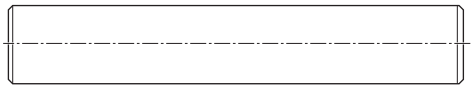
Precision steel shafts

Standard shaft machining

Solid shafts

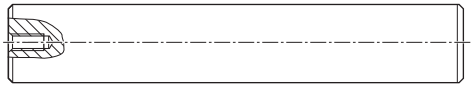
Machining by image number

010



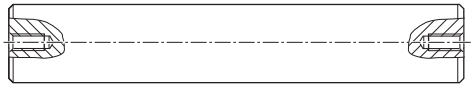
Planar and rotated to length tolerance

020



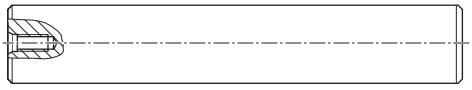
Female thread on one end

021



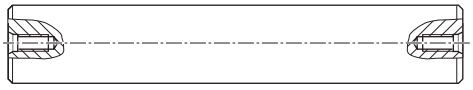
Female thread on both ends

022



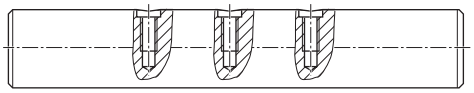
DIN 332-D female thread on one end

023



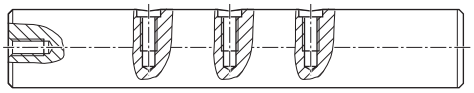
DIN 332-D female thread on both ends

030



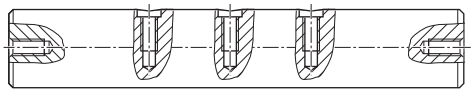
Radial thread

031



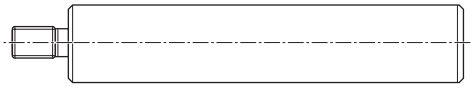
Radial thread and female thread on one end

032



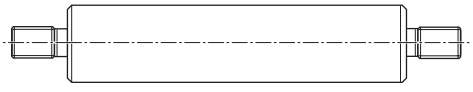
Radial thread and female thread on both ends

040



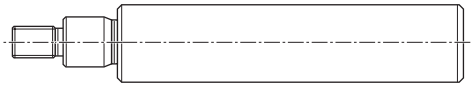
Male thread on one end

041



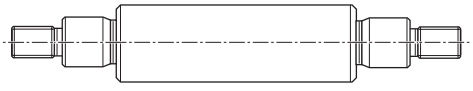
Male thread on both ends

042



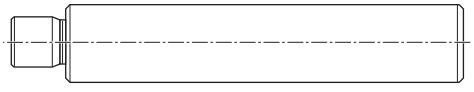
Male thread with connection spigot on one end

043



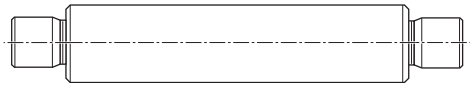
Male thread with connection spigot on both ends

050



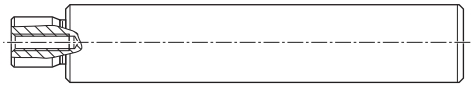
Spigot on one end

051



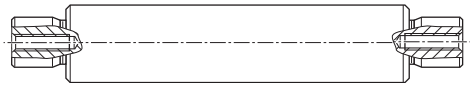
Spigot on both ends

052



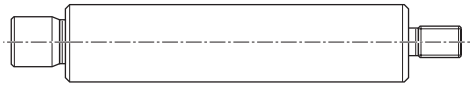
Spigot and female thread on one end

053



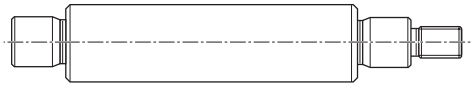
Spigot and female thread on both ends

054



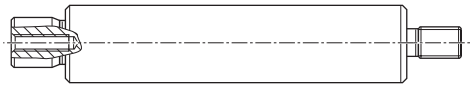
Side 1: spigot, side 2: male thread

055



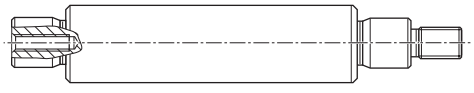
Side 1: spigot, side 2: male thread with spigot

056



Side 1: spigot and female thread, side 2: male thread

057

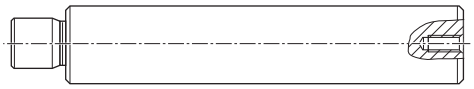


Side 1: spigot and female thread, side 2: male thread with spigot

Solid shafts

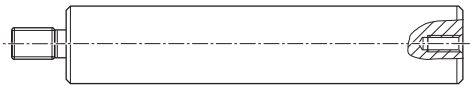
Machining by image number

058



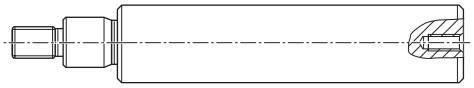
Side 1: spigot, side 2: female thread

059



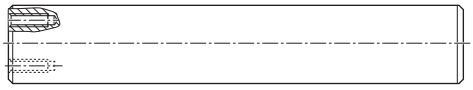
Side 1: male thread, side 2: female thread

060



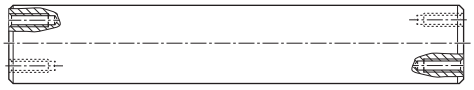
Side 1: male thread with spigot, side 2: female thread

070



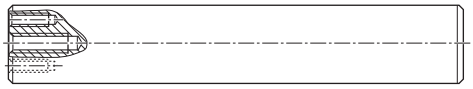
Pitch circle front thread on one end

071



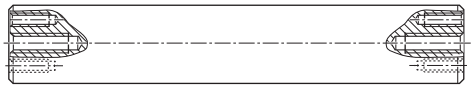
Pitch circle front thread on both ends

072



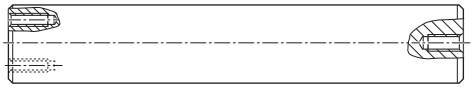
Pitch circle front thread and female thread on one end

073



Pitch circle front thread and female thread on both ends

074

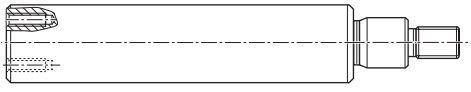


Side 1: pitch circle front thread, side 2: female thread

075

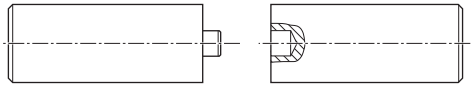
Side 1: pitch circle front thread, side 2: spigot and female thread

076



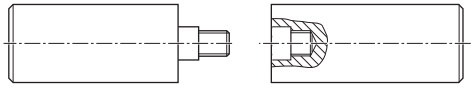
Side 1: pitch circle front thread, side 2: male thread with spigot

080



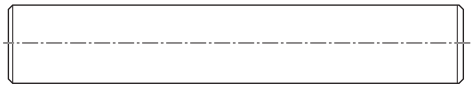
Push fit fitting

081



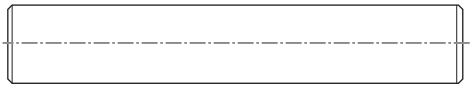
Threaded fitting

090



Annealed on one end

091



Annealed on both ends

This is only a small portion of our diverse machining options. Other machining options available upon request.

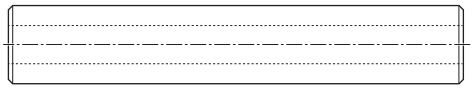
Precision steel shafts

Shaft machining

Hollow shafts

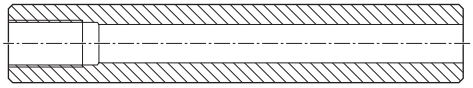
Machining by image number

110



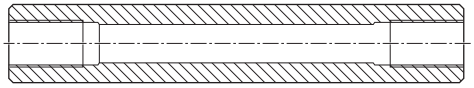
Planar and rotated to length tolerance

120



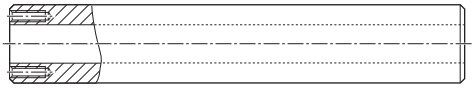
Female thread on one end

121



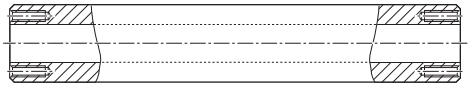
Female thread on both ends

170



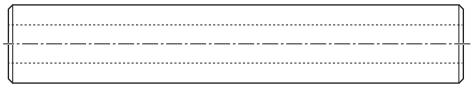
Pitch circle front thread on one end

171



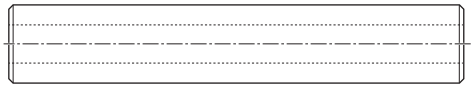
Pitch circle front thread on both ends

190



Annealed on one end

191

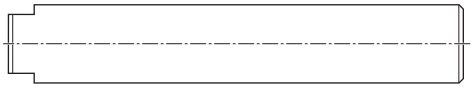


Annealed on both ends

Options

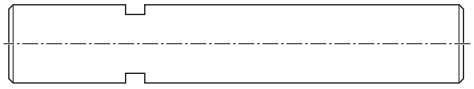
The standard shaft machining options shown above can be supplemented with the following options.

900



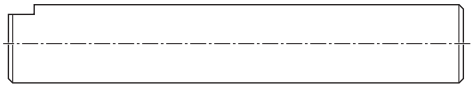
L-form wrench size

901



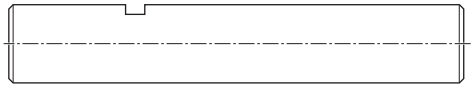
U-form wrench size

902



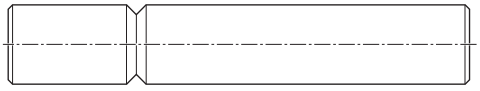
L-form plane

903



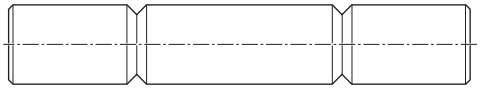
U-form plane

904



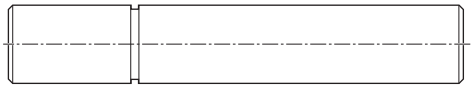
90° groove on one end

905



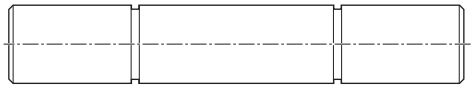
90° groove on both ends

906



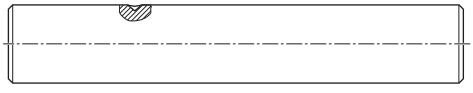
DIN 471 groove on one end

907



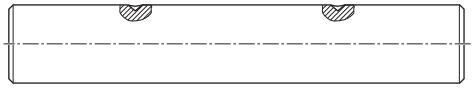
DIN 471 groove on both ends

909



90° countersink on one end

910



90° countersink on both ends

This is only a small portion of our diverse machining options. Other machining options available upon request.

Benefits

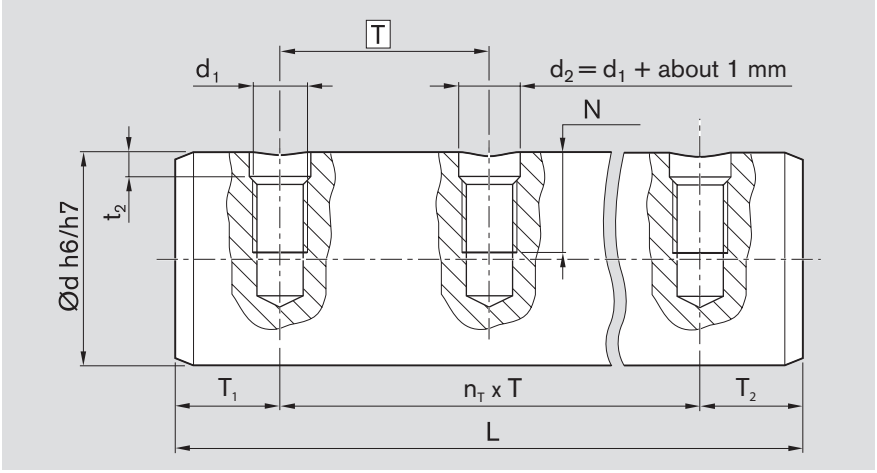
- Diverse machining options
- Short delivery time
- Low cost

Ordering

- Request with customer drawing or
- Use the shaft configuration tool
  www.boschrexroth.com/shaft-configuration

Tapped and untapped radial holes

Radial holes are necessary for supporting steel shafts. Radial holes are made in steel shafts that have already been hardened and polished.
Hole diameter, depth and spacing depend on the diameter of the shaft.
The tables in Section “Steel shafts with ready-mounted shaft support rails” contain reference values.



Reference values for drilling out the hardened surface zone

Dimensions (mm)

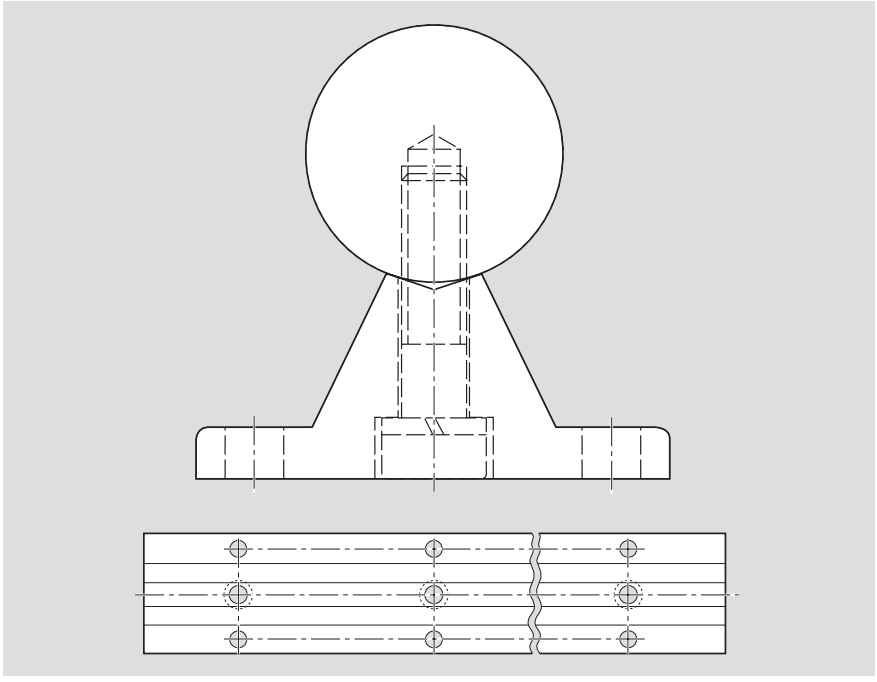
Ø d	d_1	t_2
12	M4	2.5
16	M5	2.5
20	M6	3.0
25	M8	3.0
30	M10	3.5
40	M10	4.0
40	M12	4.5

Dimensions (mm)

Ø d	d_1	t_2
50	M12	4.0
50	M14	4.5
50	M16	5.0
60	M14	5.5
60	M20	6.5
80	M16	5.5
80	M24	6.5

Values for stainless steel shafts available upon request.

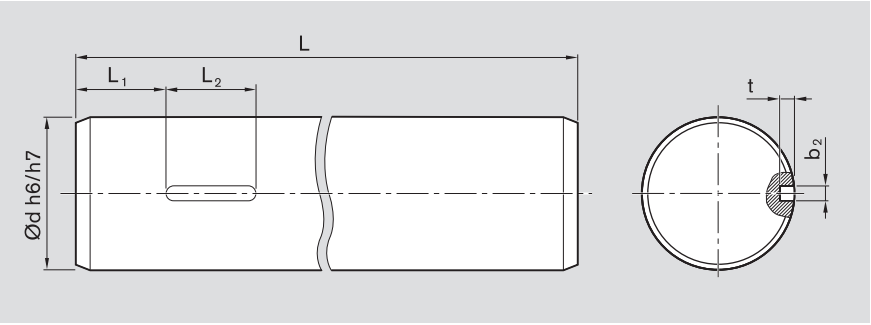
See Section “Steel shafts with ready-mounted shaft support rails” for matching shaft support rails.



Precision steel shafts

Shaft machining (Recommendation)

DIN 6885-1 keyway

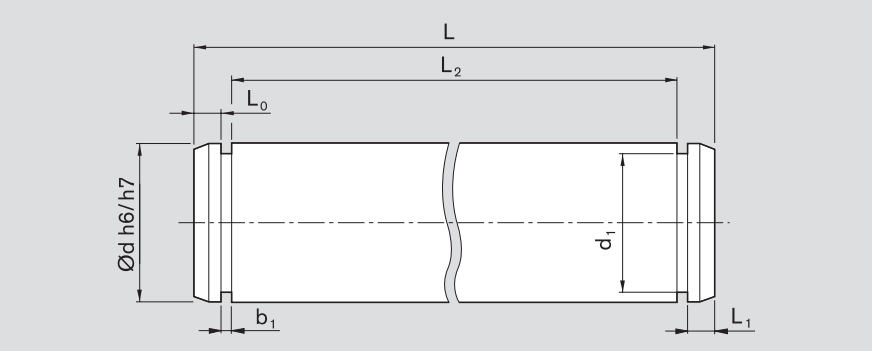


Recommended dimensions:

Dimensions (mm)		
Shaft Ø d	b_2 P9	t
8	2	1.2 +0.1
10	3	1.8 +0.1
12	4	2.5 +0.1
14	5	3.0 +0.1
16	5	3.0 +0.1
20	6	3.5 +0.1

Dimensions (mm)		
Shaft Ø d	b_2 P9	t
25	8	4.0 +0.2
30	8	4.0 +0.2
40	12	5.0 +0.2
50	14	5.5 +0.2
60	18	7.0 +0.2
80	22	9.0 +0.2

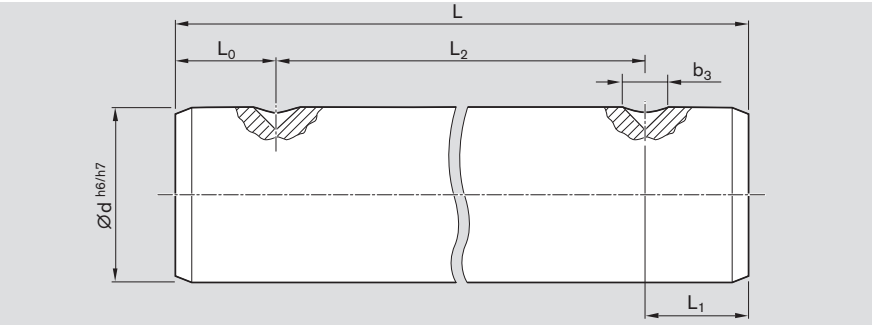
Groove for DIN 471 retaining ring



Recommended dimensions

Dimensions (mm)			DIN 471 retaining ring	
Ø d	b_1 +0.1	d_1	Dimensions (mm)	Material number
4	0.50	3.8 –0.04	4x0.4	R3410 765 00
5	0.70	4.8 –0.04	5x0.6	R3410 742 00
8	0.90	7.6 –0.06	8x0.8	R3410 737 00
10	1.10	9.6 –0.11	10x1	R3410 745 00
12	1.10	11.5 –0.11	12x1	R3410 712 00
14	1.10	13.4 –0.11	14x1	R3410 747 00
16	1.10	15.2 –0.11	16x1	R3410 713 00
20	1.30	19 –0.13	20x1.2	R3410 735 00
25	1.30	23.9 –0.21	25x1.2	R3410 750 00
30	1.60	28.6 –0.21	30x1.5	R3410 724 00
40	1.85	37.5 –0.25	40x1.75	R3410 726 00
50	2.15	47.0 –0.25	50x2	R3410 727 00
60	2.15	57.0 –0.30	60x2	R3410 764 00
80	2.65	76.5 –0.30	80x2.5	–

90° countersink



Recommended dimensions

	Dimensions (mm)													
Ø d	4	5	8	10	12	14	16	20	25	30	40	50	60	80
b_3	–	3	4	5	5	5	5	5	6	6	8	8	8	10

Pitch circle female thread