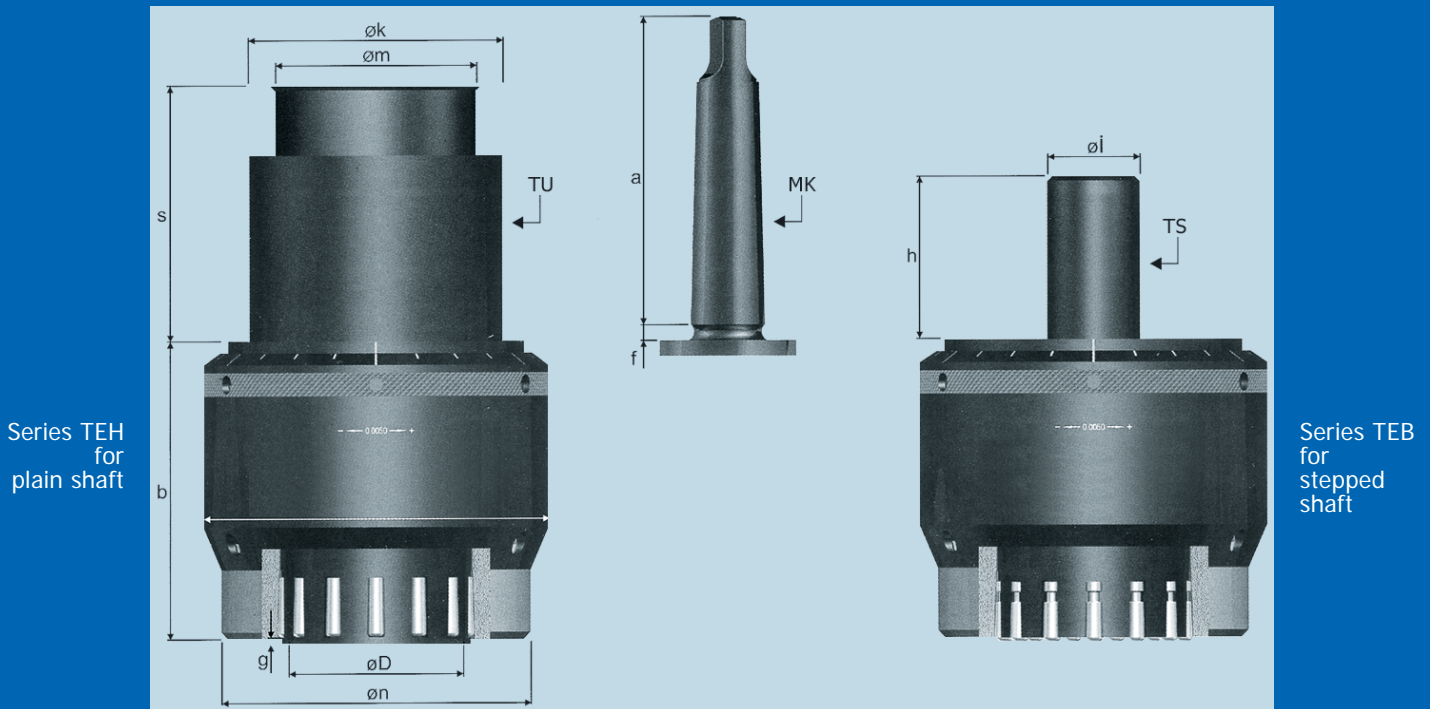


Series TE for outside diameters

Outside diameters for plain shafts series TEH from Ø 3 to 85 mm
 Outside diameters for stepped shafts series TEB from Ø 3 to 85 mm

Technical characteristics

Roller burnishing tools for outside diameters series TE, thanks to their micrometric regulation's system can process burnishing in H8 tolerance: once adjusted on the diameter, they can process a high number of holes without any further regulations. These tools are capable to roller all kinds of materials with 1.400 N/mm² tensile strength and hardness up to max. 45 HRC. The tools work with a right hand rotation, it is possible to work with the rotation of the work piece or of the tool. These tools can be used on each type of machine tool. The adjustment capacity is 0,5 mm and the tool adjustment precision is 0,005mm. Two different types of tools can be produced: series TEH for plain shafts, series TEB for stepped shafts. Series TEH are supplied with self-feeding cage. On demand it is possible to supply the tool with a cage without self-feeding. In this case, the feed is mechanical. Series TEB are supplied only with a cage without self-feeding.



Tool structure

Roller burnishing tools series TE consist of a body and a rolling head. The tool body has a precious adjustment mechanism. Cage, cone and rollers are the parts of the rolling heads. The tool shank may be Morse Taper or cylindrical. Rolling lengths are related to shank selection. TU shanks have unlimited rolling length, while TS and MK shanks have a limited length (see table below).

Diameter range Ø	Tool shank Morse Taper or cylindrical shank				b	c	g	n	a	f
	For limited rolling length		For unlimited rolling length							
	MK	Cylindrical TS	Cylindrical TU							
03-14	MK2	Ø20 h6 x 50	Ø25 h6 x 60 drilled Ø15		min 95 / max 105	54	2,0	44	78,5	5
15-24	MK3	Ø25 h6 x 56	Ø40 h6 x 70 drilled Ø26		min 100 / max 110	74	2,5	62	98	5
25-49	MK4	Ø40 h6 x 70	Ø80 h6 x 90 drilled Ø50		min 119 / max 129	106	3,0	94	123	5
50-85	MK4	Ø40 h6 x 70	Ø110 h6 x 110 drilled Ø87		min 128 / max 138	149	3,5	138	123	5

Tool's characteristics

The roller burnishing tools series TE have a wide adjustment's range. For example, the roller burnishing tool type TEH-030.00-1-100-MK4 with a nominal size of 30 mm is capable to process all sizes between diameter 29,90 mm and diameter 30,40 mm. Tools for special diameters and lengths can be produced on request.

- **Choice of the tool** - Choose the tool according to the diameter to burnish and to the presence or not of a shoulder. The rolling length changes according to the type of the shank.

- **Processing diameter** - Select carefully the diameter that you need to process (e.g. 25,43...)

- **Choice of the cage** - To establish according to the machine and the workpiece.

- Automatic feeding (self-feeding) for outside diameters for plain shafts : **code 1**

- Machine feeding (not self-feeding) for outside diameters for plain shafts **only on request: code 2**

- Machine feeding (not self-feeding) for outside diameters for stepped shafts: **code 3**

- **Rolling lengths** - The rolling length changes according to the choice of the shank. The shanks TU have an unlimited rolling length. Shanks TS and MK have a limited rolling length. If you have to burnish a long workpiece a shank with unlimited rolling length is recommended.

- **Shanks** - According to your needs.

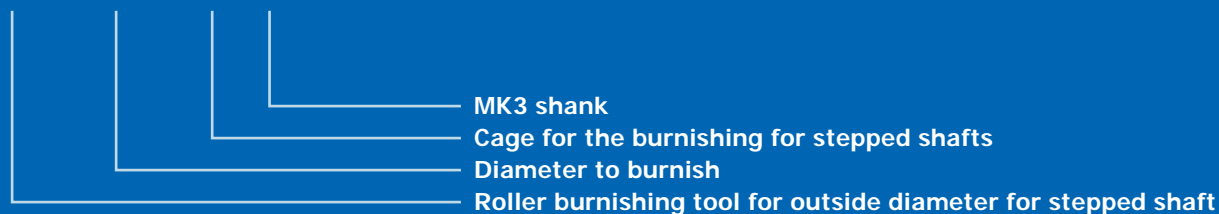
MK: Morse Taper for limited rolling lengths

TS: straight shank for limited rolling lengths

TU: straight shank for unlimited rolling lengths

Order sample : Roller burnishing tools for outside diameter 15 mm, rolling length 75 mm for stepped shaft, Morse Taper shank 3.

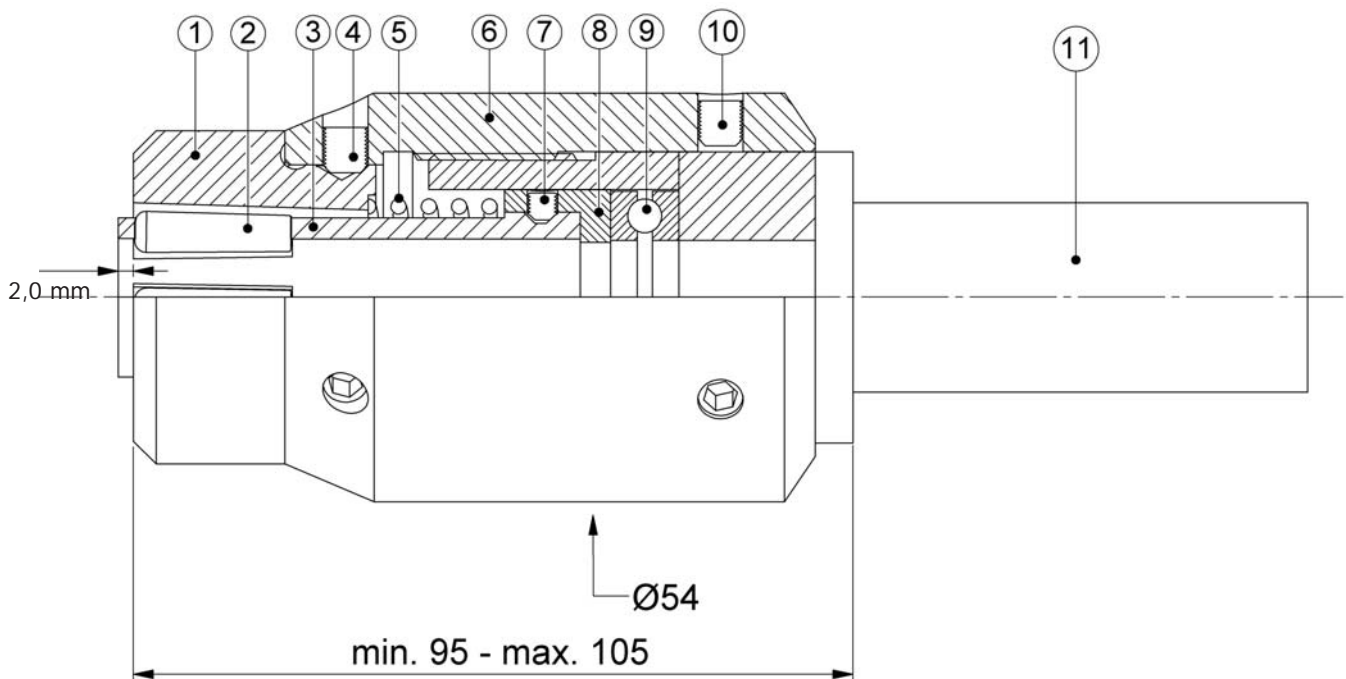
Code : **TEB - 015.00 - 3 - MK3**



Series TE for outside diameters

Outside diameters for plain shafts series TEH from diameter 3 to 14 mm

Outside diameters for stepped shafts series TEB from diameter 3 to 14 mm



- | | | |
|-------------|----------------|------------------|
| 1 - Cone | 5 - Spring | 9 - Ball bearing |
| 2 - Rollers | 6 - Housing | 10 - Screw |
| 3 - Cage | 7 - Screw | 11 - Shank |
| 4 - Screw | 8 - Frame ring | |

Outside diameters for plain shafts series TEH self-feeding

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
3,0	TEH-003.00-1-XX	-0,10/+0,40				500112	3	TEM-003.00-1	TEG-003.00-1	TEX1
4,0	TEH-004.00-1-XX	-0,10/+0,40				500112	3	TEM-004.00-1	TEG-004.00-1	
5,0	TEH-005.00-1-XX	-0,10/+0,40				500112	3	TEM-005.00-1	TEG-005.00-1	
6,0	TEH-006.00-1-XX	-0,10/+0,40				500112	3	TEM-006.00-1	TEG-006.00-1	
7,0	TEH-007.00-1-XX	-0,10/+0,40	MK2	TS20	TU25	500112	3	TEM-007.00-1	TEG-007.00-1	
8,0	TEH-008.00-1-XX	-0,10/+0,40				500112	3	TEM-008.00-1	TEG-008.00-1	
9,0	TEH-009.00-1-XX	-0,10/+0,40				500112	4	TEM-009.00-1	TEG-009.00-1	
10,0	TEH-010.00-1-XX	-0,10/+0,40				500112	4	TEM-010.00-1	TEG-010.00-1	
11,0	TEH-011.00-1-XX	-0,10/+0,40				500112	4	TEM-011.00-1	TEG-011.00-1	
12,0	TEH-012.00-1-XX	-0,10/+0,40				500112	5	TEM-012.00-1	TEG-012.00-1	
13,0	TEH-013.00-1-XX	-0,10/+0,40				500112	5	TEM-013.00-1	TEG-013.00-1	
14,0	TEH-014.00-1-XX	-0,10/+0,40				500112	5	TEM-014.00-1	TEG-014.00-1	

Shank type MK2

Straight shank type TS Ø20x50

Straight shank type TU Ø25x60 drilled inside Ø15

rolling length 75 mm

rolling length 75 mm

unlimited rolling length

Outside diameters for stepped shafts series TEB

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
3,0	TEB-003.00-3-XX	-0,10/+0,40				500311	3	TEM-003.00-3	TEG-003.00-3	TEX1
4,0	TEB-004.00-3-XX	-0,10/+0,40				500311	3	TEM-004.00-3	TEG-004.00-3	
5,0	TEB-005.00-3-XX	-0,10/+0,40				500311	3	TEM-005.00-3	TEG-005.00-3	
6,0	TEB-006.00-3-XX	-0,10/+0,40				500311	3	TEM-006.00-3	TEG-006.00-3	
7,0	TEB-007.00-3-XX	-0,10/+0,40	MK2	TS20	TU25	500311	3	TEM-007.00-3	TEG-007.00-3	
8,0	TEB-008.00-3-XX	-0,10/+0,40				500311	3	TEM-008.00-3	TEG-008.00-3	
9,0	TEB-009.00-3-XX	-0,10/+0,40				500311	4	TEM-009.00-3	TEG-009.00-3	
10,0	TEB-010.00-3-XX	-0,10/+0,40				500311	4	TEM-010.00-3	TEG-010.00-3	
11,0	TEB-011.00-3-XX	-0,10/+0,40				500311	4	TEM-011.00-3	TEG-011.00-3	
12,0	TEB-012.00-3-XX	-0,10/+0,40				500311	5	TEM-012.00-3	TEG-012.00-3	
13,0	TEB-013.00-3-XX	-0,10/+0,40				500311	5	TEM-013.00-3	TEG-013.00-3	
14,0	TEB-014.00-3-XX	-0,10/+0,40				500311	5	TEM-014.00-3	TEG-014.00-3	

Shank type MK2

Straight shank type TS Ø20x50

Straight shank type TU Ø25x60 drilled inside Ø15

rolling length 75 mm

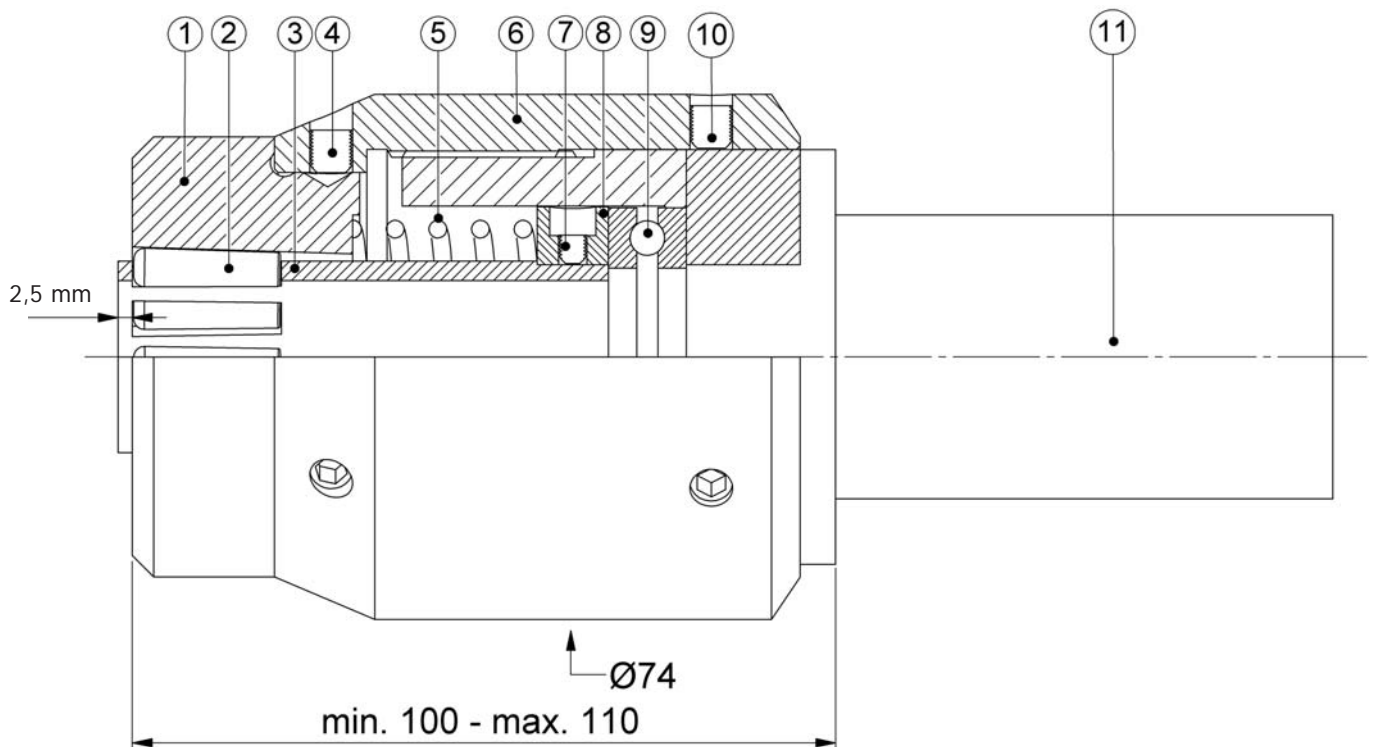
rolling length 75 mm

unlimited rolling length

Series TE for outside diameters

Outside diameters for plain shafts series TEH from diameter 15 to 24 mm

Outside diameters for stepped shafts series TEB from diameter 15 to 24 mm



- | | | |
|-------------|----------------|------------------|
| 1 - Cone | 5 - Spring | 9 - Ball bearing |
| 2 - Rollers | 6 - Housing | 10 - Screw |
| 3 - Cage | 7 - Screw | 11 - Shank |
| 4 - Screw | 8 - Frame ring | |

Outside diameters for plain shafts series TEH self-feeding

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
15,0	TEH-015.00-1-XX	-0,10/+0,40				500112	5	TEM-015.00-1	TEG-015.00-1	TEX2
16,0	TEH-016.00-1-XX	-0,10/+0,40				500112	5	TEM-016.00-1	TEG-016.00-1	
17,0	TEH-017.00-1-XX	-0,10/+0,40				500112	5	TEM-017.00-1	TEG-017.00-1	
18,0	TEH-018.00-1-XX	-0,10/+0,40				500112	6	TEM-018.00-1	TEG-018.00-1	
19,0	TEH-019.00-1-XX	-0,10/+0,40	MK3	TS25	TU40	500112	6	TEM-019.00-1	TEG-019.00-1	
20,0	TEH-020.00-1-XX	-0,10/+0,40				500112	6	TEM-020.00-1	TEG-020.00-1	
21,0	TEH-021.00-1-XX	-0,10/+0,40				500112	6	TEM-021.00-1	TEG-021.00-1	
22,0	TEH-022.00-1-XX	-0,10/+0,40				500112	7	TEM-022.00-1	TEG-022.00-1	
23,0	TEH-023.00-1-XX	-0,10/+0,40				500112	7	TEM-023.00-1	TEG-023.00-1	
24,0	TEH-024.00-1-XX	-0,10/+0,40				500112	7	TEM-024.00-1	TEG-024.00-1	

Shank type MK3

Straight shank type TS Ø25x56

Straight shank type TU Ø40x70 drilled inside Ø26

rolling length 75 mm

rolling length 75 mm

unlimited rolling length

Outside diameters for stepped shafts series TEB

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
15,0	TEB-015.00-3-XX	-0,10/+0,40				500311	5	TEM-015.00-3	TEG-015.00-3	TEX2
16,0	TEB-016.00-3-XX	-0,10/+0,40				500311	5	TEM-016.00-3	TEG-016.00-3	
17,0	TEB-017.00-3-XX	-0,10/+0,40				500311	5	TEM-017.00-3	TEG-017.00-3	
18,0	TEB-018.00-3-XX	-0,10/+0,40				500311	6	TEM-018.00-3	TEG-018.00-3	
19,0	TEB-019.00-3-XX	-0,10/+0,40	MK3	TS25	TU40	500311	6	TEM-019.00-3	TEG-019.00-3	
20,0	TEB-020.00-3-XX	-0,10/+0,40				500311	6	TEM-020.00-3	TEG-020.00-3	
21,0	TEB-021.00-3-XX	-0,10/+0,40				500311	6	TEM-021.00-3	TEG-021.00-3	
22,0	TEB-022.00-3-XX	-0,10/+0,40				500311	7	TEM-022.00-3	TEG-022.00-3	
23,0	TEB-023.00-3-XX	-0,10/+0,40				500311	7	TEM-023.00-3	TEG-023.00-3	
24,0	TEB-024.00-3-XX	-0,10/+0,40				500311	7	TEM-024.00-3	TEG-024.00-3	

Shank type MK3

Straight shank type TS Ø25x56

Straight shank type TU Ø40x70 drilled inside Ø26

rolling length 75 mm

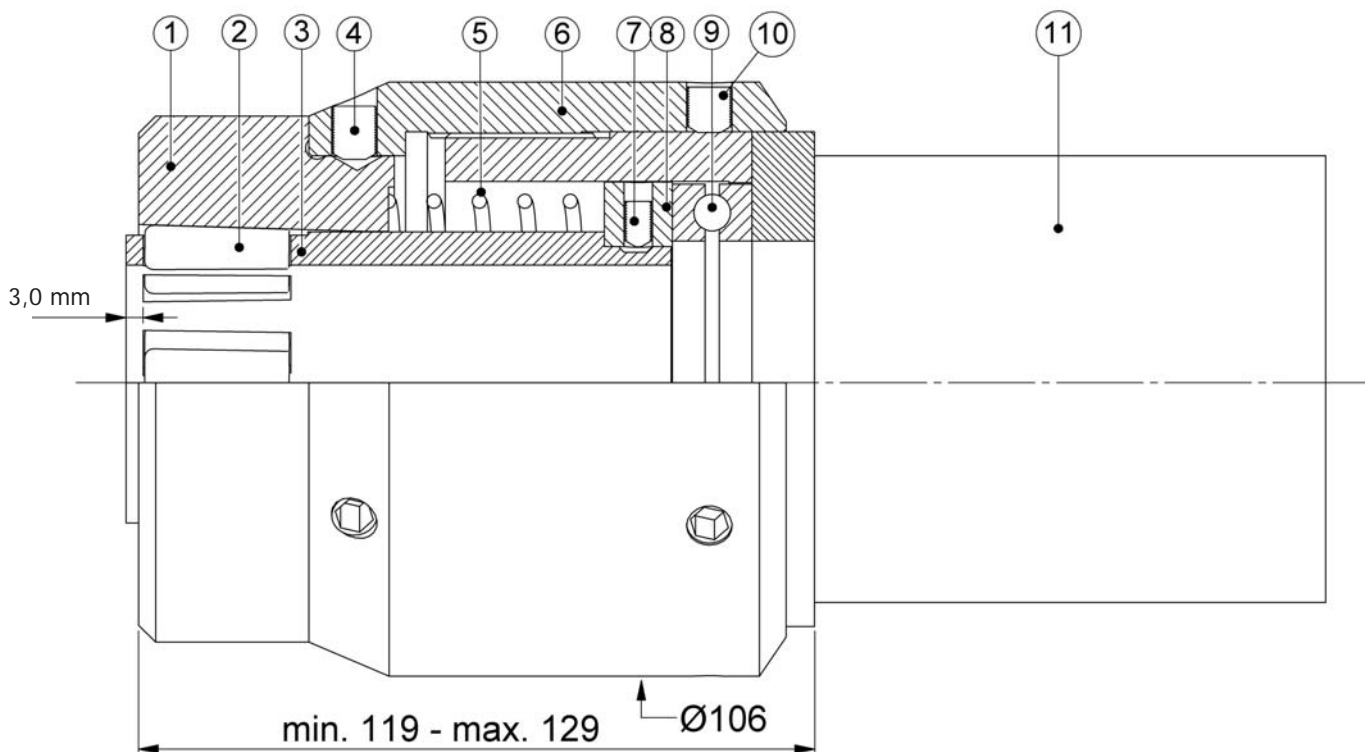
rolling length 75 mm

unlimited rolling length

Series TE for outside diameters

Outside diameters for plain shafts series TEH from diameter 25 to 49 mm

Outside diameters for stepped shafts series TEB from diameter 25 to 49 mm



- | | | |
|-------------|----------------|------------------|
| 1 - Cone | 5 - Spring | 9 - Ball bearing |
| 2 - Rollers | 6 - Housing | 10 - Screw |
| 3 - Cage | 7 - Screw | 11 - Shank |
| 4 - Screw | 8 - Frame ring | |

Outside diameters for plain shafts series TEH self-feeding

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
25,0	TEH-025.00-1-XX	-0,10/+0,40				500109	7	TEM-025.00-1	TEG-025.00-1	TEX3
26,0	TEH-026.00-1-XX	-0,10/+0,40				500109	7	TEM-026.00-1	TEG-026.00-1	
27,0	TEH-027.00-1-XX	-0,10/+0,40				500109	7	TEM-027.00-1	TEG-027.00-1	
28,0	TEH-028.00-1-XX	-0,10/+0,40				500109	7	TEM-028.00-1	TEG-028.00-1	
29,0	TEH-029.00-1-XX	-0,10/+0,40				500109	7	TEM-029.00-1	TEG-029.00-1	
30,0	TEH-030.00-1-XX	-0,10/+0,40				500109	7	TEM-030.00-1	TEG-030.00-1	
31,0	TEH-031.00-1-XX	-0,10/+0,40				500109	7	TEM-031.00-1	TEG-031.00-1	
32,0	TEH-032.00-1-XX	-0,10/+0,40				500109	7	TEM-032.00-1	TEG-032.00-1	
33,0	TEH-033.00-1-XX	-0,10/+0,40				500109	7	TEM-033.00-1	TEG-033.00-1	
34,0	TEH-034.00-1-XX	-0,10/+0,40				500109	7	TEM-034.00-1	TEG-034.00-1	
35,0	TEH-035.00-1-XX	-0,10/+0,40				500109	7	TEM-035.00-1	TEG-035.00-1	
36,0	TEH-036.00-1-XX	-0,10/+0,40				500109	7	TEM-036.00-1	TEG-036.00-1	
37,0	TEH-037.00-1-XX	-0,10/+0,40	MK4	TS40	TU80	500109	7	TEM-037.00-1	TEG-037.00-1	
38,0	TEH-038.00-1-XX	-0,10/+0,40				500109	7	TEM-038.00-1	TEG-038.00-1	
39,0	TEH-039.00-1-XX	-0,10/+0,40				500109	9	TEM-039.00-1	TEG-039.00-1	
40,0	TEH-040.00-1-XX	-0,10/+0,40				500109	9	TEM-040.00-1	TEG-040.00-1	
41,0	TEH-041.00-1-XX	-0,10/+0,40				500109	9	TEM-041.00-1	TEG-041.00-1	
42,0	TEH-042.00-1-XX	-0,10/+0,40				500109	9	TEM-042.00-1	TEG-042.00-1	
43,0	TEH-043.00-1-XX	-0,10/+0,40				500109	9	TEM-043.00-1	TEG-043.00-1	
44,0	TEH-044.00-1-XX	-0,10/+0,40				500109	9	TEM-044.00-1	TEG-044.00-1	
45,0	TEH-045.00-1-XX	-0,10/+0,40				500109	9	TEM-045.00-1	TEG-045.00-1	
46,0	TEH-046.00-1-XX	-0,10/+0,40				500109	9	TEM-046.00-1	TEG-046.00-1	
47,0	TEH-047.00-1-XX	-0,10/+0,40				500109	9	TEM-047.00-1	TEG-047.00-1	
48,0	TEH-048.00-1-XX	-0,10/+0,40				500109	9	TEM-048.00-1	TEG-048.00-1	
49,0	TEH-049.00-1-XX	-0,10/+0,40				500109	9	TEM-049.00-1	TEG-049.00-1	

Shank type MK4

Straight shank type TS Ø40x70

Straight shank type TU Ø80x90 drilled inside Ø50

rolling length 100 mm

rolling length 100 mm

unlimited rolling length

Outside diameters for stepped shafts series TEB

Ø	Type of the tool	Adjustment	Shanks			Rollers code	Rollers No.	Cone	Cage	Tool body
			MK	straight TS	straight TU					
25,0	TEB-025.00-1-XX	-0,10/+0,40				500307	7	TEM-025.00-3MX	TEG-025.00-3	TEX3
26,0	TEB-026.00-1-XX	-0,10/+0,40				500307	7	TEM-026.00-3MX	TEG-026.00-3	
27,0	TEB-027.00-1-XX	-0,10/+0,40				500307	7	TEM-027.00-3MX	TEG-027.00-3	
28,0	TEB-028.00-1-XX	-0,10/+0,40				500307	7	TEM-028.00-3MX	TEG-028.00-3	
29,0	TEB-029.00-1-XX	-0,10/+0,40				500307	7	TEM-029.00-3MX	TEG-029.00-3	
30,0	TEB-030.00-1-XX	-0,10/+0,40				500307	7	TEM-030.00-3MX	TEG-030.00-3	
31,0	TEB-031.00-1-XX	-0,10/+0,40				500307	7	TEM-031.00-3MX	TEG-031.00-3	
32,0	TEB-032.00-1-XX	-0,10/+0,40				500307	7	TEM-032.00-3MX	TEG-032.00-3	
33,0	TEB-033.00-1-XX	-0,10/+0,40				500307	7	TEM-033.00-3MX	TEG-033.00-3	
34,0	TEB-034.00-1-XX	-0,10/+0,40				500307	7	TEM-034.00-3MX	TEG-034.00-3	
35,0	TEB-035.00-1-XX	-0,10/+0,40				500307	7	TEM-035.00-3MX	TEG-035.00-3	
36,0	TEB-036.00-1-XX	-0,10/+0,40				500307	7	TEM-036.00-3MX	TEG-036.00-3	
37,0	TEB-037.00-1-XX	-0,10/+0,40	MK4	TS40	TU80	500307	7	TEM-037.00-3MX	TEG-037.00-3	
38,0	TEB-038.00-1-XX	-0,10/+0,40				500307	7	TEM-038.00-3MX	TEG-038.00-3	
39,0	TEB-039.00-1-XX	-0,10/+0,40				500307	9	TEM-039.00-3MX	TEG-039.00-3	
40,0	TEB-040.00-1-XX	-0,10/+0,40				500307	9	TEM-040.00-3MX	TEG-040.00-3	
41,0	TEB-041.00-1-XX	-0,10/+0,40				500307	9	TEM-041.00-3MX	TEG-041.00-3	
42,0	TEB-042.00-1-XX	-0,10/+0,40				500307	9	TEM-042.00-3MX	TEG-042.00-3	
43,0	TEB-043.00-1-XX	-0,10/+0,40				500307	9	TEM-043.00-3MX	TEG-043.00-3	
44,0	TEB-044.00-1-XX	-0,10/+0,40				500307	9	TEM-044.00-3MX	TEG-044.00-3	
45,0	TEB-045.00-1-XX	-0,10/+0,40				500307	9	TEM-045.00-3MX	TEG-045.00-3	
46,0	TEB-046.00-1-XX	-0,10/+0,40				500307	9	TEM-046.00-3MX	TEG-046.00-3	
47,0	TEB-047.00-1-XX	-0,10/+0,40				500307	9	TEM-047.00-3MX	TEG-047.00-3	
48,0	TEB-048.00-1-XX	-0,10/+0,40				500307	9	TEM-048.00-3MX	TEG-048.00-3	
49,0	TEB-049.00-1-XX	-0,10/+0,40				500307	9	TEM-049.00-3MX	TEG-049.00-3	

Shank type MK4

Straight shank type TS Ø40x70

Straight shank type TU Ø80x90 drilled inside Ø50

rolling length 100 mm

rolling length 100 mm

unlimited rolling length