|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Measurement of roundness by Dial gauge deflections of 6-mm Diameter Stainless Steel (SS) Round Bar** **Before Straightening** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
|  | Mean values of Dial Gauge Deflection Readings before straightening of 6 mm Stainless Steel (SS) round bar x 0.01 mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
|  | Angles in Degrees | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
| Length in cm | 0o | | 15o | | 30o | | 45o | | 60o | | 75o | | 90o | | 105o | | 120o | | 135o | | 150o | | 165o | | 180o | | 195o | | 210o | | 225o | | 240o | | 255o | | 270o | | 285o | | 300o | | 315o | | 330o | | 345o | | STD  DEV (mm) | | |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | |
| 15 | 193 | | 193 | | 191 | | 188 | | 185 | | 181 | | 178 | | 172 | | 166 | | 160 | | 157 | | 153 | | 151 | | 149 | | 153 | | 157 | | 160 | | 165 | | 174 | | 179 | | 185 | | 188 | | 191 | | 194 | | 0.1571756 | | |
| 20 | 193 | | 196 | | 195 | | 194 | | 191 | | 188 | | 183 | | 178 | | 174 | | 165 | | 159 | | 155 | | 152 | | 150 | | 151 | | 153 | | 156 | | 161 | | 167 | | 174 | | 179 | | 185 | | 189 | | 192 | | 0.1652068 | | |
| 25 | 193 | | 195 | | 196 | | 196 | | 196 | | 193 | | 190 | | 185 | | 189 | | 174 | | 167 | | 161 | | 158 | | 155 | | 154 | | 155 | | 158 | | 163 | | 166 | | 172 | | 179 | | 184 | | 189 | | 192 | | 0.1569338 | | |
| 30 | 203 | | 205 | | 208 | | 206 | | 205 | | 201 | | 200 | | 193 | | 188 | | 182 | | 176 | | 171 | | 165 | | 160 | | 158 | | 160 | | 163 | | 166 | | 170 | | 177 | | 180 | | 188 | | 193 | | 198 | | 0.1713299 | | |
| 35 | 192 | | 196 | | 198 | | 199 | | 199 | | 197 | | 194 | | 190 | | 185 | | 179 | | 172 | | 164 | | 159 | | 152 | | 150 | | 150 | | 152 | | 155 | | 159 | | 164 | | 171 | | 176 | | 183 | | 188 | | 0.1789761 | | |
| 40 | 195 | | 199 | | 202 | | 203 | | 204 | | 204 | | 201 | | 198 | | 193 | | 187 | | 182 | | 175 | | 170 | | 164 | | 161 | | 157 | | 158 | | 160 | | 165 | | 168 | | 175 | | 182 | | 189 | | 195 | | 0.166811 | | |
| 45 | 193 | | 197 | | 201 | | 203 | | 202 | | 201 | | 199 | | 194 | | 188 | | 182 | | 174 | | 167 | | 162 | | 156 | | 152 | | 153 | | 153 | | 156 | | 160 | | 164 | | 169 | | 176 | | 180 | | 186 | | 0.1828295 | | |
| 50 | 183 | | 187 | | 190 | | 190 | | 191 | | 190 | | 186 | | 181 | | 175 | | 169 | | 164 | | 159 | | 155 | | 150 | | 147 | | 146 | | 145 | | 147 | | 151 | | 156 | | 162 | | 167 | | 175 | | 179 | | 0.1646261 | | |
| 54 | 189 | | 188 | | 184 | | 179 | | 173 | | 168 | | 162 | | 155 | | 149 | | 146 | | 142 | | 144 | | 145 | | 149 | | 153 | | 160 | | 166 | | 173 | | 180 | | 184 | | 189 | | 192 | | 192 | | 193 | | 0.1790312 | | |
| 57.5 | 190 | | 188 | | 184 | | 178 | | 172 | | 164 | | 159 | | 153 | | 147 | | 143 | | 141 | | 142 | | 144 | | 148 | | 152 | | 158 | | 164 | | 169 | | 176 | | 180 | | 184 | | 188 | | 190 | | 190 | | 0.1773246 | | |
| 62.5 | 189 | | 187 | | 183 | | 177 | | 170 | | 164 | | 157 | | 161 | | 145 | | 144 | | 144 | | 145 | | 146 | | 150 | | 157 | | 163 | | 168 | | 174 | | 179 | | 184 | | 187 | | 188 | | 189 | | 190 | | 0.1685938 | | |
| 66.5 | 177 | | 172 | | 169 | | 163 | | 157 | | 151 | | 146 | | 144 | | 141 | | 142 | | 143 | | 146 | | 150 | | 158 | | 164 | | 169 | | 175 | | 179 | | 183 | | 186 | | 188 | | 189 | | 188 | | 187 | | 0.1714039 | | |
| 71.5 | 184 | | 180 | | 176 | | 171 | | 165 | | 158 | | 153 | | 148 | | 146 | | 145 | | 148 | | 149 | | 151 | | 155 | | 161 | | 165 | | 172 | | 177 | | 181 | | 184 | | 187 | | 188 | | 189 | | 188 | | 0.1558879 | | |
| 75.3 | 178 | | 177 | | 174 | | 168 | | 160 | | 155 | | 152 | | 147 | | 147 | | 147 | | 150 | | 152 | | 155 | | 160 | | 165 | | 172 | | 178 | | 184 | | 187 | | 189 | | 190 | | 191 | | 188 | | 187 | | 0.1587746 | | |
|  | | **Measurement of roundness by Dial gauge deflections of 8-mm Diameter Stainless Steel (SS) Round Bar** **Before Straightening** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
|  | | **Mean values of Dial Gauge Deflection Readings before straightening of 8 mm SS round bar x 0.01** mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
|  | | Angles in Degrees | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
| Length in cm | | 0o | | 15o | | 30o | | 45o | | 60o | | 75o | | 90o | | 105o | | 120o | | 135o | | 150o | | 165o | | 180o | | 195o | | 210o | | 225o | | 240o | | 255o | | 270o | | 285o | | 300o | | 315o | | 330o | | 345o | | STD  DEV (mm) | | |
|  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | |
| 12 | | 173 | | 172 | | 168 | | 166 | | 163 | | 161 | | 158 | | 157 | | 153 | | 150 | | 147 | | 146 | | 147 | | 149 | | 153 | | 157 | | 163 | | 166 | | 171 | | 175 | | 175 | | 175 | | 174 | | 174 | | 0.1017828 | | |
| 15 | | 172 | | 170 | | 168 | | 165 | | 164 | | 160 | | 158 | | 156 | | 152 | | 148 | | 145 | | 145 | | 146 | | 149 | | 153 | | 157 | | 161 | | 166 | | 169 | | 173 | | 173 | | 173 | | 174 | | 174 | | 0.1018878 | | |
| 20 | | 171 | | 170 | | 168 | | 165 | | 161 | | 159 | | 157 | | 155 | | 150 | | 147 | | 147 | | 146 | | 147 | | 150 | | 155 | | 157 | | 160 | | 165 | | 169 | | 170 | | 171 | | 172 | | 173 | | 173 | | 0.094518 | | |
| 24 | | 168 | | 167 | | 164 | | 161 | | 159 | | 156 | | 154 | | 152 | | 148 | | 146 | | 145 | | 145 | | 147 | | 150 | | 153 | | 157 | | 159 | | 162 | | 166 | | 168 | | 169 | | 170 | | 170 | | 169 | | 0.0886861 | | |
| 28 | | 168 | | 165 | | 163 | | 161 | | 158 | | 154 | | 153 | | 149 | | 147 | | 145 | | 145 | | 145 | | 147 | | 150 | | 154 | | 155 | | 159 | | 162 | | 163 | | 166 | | 167 | | 168 | | 168 | | 168 | | 0.0842612 | | |
| 32 | | 161 | | 161 | | 159 | | 157 | | 155 | | 153 | | 150 | | 149 | | 147 | | 146 | | 147 | | 146 | | 147 | | 149 | | 149 | | 151 | | 153 | | 155 | | 157 | | 159 | | 161 | | 162 | | 163 | | 163 | | 0.0604452 | | |
| 36 | | 172 | | 174 | | 175 | | 175 | | 174 | | 174 | | 175 | | 174 | | 174 | | 173 | | 172 | | 170 | | 170 | | 168 | | 169 | | 168 | | 167 | | 167 | | 166 | | 166 | | 166 | | 167 | | 168 | | 169 | | 0.0336838 | | |
| 40 | | 173 | | 173 | | 175 | | 174 | | 173 | | 173 | | 173 | | 172 | | 171 | | 170 | | 169 | | 167 | | 168 | | 168 | | 168 | | 167 | | 167 | | 167 | | 167 | | 167 | | 167 | | 169 | | 170 | | 170 | | 0.0274522 | | |
| 44 | | 171 | | 172 | | 172 | | 172 | | 170 | | 171 | | 171 | | 169 | | 168 | | 168 | | 168 | | 167 | | 166 | | 166 | | 167 | | 167 | | 167 | | 168 | | 167 | | 167 | | 168 | | 169 | | 169 | | 169 | | 0.0192512 | | |
| 48 | | 171 | | 172 | | 172 | | 171 | | 170 | | 170 | | 169 | | 168 | | 167 | | 167 | | 166 | | 165 | | 165 | | 165 | | 166 | | 166 | | 168 | | 167 | | 168 | | 168 | | 169 | | 169 | | 170 | | 171 | | 0.0223728 | | |
| 52 | | 171 | | 172 | | 172 | | 171 | | 169 | | 169 | | 168 | | 167 | | 166 | | 165 | | 165 | | 164 | | 165 | | 166 | | 167 | | 168 | | 168 | | 169 | | 170 | | 170 | | 170 | | 171 | | 172 | | 171 | | 0.0247999 | | |
| 56 | | 171 | | 171 | | 170 | | 169 | | 167 | | 167 | | 166 | | 165 | | 164 | | 164 | | 164 | | 163 | | 163 | | 164 | | 166 | | 167 | | 167 | | 168 | | 168 | | 168 | | 168 | | 169 | | 170 | | 171 | | 0.0253874 | | |
| 59 | | 171 | | 172 | | 171 | | 169 | | 169 | | 167 | | 167 | | 165 | | 164 | | 164 | | 163 | | 163 | | 163 | | 164 | | 166 | | 167 | | 168 | | 169 | | 169 | | 169 | | 170 | | 172 | | 171 | | 171 | | 0.0309387 | | |
| 62 | | 168 | | 169 | | 168 | | 168 | | 166 | | 166 | | 165 | | 163 | | 163 | | 163 | | 162 | | 162 | | 162 | | 163 | | 163 | | 164 | | 164 | | 165 | | 166 | | 167 | | 167 | | 169 | | 169 | | 168 | | 0.0251193 | | |
| 65 | | 168 | | 167 | | 167 | | 166 | | 164 | | 164 | | 164 | | 161 | | 160 | | 160 | | 160 | | 160 | | 160 | | 161 | | 162 | | 163 | | 164 | | 165 | | 165 | | 166 | | 166 | | 167 | | 168 | | 167 | | 0.0279719 | | |
| 69 | | 167 | | 167 | | 166 | | 164 | | 163 | | 162 | | 162 | | 160 | | 158 | | 159 | | 158 | | 157 | | 158 | | 159 | | 160 | | 160 | | 161 | | 163 | | 164 | | 163 | | 164 | | 166 | | 166 | | 166 | | 0.0315647 | | |
| 73 | | 166 | | 166 | | 165 | | 164 | | 162 | | 161 | | 161 | | 159 | | 158 | | 157 | | 156 | | 156 | | 156 | | 157 | | 158 | | 159 | | 160 | | 161 | | 162 | | 163 | | 163 | | 165 | | 165 | | 166 | | 0.0341883 | | |
| 77 | | 170 | | 169 | | 168 | | 166 | | 166 | | 165 | | 164 | | 161 | | 160 | | 160 | | 159 | | 158 | | 159 | | 160 | | 160 | | 161 | | 162 | | 163 | | 164 | | 166 | | 167 | | 168 | | 168 | | 168 | | 0.0379925 | | |
| 80 | | 169 | | 170 | | 168 | | 168 | | 165 | | 164 | | 163 | | 161 | | 160 | | 158 | | 158 | | 157 | | 157 | | 159 | | 160 | | 161 | | 162 | | 163 | | 164 | | 164 | | 167 | | 169 | | 169 | | 168 | | 0.0428296 | | |
| 83 | | 169 | | 169 | | 168 | | 165 | | 164 | | 163 | | 162 | | 160 | | 159 | | 158 | | 157 | | 155 | | 157 | | 157 | | 159 | | 161 | | 161 | | 162 | | 163 | | 164 | | 165 | | 166 | | 167 | | 168 | | 0.0411469 | | |
| 87 | | 168 | | 169 | | 169 | | 167 | | 165 | | 164 | | 163 | | 159 | | 159 | | 157 | | 156 | | 155 | | 156 | | 156 | | 157 | | 158 | | 159 | | 161 | | 162 | | 163 | | 164 | | 166 | | 167 | | 167 | | 0.0463427 | | |
| 90 | | 170 | | 169 | | 169 | | 168 | | 165 | | 164 | | 163 | | 161 | | 159 | | 158 | | 155 | | 156 | | 156 | | 157 | | 158 | | 158 | | 159 | | 161 | | 162 | | 164 | | 165 | | 165 | | 167 | | 168 | | 0.0472462 | | |
| 93 | | 166 | | 164 | | 164 | | 165 | | 165 | | 165 | | 164 | | 164 | | 163 | | 162 | | 160 | | 159 | | 157 | | 157 | | 157 | | 157 | | 157 | | 157 | | 159 | | 159 | | 160 | | 162 | | 163 | | 164 | | 0.0323862 | | |
| 96 | | 165 | | 165 | | 165 | | 165 | | 164 | | 164 | | 167 | | 163 | | 162 | | 160 | | 161 | | 159 | | 158 | | 156 | | 156 | | 156 | | 157 | | 157 | | 158 | | 159 | | 160 | | 161 | | 163 | | 164 | | 0.0328369 | | |
| 100 | | 165 | | 165 | | 165 | | 167 | | 167 | | 166 | | 165 | | 165 | | 164 | | 163 | | 162 | | 160 | | 159 | | 157 | | 157 | | 158 | | 158 | | 159 | | 161 | | 161 | | 162 | | 164 | | 165 | | 167 | | 0.0334166 | | |
| 104 | | 168 | | 168 | | 169 | | 167 | | 167 | | 166 | | 165 | | 164 | | 163 | | 162 | | 161 | | 159 | | 158 | | 156 | | 157 | | 157 | | 157 | | 158 | | 160 | | 161 | | 162 | | 164 | | 166 | | 167 | | 0.0407782 | | |
| 108 | | 168 | | 168 | | 168 | | 168 | | 167 | | 166 | | 165 | | 164 | | 163 | | 163 | | 161 | | 160 | | 157 | | 156 | | 156 | | 157 | | 158 | | 158 | | 160 | | 161 | | 162 | | 164 | | 166 | | 167 | | 0.0422703 | | |
| 112 | | 169 | | 169 | | 169 | | 168 | | 168 | | 166 | | 165 | | 164 | | 163 | | 163 | | 160 | | 158 | | 157 | | 155 | | 155 | | 157 | | 157 | | 158 | | 160 | | 161 | | 163 | | 165 | | 167 | | 168 | | 0.0480263 | | |
| 116 | | 169 | | 169 | | 169 | | 169 | | 168 | | 166 | | 166 | | 165 | | 163 | | 162 | | 161 | | 158 | | 156 | | 156 | | 156 | | 156 | | 157 | | 158 | | 159 | | 162 | | 162 | | 165 | | 166 | | 168 | | 0.0483716 | | |
| 120 | | 169 | | 169 | | 170 | | 169 | | 168 | | 167 | | 166 | | 164 | | 163 | | 162 | | 160 | | 158 | | 157 | | 156 | | 156 | | 157 | | 157 | | 159 | | 160 | | 162 | | 164 | | 165 | | 168 | | 169 | | 0.04903 | | |
| 124 | | 170 | | 170 | | 170 | | 170 | | 169 | | 168 | | 166 | | 166 | | 163 | | 161 | | 160 | | 157 | | 157 | | 156 | | 157 | | 157 | | 158 | | 158 | | 161 | | 163 | | 164 | | 166 | | 168 | | 170 | | 0.052205 | | |
| 128 | | 170 | | 170 | | 170 | | 171 | | 170 | | 169 | | 168 | | 166 | | 164 | | 162 | | 161 | | 160 | | 158 | | 156 | | 157 | | 157 | | 157 | | 158 | | 159 | | 161 | | 162 | | 166 | | 167 | | 169 | | 0.0524089 | | |
| 132 | | 169 | | 168 | | 168 | | 169 | | 170 | | 167 | | 165 | | 164 | | 162 | | 160 | | 159 | | 157 | | 155 | | 155 | | 154 | | 155 | | 156 | | 156 | | 159 | | 161 | | 162 | | 165 | | 166 | | 167 | | 0.0534053 | | |
| 136 | | 168 | | 169 | | 170 | | 169 | | 168 | | 168 | | 168 | | 164 | | 162 | | 161 | | 159 | | 157 | | 155 | | 154 | | 155 | | 154 | | 156 | | 157 | | 159 | | 160 | | 163 | | 165 | | 167 | | 169 | | 0.0554425 | | |
| 140 | | 168 | | 169 | | 170 | | 170 | | 169 | | 167 | | 167 | | 165 | | 164 | | 162 | | 160 | | 160 | | 157 | | 157 | | 156 | | 157 | | 157 | | 158 | | 162 | | 164 | | 164 | | 166 | | 168 | | 169 | | 0.0475253 | | |
| 143 | | 169 | | 169 | | 169 | | 168 | | 167 | | 167 | | 165 | | 164 | | 164 | | 162 | | 161 | | 159 | | 159 | | 158 | | 158 | | 159 | | 161 | | 162 | | 163 | | 164 | | 166 | | 168 | | 169 | | 169 | | 0.0395147 | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Measurement of roundness by Dial gauge deflections of 10-mm Diameter Stainless Steel (SS) Round Bar** **Before Straightening** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Mean values of Dial Gauge Deflection Readings before straightening of 10 mm Stainless Steel round bar x 0.01 mm** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | Angles in Degrees | | | | | | | | | | | | | | | | | | | | | | | |  |
| Length in cm | 0o | 15o | 30o | 45o | 60o | 75o | 90o | 105o | 120o | 135o | 150o | 165o | 180o | 195o | 210o | 225o | 240o | 255o | 270o | 285o | 300o | 315o | 330o | 345o | STD  DEV (mm) |
| 11.3 | 96 | 95 | 95 | 95 | 97 | 98 | 98 | 99 | 98 | 98 | 96 | 95 | 93 | 91 | 89 | 88 | 88 | 89 | 89 | 90 | 90 | 92 | 94 | 94 | 0.0362815 |
| 11.6 | 100 | 102 | 101 | 101 | 101 | 102 | 103 | 103 | 103 | 103 | 102 | 100 | 98 | 96 | 94 | 94 | 93 | 93 | 96 | 94 | 95 | 96 | 97 | 98 | 0.0350689 |
| 13 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 105 | 105 | 105 | 103 | 103 | 102 | 101 | 99 | 98 | 96 | 95 | 94 | 93 | 94 | 95 | 97 | 99 | 0.0418468 |
| 13.7 | 100 | 101 | 101 | 102 | 102 | 101 | 104 | 102 | 102 | 103 | 102 | 100 | 100 | 97 | 95 | 94 | 92 | 91 | 108 | 92 | 93 | 94 | 96 | 102 | 0.0462836 |
| 15 | 100 | 102 | 103 | 105 | 106 | 107 | 108 | 107 | 107 | 106 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 97 | 97 | 96 | 96 | 96 | 97 | 98 | 0.0404808 |
| 15.7 | 100 | 101 | 101 | 103 | 103 | 103 | 104 | 103 | 103 | 101 | 101 | 100 | 100 | 96 | 96 | 94 | 93 | 91 | 91 | 99 | 90 | 93 | 94 | 97 | 0.0457782 |
| 17 | 100 | 101 | 104 | 105 | 106 | 106 | 108 | 108 | 108 | 108 | 108 | 107 | 105 | 104 | 103 | 101 | 98 | 98 | 97 | 96 | 97 | 96 | 96 | 98 | 0.0436513 |
| 17.7 | 100 | 102 | 103 | 102 | 104 | 106 | 107 | 106 | 105 | 103 | 103 | 100 | 98 | 97 | 96 | 93 | 93 | 92 | 93 | 93 | 93 | 94 | 96 | 97 | 0.0498409 |
| 19.7 | 101 | 100 | 100 | 102 | 104 | 105 | 106 | 105 | 105 | 104 | 103 | 100 | 98 | 94 | 92 | 90 | 91 | 90 | 90 | 92 | 92 | 93 | 96 | 97 | 0.0562056 |
| 20 | 100 | 101 | 102 | 103 | 104 | 105 | 107 | 108 | 109 | 108 | 108 | 107 | 109 | 105 | 104 | 103 | 99 | 98 | 97 | 96 | 97 | 97 | 100 | 99 | 0.0426244 |
| 21.7 | 101 | 101 | 101 | 102 | 102 | 104 | 105 | 104 | 103 | 104 | 102 | 101 | 101 | 96 | 96 | 93 | 90 | 91 | 92 | 93 | 94 | 95 | 98 | 98 | 0.0471866 |
| 23 | 100 | 100 | 101 | 103 | 104 | 105 | 106 | 107 | 107 | 108 | 111 | 111 | 111 | 107 | 107 | 104 | 105 | 101 | 102 | 98 | 98 | 97 | 100 | 99 | 0.0426005 |
| 24.7 | 100 | 101 | 104 | 104 | 106 | 105 | 105 | 104 | 103 | 102 | 101 | 101 | 100 | 95 | 94 | 92 | 93 | 92 | 91 | 90 | 92 | 94 | 97 | 99 | 0.0523695 |
| 25 | 100 | 100 | 102 | 103 | 105 | 106 | 107 | 109 | 109 | 110 | 110 | 110 | 110 | 107 | 106 | 104 | 103 | 102 | 100 | 99 | 98 | 99 | 98 | 99 | 0.042955 |
| 26.7 | 100 | 100 | 100 | 102 | 102 | 103 | 104 | 103 | 101 | 101 | 99 | 98 | 98 | 94 | 94 | 93 | 93 | 92 | 94 | 93 | 92 | 92 | 92 | 96 | 0.0427556 |
| 27 | 100 | 99 | 101 | 101 | 103 | 104 | 107 | 108 | 108 | 110 | 110 | 110 | 110 | 107 | 105 | 105 | 105 | 102 | 102 | 101 | 100 | 98 | 98 | 98 | 0.0406426 |
| 29.7 | 100 | 99 | 100 | 103 | 104 | 105 | 107 | 109 | 108 | 107 | 106 | 103 | 103 | 98 | 98 | 99 | 98 | 96 | 98 | 96 | 93 | 96 | 98 | 98 | 0.0441919 |
| 30 | 99 | 98 | 100 | 101 | 101 | 103 | 106 | 105 | 105 | 108 | 107 | 108 | 109 | 109 | 108 | 106 | 105 | 104 | 102 | 100 | 99 | 97 | 97 | 98 | 0.0394434 |
| 31.7 | 100 | 98 | 96 | 100 | 103 | 102 | 104 | 105 | 106 | 105 | 105 | 103 | 102 | 100 | 99 | 96 | 96 | 95 | 95 | 95 | 94 | 94 | 94 | 96 | 0.0401367 |
| 32 | 99 | 98 | 100 | 101 | 102 | 103 | 103 | 105 | 105 | 106 | 107 | 108 | 109 | 108 | 107 | 107 | 105 | 102 | 100 | 100 | 98 | 96 | 96 | 96 | 0.0415657 |
| 34 | 100 | 99 | 101 | 103 | 102 | 104 | 105 | 105 | 105 | 107 | 107 | 108 | 110 | 110 | 110 | 108 | 108 | 107 | 105 | 103 | 102 | 101 | 99 | 98 | 0.0370146 |
| 34.7 | 100 | 100 | 100 | 101 | 102 | 103 | 104 | 104 | 106 | 107 | 106 | 106 | 104 | 103 | 102 | 99 | 98 | 96 | 95 | 96 | 96 | 96 | 96 | 97 | 0.038563 |
| 36.7 | 100 | 101 | 102 | 103 | 104 | 106 | 108 | 108 | 108 | 106 | 107 | 107 | 108 | 106 | 104 | 102 | 102 | 98 | 98 | 99 | 95 | 96 | 97 | 98 | 0.0426008 |
| 37.5 | 100 | 101 | 103 | 103 | 104 | 107 | 109 | 110 | 111 | 112 | 112 | 119 | 113 | 114 | 115 | 114 | 112 | 111 | 111 | 109 | 106 | 101 | 100 | 100 | 0.0555045 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Measurement of roundness by Dial gauge deflections of 12-mm Diameter Stainless Steel (SS) Round Bar** **Before Straightening** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Mean values of Dial Gauge Deflection Readings before straightening of 12 mm Stainless Steel (SS) round bar x 0.01 mm** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Angles in Degrees** | | | | | | | | | | | | | | | | | | | | | | | |  |
| Length in cm | 0o | 15o | 30o | 45o | 60o | 75o | 90o | 105o | 120o | 135o | 150o | 165o | 180o | 195o | 210o | 225o | 240o | 255o | 270o | 285o | 300o | 315o | 330o | 345o | STD  DEV (mm) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 | 51 | 50 | 49 | 49 | 50 | 51 | 51 | 52 | 54 | 56 | 58 | 59 | 60 | 61 | 62 | 63 | 62 | 62 | 61 | 60 | 59 | 56 | 54 | 51 | 0.04899 |
| 13 | 53 | 51 | 51 | 51 | 51 | 52 | 53 | 53 | 54 | 56 | 58 | 59 | 60 | 61 | 62 | 62 | 62 | 61 | 61 | 60 | 59 | 57 | 56 | 54 | 0.04109 |
| 15 | 54 | 53 | 53 | 53 | 53 | 53 | 54 | 55 | 55 | 56 | 59 | 59 | 60 | 61 | 62 | 62 | 62 | 61 | 61 | 60 | 60 | 59 | 57 | 56 | 0.03365 |
| 17 | 53 | 52 | 52 | 52 | 52 | 52 | 53 | 53 | 54 | 55 | 57 | 57 | 59 | 59 | 60 | 60 | 60 | 59 | 59 | 58 | 57 | 56 | 55 | 54 | 0.02954 |
| 20 | 51 | 51 | 51 | 51 | 51 | 51 | 52 | 52 | 53 | 54 | 55 | 56 | 57 | 57 | 58 | 58 | 58 | 57 | 57 | 55 | 54 | 54 | 53 | 52 | 0.02601 |
| 22 | 52 | 52 | 52 | 51 | 51 | 52 | 52 | 52 | 53 | 53 | 54 | 55 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 55 | 54 | 53 | 0.02149 |
| 25 | 53 | 52 | 52 | 52 | 52 | 52 | 52 | 53 | 53 | 53 | 54 | 54 | 56 | 56 | 56 | 56 | 56 | 57 | 57 | 56 | 56 | 56 | 55 | 53 | 0.01815 |
| 27 | 52 | 52 | 52 | 51 | 51 | 52 | 52 | 52 | 53 | 53 | 53 | 53 | 55 | 55 | 55 | 56 | 56 | 56 | 55 | 55 | 55 | 54 | 54 | 53 | 0.01558 |
| 31 | 52 | 52 | 51 | 51 | 51 | 51 | 52 | 52 | 52 | 52 | 53 | 53 | 54 | 54 | 54 | 55 | 55 | 55 | 54 | 54 | 54 | 53 | 53 | 53 | 0.01342 |
| 33 | 52 | 51 | 51 | 50 | 50 | 50 | 50 | 51 | 51 | 51 | 52 | 52 | 53 | 54 | 54 | 55 | 55 | 55 | 55 | 55 | 55 | 54 | 54 | 53 | 0.01856 |
| 35 | 51 | 51 | 50 | 49 | 49 | 49 | 49 | 50 | 50 | 51 | 51 | 52 | 53 | 53 | 54 | 55 | 55 | 56 | 56 | 56 | 55 | 55 | 54 | 53 | 0.02435 |
| 37 | 51 | 51 | 50 | 50 | 49 | 49 | 49 | 50 | 50 | 50 | 50 | 51 | 51 | 52 | 52 | 53 | 53 | 54 | 54 | 54 | 54 | 53 | 53 | 52 | 0.01641 |
| 40 | 51 | 51 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 49 | 50 | 50 | 50 | 50 | 51 | 51 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 51 | 0.00961 |
| 42 | 51 | 51 | 50 | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 50 | 50 | 51 | 52 | 52 | 53 | 53 | 53 | 52 | 52 | 0.01354 |
| 45 | 52 | 51 | 51 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 50 | 51 | 52 | 52 | 53 | 53 | 53 | 53 | 52 | 0.01804 |
| 46 | 54 | 53 | 53 | 51 | 51 | 50 | 50 | 50 | 50 | 50 | 51 | 51 | 51 | 52 | 52 | 53 | 54 | 55 | 55 | 56 | 56 | 56 | 56 | 55 | 0.02229 |
| 48 | 56 | 55 | 55 | 54 | 53 | 52 | 52 | 51 | 52 | 52 | 53 | 53 | 54 | 55 | 55 | 56 | 57 | 58 | 59 | 59 | 59 | 59 | 59 | 58 | 0.02725 |
| 50 | 53 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 0.00575 |
| 53 | 50 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 58 | 58 | 57 | 57 | 57 | 56 | 55 | 54 | 51 | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 0.0344 |