SCHNEEBERGER
LINEAR TECHNOLOGY

MINI
SLIDE

The last word in productivity

NEW

Contents

Product range

The MINISLIDE range covers six main sizes each available in different standard lengths.






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Sizes and strokes						
Rail width in mm	4	5	7	9	12	15
System width in mm	7	10	17	20	27	32
System height in mm	4	6	8	10	13	16
Lengths in mm (without end pieces)	10–25	15–50	30–70	40–80	50–100	70–130
Strokes in mm	6–22	8–42	20–58	34–66	45–70	66–102
Perfomance parameters						
Maximum acceleration in m/s^2	50	50	300	300	300	300
Maximum speed in m/s	1	1	3	3	3	3
Preload	no play	no play	no play	no play	no play	no play
Accuracy	Page 12	Page 12	Page 12	Page 12	Page 12	Page 12
Dynamic load capacity	207–337	568–1109	609–1124	692–1252	1427–2934	2611–4820
Technical performance						
Cage centering	✓	✓	–	–	–	–
Cage controly system	–	–	✓	✓	✓	✓
Gothic arch profile	✓	✓	–	–	–	–
Circular tracks/O-Geometry	–	–	✓	✓	✓	✓
Mechanical stroke limiter [1]	–	–	✓	✓	✓	✓
Technical details						
Rail, upper part, balls, screws	resistant steel	resistant steel	resistant steel	resistant steel	resistant steel	resistant steel
Cage	plastic	plastic	plastic	plastic	plastic	plastic
Pinion	–	–	plastic	plastic	plastic	plastic
End parts	–	–	plastic	plastic	plastic	plastic
Areas of application						
High vacuum in mbar [2] [4]	10^{-7}	10^{-7}	10^{-9}	10^{-9}	10^{-9}	10^{-9}
Operating temperature in °C [3]	–40/+80	–40/+80	–40/+150	–40/+150	–40/+150	–40/+150
Short-term maximum temperature in °C [3]	+120	+120	+200	+200	+200	+200

(1) The mechanical stroke limiter of MINISLIDE assists installation and maintenance. In no event must it be used to limit the stroke during operation.

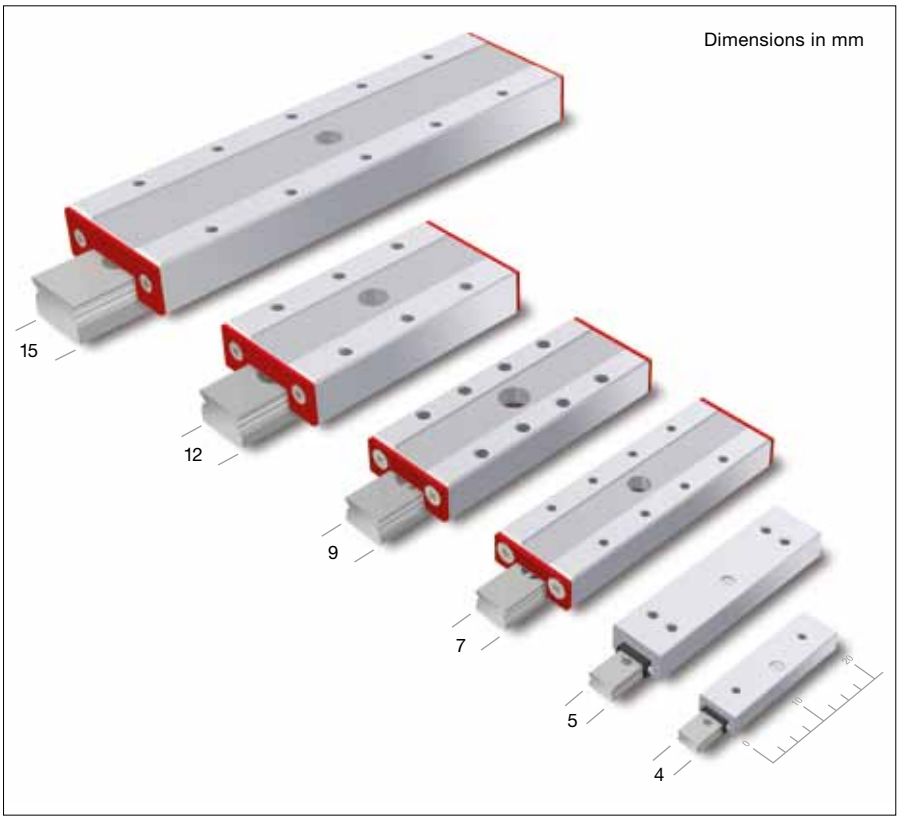
(2) The vacuum compatibility relates only to the materials used. To use the slide in vacuum, air must be removed from all drilled and tapped holes and/or vented screws should be used. (Price upon request).

(3) The standard lubrication covers a temperature range of -20°C to +100°C. For lubrication at other temperatures please consult SCHEEEBERGER.

(4) Use in vacuum requires a special lubrication, details of which can be obtained from SCHNEEBERGER.

The last word in productivity

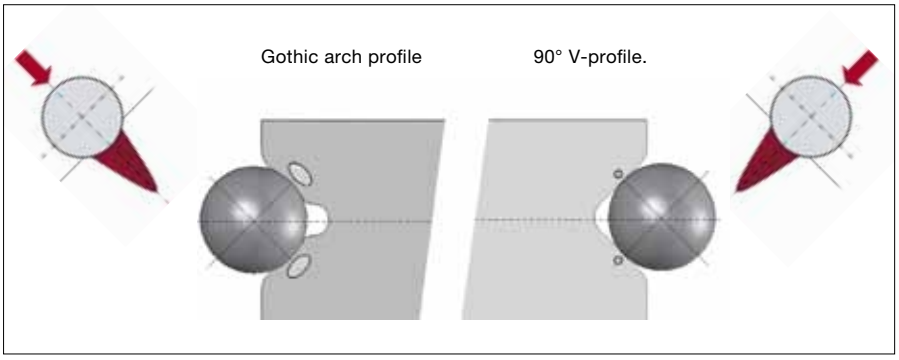
Challenging applications demand exceptional guideways. MINISLIDE embodies the newest generation of miniature slides for extremely demanding applications. They are highly robust and reliable in every application due to their smooth performance, precision and long service lifetime.



MINISLIDE Product range overview

MS 4 and MS 5 – highest results in the smallest envelope

The gothic arch profile of the MINISLIDE MS tracks permits loads that are more than ten times higher than a traditional 90° V-profile.



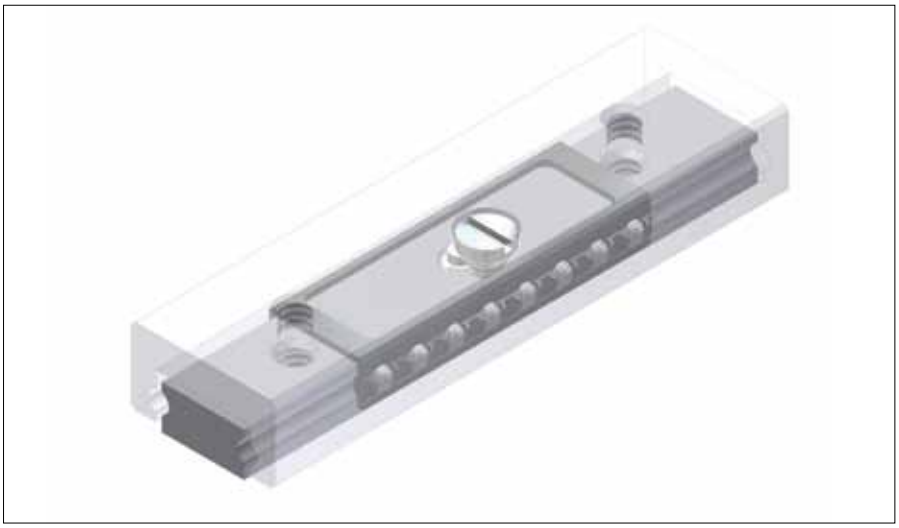
Gothic arch profile, 90° V-profile

Benefits of the gothic arch profile

- High load-carrying capacity in a compact design
- Maximum rigidity
- Low sensitivity to impacts
- Excellent damping behaviour
- Robust
- Low weight

MS 4 and MS 5 – high reliability due to reduced cage creeping

MINISLIDE MS 4 and MS 5 employ a single-piece cage to counteract any cage creeping. An integrated cage-alignment system corrects any cage displacement.

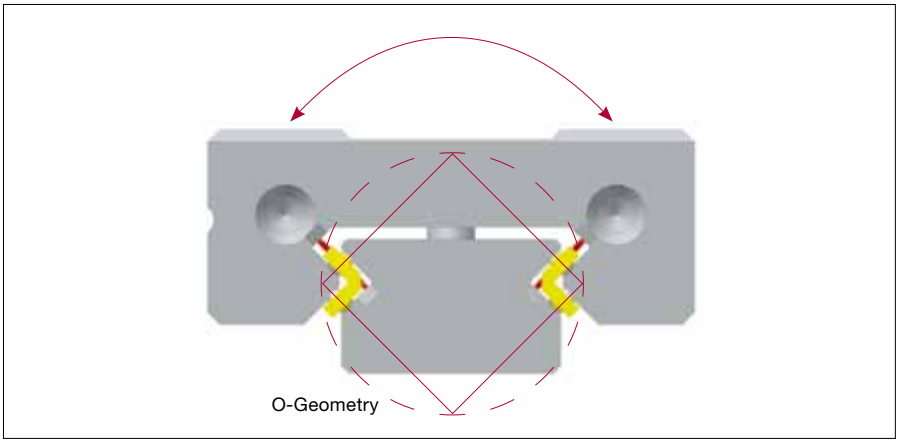


MINISLIDE MS with single-pieced cage and cage alignment

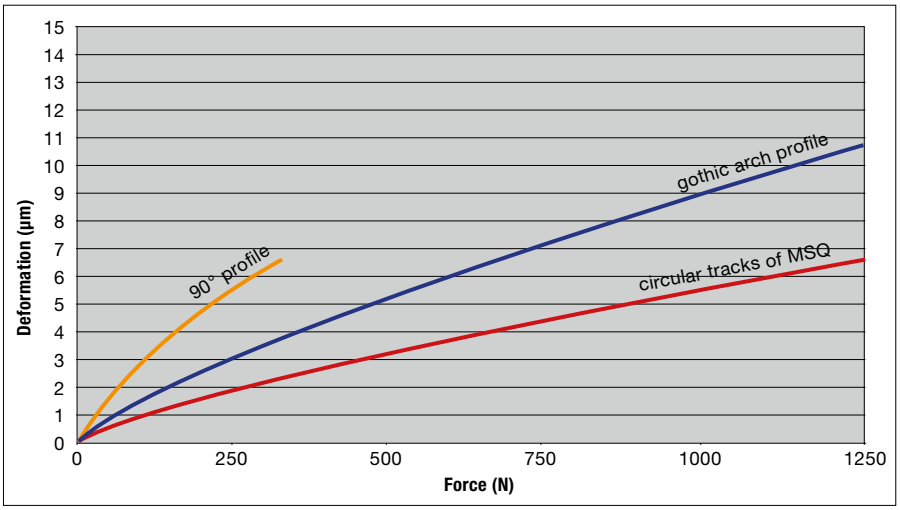
MSQ – highest rigidity and precision

MINISLIDE MSQ employs four circular tracks/O-Geometry. The O-Geometry (see figure) creates large contact surfaces. With 90° track displacement, MSQ achieves an uniform and high load capacity in all directions as well as hight moment-rigidity.

MINISLIDE are preloaded and free of play. The high number of rolling elements provides high system rigidity and therefore highest precision is guaranteed.



MINISLIDE MSQ with highest rigidity and precision



Comparison of the rigidity of MINISLIDE size 9-80.66, with identical overall dimensions, but designed with different track profiles

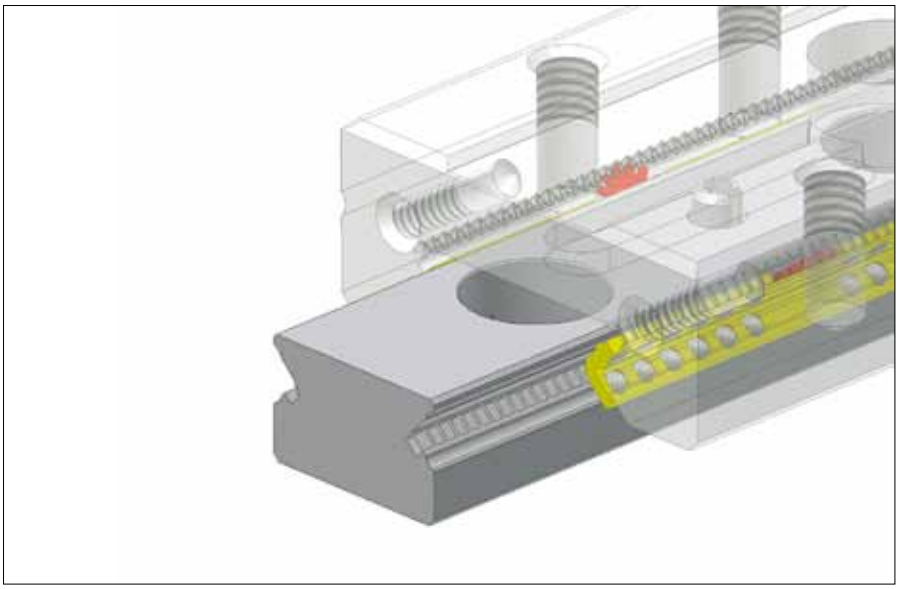
The benefits of an O-Geometry

- High load-carrying capacity with compact design
- Maximum rigidity
- Low sensitivity to impacts
- Excellent damping behaviour
- Robust
- Low weight

MSQ – highest process stability due to elimination of cage creeping

In applications using linear bearings, the cage moves freely with the axis motion. Nevertheless, through uneven load distribution, high acceleration or insufficient rigidity or accuracy in the surrounding construction, the cage can become displaced from its central position. This “cage-creep” impairs the effectiveness of every application since the cage needs to be centered frequently with a cage correction stroke. This correction additionally requires power from the drive motor.

The models MSQ 7, MSQ 9, MSQ 12 and MSQ 15 are equipped with a highly developed and robust cage control system. This eliminates cage-creep. The toothing system of the cage control system is incorporated directly into the carriage and rail. Cage and pinion are made of high-quality plastic. This compact and robust design, with a minimum number of integral components, ensures high reliability under all running conditions.



MINISLIDE MSQ with incorporated toothing system in carriage and rail

Benefits of the integrated cage control system

- No need for re-centering of the cage in applications with vertical installation, high accelerations or with uneven load distribution
- Neither the tolerances of the surrounding construction nor temperature differences lead to cage creep
- Reduced cycle times due to higher speed and acceleration
- Adjustment-free operation and therefore, more productive time
- High operational life

Precision at highest speed

Applications requiring high accelerations and duty cycles demand well thought out solutions. Through its unique design, MINISLIDE meets the requirements of modern equipment; high speeds, extreme accelerations and high frequency oscillations.

MINISLIDE – when speed counts

Customer-specific solutions

SCHNEEBERGER's many years of experience in linear technology have gone into the concept and design of MINISLIDE. Due to its outstanding performance parameters, MINISLIDE sets a standard for quality in any application.

MINISLIDE is designed for universal use. It can also be customized at the factory for specific customer requirements. SCHNEEBERGER offers, amongst other things, the following services.

Services of SCHNEEBERGER

- **Defined push force**
- **Special lubrication (vacuum, extreme temperature, etc.)**
- **Special packaging**
- **Customer-specific designs**

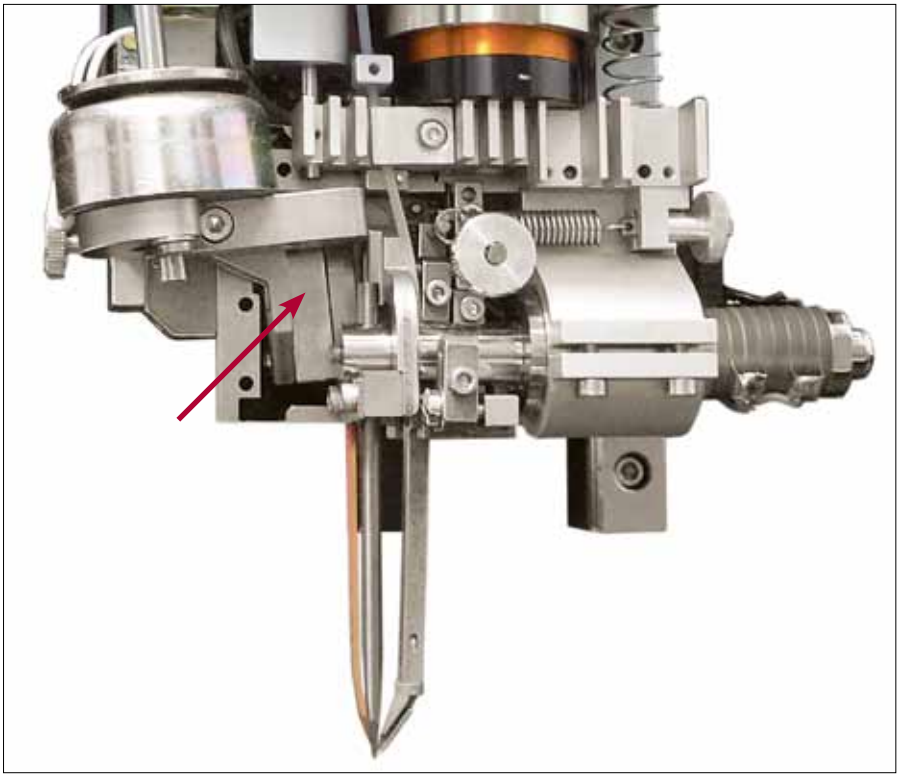
Customer-specific modifications

Precision within the smallest envelope

MINISLIDE is used wherever high-precision and process reliability is required within a limited space. Through its unique advantages, MINISLIDE is especially suitable for the following applications:

The most frequent application areas of MINISLIDE are:

- Biotechnology
- Laboratory automation
- Medical technology
- Metrology
- Micro automation
- Micro machining
- Nanotechnology
- Semiconductor industry
- Surface finishing
- Optical industry
- Robotics, pick & place

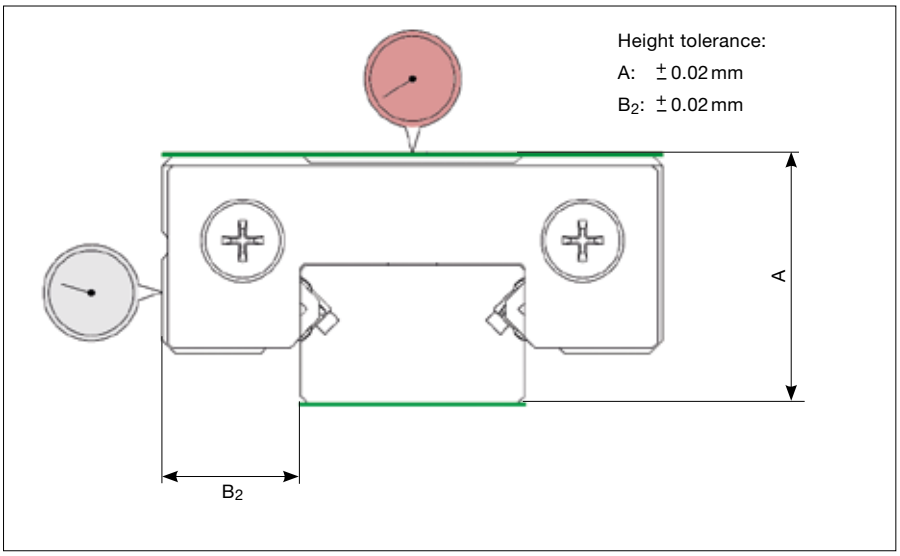


Wire bonder: MINISLIDE in action

Maximum performance through precision

The tolerance for the straightness of the stroke depends on the length of MINISLIDE. The following table gives the relevant maximum values. The measurements were carried out on a even surface in a free state condition.

Length	Straightness of travel over stroke; laterally	Straightness of travel over stroke; at top	Parellelism of table surfaces in middle position
10–30 mm	3 µm	3 µm	12 µm
40–80 mm	4 µm	4 µm	15 µm
90–130 mm	5 µm	5 µm	18 µm



Design of the supporting structure

MINISLIDE is a high-precision component. Accordingly, high demands are placed on the supporting structure to optimise the accuracies of the slide. For this reason, certain parameters must be strictly adhered to in the manufacture of the supporting structure.

- The flatness of the supporting surface in the transverse direction must be within 3 µm
- The surface roughness should be N5–N7 (Ra-Values 0.4 to 1.6)

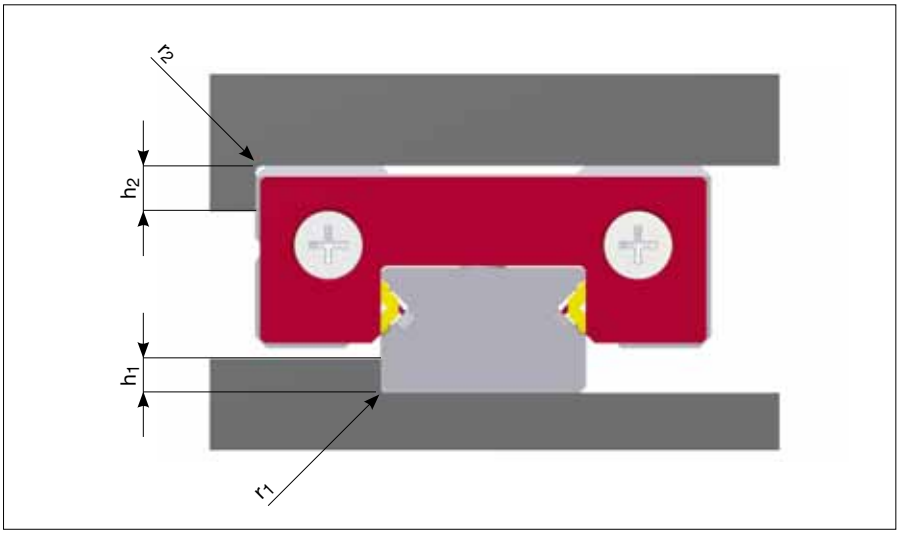
The quality of the abbuting and supporting surfaces, as well as the rigidity of the supporting structure, must comply with the highest demands. If this is not the case, then push force, accuracy and operational life will be compromised. To ensure highest precision, it is recommended that the slides are mounted to a rigid, precision-machined base. Supporting structures made of light metals cannot be made to fully comply with the required manufacturing accuracy and rigidity.

Requirements for the mounting surfaces

The measurements for the abbuting surface listed in the following table should be met to enable optimum alignment of the slide and simple installation.

The following table provides information pertaining to the maximum permissible radii and heights of abbuting surface. The datum side of the carriage is opposite to the side marked with the part number.

	MS 4	MS 5	MSQ 7	MSQ 9	MSQ 12	MSQ 15
$h_{1max.}$	0.2	0.4	1.0	1.5	2.5	3.0
$r_{1max.}$	0.1	0.2	0.2	0.3	0.4	0.4
$r_{2max.}$	0.1	0.1	0.3	0.4	0.4	0.5
h_2	1.2	1.8	2.5	3.0	4.0	5.0



Heights of abbuting surface and corner radii (mm)

Loading capacity and operational life

The load ratings of MINISLIDE (see pages 16–21) are based on the specifications established by ISO and DIN for the calculation of rolling element bearings (DIN ISO 14728). The actual (equivalent) loading in relation to the dynamic load value C is important for the sizing and selection of MINISLIDE.

The load carrying capacity C is the load with which a nominal operating life equivalent to a travel distance of 100'000 m is achieved. However, for the operational life to be calculated, not only is the load acting vertically on the slide to be considered, but also the collective sum of all forces and moments.

The static load should not be greater than the dynamic load. The reason for this lies in the fatigue behaviour that will start at the highest loaded point of the slide. When the load is absolutely constant at standstill and in operation, the fatigue starts at that point where the static load is present longest. The C-values given are, therefore, to be used in the operational life equation to calculate the operational life expectancy for a given load.

The operational life is the distance traveled by a MINISLIDE in meters, before the first signs of material fatigue appear in any of the slide components. The nominal operational life is reached when, under usual operating conditions, 90% of a statistically relevant sample of identical MINISLIDE meet or exceed the prescribed amount of travel.

As already mentioned the load carrying capacity C is based on an operational life of 100'000 m. Some manufacturers use a greater load carrying capacity i.e. C_{50}, equivalent to a distance of 50'000 m. C_{50} values are calculated by the formula $C_{50} = C \cdot 1.26$.

Example of calculation for MINISLIDE MSQ 9-60.50

› From the table on page 19, C = 989 N
› Therefore the C_{50} = 989 N · 1.26 = 1246 N

Life expectancy

The load carrying capacity for rolling element bearings corresponds to the DIN ISO specifications. From this, a value is derived from the life expectancy calculation that has a 90% probability of being exceeded. Should this probability be insufficient, then the operational life estimate must be shortened by a factor a_1 as given in the following table.

Life expectancy in %	90	95	96	97	98	99
a_1	1	0.62	0.53	0.44	0.33	0.21

Life expectancy calculation

The basis

For calculating the life expectancy L (in meters), the following data is required:

- Factor a_1 for estimating the life expectancy probability
- The dynamic load carrying capacity C of the guide (in N)
- The load P (in N) acting on the guide.

The formula for calculating the life expectancy is:

$$L = a_1 \cdot \left(\frac{C}{P}\right)^3 \cdot 10^5 = \text{Life expectancy in meters}$$

Example of calculation for MINISLIDE MSQ 9-60.50

- A life expectancy probability of 97% is chosen. This is equivalent to an a_1 factor of 0.44 (see page 14)
- The dynamic load carrying factor of the guide is 989 N according to the table (see page 19)
- The application generates a total load on the guide of 150 N

The following calculation contains the aforementioned values:

$$L = 0.44 \cdot \left(\frac{989\ N}{150\ N}\right)^3 \cdot 10^5 = 12'611'529\,m$$

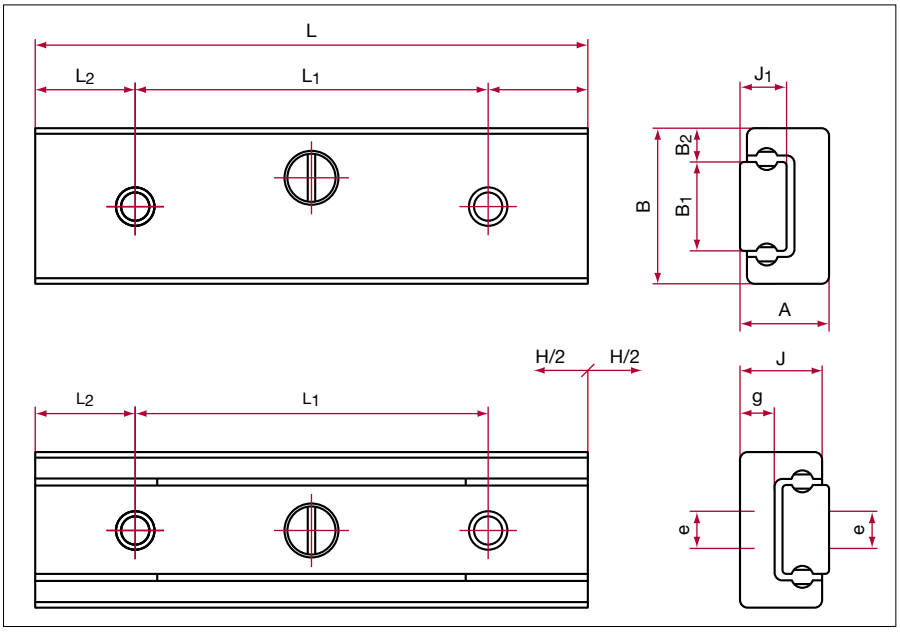
If the life expectancy is to be given in hours, then the actual stroke H (in m) and the required time t (in s) for the stroke movement must be known.

The calculation of the life expectancy L_h is thus:

$$L_h = \frac{L \cdot t}{H \cdot 3'600} = \text{Life expectancy in hours}$$

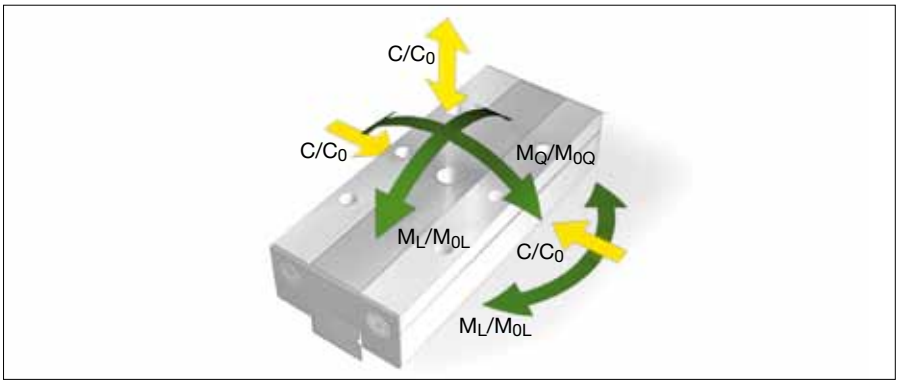
MS 4

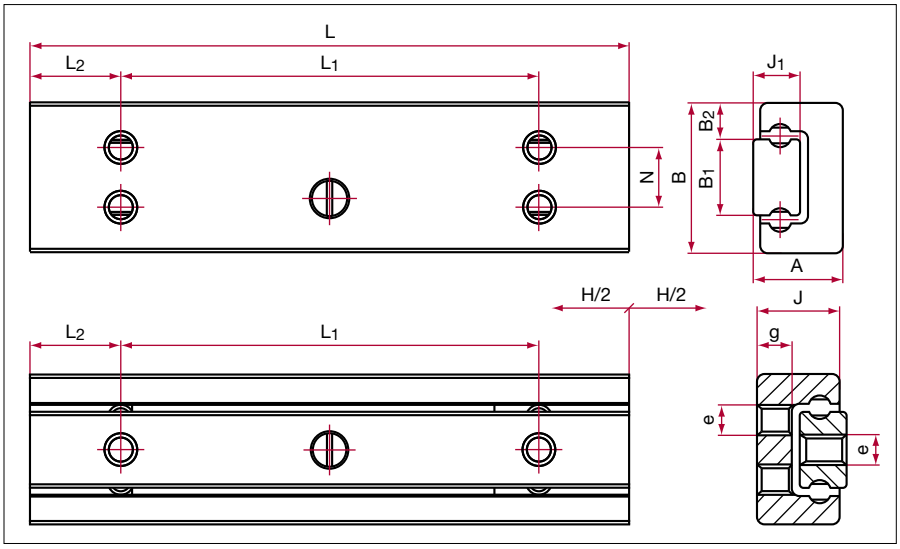
MS 4 Dimensions and load ratings		MS 4-10.6	MS 4-15.12	MS 4-20.15	MS 4-25.22
A:	System height in mm	4	4	4	4
B:	System width in mm	7	7	7	7
B_1:	Rail width in mm	4	4	4	4
B_2:	Distance between datum edges in mm	1.5	1.5	1.5	1.5
J:	Carriage height in mm	3.7	3.7	3.7	3.7
J_1:	Rail height in mm	2.1	2.1	2.1	2.1
H:	Stroke in mm	6	12	15	22
L:	System length excluding end pieces in mm	10	15	20	25
L_1:	Hole spacing in mm	5	8	12	16
L_2:	Start/finish spacing of holes in mm	2.5	3.5	4	4.5
e:	Thread in mm	M1.6	M1.6	M1.6	M1.6
g:	Usable thread length in mm	1.5	1.5	1.5	1.5
	Weight in g	1.7	2.6	3.4	4.3
	Ball diameter in mm	1	1	1	1
Load ratings and forces					
C in N	Dynamic load rating	207	242	307	337
C_0 in N	Static load rating	277	347	485	555
M_Q in Nm	Transverse dynamic moment	0.45	0.52	0.66	0.72
M_{0Q} in Nm	Transverse static moment	0.60	0.75	1.04	1.19
M_L in Nm	Longitudinal dynamic moment	0.30	0.42	0.72	0.88
M_{0L} in Nm	Longitudinal static moment	0.40	0.61	1.13	1.46



MS 5

MS 5 Dimensions and load ratings		MS 5-15.8	MS 5-20.13	MS 5-30.20	MS 5-40.31	MS 5-50.42
A:	System height in mm	6	6	6	6	6
B:	System width in mm	10	10	10	10	10
B_1:	Rail width in mm	5	5	5	5	5
B_2:	Distance between datum edges in mm	2.5	2.5	2.5	2.5	2.5
J:	Carriage height in mm	5.5	5.5	5.5	5.5	5.5
J_1:	Rail height in mm	3	3	3	3	3
H:	Stroke in mm	8	13	20	31	42
L:	System length excluding end pieces in mm	15	20	30	40	50
L_1:	Hole spacing in mm	8	12	20	28	36
L_2:	Start/finish spacing of holes in mm	3.5	4	5	6	7
N:	Hole spacing across carriage in mm	4	4	4	4	4
e:	Thread in mm	M2	M2	M2	M2	M2
g:	Usable thread length in mm	2.35	2.35	2.35	2.35	2.35
	Weight in g	5.4	7.3	11	14.8	18.6
	Ball diameter in mm	1.5	1.5	1.5	1.5	1.5
Load ratings and forces						
C in N	Dynamic load rating	568	645	857	987	1109
C_0 in N	Static load rating	780	936	1404	1716	2028
M_Q in Nm	Transverse dynamic moment	1.59	1.81	2.40	2.76	3.11
M_{0Q} in Nm	Transverse static moment	2.18	2.62	3.93	4.80	5.68
M_L in Nm	Longitudinal dynamic moment	1.25	1.66	3.14	4.34	5.69
M_{0L} in Nm	Longitudinal static moment	1.72	2.4	5.15	7.55	10.4

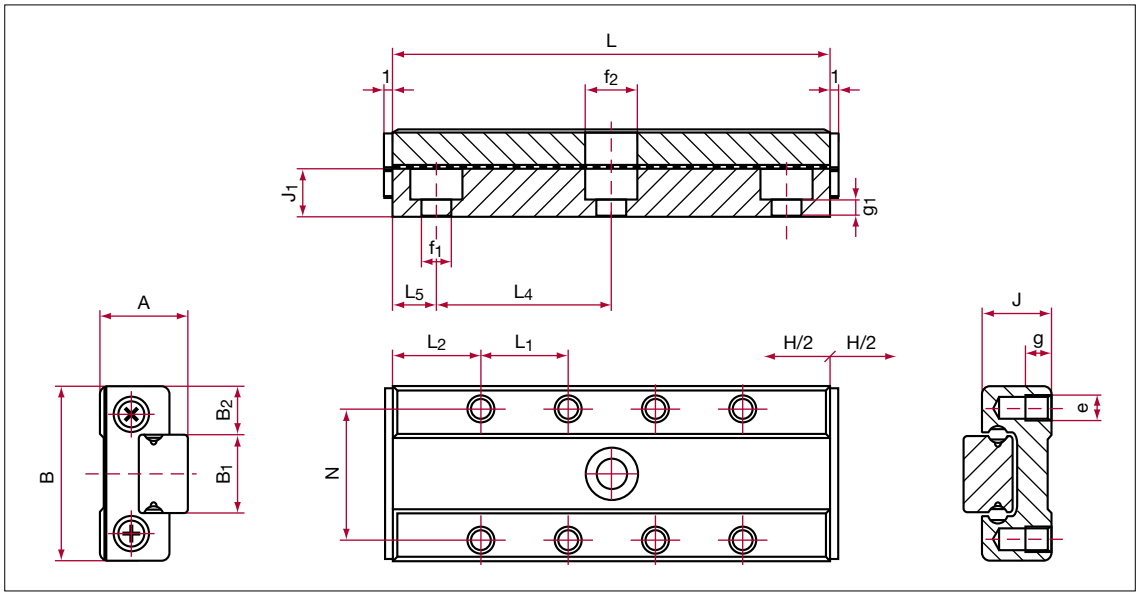




MSQ 7

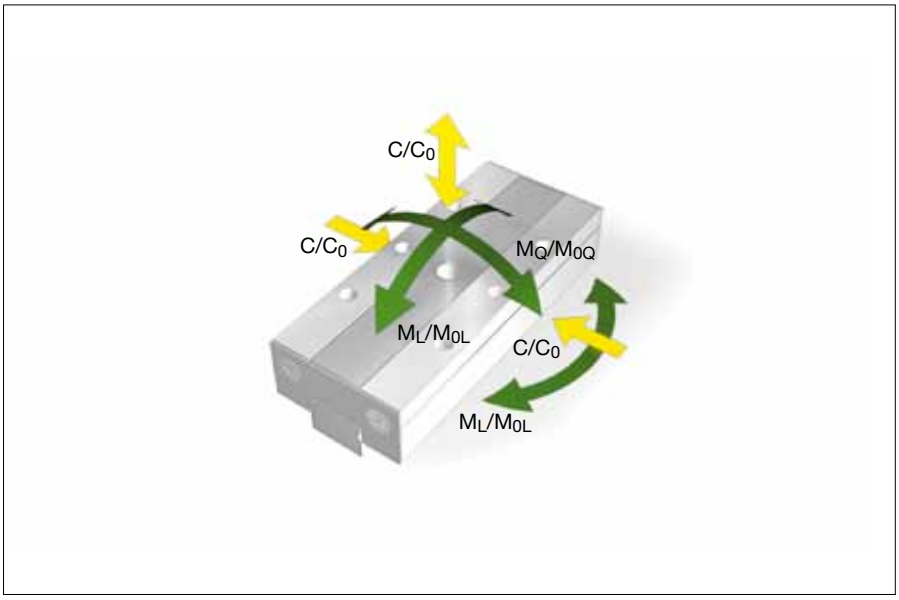
MSQ 7 Dimensions and load ratings		MSQ 7-30.20	MSQ 7-40.28	MSQ 7-50.36	MSQ 7-60.50	MSQ 7-70.58
A:	System height in mm	8	8	8	8	8
B:	System width in mm	17	17	17	17	17
B_1:	Rail width in mm	7	7	7	7	7
B_2:	Distance between datum edges in mm	5	5	5	5	5
J:	Carriage height in mm	6.5	6.5	6.5	6.5	6.5
J_1:	Rail height in mm	4.5	4.5	4.5	4.5	4.5
H:	Stroke in mm	20	28	36	50	58
L:	System length excluding end pieces in mm	30	40	50	60	70
L_1:	Hole spacing in mm	10	10	10	10	10
L_2:	Start/finish spacing of holes in mm	10	10	10	10	10
L_4:	Rail-hole spacing in mm	15	15	15	15	15
L_5:	Start/finish spacing of rail holes in mm	7.5	5	10	7.5	5
N:	Hole spacing across carriage in mm	12	12	12	12	12
e:	Thread in mm	M2	M2	M2	M2	M2
f1:	Diameter of through-hole in mm	2.4	2.4	2.4	2.4	2.4
f2:	Countersunk hole diameter in mm	4.2	4.2	4.2	4.2	4.2
g:	Usable thread length in mm	3	3	3	3	3
g1:	Clamping length in mm	2.2	2.2	2.2	2.2	2.2
	Weight in g	24.5	32.6	40.5	48.5	56.3
	Ball diameter in mm	1	1	1	1	1

Load ratings and forces						
C in N	Dynamic load rating	609	770	919	989	1124
C_0 in N	Static load rating	1193	1670	2148	2386	2864
M_Q in Nm	Transverse dynamic moment	2.6	3.3	4.0	4.3	4.8
M_{0Q} in Nm	Transverse static moment	5.1	7.2	9.2	10.3	12.3
M_L in Nm	Longitudinal dynamic moment	2.5	4.0	5.6	6.5	8.5
M_{0L} in Nm	Longitudinal static moment	5.0	8.6	13.1	15.8	21.8



MSQ 9

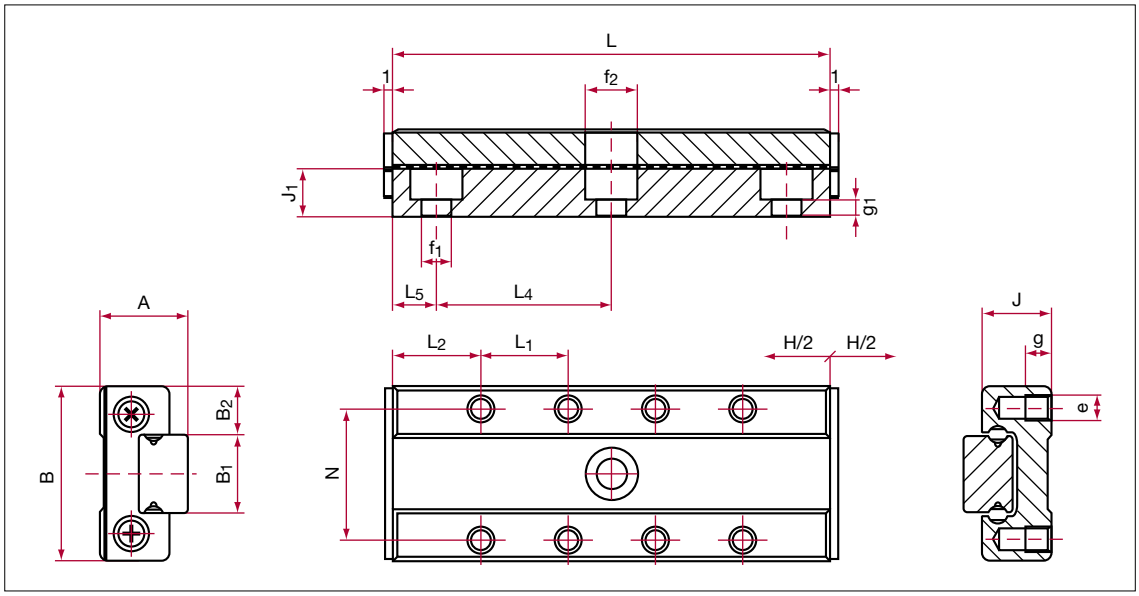
MSQ 9 Dimensions and load ratings		MSQ 9-40.34	MSQ 9-50.42	MSQ 9-60.50	MSQ 9-70.58	MSQ 9-80.66
A:	System height in mm	10	10	10	10	10
B:	System width in mm	20	20	20	20	20
B_1:	Rail width in mm	9	9	9	9	9
B_2:	Distance between datum edges in mm	5.5	5.5	5.5	5.5	5.5
J:	Carriage height in mm	8	8	8	8	8
J_1:	Rail height in mm	5.5	5.5	5.5	5.5	5.5
H:	Stroke in mm	34	42	50	58	66
L:	System length excluding end pieces in mm	40	50	60	70	80
L_1:	Hole spacing in mm	10	10	10	10	10
L_2:	Start/finish spacing of holes in mm	10	10	10	10	10
L_4:	Rail-hole spacing in mm	20	20	20	20	20
L_5:	Start/finish spacing of rail holes in mm	10	5	10	5	10
N:	Hole spacing across carriage in mm	15	15	15	15	15
e:	Thread in mm	M3	M3	M3	M3	M3
f_1:	Diameter of through-hole in mm	3.5	3.5	3.5	3.5	3.5
f_2:	Countersunk hole diameter in mm	6	6	6	6	6
g:	Usable thread length in mm	3	3	3	3	3
g_1:	Clamping length in mm	2	2	2	2	2
	Weight in g	45.6	56.9	68.1	79.2	90.3
	Ball diameter in mm	1	1	1	1	1
Load ratings and forces						
C in N	Dynamic load rating	692	846	989	1124	1252
C_0 in N	Static load rating	1432	1909	2386	2864	3341
M_Q in Nm	Transverse dynamic moment	3.7	4.5	5.2	6.0	6.6
M_{0Q} in Nm	Transverse static moment	7.6	10.1	12.6	15.2	17.7
M_L in Nm	Longitudinal dynamic moment	3.2	4.8	6.5	8.5	10.7
M_{0L} in Nm	Longitudinal static moment	6.7	10.8	15.8	21.8	28.7



MSQ 12

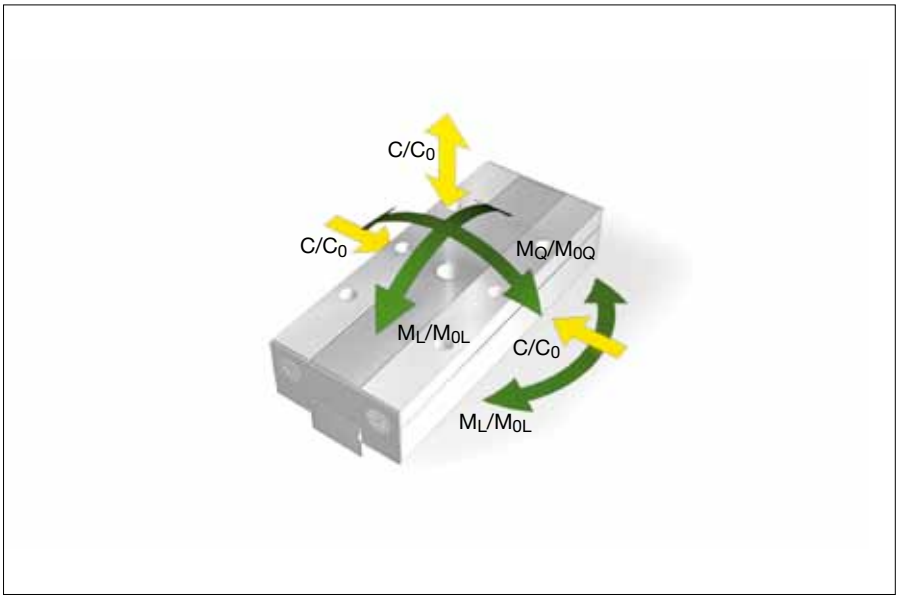
MSQ 12 Dimensions and load ratings		MSQ 12-50.45	MSQ 12-60.48	MSQ 12-80.63	MSQ 12-100.70
A:	System height in mm	13	13	13	13
B:	System width in mm	27	27	27	27
B_1:	Rail width in mm	12	12	12	12
B_2:	Distance between datum edges in mm	7.5	7.5	7.5	7.5
J:	Carriage height in mm	10	10	10	10
J_1:	Rail height in mm	7.5	7.5	7.5	7.5
H:	Stroke in mm	45	48	63	70
L:	System length excluding end pieces in mm	50	60	80	100
L_1:	Hole spacing in mm	15	15	15	15
L_2:	Start/finish spacing of holes in mm	10	7.5	10	12.5
L_4:	Rail-hole spacing in mm	25	25	25	25
L_5:	Start/finish spacing of rail holes in mm	12.5	5	15	12.5
N:	Hole spacing across carriage in mm	20	20	20	20
e:	Thread in mm	M3	M3	M3	M3
f_1:	Diameter of through-hole in mm	3.5	3.5	3.5	3.5
f_2:	Countersunk hole diameter in mm	6	6	6	6
g:	Usable thread length in mm	3.5	3.5	3.5	3.5
g_1:	Clamping length in mm	3	3	3	3
	Weight in g	103.9	124.4	165.5	206.5
	Ball diameter in mm	1.5	1.5	1.5	1.5

Load ratings and forces					
C in N	Dynamic load rating	1427	1806	2318	2934
C_0 in N	Static load rating	2685	3759	5370	7518
M_Q in Nm	Transverse dynamic moment	10.1	12.7	16.3	20.7
M_{0Q} in Nm	Transverse static moment	18.9	26.5	37.9	53.0
M_L in Nm	Longitudinal dynamic moment	8.3	12.9	21.4	35.1
M_{0L} in Nm	Longitudinal static moment	15.7	27.0	49.5	90.1



MSQ 15

MSQ 15 Dimensions and load ratings		MSQ 15-70.66	MSQ 15-90.70	MSQ 15-110.96	MSQ 15-130.102
A:	System height in mm	16	16	16	16
B:	System width in mm	32	32	32	32
B1:	Rail width in mm	15	15	15	15
B2:	Distance between datum edges in mm	8.5	8.5	8.5	8.5
J:	Carriage height in mm	12	12	12	12
J1:	Rail height in mm	9.5	9.5	9.5	9.5
H:	Stroke in mm	66	70	96	102
L:	System length excluding end pieces in mm	70	90	110	130
L1:	Hole spacing in mm	20	20	20	20
L2:	Start/finish spacing of holes in mm	15	15	15	15
L4:	Rail-hole spacing in mm	40	40	40	40
L5:	Start/finish spacing of rail holes in mm	15	5	15	5
N:	Hole spacing across carriage in mm	25	25	25	25
e:	Thread in mm	M3	M3	M3	M3
f1:	Diameter of through-hole in mm	3.5	3.5	3.5	3.5
f2:	Countersunk hole diameter in mm	6	6	6	6
g:	Usable thread length in mm	4	4	4	4
g1:	Clamping length in mm	5	5	5	5
	Weight in g	216.2	277.5	338.6	399.5
	Ball diameter in mm	2	2	2	2
Load ratings and forces					
C in N	Dynamic load rating	2611	3628	3940	4820
C_0 in N	Static load rating	4773	7637	8592	11456
M_Q in Nm	Transverse dynamic moment	23.2	32.3	35.1	42.9
M_{0Q} in Nm	Transverse static moment	42.5	68	76.5	102.0
M_L in Nm	Longitudinal dynamic moment	20.1	38.4	45.6	70.1
M_{0L} in Nm	Longitudinal static moment	36.7	80.9	99.5	166.6



Tansport and storage

MINISLIDE consist of high precision components and must therefore be handled with care. In order to protect them against damage they should always be transported in their original packaging. MINISLIDE should be stored at room temperature and under dry conditions.

Handling and installation

Rough handling of MINISLIDE can lead to damage and early failure in operation. Consequently, installation must be carried out only by suitably qualified personnel.

The mechanical stroke limiter of MINISLIDE assists installation and maintenance. In no case must it be used to limit the travel during operation.

To ensure the correct fixing of the MINISLIDE onto the supporting assembly the maximum tightening torque values for the fixing screws, given in the table below, must be complied with. Tightening torques for the fixing screws are DIN 912, µ0.125 (12.9) and DIN 912, µ0.2 (A2-70).

	Maximum tightening torque		
	M1.6	M2	M3
Strength category			
12.9	0.28 Nm	0.60 Nm	2.10 Nm
A2-70	0.20 Nm	0.30 Nm	1.10 Nm

Notes

- **When the screws are greased with grease containing MoS_2 the friction coefficient µ can be reduced by as much as half. As the tightening torques required to reach the maximum permissible tightening force depend on the friction coefficient, they must be reduced accordingly. The values can be obtained from the screw manufacturer's information or from the specialist literature. If necessary, carry out tests to determine the actual friction coefficient.**
- **Refer to the screw manufacturer's information. This is always binding.**

Lubrication

MINISLIDE are initially lubricated with grease before they leave the factory. Other lubricants are available upon request.

For the initial and subsequent lubrication, we recommend KP_2K or KP_1K grease to DIN 51825. For similar lubrication with oil, we recommend mineral oil CLP to DIN 51517 or HLP to DIN 51524 in the viscosity range of ISO 68 to 150.

Subsequent lubrication depends upon environmental conditions as well as the nature and type of the load. Guarantees regarding subsequent lubrication intervals can only be provided through the user's own tests and experience. In all cases, the recommendations provided by the lubricant manufacturer must be followed.

Ordering information

The order designation for MINISLIDE consists of the product group (MS or MSQ), the rail width (B_1), the system length (L) and the stroke (H). The following example illustrates the configuration of the designation.

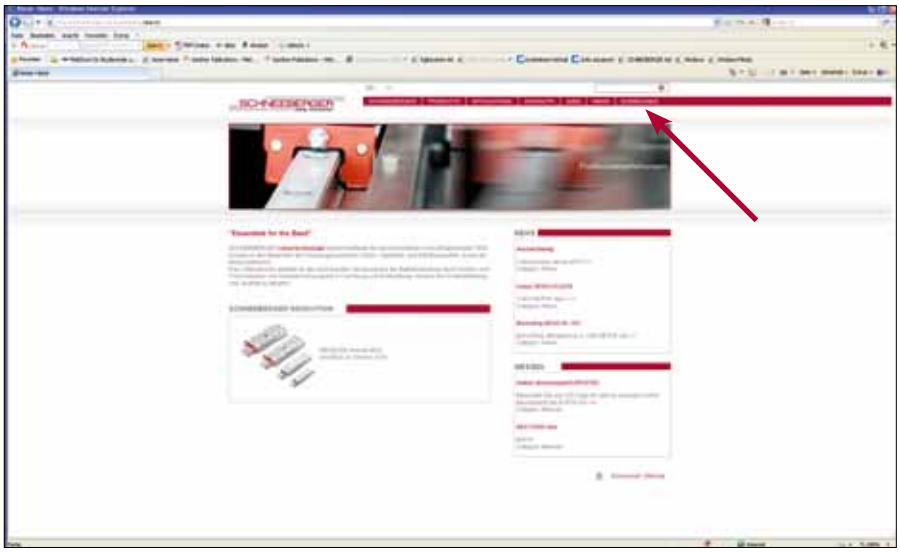
Ordering example

MS 5-40.31

→ Stroke (H)	see “Technical Data”
→ System length (L)	see “Technical Data”
→ Rail width (B1)	4, 5 or 7, 9, 12, 15
→ MINISLIDE product group	MS or MSQ

Free downloads of 2D and 3D drawings

In order to facilitate your design work, you will find 2D drawings and 3D models in all common formats available on the Cadenas part server. You can access the download area and all further product information from our website www.schneeberger.com.



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