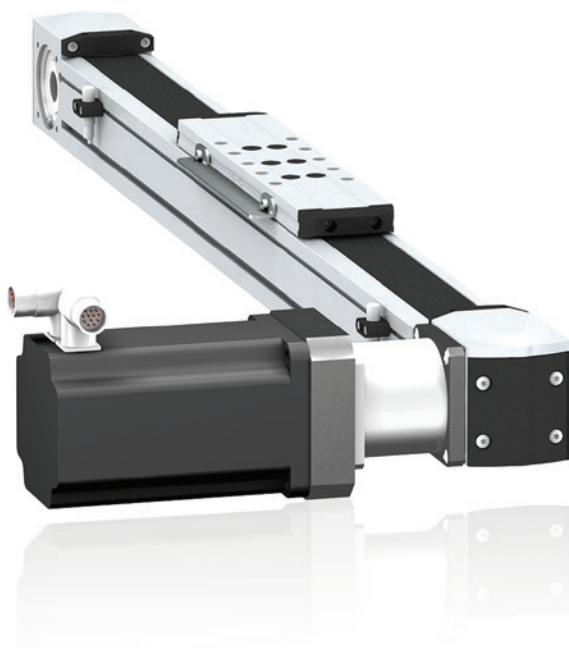


# Lexium Cartesian Robots Portal Axes

Catalog

January **2018**



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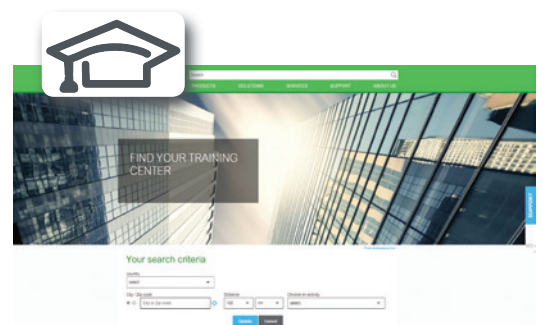
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# General contents

**Lexium Cartesian Robots - Portal axes**

*Selection guide* ..... page 2

■ Combinations of drive unit/portal axes ..... page 4

■ Lexium PAS B portal axes ..... page 6

■ Lexium PAS E portal axes .....page 11

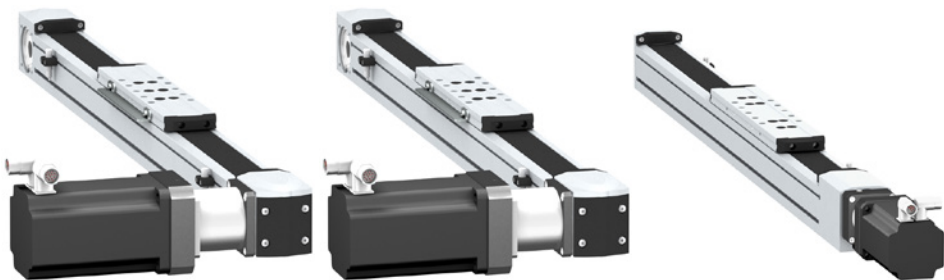
■ Lexium PAS S portal axes ..... page 14

■ Accessories ..... page 18

■ Index ..... page 22

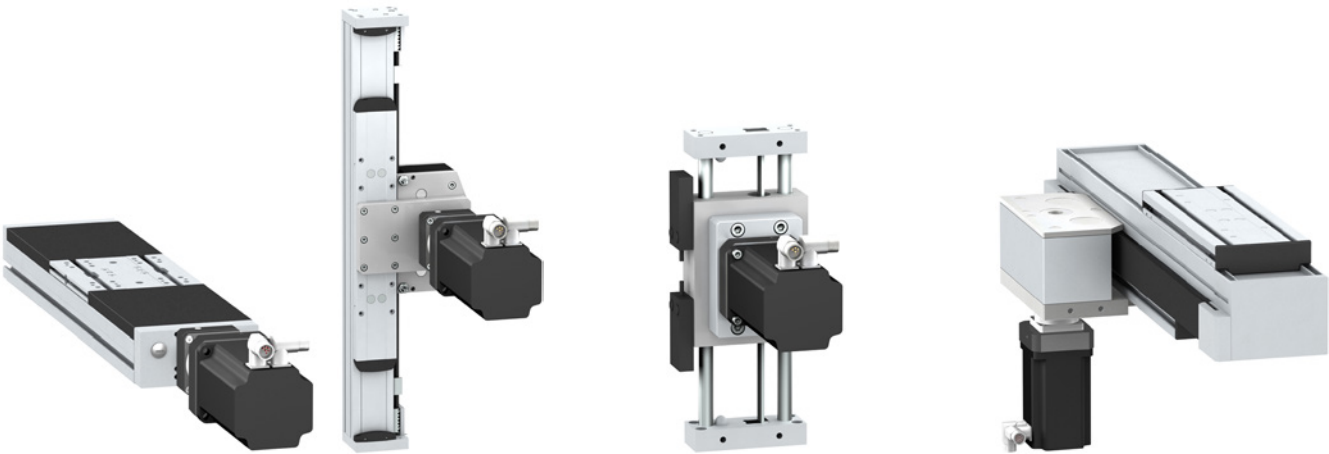
Lexium Cartesian Robots  
Cantilever and Telescopic Axes

| Axis type     |                      | Portal axes          |           |
|---------------|----------------------|----------------------|-----------|
| Movement      | Number of directions | 1                    |           |
|               | Movement type        | Generally horizontal |           |
|               | Position of the load | On carriage          |           |
| Drive         |                      | Toothed belt         | Ballscrew |
| Type of guide |                      | Ball or roller       | Ball      |



|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main characteristics                  | <ul style="list-style-type: none"><li>■ High dynamic response</li><li>■ Long stroke length</li><li>■ High positioning speed</li><li>■ Certified for Cleanrooms with ISO class 6 (ISO14644-1)</li></ul>                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"><li>■ High dynamic response</li><li>■ Long stroke length</li><li>■ High positioning speed</li></ul> | <ul style="list-style-type: none"><li>■ High precision movement (positioning, repeatability, guiding)</li><li>■ High feed forces</li><li>■ High rigidity</li></ul>                                                                                                                                                                                                           |
| Dynamic response                      | ★★★★★                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ★★★★                                                                                                                                  | ★★★                                                                                                                                                                                                                                                                                                                                                                          |
| Precision                             | ★★★                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ★★★                                                                                                                                   | ★★★★★                                                                                                                                                                                                                                                                                                                                                                        |
| Sizes                                 | 41, 42, 43, 44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 41, 42, 43, 44                                                                                                                        | 42, 43, 44                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum driving force                 | 2600 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2600 N                                                                                                                                | 4520 N                                                                                                                                                                                                                                                                                                                                                                       |
| Maximum speed of movement of the load | 8 m/s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2 m/s                                                                                                                                 | 1.25 m/s                                                                                                                                                                                                                                                                                                                                                                     |
| working stroke                        | 9 ... 5500 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 150 ... 2500 mm                                                                                                                       | 9 ... 3000 mm                                                                                                                                                                                                                                                                                                                                                                |
| Repeatability                         | ± 0.05 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ± 0.05 mm                                                                                                                             | ± 0.02 mm                                                                                                                                                                                                                                                                                                                                                                    |
| Options                               | <ul style="list-style-type: none"><li>■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution)</li><li>■ Wide range of sensors for the limit switch function</li><li>■ Choice of carriage type for adapting to the load</li><li>■ Option to add carriages</li><li>■ Increased corrosion resistance, with cover strip</li><li>■ Anti-static belt</li><li>■ Protective metal strip</li><li>■ Several different motor and gearbox mounting options</li></ul> | <ul style="list-style-type: none"><li>■ No options available</li><li>■ PAS 4•E axes are pre-configured PAS 4•B axes</li></ul>         | <ul style="list-style-type: none"><li>■ Choice of pitch</li><li>■ Wide range of sensors for the limit switch function</li><li>■ Choice of carriage type for adapting to the load</li><li>■ Several carriages possible</li><li>■ Protective metal strip</li><li>■ Ballscrew supports for longer axes</li><li>■ Several different motor and gearbox mounting options</li></ul> |
| Reference                             | PAS 4•B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PAS 4•E                                                                                                                               | PAS 4•S                                                                                                                                                                                                                                                                                                                                                                      |
| Page                                  | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 13                                                                                                                                    | 16                                                                                                                                                                                                                                                                                                                                                                           |

| Linear tables        | Cantilever axes with mobile structure on profile  | Cantilever axes with mobile structure on parallel rods | Telescopic axes      |
|----------------------|---------------------------------------------------|--------------------------------------------------------|----------------------|
| 1                    |                                                   |                                                        |                      |
| Generally horizontal | Generally vertical                                |                                                        | Generally horizontal |
| On carriage          | On the side of the profile or on the 2 end blocks | On the 2 end blocks                                    | On carriage          |
| Ballscrew            | Toothed belt                                      | Toothed belt or rack                                   | Toothed belt         |
| Double ball          | Ball or roller                                    | Linear ball bearing                                    | Ball or roller       |



|                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>■ High precision movement (positioning, repeatability, guiding)</li><li>■ High feed forces</li><li>■ High rigidity</li><li>■ Feed movement without mechanical backlash</li></ul> | <ul style="list-style-type: none"><li>■ Long stroke length</li><li>■ High feed forces</li><li>■ Option to mount the load on the side of the profile or on the end blocks</li><li>■ High rigidity</li></ul>                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>■ Compact</li><li>■ Mobile structure with light travel weight</li></ul>                                                      | <ul style="list-style-type: none"><li>■ Long stroke length from a compact unit</li><li>■ High rigidity</li><li>■ High dynamic response</li></ul>                                                                                                                                                        |
| ★★                                                                                                                                                                                                                     | ★★★★                                                                                                                                                                                                                                                                                                                                                                                                                              | ★★★★                                                                                                                                                               | ★★★★                                                                                                                                                                                                                                                                                                    |
| ★★★★★                                                                                                                                                                                                                  | ★★★                                                                                                                                                                                                                                                                                                                                                                                                                               | ★★★                                                                                                                                                                | ★★                                                                                                                                                                                                                                                                                                      |
| 41, 42, 43                                                                                                                                                                                                             | 41, 42, 43, 44                                                                                                                                                                                                                                                                                                                                                                                                                    | 30, 31, 32, 33, 34                                                                                                                                                 | 24                                                                                                                                                                                                                                                                                                      |
| 2580 N                                                                                                                                                                                                                 | 2150 N                                                                                                                                                                                                                                                                                                                                                                                                                            | 705 N                                                                                                                                                              | 1500 N                                                                                                                                                                                                                                                                                                  |
| 1 m/s                                                                                                                                                                                                                  | 3 m/s                                                                                                                                                                                                                                                                                                                                                                                                                             | 3 m/s                                                                                                                                                              | 3 m/s                                                                                                                                                                                                                                                                                                   |
| 7 ... 1500 mm                                                                                                                                                                                                          | 9 ... 1800 mm                                                                                                                                                                                                                                                                                                                                                                                                                     | 8 ... 500 mm                                                                                                                                                       | 13 ... 2400 mm                                                                                                                                                                                                                                                                                          |
| ± 0.02 mm                                                                                                                                                                                                              | ± 0.05 mm                                                                                                                                                                                                                                                                                                                                                                                                                         | ± 0.05 mm                                                                                                                                                          | ± 0.1 mm                                                                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"><li>■ Choice of pitch</li><li>■ Several different motor mounting options</li></ul>                                                                                                   | <ul style="list-style-type: none"><li>■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution)</li><li>■ Wide range of sensors for the limit switch function</li><li>■ Increased corrosion resistance, with cover strip</li><li>■ Anti-static belt</li><li>■ Protective metal strip</li><li>■ Several different motor and gearbox mounting options</li></ul> | <ul style="list-style-type: none"><li>■ Anti-corrosion version</li><li>■ Anti-static belt</li><li>■ Several different motor and gearbox mounting options</li></ul> | <ul style="list-style-type: none"><li>■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution)</li><li>■ Choice of carriage type for adapting to the load</li><li>■ Several different motor and gearbox mounting options</li></ul> |
| TAS 4                                                                                                                                                                                                                  | CAS 4                                                                                                                                                                                                                                                                                                                                                                                                                             | CAS 3                                                                                                                                                              | CAS 2                                                                                                                                                                                                                                                                                                   |
| For more information, please refer to the catalog "Lexium Cartesian Robots Table Axes"                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                   | For more information, please refer to the catalog "Lexium Cartesian Robots Cantilever and Telescopic Axes"                                                         |                                                                                                                                                                                                                                                                                                         |



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## Lexium Cartesian Robots

### Combinations of drive units/cantilever axes

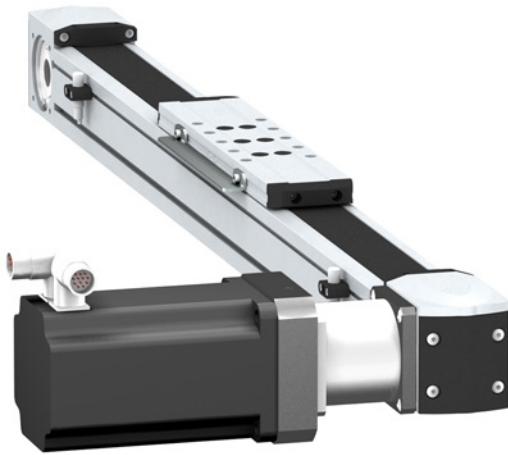
| Drive element<br>(1)                      | Type                                           | Portal axes      |                            |                            |                            | Cantilever and telescopic axes |        |
|-------------------------------------------|------------------------------------------------|------------------|----------------------------|----------------------------|----------------------------|--------------------------------|--------|
|                                           |                                                | PAS41B<br>CAS41B | PAS42B<br>PAS42S<br>CAS42B | PAS43B<br>PAS43S<br>CAS43B | PAS44B<br>PAS44S<br>CAS44B | CAS30R                         | CAS31B |
| Stepper motors                            | BRS368                                         |                  |                            |                            |                            |                                |        |
|                                           | BRS397                                         |                  |                            |                            |                            |                                |        |
|                                           | BRS39A                                         |                  |                            |                            |                            |                                |        |
|                                           | BRS39B                                         |                  |                            |                            |                            |                                |        |
|                                           | BRS3AC                                         |                  |                            |                            |                            |                                |        |
|                                           | BRS3AD                                         |                  |                            |                            |                            |                                |        |
| Integrated stepper motors                 | ILS1●571                                       |                  |                            |                            |                            |                                |        |
|                                           | ILS1●572                                       |                  |                            |                            |                            |                                |        |
|                                           | ILS1●573                                       |                  |                            |                            |                            |                                |        |
|                                           | ILS1●851                                       |                  |                            |                            |                            |                                |        |
|                                           | ILS1●852                                       |                  |                            |                            |                            |                                |        |
|                                           | ILS1●853                                       |                  |                            |                            |                            |                                |        |
| Integrated servo motors                   | ILA1●571                                       |                  |                            |                            |                            |                                |        |
|                                           | ILA1●572                                       |                  |                            |                            |                            |                                |        |
| Integrated DC-motors with mounted gearbox | ILE1●661●●●●1                                  |                  |                            |                            |                            |                                |        |
|                                           | ILE1●661●●●●2                                  |                  |                            |                            |                            |                                |        |
|                                           | ILE1●661●●●●3                                  |                  |                            |                            |                            |                                |        |
|                                           | ILE1●661●●●●4                                  |                  |                            |                            |                            |                                |        |
| Servo motors                              | BSH / SH3 0401                                 |                  |                            |                            |                            |                                |        |
|                                           | BSH / SH3 0402                                 |                  |                            |                            |                            |                                |        |
|                                           | BSH / SH3 0551                                 |                  |                            |                            |                            |                                |        |
|                                           | BSH / SH3 0552                                 |                  |                            |                            |                            |                                |        |
|                                           | BSH / SH3 0553                                 |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / ----- / MH3 / SH3 / ILM 0701       |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / BMi / MH3 / SH3 / ILM 0702         |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / BMi / MH3 / SH3 / ILM 0703         |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / ----- / MH3 / SH3 / ILM 1001       |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / BMi / MH3 / SH3 / ILM 1002         |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / BMi / MH3 / SH3 / ILM 1003         |                  |                            |                            |                            |                                |        |
|                                           | BSH / ----- / ----- / ----- / SH3 / ----- 1004 |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / ----- / MH3 / SH3 / ILM 1401       |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / BMi / MH3 / SH3 / ILM 1402         |                  |                            |                            |                            |                                |        |
|                                           | BSH / BMH / ----- / MH3 / SH3 / ----- 1403     |                  |                            |                            |                            |                                |        |
|                                           | BSH / ----- / ----- / SH3 / ----- 1404         |                  |                            |                            |                            |                                |        |
| Servo motors<br>BCH2                      | BCH2MBA53                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MB013                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LD023                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LD043                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LF043                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2HF073                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LF073                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LH103                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM052                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM031                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM102                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2HM102                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM081                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM061                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM091                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM152                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2LH203                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MM202                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MR202                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2HR202                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MR302                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MR301                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MR352                                      |                  |                            |                            |                            |                                |        |
|                                           | BCH2MR451                                      |                  |                            |                            |                            |                                |        |
| Planetary gearboxes<br>(Fa. Neugart)      | PLE40 (WPLE40)                                 |                  |                            |                            |                            |                                |        |
|                                           | PLE60 (WPLE60)                                 |                  |                            |                            |                            |                                |        |
|                                           | PLE80 (WPLE80)                                 |                  |                            |                            |                            |                                |        |
|                                           | PLE120 (WPLE120)                               |                  |                            |                            |                            |                                |        |

(1) Please refer to our website [www.schneider-electric.com](http://www.schneider-electric.com).

|  |                     |
|--|---------------------|
|  | Possible to combine |
|  | Incompatible        |

[illegible]

PF094920



Lexium PAS4B portal axis with motor and gearbox mounted

### Presentation (1)

Lexium PAS B portal axes are linear motion axes with a toothed belt for driving the carriage and roller or ball guides for guidance. The carriage moving the load is mobile and the body of the axis is fixed.

Lexium PAS B portal axes are designed for applications that require positioning of heavy loads over long distances with a high dynamic response.

These axes, with a ball guide, are particularly suitable for applications requiring high forces and significant torque. Rollers offer a simple and cost-effective guiding solution for other applications.

Lexium PAS B portal axes offer various configuration options. These include axis length, various types of sensor for the limit switch function, the addition of a protective metal strip, a choice between various carriage types of different sizes, and the option of having up to 3 carriages and an anti-static toothed belt (see page 8).

The axis design is based on a very strong and torsionally rigid aluminum profile.

Schneider Electric offers a number of drive elements that can be used to drive Lexium PAS B axes (2) (see pages 4 and 9).

Third-party drive elements can also be used under certain conditions. Contact our Customer Care Center for further details.

### Applications

Applications with the following requirements:

- Positioning over long distances: material handling, palletizers, etc.
- Positioning of parts at high speeds: flying shear, optical and measuring applications, labeling, etc.
- High feed forces: hoisting, cutting, machining, etc.

### Special product features

- Profile with T-slots on 3 sides
- Carriage with centering tapped holes for mounting the load
- Grease nipples accessible from each side of the carriage to simplify routine maintenance
- Quick-coupling system for easy motor or gearbox assembly
- Stroke in various lengths available per millimeter
- Sensors slidable in T-slots

The PAS42BB with ball guiding is suitable for clean room applications with the following configurations:

Standard clean room class PAS42BBM1000A1NA●●●R

- Clean room class 6 (ISO14644-1) 1.8 m/s/5.91 ft/s with 10 kg/22.05 lb load
- Clean room class 6 (ISO14644-1) at 0.5 m/s/1.64 ft/s with 10 kg/22.05 lb load

Increased clean room class PAS42BBM1000A1RA●●●R

- Clean room class 5 (ISO14644-1) at 1.8 m/s/5.91 ft/s with 10 kg/22.05 lb load
- Clean room class 4 (ISO14644-1) at 0.5 m/s/1.64 ft/s with 10 kg/22.05 lb load

Increased clean room class PAS42BBM1000A1RA●●●R with suction 11.7 m³/h/60.03 cu ft/h

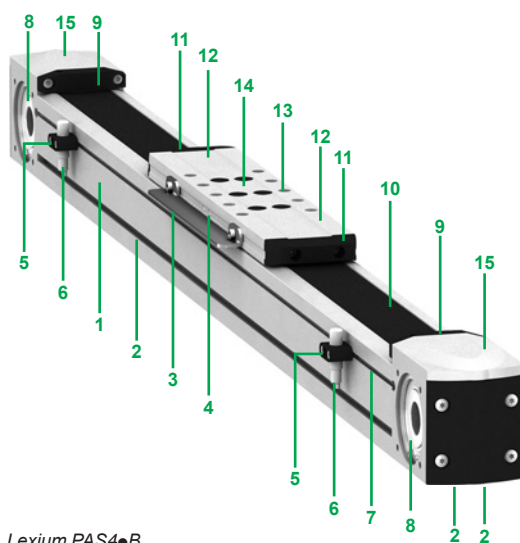
- Clean room class 2 (ISO14644-1) at 1.8 m/s/5.91 ft/s with 10 kg/22.05 lb load
- Clean room class 1 (ISO14644-1) at 1.0 m/s/3.28 ft/s with 10 kg/22.05 lb load



(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS B portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) When selecting the drive element, the maximum permissible driving torque for the axis drive shaft must always be taken into account.

### Description (1) (2)



- 1 Lexium PAS4B portal axis
- 2 T-slots for mounting the axis
- 3 Detection plate for sensors
- 4 Grease nipples on each side of carriage
- 5 Sensor supports
- 6 Sensors for the limit switch function
- 7 T-slot for positioning sensor supports
- 8 Hollow shafts for connecting drive unit or journal
- 9 Brackets for protective metal strip
- 10 Protective metal strip
- 11 Buffers
- 12 Protective metal strip deflectors
- 13 Tapped holes with centering holes for mounting the load
- 14 Carriage to support load
- 15 End blocks

Lexium PAS4B

### Mechanical characteristics (1)

Force and torque ( $F_y$ ,  $F_z$ ,  $M_x$ ,  $M_y$ ,  $M_z$ ) are calculated for a service life of 30,000 km/18,641 miles

| Type of portal axis              |                                     | PAS41BR                       | PAS42BR                       | PAS42BB  | PAS43BR                       | PAS43BB                      | PAS44BB                      |
|----------------------------------|-------------------------------------|-------------------------------|-------------------------------|---------------------------------------------------------------------------------------------|-------------------------------|------------------------------|------------------------------|
| Type of drive                    |                                     | Toothed belt                  |                               |                                                                                             |                               |                              |                              |
| Type of guide                    |                                     | Rollers                       | Rollers                       | Ball                                                                                        | Rollers                       | Ball                         | Ball                         |
| Constant feed rate               | mm/U                                | 84                            | 155                           |                                                                                             | 205                           |                              | 264                          |
| Max. driving force ( $F_x$ ) (3) | N                                   | 300                           | 800                           |                                                                                             | 1,100                         |                              | 2,600                        |
| Max. speed                       | m/s/ft/s                            | 8/26.25                       |                               | 5/16.40                                                                                     | 8/26.25                       | 5/16.40                      |                              |
| Max. acceleration                | m/s <sup>2</sup> /ft/s <sup>2</sup> | 20/65.62                      |                               | 50/164.04                                                                                   | 20/65.62                      | 50/164.04                    |                              |
| Max. driving torque              | Nm                                  | 4                             | 20                            |                                                                                             | 36                            |                              | 110                          |
| Max. force ( $F_y$ ) (3)         | N                                   | 660                           |                               | 2,810                                                                                       | 1,760                         | 4,410                        | 6,270                        |
| Max. force ( $F_z$ ) (3)         | N                                   | 430                           |                               | 2,810                                                                                       | 1,040                         | 4,410                        | 6,270                        |
| Max. torque ( $M_x$ ) (3)        | Nm                                  | 5                             | 9                             | 19                                                                                          | 29                            | 42                           | 68                           |
| Max. torque ( $M_y$ ) (3)        |                                     |                               |                               |                                                                                             |                               |                              |                              |
| With carriage type 1             | Nm                                  | —                             | 18                            | 74                                                                                          | 51                            | 162                          | 256                          |
| With carriage type 2             | Nm                                  | 11                            | 31                            | 194                                                                                         | 87                            | 379                          | 655                          |
| With carriage type 4             | Nm                                  | 28                            | 56                            | 362                                                                                         | 160                           | 687                          | 1,209                        |
| Max. torque ( $M_z$ ) (3)        |                                     |                               |                               |                                                                                             |                               |                              |                              |
| With carriage type 1             | Nm                                  | —                             | 28                            | 74                                                                                          | 86                            | 162                          | 256                          |
| With carriage type 2             | Nm                                  | 17                            | 48                            | 194                                                                                         | 148                           | 379                          | 655                          |
| With carriage type 4             | Nm                                  | 43                            | 87                            | 362                                                                                         | 271                           | 687                          | 1,209                        |
| Min...max. stroke (4)            | mm/in.                              | 125...3,000/<br>4.92...118.11 | 125...5,500/<br>4.92...216.54 | 9...5,500/<br>0.35...216.54                                                                 | 175...5,500/<br>6.89...216.54 | 11...5,500/<br>0.43...216.54 | 13...5,500/<br>0.51...216.54 |
| Repeatability                    | mm/in.                              | ± 0.05/0.002                  |                               |                                                                                             |                               |                              |                              |
| Profile cross-section            | mm/in.                              | 40 x 40/<br>1.58 x 1.58       | 60 x 60/2.36 x 2.36           |                                                                                             |                               | 80 x 80/3.15 x 3.15          |                              |
| Typical payload (5)              | kg/lb                               | 12/26.46                      | 18/39.68                      | 40/88.19                                                                                    | 35/187.39                     | 85/77.16                     | 160/352.74                   |

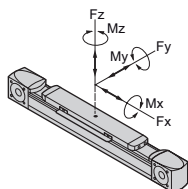
(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS B portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) Description of a Lexium PAS B portal axis; the configuration options selected will determine whether or not certain components are included.

(3) Forces and moments acting on the portal axis Lexium PAS B. If there are several forces and moments acting at the same time, refer to the manufacturer's documentation.

(4) Larger strokes at the ball guides on request.

(5) Values are used for orientation in horizontal mounting position, carriage up, and centric load. Values can also be exceeded. Refer to max. force ( $F_z$ ) value and manufacturer's documentation.



### References (1)

To order a Lexium PAS B portal axis, complete each reference by replacing the "●" (2):

Example: PAS 4 1 B R M 1000 A 2 B A XXX R/... rest of the reference on page 9

|                                     |                                                                                     | PAS 4 | ● | ● | ● | ●    | ●●●● | ● | ● | ● | ●   | ●●● | ● | /(2) |
|-------------------------------------|-------------------------------------------------------------------------------------|-------|---|---|---|------|------|---|---|---|-----|-----|---|------|
| Size (profile cross-section)        | 40 (40 x 40 mm cross-section)                                                       | 1     |   |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | 60 (60 x 60 mm cross-section)                                                       | 2     |   |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | 80 (80 x 80 mm cross-section)                                                       | 3     |   |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | 110 (110 x 110 mm cross-section)                                                    | 4     |   |   |   |      |      |   |   |   |     |     |   | /    |
| Type of drive for carriage          | Toothed belt                                                                        |       | B |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | Axis with no drive facility (for support only)                                      |       | H |   |   |      |      |   |   |   |     |     |   | /    |
| Type of guide for carriage          | Roller (for PAS41BR, 42BR, 43BR)                                                    |       |   | R |   |      |      |   |   |   |     |     |   | /    |
|                                     | Ball (for PAS42BB, 43BB, 44BB)                                                      |       |   | B |   |      |      |   |   |   |     |     |   | /    |
| Feed per revolution                 | 84 mm/revolution (for PAS41B)                                                       |       |   |   | M |      |      |   |   |   |     |     |   | /    |
|                                     | 155 mm/revolution (for PAS42B)                                                      |       |   |   | M |      |      |   |   |   |     |     |   | /    |
|                                     | 205 mm/revolution (for PAS43B)                                                      |       |   |   | M |      |      |   |   |   |     |     |   | /    |
|                                     | 264 mm/revolution (for PAS44B)                                                      |       |   |   | M |      |      |   |   |   |     |     |   | /    |
|                                     | Axis with no drive facility (for PAS4●H)                                            |       |   |   | N |      |      |   |   |   |     |     |   | /    |
| Stroke                              | Maximum 3,000 mm (for PAS41)                                                        |       |   |   |   | ●●●● |      |   |   |   |     |     |   | /    |
|                                     | Maximum 5,500 mm (for PAS42, PAS43 and PAS44)                                       |       |   |   |   | ●●●● |      |   |   |   |     |     |   | /    |
| Limit switches (3)                  | 2 sensors with PNP output, NC contact, not connected                                |       |   |   |   |      |      | A |   |   |     |     |   | /    |
|                                     | 2 sensors with PNP output, NO contact, not connected                                |       |   |   |   |      |      | C |   |   |     |     |   | /    |
|                                     | 2 sensors with NPN output, NC contact, not connected                                |       |   |   |   |      |      | E |   |   |     |     |   | /    |
|                                     | 2 sensors with NPN output, NO contact, not connected                                |       |   |   |   |      |      | G |   |   |     |     |   | /    |
|                                     | Without sensor/without detection plate                                              |       |   |   |   |      |      | N |   |   |     |     |   | /    |
| Type of carriage (4)                | Type 1 (only for PAS42B, 43B, 44B)                                                  |       |   |   |   |      |      | 1 |   |   |     |     |   | /    |
|                                     | Type 2                                                                              |       |   |   |   |      |      | 2 |   |   |     |     |   | /    |
|                                     | Type 4                                                                              |       |   |   |   |      |      | 4 |   |   |     |     |   | /    |
| Options                             | With protective metal strip                                                         |       |   |   |   |      |      |   | B |   |     |     |   | /    |
|                                     | Anti-corrosion version/without protective metal strip                               |       |   |   |   |      |      |   | C |   |     |     |   | /    |
|                                     | With anti-static toothed belt/without protective metal strip                        |       |   |   |   |      |      |   | A |   |     |     |   | /    |
|                                     | Anti-corrosion version/with anti-static toothed belt/without protective metal strip |       |   |   |   |      |      |   | E |   |     |     |   | /    |
|                                     | With anti-static toothed belt/with protective metal strip                           |       |   |   |   |      |      |   | L |   |     |     |   | /    |
|                                     | Increased clean room class/with protective metal strip (at PAS42BB)                 |       |   |   |   |      |      |   | R |   |     |     |   | /    |
|                                     | Without option                                                                      |       |   |   |   |      |      |   | N |   |     |     |   | /    |
| Number of carriages (5)             | 1                                                                                   |       |   |   |   |      |      |   |   | A |     |     |   | /    |
|                                     | 2                                                                                   |       |   |   |   |      |      |   |   | B |     |     |   | /    |
|                                     | 3                                                                                   |       |   |   |   |      |      |   |   | C |     |     |   | /    |
| Distance between two carriages      | State the distance in mm                                                            |       |   |   |   |      |      |   |   |   | ●●● |     |   | /    |
|                                     | 1 carriage only, state “XXX”                                                        |       |   |   |   |      |      |   |   |   | XXX |     |   | /    |
| Interface for the drive element (6) | Drive element mounted on right-hand side                                            |       |   |   |   |      |      |   |   |   | R   |     |   | /    |
|                                     | Drive element mounted on left-hand side                                             |       |   |   |   |      |      |   |   |   | L   |     |   | /    |
|                                     | Without connection/without adapter plate                                            |       |   |   |   |      |      |   |   |   | H   |     |   | /    |
|                                     | Axis with no drive facility (only for PAS4●H)                                       |       |   |   |   |      |      |   |   |   | N   |     |   | /    |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS B portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) For the second part of the reference, see page 9.

(3) Supplied with a 0.1 m/0.33 ft cable equipped with an M8 connector. Other cable lengths are also available (see the accessories on page 18).

(4) See characteristics and dimensions on our website [www.schneider-electric.com](http://www.schneider-electric.com) or refer to the documentation CD-ROM supplied with this catalog.

(5) Only carriages of the same type (type 1, type 2, or type 4) are permitted.

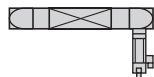
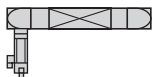
(6) Types of interface for the drive element:

PAS4●B●M●●●●●●●●●●R/...

PAS4●B●M●●●●●●●●●●L/...

PAS4●B●M●●●●●●●●●●H/...

PAS4●H●N●●●●●●●●●●N/...

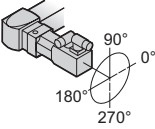
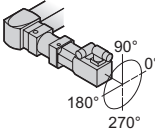
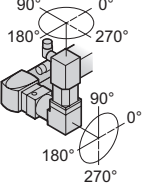
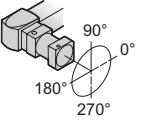
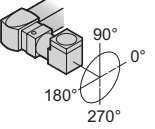
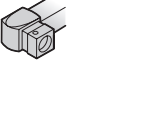
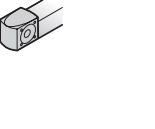
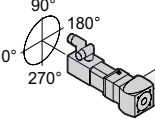
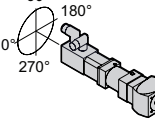
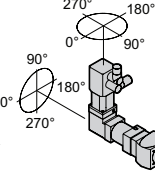
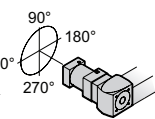
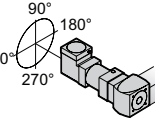
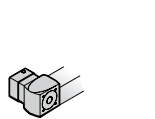
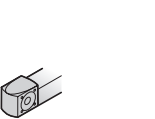


| References (continued) (1)                                                             |                                                                                                                                                           |                             |   |    |    |    |    |   |       |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|----|----|----|---|-------|
| To order a Lexium PAS B portal axis, complete each reference by replacing the “●” (2): |                                                                                                                                                           |                             |   |    |    |    |    |   |       |
| Example: PAS 4 1 B R M 1000 A 2 B A XXX R (2)/2 1G 0 H7 0                              |                                                                                                                                                           | PAS 4 ●●●●●●●●●●●●●●●● (2)/ |   | ●  | ●● | ●  | ●● | ● |       |
| + PLE60 3:1 + BMH 0702P01A2A                                                           |                                                                                                                                                           |                             |   |    |    |    |    |   | + ... |
| Motor drive configuration (3)                                                          | Motor only                                                                                                                                                | /                           | 1 |    |    |    |    |   |       |
|                                                                                        | Motor + gearbox                                                                                                                                           | /                           | 2 |    |    |    |    |   |       |
|                                                                                        | Gearbox only                                                                                                                                              | /                           | 3 |    |    |    |    |   |       |
|                                                                                        | Without motor/without gearbox/with adapter plate for the drive                                                                                            | /                           | 4 |    |    |    |    |   |       |
|                                                                                        | Without motor/without gearbox                                                                                                                             | /                           | X |    |    |    |    |   |       |
| Gearbox interface                                                                      | PLE 40 gearboxes                                                                                                                                          | /                           |   | 0G |    |    |    |   |       |
|                                                                                        | PLE 60 gearboxes                                                                                                                                          | /                           |   | 1G |    |    |    |   |       |
|                                                                                        | PLE 80 gearboxes                                                                                                                                          | /                           |   | 3G |    |    |    |   |       |
|                                                                                        | PLE 120 gearboxes                                                                                                                                         | /                           |   | 5G |    |    |    |   |       |
|                                                                                        | WPLE 40 gearboxes                                                                                                                                         | /                           |   | 0A |    |    |    |   |       |
|                                                                                        | WPLE 60 gearboxes                                                                                                                                         | /                           |   | 1A |    |    |    |   |       |
|                                                                                        | WPLE 80 gearboxes                                                                                                                                         | /                           |   | 3A |    |    |    |   |       |
|                                                                                        | WPLE 120 gearboxes                                                                                                                                        | /                           |   | 5A |    |    |    |   |       |
|                                                                                        | Other third-party gearboxes not assembled by Schneider Electric (gearbox drawings required)                                                               | /                           |   | YY |    |    |    |   |       |
|                                                                                        | Other third-party gearboxes assembled by Schneider Electric (gearbox and drawings required)                                                               | /                           |   | ZZ |    |    |    |   |       |
|                                                                                        | Without gearbox                                                                                                                                           | /                           |   | XX |    |    |    |   |       |
| Gearbox orientation (3)                                                                | 0°                                                                                                                                                        | /                           |   |    | 3  |    |    |   |       |
|                                                                                        | 90°                                                                                                                                                       | /                           |   |    | 0  |    |    |   |       |
|                                                                                        | 180°                                                                                                                                                      | /                           |   |    | 9  |    |    |   |       |
|                                                                                        | 270°                                                                                                                                                      | /                           |   |    | 6  |    |    |   |       |
|                                                                                        | Without gearbox                                                                                                                                           | /                           |   |    | X  |    |    |   |       |
| Motor interface                                                                        | Stepper motors BRS 368                                                                                                                                    | /                           |   |    |    | V8 |    |   |       |
|                                                                                        | Stepper motors BRS 397, 39A                                                                                                                               | /                           |   |    |    | V9 |    |   |       |
|                                                                                        | Stepper motors BRS 39B                                                                                                                                    | /                           |   |    |    | V0 |    |   |       |
|                                                                                        | Stepper motors BRS 3AC, 3AD                                                                                                                               | /                           |   |    |    | V1 |    |   |       |
|                                                                                        | Integrated drive with stepper motor ILS●●571, 572                                                                                                         | /                           |   |    |    | I6 |    |   |       |
|                                                                                        | Integrated drive with stepper motor ILS●●573                                                                                                              | /                           |   |    |    | I7 |    |   |       |
|                                                                                        | Integrated drive with stepper motor ILS●●851, 852                                                                                                         | /                           |   |    |    | I9 |    |   |       |
|                                                                                        | Integrated drive with stepper motor ILS●●853                                                                                                              | /                           |   |    |    | I8 |    |   |       |
|                                                                                        | Integrated drive with brushless DC motor ILE●●66 with spur wheel gear                                                                                     | /                           |   |    |    | E7 |    |   |       |
|                                                                                        | Integrated drive with servo motor ILA●●57                                                                                                                 | /                           |   |    |    | A6 |    |   |       |
|                                                                                        | Servo motors BSH/SH3 0401, 0402                                                                                                                           | /                           |   |    |    | H0 |    |   |       |
|                                                                                        | Servo motors BSH/SH3 055                                                                                                                                  | /                           |   |    |    | H5 |    |   |       |
|                                                                                        | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 0701, 0702                                                                                                           | /                           |   |    |    | H7 |    |   |       |
|                                                                                        | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 0703                                                                                                                 | /                           |   |    |    | H8 |    |   |       |
|                                                                                        | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 1001, 1002, 1003                                                                                                     | /                           |   |    |    | H1 |    |   |       |
|                                                                                        | Servo motors BSH 1004                                                                                                                                     | /                           |   |    |    | H4 |    |   |       |
|                                                                                        | Servo motors BSH/BMH/MH3/SH3/ILM 1401, 1402, 1403, 1404                                                                                                   | /                           |   |    |    | H2 |    |   |       |
|                                                                                        | Servo motors BCH2●B A5, 01                                                                                                                                | /                           |   |    |    | C1 |    |   |       |
|                                                                                        | Servo motors BCH2●D 02, 04                                                                                                                                | /                           |   |    |    | C2 |    |   |       |
|                                                                                        | Servo motors BCH2●F 04                                                                                                                                    | /                           |   |    |    | C3 |    |   |       |
|                                                                                        | Servo motors BCH2●F 07                                                                                                                                    | /                           |   |    |    | C4 |    |   |       |
|                                                                                        | Servo motors BCH2●H 10, 20                                                                                                                                | /                           |   |    |    | C5 |    |   |       |
|                                                                                        | Servo motors BCH2●M 08                                                                                                                                    | /                           |   |    |    | C6 |    |   |       |
|                                                                                        | Servo motors BCH2●M 03, 05, 06, 10, 09, 15, 20                                                                                                            | /                           |   |    |    | C7 |    |   |       |
|                                                                                        | Servo motors BCH2●R 20, 30, 35, 45                                                                                                                        | /                           |   |    |    | C8 |    |   |       |
|                                                                                        | Third-party motor without mounting by Schneider Electric (motor drawing required)                                                                         | /                           |   |    |    | YY |    |   |       |
|                                                                                        | Third-party motor with mounting by Schneider Electric (motor drawing required; motor must be provided)                                                    | /                           |   |    |    | ZZ |    |   |       |
|                                                                                        | No motor                                                                                                                                                  | /                           |   |    |    | XX |    |   |       |
| Motor orientation (3)                                                                  | 0°                                                                                                                                                        | /                           |   |    |    |    | 3  |   |       |
|                                                                                        | 90°                                                                                                                                                       | /                           |   |    |    |    | 0  |   |       |
|                                                                                        | 180°                                                                                                                                                      | /                           |   |    |    |    | 9  |   |       |
|                                                                                        | 270°                                                                                                                                                      | /                           |   |    |    |    | 6  |   |       |
|                                                                                        | Without motor                                                                                                                                             | /                           |   |    |    |    | X  |   |       |
| Planetary gearbox gear ratio + motor reference                                         | State the planetary gearbox gear ratio and the complete motor reference at the end of the reference, in plain text.<br>Example: PLE60 3:1 + BMH0702P01A2A |                             |   |    |    |    |    |   | + ... |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS B portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com)

(2) For the first part of the reference, see page 8.

(3) For possible motor drive configurations and orientation (view from motor/gearbox towards the axis or from motor towards the gearbox), see page 10.

| Mounting directions                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Right mounting                                                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| PAS4●B.../<br>1XX●●●                                                              | PAS4●B.../<br>2●G●●●                                                              | PAS4●B.../<br>2●A●●●                                                              | PAS4●B.../<br>3●G●XXX                                                             | PAS4●B.../<br>3●A●XXX                                                              | PAS4●B.../<br>4XX●●●                                                                | PAS4●B.../<br>XXXXXXX                                                               |
|  |  |  |  |  |  |  |
| Left mounting                                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| PAS4●B.../<br>1XX●●●                                                              | PAS4●B.../<br>2●G●●●                                                              | PAS4●B.../<br>2●A●●●                                                              | PAS4●B.../<br>3●G●XXX                                                             | PAS4●B.../<br>3●A●XXX                                                              | PAS4●B.../<br>4XX●●●                                                                | PAS4●B.../<br>XXXXXXX                                                               |
|  |  |  |  |  |  |  |

### Presentation

Lexium PAS E portal axes are linear motion axes with a toothed belt for driving the carriage and roller or ball guides for guidance.  
The carriage moving the load is mobile and the body of the axis is fixed.

They are ideal for applications that require high-precision positioning of heavy loads over long distances with highly dynamic performance.

The Lexium PAS E offer has been designed to offer a sophisticated "ready-to-use" solution offering a standard configuration and characteristics: the range sizes are predefined and they are supplied with a BMH or BSH motor, depending on the model, plus a planetary gearbox and two limit switches.  
This configuration reduces the selection criteria to just two parameters, the load and the length.

Regardless of the axis size, only one curve is needed to determine the positioning time as a function of the stroke (see curve on opposite page).

This ready-to-use solution is simple and low-cost: the axis setup time is minimized thanks to simplified wiring, resulting in optimized setup and maintenance costs.  
This solution also makes it possible to have very short lead times.

### Applications

Applications with the following requirements:

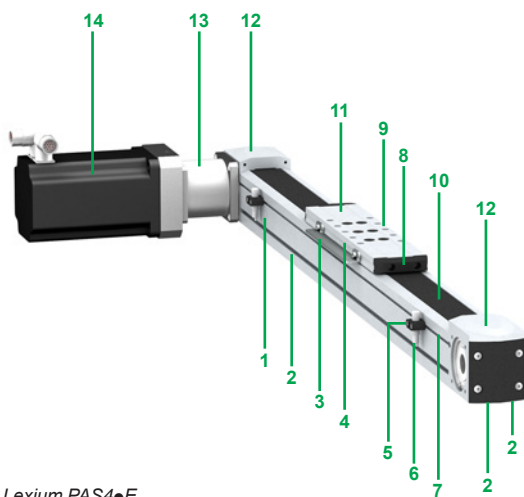
- Positioning over long distances: material handling, palletizers, etc.
- Positioning of parts at high speeds: flying shear, optical and measuring applications, labeling, etc.
- High feed forces: hoisting, cutting, machining, etc.

### Special product features

- Profile with T-slots on 3 sides
- Carriage with centering tapped holes for mounting the load
- Grease nipples accessible from each side of the carriage to simplify regular maintenance
- Different stroke lengths available
- Sensors slidable in T-slots

### Description

- 1 Lexium PAS4●E portal axis
- 2 T-slots for mounting the axis
- 3 Detection plate for sensors
- 4 Grease nipples on each side of carriage
- 5 Sensor supports
- 6 Sensors for the limit switch function: 2 sensors with PNP output, NC contact
- 7 T-slot for positioning sensor supports
- 8 Buffers
- 9 Tapped holes with centering holes for mounting the load
- 10 Drive belt
- 11 Carriage to support load
- 12 End blocks
- 13 Planetary gearbox
- 14 Motor (BMH or BSH depending on the model)



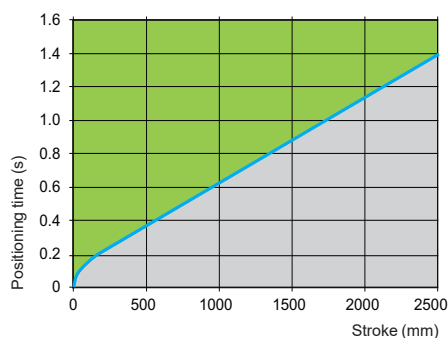
Lexium PAS4●E

### Mechanical characteristics

Force and torque ( $F_y$ ,  $F_z$ ,  $M_x$ ,  $M_y$ ,  $M_z$ ) are calculated for a service life of 30,000 km/18,641 miles

| Type of portal axis                    |                                     | PAS41E                   | PAS42E              | PAS43E              | PAS44E                |
|----------------------------------------|-------------------------------------|--------------------------|---------------------|---------------------|-----------------------|
| Type of drive                          |                                     | Toothed belt             |                     |                     |                       |
| Type of guide                          |                                     | Roller                   | Ball                |                     |                       |
| Constant feed rate                     | mm/U                                | 84                       | 155                 | 205                 | 264                   |
| Max. driving force ( $F_x$ ) (1)       | N                                   | 300                      | 800                 | 1100                | 2,600                 |
| Max. speed                             | m/s/ft/s                            | 2/6.25                   |                     |                     |                       |
| Max. acceleration                      | m/s <sup>2</sup> /ft/s <sup>2</sup> | 15/49.21                 |                     |                     |                       |
| Max. driving torque                    | Nm                                  | 4                        | 20                  | 36                  | 110                   |
| Max. force ( $F_y$ ) (2)               | N                                   | 660                      | 2,810               | 4,410               | 6,270                 |
| Max. force ( $F_z$ ) (2)               | N                                   | 430                      | 2,810               | 4,410               | 6,270                 |
| Max. torque ( $M_x$ ) (2)              | Nm                                  | 5                        | 19                  | 42                  | 67                    |
| Max. torque ( $M_y$ ) (2)              | Nm                                  | 11                       | 74                  | 162                 | 256                   |
| Max. torque ( $M_z$ ) (2)              | Nm                                  | 17                       | 74                  | 162                 | 256                   |
| Min....max. stroke                     | mm/in.                              | 150...2,500/5.91...98.43 |                     |                     |                       |
| Repeatability                          | mm/in.                              | ± 0.05/± 0.002           |                     |                     |                       |
| Profile cross-section (width x height) | mm/in.                              | 40 x 40/1.58 x 1.58      | 60 x 60/2.36 x 2.36 | 80 x 80/3.15 x 3.15 | 110 x 110/4.33 x 4.33 |
| Typical payload (3)                    | kg/lb                               | 4/8.82                   | 12/26.46            | 25/55.12            | 50/110.23             |

### Axis positioning time as a function of the stroke

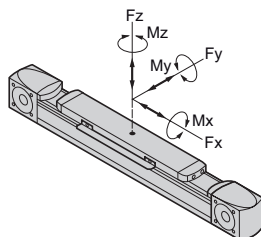


|  |                |
|--|----------------|
|  | Applicable     |
|  | Not applicable |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS E portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) Forces and torques exerted on the Lexium PAS E portal axis: If there are several forces and moments acting at the same time, refer to the manufacturer's documentation.

(3) Values are used for orientation in horizontal mounting position, carriage up, and centric load. Please contact our Customer Care Center.



### References

To order a Lexium PAS E portal axis, complete each reference by replacing the “●”:

For example: PAS 4 1 E 0150

|                                                  | PAS 4                                               | ● | E | ●●●● |
|--------------------------------------------------|-----------------------------------------------------|---|---|------|
| Size (profile cross-section)/<br>Typical payload | 40 (cross-section 40 x 40 mm)<br>4 kg/8.82 lb       | 1 |   |      |
|                                                  | 60 (cross-section 60 x 60 mm)<br>12 kg/26.46 lb     | 2 |   |      |
|                                                  | 80 (cross-section 80 x 80 mm)<br>25 kg/55.12 lb     | 3 |   |      |
|                                                  | 110 (cross-section 110 x 110 mm)<br>50 kg/110.23 lb | 4 |   |      |
| Axis type                                        | Lexium PAS E series                                 |   |   | E    |
| Stroke                                           | From 150 mm to 2,500 mm in<br>increments of 50 mm   |   |   | ●●●● |

### Associated components

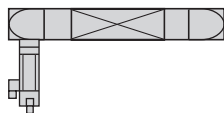
Lexium PAS E portal axes are supplied with a motor (BMH or BSH depending on the model) and a planetary gearbox, in the combinations shown below. The configuration has been designed to suit a wide range of applications.

The servo drive must be ordered separately, according to the combination recommended below.

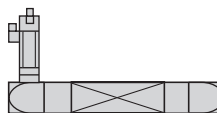
| Portal axis | Servo motor   | Planetary gearbox<br>(third-party gearboxes<br>from Neugart) | Recommended<br>servo drive<br>(not supplied) |
|-------------|---------------|--------------------------------------------------------------|----------------------------------------------|
| PAS41E●●●●  | BSH0552P01A2A | PLE 40<br>(gear ratio: 3:1)                                  | LXM32●U60N4                                  |
| PAS42E●●●●  | BMH0702P06A2A | PLE 60<br>(gear ratio: 5:1)                                  | LXM32●D12N4                                  |
| PAS43E●●●●  | BMH1002P06A2A | PLE 80<br>(gear ratio: 5:1)                                  | LXM32●D18N4                                  |
| PAS44E●●●●  | BMH1401P06A2A | PLE 120<br>(gear ratio: 5:1)                                 | LXM32●D72N4                                  |

### Servo motor mounting

The drive unit is always mounted on the right side, but can be positioned on the left by the user.



Standard drive unit mounting



Drive unit mounted on the left

For more information concerning the servo motor mounting, please consult the user manual for Lexium PAS B portal axes, which is available on our website “[www.schneider-electric.com](http://www.schneider-electric.com)”.



Lexium PAS 4S portal axis with motor and gearbox mounted

### Presentation (1)

Lexium PAS S portal axes are linear motion axes with a ballscrew for driving the carriage and ball guides for guidance.

The carriage moving the load is mobile and the body of the axis is fixed.

Lexium PAS S portal axes are particularly suited to applications that require precise positioning of heavy loads at low speeds and high feed forces.

To facilitate integration into a large number of applications, there are a range of different configuration options. These include axis length, different pitches for the ballscrew, various types of sensor for the limit switch function, adding a protective metal strip, a choice between 2 carriage types of different sizes, and the option of having up to 3 carriages (see page 16).

The axis design is based on a very strong and torsionally rigid aluminum profile.

Schneider Electric offers a number of drive elements that can be used to drive Lexium PAS S axes (2) (see pages 4 and 17).

Third-party drive elements can also be used under certain conditions. Contact our Customer Care Center for further details.

### Applications

Applications with the following requirements:

- A precision feed movement and guiding, even at variable loads and torques
- High feed forces: clamping, cutting, etc.
- Precise positioning and repeatability: optical and measuring applications, etc.

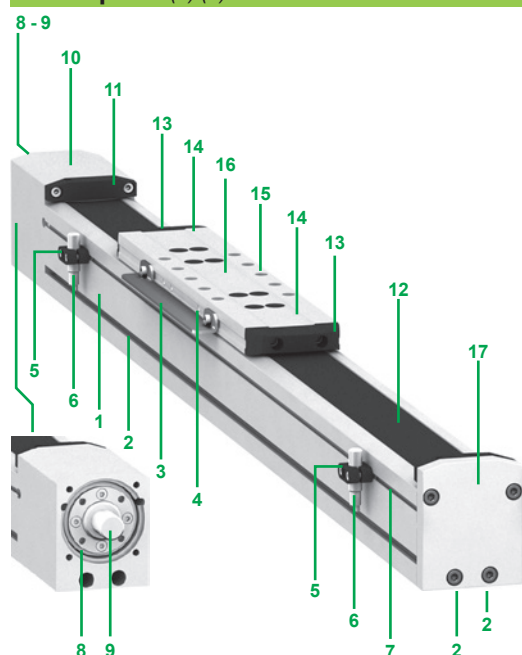
### Special product features

- Profile with T-slots on 3 sides
- Carriage with centering tapped holes for mounting the load
- Grease nipples accessible from each side of the carriage to simplify routine maintenance
- Quick-coupling system for easy motor or gearbox assembly
- Stroke in various lengths available per millimeter
- Sensors slidable in T-slots

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS S portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) When selecting the drive element, the maximum permissible driving torque for the axis drive shaft must always be taken into account.

### Description (1) (2)



- 1 Lexium PAS4S portal axis
- 2 T-slots for mounting the axis
- 3 Detection plate for sensors
- 4 Grease nipples on each side of carriage
- 5 Sensor supports
- 6 Sensors for the limit switch function
- 7 T-slot for positioning sensor supports
- 8 Flange for mounting drive element
- 9 Drive shaft
- 10 Drive block
- 11 Brackets for protective metal strip
- 12 Protective metal strip
- 13 Buffers
- 14 Protective metal strip deflectors
- 15 Tapped holes with centering holes for mounting the load
- 16 Carriage to support load
- 17 End plate

Lexium PAS4S

### Mechanical characteristics (1)

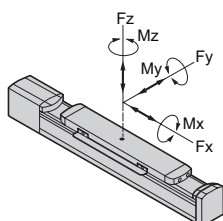
Force and torque ( $F_y$ ,  $F_z$ ,  $M_x$ ,  $M_y$ ,  $M_z$ ) are calculated for a service life of 10,000 km/6,214 miles

| Type of portal axis                       |            | PAS42SBB               | PAS42SBD | PAS42SBF  | PAS43SBB                 | PAS43SBD | PAS43SBG | PAS44SBB                 | PAS44SBD | PAS44SBH  |
|-------------------------------------------|------------|------------------------|----------|-----------|--------------------------|----------|----------|--------------------------|----------|-----------|
| Type of drive                             |            | Ball screw             |          |           |                          |          |          |                          |          |           |
| Type of guide                             |            | Ball                   |          |           |                          |          |          |                          |          |           |
| Ball screw step                           | mm/U       | 5                      | 10       | 16        | 5                        | 10       | 20       | 5                        | 10       | 25        |
| Ball screw diameter                       | mm/in.     | 16/0.63                |          |           | 20/0.79                  |          |          | 24/0.94                  |          |           |
| Max. driving force (Fx) (3)               | N          | 2980                   | 1560     | 1540      | 3400                     | 2600     | 1720     | 3700                     | 4520     | 3000      |
| Max. speed                                | 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                         | m/s²/ft/s² | 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. driving torque                       | Nm         | 3.2                    | 3.3      | 4.9       | 3.7                      | 5.3      | 6.8      | 4.3                      | 9        | 14.3      |
| Max. force (Fy) (3)                       | N          | 4,050                  |          |           | 6,360                    |          |          | 9,040                    |          |           |
| Max. force (Fz) (3)                       | N          | 4,050                  |          |           | 6,360                    |          |          | 9,040                    |          |           |
| Max. torque (Mx) (3)                      | Nm         | 27                     |          |           | 60                       |          |          | 98                       |          |           |
| Max. torque (My) (3)                      |            |                        |          |           |                          |          |          |                          |          |           |
| With carriage type 1                      | Nm         | 304                    |          |           | 556                      |          |          | 935                      |          |           |
| With carriage type 4                      | Nm         | 668                    |          |           | 1,224                    |          |          | 2,155                    |          |           |
| Max. torque (Mz) (3)                      | Nm         |                        |          |           |                          |          |          |                          |          |           |
| With carriage type 1                      |            | 304                    |          |           | 556                      |          |          | 935                      |          |           |
| With carriage type 4                      | Nm         | 668                    |          |           | 1224                     |          |          | 2,155                    |          |           |
| Min....max. stroke                        | 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           |          |           |                          |          |          |                          |          |           |
| Profile cross-section<br>(Width x height) | mm/in.     | 60 x 60/2.36 x 2.36    |          |           | 80 x 80/3.15 x 3.15      |          |          | 110 x 110/4.33 x 4.33    |          |           |
| Typical payload (4)                       | kg/lb      | 40/88.18               |          |           | 85/187.39                |          |          | 160/352.74               |          |           |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS S portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) Description of a Lexium PAS S portal axis; the configuration options selected will determine whether or not certain components are included.

(3) Forces and moments acting on the portal axis Lexium PAS S: If there are several forces and moments acting at the same time, refer to the manufacturer's documentation.



(4) Values are used for orientation in horizontal mounting position, carriage up, and centric load. Values can also be exceeded. Refer to max. force ( $F_z$ ) value and manufacturer's documentation.

## References (1)

To order a Lexium PAS S portal axis, complete each reference by replacing the "●" (2):

Example: PAS 4 2 S B F 1000 A 1 B A XXX S/... rest of the reference on page 17

|                                     |                                                          | PAS 4 | ● | ● | B | ●    | ●●●● | ● | ● | ● | ●   | ●●● | ● | /(2) |
|-------------------------------------|----------------------------------------------------------|-------|---|---|---|------|------|---|---|---|-----|-----|---|------|
| Size (profile cross-section)        | 60 (60 x 60 mm cross-section)                            | 2     |   |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | 80 (80 x 80 mm cross-section)                            | 3     |   |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | 110 (110 x 110 mm cross-section)                         | 4     |   |   |   |      |      |   |   |   |     |     |   | /    |
| Type of drive for carriage          | Ballscrew                                                |       | S |   |   |      |      |   |   |   |     |     |   | /    |
|                                     | Axis with no drive facility (for support only)           |       | A |   |   |      |      |   |   |   |     |     |   | /    |
| Type of guide for carriage          | Ball                                                     |       |   | B |   |      |      |   |   |   |     |     |   | /    |
| Ballscrew step                      | 5 mm/revolution (for PAS4●SBB)                           |       |   |   | B |      |      |   |   |   |     |     |   | /    |
|                                     | 10 mm/revolution (for PAS4●SBD)                          |       |   |   | D |      |      |   |   |   |     |     |   | /    |
|                                     | 16 mm/revolution (for PAS42SBF)                          |       |   |   | F |      |      |   |   |   |     |     |   | /    |
|                                     | 20 mm/revolution (for PAS43SBG)                          |       |   |   | G |      |      |   |   |   |     |     |   | /    |
|                                     | 25 mm/revolution (for PAS44SBH)                          |       |   |   | H |      |      |   |   |   |     |     |   | /    |
|                                     | Axis with no drive facility (for PAS4●A)                 |       |   |   | N |      |      |   |   |   |     |     |   | /    |
| Stroke                              | Maximum 1,500 mm (for PAS42)                             |       |   |   |   | ●●●● |      |   |   |   |     |     |   | /    |
|                                     | Maximum 3,000 mm (for PAS43 and PAS44)                   |       |   |   |   | ●●●● |      |   |   |   |     |     |   | /    |
| Limit switches (3)                  | 2 sensors with PNP output, NC contact, not connected     |       |   |   |   |      |      | A |   |   |     |     |   | /    |
|                                     | 2 sensors with PNP output, NO contact, not connected     |       |   |   |   |      |      | C |   |   |     |     |   | /    |
|                                     | 2 sensors with NPN output, NC contact, not connected     |       |   |   |   |      |      | E |   |   |     |     |   | /    |
|                                     | 2 sensors with NPN output, NO contact, not connected     |       |   |   |   |      |      | G |   |   |     |     |   | /    |
|                                     | Without sensors/without detection plate                  |       |   |   |   |      |      | N |   |   |     |     |   | /    |
| Type of carriage (4)                | Type 1                                                   |       |   |   |   |      |      |   | 1 |   |     |     |   | /    |
|                                     | Type 4                                                   |       |   |   |   |      |      |   | 4 |   |     |     |   | /    |
| Options (5)                         | With protective metal strip/without ballscrew support    |       |   |   |   |      |      |   |   | B |     |     |   | /    |
|                                     | With protective metal strip/with 1 ballscrew support     |       |   |   |   |      |      |   |   | C |     |     |   | /    |
|                                     | Without protective metal strip/with 1 ballscrew support  |       |   |   |   |      |      |   |   | D |     |     |   | /    |
|                                     | With protective metal strip/with 2 ballscrew supports    |       |   |   |   |      |      |   |   | E |     |     |   | /    |
|                                     | Without protective metal strip/with 2 ballscrew supports |       |   |   |   |      |      |   |   | F |     |     |   | /    |
|                                     | Without protective metal strip/without ballscrew support |       |   |   |   |      |      |   |   | N |     |     |   | /    |
| Number of carriages (6)             | 1                                                        |       |   |   |   |      |      |   |   |   | A   |     |   | /    |
|                                     | 2                                                        |       |   |   |   |      |      |   |   |   | B   |     |   | /    |
|                                     | 3                                                        |       |   |   |   |      |      |   |   |   | C   |     |   | /    |
| Distance between two carriages      | State the distance in mm                                 |       |   |   |   |      |      |   |   |   | ●●● |     |   | /    |
|                                     | 1 carriage only, state "XXX"                             |       |   |   |   |      |      |   |   |   | XXX |     |   | /    |
| Interface for the drive element (7) | With drive element or adapter plate                      |       |   |   |   |      |      |   |   |   |     | S   |   | /    |
|                                     | With shaft                                               |       |   |   |   |      |      |   |   |   |     | D   |   | /    |
|                                     | Axis with no drive facility (only for PAS4●A)            |       |   |   |   |      |      |   |   |   |     | N   |   | /    |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS S portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) For the second part of the reference, see page 17.

(3) Supplied with a 0.1 m/0.33 ft cable equipped with an M8 connector. Other cable lengths are also available (see the accessories on page 18).

(4) See characteristics and dimensions on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(5) Ballscrew support corresponds to total axis length and ballscrew speed.

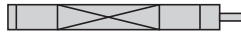
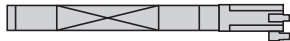
(6) Only carriages of the same type (type 1 or type 4) are permitted (only the carriage next to the motor is driven).

(7) Types of interface for the drive element:

PAS4●SB●●●●●●●●●●S/...

PAS4●SB●●●●●●●●●●D/...

PAS4●AN●●●●●●●●●●N/...



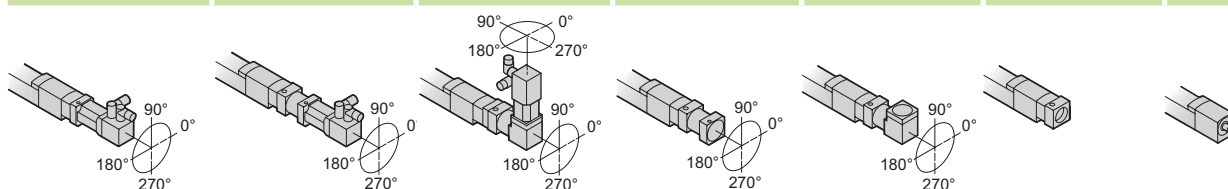
| References (continued) (1)                                                                                               |                                                                                                                                                           |   |   |    |   |    |   |  |       |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|----|---|----|---|--|-------|
| To order a Lexium PAS S portal axis, complete each reference by replacing the “●” (2):                                   |                                                                                                                                                           |   |   |    |   |    |   |  |       |
| Example: PAS 4 2 S B F 1000 A 1 B A XXX S (2)/1 XX X H7 0 + PLE60 3:1 + PAS 4 ●● B ●●●●●●●●●●●●●● (2)/ ● ●● ● ●● ● + ... |                                                                                                                                                           |   |   |    |   |    |   |  |       |
| BMH 0702P01A2A                                                                                                           |                                                                                                                                                           |   |   |    |   |    |   |  |       |
| Motor drive configuration (3)                                                                                            | Motor only                                                                                                                                                | / | 1 |    |   |    |   |  |       |
|                                                                                                                          | Motor + gearbox                                                                                                                                           | / | 2 |    |   |    |   |  |       |
|                                                                                                                          | Gearbox only                                                                                                                                              | / | 3 |    |   |    |   |  |       |
|                                                                                                                          | Without motor/without gearbox/with adapter plate for the drive                                                                                            | / | 4 |    |   |    |   |  |       |
|                                                                                                                          | Without motor/without gearbox                                                                                                                             | / | X |    |   |    |   |  |       |
| Gearbox interface                                                                                                        | PLE 40 gearboxes                                                                                                                                          | / |   | 0G |   |    |   |  |       |
|                                                                                                                          | PLE 60 gearboxes                                                                                                                                          | / |   | 1G |   |    |   |  |       |
|                                                                                                                          | PLE 80 gearboxes                                                                                                                                          | / |   | 3G |   |    |   |  |       |
|                                                                                                                          | PLE 120 gearboxes                                                                                                                                         | / |   | 5G |   |    |   |  |       |
|                                                                                                                          | WPLE 40 gearboxes                                                                                                                                         | / |   | 0A |   |    |   |  |       |
|                                                                                                                          | WPLE 60 gearboxes                                                                                                                                         | / |   | 1A |   |    |   |  |       |
|                                                                                                                          | WPLE 80 gearboxes                                                                                                                                         | / |   | 3A |   |    |   |  |       |
|                                                                                                                          | WPLE 120 gearboxes                                                                                                                                        | / |   | 5A |   |    |   |  |       |
|                                                                                                                          | Other third-party gearboxes not assembled by Schneider Electric (gearbox drawings required)                                                               | / |   | YY |   |    |   |  |       |
|                                                                                                                          | Other third-party gearboxes assembled by Schneider Electric (gearbox and drawings required)                                                               | / |   | ZZ |   |    |   |  |       |
|                                                                                                                          | Without gearbox                                                                                                                                           | / |   | XX |   |    |   |  |       |
| Gearbox orientation (3)                                                                                                  | 0°                                                                                                                                                        | / |   |    | 3 |    |   |  |       |
|                                                                                                                          | 90°                                                                                                                                                       | / |   |    | 0 |    |   |  |       |
|                                                                                                                          | 180°                                                                                                                                                      | / |   |    | 9 |    |   |  |       |
|                                                                                                                          | 270°                                                                                                                                                      | / |   |    | 6 |    |   |  |       |
|                                                                                                                          | Without gearbox                                                                                                                                           | / |   |    | X |    |   |  |       |
| Motor interface                                                                                                          | Stepper motors BRS 368                                                                                                                                    | / |   |    |   | V8 |   |  |       |
|                                                                                                                          | Stepper motors BRS 397, 39A                                                                                                                               | / |   |    |   | V9 |   |  |       |
|                                                                                                                          | Stepper motors BRS 39B                                                                                                                                    | / |   |    |   | V0 |   |  |       |
|                                                                                                                          | Stepper motors BRS 3AC, 3AD                                                                                                                               | / |   |    |   | V1 |   |  |       |
|                                                                                                                          | Integrated drive with stepper motor ILS●●●571, 572                                                                                                        | / |   |    |   | I6 |   |  |       |
|                                                                                                                          | Integrated drive with stepper motor ILS●●●573                                                                                                             | / |   |    |   | I7 |   |  |       |
|                                                                                                                          | Integrated drive with stepper motor ILS●●●851, 852                                                                                                        | / |   |    |   | I9 |   |  |       |
|                                                                                                                          | Integrated drive with stepper motor ILS●●●853                                                                                                             | / |   |    |   | I8 |   |  |       |
|                                                                                                                          | Integrated drive with brushless DC motor ILE●●66 with spur wheel gear                                                                                     | / |   |    |   | E7 |   |  |       |
|                                                                                                                          | Integrated drive with servo motor ILA●●57                                                                                                                 | / |   |    |   | A6 |   |  |       |
|                                                                                                                          | Servo motors BSH/SH3 0401, 0402                                                                                                                           | / |   |    |   | H0 |   |  |       |
|                                                                                                                          | Servo motors BSH/SH3 055                                                                                                                                  | / |   |    |   | H5 |   |  |       |
|                                                                                                                          | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 0701, 0702                                                                                                           | / |   |    |   | H7 |   |  |       |
|                                                                                                                          | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 0703                                                                                                                 | / |   |    |   | H8 |   |  |       |
|                                                                                                                          | Servo motors BSH/BMH/BMI/MH3/SH3/ILM 1001, 1002, 1003                                                                                                     | / |   |    |   | H1 |   |  |       |
|                                                                                                                          | Servo motors BSH 10040.63                                                                                                                                 | / |   |    |   | H4 |   |  |       |
|                                                                                                                          | Servo motors BSH/BMH/MH3/SH3/ILM 1401, 1402, 1403                                                                                                         | / |   |    |   | H2 |   |  |       |
|                                                                                                                          | Servo motors BCH2●B A5, 01                                                                                                                                | / |   |    |   | C1 |   |  |       |
|                                                                                                                          | Servo motors BCH2●D 02, 04                                                                                                                                | / |   |    |   | C2 |   |  |       |
|                                                                                                                          | Servo motors BCH2●F 04                                                                                                                                    | / |   |    |   | C3 |   |  |       |
|                                                                                                                          | Servo motors BCH2●F 07                                                                                                                                    | / |   |    |   | C4 |   |  |       |
|                                                                                                                          | Servo motors BCH2●H 10, 20                                                                                                                                | / |   |    |   | C5 |   |  |       |
|                                                                                                                          | Servo motors BCH2●M 08                                                                                                                                    | / |   |    |   | C6 |   |  |       |
|                                                                                                                          | Servo motors BCH2●M 03, 05, 06, 10, 09, 15, 20                                                                                                            | / |   |    |   | C7 |   |  |       |
|                                                                                                                          | Servo motors BCH2●R 20, 30, 35, 45                                                                                                                        | / |   |    |   | C8 |   |  |       |
|                                                                                                                          | Third-party motor without mounting by Schneider Electric (motor drawing required)                                                                         | / |   |    |   | YY |   |  |       |
|                                                                                                                          | Third-party motor with mounting by Schneider Electric (motor drawing required; motor must be provided)                                                    | / |   |    |   | ZZ |   |  |       |
|                                                                                                                          | No motor                                                                                                                                                  | / |   |    |   | XX |   |  |       |
| Motor orientation (3)                                                                                                    | 0°                                                                                                                                                        | / |   |    |   |    | 3 |  |       |
|                                                                                                                          | 90°                                                                                                                                                       | / |   |    |   |    | 0 |  |       |
|                                                                                                                          | 180°                                                                                                                                                      | / |   |    |   |    | 9 |  |       |
|                                                                                                                          | 270°                                                                                                                                                      | / |   |    |   |    | 6 |  |       |
|                                                                                                                          | Without motor                                                                                                                                             | / |   |    |   |    | X |  |       |
| Planetary gearbox gear ratio + motor reference                                                                           | State the planetary gearbox gear ratio and the complete motor reference at the end of the reference, in plain text.<br>Example: PLE60 3:1 + BMH0702P01A2A |   |   |    |   |    |   |  | + ... |

(1) All technical data (characteristics, dimensions, etc.) for Lexium PAS S portal axes is available on our website [www.schneider-electric.com](http://www.schneider-electric.com)

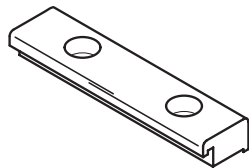
(2) For the first part of the reference, see page 16.

(3) Possible drive element configurations and orientation (view from motor/gearbox towards the axis or from motor towards the gearbox):

|                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| PAS4●S...<br>/1XXX●●● | PAS4●S...<br>/2●G●●●● | PAS4●S...<br>/2●A●●●● | PAS4●S.../<br>3●G●XXX | PAS4●S...<br>/3●A●XXX | PAS4●S...<br>/4XXX●●● | PAS4●S.../<br>XXXXXXX |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

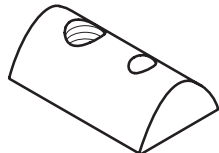


DF539870



VW33MF10●●●

DF539872



VW33MF010T●●●

**Clamping jaws (1)**

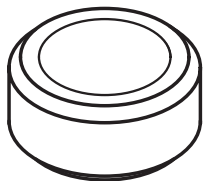
| Description                                                                                                    | For Lexium portal axes     | Reference   |
|----------------------------------------------------------------------------------------------------------------|----------------------------|-------------|
| <b>Clamping jaws</b><br>These are used to mount portal axes on a fixed support.<br><b>(sold in lots of 10)</b> | PAS41B<br>PAS41E           | VW33MF10511 |
|                                                                                                                | PAS42B<br>PAS42E<br>PAS42S | VW33MF10512 |
|                                                                                                                | PAS43B<br>PAS43E<br>PAS43S | VW33MF10613 |
|                                                                                                                | PAS44B<br>PAS44E<br>PAS44S | VW33MF10814 |

**T-slot nuts (1)**

| Description                                                                                                                                         | For Lexium portal axes                         | T-slot width and retaining screw Ø | Reference     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------|---------------|
| <b>T-slot nuts</b><br>These are inserted in the axis T-slots.<br>They are used to mount the axis on a fixed support.<br><b>(sold in lots of 10)</b> | PAS41B<br>PAS41E<br>PAS42B<br>PAS42E<br>PAS42S | Width: 5<br>M5 screw               | VW33MF010T5N5 |
|                                                                                                                                                     | PAS43B<br>PAS43E<br>PAS43S                     | Width: 6<br>M6 screw               | VW33MF010T6N6 |
|                                                                                                                                                     | PAS44B<br>PAS44E<br>PAS44S                     | Width: 8<br>M6 screw               | VW33MF010T8N6 |
|                                                                                                                                                     |                                                | Width: 8<br>M8 screw               | VW33MF010T8N8 |

(1) All technical data for accessories is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

DF538974

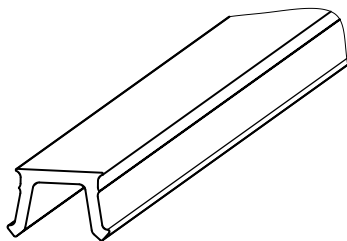


VW33MF020LD0●

**Adapters (1)**

| Description                                                                                                                                                                                     | For Lexium portal axes | Reference     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>Adapters</b><br>These help to ensure accurate, reproducible positioning of the load on the carriage. They are inserted in the holes provided on the carriage.<br><b>(sold in lots of 20)</b> | PAS41B                 | VW33MF020LD01 |
|                                                                                                                                                                                                 | PAS41E                 |               |
|                                                                                                                                                                                                 | PAS42B                 |               |
|                                                                                                                                                                                                 | PAS42E                 |               |
|                                                                                                                                                                                                 | PAS42S                 |               |
|                                                                                                                                                                                                 | PAS43B                 | VW33MF020LD02 |
|                                                                                                                                                                                                 | PAS43E                 |               |
|                                                                                                                                                                                                 | PAS43S                 |               |
|                                                                                                                                                                                                 | PAS44B                 | VW33MF020LD03 |
|                                                                                                                                                                                                 | PAS44E                 |               |
|                                                                                                                                                                                                 | PAS44S                 |               |

DF538976

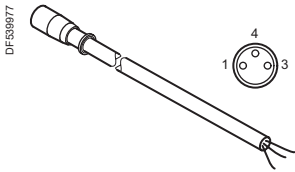


VW33MC05●0●

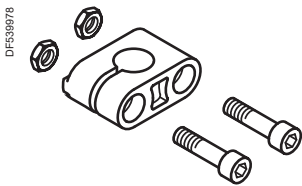
**Protective covers for T-slots (1)**

| Description                                                                                                                            | For Lexium portal axes | Reference   |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|
| <b>Protective covers for T-slots</b><br>These help to protect the profile T-slots.<br>Length 2 m/6.56 ft<br><b>(sold in lots of 5)</b> | PAS41B                 | VW33MC05A05 |
|                                                                                                                                        | PAS41E                 |             |
|                                                                                                                                        | PAS42B                 | VW33MC05B05 |
|                                                                                                                                        | PAS42E                 |             |
|                                                                                                                                        | PAS42S                 |             |
|                                                                                                                                        | PAS43B                 | VW33MC05A06 |
|                                                                                                                                        | PAS43E                 |             |
|                                                                                                                                        | PAS43S                 |             |
|                                                                                                                                        | PAS44B                 | VW33MC05A08 |
|                                                                                                                                        | PAS44E                 |             |
|                                                                                                                                        | PAS44S                 |             |

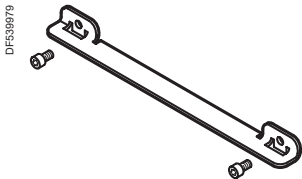
(1) All technical data for accessories is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).



VW32SBCBGA ●●●



VW33MF010M8



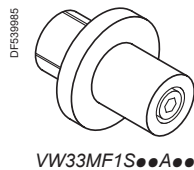
VW33MASP1

| Extension cables for sensor (1)                                                                                                                                                                                      |                            |             |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|---------------|
| Description                                                                                                                                                                                                          | For Lexium portal axes     | Length m/ft | Reference     |
| <b>Extension cables for sensor</b><br>Cables equipped with a 3-way M8 connector on the sensor end and one stripped end.<br>These cables connect directly to the cable supplied with the sensor via the M8 connector. | PAS4●B<br>PAS4●E<br>PAS4●S | 5/16.40     | VW32SBCBGA050 |
|                                                                                                                                                                                                                      |                            | 10/32.81    | VW32SBCBGA100 |
|                                                                                                                                                                                                                      |                            | 20/65.62    | VW32SBCBGA200 |

| Sensor support (1)                                                                                                                                                  |                            |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|
| Description                                                                                                                                                         | For Lexium portal axes     | Reference   |
| <b>Sensor support</b><br>This is used to hold a standard Ø 8 mm sensor for the limit switch function.<br>It is inserted in the axis Tslots.<br>(sold in lots of 10) | PAS4●B<br>PAS4●E<br>PAS4●S | VW33MF010M8 |

| Detection plate for sensor (1)                                                                                                                                                                                                         |                            |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|
| Description                                                                                                                                                                                                                            | For Lexium portal axes     | Reference |
| <b>Detection plate for sensor</b><br>This acts as a physical marker for the sensors acting as limit switches when detecting the presence of the carriage.<br>It is mounted on the axis carriage and is supplied with retaining screws. | PAS4●B<br>PAS4●E<br>PAS4●S | VW33MASP1 |

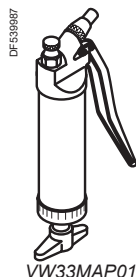
(1) All technical data for accessories is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).



VW33MF1S●●A●●

**Shaft journals (1)**

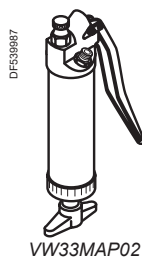
| Description                                                                                                                                                                                               | For Lexium portal axes     | Maximum radial force N | Moment of inertia kgcm <sup>2</sup> | Maximum driving torque N.m/lbf.in | Reference     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------|-------------------------------------|-----------------------------------|---------------|
| <b>Shaft journals</b><br>Coupled to the axis, these can be used, via a mechanical adapter (not supplied), to connect: An encoder indicating the axis position<br>A third-party application-specific drive | PAS41B<br>PAS41E<br>PAS41S | 230                    | 0.002                               | 7.7 N.m/<br>68.14 lbf.in          | VW33MF1S12A12 |
|                                                                                                                                                                                                           | PAS42B<br>PAS42E<br>PAS42S | 400                    | 0.05                                | 35.7 N.m/<br>315.93 lbf.in        | VW33MF1S27A20 |
|                                                                                                                                                                                                           | PAS43B<br>PAS43E<br>PAS43S | 700                    | 0.16                                | 82 N.m/<br>725.66 lbf.in          | VW33MF1S32A25 |
|                                                                                                                                                                                                           | PAS44B<br>PAS44E<br>PAS44S | 1,300                  | 0.54                                | 182 N.m/<br>1,610.62 lbf.in       | VW33MF1S37A32 |



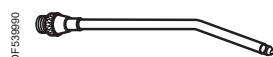
VW33MAP01

**Lubrication accessories (1)**

| Description                                                                                                                                                                  | For Lexium portal axes        | Nozzle angle | Reference |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------|-----------|
| <b>High-pressure grease pump (2)</b><br>This is used to lubricate axes with ball guides:<br>Grease capacity: 120 cm <sup>3</sup><br>Flow rate: 0.5 cm <sup>3</sup> /pressure | PAS4●BB<br>PAS4●EB<br>PAS4●SB | —            | VW33MAP01 |
| <b>High-pressure oil pump (2)</b><br>This is used to lubricate axes with roller guides:<br>Oil capacity: 120 cm <sup>3</sup><br>Flow rate: 0.5 cm <sup>3</sup> /pressure     | PAS4●BR<br>PAS4●ER            | —            | VW33MAP02 |
| <b>D6 rigid nozzles</b><br>These are mounted on VW33MAP01 and VW33MAP02 high-pressure pumps to lubricate the Lexium axes.                                                    | PAS4●B●<br>PAS4●E●<br>PAS4●S● | 90°          | VW33MAT01 |



VW33MAP02



VW33MAT01

(1) All technical data for accessories is available on our website [www.schneider-electric.com](http://www.schneider-electric.com).

(2) Requires a D type nozzle, to be ordered separately.

| P        |    |
|----------|----|
| PAS41BR  | 7  |
| PAS41E   | 12 |
| PAS42BB  | 7  |
| PAS42BR  | 7  |
| PAS42E   | 12 |
| PAS42SBB | 15 |
| PAS42SBD | 15 |
| PAS42SBF | 15 |
| PAS43BB  | 7  |
| PAS43BR  | 7  |
| PAS43E   | 12 |
| PAS43SBB | 15 |
| PAS43SBD | 15 |
| PAS43SBG | 15 |
| PAS44BB  | 7  |
| PAS44E   | 12 |
| PAS44SBB | 15 |
| PAS44SBD | 15 |
| PAS44SBH | 15 |

| V             |    |
|---------------|----|
| VW32SBCBGA050 | 20 |
| VW32SBCBGA100 | 20 |
| VW32SBCBGA200 | 20 |
| VW33MAP01     | 21 |
| VW33MAP02     | 21 |
| VW33MASP1     | 20 |
| VW33MAT01     | 21 |
| VW33MC05A05   | 19 |
| VW33MC05A06   | 19 |
| VW33MC05A08   | 19 |
| VW33MC05B05   | 19 |
| VW33MF010M8   | 20 |
| VW33MF010T5N5 | 18 |
| VW33MF010T6N6 | 18 |
| VW33MF010T8N6 | 18 |
| VW33MF010T8N8 | 18 |
| VW33MF020LD01 | 19 |
| VW33MF020LD02 | 19 |
| VW33MF020LD03 | 19 |
| VW33MF10511   | 18 |
| VW33MF10512   | 18 |
| VW33MF10613   | 18 |
| VW33MF10814   | 18 |
| VW33MF1S12A12 | 21 |
| VW33MF1S27A20 | 21 |
| VW33MF1S32A25 | 21 |
| VW33MF1S37A32 | 21 |

The Next Generation



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