

Trapezoidal screw drives TGT

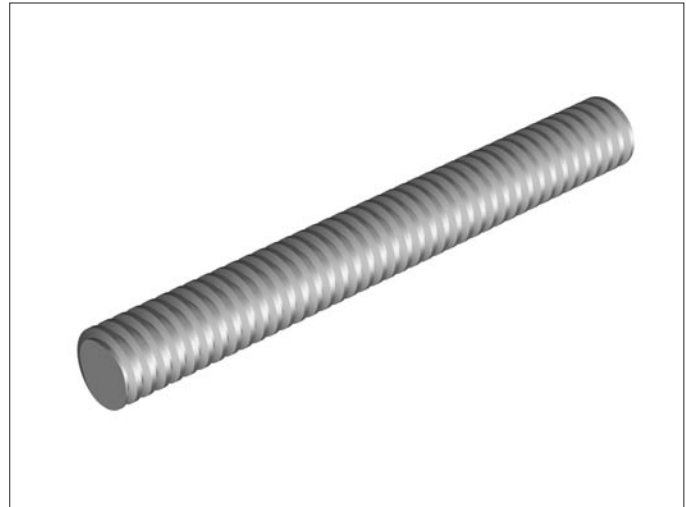
General technical data

NEFF trapezoidal screws are manufactured in a rolled execution.

Precision trapezoidal screws RPTS

Technical data

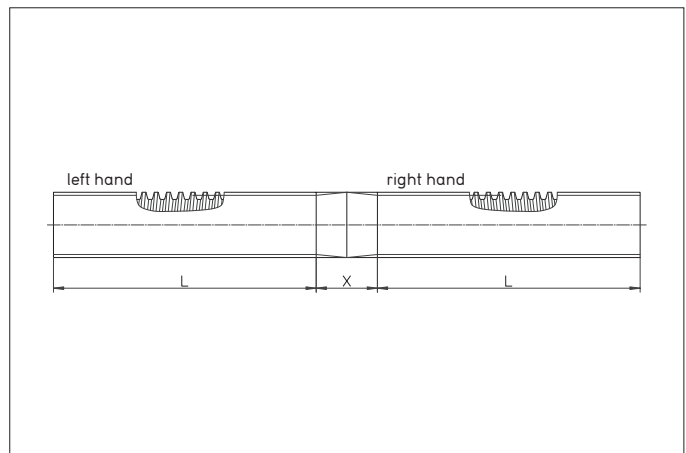
- Thread _____ Metric ISO trapezoidal thread to DIN 103, 7c
- Diameter _____ 10 – 80 mm
- Lead _____ 2 – 24 mm
- No. of starts _____ Up to 6 starts
- Thread direction _____ Right hand thread; single start also available left hand thread, see table p. 35
- Length _____ Up to 3000 mm for screws up to Tr 18 x 4
Up to 6000 mm for screws from Tr 20 x 4
- Material _____ 1.0401 (case hardened steel C15)
stress relief annealed, weldable
- Lead accuracy _____ 50 to 300 µm/300 mm
- Straightness _____ 0.1 to 0.5 mm/300 mm
- Left and right hand screw _____ For thread leads of 2 – 10 mm
- End machining _____ In accordance with customer's specs



Trapezoidal screws with right and left hand thread

Technical data

- Diameter _____ 10 – 80 mm
- Lead _____ 2 – 10 mm
- No. of starts _____ Single start
- Thread direction _____ Right hand thread and left hand thread
- Length _____ Max. 3000 mm,
up to 6000 mm for screws from Tr 20 x 4,
on request.
- Material _____ 1.0401 (C15)
- Lead accuracy _____ 50 to 300 µm/300 mm
- Straightness _____ 0.1 to 0.5 mm/300 mm
- Dimension X _____ 100 mm
Diameter in the area of dimension X
smaller than nominal diameter



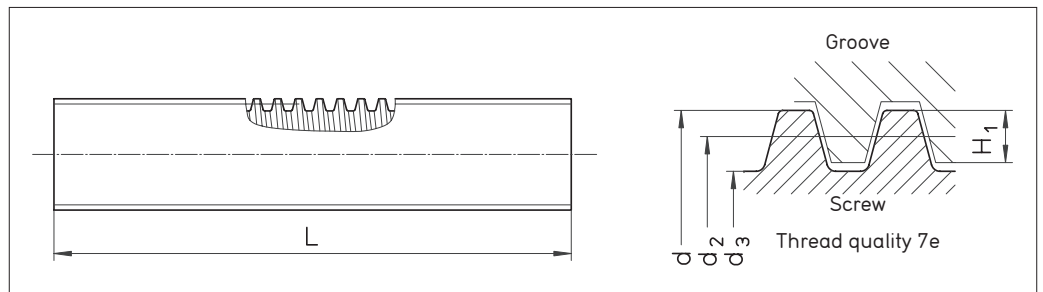
Trapezoidal screw drives

Summary of trapezoidal screws RPTS

Rolled precision trapezoidal screws RPTS

Standard length 3000 mm, from \varnothing 20 mm up to 6000 mm available. Dimension L to customer's specs.

Material:
1.0401 (C15)



Type	Outer diameter [mm]	Lead [mm]	Right/left hand thread	d	Dimensions [mm]			Accuracy	Straightness		Weight	Planar moment of inertia	Moment of resistance	Mass moment of inertia		
					$d_{2 \min}$	$d_{2 \max}$	$d_3^{6)}$	H_1	μ /300mm	lmm/300mm	$\alpha^{2)}$	$\eta^{3)}$	[kg/m]	[cm ⁴]	[cm ³]	[kg m ² /m]
RPTS Tr 10x2	10	8.739	8.929	6.89	1	300	0.5	4° 2'	0.40	0.500	0.011	0.032	0.51 · 10 ⁻⁵			
RPTS Tr 10x3	10	8.191	8.415	5.84	1.5	300	0.5	6° 24'	0.51	0.446	0.0057	0.020	0.40 · 10 ⁻⁵			
RPTS Tr 12x3	12	10.191	10.415	7.84	1.5	300	0.5	5° 11'	0.46	0.68	0.019	0.047	0.94 · 10 ⁻⁵			
RPTS Tr 12x6 P3 ¹⁾	12	10.165	10.415	7.84	1.5	300	0.5	10° 18'	0.62	0.68	0.019	0.047	0.94 · 10 ⁻⁵			
RPTS Tr 14x3	14	12.191	12.415	9.84	1.5	300	0.5	4° 22'	0.42	0.96	0.046	0.094	1.88 · 10 ⁻⁵			
RPTS Tr 14x4	14	11.640	11.905	8.80	2	300	0.5	6° 3'	0.50	0.888	0.029	0.067	1.60 · 10 ⁻⁵			
RPTS Tr 16x4	16	13.640	13.905	10.80	2	50	0.1	5° 11'	0.46	1.21	0.067	0.124	2.96 · 10 ⁻⁵			
RPTS Tr 16x8 P4 ¹⁾	16	13.608	13.905	10.80	2	300	0.3	10° 18'	0.62	1.21	0.067	0.124	2.96 · 10 ⁻⁵			
RPTS Tr 18x4	18	15.640	15.905	12.80	2	50	0.1	4° 32'	0.43	1.58	0.132	0.206	5.05 · 10 ⁻⁵			
RPTS Tr 20x4	20	17.640	17.905	14.80	2	50	0.1	4° 2'	0.40	2.00	0.236	0.318	8.10 · 10 ⁻⁵			
RPTS Tr 20x8 P4 ¹⁾	20	17.608	17.905	14.80	2	200	0.2	8° 3'	0.57	2.00	0.236	0.318	8.10 · 10 ⁻⁵			
RPTS Tr 20x16 P4 ¹⁾	20	17.608	17.905	14.80	2	200	0.2	15° 47'	0.71	2.00	0.236	0.318	8.10 · 10 ⁻⁵			
RPTS Tr 22x5	22	19.114	19.394	15.50	2.5	50	0.1	4° 39'	0.43	2.34	0.283	0.366	1.11 · 10 ⁻⁴			
RPTS Tr 22x24 P4 S ¹⁾⁵⁾	22	19.140	19.505	16.50	2.5	200	0.2	21° 34'	0.75	2.34	0.364	0.441	1.11 · 10 ⁻⁴			
RPTS Tr 24x5	24	21.094	21.394	17.50	2.5	50	0.1	4° 14'	0.41	2.85	0.460	0.526	1.65 · 10 ⁻⁴			
RPTS Tr 24x10 P5	24	21.058	21.394	17.50	2.5	200	0.2	8° 25'	0.58	2.85	0.460	0.526	1.65 · 10 ⁻⁴			
RPTS Tr 26x5	26	23.094	23.394	19.50	2.5	50	0.1	3° 52'	0.39	3.40	0.710	0.728	2.35 · 10 ⁻⁴			
RPTS Tr 28x5	28	25.094	25.394	21.50	2.5	50	0.1	3° 34'	0.37	4.01	1.050	0.976	3.26 · 10 ⁻⁴			
RPTS Tr 30x6	30	26.547	26.882	21.90	3	50	0.1	4° 2'	0.40	4.50	1.130	1.030	4.10 · 10 ⁻⁴			
RPTS Tr 30x12 P6 ¹⁾	30	26.507	26.882	21.90	3	200	0.2	8° 3'	0.57	4.50	1.130	1.030	4.10 · 10 ⁻⁴			
RPTS Tr 32x6	32	28.547	28.882	23.90	3	50	0.1	3° 46'	0.38	5.19	1.600	1.340	5.45 · 10 ⁻⁴			
RPTS Tr 36x6	36	32.547	32.882	27.90	3	50	0.1	3° 18'	0.35	6.71	2.970	2.130	9.10 · 10 ⁻⁴			
RPTS Tr 40x7	40	36.020	36.375	30.50	3.5	50	0.1	3° 29'	0.37	8.21	4.250	2.790	1.37 · 10 ⁻³			
RPTS Tr 40x14 P7 ¹⁾	40	35.978	36.375	30.50	3.5	200	0.2	6° 57'	0.53	8.21	4.250	2.790	1.37 · 10 ⁻³			
RPTS Tr 44x7	44	40.020	40.275	34.50	3.5	50	0.1	3° 8'	0.34	10.10	6.950	4.030	2.10 · 10 ⁻³			
RPTS Tr 48x8	48	43.468	43.868	37.80	4	100	0.1	3° 18'	0.35	12.00	10.000	5.300	2.90 · 10 ⁻³			
RPTS Tr 50x8	50	45.468	45.868	39.30	4	100	0.1	3° 10'	0.34	13.10	11.700	5.960	3.40 · 10 ⁻³			
RPTS Tr 60x9	60	54.935	55.360	48.15	4.5	200	0.3	2° 57'	0.33	19.00	26.400	11.000	7.30 · 10 ⁻³			
RPTS Tr 70x10	70	64.425	64.850	57.00	5	200	0.3	2° 48'	0.32	26.00	51.800	18.200	1.40 · 10 ⁻²			
RPTS Tr 80x10	80	74.425	74.850	67.00	5	200	0.3	2° 25'	0.29	34.70	98.900	29.500	2.40 · 10 ⁻²			

¹⁾ Only right hand thread

²⁾ Lead angle at the flank diameter; ➤ see formula (XVI) p. 52

³⁾ Theoretical efficiency for converting a rotary motion into a linear motion with a coefficient of friction $\mu = 0.1$ efficiency for other friction coefficients ➤ see formula (XVI) p. 52

⁴⁾ The polar moment of inertia is double the moment of inertia.

⁵⁾ Special profile.

⁶⁾ For a wider filletting the core diameter is slightly smaller, deviating from DIN 103.