The alternative to hydraulic jacks for heavy-duty falsework
- inexpensive and robust
- up to 1000 kN vertical load
TITAN 500 and TITAN 1000 wedge jacks

Wedge jacks are used for supporting cross-beams or similar falsework members or single props made from rolled steel sections or typical heavy-duty falsework props. The falsework components can be attached to the wedge jack with, for example, beam clamps. Wedge jacks for such applications should be placed on essentially firm, even surfaces with minimal chance of rotation, e.g. concrete pad foundations, raft foundations, ground beams, steel brackets, etc.

TITAN 500 with welded angle head plates on both sides, welded base plate and robust, forged anchor bolt.

TITAN 1000 with plates welded to top and bottom wedges and robust, forged anchor bolt.

The main advantages of wedge jacks:
- exact height adjustment
- low settlement
- easy handling
- individual parts dip-coated for corrosion protection
- unaffected by water (unlike sand jacks)
- less expensive than hydraulic systems

No hydraulics needed for adjusting height or lowering

Raising just a little is possible up to a vertical load of approx. 40 kN. The wedge jack can be released for lowering under load using a ring spanner (46AF/80AF) and a 2 kg handheld hammer or a torque multiplier (manual/electric) with step-down gear (preferably 1:15).

TITAN 500

- Range of adjustment: 160 – 260 mm
- Weight: 29.5 kg
- Part No.: 0120350001

TITAN 1000

- Range of adjustment: 162 – 272 mm
- Weight: 53.3 kg
- Part No.: 0120350003

with ring spanner
AF 46  Part No. 0620350006
AF 80  Part No. 0620350004

with torque multiplier
manual  Part No. 0620350007
electric (not shown)  Part No. 0620350008
Wedge jacks can be used to support and transfer both concentric and eccentric vertical loads and, to a limited extent, horizontal forces, too. The loadbearing capacity depends on the support conditions. The figure shows the loads/forces using a TITAN 1000 as an example. A wedge jack may not be used to resist an eccentric vertical load and simultaneous horizontal forces in the same elevation.

Permissible loads* according to DIN EN 12812 and DIN EN 1993. The resistances specified must be compared with the characteristic load of the structure.

<table>
<thead>
<tr>
<th></th>
<th>TITAN 500</th>
<th>TITAN 1000</th>
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<tbody>
<tr>
<td>Range of adjustment H [mm]:</td>
<td>min.</td>
<td>max.</td>
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<tr>
<td>Vertical load</td>
<td></td>
<td></td>
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<tr>
<td>perm. Fz (incl. γM, γf)</td>
<td>max. 420 kN</td>
<td>max. 1000 kN</td>
</tr>
<tr>
<td>Horizontal load</td>
<td></td>
<td></td>
</tr>
<tr>
<td>perm. Fx, perm. Fy</td>
<td>0.14 · Fz</td>
<td>0.11 · Fz</td>
</tr>
<tr>
<td>Eccentricity</td>
<td></td>
<td></td>
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<tr>
<td>perm. ex, perm. ey</td>
<td>30 mm</td>
<td>12 mm</td>
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</tbody>
</table>

* Always comply with the instructions for installation and use. The loadbearing capacity depends on the support conditions.

Also suitable for horizontal or eccentric loads

Relieving
When using several wedge jacks in a row, these are relieved from outside to inside alternately by turning each one through a quarter turn (corresponds to approx. 3 mm each time).
Support for single props
The wedge jack is positioned in such a way that the line of action of the vertical load passes through the centroids of the prop and the jack. When using props made from rolled steel sections, the load must be transferred via end plates welded to the sections. Beam clamps should be used as well to secure the positions of the components.

TITAN universal beam clamp
Forged body for high clamping force with low weight. Maximum permissible load for:
- single-lap joint: perm. R = 3 kN
- double-lap joint: perm. R = 4.5 kN
- 5–70 mm clamping capacity

Weight: 1.60 kg
Part No.: 0620350009

The photos reproduced in this brochure represent momentary snapshots of work on building sites. It is therefore possible that certain facts and circumstances do not fully correspond to the technical (safety) requirements.