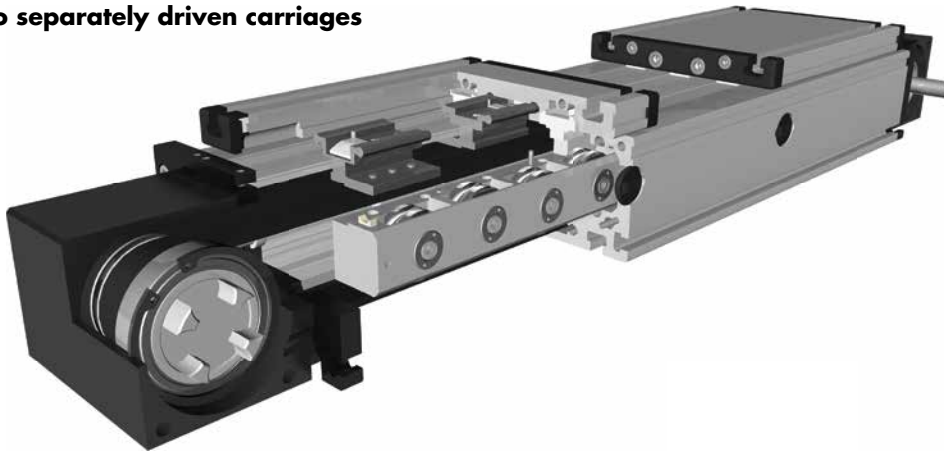


Positioning system DLZZ 160, 200

Belt drive with two separately driven carriages



Function:

This unit consists of a rectangular aluminium profile with 2 integrated roller guides. The carriage is moved by a belt drive. Each carriage can be moved separately by its own drive. This unit has twin pulleys, which run on separate bearings, and two independent, parallel drive belts, one for each carriage. The openings of the guide body are sealed with 3 stainless steel cover bands to protect the guide from splash water and dust.

Fitting position:

As required. Max. length 4.000 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.

Belt type:

HTD with steel reinforcement, no backlash when changing direction, repeatability $\pm 0,1$ mm.

Carriage support:

In the standard version, the carriage runs on 8 rollers which can be adjusted and serviced at a central servicing position. For longer carriages the number of rollers can be increased.

Forces and torques	Size	160		200	
	Forces/Torques	static	dynamic.	static	dynamic.
	F_x (N)	1210	1100	1900	1800
	F_y (N)	3000	2000	4400	3100
	F_z (N)	3500	2800	4900	4400
	M_x (Nm)	400	320	600	510
	M_y (Nm)	360	300	560	480
	M_z (Nm)	180	150	310	275
All forces and torques related to the following:					
existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$					
table values					
No-load torque					
Nm without cover bands		1,5		1,8	
Nm with cover bands		2,1		4	
Speed					
(m/s) max		6		8	
Tensile force					
permanent (N)		1210		1400	
0,2 s (N)		1331		2090	
Geometrical moments of inertia of aluminium profile					
I_x mm ⁴		22,2x10 ⁵		63,8x10 ⁵	
I_y mm ⁴		122,0x10 ⁵		335x10 ⁵	
Elastic modulus N/mm ²		70000		70000	

For life-time calculation of rollers use our homepage.

Driving torque:

$$M_o = \frac{F \cdot P \cdot S_i}{2000 \cdot \pi} + M_n$$

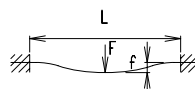
$$P_o = \frac{M_o \cdot n}{9550}$$

F = force (N)
 P = pulley action perimeter (mm)
 S_i = safety factor 1,2 ... 2
 M_n = no-load torque (Nm)
 n = rpm pulley (min⁻¹)
 M_o = driving torque (Nm)
 P_o = motor power (KW)

Deflection:

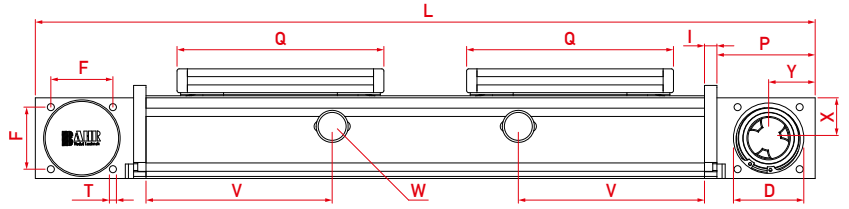
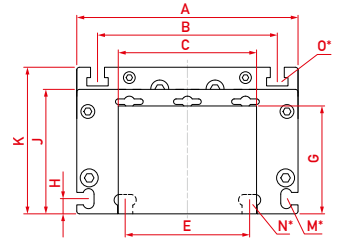
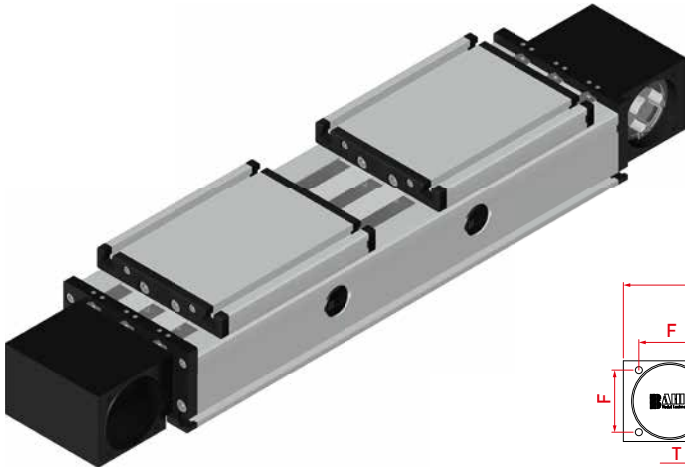
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$

f = deflection (mm)
 F = load (N)
 L = free length (mm)
 E = elastic modulus 70000 (N/mm²)
 I = second moment of area (mm⁴)



Positioning system DLZZ 160, 200

Dimensions (mm)



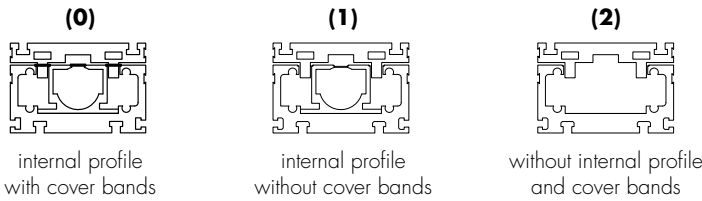
$V = Q + 100 \text{ mm}$ $W = \text{servicing position}$

*For slide nuts refer to chapter 2.2 page 2

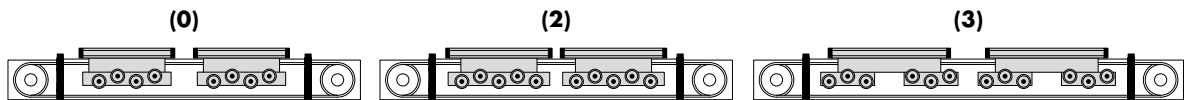
Increasing the carriage length will increase the basic length by the same amount.

Size	Basic length L	A	B	C	D	E	F	G	H	I	J	K	M for	N for	O for	P	Q	T	X	Y	Basic weight	Weight per 100 mm
DLZZ 160	615	160	130	100	68	90	60	78	11	12	90	106	M6	M8	M8	95	200	M8	39	45	16,0 kg	1,69 kg
DLZZ 200	790	200	160	150	90	140	80	97	15	15	110	129	M8	M10	M10	110	270	M10	49	50	28,50 kg	2,33 kg

0 Choice of guide body profile: Stainless versions upon request.

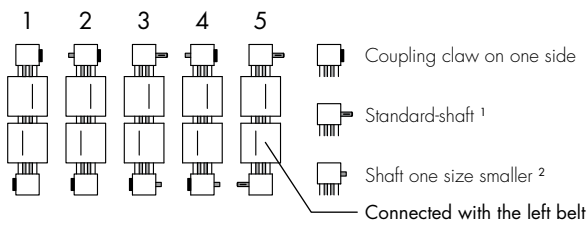


0 Choice of carriage:



Size	Version 0		Version 2		Version 3	
	Q	L	Q	L	Q	L
160	200	615	250	715	300	830
200	270	790	330	910	410	1070

0 Drive version:



Belt table:

Code No.	Size	Belt	mm/rev.	Number of teeth
0 6	160	8M 20	176	22
0 7	200	8M 30	224	28

Shaft dimensions / Coupling claw:

Size	Shaft $\varnothing h6 \times \text{length}$	Key	Coupling
DLZZ 160 ¹	$\varnothing 18 \times 45$	6x6x35	19
DLZZ 160 ²	$\varnothing 14 \times 35$	5x5x28	19
DLZZ 200 ¹	$\varnothing 22 \times 45$	6x6x40	24
DLZZ 200 ²	$\varnothing 18 \times 45$	6x6x40	24

DLZZ 200 4 0 0 2 0 7 1 01500 — Basic length + stroke = total length

Pos. 1 2 3 4 5 6 7

Sample ordering code:

DLZZ 200 with internal profile and cover bands, carriage version 0, drive version 2, 710 mm stroke.