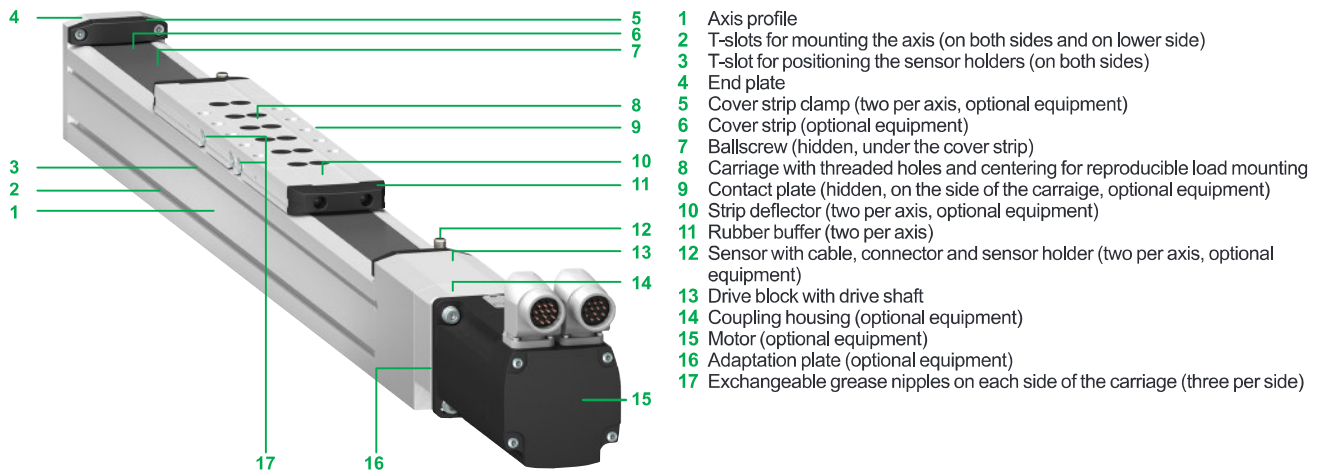


## Description (1) (2)



- 1 Axis profile
- 2 T-slots for mounting the axis (on both sides and on lower side)
- 3 T-slot for positioning the sensor holders (on both sides)
- 4 End plate
- 5 Cover strip clamp (two per axis, optional equipment)
- 6 Cover strip (optional equipment)
- 7 Ballscrew (hidden, under the cover strip)
- 8 Carriage with threaded holes and centering for reproducible load mounting
- 9 Contact plate (hidden, on the side of the carriage, optional equipment)
- 10 Strip deflector (two per axis, optional equipment)
- 11 Rubber buffer (two per axis)
- 12 Sensor with cable, connector and sensor holder (two per axis, optional equipment)
- 13 Drive block with drive shaft
- 14 Coupling housing (optional equipment)
- 15 Motor (optional equipment)
- 16 Adaptation plate (optional equipment)
- 17 Exchangeable grease nipples on each side of the carriage (three per side)

## Mechanical characteristics (1)

Force and torque (Fx, Fy, Fz, Mx, My, Mz) are calculated for a service life of 10,000 km (6,214 miles)

Type of portal axis		PAS42SBB	PAS42SBD	PAS42SBF	PAS43SBB	PAS43SBD	PAS43SBG	PAS44SBB	PAS44SBD	PAS44SBH
Axis profile cross-section (width x height)	mm (in)	Size 2: 60 x 60 (2.36 x 2.36)			Size 3: 80 x 80 (3.15 x 3.15)			Size 4: 110 x 110 (4.33 x 4.33)		
Type of mechanical drive element		Ballscrew								
Type of guide		Ball guide								
Ballscrew pitch	mm/rev (in/rev)	5 (0,2)	10 (0,39)	16 (0,63)	5 (0,2)	10 (0,39)	20 (0,79)	5 (0,2)	10 (0,39)	25 (0,98)
Ballscrew diameter	mm (in)	16 (0.63)			20 (0.79)			25 (0.98)		
Max. feed force (Fx) (4)	N (lbf)	2,980 (669.93)	1,560 (350.70)	1,540 (346.20)	3,400 (764.35)	2,600 (584.50)	1,720 (386.67)	3,700 (831.79)	4,520 (1,016.13)	3,000 (674.42)
Max. speed (3)	m/s (ft/s)	0.25 (0.82)	0.5 (1.64)	0.8 (2.62)	0.25 (0.82)	0.5 (1.64)	1 (3.28)	0.25 (0.82)	0.5 (1.64)	1.25 (4.10)
Max. acceleration (3)	m/s <sup>2</sup> (ft/s <sup>2</sup> )	2 (6.56)	4 (13.12)	6.4 (21.00)	2 (6.56)	4 (13.12)	8 (26.25)	2 (6.56)	4 (13.12)	10 (32.81)
Max. drive torque (4)	Nm (lbf/in)	3.2 (28.32)	3.3 (29.20)	4.9 (43.36)	3.7 (32.74)	5.3 (46.90)	6.8 (60.18)	4.3 (38.05)	9 (79.65)	14.3 (126.5)
Max. force (Fy) (4)	N (lbf)	4,050 (910.47)			6,360 (1,429.78)			9,040 (2,032.27)		
Max. force (Fz) (4)	N (lbf)	4,050 (910.47)			6,360 (1,429.78)			9,040 (2,032.27)		
Max. torque (Mx) (4)	Nm (lbf/in)	27 (238.97)			60 (531.04)			98 (867.37)		
Max. torque (My) (4)	With carriage type 1	304 (2,690.62)			556 (4,921.01)			935 (8,275.44)		
	With carriage type 4	668 (5,912.29)			1,224 (10,833.31)			2,155 (19,073.35)		
Max. torque (Mz) (4)	With carriage type 1	304 (2,690.62)			556 (4,921.01)			935 (8,275.44)		
	With carriage type 4	668 (5,912.29)			1,224 (10,833.31)			2,155 (19,073.35)		
Min...max. stroke (5)	mm (in)	9...1,500 (0.35...59.06)			11...3,000 (0.43...118.11)			13...3,000 (0.51...118.11)		
Repeatability	mm (in)	± 0.02 (0.001)								

(1) Technical data (characteristics, dimensions, etc.) for Lexium PAS4●S portal axes are available on the [product data sheet](#).

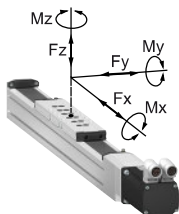
(2) Description of Lexium PAS4●S portal axes: the configuration options selected will determine whether or not certain components are included.

(3) Depending on load and stroke.

(4) Forces and torques decrease at increasing speeds. If several forces (Fy, Fz) and torques (Mx, My, Mz) acting at the same time, refer to the [hardware guide](#).

(5) Min. stroke required for the lubrication of the linear guide.

## Forces and torques



# Lexium PAS, PAD

Portal axes with movable carriage and fixed axis

Lexium PAS4●S portal axes

## References (1)

To order Lexium PAS4●S portal axes, complete each reference by replacing the “●”:

Example: PAS42SBF1000A1BAXXS/... (2)		PAS4	●	●	B	●	●●●●	●	●	●	●	●●●	●	/(2)
Size (axis profile cross-section)	60 x 60 mm (2.36 x 2.36 in)	2												/
	80 x 80 mm (3.15 x 3.15 in)	3												/
	110 x 110 mm (4.3 x 4.3 in)	4												/
Type of mechanical drive element	Ballscrew		S											/
	Without (support axis)		A											/
Type of guide	Recirculating ball bearing guide			B										/
Ballscrew pitch	5 mm/rev (0.19 in/rev) (for size 2, 3 and 4)				B									/
	10 mm/rev (0.39 in/rev) (for size 2, 3 and 4)				D									/
	16 mm/rev (0.63 in/rev) (for size 2)				F									/
	20 mm/rev (0.79 in/rev) (for size 3)				G									/
	25 mm/rev (0.98 in/rev) (for size 4)				H									/
	Support axis (without drive)				N									/
Stroke (3)	State the length in mm					●●●●								/
Sensors (4)	Two PNP sensors as normally closed contacts, not connected							A						/
	Two PNP sensors as normally closed contacts, connected							B						/
	Two NPN sensors as normally closed contacts, not connected							E						/
	Two NPN sensors as normally closed contacts, connected							F						/
	Two NPN sensors as normally open contacts, not connected							G						/
	Two NPN sensors as normally open contacts, connected							H						/
	Without sensors, without contact plate							N						/
Type of carriage	Type 1								1					/
	Type 4								4					/
Axis options (5)	With cover strip/without ballscrew support									B				/
	With cover strip/with 1 ballscrew support									C				/
	Without cover strip/with 1 ballscrew support									D				/
	With cover strip/with 2 ballscrew supports									E				/
	Without cover strip/with 2 ballscrew supports									F				/
	Without cover strip/without ballscrew support									N				/
Quantity of carriages (6)	One carriage										A			/
	Two carriages										B			/
	Three carriages										C			/
Distance between two carriages	State the distance in mm											●●●		/
	One carriage only, state “XXX”											XXX		/
Mounting options for motor and/or gearbox (7)	Straight mounted												S	/
	With shaft												D	/
	Support axis (only for PAS4●A)												N	/

(1) Technical data (characteristics, dimensions, etc.) for Lexium PAS4●S portal axes are available on the [product data sheet](#).  
 (2) For the second part of the reference, see [page 21](#).  
 (3) For the min. and max. stroke per size, refer to the mechanical characteristics of the portal axes (see [page 19](#)).  
 (4) Supplied with a 0.1 m (0.33 ft) cable equipped with an M8 connector. For sensor extension cable, refer to accessories (see [page 55](#)).  
 (5) Ballscrew support corresponds to total axis length and ballscrew speed.  
 (6) Only carriages of the same type can be used. Only the carriage next to the motor is driven.  
 (7) For the possible mounting options see the following pictures:

