

Telescopic slides

General notes

GENERAL INFORMATION

Telescopic slides offer smooth running, wear-free, and quiet linear motion. They are used in a very wide range of applications. The spectrum ranges from the most simple extensions and drawers to high-quality variants that are used in the industrial environment on machines, production systems, and equipment. The telescopic slides have a multitude of positive features and are still very interesting from an economic standpoint. Here are a few examples of use: sliding doors, protective hoods, keyboards and PC pullouts, vehicle equipment, storage shelves, battery boxes etc.

Telescopic slides can come with a number of component options. Some are available for one of the two stop positions and in combination, and they are defined by the type in the article number.

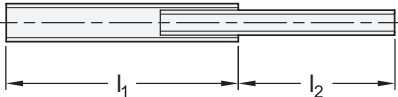

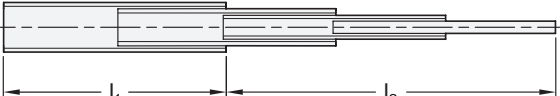
STRUCTURE

Telescopic slides consist of an outer and inner slide as well as additionally of one or two middle slides depending on design and/or required extension lengths. The slides are interconnected through appropriately shaped geometry and move by means of ball bearings. A ball cage keeps the bearings spaced and in position.

The slides are usually mounted through countersunk holes or through-holes. Other options, such as threaded bolts or support brackets, are available as an alternative.

In regard to the length of the extension, telescopic slides can be divided into three categories:

Partial extension, full extension, and over extension. The categories are defined by the achievable stroke l_2 , which is listed in relation to the nominal length l_1 .

Type of extension	Extension diagram
Partial extension: $l_1 = 100\% \rightarrow l_2 = \text{min. } 75\%$	 A schematic diagram of a telescopic slide in a partially extended state. The outer slide is shown in grey, and the inner slide is in white. Dimension lines below indicate the nominal length l_1 (the length of the outer slide) and the achievable stroke l_2 (the length of the inner slide).
Full extension: $l_1 = 100\% \rightarrow l_2 = \text{min. } 100\%$	 A schematic diagram of a telescopic slide in a fully extended state. The outer slide is shown in grey, and the inner slide is in white. Dimension lines below indicate the nominal length l_1 (the length of the outer slide) and the achievable stroke l_2 (the length of the inner slide).
Over extension: $l_1 = 100\% \rightarrow l_2 = \text{min. } 150\%$	 A schematic diagram of a telescopic slide in an over-extended state. The outer slide is shown in grey, and the inner slide is in white. Dimension lines below indicate the nominal length l_1 (the length of the outer slide) and the achievable stroke l_2 (the length of the inner slide).

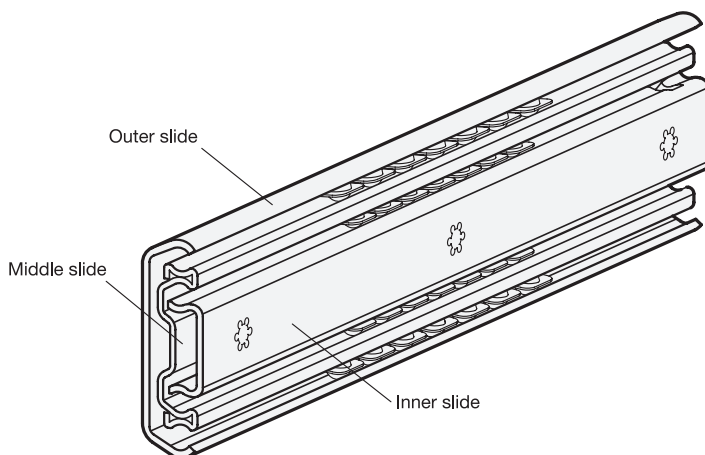
All slides have internally constructed stops in the front and back end position. The stops prevent the slides from extending unintentionally. Depending on the available installation space and required stability, the stops are designed accordingly in a metallic form or with additional plastic or elastomer parts as a rubber stop to prevent the slides from hitting the end positions with too much force.

Also the telescopic slides can come with a variety of accessory functions. Examples include locking devices, latches, detach functions, and self-retracting mechanisms, some of which are dampened. Some additional functions are available, depending on slide variant, for the back or front stop position and in combination. Furthermore, customer-specific modifications regarding the fastening of the slides can be made.

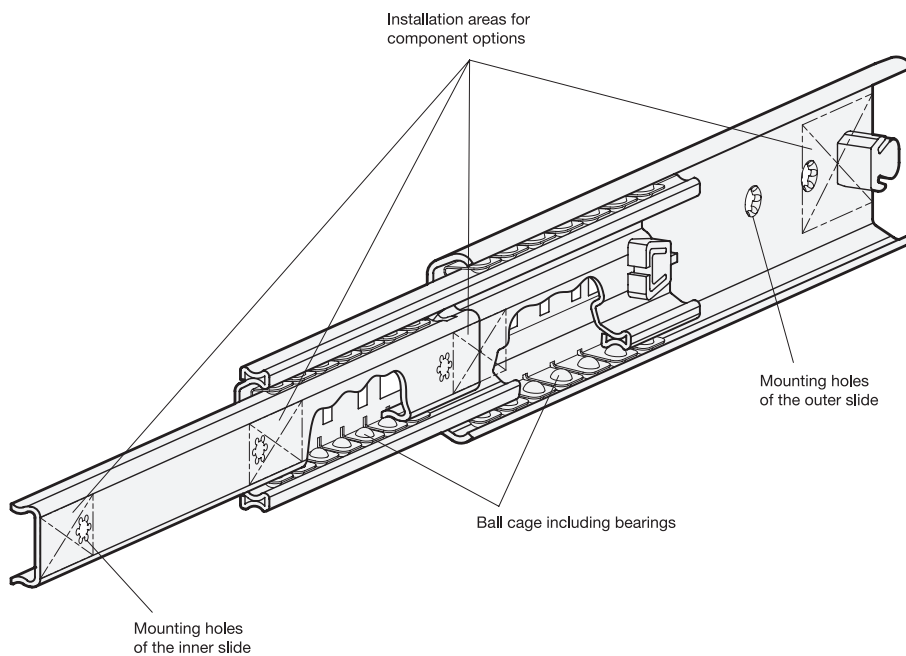
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TELESCOPIC SLIDES WITH FULL EXTENSION, BACK STOP POSITION



TELESCOPIC SLIDES WITH FULL EXTENSION, FRONT STOP POSITION



Telescopic slides - Types

Standard	Type of extension Partial extension T Full extension V	Load capacity per pair at 10,000 cycles in N	Basic length retracted position in mm	Material Steel ST St. Steel NI	Fastening		
					Through-holes (Id. no. 1)	Countersunk holes (Id. no. 2)	Outer slide, through-holes/ Inner slide, countersunk holes (Id. no. 3)
GN 1400 see page 6	T	280	300 - 500	ST	X		
GN 1404 see page 8	T	780	300 - 700	ST			X
GN 1408 see page 10	V	250	250 - 700	ST	X		
GN 1410 see page 13	V	510	250 - 800	ST	X		
GN 1412 see page 16	V	430	300 - 700	ST	X		
GN 1414 see page 19	V	360	300 - 650	ST	X		
GN 1418 see page 22	V	430	350 - 650	ST	X		
GN 1420 see page 25	V	1290	300 - 1200	ST		X	
GN 1422 see page 27	V	1290	300 - 800	ST		X	
GN 1424 see page 30	V	750	350 - 700	ST		X	
GN 1426 see page 33	V	1380	500 - 800	ST		X	
GN 1430 see page 35	V	2120	400 - 1200	ST		X	
GN 1432 see page 37	V	2300	400 - 800	ST		X	
GN 1440 Type B see page 40	V	3250	300 - 1500	ST	X		
GN 1440 Type M see page 40	V	3250	300 - 1500	ST	X		
GN 1440 Type K see page 40	V	3250	300 - 1500	ST	X		
GN 1440 Type Q see page 40	V	3250	300 - 1500	ST	X		
GN 1450 see page 44	V	510	300 - 600	NI	X		
GN 1460 see page 47	V	1050	250 - 800	NI		X	

Telescopic slides - Component features

Standard	Component features									
	without rubber stop	with rubber stop, back-front	Locking device back	Locking device back, detach function	Latch back	Latch front	Latch back-front	Self-retracting mechanism, dampened / not dampened	Push to open - mechanism	Extension on both sides
			Type E	Type F	Type M	Type K	Type Q			
GN 1400 see page 6	X									
GN 1404 see page 8		X	X							
GN 1408 see page 10		X		X						
GN 1410 see page 13		X		X						
GN 1412 see page 16		X		X			X			
GN 1414 see page 19		X		X			X			
GN 1418 see page 22		X		X				X		
GN 1420 see page 25		X	X							
GN 1422 see page 27		X					X			
GN 1424 see page 30		X					X			
GN 1426 see page 33		X								X
GN 1430 see page 35		X	X							
GN 1432 see page 37		X					X			
GN 1440 Type B see page 40		X								
GN 1440 Type M see page 40		X			X					
GN 1440 Type K see page 40		X				X				
GN 1440 Type Q see page 40		X					X			
GN 1450 see page 44		X		X						
GN 1460 see page 47		X		X						