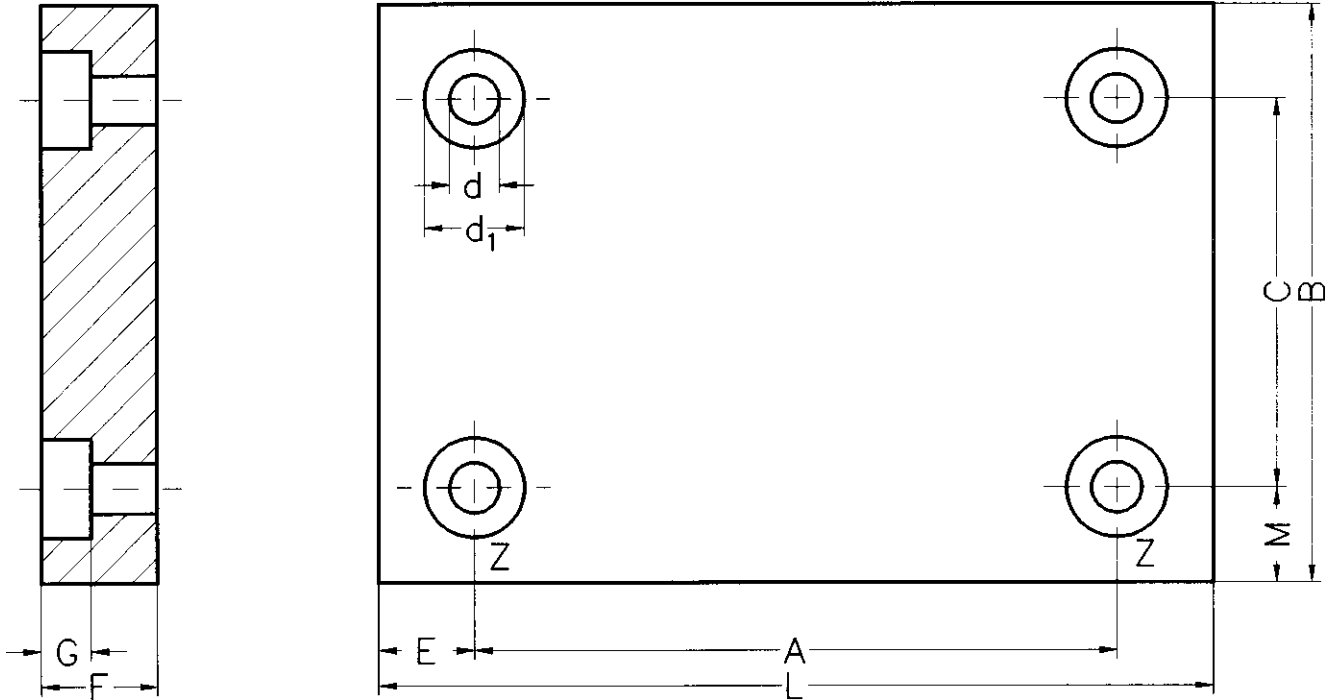
2 Rails, Carriages And Bearings



Precision V-Groove Rail System, 90°



Carriage Plate, 90° System



Catalog Numbers		A	B	C	H7 d	d ₁	E	+0.02 F	G	L	M
Carriage Plate	Matching Guide Rollers										
HI9025M100	HIRK90M2ZD/2ED	60	80	45	6	16	20	10	7	100	17.5
HI9050M140	HIRK90M3ZD/3ED	90	120	75	8	22	25	14	9	140	22.5
HI9044M160	HIRK90M4ZD/4ED	100	130	76.5	10	26	30	20	11	160	26.8
HI9076M230	HIRK90M5ZD/5ED	150	200	122	16	36	40	25	17.5	230	39

Material: Aluminum Alloy

Finish: Black Anodized

Load Carrying Capacities

Guide Roller	Combined with Carriage Plate	Load Per Guide Roller	
		Axial	Radial
HIRK90M2ZD HIRK90M2ED	HI9025M100	190 N	1110 N
HIRK90M3ZD HIRK90M3ED	HI9050M140	310 N	1720 N
HIRK90M4ZD HIRK90M4ED	HI9044M160	980 N	4620 N
HIRK90M5ZD HIRK90M5ED	HI9076M230	1625 N	6050 N

If two additional eccentric rollers are installed, max. load capacities can be increased by up approx. 40%.