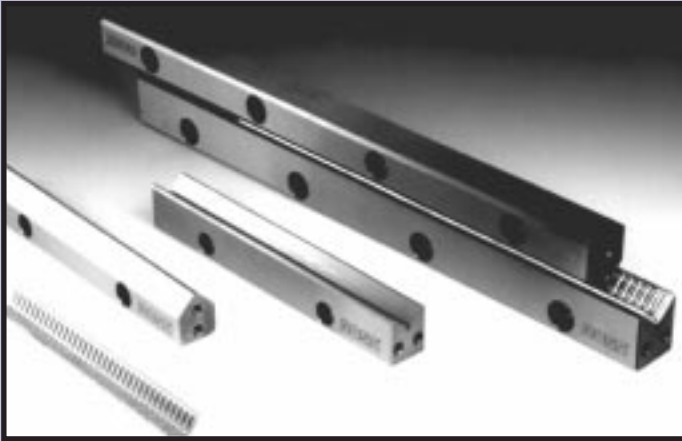


20 High Load Capacity Needle Roller Rail Sets



Needle Roller Advantages

1. Higher Load Ratings
2. Higher Rigidity
3. Better Overlapping of the Rollers, especially in case of Short Stroke
4. Higher Sensibility to Mounting Errors and Impurities

The same calculation criteria used previously is valid for the rails RM/RV. However the different cage designs (plastic for horizontal application aluminium for both horizontal and vertical applications) should be accounted for.

Rails type RM/RV can be equipped with needle cages. The cages are made of plastic, aluminium and brass. The plastic cages are moulded in single elements which can be assembled by means of dovetail snap in ends. They are indicated for use in horizontal applications. This type of cage is supplied in the flat state. The angle necessary during assembly can be obtained by submerging the cage in oil at 80°C and cooling it.

Determination of Cage Length and Load Rating with protruding cages.

Example is based upon RM/RV 2025-500. For the calculation of the cage length the formula $LG = L - \frac{C}{2}$ is valid.

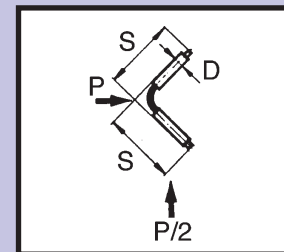
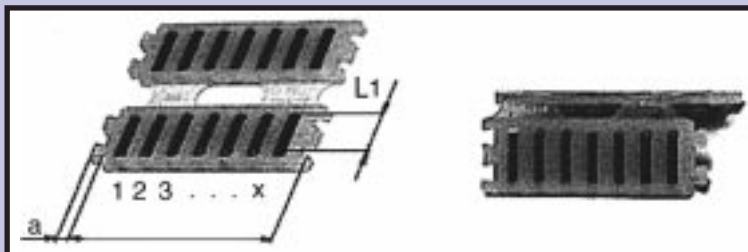
The stroke is 200mm and the load 1500 kg. Thus, $LG = 500 - \frac{200}{2} = 400$ mm.

As previously, the cage FF is supplied as single elements thus each element length is assumed as the pitch that yields:

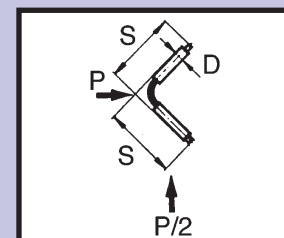
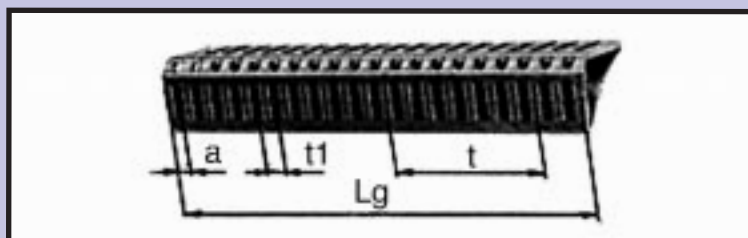
NE (number of elements) = $\frac{LG}{t} = \frac{400}{32} = 12.5$ ∴ if the rating for each element is 868 Kg the system rating will be 10416 kg.

The condition $P > F$ -10416 > 1500 should be verified.

For tables mounted vertically, the cage type HW should be chosen.

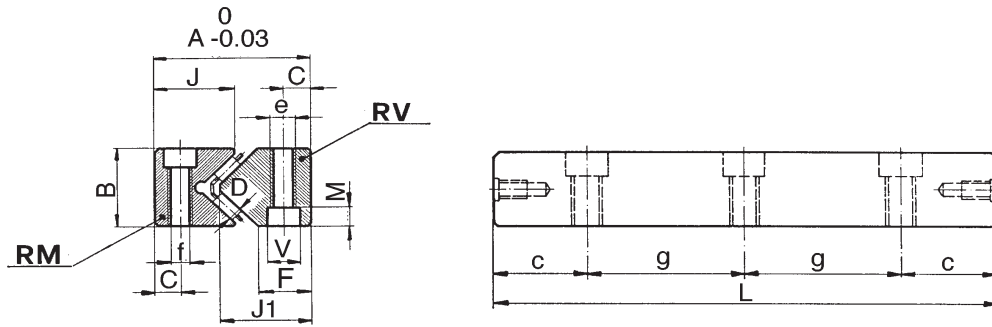


Designation	ØD	L1	S	t	a	nr/t	Pkg
FF2025 zw	2.0	6.8	15.0	32	2.0	7.0	868
FF2535 zw	2.5	9.8	20.5	45	2.4	8.0	1792
FF3045 zw	3.0	13.8	26.0	60	3.0	9.0	3375
FF3555 zw	3.5	17.8	31.5	75	3.2	10.0	5500



Designation	ØD	L1	S	t	t ₁	a	nr/t	Pkg
HW15	2.0	6.8	15.0	32	4.5	2.0	7.0	868
HW20	2.5	9.8	20.5	45	5.5	2.4	8.0	1792
HW25	3.0	13.8	26.0	60	6	3.0	9.0	3375
HW30	3.5	17.8	31.5	75	7	3.2	10.0	5500

High Load Capacity Needle Roller Rail Sets 21



Designation	Rail Type Retainer	Rail RM Weight (gr)	Rail RV Weight (gr)	L	g	c	D	A	B	F	J ₁	J	C	e	f	V	M
RM/RV	92025-200	685	695	200	1x100												
	92025-300	1020	1030	300	2x100												
	92025-400	1355	1365	400	3x100												
	92025-500	1690	1700	500	4x100												
	92025-600	2025	2035	600	5x100												
	92025-700	2360	2370	700	6x100	50	2	44	22	15	24.5	24	9	M8	6.8	10.5	6.2
	92025-800	3695	2705	800	7x100												
	92025-900	3030	3040	900	8x100												
	92025-1000	3365	3375	1000	9x100												
	92025-1100	3700	3710	1100	10x100												
92025-1200	4035	4045	1200	11x100													
RM/RV	2025-200	900	900	200	1x100												
	2025-300	1365	1350	300	2x100												
	2025-400	1830	1800	400	3x100												
	2025-500	2295	2250	500	4x100												
	2025-600	2760	2700	600	5x100												
	2025-700	3225	3150	700	6x100	50	2	52	25	18	29	28	10	M10	8.5	13.5	8.2
	2025-800	3690	3600	800	7x100												
	2025-900	4155	4050	900	8x100												
	2025-1000	4620	4500	1000	9x100												
	2025-1100	5085	4950	1100	10x100												
2025-1200	5550	5400	1200	11x100													
RM/RV	2535-300	1905	1965	300	2x100												
	2535-400	2540	2620	400	3x100												
	2535-500	3175	3275	500	4x100												
	2535-600	3810	3930	600	5x100												
	2535-700	4445	4585	700	6x100												
	2535-800	5080	5240	800	7x100	50	2.5	62	30	22	35	34	12	M12	10.5	16.5	10.2
	2535-900	5715	5895	900	8x100												
	2535-1000	6350	6650	1000	9x100												
	2535-1100	6985	7205	1100	10x100												
	2535-1200	7620	7860	1200	11x100												
RM/RV	3045-400	3660	3460	400	3x100												
	3045-500	4575	4325	500	4x100												
	3045-600	5490	5190	600	5x100												
	3045-700	6405	6055	700	6x100												
	3045-800	7320	6920	800	7x100	50	3	74	35	25	40	42.5	14	M14	12.5	18.5	12.2
	3045-900	8235	7785	900	8x100												
	3045-1000	9150	8650	1000	9x100												
	3045-1100	10065	9515	1100	10x100												
	3045-1200	10980	10380	1200	11x100												
	RM/RV	3555-500	6170	6100	500	4x100											
3555-600		7410	7320	600	5x100												
3555-700		8650	8540	700	6x100												
3555-800		9890	9760	800	7x100	50	3.5	78	45	25	45	45	14	M14	12.5	18.5	12.2
3555-900		11130	10980	900	8x100												
3555-1000		12370	12200	1000	9x100												
3555-1100		13610	13420	1100	10x100												
3555-1200		14850	14640	1200	11x100												

The supply of RM and RV rails as one single piece up to a maximum length of 1700 mm is also available

End pieces GV and GM with or without wiper

	9-2025	2025	2535	3045	3555
a4	8	9	11	11	11
a5	4	3	3	3	3
a6	10	11	13	13	13
e	M4	M6	M8	M8	M8
f	10	14	16	18	22
r	10	12.5	14	14	14

Typical Ordering Example;

For horizontal rails type; RM/RV 2025-200 C=80mm
 2 rails type type RM2025-200, 2 rails type RV 2025-200
 2 cages type FF 2025-ZW with 5 elements each.
 4 end pieces GV 2025

