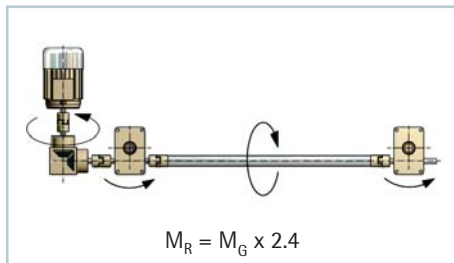


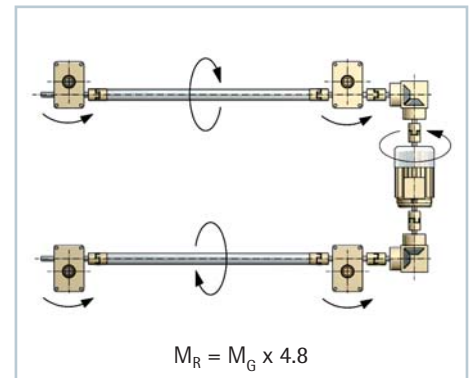
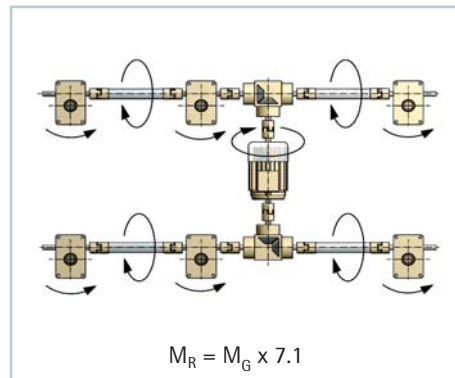
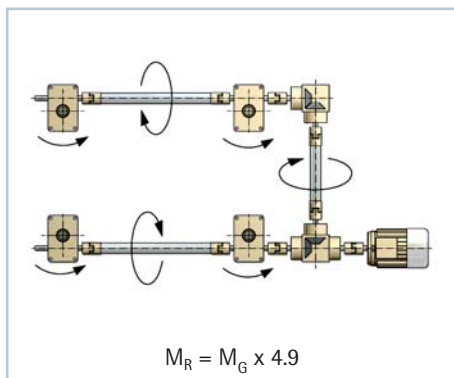
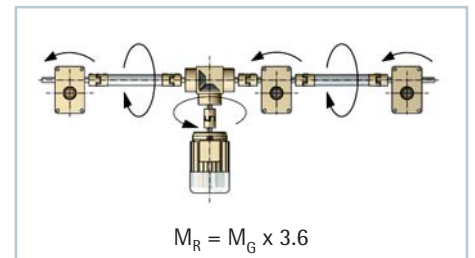
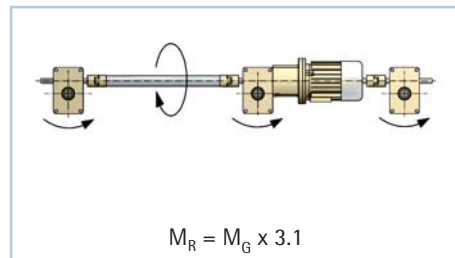
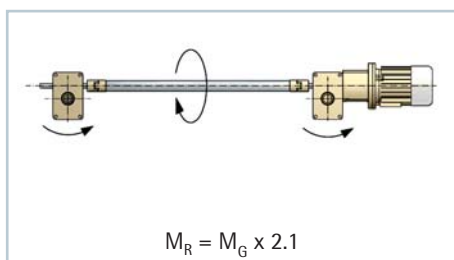
Drive torque for screw jacks - approximate calculation



Calculation

The drive torque required for a lifting system is the sum of the torques for the individual screw jacks and increases due to frictional losses on transfer components such as couplings, connecting shafts, bevel gearboxes etc.

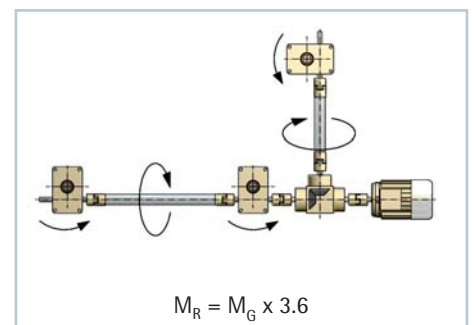
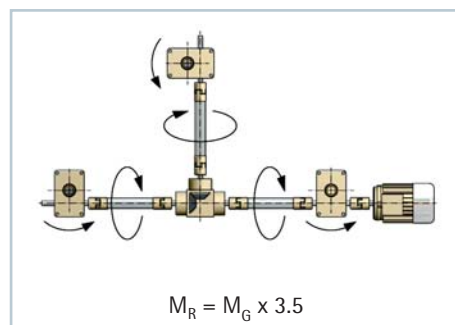
To simplify the calculation, the following factors are used to determine the drive torque for the most common system layouts.



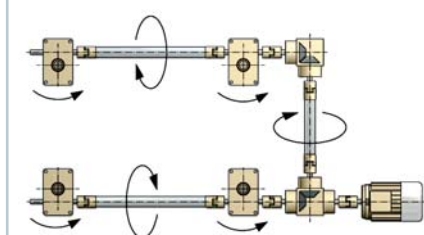
M_R - Overall drive torque for the entire system.

M_G - Drive torque for an single gearbox

M_A - Starting torque max. $1.5 \times M_R$



Example (example from page 162, 12 kN per gearbox)



$$M_R = M_G \times 4.9 = 5.97 \text{ Nm} \times 4.9 = 29.25 \text{ Nm}$$

→ x safety factor 1.4 = 40.95 Nm

CAUTION:

We recommend multiplying the calculated value by a safety factor of 1.3 to 1.5 (up to 2 for small systems and for low speeds). The values stated assume equal distribution of the load across all gearboxes!