Sizing and Selection

The procedure for planning screw jack systems is generally as follows:

1. Definition of the speed and possible mounting positions of the worm gear screw jacks.

2. Selection of the drive components (couplings, shafts, bevel gearboxes, motors) for synchronous drive of the individual worm gear screw jacks. The following criteria are decisive:
   - Lowest possible loading of the individual trans mission components. Input of the entire drive torque via the teeth of a bevel gearbox must be avoided in particular.
   - As few transmission components as possible and short joint shafts.
   - Provision for the use of a torque-limiting coupling to protect the system. It is sometimes difficult to show the direction of rotation of the individual components in the drawing. The following method can generally be used:
     – Define the position of the individual worm gear screw jacks.
     – Enter the direction of rotation of each worm gear screw jack for the “lifting” motion (the direction of rotation of a shaft is shown by an arrow pointing in the direction of movement of a point on the upper side of the shaft).
     – Draw in the possible position of the bevel gear boxes.
     – Determine the direction of rotation and position of the bevel gear.

THOMSON Linear Motion. Optimized.™

Worm Gear Screw Jack and Drive Unit Selection

After selecting the drive unit, it is important to check whether the worm gear screw jack or any transmission components may be overloaded by the drive unit. The following points should also be established:

1. On which side is the motor to be mounted.
2. Direction of rotation of the jack systems.