

| Outside diameter | |
|------------------|--------|
| 15 | 0.2344 |
| 16 | 0.2500 |
| 17 | 0.2656 |
| 18 | 0.2813 |
| 19 | 0.2969 |
| 20 | 0.3125 |
| 21 | 0.3281 |
| 22 | 0.3438 |
| 23 | 0.3594 |
| 24 | 0.3750 |
| 25 | 0.3906 |
| 26 | 0.4063 |

| Common insert size | | |
|--------------------|------|------|
| 1813 | 1814 | 1920 |
| 1713 | 1714 | 1820 |
| 1913 | 1914 | 2020 |
| 2413 | 2412 | 2415 |

| Wall thickness | | |
|----------------|--------|------------|
| | 1 wall | both walls |
| 12 | 0.012 | 0.024 |
| 13 | 0.013 | 0.026 |
| 14 | 0.014 | 0.028 |
| 15 | 0.015 | 0.030 |
| 16 | 0.016 | 0.032 |
| 17 | 0.017 | 0.034 |
| 18 | 0.018 | 0.036 |
| 19 | 0.019 | 0.038 |
| 20 | 0.020 | 0.040 |

| Shaft size by size | I.D. | Spine BDM | Spine O.L.'s chart |
|--------------------|--------|-----------|--------------------|
| 1616 | 0.2180 | 28 | 25/30 |
| 1713 | 0.2396 | | |
| 1714 | 0.2376 | | |
| 1716 | 0.2336 | 39 | 30/35 |
| 1813 | 0.2553 | | |
| 1814 | 0.2533 | | |
| 1816 | 0.2493 | 44 | 35/40 |
| 1820 | 0.2413 | | |
| 1913 | 0.2709 | | |
| 1914 | 0.2689 | | |
| 1916 | 0.2649 | 50 | 45/50 |
| 1918 | 0.2609 | | |
| 1920 | 0.2569 | 64 | |
| 2012 | 0.2885 | | |
| 2013 | 0.2865 | 53 | |
| 2014 | 0.2845 | | |
| 2016 | 0.2805 | 61 | 55/60 |
| 2018 | 0.2765 | 65 | 65/70 |
| 2020 | 0.2725 | 73 | 75 |
| 2112 | 0.3041 | | |
| 2113 | 0.3021 | | |
| 2114 | 0.3001 | 62 | |
| 2115 | 0.2981 | 60/68 | |
| 2117 | 0.2941 | 78 | |
| 2212 | 0.3198 | | |
| 2213 | 0.3178 | 68 | |
| 2215 | 0.3138 | 75 | |
| 2216 | 0.3118 | 80 | |
| 2217 | 0.3098 | 89 | |
| 2219 | 0.3058 | 90 | |
| 2312 | 0.3354 | 76 | |
| 2314 | 0.3314 | 80 | |
| 2315 | 0.3294 | 88 | |
| 2317 | 0.3254 | 105 | |
| 2412 | 0.3510 | | |
| 2413 | 0.3490 | 86 | |
| 2415 | 0.3450 | | |
| 2419 | 0.3370 | 120 | |
| 2512 | 0.3666 | 94 | |
| 2514 | 0.3626 | 105 | |
| 2613 | 0.3803 | 115 | |

| Shaft size by spine | Spine |
|---------------------|-------|
| 1616 | 28 |
| 1716 | 39 |
| 1816 | 44 |
| 1916 | 50 |
| 2013 | 53 |
| 1918 | 58 |
| 2016 | 61 |
| 2114 | 62 |
| 1920 | 64 |
| 2115 | 68 |
| 2018 | 65 |
| 2213 | 68 |
| 2020 | 73 |
| 2215 | 75 |
| 2312 | 76 |
| 2117 | 78 |
| 2216 | 80 |
| 2314 | 80 |
| 2413 | 86 |
| 2315 | 87 |
| 2217 | 89 |
| 2219 | 90 |
| 2512 | 94 |
| 2317 | 105 |
| 2514 | 105?? |
| 2613 | 115 |
| 2419 | 120 |

0.0073 perfect
0.0052 too tight?
0.0129 too sloppy

| Inside fit range | | | |
|--------------------|--------|------|-----------------------|
| Shaft size by I.D. | I.D. | | calculated difference |
| 1616 | 0.2180 | | |
| 1716 | 0.2336 | | |
| 1714 | 0.2376 | 15xx | 0.0033 |
| 1713 | 0.2396 | | 0.2396 |
| 1820 | 0.2413 | | 0.0069 |
| 1816 | 0.2493 | | 0.0149 |
| 1814 | 0.2533 | 16xx | 0.0032 |
| 1813 | 0.2553 | | 0.0052 |
| 1920 | 0.2569 | | 0.0069 |
| 1918 | 0.2609 | | 0.0109 |
| 1916 | 0.2649 | | 0.0149 |
| 1914 | 0.2689 | 17xx | 0.0032 |
| 1913 | 0.2709 | | 0.0052 |
| 2020 | 0.2725 | | 0.0069 |
| 2018 | 0.2765 | | 0.0109 |
| 2016 | 0.2805 | | 0.0149 |
| 2014 | 0.2845 | 18xx | 0.0189 |
| 2013 | 0.2865 | | 0.0052 |
| 2012 | 0.2885 | | 0.0072 |
| 2117 | 0.2941 | | 0.0129 |
| 2115 | 0.2981 | 19xx | 0.0012 |
| 2114 | 0.3001 | | 0.0032 |
| 2113 | 0.3021 | | 0.0052 |
| 2112 | 0.3041 | | 0.0072 |
| 2219 | 0.3058 | | 0.0089 |
| 2216 | 0.3118 | | 0.0149 |
| 2215 | 0.3138 | 20xx | 0.0012 |
| 2213 | 0.3178 | | 0.0052 |
| 2212 | 0.3198 | | 0.0072 |
| 2317 | 0.3254 | | 0.0129 |
| 2315 | 0.3294 | 21xx | 0.0012 |
| 2314 | 0.3314 | | 0.0032 |
| 2312 | 0.3354 | | 0.0072 |
| 2419 | 0.3370 | | 0.0089 |
| 2415 | 0.3450 | 22xx | 0.0012 |
| 2413 | 0.3490 | | 0.0052 |
| 2412 | 0.3510 | | 0.0072 |
| 2514 | 0.3626 | 23xx | 0.0032 |
| 2512 | 0.3666 | | 0.0072 |
| 2613 | 0.3803 | 24xx | 0.0052 |