

High-speed screw jacks G1-G3

High Speed Screw Jack G1-G3

NEFF high speed screw jacks supplement our offer of worm gear screw jacks. They are more efficient and may be used in a broader field of applications. They may be used in a medium load range (12.3 kN-117 kN1), with a high lifting speed and longer operating time.

All high speed screw jacks are equipped with hardened, sharpened and spiral-toothed bevel gear transmissions. Therefore, they attain high lifting speeds and improved efficiency.

The models N, V and R are available in three sizes with 2:1 and 3:1 transmissions. With ball screws, high speed screw jacks become even

more dynamic. All high speed screw jacks work in all installation positions. Due to their cubic casing they can be mounted flexibly.

By using ball screws the high-speed screw jacks achieve even better performance values. All high-speed screw jacks are functional in every installation position and can be mounted flexibly thanks to the cubic form of the housing.

According to the customer's request they are delivered with up to four drive shafts. Lifting assemblies with several high speed screw jacks do not therefore require additional bevel gears.

| Technical Data Version N/VK: | | | | | | | |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Size ⁷⁾ | G1-N-VK-TGS 24x5 | G1-N-VK-KGS 2505 | G2-N-VK-TGS 40x7 | G2-N-VK-KGS 3210 | G2-N-VK-KGS 4005 | G3-N-VK-TGS 60x9 | G3-N-VK-KGS 6310 |
| Max. stroke and drag force in [kN] | 20,6 | 12,3 | 44,5 | 33,4 | 23,8 | 117 | 76 |
| Stroke per full turn of the screw shaft, ratio 2:1 in [mm] ⁸⁾ | 2,5 | 2,5 | 3,5 | 5 | 2,5 | 4,5 | 5 |
| Stroke per full turn of the screw shaft, ratio 3:1 in [mm] ⁸⁾ | 1,6 | 1,6 | 2,3 | 3,33 | 1,6 | 3 | 3,33 |
| Max. stroke speed in m/min ratio 2:1, 3000/min | - ¹⁾ | 7,5 | - ²⁾ | 15 | 7,5 | - ³⁾ | 15 |
| Max. stroke speed in m/min ratio 3:1, 3000/min | - ⁴⁾ | 5,01 | - ⁵⁾ | 10 | 4,99 | - ⁶⁾ | 9,99 |
| Efficiency (with screw) | 0,45 | 0,75 | 0,4 | 0,75 | 0,75 | 0,35 | 0,75 |
| Gear efficiency | 0,91 | 0,91 | 0,93 | 0,93 | 0,93 | 0,94 | 0,94 |
| Idling torque for ratio 2:1 | 1,44 | 1,44 | 1,89 | 1,89 | 1,89 | 3,69 | 3,69 |
| Idling torque for ratio 3:1 | 1,35 | 1,35 | 1,8 | 1,8 | 1,8 | 3,6 | 3,6 |
| Max. moment of a torque on the screw shaft in [Nm] | 50 | 50 | 175 | 175 | 175 | 1600 | 1600 |

| Technical Data Version R: | | | | | | | |
|--|-----------------|---------------|-----------------|---------------|---------------|-----------------|---------------|
| Size ⁷⁾ | G1-R-TGS 24x5 | G1-R-KGS 2505 | G2-R-TGS 40x7 | G2-R-KGS 3210 | G2-R-KGS 4005 | G3-R-TGS 60x9 | G3-R-KGS 6310 |
| Max. stroke and drag force in [kN] | 19,6 | 12,3 | 56,5 | 33,4 | 23,8 | 117 | 76 |
| Stroke per full turn of the screw shaft, ratio 2:1 in [mm] ⁸⁾ | 2,5 | 2,5 | 3,5 | 5 | 2,5 | 4,5 | 5 |
| Stroke per full turn of the screw shaft, ratio 3:1 in [mm] ⁸⁾ | 1,6 | 1,6 | 2,3 | 3,33 | 1,6 | 3 | 3,33 |
| Max. stroke speed in m/min ratio 2:1, 3000/min | - ¹⁾ | 7,5 | - ²⁾ | 15 | 7,5 | - ³⁾ | 15 |
| Max. stroke speed in m/min ratio 3:1, 3000/min | - ⁴⁾ | 5,01 | - ⁵⁾ | 10 | 4,99 | - ⁶⁾ | 9,99 |
| Efficiency (with screw) | 0,45 | 0,75 | 0,4 | 0,75 | 0,75 | 0,35 | 0,75 |
| Gear efficiency | 0,91 | 0,91 | 0,93 | 0,93 | 0,93 | 0,94 | 0,94 |
| Idling torque for ratio 2:1 | 1,44 | 1,44 | 1,89 | 1,89 | 1,89 | 3,69 | 3,69 |
| Idling torque for ratio 3:1 | 1,35 | 1,35 | 1,8 | 1,8 | 1,8 | 3,6 | 3,6 |
| Max. moment of a torque on the screw shaft in [Nm] | 50 | 50 | 175 | 175 | 175 | 1600 | 1600 |

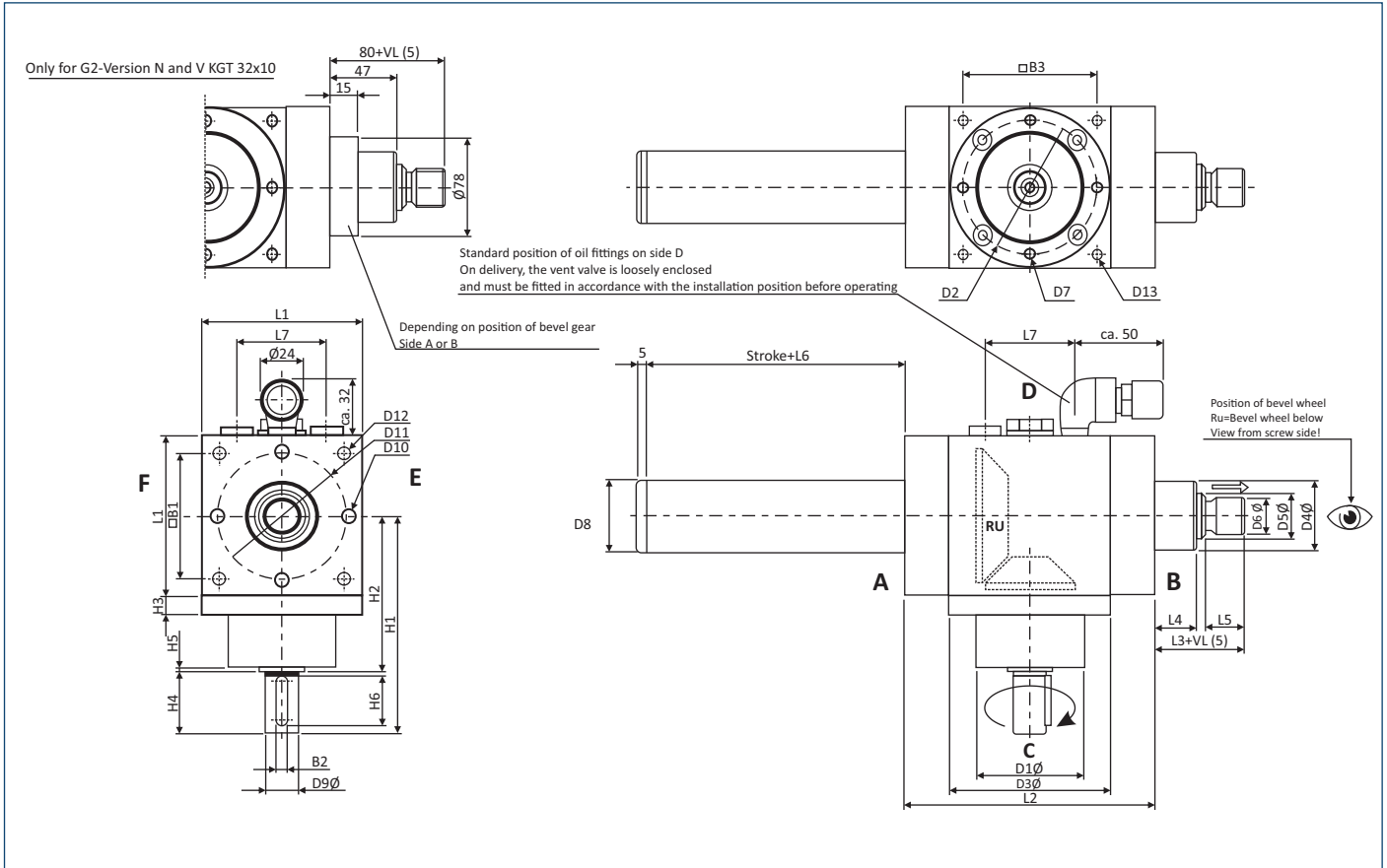
- 1) max. permissible screw revolution speed (max. 4,55m/min at 1820/min)
- 2) max. permissible screw revolution speed (max. 1,82m/min at 520/min)
- 3) max. permissible screw revolution speed (max. 1,44m/min at 320/min)
- 4) max. permissible screw revolution speed (max. 4,55m/min at 2730/min)

- 5) max. permissible screw revolution speed (max. 1,82m/min at 780/min)
- 6) max. permissible screw revolution speed (max. 1,44m/min at 460/min)
- 7) all screw sizes with other threads in stock
- 8) ratio 1:1 on request



High-speed screw jacks G1

Dimensions - type N/V



| Size | L1 | L2 | L3 | L4 | L5 | L6 | L7 | B1 | B2 | B3 | H1 | H2 | H3 | H4 | H5 | H6 | D1 | D2 | D3 h7 |
|------|-----|-----|----|----|----|---------------------|-----|-----|--------------------|-----|----------------------|----------------------|------|--------------------|--------------------|--------------------|----------------------|----|-------|
| G1 | 90 | 140 | 50 | 23 | 22 | 35/70 ⁴ | 50 | - | 6 | - | 122 | 87 | 10 | 35 | 2 | 25 | 60 | 75 | 89 |
| G2 | 140 | 190 | 65 | 32 | 29 | 45/100 ⁴ | 90 | 113 | 10 | 110 | 180 | 130 | 13 | 50 | 2 | 45 | 90 | - | 135 |
| G3 | 230 | 295 | 95 | 40 | 48 | 60/110 ⁴ | 180 | - | 16/12 ¹ | 180 | 305/310 ¹ | 215/230 ¹ | 17,5 | 90/80 ¹ | 2/3,5 ¹ | 80/63 ¹ | 150/120 ¹ | - | 225 |

| Size | D4 | D5 | D6 | D7 | D8 | D9 j6 | D10 | D11 | D12 | D13 | | | | | | | | | |
|------|----|-------------|----------------------|----|---------------------|--------------------|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|
| G1 | 39 | T24x5/K2505 | M18/M20 ³ | M8 | 42/□40 ² | 18/12 ¹ | M10 | 72 | - | - | | | | | | | | | |
| G2 | 60 | T40x7/K4005 | M30/M20 ³ | - | 65/□65 ² | 32/28 ¹ | - | - | M12 | M10 | | | | | | | | | |
| G3 | 90 | T60x9/K6310 | M48x2 ³ | - | 90/□90 ² | 55/40 ¹ | M20 | 180 | - | M16 | | | | | | | | | |

1) First dimension for ratio 2:1, second dimension for ratio 3:1

2) First dimension for Standard-Version N, second dimension for square-type tube Version V

3) First dimension for trapezoidal screw, second dimension for ball screw

4) Second dimension for stop collar or locking device

5) Screw extension (see productcode)



Performance table

- F** Axial load
- H** Low ratio (ex.: 2:1)
- L** High ratio (ex.: 3:1)
- Nm** Required drive torque for axial load **F**
- HNm** Required holding torque for axial load **F** (If – no holding torque is required)
- kW** Required driving power in depending on speed

Screw jacks with other screw pitches as in the performance tables:

For screws with higher pitches the power values can be multiplied by the pitch factor.

For example: If a pitch of 10 mm in place of 5 mm use the existing performance data and multiply by the factor of 2, use a factor of 10 if the pitch is 50 mm in place of 5 mm

G1-KGS-2505

| n [1/min] | Stroke speed [m/min] | | F=15 [kN] | | | | | | F=10 [kN] | | | | | | F=5 [kN] | | | | | | F=2,5 [kN] | | | | | | F=1 [kN] | | | | | |
|--------------|-------------------------|------|-----------|------|------|------|------|------|-----------|------|------|------|------|------|----------|-----|------|------|-----|------|------------|-----|------|------|-----|------|----------|-----|------|------|-----|------|
| | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | |
| | 2:1 | 3:1 | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW |
| 3000 | 7,50 | 5,00 | 9,76 | 2,68 | 3,07 | 6,79 | 1,16 | 2,13 | 7,11 | 1,18 | 2,23 | 5,10 | 0,21 | 1,60 | 4,45 | - | 1,40 | 3,40 | - | 1,07 | 3,13 | - | 0,98 | 2,55 | - | 0,80 | 2,33 | - | 0,73 | 2,04 | - | 0,64 |
| 2250 | 5,63 | 3,75 | 9,76 | 2,68 | 2,30 | 6,79 | 1,16 | 1,60 | 7,11 | 1,18 | 1,67 | 5,10 | 0,21 | 1,20 | 4,45 | - | 1,05 | 3,40 | - | 0,80 | 3,13 | - | 0,74 | 2,55 | - | 0,60 | 2,33 | - | 0,55 | 2,04 | - | 0,48 |
| 1500 | 3,75 | 2,50 | 9,76 | 2,68 | 1,53 | 6,79 | 1,16 | 1,07 | 7,11 | 1,18 | 1,12 | 5,10 | 0,21 | 0,80 | 4,45 | - | 0,70 | 3,40 | - | 0,53 | 3,13 | - | 0,49 | 2,55 | - | 0,40 | 2,33 | - | 0,37 | 2,04 | - | 0,32 |
| 1000 | 2,50 | 1,67 | 9,76 | 2,68 | 1,02 | 6,79 | 1,16 | 0,71 | 7,11 | 1,18 | 0,74 | 5,10 | 0,21 | 0,53 | 4,45 | - | 0,47 | 3,40 | - | 0,36 | 3,13 | - | 0,33 | 2,55 | - | 0,27 | 2,33 | - | 0,24 | 2,04 | - | 0,21 |
| 750 | 1,88 | 1,25 | 9,76 | 2,68 | 0,77 | 6,79 | 1,16 | 0,53 | 7,11 | 1,18 | 0,56 | 5,10 | 0,21 | 0,40 | 4,45 | - | 0,35 | 3,40 | - | 0,27 | 3,13 | - | 0,25 | 2,55 | - | 0,20 | 2,33 | - | 0,18 | 2,04 | - | 0,16 |
| 500 | 1,25 | 0,83 | 9,76 | 2,68 | 0,51 | 6,79 | 1,16 | 0,36 | 7,11 | 1,18 | 0,37 | 5,10 | 0,21 | 0,27 | 4,45 | - | 0,23 | 3,40 | - | 0,18 | 3,13 | - | 0,16 | 2,55 | - | 0,13 | 2,33 | - | 0,12 | 2,04 | - | 0,10 |
| 250 | 0,63 | 0,42 | 9,76 | 2,68 | 0,26 | 6,79 | 1,16 | 0,18 | 7,11 | 1,18 | 0,19 | 5,10 | 0,21 | 0,13 | 4,45 | - | 0,12 | 3,40 | - | 0,10 | 3,13 | - | 0,08 | 2,55 | - | 0,10 | 2,33 | - | 0,06 | 2,04 | - | 0,10 |

G2-KGS-4005

| n [1/min] | Stroke speed [m/min] | | F=50 [kN] | | | | | | F=30 [kN] | | | | | | F=20 [kN] | | | | | | F=10 [kN] | | | | | | F=5 [kN] | | | | | |
|--------------|-------------------------|------|-----------|------|------|-------|------|------|-----------|------|------|-------|------|------|-----------|------|------|------|------|------|-----------|------|------|------|-----|------|----------|-----|------|------|-----|------|
| | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | |
| | 2:1 | 3:1 | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW |
| 3000 | 7,50 | 5,00 | 28,83 | 9,64 | 9,06 | 19,18 | 5,44 | 6,02 | 18,22 | 4,86 | 5,72 | 12,39 | 2,38 | 3,89 | 12,91 | 2,47 | 4,06 | 8,99 | 0,86 | 2,82 | 7,61 | 0,09 | 2,39 | 5,60 | - | 1,76 | 4,95 | - | 1,56 | 3,90 | - | 1,22 |
| 2250 | 5,63 | 3,75 | 28,83 | 9,64 | 6,79 | 19,28 | 5,44 | 4,54 | 18,22 | 4,86 | 4,29 | 12,49 | 2,38 | 2,94 | 12,91 | 2,47 | 3,04 | 8,99 | 0,86 | 2,12 | 7,61 | 0,09 | 1,79 | 5,60 | - | 1,32 | 4,95 | - | 1,17 | 3,90 | - | 0,92 |
| 1500 | 3,75 | 2,50 | 28,83 | 9,64 | 4,53 | 19,28 | 5,44 | 3,03 | 18,22 | 4,86 | 2,86 | 12,49 | 2,38 | 1,96 | 12,91 | 2,47 | 2,03 | 8,99 | 0,86 | 1,41 | 7,61 | 0,09 | 1,19 | 5,60 | - | 0,88 | 4,95 | - | 0,78 | 3,90 | - | 0,61 |
| 1000 | 2,50 | 1,67 | 28,83 | 9,64 | 3,02 | 19,28 | 5,44 | 2,02 | 18,22 | 4,86 | 1,91 | 12,49 | 2,38 | 1,31 | 12,91 | 2,47 | 1,35 | 8,99 | 0,86 | 0,94 | 7,61 | 0,09 | 0,80 | 5,60 | - | 0,59 | 4,95 | - | 0,52 | 3,90 | - | 0,41 |
| 750 | 1,88 | 1,25 | 28,83 | 9,64 | 2,26 | 19,28 | 5,44 | 1,51 | 18,22 | 4,86 | 1,43 | 12,49 | 2,38 | 0,98 | 12,91 | 2,47 | 1,01 | 8,99 | 0,86 | 0,71 | 7,61 | 0,09 | 0,60 | 5,60 | - | 0,44 | 4,95 | - | 0,39 | 3,90 | - | 0,31 |
| 500 | 1,25 | 0,83 | 28,83 | 9,64 | 1,51 | 19,28 | 5,44 | 1,01 | 18,22 | 4,86 | 0,95 | 12,49 | 2,38 | 0,65 | 12,91 | 2,47 | 0,68 | 8,99 | 0,86 | 0,47 | 7,61 | 0,09 | 0,40 | 5,60 | - | 0,29 | 4,95 | - | 0,26 | 3,90 | - | 0,20 |
| 250 | 0,63 | 0,42 | 28,83 | 9,64 | 0,75 | 19,28 | 5,44 | 0,50 | 18,22 | 4,86 | 0,48 | 12,49 | 2,38 | 0,33 | 12,91 | 2,47 | 0,34 | 8,99 | 0,86 | 0,24 | 7,61 | 0,09 | 0,20 | 5,60 | - | 0,10 | 4,95 | - | 0,13 | 3,90 | - | 0,10 |

G3-KGS-6310

| n [1/min] | Stroke speed [m/min] | | F=90 [kN] | | | | | | F=75 [kN] | | | | | | F=50 [kN] | | | | | | F=25 [kN] | | | | | | F=10 [kN] | | | | | |
|--------------|-------------------------|-------|-----------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-----------|------|------|-------|------|------|-----------|------|------|-------|-----|------|
| | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | | 2:1 | | | 3:1 | | |
| | 2:1 | 3:1 | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW | Nm | HNm | kW |
| 3000 | 15,00 | 10,00 | 99,89 | 38,57 | 31,38 | 67,90 | 31,47 | 21,33 | 83,98 | 31,41 | 26,38 | 57,30 | 25,51 | 18,00 | 57,45 | 19,47 | 18,05 | 39,63 | 15,57 | 12,45 | 30,93 | 7,54 | 9,71 | 21,97 | 5,64 | 6,90 | 15,01 | 0,37 | 4,72 | 11,37 | - | 3,57 |
| 2250 | 11,25 | 7,50 | 99,89 | 38,57 | 23,53 | 67,90 | 31,47 | 16,00 | 83,98 | 31,41 | 19,79 | 57,30 | 25,51 | 13,50 | 57,45 | 19,47 | 13,54 | 39,63 | 15,57 | 9,34 | 30,93 | 7,54 | 7,29 | 21,97 | 5,64 | 5,18 | 15,01 | 0,37 | 3,54 | 11,37 | - | 2,68 |
| 1500 | 7,50 | 5,00 | 99,89 | 38,57 | 15,69 | 67,90 | 31,47 | 10,66 | 83,98 | 31,41 | 13,19 | 57,30 | 25,51 | 9,00 | 57,45 | 19,47 | 9,02 | 39,63 | 15,57 | 6,22 | 30,93 | 7,54 | 4,86 | 21,97 | 5,64 | 3,45 | 15,01 | 0,37 | 2,36 | 11,37 | - | 1,79 |
| 1000 | 5,00 | 3,33 | 99,89 | 38,57 | 10,46 | 67,90 | 31,47 | 7,11 | 83,98 | 31,41 | 8,79 | 57,30 | 25,51 | 6,00 | 57,45 | 19,47 | 6,02 | 39,63 | 15,57 | 4,15 | 30,93 | 7,54 | 3,24 | 21,97 | 5,64 | 2,30 | 15,01 | 0,37 | 1,57 | 11,37 | - | 1,19 |
| 750 | 3,75 | 2,50 | 99,89 | 38,57 | 7,84 | 67,90 | 31,47 | 5,33 | 83,98 | 31,41 | 6,60 | 57,30 | 25,51 | 4,50 | 57,45 | 19,47 | 4,51 | 39,63 | 15,57 | 3,11 | 30,93 | 7,54 | 2,43 | 21,97 | 5,64 | 1,73 | 15,01 | 0,37 | 1,18 | 11,37 | - | 0,89 |
| 500 | 2,50 | 1,67 | 99,89 | 38,57 | 5,23 | 67,90 | 31,47 | 3,55 | 83,98 | 31,41 | 4,40 | 57,30 | 25,51 | 3,00 | 57,45 | 19,47 | 3,01 | 39,63 | 15,57 | 2,07 | 30,93 | 7,54 | 1,62 | 21,97 | 5,64 | 1,15 | 15,01 | 0,37 | 0,79 | 11,37 | - | 0,60 |
| 250 | 1,25 | 0,83 | 99,89 | 38,57 | 2,61 | 67,90 | 31,47 | 1,78 | 83,98 | 31,41 | 2,20 | 57,30 | 25,51 | 1,50 | 57,45 | 19,47 | 1,50 | 39,63 | 15,57 | 1,04 | 30,93 | 7,54 | 0,81 | 21,97 | 5,64 | 0,58 | 15,01 | 0,37 | 0,39 | 11,37 | - | 0,10 |

Note: values are valid at an ambient temperature of 20 °C
Tables for other spindle types on request.



Performance table

- F** Axial load
H Low ratio (ex.: 2:1)
L High ratio (ex.: 3:1)
Nm Required drive torque for axial load **F**
HNm Required holding torque for axial load **F** (If – no holding torque is required)
kW Required driving power in depending on speed

Screw jacks with other screw pitches as in the performance tables:

For screws with higher pitches the power values can be multiplied by the pitch factor.

For example: If a pitch of 10 mm in place of 5 mm use the existing performance data and multiply by the factor of 2, use a factor of 10 if the pitch is 50 mm in place of 5 mm

| G1-Tr-24x5 | | | | | | | | | | | | | | | | | | | | | | |
|------------|--------------------|------|-----------|------|-------|------|-----------|------|------|------|----------|------|------|------|------------|------|------|------|----------|------|------|------|
| n [1/min] | Hubgeschw. [m/min] | | F=15 [kN] | | | | F=10 [kN] | | | | F=5 [kN] | | | | F=2,5 [kN] | | | | F=1 [kN] | | | |
| | | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | |
| | 2:1 | 3:1 | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW |
| 3000 | 7,50 | 5,00 | 15,06 | 4,73 | 10,19 | 3,20 | 10,64 | 3,34 | 7,36 | 2,31 | 6,22 | 1,95 | 4,53 | 1,42 | 4,01 | 1,26 | 3,11 | 0,98 | 2,68 | 0,84 | 2,27 | 0,71 |
| 2250 | 5,63 | 3,75 | 15,06 | 3,55 | 10,19 | 2,40 | 10,64 | 2,51 | 7,36 | 1,73 | 6,22 | 1,47 | 4,53 | 1,07 | 4,01 | 0,94 | 3,11 | 0,73 | 2,68 | 0,63 | 2,27 | 0,53 |
| 1500 | 3,75 | 2,50 | 15,06 | 2,37 | 10,19 | 1,60 | 10,64 | 1,67 | 7,36 | 1,16 | 6,22 | 0,98 | 4,53 | 0,71 | 4,01 | 0,63 | 3,11 | 0,49 | 2,68 | 0,42 | 2,27 | 0,36 |
| 1000 | 2,50 | 1,67 | 15,06 | 1,58 | 10,19 | 1,07 | 10,64 | 1,11 | 7,36 | 0,77 | 6,22 | 0,65 | 4,53 | 0,47 | 4,01 | 0,42 | 3,11 | 0,33 | 2,68 | 0,28 | 2,27 | 0,24 |
| 750 | 1,88 | 1,25 | 15,06 | 1,18 | 10,19 | 0,80 | 10,64 | 0,84 | 7,36 | 0,58 | 6,22 | 0,49 | 4,53 | 0,36 | 4,01 | 0,31 | 3,11 | 0,24 | 2,68 | 0,21 | 2,27 | 0,18 |
| 500 | 1,25 | 0,83 | 15,06 | 0,79 | 10,19 | 0,53 | 10,64 | 0,56 | 7,36 | 0,39 | 6,22 | 0,33 | 4,53 | 0,24 | 4,01 | 0,21 | 3,11 | 0,16 | 2,68 | 0,14 | 2,27 | 0,12 |
| 250 | 0,63 | 0,42 | 15,06 | 0,39 | 10,19 | 0,27 | 10,64 | 0,28 | 7,36 | 0,19 | 6,22 | 0,16 | 4,53 | 0,12 | 4,01 | 0,10 | 3,11 | 0,08 | 2,68 | 0,07 | 2,27 | 0,06 |

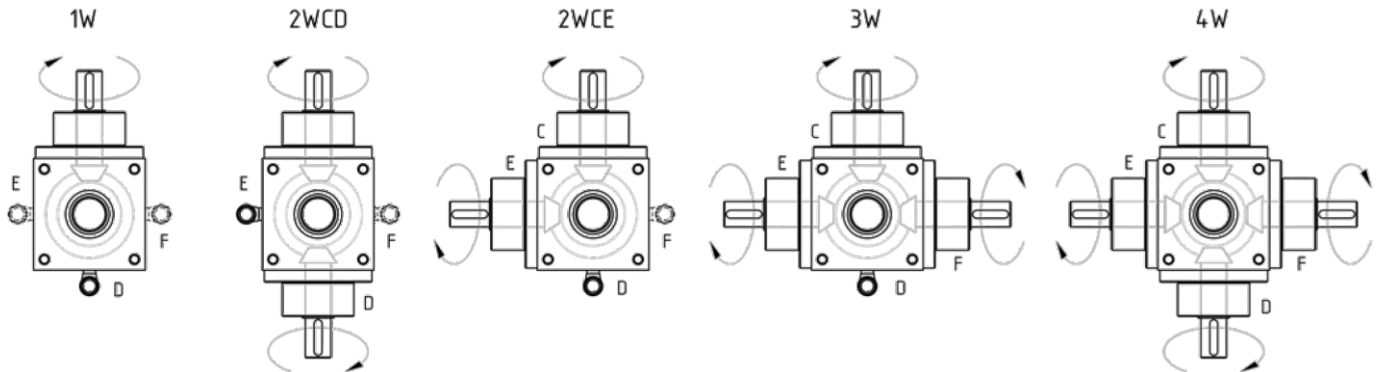
| G2-Tr-40x7 | | | | | | | | | | | | | | | | | | | | | | |
|------------|--------------------|------|-----------|-------|-------|-------|-----------|-------|-------|------|-----------|------|-------|------|-----------|------|-------|------|----------|------|------|------|
| n [1/min] | Hubgeschw. [m/min] | | F=50 [kN] | | | | F=30 [kN] | | | | F=20 [kN] | | | | F=10 [kN] | | | | F=5 [kN] | | | |
| | | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | |
| | 2:1 | 3:1 | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW |
| 3000 | 10,50 | 7,00 | 71,93 | 22,60 | 48,55 | 15,25 | 44,08 | 13,85 | 30,01 | 9,43 | 30,15 | 9,47 | 20,74 | 6,52 | 16,23 | 5,10 | 11,47 | 3,60 | 9,26 | 2,91 | 6,84 | 2,15 |
| 2250 | 7,88 | 5,25 | 71,93 | 16,95 | 48,55 | 11,44 | 44,08 | 10,38 | 30,01 | 7,07 | 30,15 | 7,10 | 20,74 | 4,89 | 16,23 | 3,82 | 11,47 | 2,70 | 9,26 | 2,18 | 6,84 | 1,61 |
| 1500 | 5,25 | 3,50 | 71,93 | 11,30 | 48,55 | 7,63 | 44,08 | 6,92 | 30,01 | 4,71 | 30,15 | 4,74 | 20,74 | 3,26 | 16,23 | 2,55 | 11,47 | 1,80 | 9,26 | 1,45 | 6,84 | 1,07 |
| 1000 | 3,50 | 2,33 | 71,93 | 7,53 | 48,55 | 5,08 | 44,08 | 4,62 | 30,01 | 3,14 | 30,15 | 3,16 | 20,74 | 2,17 | 16,23 | 1,70 | 11,47 | 1,20 | 9,26 | 0,97 | 6,84 | 0,72 |
| 750 | 2,63 | 1,75 | 71,93 | 5,65 | 48,55 | 3,81 | 44,08 | 3,46 | 30,01 | 2,36 | 30,15 | 2,37 | 20,74 | 1,63 | 16,23 | 1,27 | 11,47 | 0,90 | 9,26 | 0,73 | 6,84 | 0,54 |
| 500 | 1,75 | 1,17 | 71,93 | 3,77 | 48,55 | 2,54 | 44,08 | 2,31 | 30,01 | 1,57 | 30,15 | 1,58 | 20,74 | 1,09 | 16,23 | 0,85 | 11,47 | 0,60 | 9,26 | 0,48 | 6,84 | 0,36 |
| 250 | 0,88 | 0,58 | 71,93 | 1,88 | 48,55 | 1,27 | 44,08 | 1,15 | 30,01 | 0,79 | 30,15 | 0,79 | 20,74 | 0,54 | 16,23 | 0,42 | 11,47 | 0,10 | 9,26 | 0,24 | 6,84 | 0,10 |

| G3-Tr-60x9 | | | | | | | | | | | | | | | | | | | | | | |
|------------|--------------------|------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|-------|-------|-----------|-------|-------|-------|-----------|------|-------|------|
| n [1/min] | Hubgeschw. [m/min] | | F=90 [kN] | | | | F=75 [kN] | | | | F=50 [kN] | | | | F=25 [kN] | | | | F=10 [kN] | | | |
| | | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | | 2:1 | | 3:1 | |
| | 2:1 | 3:1 | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW | Nm | kW |
| 3000 | 13,50 | 9,00 | 188,57 | 59,24 | 127,08 | 39,92 | 157,87 | 49,59 | 106,61 | 33,49 | 106,71 | 33,52 | 72,51 | 22,78 | 55,56 | 17,45 | 38,40 | 12,06 | 24,86 | 7,81 | 17,94 | 5,64 |
| 2250 | 10,13 | 6,75 | 188,57 | 44,43 | 127,08 | 29,94 | 157,87 | 37,19 | 106,61 | 25,12 | 106,71 | 25,14 | 72,51 | 17,08 | 55,56 | 13,09 | 38,40 | 9,05 | 24,86 | 5,86 | 17,94 | 4,23 |
| 1500 | 6,75 | 4,50 | 188,57 | 29,62 | 127,08 | 19,96 | 157,87 | 24,80 | 106,61 | 16,75 | 106,71 | 16,76 | 72,51 | 11,39 | 55,56 | 8,73 | 38,40 | 6,03 | 24,86 | 3,91 | 17,94 | 2,82 |
| 1000 | 4,50 | 3,00 | 188,57 | 19,75 | 127,08 | 13,31 | 157,87 | 16,53 | 106,61 | 11,16 | 106,71 | 11,17 | 72,51 | 7,59 | 55,56 | 5,82 | 38,40 | 4,02 | 24,86 | 2,60 | 17,94 | 1,88 |
| 750 | 3,38 | 2,25 | 188,57 | 14,81 | 127,08 | 9,98 | 157,87 | 12,40 | 106,61 | 8,37 | 106,71 | 8,38 | 72,51 | 5,69 | 55,56 | 4,36 | 38,40 | 3,02 | 24,86 | 1,95 | 17,94 | 1,41 |
| 500 | 2,25 | 1,50 | 188,57 | 9,87 | 127,08 | 6,65 | 157,87 | 8,27 | 106,61 | 5,58 | 106,71 | 5,59 | 72,51 | 3,80 | 55,56 | 2,91 | 38,40 | 2,01 | 24,86 | 1,30 | 17,94 | 0,94 |
| 250 | 1,13 | 0,75 | 188,57 | 4,94 | 127,08 | 3,33 | 157,87 | 4,13 | 106,61 | 2,79 | 106,71 | 2,79 | 72,51 | 1,90 | 55,56 | 1,45 | 38,40 | 1,01 | 24,86 | 0,65 | 17,94 | 0,10 |



Shaft assemblies/ Vent Valve

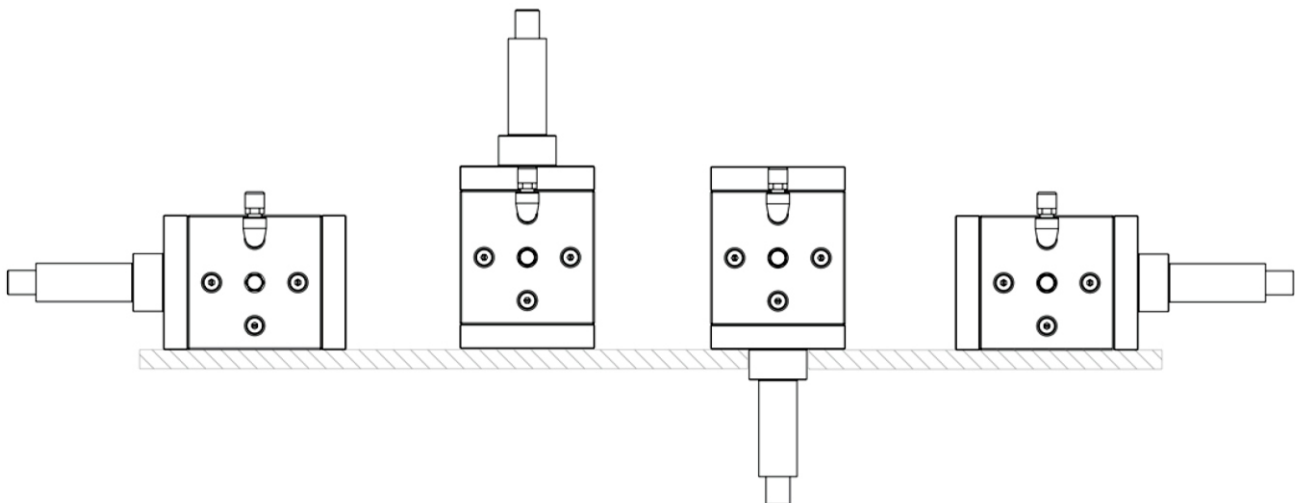
Shaft assemblies & Location of vent valve



Shaft assemblies

Selection of shaft assemblies and position of oil armatures. The standard positions of the oil armatures is shown in bold. The shaft assemblies and the position of oil armatures can be selected via the product code. Please ensure that change the direction of rotation of the output shaft if you selected more than one shaft.

Location of vent valve



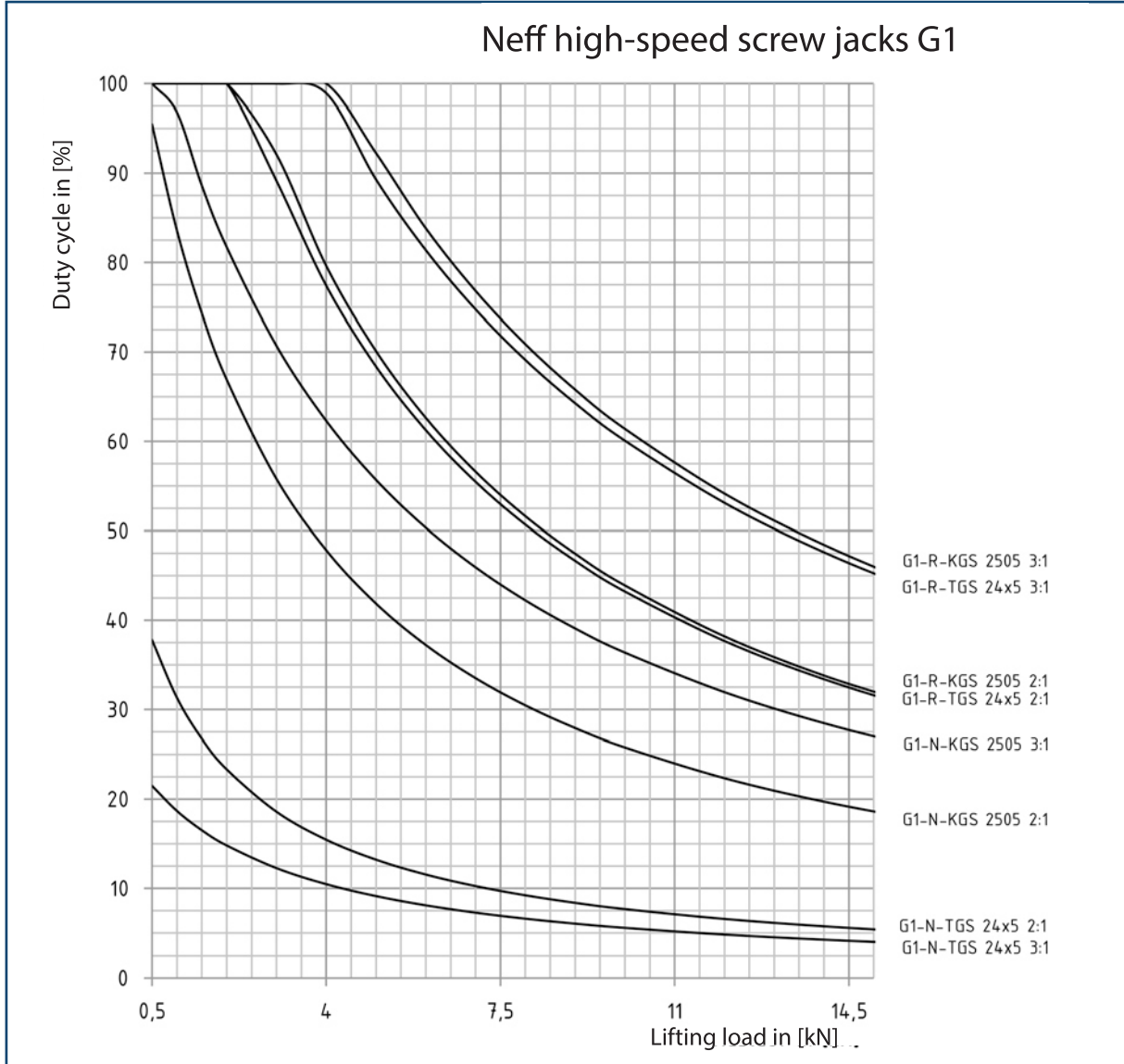
Location of vent valve

Possible positions of appended vent valve on the installation position of the screw jack. At speeds below 1500 1/min the High Speed Screw Jack can be operated without vent valve. Important to ensure in swing operations: Don't assembly the vent valve under the oil level. It consists a risk of oil leakage.



High-speed screw jacks G1

Operating time-Chart G1 at 1500/min and 20° ambient temperature



To calculate the Operating time ED_n/h for other speeds, multiply the Operating time in [%] with the speed-factor fn_{neff} :

$$ED_n/h \text{ in } [\%] = ED_n \times fn_{neff}$$

If different speeds determine the average of speed:

$$n_m = n_1 \times q_1 + n_2 \times q_2 + \dots + n_i \times q_i / 100$$

n_1, n_2, \dots = Speed in [1/min] during the clearance

q_1, q_2, \dots = Dues of load duration in [%]

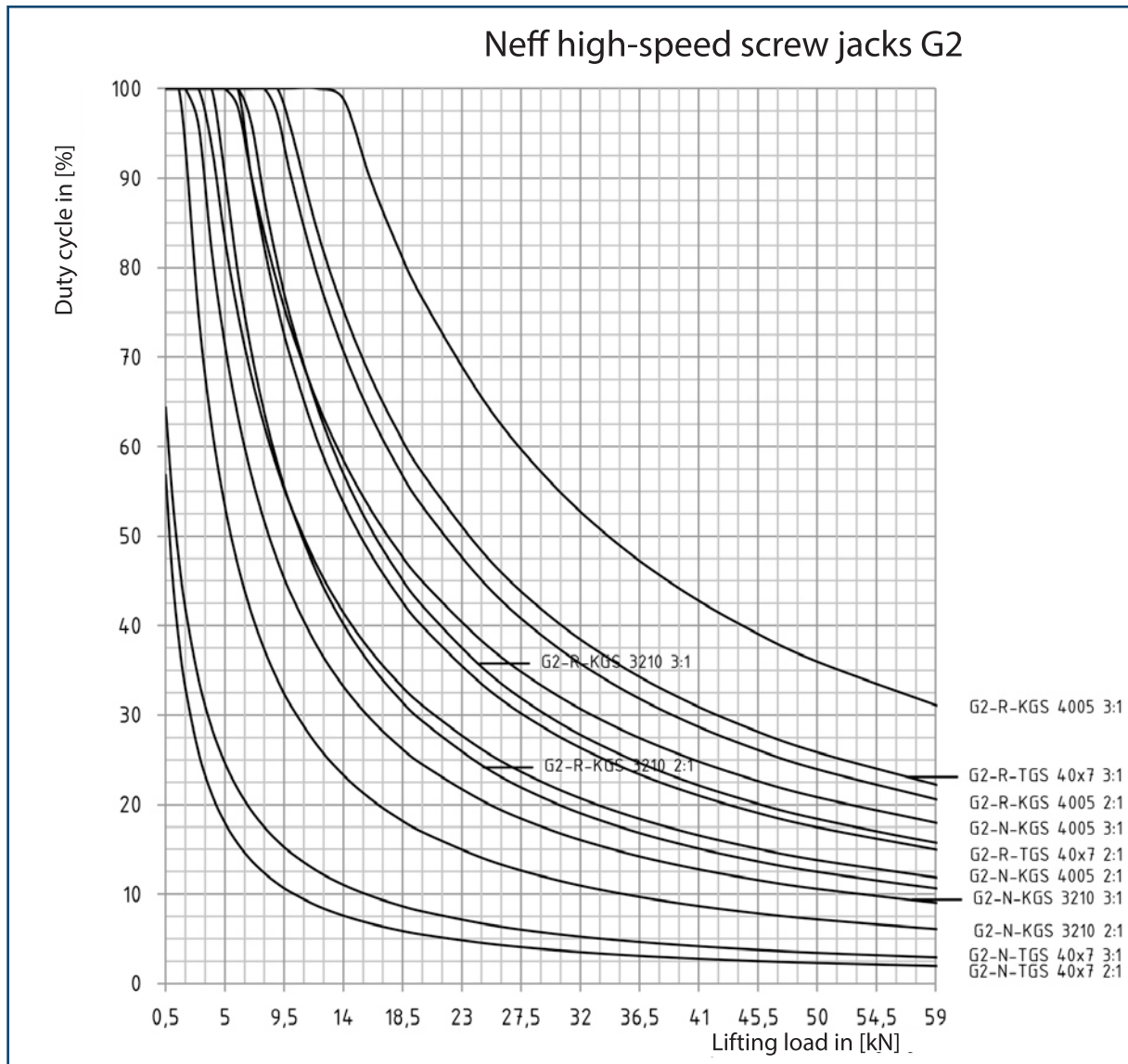
n_m = Average speed in [1/min]

| speed | speed factor fn_{neff} |
|-------|--------------------------|
| 3000 | 0.5 |
| 2500 | 0.6 |
| 2000 | 0.75 |
| 1000 | 1.5 |
| 750 | 2 |
| 500 | 3 |
| 250 | 6 |



High-speed screw jacks G2

Operating time-Chart G2 at 1500/min and 20° ambient temperature



To calculate the Operating time ED_n/h for other speeds, multiply the Operating time in [%] with the speed-factor fn_{neff} :

$$ED_n/h \text{ in } [\%] = ED_d/h \times fn_{neff}$$

If different speeds determine the average of speed:

$$n_m = n_1 \times q_1 + n_2 \times q_2 + \dots + n_i \times q_i / 100$$

n_1, n_2, \dots = Speed in [1/min] during the clearance

q_1, q_2, \dots = Dues of load duration in [%]

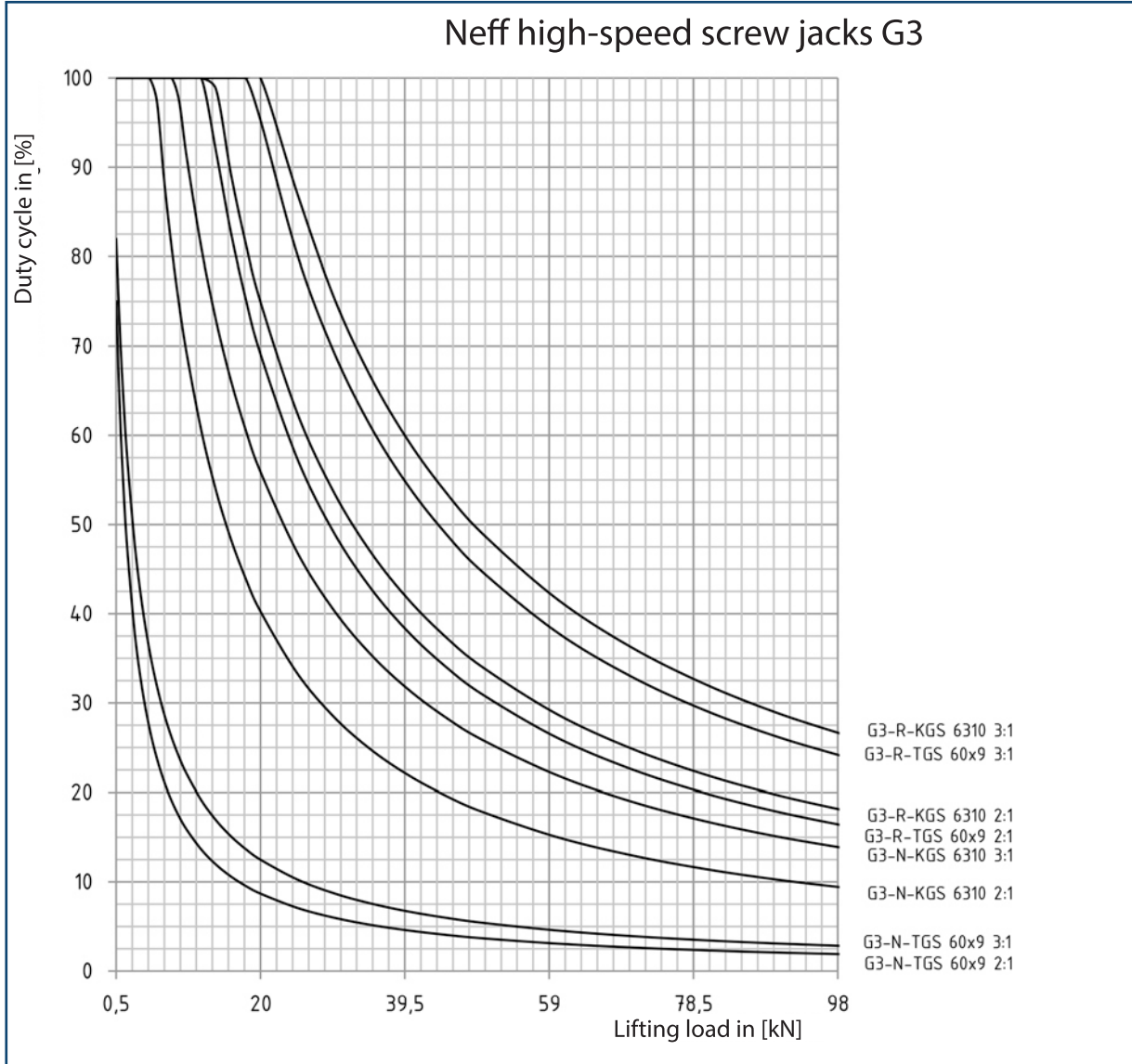
n_m = Average speed in [1/min]

| speed | speed factor fn_{neff} |
|-------|--------------------------|
| 3000 | 0.5 |
| 2500 | 0.6 |
| 2000 | 0.75 |
| 1000 | 1.5 |
| 750 | 2 |
| 500 | 3 |
| 250 | 6 |



High-speed screw jacks G3

Operating time-Chart G3 at 1500/min and 20° ambient temperature



To calculate the Operating time ED_n/h for other speeds, multiply the Operating time in [%] with the speed-factor fn_{neff} :

$$ED_n/h \text{ in } [\%] = ED_d/h \times fn_{neff}$$

If different speeds determine the average of speed:

$$n_m = n_1 \times q_1 + n_2 \times q_2 + \dots + n_i \times q_i / 100$$

n_1, n_2, \dots = Speed in [1/min] during the clearance

q_1, q_2, \dots = Dues of load duration in [%]

n_m = Average speed in [1/min]

| speed | speed factor fn_{neff} |
|-------|--------------------------|
| 3000 | 0.5 |
| 2500 | 0.6 |
| 2000 | 0.75 |
| 1000 | 1.5 |
| 750 | 2 |
| 500 | 3 |
| 250 | 6 |



Ordering code

High Speed Screw Jacks



| Nr. | Designation | Code | Description |
|-----|---|--|--|
| 1 | Size | G1, G2, G3 | |
| 2 | Design | N, VK, R | Lifting screw Lifting screw, protected against twisting by square tube Rotating screw |
| 3 | Transmission ratio | 2:1 3:1 | Gearboxes available for all sizes |
| 4 | Type of screw | T K | Trapezoidal screw drive Ball screw drive |
| 5 | Screw dimension | | e.g. 2005 = diameter 20mm, pitch 5mm |
| 6 | Stroke in [mm] | | Specification of the stroke length |
| 7 | Screw extension VL in [mm] for version N/V Usable stroke length NL in [mm] for version R | | Screw extension VL, usable stroke length NL e.g. due to block, mounting situation. See product drawings |
| 8 | Screw end | M A S Z | Metric threaded stem End with chamfer Custom (according to specification, description or drawing) Centric stem (standard for version R) |
| 9 | Attached part for version N/VK/VP | 0 BP GA GK HG | None With fastening plate mounted With spherical bearing mounted With fork end mounted With high-performance fork end mounted |
| | Nut type for version R (other types on request) | F-D F-N D-F N-F EFM-N N-EFM SFF-N N-SFF SFZ-N N-SFZ | Flanged nut according DIN 69051 (flange direction to housing) Flanged nut according Neff-Norm (flange direction to housing) Flanged nut according DIN 69051 (flange direction to screw end) Flanged nut according Neff-Norm (flange direction to screw end) trapezoidal-threaded nut-NEFF-Norm (flange direction to housing) trapezoidal-threaded nut-NEFF-Norm (flange direction to screw end) safety nut - flange side-NEFF-Norm (flange direction to housing) safety nut - flange side-NEFF-Norm (flange direction to screw end) safety nut - centric side-NEFF-Norm (flange direction to housing) safety nut - centric side-NEFF-Norm (flange direction to screw end) |
| 10 | Screw cover | 0 FB SF | None With bellow With spiral spring cover |
| 11 | Anti-unscrewing device | 0 AS | None With (installed as standard with ball screw drive) |
| 12 | Position of oil fittings | D E F | See product drawings G1-G3 Standard location see description No. 13 |
| 13 | Shaft arrangement | 1W 2WCD 2WCE 3W | 1 shaft end (position of oil fittings - side D) 2 shaft ends on side C and D (180°, position of oil fittings - side E) 2 shaft ends on side C and E (90°, position of oil fittings - side D) 3 shaft ends (position of oil fittings - side D) |
| 14 | Gear wheel arrangement | RO RU | Gear wheel above (viewed from screw side to gearbox) Gear wheel below (viewed from screw side to gearbox) |
| 15 | Requirements | 0 1 | None According to specification, description or drawing |

