

Screw Jacks Options

Stroke Control Devices: Electric And Electronic Options

Screwjacks can host different devices for stroke control: mechanical switches or proximity sensors, that generate a signal for switching motor supply (so-called ON/OFF workout). All wirings and circuitry operations shall be done with unpowered motor, so to avoid any potential harm to operator and damages to screwjack.

Adjustable mechanical switches (model HR-F only)

Single-contact changeover microswitches, integrated into screwjack gearbox; they get activated via a cam, which gets its own movement from leadscrew revolutions.

A compact and well protected system is then available, even though it's not fully suitable in case of long strokes; for some ratios a rotative potentiometer is also available.

Fixed mechanical switches (model HT-FCE only)

These microswitches are mounted on rear-pipe and are not adjustable, therefore position shall be clearly outlined in customer's order.

Proximity sensors (model HT-FCI only)

These sensors are mounted on rear-pipe and are not adjustable, therefore position shall be clearly outlined in customer's order..

Magnetic limit switches (model HT-FCM only)

Magnetic sensors are activated by a magnetic field generated by a magnetic ring fixed to the nut. These switches are mounted on outer tube with brackets; outer tube shall therefore be built with non-magnetic materials. This kind of stroke control device cannot be used when antirotation system is needed.

Potentiometer (model HR-F only)

This device is hosted inside limit switches box that hosts also the integrated limit switches. It allows for absolute feedback reference (in terms of resistance value) for position of nutscrew along the stroke.

Being geared to integrated switches, it does not fully cope with long strokes. Also, gearing does not always permit complete electrical reading, i.e. a 10KOhm device could read only 6KOhm.

Incremental encoder

A device that turns a rotational movement into digital pulses.

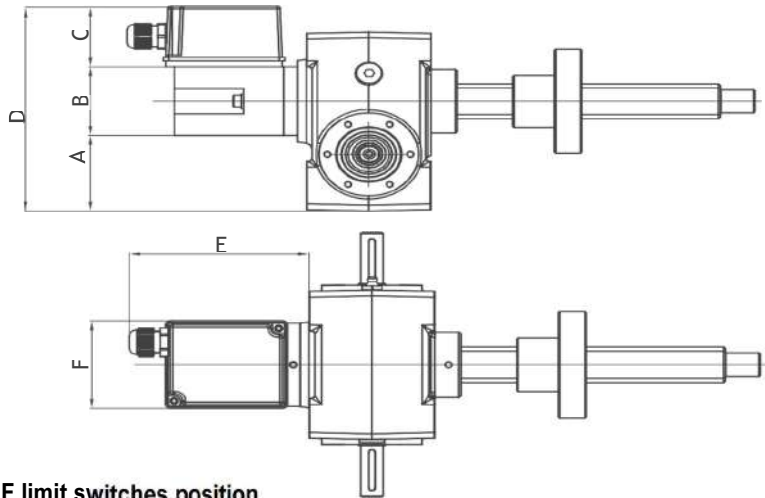
It can be hosted into AC or DC motor, or mounted on shaft opposite to motorside.

It does not provide absolute feedback reference, therefore each reset of machine (or mains power supply failure) will need encoder to be re-set at "zero".

WARNING:

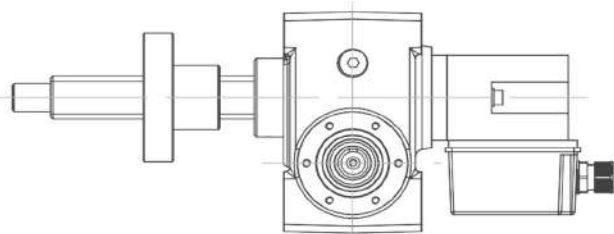
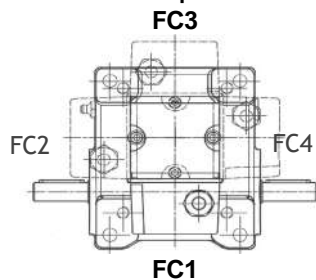
IN CASE NO LIMIT SWITCHES ARE INCLUDED IN THE SCREWJACK OR FRAMEWORK, WE STRONGLY RECOMMEND MOTORPOWER OVERLOAD DETECTORS TO BE INSTALLED.

Integrated mechanical limit switches (F)



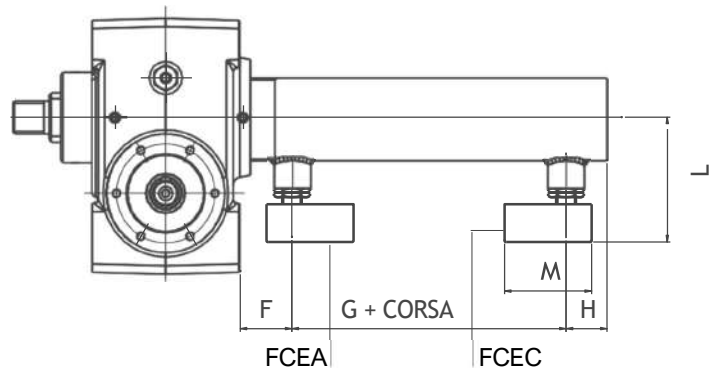
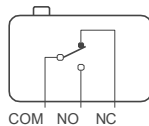
Dimensions Table						
Size	A	B	C	D	E	F
05	30	60	52	112	130	74
10	35	60	52	112	130	74
25	65	60	52	112	130	74
50	90	60	52	112	130	74
100	108	60	52	112	150	74
200	Not available					

F limit switches position



Mechanical limit switches (FCE)

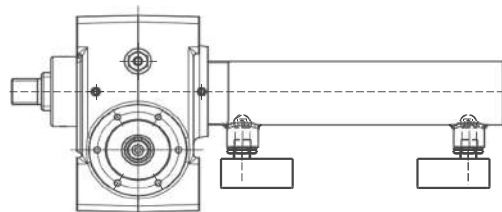
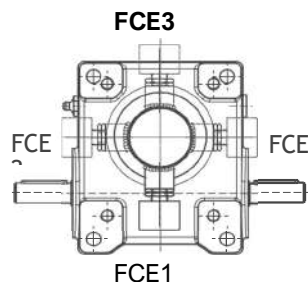
Dimensions Table						
Size	05	10	25	50	100	200
F	35	35	35	39	61	60
G	6	6	24	28	38	42
H	20	22	24	24	27	35
L	70	70	80	90	95	115
M	53	53	53	53	53	53



FCEC = All-closed position mechanical limit switch

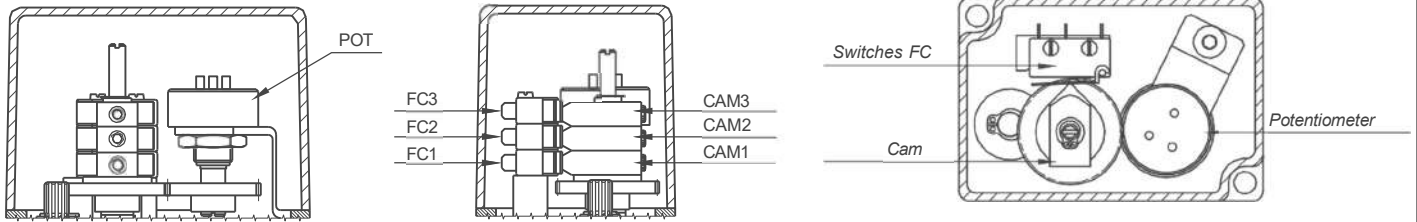
FCEA = All-opened position mechanical limit switch

FCE limit switches position



Integrated limit switches and potentiometer characteristics

Stroke Control devices Assembly



- FC 1 - lower microswitch
- FC 2 - middle microswitch
- FC 3 - upper microswitch
- CAM 1 - lower cam
- CAM 2 - middle cam
- CAM 3 - upper cam
- POT - potentiometer

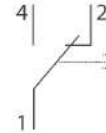
Limit Switches		
Performance	Type	
	XCF	XGG (on request)
Voltage	250 Vac	230 Vac / 30 Vdc
Resistive load	10 A	16 A
Motor load	2 A	6 A

Note: for microswitches + potentiometer versions contact our Technical Dept. in case strokes exceed values mentioned on performance tables.

Switches technical features

Limit Switches Features:

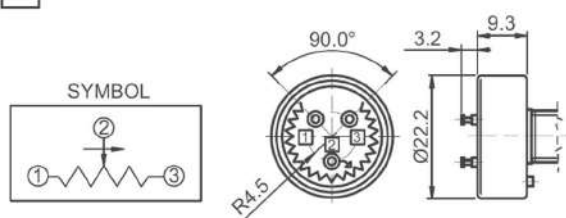
Housing: Phenolic-melamine thermosetting
 Mechanism: Snap-action coil spring mechanism with beryllium / bronze spring.
 Changeover con- tact, normally-closed / normally-open.
 Contacts: fine silver
 Terminals: gold flashed
 Mechanical life: 3x10⁶ (XGG) cycles minimum (impact free actuation).



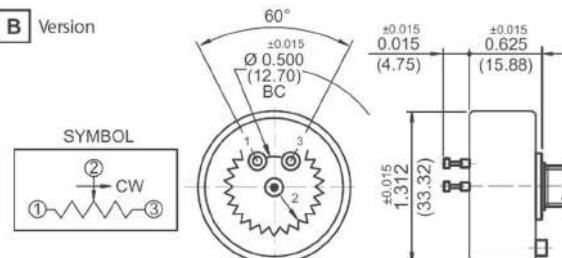
Potentiometer Option POT

Spinning Potentiometer		
Performances	Type (A)	Type (B)
Max. angle	340° ± 3°	352° ± 2°
Resistance	1K / 5K / 10K (standard)	1K / 5K / 10K (standard)
Voltage	MAX 10 V	MAX 50 V
Independent linearity	± 2%	± 1%
Tolerance	± 20%	± 3%
Temperature coefficient of resistance	600 ppm / °C	20 ppm / °C

A Version

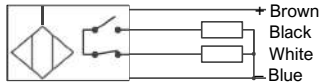


B Version



Proximity (Inductive) Sensors (FCI)

NA + NC



FCIC = All-closed position inductive sensor

FCIA = All-opened position inductive sensor

Technical data:

Supply voltage (UB): 5 ÷ 40 Vdc

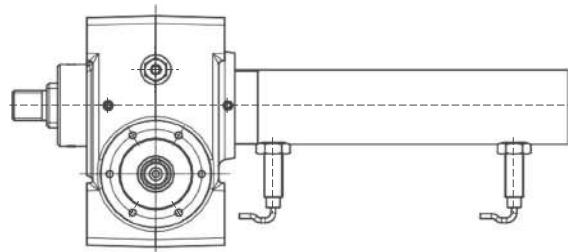
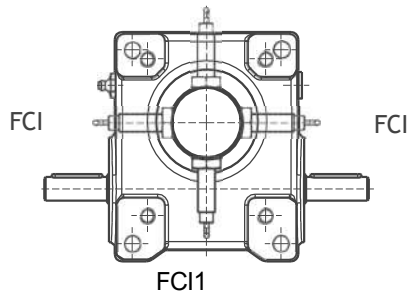
Temperature range: - 25° ÷ + 75°C

Degree of protection: IP67

Switch status indicator: yellow LED

FCI proximity switches position

FCI3



Dimensions Table

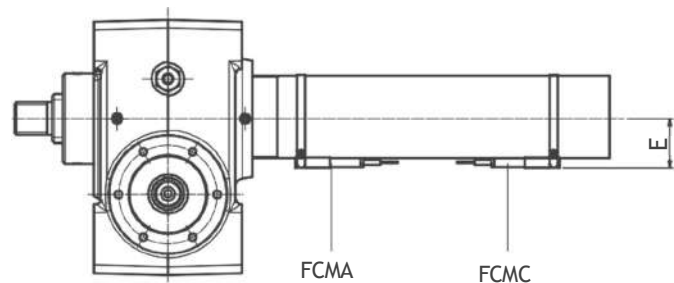
Size	05	10	25	50	100	200
A	23	20	32	39	61	60
B	6	6	7	8	8	8
C	26	26	35	44	57	69
D	70	70	77	87	95	112

Magnetic limit switches (FCM)

FCMC = All-closed position magnetic switch

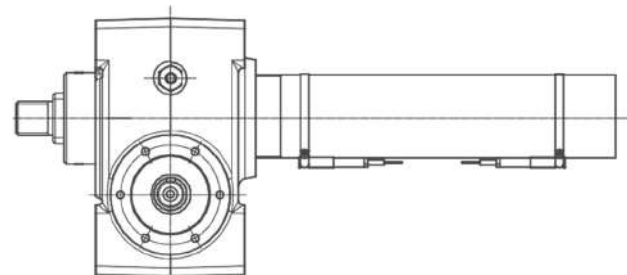
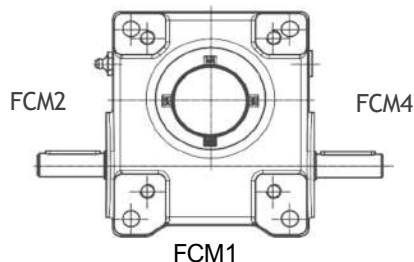
FCMA = All-opened position magnetic switch

Dimensions Table						
Size	05	10	25	50	100	200
E	24	24	31	41	49	66



FCM limit switches position

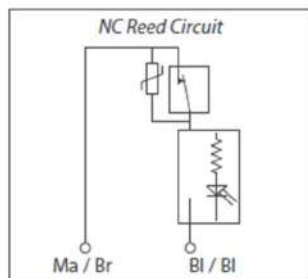
FCM3



FCM Magnetic Limit Switches			
Performance	Reed NC	Type Reed NO	PNP
DC voltage	3 / 110 V	3 / 30 V	6 / 30 V
AC voltage	3 / 110 V	3 / 30 V	/
25°C Current	0,5 A	0,1 A	0,20 A
Power	20 VA	6 VA	4 W
Supply cable	PVC 2 x 0,14 mm	PVC 2 x 0,14 mm	PVC 3 x 0,14 mm
Cablelength	2500 mm		
Protection	IP67		

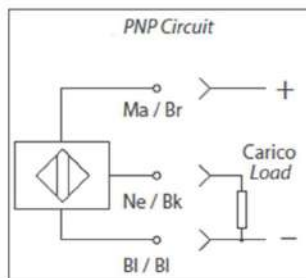
Circuit Reed NC

Circuit with normally closed Reed switch protected by a varistor against overvoltages caused when switching off, with LED indicator.



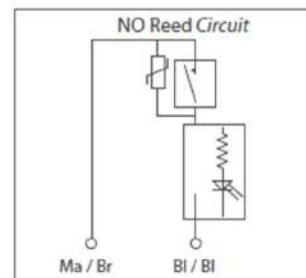
Circuit PNP

Circuit with Hall-effect switch and PNP outlet. Protected against overvoltage spikes and reverse of polarity. With LED indicator.



Circuit Reed NO

Circuit with normally open Reed switch protected by a varistor against overvoltages caused when switching off, with LED indicator.



Encoder E Option

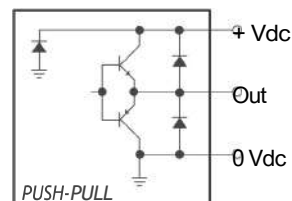
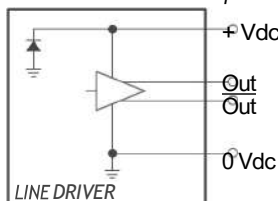
Encoder mounted on AC motors

Bi-directional incremental encoder, with (standard) or without zero-pulse, protection IP54.

Available ppr: 50 / 100 / 200 / 400 / 500 / 512 / 1000 / 1024 (standard)

Available output circuits: Line Drive 5 Vdc (standard) Push Pull 24 Vdc / Open Collector NPN 10 -30 Vdc
Open Collector PNP 10 -30 Vdc.

Red	÷Vdc
Black	0 Vdc
Green	A
Yellow	B
Blue	Z
Brown	-A
Orange	-B
White	-Z



Ordering Key References

Mechanical limit switches:

Adjustable Mechanical Limit Switches:

2FC2 = 2 Micro XGG (only version HR-F)

3FC2 = 3 Micro XGG (only version HR-F)

Fixed Mechanical limit switches: (Only version HT)

2FCE = 2 Microswitches, changeover contact (standard version without prior information)

3FCE = 3 Microswitches, changeover contact

Magnetic limit switches:

Only version HT

2FCM0 = 2 Sensors circuit Reed NC (standard version without prior information)

2FCM1 = 2 Sensors circuit Reed NO

2FCM2 = 2 Sensors PNP

3FCM0 = 3 Sensors circuit Reed NC (standard version without prior information)

3FCM1 = 3 Sensors circuit Reed NO

3FCM2 = 3 Sensors PNP

Inductive sensors:

Only version HT

2FCI = 2 Inductive sensors

Potentiometers:

(Standard version)

POT01A = 1 k Ohm

POT05A = 5 k Ohm

POT10A = 10 k Ohm

(Special version)

POT01B = 1 k Ohm

POT05B = 5 k Ohm

POT10B = 10 k Ohm

Encoder: (only on AC motor)

E05 = Push Pull 1024 ppr

E06 = Line Drive 1024 ppr (standard)

E07 = Open Collector NPN

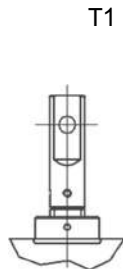
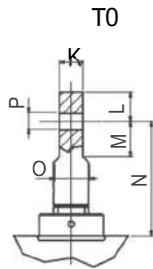
E08 = Open Collector PNP

E13 = Encoder not considered above (according to customer request) *(only on screwjack housing)*

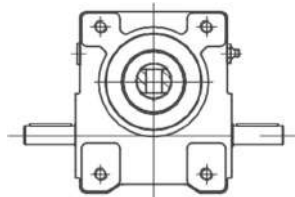
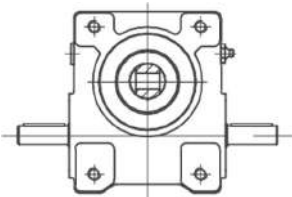
Options Front Fixings

Besides standard front fixings, other customized ones can also be supplied: they must be selected according to the type of installation of the jack in order to avoid as much as possible the load being not perfectly axial (load eccentricities). Please notice that the reaction torque that is applied to the nut under load is transferred to the front fixings hence, in case of clevis or ball joint, an antirotation device needs to be also provided (only on HT models).

T0 = Standard Fixing Eyelet T1 = Standard Fixing Eyelet turned by 90°

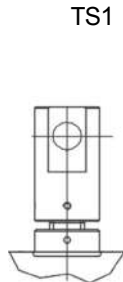
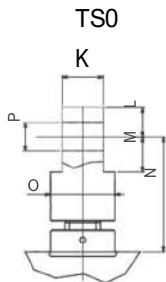


Dimensions Table						
Size	K	L	M	N	O	P (ΦH9)
05	12	15	22	68	Φ18	Φ10
10	14	20	25	89	Φ20	Φ12
25	20	25	30	102	Φ30	Φ14
50	30	25	30	117	Φ40	Φ22
100	42	35	40	154	Φ55	Φ30
200	55	50	50	145	Φ70	Φ40

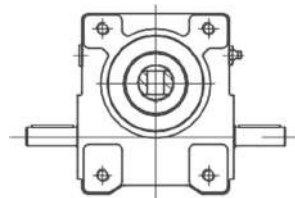
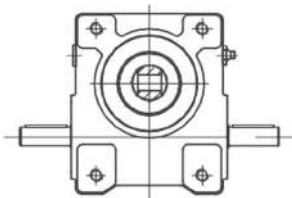


TS0 = Not Standard Fixing Eyelet

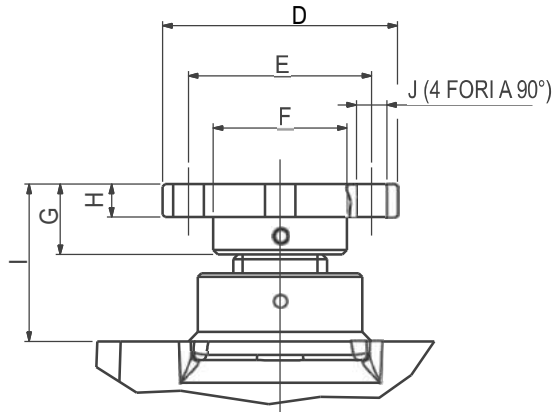
TS1 = Not Standard Fixing Eyelet turned by 90°



Dimensions table						
Size	K	L	M	N	O	P (ΦH9)
10	25	20	20	80	Φ38	Φ20
25	30	25	25	115	Φ48	Φ25
50	40	35	35	150	Φ68	Φ35
100	40	50	50	205	Φ98	Φ50
200	75	60	60	235	Φ108	Φ60

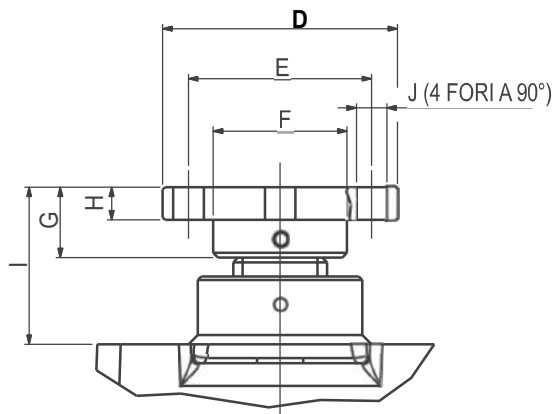


TF = Standard Fixing Flanged



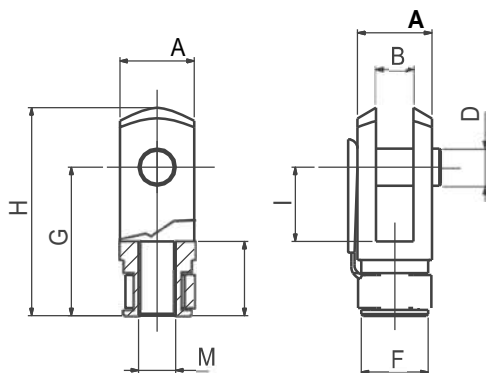
Dimensions table							
Size	D	E	F	G	H	I	J
05	Φ55	Φ43	Φ30	18	10	34.5	Φ7
10	Φ65	Φ50	Φ35	20	12	40	Φ9
25	Φ90	Φ68	Φ45	22	12	48	Φ11
50	Φ100	Φ78	Φ57	30	12	66	Φ13
100	Φ130	Φ100	Φ72	45	20	90	Φ17
200	Φ198	Φ155	Φ105	60	30	110	Φ25

TFS = Not Standard Fixing Flanged



Dimensions table							
Size	D	E	F	G	H	I	J
05	Φ55	Φ40	Φ30	14	8	30.5	Φ7
10	Φ79	Φ60	Φ46	21	8	41	Φ11
25	Φ89	Φ67	Φ46	23	10	49	Φ11
50	Φ109	Φ85	Φ60	30	15	66	Φ13
100	Φ149	Φ117	Φ85	50	20	95	Φ17

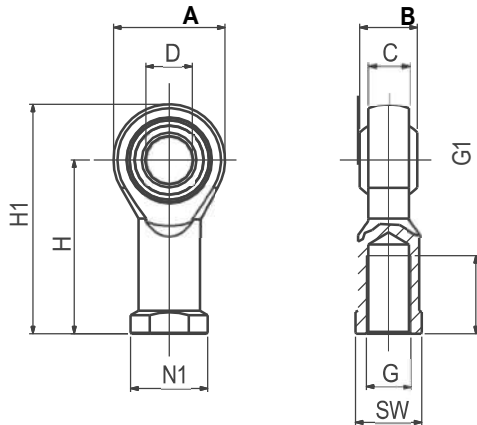
TA3 = Fixing Clevis



Dimensions table									
Size	A	B	C	D(ΦH9)	F	G	H	I	M
05	24	12	24	Φ12	20	48	62	24	M12
10	27	14	28	Φ14	24	56	72	28	M14
25 *	40	20	40	Φ20	34	80	105	40	M20x1.5
50 *	55	30	56	Φ30	48	110	148	54	M27x2
100 *	70	35	72	Φ35	60	144	188	72	M36X2
200 *	120	60	104	Φ60	100	208	268	104	M52x3

From size 05 to size 25, clevises integrate pin w/clip. From size 50 to size 200, clevises integrate pin w/seeger.
For sizes marked with (*) option TA3 needs to be clearly required when ordering, because clips can't be mounted (afterwards) on a standard leadscrew edge.

TA4 = Fixing Ball Joint



Dimensions table										
Size	A	B	C	D(øH9)	G	G1	H	H1	N1	SW
05	32	16	12	Φ12	M12	22	50	66	22	19
10	36	19	13.5	Φ15	M14	25	57	75	26	22
25 *	50	25	18	Φ20	M20x1.5	33	77	102	35	30
50 *	70	37	25	Φ30	M30x2	51	110	145	50	41
100 *	80	43	28	Φ35	M36x2	56	125	165	58	50
200 *	137	44	38	Φ60	M52x3	70	175	243	88	75

Can only be mounted on threads different from standard ones.

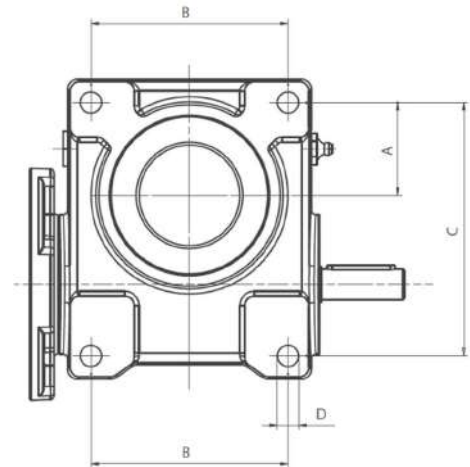
Rear Fixing

Additional gearbox hole-settings Option K

There is availability for different hole-settings, by drilling additional threaded holes on gearbox. Table below shows possibilities for hole-settings, and customized ones can be supplied

Dimensions table				
Size	A	B	C	D
05	28	56	80	Φ9 THROUG-HOLES
10	30	80	85	M8 DEEP 16
25 *	48	102	131	Φ 11 THROUG-HOLES
50	60	130	165	Φ 13 THROUG-HOLES
100	60	134	175	M20 DEEP 40

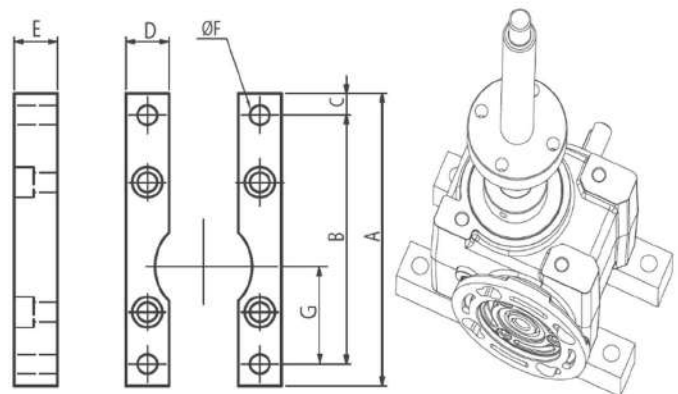
* Already supplied on standard gearbox



Fastening strips Opzione LF

In case threaded holes on gearbox should not be 100% compatible with customer's structure, additional fastening strips are available. Table below shows standard strips, but customized ones can be made: contact Mecvel offices to check possibilities in detail.

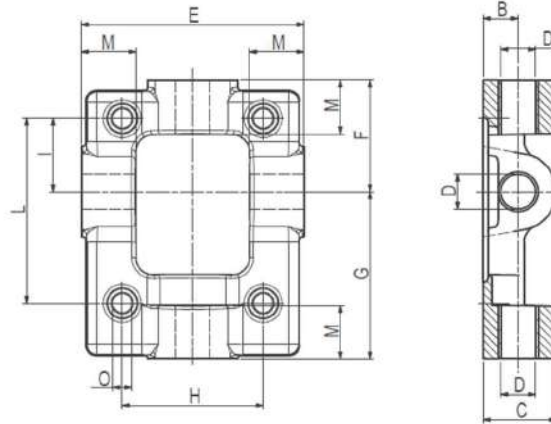
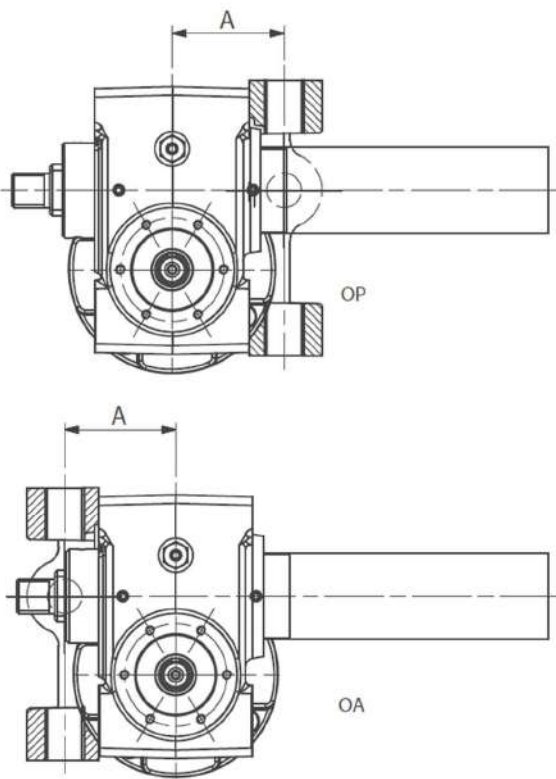
Dimensions table							
Size	A	B	C	D	E	F	G
05	140	120	10	20	15	Φ9	48
10	150	130	10	20	20	Φ9	52
25	210	185	12.5	30	20	Φ11	75
50	270	240	15	40	30	Φ13	98
100	315	275	20	40	40	Φ19	110
200	415	365	25	60	60	Φ28	155



Rocking operation supports Options OA and OP

Sizes 05 / 10 / 25 can host counter-platings for pins, that allow screwjacks for a “swinging” movement when operating Table below shows dimensions and mounting specs for these platings.

Swivelling shafts holder for connection to customer’s structure are also available (see pag. 66)



Dimensions table

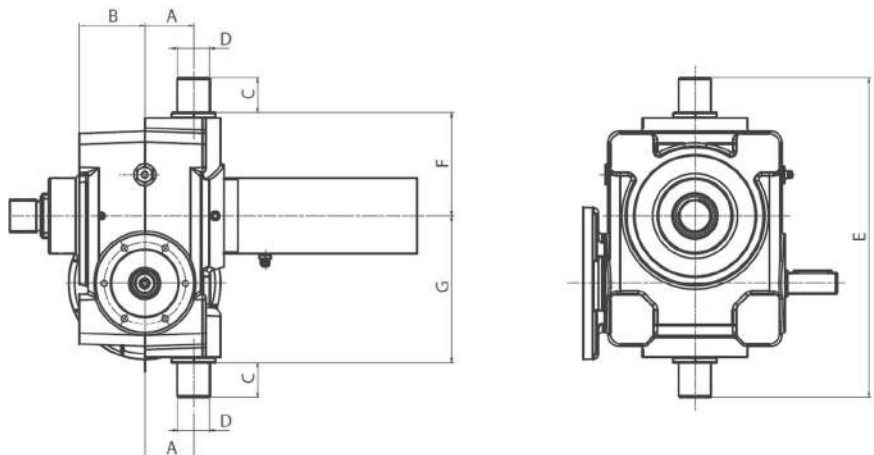
Size	A	B	C	D(ΦH7)	E	F	G	H	I	L	M	O
05	50	15	29	Φ16	74	37	61	52	21	60	10	Φ9
10	55	15	30	Φ16	104	41	66	62	29	78	15	Φ9
25	65	20	42	Φ20	128	64	96	81	42	106	30	Φ11

Integrated rocking operation supports Option OP

Sizes 50 / 100 / 200, requested with option OP, are already integrating the pins in their gearboxes, so to allow for the “swinging” movement already described. In these three sizes, option OA is not available. Swivelling shafts holder for connection to customer’s structure are also available (see pag. 67), except for size 200.

Dimensions table

Size	A	B	C	D(Φh7)	E	F	G
50	45	63	32	30	294	95	135
100	90	80	42	40	330	97	149
200	45	96	60	55	444	146	178



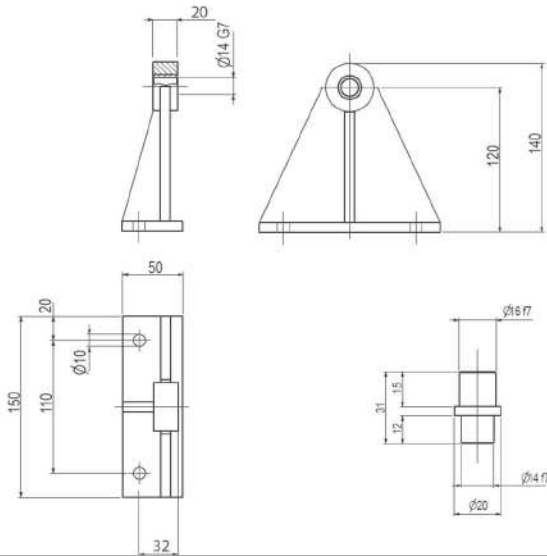
Swinging mounting feet

SP--P

A practical installation of screwjacks featuring swinging movement support (option OA-OP) can be done thanks to four sizes of mounting "feet". SPxxP kit includes two feet and two pins. This is unavailable for size 200.

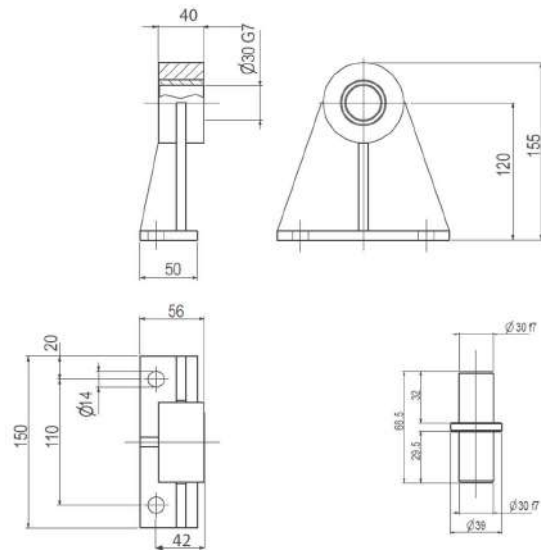
SP0014P

Kit includes two feet and two pins Ø14/16, for screwjacks size 05, 10



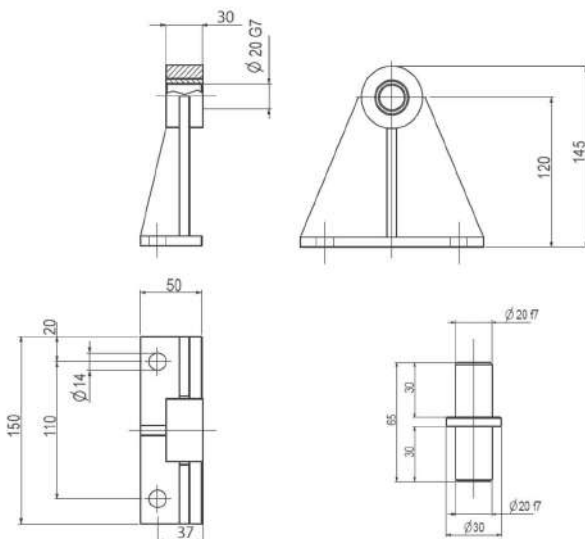
SP0030P

Kit includes two feet Ø30, for screwjacks size 50



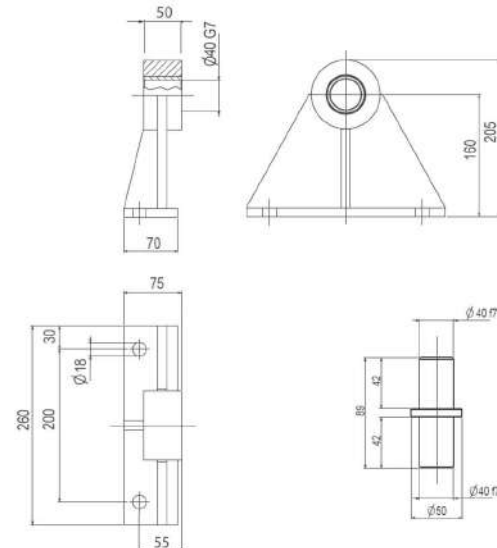
SP0020P

Kit includes two feet and two pins Ø20, for screwjacks size 25



SP0040P

Kit includes two feet Ø40, for screwjacks size 100

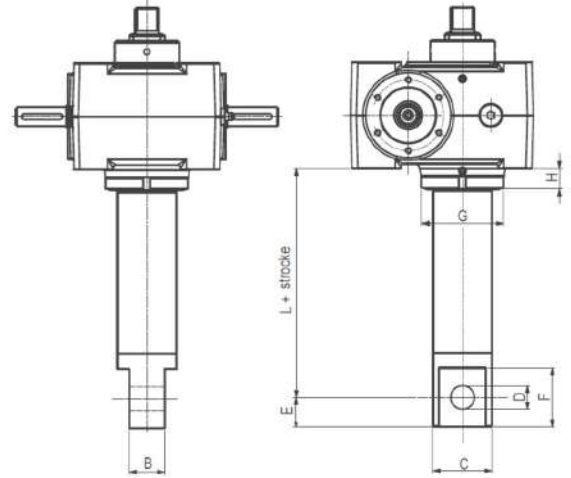


Rear-pipe for swinging movement (only HT model) Option P0

In case an eyelet rear attachment is needed, screwjacks can be fitted with this type of rear-pipe.

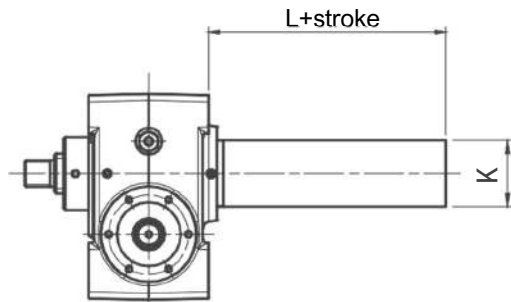
When using this kind of fastening, rear-pipe is undertaking max load applied to screwjack

Dimensions table								
Size	B	C	D(ΦH7)	E	F	G	H	L
05	25	Φ36	Φ20	20	40	Φ42	12	92
10	25	Φ36	Φ20	20	40	Φ42	11	92
25	30	Φ50	Φ25	25	50	Φ70	18	120
50	40	Φ70	Φ35	35	70	Φ92	24	152
100	60	Φ85	Φ50	50	100	Φ110	37	210
200	75	Φ120	Φ60	60	120	Φ155	43	240



Fixed protection (only HT model)

For the HT version is available for the fixed protection in aluminum for the leadscrew.



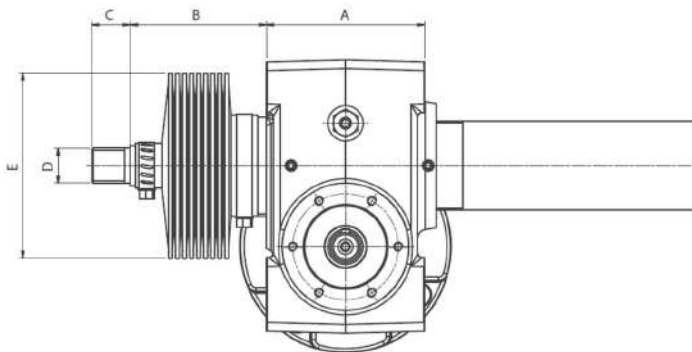
Dimensions table		
Size	L	K
05	55	Φ 36
10	52	Φ 36
25	74	Φ 50
50	91	Φ 70
100	126	Φ 85
200	137	Φ 120

Mandatory accessory with inductive limit switches (FCI), magnetic limit switches (FCM), mechanical limit switches (FCE) and anti- rotation device (option L).

Screw protections

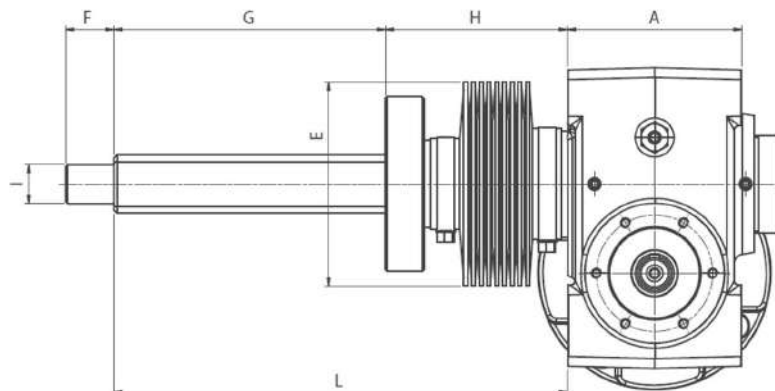
Bellows boot Option B

Leadscrew can be protected by means of this element, a very useful one in case of harsh (dust, rain...) or delicate (food, medical) environments.



Dimensions table					
Size	A	B	C	D	E
05	70	36+ ((1.16 x stroke)- stroke)	17.5	M12	Φ70
10	80	40+ ((1.12 x stroke)- stroke)	19	M14	Φ80
25	90	46+ ((1.08 x stroke)- stroke)	22	M20	Φ105
50	120	56+ ((1.04 x stroke)- stroke)	29	M30X2	Φ150
100	160	65+ ((1.05 x stroke)- stroke)	45	M36X3	Φ165
200	192	70+ ((1.06 x stroke)- stroke)	58	M56X5.5	Φ195

Model HR



Dimensions table

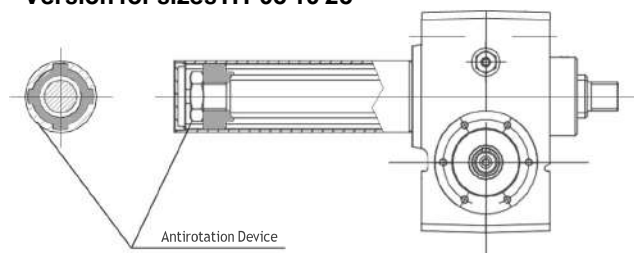
Size	A	E	F	G	H	I(Φh7)	L
05	70	Φ70	16	20 + stroke	47+ ((1.16 x stroke)- stroke)	Φ12	67+ (1.16 x stroke)
10	80	Φ80	20	25 + stroke	56+ ((1.12 x stroke)- stroke)	Φ15	81+ (1.12 x stroke)
25	90	Φ105	25	40 + stroke	70+ ((1.08 x stroke)- stroke)	Φ20	110+ (1.08 x stroke)
50	120	Φ150	30	50 + stroke	100 + ((1.04 x stroke)- stroke)	Φ25	150+ (1.04 x stroke)
100	160	Φ165	40	55 + stroke	120+ ((1.05 x stroke)- stroke)	Φ40	175+ (1.05 x stroke)
200	192	Φ195	70	60 + stroke	145 + ((1.06 x stroke)- stroke)	Φ55	205+ (1.06 x stroke)

On demand double bellows boot on HR screwjacks.

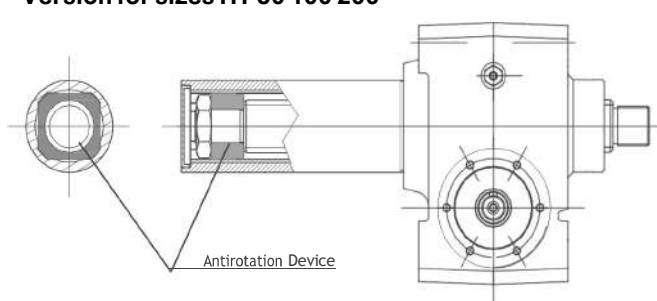
Antirotation Device Option L

The Anti-rotation device avoids push rod spinning around its own axis when travelling: it is essential in case of not guided load. When using TA3 and A4 front ends it is advisable to use this option to prevent front end from unscrewing in case it is not properly fixed. This device is available only on travelling screw models HT and it is done by means of a flanged nut fixed on the bottom of the acme screw engaged in a keyway fixed to the protective tube.

Version for sizes HT 05 10 25



Version for sizes HT 50 100 200

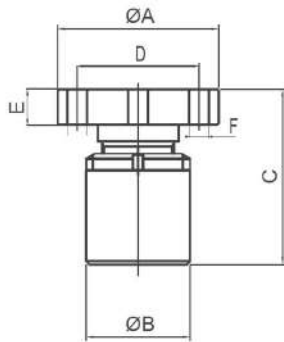


Safety Nuts

In some applications it is necessary to have the jack hold the load even in the event that the main nut fails due to wear. The safety nut is a device that enables checking the wear of the main nut and that prevents the load from falling down in case the nut thread collapses, due to wear, before being able to do the necessary checking operations. Three types of safety nuts are available for acme screwjacks, according to the specific needs of each application. For ball screwjacks we can supply similar solutions but it is necessary to contact our technical department.

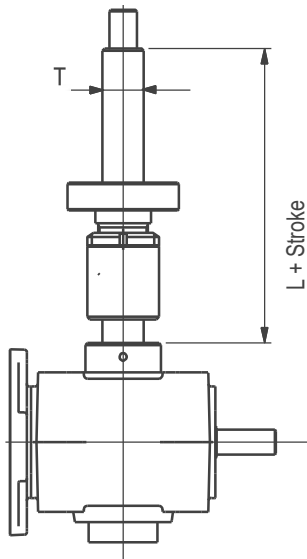
Steel Safety Nut (only for travelling nut models HR) Option GS

The safety nut is in steel and has been designed to start working only in case of main nut maximum wear. This safety nut is connected to the main bronze nut and travels with it along the stroke. When the bronze nut is completely worn out, the steel nut starts working on acme screw until it comes to a complete grip to acme screw. Screwjack is the completely blocked. This kind of nut can work in both directions, i.e. with compression or traction load (pushing / pulling)

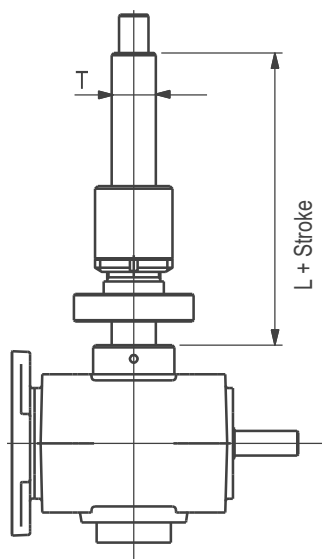


Dimensions table								
Size	A	B	C	D	E	F	L	Tr
05	Φ 55	45	65	43	12	Φ7	76	18x4
10	Φ 65	45	65	50	15	Φ9	86	20x4
25	Φ 90	58	95	68	20	Φ11	125	30x6
50	Φ 99	75	135	78	25	Φ11	165	40x7
100	Φ 129	92	170	100	30	Φ13	200	55x9
200	Φ 179	125	200	140	30	Φ18	230	70x10

Compression-Pushing load

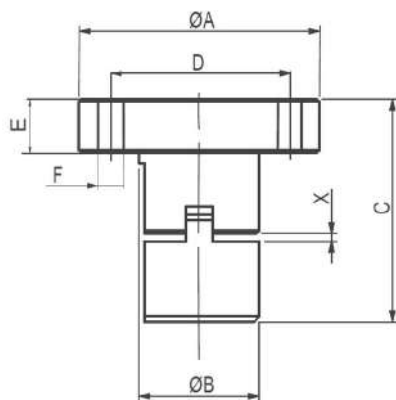


Traction-Pulling load



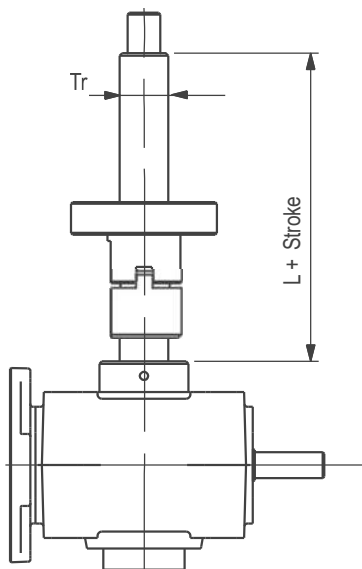
Bronze safety nut with visual wear ceck (only HR model) Option G

An auxiliary bronze nut travels along with main bronze nut, kept together by a small slot. This connection allows for independent axial movement of one nut to the other. When main nut starts getting too much worn, backlash between this nut and leadscrew grows. This condition causes the auxiliary nut to start working, undertaking part of the load. When this happens, dimension "X" (see table below) lowers; and once it reaches the minimum admitted value shown below, screwjack shall be serviced because wear has reached a critical level, causing a possible collapse of load. Therefore, we recommend a recurrent check of "X", so to monitor wear of system.

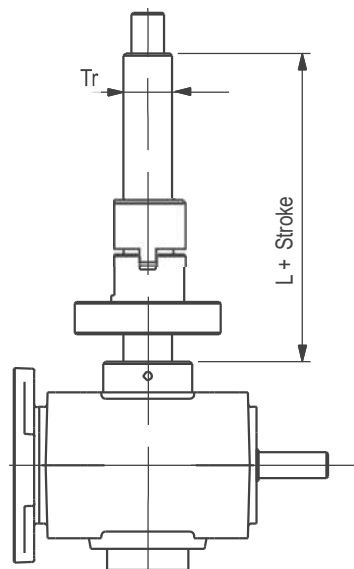


Dimensions table										
Size	A	B	C	D	E	F	L	Starting value X	Minimum admitted value X	Tr
05	Φ55	30	55	43	12	Φ7	76	2	1	18x4
10	Φ65	35	62	50	15	Φ9	86	2	1	20x4
25	Φ90	45	83	68	20	Φ11	125	3	1.5	30x6
50	Φ99	57	114	78	25	Φ11	165	3.5	1.75	40x7
100	Φ129	72	145	100	30	Φ13	200	4.5	2.25	55x9
200	Φ179	100	170	140	30	Φ18	230	5	2.5	70x10

Compression-Pushing load

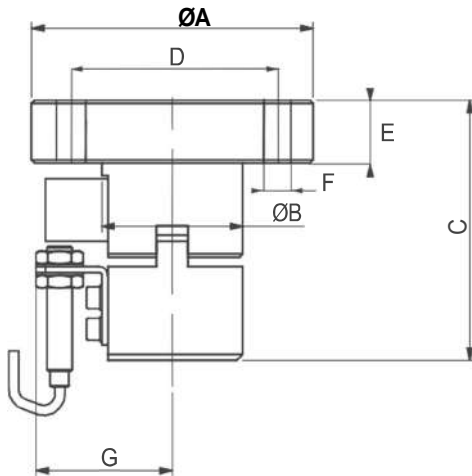


Traction-Pulling load



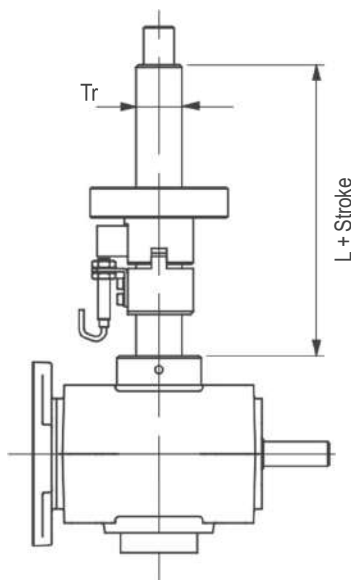
Bronze safety nut, with automatic and visual wear check (only HR model) Option GU

This system works as previous one (Option "G"): it only differs for the proximity sensor installed, which will provide a signal when wear reaches a critical level.

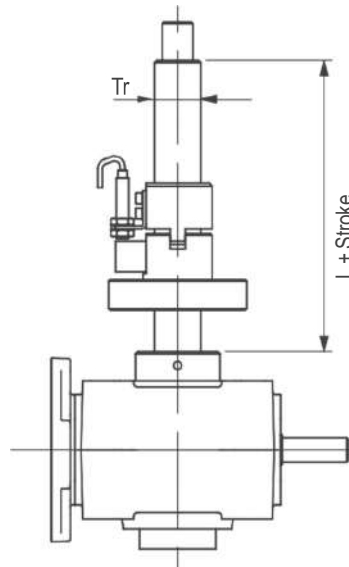


Dimensions table									
Size	A	B	C	D	E	F	G	L	Tr
05	Φ55	30	55	43	12	Φ7	38	96	18x4
10	Φ65	35	62	50	15	Φ9	41	106	20x4
25	Φ90	45	83	68	20	Φ11	46	145	30x6
50	Φ99	57	114	78	25	Φ11	58	185	40x7
100	Φ129	72	145	100	30	Φ13	66	220	55x9
200	Φ179	100	170	140	30	Φ18	80	250	70x10

Compression-Pushing load

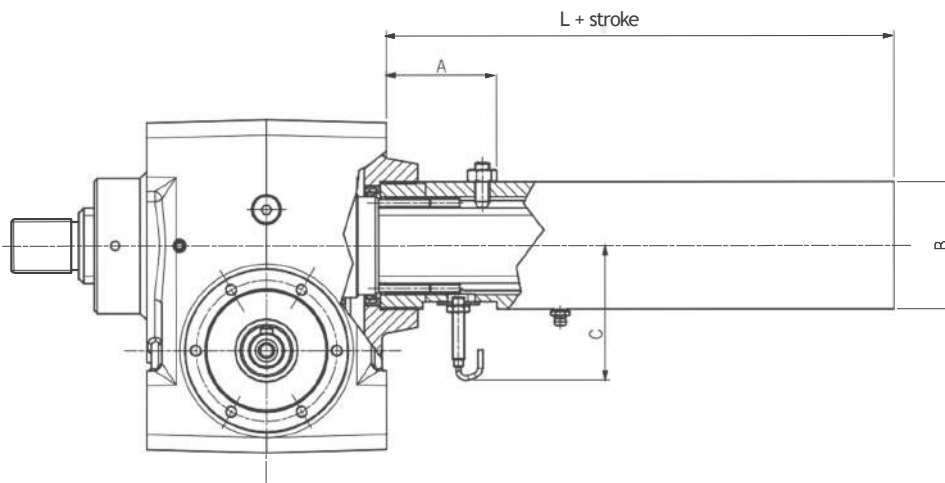


Traction-Pulling load



Bronze safety nut with wear automatic control (only HT model) Option GU

It is made with a second nut, coupled to the main nut with 4 pins that ensure the rotation, but left free to move axially with respect to the other. When the nut begins to wear, the clearance between the nut and the screw increases causing variations in the distance between nut and safety nut. When this distance reaches the maximum limit the inductive sensor shall signal reaching of the maximum allowable wear of the nut. When the sensor gives the alarm it is absolutely necessary to replace the nut and safety nut. Failure to replace these components may lead to excessive wear such as to cause the collapse of the load.

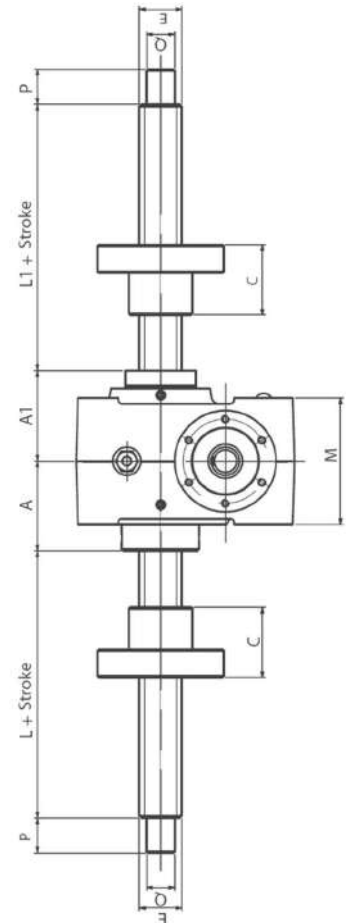


Dimensions table				
Size	A	B	C	L
25	50	50	75	99
50	60	70	85	116
100	75	85	90	146
200	85	120	110	172

Double screw with right and left thread Option U

On HR and HR-VRS models a double screw (1 with rh thread and 1 with lh thread) with their own nuts. The performances remain the same as for the jacks with single screw.

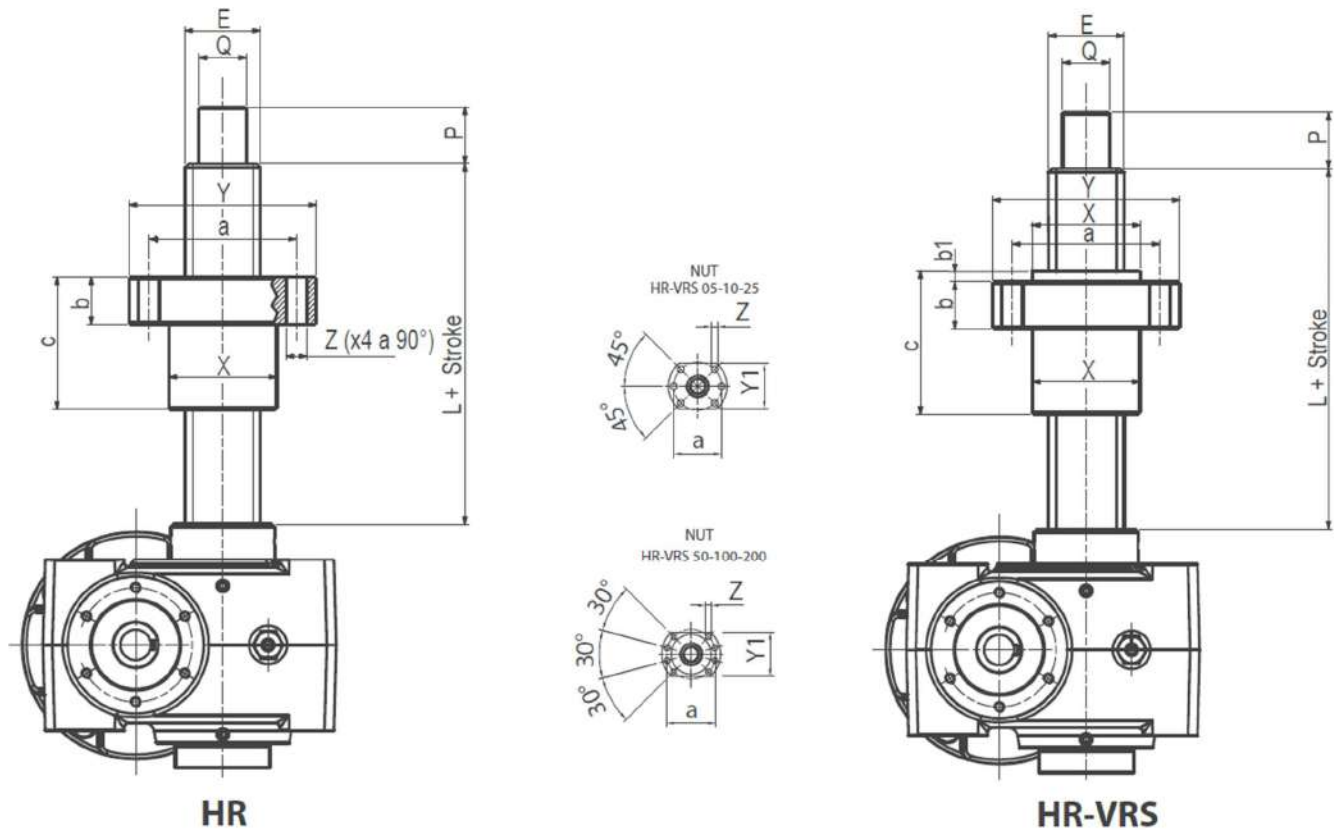
Dimensions									
Size	A	A1	C	E	M	L	L1	P	Q(øh7)
HR 05	45.5	54.5	35	TR 18X4	70	65	56	16	12
HR 10	55	59	40	TR 20X4	80	66	62	20	15
HR 25	64	64	50	TR 30X6	90	90	90	25	20
HR 50	89	93	70	TR 40X7	120	120	116	30	25
HR 100	115	131	85	TR 55X9	160	140	124	40	40
HR 200	136	143	105	TR 70X10	192	165	158	70	55
HR-VRS 05	45.5	554.5	50	VRS 16X5	70	65	56	16	12
HR-VRS 10	55	57	53	VRS 20X5	80	66	64	20	15
HR-VRS 25	64	64	74	VRS 32X10	90	90	90	25	20
HR-VRS 50	89	93	93	VRS 40X10	120	120	116	30	25
HR-VRS 100	115	131	93	VRS 50X10	160	140	124	40	40
HR-VRS 200	136	143	98	VRS 63X10	192	165	158	70	55



GUIDELINE DIMENSIONS ONLY

Screwjacks with increased size of screw Option V (Only on version HR and HR-VRS)

In case of applications where the static conditions are more demanding than the working dynamic ones (long strokes with heavy push loads or short strokes with even higher push loads) it is possible to manufacture screwjacks with increased size screws or ballscrew. Our Technical Dept. is at customer's disposal for assistance in rising systems selection.

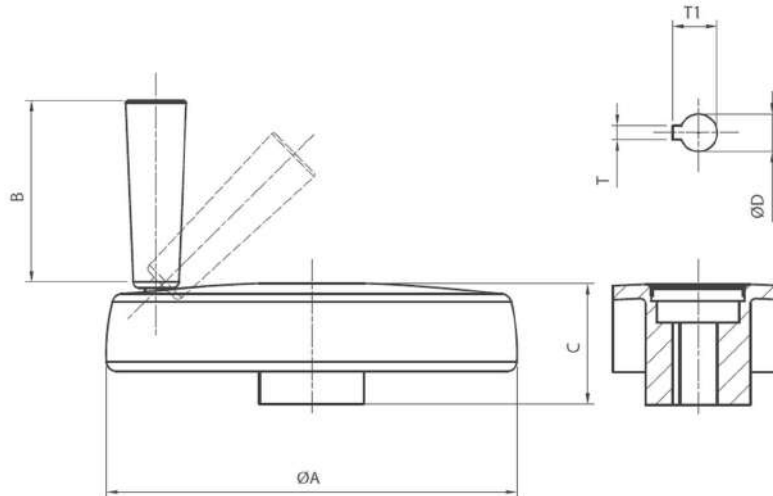


Dimensions												
Size	E	P	Q (øh7)	X	Y	Y1	Z	a	b	b1	c	L
HR 05	TR 20x04	20	15	35	65		9	50	15		40	66
HR 10	TR 30x6	25	20	45	90		11	68	20		50	90
HR 25	TR 40x7	30	25	57	99		11	78	25		70	120
HR 50	TR 55x9	40	40	72	129		13	100	30		85	140
HR 100	TR 70x10	70	55	100	179		18	140	30		105	165
HR 200	TR 80x10	75	60	110	189		18	150	30		110	170
HR-VRS 05	VRS 20X5	20	15	36	58	44	6.5	47	10	5	55	91
HR-VRS 10	VRS 32X10	25	20	50	80	62	9	65	12	6	118	155
HR-VRS 25	VRS 40X10	30	25	63	93	70	9	78	14	7	142	190
HR-VRS 50	VRS 50X10	40	40	75	110	85	11	93	16	7	144	200
HR-VRS 100	VRS 63X10	70	55	90	125	95	11	108	18	7	166	225
HR-VRS 200	VRS 80X10	75	60	105	145	110	13.5	125	20	9	172	235

Input options

Handwheel for manual driving. Option H

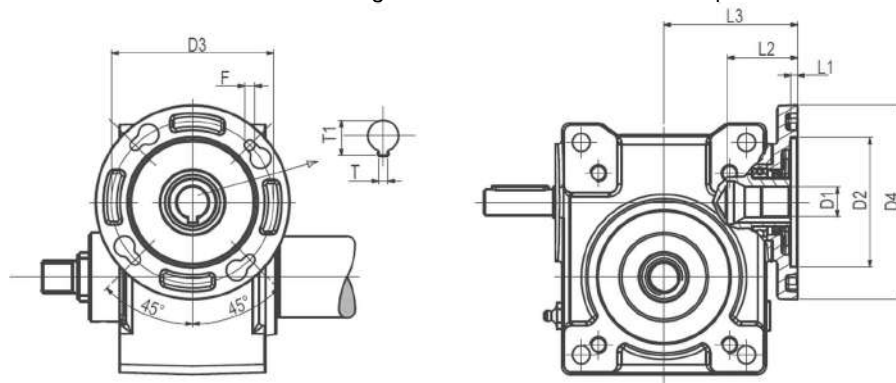
Screwjacks can be manually driven via a handwheel, installed on its outcoming shafts, or on aux shaft of electric motor. Depending on reduction ratio and leadscrew pitch, running a complete stroke with manual winding might require a large amount of rotations. Handwheel specs are shown in table below.



Dimensions table						
Size	A	B	C	D	T	T1
05	Φ102	50	34	Φ10	3	11.4
10	Φ150	65	44	Φ14	5	16.3
25	Φ176	80	49	Φ16	5	18.3
50	Φ200	90	53	Φ19	6	21.8
100	Φ200	90	53	Φ24	8	27.3
200	Φ250	90	66	Φ30	8	33.3

Motor Connection

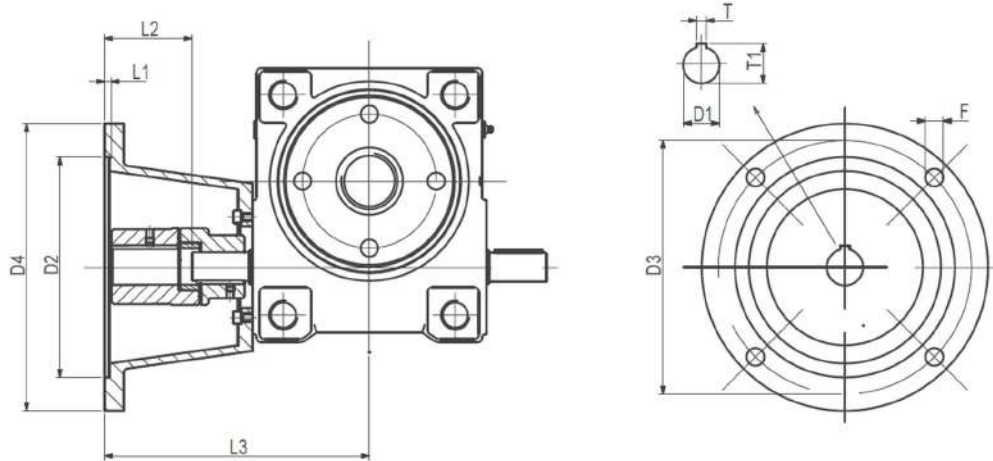
Direct motor connection via motorflange + hollowshaft. Motor is directly linked to screwjack, with an IEC motorflange. Table below shows dimensions for available motorflanges on each size. Size 200 can't provide direct motorconnection via flange.



Dimensions table												
Size	D1	D2	D3	D4	F	L1	L2	L3				
								HT/HR 05	HT/HR 10	HT/HR 25	HT/HR 50	HT/HR 100
56 B14	Φ9	Φ50	Φ65	Φ80	Φ5.5	3	22	52				3
63 B14	Φ11	Φ60	Φ75	Φ90	Φ5.5	3.5	25	52	65.5			4
71 B14	Φ14	Φ70	Φ85	Φ105	Φ6.5	4	35		65.5	82.5		5
80 B14	Φ19	Φ80	Φ100	Φ120	Φ6.5	4	42			82.5	103	6
90 B14	Φ24	Φ95	Φ115	Φ140	Φ8.5	4.5	53				103	8
100/112 B14	Φ28	Φ110	Φ130	Φ160	Φ8.5	4.5	64					112.5

Motor connection, with bell-flange and coupling Option CG

Sizes 50 / 100 / 200 feature also the "bellflange + coupling" motor connection. See table below for dimensions and specifications.

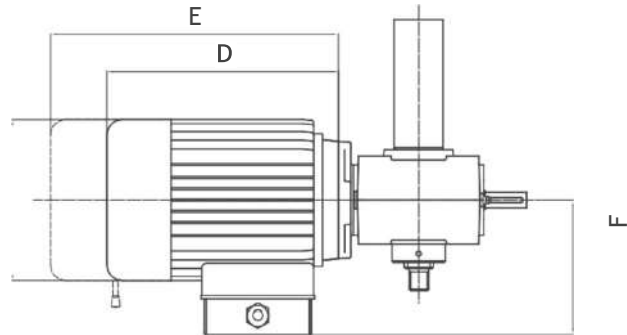


Dimensions table

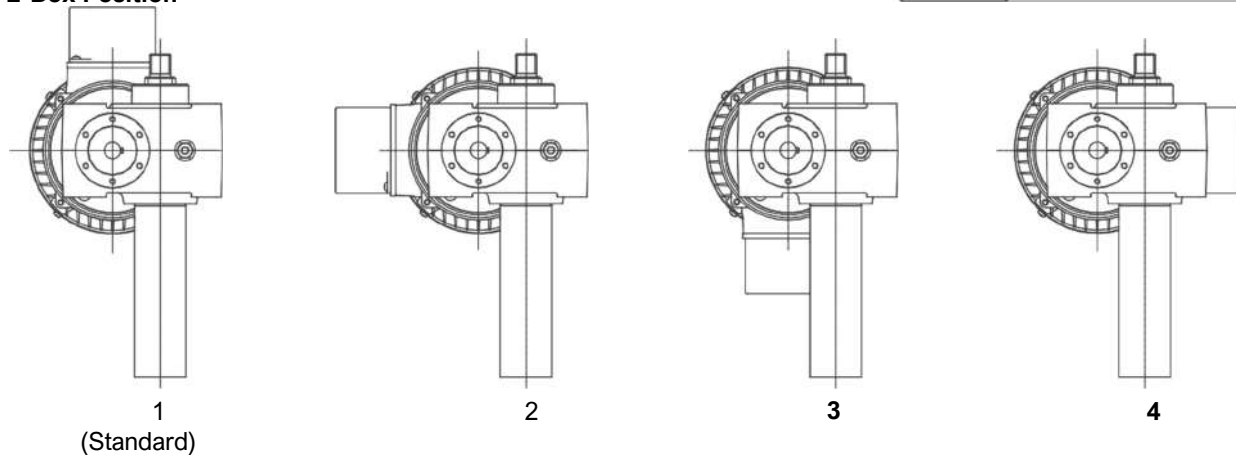
Size	D1	D2	D3	D4	F	L1	L2	L3			T	T1
								HT/HR 50	HT/HR 100	HT/HR 200		
80 B05	Φ19	Φ130	Φ165	Φ200	M10	4.5	52	183			6	21.8
90 B05	Φ24	Φ130	Φ165	Φ200	M10	4.5	52	183			8	27.3
100/112 B5	Φ28	Φ180	Φ215	Φ250	Φ14.5	5	68		239	259	8	31.3
132 B5	Φ30	Φ230	Φ265	Φ300	Φ14.5	5	91		274	278	10	41.3

Model HT/HR-M

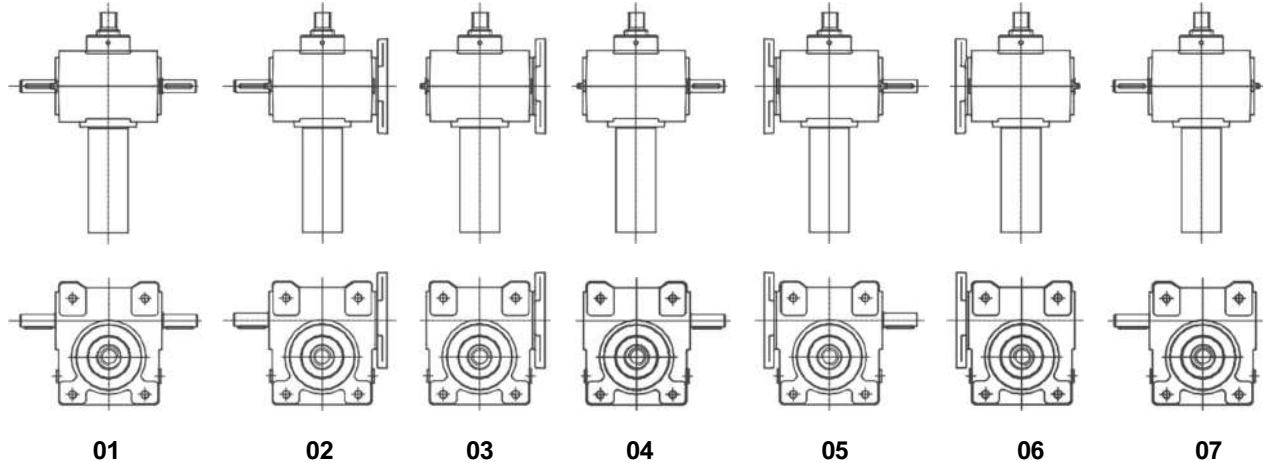
For HT/HR screwjack complete with motor write in the ordering key the e-box position.



E-Box Position



Orientation of Motor Flanges And Shafts



Motor Choice Guideline

Motor Type

Version:

AC = alternate current

PD = Special motorflange (provide drawing)

Voltage:

CA / AC = standard voltage table

MT = Multivoltage 230/50 (1-phase)

Type:

(Solo per CA / only for AC)

T = 3-phase

M =1-phase

AT = 3-phase with brake

AM =1-phase with brake

ME =1-phase with starting capacitor

AE = 1-phase with brake and starting capacitor

Size:

CA / AC: IEC 56/63/71/80/90/100/112/132

Pole:

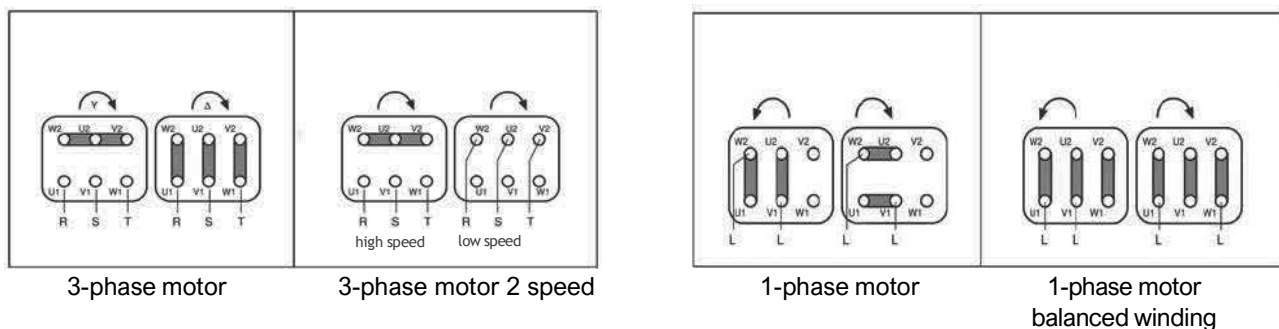
CA / AC: 2 / 4 / 6

Standard Voltage Table		
Rated Voltage[V] [Hz]:		Usable voltages[V] [Hz]:
230/400/50	277/480/60	240/415/50 - 220/380/50 - 265/460/60 - 255/440/60
190/330/50	220/380/60	200/346/60 - 208/360/60 - 230/400/60
208/360/50	254/440/60	200/346/50 - 240/415/60
400/690/50	480/830/60	380/660/50 - 415/717/50

AC MOTOR OPTIONS

Motorflange type:	IEC56B14 / IEC63B14 / IEC71B14 / IEC80 B14 / IEC90 B14 / IEC100/112 B14
Service rate:	S1 / S2 / S3
Insulation class:	F = standard (leave blank) - Advise only if different than "F"
Protection Degree:	IP55 (leave blank) IP65 TP = tropicalization IN = winding for inverters Other = advise NONE = leave blank

Motor connections



Brake:

FECC = DC brake negative action (standard)

Power Supply

230V±10% 50/60Hz AC side inside the brake. The brake is powered directly from the power supply of the motor (standard). Motors with separated brake power supply and tensions in the range (24-205 Vdc) can be available on request. In this case the brake needs a separated power supply from the motor and its code becomes FECC-AS-24 Vdc

FECA= AC brake

Power Supply

230/400V±10% 50/60Hz. The brake is powered directly from the power supply of the motor. Motors with separated brake power supply and tensions in the range (24-690 Vac - 50/60 Hz) can be available on request.

In this case the brake needs a separated power supply from the motor and its code becomes FECA-AS-230 Vac 50 HZ

Separate brake power supply:

achieved by means of an auxiliary terminal board, with fixed brake coil terminals, located inside the motor terminal box. Nb. On all motors prepared for frequency converter the brake must always have a separate power supply

No Brake

Leave blank

Options:

LS = hand release lever (leave blank) Note: not available for motor IEC 56

AB = 2'shaft

IN = winding suitable for inverters

Other = Advise In Detail

None = Leave Blank