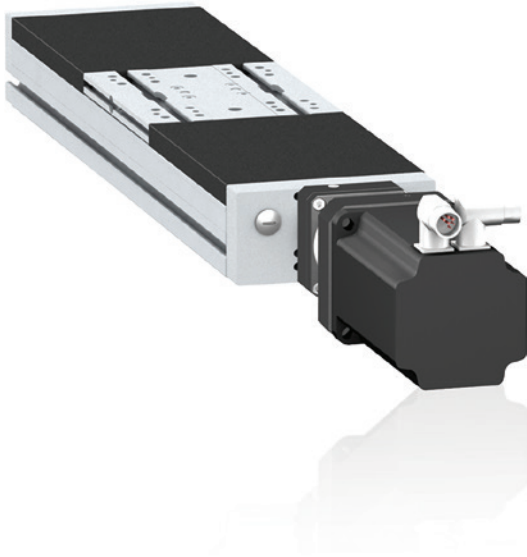


Lexium Cartesian Robots Table Axes

Catalog
January 2018



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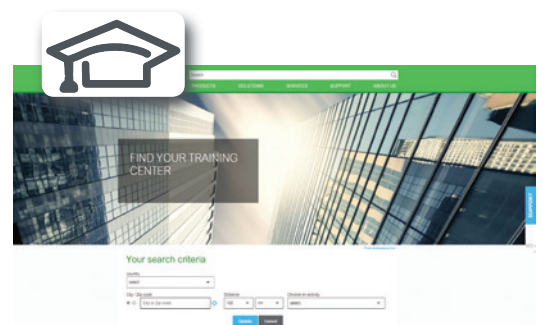
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General contents

Lexium Cartesian Robots - Table axes

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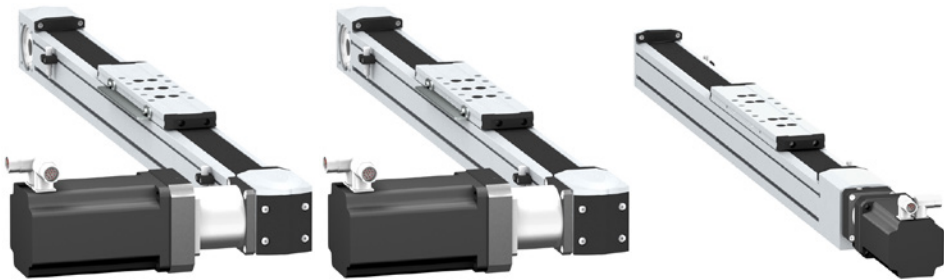
■ **Lexium TAS linear tables**..... *page 6*

■ **Accessories** *page 10*

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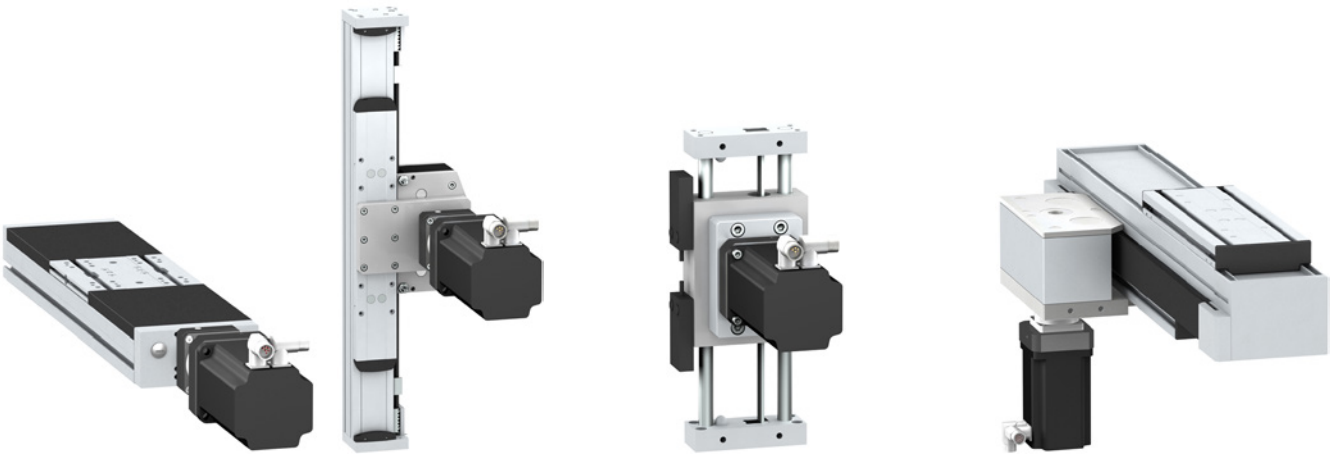
Lexium Cartesian Robots
Cantilever and Telescopic Axes

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	■ High dynamic response ■ Long stroke length ■ High positioning speed ■ Certified for Cleanrooms with ISO class 6 (ISO14644-1)		■ High dynamic response ■ Long stroke length ■ High positioning speed	■ High precision movement (positioning, repeatability, guiding) ■ High feed forces ■ High rigidity
	★★★★★	★★★★	★★★	
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	■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution) ■ Wide range of sensors for the limit switch function ■ Choice of carriage type for adapting to the load ■ Option to add carriages ■ Increased corrosion resistance, with cover strip ■ Anti-static belt ■ Protective metal strip ■ Several different motor and gearbox mounting options		■ No options available ■ PAS 4•E axes are pre-configured PAS 4•B axes	■ Choice of pitch ■ Wide range of sensors for the limit switch function ■ Choice of carriage type for adapting to the load ■ Several carriages possible ■ Protective metal strip ■ Ballscrew supports for longer axes ■ Several different motor and gearbox mounting options
Reference	PAS 4•B	PAS 4•E	PAS 4•S	
Page	For more information, please refer to the catalog "Lexium Cartesian Robots Portal Axes"			

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



■ High precision movement (positioning, repeatability, guiding) ■ High feed forces ■ High rigidity ■ Feed movement without mechanical backlash	■ Long stroke length ■ High feed forces ■ Option to mount the load on the side of the profile or on the end blocks ■ High rigidity	■ Compact ■ Mobile structure with light travel weight	■ Long stroke length from a compact unit ■ High rigidity ■ High dynamic response
★★	★★★★	★★★★	★★★★
★★★★★	★★★	★★★	★★
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
■ Choice of pitch ■ Several different motor mounting options	■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution) ■ Wide range of sensors for the limit switch function ■ Increased corrosion resistance, with cover strip ■ Anti-static belt ■ Protective metal strip ■ Several different motor and gearbox mounting options	■ Anti-corrosion version ■ Anti-static belt ■ Several different motor and gearbox mounting options	■ Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution) ■ Choice of carriage type for adapting to the load ■ Several different motor and gearbox mounting options
TAS 4	CAS 4	CAS 3	CAS 2
8	For more information, please refer to the catalog "Lexium Cartesian Robots Cantilever and Telescopic Axes"		



Lexium Cartesian Robots

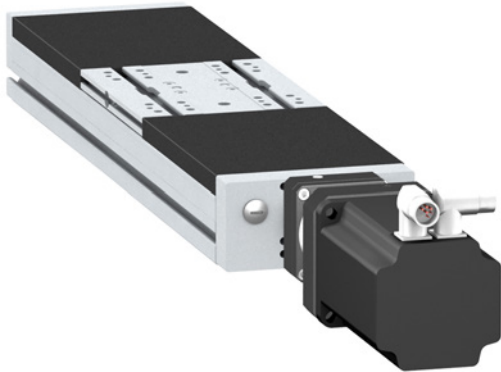
Combinations of drive units/cantilever axes

Drive element (1)	Type	Portal axes				Cantilever and telescopic axes	
		PAS41B CAS41B	PAS42B PAS42S CAS42B	PAS43B PAS43S CAS43B	PAS44B PAS44S 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 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 (Fa. Neugart)	PLE40 (WPLE40)						
	PLE60 (WPLE60)						
	PLE80 (WPLE80)						
	PLE120 (WPLE120)						

(1) Please refer to our website www.schneider-electric.com.

	Possible to combine
	Incompatible

[illegible]



Lexium TAS4S linear table with motor and gearbox mounted

Presentation (1)

Lexium TAS linear tables support high-precision linear positioning of heavy loads at high feed forces.

This level of performance is made possible by the drive system, which uses a preloaded ballscrew.

The linear table design is based on an aluminum profile capable of supporting substantial pressure without bending.

To facilitate integration into a large number of applications, there are a range of different configuration options. These include table length, different pitches for the ballscrew, and different mounting options for the drive element (see page 8).

Schneider Electric offers a number of drive elements that can be used to drive Lexium TAS linear tables (2) (see page 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:

- Feed movement without mechanical backlash: cutting, separating, labeling, etc.
- High feed forces: clamping, machining, etc.
- Precise movement of heavy loads: material handling, etc.
- Precise positioning: optical applications, laser use, etc.

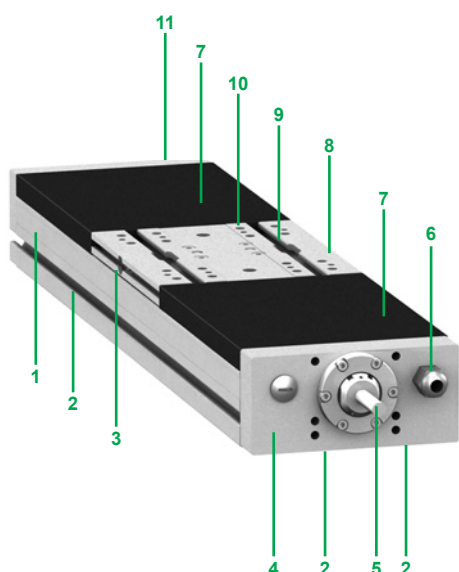
Special product features

- Profile with T-slots on 3 sides
- Carriage with tapped holes and T-slots for mounting the load
- Grease nipples accessible from each side of the carriage to simplify routine maintenance
- Quick-coupling system for easy motor assembly
- Motor positioning right at the shaft end along the table axis, on each side, above or below the linear table
- Stroke in various lengths available per millimeter
- Preloaded ballscrew for movement without mechanical backlash
- 2 integrated sensors for the limit switch function

(1) All technical data (characteristics, dimensions, etc.) for Lexium TAS linear tables is available on our website 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 TAS4S linear table
- 2 T-slots for mounting the axis: 1 on each side and 2 under profile
- 3 Grease nipples on each side of carriage
- 4 Drive block
- 5 Drive shaft
- 6 Cable gland for sensor cable outlet
- 7 Bellows
- 8 Tapped holes for mounting the load
- 9 T-slots for mounting the load
- 10 Carriage to support load
- 11 End plate

Lexium TAS4S

Mechanical characteristics (1)

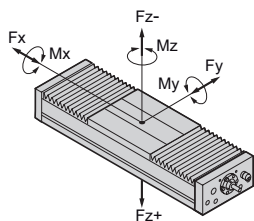
Force and torque (Fy, Fz, Mx, My, Mz) are calculated for a service life of 5,000 km/3,107 miles for TAS41 and 10,000 km/6,214 miles for TAS42 and TAS43

Type of linear table		TAS41SBA	TAS41SBB	TAS41SBC	TAS42SBB	TAS42SBC	TAS42SBD	TAS43SBB	TAS43SBC	TAS43SBE
Type of drive		Ball screw								
Type of guide		Double ball								
Ball screw step	mm/U	2	5	10	5	10	16	5	10	20
Ball screw diameter	mm/in.	12/0.47			16/0.63			20/0.79		
Max. driving force (Fx) (3)	N	500	800	780	2200	1120	1080	2580	1760	1700
Max. speed	m/s/ft/s	0.1/0.33	0.25/0.82	0.5/1.64	0.25/0.82	0.5/1.64	0.8/2.62	0.25/0.82	0.5/1.64	1/3.28
Max. acceleration	m/s²/ft/s²	0.8/2.62	2/6.56	4/13.12	2/6.56	4/13.12	6.4/21.00	2/6.56	4/13.12	8/26.25
Max. driving torque	Nm	0.4	0.9	1.6	2.2	2.3	3.4	2.7	3.5	6.4
Max. force (Fy) (3)	N	1,720			2,660			3,550		
Max. force (Fz) (3)	N	+ 2,155			+ 6,285			+ 8,380		
	N	- 2,155			- 3140			- 4,190		
Max. torque (Mx) (3)	Nm	48			110			205		
Max. torque (My) (3)	Nm	90			190			335		
Max. torque (Mz) (3)	Nm	72			160			285		
Min....max. stroke	mm/in.	7...600/0.28...23.62			9...1,000/0.35...39.37			11...1,500/0.43...59.06		
Repeatability	mm/in.	± 0.02/0.001								
Profile cross-section (width x height)	mm/in.	100 x 39/3.94 x 1.54			150 x 54/5.91 x 2.13			200 x 59/7.87 x 2.32		
Typical payload (4)	kg/lb	40/88.18			150/330.69			180/396.83		

(1) All technical data (characteristics, dimensions, etc.) for Lexium TAS linear tables is available on our website www.schneider-electric.com.

(2) Description of a Lexium TAS linear table; the configuration options selected will determine whether or not certain components are included.

(3) Forces and torques exerted on the Lexium TAS linear table: 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 (Fz) value and manufacturer's documentation.

References (1)

To order a Lexium TAS linear table, complete each reference by replacing the “●” (2):

Example: TAS 4 1 S B A 0600 A 1 B S/... rest of the reference on page 9

		TAS 4	●	S	B	●	●●●●	●	1	B	●	/(2)
Size (profile cross-section)	100 (100 x 39 mm cross-section)	1										/
	150 (150 x 54 mm cross-section)	2										/
	200 (200 x 59 mm cross-section)	3										/
Type of drive for carriage	Ballscrew		S									/
Type of guide for carriage	Twin ball guides			B								/
Ballscrew step	2 mm/revolution (for TAS41SBA)				A							/
	5 mm/revolution (for TAS4●SBB)				B							/
	10 mm/revolution (for TAS4●SBC)				C							/
	16 mm/revolution (for TAS42SBD)				D							/
	20 mm/revolution (for TAS43SBE)				E							/
Stroke	Maximum 600 mm (for TAS41)					●●●●						/
	Maximum 1,000 mm (for TAS42)					●●●●						/
	Maximum 1,500 mm (for TAS43)					●●●●						/
Limit switches	2 sensors with PNP output, NC contact (3)							A				/
	2 sensors with PNP output, NC contact (4)							B				/
	Without sensors							N				/
Type of carriage	Type 1								1			/
Options	None/Linear table supplied with bellows									B		/
Interface for the drive element (5)	Drive element in the table axis, driven directly										S	/
	Drive element above table, driven by belt										O	/
	Drive element below table, driven by belt										U	/
	Drive element to left of table, driven by belt										L	/
	Drive element to right of table, driven by belt										R	/
	With shaft (without connection, without drive element)										N	/

(1) All technical data (characteristics, dimensions, etc.) for Lexium TAS linear tables is available on our website www.schneider-electric.com

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

(3) Supplied with a 5 m/16.40 ft cable with flying leads at one end.

(4) Supplied with a 0.2 m/0.66 ft cable equipped with an M8 connector.

(5) Types of interface for the drive element:

TAS4●SB●●●●●1BS

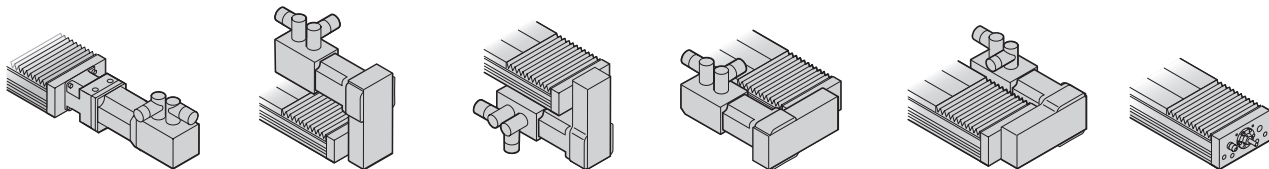
TAS4●SB●●●●●1BO

TAS4●SB●●●●●1BU

TAS4●SB●●●●●1BL

TAS4●SB●●●●●1BR

TAS4●SB●●●●●1BN



References (continued) (1)

To order a Lexium TAS linear table, complete each reference by replacing the "●" (2):

Example: TAS 4 1 S B A 0600 A 1 B S (2)/H5 0
+ BSH 0552P01A2A

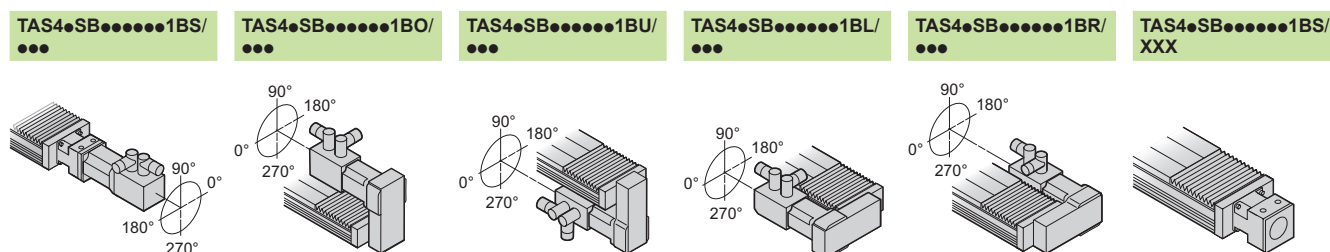
TAS 4 ● S B ● ● ● ● ● 1 B ● (2)/ ● ● ● + ...

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		
Motor reference	State the complete motor reference at the end of the reference, in plain text. Example: BSH 0552P01A2A					+ ...

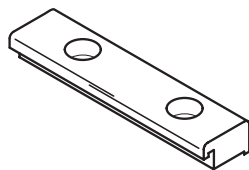
(1) All technical data (characteristics, dimensions, etc.) for Lexium TAS linear tables is available on our website www.schneider-electric.com.

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

(3) Possible drive element configurations and orientations:

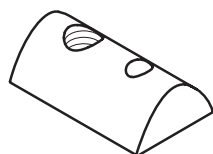


DF539870



VW33MF10●●●

DF539872



VW33MF010T●●●

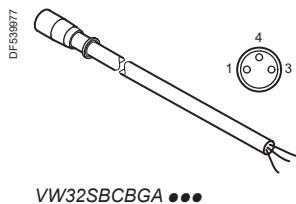
Clamping jaws (1)

Description	For Lexium table axes	Reference
Clamping jaws These are used to mount portal axes on a fixed support. (sold in lots of 10)	TAS41	VW33MF10515
	TAS42	VW33MF10814
	TAS43	

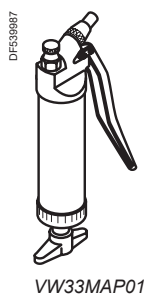
T-slot nuts (1)

Description	For Lexium table axes	T-slot width and retaining screw Ø	Reference
T-slot nuts These are inserted in the axis T-slots. They are used to mount the axis on a fixed support. (sold in lots of 10)	TAS41	Width: 5 M5 screw	VW33MF010T5N5
	TAS42 TAS43	Width: 8 M6 screw	VW33MF010T8N6
		Width: 8 M8 screw	VW33MF010T8N8

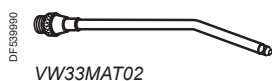
(1) All technical data for accessories is available on our website www.schneider-electric.com.

**Extension cables for sensor (1)**

Description	For Lexium table axes	Length m/ft	Reference
Extension cables for sensor Cables equipped with a 3-way M8 connector on the sensor end and one stripped end. These cables connect directly to the cable supplied with the sensor.	TAS4●B	5/16.40	VW32SBCBGA050
		10/32.81	VW32SBCBGA100
		20/65.62	VW32SBCBGA200

**Lubrication accessories (1)**

Description	For Lexium table axes	Nozzle angle	Reference
High-pressure grease pump (2) This is used to lubricate axes with ball guides: Grease capacity: 120 cm ³ Flow rate: 0.5 cm ³ /pressure.	TAS4●	–	VW33MAP01
D6 rigid nozzles These are mounted on VW33MAP01 and VW33MAP02 high-pressure pumps to lubricate the Lexium axes.	TAS4●	20°	VW33MAT02



(1) All technical data for accessories is available on our website www.schneider-electric.com.

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

Lexium Cartesian Robots

Table Axes

Product reference index

T	
TAS41SBA	7
TAS41SBB	7
TAS41SBC	7
TAS42SBB	7
TAS42SBC	7
TAS42SBD	7
TAS43SBB	7
TAS43SBC	7
TAS43SBE	7

V	
VW32SBCBGA050	11
VW32SBCBGA100	11
VW32SBCBGA200	11
VW33MAP01	11
VW33MAT02	11
VW33MF010T5N5	10
VW33MF010T8N6	10
VW33MF010T8N8	10
VW33MF10515	10
VW33MF10814	10

The Next Generation



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