

## Precision Shaft Steel, Hardened and Ground, on choice chromed

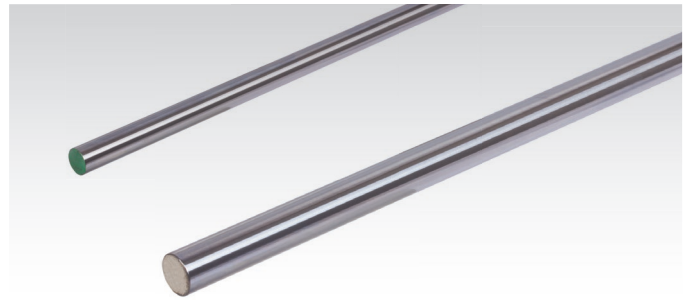
**Material CF53:** Steel 1.1213 (CF53), hardness min. 59 HRC.  
Diameter tolerance: ISO h6.

**Material CF53 CR:** Steel 1.1213 (CF53), hardness min. 59 HRC,  
chrome plated 10 µm, chrome-hardness min. 800 HV,  
without CR(VI), suitable for food and medical industry.  
Diameter tolerance: ISO h7.

Dimension-stable up to +120°C.

In lengths of 1 m and 2 m available ex stock.

Fixed lengths can be delivered on request.



Ordering Details: e.g.: Product No. 647 405 00, Shaft Steel CF53, 5 mm, length 1 m

Product No. CF53 1 m	Product No. CF53 2 m	Product No. CF53 CR 1 m	Product No. CF 53 CR 2 m	Shaft- Diameter mm	Hardness Depth DIN 13012 mm min.	Weight Length 1m kg	Weight Length 2m kg
647 403 01*	-	-	-	3	0,4	0,059	-
647 404 01	-	-	-	4	0,4	0,098	-
647 405 00	-	647 605 00	-	5	0,4	0,154	-
647 406 00	-	647 606 00	-	6	0,4	0,222	-
647 408 00	647 508 00	647 608 00	647 708 00	8	0,4	0,394	0,788
647 410 00	647 510 00	647 610 00	647 710 00	10	0,4	0,616	1,232
647 412 00	647 512 00	647 612 00	647 712 00	12	0,6	0,888	1,776
647 414 00	647 514 00	647 614 00	647 714 00	14	0,6	1,208	2,416
647 416 00	647 516 00	647 616 00	647 716 00	16	0,6	1,578	3,156
647 420 00	647 520 00	647 620 00	647 720 00	20	0,9	2,466	4,932
647 425 00	647 525 00	647 625 00	647 725 00	25	0,9	3,853	7,706
647 430 00	647 530 00	647 630 00	647 730 00	30	0,9	5,549	11,098
647 440 00	647 540 00	647 640 00	647 740 00	40	1,5	9,864	19,728
647 450 00	647 550 00	647 650 00	647 750 00	50	1,5	15,413	30,826

\* Ø 3mm made from material 100CR6.

## Precision Shaft Steel, Stainless, Hardened and Ground

**Material X46:** Stainless Steel 1.4043 (X46Cr13), min. 52 HRC.

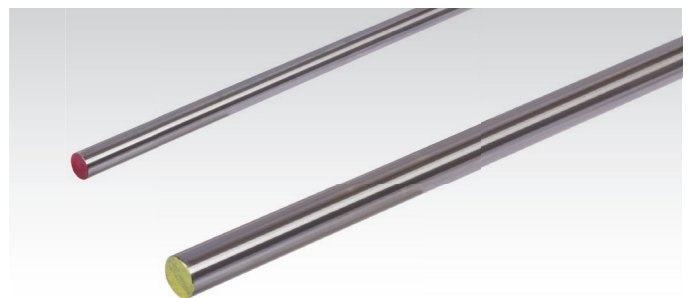
**Material X90:** Stainless Steel 1.4112 (X90CrMoV18), min. 54 HRC.

Diameter tolerance: ISO h6.

Dimension-stable up to +120°C.

In lengths of 1 m and 2 m available ex stock.

Fixed lengths can be delivered on request.



Ordering Details: e.g.: Product No. 647 992 06, Shaft Steel X46, 6 mm, length 1 m

Product No. X46 1 m	Product No. X46 2 m	Product No. X90 1 m	Product No. X90 2 m	Shaft- Diameter mm	Hardness Depth DIN 13012 mm min.	Weight Length 1m kg	Weight Length 2m kg
-	-	647 994 04	-	4	0,4	0,098	-
-	-	647 994 05	-	5	0,4	0,154	-
647 992 06	-	647 994 06	-	6	0,4	0,222	-
647 992 08	647 993 08	647 994 08	647 995 08	8	0,4	0,394	0,788
647 992 10	647 993 10	647 994 10	647 995 10	10	0,4	0,616	1,232
647 992 12	647 993 12	647 994 12	647 995 12	12	0,6	0,888	1,776
647 992 14	647 993 14	647 994 14	647 995 14	14	0,6	1,208	2,416
647 992 16	647 993 16	647 994 16	647 995 16	16	0,6	1,578	3,156
647 992 20	647 993 20	647 994 20	647 995 20	20	0,9	2,466	4,932
647 992 25	647 993 25	647 994 25	647 995 25	25	0,9	3,853	7,706
647 992 30	647 993 30	647 994 30	647 995 30	30	0,9	5,549	11,098
647 992 40	647 993 40	647 994 40	647 995 40	40	1,5	9,864	19,728
647 992 50	647 993 50	647 994 50	647 995 50	50	1,5	15,413	30,826

## Dimension Tolerances for shafts with Ø-tolerance h6

	Diameter	Shaft Diameter													
		3 mm	4 mm	5 mm	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm	20 mm	25 mm	30 mm	40 mm	50 mm
Diameter	[µm]	0,6	-8	-8	-8	-9	-9	-11	-11	-11	-13	-13	-13	-16	-16
Straightness	[mm/m]	0,3	0,3	0,2	0,2	0,2	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Roundness	[µm]	3	4	4	4	4	4	5	5	5	6	6	6	7	7
Parallellity	[µm]	4	5	5	5	6	6	8	8	8	9	9	9	11	11