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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ГОСТ 397-79 : ШПЛИНТЫ**http://www.metiz.net/files/catalog_images/397-79_1_0.jpg?1239353691 Настоящий стандарт распространяется на шплинты с условным диаметром от 0,6 до 20 мм.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Условный диаметр шплинта d\*0 | 0,6 | 0,8 | 1,0 | 1,2 | 1,6 | 2,0 | 2,5 | 3,2 | 4,0 | 5,0 | 6,3 | 8,0 | 10,0 | 13,0 | 16,0 | 20,0 |
| d | наиб. | 0,5 | 0,7 | 0,9 | 1,0 | 1,4 | 1,8 | 2,3 | 2,9 | 3,7 | 4,6 | 5,9 | 7,5 | 9,5 | 12,4 | 15,4 | 19,3 |
| наим. | 0,4 | 0,6 | 0,8 | 0,9 | 1,3 | 1,7 | 2,1 | 2,7 | 3,5 | 4,4 | 5,7 | 7,3 | 9,3 | 12,1 | 15,1 | 19,0 |
| l2 | наиб. | 1,6 | 1,6 | 1,6 | 2,5 | 2,5 | 2,5 | 2,5 | 3,2 | 4,0 | 4,0 | 4,0 | 4,0 | 6,3 | 6,3 | 6,3 | 6,3 |
| наим. | 0,8 | 0,8 | 0,8 | 1,3 | 1,3 | 1,3 | 1,3 | 1,6 | 2,0 | 2,0 | 2,0 | 2,0 | 3,2 | 3,2 | 3,2 | 3,2 |
| l1≈ | 2,0 | 2,4 | 3,0 | 3,0 | 3,2 | 4,0 | 5,0 | 6,4 | 8,0 | 10,0 | 12,6 | 16,0 | 20,0 | 26,0 | 32,0 | 40,0 |
| D | наиб. | 1,0 | 1,4 | 1,8 | 2,0 | 2,8 | 3,6 | 4,6 | 5,8 | 7,4 | 9,2 | 11,8 | 15,0 | 19,0 | 24,8 | 30,8 | 38,6 |
| наим. | 0,9 | 1,2 | 1,6 | 1,7 | 2,4 | 3,2 | 4,0 | 5,1 | 6,5 | 8,0 | 10,3 | 13,1 | 16,6 | 21,7 | 27,0 | 33,8 |
| Рекомендуе­мые диаметрысоединяемых деталей | Болт | свыше | - | 2,5 | 3,5 | 4,5 | 5,5 | 7,0 | 9,0 | 11,0 | 14,0 | 20,0 | 27,0 | 39,0 | 56,0 | 80,0 | 120,0 | 170,0 |
| до | 2,5 | 3,5 | 4,5 | 5,5 | 7,0 | 9,0 | 11,0 | 14,0 | 20,0 | 27,0 | 39,0 | 56,0 | 80,0 | 120,0 | 170,0 | - |
| Штифт,ось | свыше | - | 2,0 | 3,0 | 4,0 | 5,0 | 6,0 | 8,0 | 9,0 | 12,0 | 17,0 | 23,0 | 29,0 | 44,0 | 69,0 | 110,0 | 160,0 |
| до | 2,0 | 3,0 | 4,0 | 5,0 | 6,0 | 8,0 | 9,0 | 12,0 | 17,0 | 23,0 | 29,0 | 44,0 | 69,0 | 110,0 | 160,0 | - |

|  |  |
| --- | --- |
| Длина шплинта | Теоретическая масса 1000шт. стальных шплинтов, кг, при условном диаметре d0 в мм |
| Но-мин. | Пред, откл. | 0,6 | 0,8 | 1,0 | 1,2 | 1,6 | 2,0 | 2,5 | 3,2 | 4,0 | 5,0 | 6,3 | 8,0 | 10 | 13 | 16 | 20 |
| 4 | ±0,5 | 0,008 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | 0,010 | 0,021 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | 0,011 | 0,024 | 0,042 |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | 0,013 | 0,029 | 0,053 | 0,068 | 0,140 |   |   |   |   |   |   |   |   |   |   |   |
| 10 | ± 0,8 | 0,016 | 0,034 | 0,061 | 0,079 | 0,162 | 0,268 |   |   |   |   |   |   |   |   |   |   |
| 12 | 0,018 | 0,039 | 0,070 | 0,090 | 0,185 | 0,324 | 0,544 |   |   |   |   |   |   |   |   |   |
| 14 |   | 0,044 | 0,079 | 0,101 | 0,207 | 0,362 | 0,603 | 1,08 |   |   |   |   |   |   |   |   |
| 16 |   | 0,050 | 0,088 | 0,112 | 0,230 | 0,400 | 0,663 | 1,17 | 2,07 |   |   |   |   |   |   |   |
| 18 |   |   | 0,097 | 0,123 | 0,252 | 0,441 | 0,723 | 1,27 | 2,23 |   |   |   |   |   |   |   |
| 20 |   |   | 0,106 | 0,134 | 0,275 | 0,479 | 0,782 | 1,37 | 2,39 | 3,93 | 7,3 |   |   |   |   |   |
| 22 |   |   |   | 0,146 | 0,279 | 0,517 | 0,842 | 1,46 | 2,55 | 4,18 | 7,7 |   |   |   |   |   |
| 25 | ±1.2 |   |   |   | 0,162 | 0,331 | 0,573 | 0,931 | 1,61 | 2,79 | 4,55 | 8,4 |   |   |   |   |   |
| 28 |   |   |   |   | 0,365 | 0,630 | 1,021 | 1,75 | 3,03 | 4,93 | 9,0 |   |   |   |   |   |
| 32 |   |   |   |   | 0.410 | 0,705 | 1,140 | 1,95 | 3,35 | 5,43 | 9,8 |   |   |   |   |   |
| 36 |   |   |   |   |   | 0,781 | 1,268 | 2,14 | 3,67 | 5,93 | 10,7 |   |   |   |   |   |
| 40 |   |   |   |   |   | 0,856 | 1,387 | 2,33 | 3,99 | 6,43 | 11,5 | 19,7 |   |   |   |   |
| 45 |   |   |   |   |   |   | 1.536 | 2,58 | 4,39 | 7,05 | 12.5 | 21,7 | 37,9 |   |   |   |

|  |  |
| --- | --- |
| Длина шплинта | Теоретическая масса 1000шт. стальных шплинтов, кг, при условном диаметре d0 в мм |
| Но-мин. | Пред. откл. | 0,6 | 0,8 | 1,0 | 1,2 | 1,6 | 2,0 | 2,5 | 3,2 | 4,0 | 5,0 | 6,3 | 8,0 | 10 | 13 | 16 | 20 |
| 50 | ±1.2 |   |   |   |   |   |   | 1,685 | 2,82 | 4,79 | 7,80 | 13,6 | 23,3 | 40,6 |   |   |   |
| 56 |   |   |   |   |   |   |   | 3,11 | 5,27 | 8,55 | 14,8 | 25,4 | 43,9 |   |   |   |
| 63 | ±2 |   |   |   |   |   |   |   | 3,44 | 5,83 | 9,43 | 16,3 | 27,7 | 47,7 |   |   |   |
| 71 |   |   |   |   |   |   |   |   | 6,47 | 10,42 | 17,9 | 30,4 | 52,0 | 97 |   |   |
| 80 | ±3 |   |   |   |   |   |   |   |   | 7,18 | 11,55 | 19,8 | 33,5 | 57,0 | 105 |   |   |
| 90 |   |   |   |   |   |   |   |   |   | 12,80 | 21,9 | 36,8 | 62,4 | 115 |   |   |
| 100 |   |   |   |   |   |   |   |   |   | 14,04 | 23,9 | 40,2 | 67,8 | 124 |   |   |
| 112 |   |   |   |   |   |   |   |   |   |   | 26,4 | 44,3 | 74,3 | 136 | 215 |   |
| 125 |   |   |   |   |   |   |   |   |   |   | 29,1 | 48,7 | 81,4 | 148 | 233 |   |
| 140 |   |   |   |   |   |   |   |   |   |   |   | 53,7 | 89,6 | 162 | 255 |   |
| 160 |   |   |   |   |   |   |   |   |   |   |   | 60,6 | 100,5 | 181 | 284 | 467 |
| 180 |   |   |   |   |   |   |   |   |   |   |   |   | 111,4 | 200 | 312 | 512 |
| 200 |   |   |   |   |   |   |   |   |   |   |   |   | 122,3 | 219 | 341 | 558 |
| 224 |   |   |   |   |   |   |   |   |   |   |   |   |   | 261 | 375 | 612 |
| 250 |   |   |   |   |   |   |   |   |   |   |   |   |   | 266 | 413 | 671 |
| 280 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 456 | 738 |

 Примечание.   Для определения массы шплинтов, изготовляемых из других материалов, значения массы, указанные в таблице, должны быть умножены на коэффициент: 1,080 - для латуни;   0,356 - для алюминиевого сплава. Шплинты обозначаются по схеме, указанной на примере шплинта с условным диаметром 5 мм, длиной 28 мм, из латуни Л63 с никелевым покрытием толщиной 6 мкм. http://www.metiz.net/files/imagefield_thumbs/catalog_images/397-79_2.jpg  Шплинт 5X28.3.036 ГОСТ397-79 Примечание. Марка материала 0 (низкоуглеродистая сталь) и отсутствие покрытия в условном обозначении не указываются.Пример условного обозначения шплинта с услов­ным диаметром 5 мм, длиной 28 мм, из низкоуглеродистой стали, без пок­рытия : Шплинт 5X28 ГОСТ397-79 Рекомендуемые марки материала и его условное обозначение — в соот­ветствии с таблицей.

|  |  |  |
| --- | --- | --- |
| Материал | Условное обозначение материала | Вид покрытия |
| Низкоуглеродистые стали с содержанием углерода не более 0,20 % по ГОСТ 1050-74 и ГОСТ 380-88 | 0 | Цинковое, хроматированное Кадмиевое, хроматированное Окисное Фосфатное с пропиткой маслом |
| Коррозионно-стойкая сталь 12Х18Н10Т по ГОСТ 5632-72 | 2 | Окисное из кислых растворов |
| Латунь   Л63   по   ГОСТ 15527-70 | 3 | Никелевое |
| АМЦ по ГОСТ 4784-74 | 4 | Окисное,   наполненное   в   растворе бихромата калия |

 Толщина металлического покрытия — от 6 до 12 мкм, условные обозначения покрытий - по ГОСТ 1759.0-87.Допускается:а)            в случае изготовления шплинтов из проволоки с покрытием — отсутствие покрытия на торцах ветвей;б)            в случае готовых шплинтов - отсутствие покрытия на внутренней стороне ветвей в месте их соприкосновения.  |