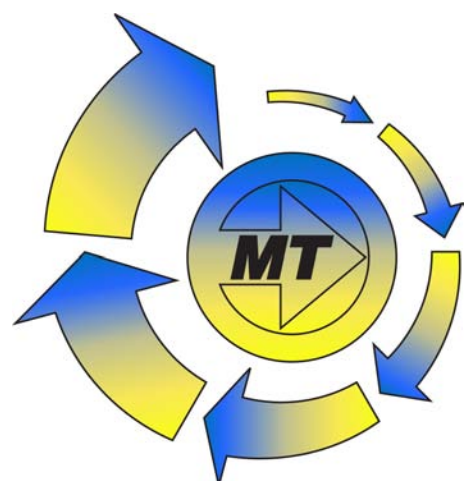


JTM

Worm Gear Jack

Contents

Product Description	001
Sample Part Number	003
Permissible Buckling Load	004
Specifications	005
Dimensions	006



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2D/3D
CAD

JACTON®



Product Description

JACTON JTM Series Worm Gear Jack is used in applications where linear motion is required. Lifting of any load, pushing or pulling of mechanical equipment, adjusting of tight clearances of mechanical parts can be done by screw jacks. Examples include: Platform lifts, Damper adjustments, Ergonomic lifts, Maintenance lifts, Roll adjustments, Earth Station Antennas, Drilling equipment, Solar Trackers, Conveyor adjustments, Packaging equipment, Gate adjustments, Dam adjustment, and Mine door openers. In the absence of vibration load, they have self locking and precisely position loads, will hold loads without backdriving. Can be mounted in any attitude. Generally maintenance free.

● Features:

- * Self locking trapezoidal screw, precise positioning, and uniform speed.
- * Available in 6 sizes from JTM10 to JTM200.
- * Static load capacity from 10 kN to 200 kN. Custom 300 kN, 500 kN, 750 kN and 1000 kN.
- * Trapezoidal diameter from 20 mm to 65 mm. Custom larger diameter screw.
- * Standard trapezoidal screw maximum length 6000 mm, custom longer stroke.
- * Upright or Inverted mounting. Available in tension or compression loads.
- * Translating, Keyed for non-rotating, and Rotating designs.
- * Each Model has TWO gear ratios, they are High ratio and Slow ratio.
- * Standard with 1-start trapezoidal screw, custom 2-starts trapezoidal screw which offers increased travel speed and require a brake or external locking device to hold position.
- * Custom-made trapezoidal screw diameter and pitch, gear ratios, and worm shaft sizes.
- * Trapezoidal Screw Ends: top plate, clevis end, plain end, threaded end, fork end, rod end.
- * Can be operated by manually operated or by electrical motor driven.
- * Single unit use, or complete jacking system including gear motors, bevel gearboxes, connecting shafts

Product Description

and couplings for dual or multiple jack arrangements.

- * Custom-made double clevis screw jack, anti-backlash screw jack.
- * Can be used as alternatives to hydraulic and pneumatic systems.

● **Materials:**

- * Trapezoidal Screw: Carbon steel #45. Custom stainless steel.
- * Worm(Input Shaft): Hardened worm, carbon steel #45. Custom stainless steel.
- * Worm Gear(Wheel): High strength bronze.
- * Travelling Nut and Safety Nut: High strength bronze.
- * Housing(Gearbox): Ductile Iron

● **Accessories:**

- * Motorized driven (AC or DC) by asynchronous motors (normal, YEJ brake, YVP variable frequency, B explosion proof, D multi-speed), stepper motors, servo motors with encoders and controllers. IEC motor flange or NEMA C-Face motor adapter for connect with motors. Frequency inverters.
- * Manually operated by Aluminum handwheels, or Cast iron handwheels.
- * Connection Devices: Couplings. Universal joints. Telescopic universal joints. Connecting shafts.
- * Screw Protective Devices: Bellows boot. Telescopic spring covers. Protective tubes.
- * Safety Devices: Limit switches. Proximity switches. Safety nuts. Anti-backlash nut. Overload safety couplings. Stop nuts. Position Encoders. Overload clutch. Brake motor. Linear braking elements. Wear detection/monitors. Linear guides and rails. Potentiometer. Pressure sensor.
- * Others Accessories: Travel nuts. Position indicators. Trunnion adapter plates. Trunnion mounting brackets. Pillow blocks. Flange blocks. Rod end bearings.

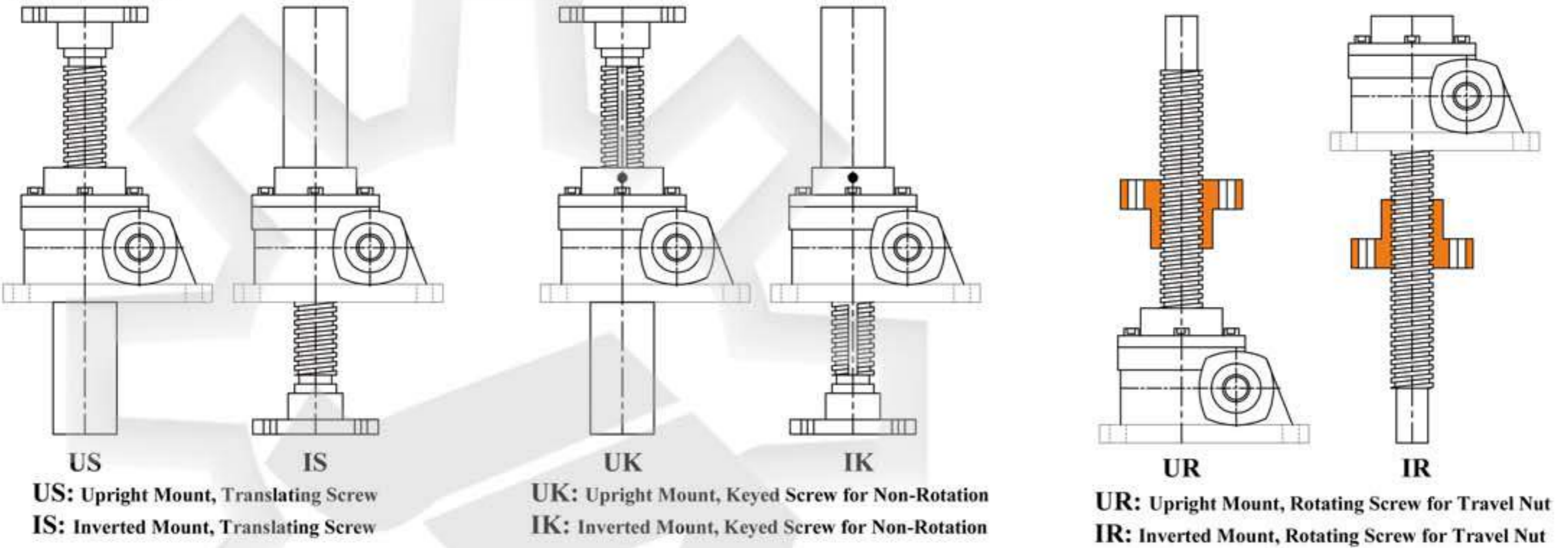
Sample Part Number

Sample Part Number: JTM100 - US - 300 - H - I - C - PP
 (1) (2) (3) (4) (5) (6) (7)

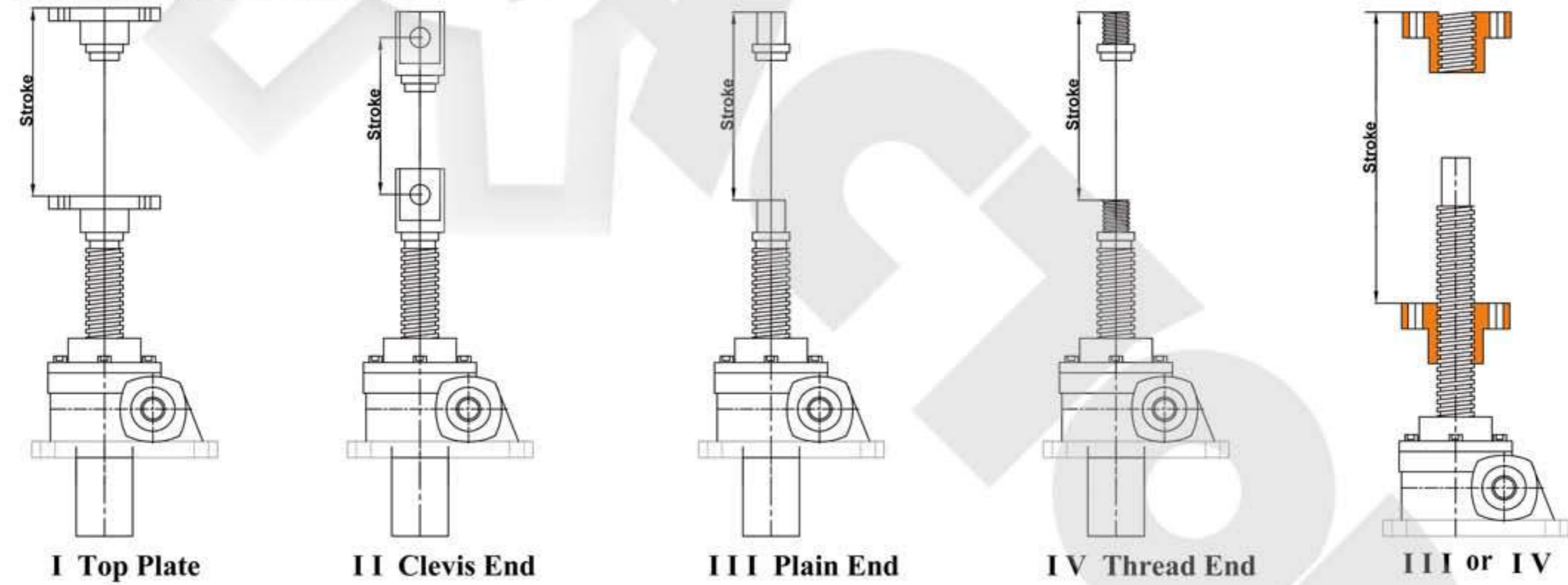
(1) Models & (4) Ratios

JTM10 (Tr 20 x 4) H: 5:1, L: 20:1	JTM25 (Tr 26 x 5) H: 6:1, L: 24:1	JTM50 (Tr 40 x 8) H: 6:1, L: 24:1	JTM100 (Tr 50 x 10) H: 8:1, L: 24:1	JTM150 (Tr 55 x 10) H: 8:1, L: 24:1
JTM20 (Tr 65 x 12) H: 8:1, L: 24:1		H: High Gear Ratios, L: Slow Gear Ratios		

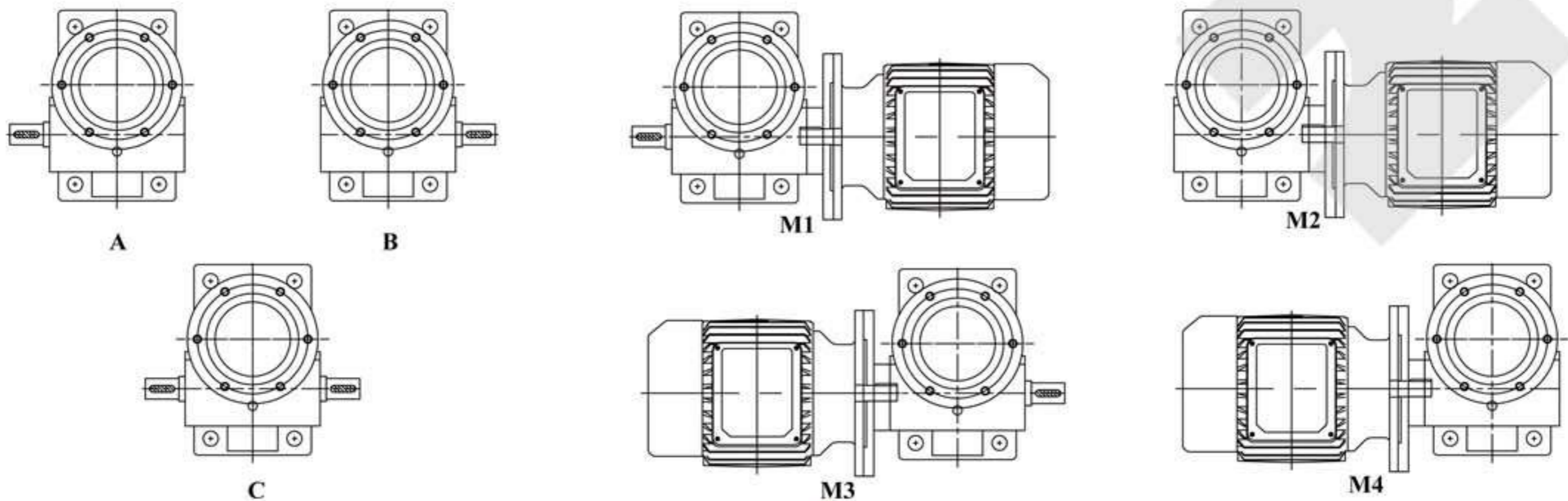
(2) Jack Designs and Configurations



(3) Stroke & (5) Screw End Fittings

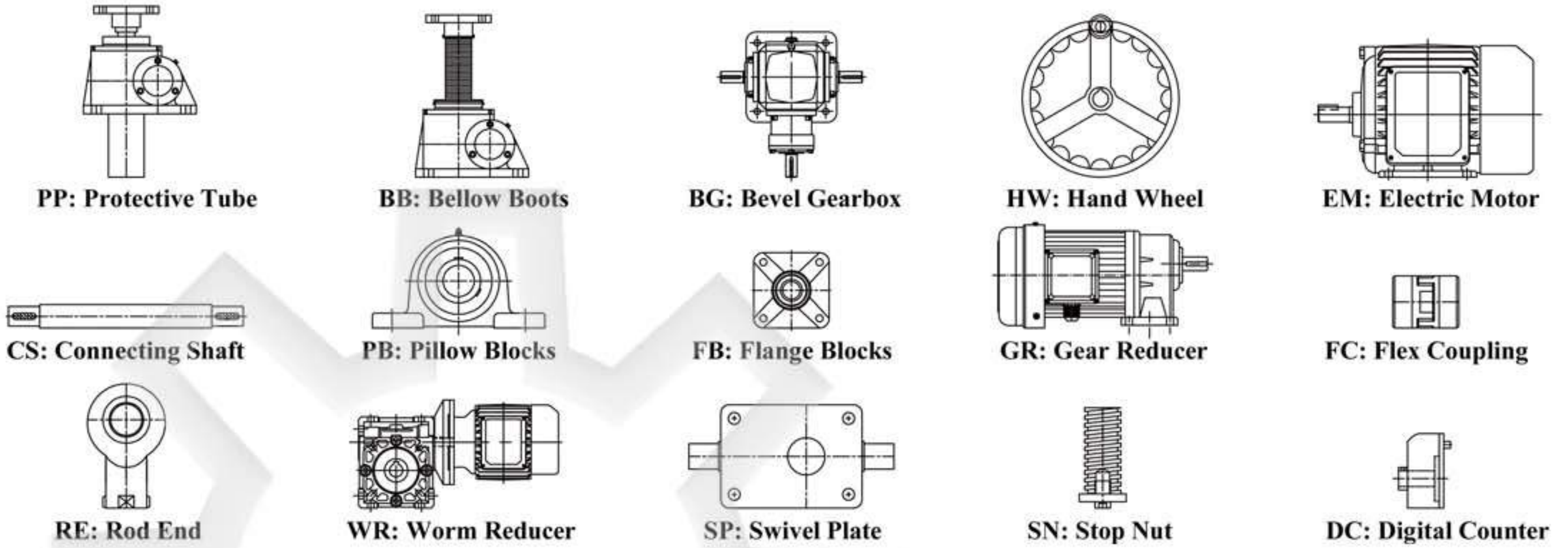


(6) Input Shafts Types & Motor Flange Types

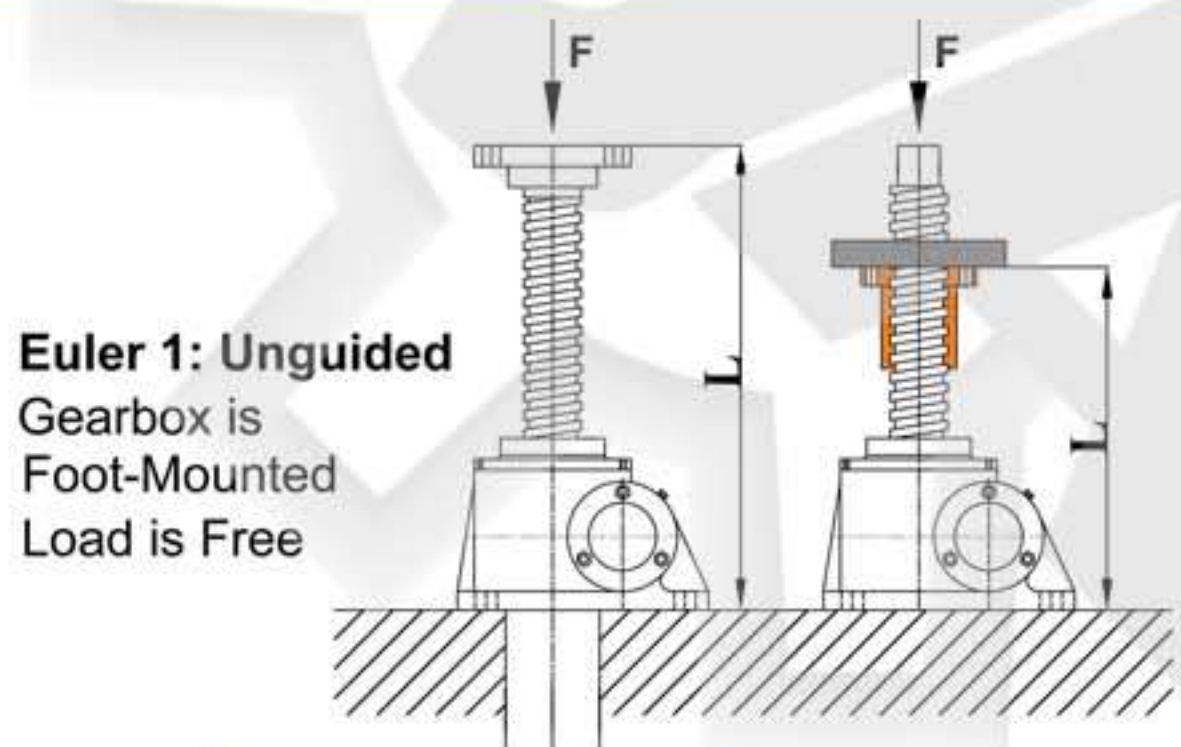


Sample Part Number

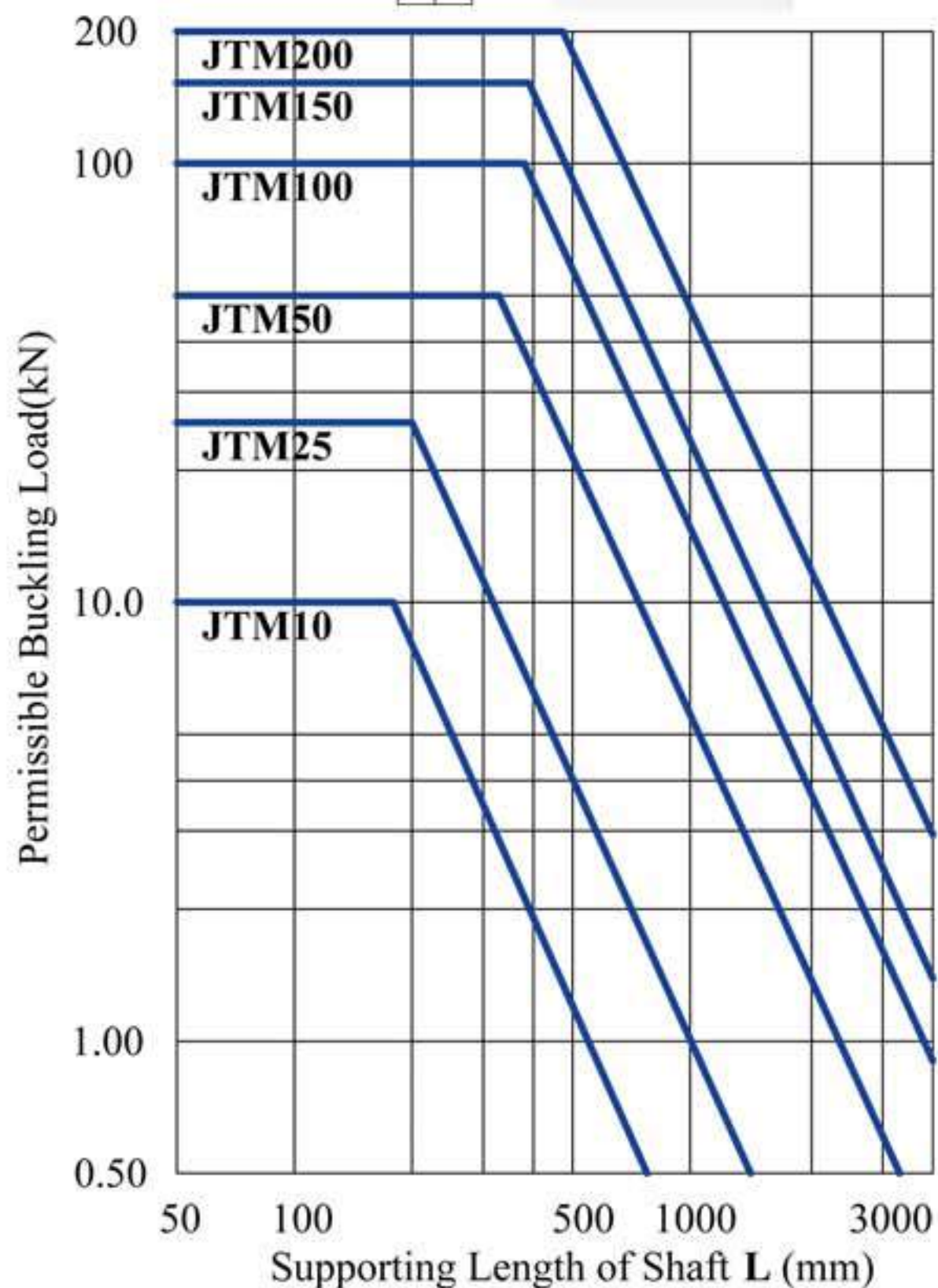
(7) Accessories



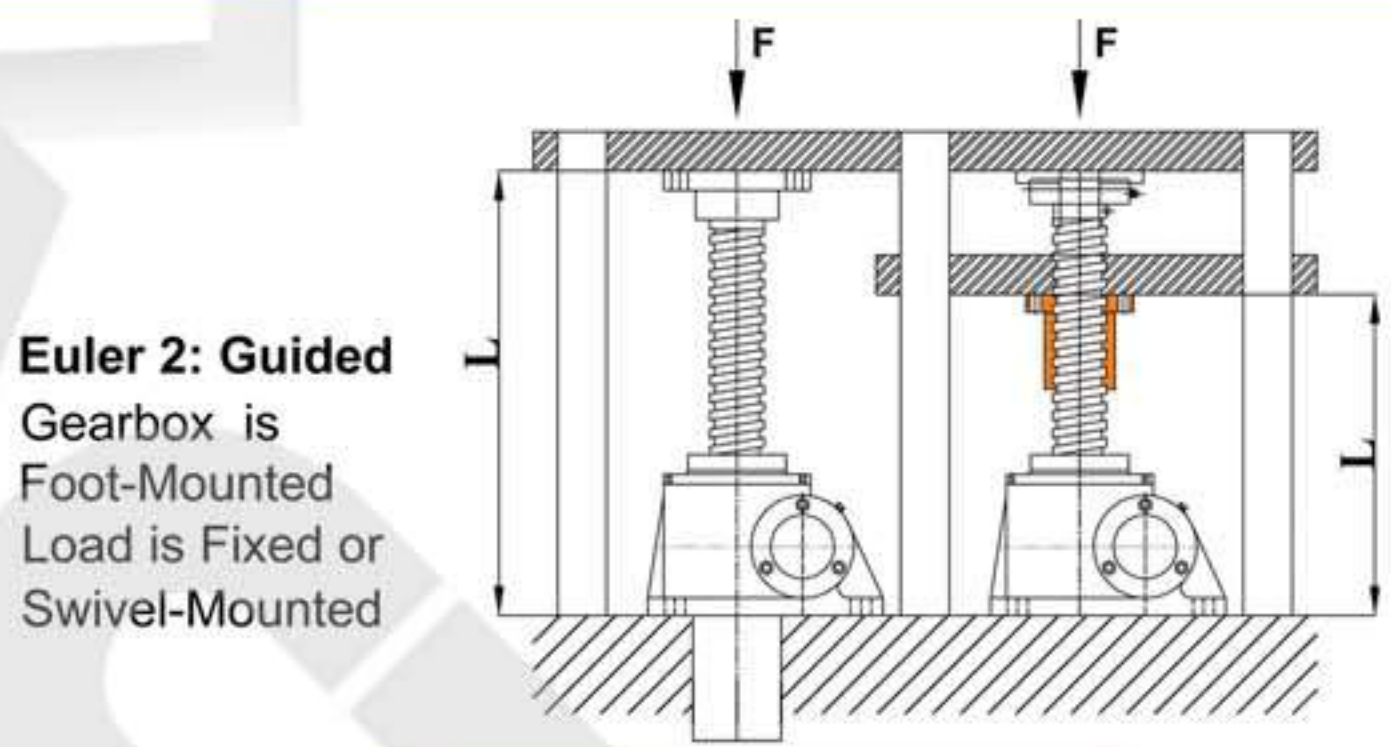
Permissible Buckling Load



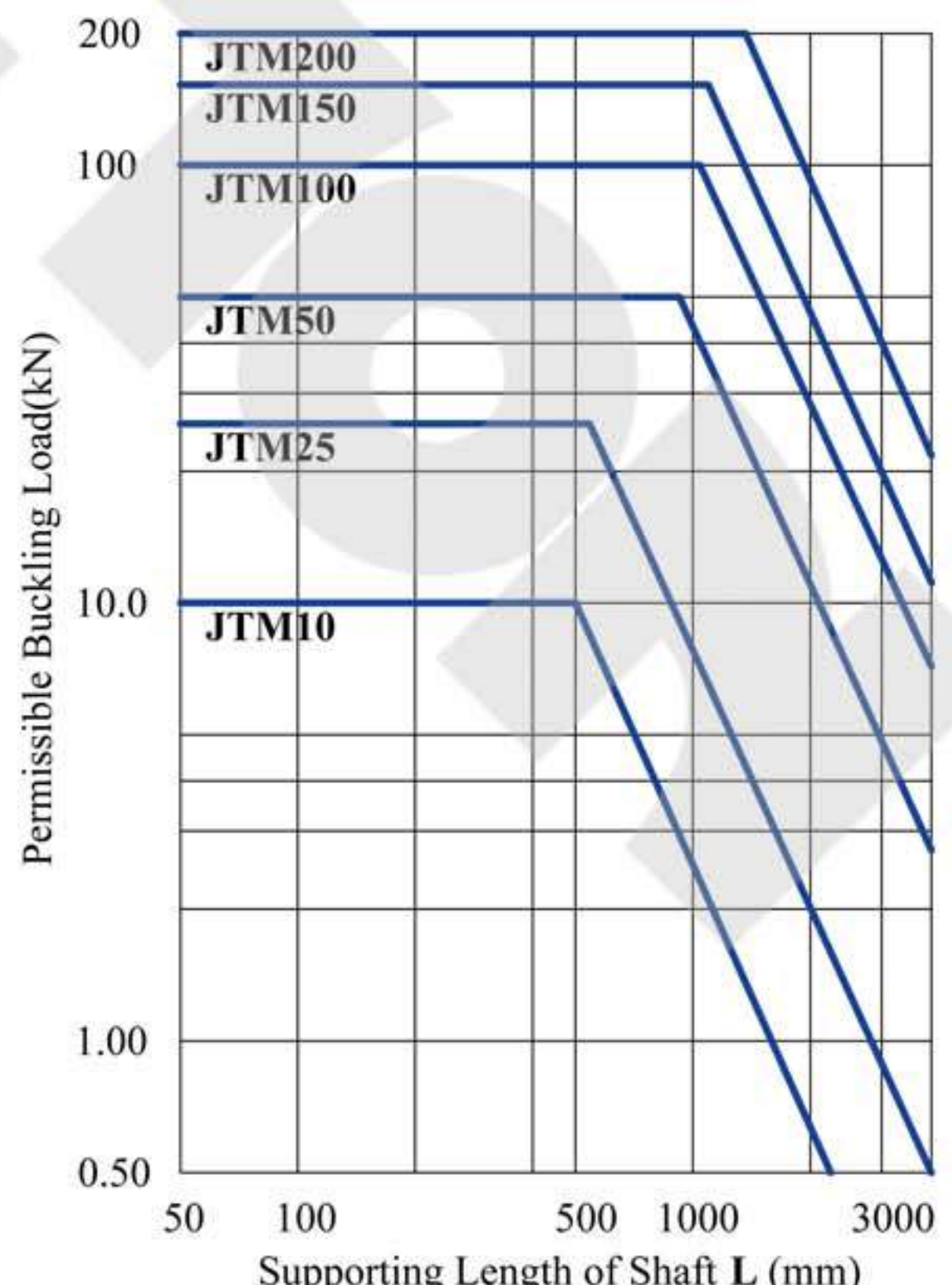
Euler 1: Unguided
Gearbox is Foot-Mounted
Load is Free



Euler I: Unguided, Gearbox is Foot-Mounted, Load is Free



Euler 2: Guided
Gearbox is Foot-Mounted
Load is Fixed or Swivel-Mounted



Euler II: Guided, Gearbox is Foot-Mounted, Load is Fixed or Swivel-Mounted

Specifications

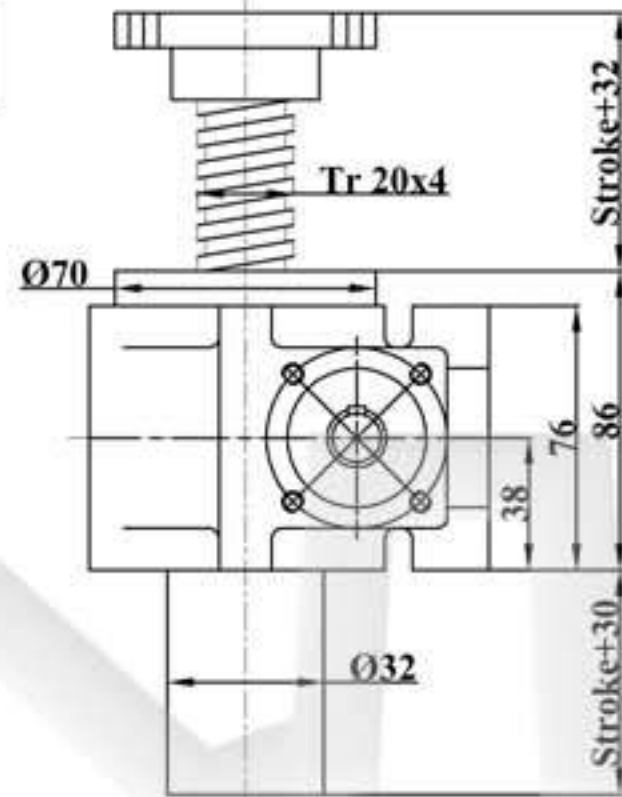
Remarks:

- 1) H: High ratio, L: Slow ratio
- 2) Max. allowable power is under the conditions that ambient temperature 20 degree C, duty cycle 20%h and input speed 1500rpm.
- 3) Overall efficiency is under grease lubrication.
- 4) Self-locking under static conditions.

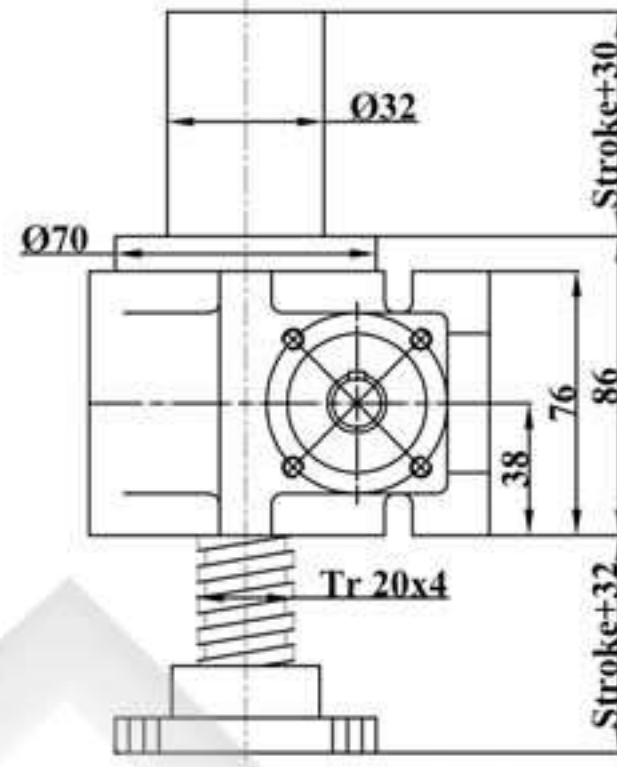
Model		JTM10	JTM25	JTM50	JTM100	JTM150	JTM200
Max. Load Capacity (kN)		10	25	50	100	150	200
Lift screw sizes (mm)		Tr20 x 4	Tr26 x 5	Tr40 x 8	Tr50 x 10	Tr55 x 10	Tr65 x 12
Root Dia. of screw (mm)		14.8	19.7	30.5	38.4	43.4	51.3
Gear ratio	H	5:1	6:1	6:1	8:1	8:1	8:1
Lift screw travel (mm), per turn of input shaft	H	0.8	0.83	1.33	1.25	1.25	1.5
Efficiency %	H	21	21	22	22	20	20
Gear ratio	L	20:1	24:1	24:1	24:1	24:1	24:1
Lift screw travel (mm), per turn of input shaft	L	0.2	0.21	0.33	0.42	0.42	0.5
Efficiency %	L	12	12	14	15	14	13
Max. allowable power (kw)	H	0.49	1	2	2.8	3.1	5
	L	0.36	0.46	0.63	1.4	2.2	3.2
No-load torque (Nm)		0.29	0.62	1.4	2	2.6	3.9
Permissible torque of input shaft (Nm)		19.6	49	153.9	292	292	292
Required torque of input shaft at max. load (Nm)	H	6.2	16.1	48.7	90.7	149	238.1
	L	2.9	7.4	20	45.3	72.3	124
Permissible max. speed (RPM) of input shaft at max. load	H	750	600	400	300	200	200
	L	1200	600	300	300	290	250
Lift screw rotational torque (Nm) at max. load		20.1	65.1	201.5	503.6	813.2	1287.7

Dimensions

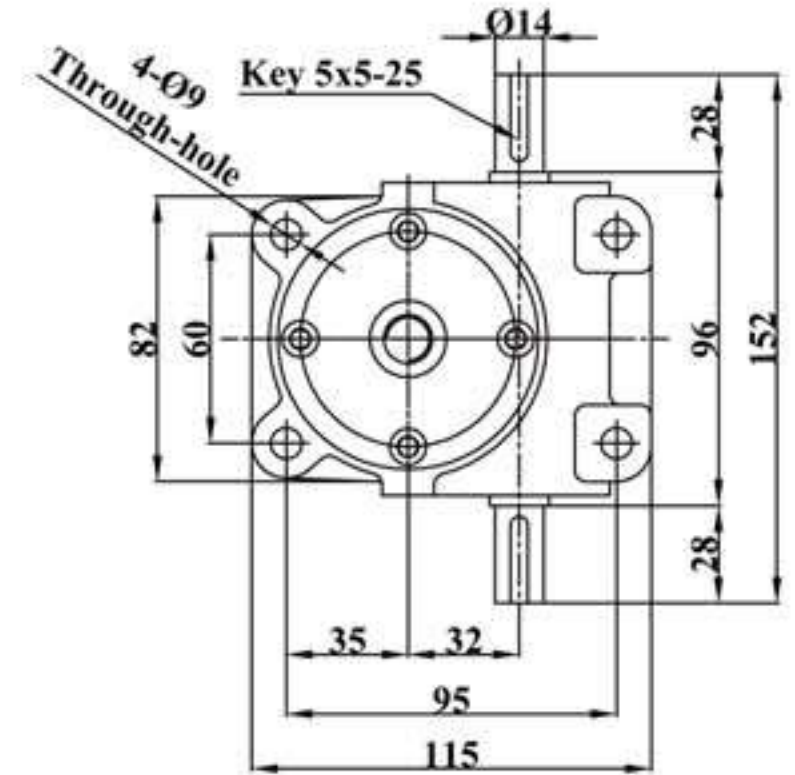
JTM10



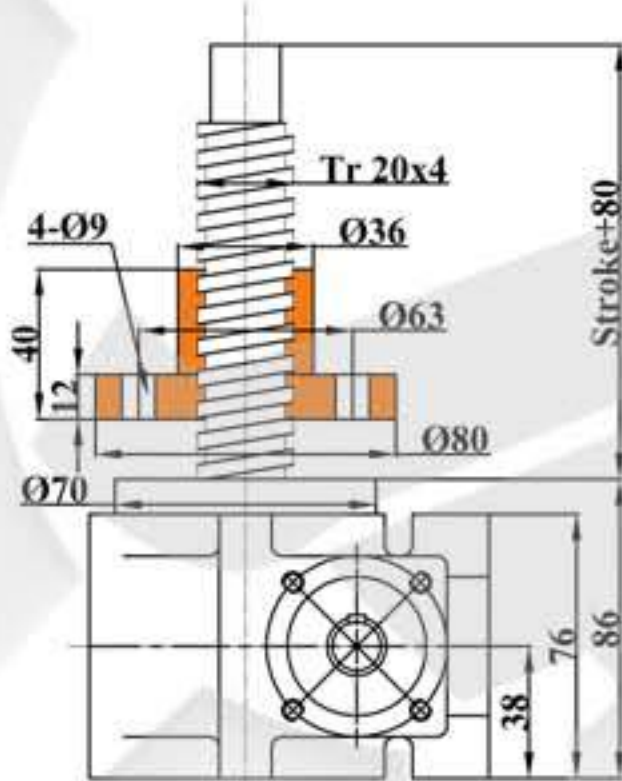
Upright



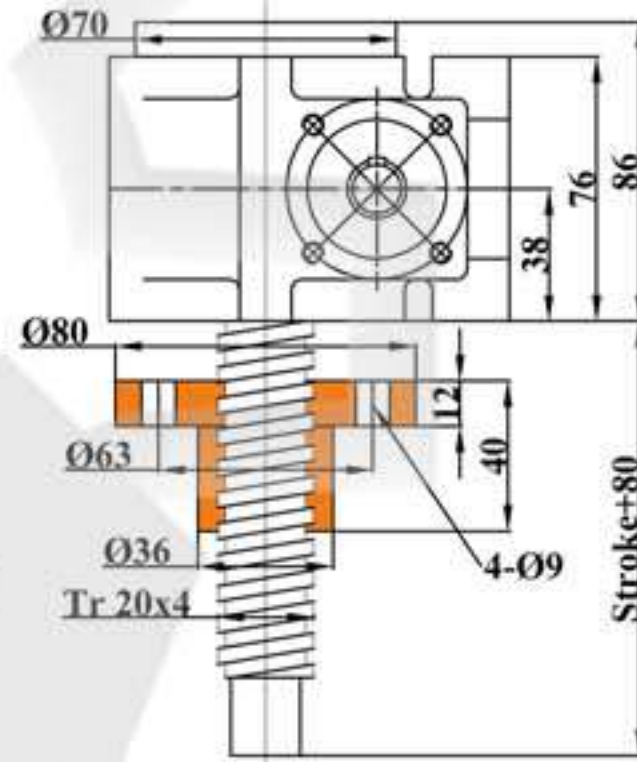
Inverted



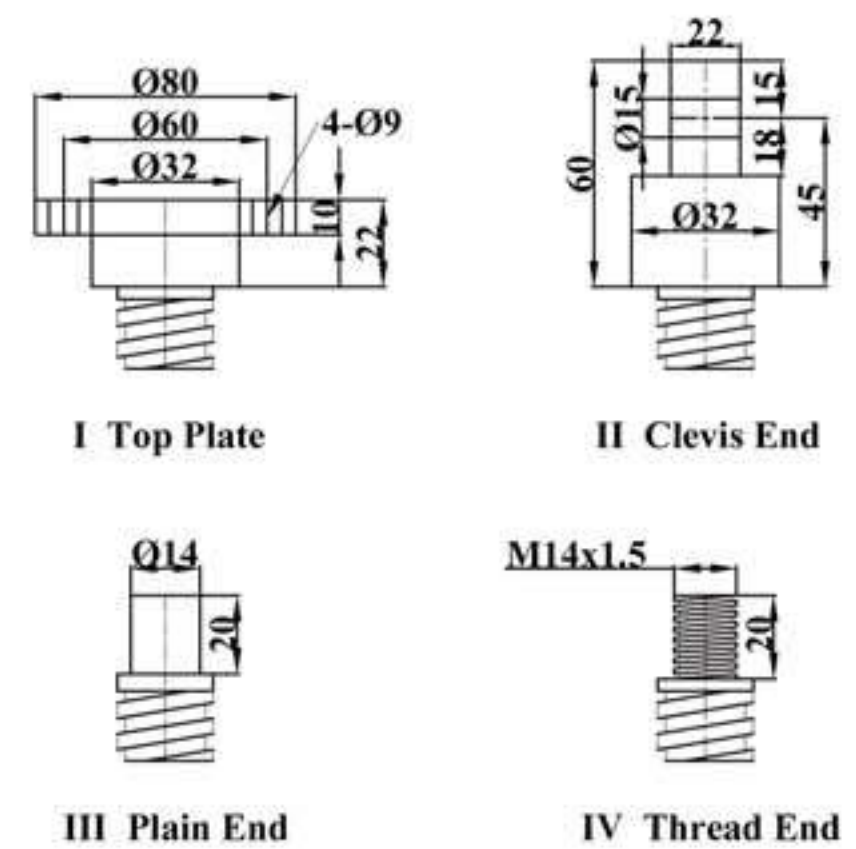
Screw End Types and Dimensions



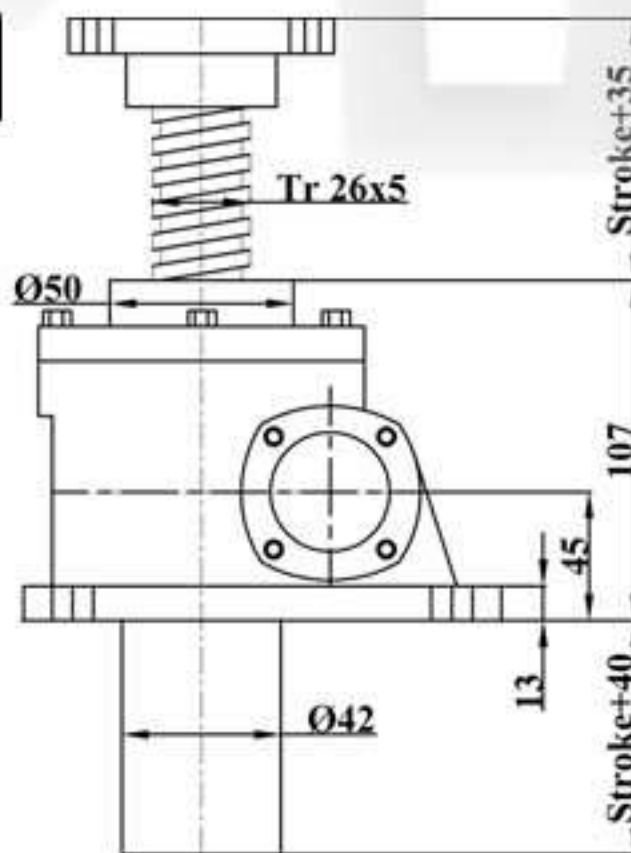
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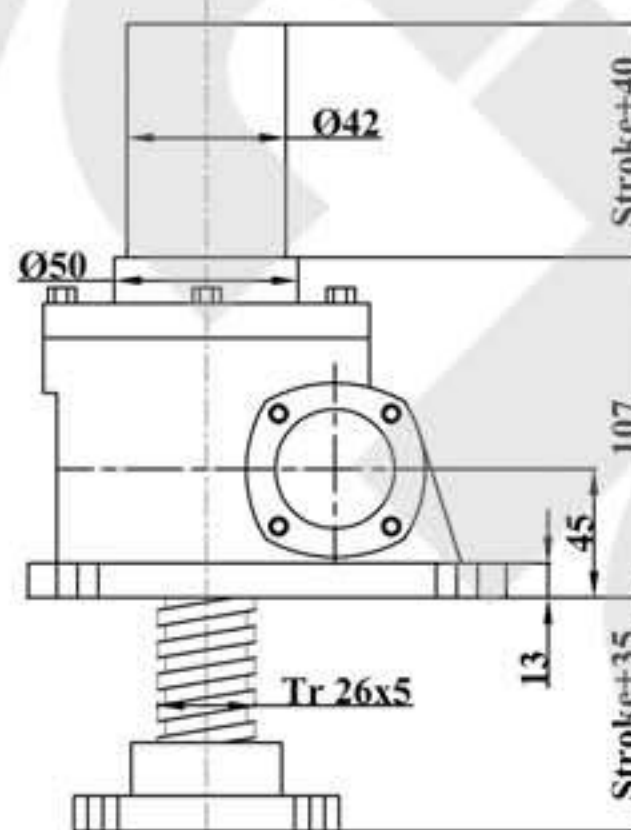
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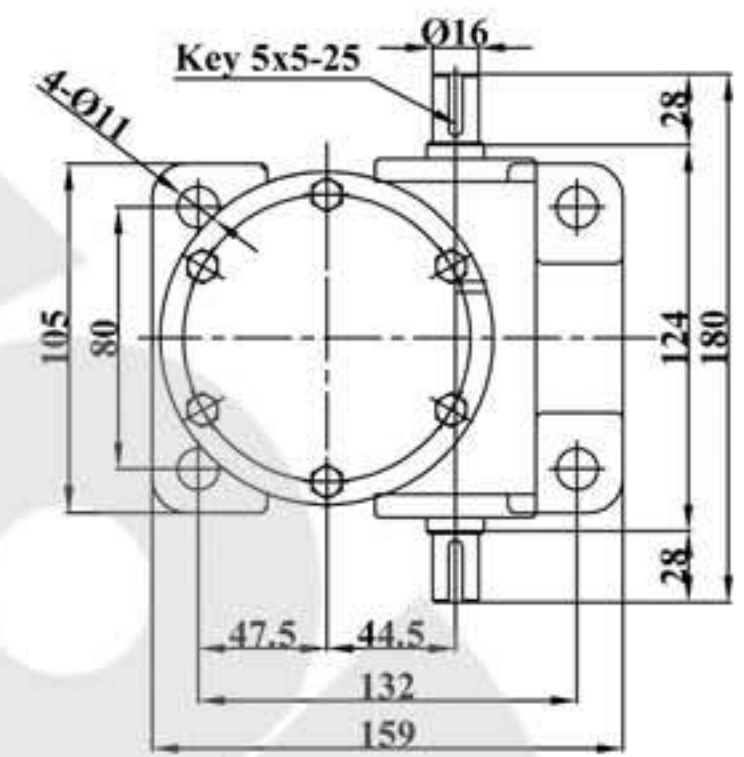
JTM25



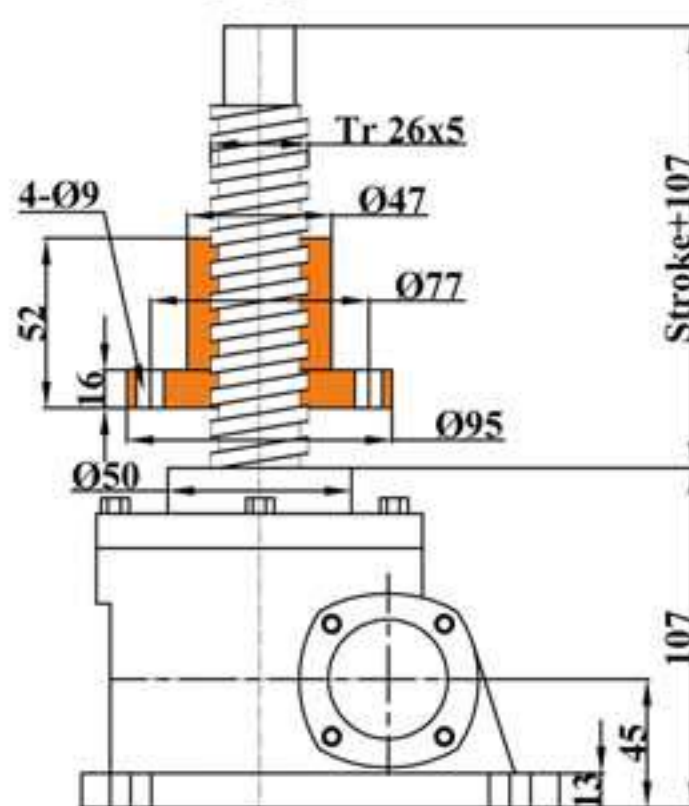
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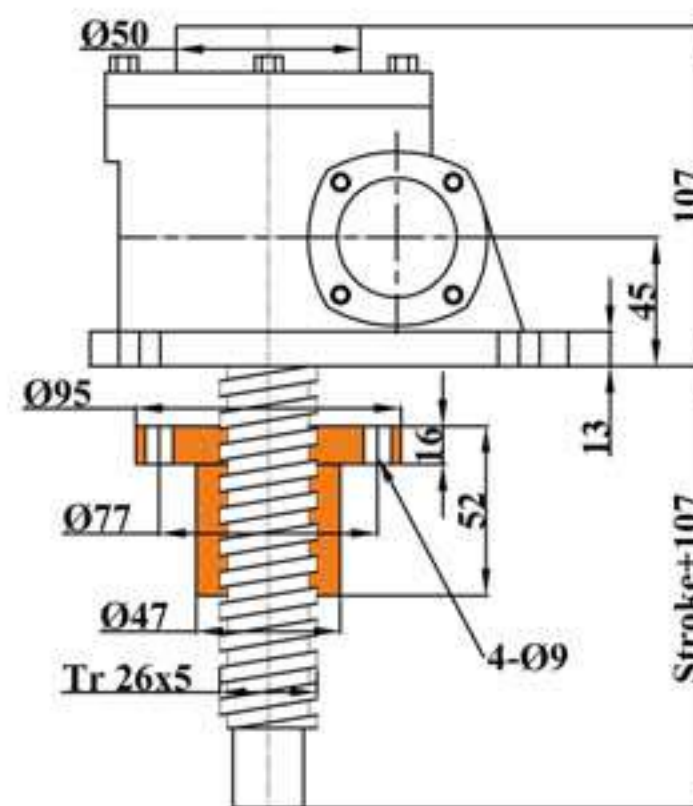
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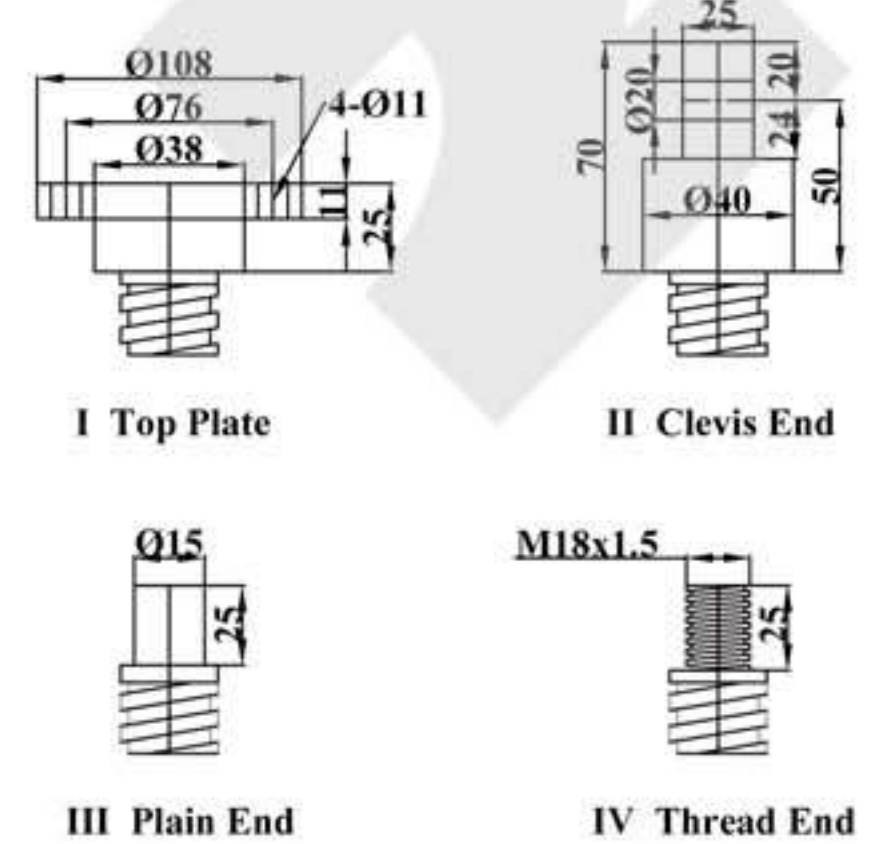
Screw End Types and Dimensions



Upright



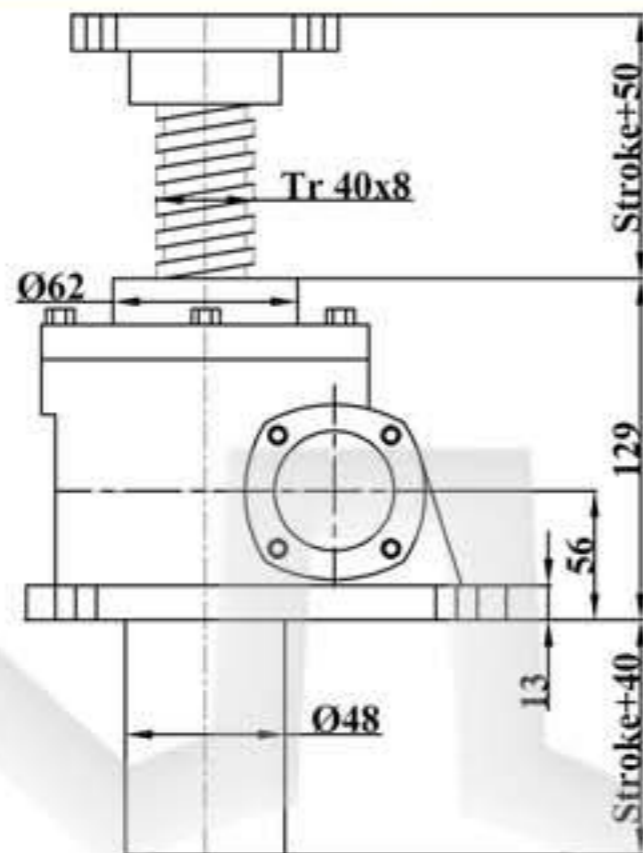
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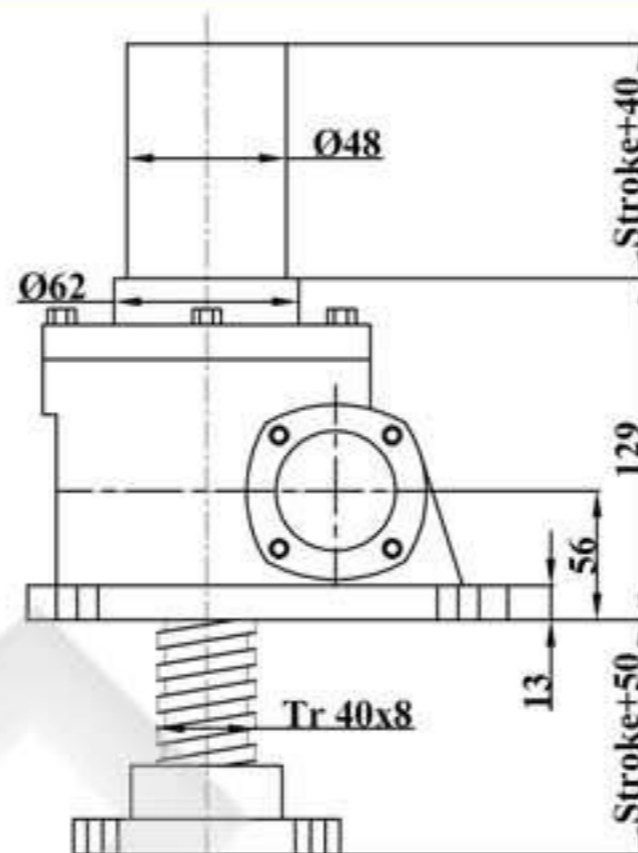
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Dimensions

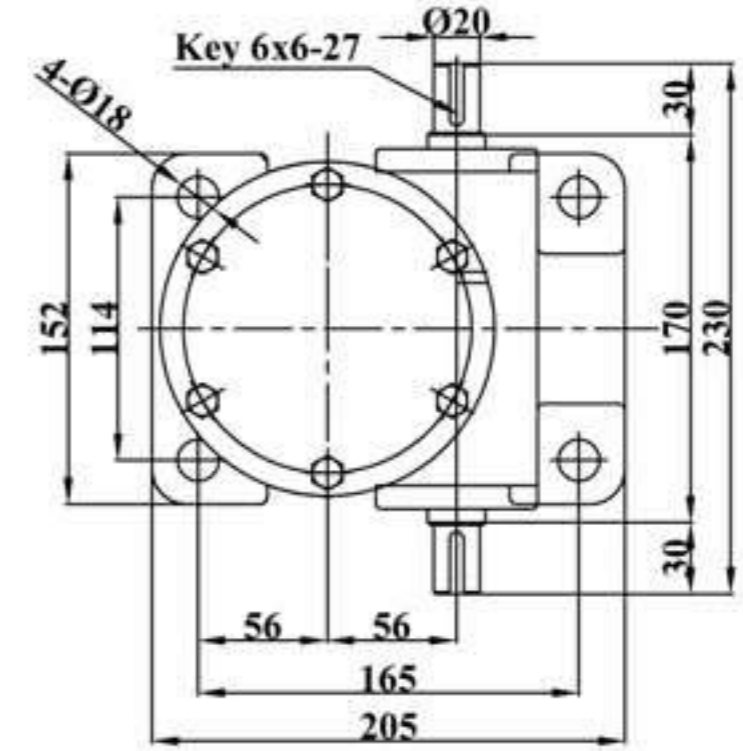
JTM50



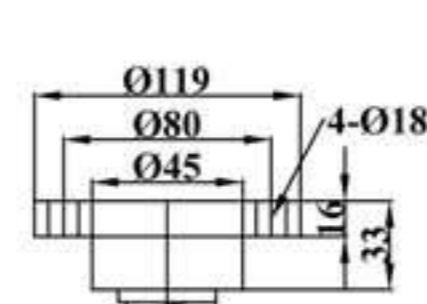
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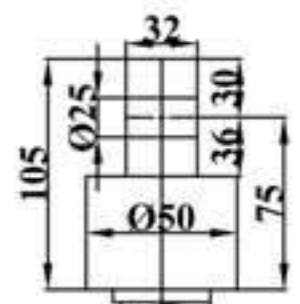
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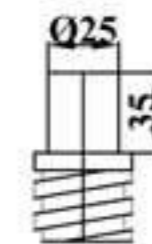
Screw End Types and Dimensions



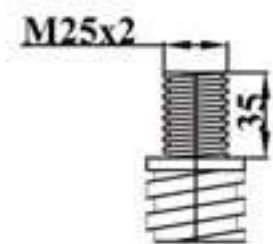
I Top Plate



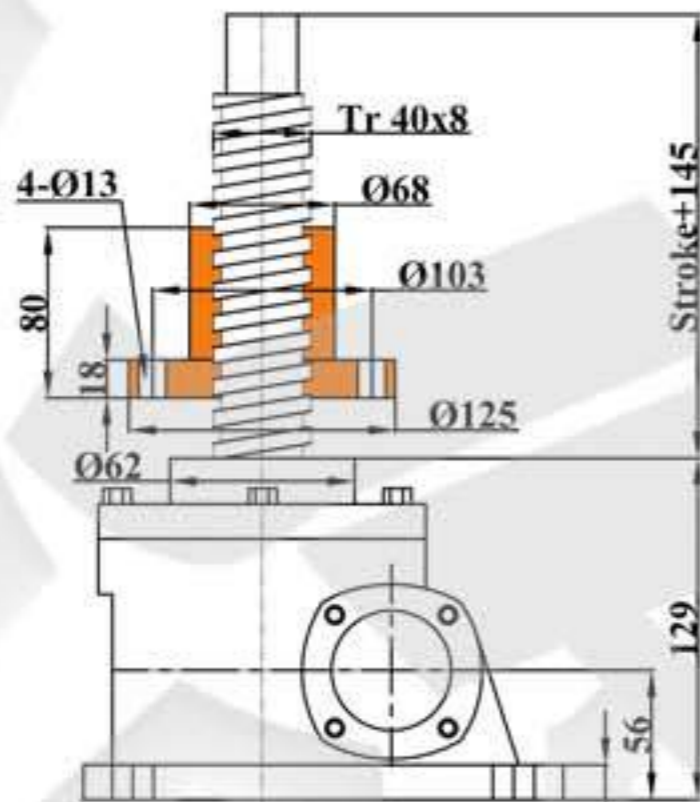
II Clevis End



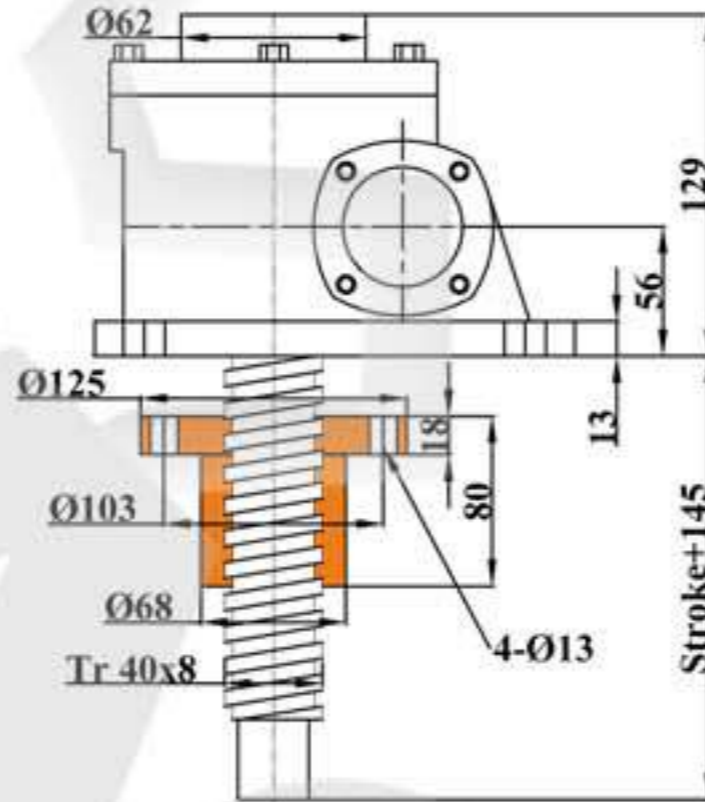
III Plain End



IV Thread End

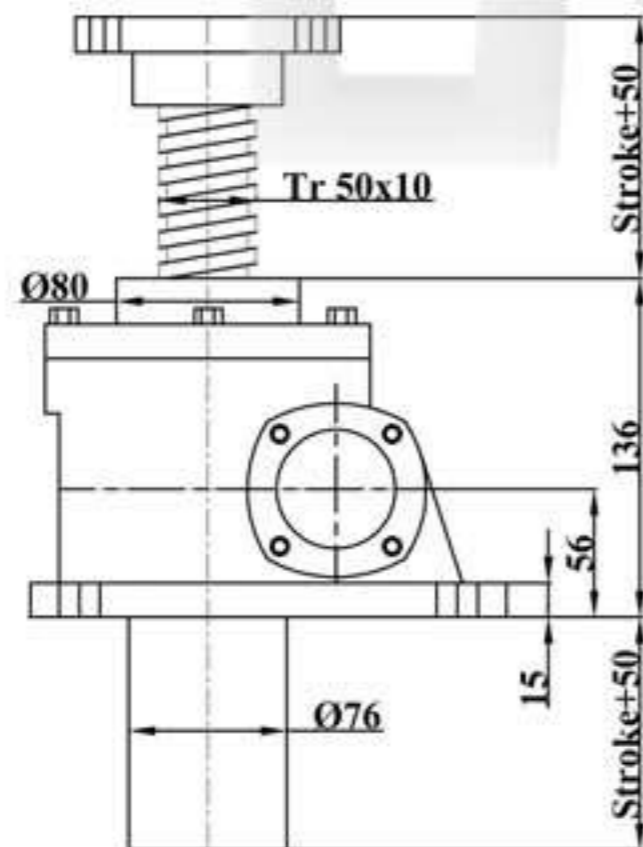


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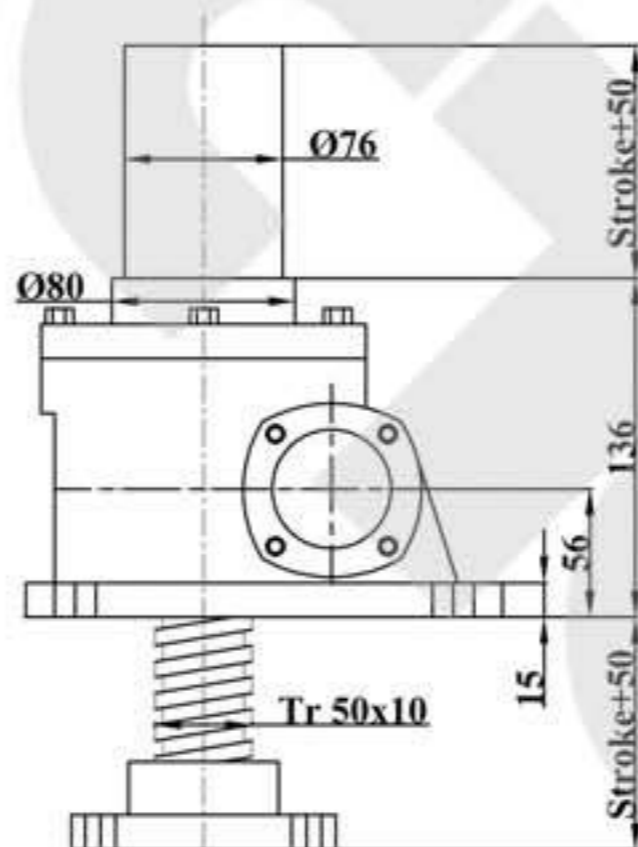


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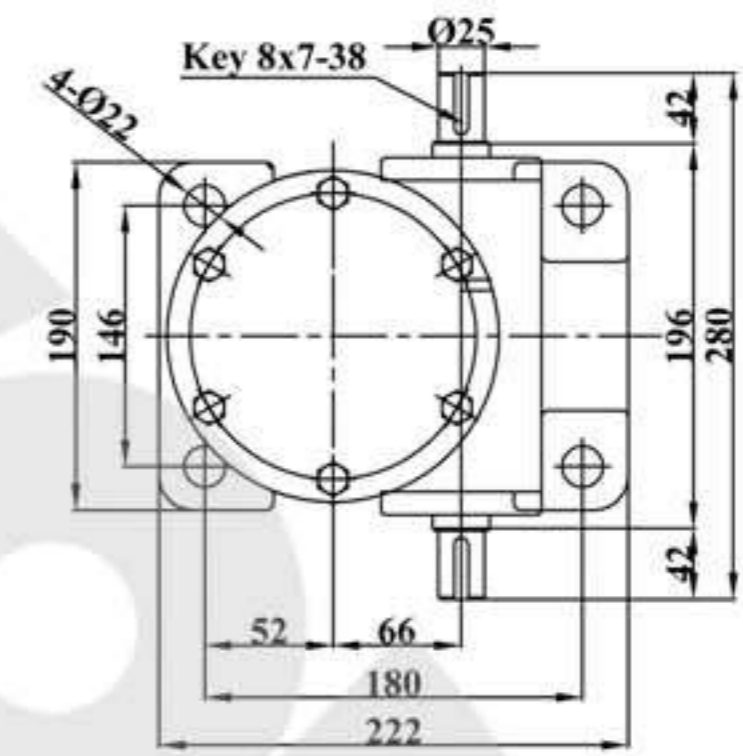
JTM100



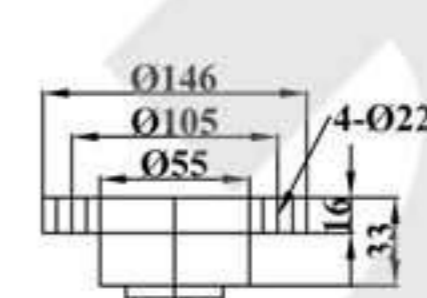
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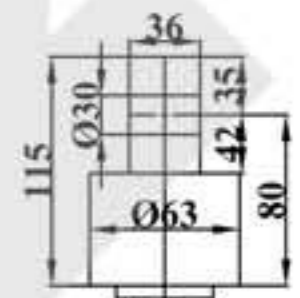
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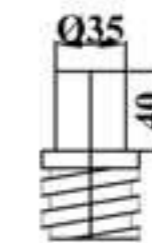
Screw End Types and Dimensions



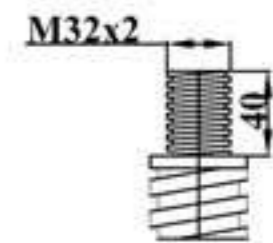
I Top Plate



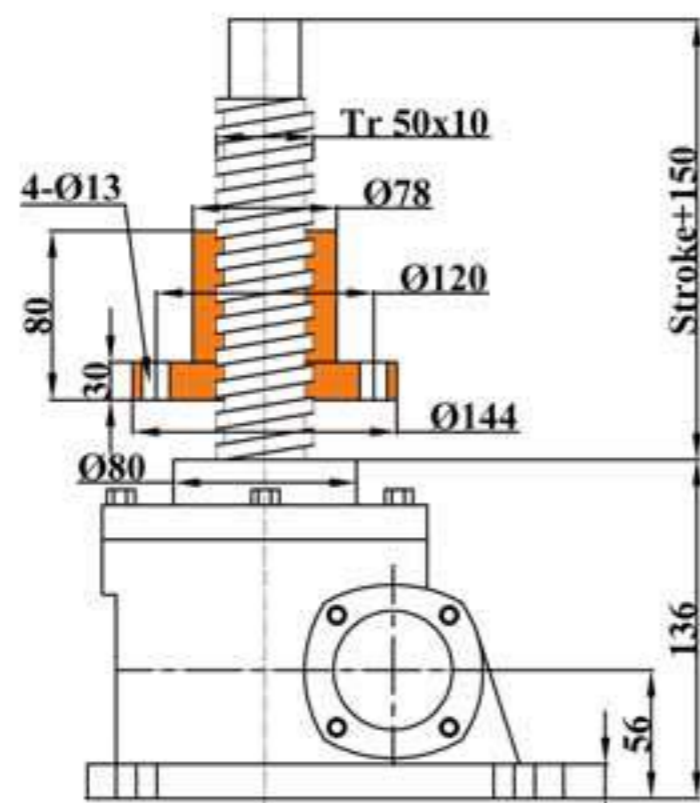
II Clevis End



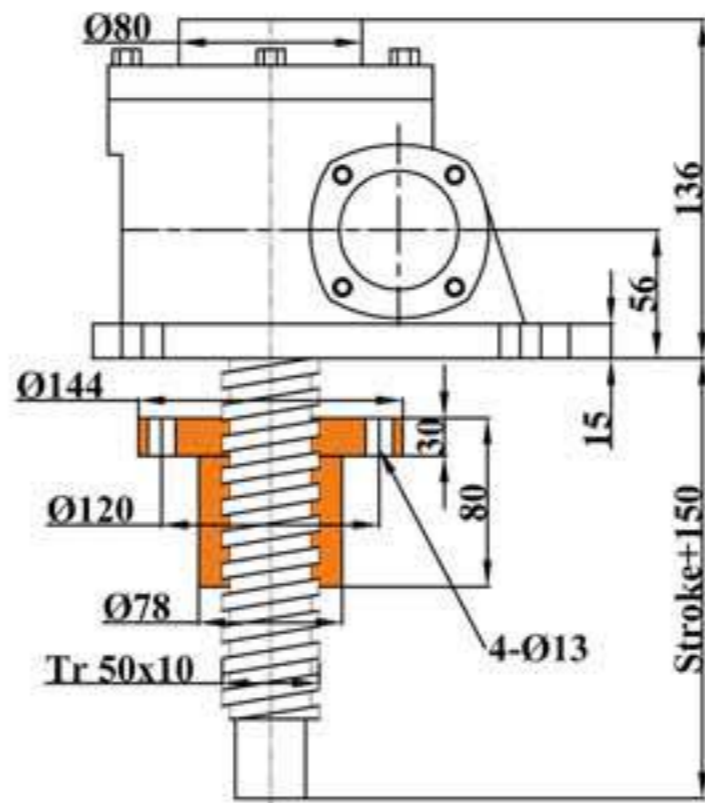
III Plain End



IV Thread End



Upright



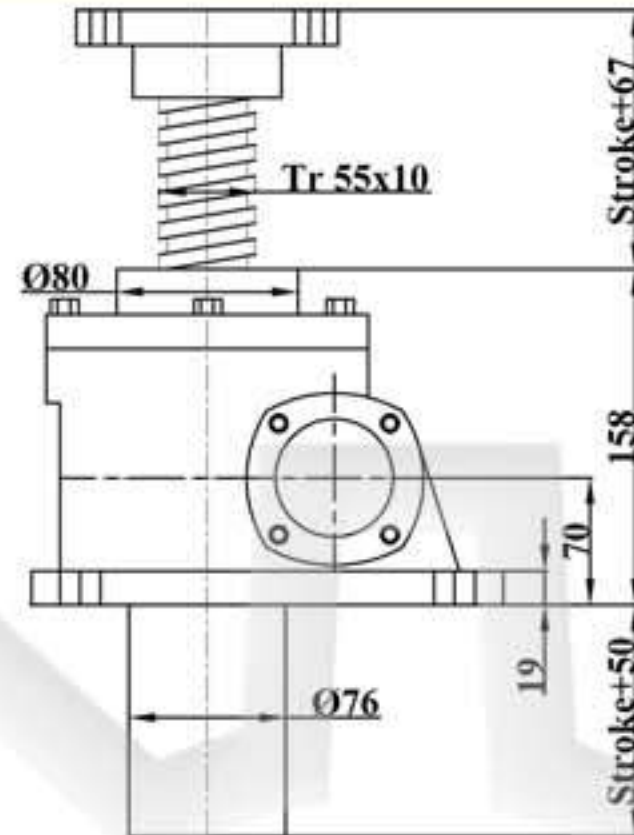
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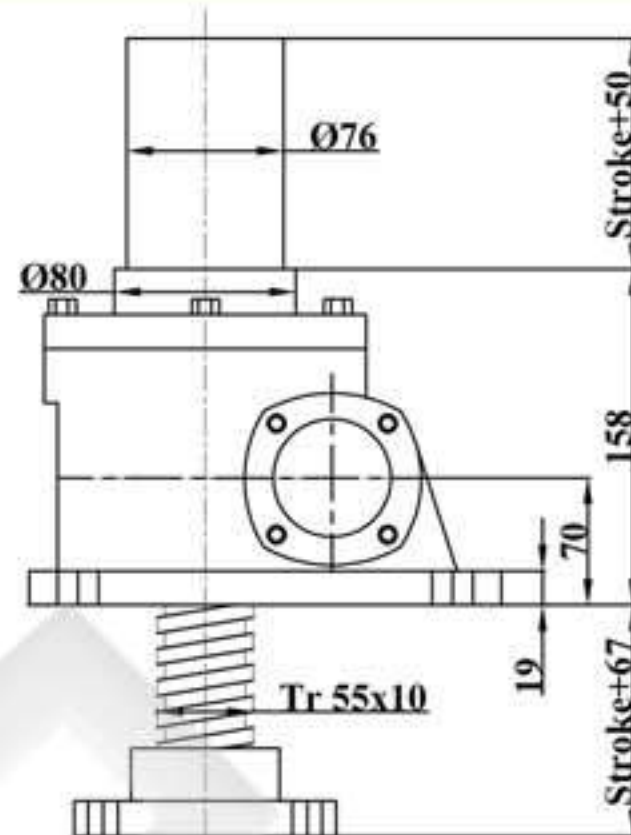
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Dimensions

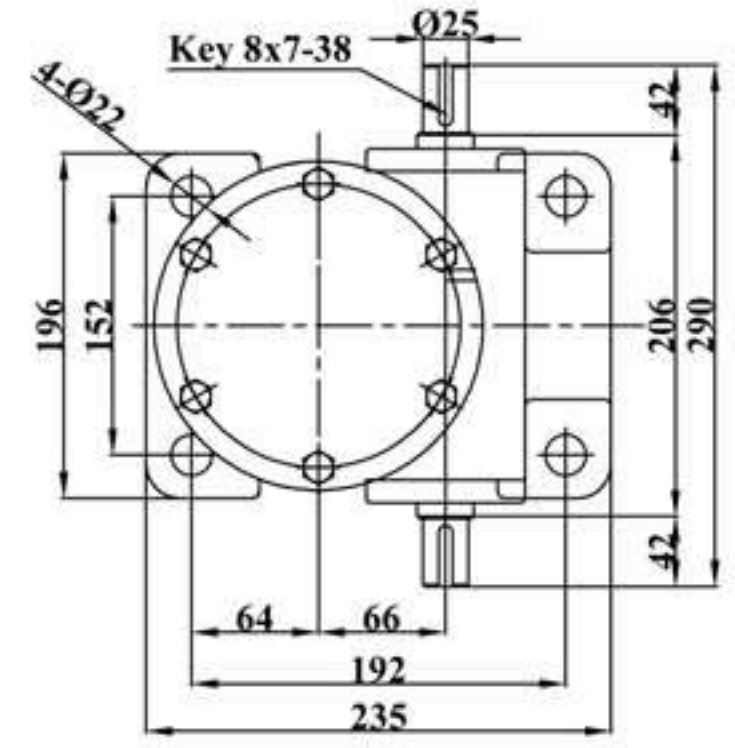
JTM150



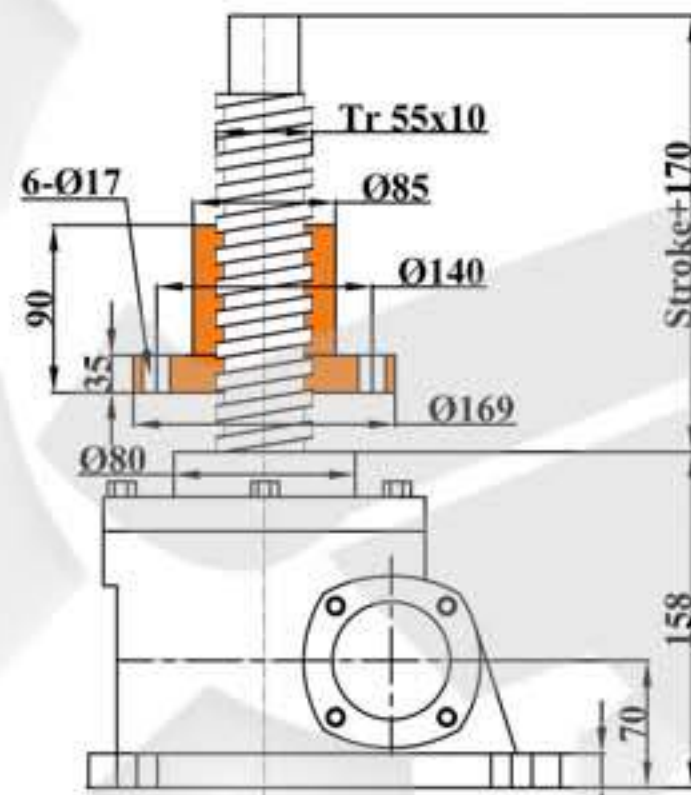
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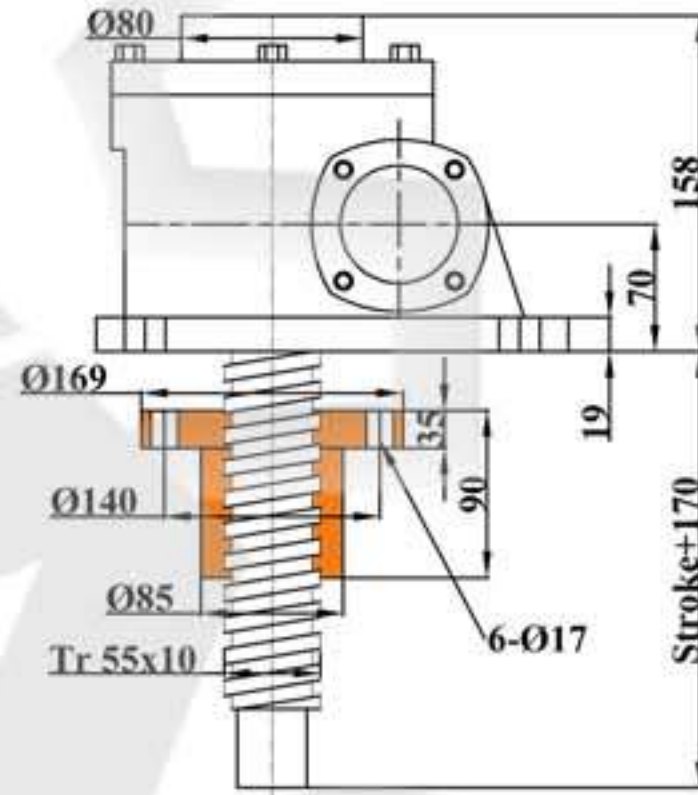
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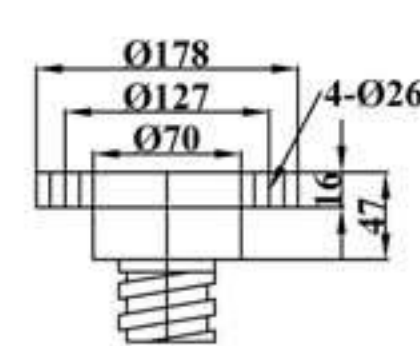
Screw End Types and Dimensions



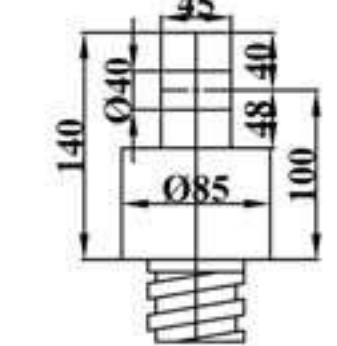
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Inverted



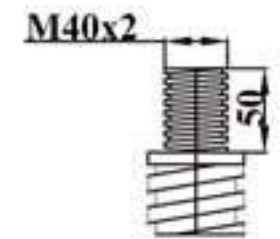
I Top Plate



II Clevis End

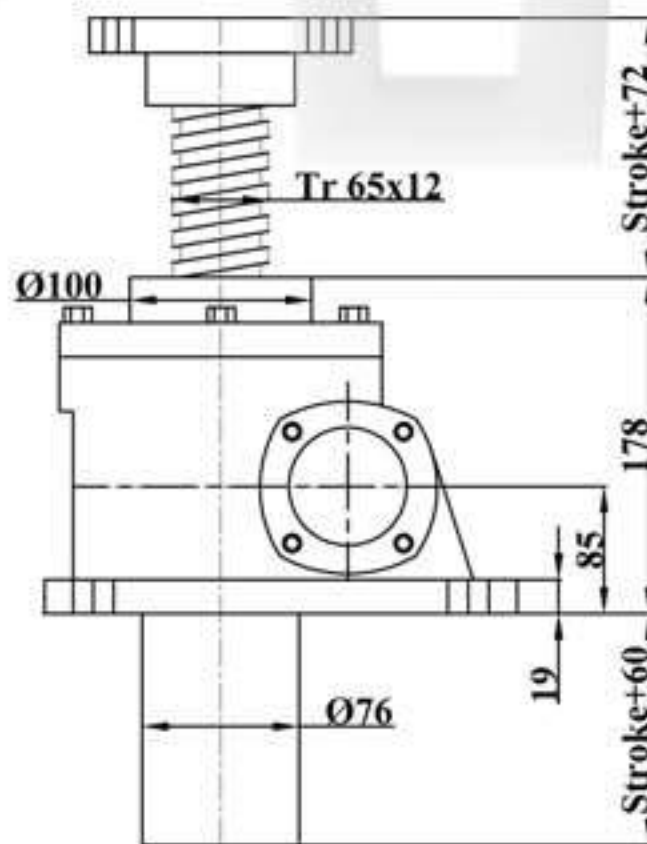


III Plain End

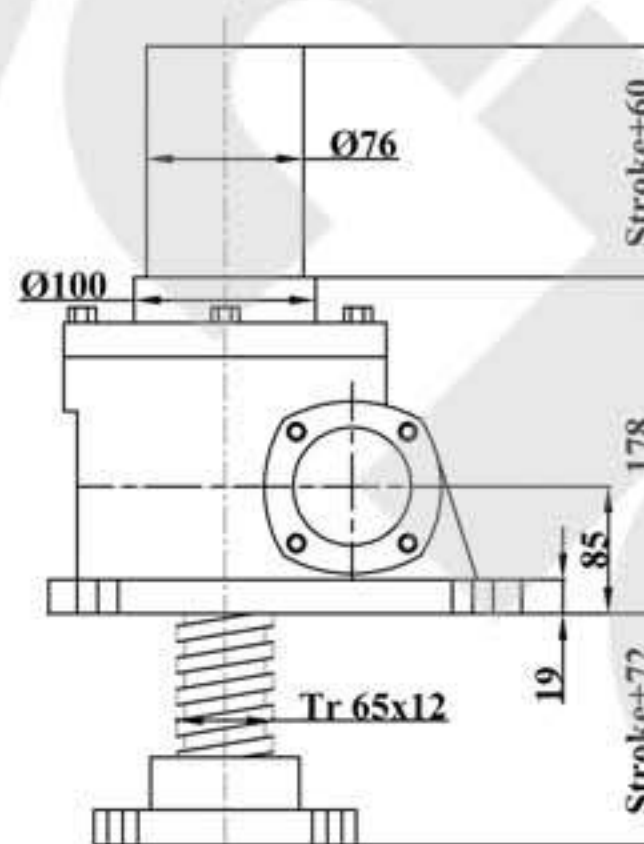


IV Thread End

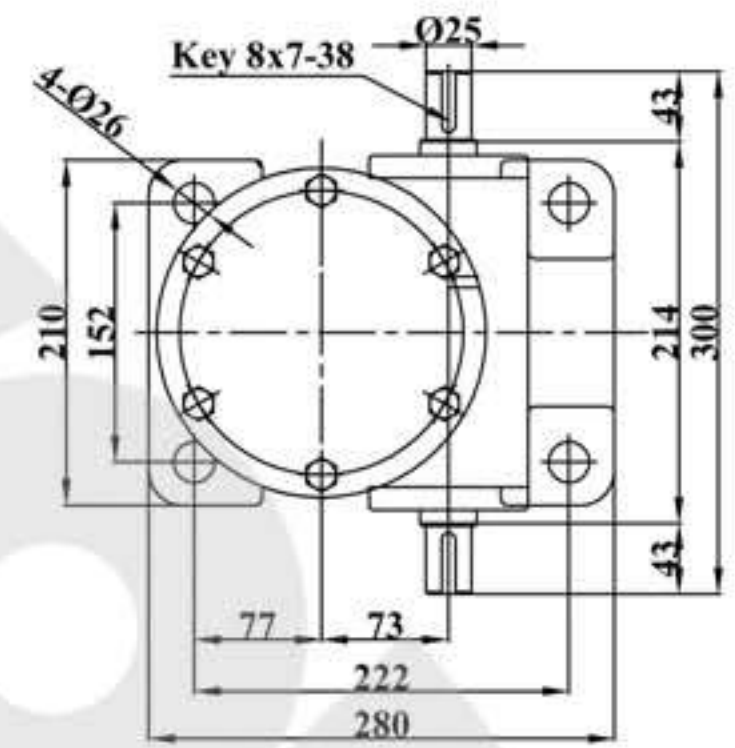
JTM200



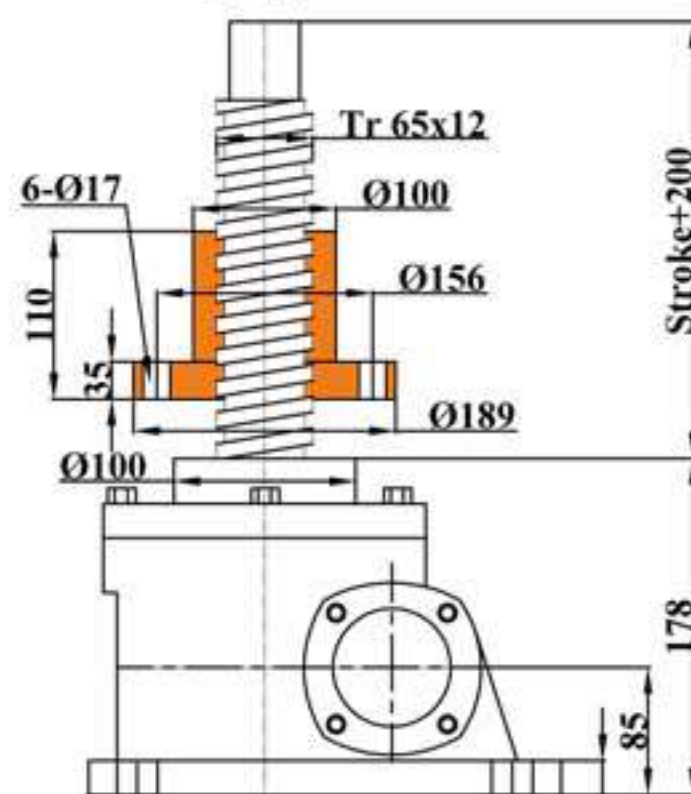
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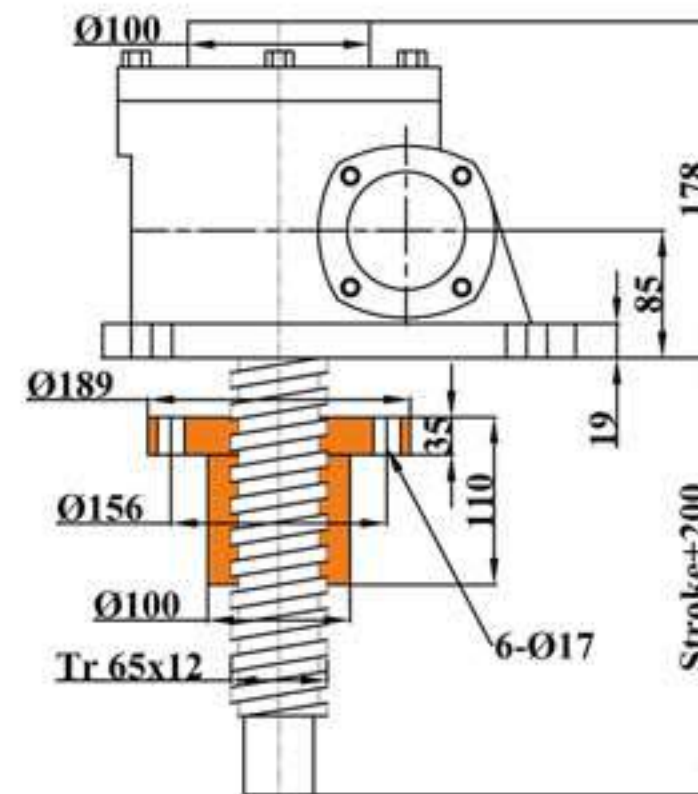
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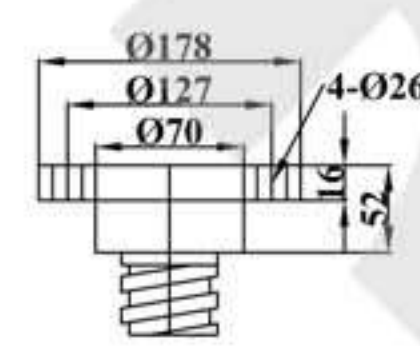
Screw End Types and Dimensions



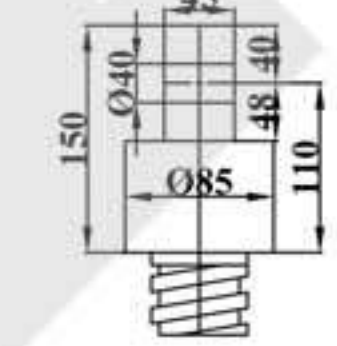
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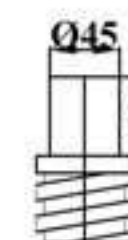
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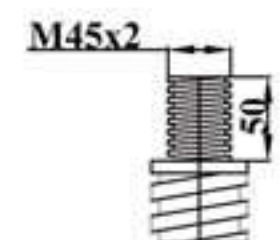
I Top Plate



II Clevis End



III Plain End



IV Thread End