NIMET

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Induction hardened and ground linear shafts

Ni-W

Cf53

Dimensions
Ø6 - 80 mm

Surface hardness
62±2 HRC

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/mm²	Yield strength $R_{p\,0.2}$ N/mm²	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-W / 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 h6 µm
NI-W 6	6	0.4 + 0.4	4	6	0.25	0 / -8
NI-W 8	8	0.4 + 0.4	4	6	0.20	0 / -9
NI-W 10	10	0.4 + 0.4	4	6	0.20	0 / -9
NI-W 12	12	0.6 + 0.6	5	8	0.20	0 / -11
NI-W 14	14	0.6 + 0.6	5	8	0.20	0 / -11
NI-W 15	15	0.6 + 0.6	5	8	0.20	0 / -11
NI-W 16	16	0.6 + 0.6	5	8	0.20	0 / -11
NI-W 18	18	0.6 + 0.6	5	8	0.20	0 / -11
NI-W 20	20	0.9 + 0.8	6	9	0.20	0 / -13
NI-W 25	25	0.9 + 0.8	6	9	0.15	0 / -13
NI-W 30	30	0.9 + 0.8	6	9	0.15	0 / -13
NI-W 35	35	1.5 + 1.3	7	11	0.15	0 / -16
NI-W 40	40	1.5 + 1.3	7	11	0.15	0 / -16
NI-W 45	45	1.5 + 1.3	7	11	0.15	0 / -16
NI-W 50	50	1.5 + 1.3	7	11	0.15	0 / -16
NI-W 60	60	2.2 + 1.6	8	13	0.15	0 / -19
NI-W 70	70	2.2 + 1.6	8	13	0.15	0 / -19
NI-W 80	80	2.2 + 1.6	8	13	0.15	0 / -19

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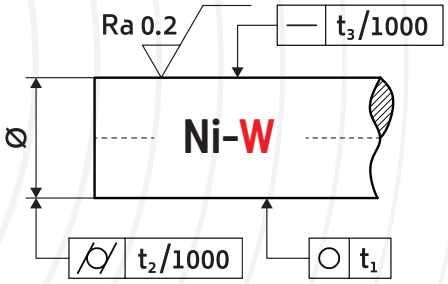

Dimensions
Ø1/4" - 3"

Surface hardness
62±2 HRC

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/mm²	Yield strength $R_{p0.2}$ N/mm²	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-W / Imperial

Series	Shaft diameter Ø mm	Shaft diameter Ø inch	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
NI-W 6.35	6.35	0.25	0.016 + 0.016	0.00016	0.00023	0.00308	-0.0005 / -0.001
NI-W 9.525	9.525	0.375	0.016 + 0.016	0.00016	0.00023	0.00246	-0.0005 / -0.001
NI-W 12.7	12.7	0.5	0.024 + 0.024	0.00020	0.00031	0.00246	-0.0005 / -0.001
NI-W 15.875	15.875	0.625	0.024 + 0.024	0.00020	0.00031	0.00246	-0.0005 / -0.001
NI-W 19.05	19.05	0.75	0.035 + 0.032	0.00024	0.00035	0.00246	-0.0005 / -0.001
NI-W 22.225	22.225	0.875	0.035 + 0.032	0.00024	0.00035	0.00185	-0.0005 / -0.001
NI-W 25.4	25.4	1	0.035 + 0.032	0.00024	0.00035	0.00185	-0.0005 / -0.001
NI-W 28.575	28.575	1.125	0.035 + 0.032	0.00024	0.00035	0.00185	-0.0005 / -0.001
NI-W 31.75	31.75	1.25	0.059 + 0.051	0.00028	0.00043	0.00185	-0.0005 / -0.001
NI-W 34.925	34.925	1.375	0.059 + 0.051	0.00028	0.00043	0.00185	-0.0005 / -0.001
NI-W 38.1	38.1	1.5	0.059 + 0.051	0.00028	0.00043	0.00185	-0.0006 / -0.0011
NI-W 44.45	44.45	1.75	0.059 + 0.051	0.00028	0.00043	0.00185	-0.0006 / -0.0011
NI-W 50.8	50.8	2	0.087 + 0.063	0.00028	0.00043	0.00185	-0.0006 / -0.0013
NI-W 57.15	57.15	2.25	0.087 + 0.063	0.00031	0.00051	0.00185	-0.0007 / -0.0015
NI-W 63.5	63.5	2.5	0.087 + 0.063	0.00031	0.00051	0.00185	-0.0007 / -0.0015
NI-W 76.2	76.2	3	0.087 + 0.063	0.00031	0.00051	0.00185	-0.0008 / -0.0017