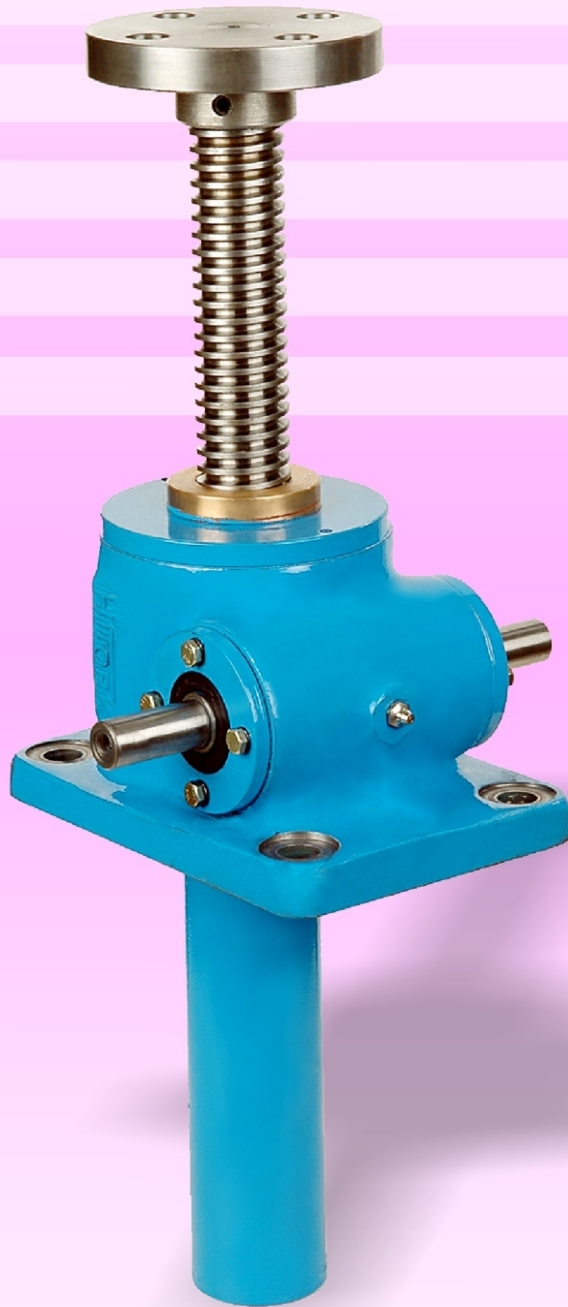


Worm Gear Screw Jacks Imperial - IMA Series

Linear Actuators



ISO : 9001 - 2008



Linear Actuation Technology Product Selection Guide

Imperial IMA Series Machine Screw Jacks

Introduction:

Gears and Gear Drives (india) pvt ltd, with over three decades of experience, provide products, solutions and services in Linear Actuation Drives Technology.

IMA Series of machine screw jacks are specially developed to meet the needs in countries using inch system. With capacities ranging from 500 lbs to 50 tons, provide solutions to all your linear actuation and lifting needs.

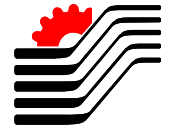
Gears and Gear Drives (india) pvt ltd also provides packaged solutions to linear actuation technology which requires combination of other power transmission products such as bevel gear boxes, geared motors, shafts, couplings, universal joints etc.

Features:

Inch version of screw jacks (IMA Series) are designed for loads, speeds and dimensions frequently used in inch system countries.

Advantages:

- Positive mechanical positioning.
- Precise movement.
- Uniform lifting speed.
- Upright & inverted versions.
- Capacities ranging from ¼ ton to 50 ton.
- Machine Acme screw hardened & tempered for long life.
- Case hardened and ground worm.
- Aluminium bronze worm wheel with controlled backlash and matched blue bearing.
- Aluminium housing for ½ and 1 ton, SG iron housing for other sizes.
- Thrust ball bearing for load and tapered roller bearing for worm shaft.
- Translating screw or rotating screw version.
- Wide range of accessories such as protection tube, bellows, motor flange, stroke limit setting devices.
- Various screw rod end possibilities, plain, threaded, top plate, clevis, Fork end, Rod end, swivel base etc.



System Parts	End Application
<ul style="list-style-type: none"> • Electrical Accessories Viz. AC/DC/Stepper/Servo/3 Phase/Single phase Motors with NEMA & IEC Flanges • Control Electronics Viz. Counters, Limit Switches, Potentiometer, Proximity Switches, Encoders, Programmed Motion Controllers(Relay bee) 	
<h3>Additional Features</h3>	<h3>Industrial Machinery</h3>
<ul style="list-style-type: none"> • Ball Screw Jacks on Classic Versions • Special Profile Screw Shafts • Double Clevis Version 	<ul style="list-style-type: none"> • Cold Rolling Mill • Hot Rolling Mill • Saw Pipe Mill • Spiral Weld Pipe Mill • Steel Manufacturing Industry • Industrial Automation • Lifting Systems
<h3>Combo Drives</h3>	<h3>Mobile and Transport Machinery</h3>
<ul style="list-style-type: none"> • Jack + Bevel Drive + Motor • Jack + Worm Reducer + Motor • Jack + Inline Helical Drive + Motor • Jack + Planetary Drive + Motor 	<ul style="list-style-type: none"> • Deflector for Trucks • Mobile Dish Antennae's Positioning Jacks • Landing Gear Jacks • Rail / Road Maintenance Equipments • Ship Maintenance Equipments
<h3>Customisation for your needs</h3>	<h3>Miscellaneous Application</h3>
<ul style="list-style-type: none"> • Anti Backlash • Anti Turn • Anti Backlash + Anti Turn • Multi Start Screw Shaft • Special Gear Ratios 	<ul style="list-style-type: none"> • Solar Panel • Agricultural Machinery • Atomic Energy • Antennae Positioning System

Preliminary Selection Guide

Machine Screw Actuator Models

Imperial Machine Screw Actuator Sizes
Capacities from 0.25 to 5 Tonnes

Machine Screw Actuator Units							
Capacity (Tonnes)		0.25	0.5	1	2	3	5
Series		IMA0.25	IMA0.5	IMA1	IMA2(REG) IMA2(INV) IMA2(SPL)	IMA3(REG) IMA3(INV)	IMA5
Lifting Screw Diameter	Diameter Pitch Type	½ 0.250 ACME	5/8 0.125 ACME	¾ 0.200 ACME	1 0.250 ACME	1 0.250 ACME	1 ½ 0.375 ACME
Worm Gear Ratios	Normal	5:1	5:1	5:1	6:1	6:1	6:1
	Optional 1	-	-	20:1	24:1	24:1	24:1
	Optional 2	-	-	-	12:1	12:1	12:1
Turns of Worm for 1" Raise	Normal	20	40	25	24	24	16
	Optional 1	-	-	100	96	96	64
	Optional 2	-	-	-	48	48	32
Worm Torque at No load (in-lb)	Normal	2	2	5	5	5	10
	Optional 1	-	-	5	5	5	10
	Optional 2	-	-	-	5	5	10
Maximum Horsepower per Actuator (Cv)	Normal	1/3	1/3	1/2	2	2	4
	Optional 1	-	-	1/4	½	¾	¾
	Optional 2	-	-	-	¾	1 ¼	2
Worm Torque at Full Load (in-lb)	Normal	13	21	58	126	189	486
	Optional 1	-	-	25	56	83	168
	Optional 2	-	-	-	79	118	308
Efficiency Rating (%)	Normal	34	21	25	24	24	23
	Optional 1	-	-	14	13	13	17
	Optional 2	-	-	-	19	19	18
Max Worm Speed at Full Load (rpm)	Normal	1580	980	540	985	660	512
	Optional 1	-	-	615	560	560	278
	Optional 2	-	-	-	600	660	404
Max Load at Full Horsepower and 1750 rpm(lb)	Normal	505	630	690	2520	2520	3280
	Optional 1	-	-	785	1430	2148	1780
	Optional 2	-	-	-	1520	2530	2590
Overhung Load Capacity of Actuator Worm Shafts (lb)		50	45	55	80	120	205
Weight with 6" Raise (lb)		2.3	2.3	5	17	17	35
Weight per Additional 1" Raise (lb)		0.1	0.1	0.3	0.3	0.3	0.9

Machine Screw Actuator Models

Imperial Machine Screw Actuator Sizes Capacities from 10 to 50 Tonnes

Machine Screw Actuator Units							
Capacity (Tonnes)		10	15	20	25	35	50
Series		IMA10	IMA15	IMA20	IMA25	IMA35	IMA50(REG) IMA50(INV)
Lifting Screw Diameter	Diameter Pitch Type	2 0.500 ACME	2 1/4 0.500 ACME	2 1/2 0.500 ACME	3 0.666 ACME	3 3/4 0.666 ACME	4 1/2 0.666 ACME
Worm Gear Ratios	Normal Optional 1 Optional 2	23:3 24:1 -	23:3 24:1 -	8:1 24:1 -	10 2/3:1 32:1 -	10 2/3:1 32:1 -	10 2/3:1 32:1 -
Turns of Worm for 1" Raise	Normal Optional 1 Optional 2	153.4 48 -	153.4 48 -	16 48 -	16 48 -	16 48 -	16 48 -
Worm Torque at No load (in-lb)	Normal Optional 1 Optional 2	20 20 -	20 20 -	30 30 -	40 40 -	50 50 -	100 100 -
Maximum Horsepower per Actuator (Cv)	Normal Optional 1 Optional 2	5 1 1/2 -	5 1 1/2 -	5 1 1/2 -	8 2 1/2 -	8 2 1/2 -	15 6 -
Worm Torque at Full Load (in-lb)	Normal Optional 1 Optional 2	1020 482 -	1655 780 -	2151 1045 -	2690 1425 -	4400 2330 -	7020 3624 -
Efficiency Rating (%)	Normal Optional 1 Optional 2	23 15 -	21 14 -	21 14 -	21 13 -	18 11 -	16 10 -
Max Worm Speed at Full Load (rpm)	Normal Optional 1 Optional 2	305 195 -	190 120 -	145 90 -	185 109 -	115 66 -	130 105 -
Max Load at Full Horsepower and 1750 rpm(lb)	Normal Optional 1 Optional 2	3900 2480 -	3610 2295 -	3700 2285 -	5920 3495 -	5070 2990 -	8510 6590 -
Overhung Load Capacity of Actuator Worm Shafts (lb)		305	390	425	735	665	350
Weight with 6" Raise (lb)		52	66	93	160	240	410
Weight per Additional 1" Raise (lb)		1.4	1.5	2.6	2.5	3.7	5.5

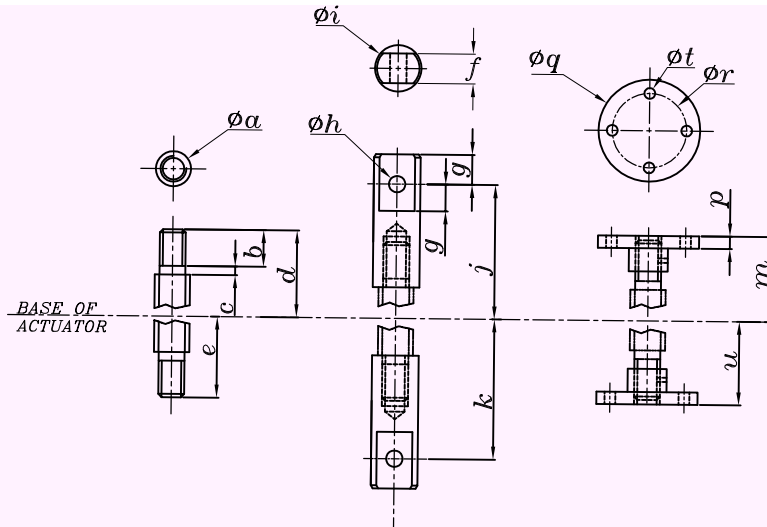
Dimension Sheet

Machine Screw Actuator

Models (Type 1 - Translating Screw)

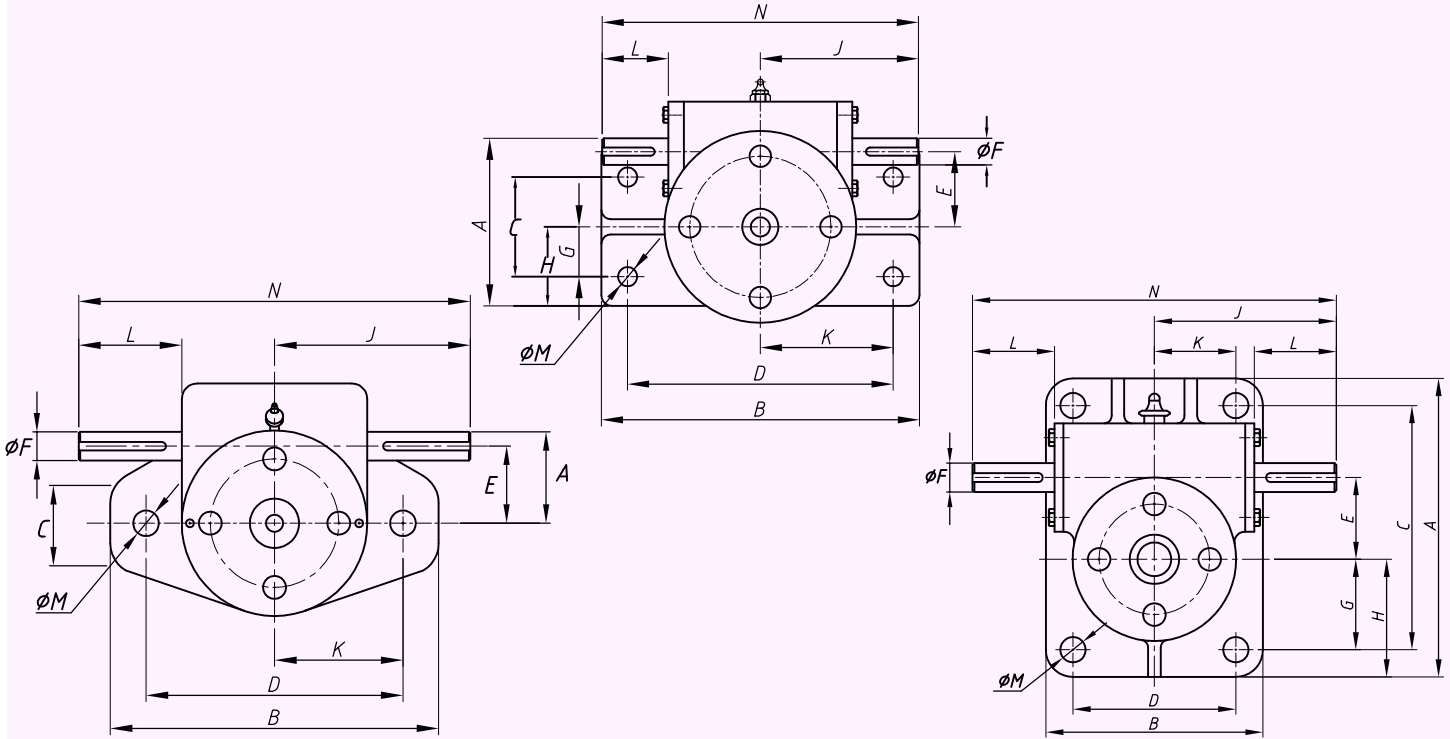
Imperial Machine Screw Actuator Sizes
Capacities from 0.25 to 5 Tonnes

Capacity (Tonnes)	0.25	0.5	1	2	2	2	3	5
Series	IMA0.25	IMA0.5	IMA1	IMA2(REG)	IMA2(INV)	IMA2(SPL)	IMA3	IMA5
Screw Øx pitch	1/2X0.250	5/8x0.125	3/4x0.200	1x0.250	1x0.250	1x0.250	1x0.250	1 1/2x0.375
Housing								
A	1.647	1.647	2 5/8	3 1/2	6 1/4	7	6 1/4	8
B	4	4	5	7	4 1/8	3 1/2	4 1/8	6
C	1	1		2	5 1/4	6	5 1/4	6 1/2
D	3 1/4	3 1/4	4	6	3 1/8	2	3 1/8	4 1/2
E	0.938	0.938	1.26	1.78	1.78	1.78	1.78	2.213
ØF	0.373 / 0.375	0.373 / 0.375	0.498 / 0.500	0.498 / 0.5	0.498 / 0.5	0.498 / 0.5	0.498 / 0.5	0.748 / 0.749
Keyway	1/8 x 1/16 x 3/4	1/8 x 1/16 x 3/4	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8 x 1/16 x 1	3/16 x 3/32 x 1 1/4
G				1	1.93	2 1/2	1 7/8	2 1/4
H				1 3/4	2.42	3	2 3/8	3
J	2 1/4	2 1/4	3	3 1/2	3 1/2	3 1/2	3 1/2	4 1/2
K	1 5/8	1 5/8	2	3	1 9/16	1	1 9/16	2 1/4
L	1.128	1.128	1 7/16	1.52	1.325	1 1/8	1.325	1.732
ØM	9/32	9/32	13/32	13/32	13/32	13/32	13/32	11/16
N	4 1/2	4 1/2	6	7	7	7	7	9
ØO	1.043	1.043	1.65	1 21/32	1.831	1 21/32	1.831	2 3/8
P	1	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8	1 3/8	1.5
Q	1	1	1.5	1.75	1.75	1.75	1.75	2.25
R	2 3/8	2 3/8	3 1/4	3 7/8	3 7/8	4 1/16	3.757	5 1/4
S	5/16	5/16	3/8	0.568	1/2	1/2	1/2	0.537
T	2 3/8	2 3/8	2.933	37/8	3 7/8	3 3/4	3.757	5 1/4
U	3/4	3/4	1	1	1.378	0	1 3/8	1.378
Screw End F								
a	3/8 - 24 UNF-2A	3/8 - 24 UNF-2A	1/2 - 13 UNC-2A	3/4 - 10 UNC-2A	3/4 - 10 UNC-2A	3/4 - 10 UNC-2A	5/8 18 UNF-2A	1 - 8 UNC-2A
b	3/4	1	3/4	1 1/8	1 1/8	1 1/8	1	1 1/8
c	1/8	1/8	1/8	0.19	0.19	0.19	1/8	0.19
d mini	4 +/- 1/32	4 +/- 1/32	5 3/8 +/- 1/32	6 +/- 1/32	6 +/- 1/32	6 +/- 1/32	5 3/16 +/- 0.06	8 +/- 0.06
e mini	2 +/- 1/32	2 +/- 1/32	2 +/- 1/32	2.5 +/- 1/32	2.5 +/- 1/32	2.5 +/- 1/32	2.06 +/- 0.06	3.5 +/- 0.06
Screw End C								
f	3/8	1/2	1/2	3/4	3/4	3/4	1	1
g	3/8	1/2	1/2	3/4	3/4	3/4	3/4	1
Øh	13/64	17/64	21/64	13/32	13/32	13/32	5/8	0.66
Øi	1/2	5/8	3/4	1	1	1	1 1/2	1.5
j mini	4 +/- 1/32	4 +/- 1/32	5 +/- 1/32	5 1/4 +/- 1/16	5 1/4 +/- 1/16	5 1/4 +/- 1/16	6.06 +/- 0.06	7 +/- 0.06
k mini	2 +/- 1/32	2 +/- 1/32	1 5/8 +/- 1/32	1 3/4 +/- 1/16	1 3/4 +/- 1/16	1 3/4 +/- 1/16	2.937 +/- 0.06	2.5 +/- 0.06
Screw End P								
m mini	4 +/- 1/32	4 +/- 1/32	4 1/2 +/- 1/32	5 1/4 +/- 0.06	5 1/4 +/- 0.06	5 1/4 +/- 0.06	5 1/4 +/- 0.06	7 +/- 0.6
p	5/16	5/16	3/8	7/16	7/16	7/16	7/16	0.6
Øq	2 1/4	2 1/4	3 1/2	4 1/4	4 1/4	4 1/4	4 1/4	4 1/2
Ør	1 1/2	1 1/2	2 1/2	3	3	3	3	3
Øt	4 X 9/32	4 X 9/32	4 X 7/16	4 X 13/32	4 X 13/32	4 X 13/32	13/32	4 X 11/16
u mini	2 +/- 1/32	2 +/- 1/32	1 1/4 +/- 1/32	1 3/4 +/- 0.06	1 3/4 +/- 0.06	1 3/4 +/- 0.06	2 1/8 +/- 0.06	2 1/2 +/- 0.06

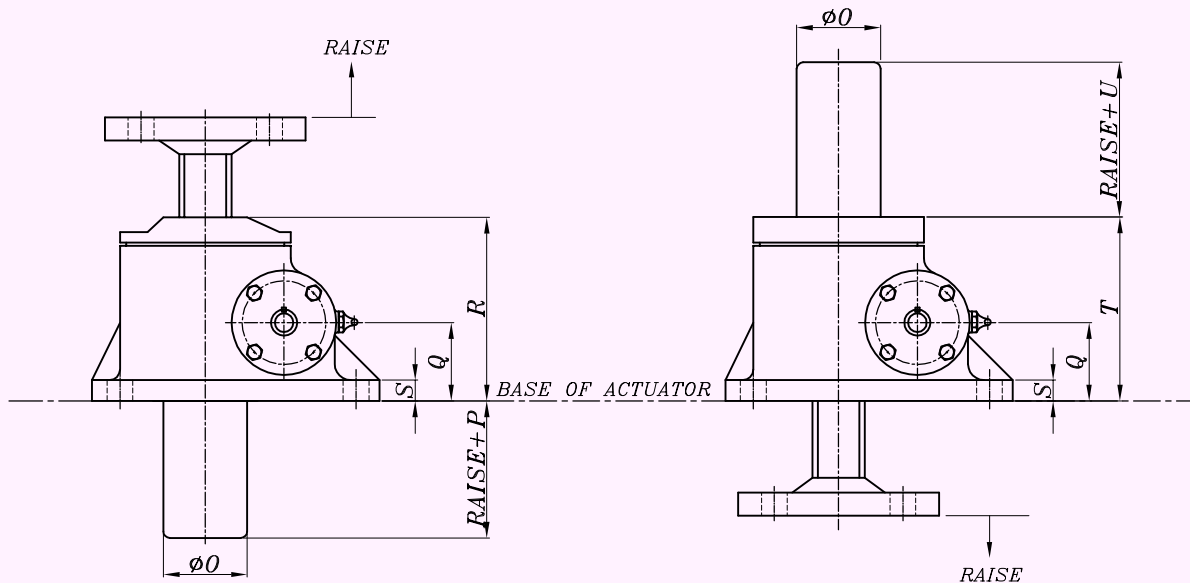


*Note: REG - Regular Base
 N V - Inverted Base

Screw End F Screw End C Screw End P



Series IMA 0.25 to 1 Series IMA2(REG) & IMA 50(REG) Series IMA2(INV) to IMA 35 & IMA 50(INV)



Upright Inverted

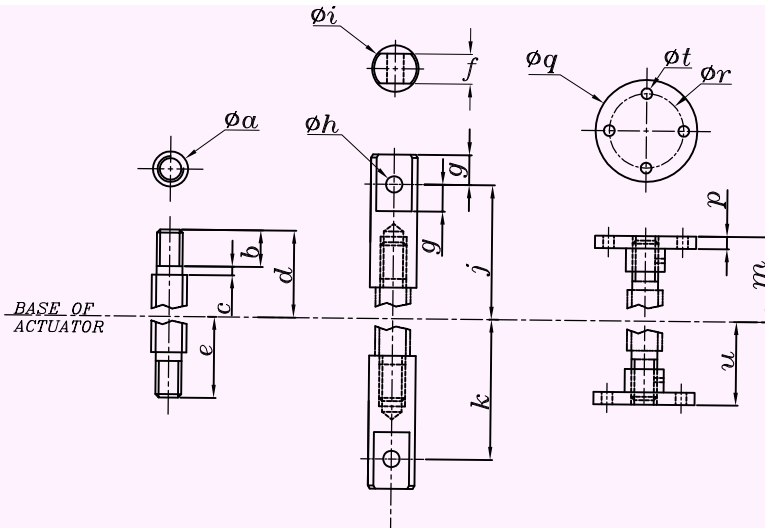
Dimension Sheet

Machine Screw Actuator

Models (Translating Screw Type)

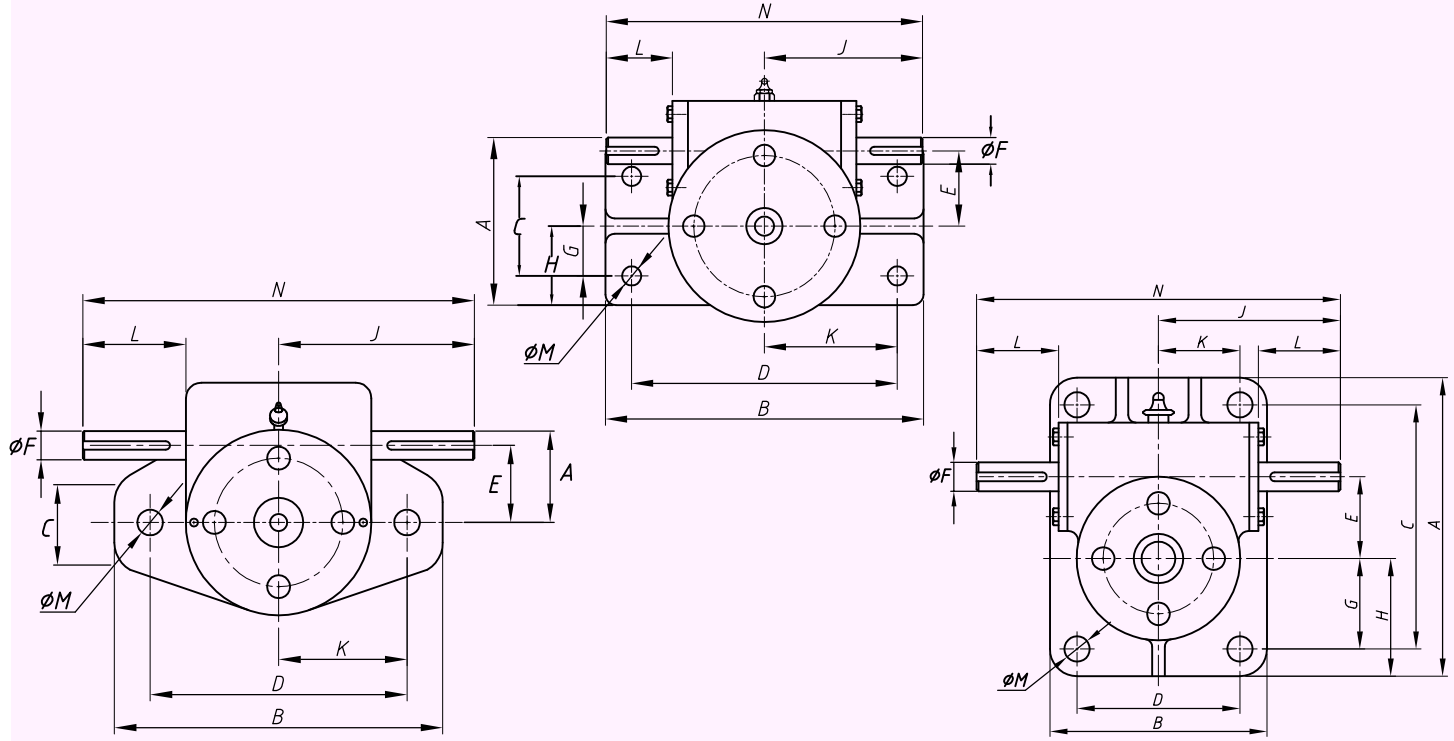
Imperial Machine Screw Actuator Sizes
Capacities from 10 to 50 Tonnes

Capacity (Tonnes)	10	15	20	25	35	50	50
Series	IMA10	IMA15	IMA20	IMA25	IMA35	IMA50(REG)	IMA50(INV)
Screw Øx pitch	2 x 0.500	2 1/4 x 0.5	2 1/2 x 0.5	3 X 0.666	3 3/4 x 0.666	4 1/2 x 0.666	4 1/2 x 0.666
Housing							
A	8 3/4	9 1/4	11	13 3/4	15.5	9 3/4	21.75
B	7 1/2	7 3/4	8 1/4	10 1/4	10.25	19 3/4	10.25
C	7	7 1/2	8 3/4	11	12.5	6	18
D	5 3/4	6	6	7 1/2	7.5	16	6
E	2.63	2.63	2.85	3.82	3.82	5.394	5.394
ØF	0.998 / 0.999	0.998 / 0.999	0.998 / 0.999	1.373 / 1.375	1.373 / 1.375	1.498 / 1.500	1.498 / 1.500
Keyway	1/4x1/8x1 1/2	1/4x1/8x1 1/2	1/4x1/8x1 1/2	5/16x5/32x2	0.313x0.156x2	3/8x3/16x2/14	3/8x3/16x2/14
G	2	2 1/2	3	3 3/4	4,5	3	8
H	2 7/8	3 3/8	4 1/8	5 1/8	6	4 7/8	9.87
J	5 1/2	5 1/2	5.5	7	7	11.133	11.133
K	2 7/8	3	3	3 3/4	3.75	8	3
L	2.126	2.114	1 1/2	2.649	2.19	4.44	4.44
ØM	13/16	13/16	1 1/8	1 3/8	1.63	1 3/8	1 7/8
N	11	11	11	14	14	22.266	22.266
ØO	2.756	3	3 1/2	4 1/2	4.5	5.512	5.512
P	1,673	1,575	2	2	2	2.90	2.95
Q	2.25	2.75	3.25	4	4	4.75	4.75
R	5 5/8	6.31	7.13	8 7/8	8.88	9.868	9.868
S	1/2	0.624	3/4	1	1.05	1 1/4	1 1/4
T	5 5/8	6	7.13	8 7/8	8.88	9.868	9.868
U	1.28	1.575	2	2	2.25	2.5	2.7
Screw End F							
a	1 1/2 -6 UNC-2A	1.75-5 UNC-2A	2 -4.5 UNC 2A	2.5 -4 UNC-2A	3.25 - 4 UNC-2A	4 - 4 UNC-2A	4 - 4 UNC-2A
b	1 5/8	2	2 1/4	3 1/4	3 3/4	4.25	4.25
c	0.25	0.25	1/4	0.25	1/4	0.25	0.25
d mini	8.75 +/- 0.06	9.75 +/- 0.06	11.5 +/-0.06	13.75 +/-0.06	15 +/- 0.06	17.50 +/-0.03	17.50 +/-0.03
e mini	4 1/4 +/- 0.06	4.25 +/- 0.06	5 +/-0.06	5.75 +/-0.06	7 +/- 0.06	8 +/- 0.03	8 +/- 0.03
Screw End C							
f	1.25	1.5	1.75	2.25	2.5	3 1/4	3 1/4
g	1 1/4	1.25	1 1/2	1.75	2	2 1/2	2 1/2
Øh	Ø.8	0.91	1.03	1.28	1.53	1 25/32	1 25/32
Øi	2	2.25	2.5	3	3.75	4.5	4.5
j mini	7.5 +/-0.06	8.5 +/-0.06	10 +/-0.06	12 +/- 0.06	13 +/-0.06	15 +/-0.03	15 +/-0.03
k mini	3 +/- 0.06	3 +/- 0.06	3.5 +/-0.06	4 +/-0.06	5 +/- 0.06	5.50 +/- 0.03	5.50 +/- 0.03
Screw End P							
m mini	8.49 +/- 0.06	8.81 +/- 0.06	9 1/4 +/-0.06	13.44 +/- 0.06	12 +/- 0.06	14.98 +/-0.03	14.98 +/-0.03
p	0.94	0.94	0.94	0.94	1.31	1 1/4	1 1/4
Øq	5 3/4	5 3/4	5 3/4	8.5	10.5	11 1/4	11 1/4
Ør	4.13	4.13	4.13	6	7.75	8 3/4	8 3/4
Øt	4 X 13/16	4 X 13/16	4 X 13/16	4 x 1.06	4 x 1.62	4 X 1 7/8	4 X 1 7/8
u mini	2.585	2 3/4 +/-0.06	3 +/- 0.06	4.57 +/- 0.06	3.5 +/-0.06	5.486 +/-0.06	5.486 +/-0.06

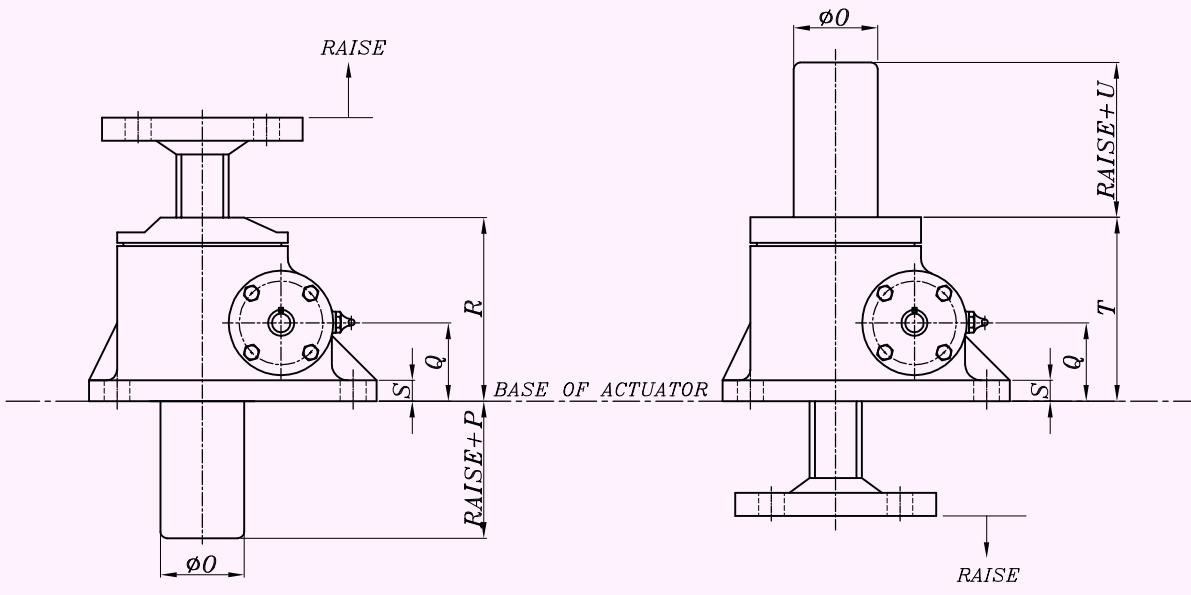


*Note: REG - Regular Base
INV - Inverted Base

Screw End F Screw End C Screw EndP



Series IMA 0.25 to 1 Series IMA2(REG) & IMA 50 (REG) Series IMA2 (INV) to IMA 35 & IMA 50(INV)



Upright

Inverted

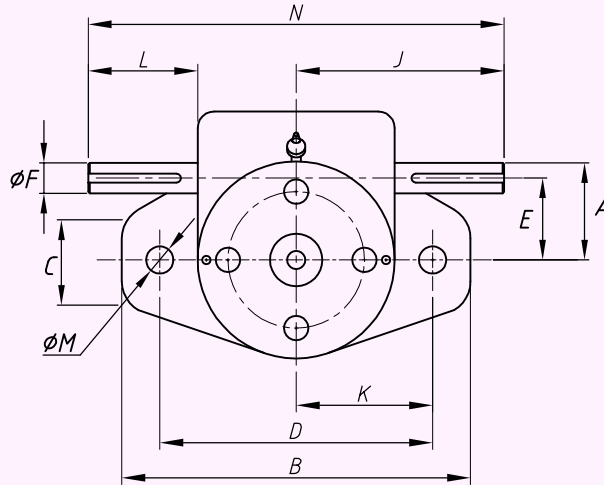
Dimension Sheet

Machine Screw Actuator

Models (Type 2 - Rotating Screw)

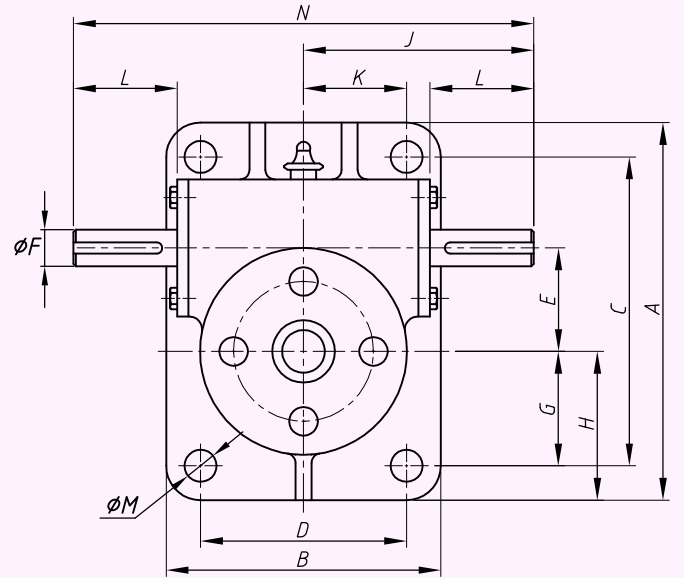
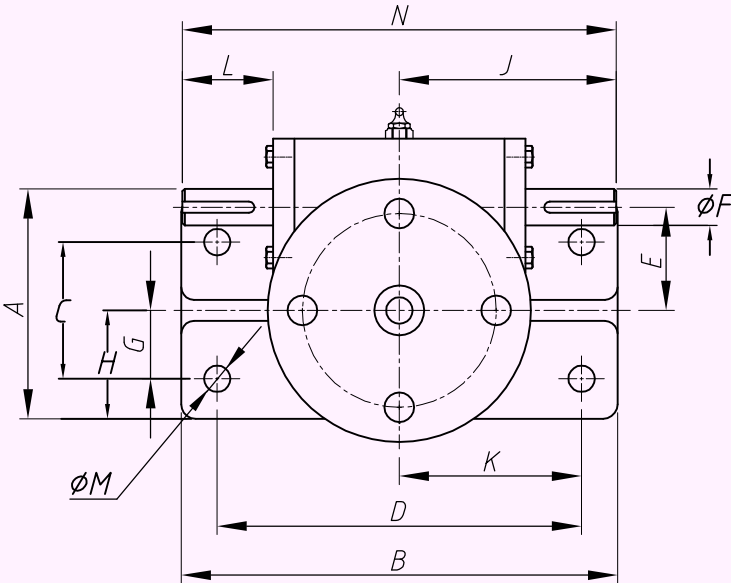
Imperial Machine Screw Actuator Sizes
Capacities from 0.25 to 5 Tonnes

Capacity (Tonnes)	0.25	0.5	1	2	2	2	3	5
Series	IMA0.25	IMA0.5	IMA1	IMA2(REG)	IMA2(INV)	IMA2(SPL)	IMA3	IMA5
Screw Øx pitch	½ x 0.250	5/8 x 0.125	¾ x 0.200	1 x 0.250	1 x 0.250	1 x 0.250	1 x 0.250	1 ½ x 0.375
Housing								
A	1.647	1.647	2 5/8	3 ½	6 1/4	7	6 1/4	8
B	4	4	5	7	4 1/8	3 ½	4 1/8	6
C	1	1		2	5 1/4	6	5 1/4	6 ½
D	3 1/4	3 1/4	4	6	3 1/8	2	3 1/8	4 ½
E	0.938	0.938	1.26	1.78	1.78	1.78	1.78	2.213
ØF	0.373 / 0.375	0.373 / 0.375	0.498 / 0.500	0.498 / 0.5	0.498 / 0.5	0.498 / 0.5	0.498 / 0.5	0.748 / 0.749
Keyway	1/8 x 1/16 x 3/4	1/8 x 1/16 x 3/4	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8 x 1/16 x 1	1/8x1/16x1	3/16x3/32x1 1/4
G				1	1.93	2 ½	1 7/8	2 1/4
H				1 3/4	2.42	3	2 3/8	3
J	2 1/4	2 1/4	3	3 ½	3 ½	3 ½	3 ½	4 ½
K	1 5/8	1 5/8	2	3	1 9/16	1	1 9/16	2 1/4
L	1.128	1.128	1 7/16	1.52	1.325	1 1/8	1.325	1.732
ØM	9/32	9/32	13/32	13/32	13/32	13/32	13/32	11/16
N	4 ½	4 ½	6	7	7	7	7	9
O	0	0	0	0	0	0	0	0
P	0	0	0	0	0	0	0	0
Q	1	1	1.5	1.75	1.75	1.75	1.75	2.25
R	2 3/8	2 3/8	3 1/4	3.875	3 3/4	4 1/16	3.757	5 1/4
S	5/16	5/16	3/8	0.568	½	½	½	0.537
T	2 3/8	2 3/8	3 1/4	3 7/8	3 3/4	3 3/4	3.757	5 1/4
U	0	0	0	0	0	0	0	0
V	3/8	3/8	1/4	5/8	5/8	5/8	0.3125	2
X	1 ½	1 7/8	1 3/4	2 3/8	2 3/8	2 3/8	3.0625	3
Y	5/8	5/8	5/8	3/4	3/4	3/4	3/4	1
ØZ	0.310/0.312	0.435/0.437	0.498/0.500	0.623/0.625	0.623/0.625	0.623/0.625	0.623/0.625	0.998/1
Lifting Nut								
a	3/8	3/8	½	½	½	½	0.625	3/4
b	7/8	7/8	1 ½	1 ½	1 ½	1 ½	2	2 ½
Øc	2 1/4	2 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	4
Ød	1	1	1 ½	1 ½	1 ½	1 ½	2	2
Øe	9/32	9/32	13/32	13/32	13/32	13/32	9/32	9/16
Øf	1 3/4	1 3/4	2 3/8	2 3/8	2 3/8	2 3/8	2.75	3
q	4	4	4	4	4	4	4	4



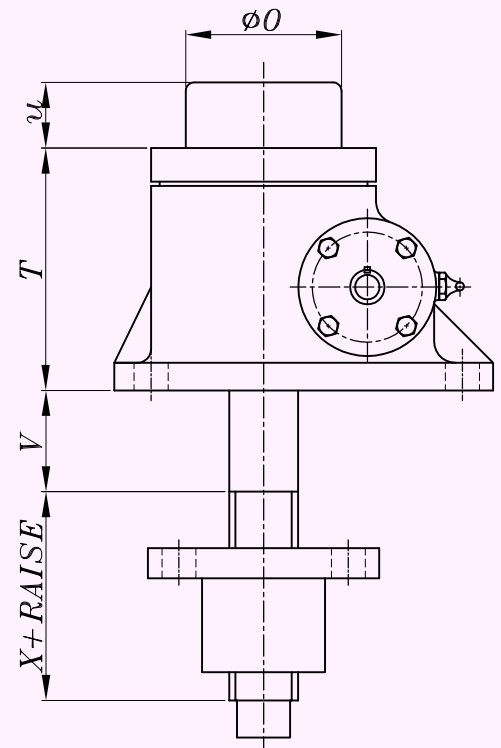
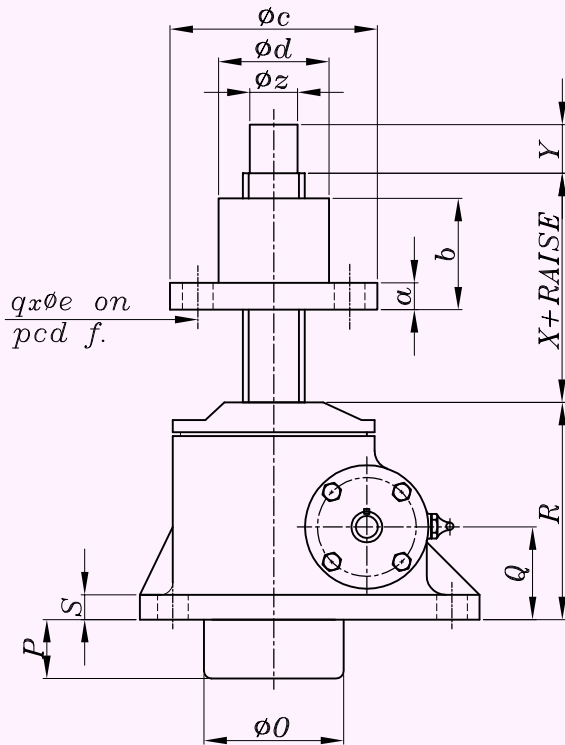
*Note: REG - Regular Base
INV - Inverted Base

Seie s IMA0 .25 T01



Series IMA 2(REG) & IMA 50 (REG)

Seie s IMA 2(INV) TO IMA3 5 & IMA50(INV)



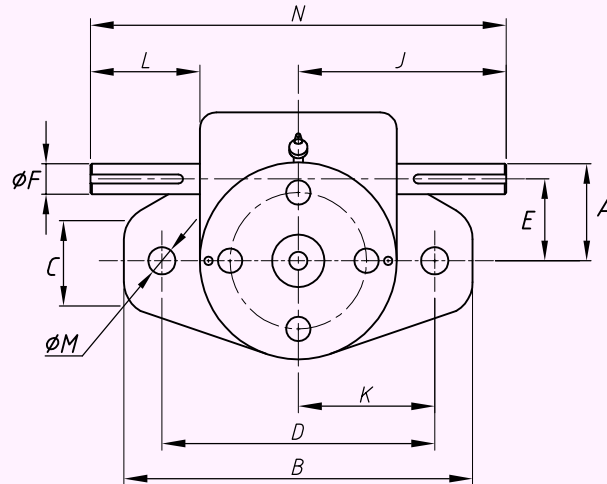
Dimension Sheet

Machine Screw Actuator

Models (Type 2 - Rotating Screw)

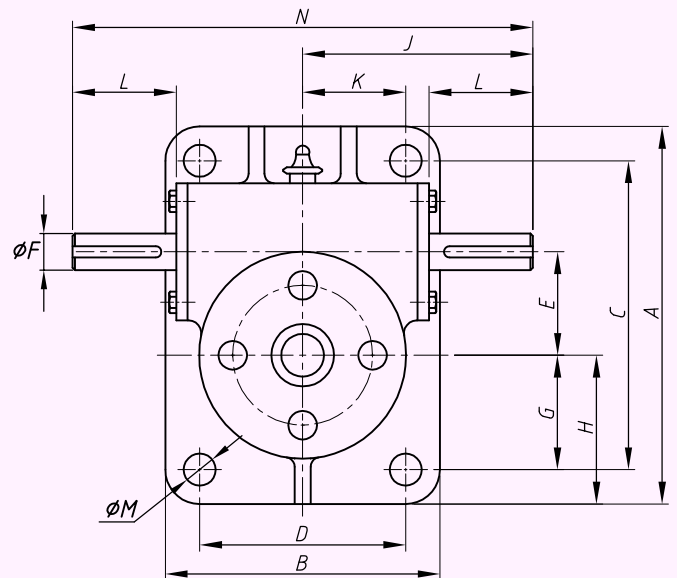
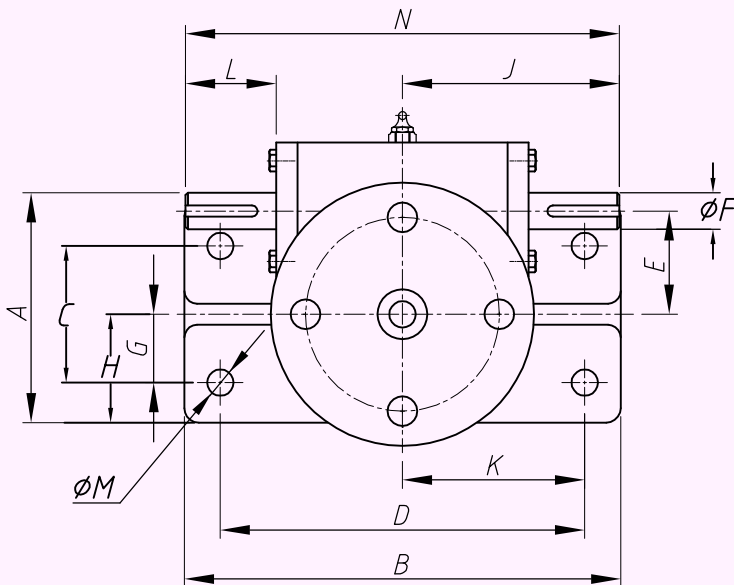
Imperial Machine Screw Actuator Sizes
Capacities from 10 to 50 Tonnes

Capacity (Tonnes)	10	15	20	25	35	50	50
Series	IMA10	IMA15	IMA20	IMA25	IMA35	IMA50(REG)	IMA50(INV)
Screw Øx pitch	2 x 0.500	2 1/4 x 0.5	2 1/2 x 0.5	3 X 0.666	3 3/4 x 0.666	4 1/2 x 0.666	4 1/2 x 0.666
Housing							
A	8 3/4	9 1/4	11	13 3/4	15,5	9 3/4	21,75
B	7 1/2	7 3/4	8 1/4	10 1/4	10.25	19 3/4	10.25
C	7	7 1/2	8 3/4	11	12.5	6	18
D	5 3/4	6	6	7 1/2	7.5	16	6
E	2.63	2.63	2.85	3.82	3.82	5.394	5.394
ØF	0.998 / 0.999	0.998 / 0.999	0.998 / 0.999	1.373 / 1.375	1.373 / 1.375	1.498 / 1.500	1.498 / 1.500
Keyway	1/4x1/8x1 1/2	1/4x1/8x1 1/2	1/4x1/8x1 1/2	5/16x5/32x2	0,313x0,156x2	3/8x3/16x2/14	3/8x3/16x2/14
G	2	2 1/2	3	3 3/4	4.5	3	8
H	2 7/8	3 3/8	4 1/8	5 1/8	6	4 7/8	4 7/8
J	5 1/2	5 1/2	5,5	7	7	11.133	11.133
K	2 7/8	3	3	3 3/4	3.75	8	3
L	2.126	2.114	1 1/2	2.649	2.19	4.44	4.44
ØM	13/16	13/16	1 1/8	1 3/8	1,63	1 7/8	1 7/8
N	11	11	11	14	14	22.266	22.266
O	2 7/8	2 7/8	3.5	4.5	4.5	5.56	5.56
P	1	1	1.75	2	2	2 1/2	2 1/2
Q	2.25	2.75	3.25	4	4	4.75	4.75
R	5.63 +/- 0.06	6.31 +/- 0.06	7.13 +/- 0.06	8 7/8 +/- 0.06	8.88 +/- 0.06	10.88 +/- 0.03	10.88 +/- 0.03
S	1/2	5/8	3/4	1	1 1/4	1 1/4	1 1/4
T	5.63 +/- 0.06	6 +/- 0.06	7.13 +/- 0.06	8 7/8 +/- 0.06	8.88 +/- 0.06	10.88 +/- 0.06	10.88 +/- 0.06
U	0	0	0	0	0	0	0
V	1.13	1.81	0.63	1.5	0.88	0.5	2 5/8
X	4	4	5	7	6	7.5	8
Y	2	2	2 1/2	3	3 1/2	4	4
ØZ	1.247/1.249	1.498/1.500	1.748/1.750	2.490/2.500	2.998/3.000	3.498/3.500	3.498/3.500
Lifting Nut							
a	1	1	1	1.25	1.5	2	2
b	3	3	3	5.5	5.5	6	6
Øc	6	6.5	7 1/2	8.5	9	10	10
Ød	3	3.503	3 3/4	4.5	5	6	6
Øe	0.81	0.81	0,94	1 1/16	1 1/16	1 1/16	1 1/16
Øf	4.5	5	5.5	6.5	7	8	8
q	4	4	4	4	4	6	6

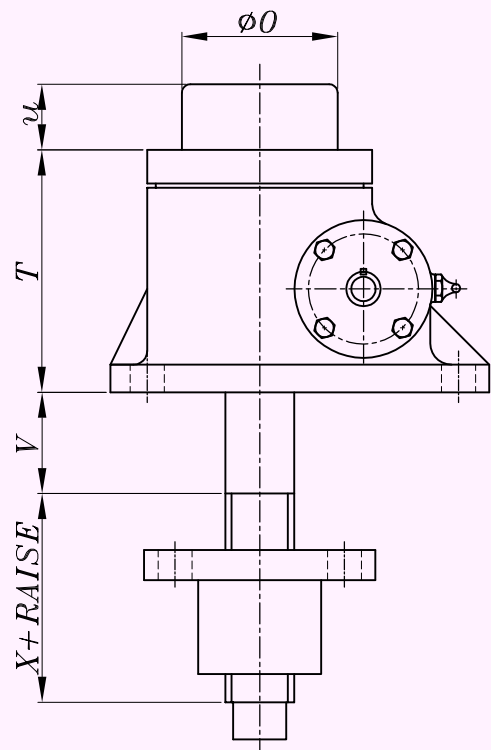
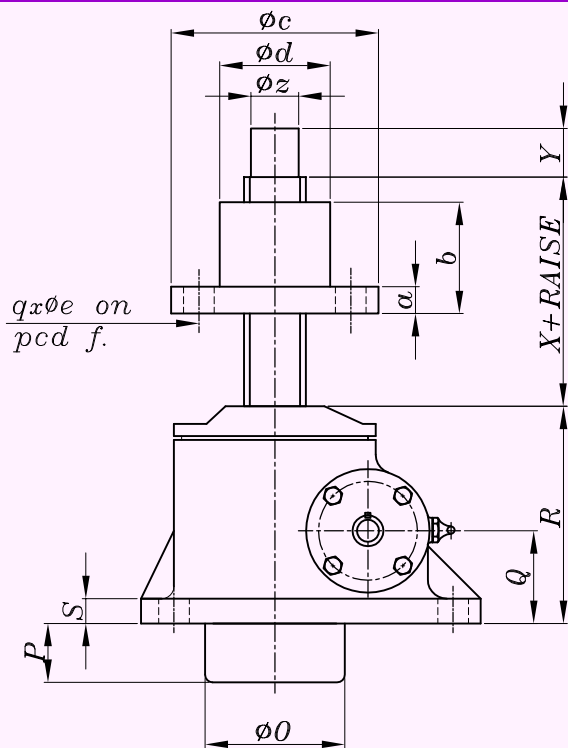


*Note: REG - Regular Base
INV - Inverted Base

Seie s IMA0 .25 T01

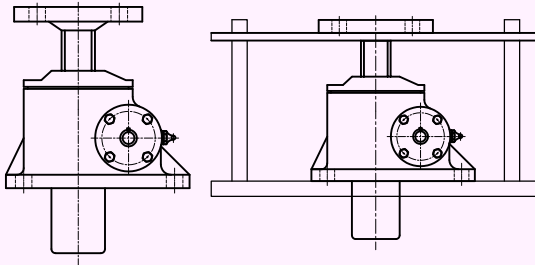


Series IMA 2(REG) & IMA 50 (REG) Seie s IMA 2(INV) TO IMA3 5 & IMA50(INV)



Column Length:

Maximum axial compressive load depends upon size of screw and end fixing conditions. Two typical screw end conditions are shown below for travelling screw configuration.



Maximum permissible column loads for different screw jack sizes and for above two end conditions are shown in graph. These are theoretical buckling loads as predicted by Euler column formula. GGD recommends that load end of actuator screws be guided so that misalignment is avoided.

Maximum Permissible Screw Length

Load curves terminate at screw length where the screw slenderness ratio is 200. Therefore maximum screw length is limited regardless of the load. Please refer following table for maximum permissible screw length regardless of load.

Actuator Model	Rating Tons	Max permissible screw length regardless of load (in)	
		Fixed Free	Fixed Guided
IMA 0.25	0.25	8.5	17
IMA 0.5	0.5	12	24
IMA 1	1.0	13	26
IMA 2	2.0	18	36
IMA 3	3.0	18	36
IMA 5	5.0	27	54
IMA 10	10.0	36	72
IMA 15	15.0	43	86
IMA 20	20.0	46	92
IMA 25	25.0	62	124
IMA 35	35.0	83	166
IMA 50	50.0	102	204

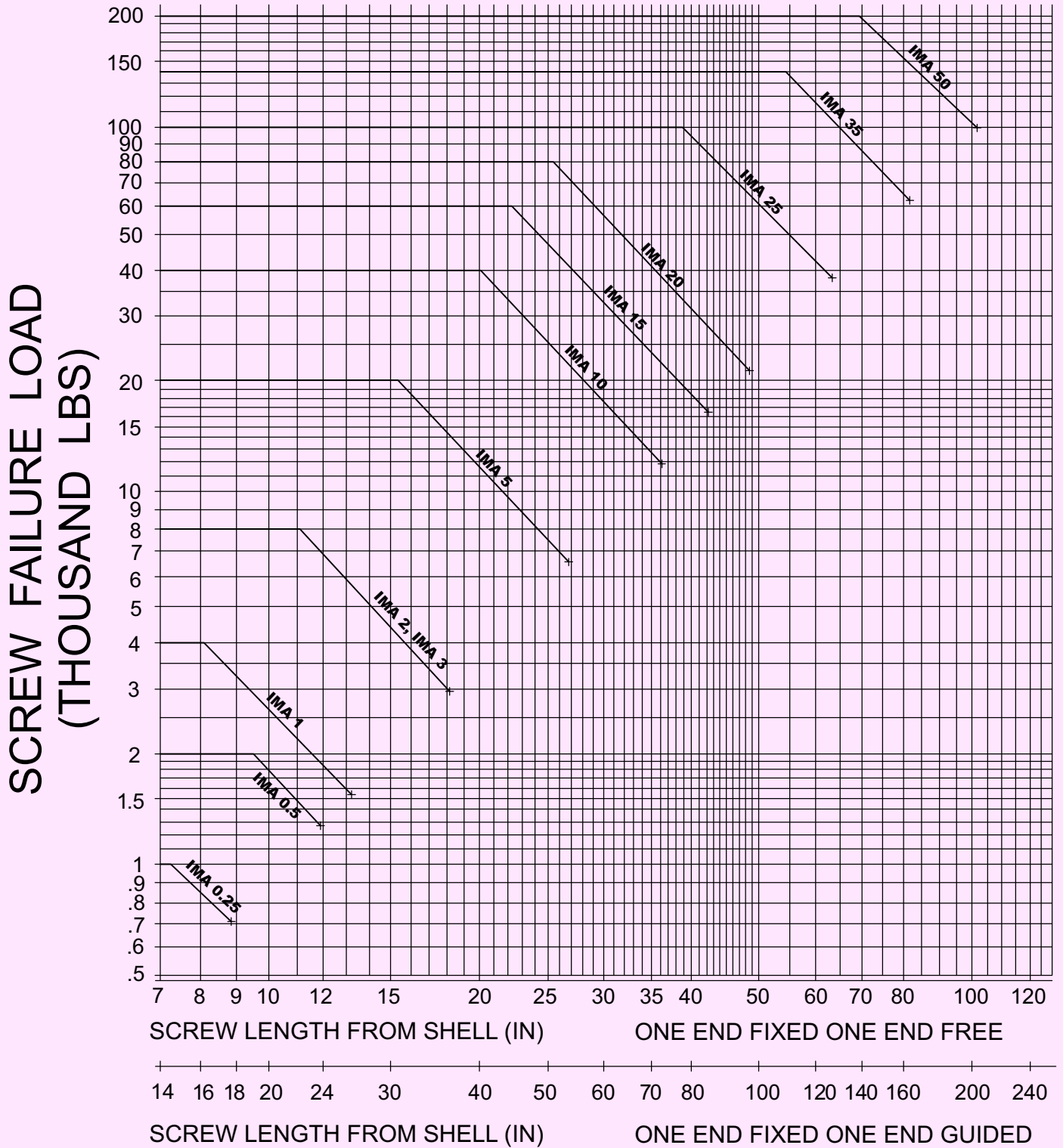
Example:

Select actuator model for 14000 lbs unguided load (fixed-free) and 30 in raise.

Steps to follow:

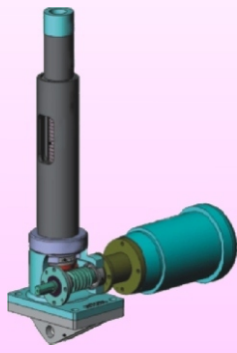
1. Select safety factor suitable for actuator application. Example 2.0
2. Multiply load by safety factor to obtain failure load. Failure load = $2 \times 14000 = 28000$ lbs.
3. Locate 28000 lbs on vertical axis & draw horizontal line.
4. Locate 30 in on horizontal axis for fixed free & draw vertical line.
5. Any actuator above the intersection point is suitable. Model IMA 15 is the model in this example.

SCREW COLUMN STRENGTH





**Worm Gear Screw
Jacks Cubical**



Electric Cylinder



Ball Screw Jack



Bevel Gear Box



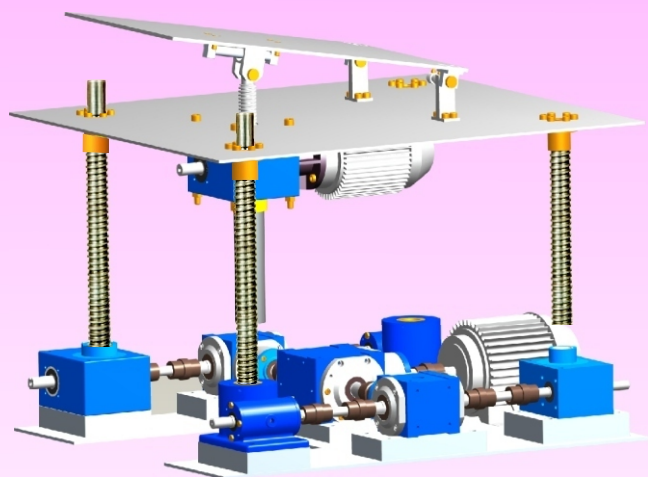
L Drive



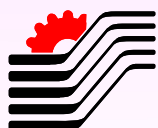
**Motorised Linear
Actuator**



**Universal Joints
(Metric and Imperial Versions)**



Lifting Systems



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