

Screw jack options

Raised cover CA

Available for MA Series screw jacks, the raised covers with toleranced dimensions act as a centring register, also allow the fitting of bronze guide bushes, protective tubes and bellows. State whether required on top of housing, bottom or both.

With MA Series screw jacks Model B (travelling nut), a raised cover in the down position is recommended to protect the rotating end of the acme thread.

SJ Series screw jacks have raised cover as standard.

Ordering code: raised cover CA and position

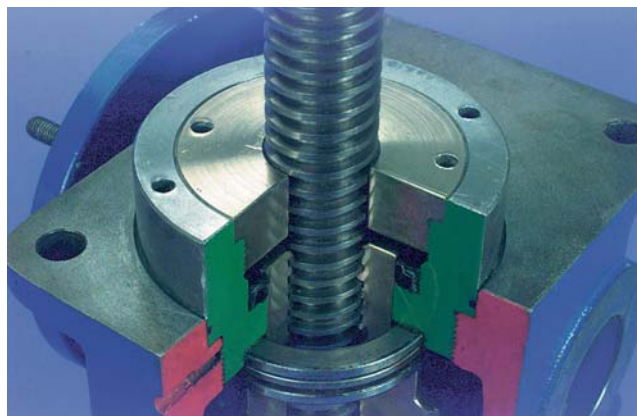


Bronze guide G

Bronze guide bushes are available for MA Series screw jacks. They fit into the raised cover and accept lateral loads from the acme screw. Bronze guides are recommended where the screw is not fully guided and indispensable where the trunnion mount is used.

SJ screw jacks have bronzed guides fitted as standard.

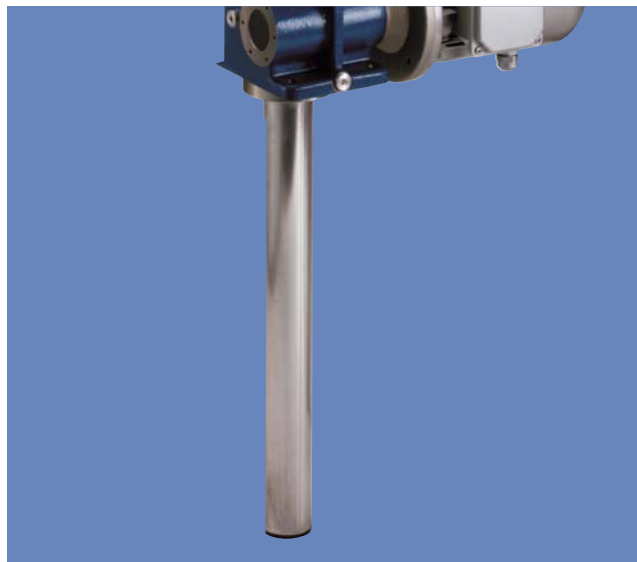
Ordering code: bronze guide G and position



Protective tube T

Available for all travelling screw models, the protective tube encloses the acme screw below the housing. Material is aluminium or steel if anti-turn device is fitted. It connects to the housing by means of a raised cover, and allows the fitting of other options such as limit switches and anti-turn device.

Ordering code: protective tube T

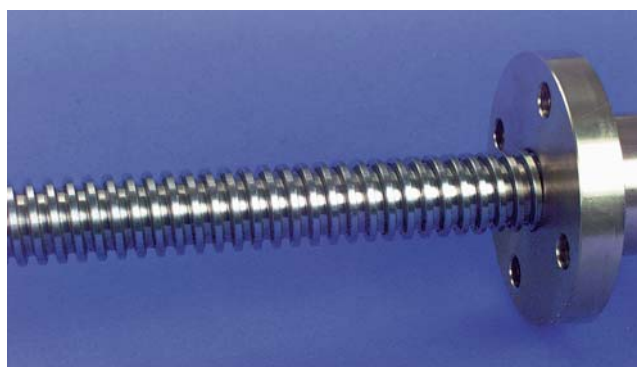


Stainless steel screw SS

Both SJ and MA Series screw jacks can be provided with a stainless steel acme screw for use in arduous environments and food industry applications.

Ordering code: stainless steel SS

When stainless steel screws are specified, we can supply the flange end and rod end in stainless if requested.



Screw jack options

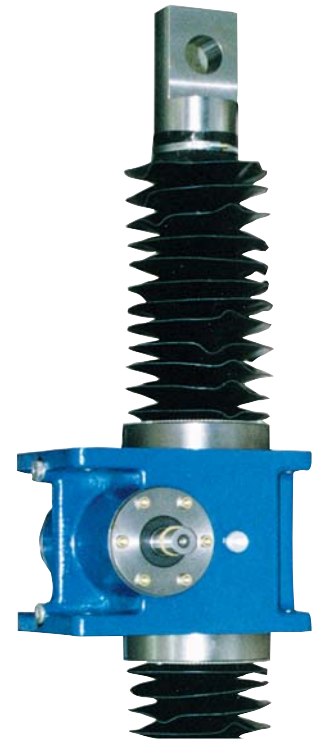
Bellows B

Protective bellows are available to protect the screw from ingress of debris that might cause damage. They are available for both SJ and MA screw jacks.

Standard material is nylon with a PVC coating. A stock range is available at 300, 600 and 1000mm lengths. Other lengths can be manufactured to your requirements. Also other materials are possible.

Note that bellows cause changes to the closed and extended lengths. We will acknowledge orders with a certified drawing giving exact dimensions.

Ordering: order bellows B and supply a sketch of your requirements similar to these examples.

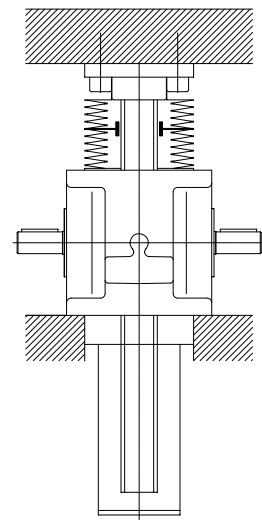
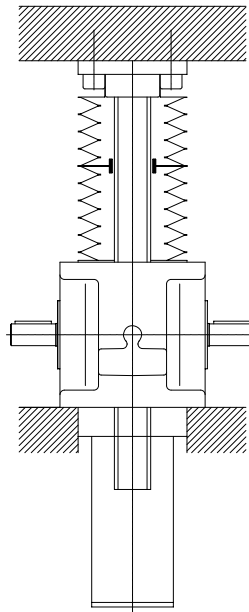


MA screwjack model A with bellows

Screw jacks model A – travelling screw

Usually, bellows are fitted between the acme screw attachment and worm gearbox.

In some cases it may be required to also fit bellows on the opposite side, instead of the protective tube.

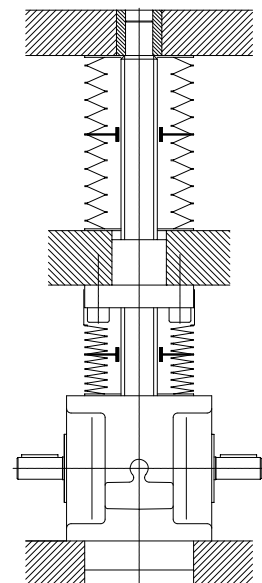
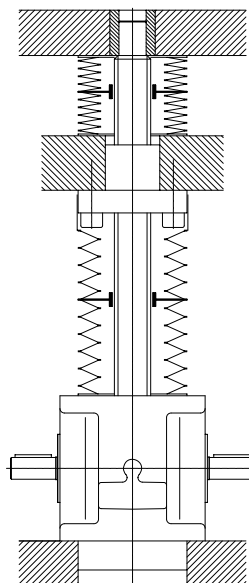


Screw jacks model B – travelling nut

Bellows are normally fitted above and below the nut.

Some applications may require bellows in only one of these two positions.

The method of fixing the upper bellows is dependent on the application.



Safety nuts

Safety nuts are a back-up feature to prevent the load dropping in an uncontrolled manner, in the event of either extreme wear or catastrophic nut failure. Safety nuts for travelling screw models are fitted inside the screw jack housing. Safety travelling nuts for travelling nut screw jacks are an extension to the standard nut and feature a wear indication.

For certain sizes, safety nuts increase the overall height of the screw jack and this should be allowed for.

Safety nuts work with one particular load direction as indicated on these drawings. According to the direction, the safety nuts can be inverted. When ordering, supply a sketch with the direction of forces.

Safety bronze nut for SJ Series model A (travelling screw) MSA

Screw jack size	SJ 10	SJ 25	SJ 50	SJ 80	SJ 200
a	33	40	50	70	95
b	2.5	3	3.5	4.5	6
Ød	30	50	55	70	100
Q	18	31	40	54	90
Øh	42	65	75	90	120

Dimension b (distance between wormwheel and safety nut) reduces with wear to the bronze nut.

Safety travelling nut for SJ Series model B (travelling nut) SBC

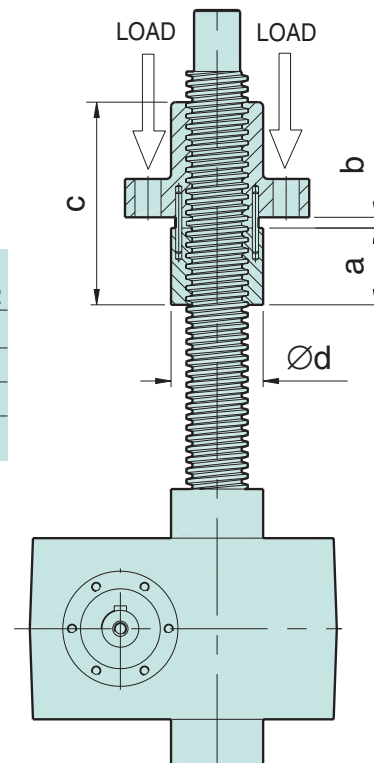
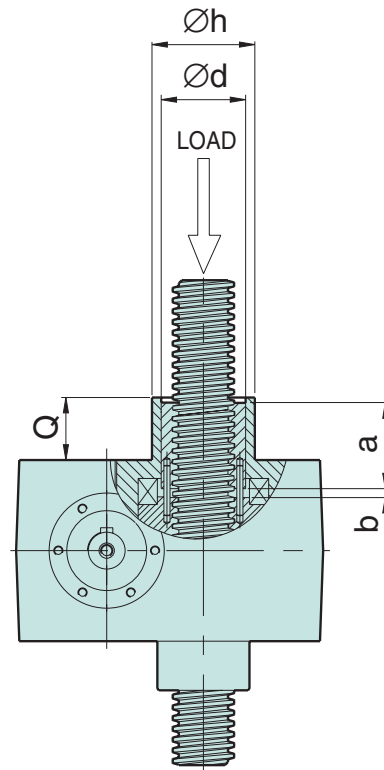
Screw jack size	SJ 5	SJ 10	SJ 25	SJ 50	SJ 80	SJ 200	
						Tr 70 × 12	Tr 80 × 12
a	28	33	35	50	70	95	
b	2	2.5	3	3.5	4.5	6	
c	70	80.5	88	128.5	174.5	231	211
Ød	30	40	50	60	75	100	110

Dimension b (distance between bronze nut MB and safety nut SBC) reduces with wear to the bronze nut.

SJ Series Screw Jacks

Option MSA Safety bronze nut for SJ model A travelling screw, available for sizes 10-80 only.

Option SBC Safety travelling nut with wear indication for SJ model B travelling nut.



Safety nuts

Safety nuts for MA Series screw jacks perform the same functions as described for SJ Series screw jacks. A wear indication is provided and on request limit switches can be fitted.

Safety nuts increase the overall height of the screw jack and this should be allowed for.

Safety nuts work with one particular load direction as indicated in these drawings. According to the direction, the safety nuts can be inverted. When ordering, supply a sketch with the direction of forces.

MA Series Screw Jacks

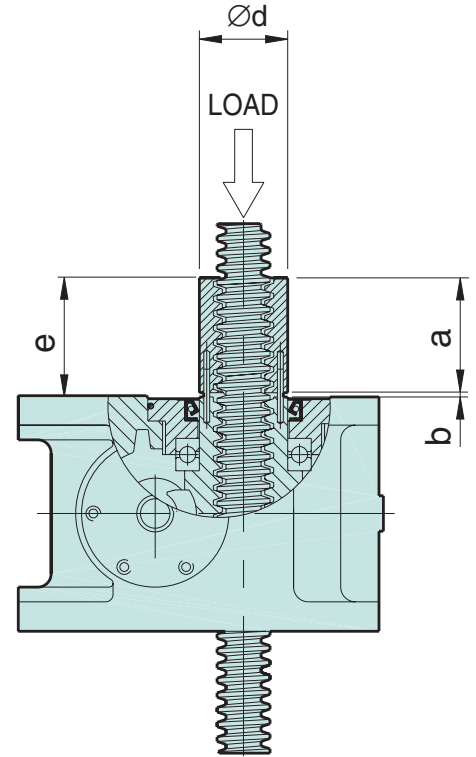
Option MSA *Safety bronze nut with wear indication for MA model A travelling screw.*

Option SBC *Safety travelling nut with wear indication for MA model B travelling nut.*

Safety bronze nut for MA Series model A (travelling screw) **MSA**

Screw jack size	MA5	MA10	MA25	MA50	MA80	MA100	MA200	MA350
a	28	33	35	50	70	70	95	115
b	2	2.5	3	3.5	4.5	6	6	8
Ød	30	35	50	60	70	80	100	140
e	29.5	35	37.5	52.5	73.5	75	100	122

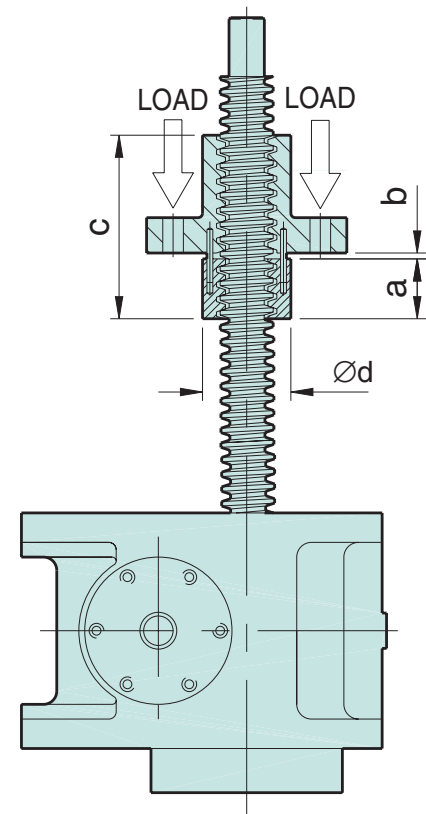
Dimension b (distance between wormwheel and safety nut) reduces with wear to the bronze nut.



Safety travelling nut for MA Series model B (travelling nut) **SBC**

Screw jack size	MA5	MA10	MA25	MA50	MA80	MA100	MA200	MA350
a	28	33	35	50	70	70	95	115
b	2	2.5	3	3.5	4.5	6	6	8
c	70	80.5	88	128.5	174.5	176	231	283
Ød	30	40	50	60	75	80	100	150

Dimension b (distance between bronze nut MB and safety nut SBC) reduces with wear to the bronze nut.



Magnetic limit switches FCM

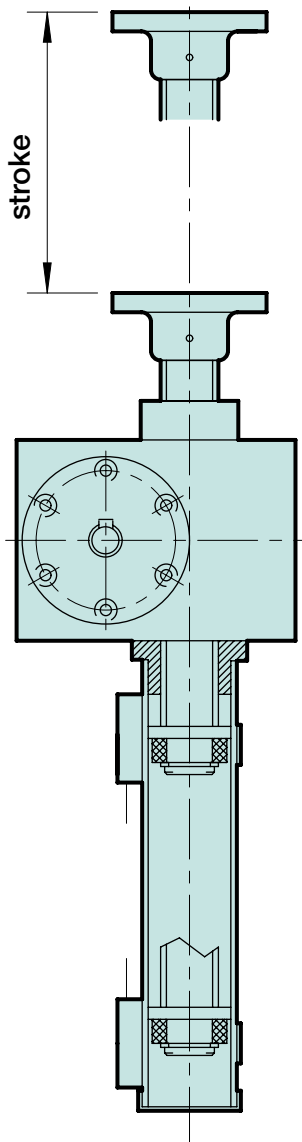
Magnetic stroke limit switches, fitted to the aluminium protective tube, sense a magnetic target ring positioned on the screw. They can be fitted to both SJ and MA Series screw jacks model A (travelling screw) only.

- magnetic reed switches available NC or NO.
- 2 off supplied, also extra switches can be fitted.
- adjustable switch position, set by clamp.
- available up to size 25 only.
- LED indicator fitted.

Operation

When the magnetic ring passes under the switch it changes state. This change of state occurs for a fixed distance called the switching band and then returns to its original state.

When used for stop signalling, the overrun of the screw jack may exceed the switching band of the switch. In this situation it may be necessary to latch the switch signal to ensure the unit continues to stop.



Screw jack options



Stopping accuracy

The accuracy of the stopping position depends on speed, the size and direction of the load, motor characteristics, brakes if present and control circuitry. For advice on a specific application speak to our engineers.

Ordering codes

- 2 off normally closed magnetic switches FCM (NC).
- 2 off normally open magnetic switches FCM (NO).

Technical details

Switch detail	Switch type	
	Normally closed	Normally open
Voltage range ac/dc	3...130V	3...130V
Max. voltage drop	2.5V	2.5V
Switching capacity W/VA	20W/20VA	10W/10VA
Max. switching current @ 25°C	300mA	300mA
Electric life (resistive load 20% of max) Number of operations	1x10 ⁶	1x10 ⁶
Repeatability mm	0.1	0.1
Switch off time ms	1	0.6
Switch on time ms	0.1	0.1
Temperature range °C	-30 to + 80	-30 to +80
Protection	IP67	IP67
Cable length m	2	2

Proximity limit switches FCP

Screw jack options

Limit switches protect the machine and the screw jack from potential damage due to overstroking. They also give a control signal to indicate the cycle is complete.

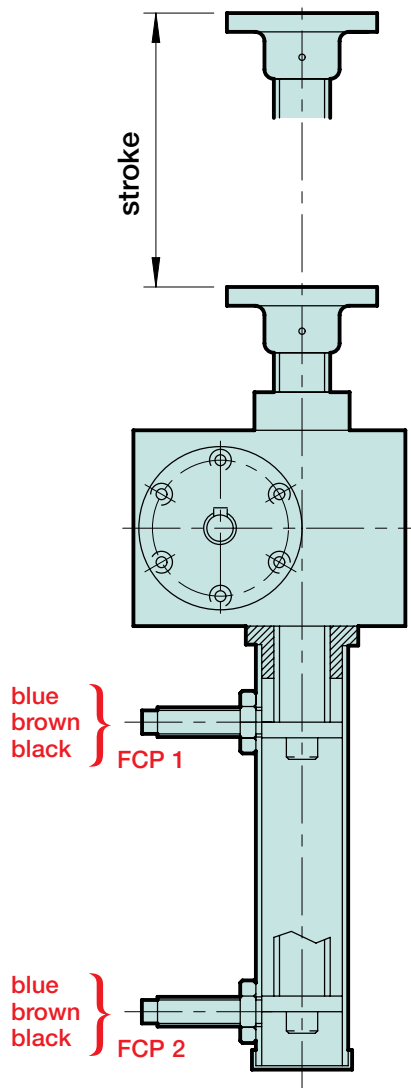
Proximity limit switches are inductive sensors to industrial standard dimensions which detect the movement of a metallic disc inside the protective tube. They can be used with SJ and MA Serie screw jacks Model A (travelling screw) only.

- normally closed PNP non-contacting switches
- 2 off supplied for end of stroke limits
- factory set and non-adjustable
- non-latching
- with LED indicator

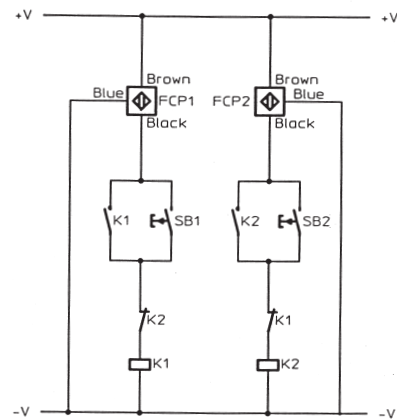
Operation

When the metallic ring passes under the switch, it changes state. This change of state occurs for a fixed distance called the switching band and then returns to its original state.

When used for stop signalling, the overrun of the screw jack may exceed the switching band of the switch. In this situation it may be necessary to latch the switch signal to ensure the unit continues to stop.



CONTROL CIRCUIT



Ordering codes

2 off proximity limit switches FCP.

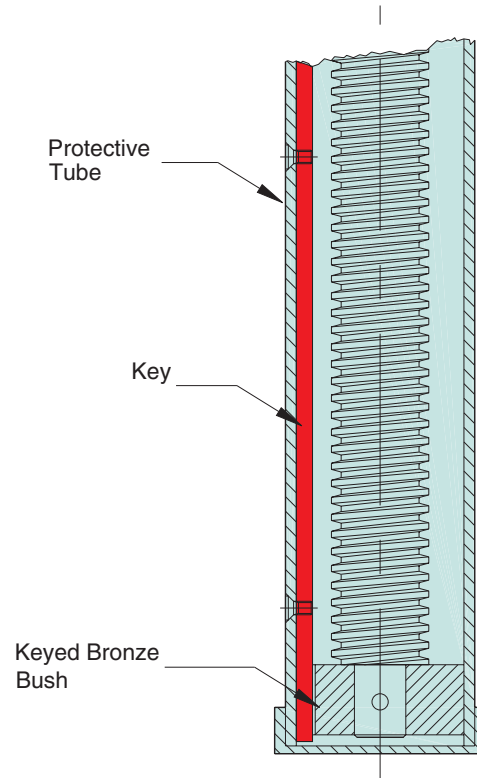
Technical data

Rated voltage	10 to 30 V d.c.
Hysteresis	≤ 10%
Max. output current	200 mA
Voltage drop	≤ 1.8 V
Current consumption	≤ 10 mA
Operating frequency	1000 Hz
Repeatability	0.04 mm
Working temperature	-25 to 70°C
Protection	IP67
Cable length	2 m
Cable section	3 x 0.14 mm ²

The anti-turn device is available for model A travelling screw only.

It is necessary only when the load to be lifted may turn, i.e. the screw guidance does not prevent rotation. Within the protective steel tube is fitted a key, and a keyed bronze bush is fitted to the bottom of the screw. The bronze bush also acts as a stop nut.

Ordering code: anti-turn device AR



Adjustable backlash RMG

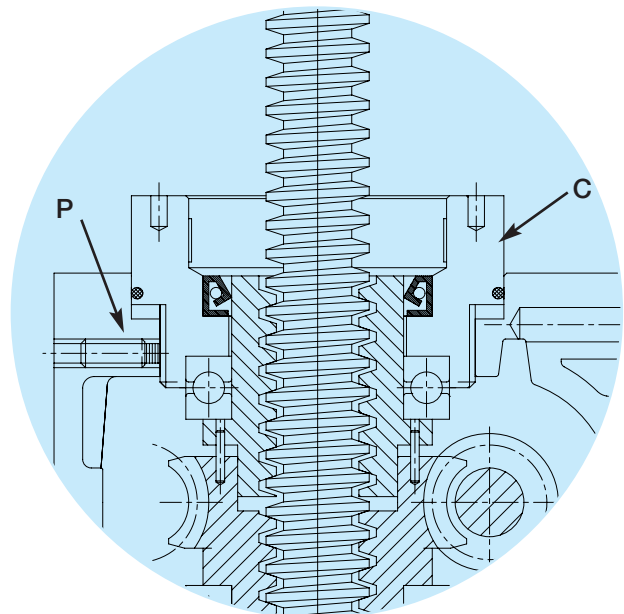
The adjustable backlash feature is available for MA Series screw jacks model A (travelling screw) only. It reduces axial backlash between the acme screw and the bronze nut. Wear during the life of the screwjack can be compensated.

Backlash adjustment is made by rotating nut C, and the setting by locking screw P.

The adjustable backlash feature is especially useful where loads exist in both directions or there is vibration.

Note: as the axial backlash is reduced, the starting efficiency of the screw jack falls. Speak to our engineers for full details.

Ordering code: adjustable backlash RMG

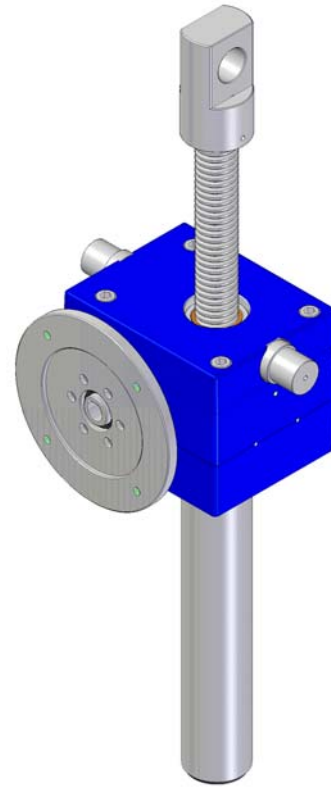
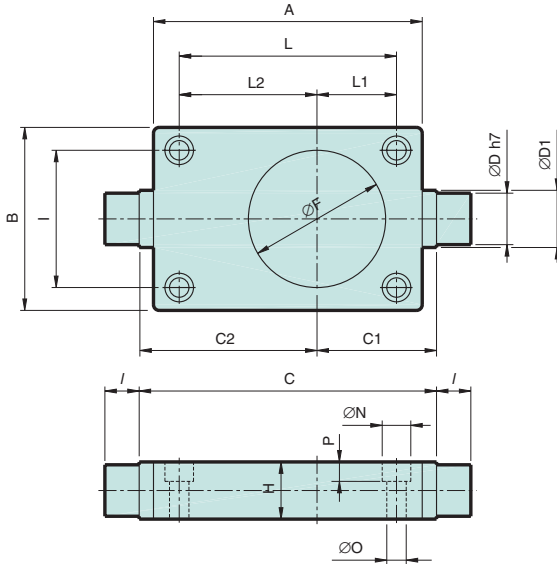


Trunnion mount SC

The trunnion mount allows pivoting of the screw jack. It bolts on to either the top or the bottom of the screwjack housing, and is available for all models of screw jack.

On MA Series screw jacks Model A, bronze guides must be fitted when the trunnion mount is present.

Ordering code:
trunnion mount SC



Size	A	B	C	C1	C2	ØD	ØD1	ØF	H	I	L	L1	L2	/	M	N	O	P	[kg]
			-0.3	-0.15	-0.15														
SJ 5	100	86	105	40.5	64.5	15	20	30	20	52	60	21	39	15	23	14	9	8.5	1.1
SJ 10	110	96	115	42.5	72.5	20	25	38.7	25	63	78	29	49	20	21	14	9	8.5	1.6
SJ 25	160	130	185	72.5	112.5	25	30	46	30	81	106	42	64	20	36	17	11	11	3.4
SJ 50	200	160	215	85.5	129.5	35	40	60	40	115	150	63	87	30	35	19	13	13	7.3
SJ 80	220	170	235	90.5	144.5	45	50	90	50	134	175	60	115	35	22	31	21	21	9
SJ 200	280	230	300	125	175	70	90	120	120	180	230	90	140	75	25	48	32	31	40

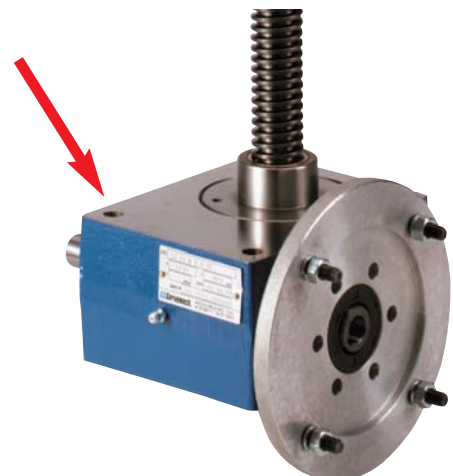
Size	A	B	C	C1	C2	ØD	ØD1	F	H	I	L	L1	L2	/	M	N	O	P	[kg]
			-0.3	-0.15	-0.15														
MA 5	124	80	130	50.5	79.5	15	20	65	20	62	95	31	64	15	12.5	14	9	8.5	0.8
MA 10	140	105	145	56.5	88.5	20	25	80	25	80	110	38	72	20	14	14	9	8.5	1.6
MA 25	175	130	200	80	120	25	30	100	30	100	140	50	90	20	17.5	19	13	13	3.2
MA 50-80	235	160	260	104.5	155.5	45	50	120	50	120	190	70	120	30	23	25	17	17	9.8
MA 100	276	200	305	119.5	185.5	50	60	160	60	150	220	75	145	40	26	32	22	22	15.8
MA 200	330	230	360	132	228	70	80	190	80	175	270	87	183	45	30	41	28	28	29
MA 350	415	300	440	181.5	258.5	80	90	240	90	230	330	126	204	60	42	51	34	34	52

Through mounting holes

Through mounting holes are available for series SJ Series screw jacks. They are clearance holes that run right through the housing and result in an increased rigidity of mounting.

Note that the hole spacing changes from the standard tapped holes. The spacing of through holes matches some alternative products.

Ordering code: housing with through mounting holes



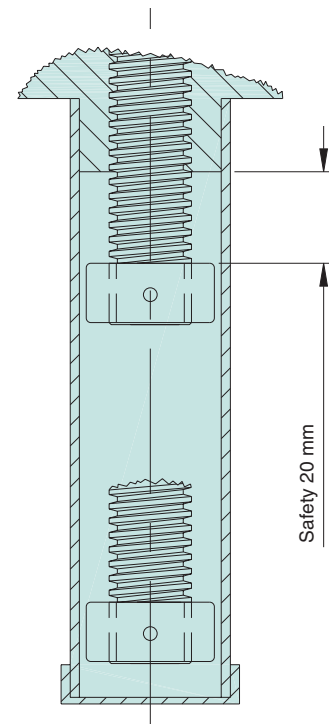
Stop nut SN

The stop-nut is available for all, model A (travelling screw) screw jacks.

It is a safety option to prevent the acme thread unscrewing clear of the screw jack housing. Under normal use the nut is not operative and should remain 20mm clear of the housing. Thus the stop-nut suits emergency use only, and after use a check should be made for damage.

Ordering code: stop-nut SN

Screwjack options

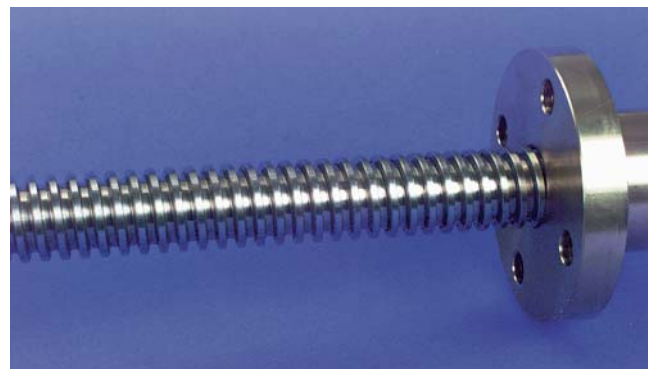


Multi-start threads and ballscrews

Servomech screw jacks can readily be supplied with other threads, speak to our engineers for advice on these options.

Acme threads can be provided with 2 or 3 starts. This achieves higher linear speeds up to 150 mm/s, alternatively, reduced input speeds where low noise is important.

Ballscrews offer higher efficiencies and can be supplied to suit duty cycles between 30 and 100%.



Motor connection possibilities

Motor frame	SERIES SJ						SERIES MA							
	SJ 5	SJ 10	SJ 25	SJ 50	SJ 80	SJ 200	MA5	MA10	MA25	MA50	MA80	MA100	MA200	
56 B5	F													
56 B14	F													
63 B5	B	F	F				F	F	F					
63 B14		F					F	F						
71 B5		B	F				B	B	F					
71 B14		B					B	B						
80 B5			B	F	F				B	F	F	F		
80 B14			B						B					
90 B5			B	B	B				B	B	B	F	F	
90 B14			B	B	B				B	B	B			
100/112 B5				B	B	F				B	B	B	F	
100/112 B14				B	B					B	B	B		
132 B5														B

F = plug-in motor flange B = bell-housing + coupling