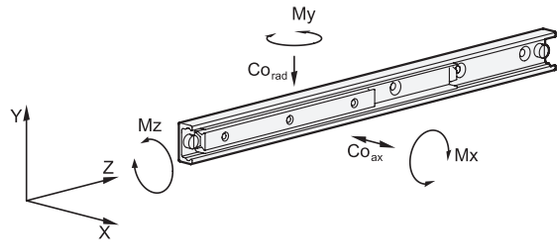
Load Rating of Telescopic Linear Slides

Sorted by Series Numbers

When selecting a suitable linear slide, it is primarily the available installation space, the desired stroke and the load to be carried which must be taken into consideration. The values listed below can be used as a guidance 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 load rating details are non-binding guide values given without liability and do not constitute a guarantee of quality. 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

Part number	Load ratings		Permissible load torques		
	Co_{rad}	Co_{ax}	M_x	M_y	M_z
GN 2402 -28- 60-...	3580 N *805 lbf*	2500 N *562 lbf*	37 Nm	25 Nm	18 Nm
-28- 80-...	4780 N *1075 lbf*	3345 N *752 lbf*	65 Nm	45 Nm	23 Nm
-28-130-...	7765 N *1746 lbf*	5435 N *1222 lbf*	166 Nm	117 Nm	38 Nm
-28-210-...	12545 N *2820 lbf*	8780 N *1974 lbf*	430 Nm	300 Nm	62 Nm
-35-130-...	9980 N *2244 lbf*	6985 N *1570 lbf*	219 Nm	156 Nm	50 Nm
-35-210-...	16125 N *3625 lbf*	11290 N *2538 lbf*	560 Nm	397 Nm	87 Nm
-35-290-...	22270 N *5006 lbf*	15590 N *3505 lbf*	1085 Nm	745 Nm	109 Nm
-43-210-...	23140 N *5202 lbf*	16200 N *3642 lbf*	790 Nm	552 Nm	157 Nm
-43-370-...	40775 N *9167 lbf*	28540 N *6416 lbf*	2445 Nm	1710 Nm	275 Nm
GN 2404 -28-130	645 N *145 lbf*	452 N *102 lbf*	30 Nm	23 Nm	17 Nm
-28-210	1165 N *262 lbf*	816 N *183 lbf*	86 Nm	60 Nm	27 Nm
-28-290	2015 N *453 lbf*	1410 N *317 lbf*	190 Nm	135 Nm	41 Nm
-28-370	2540 N *571 lbf*	1780 N *400 lbf*	309 Nm	215 Nm	52 Nm
-28-450	3065 N *689 lbf*	2145 N *482 lbf*	540 Nm	316 Nm	64 Nm
-28-530	3595 N *808 lbf*	2515 N *565 lbf*	625 Nm	435 Nm	74 Nm
-35-290	2100 N *472 lbf*	1470 N *330 lbf*	218 Nm	155 Nm	56 Nm
-35-370	2685 N *604 lbf*	1880 N *423 lbf*	348 Nm	247 Nm	69 Nm
-35-450	3270 N *735 lbf*	2285 N *514 lbf*	515 Nm	365 Nm	80 Nm
-35-530	4350 N *978 lbf*	3045 N *685 lbf*	787 Nm	553 Nm	101 Nm
-35-610	4930 N *1108 lbf*	3450 N *776 lbf*	1025 Nm	722 Nm	113 Nm
-35-690	5510 N *1239 lbf*	3860 N *868 lbf*	1295 Nm	914 Nm	125 Nm
-43-370	3540 N *796 lbf*	2480 N *558 lbf*	444 Nm	313 Nm	119 Nm
-43-450	4905 N *1103 lbf*	3435 N *772 lbf*	735 Nm	514 Nm	151 Nm
-43-530	6305 N *1417 lbf*	4415 N *993 lbf*	1090 Nm	766 Nm	184 Nm
-43-610	7725 N *1737 lbf*	5410 N *1216 lbf*	1525 Nm	1065 Nm	210 Nm
-43-690	8185 N *1840 lbf*	5730 N *1288 lbf*	1850 Nm	1295 Nm	240 Nm
-43-770	9490 N *2133 lbf*	6530 N *1468 lbf*	2405 Nm	1685 Nm	273 Nm

Load Rating of Telescopic Linear Slides

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Part number	Load ratings C_{0rad}
GN 2406 -28- 290-E	587 N *132 lbf*
-28- 370-E	793 N *178 lbf*
-28- 450-E	999 N *225 lbf*
-28- 530-E	1205 N *271 lbf*
-28- 610-E	1510 N *339 lbf*
-35- 450-E	1265 N *284 lbf*
-35- 530-E	1700 N *382 lbf*
-35- 690-E	2150 N *483 lbf*
-35- 850-E	2830 N *636 lbf*
-43- 530-E	2140 N *481 lbf*
-43- 690-E	2885 N *649 lbf*
-43- 850-E	4010 N *901 lbf*
-43-1010-E	4755 N *1069 lbf*
-43-1490-E	3820 N *859 lbf*

Part number	Load ratings C_{0rad}
GN 2408 -28-210-...	447 N *100 lbf*
-28-370-...	1000 N *225 lbf*
-28-450-...	1205 N *271 lbf*
-28-530-...	1140 N *256 lbf*
-35-370-...	1035 N *233 lbf*
-35-450-...	1265 N *284 lbf*
-35-530-...	1705 N *383 lbf*
-35-610-...	1930 N *434 lbf*
-43-450-...	1890 N *425 lbf*
-43-610-...	3035 N *682 lbf*
-43-770-...	3145 N *707 lbf*
-43-930-...	2580 N *580 lbf*

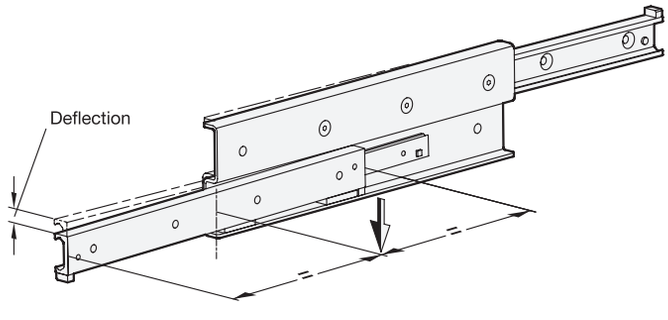
Part number	Load ratings C_{0rad}
GN 2410 -28-210	444 N *99.82 lbf*
-28-370	496 N *112 lbf*
-28-450	405 N *91.05 lbf*
-28-530	342 N *76.88 lbf*
-35-370	534 N *120 lbf*
-35-450	439 N *98.69 lbf*
-35-530	403 N *90.60 lbf*
-35-610	346 N *77.78 lbf*
-43-450	1370 N *308 lbf*
-43-610	1115 N *251 lbf*
-43-770	870 N *196 lbf*
-43-930	714 N *161 lbf*

For telescopic linear slides, which consist of two linear slides assembled together, no information is given on the permissible load torques as these are normally used for paired applications. Loads of these dimensions only occur to a minor degree because it may be assumed that the surrounding construction has sufficient rigidity. Transferring load torques within certain limits 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 specified values are observed, a minor deflection occurs at the end of the runner or of the rail when the telescopic linear slide is fully extended. This has normally no detrimental effect on the proper function of the application. If required, guide values may be given on request.



Mounting screws, assignment of the mounting holes

The standard mounting hardware are DIN 7991-10.9 countersunk screws, which are to be mounted with the recommended tightening torques. Depending on the type, it may not be possible to reach / use all mounting holes. In general, these holes may remain unused. In exceptional cases, especially in case of stroke on both sides, the mounting holes can be accessed by loosening the stop screws and by pulling out the runner. The stop screws are then put back in place.

Traversal speed, cage slip

The traversal speed of linear slides may be up to 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 acceleration forces, cage slip may occur in some cases, especially with long ball cages. In such cases, 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 travel distance should be provided for repositioning the cage.