

## Power Transmission Solutions

### Screw Jack FAQ's

#### ***What is the lead time for a standard screw jack?***

Normally 3-4 working weeks from receipt of order. If you need a quicker delivery we can often offer an express premium service. Call us for details.

#### ***What are the determining factors for selecting the correct screw jack?***

There are many! Please download and complete our screw jacks application questionnaire and e-mail it to us. We can then help you.

#### ***What are the corrosion resisting options available for screw jacks?***

Electroless nickel or zinc plated housings, standard and offshore paint finishes, stainless steel spindles with or without bellows protection. Stainless steel gear casings, spindle cover tubes and bearing housings.

#### ***What is the difference between rotating and translating screw jack options?***

With the rotating spindle design, a nut fixed to the load climbs the spindle. Features include minimal protrusion below the screw jack. With the translating spindle design, the spindle rises and falls through the screw jack gearbox. Features include no permanent protrusion above the screw jack.

#### ***What is the Euler figure often quoted with screw jack installations?***

Euler is a spindle buckling reference. For our own calculations, a figure 6 is required as a minimum to include a safety factor. Values below this indicate a tendency to buckling when the spindle is under load. It relates to spindle length, diameter and the applied force/load.

#### ***Trapezoidal or ballscrew spindle/worm or bevel gear - what should I use for my screw jack?***

For applications requiring a stroke speed of up to 1.5m/min and intermittent duty, use a worm gear screw jack with a trapezoidal spindle. For higher speed operations, use a worm gear screw jack with a ballscrew spindle or a bevel gear screw jack with a trapezoidal spindle.

For demanding/continuous duty cycle, it might be better to use the bevel gear screw jack with ballscrew spindle. We have a mathematical model which will quickly tell us which combination is the best for your particular application.

#### ***Are CAD files available?***

Yes, please visit the relevant product pages on our website for downloads and links.

Directors: RD Clark; JA Clark

Registered Office: Northwood House, 138 Bromham Road, Bedford, MK40 2QW.  
Registered in England No. 2695331 VAT Registration No: GB-426 6623 46



Accredited to BS EN 9001:2008

## Power Transmission Solutions

Page 2 – Screw Jacks FAQ's continued

### ***How should motors be sized for a screw jack system?***

Preferably refer the application to us to calculate the power requirement. Alternatively, use the formula in our catalogue. Be generous when selecting the motor. Temperature, friction and imperfect assemblies can cause greater than calculated loads to be encountered. This is particularly true for multi-screw jack installations. Size the motor on dynamic load. Obvious but often missed.

### ***What does screw jack self-sustaining mean?***

The ability for a screw jack spindle to hold position without a brake. Trapezoidal spindles normally will be self-sustaining. Vibration will cause them to tend toward not being so. Ballscrew spindles are not self-sustaining and must be braked if used vertically. Always refer to relevant Health & Safety requirements when planning screw jack systems.

### ***Why is spindle rotation prevention offered with non-rotating spindles?***

Under 'no load' conditions, translating spindles will rotate due to drag between spindle and worm gear. This can be prevented by the use of a keyed lifting screw.

### ***Why is a spindle travel limit option offered?***

Translating spindles can be easily wound out of the gearbox. A mechanical stop, fixed at the base of the spindle prevents this. It is particularly recommended for manually operated screw jacks.

### ***Are screw jack backlash-free?***

No, the very nature of the screw jack system means that some clearances must exist to prevent binding. This normally creates backlash of 0.13 to 0.28mm as measured at the spindle. Backlash reduction options are available for critical applications where the stroke encompasses both compressive and tensile load cycles.

### ***Can I achieve a stroke speed higher than 1.5m/min with worm gear screw jacks?***

Yes, by using a 2-start thread or a high lead ballscrew. Be aware that the motor power will increase.

### ***Can screw jacks be maintained and refurbished my users?***

Yes, they can. Full maintenance instructions are published on our website under the relevant product pages. In the interests of Health & Safety however, the supply of some parts for refurbishment may be refused.

Directors: RD Clark; JA Clark

Registered Office: Northwood House, 138 Bromham Road, Bedford, MK40 2QW.  
Registered in England No. 2695331 VAT Registration No: GB-426 6623 46



Accredited to BS EN 9001:2008