2D/3D CAD

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Descriptions

configures screw jacks (ball screw and machine screw) with components such as bevel gearboxes, motors (3 phase, 1 phase, DC and servo designs), motor adaptors, gear reducers, limit switches, encoders, counters, hand wheels, connecting shafts, couplings, bellows boots, pillow blocks, torque limiters, linear guidance, and motion control devices to create Complete Multiple Jack Systems. There are no "standard" travel lengths and all Screw Jack systems are built to specification. We offer complete modular screw jack systems to meet your requirements. Please contact us with details of your project and use our experience to assist you with application and design support, 3D models and budgetary pricing.

Screw jack system is usually used for lifting heavy duty load or lifting platform. The most popular system configurations are the “H”, “U”, “T” and “I” configured multiple jack systems. Note that multiple screw jacks can be linked together mechanically or electrically. The latter is useful if there is no space for linking drive shafts. Our Multiple Machine Screw Jacks Systems (mechanically linked system) simultaneously lifting, is not only for the simple load-supporting from several kilograms to several hundreds tons, but also have other features such as hold the position with self-locking without brake or locking mechanism, precisely position, full synchronization, easy installation and operation, maintenance free, can be operated by hand wheels, 3-phase motor or both.

Multiple jack configurations: Where there are multiple jacks forming part of a complete system, calculate the total input power for the system, including losses in couplings and gear boxes, using the following efficiency: 2-jacks system 95%, 3-jacks system 90%, 4-jacks system 85%, 5-jacks system 80%, 6-jacks system 80%, 8-jacks system 80%.

● **Note:** don't ignore bevel gearboxes efficiency 94%. If motor driven, bevel-helical gear motors efficiency 90%-95%, but RV worm gear motors efficiency 40%-50%.

● **Note:** Multiple screw jack systems are not limited to the number of screw jacks shown here. Typical mechanical system arrangements link 2, 4, 6, 8 jack systems and are driven by one motor. Larger systems can extend up to 16 or higher. As an alternative, screw jacks can be individually driven

Descriptions

by electric motors and with suitable feedback devices, such as encoders, be synchronized electronically by a control system. With the use of electronic synchronization/control multiple systems or screw jacks can be used in unison. Extending the possible number of screw jacks used in unison in excess of 100.

Screw Jack Systems offer comprehensive lifting, lowering, pushing, pulling and position holding with precision for design solutions in a wide variety of industries. These jacking systems are found in markets including platform synchronous lifting systems such as lift tables and landing stage, material handling equipment, steel works equipment, food and beverage industry, water processing, pharmaceutical, medical and laboratory equipment, packaging equipment, nuclear and aerospace, paper and printing industry equipment, satellite earth station antenna system, heavy vehicle lifting, solar panel tracking systems, bending machine, conveyor equipment, theatre and stage construction and military among others.

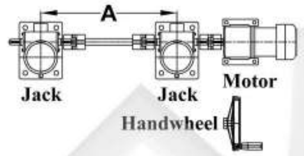
The **Main Advantages** of a screw jack system over hydraulic, pneumatic or chain driven lift drive system are:

* Controlled Lift with mechanically linked Jacks in each corner. Synchronized lift with No skewing or tilting of frame throughout the lift stroke.
* Compact Worm Gear Screw jack bodies. Low input power, High lifting linear force, Self Locking with no back wind.
* Feature: Single, Clean, electric motor drive. Just one motor is required with Brake, feedback options. No oil contamination issues.
* Variable Speed through inverter control. With Inverter driven motor, soft start and stop, current management, varying lift speeds are all available.

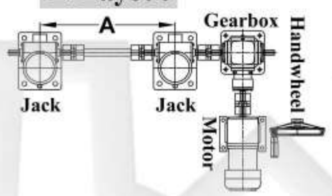
Screw Jack System Configurations

2-Jacks System

I-Layout



L-Layout



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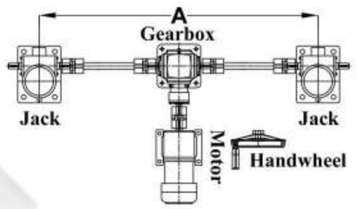

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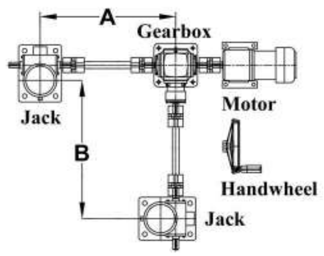
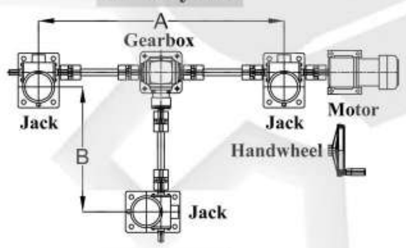


3-Jacks System

TI-Layout



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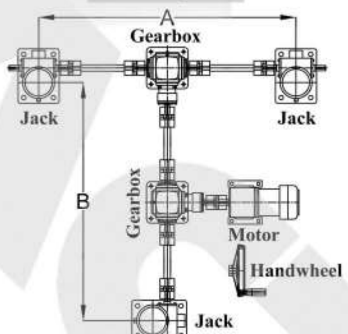

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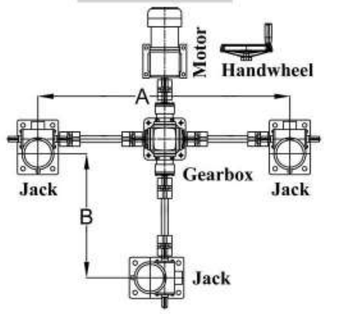
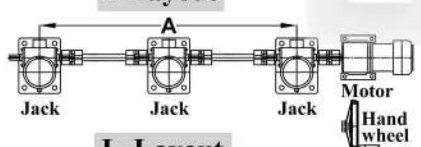


I-Layout



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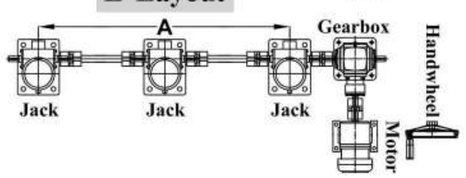

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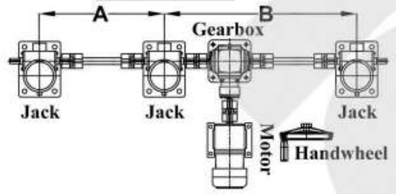

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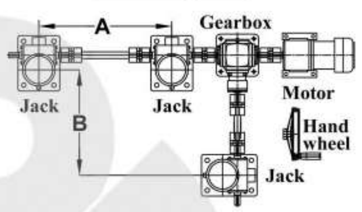
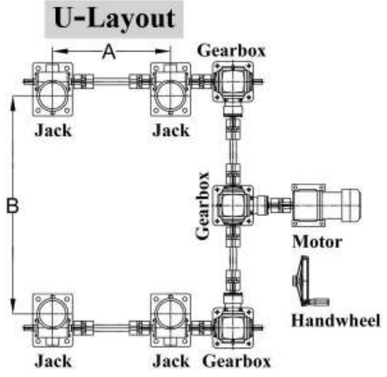
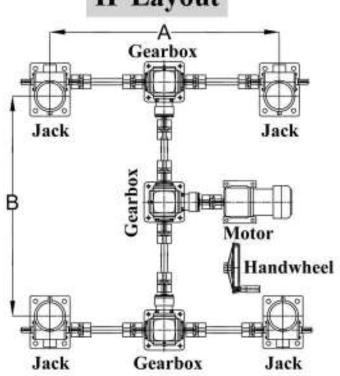


4-Jacks System

U-Layout



H-Layout



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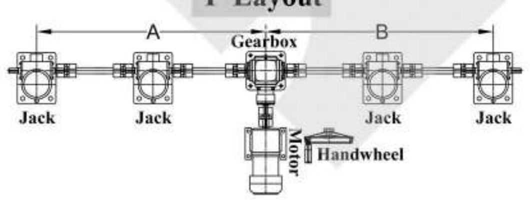
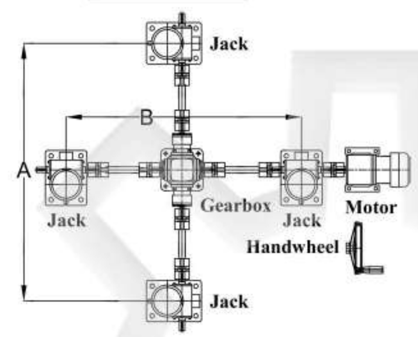


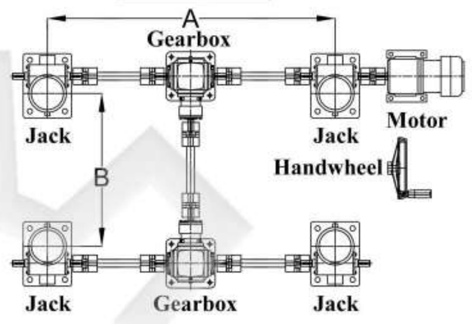
Screw Jack System Configurations

4-Jacks System

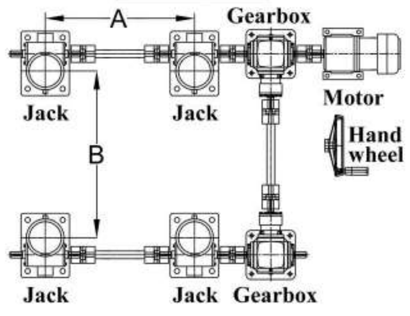
TT-Layout



HI-Layout

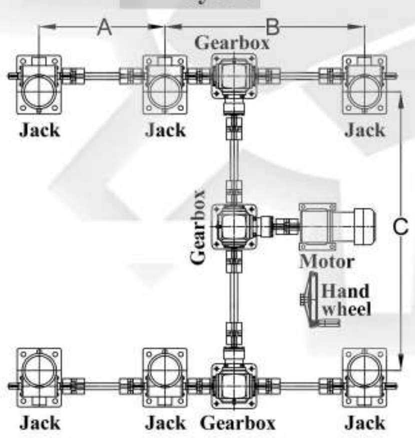


UI-Layout

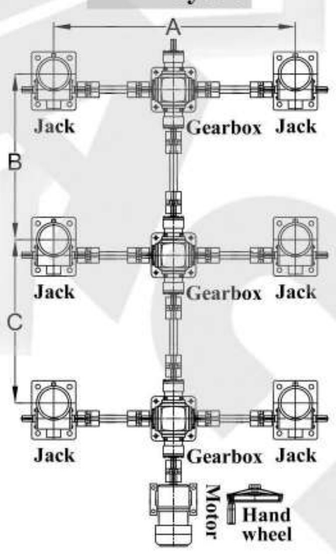


6-Jacks System

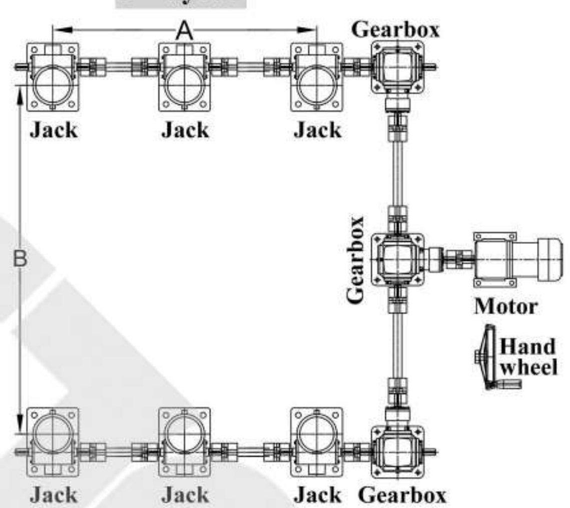
H-Layout



HH-Layout

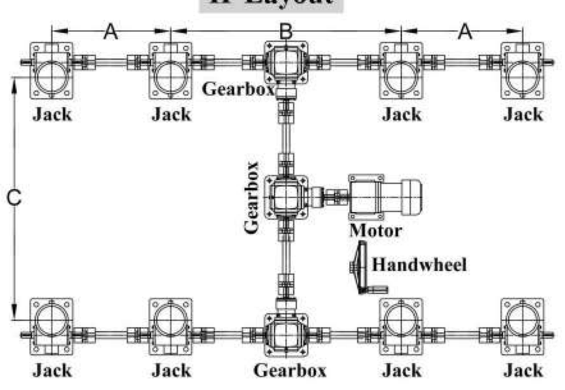


U-Layout

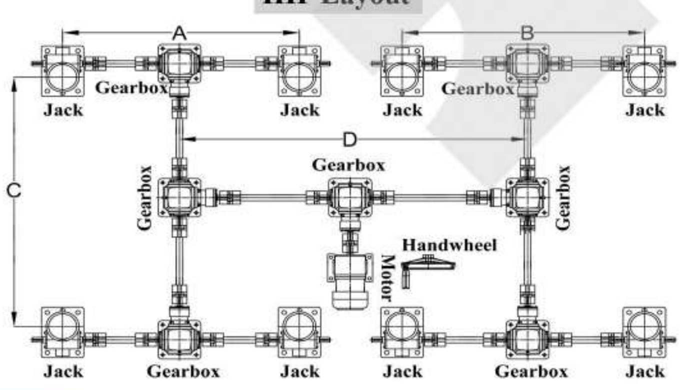


8-Jacks System

H-Layout



HH-Layout



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Other Products

Cubic Machine Screw Jack

- Cubic design permits any mounting position.
- High static loads, best for slow movement and low duty cycles.
- Static load capacities from 2.5 kN to 500 kN as Standard.
- Translating, Anti-rotation (keyed) and Rotating Screw configurations.
- Self locking trapezoidal screw offers maximum stroke of 7500 mm.
- Power source: Manual operation, Motor drive.
- Single jack, or synchronization of multiple jacks arrangeme

Cubic Ball Screw Jack

- Cubic design permits any mounting position.
- High duty cycle, high precision, high speed, less power and long service life.
- Static load capacities from 10 kN to 350 kN as Standard.
- Translating, Anti-rotation and Rotating Screw configurations.
- Not self-locking ball screw offers maximum stroke of 6000 mm.
- Power source: Brake motor drive. Not suited for manual operation.
- Single jack, or synchronization of multiple jacks arrangements.

Classic Machine Screw Jack

- Classic design, no need to attach any construction elements to the housing.
- High static loads, best for slow movement and low duty cycles.
- Static load capacities from 0.5 ton to 100 tons as Standard.
- Translating, Anti-rotation (keyed) and Rotating Screw configurations.
- Self locking trapezoidal screw offers maximum stroke of 7500 mm.
- Power source: Manual operation, Motor drive.
- Single jack, or synchronization of multiple jacks arrangements.

Stainless Steel Screw Jack

- Classic design, no need to attach any construction elements to
- Complete Stainless Steel Screw Jack design.
- High static loads, best for slow movement and low duty cycles.
- Static load capacities from 1 ton to 20 tons as Standard.
- Translating, Anti-rotation (keyed) and Rotating Screw configurations.
- Self locking Stainless Steel trapezoidal screw offers maximum stroke of 7500 mm.
- Power source: Manual operation, Motor drive.
- Single jack, or synchronization of multiple jacks arrangements.

Other Products

Classic Ball Screw Jack

- Classic design, no need to attach any construction elements to the housing.
- High duty cycle, high precision, high speed, less power and long service life.
- Static load capacities from 1 ton to 35 tons as Standard.
- Translating, Anti-rotation and Rotating Screw configurations.
- Not self-locking ball screw offers maximum stroke of 6000 mm.
- Power source: Brake motor drive. Not suited for manual operation
- Single jack, or synchronization of multiple jacks arrangements.

Bevel Gear Machine Screw Jack

- High efficiency, high lifting speed, high duty cycle, long lifespan.
- Spiral bevel gear mechanism are used, with 2:1, 2.5:1 and 3:1 ratios.
- Static load capacities from 400 Kg to 3500 Kg as Standard.
- Translating, Anti-rotation (keyed) and Rotating Screw configurations.
- Self locking trapezoidal screw offers maximum stroke of 6000 mm.
- Power source: Manual operation, Motor drive.
- Single jack, or synchronization of multiple jacks arrangem

Bevel Gear Ball Screw Jack

- Higher efficiency, higher lifting speed, higher duty cycle, longer lifespan.
- Spiral bevel gear mechanism are used, with 2:1, 2.5:1 and 3:1 ratios.
- Static load capacities from 400 Kg to 3500 Kg as Standard.
- Translating, Anti-rotation and Rotating Screw configurations.
- Not self-locking ball screw offers maximum stroke of 6000 mm.
- Power source: Brake motor drive. Not suited for manual operation.
- Single jack, or synchronization of multiple jacks arrangements.

Screw Jack Lifting Systems

- Lifting systems are not limited to the number of screw jacks. Commonly used are 2, 4, 6, 8 jack systems.
- Full synchronization, self-locking, precision positioning, easy installation and operation, maintenance free.
- From a few kilograms to heavy-duty several hundred tons.
- Complete lifting systems with geared motors, shafting and couplings available.
- Power source: Synchronized drive from a single electric motor.
- With Inverter driven motor, soft start and stop, variable lifting speeds are all available.

Other Products

Cubic Bevel Gearbox

- Modular design spiral bevel gearboxes with cubic housing.
- Ultra Compact Design. All-round tapped holes for universal mounting, 6 possible mounting positions.
- Gear ratios of 1:1, 2:1, 3:1, 4:1 and 5:1 are actual ones.
- Power Ratings up to 156 kW. Torque Ratings up to 1199 N.m.
- Gear transmission average efficiency up to 94%.
- 2-way, 3-way and 4-way Configurations.
- Solid Shaft, Hollow Shaft, and Direct motor mount or via motor flanges.
- High efficiency, high transmission capacity, low backlash, Noiseless operation, low running temperature and long service life.

Classic Bevel Gearbox

- Used in pairs case hardened alloy steel spiral bevel gears.
- Gear ratios of 1:1, 1.5:1, 2:1, 2.5:1, 3:1, 4:1 and 5:1 are actual ones.
- Power Ratings up to 335 kW. Torque Ratings up to 5713 N.m.
- Gear transmission average efficiency up to 94%.
- 2-way, 3-way and 4-way Configurations.
- Solid Shaft, Hollow Shaft, and Direct motor mount or via motor flanges.
- Various Shafts Arrangements, Rotation Directions and Mounting Positions available.
- High efficiency, high transmission capacity, low backlash, noiseless operation, low running temperature and long service life.

Lightweight Bevel Gearbox (Aluminium Alloy)

- Quality finished casing by die-casting, in lightweight aluminium alloy.
- Compact design, small-sized, ultra-lightweight, universal mounting.
- Utilizing carburized case-hardened spiral bevel gears.
- Gear ratios of 1:1 and 2:1 are actual ones.
- Power Ratings up to 4.94 kW. Torque Ratings up to 40 N.m.
- Gear transmission average efficiency up to 94%
- 2-way and 3-way Configurations.
- High efficiency, low backlash, quiet operation, maintenance free, low running temperature and long service life.

Other Products

Electric Cylinders

- Be basically screw jacks with travelling nut, but with lifting cylinder design.
- High static loads, best for slow movement and low duty cycles.
- Static load capacities from 2.5 ton to 10 tons as Standard.
- Self-locking, precise positioning, and uniform speed.
- Power source: Manual operation, Motor drive.
- Single unit, or synchronization of multiple units.
- A better choice over hydraulic actuators or pneumatic cylinders with this clean alternative, impler to install, control, low maintenance and a quieter solution.

Electric Linear Actuators

- Parallel or In-Line drive configurations.
- Self-locking ACME screw and nut, driven by an electric motor, through a reduction gearbox.
- Low maintenance due to high-quality grease and enclosed design.
- Load capacities from 100 Kgf to 15 tons as Standard (Parallel)
- Load capacities from 10 Kgf to 1000 Kgf as Standard (In-Line).
- Low noise system, higher dynamic capacity, higher speed capability and longer life.
- Low power consumption and running costs, no oil leaks, contamination or fire risk.
- Easy installation with two trunnion mounting feet, no pipework, powerpack and valves.
- Be a real alternative to pneumatic and hydraulic cylinders.

Customized and molded products