

Precision Steel Shafts

## Ordering Data

### Solid shafts made of heat-treated steel

When a shaft forms an integral part of an anti-friction bearing system, the materials used have to satisfy exacting requirements.

We offer the optimum shaft material for each diameter range.

The exceptionally uniform surface hardness and hardening depth of the shafts, combined with an excellent degree of purity, homogeneous microstructure and defined grain sizes, ensure particularly long service life under rolling loads.

Available diameters (mm)	Ø d (mm)	Lengths (m)
3, 4, 5, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22,	<b>3</b>	0.4
24, 25, 30, 32, 35, 38, 40, 45, 50, 55, 60,	<b>4</b>	3.6
70, 80, 100, 110	<b>5 and 6 from 8</b>	5.8 6.1

Solid shafts from 20 mm in diameter and up to 8 m in length are available upon request. Greater overall lengths are composed of sections joined end-to-end. Linear Bushings can roll over joints without any problems.

Materials	Hardness
<b>Cf 53, Cf 60, Ck 67</b>	min. 60 HRC

Part numbers	
<b>Tolerance h6</b>	R1000 xxx 00
<b>Tolerance h7</b>	R1000 xxx 01

xxx = diameter in mm

#### Ordering example

Solid shaft Ø 25 h7 made of heat-treated steel, length 460 mm

**Part number:**  
**R1000 025 01, 460 mm**

### Solid shafts made of corrosion-resistant steel per ISO 683-17 / EN 10088

The correct choice for applications requiring high corrosion resistance in a clean environment, e.g. in the food industry, semiconductor manufacturing and medical technology. X 90 CrMoV 18 differs from X 46 Cr 13 in that it is additionally resistant to lactic acid.

Materials	Available diameters (mm)
<b>X 46 Cr 13</b>	4, 5, 6, 8, 10, 12, 14, 16, 20, 25, 30, 40, 50, 60, 80
<b>X 90 CrMoV 18</b>	3, 12, 16, 20, 25, 30, 40, 50, 60, 80

Ø d (mm)	Lengths (m)
<b>3</b>	0.4
<b>4 - 10</b>	3.6
<b>12 - 80</b>	6.1

Greater overall lengths are composed of sections joined end-to-end.

Linear Bushings can roll over joints without any problems.

Materials	Hardness
<b>X 46 Cr 13</b>	min. 54 HRC
<b>X 90 CrMoV 18</b>	min. 55 HRC

Part numbers for X 46 Cr 13	
<b>Tolerance h6</b>	R1000 0xx 30
<b>Tolerance h7</b>	R1000 0xx 31

Part numbers for X 90 CrMoV 18	
<b>Tolerance h6</b>	R1000 0xx 20
<b>Tolerance h7</b>	R1000 0xx 21

xx = diameter in mm

#### Ordering example:

Solid shaft Ø 16 h6 made of corrosion-resistant steel X 46 Cr 13, length 350 mm

**Part number:**  
**R1000 016 30, 350 mm**

### Solid steel shafts, hard chrome plated

Optimal anti-corrosion protection for shaft surface on outside diameter.

Available diameters (mm)	
12, 16, 20, 25, 30, 40, 50, 60, 80	

Ø d (mm)	Lengths (m)
12	5.5
16	6.5
20 - 80	7

Greater overall lengths are composed of sections joined end-to-end.

Linear Bushings can roll over joints without any problems.

Materials	Hardness
Cf 53, Cf 60, Ck 67	min. 60 HRC (approx. 700 HV)
Chrome plating (thickness approx. 10 µm)	approx. 1000 HV

Part numbers	
Tolerance h6	R1000 0xx 60
Tolerance h7	R1000 0xx 61

xx = diameter in mm

#### Ordering example:

Solid shaft Ø 30 hard chrome plated h7, length 480 mm

**Part number:**

**R1000 030 61, 480 mm**

### Tubular shafts made of heat-treated steel

Tubular shafts can be used as ducts for electric cables and liquid or gaseous media. They are also often used for weight reduction. The shafts are made from seamlessly rolled tube material. The inside diameters are not machined.

Available diameters (mm)	
Outside	Inside (approx.)
8	3
10	4
12	3.4
16	8
20	14
25	14
30	19
40	26.5
50	29.6
60	36.5
80	57.4
100	65

Ø d (mm)	Max. lengths (m)
8, 10	1
16	2
12 and 20 - 100	6.1

Materials	Hardness
Ck 60	min. 60 HRC

Part numbers	
Tolerance h6	R1001 xxx 10
Tolerance h7	R1001 xxx 11

xxx = outside diameter in mm

#### Ordering example:

Tubular shaft Ø 80 h7, length 3600 mm

**Part number:**

**R1001 080 11, 3600 mm**

### Tubular shafts, hard chrome plated

Tubular shafts are hard chrome plated on the outside diameter. Length: max. 6.1 m

Available diameters (mm)	
Outside	Inside (approx.)
25	14
30	19
40	26.5
50	29.6
60	36.5
80	57.4

Materials	Hardness
Ck 60	min. 60 HRC (approx. 700 HV)
Chrome plating (thickness approx. 10 µm)	approx. 1000 HV

Part number	
Tolerance h7	R1001 0xx 41

xx = outside diameter in mm

#### Ordering example:

Tubular shaft Ø 40, hard chrome plated h7, length 2000 mm

**Part number:**

**R1001 040 41, 2000 mm**

