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| **ЛИСТ УТВЕРЖДЕНИЯ**  **ЗАГЛУШКИ ФЛАНЦЕВЫЕ СТАЛЬНЫЕ**  **Конструкция, размеры и технические требования**  **АТК 24.200.02.90**  Первый заместитель начальника  научно-технического отдела  Минтяжмаша СССР                                                                     В.А. Мажукин  Начальник сектора  Минтяжмаша СССР                                                                     А.А. Полтарецкий  Главный инженер ЦКБН                                                            Ю.А. Кашицкий  Зав. отделом стандартизации                                                     А.Ю. Пролесковский  Вед. конструктор                                                                         М.И. Байбакова  **АЛЬБОМ ТИПОВЫХ КОНСТРУКЦИЙ**   |  |  | | --- | --- | | **ЗАГЛУШКИ ФЛАНЦЕВЫЕ СТАЛЬНЫЕ**  **Конструкция, размеры и технические требования** | **АТК 24.200.02.90** |   **Дата введения 01.01.91**  Несоблюдение альбома преследуется по закону  Настоящий альбом типовых конструкций распространяется на заглушки фланцевые стальные на условное давление от 0,6 до 16 МПа (от 6 до 160 кгс/см2), температуру от минус 70 до 600 С, применяемые в химической, нефтеперерабатывающей, нефтехимической, газовой, нефтяной и других смежных отраслях промышленности.  **1. КОНСТРУКЦИЯ И РАЗМЕРЫ**  1.1. Альбом типовых конструкций устанавливает пять исполнений заглушек:  исполнение 1 - заглушки с соединительным выступом на условное давление от 0,6 до 4,0 МПа (от 6 до 40 кгс/см2);  исполнение 2 - заглушки с выступом на условное давление от 1,0 до 6,3 МПа (от 10 до 63 кгс/см2);  исполнение 3 - заглушки с шипом на условное давление от 0,6 до 6,3 МПа (от 6 до 63 кгс/см2), кроме размеров уплотнительных поверхностей под фторопластовые прокладки, которые должны соответствовать указанным в [табл. 17](http://www.docload.ru/Basesdoc/9/9500/index.htm#i163739);  исполнение 4 - заглушки под прокладку овального сечения на условное давление от 6,3 до 16,0 МПа (от 63 до 160 кгс/см2);  исполнение 5 - заглушки с впадиной на условное давление 4,0 МПа (40 кгс/см2).  1.2. Заглушки на условное давление 1,0 МПа (10 кгс/см2); 1,6 МПа (16 кгс/см2); 2,5 МПа (25 кгс/см2) с условными проходами от 10 до 50 мм включительно принимать на условное давление 4,0 МПа (40 кгс/см2).  Заглушки на условное давление 1,0 МПа (10 кгс/см2) с условными проходами от 65 до 150 мм включительно принимать на условное давление 1,6 МПа (16 кгс/см2).  Заглушки на условное давление 2,5 МПа (25 кгс/см2) с условными проходами от 65 до 150 мм включительно принимать на условное давление 4,0 МПа (40 кгс/см2).  Заглушки на условное давление 6,3 МПа (63 кгс/см2); 10,0 МПа (100 кгс/см2) с условными проходами от 15 до 40 мм включительно принимать на условное давление 16,0 МПа (160 кгс/см2) (относится только к исполнению 4).  1.3. Конструкция и размеры заглушек исполнения 1 должны соответствовать указанным на [черт. 1](http://www.docload.ru/Basesdoc/9/9500/index.htm#i23621) и в [табл. 1-5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i33326).  **Исполнение 1**    Примечание. Шероховатость поверхностей А для заглушек из поковок Rа  100 мкм.  Черт. 1  Таблица 1  **Ру 0,6 МПа (6 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D2 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 75 | 50 | 35 | 12 | 10 | 2 | 6 | 11 | 4 | М10 | 0,3 | | 15 | 80 | 55 | 40 | 10 | 0,4 | | 20 | 90 | 65 | 50 | 16 | 0,5 | | 25 | 100 | 75 | 60 | 22 | 0,6 | | 32 | 120 | 90 | 70 | 14 | 12 | 28 | 14 | М12 | 1,0 | | 40 | 130 | 100 | 80 | 3 | 36 | 1,1 | | 50 | 140 | 110 | 90 | 46 | 1,3 | | 65 | 160 | 130 | 110 | 60 | 1,7 | | 80 | 185 | 150 | 128 | 76 | 18 | М16 | 2,3 | | 100 | 205 | 170 | 148 | 94 | 2,8 | | 125 | 235 | 200 | 178 | 16 | 14 | 118 | 8 | 4,4 | | 150 | 260 | 225 | 202 | 142 | 5,5 | | 200 | 315 | 280 | 258 | 196 | 8,3 | | 250 | 370 | 335 | 312 | 16 | 14 | 3 | 244 | 18 | 12 | М16 | 11,6 | | 300 | 435 | 395 | 365 | 18 | 15 | 4 | 294 | 22 | М20 | 17,4 | | 350 | 485 | 445 | 415 | 344 | 22,1 | | 400 | 535 | 495 | 465 | 20 | 17 | 390 | 16 | 30,6 | | 450 | 590 | 550 | 520 | 22 | 19 | 440 | 41,8 | | 500 | 640 | 600 | 570 | 490 | 49,7 | | 600 | 755 | 705 | 670 | 24 | 20 | 5 | 590 | 26 | 20 | М24 | 74,0 | | 800 | 975 | 920 | 880 | 30 | 26 | 780 | 30 | 24 | М27 | 159,3 | | 1000 | 1175 | 1120 | 1080 | 36 | 32 | 980 | 28 | 285,5 | | 1200 | 1400 | 1340 | 1295 | 40 | 36 | 1180 | 33 | 32 | М30 | 454,2 |   Таблица 2  **Ру 1,0 МПа (10 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D2 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 335 | 295 | 268 | 16 | 14 | 3 | 196 | 22 | 8 | М20 | 9,2 | | 250 | 390 | 350 | 320 | 18 | 16 | 244 | 12 | 14,4 | | 300 | 440 | 400 | 370 | 20 | 17 | 4 | 294 | 20,1 | | 350 | 500 | 460 | 430 | 22 | 19 | 344 | 16 | 29,3 | | 400 | 565 | 515 | 482 | 24 | 21 | 390 | 26 | М24 | 41,0 | | 450 | 615 | 565 | 532 | 440 | 20 | 48,9 | | 500 | 670 | 620 | 585 | 26 | 23 | 490 | 64,0 | | 600 | 780 | 725 | 685 | 30 | 26 | 5 | 590 | 30 | М27 | 99,6 | | 800 | 1010 | 950 | 905 | 40 | 36 | 780 | 33 | 24 | М30 | 230,4 | | 1000 | 1220 | 1160 | 1110 | 45 | 41 | 980 | 28 | 385,5 | | 1200 | 1455 | 1380 | 1330 | 55 | 51 | 1180 | 39 | 32 | М36 | 675,7 |   \* Заглушки Ду 10-50 мм принимать по [табл. 5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i53013) на Ру 4,0 МПа, Ду 65-150 мм принимать по [табл. 3](http://www.docload.ru/Basesdoc/9/9500/index.htm#i43976) на Ру 1,6 МПа.  Таблица 3  **Ру 1,6 МПа (16 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D2 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 65 | 180 | 145 | 122 | 16 | 14 | 3 | 60 | 18 | 4 | М16 | 2,5 | | 80 | 195 | 160 | 133 | 76 | 3,0 | | 100 | 215 | 180 | 158 | 94 | 8 | 3,6 | | 125 | 245 | 210 | 184 | 118 | 4,8 | | 150 | 280 | 240 | 212 | 18 | 16 | 142 | 22 | М20 | 7,1 | | 200 | 335 | 295 | 268 | 196 | 12 | 10,4 | | 250 | 405 | 355 | 320 | 22 | 20 | 244 | 26 | М24 | 19,0 | | 300 | 460 | 410 | 370 | 24 | 21 | 4 | 294 | 26,4 | | 350 | 520 | 470 | 430 | 26 | 23 | 344 | 16 | 37,3 | | 400 | 580 | 525 | 482 | 30 | 27 | 390 | 30 | М27 | 54,3 | | 450 | 640 | 585 | 532 | 440 | 20 | 66,2 | | 500 | 710 | 650 | 585 | 36 | 33 | 490 | 33 | М30 | 99,2 | | 600 | 840 | 770 | 685 | 40 | 36 | 5 | 590 | 39 | 20 | М36 | 152,2 | | 800 | 1020 | 950 | 905 | 50 | 46 | 780 | 24 | 294,2 | | 1000 | 1255 | 1170 | 1110 | 60 | 56 | 980 | 45 | 28 | М42 | 539,3 | | 1200 | 1485 | 1390 | 1330 | 70 | 66 | 1180 | 52 | 2 | М48 | 885,9 |   \* Заглушки Ду 10-50 мм принимать по [табл. 5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i53013) на Ру 4,0 МПа.  Таблица 4  **Ру 2,5 МПа (25 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D2 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 360 | 310 | 278 | 24 | 22 | 3 | 196 | 26 | 12 | М24 | 16,2 | | 250 | 425 | 370 | 335 | 30 | 27 | 244 | 30 | М27 | 29,1 | | 300 | 485 | 430 | 390 | 4 | 294 | 16 | 36,8 | | 350 | 550 | 490 | 450 | 36 | 33 | 344 | 33 | М30 | 58,3 | | 400 | 610 | 550 | 505 | 40 | 37 | 390 | 81,4 | | 450 | 660 | 600 | 555 | 440 | 20 | 95,5 | | 500 | 730 | 660 | 615 | 45 | 42 | 490 | 39 | М36 | 131,6 | | 600 | 840 | 770 | 720 | 50 | 46 | 5 | 590 | 195,4 | | 800 | 1075 | 990 | 930 | 60 | 56 | 780 | 45 | 24 | М42 | 389,9 |   \* Заглушки Ду 10-150 мм принимать по [табл. 5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i53013) на Ру 4,0 МПа.  Таблица 5  **Ру 4,0 МПа (40 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D2 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 90 | 60 | 42 | 14 | 12 | 2 | 6 | 14 | 4 | М12 | 0,5 | | 15 | 95 | 65 | 47 | 10 | 0,6 | | 20 | 105 | 75 | 58 | 16 | 14 | 16 | 0,8 | | 25 | 115 | 85 | 68 | 22 | 1,0 | | 32 | 135 | 100 | 78 | 18 | 16 | 28 | 18 | М16 | 1,6 | | 40 | 145 | 110 | 88 | 3 | 36 | 1,8 | | 50 | 160 | 125 | 102 | 46 | 2,2 | | 66 | 180 | 145 | 122 | 20 | 18 | 60 | 8 | 3,1 | | 80 | 195 | 160 | 133 | 76 | 3,7 | | 100 | 230 | 190 | 158 | 22 | 20 | 94 | 22 | М20 | 5,8 | | 125 | 270 | 220 | 184 | 24 | 22 | 118 | 26 | М24 | 8,8 | | 150 | 300 | 250 | 212 | 26 | 24 | 142 | 12,1 | | 200 | 375 | 320 | 285 | 30 | 28 | 196 | 30 | 12 | М27 | 22,1 | | 250 | 445 | 385 | 345 | 36 | 34 | 244 | 33 | М30 | 38,4 | | 300 | 510 | 450 | 410 | 40 | 37 | 4 | 294 | 16 | 55,2 | | 350 | 570 | 510 | 465 | 45 | 42 | 344 | 79,7 | | 400 | 655 | 585 | 535 | 50 | 47 | 390 | 39 | М36 | 117,3 | | 450 | 680 | 610 | 560 | 440 | 20 | 125,9 | | 500 | 755 | 670 | 615 | 55 | 52 | 490 | 45 | М42 | 170,6 |   Примечание к [табл. 1-5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i33326). Масса подсчитана при плотности материала - 7850 кг/м3.  Пример условного обозначения круглой заглушки исполнения 1 с условным проходом 100 мм на условное давление 0,6 МПа (6 кгс/см2) из стали 16ГС категории 6:  Заглушка 1 - 100 - 0,6 - 16ГС - 6 АТК 24.200.02-90  То же, квадратной:  Заглушка квадратная 1 - 100 - 0,6 - 16ГС - 6 АТК 24.200.02-90.  1.4. Конструкция и размеры заглушек исполнения 2 должны соответствовать указанным на [черт. 2](http://www.docload.ru/Basesdoc/9/9500/index.htm#i66105) и в [табл. 6-10](http://www.docload.ru/Basesdoc/9/9500/index.htm#i76710).  **Исполнение 2**    Примечание. Шероховатость поверхностей А для заглушек из поковок Rа  100 мкм.  Черт. 2  Таблица 6  **Ру 1,0 МПа (10 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 335 | 295 | 259 | 16 | 14 | 4 | 196 | 22 | 8 | 20 | 8,8 | | 250 | 390 | 350 | 312 | 18 | 16 | 244 | 12 | 14,0 | | 300 | 440 | 400 | 363 | 20 | 17 | 5 | 294 | 19,4 | | 350 | 500 | 460 | 421 | 22 | 19 | 344 | 16 | 28,4 | | 400 | 565 | 515 | 473 | 24 | 21 | 390 | 26 | 24 | 39,6 | | 450 | 615 | 565 | 523 | 440 | 20 | 47,7 | | 500 | 670 | 620 | 575 | 26 | 23 | 490 | 64,1 | | 600 | 780 | 725 | 677 | 30 | 25 | 6 | 590 | 30 | 27 | 96,0 | | 800 | 1010 | 950 | 877 | 40 | 35 | 780 | 33 | 24 | 30 | 223,7 |   \* Заглушки Ду 10-50 мм принимать по [табл. 9](http://www.docload.ru/Basesdoc/9/9500/index.htm#i101461) на Ру 4,0 МПа, Ду 65-150 мм по [табл. 7](http://www.docload.ru/Basesdoc/9/9500/index.htm#i83766) на Ру 1,6 МПа  Таблица 7  **Ру 1,6 МПа (16 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 65 | 180 | 145 | 109 | 16 | 14 | 4 | 60 | 18 | 4 | M16 | 2,3 | | 80 | 195 | 160 | 120 | 76 | 2,7 | | 100 | 215 | 180 | 149 | 94 | 8 | 3,4 | | 125 | 245 | 210 | 175 | 118 | 4,5 | | 150 | 280 | 240 | 203 | 18 | 16 | 142 | 22 | M20 | 6,8 | | 200 | 335 | 295 | 259 | 196 | 12 | 10,0 | | 250 | 405 | 355 | 312 | 22 | 20 | 244 | 26 | М24 | 18,6 | | 300 | 460 | 410 | 363 | 24 | 21 | 5 | 294 | 25,8 | | 350 | 520 | 470 | 421 | 26 | 23 | 344 | 16 | 36,5 | | 400 | 580 | 525 | 473 | 30 | 27 | 390 | 30 | М27 | 53,4 | | 450 | 640 | 585 | 523 | 440 | 20 | 65,1 | | 500 | 710 | 650 | 575 | 36 | 33 | 490 | 33 | М30 | 97,9 | | 600 | 840 | 770 | 677 | 40 | 35 | 6 | 590 | 39 | М36 | 148,3 | | 800 | 1020 | 950 | 877 | 50 | 45 | 780 | 24 | 288,4 |   Таблица 8  **Ру 2,5 МПа (25 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 360 | 310 | 259 | 24 | 22 | 4 | 196 | 26 | 12 | М24 | 15,7 | | 250 | 425 | 370 | 312 | 30 | 28 | 244 | 30 | М27 | 28,3 | | 300 | 485 | 430 | 363 | 27 | 5 | 294 | 16 | 35,6 | | 350 | 550 | 490 | 421 | 36 | 33 | 344 | 33 | М30 | 56,9 | | 400 | 610 | 550 | 473 | 40 | 37 | 390 | 79,7 | | 450 | 660 | 600 | 523 | 440 | 20 | 93,6 | | 500 | 730 | 660 | 575 | 45 | 42 | 490 | 39 | М36 | 129,3 | | 600 | 840 | 770 | 677 | 50 | 45 | 6 | 590 | 189,9 | | 800 | 1075 | 990 | 877 | 60 | 55 | 780 | 45 | 24 | М42 | 381,4 |   Примечание к [табл. 7](http://www.docload.ru/Basesdoc/9/9500/index.htm#i83766), [8](http://www.docload.ru/Basesdoc/9/9500/index.htm#i96448):  \* Заглушки Ду 10-50 мм принимать по [табл. 9](http://www.docload.ru/Basesdoc/9/9500/index.htm#i101461) на Ру 4,0 МПа.  \*\* Заглушки Ду 65-150 мм принимать по [табл. 9](http://www.docload.ru/Basesdoc/9/9500/index.htm#i101461) на Ру 4,0 МПа.  Таблица 9  **Ру 4,0 МПа (40 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 90 | 60 | 34 | 14 | 12 | 4 | 6 | 14 | 4 | М12 | 0,4 | | 15 | 95 | 65 | 39 | 10 | 0,5 | | 20 | 105 | 75 | 50 | 16 | 14 | 16 | 0,7 | | 25 | 115 | 85 | 57 | 22 | 0,8 | | 32 | 135 | 100 | 65 | 18 | 16 | 28 | 18 | М16 | 1,4 | | 40 | 145 | 110 | 75 | 17 | 36 | 1,8 | | 50 | 160 | 125 | 87 | 46 | 2,2 | | 65 | 180 | 145 | 108 | 20 | 18 | 60 | 8 | 3,0 | | 80 | 195 | 160 | 120 | 76 | 3,5 | | 100 | 230 | 190 | 149 | 22 | 20 | 94 | 22 | М20 | 5,5 | | 125 | 270 | 220 | 175 | 24 | 22 | 118 | 26 | М24 | 8,5 | |  | 300 | 250 | 203 | 26 | 24 | 142 | 11,7 | |  | 375 | 320 | 259 | 30 | 28 | 196 | 30 | 12 | М27 | 21,4 | | 250 | 445 | 385 | 312 | 36 | 34 | 244 | 33 | М30 | 37,4 | | 300 | 510 | 450 | 363 | 40 | 37 | 5 | 294 | 16 | 53,6 | | 350 | 570 | 510 | 421 | 45 | 42 | 344 | 77,8 | | 400 | 655 | 585 | 473 | 50 | 47 | 390 | 39 | М36 | 114,5 | | 450 | 680 | 610 | 523 | 440 | 20 | 123,9 | | 500 | 755 | 670 | 575 | 55 | 50 | 490 | 45 | М42 | 164,4 |   Таблица 10  **Ру 6,3 МПа (63 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 100 | 70 | 34 | 18 | 16 | 4 | 6 | 14 | 4 | М12 | 0,7 | | 15 | 105 | 75 | 39 | 10 | 0,8 | | 20 | 125 | 90 | 50 | 20 | 18 | 16 | 18 | М16 | 1,3 | | 25 | 135 | 100 | 57 | 22 | 20 | 22 | 1,8 | | 32 | 150 | 110 | 65 | 28 | 22 | М20 | 2,2 | | 40 | 165 | 125 | 75 | 24 | 22 | 36 | 3,0 | | 50 | 175 | 135 | 87 | 46 | 3,4 | | 65 | 200 | 160 | 109 | 28 | 26 | 60 | 8 | 5,3 | | 80 | 210 | 170 | 120 | 76 | 5,9 | | 100 | 250 | 200 | 149 | 94 | 26 | М24 | 8,4 | | 125 | 295 | 240 | 175 | 32 | 30 | 118 | 30 | М27 | 13,8 | | 150 | 340 | 280 | 203 | 36 | 34 | 142 | 33 | М30 | 21,1 | | 200 | 405 | 345 | 259 | 40 | 38 | 196 | 12 | 33,8 | | 250 | 470 | 400 | 312 | 45 | 43 | 244 | 39 | 12 | М36 | 51,9 | | 300 | 530 | 460 | 363 | 50 | 47 | 5 | 294 | 16 | 72,1 | | 350 | 595 | 525 | 421 | 55 | 52 | 344 | 103,2 | | 400 | 670 | 585 | 473 | 60 | 57 | 390 | 45 | М42 | 143,2 | | 500 | 800 | 705 | 575 | 70 | 65 | 490 | 52 | 20 | М48 | 234,2 | | 600 | 925 | 820 | 677 | 80 | 75 | 6 | 590 | 56 | М52 | 364,9 |   Примечание к [табл. 6-10](http://www.docload.ru/Basesdoc/9/9500/index.htm#i76710): Масса подсчитана при плотности материала - 7850 кг/м3.  Пример условного обозначения круглой заглушки исполнения 2 с условным проходом 80 мм на условное давление 1,6 МПа (16 кгс/см2) из стали 16ГС категории 6:  Заглушка 2 - 80 - 1,6 - 16ГС - 6 АТК 24.200.02-90  То же, квадратной:  Заглушка квадратная 2 - 80 - 1,6 - 16ГС - 6 АТК 24.200.02-90  1.5. Конструкция и размеры заглушек исполнения 3 должны соответствовать указанным на [черт. 3](http://www.docload.ru/Basesdoc/9/9500/index.htm#i111432) и в [табл. 11-16](http://www.docload.ru/Basesdoc/9/9500/index.htm#i123937).  **Исполнение 3**    1. Шероховатость поверхностей А для заглушек из поковок Rа  100 мкм.  2. \* для фторопластовых прокладок -  Черт. 3  Таблица 11  **Ру 0,6 МПа (6 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 75 | 50 | 19 | 29 | 14 | 13 | 4 | 6 | 11 | 4 | М10 | 0,3 | | 15 | 80 | 55 | 23 | 33 | 10 | 0,4 | | 20 | 90 | 65 | 33 | 43 | 12 | 16 | 0,4 | | 25 | 100 | 75 | 41 | 51 | 22 | 0,5 | | 32 | 120 | 90 | 49 | 59 | 28 | 14 | M12 | 0,7 | | 40 | 130 | 100 | 55 | 69 | 36 | 0,9 | | 50 | 140 | 110 | 66 | 80 | 46 | 1,1 | | 65 | 160 | 130 | 86 | 100 | 60 | 1,4 | | 80 | 185 | 150 | 101 | 115 | 76 | 18 | M16 | 1,9 | | 100 | 205 | 170 | 117 | 137 | 16 | 14 | 94 | 2,9 | | 125 | 235 | 200 | 146 | 166 | 118 | 8 | 3,9 | | 150 | 260 | 225 | 171 | 191 | 142 | 4,9 | | 200 | 315 | 280 | 229 | 249 | 196 | 7,5 | | 250 | 370 | 335 | 283 | 303 | 244 | 18 | 12 | 10,6 | | 300 | 435 | 395 | 336 | 356 | 18 | 16 | 5 | 294 | 22 | М20 | 16,4 | | 350 | 485 | 445 | 386 | 406 | 344 | 20,9 | | 400 | 535 | 495 | 436 | 456 | 20 | 17 | 390 | 16 | 28,4 | | 450 | 590 | 550 | 489 | 509 | 22 | 19 | 440 | 39,2 | | 500 | 640 | 600 | 541 | 561 | 490 | 46,8 | | 600 | 755 | 705 | 635 | 661 | 24 | 21 | 6 | 590 | 26 | 20 | М24 | 71,5 | | 800 | 975 | 920 | 841 | 867 | 30 | 27 | 780 | 30 | 24 | М27 | 154,9 |   Таблица 12  **Ру 1,0 МПа (10 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 335 | 295 | 239 | 259 | 16 | 14 | 4 | 196 | 22 | 8 | М20 | 8,3 | | 250 | 390 | 350 | 292 | 312 | 18 | 16 | 244 | 12 | 13,3 | | 300 | 440 | 400 | 343 | 363 | 20 | 17 | 5 | 294 | 18,4 | | 350 | 500 | 460 | 395 | 421 | 22 | 19 | 344 | 16 | 27,2 | | 400 | 565 | 515 | 447 | 473 | 24 | 21 | 390 | 26 | M24 | 38,1 | | 450 | 615 | 565 | 497 | 523 | 440 | 20 | 46,0 | | 500 | 670 | 620 | 549 | 575 | 26 | 23 | 490 | 62,2 | | 600 | 780 | 725 | 651 | 677 | 30 | 25 | 6 | 590 | 30 | M27 | 93,2 | | 800 | 1010 | 950 | 851 | 877 | 40 | 35 | 780 | 33 | 24 | M30 | 219,4 |   \* Заглушки Ду 10-50 мм принимать по [табл. 15](http://www.docload.ru/Basesdoc/9/9500/index.htm#i153803) на Ру 4,0 МПа, Ду 65-150 мм по [табл. 13](http://www.docload.ru/Basesdoc/9/9500/index.htm#i138821) на Ру 1,6 МПа.  Таблица 13  **Ру 1,6 МПа (16 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 65 | 180 | 145 | 95 | 109 | 16 | 14 | 4 | 60 | 18 | 4 | М16 | 2,2 | | 80 | 195 | 160 | 106 | 120 | 76 | 2,6 | | 100 | 215 | 180 | 129 | 149 | 94 | 8 | 3,2 | | 125 | 245 | 210 | 155 | 175 | 15 | 118 | 4,5 | | 150 | 280 | 240 | 183 | 203 | 18 | 16 | 142 | 22 | М20 | 6,4 | | 200 | 335 | 295 | 239 | 259 | 20 | 18 | 196 | 12 | 10,8 | | 250 | 405 | 355 | 292 | 312 | 22 | 20 | 244 | 26 | М24 | 17,8 | | 300 | 460 | 410 | 343 | 363 | 24 | 21 | 5 | 294 | 24,6 | | 350 | 520 | 470 | 395 | 421 | 26 | 23 | 344 | 16 | 35,1 | | 400 | 580 | 525 | 447 | 473 | 30 | 27 | 390 | 30 | М27 | 51,6 | | 450 | 640 | 585 | 497 | 523 | 440 | 20 | 63,1 | | 500 | 710 | 650 | 549 | 575 | 36 | 33 | 490 | 33 | М30 | 95,6 | | 600 | 840 | 770 | 651 | 677 | 40 | 35 | 6 | 590 | 39 | М36 | 144,8 | | 800 | 1020 | 950 | 851 | 877 | 50 | 45 | 780 | 24 | 283,1 |   Таблица 14  **Ру 2,5 МПа (25 кгс/см2)**  Размеры в мм   | Dy\*\* | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 200 | 360 | 310 | 239 | 259 | 24 | 22 | 4 | 196 | 26 | 12 | М24 | 15,1 | | 250 | 425 | 370 | 292 | 312 | 30 | 28 | 244 | 30 | М27 | 27,5 | | 300 | 485 | 430 | 343 | 363 | 27 | 5 | 294 | 16 | 34,5 | | 350 | 550 | 490 | 395 | 421 | 36 | 33 | 344 | 33 | М30 | 55,5 | | 400 | 610 | 550 | 447 | 473 | 40 | 37 | 390 | 77,9 | | 450 | 660 | 600 | 497 | 523 | 40 | 20 | 91,7 | | 500 | 730 | 660 | 549 | 575 | 45 | 42 | 490 | 39 | М36 | 127,0 | | 600 | 840 | 770 | 651 | 677 | 50 | 45 | 6 | 590 | 190,7 | | 800 | 1075 | 990 | 851 | 877 | 60 | 55 | 780 | 45 | 24 | М42 | 382,6 |   Примечание к [табл. 13](http://www.docload.ru/Basesdoc/9/9500/index.htm#i138821), [14](http://www.docload.ru/Basesdoc/9/9500/index.htm#i146008):  \* Заглушки Ду 10-50 мм принимать по [табл. 15](http://www.docload.ru/Basesdoc/9/9500/index.htm#i153803) на Ру 4,0 МПа.  \*\* Заглушки Ду 65-150 мм принимать по [табл. 15](http://www.docload.ru/Basesdoc/9/9500/index.htm#i153803) на Ру 4,0 МПа.  Таблица 15  **Ру 4,0 МПа (40 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 90 | 60 | 24 | 34 | 14 | 12 | 4 | 6 | 14 | 4 | М12 | 0,4 | | 15 | 95 | 65 | 29 | 39 | 10 | 0,5 | | 20 | 105 | 75 | 36 | 50 | 16 | 14 | 16 | 0,7 | | 25 | 115 | 85 | 43 | 57 | 22 | 0,8 | | 32 | 135 | 100 | 51 | 65 | 18 | 16 | 28 | 18 | М16 | 1,4 | | 40 | 145 | 110 | 61 | 75 | 36 | 1,6 | | 50 | 160 | 125 | 73 | 87 | 46 | 1,9 | | 65 | 180 | 145 | 95 | 109 | 20 | 18 | 60 | 8 | 2,8 | | 80 | 195 | 160 | 106 | 120 | 76 | 3,3 | | 100 | 230 | 190 | 129 | 149 | 22 | 20 | 94 | 22 | М20 | 5,3 | | 125 | 270 | 220 | 155 | 175 | 24 | 22 | 118 | 26 | М24 | 8,2 | | 150 | 300 | 250 | 183 | 203 | 26 | 24 | 142 | 11,3 | | 200 | 375 | 320 | 239 | 259 | 30 | 28 | 195 | 30 | 12 | М27 | 20,8 | | 250 | 445 | 385 | 292 | 312 | 36 | 34 | 244 | 33 | М30 | 36,6 | | 300 | 510 | 450 | 343 | 363 | 40 | 37 | 5 | 294 | 16 | 52,4 | | 350 | 570 | 510 | 395 | 421 | 45 | 42 | 344 | 76,4 | | 400 | 655 | 585 | 447 | 473 | 50 | 47 | 390 | 39 | М36 | 112,8 | | 450 | 680 | 610 | 497 | 523 | 440 | 20 | 123,5 | | 500 | 755 | 670 | 549 | 575 | 55 | 50 | 490 | 45 | М42 | 162,0 |   Таблица 16  **Ру 6,3 МПа (63 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D3 | D4 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 10 | 100 | 70 | 24 | 34 | 18 | 16 | 4 | 6 | 14 | 4 | М12 | 0,7 | | 15 | 105 | 75 | 29 | 39 | 10 | 0,8 | | 20 | 125 | 90 | 36 | 50 | 20 | 18 | 16 | 18 | М16 | 1,3 | | 25 | 135 | 100 | 43 | 57 | 22 | 20 | 22 | 1,8 | | 32 | 150 | 110 | 51 | 65 | 28 | 22 | М20 | 2,0 | | 40 | 165 | 125 | 61 | 75 | 24 | 22 | 36 | 2,9 | | 50 | 175 | 135 | 73 | 87 | 46 | 3,3 | | 65 | 200 | 160 | 95 | 109 | 28 | 26 | 60 | 8 | 5,1 | | 80 | 210 | 170 | 106 | 120 | 76 | 5,8 | | 100 | 250 | 200 | 123 | 149 | 94 | 26 | М24 | 8,2 | | 125 | 295 | 240 | 155 | 175 | 32 | 30 | 118 | 30 | М27 | 13,5 | | 150 | 340 | 280 | 183 | 203 | 36 | 34 | 142 | 33 | М30 | 20,7 | | 200 | 405 | 345 | 239 | 259 | 40 | 38 | 196 | 12 | 33,3 | | 250 | 470 | 400 | 292 | 312 | 45 | 43 | 244 | 39 | М36 | 51,2 | | 300 | 530 | 460 | 343 | 363 | 50 | 47 | 5 | 294 | 16 | 70,9 | | 350 | 595 | 525 | 395 | 421 | 55 | 52 | 344 | 101,8 | | 400 | 670 | 585 | 447 | 473 | 60 | 57 | 390 | 45 | М42 | 141,5 | | 500 | 800 | 705 | 549 | 575 | 70 | 65 | 490 | 52 | 20 | М48 | 231,9 | | 600 | 925 | 820 | 651 | 677 | 80 | 75 | 6 | 590 | 56 | М52 | 361,3 |   Примечание к [табл. 11-16](http://www.docload.ru/Basesdoc/9/9500/index.htm#i123937): Масса подсчитана при плотности материала - 7850 кг/м3.  Пример условного обозначения круглой заглушки исполнения 3 с условным проходом 100 мм на условное давление 0,6 МПа (6 кгс/см2) из стали 16ГС категории 6:  Заглушка 3 - 100 - 0,6 - 16ГС - 6 АТК 24.200.02-90  То же, квадратной:  Заглушка квадратная 3 - 100 - 0,6 - 16ГС - 6 АТК 24.200.02-90  То же, под фторопластовую прокладку:  Заглушка 3 - 100 - 0,6ф - 16ГС - 6 АТК 24.200.02-90  Таблица 17  **Размеры уплотнительных поверхностей под фторопластовые прокладки**  Размеры в мм   | Dy | D3 | | D4 | | h | | --- | --- | --- | --- | --- | --- | | Ру, МПа (кгс/см2) | | | | | 0,6 (6) |  1,0 (10) | 0,6 (6) |  1,0 (10) | | 10 | 18 | 23 | 30 | 35 | 4 | | 15 | 22 | 28 | 34 | 40 | | 20 | 32 | 35 | 44 | 51 | | 25 | 40 | 42 | 52 | 58 | | 32 | 48 | 50 | 60 | 66 | | 40 | 54 | 60 | 70 | 76 | | 50 | 65 | 72 | 81 | 88 | | 65 | 85 | 94 | 101 | 110 | | 80 | 100 | 105 | 116 | 121 | | 100 | 116 | 128 | 138 | 150 | 6 | | 125 | 145 | 154 | 167 | 176 | | 150 | 170 | 182 | 192 | 204 | | 200 | 228 | 238 | 250 | 260 | | 250 | 282 | 291 | 304 | 313 | | 300 | 335 | 342 | 357 | 364 | | 350 | 385 | 394 | 407 | 422 | | 400 | 435 | 446 | 457 | 474 | | 450 | 488 | 496 | 510 | 524 | | 500 | 540 | 548 | 562 | 576 | | 600 | 634 | 650 | 662 | 678 |   1.6. Конструкция и размеры заглушек исполнения 4 должны соответствовать указанным на [черт. 4](http://www.docload.ru/Basesdoc/9/9500/index.htm#i177811) и в [табл. 18-20](http://www.docload.ru/Basesdoc/9/9500/index.htm#i184440).  **Исполнение 4**    Примечание. Шероховатость поверхностей А для заглушек из поковок Rа  100 мкм.  Черт. 4  Таблица 18  **Ру 6,3 МПа (63 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D2 | b | b1 | h | D8 | b2 | h2 | r | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 50 | 175 | 135 | 102 | 26 | 24 | 3 | 85 | 12 | 8,0 | 4,0 | 46 | 22 | 4 | М20 | 3,8 | | 65 | 200 | 160 | 132 | 110 | 60 | 8 | 4,9 | | 80 | 210 | 170 | 133 | 30 | 28 | 115 | 76 | 6,4 | | 100 | 250 | 200 | 170 | 145 | 94 | 26 | М24 | 9,3 | | 125 | 295 | 240 | 205 | 32 | 30 | 175 | 118 | 30 | М27 | 14,0 | | 150 | 340 | 280 | 240 | 36 | 34 | 205 | 142 | 33 | М30 | 21,5 | | 200 | 405 | 345 | 285 | 40 | 38 | 265 | 196 | 12 | 34,2 | | 250 | 470 | 400 | 345 | 45 | 43 | 320 | 244 | 39 | М36 | 51,6 | | 300 | 530 | 460 | 410 | 42 | 4 | 375 | 294 | 16 | 65,3 | | 350 | 595 | 525 | 465 | 50 | 47 | 420 | 344 | 94,3 | | 400 | 670 | 585 | 535 | 55 | 52 | 480 | 390 | 45 | М42 | 132,4 | | 450 | 730 | 650 | 590 | 60 | 57 | 520 | 440 | 20 | 172,3 |   \* Заглушки Ду 10-40 мм принимать по [табл. 20](http://www.docload.ru/Basesdoc/9/9500/index.htm#i192575) на Ру 16,0 МПа.  Таблица 19  **Ру 10,0 МПа (100 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D2 | b | b1 | h | D8 | b2 | h2 | r | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 50 | 195 | 145 | 102 | 30 | 28 | 3 | 85 | 12 | 8,0 | 4,0 | 46 | 26 | 4 | M24 | 5,5 | | 65 | 220 | 170 | 140 | 36 | 34 | 110 | 60 | 8 | 8,5 | | 80 | 230 | 180 | 150 | 115 | 76 | 9,4 | | 100 | 265 | 210 | 175 | 145 | 94 | 30 | M27 | 12,5 | | 125 | 310 | 250 | 210 | 40 | 38 | 175 | 118 | 33 | М30 | 19,6 | | 150 | 350 | 290 | 250 | 45 | 43 | 205 | 142 | 12 | 28,1 | | 200 | 430 | 360 | 285 | 50 | 48 | 265 | 196 | 39 | М36 | 47,8 | | 250 | 500 | 430 | 345 | 55 | 53 | 320 | 244 | 73,7 | | 300 | 585 | 500 | 410 | 60 | 57 | 4 | 375 | 294 | 45 | 16 | М42 | 106,4 | | 350 | 655 | 560 | 465 | 70 | 67 | 420 | 17 | 11,0 | 5,8 | 344 | 52 | М48 | 156,1 | | 400 | 715 | 620 | 535 | 75 | 72 | 480 | 390 | 204,6 |   \* Заглушки Ду 10-40 мм принимать по [табл. 20](http://www.docload.ru/Basesdoc/9/9500/index.htm#i192575) на Ру 16,0 МПа.  Таблица 20  **Ру 16,0 МПа (160 кгс/см2)**  Размеры в мм   | Dy\* | D | D1 | D2 | b | b1 | h | D8 | b2 | h2 | r | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 15 | 105 | 75 | 55 | 26 | 24 | 2 | 35 | 9 | 6,5 | 2,8 | 10 | 14 | 4 | М12 | 1,4 | | 20 | 125 | 90 | 58 | 28 | 26 | 45 | 16 | 18 | М16 | 2,2 | | 25 | 135 | 100 | 68 | 30 | 28 | 50 | 22 | 2,8 | | 32 | 150 | 110 | 78 | 65 | 28 | 22 | М20 | 3,4 | | 40 | 165 | 125 | 88 | 3 | 75 | 36 | 4,0 | | 50 | 195 | 145 | 115 | 36 | 34 | 95 | 12 | 8,0 | 4,0 | 46 | 26 | М24 | 6,9 | | 65 | 220 | 170 | 140 | 40 | 38 | 110 | 60 | 8 | 9,6 | | 80 | 230 | 180 | 150 | 130 | 76 | 10,6 | | 100 | 265 | 210 | 175 | 160 | 94 | 30 | М27 | 14,1 | | 125 | 310 | 250 | 210 | 45 | 43 | 190 | 118 | 33 | М30 | 22,3 | | 150 | 350 | 290 | 250 | 55 | 53 | 205 | 14 | 10,0 | 4,2 | 142 | 12 | 34,7 | | 200 | 430 | 360 | 315 | 60 | 58 | 275 | 17 | 11,0 | 5,8 | 196 | 39 | М36 | 58,0 | | 250 | 500 | 430 | 380 | 70 | 68 | 330 | 244 | 95,3 | | 300 | 585 | 500 | 410 | 80 | 77 | 4 | 380 | 23 | 14,0 | 8,5 | 294 | 45 | 16 | М42 | 143,2 | | 350 | 700 | 590 | 520 | 95 | 92 | 420 | 344 | 52 | М48 | 2 | | 400 | 770 | 660 | 595 | 100 | 97 | 5 | 480 | 390 | 20 | 316,9 |   Примечание к [табл. 18-20](http://www.docload.ru/Basesdoc/9/9500/index.htm#i184440). Масса подсчитана при плотности материала - 7850 кг/м3.  Пример условного обозначения круглой заглушки исполнения 4 с условным проходом 100 мм на условное давление 6,3 МПа (63 кгс/см2) из стали 16ГС категории 6:  Заглушка 4 - 100 - 6,3 - 16ГС - 6 АТК 24.200.02-90  1.7. Конструкция и размеры заглушек исполнения 5 должны соответствовать указанным на [черт. 5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i204425) и в [табл. 21](http://www.docload.ru/Basesdoc/9/9500/index.htm#i215139).    Примечание. Шероховатость поверхностей А для заглушек из поковок Rа  100 мкм.  Черт. 5  Таблица 21  **Ру 4,0 МПа (40 кгс/см2)**  Размеры в мм   | Dy | D | D1 | D2 | D6 | b | b1 | h | d2 | d | n | Номинальный диаметр болтов или шпилек | Масса, кг, не более | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 50 | 160 | 125 | 102 | 88 | 20 | 17 | 4 | 46 | 18 | 4 | М16 | 2,6 | | 80 | 195 | 160 | 133 | 121 | 22 | 19 | 76 | 8 | 4,3 | | 100 | 230 | 190 | 158 | 150 | 94 | 22 | М20 | 5,9 | | 150 | 300 | 250 | 212 | 204 | 26 | 23 | 142 | 26 | М24 | 12,5 | | 200 | 375 | 320 | 285 | 260 | 30 | 27 | 196 | 30 | 12 | М27 | 22,5 | | 250 | 445 | 385 | 345 | 313 | 36 | 33 | 244 | 33 | М30 | 38,8 | | 300 | 510 | 450 | 410 | 364 | 40 | 36 | 5 | 294 | 16 | 56,6 | | 500 | 755 | 670 | 615 | 576 | 55 | 51 | 490 | 45 | 20 | М42 | 172,8 |   Примечание. Масса подсчитана при плотности материала - 7850 кг/м3.  Пример условного обозначения заглушки исполнения 5 с условным проходом 80 мм на условное давление 4,0 МПа (40 кгс/см2) из стали 16ГС категории 6:  Заглушка 5 - 80 - 4,0 - 16ГС - 6 АТК 24.200.02-90  **2. ТЕХНИЧЕСКИЕ ТРЕБОВАНИЯ**  2.1. Заглушки должны изготовляться в соответствии с требованиями настоящего альбома типовых конструкций по чертежам, утвержденным в установленном порядке.  2.2. Давления условные и рабочие - по [ГОСТ 356](http://www.docload.ru/Basesdoc/7/7935/index.htm" \o "Арматура и детали трубопроводов. Давления условные пробные и рабочие. Ряды).  2.3. Присоединительные размеры заглушек - по [ГОСТ 356](http://www.docload.ru/Basesdoc/7/7935/index.htm" \o "Арматура и детали трубопроводов. Давления условные пробные и рабочие. Ряды).  2.4. Требования к материалам, виды их испытаний должны соответствовать ОСТ 26-291.  2.5. Материал заглушек выбирается исходя из условий эксплуатации по ОСТ 26-291 из листового и полосового проката или поковок. Поковки с пределом текучести не менее 215 МПа (2200 кгс/см2) при температуре 20 С.  2.6. Прибавка на коррозию принята - 2 мм.  2.7. Для квадратных фланцев на Ру  4,0 МПа (40 кгс/см2) по [ГОСТ 12815](http://www.docload.ru/Basesdoc/8/8013/index.htm) допускается изготовлять квадратные заглушки.  2.8. Неуказанные предельные отклонения номинального размера h:  1 мм при h = 2 мм;  2 мм при h > 2 мм.  2.9. Предельные отклонения размеров:  D3 - H12; d - H15; b1 - js15;  D4 - h12; D8 - +0,15 мм; b2; h2 - 0,4 мм.  Неуказанные предельные отклонения размеров - по рабочим чертежам, утвержденным в установленном порядке.  Предельные отклонения размеров D3 и D4 под фторопластовые прокладки:  D3 - свыше 130 до 500 мм - Н11;  - свыше 500 мм              - Н10;  D4 - до 30 мм                      - b12;  - свыше 30 до 260 мм    - d11;  - свыше 260 мм              - f9.  2.10. Предельные отклонения от номинального размера b - по действующим стандартам на листовой или полосовой прокат, для поковок , для штамповок - по II классу ГОСТ 7505.  2.11. Позиционный допуск осей отверстий d в диаметральном выражении не должен быть более, мм:  1,0 - для отверстий диаметром 11 мм;  2,0 - для отверстий диаметром от 14 до 26 мм;  3,0 - для отверстий диаметром от 30 до 45 мм;  4,0 - для отверстий диаметром 52 и 56 мм.  2.12. Заглушки рассчитаны на применение с прокладками эластичными, асбометаллическими спирально-навитыми и овального сечения.  2.13. Поверхности заглушек не должны иметь раковин, трещин, заусенцев и других дефектов, снижающих прочность заглушек и надежность соединений.  2.14. Гидравлические испытания заглушек, как правило, должны производиться совместно с оборудованием в соответствии с требованиями ОСТ 26-291.  2.15. Допускается изготовление заглушек сварными при условии полного провара и 100 % контроля качества сварных швов в соответствии с ОСТ 26-291.  Разделка кромок и способ сварки определяется технической документацией предприятия-изготовителя.  2.16. Срок службы заглушки не менее 10 лет.  2.17. На боковой поверхности заглушки должна быть выполнена маркировка: условное обозначение без наименования изделия, товарный знак предприятия-изготовителя.  Допускается не маркировать товарный знак предприятия-изготовителя, если заглушка не является товарной продукцией.  2.18. Технические требования к крепежным изделиям по [ОСТ 26-2043](http://www.docload.ru/Basesdoc/8/8375/index.htm" \o "Болты, шпильки, гайки и шайбы для фланцевых соединений. Технические требования).  **ИНФОРМАЦИОННЫЕ ДАННЫЕ**  1. УТВЕРЖДЕН И ВВЕДЕН В ДЕЙСТВИЕ Указанием Министерства тяжелого машиностроения 19.06.90 № ВА-002-1-6288.  2. РАЗРАБОТЧИКИ:  Пролесковский А.Ю. (руководитель темы), Байбакова М.И.  3. ЗАРЕГИСТРИРОВАН ВНИИКИ за № \_\_\_\_ от \_\_\_\_\_\_\_\_\_\_\_\_ 1990 г.  4. ВЗАМЕН ОСТ 26-11-07-85.  5. ССЫЛОЧНЫЕ НОРМАТИВНО-ТЕХНИЧЕСКИЕ ДОКУМЕНТЫ   | Обозначение НТД, на который дана ссылка | Номер пункта, подпункта, перечисления, приложения | | --- | --- | | [ГОСТ 356-80](http://www.docload.ru/Basesdoc/7/7935/index.htm) | [2.2](http://www.docload.ru/Basesdoc/9/9500/index.htm#i234050) | | ГОСТ 7505-74 | [2.10](http://www.docload.ru/Basesdoc/9/9500/index.htm#i281010) | | [ГОСТ 12815-80](http://www.docload.ru/Basesdoc/8/8013/index.htm) | [2.3](http://www.docload.ru/Basesdoc/9/9500/index.htm#i242901), [2.7](http://www.docload.ru/Basesdoc/9/9500/index.htm#i272658) | | ОСТ 26-291-87 | [2.4](http://www.docload.ru/Basesdoc/9/9500/index.htm#i256642), [2.5](http://www.docload.ru/Basesdoc/9/9500/index.htm#i266892), [2.14](http://www.docload.ru/Basesdoc/9/9500/index.htm#i297407), [2.15](http://www.docload.ru/Basesdoc/9/9500/index.htm#i308652) | | ОСТ 26-2043-77 | [2.18](http://www.docload.ru/Basesdoc/9/9500/index.htm#i311228) |   **СОДЕРЖАНИЕ**   |  | | --- | | [1. Конструкция и размеры.. 1](http://www.docload.ru/Basesdoc/9/9500/index.htm#i13655)  [2. Технические требования. 11](http://www.docload.ru/Basesdoc/9/9500/index.htm#i223121) | |