

E-SERIES
Metric Machine Screw Jacks
Metric Ball Screw Jacks

1. Metric Machine Screw Jacks

Precise positioning repeatable, reliable performance, self-locking feature, over 5000 variants.



Translating Screw (upright)



Rotating Screw (upright)



Translating Screw (inverted)



Rotating Screw (inverted)



Clevis



Threaded

Note

Clockwise rotation of worm raises load on all models - counter clockwise available at extra charge. Unless a translating lifting screw is keyed, the top should be bolted to the lifting member to prevent the screw from rotating.

Screw Jacks are equipped with "Alemite" grease fittings. Recommended lubricants are listed in the installation and maintenance instructions.

Screw Jacks supplied complete with drive shaft keys. Bellows boots screw protection available on request. Anti-backlash option for reduced axial screw backlash. Secondary guide option for increased lateral rigidity. Double clevis screw jack option.

Attachments

IEC and Nema motor flanges, motors, gearboxes, reducers and couplings available for single screw jacks or multiple jacking arrangements.

E-Series Metric Screw Jacks

1.1 Standard Performance

Model		E2625	E2501	E1802	E1805	E1810	E1820	E1830	E1850	E18100
Capacity	kN	5	10	25	50	100	200	300	500	1000
Lifting Screw*	mm	16 x 3	20 x 5	30 x 6	40 x 9	55 x 12	65 x 12	95 x 16	120 x 16	160 x 20
Gear ratios	Option 1	5:1	5:1	6:1	6:1	8:1	8:1	102/3:1	102/3:1	12:1
	Option 2	20:1	20:1	24:1	24:1	24:1	24:1	32:1	32:1	36:1
Turn of worm for travel of lifting screw	Option 1	5 for 3mm	1 for 1mm	1 for 1mm	1 for 1.5mm	1 for 1.5mm	1 for 1.5mm	1 for 1.5mm	1 for 1.5mm	3 for 5mm
	Option 2	20 for 3mm	4 for 1mm	4 for 1mm	4 for 1.5mm	2 for 1mm	2 for 1mm	2 for 1mm	2 for 1mm	9 for 5mm
Max. Input power (kW)	Option 1	0.25	0.375	1.5	3	3.75	3.75	6	11.25	18.5
	Option 2	0.12	0.19	0.375	0.55	1.125	1.125	1.9	4.5	8.25
Start up torque at full load (Nm)†	Option 1	2.5	6.8	19.8	56	115.9	263.8	480	904	2025
	Option 2	1.1	3	8.7	25.5	60.5	137	284	504	1119
Weight (kg) - stroke = 150mm		1.03	2.27	8.17	15.88	24.72	45	86	195	553
Weight (kg) per extra 25mm		0.073	0.13	0.21	0.32	0.57	0.86	1.58	2.49	4.31

Options

- * All metric machine screws have a trapezoidal thread form, single start as standard (diameter x pitch).
- † For loads of 25% to 100% of screw jack capacity, torque requirements are approximately proportional to the load.

1.1.1 Screw Jack Efficiencies

Model		E2625	E2501	E1802	E1805	E1810	E1820	E1830	E1850	E18100
Static efficiency	Option 1	0.189	0.233	0.201	0.213	0.206	0.181	0.149	0.132	0.131
	Option 2	0.107	0.130	0.115	0.117	0.132	0.116	0.084	0.079	0.079
Dynamic efficiency	Option 1	0.252	0.306	0.264	0.281	0.272	0.242	0.205	0.181	0.178
	Option 2	0.160	0.194	0.167	0.172	0.190	0.169	0.128	0.120	0.123

Note

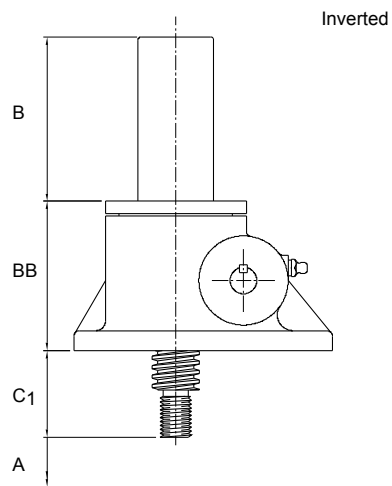
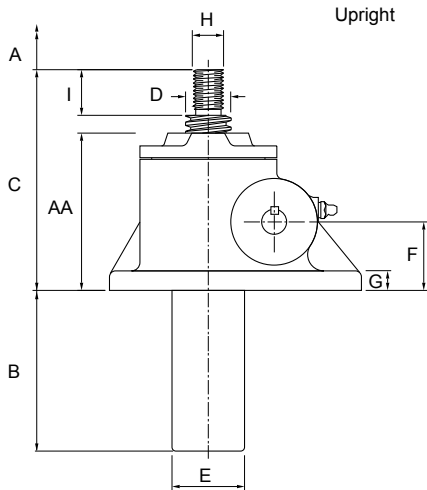
Efficiency values for standard grease lubricated worm gear box and lifting screw.

E-Series Metric Screw Jacks

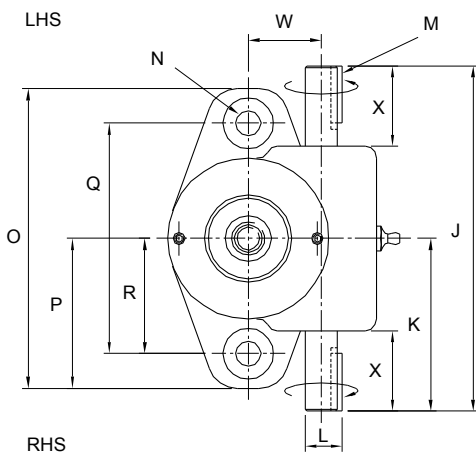
1.2 Dimensions

1.2.1 Translating Screw Jacks

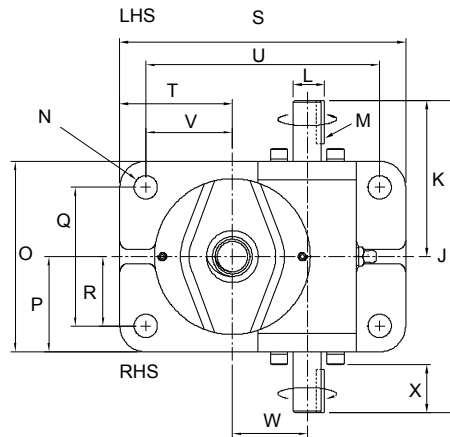
Elevation view



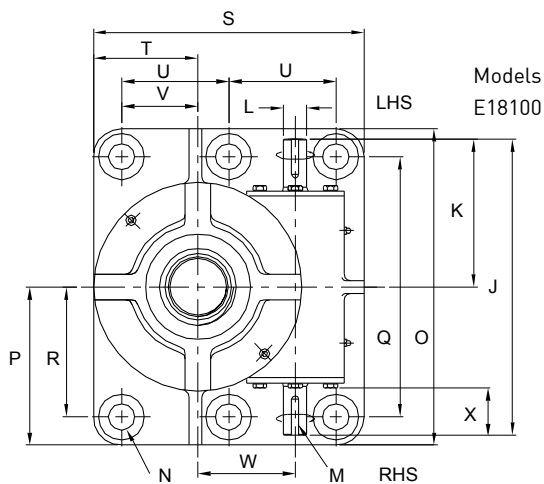
Plan view



Models
E2625
E2501



Models
E1802
E1805
E1810
E1820
E1830
E1850



Models
E18100

LHS = Left Hand Side
RHS = Right Hand Side

E-Series Metric Screw Jacks

1.2.2 Dimensions

Model	Upright	E2625	E2501	E1802	E1805	E1810	E1820	E1830	E1850	E18100
	Inverted	E2624	E2500	E1801	E1804	E1809	E1819	E1829	E1849	E18099
Capacity		5	10	25	50	100	200	300	500	1000
A		Stroke as required								
B		A + 9	A + 10	A + 5	A - 5	A + 3	A - 1	A + 15	A + 13	A + 3
C		95	125	145	185	200	265	325	390	560
C1		40	45	55	65	80	95	115	150	260
øD		16	20	30	40	55	65	95	120	160
øE		26.7	33.4	48.3	60.3	73	89	115	141	194
F		26 ± 0.13	40 ± 0.13	45 ± 0.13	60 ± 0.13	60 ± 0.13	85 ± 0.13	105 ± 0.13	120 ± 0.13	150 ± 0.13
G		10	10	13	14	16	20	30	32	40
H		M10 x 1.5	M12 x 1.75	M20 x 2.5	M24 x 3	M36 x 4	M48 x 5	M72 x 4	M100 x 4	M125 x 4
I		20	24	30	35	40	55	65	90	125
J		120	150	180	230	280	300	380	460	580
K		60	75	90	115	140	150	190	230	290
øL		10 h8	14 h8	16 h8	19 h8	25 h8	28 h8	35 h8	40 h8	45 h8
M		3 x 3 x 18	5 x 5 x 25	5 x 5 x 25	6 x 6 x 32	8 x 7 x 40	8 x 7 x 40	10 x 8 x 50	12 x 8 x 56	14 x 9 x 70
øN		9	11	13.5	18	22	26	39	51	51
O		110	130	110	150	190	210	260	300	620
P		55	65	55	75	95	105	130	150	310
Q		85	100	80	115	145	150	190	200	510
R		42.5	50	40	57.5	72.5	75	95	100	255
S		-	-	165	205	225	275	365	535	530
T		-	-	65	75	75	105	140	225	205
U		-	-	135	170	180	215	295	435	210
V		-	-	50	57.5	52.5	75	105	175	150
W		23.82 + 0.076 - 0.000	31.75 + 0.076 - 0.000	43.26 + 0.025 - 0.025	55.58 + 0.050 - 0.000	66 + 0.060 - 0.000	66 + 0.070 - 0.000	95.25 + 0.130 - 0.000	135 + 0.070 - 0.000	190.5 + 0.076 - 0.000
X		27	35	27.5	35	44	44	56	66	88
AA		64	90	103.5	138	146.5	195	235	275	405
BB		64	78	95.5	122	130.5	179	235	275	405

Note

All dimensions in mm.

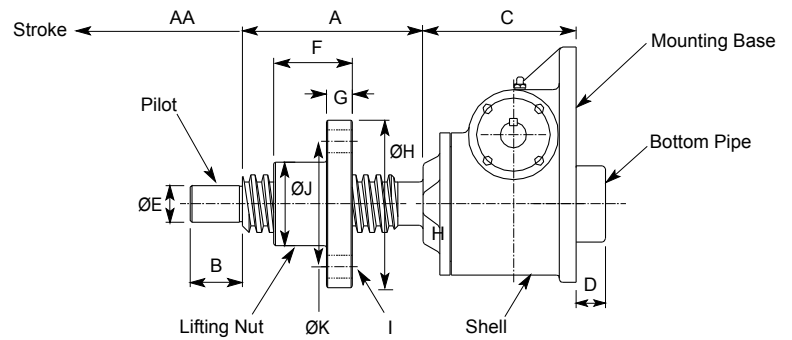
Closed height of threaded end and top plate units are the same for upright or inverted models.

Rotating screw jacks (refer 1.3) have the same dimensions for the shell as the translating screw type.

Dimensions are subject to change without notice.

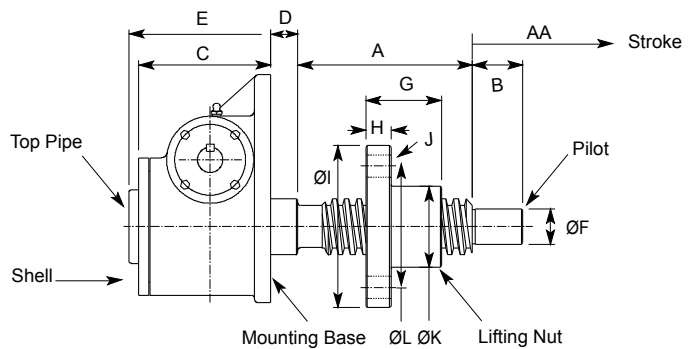
1.3 Rotating Screw Jack

1.3.1 Upright Rotating Screw Jack



Model	UE2626	UE2502	UE1803	UE1806	UE1811	UE1821	UE1831	UE1851	UE18101
Capacity (kN)	5	10	25	50	100	200	300	500	1000
A	AA + 40	AA + 44	AA + 60	AA + 80	AA + 100	AA + 100	AA + 180	AA + 200	AA + 250
B	16	16	25	30	50	65	85	100	125
C	64	90	103.5	138	146.5	195	235	275	405
D	34	0	0	0	28	24	40	63	128
øE	10	12	20	25	35	45	75	90	125
F	25	35	40	65	75	75	140	150	175
G	10	12	15	20	25	25	35	50	60
H	60	80	90	115	160	185	230	280	380
I	4 x ø9	4 x ø11	4 x ø13.5	4 x ø18	4 x ø22	4 x ø26	6 x ø26	6 x ø33	6 x ø45
øJ	25	35	40	55	80	90	125	160	210
øK (PCD)	42	57	65	85	120	135	175	220	295

1.3.2 Inverted Rotating Screw



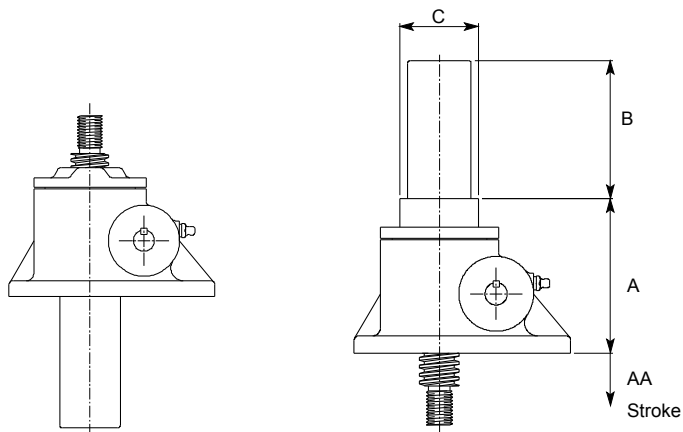
Model	DE2626	DE2502	DE1803	DE1806	DE1811	DE1821	DE1831	DE1851	DE18101
Capacity (kN)	5	10	25	50	100	200	300	500	1000
A	AA + 40	AA + 44	AA + 60	AA + 80	AA + 100	AA + 100	AA + 180	AA + 200	AA + 250
B	16	16	25	30	50	65	85	100	125
C	64	90	95.5	122	130.5	179	235	275	405
D	12	10	14	18	26.5	25	25	35	105
E	64	90	95.5	122	130.5	203	275	313	458
øF	10	12	20	25	35	45	75	90	125
G	25	35	40	65	75	75	140	150	175
H	10	12	15	20	25	25	35	50	60
øI	60	80	90	115	160	185	230	280	380
J	4 x 9	4 x 11	4 x 13.5	4 x 18	4 x 22	4 x 26	6 x 26	6 x 33	6 x 45
øK	25	35	40	55	80	90	125	160	210
øL (PCD)	42	57	65	85	120	135	175	220	295

PCD = Pitch Circle Diameter

E-Series Metric Screw Jacks

1.4 Keyed Metric Screw Jacks

Keyed translating screw jacks stop the screw from rotating without the need for end pinning. However the keyway in the screw will cause greater than normal wear on the internal threads of the worm gear.



Upright
(dimensions as standard versions)

Inverted

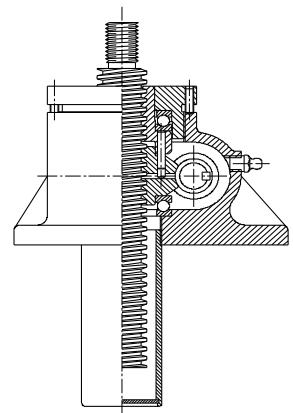
Model	E2624	E2500	E1801	E1804	E1809	E1819	E1829	E1849	E1899	
Inverted	A	79	78	125.5	159	167.5	210	267	**	**
	B	AA + 9	AA + 35	AA + 30	AA + 20	AA + 3	AA - 1	AA + 15	**	**
	C	35	N/A	60	75	90	102	141.5	**	**

** Consult Power Jacks

1.5 Anti-Backlash

Anti-Backlash Option

Reduction in the axial backlash between the screw and the worm gear nut to a practical minimum. Acts as a safety device, providing a dual nut load carrying unit, when the worm gear becomes worn. Wear indicator for critical applications.



2. Metric Ball Screw Jacks

High efficiency. Precise and reliable positioning. Integral safety device.



Translating Screw (upright)



Rotating Screw (upright)

Note

Integral safety device - All Power Jacks metric ball screw jacks except model E28501 have an integral safety device as standard.

This provides two important safety roles:

- (a) wear indicator and
- (b) sustain the load in the unlikely event of catastrophic ball failure.

Bellows boots screw protection available on request.

Pre-loaded ball screw assembly for zero linear backlash option.

Secondary guide option for increased lateral rigidity.

Double clevis screw jack option.

Attachments

IEC and Nema motor flanges, motors, gearboxes, reducers and couplings available for single screw jacks or multiple jacking arrangements.



Translating Screw (inverted)



Rotating Screw (inverted)



Clevis



Threaded

E-Series Metric Screw Jacks

2.1 Standard Performance

Model		E28501	E3802		E3805		E3810		E3820		E3830	E3860
Capacity (kN)		10	25		50		100		200		300	500
Lifting Screw	Diameter (mm)	20	25		40		50		63		80	On request
	Pitch (mm)	5	5	10	10	20	10	20	10	20	20	
Gear ratios	Option 1	5:1	6:1		6:1		8:1		8:1		10 2/3:1	
	Option 2	20:1	24:1		24:1		24:1		24:1		32:1	
Turn of worm for travel of lifting screw	Option 1	10 for 10mm	12 for 10mm	6 for 10mm	6 for 10mm	3 for 10mm	8 for 10mm	4 for 10mm	8 for 10mm	4 for 10mm	5.33 for 10mm	
	Option 2	40 for 10mm	48 for 10mm	24 for 10mm	24 for 10mm	12 for 10mm	24 for 10mm	12 for 10mm	24 for 10mm	12 for 10mm	16 for 10mm	
Maximum input power (kW)	Option 1	0.375	1.5		3		3.75		3.75		6	
	Option 2	0.18	0.375		0.55		1.125		1.125		1.9	
Start-up torque at full load (Nm) †	Option 1	2.7	5.9	11.1	23.4	44.6	36.4	68.5	75.2	139.4	182	
	Option 2	1.2	2.6	4.9	10.7	20.4	19.1	35.8	39.4	72.9	107.3	
Weight (kg) - stroke = 150mm		2.8	8.17		15.88		24.72		45		86	
Weight (kg) - per extra 25mm		0.08	0.21		0.32		0.57		0.86		1.58	

† For loads of 25% to 100% of screw jack capacity, torque requirements are approximately proportional to the load.

2.1.1 Ball Screw Jack Efficiencies

Gear ratio = 1

Model	E28501	E3802		E3805		E3810		E3820		E3830	E3860
Gear ratio	5:1	6:1		6:1		8:1		8:1		102/3:1	On request
Lifting screw pitch (mm)	5	5	10	10	20	10	20	10	20	20	
Static efficiency	0.603	0.565	0.600	0.567	0.595	0.546	0.581	0.529	0.571	0.492	
Dynamic efficiency	0.681	0.662	0.692	0.663	0.687	0.645	0.674	0.631	0.665	0.595	

Gear ratio = 2

Model	E28501	E3802		E3805		E3810		E3820		E3830	E3860
Gear ratio	20:1	24:1		24:1		24:1		24:1		32:1	On request
Lifting screw pitch (mm)	5	5	10	10	20	10	20	10	20	20	
Static efficiency	0.341	0.32	0.34	0.31	0.325	0.348	0.37	0.337	0.364	0.278	
Dynamic efficiency	0.429	0.419	0.438	0.407	0.422	0.45	0.47	0.44	0.465	0.371	

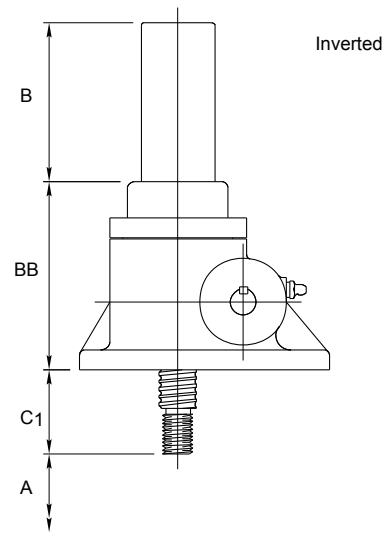
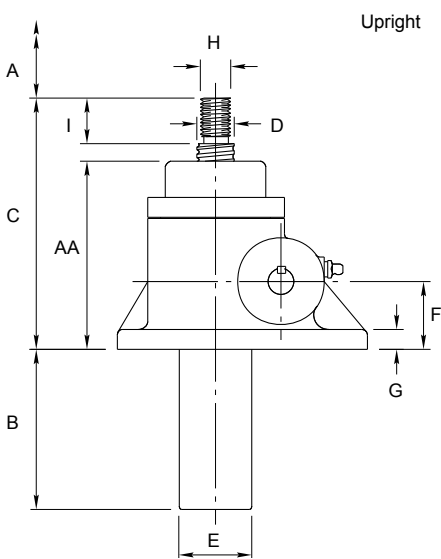
Notes

Efficiency values for standard grease lubricated worm gear box and lifting screw.

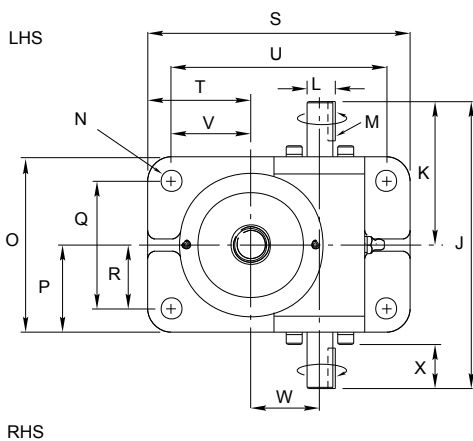
2.2 Ball Screw Jack Dimensions

2.2.1 Translating Screw

Elevation view

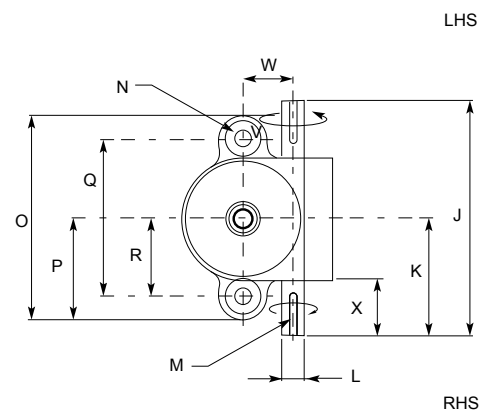


Plan view



- Models
 E3802
 E38021
 E3805
 E38051
 E3810
 E38101
 E3820
 E38201
 E3830
 E3860

Model
 E28501



LHS = Left Hand Side
 RHS = Right Hand Side

E-Series Metric Screw Jacks

2.2.2 Dimensions

Model	Upright	E28501	E3802	E38021	E3805	E38051	E3810	E38101	E3820	E38201	E3830	E3860
	Inverted	E28500	E3801	E38011	E3804	E38041	E3809	E38091	E3819	E38191	E3829	E3859
Capacity		10	25		50		100		200		300	500
A		Stroke as required										
B		A + 35	A + 10		A + 10		A + 15		A + 10		A + 30	
B1		A + 35	A + 25		A + 25		A + 25		A + 25		A + 25	
C		150	175	202	218	269	252	275	338	386	445	
C1		45	55		65		80		95		115	
øD		20	25		40		50		63		80	
øE		42	48.3		60.3		73		89		115	
F		40 ± 0.13	45 ± 0.13		60 ± 0.13		60 ± 0.13		85 ± 0.13		105 ± 0.13	
G		9	13		14		16		20		30	
H		M12 x 1.75	M20 x 2.5		M24 x 3		M36 x 4		M48 x 5		M72 x 4	
I		24	30		35		40		55		65	
J		150	180		230		280		300		380	
K		75	90		115		140		150		190	
øL		14 h8	16 h8		19 h8		25 h8		28 h8		35 h8	
M		5 x 5 x 25	5 x 5 x 25		6 x 6 x 32		8 x 7 x 40		8 x 7 x 40		10 x 8 x 50	
øN		11	13.5		18		22		26		39	
O		130	110		150		190		210		260	
P		65	55		75		95		105		130	
Q		100	80		115		145		150		190	
R		50	40		57.5		72.5		75		95	
S		-	165		205		225		275		365	
T		-	65		75		75		105		140	
U		-	135		170		180		215		295	
V		-	50		57.5		52.5		75		105	
W		31.75 + 0.076 - 0.000	43.26 + 0.025 - 0.025		55.58 + 0.050 - 0.000		66 + 0.060 - 0.000		66 + 0.70 - 0.000		95.25 + 0.130 - 0.000	
X		36	27.5		35		44		44		56	
AA		114	134	161	172	223	197	220	268	316	360	
BB		114	134	161	172	223	197	220	268	316	360	

On request

Note

All dimensions in mm.

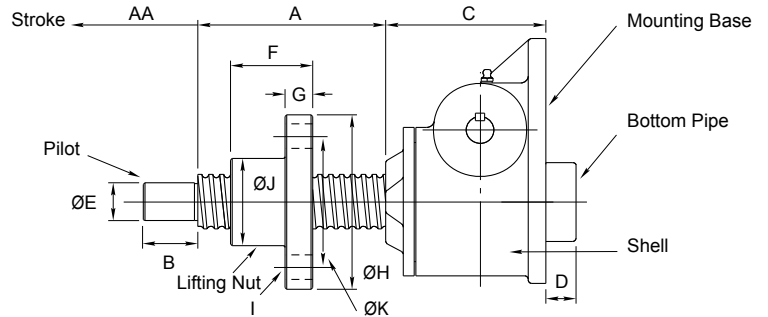
Closed height (C/C_i) of threaded end and top plate units are the same for upright or inverted models.

Rotating screw jacks (refer 2.3) have the same dimensions for the shell as the translating screw type.

Dimensions are subject to change without notice.

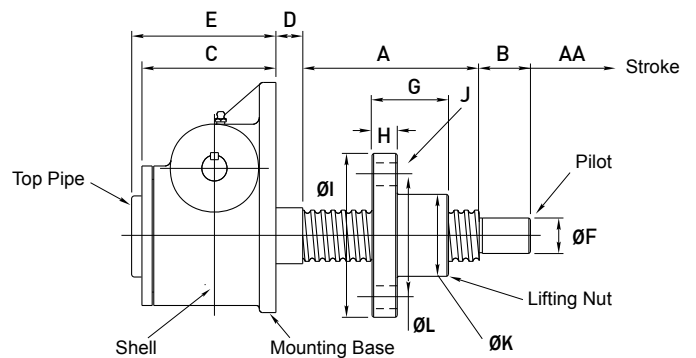
2.3 Rotating Ball Screw Jacks

2.3.1 Upright Rotating Screw



Model	UE28502	UE3803	UE38031	UE3806	UE38061	UE3811	UE38111	UE3821	UE38211	UE3831	UE3861
Capacity (kN)	10	25		50		100		200		300	500
A	AA + 74	AA + 85	AA + 110	AA + 110	AA + 160	AA + 135	AA + 160	AA + 176	AA + 190	AA + 240	On request
B	16	25		30		50		65		85	
C	90	103.5		138		146.5		195		235	
D	0	0		0		28		24		40	
ØE	12	20		25		35		45		75	
F	44	65	96	90	136	108	132	150.5	160	200	
G	12	15		20		25		35		48	
ØH	55	90		120		155		185		230	
I	6 x Ø7	4 x Ø13.5		4 x Ø18		4 x Ø22		4 x Ø26		4 x Ø26	
ØJ	32	40	47	60		70	75	85	95	120	
ØK (PCD)	45	65		90		115		135		175	

2.3.2 Inverted Rotating Screw

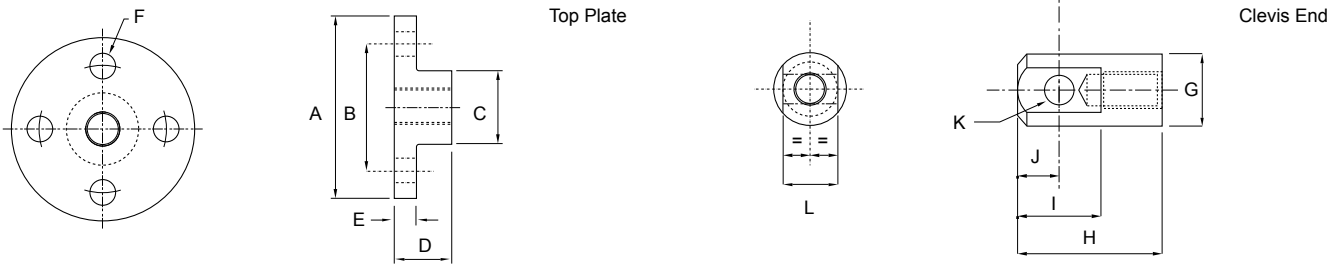


Model	DE28502	DE3803	DE38031	DE3806	DE38061	DE3811	DE38111	DE3821	DE38211	DE3831	DE3861
Capacity (kN)	10	25		50		100		200		300	500
A	AA + 74	AA + 85	AA + 110	AA + 110	AA + 160	AA + 135	AA + 160	AA + 176	AA + 190	AA + 240	On request
B	16	25		30		50		65		85	
C	90	95.5		122		130.5		179		235	
D	10	13.5		18		26.5		25		25	
E	90	95.5		122		130.5		203		275	
ØF	12	20		25		35		45		75	
G	44	65	96	90	136	108	132	150.5	160	200	
H	12	15		20		25		35		48	
ØI	55	90		120		155		185		230	
J	6 x Ø7	6 x Ø13.5		6 x Ø18		6 x Ø22		6 x Ø26		6 x Ø26	
ØK	32	40	47	60		70	75	85	95	120	
ØL (PCD)	45	65		90		115		135		175	

PCD = Pitch Circle Diameter

3 Accessories

3.1 Translating Screw Ends



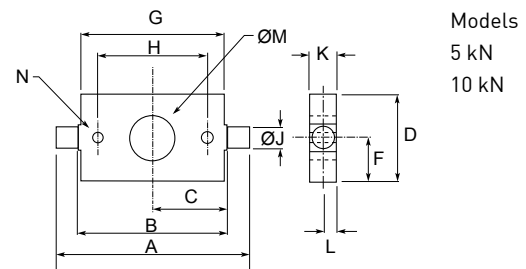
500kN & 100kN models have 6 bolt holes

Capacity [kN]	5	10	25	50	100	200	300	500	1000
øA	65	80	100	150	150	170	240	280	380
B (PCD)	45	55	70	85	110	120	170	215	290
øC	25	30	40	50	65	75	110	150	200
D	21	24	31.5	36.5	42	58	67	92	127
E	8	10	12	16	20	25	30	35	75
øF	9	11	13.5	18	22	26	33	33	51
øG	25	30	40	50	65	75	110	150	200
H	56	63	79.5	91.5	120	143	167	217	297
I	30	36	46	60	66	80	120	150	210
J	15	18	23	30	33	40	60	75	105
øK	10	12	16	20	22	30	45	60	90
L	15	20	30	35	40	50	80	110	140

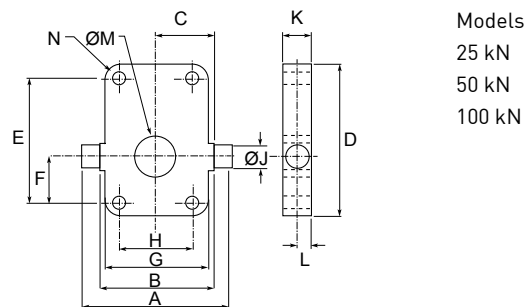
PCD = Pitch Circle Diameter.

3.2 Trunnion Mounts

Capacity [kN]	5	10	25	50	100
A	114	175	160	200	270
B	114	135	120	160	200
C	57	67.5	60	80	100
D	60	80	165	205	225
E	-	-	135	170	180
F	30	40	50	57.5	52.5
G	110	130	110	150	190
H	85	100	80	115	145
øJ (h6)	15	20	25	35	45
K	20	25	30	40	50
L	10	12.5	15	20	25
øM	50	58	72	95	130
N	M8 (2)	M10 (2)	M12 (4)	M16 (4)	M20 (4)
Weight [kg]	1.24	2.27	3.27	8.9	15.57



Models
5 kN
10 kN



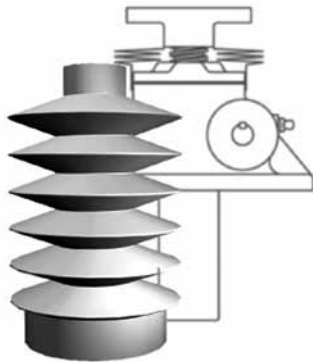
Models
25 kN
50 kN
100 kN

Trunnion mount bolts onto screw jack base plates.
Other sizes available on request.



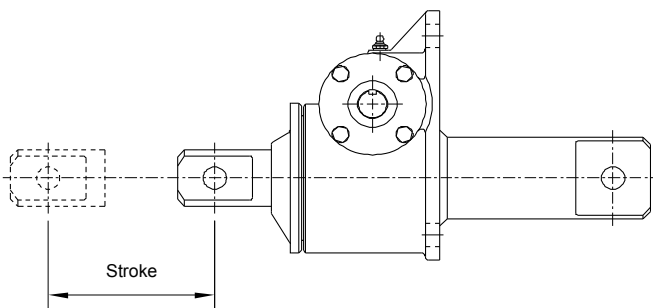
3.3 Motor Adaptors

Standard adaptors for 25kN to 300kN Screw Jacks.
Standard is IEC motor frames.
NEMA frames available on request.



3.4 Bellows Boots

Bellows Boots Options
Protect the screw from dust and dirt.
Guards against moisture and corrosive contaminants.
Helps maintain the proper lubrication.



3.5 Metric Double Clevis Screw Jacks

4 Other Products Screw Jacks



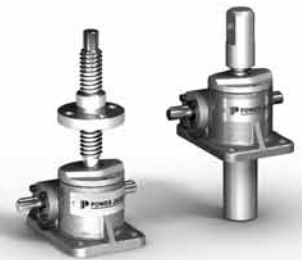
S-Series
Machine Screw



E-Series
Machine Screw



E-Series
Ball Screw



E-Series
Stainless Steel

Linear Actuators



EMA
0 - 10kN



Rolaram
10 - 400kN

Bevel Gearboxes



Range-N



Range-PowerGear



Range-P

Power Jacks are an industry leader in the manufacture of quality industrial lifting, positioning, material handling and power transmission equipment. The products are supplied globally to most industry sectors including nuclear, water, oil & gas, chemical, defence, steel, aluminium, automotive, and others.

PRECISION SCREW JACKS . ELECTRIC LINEAR ACTUATORS .
PLANETARY ROLLER SCREWS . SPIRAL BEVEL GEARBOXES .

DESIGN WITH POWER



FM 23810