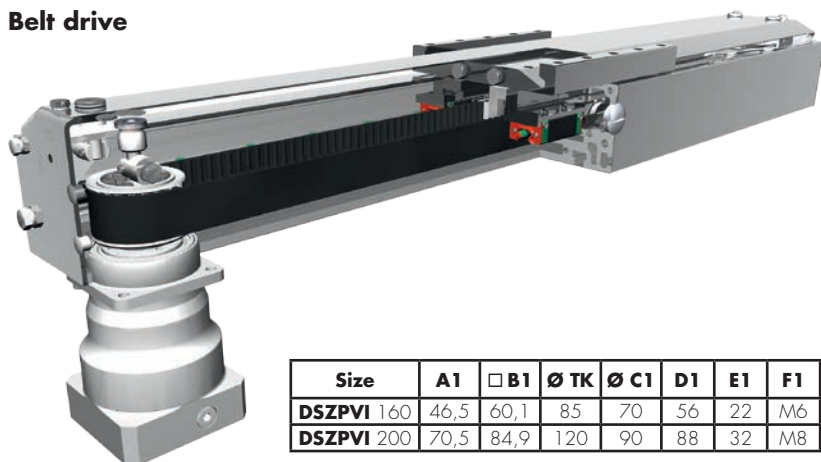


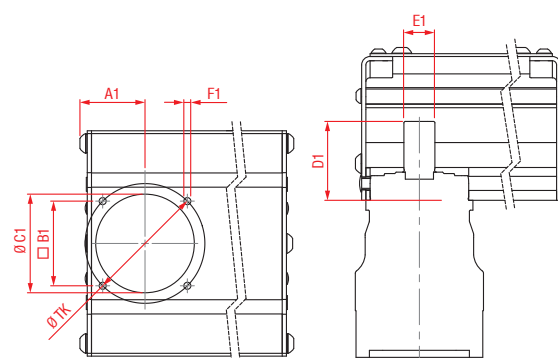
Positioning system DSZPVIE 160, 200

Specifications

Belt drive



Size	A1	B1	TK	C1	D1	E1	F1
DSZPVIE 160	46,5	60,1	85	70	56	22	M6
DSZPVIE 200	70,5	84,9	120	90	88	32	M8



Function:

This unit consists of a rectangular aluminium profile with 2 integrated rail guides and is covered by a stainless steel sheet (thickness 0.37mm, material 1.4301). The carriage is moved by a belt drive. On the drive side the pulley is beared on the shaft of a planetary gear. Belt tension can be readjusted by a simple screw adjustment at the opposite side of the drive. A special curved aluminium sheet is covering the carriage side. There is only a small gap between carriage and aluminium sheet. Because of its special design it is possible to drive the carriage over the pulley areas. This fact is making the unit very compact.

Fitting position:

As required, max. length DSZPVIE 120 / 1600mm, DSZPVIE 160 / 1800mm, DSZPVIE 200 / 2000mm

Carriage mounting:

By tapped holes

Unit mounting:

T-slots

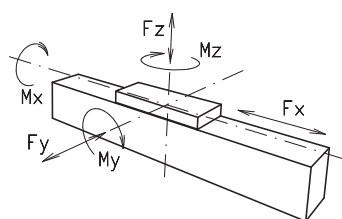
Belt type:

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

Carriage support:

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

Forces and torques



Size			160		200	
permitted dyn. Forces*			5000 km	10000 km	5000 km	10000 km
F _x (N)			1900	1800	4000	3800
F _y (N)			5570	3900	15600	11080
F _z (N)			7050	5020	20600	14600
M _x (Nm)			358	255	1285	915
M _y (Nm)			369	262	1375	980
M _z (Nm)			364	258	1345	960
C (N)			7800		22800	
All forces and torques related to the following:						
No-load torque						
Nm without cover bands			1,5		2,0	
Nm with cover bands			2,1		2,9	
Speed						
(m/s) max			5		5	
Tensile force						
permanent (N)			1900		4000	
0,2 s (N)			2090		4300	
Flächenträgheitsmomente Al-Profil						
I _x mm ⁴			21,32 x 10 ⁵		48,07 x 10 ⁵	
I _y mm ⁴			123,36 x 10 ⁵		259,99 x 10 ⁵	
Elastic modulus N/mm ²			70000		70000	

* referred to life-time

Formula: DSZPVIE

Driving torque:

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

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

F = force (N)
P = pulley action perimeter (mm)
S_i = safety factor 1,2 ... 2
M_{leer} = 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
I = second moment of area (mm⁴)

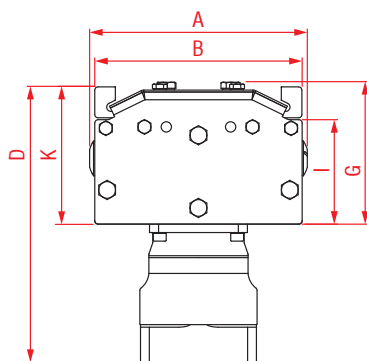
Nominal lifetime:

$$L = \left(\frac{C}{F} \right)^3 \times 10^5$$

L = Lifetime in meter
C = Dynamic load factor (N)
F = Middle load (N)

Positioning system DSZPVIE 160, 200

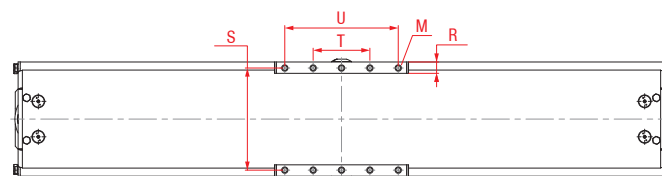
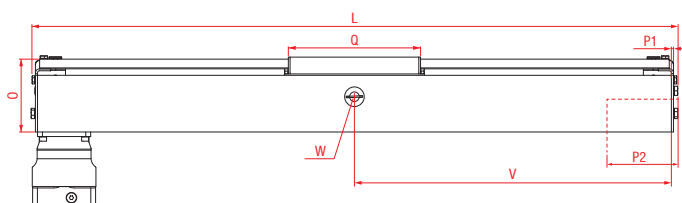
Dimensions (mm)



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



Optionally available with angular planetary gearbox



M = thread depth M6 x 12

W = servicing position

V = Q + 100

Size	Basic length L	A	C	D	G	I	K	M for	N for	O	P1	P2	Q	R	S	T	U	Basic weight without gearbox	Weight per 100 mm
DSZPVI 160	288	160	90	217,5	108,5	80	107,5	M8	M6	104	3	52,5	188	15	144	80	160	9,83 kg	1,98 kg
DSZPVI 200	349	200	140	251	132,5	100	130,5	M10	M8	128	3	62,5	245	17	180	100	200	18,95 kg	3,71 kg

Choice of guide body profile:

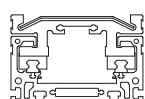
(0) corrosion-protected components

(1) as above, but with standard components

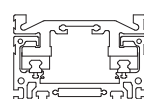
(2) like version (0), but without cover profile

(3) as above (0), but with standard components

(0) | (1) with cover profile



(2) | (3) without cover profile



Choice of carriages:

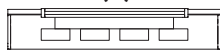
(0)



(1)

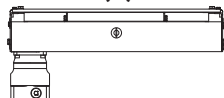


(2)

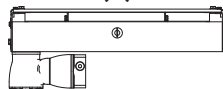


Drive version:

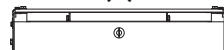
(0)



(1)



(2)



(0) planetary gearbox

(1) angular planetary gearbox

(2) without gearbox

Belt table:

Code-No.	Size	Belt	mm/rev.	Number of teeth
0 7	160	8M 30	176	22
0 9	200	8M 50	224	28

Gearbox variants:

Gearbox	DSZPVIE 120	DSZPVIE 160	DSZPVIE 200
Neugart (0)	PLN 70	PLN 90	PLN 115
(1)	WPLN 70	WPLN 90	WPLN 115
SEW (0)	PSKC 221	PSKC 321	PSKC 521
Wittenstein (0)	SP+060	SP+075	SP+100
(1)	SK+060	SK+075	SK+100

DSZPVIE 160 1 0 0 0 0 7 1 1500 — Basic length + stroke = total length

Pos. 1 2 3 4 5 6 7

Sample ordering code:

DSZPVIE 160 with standard body profile, standard carriage, with planetary gearbox, 1211 mm stroke.