

| | Measurement of roundness by Dial gauge deflections of 6-mm Diameter Mild Steel (MS) Round Bar Before Straightening | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| | Mean values of Dial Gauge Deflection Readings before straightening of 6 mm MS 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) |
| 16.3 | 191 | 191 | 194 | 194 | 193 | 194 | 193 | 192 | 190 | 189 | 185 | 184 | 181 | 179 | 179 | 178 | 181 | 182 | 181 | 183 | 187 | 189 | 191 | 190 | 0.05431 |
| 20.0 | 180 | 181 | 182 | 183 | 184 | 186 | 184 | 185 | 187 | 190 | 189 | 183 | 183 | 182 | 177 | 175 | 174 | 171 | 172 | 168 | 167 | 166 | 169 | 173 | 0.07055 |
| 25.0 | 163 | 168 | 171 | 173 | 174 | 176 | 178 | 182 | 183 | 182 | 185 | 182 | 181 | 182 | 178 | 175 | 173 | 172 | 173 | 168 | 167 | 165 | 165 | 166 | 0.05431 |
| 30.0 | 174 | 174 | 176 | 176 | 178 | 182 | 183 | 183 | 185 | 186 | 185 | 188 | 187 | 185 | 186 | 184 | 184 | 185 | 181 | 176 | 177 | 176 | 174 | 174 | 0.05128 |
| 35.0 | 178 | 175 | 176 | 175 | 182 | 184 | 185 | 184 | 182 | 184 | 184 | 185 | 185 | 187 | 187 | 185 | 183 | 180 | 182 | 182 | 176 | 177 | 174 | 175 | 0.04505 |
| 40.0 | 165 | 166 | 164 | 170 | 166 | 171 | 175 | 174 | 176 | 180 | 183 | 183 | 182 | 183 | 185 | 183 | 182 | 176 | 175 | 174 | 176 | 172 | 172 | 167 | 0.06652 |
| 45.0 | 168 | 165 | 166 | 166 | 166 | 165 | 165 | 172 | 175 | 174 | 175 | 176 | 182 | 180 | 182 | 181 | 184 | 184 | 181 | 175 | 176 | 174 | 172 | 169 | 0.06528 |
| 50.0 | 165 | 165 | 167 | 166 | 169 | 171 | 174 | 176 | 176 | 177 | 178 | 180 | 179 | 181 | 183 | 181 | 178 | 172 | 169 | 167 | 167 | 165 | 164 | 161 | 0.06718 |
| 55.0 | 172 | 168 | 163 | 162 | 164 | 165 | 168 | 170 | 173 | 173 | 177 | 178 | 181 | 185 | 181 | 183 | 183 | 183 | 181 | 178 | 180 | 178 | 177 | 175 | 0.06727 |
| 60.0 | 164 | 162 | 163 | 162 | 163 | 168 | 168 | 168 | 170 | 173 | 172 | 175 | 177 | 174 | 179 | 178 | 178 | 177 | 177 | 172 | 168 | 168 | 167 | 166 | 0.05681 |
| 65.0 | 158 | 158 | 158 | 158 | 155 | 157 | 156 | 156 | 156 | 162 | 163 | 166 | 168 | 170 | 172 | 176 | 174 | 175 | 172 | 173 | 169 | 164 | 164 | 163 | 0.06949 |
| 70.0 | 162 | 163 | 158 | 159 | 155 | 153 | 158 | 157 | 156 | 162 | 166 | 171 | 171 | 173 | 175 | 176 | 177 | 176 | 175 | 176 | 175 | 171 | 167 | 165 | 0.07757 |
| 75.0 | 168 | 168 | 166 | 165 | 163 | 165 | 164 | 164 | 167 | 167 | 171 | 173 | 174 | 175 | 180 | 181 | 179 | 179 | 182 | 181 | 175 | 178 | 177 | 175 | 0.06331 |
| 80.0 | 185 | 186 | 185 | 185 | 184 | 184 | 185 | 183 | 178 | 177 | 183 | 182 | 185 | 192 | 191 | 193 | 195 | 196 | 202 | 203 | 200 | 199 | 195 | 196 | 0.07348 |
| 85.0 | 204 | 208 | 205 | 204 | 203 | 200 | 200 | 197 | 192 | 195 | 193 | 193 | 185 | 190 | 192 | 193 | 195 | 198 | 202 | 203 | 205 | 204 | 202 | 203 | 0.05946 |
| 93.0 | 204 | 205 | 203 | 199 | 191 | 192 | 187 | 187 | 183 | 184 | 183 | 182 | 182 | 184 | 188 | 193 | 196 | 199 | 203 | 204 | 205 | 206 | 211 | 208 | 0.09622 |

| | Measurement of roundness by Dial gauge deflections of 8-mm Diameter Mild Steel (MS) Round Bar Before Straightening | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| | Mean values of Dial Gauge Deflection Readings before straightening of 8 mm MS 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 | 173 | 166 | 162 | 158 | 155 | 153 | 150 | 148 | 146 | 147 | 149 | 155 | 159 | 167 | 149 | 149 | 153 | 158 | 159 | 160 | 159 | 158 | 155 | 152 | 0.068437 |
| 17 | 152 | 150 | 149 | 145 | 141 | 142 | 138 | 135 | 131 | 128 | 126 | 126 | 128 | 130 | 135 | 140 | 145 | 150 | 155 | 157 | 157 | 158 | 157 | 154 | 0.109782 |
| 22 | 153 | 153 | 150 | 148 | 146 | 146 | 142 | 139 | 137 | 135 | 130 | 128 | 127 | 126 | 127 | 131 | 136 | 141 | 145 | 151 | 154 | 156 | 156 | 154 | 0.102921 |
| 27 | 149 | 149 | 148 | 146 | 144 | 143 | 140 | 140 | 138 | 134 | 131 | 129 | 126 | 124 | 123 | 122 | 125 | 129 | 134 | 138 | 142 | 145 | 148 | 149 | 0.093599 |
| 32 | 142 | 143 | 143 | 143 | 142 | 142 | 139 | 136 | 137 | 135 | 135 | 132 | 131 | 127 | 124 | 122 | 121 | 122 | 125 | 127 | 131 | 134 | 137 | 140 | 0.074103 |
| 36 | 126 | 128 | 130 | 133 | 133 | 134 | 132 | 130 | 131 | 132 | 132 | 131 | 129 | 128 | 124 | 120 | 119 | 118 | 117 | 117 | 117 | 119 | 122 | 125 | 0.059805 |
| 40 | 120 | 125 | 126 | 129 | 131 | 133 | 134 | 135 | 134 | 133 | 132 | 131 | 131 | 130 | 128 | 126 | 124 | 121 | 119 | 116 | 116 | 117 | 120 | 121 | 0.06303 |
| 45 | 115 | 119 | 122 | 125 | 129 | 131 | 133 | 133 | 132 | 132 | 132 | 132 | 132 | 132 | 131 | 130 | 126 | 119 | 121 | 118 | 116 | 116 | 115 | 115 | 0.069933 |
| 50 | 116 | 115 | 118 | 119 | 126 | 129 | 133 | 136 | 136 | 137 | 134 | 135 | 135 | 134 | 133 | 134 | 133 | 129 | 126 | 121 | 120 | 115 | 114 | 113 | 0.084929 |
| 55 | 113 | 112 | 111 | 108 | 107 | 113 | 118 | 121 | 125 | 127 | 129 | 127 | 122 | 123 | 129 | 127 | 128 | 129 | 130 | 126 | 119 | 116 | 115 | 113 | 0.074717 |
| 60 | 120 | 117 | 116 | 117 | 120 | 124 | 127 | 132 | 138 | 141 | 142 | 143 | 143 | 141 | 137 | 137 | 137 | 137 | 137 | 135 | 135 | 131 | 124 | 122 | 0.090289 |
| 65 | 122 | 121 | 116 | 116 | 116 | 118 | 122 | 124 | 126 | 133 | 138 | 139 | 140 | 140 | 138 | 136 | 135 | 133 | 133 | 133 | 132 | 131 | 128 | 126 | 0.081594 |
| 70 | 121 | 115 | 113 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 120 | 122 | 125 | 127 | 129 | 130 | 131 | 131 | 129 | 129 | 129 | 129 | 125 | 123 | 0.066821 |
| 75 | 125 | 124 | 120 | 116 | 114 | 113 | 113 | 113 | 115 | 117 | 117 | 120 | 125 | 126 | 127 | 128 | 129 | 130 | 128 | 125 | 125 | 126 | 127 | 126 | 0.058347 |
| 80 | 123 | 122 | 121 | 119 | 118 | 115 | 115 | 113 | 113 | 113 | 114 | 115 | 119 | 121 | 125 | 127 | 128 | 128 | 128 | 128 | 127 | 126 | 125 | 124 | 0.056169 |
| 85 | 119 | 118 | 118 | 118 | 116 | 113 | 111 | 110 | 109 | 107 | 107 | 107 | 108 | 109 | 110 | 113 | 115 | 117 | 119 | 120 | 120 | 121 | 120 | 119 | 0.050076 |
| 90 | 117 | 116 | 118 | 118 | 119 | 119 | 116 | 114 | 111 | 110 | 109 | 106 | 105 | 103 | 103 | 105 | 108 | 110 | 112 | 115 | 116 | 117 | 115 | 117 | 0.052789 |
| 95 | 120 | 120 | 120 | 120 | 121 | 120 | 121 | 117 | 116 | 114 | 112 | 109 | 107 | 105 | 105 | 104 | 106 | 108 | 112 | 114 | 116 | 118 | 119 | 119 | 0.059110 |
| 101.3 | 121 | 122 | 120 | 120 | 120 | 121 | 120 | 120 | 119 | 117 | 117 | 113 | 112 | 109 | 107 | 107 | 107 | 108 | 110 | 113 | 116 | 117 | 118 | 119 | 0.051086 |
| 106.3 | 121 | 123 | 122 | 122 | 121 | 121 | 120 | 117 | 116 | 116 | 112 | 110 | 109 | 109 | 113 | 116 | 119 | 123 | 120 | 124 | 125 | 125 | 124 | 122 | 0.051009 |
| 111.3 | 127 | 125 | 125 | 123 | 123 | 120 | 118 | 174 | 139 | 125 | 118 | 119 | 123 | 126 | 128 | 131 | 130 | 130 | 131 | 129 | 130 | 129 | 126 | 126 | 0.108365 |
| 116.3 | 129 | 126 | 124 | 121 | 118 | 116 | 115 | 114 | 115 | 117 | 119 | 123 | 124 | 124 | 126 | 125 | 126 | 126 | 127 | 127 | 127 | 127 | 127 | 127 | 0.046830 |
| 121.3 | 126 | 122 | 122 | 122 | 122 | 125 | 130 | 135 | 135 | 136 | 140 | 135 | 134 | 136 | 136 | 135 | 133 | 132 | 132 | 132 | 132 | 131 | 128 | 128 | 0.052523 |
| 126.3 | 122 | 120 | 118 | 115 | 117 | 119 | 122 | 124 | 122 | 125 | 126 | 127 | 125 | 127 | 131 | 132 | 133 | 133 | 135 | 134 | 130 | 130 | 129 | 128 | 0.056357 |
| 131.3 | 120 | 119 | 119 | 123 | 127 | 130 | 132 | 134 | 134 | 135 | 135 | 134 | 134 | 135 | 134 | 133 | 133 | 131 | 132 | 131 | 129 | 128 | 126 | 122 | 0.053588 |
| 136.3 | 119 | 116 | 117 | 117 | 116 | 116 | 117 | 118 | 118 | 121 | 125 | 127 | 129 | 129 | 128 | 130 | 129 | 127 | 128 | 126 | 125 | 122 | 120 | 117 | 0.051483 |
| 141.3 | 117 | 116 | 116 | 115 | 118 | 120 | 119 | 120 | 127 | 128 | 129 | 129 | 130 | 130 | 129 | 128 | 129 | 128 | 125 | 122 | 120 | 117 | 118 | 113 | 0.057129 |

Measurement of roundness by Dial gauge deflections of 10-mm Diameter Mild Steel (MS) Round Bar Before Straightening
Mean values of Dial Gauge Deflection Readings before straightening of 10 mm Mild Steel 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) |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14.5 | 99 | 96 | 97 | 94 | 93 | 92 | 95 | 95 | 94 | 94 | 94 | 94 | 94 | 91 | 89 | 89 | 89 | 91 | 90 | 90 | 90 | 92 | 93 | 95 | 0.0253982 |
| 17 | 102 | 102 | 100 | 100 | 100 | 99 | 102 | 100 | 100 | 97 | 97 | 95 | 98 | 94 | 95 | 95 | 94 | 95 | 94 | 95 | 95 | 93 | 95 | 95 | 0.0283701 |
| 20 | 102 | 99 | 98 | 97 | 98 | 96 | 97 | 94 | 95 | 97 | 97 | 96 | 97 | 96 | 97 | 95 | 96 | 95 | 97 | 96 | 97 | 95 | 96 | 96 | 0.0158141 |
| 23.5 | 98 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 95 | 95 | 94 | 94 | 93 | 93 | 93 | 92 | 93 | 93 | 94 | 94 | 94 | 95 | 95 | 0.0152029 |
| 26 | 92 | 92 | 92 | 90 | 90 | 91 | 91 | 90 | 90 | 90 | 90 | 90 | 89 | 89 | 89 | 88 | 88 | 87 | 87 | 88 | 88 | 88 | 89 | 89 | 0.0154122 |
| 29 | 87 | 87 | 88 | 88 | 88 | 88 | 88 | 88 | 89 | 88 | 88 | 87 | 88 | 86 | 86 | 85 | 84 | 84 | 84 | 83 | 84 | 84 | 85 | 85 | 0.0177151 |
| 31.5 | 98 | 95 | 94 | 95 | 94 | 92 | 94 | 95 | 95 | 95 | 95 | 94 | 96 | 94 | 93 | 91 | 92 | 91 | 90 | 89 | 89 | 89 | 90 | 91 | 0.025553 |
| 34 | 96 | 93 | 94 | 93 | 94 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 96 | 93 | 93 | 93 | 93 | 92 | 91 | 90 | 91 | 90 | 90 | 91 | 0.0185525 |
| 37 | 92 | 90 | 90 | 90 | 91 | 92 | 93 | 93 | 93 | 93 | 92 | 108 | 92 | 91 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 90 | 0.0393474 |
| 40 | 91 | 89 | 89 | 89 | 89 | 89 | 90 | 89 | 90 | 90 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 90 | 89 | 89 | 89 | 89 | 90 | 0.0053236 |
| 43 | 92 | 92 | 92 | 91 | 92 | 92 | 91 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 88 | 89 | 90 | 89 | 89 | 88 | 87 | 89 | 89 | 89 | 0.0177617 |
| 46 | 95 | 91 | 93 | 93 | 93 | 94 | 94 | 93 | 93 | 94 | 92 | 91 | 94 | 93 | 88 | 89 | 88 | 89 | 88 | 87 | 88 | 89 | 90 | 90 | 0.0247392 |
| 49 | 94 | 90 | 91 | 91 | 93 | 92 | 94 | 94 | 93 | 93 | 93 | 90 | 94 | 91 | 90 | 90 | 89 | 89 | 89 | 89 | 89 | 90 | 90 | 90 | 0.0186489 |
| 52 | 96 | 95 | 97 | 95 | 96 | 97 | 98 | 98 | 98 | 96 | 95 | 94 | 95 | 95 | 94 | 94 | 93 | 93 | 93 | 92 | 90 | 90 | 91 | 90 | 0.0251318 |
| 55 | 92 | 92 | 94 | 94 | 93 | 92 | 95 | 92 | 91 | 92 | 92 | 91 | 94 | 92 | 92 | 91 | 93 | 91 | 89 | 88 | 88 | 88 | 88 | 90 | 0.019766 |
| 58 | 98 | 97 | 99 | 98 | 97 | 97 | 96 | 96 | 97 | 97 | 100 | 97 | 98 | 100 | 99 | 100 | 99 | 97 | 95 | 93 | 97 | 98 | 98 | 98 | 0.0159292 |
| 61 | 98 | 98 | 97 | 96 | 97 | 98 | 98 | 98 | 98 | 98 | 99 | 100 | 99 | 98 | 96 | 96 | 98 | 95 | 97 | 96 | 96 | 95 | 95 | 96 | 0.0146747 |
| 64 | 93 | 91 | 92 | 91 | 92 | 93 | 92 | 109 | 91 | 90 | 89 | 89 | 90 | 88 | 88 | 88 | 89 | 88 | 88 | 90 | 89 | 89 | 90 | 90 | 0.0415668 |
| 67 | 164 | 161 | 161 | 161 | 157 | 157 | 157 | 155 | 158 | 155 | 155 | 156 | 156 | 156 | 157 | 153 | 155 | 155 | 156 | 154 | 151 | 154 | 154 | 154 | 0.0301126 |
| 70 | 158 | 155 | 156 | 155 | 154 | 154 | 155 | 155 | 154 | 153 | 152 | 152 | 152 | 152 | 154 | 157 | 153 | 154 | 153 | 154 | 155 | 154 | 154 | 155 | 0.0148382 |
| 73 | 104 | 100 | 100 | 99 | 99 | 102 | 100 | 99 | 100 | 100 | 102 | 96 | 100 | 99 | 99 | 101 | 98 | 99 | 99 | 99 | 101 | 101 | 98 | 100 | 0.0151658 |
| 76 | 105 | 92 | 92 | 92 | 92 | 91 | 91 | 91 | 91 | 91 | 93 | 91 | 93 | 93 | 93 | 93 | 93 | 93 | 91 | 92 | 90 | 90 | 90 | 91 | 0.0284741 |
| 79 | 99 | 99 | 93 | 94 | 92 | 91 | 90 | 94 | 93 | 98 | 92 | 91 | 94 | 95 | 95 | 96 | 97 | 97 | 99 | 94 | 93 | 92 | 94 | 92 | 0.0271762 |
| 82 | 98 | 96 | 96 | 96 | 95 | 96 | 96 | 96 | 96 | 96 | 96 | 95 | 95 | 95 | 96 | 96 | 96 | 96 | 95 | 95 | 96 | 96 | 96 | 96 | 0.0063171 |
| 85 | 97 | 98 | 97 | 97 | 98 | 98 | 99 | 99 | 95 | 94 | 97 | 94 | 92 | 92 | 93 | 95 | 94 | 95 | 96 | 93 | 97 | 96 | 95 | 94 | 0.0219486 |
| 88 | 93 | 95 | 97 | 97 | 97 | 97 | 99 | 95 | 98 | 98 | 97 | 98 | 99 | 98 | 97 | 97 | 98 | 97 | 95 | 93 | 95 | 96 | 95 | 97 | 0.0159041 |
| 91 | 94 | 93 | 95 | 93 | 93 | 93 | 95 | 94 | 94 | 94 | 92 | 92 | 98 | 94 | 91 | 92 | 92 | 91 | 90 | 91 | 91 | 91 | 91 | 89 | 0.019437 |
| 94 | 97 | 96 | 98 | 98 | 99 | 95 | 100 | 98 | 96 | 96 | 91 | 93 | 94 | 94 | 94 | 94 | 92 | 92 | 95 | 95 | 94 | 95 | 95 | 97 | 0.0219155 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
| 97 | 151 | 150 | 150 | 150 | 151 | 151 | 150 | 150 | 147 | 147 | 147 | 148 | 148 | 146 | 146 | 146 | 146 | 146 | 146 | 147 | 147 | 147 | 147 | 149 | 0.0178126 |
| 100 | 153 | 150 | 151 | 150 | 152 | 157 | 159 | 160 | 156 | 156 | 154 | 155 | 154 | 155 | 155 | 155 | 155 | 155 | 155 | 156 | 157 | 157 | 161 | 163 | 0.032674 |
| 102 | 90 | 87 | 87 | 86 | 83 | 83 | 85 | 85 | 83 | 81 | 82 | 82 | 83 | 82 | 84 | 82 | 85 | 86 | 84 | 85 | 90 | 90 | 91 | 88 | 0.0288303 |
| 104 | 85 | 83 | 82 | 83 | 83 | 79 | 81 | 79 | 80 | 78 | 77 | 77 | 80 | 78 | 77 | 77 | 77 | 78 | 76 | 78 | 79 | 81 | 79 | 80 | 0.0232452 |
| 107 | 94 | 92 | 93 | 93 | 92 | 92 | 91 | 90 | 90 | 89 | 89 | 89 | 88 | 88 | 88 | 88 | 87 | 87 | 88 | 89 | 89 | 90 | 90 | 91 | 0.0209637 |
| 111 | 101 | 98 | 97 | 93 | 94 | 93 | 91 | 91 | 86 | 87 | 87 | 87 | 90 | 89 | 93 | 89 | 93 | 90 | 86 | 82 | 89 | 92 | 93 | 93 | 0.0428827 |
| 114 | 99 | 99 | 99 | 101 | 102 | 100 | 103 | 100 | 98 | 97 | 97 | 99 | 103 | 99 | 99 | 96 | 97 | 97 | 97 | 100 | 98 | 97 | 97 | 100 | 0.0182502 |
| 118 | 102 | 100 | 100 | 100 | 99 | 97 | 98 | 97 | 95 | 89 | 89 | 90 | 90 | 90 | 88 | 85 | 86 | 87 | 88 | 90 | 91 | 92 | 95 | 96 | 0.0508057 |
| 122 | 89 | 85 | 86 | 87 | 88 | 86 | 87 | 86 | 85 | 83 | 83 | 77 | 84 | 85 | 83 | 84 | 84 | 82 | 85 | 85 | 80 | 79 | 85 | 84 | 0.0278409 |
| 127 | 88 | 85 | 85 | 87 | 89 | 87 | 84 | 81 | 80 | 78 | 79 | 80 | 82 | 83 | 82 | 80 | 82 | 81 | 85 | 84 | 84 | 81 | 84 | 84 | 0.0277348 |
| 131 | 95 | 95 | 93 | 93 | 94 | 91 | 90 | 87 | 87 | 88 | 89 | 90 | 92 | 90 | 91 | 91 | 89 | 90 | 89 | 91 | 92 | 93 | 92 | 90 | 0.0215768 |
| 138 | 94 | 99 | 99 | 97 | 98 | 96 | 98 | 97 | 97 | 98 | 98 | 98 | 98 | 99 | 98 | 97 | 97 | 98 | 98 | 96 | 97 | 95 | 97 | 97 | 0.0109086 |

Measurement of roundness by Dial gauge deflections of 12-mm Diameter Mild Steel (MS) Round Bar Before Straightening
Mean values of Dial Gauge Deflection Readings before straightening of 12 mm Mild Steel 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 | 59 | 59 | 60 | 60 | 62 | 61 | 63 | 64 | 64 | 66 | 66 | 66 | 67 | 67 | 68 | 67 | 68 | 66 | 66 | 64 | 63 | 62 | 61 | 61 | 0.02946 |
| 17 | 60 | 61 | 62 | 62 | 63 | 63 | 65 | 66 | 67 | 68 | 68 | 68 | 69 | 69 | 69 | 68 | 69 | 67 | 67 | 65 | 64 | 64 | 60 | 62 | 0.03033 |
| 22 | 62 | 63 | 64 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 70 | 70 | 70 | 69 | 68 | 67 | 65 | 65 | 59 | 63 | 0.03294 |
| 27 | 66 | 67 | 67 | 68 | 69 | 69 | 72 | 72 | 73 | 74 | 74 | 75 | 75 | 74 | 74 | 74 | 74 | 72 | 72 | 70 | 68 | 68 | 65 | 67 | 0.0324 |
| 32 | 70 | 71 | 71 | 72 | 73 | 73 | 76 | 77 | 77 | 78 | 78 | 79 | 79 | 78 | 78 | 79 | 77 | 76 | 76 | 73 | 72 | 70 | 70 | 70 | 0.03297 |
| 37 | 66 | 67 | 67 | 68 | 69 | 69 | 71 | 72 | 73 | 74 | 74 | 75 | 75 | 74 | 74 | 75 | 74 | 72 | 72 | 69 | 69 | 68 | 67 | 67 | 0.03038 |
| 43 | 62 | 64 | 64 | 64 | 65 | 66 | 67 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 70 | 69 | 69 | 66 | 66 | 65 | 64 | 64 | 0.02864 |
| 47 | 63 | 64 | 64 | 64 | 65 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 70 | 69 | 69 | 66 | 66 | 65 | 64 | 63 | 0.02892 |
| 53 | 64 | 64 | 64 | 64 | 64 | 65 | 65 | 67 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 70 | 70 | 69 | 67 | 66 | 65 | 64 | 63 | 0.02967 |
| 57 | 62 | 62 | 62 | 63 | 63 | 63 | 64 | 65 | 66 | 68 | 69 | 69 | 69 | 70 | 69 | 70 | 69 | 69 | 67 | 66 | 65 | 64 | 63 | 62 | 0.03016 |
| 62 | 61 | 60 | 60 | 61 | 61 | 62 | 62 | 64 | 65 | 66 | 68 | 68 | 68 | 69 | 68 | 69 | 69 | 68 | 66 | 65 | 64 | 63 | 62 | 61 | 0.03098 |
| 67 | 62 | 61 | 61 | 61 | 61 | 62 | 62 | 63 | 64 | 65 | 66 | 67 | 67 | 68 | 67 | 68 | 68 | 68 | 67 | 66 | 65 | 63 | 62 | 62 | 0.02647 |

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|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------|
| 73 | 63 | 63 | 62 | 62 | 61 | 61 | 62 | 63 | 64 | 64 | 65 | 66 | 66 | 67 | 67 | 68 | 68 | 68 | 68 | 67 | 65 | 64 | 62 | 62 | 0.02377 |
| 77 | 61 | 60 | 60 | 59 | 59 | 59 | 59 | 60 | 61 | 61 | 62 | 62 | 63 | 63 | 63 | 64 | 65 | 65 | 64 | 63 | 62 | 61 | 60 | 60 | 0.01878 |
| 83 | 58 | 58 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 59 | 60 | 60 | 60 | 61 | 61 | 61 | 60 | 59 | 58 | 57 | 57 | 0.01402 |
| 87 | 55 | 55 | 55 | 54 | 54 | 54 | 55 | 55 | 55 | 55 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 55 | 55 | 53 | 53 | 0.01187 |
| 93 | 51 | 52 | 52 | 51 | 52 | 52 | 53 | 52 | 52 | 53 | 53 | 53 | 53 | 54 | 54 | 54 | 54 | 53 | 52 | 51 | 51 | 51 | 49 | 50 | 0.01298 |
| 98 | 55 | 55 | 55 | 54 | 54 | 55 | 55 | 55 | 56 | 56 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 57 | 56 | 55 | 55 | 54 | 53 | 0.01377 |
| 104 | 58 | 58 | 57 | 57 | 57 | 57 | 58 | 58 | 59 | 60 | 60 | 60 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 61 | 60 | 58 | 58 | 57 | 0.0178 |