



Products for the furniture industry

Mechanical, hydraulic and electro-motor-driven solutions
for opening, closing and adjusting

More comfort and ergonomics for your furniture.

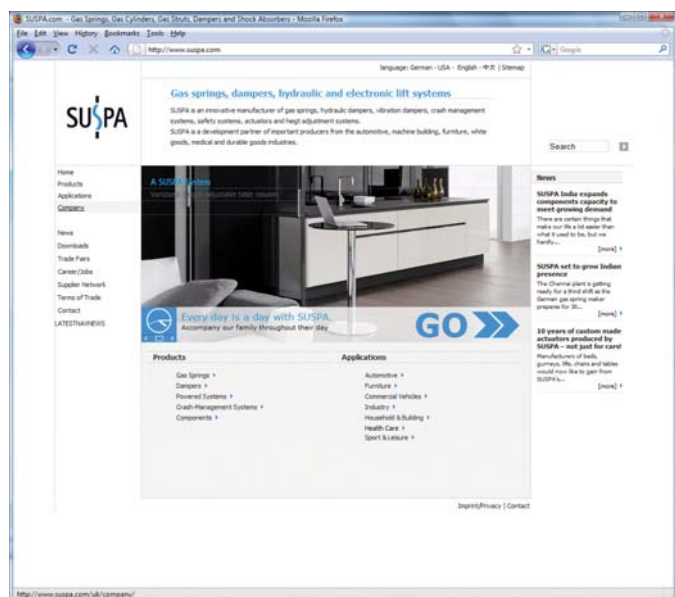
SUSPA – products for the furniture industry.

This catalogue provides a complete overview of SUSPA products for the furniture industry. It shows a multitude of new ideas to be able to better plan and realize for the desires of your customers. This catalogue shows various product applications with installation suggestions and assembly instructions.

For over 50 years, SUSPA products have been in virtually every part of daily life – in your kitchen, in your living room and in your office. Our ability to see the usual with new eyes is sought-after. From the cushioned opening and closing of hatches or the comfortable adjustment of tables and work stations.

SUSPA products create added value for your furniture because our employees work with competence and passion to solve your technical requirements. Our technology makes your furniture comfortable and supports the user in the demand for reliability and trust.

SUSPA stands for technical reliability, combined with noticeable emotionality and proximity to the customer. Just speak to us and see for yourself. In our global network of subsidiary companies and sales representatives, you are bound to find a personal contact near to you. For more information, see our website at www.suspa.com



Mechanical, hydraulic and electro-motor-driven solutions for opening, closing and adjusting

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1. Overview of furniture applications



Kitchen

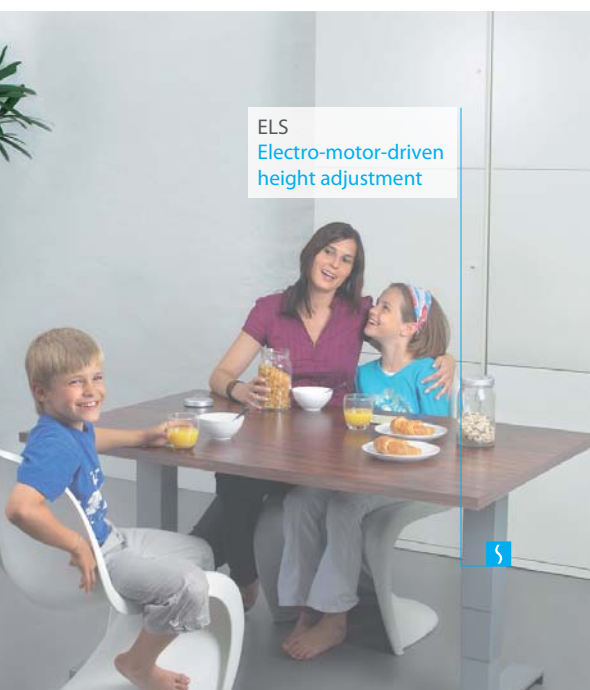
- Height adjustment for dining tables: ELS
- Comfortable opening and closing of hatches: Liftline
- Gentle closing of refrigerator doors: Softline
- Height adjustment of entire kitchen blocks: Movotec
- Height adjustment of bar and kitchen side tables: Varistand





Work

- Ergonomic height adjustment for desks: ELS
- Comfortable opening and closing of hatches: Liftline
- Height adjustment of work banks and work stations: Movotec
- Height adjustment of sit-and-stand tables and desks: Varistand



Living

- Height adjustment for living room and dining tables: ELS
- Comfortable opening and closing of hatches: Liftline
- Adjustment of armchairs, couches and sofas: Varilock
- Simple opening and closing of sofa beds: Liftline
- Height adjustment for one-legged side tables: Varistand
- Opening and adjustment of beds: Liftline

2. Gas springs (Liftline)

Standard gas spring or Soft-Stop-gas spring

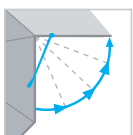


Standard gas springs as well as Soft-Stop gas springs are dampened on extension. After opening the flap slightly (as little as 10 degrees) both gas spring types will automatically lift the flap to the fully open position of approximately 90 degrees unassisted. In order to minimize cupboard vibrations, the speed is controlled over the entire range of opening by using a special hydraulic dampening (extension dampening). By presetting the filling pressure, it is possible to optimize the gas spring to any installation situation.

» Advantages of the Soft-Stop gas spring

- Automatic and noiseless opening function
- Smoothly cushioned movement throughout the entire opening procedure
- Gently slowing down the door / lid as it reaches full extension.

Positioning gas spring



If a furniture flap needs to be used in many different positions, the positioning gas spring may be the right solution. This gas spring supports the load in any position desired by the user. Doors / lids can be positioned infinitely throughout their complete range of motion. By careful adjustment of the pressure during filling, the gas spring can be optimized to the application.

» Advantages of the positioning gas spring

- Counterbalance for loads during the opening function
- The ability to hold or position the door infinitely at any position in it's range of motion

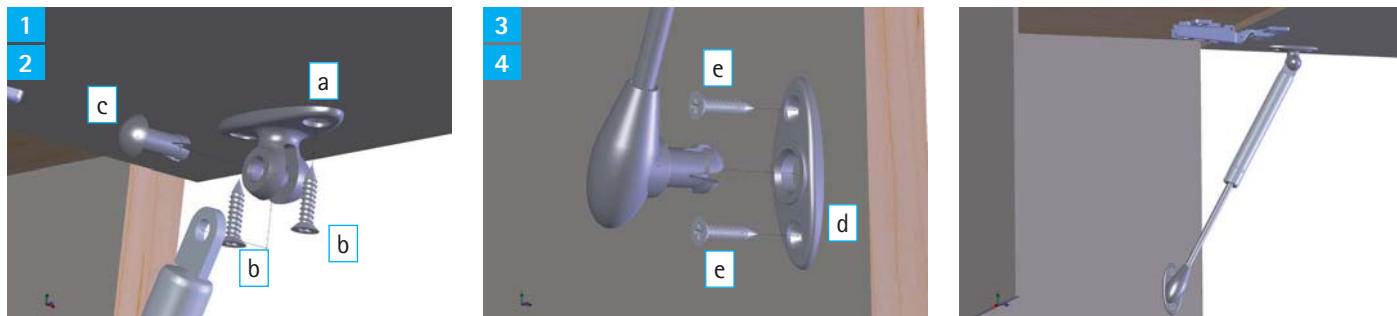
Applications

- Kitchen cabinets
- Adjustable kitchen hoods
- Bathroom cabinets
- Furniture fronts with one or more flaps
- Shoe cupboards
- Chests
- Foldout beds
- Adjustable LCD screens and monitors
- Components for complex furniture hinges
- Foldout seating banks
- Sofa bed combinations



2.1 Gas springs (Liftline): Assembly and installation

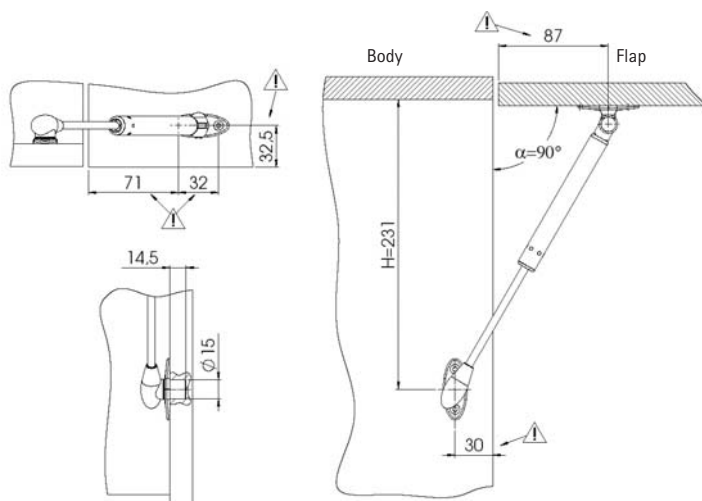
Assembly instructions



- 1 Fit attachment **a** to the hatch using screws **b**
- 2 Attach the gas spring on the pipe side to the attachment **a** and secure with pin **c**
- 3 Fit attachment **d** to the body using screws **e**
- 4 Snap the gas spring on the piston rod side to the attachment **d**

Installation recommendation

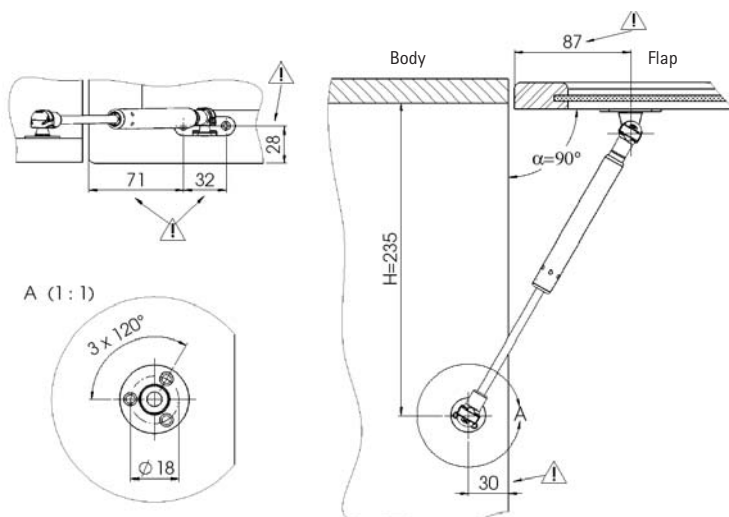
For flaps made of MDF or chipboard with 18 mm wall thickness



When complying with the relevant fixed dimension , an opening angle of $\alpha = 90^\circ$ at an interval of $H=231$ mm (9.09 in) result.

The right gas spring for this installation can be found on Page 8 (Quickship program) or Page 10 (Individual program).

For glass fronts (4 mm glass thickness) with metal / aluminium frame



When complying with the relevant fixed dimension , an opening angle of $\alpha = 90^\circ$ at an interval of $H=235$ mm (9.25 in) result.

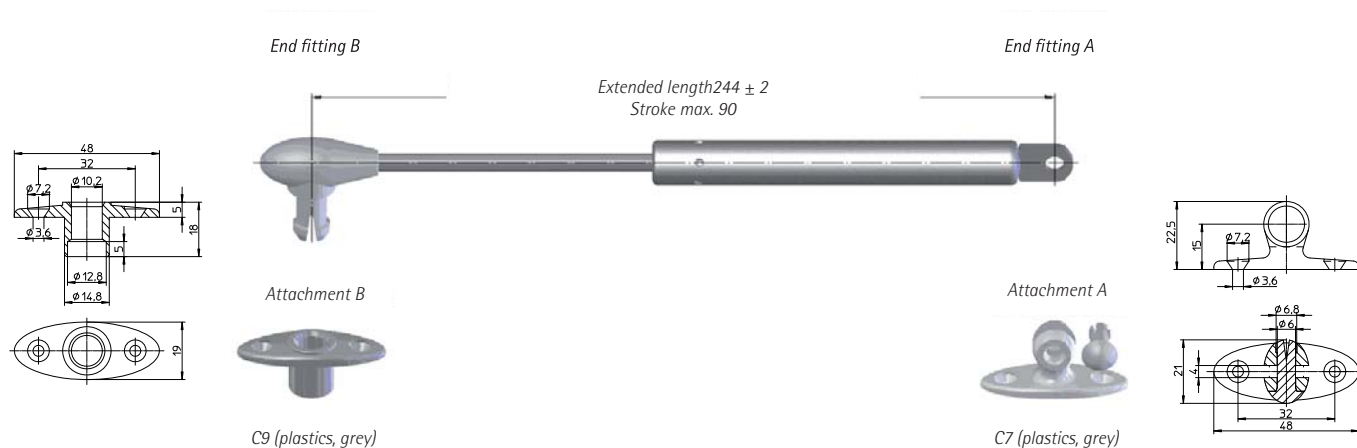
The right gas spring for this installation can be found on Page 9 (Quickship program) or Page 11 (Individual program).

All information in mm. 25.4 mm = 1 in.

The illustrations are suggestions of installations. In individual cases, installation situations can occur which deviate from our suggestion. In this case, we recommend that you seek competent and individual consultation from an SUSPA employee or distributor.

2.2 Gas springs (Liftline): Quickship program

Furniture gas spring for flaps made of MDF or chipboard with 18 mm wall thickness



All information in mm, 25.4 mm = 1 in., standard color of gas spring is white aluminium, subject to changes.

Choose your desired gas spring (standard, soft-stop or positioning) depending on the height, breadth and weight of your flap by using the following selection tables:

1. Standard gas spring or Soft-Stop gas spring

Flap-height [mm]	Flap-width 450 mm (17.7 in)					Flap-width 600 mm (23.6 in)				
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number		Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	
				Standard	Soft-Stop				Standard	Soft-Stop
300-350	1.6 - 1.8	1	80	S01625513	S01625521	2.1 - 2.5	1	80	S01625513	S01625521
351-400	1.8 - 2.1	1	80	S01625513	S01625521	2.5 - 2.8	2	50	S01625512	S01625520
401-450	2.1 - 2.4	2	50	S01625512	S01625520	2.8 - 3.2	2	80	S01625513	S01625521
451-500	2.4 - 2.6	2	80	S01625513	S01625521	3.2 - 3.5	2	80	S01625513	S01625521
501-550	2.6 - 2.9	2	80	S01625513	S01625521	3.5 - 3.9	2	100	S01625514	S01625522
551-600	2.9 - 3.2	2	100	S01625514	S01625522	3.9 - 4.2	2	120	S01625515	S01625523

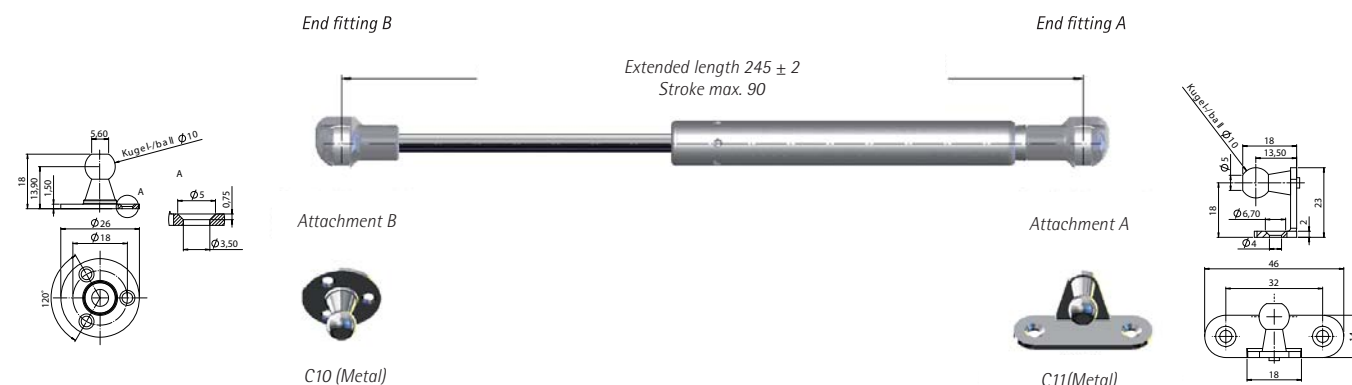
Flap-height [mm]	Flap-width 900 mm (35.4 in)					Flap-width 1,200 mm (47.2 in)				
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number		Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	
				Standard	Soft-Stop				Standard	Soft-Stop
300-350	3.2 - 3.7	2	80	S01625513	S01625521	4.2 - 4.9	2	80	S01625513	S01625521
351-400	3.7 - 4.2	2	80	S01625513	S01625521	4.9 - 5.6	2	100	S01625514	S01625522
401-450	4.2 - 4.7	2	100	S01625514	S01625522	5.7 - 6.4	2	120	S01625515	S01625523
451-500	4.7 - 5.3	2	120	S01625515	S01625523	-	-	-	-	-

2. Positioning gas spring

Flap-height [mm]	Flap-width 450 mm (17.7 in)				Flap-width 600 mm (23.6 in)				Flap-width 900 mm (35.4 in)				Flap-width 1,200 mm (47.2 in)			
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number
300-350	1.6 - 1.8	1	45	S01625528	2.1 - 2.5	1	60	S01625529	3.2 - 3.7	1	90	S01625530	4.2 - 4.9	2	60	S01625529
351-400	1.8 - 2.1	1	45	S01625528	2.5 - 2.8	1	60	S01625529	3.7 - 4.2	2	45	S01625528	4.9 - 5.6	2	60	S01625529
401-450	2.1 - 2.4	1	60	S01625529	2.8 - 3.2	2	45	S01625528	4.2 - 4.7	2	60	S01625529	5.6 - 6.3	2	90	S01625530
451-500	2.4 - 2.6	2	45	S01625528	3.2 - 3.5	2	60	S01625529	4.7 - 5.3	2	60	S01625529	-	-	-	-
501-550	2.6 - 2.9	2	60	S01625529	3.5 - 3.9	2	60	S01625529	5.3 - 5.8	2	90	S01625530	-	-	-	-

The stated values in the selection tables are recommendations for MDF or chipboard panels with an 18 mm wall thickness. 25.4 mm = 1 in. 0.453kg = 1 lb.

Furniture gas spring for glass fronts (4 mm glass thickness) with metal / aluminium frame



All information in mm, 25.4 mm = 1 in., standard color of gas spring is white aluminium, subject to changes.

Choose your desired gas spring (standard, soft-stop or positioning) depending on the height, breadth and weight of your flap by using the following selection tables:

1. Standard gas spring or Soft-Stop gas spring

Flap-height [mm]	Flap-width 450 mm (17.7 in)					Flap-width 600 mm (23.6 in)				
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number		Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	
				Standard	Soft-Stop				Standard	Soft-Stop
300-350	1.6 - 1.8	1	80	S01625517	S01625525	2.1 - 2.5	1	80	S01625517	S01625525
351-400	1.8 - 2.1	1	80	S01625517	S01625525	2.5 - 2.8	2	50	S01625516	S01625524
401-450	2.1 - 2.4	2	50	S01625516	S01625524	2.8 - 3.2	2	80	S01625517	S01625525
451-500	2.4 - 2.6	2	80	S01625517	S01625525	3.2 - 3.5	2	80	S01625517	S01625525
501-550	2.6 - 2.9	2	80	S01625517	S01625525	3.5 - 3.9	2	100	S01625518	S01625526
551-600	2.9 - 3.2	2	100	S01625518	S01625526	3.9 - 4.2	2	120	S01625519	S01625527

Flap-height [mm]	Flap-width 900 mm (35.4 in)					Flap-width 1,200 mm (47.2 in)				
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number		Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	
				Standard	Soft-Stop				Standard	Soft-Stop
300-350	3.2 - 3.7	2	80	S01625517	S01625525	4.2 - 4.9	2	80	S01625517	S01625525
351-400	3.7 - 4.2	2	80	S01625517	S01625525	4.9 - 5.6	2	100	S01625518	S01625526
401-450	4.2 - 4.7	2	100	S01625518	S01625526	5.7 - 6.4	2	120	S01625519	S01625527
451-500	4.7 - 5.3	2	120	S01625519	S01625527	-	-	-	-	-

2. Positioning gas spring

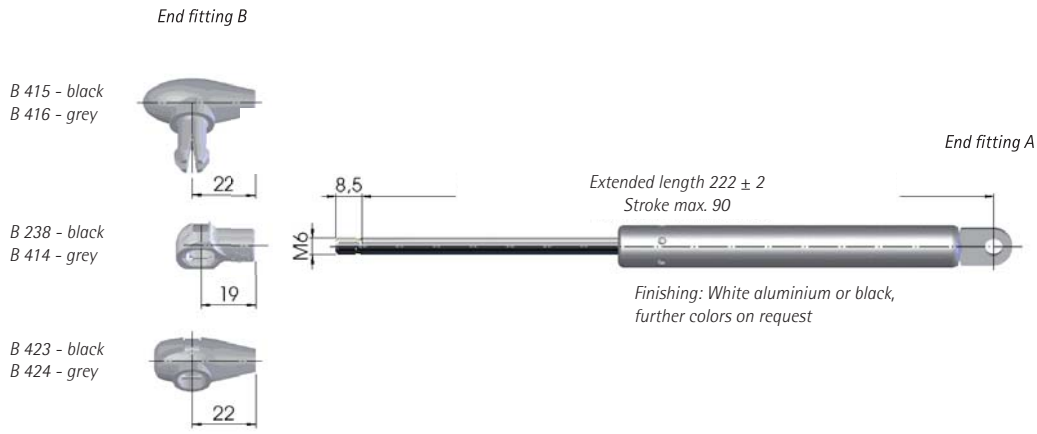
Flap-height [mm]	Flap-width 450 mm (17.7 in)				Flap-width 600 mm (23.6 in)				Flap-width 900 mm (35.4 in)				Flap-width 1,200 mm (47.2 in)			
	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number	Flap-weight [kg]	Number of gas springs	Force [N]	Ordering number
300-350	1.6 - 1.8	1	45	S01625531	2.1 - 2.5	1	60	S01625532	3.2 - 3.7	1	90	S01625533	4.2 - 4.9	2	60	S01625532
351-400	1.8 - 2.1	1	45	S01625531	2.5 - 2.8	1	60	S01625532	3.7 - 4.2	2	45	S01625531	4.9 - 5.6	2	60	S01625532
401-450	2.1 - 2.4	1	60	S01625532	2.8 - 3.2	2	45	S01625531	4.2 - 4.7	2	60	S01625532	5.6 - 6.3	2	90	S01625533
451-500	2.4 - 2.6	2	45	S01625531	3.2 - 3.5	2	60	S01625532	4.7 - 5.3	2	60	S01625532	-	-	-	-
501-550	2.6 - 2.9	2	60	S01625532	3.5 - 3.9	2	60	S01625532	5.3 - 5.8	2	90	S01625533	-	-	-	-

The stated values in the selection tables are recommendations for glass fronts (4 mm glass thickness) with metal / aluminium frame. 25.4 mm = 1 in. 0.453kg = 1 lb.

2.3 Gas springs (Liftline): Individual program

Furniture gas spring for flaps made of MDF or chipboard with 18 mm wall thickness

Gas spring configuration and selection of end fittings



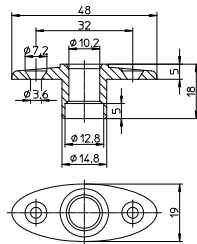
All information in mm.
25.4 mm = 1 in.
Subject to changes.

Selection of attachments

Attachment piston rod side (body):

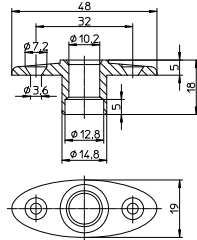
C9 (Plastics, grey)

Ordering no. S06210024



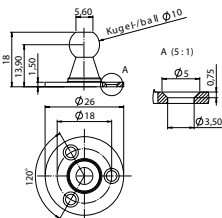
C8 (Plastics, black)

Ordering no. S06210007



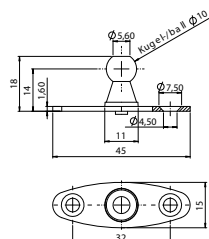
C10 (Metal)

Ordering no. S06710163



C14 (Metal)

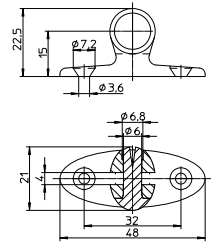
Ordering no. S06710167



Attachment pipe side (flap):

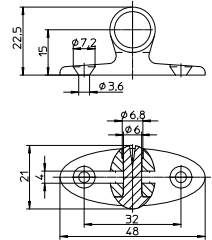
C7 (Plastics, grey, consistend with C9)

Ordering no. S06210025 (Attachment)
S06210026 (Pin)



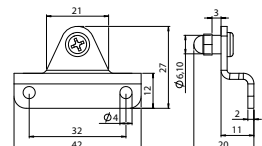
C6 (Plastics, black, consistend with C8)

Ordering no. S06210008 (Attachment)
S06210009 (Pin)



C13 (Metal)

Ordering no. S15810014



Determine the force of the gas spring depending on height, breadth and weight of the flap.
Use the selection tables on Page 8. All information in mm. 25.4 mm = 1 in. Subject to changes.

Furniture gas spring for glass fronts (4 mm glass thickness) with metal / aluminium frame

Gas spring configuration and selection of end fittings



All information in mm
25.4 mm = 1 in.
Subject to changes.

Selection of attachments

Attachment piston rod side (body):

C10 (Metal)
Ordering no. S06710163

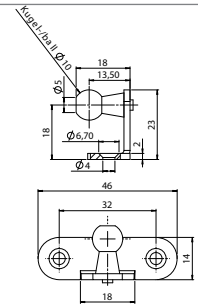


C14 (Metal)
Ordering no. S06710167

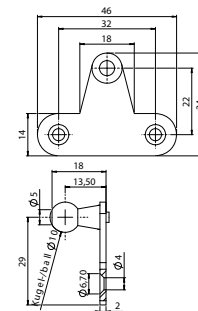


Attachment pipe side (flap):

C11 (Metal)
Ordering no. S06810013



C15 (Metal)
Ordering no. S06710168



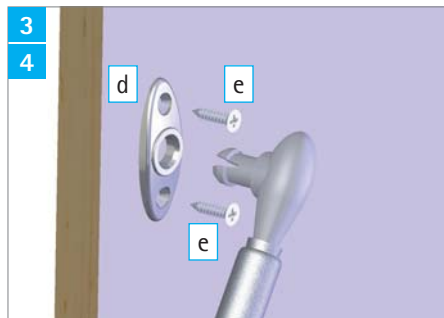
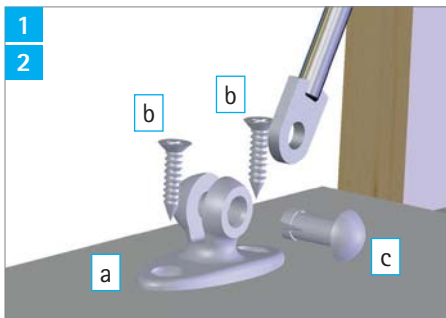
Determine the force of the gas spring depending on height, breadth and weight of the flap.
Use the selection tables on Page 9. All information in mm. 25.4 mm = 1 in. Subject to changes.

3.1 Dampers (Softline): Assembly and configuration

Furniture dampers



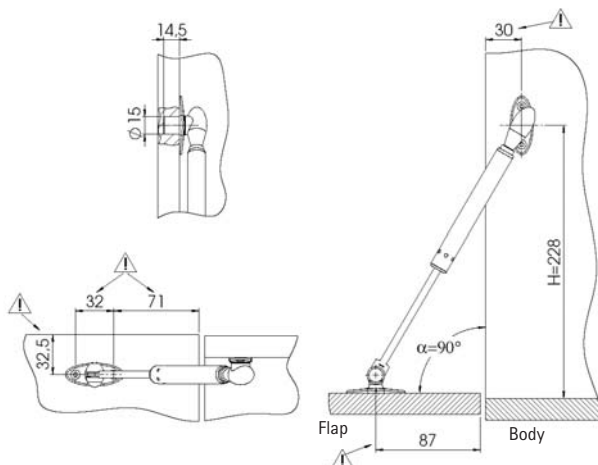
- Independent and noiseless opening of hatches
- Smooth cushioned movement throughout the entire opening procedure
- Gentle stopping and avoidance of force peaks when reaching the end position



- 1 Fit attachment **a** to the hatch using screws **b**
- 2 Attach the damper on the piston rod side to the attachment **a** and secure with pin **c**
- 3 Fit attachment **d** to the body using screws **e**
- 4 Snap the damper on the pipe side to the attachment **d**

Installation recommendation

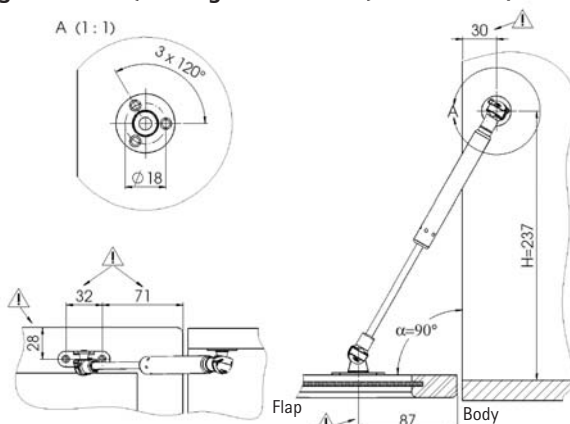
For flaps made of MDF or chipboard with 18 mm wall thickness



When complying with the relevant fixed dimension \triangle , an opening angle of $\alpha = 90^\circ$ at an interval of $H=228$ mm (8.98 in) result.

The right damper for this installation can be found on Page 13.

For glass fronts (4 mm glass thickness) with metal / aluminium frame



When complying with the relevant fixed dimension \triangle , an opening angle of $\alpha = 90^\circ$ at an interval of $H=237$ mm (9.33 in) result.

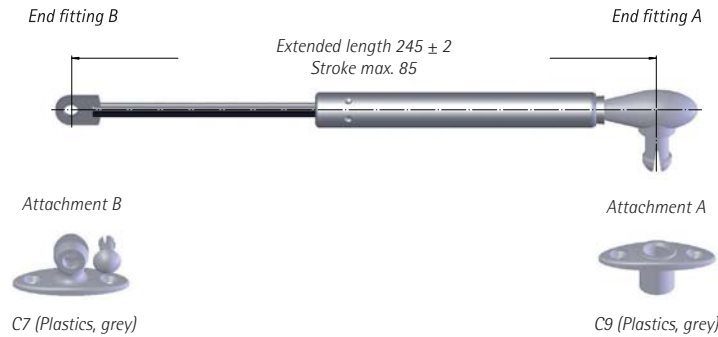
The right damper for this installation can be found on Page 13.

*All information in mm. 25.4 mm = 1 in.
The illustrations are suggestions of installations. In individual cases, installation situations can occur which deviate from our suggestion. In this case, we recommend that you seek competent and individual consultation from an SUSPA employee or distributor.*

3.2 Dampers (Softline): Quickship program

Damper for flaps made of MDF or chipboard with 18 mm wall thickness

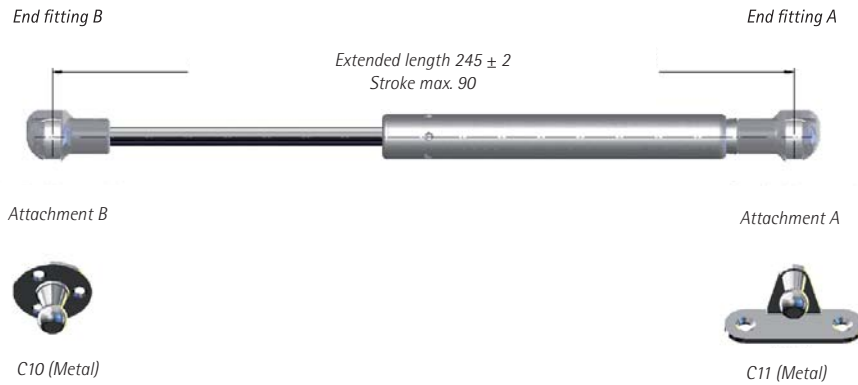
Ordering number: S01110478



All information in mm, 25.4 mm = 1 in., standard color of gas spring is white aluminium, subject to changes.

Damper for glass fronts (4 mm glass thickness) with metal / aluminium frame

Ordering number: S01110479



All information in mm, 25.4 mm = 1 in., standard color of gas spring is white aluminium, subject to changes.

3.3 Dampers (Softline): Individual program

We also offer an Individual program for dampers. Choose from a multitude of end fittings and attachments (see Pages 10 and 11). As with the individual program for gas springs, dampers are also supplied in white aluminium or black. Other colors are available on request.

4. Lockable gas springs (Varilock)

Applications in the furniture industry

Home furniture

- Positioning of chairs and of individual sections of beds
- Head support, backrest and leg support for armchairs
- Height adjustment for bedside tables/over-bed tables
- Complete, ready-to-install column for height adjustment of tables

Office furniture

- Height adjustment for podiums
- Height of keyboard support
- Audio / Visual carts
- Portable workstations
- Computer carts

School furniture

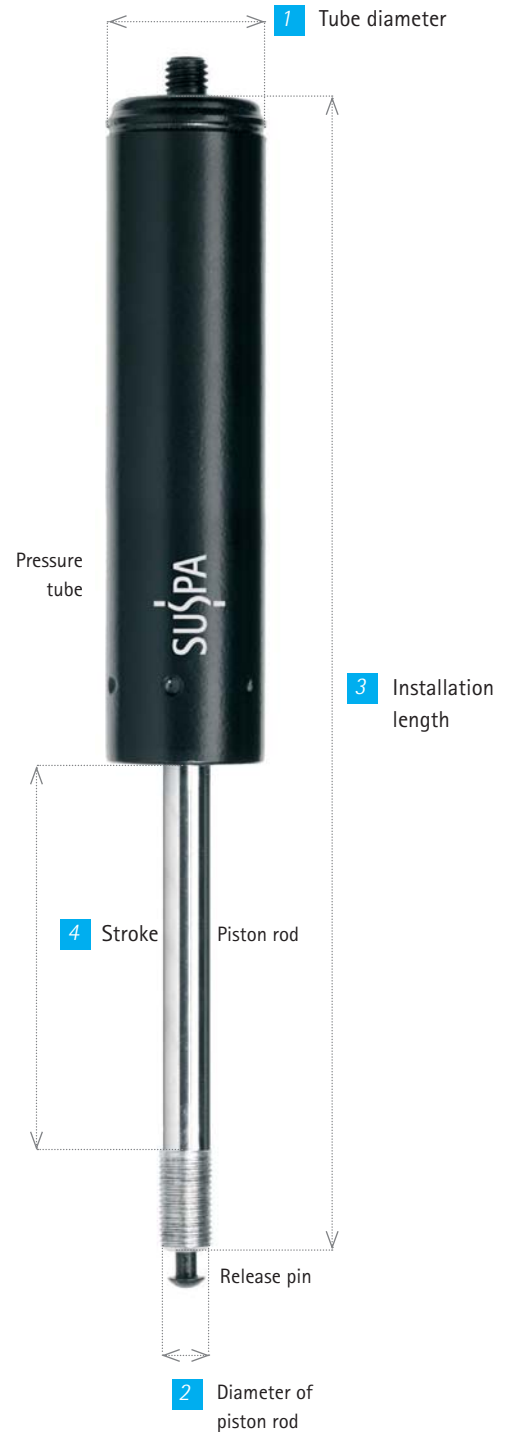
- Height of chairs and podiums for teachers and students
- Adjustment of tabletop tilting
- Audio / Visual carts
- Computer carts

Type of locking

Rigid locking in extension (VARILOCK HY1 and HY3) is used when a cushioning effect in the locking position is not desired – for example, for safety reasons. Rigid locking in compression (VARILOCK HY4, HY6, VOB18-1 and VOB18-3) is recommended for light weight applications that are subject to high compression forces when locked and require no movement. The VOB18-1, VOB18-3 and HY6 are ideal for applications that require a short installation length and a large stroke. Elastic-locking gas springs VARILOCK, EL1, EL2, VOB24 and VOB28 are recommended when the locking feature is required to have a cushioning effect. Sudden jolted loads can thus be dampened or even completely avoided. This type of gas springs should be mounted with the piston rod pointing downwards. The VARILOCK, VOB24 and VOB28 are both suitable for applications where the release mechanism is installed at the upper mounting point.

Forces

The gas spring's extension force depends on the filling pressure. When the VARILOCK is being manufactured, the force is set at the nominal value F1 and remains unchanged over the service life of the gas spring. The locking feature is released when the VARILOCK's valve is opened. This is a result of the user activating the release mechanism which compresses on the release pin. Once the user lets off the control mechanism, the internal gas pressure causes the valve to close automatically. The activation force and the valve closing force both depend on the filling pressure of the gas spring and are proportional to the VARILOCK's extension force.



1	Tube diameter:	22 mm (0.866 in) 24 mm (0.945 in) (only VOB) 28 mm (1.102 in)
2	Diameter of piston rod:	8 mm or 10 mm (0.315 in or 0.394 in)
3	Installation length:	Depends on stroke
4	Stroke:	10 mm to 450 mm (0.394 in to 17.717 in)

End fittings

SUSPA supplies a wide variety of connections and end fittings to ensure that the VARILOCK will be easily integrated into your application.



Bowden cables, buttons and levers

SUSPA can supply a wide variety of Bowden cables in various lengths and designs. They can be operated by means of levers and/or buttons. Cables can be manufactured based on your specifications of: Length, color, fittings, diameter, low friction casing, cables and adjustment elements.

Bowden cables manufactured to meet customers needs.



Release systems

The valve in a locking gas spring is actuated via the release pin. To ensure successful compatibility with your application, SUSPA has developed a wide range of release systems. These include levers, cable releases and push-buttons, that can be matched to each application.

Release heads:



Buttons with various finishes:



Metal levers:



Bowden cable with plastic lever:



5.1 Height adjustment system: Pneumatic (Varistand)

Varistand: The ready-to-install, height-adjustable table column

The Varistand table column is a professional, sophisticated and design-orientated complete solution for table / cart applications. It is characterised in particular by its ease of use and plug & play assembly. Varistand offers high-quality and comfortable height adjustment.

Highlights

- Elegant design
- Precise, quiet guide system
- Rigid / elastic locking in any position
- Constant force, independent of position
- Non-rotational column
- Large adjustment range despite short installation length
- Quick and easy to adjust
- Plug & Play assembly
- Override-function: tabletop can be lifted without activating the release (optional)

Applications

Varistand can be used as a ready-to-install and color-matched height adjustment system in hospitals and care homes. Set up your office according to the latest ergonomic expertise in modern design. Make your classroom more flexible with height-adjustable desks. Or transform your restaurant into a stand-up café in the morning or a relaxing lounge in the evening. It is also perfect for computer carts and AV carts.



Photo: Ronald Schmitt, Tische

Specifications Varistand

Features	Values
Diameter	75 / 70 mm (2.95 / 2.85 in)
Stroke	max. 450 mm (17.7 in)
Length when compressed ($L_{\text{compressed}}$)	Stroke + 166 mm (6.5 in)
Length when extended (L_{extended})	$L_{\text{compressed}}$ + Hub (max. 1065 mm, 42.0 in)
Stroke force	From 70 N (16 lbs) onwards, according to weight of tabletop or application
Surface finishing	Chrome plated, powder-coated (RAL colors)
Activation/release	Lever, button, foot release
Tabletop fitting	Flange adapter (with 12 drillholes, distance 32 mm, 1.26 in)
Base fitting	Flange or tapered cone adapter
Non-rotation function	standard
Override-function	optional

Further types on request.

Varistand Quickship program

Features	Ordering number			
	VS-QS-C-L	VS-QS-C-S	VS-QS-B-L	VS-QS-B-S
Diameter [mm] ([in])	75 / 70 (2.95 / 2.85)	75 / 70 (2.95 / 2.85)	75 / 70 (2.95 / 2.85)	75 / 70 (2.95 / 2.85)
Stroke [mm] ([in])	436 (17.2)	225 (8.9)	436 (17.2)	225 (8.9)
Length when compressed [mm] ([in])	603 (23.7)	436 (17.2)	603 (23.7)	436 (17.2)
Length when extended [mm] ([in])	1,039 (40.9)	661 (26.0)	1,039 (40.9)	661 (26.0)
Stroke force [N] ([lbs])	70-400 (16-90)	70-400 (16-90)	70-400 (16-90)	70-400 (16-90)
Surface finishing	Chrome	Chrome	RAL 9005	RAL 9005
Activation/release	Lever	Lever	Lever	Lever
Tabletop fitting	Flange adapter	Flange adapter	Flange adapter	Flange adapter
Base fitting	tapered cone adapter	tapered cone adapter	tapered cone adapter	tapered cone adapter
Non-rotation function	standard	standard	standard	standard
Override-function	none	none	none	none

Minimum: 10 pieces



Varislim: The slim, ready-to-install, height-adjustable table column

Varislim rounds off the benefits of the Varistand through slim design and numerous implementation possibilities. The slim, yet stable design of Varislim allows additional surfaces to be mounted.

Highlights

- Slim design
- Non-rotational column
- Multifunctional application
- Rigid locking in any position
- Large adjustment range
- Plug & Play assembly
- Override-function: tabletop can be raised without activating the release (optional)

Applications

- Office and coffee tables
- Bistro tables
- Standing desks
- Sit-and-stand tables
- Laptop tables
- Motor home interiors
- Flipchartholder

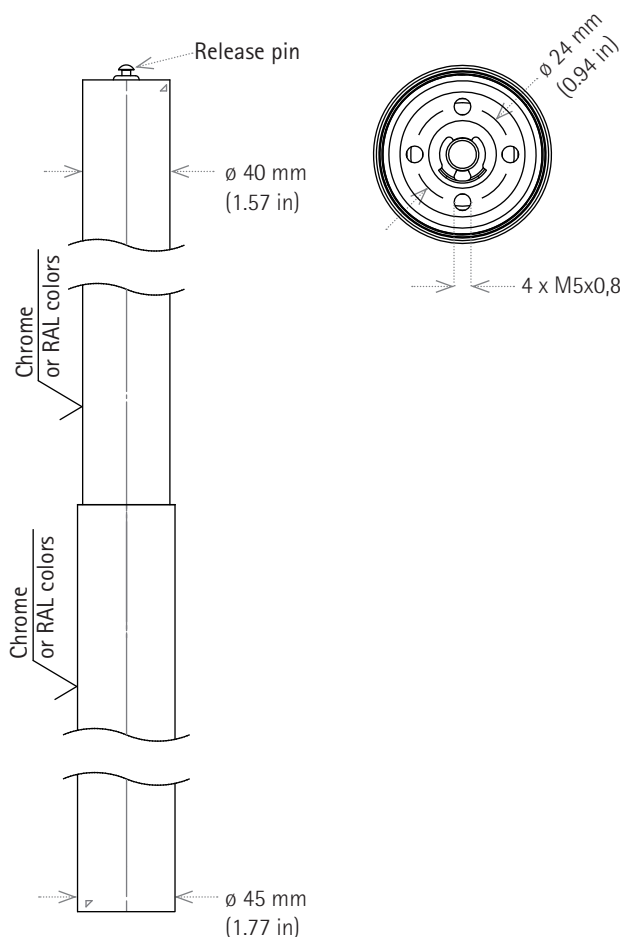


Photo: Ronald Schmitt Tische

Specifications Varislim

Features	Values
Diameter	45 / 40 mm (1.77 / 1.57 in)
Stroke	100 - 400 mm (3.94 - 15.7 in)
Length when compressed ($L_{\text{compressed}}$)	Stroke + 155 mm (6.1 in)
Length when extended (L_{extended})	$L_{\text{compressed}}$ + Hub (max. 1065 mm, 42.0 in)
Stroke force	From 70 N (16 lbs) put in max, tunable according to weight of tabletop or application
Surface finishing	Chrome plated, powder-coated (RAL colors)
Activation/release	Lever, button, foot release
Tabletop fitting	Depending on activation / release
Base fitting	See drawing (right)
Non-rotation function	standard
OverRide-function	optional

Further types on request.



5.2 Height adjustment system: Hydraulic (Movotec)

General system description

The Movotec system is made up of cylinders and a pump, which are driven using a hand crank or an electronic motor. The drive generated through this causes the oil to flow from the pump into the cylinders or from the cylinders back into the pump. This makes the cylinders move in and out of the specified adjustment range (stroke).

The Movotec product range is made up of the following system variations:

1. Bolt-on System

The Bolt-on System is supplied as a retrofit kit. Every customer can make his existing tables height adjustable by upgrading them with the Bolt-on System.

2. Corner Leg System (System with ready-to-install corner legs)

The Corner Leg system is supplied with ready-to-install corner legs made of standard aluminium profiles. The customer is thus able to put together his individual height-adjustable table with the supplied ready-to-install corner legs.

3. ATU System (Table Adjustment System)

The ATU system (Aluminium Telescopic Unit) is a complete table adjustment system based on two legs (without table top). For further details, please see page 20 and 21.



Properties

- Selection of preconfigured solutions (see order numbers) or individual solutions
- Exceptionally comfortable – upon request also display controlled – operation with electronic motor drives
- Comfortable manual height adjustment for hand crank operation, since only a small amount of power is required
- Synchronised height adjustment for up to eight legs possible
- Height adjustment for heavy loads possible (up to more than 900 kg)
- Simple assembly and intuitive operation
- Extensive and self-explanatory delivery packages with accessory kits and documentation



Applications

- Lifting workbenches, joiner's benches and assembly tables
- Adjusting the height of individual and group workstations (e.g. office desks, CAD work stations, sewing and craft tables, sink units in catering establishments, packing tables, etc.)
- Lifting and lowering sales and service installations in wholesale and retail, in museums, in the catering and the hotel industry (e.g. cash desks, counters, check-in desks, etc.)
- Height adjustment for kitchen blocks, sinks, work surfaces and other kitchen installations
- Entry and exit aids for people of various sizes, elderly persons and disabled persons (e.g. height adjustment of bathtubs)
- Comfortable and safe lifting and lowering of patients (e.g. therapy tables, operating tables, massage tables, etc.)

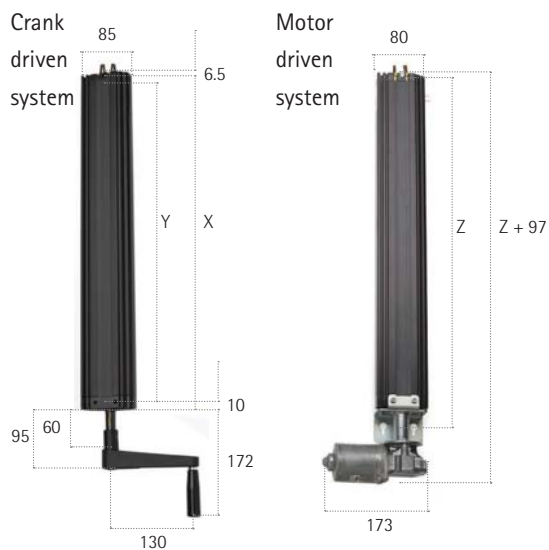
Quickship program for 4-leg-tables

	System Lift Capacity (lbs. / kg)	Adjustment Range (mm)	CB „Bolt-On“ Cylinder		Crank driven system			Motor driven system	
			A (mm)	B (mm)	X [mm]	Y [mm]	Ordering number	Z [mm]	Ordering number
Bolt-On	750 / 340	155	258.5	165	344.5	328.5	MQS-00001	375	MQS-00008E
	750 / 340	195	333.5	240	404.5	388.5	MQS-00002	435	MQS-00009E
	750 / 340	300	463.5	340	586.5	570.5	MQS-00003	617	MQS-00010E
	750 / 340	400	558.5	340	714.5	698.5	MQS-00004	745	MQS-00011E
	1000 / 454	150	258.5	165	404.5	388.5	MQS-00005	435	MQS-00012E
	1000 / 454	230	463.5	340	586.5	570.5	MQS-00006	617	MQS-00013E
	1000 / 454	305	463.5	340	714.5	698.5	MQS-00007	745	MQS-00014E
Corner Leg	750 / 340	155	-	-	344.5	328.5	MSY-03856	375	MSY-04390
	750 / 340	195	-	-	404.5	388.5	MSY-03857	435	MSY-04391
	750 / 340	300	-	-	586.5	570.5	MSY-03858	617	MSY-04392
	750 / 340	400	-	-	714.5	698.5	MSY-03859	745	MSY-04393

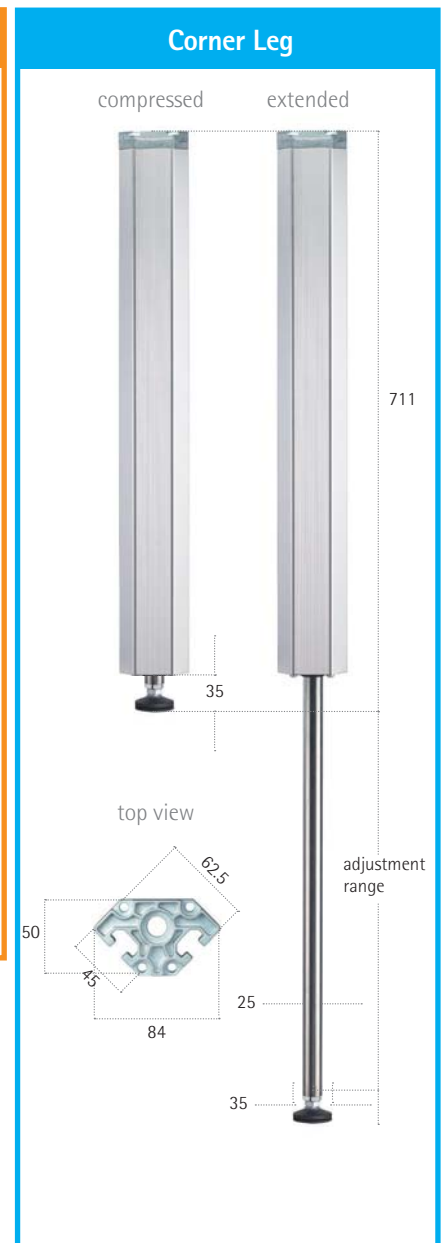
Individual program

Configure your Movotec system to your individual needs. Please follow these four steps:

1. Specify the number of cylinders (=number of legs and columns)
2. Specify the weight of the load that has to be moved
3. Define the adjustment range (stroke)
4. Define the operating mode (hand crank or switch with electronic motor)



All dimensions in mm. 0,453kg = 1 Lb. / 25,4mm = 1in.



5.2 Height adjustment system: Hydraulic (Movotec - ATU)

ATU Table Adjustment System

With the ATU (Aluminium Telescopic Unit) table adjustment system you can build your individual height-adjustable 2-leg table. You can order all the necessary frame and accessory parts, except for the table top.

The ATU table adjustment system is modular and is made up of two components:

- 1. Movotec system** (electronic motor or hand crank) with two aluminium profiles as table legs (ATU)
- 2. Workstation kit** (cross beam, top bracket, foot bracket, accessory parts)

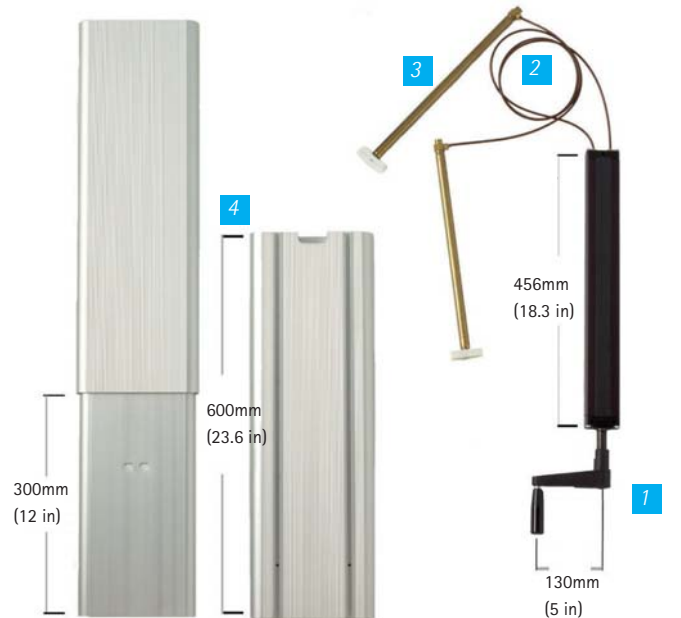


Step 1: Select your Movotec system

Crank Driven System

- 1 Crank driven unit
- 2 Two flexible tubing sections 90 cm and 180 cm (3 ft. and 6 ft.)
- 3 Two lift cylinders with ATU bracket
- 4 Two ATUs (Aluminium profiles as table legs)
- 5 Installation instructions (not shown)

Ordering number	Lift capacity	Adjustment range (stroke)
MSY-04495	226 kg	200 mm (8 in)
MSY-04496	226 kg	300 mm (12 in)



Motor Driven System

- 1 Motor driven unit
- 2 Two flexible tubing sections 90 cm and 180 cm (3 ft. and 6 ft.)
- 3 Two lift cylinders with ATU bracket
- 4 Two ATUs (Aluminium profiles as table legs)
- 5 Controller
- 6 Surface mount switch
- 7 Power cord (not shown)
- 8 Installation instructions (not shown)

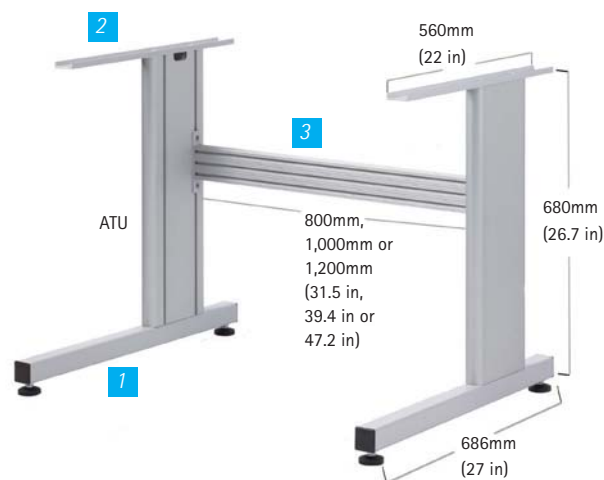
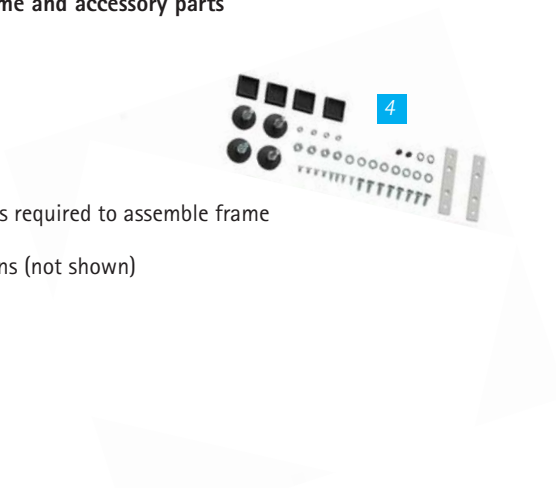
Ordering number	Lift capacity	Adjustment range (stroke)
MSY-04588	226 kg	200 mm (8 in)
MSY-04589	226 kg	300 mm (12 in)



Step 2: Select your workstation kit

Workstation kit with frame and accessory parts

- 1 Two foot brackets
- 2 Two top brackets
- 3 Cross beam
- 4 All fasteners and plugs required to assemble frame
- 5 Installation instructions (not shown)



Select your workstation kit according to your desired table frame length (length of the cross beam):

Ordering number	Length of the cross beam
D44-00033	800 mm (31.5 in)
D44-00034	1,000 mm (39.4 in)
D44-00035	1,200 mm (47.2 in)



Notice:

The construction kit allows the table legs to be attached both centrally on the foot (see bottom left) and as a self-supporting version at the end of the foot (see bottom right).



Table legs centered



Table legs at the end of the foot



5.3 Height adjustment system: E-motor-driven (ELS Office)

Ergonomics in the workplace

The ELS adjustable system for sit-and-stand workplaces allows tables without crossbars to be constructed with the highest level of stability and optimum anti-twist protection. It comprises one or more table legs powered by electronic motors, electronic control and a manual control switch (can be programmed as an option). The drive that is built into the telescopic arm boasts high adjustment speeds with low noise emission. The table legs are available as rounded or square versions. The powder coating is silver-grey as standard, but is also available in other colors upon request.



Sit-to-stand workplace solution

Specifications ELS Office

Features	Values
Material / surface finishing	Steel profile / powder-coated (silver-grey)
Design	Double telescoping
Assembly dimension	570 mm (22.4 in)
Adjustment range (stroke)	660 mm (26 in)
Length extended	1,230 mm (48.4 in)
Adjustment speed	40 mm/sec. (1.5 in/s)
Maximum load	60 kg (132 lbs) per leg, e.g. 2-leg-table: 120 kg (264 lbs)

Further types on request.

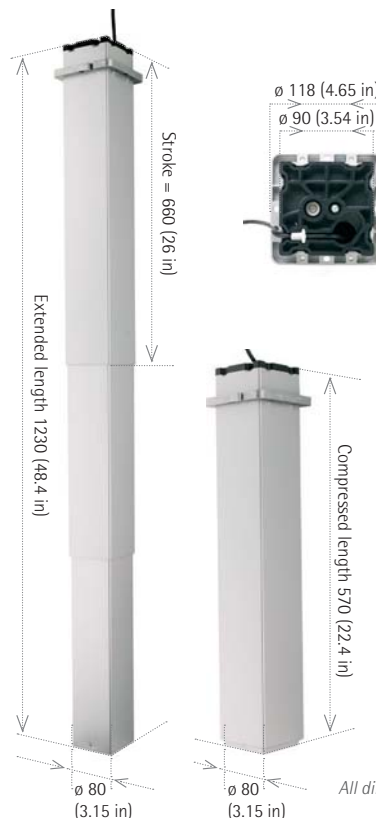
Highlights

- Individual configuration: 1-leg-tables to 4-leg-tables
- Design: round or square
- New anti-rotational guide package
- Maximum adjustment range with a very low compressed height
- Excellent stability
- Plug and play system makes installation simple
- Fast height adjustment
- Low noise level
- Programmable control unit

Round model: ELS 2-R



Square model: ELS 2-S



All dimensions in mm (in).



Height adjustment system: E-motor-driven (ELS Home)

With ELS Home, there is now also an adjustment system for the home. ELS Home offers the opportunity of using a table both as a living room table and a dining table. The electronic adjustment opportunities will turn a low coffee table into a dining table in no time at all. ELS Home is based on the tried and tested ELS Office technology.

Specifications ELS Home

Features	Values
Material / surface finishing	Steel profile / powder-coated (silver-grey)
Design	Double telescoping
Assembly dimension	380 mm (15 in)
Adjustment range (stroke)	292 mm (11.5 in)
Length extended	672 mm (26.5 in)
Adjustment speed	40 mm/sec. (1.5 in/s)
Maximum load	60 kg (132 lbs) per leg, e.g. 2-leg-table: 120 kg (264 lbs)

Further types on request.



From coffee table ...



... to dining table

Control Units and Hand Switches for ELS Office and ELS Home

Control Units

- TA-C1: One column control unit
- TA-C2: Two column control unit
- TA-C3: Three column control unit



- TA-C4: Four column control unit



Hand Switches

- TA-HS1: basic hand switch with Up-and-Down function



- TA-HS2: Deluxe hand switch with digital display and four programmable height settings



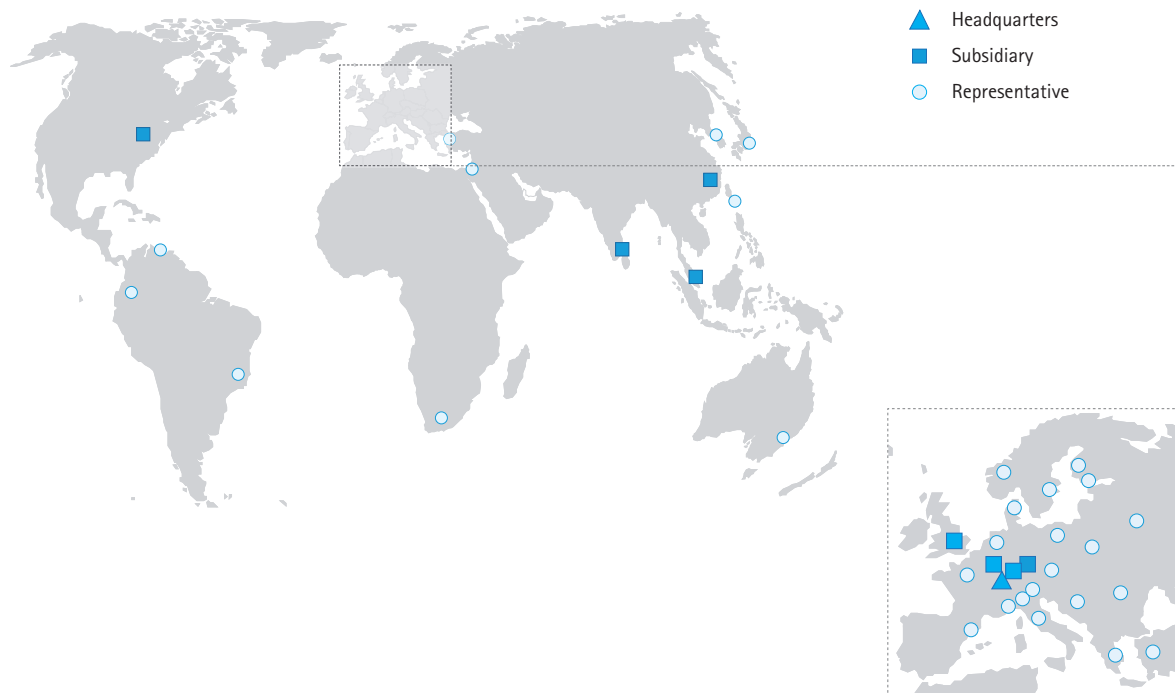
Input voltage: 220-240 VAC (115 VAC available upon request)

Output voltage: 24 V DC

Temperature range: 5 – 60°C (41-140°F)

Safety class: IP20

6. Contact information



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