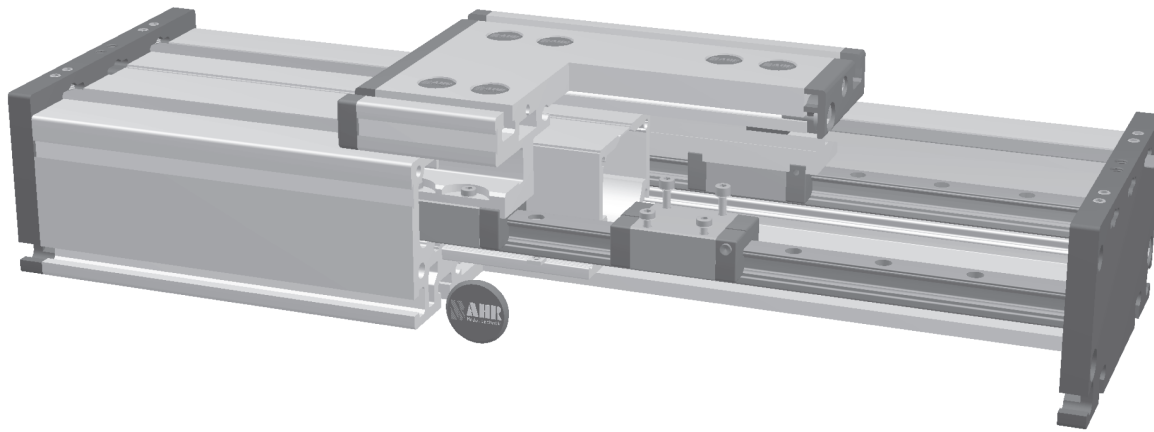


# Positioning system DSR 160, 200

Specifications

## Roller unit without drive



### Function:

This unit consists of a rectangular aluminium profile with 2 integrated rail guidances. The openings of the guide body are sealed with 3 stainless steel cover bands to protect the guide from splash water and dust. Alternatively, the opening can also be covered with a bellow or can be delivered without cover bands. The positioning system can be either driven by an internal pneumatic cylinder or other additional drives or it serves as load carrying linear slide.

**Fitting position:** As required. Max. length 6.000 mm without joints.

**Carriage mounting:** By T-slots.

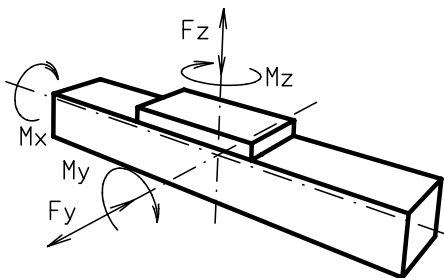
**Unit mounting:** By T-slots and mounting sets. The linear axis can be combined with any T-slot profile.

**Carriage support:** In the standard version, the carriage runs on 4 runner blocks which can be adjusted and serviced at a central servicing position. For longer carriages the number of runner blocks can be increased.

8.1



### Forces and torques



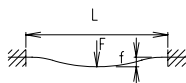
Size	160		200	
<b>permitted dyn. Forces*</b>	5000 km	10000 km	5000 km	10000 km
F <sub>y</sub> (N)	2236	1775	5155	4092
F <sub>z</sub> (N)	5278	4189	11311	8977
M <sub>x</sub> (Nm)	282	224	752	597
M <sub>y</sub> (Nm)	283	225	813	646
M <sub>z</sub> (Nm)	300	238	862	684
<b>All forces and torques related to the following:</b>				
existing values	$\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$			
values of table				
<b>Speed</b>				
(m/sec) max	5		5	
<b>Geometrical moments of inertia of aluminium profile</b>				
I <sub>x</sub> mm <sup>4</sup>	2,13x10 <sup>6</sup>		4,81 x10 <sup>6</sup>	
I <sub>y</sub> mm <sup>4</sup>	12,33x10 <sup>6</sup>		26,0 x10 <sup>6</sup>	
Elastic modulus N/mm <sup>2</sup>	70000		70000	

\* referred to life-time

### Formula: DSR

Deflection:

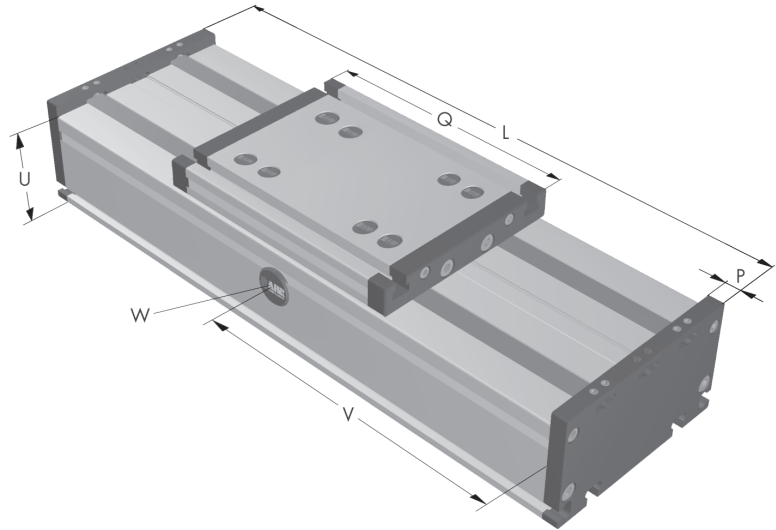
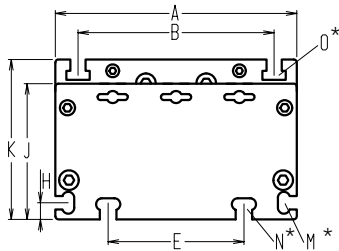
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$



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

# Positioning system DSR 160, 200

Dimensions (mm)



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

\*For slide-nuts refer to chapter 2.2 page 2       $V = Q + 100 \text{ mm}$        $W = \text{servicing position}$

Size □	Basic length L	A	B	E	H	J	K	M for	N for	O for	P	Q	U	Basic weight	Weight per 100 mm
DSR 160	240	160	130	90	11	90	106	M 6	M 8	M 8	12	200	80	7,0 kg	1,5 kg
DSR 200	320	200	160	140	15	110	129	M 8	M 10	M 10	15	270	100	15,0 kg	2,9 kg

### Choice of guide body profile:

0	(0)	(1)	(2)	(3)
	internal profile with cover bands	internal profile without cover bands	without internal profile and cover bands	with bellows

**Stainless versions upon request.**

### Choice of carriages:

0	(0)	(1)

Size	Version 0		Version 1	
	Q	L	Q	L
160	200	240	>230	>270
200	270	320	>310	>360

**1500** Basic length + stroke = total length

DSR 160 0 0 0 0 0 0 0 0 0 01500  
Pos. 1 2 3 4 5 6 7

Inductive proximity switch sets, which can be mounted inside of the square profile, are available as accessories. Coupling and a special plug are mounted from the outside. For additional accessories refer to chapter 2.2 – 4.2.

Sample ordering code:  
DSR160, with internal profile and cover bands, standard runner blocks, 1260 mm stroke.



**8.1**

