

Measurement of roundness by Dial gauge deflections of 6-mm Diameter Stainless Steel (SS) Round Bar After Straightening
Mean values of Dial Gauge Deflection Readings after straightening of 6 mm SS round bar x 0.01 mm

	Angles in Degrees																								
Length in cm	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	STD DEV (mm)
15	193	193	191	188	185	181	178	175	170	168	167	159	160	158	153	157	160	165	174	179	182	188	191	194	0.1343
20	192	191	192	193	191	188	187	185	179	176	172	168	164	162	156	163	159	163	167	174	179	185	189	192	0.1248
25	192	193	194	194	194	193	190	187	186	184	182	178	176	174	171	168	165	168	166	172	179	184	189	192	0.1002
30	194	196	195	196	195	196	195	193	188	186	181	176	175	178	175	172	163	166	170	177	176	188	186	198	0.109
35	192	195	194	195	196	197	194	192	190	188	186	183	173	176	172	169	168	167	172	168	173	176	181	188	0.1062
40	194	197	196	196	197	198	196	195	193	190	188	185	178	177	174	167	166	165	165	169	175	182	183	195	0.1191
45	192	196	198	199	198	199	199	194	191	187	186	184	183	180	176	173	169	171	166	166	172	176	185	186	0.112
50	189	192	195	194	196	195	197	191	188	185	184	183	180	179	174	171	175	172	169	168	174	178	185	179	0.0925
54	188	190	192	193	194	193	194	189	182	183	181	177	175	176	172	170	172	173	175	171	182	182	186	193	0.084
57.5	190	189	190	191	192	193	191	187	185	182	179	176	173	171	170	173	168	169	176	175	184	183	184	190	0.0832
62.5	189	188	189	190	189	192	188	185	183	180	178	174	171	168	169	168	166	172	179	174	185	184	186	190	0.0842
66.5	187	186	188	189	188	190	187	182	180	178	175	172	169	167	168	169	169	171	183	181	184	185	188	187	0.0796
71.5	186	184	186	187	186	188	186	184	178	175	176	174	170	163	164	165	172	177	181	184	182	184	189	188	0.08
75.3	178	177	174	168	173	178	181	172	175	157	165	163	167	160	165	172	175	184	187	189	186	183	188	187	0.0934

Measurement of roundness by Dial gauge deflections of 8-mm Diameter Stainless Steel (SS) Round Bar After Straightening
Mean values of Dial Gauge Deflection Readings after straightening of 8 mm Stainless Steel (SS) round bar x 0.01 mm

	Angles in Degrees																								
Length in cm	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	STD DEV (mm)
11	183	181	181	181	179	178	178	177	175	175	175	175	176	177	178	179	180	180	181	181	180	180	182	181	0.0244
14	176	174	175	174	173	172	171	170	168	168	168	167	168	168	170	170	172	172	173	173	173	173	174	173	0.0263
18	174	172	169	169	168	168	168	166	165	168	166	167	165	164	165	166	166	168	169	168	169	169	170	169	0.0233

21	168	164	165	163	164	165	166	165	163	165	168	165	164	165	165	166	167	166	167	167	165	165	165	165	0.0141
24	169	171	169	169	169	169	168	167	167	166	168	168	169	169	170	170	172	172	172	172	171	171	171	170	0.0168
28	169	169	168	167	167	167	166	166	166	165	165	166	168	168	169	170	170	170	170	170	169	169	168	168	0.0167
32	167	167	167	165	166	165	163	163	163	163	163	168	163	163	163	163	164	165	165	164	165	165	165	166	0.0149
35	167	166	165	165	164	163	163	163	165	164	165	166	164	165	166	163	164	164	164	164	163	164	165	165	0.0115
38	164	164	164	163	163	162	161	161	161	161	162	164	164	165	166	167	168	168	168	167	166	165	165	164	0.0216
41	166	163	163	163	163	162	161	161	160	160	161	161	163	163	164	165	166	166	166	165	165	164	164	164	0.0184
44	163	163	161	161	161	160	160	158	159	159	160	161	163	163	164	165	165	165	166	165	164	163	163	163	0.022
47	162	161	160	160	159	158	158	157	158	158	159	160	162	161	162	163	163	163	163	163	162	162	161	159	0.0195
50	164	164	159	159	158	156	156	156	157	157	158	159	160	160	161	162	162	162	162	162	160	160	159	159	0.0237
53	162	163	160	159	159	159	159	159	160	160	162	163	164	164	165	166	166	166	166	165	165	164	164	163	0.0271
57	163	162	159	159	158	158	158	159	160	161	163	163	164	165	165	166	166	166	166	165	164	163	163	162	0.0282
61	164	159	158	158	157	157	157	158	159	159	161	161	164	164	165	165	166	166	165	164	164	163	163	162	0.0319
65	162	158	157	156	156	156	155	156	156	157	158	160	162	162	163	164	165	165	165	164	164	163	162	161	0.0347
69	162	157	156	155	154	153	154	154	154	156	157	159	159	161	162	163	164	164	163	163	162	161	160	158	0.0361
73	160	156	155	154	153	153	153	153	154	154	155	157	158	159	160	161	161	162	162	161	160	159	158	157	0.032
77	157	155	154	153	152	152	152	152	153	154	154	156	156	157	158	159	159	160	160	160	160	158	157	157	0.0281
80	158	154	153	153	152	151	155	152	152	153	154	155	156	157	158	158	159	159	159	159	159	158	158	157	0.0275
84	154	153	152	154	153	153	154	151	153	151	153	153	154	156	157	157	158	158	158	158	158	157	156	155	0.0231
88	153	153	152	150	152	151	153	151	152	148	152	152	153	154	156	156	157	157	158	158	157	156	155	155	0.027
92.7	151	152	148	144	145	146	145	147	146	145	146	148	149	152	153	154	156	154	153	147	145	146	148	151	0.0356
95.7	149	148	146	145	143	144	143	146	143	146	144	145	146	147	150	152	154	153	148	144	146	143	145	147	0.0315
99.7	146	146	144	144	144	146	144	145	145	143	144	146	143	145	148	150	144	145	146	145	147	144	147	145	0.0162
Angles in Degrees																									
Length in cm	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	STD DEV (mm)
103.7	147	144	145	146	144	144	146	144	146	144	145	144	146	144	145	148	146	144	147	145	144	143	145	146	0.0125
108.2	146	145	143	144	145	146	143	144	145	143	146	144	145	147	144	145	145	146	144	144	143	145	144	145	0.011
111.7	144	146	144	143	144	145	144	146	147	144	145	145	146	146	146	146	146	145	144	145	146	147	145	144	0.0108
114.7	146	144	143	145	147	145	144	147	146	144	145	145	146	146	148	146	146	145	144	144	146	144	143	144	0.013
117.7	147	146	144	146	145	144	144	143	145	145	146	145	144	148	147	148	144	144	145	146	144	143	144	145	0.0141
120.7	144	145	146	145	144	145	145	146	144	146	145	146	143	144	146	144	144	145	146	144	142	144	143	146	0.0113

124.7	145	146	144	147	145	146	143	145	144	146	144	145	144	145	143	143	145	144	145	145	145	145	144	145	0.01
128.7	145	144	142	144	146	144	146	145	145	144	144	146	145	144	145	145	144	145	145	146	144	144	143	146	0.0101
132.7	143	143	145	146	144	145	143	144	143	144	145	146	143	143	143	143	143	143	143	143	142	146	144	144	0.0131
135.7	143	144	144	145	145	140	141	139	142	143	143	143	144	144	145	144	145	144	143	143	143	145	144	143	0.0159
141.7	145	144	143	143	143	142	142	142	143	143	144	144	144	145	145	145	145	144	144	145	143	142	141	143	0.0121

Measurement of roundness by Dial gauge deflections of 10-mm Diameter Stainless Steel (SS) Round Bar After Straightening

Mean values of Dial Gauge Deflection Readings after straightening of 10 mm Stainless Steel (SS) round bar x 0.01 mm

	Angles in Degrees																								
Length in cm	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	STD DEV (mm)
12	148.5	149.8	151.0	151.8	152.5	154	155.5	156.3	157.0	157	157.0	156.8	156.5	155.8	155.0	154	153.0	151.5	150.0	149.8	149.5	149	148.5	148.5	0.03
15	146.5	148	149.5	151	152.5	154	155.5	156.5	157.5	157.3	157.0	156.8	156.5	155.8	155.0	154.3	153.5	152	150.5	149	147.5	147.3	147.0	147	0.04
17	147.0	148.3	149.5	151	152.5	154	155.5	156.5	157.5	157.3	157.0	156.8	156.5	156	155.5	154.5	153.5	152.3	151.0	149.5	148.0	147.5	147.0	147.3	0.04
20	148.5	149	149.5	150.5	151.5	153	154.5	155.5	156.5	156.8	157.0	157	157.0	156.8	156.5	155	153.5	152.5	151.5	150.5	149.5	148.8	148.0	148.3	0.03
23	146.5	147.5	148.5	149.8	151.0	151.8	152.5	153.3	154.0	154.8	155.5	155.3	155.0	154.8	154.5	153	151.5	150.5	149.5	149	148.5	147.8	147.0	147	0.03
25	147.0	148.3	149.5	151.3	153.0	153.8	154.5	155	155.5	155.8	156.0	156	156.0	155.5	155.0	153.8	152.5	151.5	150.5	149.5	148.5	148.5	148.5	148.3	0.03
27	147.5	148.3	149.0	150.8	152.5	153.5	154.5	155.5	156.5	156.8	157.0	156.8	156.5	156	155.5	154.3	153.0	152.3	151.5	150.5	149.5	149	148.5	148.3	0.033
30	148.0	148.3	148.5	150	151.5	152.8	154.0	155.3	156.5	157	157.5	157.5	157.5	156.8	156.0	155.8	155.5	154.3	153.0	151.8	150.5	149.8	149.0	148.5	0.034
32	148.5	149	149.5	150.5	151.5	153	154.5	155.8	157.0	157.5	158.0	157.8	157.5	157	156.5	155.3	154.0	153.3	152.5	151.3	150.0	149.3	148.5	148.5	0.034
34	147.5	148	148.5	149.8	151.0	153.8	156.5	156	155.5	156.3	157.0	158	159.0	158.3	157.5	156	154.5	153.5	152.5	150.8	149.0	148.5	148.0	148	0.04
37.5	151.0	152.5	154.0	155.3	156.5	156	155.5	156.3	157.0	158	159.0	159.5	160.0	159.8	159.5	158.5	157.5	156.5	155.5	154.5	153.5	152	150.5	150.5	0.03
44	152.0	151.5	151.0	150.3	149.5	149.8	150.0	150.8	151.5	153	154.5	155.8	157.0	158	159.0	160.3	161.5	160.8	160.0	159.8	159.5	158	156.5	154.3	0.04
46	152.5	153	153.5	152.5	151.5	152	152.5	153.3	154.0	155.3	156.5	157.5	158.5	161	163.5	163.3	163.0	161.5	160.0	159.5	159.0	158	157.0	155	0.04
49	151.0	151	151.0	151	151.0	151.8	152.5	153.5	154.5	155.3	156.0	157.5	159.0	159.8	160.5	160.5	160.5	160	159.5	158	156.5	155.3	154.0	153.3	0.036
52	151.5	151.3	151.0	151	151.0	151	151.0	151.5	152.0	153.8	155.5	156.5	157.5	158	158.5	158.5	158.5	158.5	158.5	157	155.5	154.5	153.5	153.3	0.030
55	152.0	152.3	152.5	152.8	153.0	153.8	154.5	155.3	156.0	157.3	158.5	159.5	160.5	160.8	161.0	161	161.0	160	159.0	157.8	156.5	155.5	154.5	154	0.032
58	149.5	149.5	149.5	149.8	150.0	151.3	152.5	154	155.5	156.3	157.0	157.8	158.5	159	159.5	159.3	159.0	158.3	157.5	156.3	155.0	153.8	152.5	151.3	0.036
61	149.5	149.5	149.5	150	150.5	151.5	152.5	153.8	155.0	156.3	157.5	158	158.5	158.8	159.0	158.8	158.5	157.5	156.5	155	153.5	152.8	152.0	151	0.035
64	149.5	149.5	149.5	149.8	150.0	151	152	154	156	157	158	158.8	159.5	159.5	159.5	158.8	158.0	157.3	156.5	155.3	154.0	152.8	151.5	150.8	0.037
68	149.0	149.5	150.0	150.8	151.5	152.3	153.0	154.5	156.0	156.8	157.5	158.3	159.0	159	159.0	158	157	156	155.0	154	153.0	151.8	150.5	150.3	0.034

Measurement of roundness by Dial gauge deflections of 12-mm Diameter Stainless Steel (SS) Round Bar After Straightening
Mean values of Dial Gauge Deflection Readings after straightening of 12 mm Stainless Steel (SS) round bar x 0.01 mm

	Angles in Degrees																								
Length in cm	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	STD DEV (mm)
5	65	64.3	63.5	63.5	63.5	64.3	65	65	65	65.3	65.5	65.8	66	65.8	65.5	65.3	65	64.5	64	64.3	64.5	64	63.5	63	0.0084
11	109.0	109	109.5	110	110.5	110	110.0	110	110.0	110	110.5	111	111.0	111	111.5	111	110.5	111	110.5	110	110.0	110	110.0	110	0.0059
15	108.0	108	108.0	108	107.5	108	108.5	109	109.0	109	109.5	110	110.0	110	110.5	110	110.0	110	109.5	110	109.5	109	109.0	109	0.0087
19	106.0	106	106.5	107	106.5	106	106.0	106	106.0	106	106.0	107	108.0	108	108.0	108	108.5	108	108.0	108	108.5	108	108.0	108	0.0102
24.5	108.5	108	108.0	108	108.0	108	107.0	107	107.5	108	108.0	109	109.0	109	109.0	110	110.5	110	110.0	111	111.0	111	110.0	110	0.012
31	107.0	108	109.0	109	108.0	108	108.0	108	107.0	107	106.5	107	108.0	108	108.0	108	108.5	109	108.5	109	109.5	110	109.5	110	0.009
35	106.0	106	106.0	106	106.0	106	106.0	106	106.0	106	106.0	106	106.0	106	105.0	106	107.0	107	107.0	107	107.5	107	105.5	106	0.0058
40	104.0	105	105.0	105	105.0	105	105.0	105	105.5	106	105.5	106	106.0	106	106.0	106	106.0	106	106.0	106	106.0	106	106.0	106	0.0057
45	106.0	105	106.0	105	104.0	105	106.0	106	106.0	106	106.0	106	106.0	106	105.0	106	106.0	107	107.0	107	106.0	106	106.0	106	0.0062
48	105.0	106	107.0	107	107.0	108	108.0	108	108.0	108	108.0	108	107.0	107	107.0	107	107.5	107	107.0	107	106.5	107	107.0	107	0.0069
53	108.0	108	107.0	107	107.5	107	107.0	107	106.0	106	106.0	106	106.0	106	106.5	107	106.5	107	107.5	108	107.5	108	107.5	108	0.0065
60	107.5	108	108.5	109	108.5	108	108.0	109	109.0	109	109.0	109	108.5	109	109.0	109	108.0	109	109.0	109	108.0	108	108.5	108	0.0039
65	108.0	108	108.5	109	109.5	110	110.0	111	111.0	110	109.0	109	109.5	110	109.5	109	109.0	109	108.5	108	108.0	109	109.0	109	0.0077
70	108.5	109	109.0	109	109.5	110	110.0	110	110.5	111	110.5	111	110.5	110	110.0	110	110.0	110	109.5	109	109.0	109	109.0	109	0.0064
75	108.0	110	111.0	111	111.0	111	110.5	111	111.0	111	111.0	111	111.0	111	110.5	111	110.5	110	109.5	109	109.0	109	109.5	109	0.0086
80	112.0	112	111.5	112	112.0	113	113.0	113	113.0	113	113.0	113	113.0	113	113.0	113	112.5	113	112.5	113	112.5	113	112.5	113	0.0046
84	111.0	112	113.0	113	113.5	114	114.0	114	113.5	113	113.0	113	113.0	113	113.0	113	113.0	113	112.5	113	112.5	112	112.0	113	0.0066