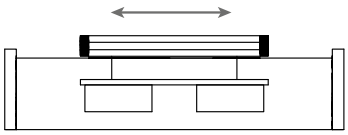
Linear system **QSR 60, 80, 100, 125**

TECHNICAL SUMMARY
REFERENCE ONLY

RAIL GUIDE

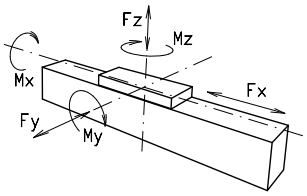
- WITHOUT DRIVE
- SUPPORT UNIT
- WITHOUT COVERBAND



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. Construction compatible with QSZ.

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: $\frac{Fy}{Fy_{dyn}} + \frac{Fz}{Fz_{dyn}} + \frac{Mx}{Mx_{dyn}} + \frac{My}{My_{dyn}} + \frac{Mz}{Mz_{dyn}} \leq 1$

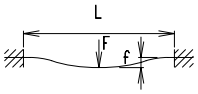
Speed				
(m/s) max	5	5	5	5
Geometrical moments of inertia of aluminium profile				
I_x mm^4	4,3x10^5	14,3x10^5	31,8x10^5	74,9x10^5
I_y mm^4	5,8x10^5	18,7x10^5	46,5x10^5	106,5x10^5
Elastic modulus N/mm^2	70000	70000	70000	70000

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)

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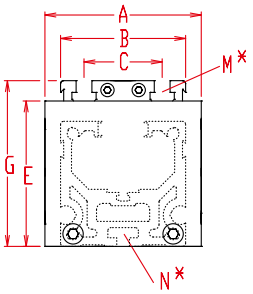
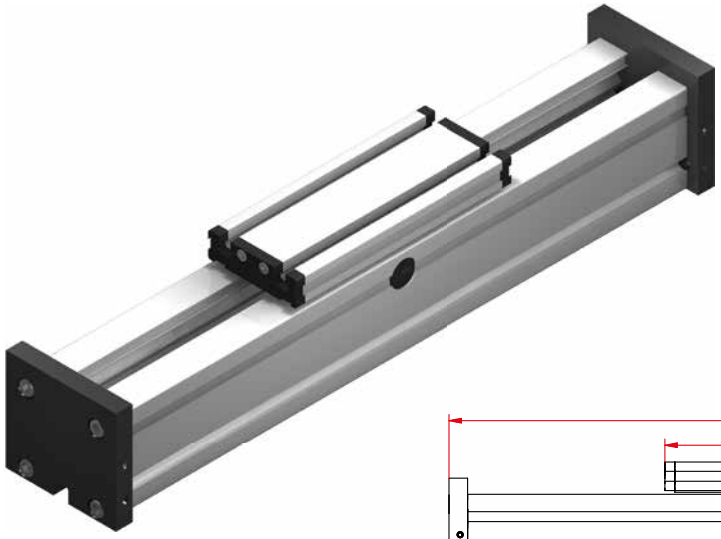
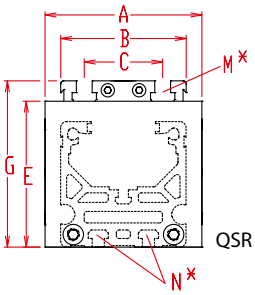
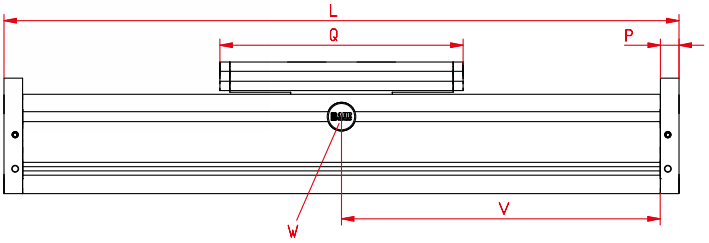
Dimensions (mm)







QSR 125



V = Q + 100 mm
W = servicing position

*For slide nuts refer to chapter 2.2 page 2

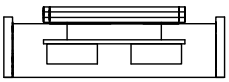
Increasing the carriage length will increase the basic length by the same amount.

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

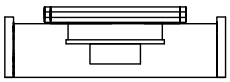
0 **Choice of guide body profile:**
(0) Standard **(1)** corrosion-protected screws
(4) expanded corrosion-protected version (depending on the availability of components)

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

QSR	80	0	0	0	0	0	0	0	1500
	Pos.	1	2	3	4	5	6	7	

Basic length + stroke = total length

For additional accessories refer to chapter 2.2

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

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