

All linear slides consist of an outer rail with a runner moving inside. Anti-friction bearings, kept at a distance and in position by means of a ball cage, lie between the rail and the runner.

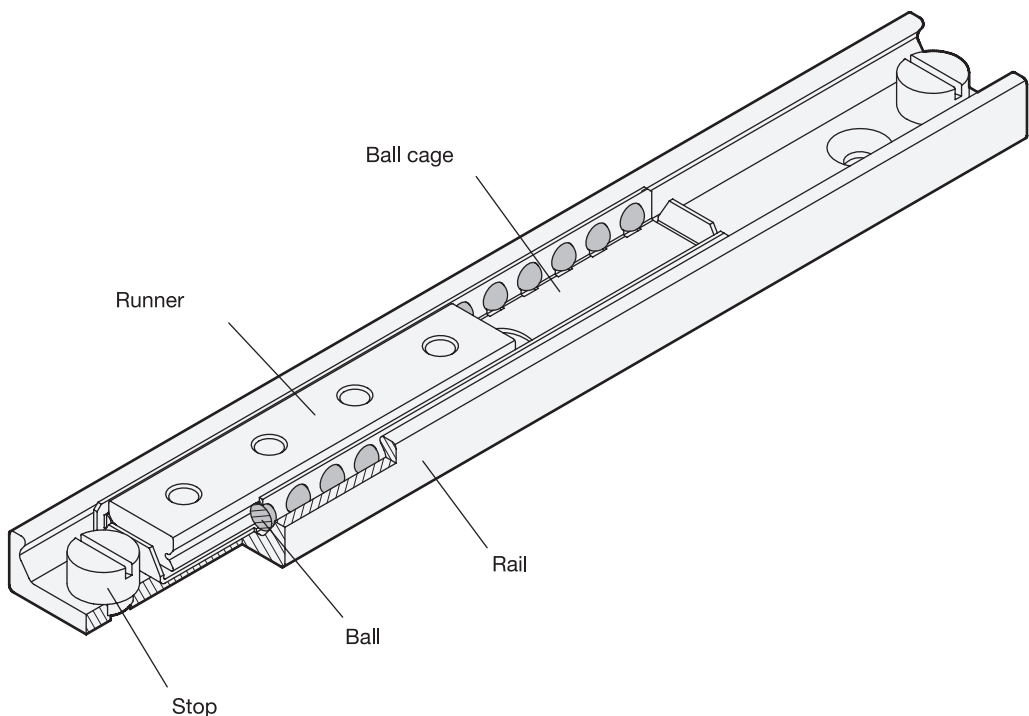
Rail and runner are made of heat treatable steel, enabling their use in industrial environments with higher requirements in terms of load rating, quiet operation and useful service life.

All designs are available in the nominal rail dimensions $h_1 = 28, 35$ and 43 mm and may also be supplied beyond the standard range in lengths from 130 mm to 1970 mm, appropriate for individual requirements.

Linear slides are normally adjusted so that a clearance-free (i.e. moderately pre-stressed) match-up is created between rail and runner. The raceways of the rails and runners are induction hardened, which combined with the antifriction bearings results in lower wear and longer service life. Linear slides are permanently lubricated with a high-grade special grease designed for linear guide rail systems.

Depending on requirements, a variety of different types are available. Sliding distances of the runners are inside, partly outside or entirely outside the length of the rails. Fully extendable telescopic linear slides consist of linear slides directly interconnected at the rails, the runners or with the help of an intermediate profile.

To mount linear slides, countersinks in the rails and, depending on type of construction, threaded or countersunk holes in the runners are available. The compact style is generally advantageous for use in tight spaces.

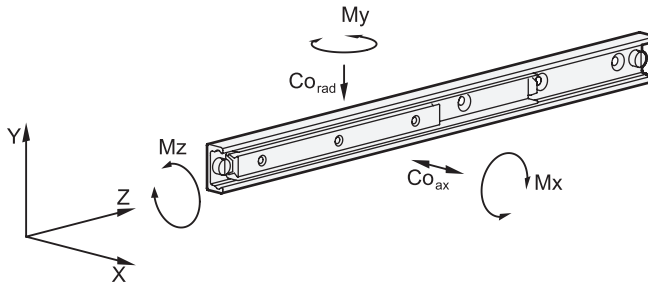


Load Rating of Telescopic Linear Slides

in Ascending Order of the Standard Series Numbers

When selecting a suitable linear slide, it is primarily the available space, the desired stroke and the load carried which must be taken into consideration. The values listed below can be used as a guide in selecting a suitable nominal rail size and refer in each case to one linear slide. Depending on the application, appropriate safety factors should be taken into account.

The details on load rating are non-binding guide values given without liability and does not constitute any type of guarantee or warranty of its intended use. The user must determine in each individual case whether a product is suitable for the intended application. Environmental factors and aging may affect the stated values.



Static load rating

Article No.	Load ratings		Permissible load torques		
	$C_{o_{rad}}$ in N	$C_{o_{ax}}$ in N	M_x in Nm	M_y in Nm	M_z in Nm
GN 2402 -28- 60-...	3580	2500	37	25	18
-28- 80-...	4780	3345	65	45	23
-28-130-...	7765	5435	166	117	38
-28-210-...	12545	8780	430	300	62
-35-130-...	9980	6985	219	156	50
-35-210-...	16125	11290	560	397	87
-35-290-...	22270	15590	1085	745	109
-43-210-...	23140	16200	790	552	157
-43-370-...	40775	28540	2445	1710	275
GN 2404 -28-130	645	452	30	23	17
-28-210	1165	816	86	60	27
-28-290	2015	1410	190	135	41
-28-370	2540	1780	309	215	52
-28-450	3065	2145	540	316	64
-28-530	3595	2515	625	435	74
-35-290	2100	1470	218	155	56
-35-370	2685	1880	348	247	69
-35-450	3270	2285	515	365	80
-35-530	4350	3045	787	553	101
-35-610	4930	3450	1025	722	113
-35-690	5510	3860	1295	914	125
-43-370	3540	2480	444	313	119
-43-450	4905	3435	735	514	151
-43-530	6305	4415	1090	766	184
-43-610	7725	5410	1525	1065	210
-43-690	8185	5730	1850	1295	240
-43-770	9490	6530	2405	1685	273

Load Rating of Telescopic Linear Slides

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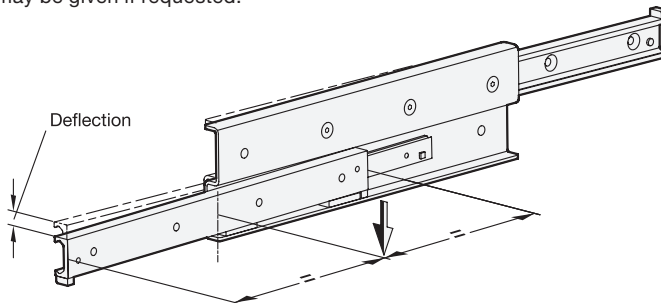
Article no.	Load ratings C _{Orad} in N	Article no.	Load ratings C _{Orad} in N	Article no.	Load ratings C _{Orad} in N
GN 2406 -28- 290-E	587	GN 2408 -28-210-...	447	GN 2410 -28-210	444
-28- 370-E	793	-28-370-...	1000	-28-370	496
-28- 450-E	999	-28-450-...	1205	-28-450	405
-28- 530-E	1205	-28-530-...	1140	-28-530	342
-28- 610-E	1510	-35-370-...	1035	-35-370	534
-35- 450-E	1265	-35-450-...	1265	-35-450	439
-35- 530-E	1700	-35-530-...	1705	-35-530	403
-35- 690-E	2150	-35-610-...	1930	-35-610	346
-35- 850-E	2830	-43-450-...	1890	-43-450	1370
-43- 530-E	2140	-43-610-...	3035	-43-610	1115
-43- 690-E	2885	-43-770-...	3145	-43-770	870
-43- 850-E	4010	-43-930-...	2580	-43-930	714
-43-1010-E	4755				
-43-1490-E	3820				

No details on the permissible load torques are given for the telescopic linear slides as these are normally used for paired applications. Loads of these dimensions occur to a minor degree because it may be assumed that the surrounding construction has sufficient rigidity and stiffness. Transferring load torques within certain limited is permitted.

Static load and deflection

The load values given in the tables refer to a maximum permissible force allowed to act in the middle of the fully extended profile rail at the third segment.

If the given values are observed and if the telescopic linear slide is fully extended, a minor deflection (sag) occurs at the end of the runner or of the rail. This has normally no detrimental effect on the proper function of the application. If required, guide values may be given if requested.



Mounting screws, assignment of the mounting holes

The standard mounting hardware is DIN 7991-10.9 countersunk screws, to be mounted with the recommended tightening torque. Depending on type, not all mounting holes may be utilized. In general, these holes can be left unused. In exceptional cases, especially in bilateral stroke, mounting holes can be accessed by loosening the support screws and by pulling out the runner. The support screws are then put back in place.

Traversal speed, cage slip

The traversal speed in linear slides can be as much as 0,8 m/s. The particular application and the installation length can have an effect on this value. In the event of rapid changes of direction and high accelerating forces, cage slip may occur in some cases, especially in long ball cages. In cases such as these, the cage does not move synchronously with half the speed of the runner, but gradually loses its correct position owing to the slip. Whenever possible, running a blank stroke to the end of the traversal distance should be provided for back positioning.