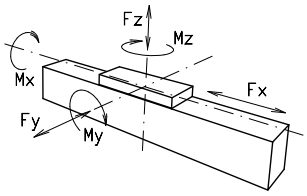
Positioning system QSR 60, 80, 100, 125

Rail guide

Function:
This unit consists of a square aluminium profile with an integrated ball rail. This unit can be driven by a pneumatic cylinder or other additional drives or it serves as a load carrying slide unit.

Fitting position: As required. Max. length 6.000 mm without joints.
Carriage mounting: By T-slots.
Unit mounting: By T-slots and mounting sets. The linear axis can be combined with any T-slot profile.
Carriage support: In the standard version, the carriage runs on two runner blocks which can be adjusted and serviced at a central servicing position. For longer carriages the number of runner blocks can be increased.

Forces and torques



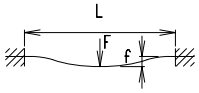
Size	60		80		100		125	
permitted dyn. forces*	5000 km	10000 km	5000 km	10000 km	5000 km	10000 km	5000 km	10000 km
F_x (N)	-	-	-	-	-	-	-	-
F_y (N)	1410	990	3570	2550	4080	2900	6892	5470
F_z (N)	3520	2500	8500	6050	10300	7270	17205	13659
M_x (Nm)	33	23	107	75	142	101	288	228
M_y (Nm)	104	73	310	222	439	311	1110	881
M_z (Nm)	100	70	296	210	412	292	1012	803
All forces and torques related to the following: existing values / table values	$\frac{Fy}{Fy_{dyn}} + \frac{Fz}{Fz_{dyn}} + \frac{Mx}{Mx_{dyn}} + \frac{My}{My_{dyn}} + \frac{Mz}{Mz_{dyn}} \leq 1$							
Speed								
(m/s) max	5		5		5		5	
Geometrical moments of inertia of aluminium profile								
I_x mm^4	$4{,}3 \times 10^5$		$16{,}5 \times 10^5$		$43{,}0 \times 10^5$		$74{,}9 \times 10^5$	
I_y mm^4	$4{,}8 \times 10^5$		$18{,}7 \times 10^5$		$48{,}8 \times 10^5$		$106{,}5 \times 10^5$	
Elastic modulus N/mm^2	70000		70000		70000		70000	

For life-time calculation use our homepage.

** referred to life-time*

Deflection:

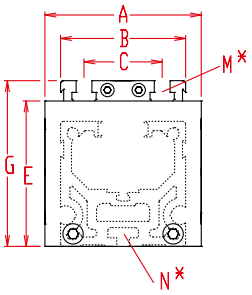
$$f = \frac{F * L^3}{E * I * 192}$$

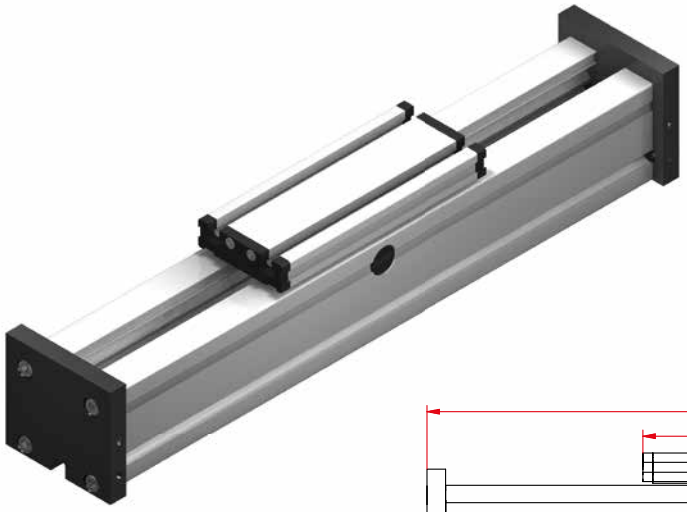


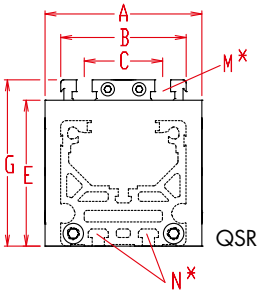
f = deflection (mm)
F = load (N)
L = free length (mm)
E = elastic modulus 70000 (N/mm^2)
I = second moment of area (mm^4)

Positioning system QSR 60, 80, 100, 125

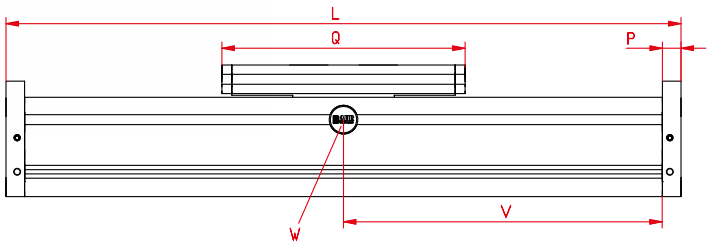
Dimensions (mm)







QSR 125



V = Q + 100 mm
W = servicing position

*For slide nuts refer to chapter 2.2 page 2

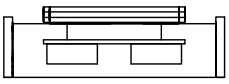
Increasing the carriage length will increase the basic length by the same amount.

Size ❐	Basic length L	A	B	C	E	G	N for	M for	P	Q	Basic weight	Weight per 100 mm
QSR 60	205	80	60	36	60	79	M 5	M 6	12	177	1,8 kg	0,53 kg
QSR 80	270	100	80	50	93	106	M 6	M 8	17	232	4,9 kg	0,92 kg
QSR 100	315	130	100	66	110	129	M 10	M 10	20	268	8,2 kg	1,41 kg
QSR 125	360	160	125	82	134,5	157,5	M 10	M 12	25	300	15,1 kg	2,12 kg

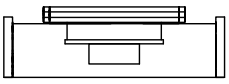
0 **Choice of guide body profile:**
(0) Standard **(1)** corrosion-protected screws
(4) expanded corrosion-protected version (depending on the availability of components)

0 **Choice of carriages:**

(0)



(1)



Size	Version 0		Version 1	
	Q	L	Q	L
60	177	205	152	180
80	232	270	196	240
100	268	315	260	310
125	300	360	260	320

1500 Basic length + stroke = total length

For additional accessories refer to chapter 2.2 – 3.2

QSR	80	0	0	0	0	0	0	0	01500
	Pos.	1	2	3	4	5	6	7	

Sample ordering code:
QSR80 with standard body profile, standard carriage and 1230 mm stroke