

Spindle Lifting Systems

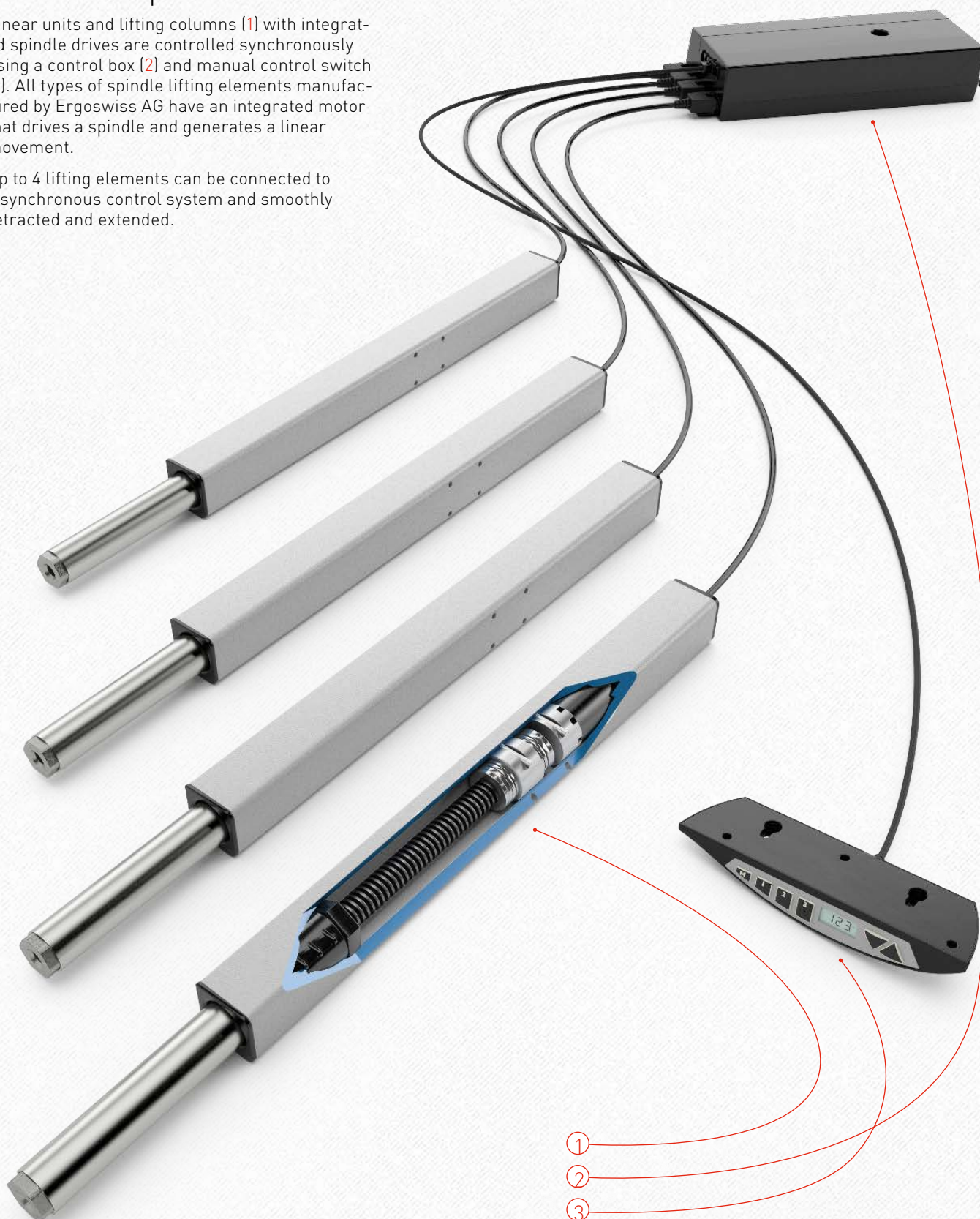


System **Function**

Proven and powerful

Linear units and lifting columns (1) with integrated spindle drives are controlled synchronously using a control box (2) and manual control switch (3). All types of spindle lifting elements manufactured by Ergoswiss AG have an integrated motor that drives a spindle and generates a linear movement.

Up to 4 lifting elements can be connected to a synchronous control system and smoothly retracted and extended.



ergo Applications



Product Overview

Some of the features of our spindle lifting systems:

- Simple plug & play assembly and start-up.
- Generous legroom and more design scope as the drive is installed directly in the lifting element.
- No restoring force is required.

Lifting element	Stability	Cross section	Installation
	●●●○○	1.4" x 1.4" (35 x 35 mm)	24"/28" (600/700 mm)
		1.4" x 1.4" (35 x 35 mm)	
	●●●◐○	1.8" x 1.8" (45 x 45 mm)	24"/28" (600/700 mm)
		3.1" x 2.0" (80 x 50 mm)	
	●●●●●	10.2" x 2.8" (260 x 60 mm)	21"/25" (530/630 mm)
	●●●●◐	5.9" x 2.8" (150 x 70 mm)	21"/25" (530/630 mm)
	●●●◐○	1.8" x 1.8" (45 x 45 mm)	25"/29" (640/740 mm)
		10.2" x 1.6" (260 x 40 mm)	
		2.0" x 2.0" (50 x 50 mm)	
	●●●●○	2.0" x 2.0" (50 x 50 mm)	25" (640 mm)

*Please also note the maximum load of the entire system

- The spindle lifting system also allows for horizontal adjustment.
- The lifting system is only available with an electric motor. (For a hand-crank solution, see hydraulic catalogue).
- As our control units are connected in parallel, they can drive up to 12 lifting elements synchronously.

Stroke length system	Spindle lifting system	Max. load power per lifting element*	Hydraulic lifting system	Max. load power per lifting element*
12"/16" (300/400 mm)	SLA	275 lbs (125 kg)	LA	330/550 lbs (150/250 kg)
			LD	330/550 lbs (150/250 kg)
12"/20" (300/500 mm)	SLG	275 lbs (125 kg)	LG	330/550 lbs (150/250 kg)
			TA	330/550 lbs (150/250 kg)
12"/16" (300/400 mm)	SL	440/660 lbs (200/300 kg)	TL	330/550 lbs (150/250 kg)
12"/16" (300/400 mm)	SM	440/660 lbs (200/300 kg)	TM	330/550 lbs (150/250 kg)
12"/16" (300/400 mm)	SQ	275 lbs (125 kg)	TQ	330/550 lbs (150/250 kg)
			TT	330/550 lbs (150/250 kg)
			TU	330/550 lbs (150/250 kg)
12" (300 mm)	SE	275 lbs (125 kg)		

System Combinations SLA|SLG|SQ|SE

This table will help you to put together your own system on the basis of the required system load, the number of lifting element (linear units and lifting columns) to be activated and the desired lifting distance.

270 lbs (125 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
1 lifting element	12" (300 mm)	* 1330	SCT2	0.35"/s (9 mm/s)	2/18 (mins.)
1 lifting element	16" (400 mm)	* 1340	SCT2	0.35"/s (9 mm/s)	2/18 (mins.)
550 lbs (250 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
2 lifting elements	12" (300 mm)	* 1330	SCT2	0.35"/s (9 mm/s)	2/18 (mins.)
2 lifting elements	16" (400 mm)	* 1340	SCT2	0.35"/s (9 mm/s)	2/18 (mins.)
820 lbs (375 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
3 lifting elements	12" (300 mm)	* 1330	SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
3 lifting elements	16" (400 mm)	* 1340	SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
1100 lbs (500 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
4 lifting elements	12" (300 mm)	* 1330	SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
4 lifting elements	16" (400 mm)	* 1340	SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
1370 lbs (625 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
5 lifting elements	12" (300 mm)	* 1330	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
5 lifting elements	16" (400 mm)	* 1340	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
1540 lbs (700 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
6 lifting elements	12" (300 mm)	* 1330	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
6 lifting elements	16" (400 mm)	* 1340	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
1650 lbs (750 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
7 lifting elements	12" (300 mm)	* 1330	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
7 lifting elements	16" (400 mm)	* 1340	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
1760 lbs (800 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed	Duty cycle** (on/off)
8 lifting elements	12" (300 mm)	* 1330	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)
8 lifting elements	16" (400 mm)	* 1340	2x SCT4	0.35"/s (9 mm/s)	2/18 (mins.)

Control unit type VD	Hand switch up/down	Hand switch memory
		

* Linear unit **SLA**, **SLG** and lifting column **SQ**







** Duty cycle

Control voltage (230, 210 VAC)

System Combinations SL|SM

This table will help you put together your own system on the basis of the required system load, the number of lifting elements (lifting columns) to be activated and the desired lifting distance.

440 lbs (200 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed mm/s	Duty cycle** (on/off)
1 lifting element	12" (300 mm)	* 1430	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
1 lifting element	16" (400 mm)	* 1440	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
880 lbs (400 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed mm/s	Duty cycle** (on/off)
2 lifting elements	12" (300 mm)	* 1430	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
2 lifting elements	16" (400 mm)	* 1440	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
2 lifting elements	12" (300 mm)	* 1430	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
2 lifting elements	16" (400 mm)	* 1440	*** compact-3	0.5"/s (12 mm/s)	2/18 (mins.)
1320 lbs (600 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed mm/s	Duty cycle** (on/off)
2 lifting elements	12" (300 mm)	* 1330	*** SCT2	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)
2 lifting elements	16" (400 mm)	* 1340	*** SCT2	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)
1650 lbs (750 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed mm/s	Duty cycle** (on/off)
3 lifting elements	12" (300 mm)	* 1330	*** SCT4	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)
3 lifting elements	16" (400 mm)	* 1340	*** SCT4	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)
2200 lbs (1000 kg)	Stroke length	Lifting element type	Control unit type	Lifting speed mm/s	Duty cycle** (on/off)
4 lifting elements	12" (300 mm)	* 1330	*** SCT4	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)
4 lifting elements	16" (400 mm)	* 1340	*** SCT4	**** 0.33"/s (8.5 mm/s)	2/40 (mins.)

Control unit type compact	Hand switch up/down	Hand switch memory
		
Control unit type VD	Hand switch up/down	Hand switch memory
		

* Lifting column **SM** or **SL**

** Duty cycle

*** Control voltage (230, 110 VAC)

**** Lifting speed load dependent 0.23"/s - 0.33"/s (6-8.5 mm/s)



Universal and compact

The housing of the linear unit consists of a colorless anodized aluminum profile. The cylinder rod is made of stainless steel and positioned in a plastic bushing. It is operated by means of an internal spindle drive. The cable length is 6-1/2ft (2m).

Up to 4 linear units can be connected to one control unit and operated synchronously.

Application

The linear units **SLA** and **SLG** are used in places where a work surface needs to be adjusted to the right ergonomic height. Existing work stations can simply be retrofitted. The systems fit perfectly into the 1.6" x 1.6" (40x40 mm) and 2" x 2" (50x50 mm) steel profiles which are often used as support elements and legs for work stations.

Compared to the linear unit **SLA** (cross section 1.4" x 1.4" or 35x35 mm), the linear unit **SLG** (cross section 1.8" x 1.8" or 45x45 mm) can absorb higher bending moments and is more stable at the same lifting distance.

- Tooling shop
- Machine industry
- Furniture industry



Dimensions **SLA|SLG**

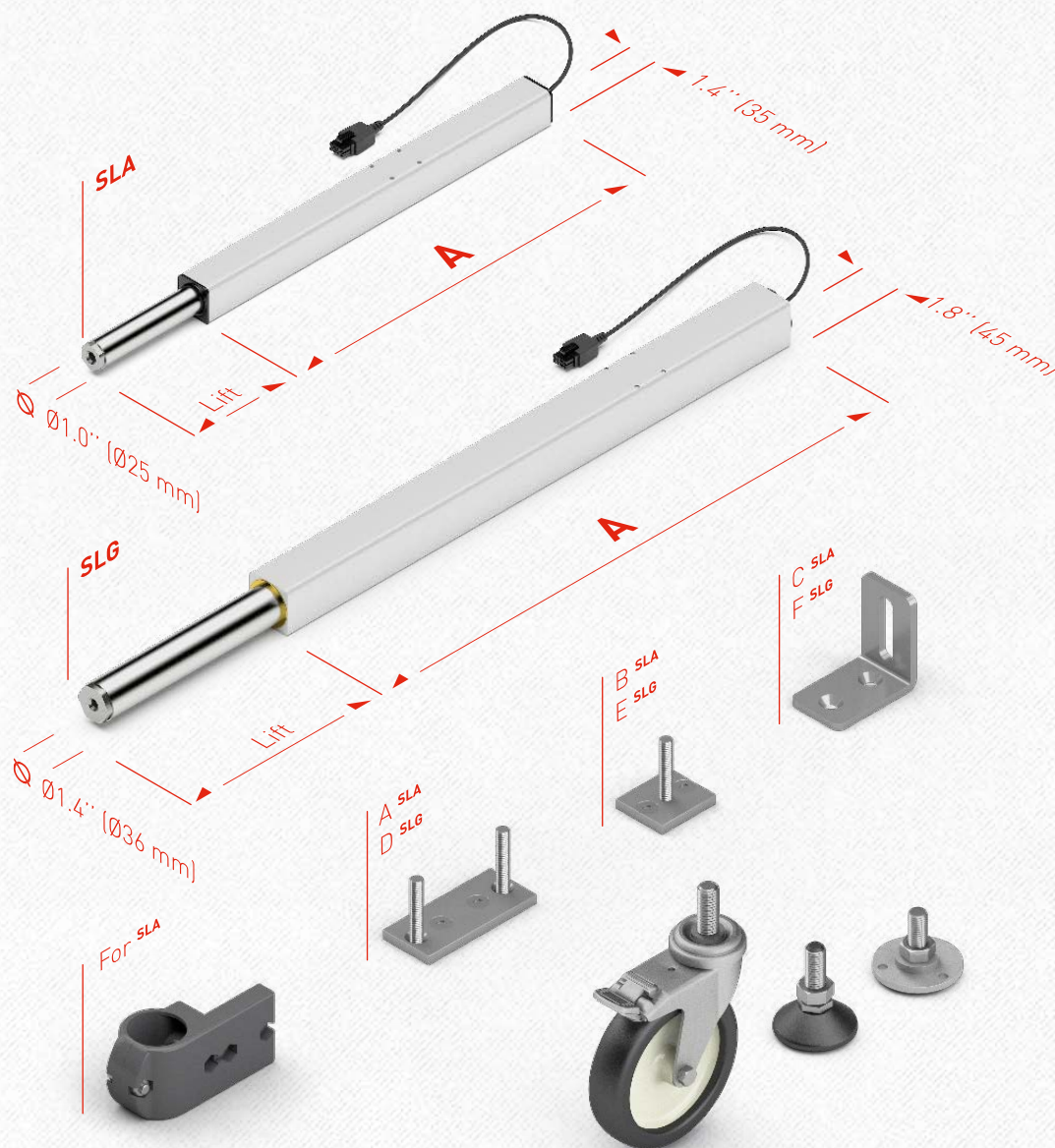


Technical data

- Versatile linear guide rail with **internal** drive unit
- Compressive force per lifting element 281 lbf (1250 N) (**SLA/SLG**)
- Tensile force per lifting element 281 lbf (1250 N) (**SLA/SLG**)
- Please also note the maximum load of the entire system
- Synchronous control of 1 to 8 linear units
- Lifting speed 0.35"/s (9 mm/s)
- Stroke length 12" (300mm) or 16" (400 mm)
- **SLA** Mb stat. = 110 lbf-ft (150 Nm)*
SLG Mb stat. = 140 lbf-ft (200 Nm)*
- **SLA** Mb dyn. = 35 lbf-ft (50 Nm)**
SLG Mb dyn. = 60 lbf-ft (80 Nm)**
- No additional guide rail is required
- Color: colorless anodized aluminum
- * Mb stat. = max. permissible bending moment at a standstill
- ** Mb dyn. = max. permissible bending moment during lifting movement

Typ **SLA|SLG**

	Lift	A
SLA SLG 1330	24" (600 mm)	12" (300 mm)
SLA SLG 1340	28" (700 mm)	16" (400 mm)





Elegant and powerful

The lifting column **SL** consists of colorless anodized aluminum profiles, guided by plastic gliders. Each lifting column has an **internal** motor that drives a threaded spindle. The cable length is 6ft (1.8 m).

The T-slots on 3 sides (width 0.3" or 8 mm) of the lifting column allow the addition of crossbars, shelves, attachments and mountings.

Up to 3 lifting columns can be connected to one control unit. When a maximum of 4 control units are syn-chronized, up to 12 lifting columns can be operated synchronously.

The choice of system load defines the type of control unit (see system combination).

Application

The **SL** is available as a lifting system (lifting column and control unit) or as a complete base frame.

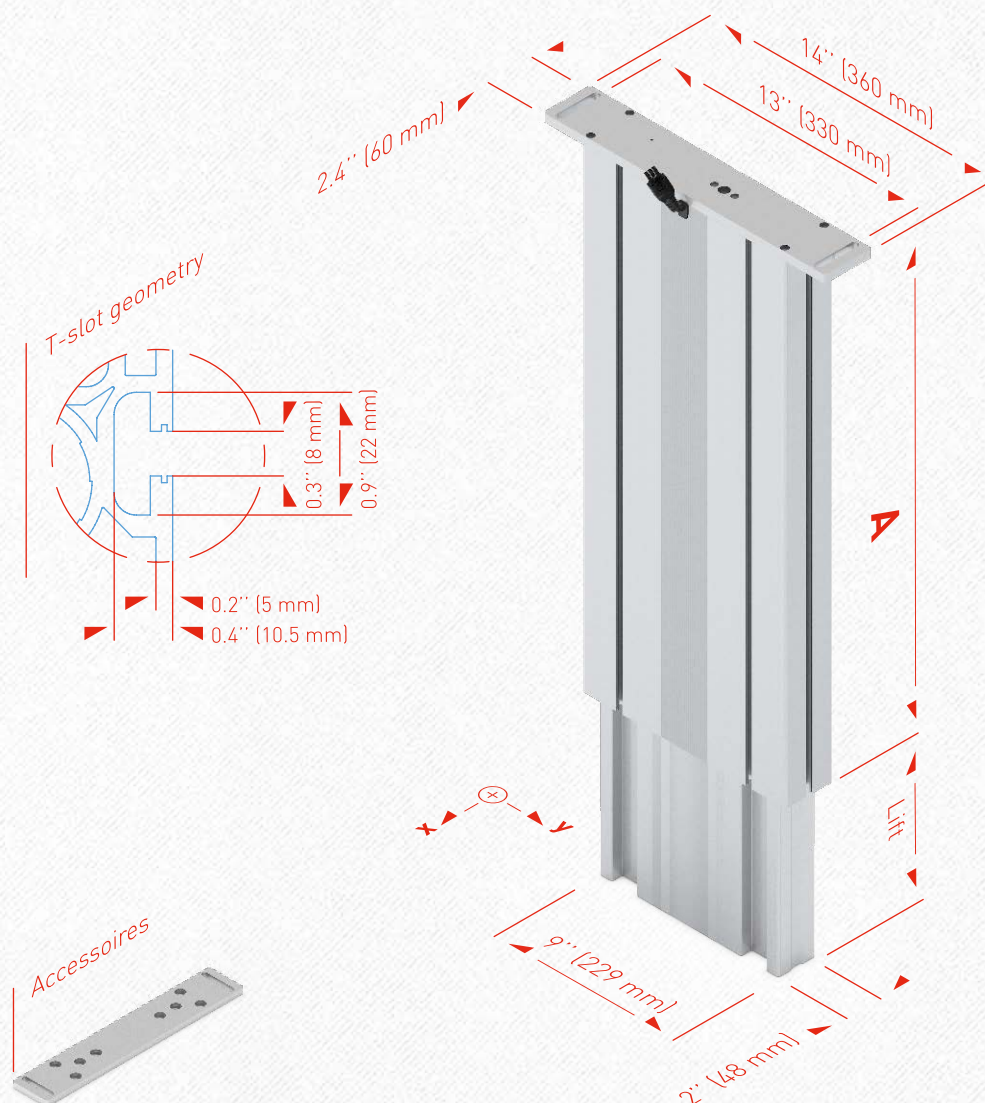
The system **SL** can be used for assembly tables, in assembly units, for office desks, height-adjustable beds and bathtubs and for general use in furniture construction and mechanical engineering.

The following accessories are available:

- crossbars in various lengths
- telescopic crossbar
- table feet with adjustable rubber feet
- base plates
- option: ESD (electrostatic discharge) version

The crossbars are supplied with pre-fitted universal connectors. These can be pushed into the lifting column and clamped with a conical screw connection.

Dimensions **SL**



Technical data

- Versatile lifting column with **internal** drive unit
- System loads:
 - 1 **SL**: 440 lbs (200 kg)
 - 2 **SL**: 880 lbs (400 kg)
 - 3 **SL**: 880 lbs (400 kg)
 - 4 **SL**: 2200 lbs (1 000 kg)
- Synchronous control of 1 to 12 [8] lifting columns
- Lifting speed 0.5"/s (12 mm/s)
- Stroke length 12" (300mm) or 16" (400 mm)
- Mb_x stat. = 290 lbf ft (400 Nm)*
- Mb_y stat. = 880 lbf ft (1200 Nm)*
- Mb_x dyn. = 140 lbf ft (200 Nm)**
- Mb_y dyn. = 400 lbf ft (550 Nm)**
- Color: colorless anodized aluminum
- * Mb stat. = max. permissible bending moment at a standstill
- ** Mb dyn. = max. permissible bending moment during lifting movement
- *** Lifting speed load dependent***

Lifting column **SL**

	A	Lift
SL 1430 [1330]	21" (530 mm)	12" (300 mm)
SL 1440 [1340]	25" (630 mm)	16" (400 mm)



Flexible assembly

The base frame **SL** has been designed for fast and flexible assembly of tables.

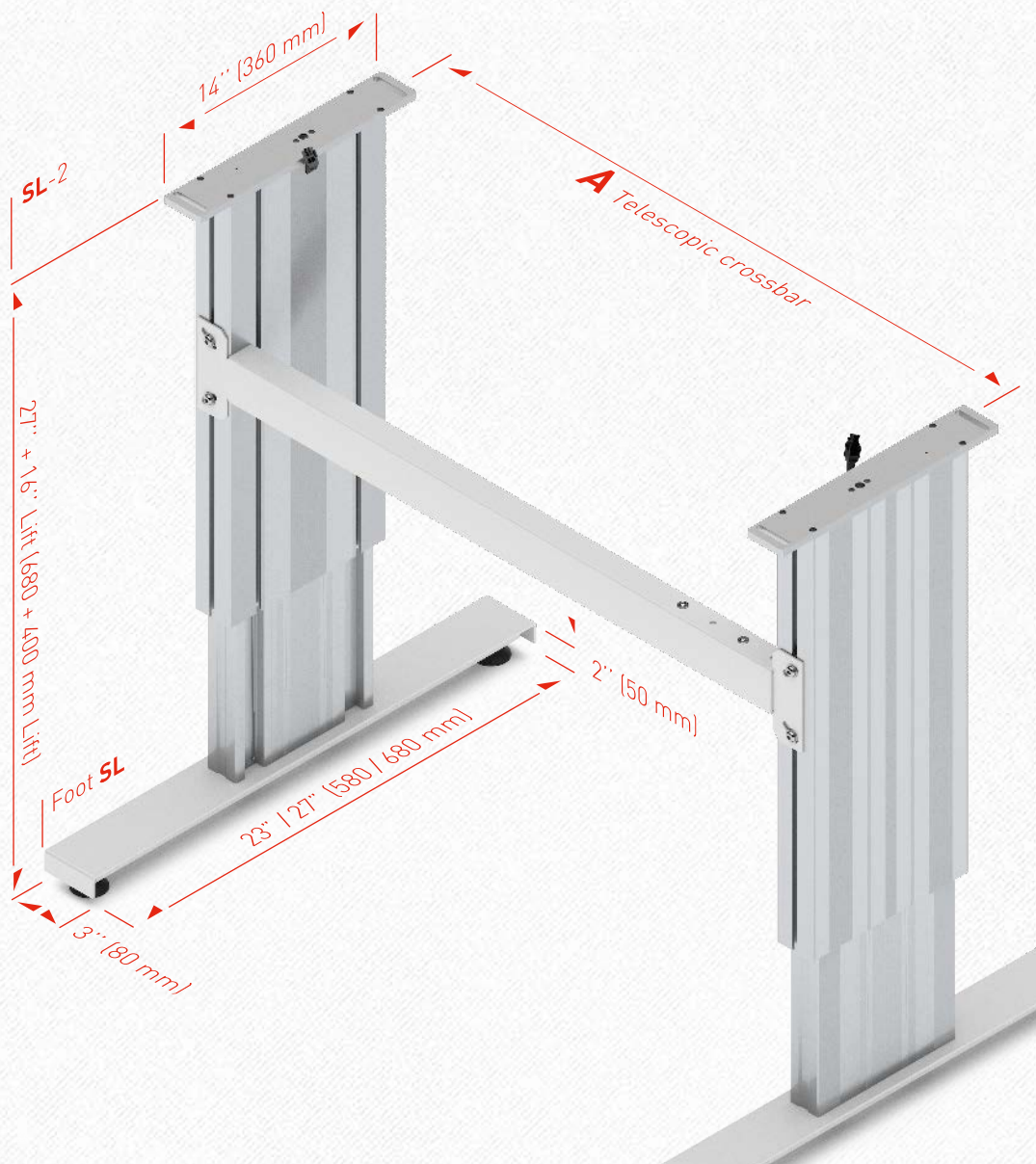
The maximum system load is 880 lbs (400 kg). The adjustment range is 16" (400 mm) and the lifting speed 0.5"/s (12 mm/s).

The base frame **SL** consists of 2 lifting columns, a crossbar and 2 table feet. The crossbars slide easily into the grooves of the lifting column and are clamped with an Allen key.

Both lifting columns are connected to the synchronous control system by means of a plug-in connector and are immediately ready for operative use.

Various screws to mount the table top are included in delivery. The base frame is delivered

Dimensions of base frame **SL**



Base frame **SL-2**

	A
SL-2	37.8" – 63.4" (960 - 1610 mm)

As option available:

- System load 1320 lbs (600 kg) and lifting speed 0.33"/s (8.5 mm/s)
- Installation 23" (580 mm) and stroke length 12" (300 mm)



Slim and robust

The lifting column **SM** consists of two colorless anodized aluminum profiles, guided by plastic gliders. Each lifting column has an **internal** motor that drives a threaded spindle. The cable length is 6ft (1.8 m).

The T-slots on 3 sides (width 0.3" or 8 mm) of the lifting column allow the addition of crossbars, shelves, attachments and mountings. Up to 3 lifting columns can be connected to one control unit. When a maximum of 4 control units are syn-chronized, up to 12 lifting columns can be operated synchronously.

The choice of system load defines the type of control unit (see system combination).

Application

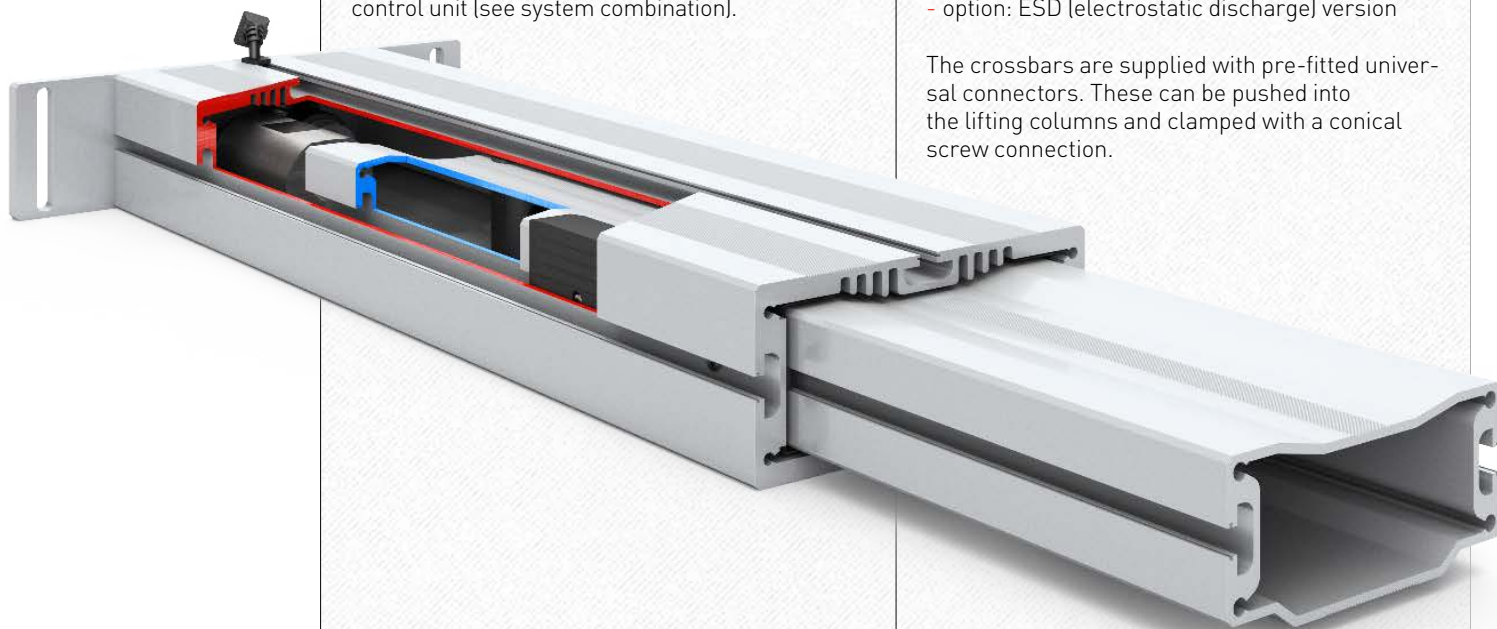
The **SM** is available as a lifting system (lifting column and control unit) or as a complete base frame.

The system **SM** can be used for assembly tables, in assembly units, for office desks, height-adjustable beds and bathtubs and for general use in furniture construction and mechanical engineering.

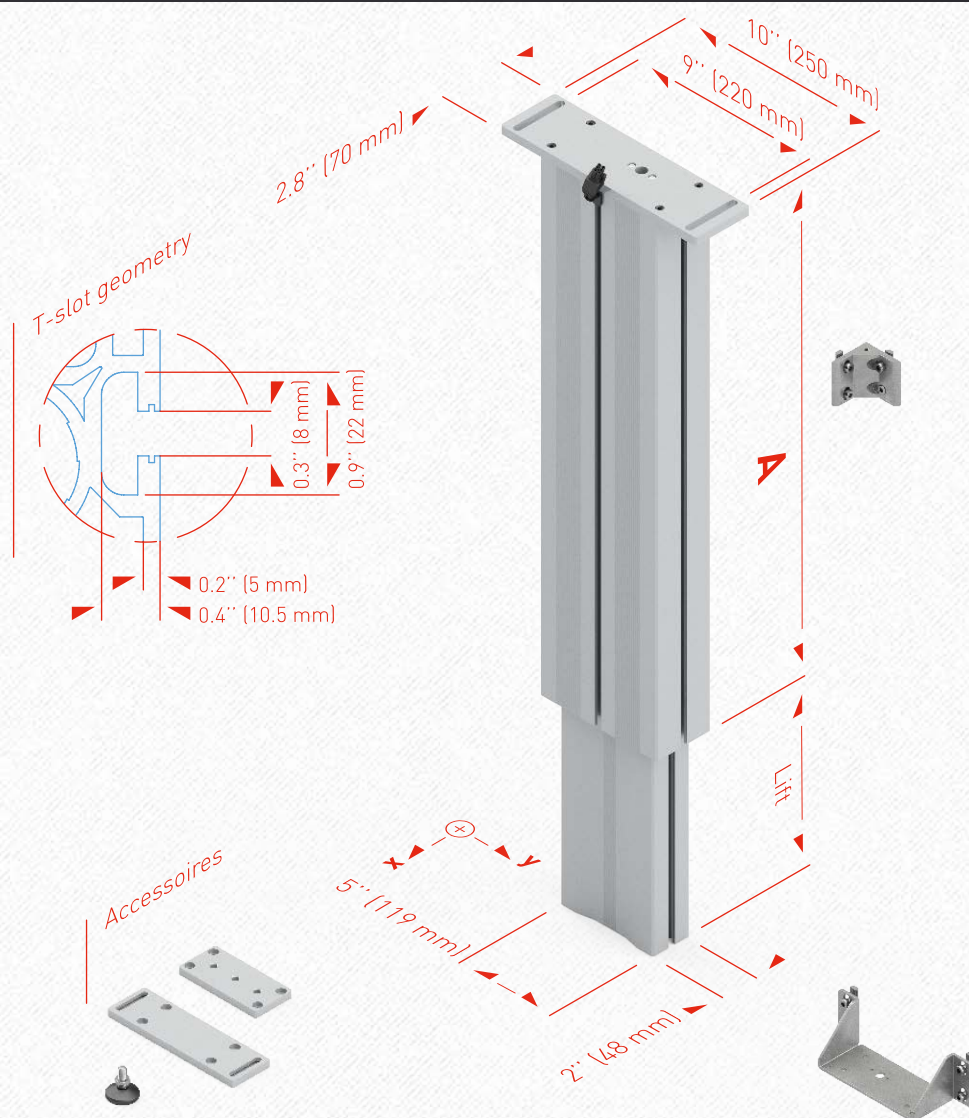
The following accessories are available:

- crossbars in various lengths
- telescopic crossbar
- table feet with adjustable rubber feet
- base plates
- option: ESD (electrostatic discharge) version

The crossbars are supplied with pre-fitted universal connectors. These can be pushed into the lifting columns and clamped with a conical screw connection.



Dimensions **SM**



Technical data

- Versatile lifting column with **internal** drive unit
- System loads:
 - 1 **SM**: 440 lbs (200 kg)
 - 2 **SM**: 880 lbs (400 kg)
 - 3 **SM**: 880 lbs (400 kg)
 - 4 **SM**: 2200 lbs (1000 kg)
- Synchronous control of 1 to 12 [8] lifting columns
- Lifting speed 0.5"/s (12 mm/s) 0.33"/s (8.5 mm/s)***
- Stroke length 12" (300mm) or 16" (400 mm)
- Mb_x stat. = 250 lbf ft (350 Nm)*
Mb_y stat. = 660 lbf ft (900 Nm)*
- Mb_x dyn. = 110 lbf ft (150 Nm)**
Mb_y dyn. = 330 lbf ft (450 Nm)**

Color: colorless anodized aluminum

- * Mb stat. = max. permissible bending moment at a standstill
- ** Mb dyn. = max. permissible bending moment during lifting movement
- *** Lifting speed load dependent

Lifting column **SM**

	A	Lift
SM 1430 [1330]	20.9"	11.8"
SM 1440 [1340]	24.8"	15.7"



Combinable in a variety of ways

The base frame **SM-1** consists of a lifting column mounted on a table foot with adjustable feet. The lifting column **SM** is equipped with a table plate support which is used to attach a table top.

- including 1 control box and 1 manual control switch
- ideal as a lectern
- System load 440 lbs (200 kg) at 0.5"/s (12 mm/s)



The base frame **SM-2** consists of two lifting columns each of which is mounted on a table foot with adjustable feet. The columns are connected by a crossbar. Each lifting column **SM** is equipped with a table plate support which is used to attach the table top.

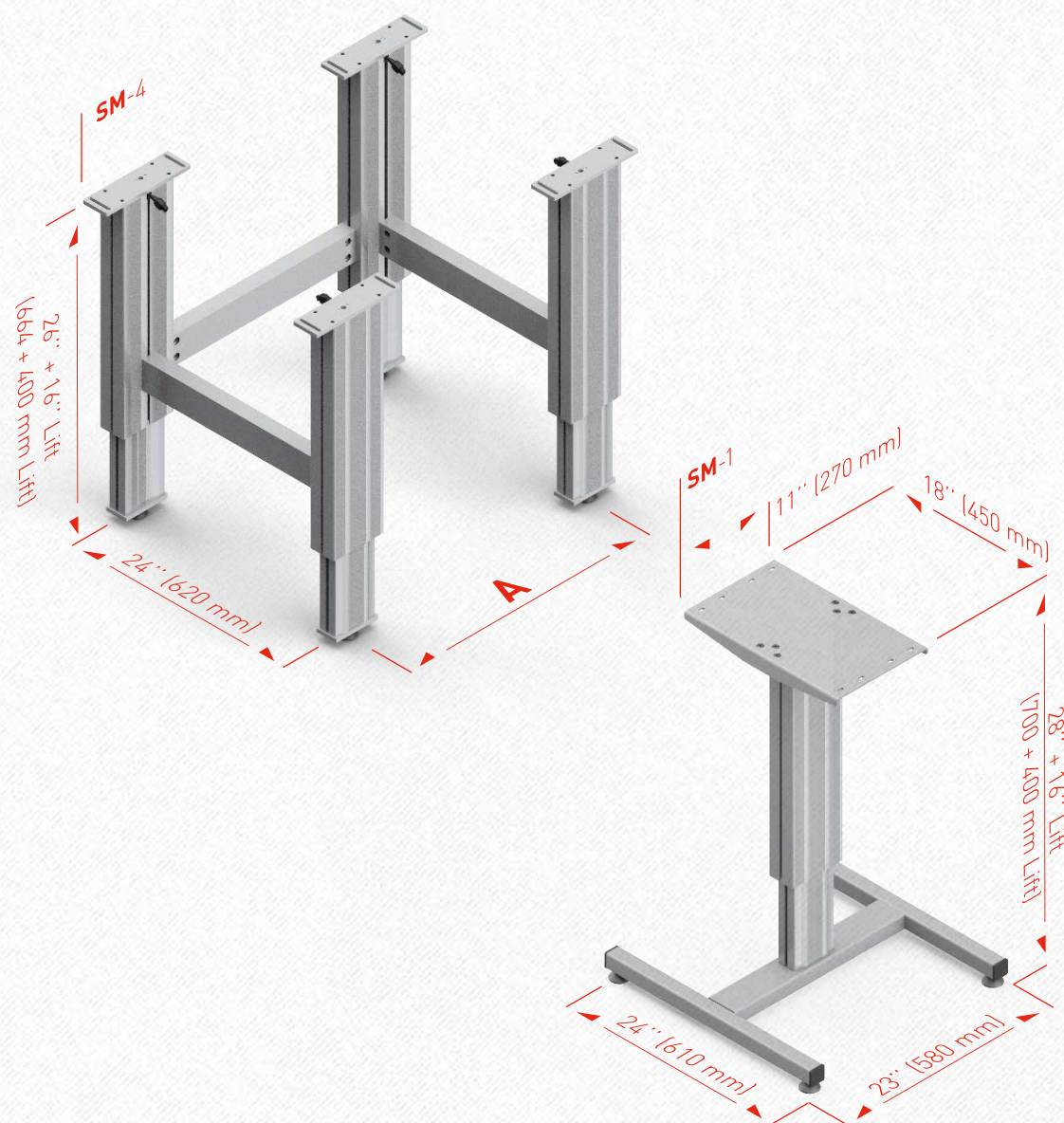
- including 1 control box and 1 manual control switch
- ideal as an office desk or light assembly table
- System load 880 lbs (400 kg) at 0.5"/s (12 mm/s)

The base frame **SM-4** consists of four lifting columns arranged in a rectangle and connected by crossbars. The lifting columns are equipped with a foot plate including adjustable rubber feet. The table top is attached directly to the adapter plates of the lifting column **SM**.

- including 1 control box and 1 manual control switch
- ideal for stable workbenches
- system loads up to 2200 lbs (1'000 kg) at 0.33"/s (8.5 mm/s) on request



Dimensions of base frame **SM**



Base frame **SM-4**

	A
SM-4	28" (700 mm)
SM-4	39" (1000 mm)
SM-4	51" (1300 mm)
SM-4	67" (1700 mm)

Detailed CAD drawings in various formats can be found at www.ergoswiss.us

As option available:

- System load 1320 lbs (600 kg) and lifting speed 0.33"/s (8.5 mm/s)
- Installation 22" (570 mm) and stroke length 12" (300 mm)



Slim and powerful

The spindle lifting column **SQ** belongs to the same product family as the table leg TQ. Its plain anodized aluminum housings comes with a simple surface design to ensure an elegant and stylish finish.

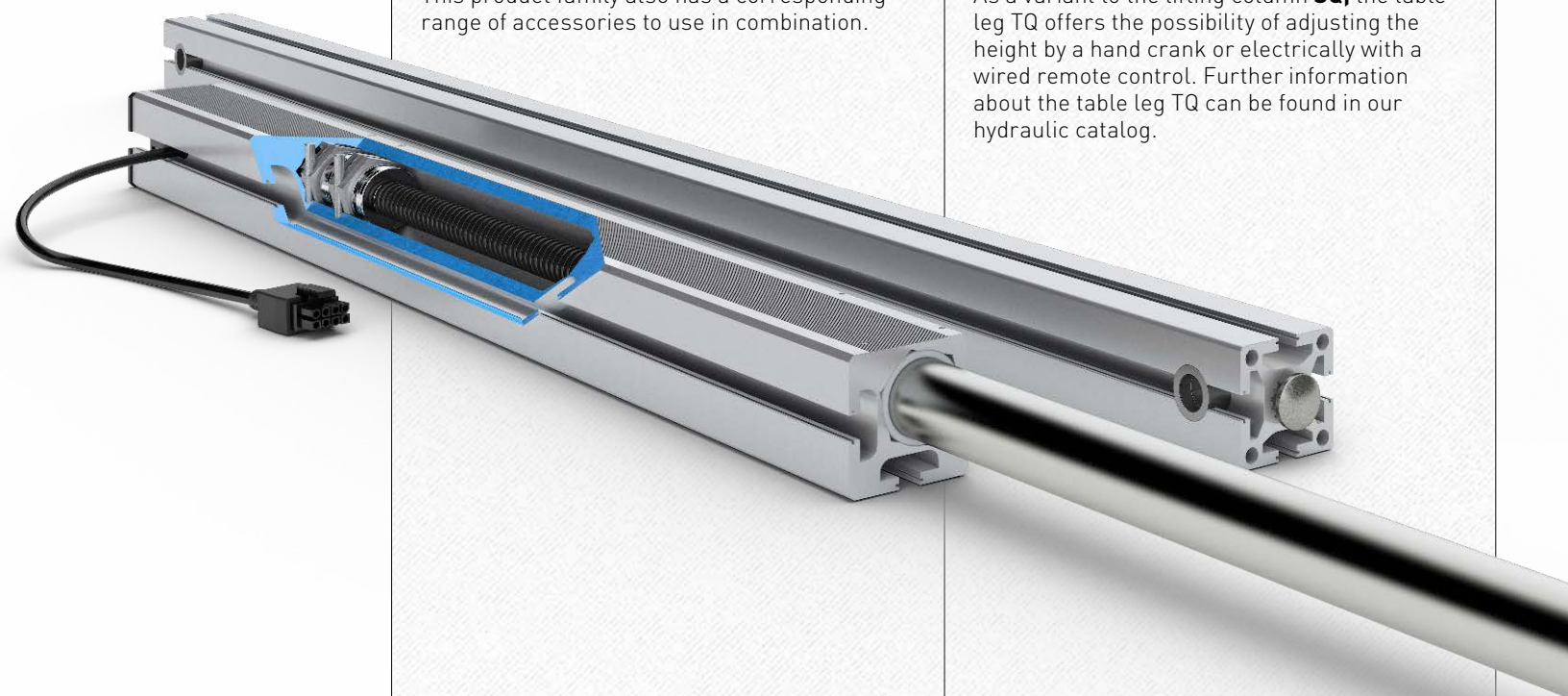
The T-slots on 2 sides (width 0.3" or 8 mm) allow the mounting of crossbars, shelves and other attachments along the entire length of the leg.

This product family also has a corresponding range of accessories to use in combination.

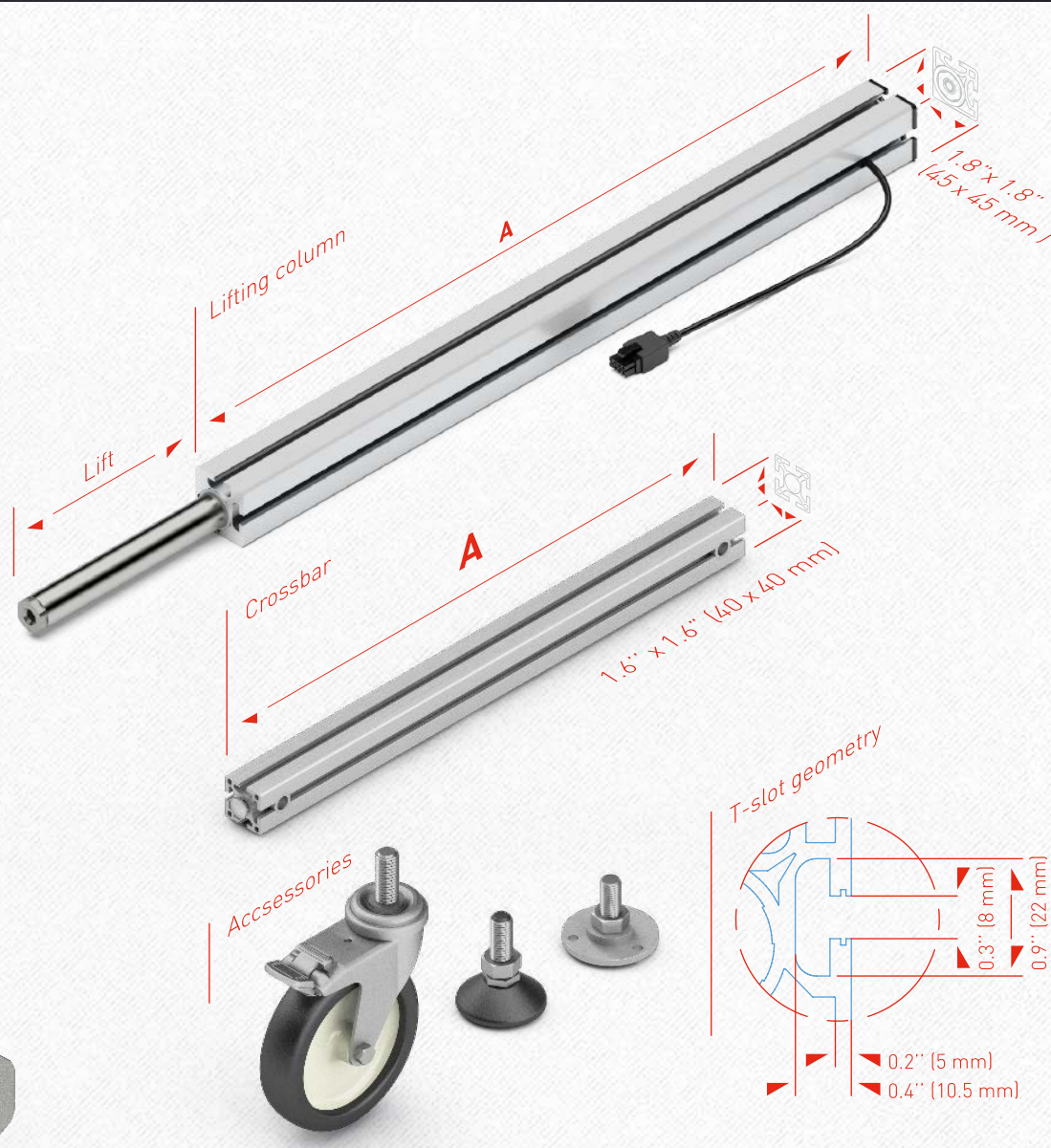
Application

The electrically driven lifting column **SQ** is suitable for height adjustable mounting tables, laboratory workstations and generally in furniture and mechanical industry. Up to 4 lifting columns can be connected to one control box and are operated synchronously. In synchronous operation with 2 control boxes, up to 8 lifting columns can be operated. Each lifting column has an internal motor that drives the threaded spindle.

As a variant to the lifting column **SQ**, the table leg TQ offers the possibility of adjusting the height by a hand crank or electrically with a wired remote control. Further information about the table leg TQ can be found in our hydraulic catalog.



Dimensions **SQ**



Technical data

- Versatile linear guide rail with **internal** drive unit
- Compressive force per lifting 330 lbs (1250 N)
- Tensile force per lifting element 330 lbs (1250 N)
- Please also note the maximum load of the entire system
- Synchronous control of 1 to 8 linear units
- Lifting speed 0.35"/s (9 mm/s)
- Stroke length 12" (300mm) or 16" (400 mm)
- Mb stat. = 140 lbf-ft (200 Nm)
- Mb dyn. = 60 lbf-ft (80 Nm)
- color: colorless anodized aluminum

Crossbar **SQ**

	A	Lift
SQ 1330	25.1" (640 mm)	11.8" (300 mm)
SQ 1440	29.1" (740 mm)	15.7" (400 mm)

Crossbar **SQ**

	A
SQ 550	22" (550 mm)
SQ 750	30" (750 mm)
SQ 950	37" (950 mm)
SQ 1150	45" (1150 mm)
SQ 1550	61" (1550 mm)



Quickly mounted

Tables can be put together quickly and flexibly with the **SQ** table base frame.

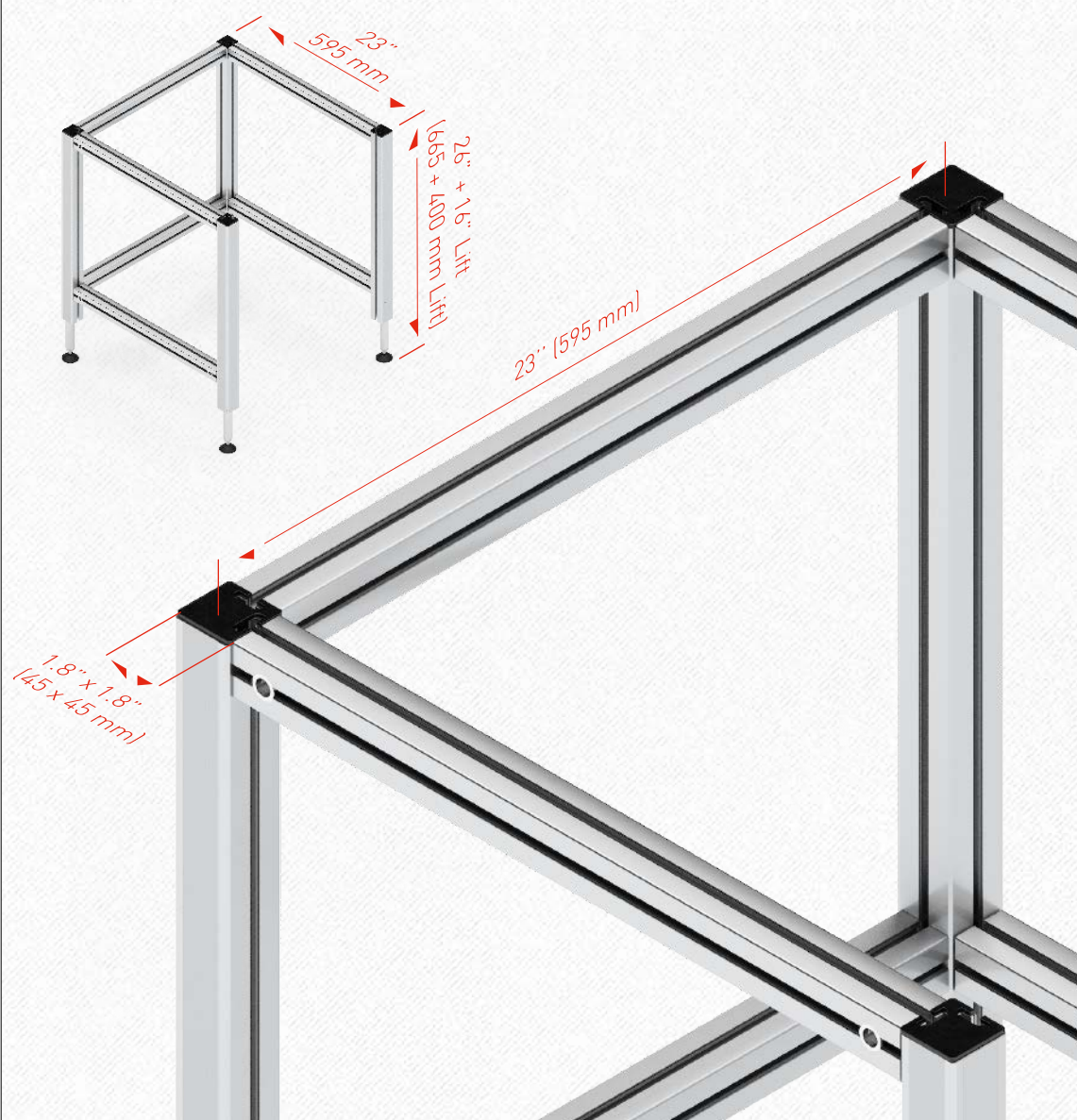
The maximum load is 1100 lbs (500 kg). The max. height adjustment range is 16" (400 mm).

The base frame **SQ-4** consists of four lifting columns **SQ**, arranged in a rectangle and connected by crossbars. The lifting columns are equipped with adjustable rubber feet. The table top is attached directly to the crossbars of the lifting columns **SQ**.

- Ideal for light and slim workstations



Dimensions of base frame **SQ**



Base frame **SQ-4**

	A
SQ-4	23" (595 mm)
SQ-4	31" (795 mm)
SQ-4	39" (995 mm)
SQ-4	47" (1195 mm)
SQ-4	63" (1595 mm)



Compact and stable

The lifting column **SE** consists of a powder coated steel guiding with cross section 2"x2" (50x50 mm).

The inner tube slides on plastic gliders and is moved by an inline spindle drive.

The welded side plate enables the mounting of a cross bar TA, which is also used in other systems. It is available in various standard lengths. Adjustable feet or castors can be mounted to the M10 thread inside of the inner tube.

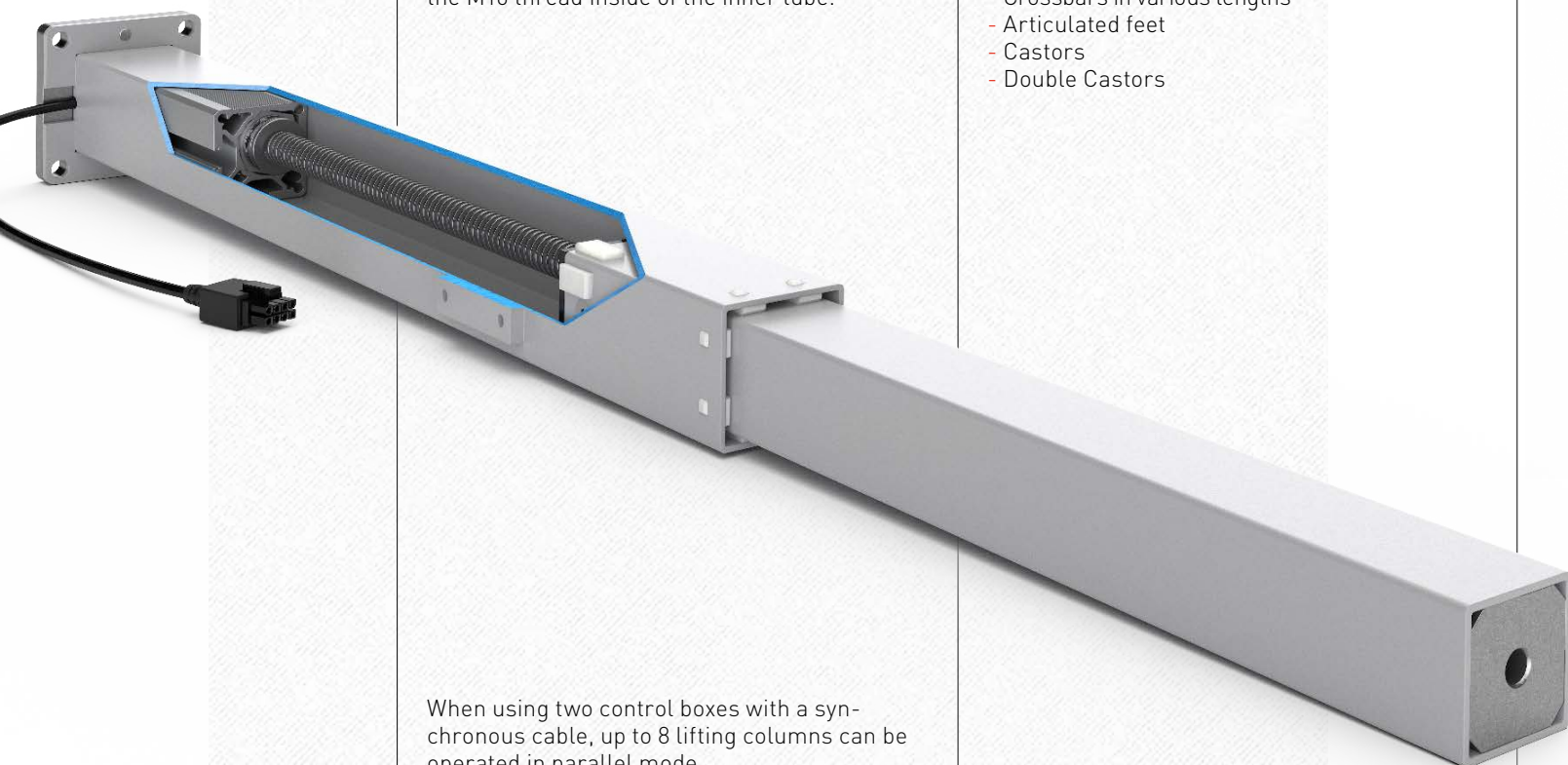
Application

The **SE** is available as a lifting system (lifting column with control unit and switch) or as a complete frame.

The system **SE** is used in applications which need ergonomic height adjustable work surfaces. For example, work benches, mounting or packing tables.

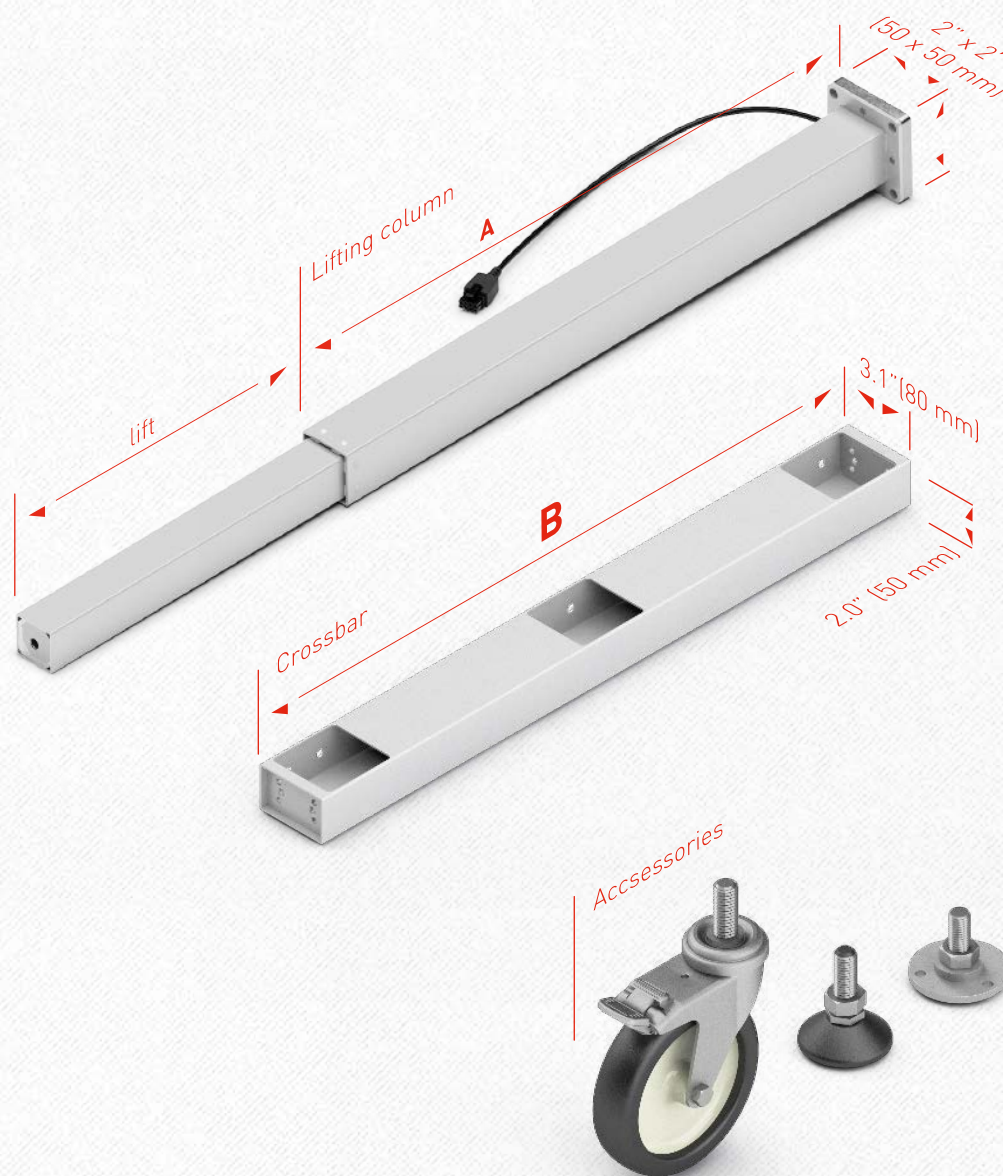
The following accessories are available:

- Crossbars in various lengths
- Articulated feet
- Castors
- Double Castors



When using two control boxes with a synchronous cable, up to 8 lifting columns can be operated in parallel mode.

Dimensions **SE**



Technical data

- Versatile lifting column with **internal** drive unit
- Compressive force per lifting 330 lbs (1250 N)
- Tensile force per lifting element 330 lbs (1250 N)
- Please also note the maximum load of the entire system
- Synchronous control of 1 to 8 linear units
- Lifting speed 0.35"/s (9 mm/s)
- Stroke length 12" (300mm)
- Mb stat. = 250 lbf-ft (350 Nm)
- Mb dyn. = 110 lbf-ft (150 Nm)
- Color: RAL 9006 white aluminum

Lifting column **SE**

	A	lift
SE 1330	25.1" (640 mm)	11.8" (300 mm)

Crossbar **SE**

	A
SE 550	22" (550 mm)
SE 750	30" (750 mm)
SE 950	37" (950 mm)
SE 1150	45" (1150 mm)
SE 1550	61" (1550 mm)



Create space

Because of its small mounting size there is a lot of space under the table top and room for substructures.

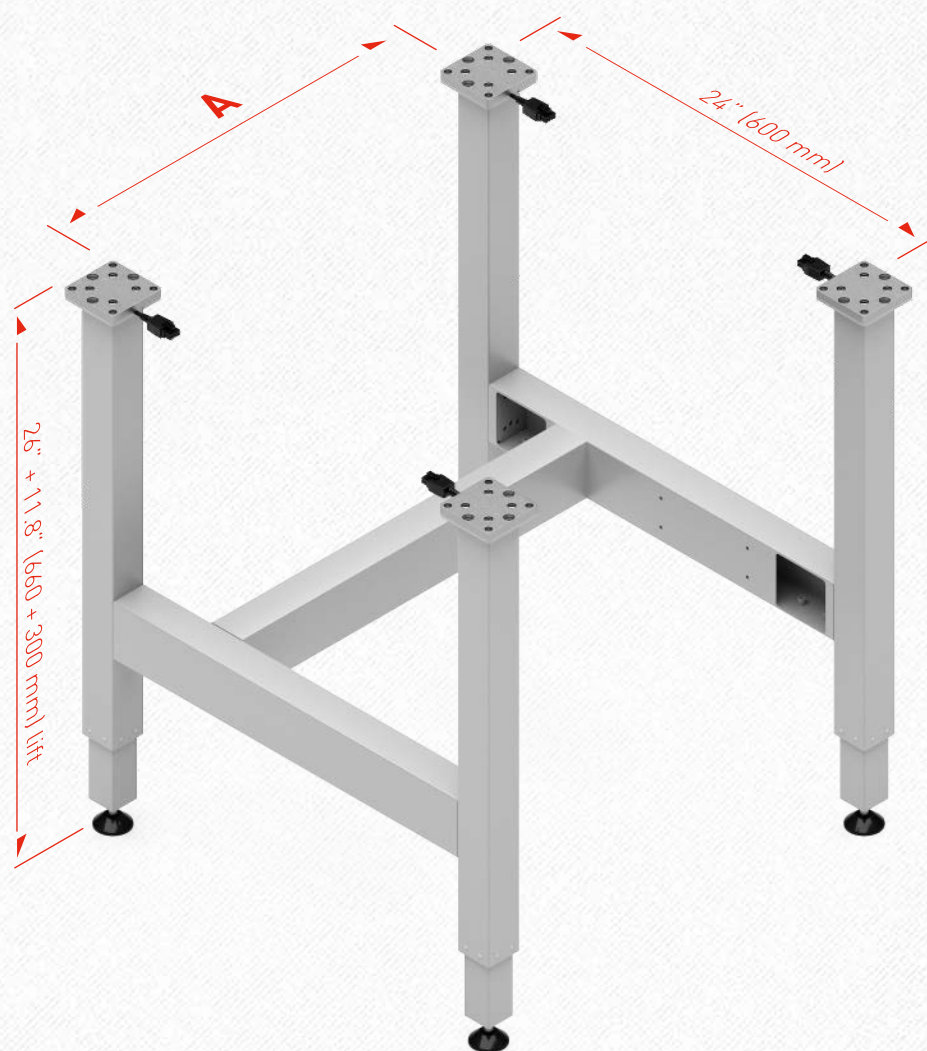
The maximum load is 1100 lbs (500 kg). The adjustment range is a maximum of 11.8" (300 mm).

The frame **SE-4** consists of four lifting columns **SE** which are arranged in a rectangle connected by cross bars. Each lifting column **SE** is equipped with an adjustable rubber foot. The table plate can be mounted directly to the head plates of the lifting columns.

- Ideal as workbench



Dimensions of base frame **SE**



Base frame **SE-4**

	A
SE-4	24" (600 mm)
SE-4	31" (800 mm)
SE-4	39" (1000 mm)
SE-4	47" (1200 mm)
SE-4	63" (1600 mm)