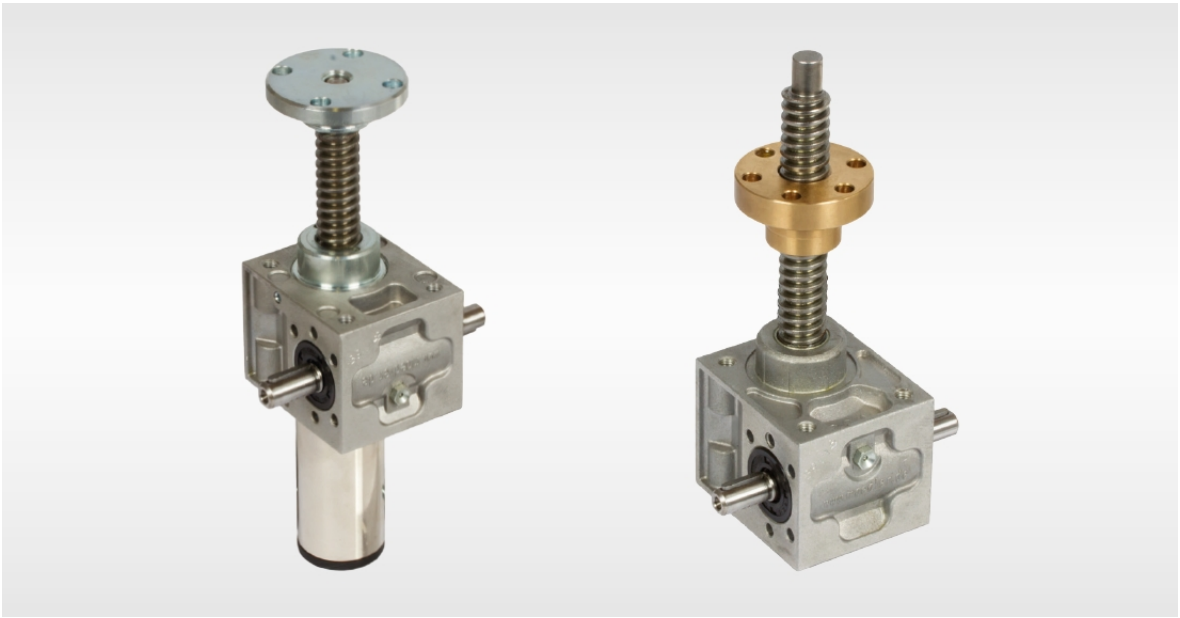
Operating and maintenance instructions

Worm gear screw jacks NP/I



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INSTALLATION and SERVICING INSTRUCTIONS

We kindly ask you, in your private interest, to strictly observe these recommendations in order to maintain a perfect and long-term operation of the system and to avoid unnecessary annoyance.

Dismantling of the hoisting gear as well as removing the threaded ball nuts from the screw without our consent dispenses us from any compensation claim. This also applies when the data you indicated such as speed, load, duty cycle, environmental factors as well as data on component forces are exceeded!

Before assembly of the hoisting gears and, eventually, other drive units, ensure a clean plane and preferably machined assembly surface. Likewise strictly observe the sense of rotation of all elements when applying several gear units. Unless it has been ensured during construction, check whether component forces can affect the screw i.e. from the outside or due the friction-moment of the nut.

During assembly, all fixing screws should initially be tightened slightly in order to facilitate the alignment. With misalignment or stress in this phase, they have to be remedied before thightening of the fixing screws. Before interconnecting the hoisting gears, all screws should be adjusted to an exact hoisting level. Non-compliance with these points leads to a life and an early failure. When the hoisting gears are connected to driving shafts provided by the customer, they should be equipped with flexible couplings in case misalignment cannot be excluded.

TEST RUN

With mounting the drive motor, again observe the sense of rotation! The hoisting table res. the part to be moved is fixed by means of the screw res. nut in retracted postion, i.e. do not tighten the screw too much. When the complete course can be effected without fluctuations in torque, the screws will be tightened completely. If the torque has not changed, running without stress can be presumed. Only when all factors are correct, the system can be run under load. If possible, also check whether voltage fluctuations of the motor occur during stroke. After 4-6 service hours, check whether the fixing screws are still thightened.

MAINTENANCE

The hoisting gears are supplied with grease (oil) filling. With version LM, the screw is to be greased before installation. At hoisting gears with difficult access the points of lubrication have to be provided with permanent cups res. a connection to the lubricating system. This applies in particular to version LM. Depending on the case of operation, the gears res. screws have to be greased at regular intervals.

We recommend to exchange the grease, to clean the parts and again grease them after approx. 500-600 operating hours or 24-30 months. At his opportunity, the state of the nut and the toothing should be checked. When the thread is used by more than 50%, an exchange is to be made.

Turn out the screw, remove screw protection. Remove the two threaded pins at the sides. Loosen bearing cover by means of hook spanner and turn it out. Remove and wash out shaft sealing rings, guard rings and shims.

ATTENTION!

Mark the shim so that it is replaced at the same position again! Fill the clean gear again with grease (leave space for detachable accessories). Fill res. coat toothing, bearing and thread (screw) with grease in order to avoid dry operating during start up.

Install a new 0-ring and new shaft sealing rings. First tighten the bearing cover, then loosen it slightly, after that tighten it moderately again.

Take care for easy motion of the screw shaft. After that turn in the screw again and secure the bearing cover by means of the two threaded pins.

Basically observe that all parts are replaced correctly to the old position.

If applicable, replace the permanent grease cup and regrease the gear at the point of lubrication.

When lubricating with oil, discharge the oil at the oil drain plug, clean the gear from eventual residues and fill it again.

Control oil level at the inspection glass.

LUBRICANT, standard:

The gear is supplied with High-grade grease (Divinol Lithogrease 1500) for roller mills and worm gear screw jack lubrication.
Thickner: Lithium complex soap, NLGI-Class / DIN 51 818:1
Temperature range: -20°C - +150°C.

LUBRICANT, only at gearboxes with oil filling:

The gearbox is initially filled with DIN 51517 CLP 220 (transmission oil). ISO-Viscosity calls DIN 51510:220. The oil grad will be specified in the case of special applications.

Lubricant filling in gramm

size 0	size 1	size 2	size 3	Size 4						
20	40	100	200	480						

Lubricant quantities for re-lubricating in gramm

size 0	size 1	size 2	Size 3	size 4						
3	3	4	5	6						