

INSTALLATION AND MAINTENANCE

Installation

The screw jack must be installed in a manner that does not create lateral loads on the threaded spindle. Great care must be taken to ensure that the threaded spindle is orthogonal to the mounting plane, and that the load and threaded spindle are on the same axis. Employing multiple screw jacks to handle the same load (see the mounting schemes section on pages 90-91) requires further verifications: it is critical that the load support points, (the end fittings for TP models and the lead nuts for TPR models), are perfectly aligned in order that the load can be uniformly distributed; otherwise the misaligned screw jacks would act as brake or counter-load. Whenever several jacks have to be connected by means of transmission shafts, it is recommended that they be perfectly aligned in order to avoid overloading of the worm screws. It is advisable to use joints capable of absorbing alignment errors but having, at the same time, a rigid torsion necessary to keep the synchronization of the transmission. The assembly or disassembly of the joints or pulleys of worm screw must be carried out by means of tie rods or extractors, using, if necessary, the threaded hole on top of the worm screw; striking or hammering could damage the inner bearings.

For heat-shrinking joints or pulleys, we recommend a temperature between 80-100 °C. Installations environments with dust, water, vapors, etc. require precautions to protect the threaded spindle. This can be done by using elastic or rigid protections.

The above protections are also used in order to avoid any accidental human contact with the moving devices. For civil applications it is always advisable to use the safety components.

Preparing for service

All UNIMEC's screw jacks are supplied filled with long lasting lubricant which ensures a perfect lubrication of the worm gear/worm wheel group and all the inner parts. All screw jacks (except for the size 183) are equipped with a lubricant plug for filling-up the lubricant as necessary.

As clearly explained on relative paragraph, lubrication of the threaded spindle is a user's responsibility and must be carried out periodically depending on the duty conditions and the operating environment. Special systems are available for holding the screw jacks in any position without creating leakage problems. The application of some accessories can limit these assembly possibilities: the various solutions to be adopted will be explained in the relevant paragraphs.

Start-up

All screw jacks undergo a careful quality examination before being delivered to the client, and are dynamically tested load-free. When starting-up a machine where screw jacks are installed, it is critical to check for the lubrication of the threaded spindles and for the absence of foreign material. During the calibration phase of the electrical end-of-stroke systems, the inertia of the moving masses should be taken into account, which for vertical loads will be lower in ascent and greater in descent. It is advisable to start-up the machine with the minimum possible load and to make sure all components are working properly, before assuming regular operation.

Especially at start-up, it is critical to follow the instructions given in the manual: continuous or hazardous testing maneuvers could lead to an abnormal overheating of the screw jacks and cause irreparable damages.

One single temperature peak is enough to cause premature wear or breakdown of the screw jack.



Routine maintenance

Screw jacks must be periodically inspected, depending on the level of use and working environment. It is advisable to check for lubricant leakages from the casing, and, if this occurs, it is necessary to find and eliminate the cause and fill the lubricant up the correct level.

The lubrication conditions of the threaded spindle must be periodically inspected (and restored if necessary) as well as the presence of any foreign material. The safety components must be inspected according to the applicable norms.

Storage

Screw jacks must be protected from deposits of dust and foreign matter during storage. Particular attention must be paid to saline or corrosive atmospheres.

We also recommend to:

- 1 - Periodically rotate the input shaft to ensure proper lubrication of the inner parts and avoid that the seals dry up, therefore causing lubricant leakages.
- 2 - Lubricate and protect the threaded spindle, the worm screw and the non varnished components.
- 3 - Support the threaded spindle in case of horizontal storage.

Warranty

Warranty is valid given when the instructions contained in our manual are carefully followed.

ORDERING CODES

TP	306	1/5	1000	TF	PR-PE	B	IEC 80B5	SU-P0
model (TP/TPR) (MTP/MTPR)	size	reduction ratio	stroke [mm]	end fitting	protections	construction model	motor flange	accessories