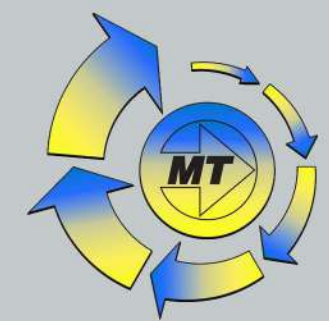


# JTQ

## Quick Lifting Screw Jacks [ Trapezoidal Screw ]



|                           |                  |
|---------------------------|------------------|
| <b>Descriptions</b>       | <b>001</b>       |
| <b>Selection Guide</b>    | <b>001 - 003</b> |
| Sample Part Number        | 001              |
| <b>Specifications</b>     | <b>004</b>       |
| <b>Overall Dimensions</b> | <b>005 - 008</b> |
| JTQ1                      | 005              |
| JTQ3                      | 006              |
| JTQ5                      | 007              |
| JTQ10                     | 008              |
| <b>Other Products</b>     | <b>009 - 012</b> |
| <b>Contact Us</b>         | <b>013</b>       |

Contents





**Descriptions**

**JTQ Series Quick Lifting Screw Jacks** incorporate the use of a self-locking **Trapezoidal Screw** (also known as High Speed Screw Jacks, Bevel Gear Machine Screw Jacks, or Bevel Gear Lifting Jacks) are a supplement to our range of Worm Gear Machine Screw Jacks. These jacks do not use worm gearing but bevel gearing. All quick-lifting screw jacks are equipped with hardened, sharpened and spiral-toothed bevel gearbox ensures higher efficiency, higher lifting speed, greater duty cycle and a longer service life. The "JTQ" Jacks are modular design in 4 sizes. Each size is available with gear ratios 1:1 and 2:1. Gear housings are cubic design housing, compact and robust, they are made of aluminum alloy with anodizing. Compared with cast iron gearbox, it is lighter in weight, higher in strength, and easier to dissipate heat.

Compared with Worm Gear Machine Screw Jacks, the "JTQ" Jacks are more efficient and used in applications requiring higher dynamics and higher duty cycle up to 40%. They can be driven directly by electric motor or other engines, or manually operated. The highest input speed is 750rpm. Especially suitable for high-frequency and high-speed working conditions, the maximum lifting speed is up to 75 mm/s (4500 mm/min) with single lead screws, and 150 mm/s (9000 mm/min) with double lead screws. There are no "standard" travel lengths (stroke), all orders manufactured according to the user's requirements.

All "JTQ" Jacks are functional in every installation position and can be mounted flexibly thanks to the cubic form. According to the customer's request, they are delivered with one shaft, two shafts, three shafts, and four shafts configurations. Custom-built to meet your specifications, they can be seamlessly configured into arrangements comprising multiple jacks. As an added benefit, "JTQ" bevel gear jacks also act as 90 degree boxes, do not therefore require additional bevel gearboxes, making them an ideal choice for the multi-jack systems. Simple and effective solution in comparison with hydraulic and pneumatic systems.

**Selection Guide**

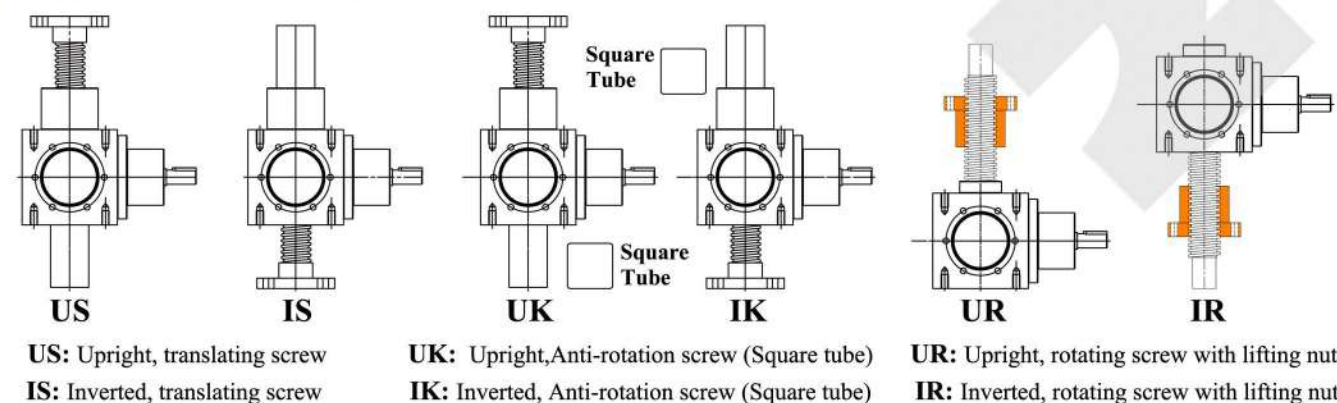
**Sample Part Number ( Example ):**

**JTQ5 - US - 300 - 2 - I - 2SR - RHCU - PP**  
 (1) (2) (3) (4) (5) (6) (7) (8)

**(1) Models & (4) Gear Ratios**

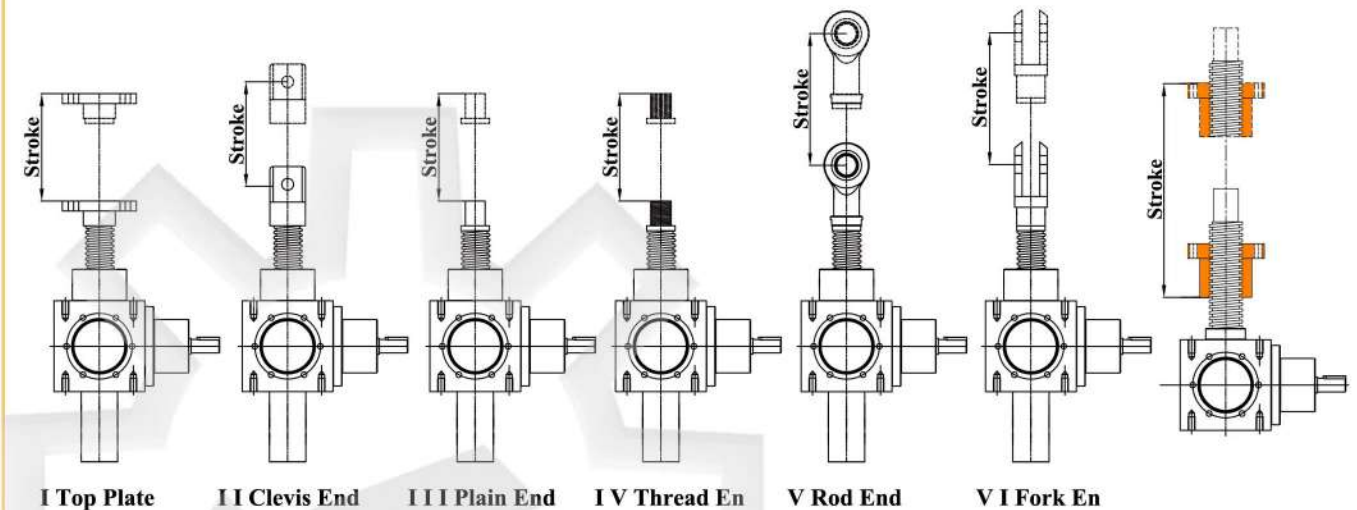
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| JTQ1 (Tr18x4) | JTQ1 (Tr18x4) | JTQ3 (Tr20x4) | JTQ5 (Tr26x5) |
| 1:1, 2:1      | 1:1, 2:1      | 1:1, 2:1      | 1:1, 2:1      |

**(2) Designs and Configurations**



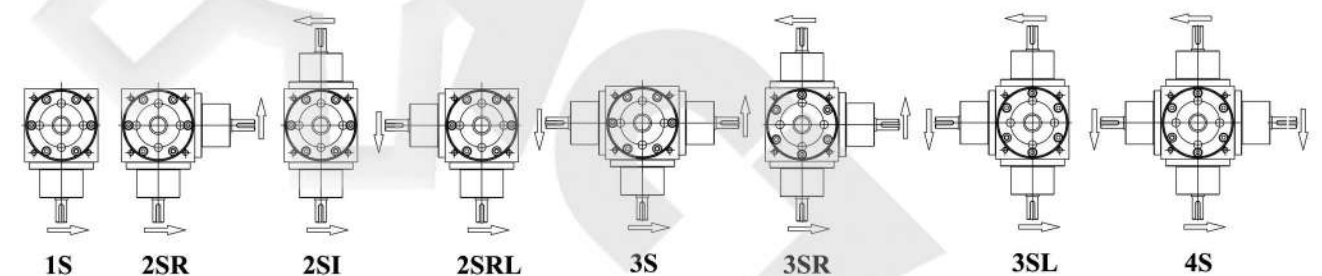
**Selection Guide**

**(3) Stroke and (5) Screw Ends**



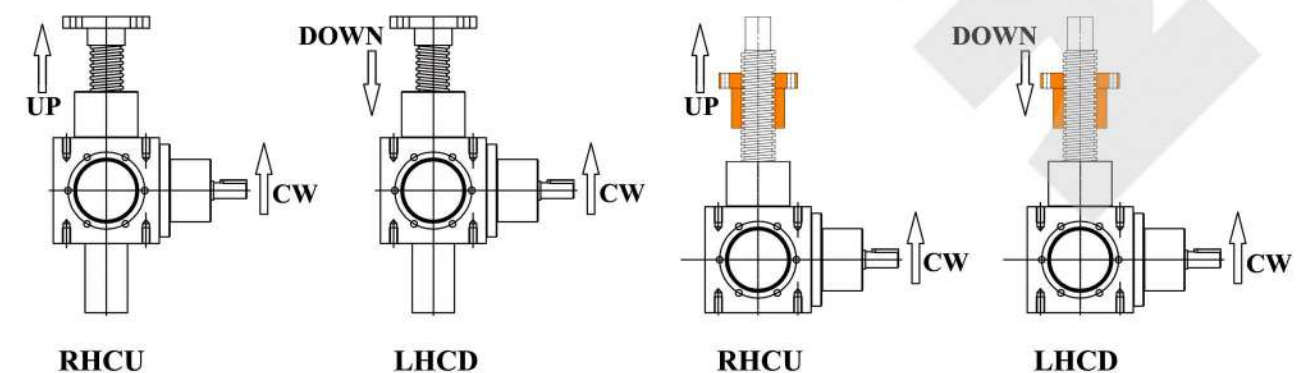
**(6) Input Shafts Types**

**Note:** The gearbox space is limit, except 1S and 2SI type, other types are not suitable for 1:1 ratio, but 2:1 ratio is available for all types.



**(7) Trapezoidal Screw or Nut Direction of Movement**

**RHCU:** Right-handed Screw. When the input shaft rotates clockwise, the trapezoidal screw or nut moves up  
**LHCD:** Left-handed Screw. When the input shaft rotates clockwise, the trapezoidal screw or nut moves down  
**Note:** When the input shaft rotate counterclockwise, the direction of movement is the opposite

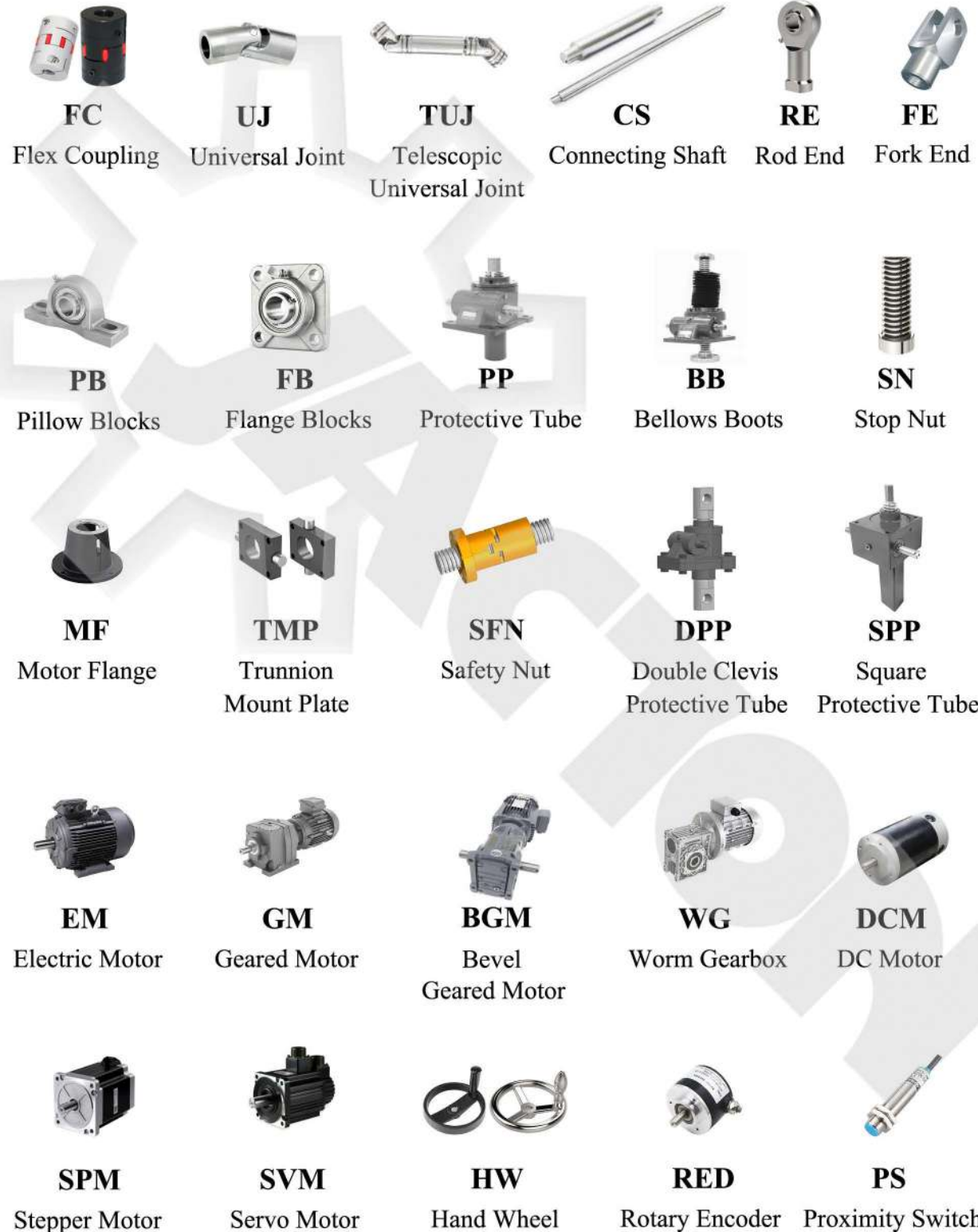




**Selection Guide**

**Sample Part Number**

**(8) Accessories**



**Specifications**

● **Note:** For multiple "JTQ" screw jack system, some bevel gear jacks require **Left-handed Trapezoidal Screw**. Please pay more attention when selection.

| Model  | JTQ1           | JTQ3   | JTQ5   | JTQ10  |
|--|----------------|--------|--------|--------|
| <b>Rated dynamic load (kN)</b>                         | 1              | 3      | 5      | 10     |
| <b>Lift Screw Diameter x Pitch (mm)</b>                | Tr18x4         | Tr20x4 | Tr26x5 | Tr30x6 |
| <b>Gear ratio</b>                                      | H              | 1:1    | 1:1    | 1:1    |
|  | L              | 2:1    | 2:1    | 2:1    |
| <b>Lift screw travel (mm), per turn of input shaft</b> | H              | 4      | 4      | 5      |
|  | L              | 2      | 2      | 2.5    |
| <b>Overall Efficiency %</b>                            | 45             | 45     | 45     | 45     |
| <b>Starting Efficiency %</b>                           | 30             | 30     | 30     | 30     |
| <b>Max. permissible input power (kw)</b>               | 0.55           | 1.1    | 1.5    | 3      |
| <b>Max. permissible input speed (rpm)</b>              | 750            | 750    | 750    | 750    |
| <b>Permissible Input Torque ( Nm )</b>                 | 15             | 30     | 49     | 140    |
| <b>No-Load Torque ( Nm )</b>                           | 0.5            | 0.8    | 1      | 1.4    |
| <b>Duty Cycles</b>                                     | 40%            | 40%    | 40%    | 40%    |
| <b>Housing(Gearbox) Material</b>                       | Aluminum Alloy |        |        |        |







**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 arrangement



**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 arrangement



**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, simpler 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**

