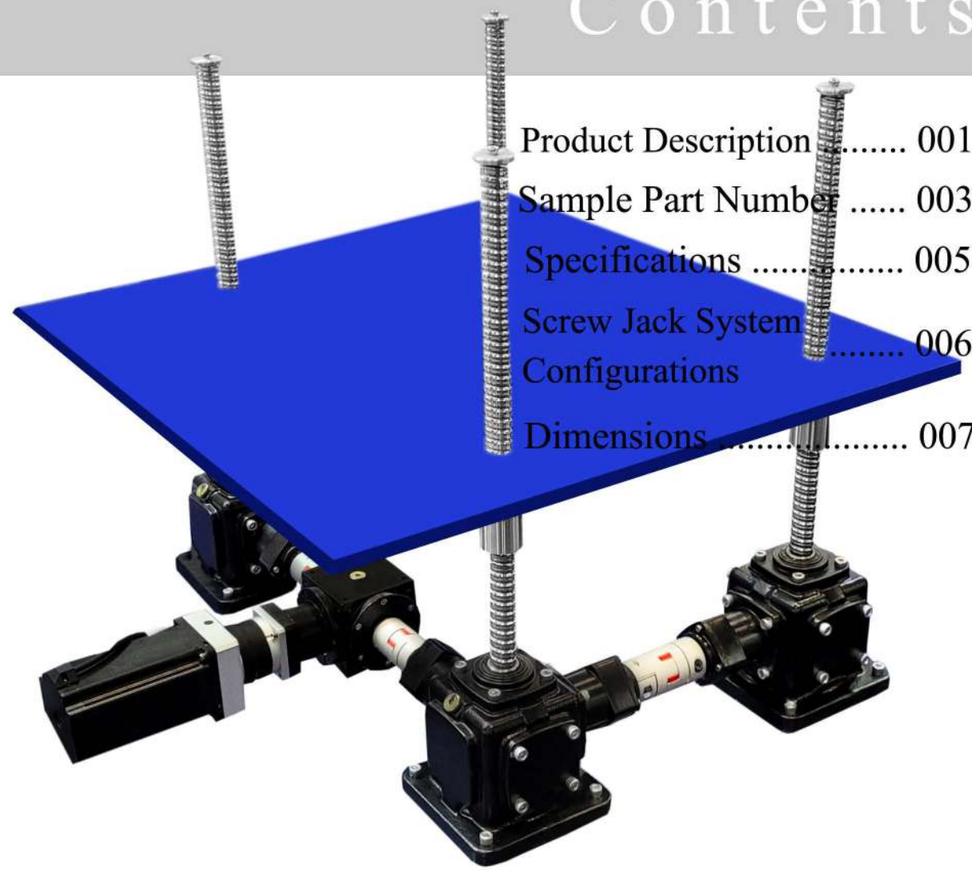
JTGB

Bevel Gear Ball Screw Jack

Contents



Product Description

The gearboxes of **JTGB Series Bevel Gear Ball Screw Jacks** are same dimensions as JT Series Spiral bevel gearboxes. Means, same center distance, making them an ideal choice for complete lifting systems. These improvements will require a less in human and material resources, also save much cost and time. These Bevel Gear Ball Screw Jacks offer higher efficiency, higher lifting speed, higher duty cycle and longer lifespan than Worm Gear Ball Screw Jacks. Ball screw bevel gear jacks achieve faster travel speeds and are rated for near continuous operation, but without self-locking, require a brake or other external locking device to hold position. Can be mounted in any attitude. Generally maintenance free.

● **Features:**

* Higher efficiency, higher lifting speed, higher duty cycle, longer lifespan
* Static load capacity from 400 kgf to 3500 kgf. Dynamic load capacity from 200 kgf to 2600 kgf.
* High precision ball screw diameter from 16 mm to 63 mm.
* There are no "standard" travel lengths, built to specification.
* Upright or Inverted mounting. Available in tension or compression loads.
* Translating, Anti-Rotation, and Rotating screw designs.
* Standard with 1-start ball screw, custom 2-starts ball screw which offers increased travel speed and require a brake or external locking device to hold position.
* Screw Ends: top plate, clevis end, plain end, threaded end, fork end, rod end.
* Can be operated by manually operated or by electric motor driven.
* Single unit use, or complete jacking system including gearmotors, bevel gearboxes, connecting shafts and couplings for dual or multiple jack arrangements.
* Optimal for low-speed operation: The driving system has less noise because machinery can be driven at a lower input speed.

Product Description

* Simple and effective solution in comparison with hydraulic and pneumatic systems.

● **Materials:**

* Bevel Gears Units: Lapped together in pairs, high quality alloy steel, case hardened.
* Ball Screw: SCM 450, S55C, Hardness: HRC 58-62
* Ball Nut: SCM415H, Hardness: HRC 58-62
* Steel Ball: SUJ2, Hardness: HRC 60 UP
* Input Shaft: Hardened, alloy steel. Custom stainless steel.
* Drive Sleeve: High strength bronze.
* Housing: 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.

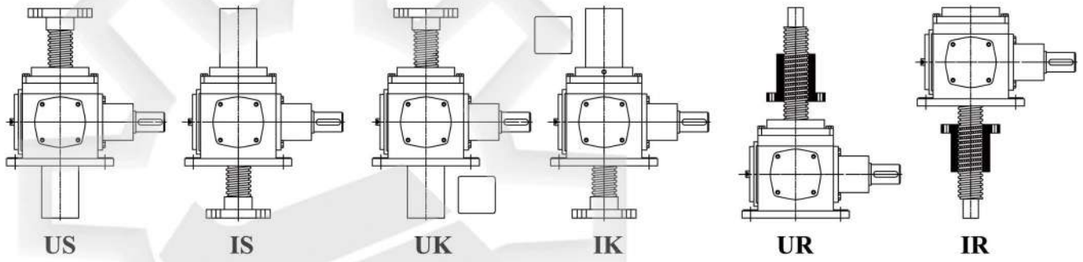
Sample Part Number

Sample Parts Numbers: JTGB25 - US - 300 - 3 - II - 2SR - CU - PP
(1) (2) (3) (4) (5) (6) (7) (8)

(1) Models & (4) Ratios

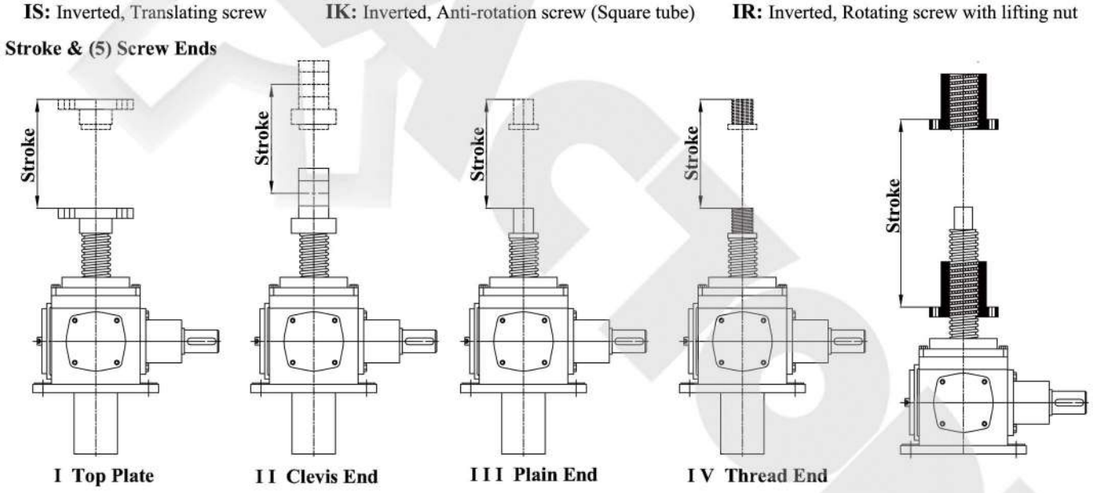
JTGB12 (16 x 5) 2 : 1	JTGB15 (20 x 5) 2 : 1	JTGB19 (32 x 10) 2.5 : 1
JTGB25 (40 x 10) 3 : 1	JTGB32 (50 x 10) 3 : 1	JTGB40(63 x 10) 3 : 1

(2) Designs and Configurations



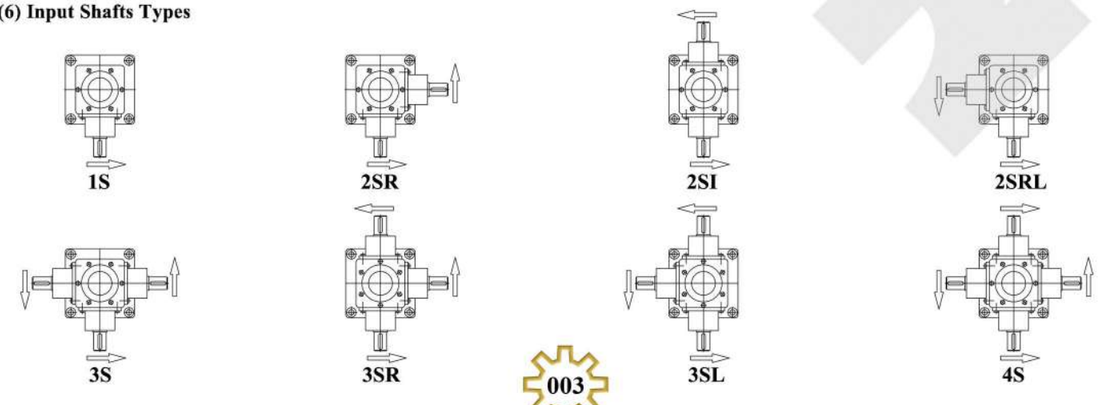
US: Upright, Translating screw
IS: Inverted, Translating screw
UK: Upright, Anti-rotation screw (Square tube)
IK: Inverted, Anti-rotation screw (Square tube)
UR: Upright, Rotating screw with lifting nut
IR: Inverted, Rotating screw with lifting nut

(3) Stroke & (5) Screw Ends



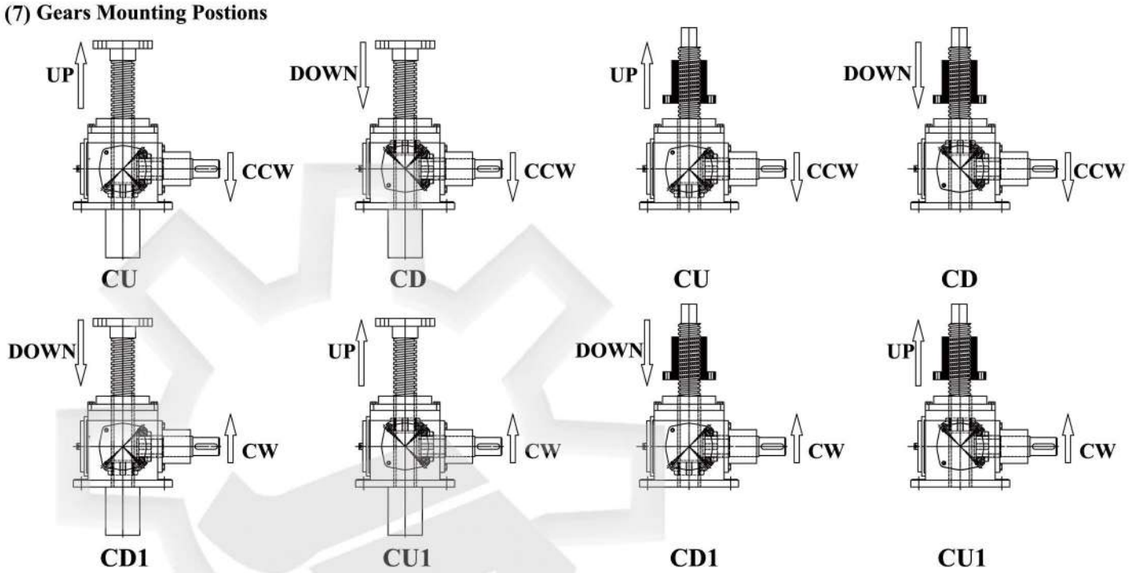
I Top Plate
II Clevis End
III Plain End
IV Thread End

(6) Input Shafts Types



Sample Part Number

(7) Gears Mounting Postions



(8) Special Requirements

FC: Flex Coupling
UJ: Universal Joint
TUJ: Telescopic Universal Joint
CS: Connecting Shaft
HW: Hand Wheel

PB: Pillow Blocks
FB: Flange Blocks
RE: Rod End
LSB: Linear Shaft & Bushing
LGR: Linear Guides and Rails

TSC: Telescopic Spring
BB: Bellows Boots
PP: Protective Tube
TMP: Trunnion Mount Plate
MF: Motor Flange

WG: Worm Gearbox
GM: Geared Motor
EM: Electric Motor
SPM: Stepper Motor
SVM: Servo Motor

DCM: Dc Motor
RED: Rotary Encoder
PS: Proximity Switch
IT: Inverter
PI: Position Indicator

Specifications

Remarks:
1) Overall efficiency is under grease lubrication.
2) Not self-locking, brake motor is required.
3) They maximum dynamic load is under Euler II(fully guided).

Model	JTGB12	JTGB15	JTGB19	JTGB25	JTGB32	JTGB40
Maximum static load capcity (kgf)	400	800	2000	2500	3000	3500
Maximum dynamic load capcity (kgf)	200	500	1000	1500	2000	2600
Ball screw sizes (mm)	16 x 5	20 x 5	32 x 10	40 x 10	50 x 10	63 x 10
Gear ratio	2:1	2:1	2.5:1	3:1	3:1	3:1
Ball screw travel (mm), per turn of input shaft	2.5	2.5	4	3.33	3.33	3.33
Efficiency %	60	60	60	60	60	60
Travel nut material	GCr15 Bearing Steel					
Housing material	Aluminum Alloy		Ductile Iron			

Screw Jack System Configurations

Two Jacks

Four Jacks

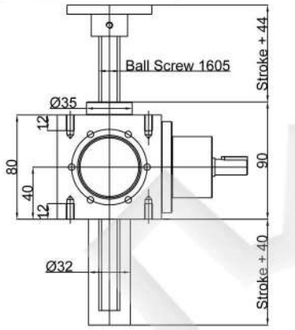
Six Jacks

Eight Jacks

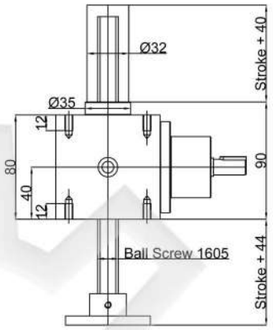
Fourteen Jacks

Dimensions

JTGB12



Upright



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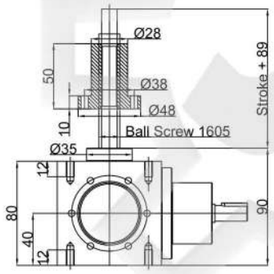

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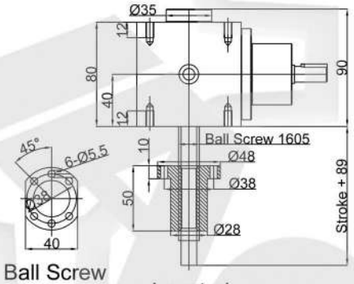
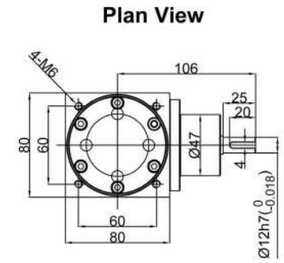
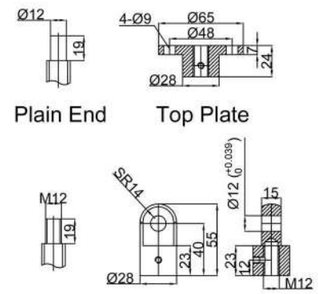


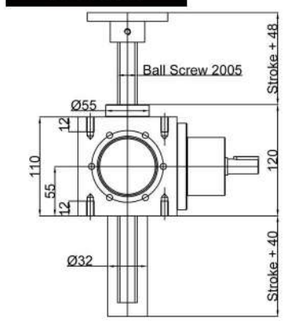
Ball Screw SFU1605-4 Inverted



End Types and Dimensions



JTGB15



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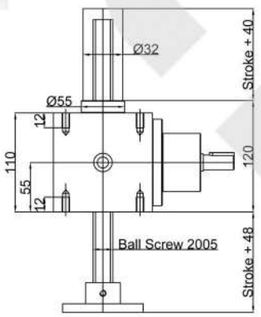

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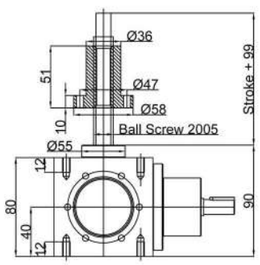

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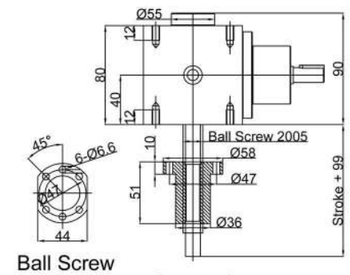
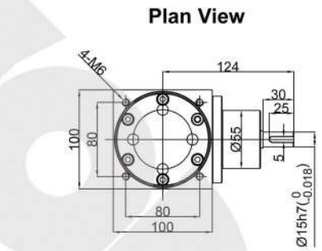
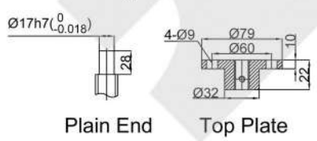
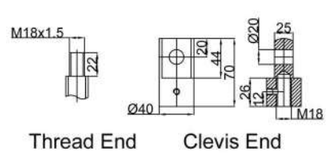


Ball Screw SFU2505-4 Inverted



End Types and Dimensions





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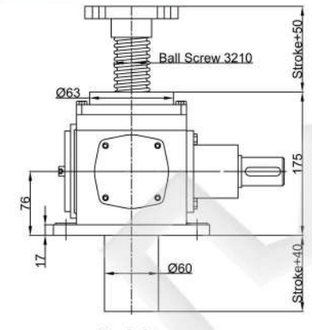
Dimensions

JTGB19



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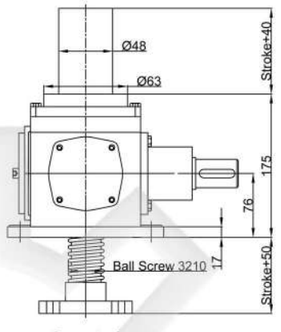

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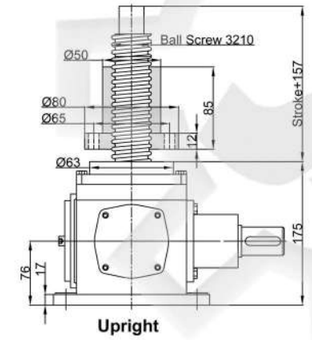

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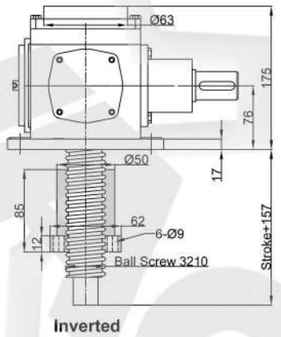

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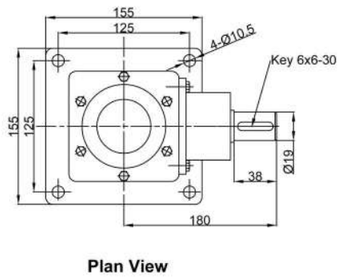
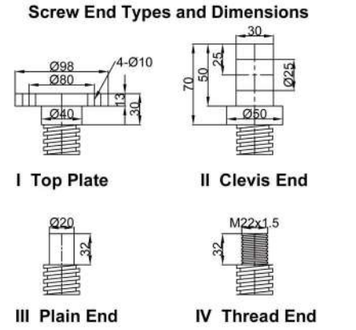


Plan View



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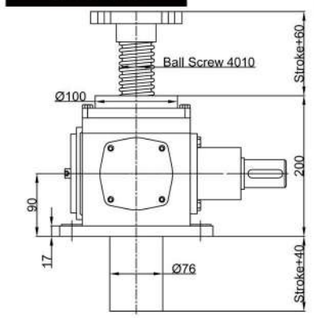

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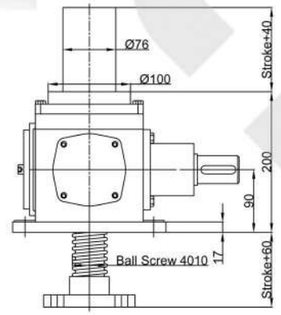

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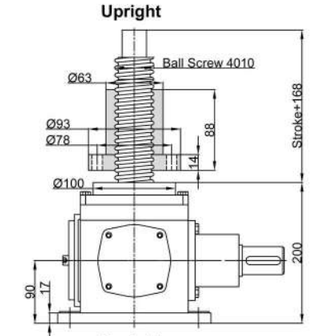

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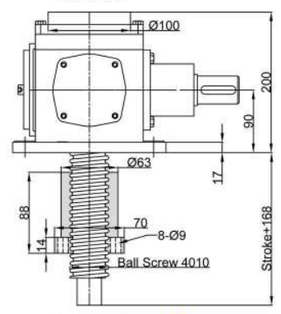

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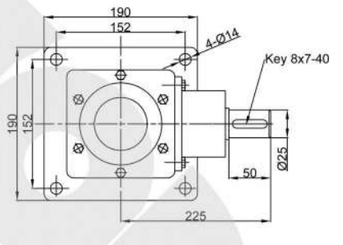
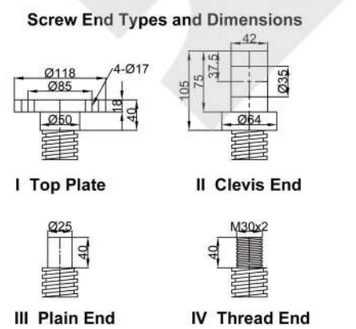


Plan View



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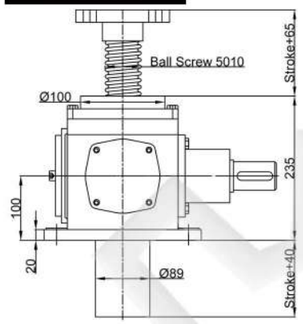
Dimensions

JTGB32



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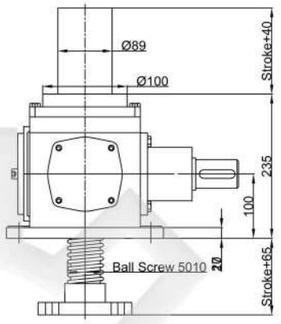

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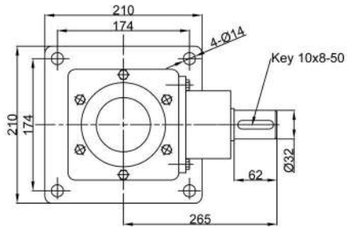

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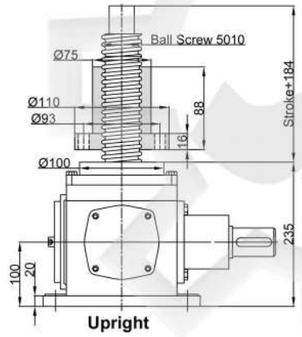

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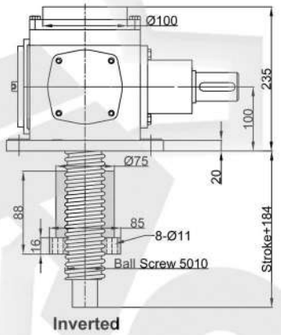

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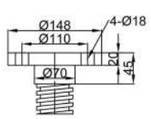
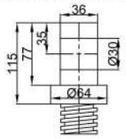
Screw End Types and Dimensions



I Top Plate

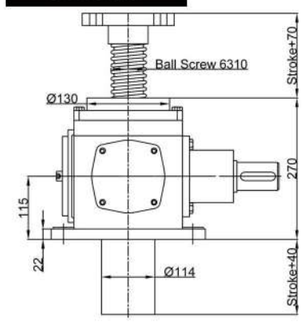


II Clevis End

III Plain End

IV Thread End

JTGB40



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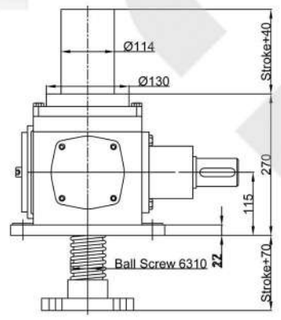

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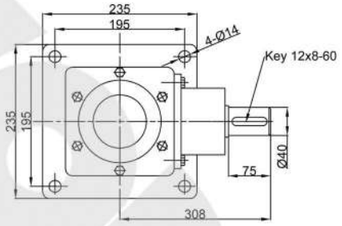
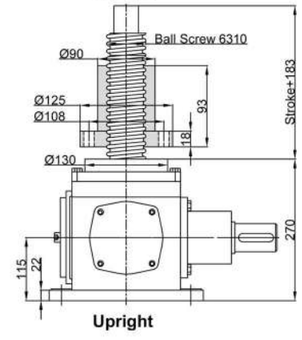


Plan View



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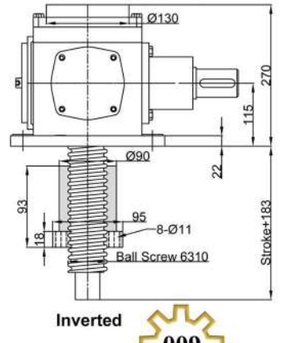

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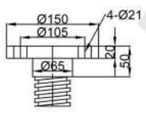
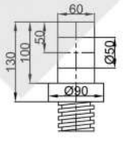
Screw End Types and Dimensions



I Top Plate



II Clevis End

III Plain End

IV Thread End

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