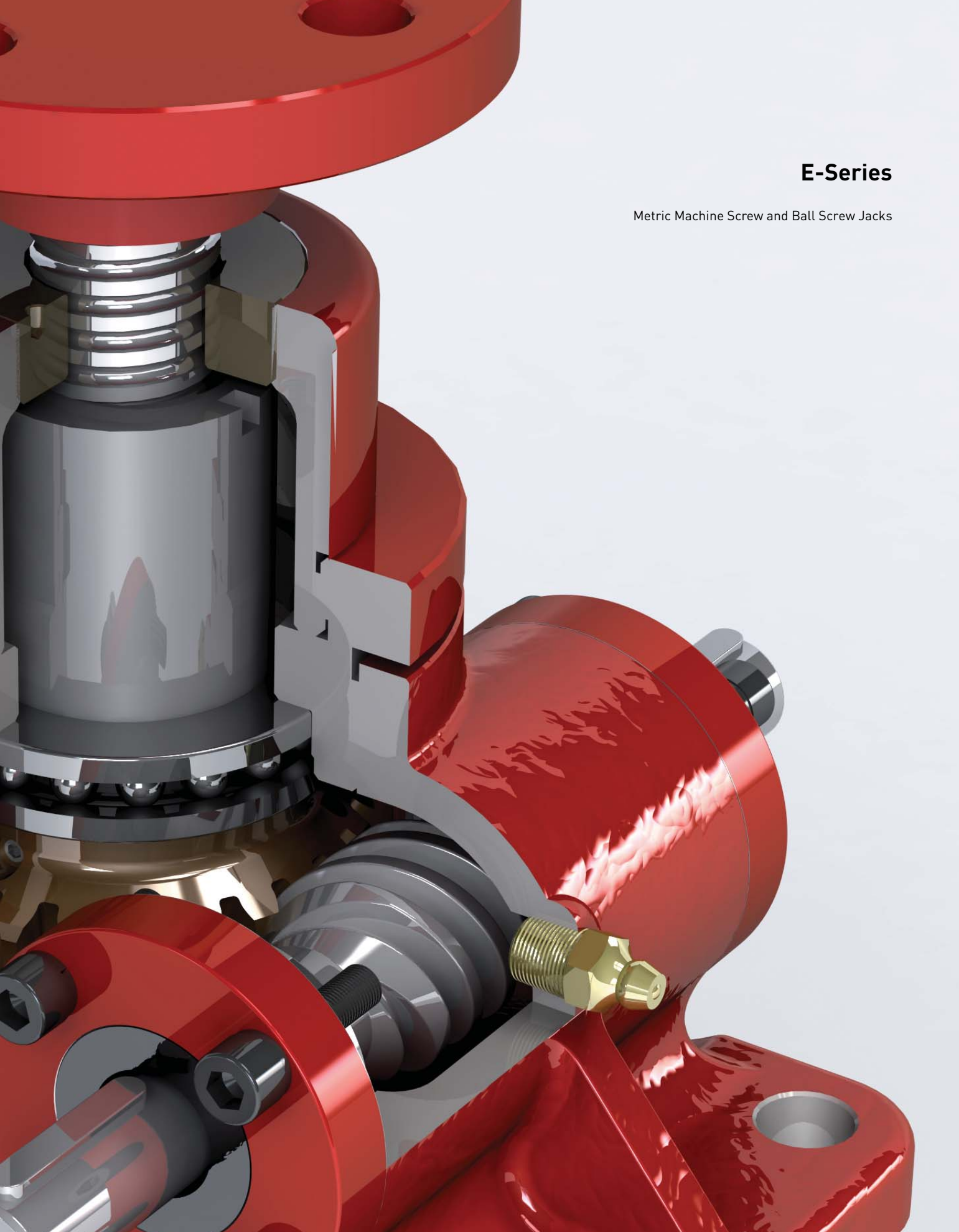




E-Series

Metric Machine Screw and 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.

1.1. Standard Performance

Screw jack 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	10 ^{2/3} :1	10 ^{2/3} :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	56.0	115.9	263.8	480	904	2025
	option 2	1.1	3.0	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.

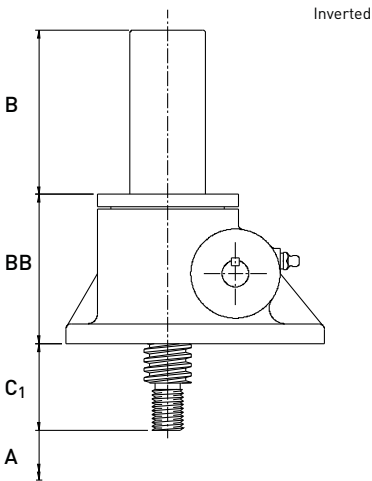
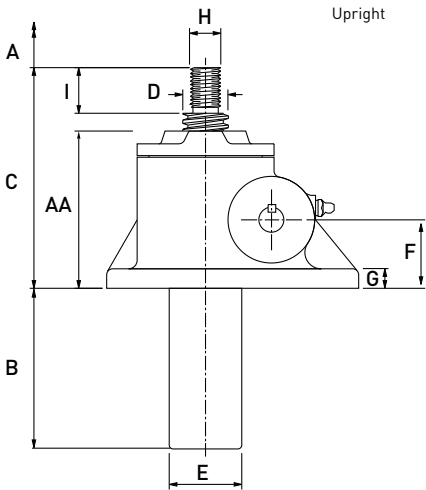
1.1.1. Screw Jack Efficiencies

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

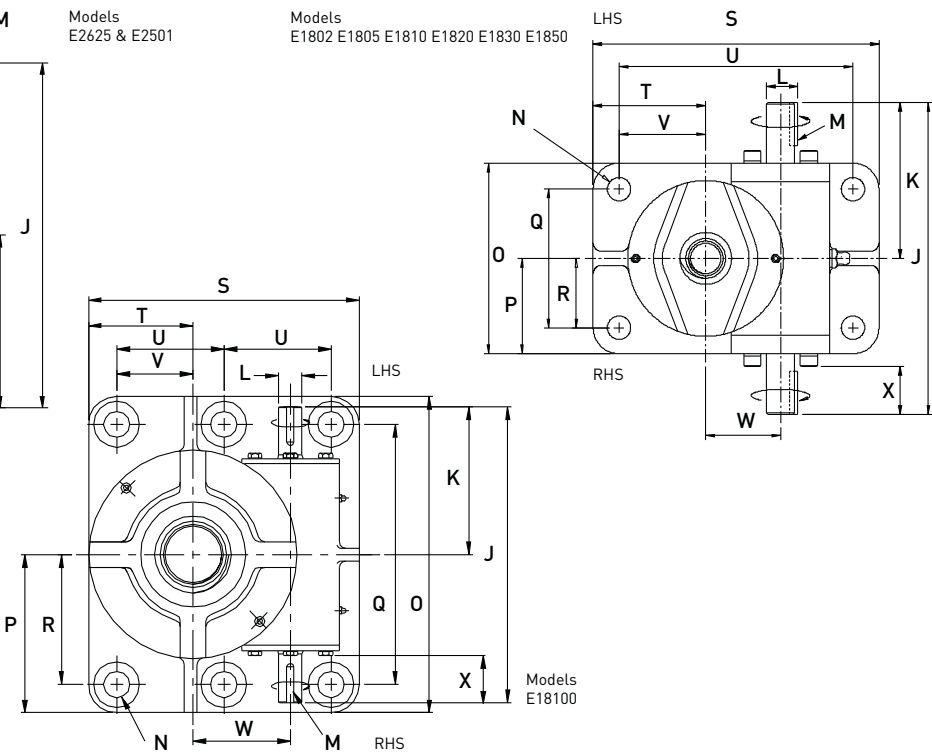
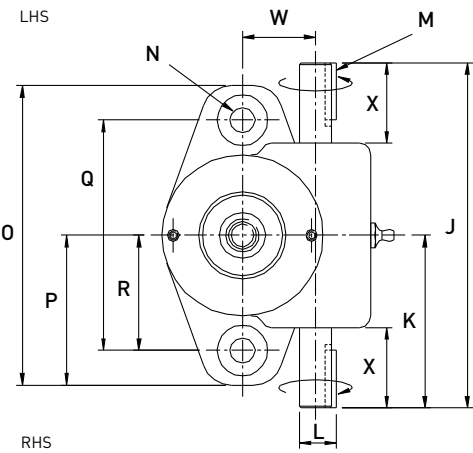
Notes: Efficiency values for standard grease lubricated worm gear box and lifting screw.

1.2. Dimensions

1.2.1. Translating Screw Jacks



Plan View



LHS = Left Hand Side
RHS = Right Hand Side

E-Series Metric Screw Jacks

1.2. Dimensions

Screw Jack Models

Upright	E2625	E2501	E1802	E1805	E1810	E1820	E1830	E1850	E18100
Inverted	E2624	E2500	E1801	E1804	E1809	E1819	E1829	E1849	E18099
Capacity (kN)	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
D	Ø16	Ø20	Ø30	Ø40	Ø55	Ø65	Ø95	Ø120	Ø160
E	Ø26.7	Ø33.4	Ø48.3	Ø60.3	Ø73	Ø89	Ø115	Ø141	Ø194
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
L	Ø10h8	Ø14h8	Ø16h8	Ø19h8	Ø25h8	Ø28h8	Ø35h8	Ø40h8	Ø45h8
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
N	Ø9	Ø11	Ø13.5	Ø18	Ø22	Ø26	Ø39	Ø51	Ø51
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	31.75	43.26	55.58	66	66	95.25	135	190.5
	+ 0.076	+ 0.076	+ 0.025	+ 0.050	+ 0.060	+ 0.070	+ 0.130	+ 0.070	+ 0.076
	- 0.000	- 0.000	- 0.025	- 0.000	- 0.000	- 0.000	- 0.000	- 0.000	- 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

Notes:

All dimensions in mm.

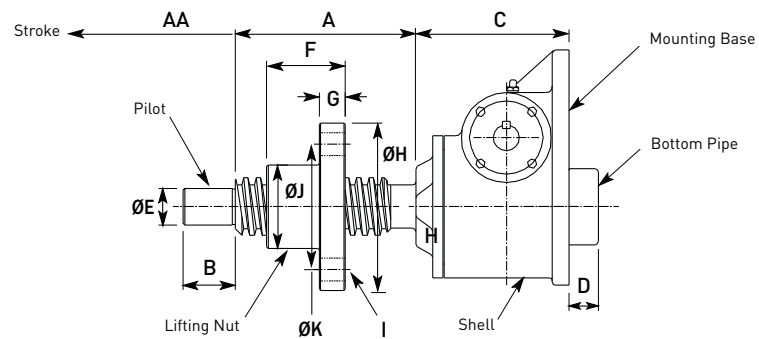
Closed height of threaded end and top plate units is the same for upright or inverted models.

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.

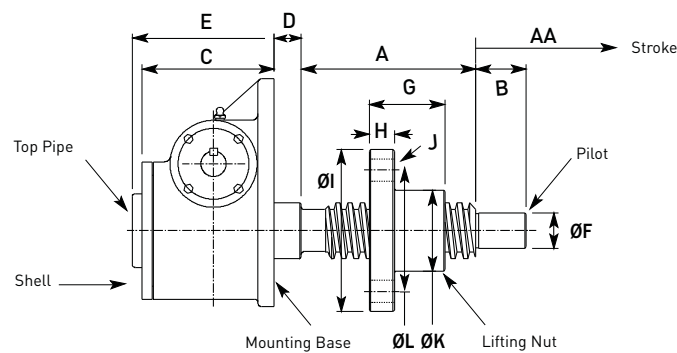
1.3. Rotating Screw Jack

1.3.1. Upright Rotating Screw



Model	(kN)	A	B	C	D	ØE	F	G	H	I	ØJ	ØK (P.C.D.)
UE2626	5	AA + 40	16	64	34	Ø10	25	10	60	4 x Ø9	Ø25	Ø42
UE2502	10	AA + 44	16	90	0	Ø12	35	12	80	4 x Ø11	Ø35	Ø57
UE1803	25	AA + 60	25	103.5	0	Ø20	40	15	90	4 x Ø13.5	Ø40	Ø65
UE1806	50	AA + 80	30	138	0	Ø25	65	20	115	4 x Ø18	Ø55	Ø85
UE1811	100	AA + 100	50	146.5	28	Ø35	75	25	160	4 x Ø22	Ø80	Ø120
UE1821	200	AA + 100	65	195	24	Ø45	75	25	185	4 x Ø26	Ø90	Ø135
UE1831	300	AA + 180	85	235	40	Ø75	140	35	230	6 x Ø26	Ø125	Ø175
UE1851	500	AA + 200	100	275	63	Ø90	150	50	280	6 x Ø33	Ø160	Ø220
UE18101	1000	AA + 250	125	405	128	Ø125	175	60	380	6 x Ø45	Ø210	Ø295

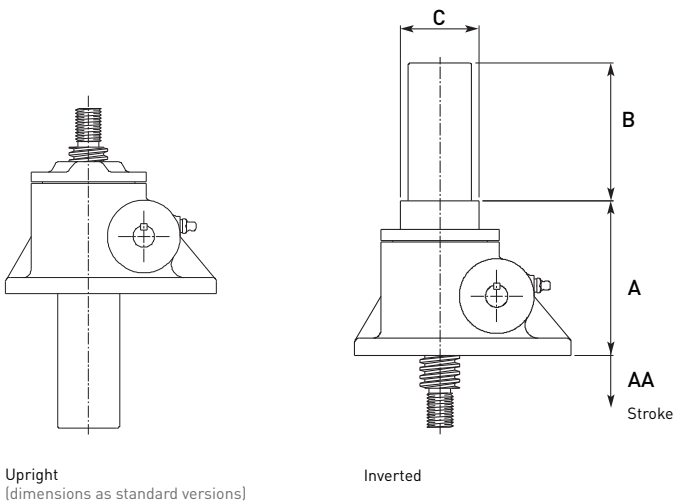
1.3.2. Inverted Rotating Screw



Model	(kN)	A	B	C	D	E	ØF	G	H	ØI	J	ØK	ØL (P.C.D.)
DE2626	5	AA + 40	16	64	12	64	Ø10	25	10	Ø60	4 x Ø9	Ø25	Ø42
DE2502	10	AA + 44	16	90	10	90	Ø12	35	12	Ø80	4 x Ø11	Ø35	Ø57
DE1803	25	AA + 60	25	95.5	14	95.5	Ø20	40	15	Ø90	4 x Ø13.5	Ø40	Ø65
DE1806	50	AA + 80	30	122	18	122	Ø25	65	20	Ø115	4 x Ø18	Ø55	Ø85
DE1811	100	AA + 100	50	130.5	26.5	130.5	Ø35	75	25	Ø160	4 x Ø22	Ø80	Ø120
DE1821	200	AA + 100	65	179	25	203	Ø45	75	25	Ø185	4 x Ø26	Ø90	Ø135
DE1831	300	AA + 180	85	235	25	275	Ø75	140	35	Ø230	6 x Ø26	Ø125	Ø175
DE1851	500	AA + 200	100	275	35	313	Ø90	150	50	Ø280	6 x Ø33	Ø160	Ø220
DE18101	1000	AA + 250	125	405	105	458	Ø125	175	60	Ø380	6 x Ø45	Ø210	Ø295

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.



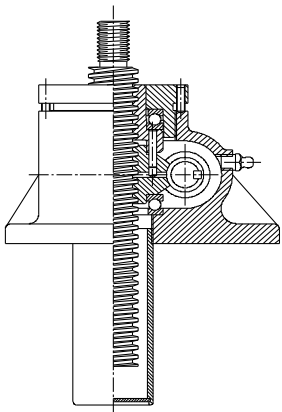
Model		E2624	E2500	E1801	E1804	E1809	E1819	E1829	E1849	E1899
Inverted	A	79	78	125.5	79	79	210	267	**	**
	B	AA + 9	AA + 35	AA + 30	AA + 20	AA + 3	AA + 1	AA + 15	**	**
	C	Ø35	N/A	Ø60	Ø75	Ø90	Ø102	Ø141.5	**	**

**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.



Translating Screw (inverted)



Rotating Screw (inverted)

Attachments

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



Clevis



Threaded

E-Series Metric Screw Jacks

2.1. Standard Performance

Screw jack model			E28501	E3802		E3805		E3810		E3820		E3830	E3860
Capacity (kN)			10	25		50		100		200		300	500
Lifting screw	Diameter	20 mm	25 mm		40 mm		50 mm		63 mm		80 mm		On Request
	Pitch	5 mm	5 mm	10mm	10 mm	20mm	10 mm	20mm	10 mm	20mm	20 mm		
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 10 mm	12 for 10 mm	6 for 10 mm	6 for 10 mm	3 for 10 mm	8 for 10 mm	4 for 10 mm	8 for 10 mm	4 for 10 mm	5.33 for 10 mm		
	option 2	40 for 10 mm	48 for 10 mm	24 for 10 mm	24 for 10 mm	12 for 10 mm	24 for 10 mm	12 for 10 mm	24 for 10 mm	12 for 10 mm	16 for 10 mm		
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 = Option 1

Model	E28501	E3802		E3805		E3810		E3820		E3830	E3860
Gear ratio	5:1	6:1		6:1		8:1		8:1		10 2/3:1	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	

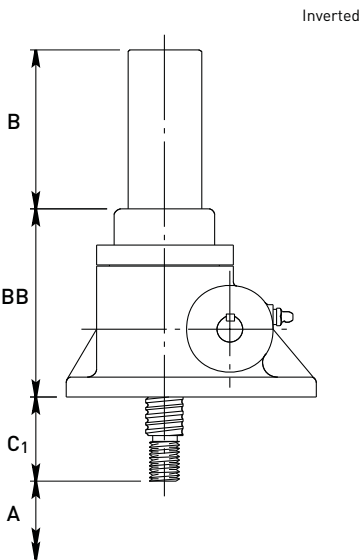
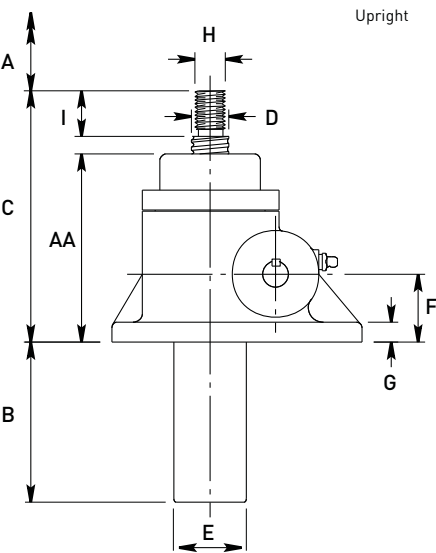
Gear Ratio = Option 2

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	0.320	0.340	0.310	0.325	0.348	0.370	0.337	0.364	0.278	
Dynamic efficiency	0.429	0.419	0.438	0.407	0.422	0.450	0.470	0.440	0.465	0.371	

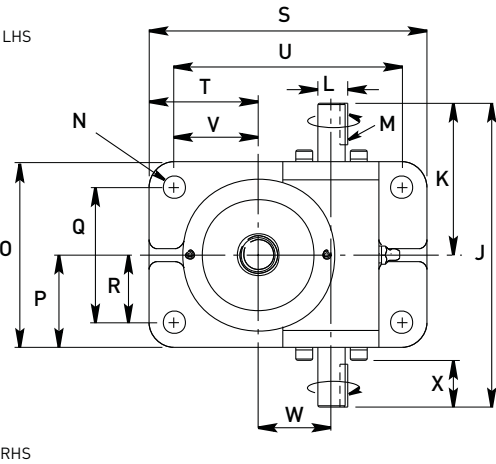
Notes: Efficiency values for standard grease lubricated worm gear box and lifting screw.

2.2. Ball Screw Jack Dimensions

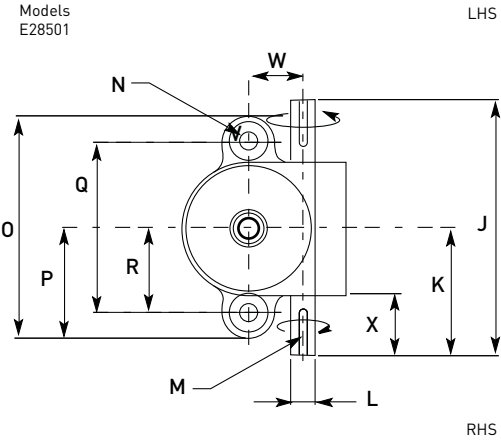
2.2.1. Translating Screw



Plan View



Models
E3802 E38021 E3805 E38051 E3810
E38101 E3820 E38201 E3830 E3860



LHS = Left Hand Side
RHS = Right Hand Side

E-Series Metric Screw Jacks

2.2.2. Screw Jack Model

Upright	E28501	E3802	E38021	E3805	E38051	E3810	E38101	E3820	E3830	E3860
Inverted	E28500	E3801	E38011	E3804	E38041	E3809	E38091	E3819	E3829	E3859
Capacity (kN)	10	25		50		100		200	300	500

A	Stroke as Required										
B	A + 35	A + 10		A + 10		A + 15		A + 10		A + 30	On Request
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	
D	Ø20	Ø25		Ø40		Ø50		Ø63		Ø80	
E	Ø42	Ø48.3		Ø60.3		Ø73		Ø89		Ø115	
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	
L	Ø14 h8	Ø16 h8		Ø19 h8		Ø25 h8		Ø28 h8		Ø35 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	
N	Ø11	Ø13.5		Ø18		Ø22		Ø26		Ø39	
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	43.26		55.58		66		66		95.25	
	+ 0.076	+ 0.025		+ 0.050		+ 0.060		+ 0.070		+ 0.130	
	- 0.000	- 0.025		- 0.000		- 0.000		- 0.000		- 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	

Notes:

All dimensions in mm.

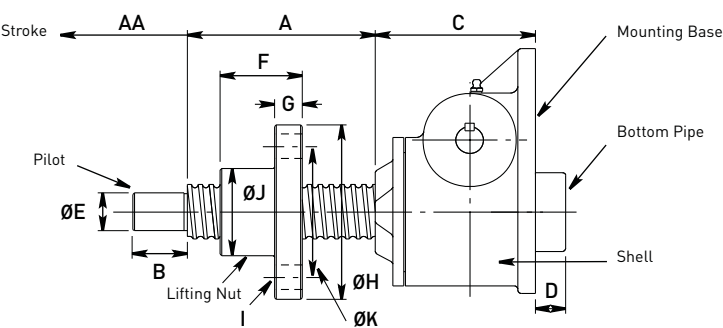
Closed height (C/C₁) of threaded end and top plate units is the same for upright or inverted models.

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.

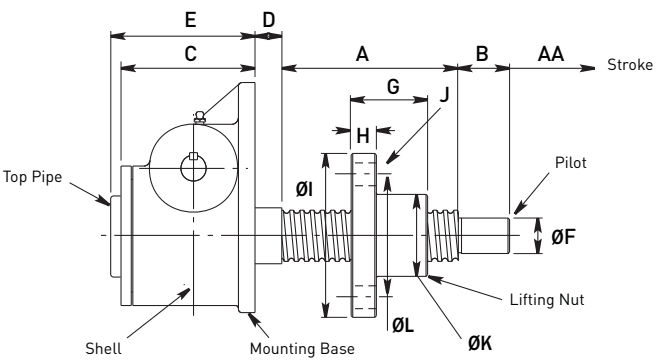
2.3. Rotating Ball Screw Jacks

2.3.1. Upright Rotating Screw



Model	(kN)	A	B	C	D	ØE	F	G	ØH	I	ØJ	ØK (P.C.D.)
UE28502	10	AA + 74	16	90	0	Ø12	44	12	Ø55	6 x Ø7	Ø32	Ø45
UE3803	25	AA + 85	25	103.5	0	Ø20	65	15	Ø90	4 x Ø13.5	Ø40	Ø65
UE38031		AA + 110					96				Ø47	
UE3806	50	AA + 110	30	138	0	Ø25	90	20	Ø120	4 x Ø18	Ø60	Ø90
UE38061		AA + 160					136				Ø70	
UE3811	100	AA + 135	50	146.5	28	Ø35	108	25	Ø155	4 x Ø22	Ø75	Ø115
UE38111		AA + 160					132				Ø85	
UE3821	200	AA + 176	65	195	24	Ø45	150.5	35	Ø185	4 x Ø26	Ø95	Ø135
UE38211		AA + 190					160				Ø120	
UE3831	300	AA + 240	85	235	40	Ø75	200	48	Ø230	4 x Ø26	Ø120	Ø175
UE3861	500	On Request										

2.3.2 Inverted Rotating Screw

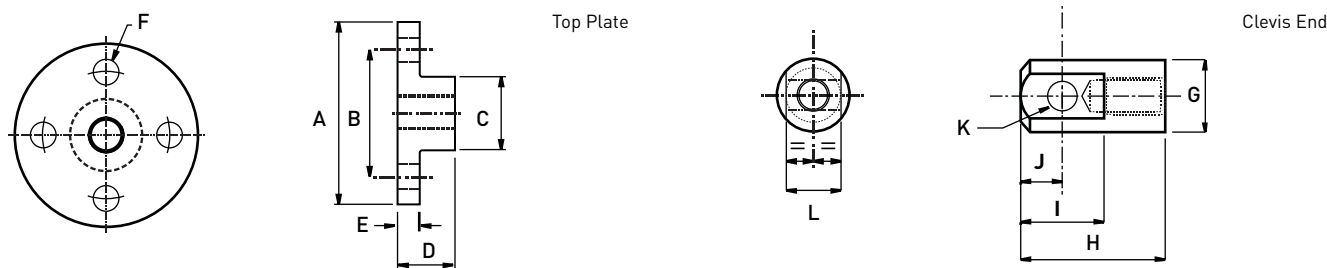


Model	(kN)	A	B	C	D	E	ØF	G	H	ØI	J	ØK	ØL (P.C.D.)
DE28502	10	AA+ 74	16	90	10	90	Ø12	44	12	Ø55	6 x Ø7	Ø32	Ø45
DE3803	25	AA + 85	25	95.5	13.5	95.5	Ø20	65	15	Ø90	4 x Ø13.5	Ø40	Ø65
DE38031		AA + 110						96				Ø47	
DE3806	50	AA + 110	30	122	18	122	Ø25	90	20	Ø120	4 x Ø18	Ø60	Ø90
DE38061		AA + 160						136				Ø70	
DE3811	100	AA + 135	50	130.5	26.5	130.5	Ø35	108	25	Ø155	4 x Ø22	Ø75	Ø115
DE38111		AA + 160						132				Ø85	
DE3821	200	AA + 176	65	179	25	203	Ø45	150.5	35	Ø185	4 x Ø26	Ø95	Ø135
DE38211		AA + 190						160				Ø120	
DE3831	300	AA + 240	85	235	25	275	Ø75	200	48	Ø230	4 x Ø26	Ø120	Ø175
DE3861	500	On Request											

E-Series Metric Screw Jacks

3. Accessories

3.1. Translating Screw Ends

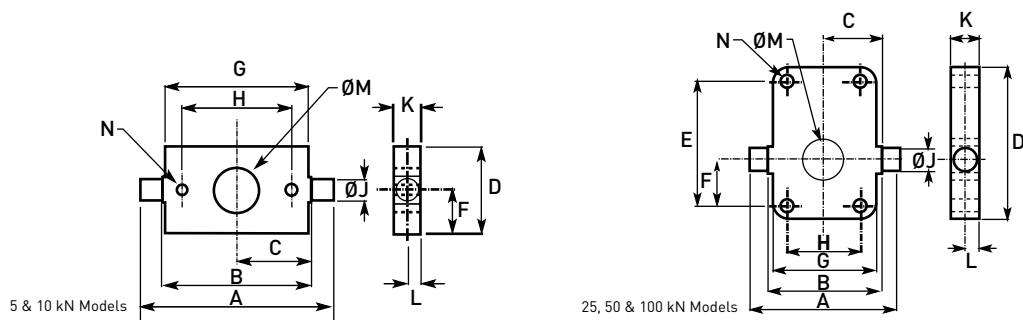


500 & 1000 kN Models have 6 bolt holes

Capacity (kN)	5	10	25	50	100	200	300	500	1000
A	Ø65	Ø80	Ø100	Ø120	Ø150	Ø170	Ø240	Ø280	Ø380
B	P.C.D. 45	P.C.D. 55	P.C.D. 70	P.C.D. 85	P.C.D. 110	P.C.D. 120	P.C.D. 170	P.C.D. 215	P.C.D. 290
C	Ø25	Ø30	Ø40	Ø50	Ø65	Ø75	Ø110	Ø150	Ø200
D	21	24	31.5	36.5	42	58	67	92	127
E	8	10	12	16	20	25	30	35	75
F	Ø9	Ø11	Ø13.5	Ø18	Ø22	Ø26	Ø33	Ø33	Ø51
G	Ø25	Ø30	Ø40	Ø50	Ø65	Ø75	Ø110	Ø150	Ø200
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
K	Ø10	Ø12	Ø16	Ø20	Ø22	Ø30	Ø45	Ø60	Ø90
L	15	20	30	35	40	50	80	110	140

P.C.D. = Pitch Circle Diameter

3.2. Trunion Mounts



Capacity (kN)	A	B	C	D	E	F	G	H	ØJ (h6)	K	L	ØM	N	Weight (kg)
5	114	114	57	60	-	30	110	85	Ø15	20	10	Ø50	M8 (2)	1.24
10	175	135	67.5	80	-	40	130	100	Ø20	25	12.5	Ø58	M10 (2)	2.27
25	160	120	60	165	135	50	110	80	Ø25	30	15	Ø72	M12 (4)	3.27
50	200	160	80	205	170	57.5	150	115	Ø35	40	20	Ø95	M16 (4)	8.90
100	270	200	100	225	180	52.5	190	145	Ø45	50	25	Ø130	M20(4)	15.57

Trunion mounts bolt onto screw jack base plates
Other sizes available on request

E-Series Metric Screw Jacks

3.3. Motor Adapters

Standard adapters for 25kN to 300kN Screw Jacks.

Standard is IEC motor frames.

NEMA frames available on request.



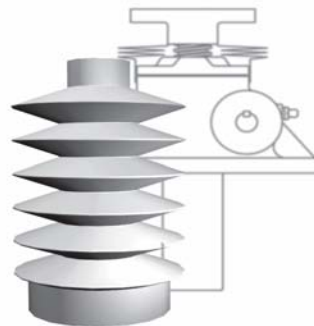
3.4. Bellows Boots

Bellows Boots Options

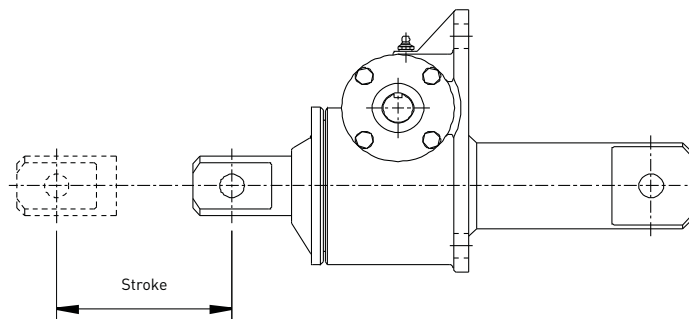
Protect the screw from dust and dirt.

Guards against moisture and corrosive contaminants.

Helps maintain the proper lubrication.



3.5. Metric Double Clevis Screw Jacks



E-Series Metric Screw Jacks

Other Products

Screw Jacks



S-Series, Machine Screw



E-Series, Machine Screw



E-Series, Ball Screw



E-Series, Stainless Steel

Electric Linear Actuators



Range EMA (0-10kN)



Range Rolaram (10-400kN)



Special

Bevel Gearboxes



Range - P



Range - N



Range - PowerGear



Special

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



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