



Induction hardened and chrome plated linear shafts

Dimensions

Ø6 - 80 mm

Surface hardness

62±2 HRC

Chrome layer thickness

12±5 µm

Chrome layer microhardness

900-1100HV0.1

Surface roughness

Ra max. 0.20 µm

Standard indicative length

6400 (-0/+50) mm
other, on request

Surface hardening depth, SHD

according to EN ISO 15787

On request

special lengths, tolerances and dimensions

Chemical composition - in % by weight

Steel grade	C	Si	Mn	P	S	Cr	Ni	Mo	V
Cf53	0.50 ÷ 0.57	0.15 ÷ 0.35	0.40 ÷ 0.70	max. 0.025	max. 0.035	-	-	-	-

Mechanical properties

Steel grade	Diameter Ø mm	Tensile strength R _m N/mm ²	Yield strength R _{p0.2} N/mm ²	Elongation A ₅ %	Hardness Brinell ⁽¹⁾ HB
Cf53	Ø ≤ 16	min. 755	min. 610	min. 6	245-320
	16 < Ø ≤ 25	min. 765	min. 630	min. 7	245-280
	Ø ≤ 40	min. 640	min. 338	min. 12	197-223
	40 < Ø ≤ 80	min. 660	min. 345	min. 12	197-223

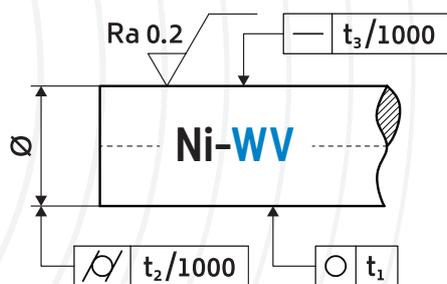
(1) Only for information

Steel grades correspondences

EN	Werkstoff	DIN	B.S.	UNI	JIS	GOST	AISI / SAE / ASTM
C53	1.1213	Cf53 (C53G)	070M55	C53	S50C	50	1050

Ni-WV / Metric

Series	Shaft diameter Ø mm	Surface hardening depth SHD (min. + tol.) mm	Roundness t ₁ max. µm	Parallelism t ₂ max. µm	Straightness t ₃ max. mm/m	Standard tolerance ISO h7 µm
NI-WV 6	6	0.4 + 0.4	5	10	0.25	0 / -12
NI-WV 8	8	0.4 + 0.4	6	10	0.20	0 / -15
NI-WV 10	10	0.4 + 0.4	6	10	0.20	0 / -15
NI-WV 12	12	0.6 + 0.6	8	12	0.20	0 / -18
NI-WV 14	14	0.6 + 0.6	8	12	0.20	0 / -18
NI-WV 15	15	0.6 + 0.6	8	12	0.20	0 / -18
NI-WV 16	16	0.6 + 0.6	8	12	0.20	0 / -18
NI-WV 18	18	0.6 + 0.6	8	12	0.20	0 / -18
NI-WV 20	20	0.9 + 0.8	9	12	0.20	0 / -21
NI-WV 25	25	0.9 + 0.8	9	12	0.15	0 / -21
NI-WV 30	30	0.9 + 0.8	9	12	0.15	0 / -21
NI-WV 35	35	1.5 + 1.3	11	15	0.15	0 / -25
NI-WV 40	40	1.5 + 1.3	11	15	0.15	0 / -25
NI-WV 45	45	1.5 + 1.3	11	15	0.15	0 / -25
NI-WV 50	50	1.5 + 1.3	11	15	0.15	0 / -25
NI-WV 60	60	2.2 + 1.6	13	15	0.15	0 / -30
NI-WV 70	70	2.2 + 1.6	13	15	0.15	0 / -30
NI-WV 80	80	2.2 + 1.6	13	15	0.15	0 / -30



Dimensions

Ø1/4" - 3"

Surface hardness

62±2 HRC

Chrome layer thickness

12±5 µm / 0.0005±0.0002"

Chrome layer microhardness

900-1100HV0.1

Surface roughness

Ra max. 0.20 µm

Standard indicative length

6400 (-0/+50) mm / 251.96 (-0/+2)"
other, on request

Surface hardening depth, SHD

according to EN ISO 15787

On request

special lengths, tolerances and dimensions

Chemical composition - in % by weight

Steel grade	C	Si	Mn	P	S	Cr	Ni	Mo	V
Cf53	0.50 ± 0.57	0.15 ÷ 0.35	0.40 ÷ 0.70	max. 0.025	max. 0.035	-	-	-	-

Mechanical properties

Steel grade	Diameter Ø mm	Tensile strength R _m N/mm ²	Yield strength R _{p0.2} N/mm ²	Elongation A ₅ %	Hardness Brinell ⁽¹⁾ HB
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Steel grades correspondences

EN	Werkstoff	DIN	B.S.	UNI	JIS	GOST	AISI / SAE / ASTM
C53	1.1213	Cf53 (C53G)	070M55	C53	S50C	50	1050

Ni-WV / Imperial

Series	Shaft diameter Ø		Surface hardening depth SHD (min. + tol.) inch	Roundness t ₁ max. inch	Parallelism t ₂ max. inch	Straightness t ₃ max. inch/ft	Standard tolerance Class "L" inch
	mm	inch					
NI-WV 6.35	6.35	0.25	0.016 + 0.016	0.00020	0.00039	0.00308	-0.0005 / -0.001
NI-WV 9.525	9.525	0.375	0.016 + 0.016	0.00024	0.00039	0.00246	-0.0005 / -0.001
NI-WV 12.7	12.7	0.5	0.024 + 0.024	0.00031	0.00047	0.00246	-0.0005 / -0.001
NI-WV 15.875	15.875	0.625	0.024 + 0.024	0.00031	0.00047	0.00246	-0.0005 / -0.001
NI-WV 19.05	19.05	0.75	0.035 + 0.032	0.00035	0.00047	0.00246	-0.0005 / -0.001
NI-WV 22.225	22.225	0.875	0.035 + 0.032	0.00035	0.00047	0.00185	-0.0005 / -0.001
NI-WV 25.4	25.4	1	0.035 + 0.032	0.00035	0.00047	0.00185	-0.0005 / -0.001
NI-WV 28.575	28.575	1.125	0.035 + 0.032	0.00035	0.00047	0.00185	-0.0005 / -0.001
NI-WV 31.75	31.75	1.25	0.059 + 0.051	0.00043	0.00059	0.00185	-0.0005 / -0.001
NI-WV 34.925	34.925	1.375	0.059 + 0.051	0.00043	0.00059	0.00185	-0.0005 / -0.001
NI-WV 38.1	38.1	1.5	0.059 + 0.051	0.00043	0.00059	0.00185	-0.0006 / -0.0011
NI-WV 44.45	44.45	1.75	0.059 + 0.051	0.00043	0.00059	0.00185	-0.0006 / -0.0011
NI-WV 50.8	50.8	2	0.087 + 0.063	0.00043	0.00059	0.00185	-0.0006 / -0.0013
NI-WV 57.15	57.15	2.25	0.087 + 0.063	0.00051	0.00059	0.00185	-0.0007 / -0.0015
NI-WV 63.5	63.5	2.5	0.087 + 0.063	0.00051	0.00059	0.00185	-0.0007 / -0.0015
NI-WV 76.2	76.2	3	0.087 + 0.063	0.00051	0.00059	0.00185	-0.0008 / -0.0017