

ПРОТЯЖКИ С НАВЕРТНЫМ ХВОСТОВИКОМ ДЛЯ  
ШЛИЦЕВЫХ ОТВЕРСТИЙ С ЭВОЛЬВЕНТНЫМ ПРОФИЛЕМ  
ДИАМЕТРОМ ОТ 55 ДО 130 ММ, МОДУЛЕМ ОТ 3 ДО 4 ММ  
С ЦЕНТРИРОВАНИЕМ ПО НАРУЖНОМУ ДИАМЕТРУ

ГОСТ Р  
50037—92

Конструкция

Combined broaches with diameter from 55 to 130 mm for alitting holes  
with involute profile with wind round tail and centring at outside diameter  
with modul frome 3 to 4 mm. Construction

ОКП 39 2340

Дата введения 01.01.93

Настоящий стандарт распространяется на комбинированные однопроходные протяжки универсального назначения с навертным хвостовиком диаметром  $D$  от 55 до 130 мм, модулем  $m$  от 3 до 4 мм, предназначенные для обработки шлицевых втулок с эвольвентным профилем по ГОСТ 6033 с центрированием по наружному диаметру.

Требования стандарта являются обязательными, кроме требований для справок и рекомендуемых, указанных в чертежах.

1. Конструкция и общие размеры протяжек должны соответствовать указанным на черт. 1 и в табл. 1;

координаты профиля и контрольные размеры по роликам — табл. 3;

диаметры зубьев — табл. 4.

Размеры навертного хвостовика — по ГОСТ 28048.

Изготовление навертного хвостовика производят по взаимной договоренности потребителя с изготовителем.

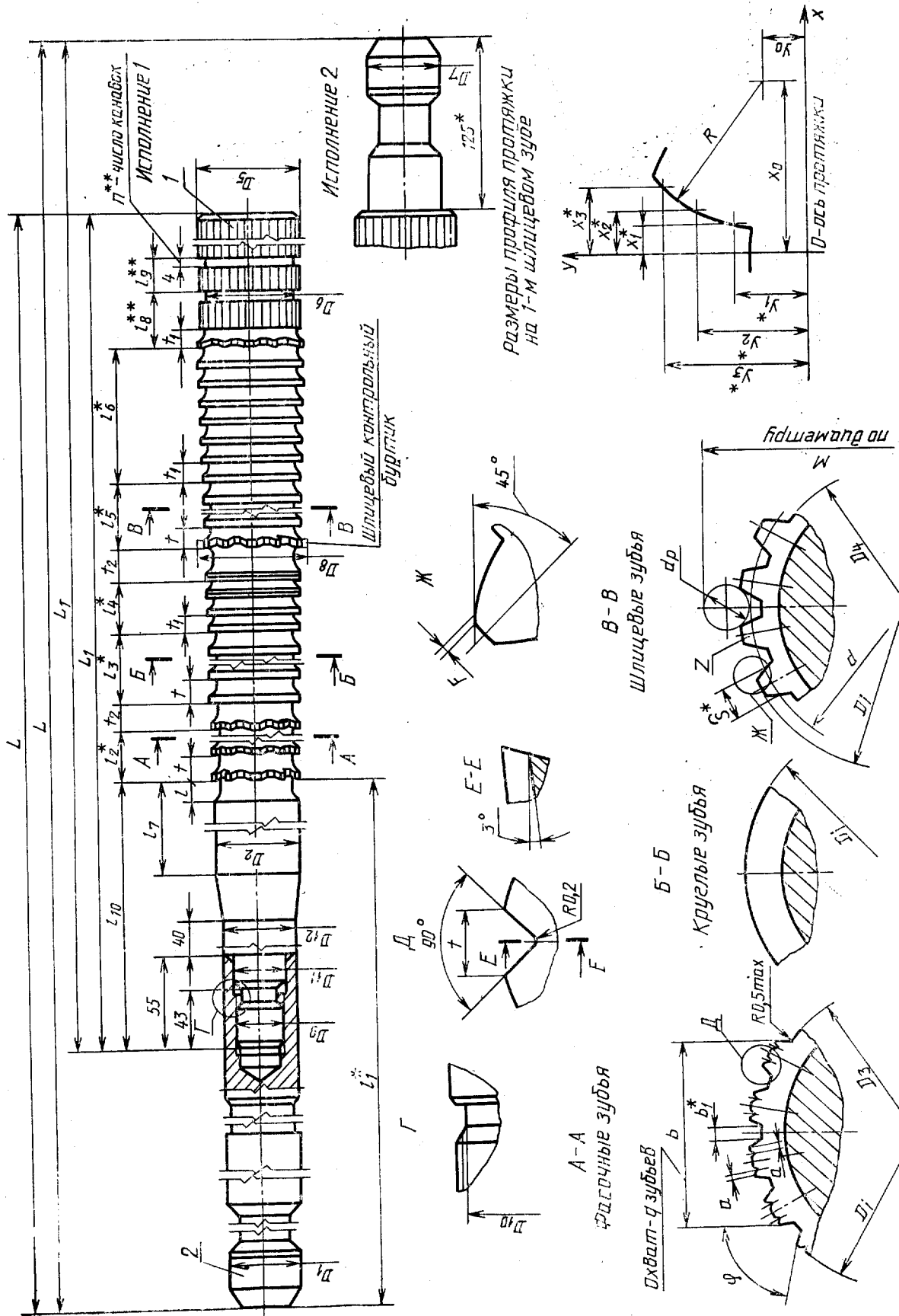
Допускается по требованию заказчика корректировать размер  $M$  (табл. 3) и диаметры чистовых и калибрующих зубьев (табл. 4).

2. Обозначение деталей протяжек должно соответствовать указанным в табл. 2.

3. Размеры протягиваемого отверстия и усилие протягивания должны соответствовать указанным на черт. 2 и в табл. 5.

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Настоящий стандарт не может быть полностью или частично воспроизведен, тиражирован и распространен без разрешения Госстандарта России



\* Размеры для справок.  
 \*\* Размеры и параметр — рекомендуемые.

Черт. 1

Размеры, мм

| Обозначение<br>протяжки исполнения |           | Применяе-<br>мость |   | D×m  | z  | Сочетание<br>полей<br>допусков<br>D и e | S     | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> ,<br>не<br>более | D <sub>4</sub> ,<br>не<br>более | D <sub>5</sub> | D <sub>6</sub> | D <sub>7</sub> | D <sub>8</sub> | D <sub>9</sub> |
|------------------------------------|-----------|--------------------|---|------|----|---|-------|----------------|----------------|---------------------------------|---------------------------------|----------------|----------------|----------------|----------------|----------------|
| 1                                  | 2         | 1                  | 2 |      |    |   |       |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3412                          | 2403-3413 |                    |   | 55×3 | 17 | H7—9H                                   | 5,197 | 45             | 48,5           | 48,2                            | 48,4                            | 54,3           | 46             | 36             | 55,2           | M30×2          |
| 2403-3414                          | 2403-3415 |                    |   |      |    | H8—11H                                  | 5,277 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3416                          | 2403-3417 |                    |   |      |    | H7—9H                                   | 5,197 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3418                          | 2403-3419 |                    |   |      |    | H8—11H                                  | 5,277 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3421                          | 2403-3422 |                    |   | 60×3 | 18 | H7—9H                                   | 6,351 | 50             | 53,4           | 53,1                            | 53,4                            | 59,3           | 51             | 50             | 59,6           | M36×3          |
| 2403-3423                          | 2403-3424 |                    |   |      |    | H8—11H                                  | 6,431 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3425                          | 2403-3426 |                    |   |      |    | H7—9H                                   | 6,351 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3427                          | 2403-3428 |                    |   |      |    | H8—11H                                  | 6,431 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3429                          | 2403-3431 |                    |   | 65×3 | 20 | H7—9H                                   | 5,774 | 50             | 58,4           | 58,1                            | 58,4                            | 64,3           | 56             | 50             | 65,0           | M36×3          |
| 2403-3432                          | 2403-3433 |                    |   |      |    | H8—11H                                  | 5,854 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3434                          | 2403-3435 |                    |   |      |    | H7—9H                                   | 5,774 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3436                          | 2403-3437 |                    |   |      |    | H8—11H                                  | 5,854 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3438                          | 2403-3439 |                    |   | 70×3 | 22 | H7—9H                                   | 5,197 | 63,4           | 63,1           | 63,4                            | 69,3                            | 61             | 50             | 70,2           | M48×3          |                |
| 2403-3441                          | 2403-3442 |                    |   |      |    | H8—11H                                  | 5,277 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3443                          | —         |                    |   |      |    | H7—9H                                   | 5,197 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3444                          | —         |                    |   |      |    | H8—11H                                  | 5,277 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3445                          | 2403-3446 |                    |   | 75×3 | 24 | H7—9H                                   | 4,619 | 63,4           | 68,1           | 68,4                            | 74,3                            | 66             | 50             | 71,4           | M48×3          |                |
| 2403-3447                          | 2403-3448 |                    |   |      |    | H8—11H                                  | 4,699 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3449                          | —         |                    |   |      |    | H7—9H                                   | 4,619 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3451                          | —         |                    |   |      |    | H8—11H                                  | 4,699 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3452                          | 2403-3453 |                    |   | 80×3 | 25 | H7—9H                                   | 5,774 | 63             | 73,4           | 73,1                            | 73,4                            | 79,3           | 71             | 50             | 80,0           | M48×3          |
| 2403-3454                          | 2403-3455 |                    |   |      |    | H8—11H                                  | 5,854 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3456                          | 2403-3457 |                    |   | 85×3 | 27 | H7—9H                                   | 5,197 | 63             | 78,4           | 78,1                            | 78,4                            | 84,3           | 76             | 50             | 85,4           | M48×3          |
| 2403-3458                          | 2403-3459 |                    |   |      |    | H8—11H                                  | 5,277 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3461                          | 2403-3462 |                    |   | 90×3 | 28 | H7—9H                                   | 6,351 | 63             | 83,4           | 83,1                            | 83,4                            | 89,3           | 81             | 50             | 90,0           | M48×3          |
| 2403-3463                          | 2403-3464 |                    |   |      |    | H8—11H                                  | 6,431 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3465                          | 2403-3466 |                    |   | 95×3 | 30 | H7—9H                                   | 5,774 | 63             | 88,4           | 88,1                            | 88,4                            | 94,3           | 86             | 50             | 95,2           | M48×3          |
| 2403-3467                          | 2403-3468 |                    |   |      |    | H8—11H                                  | 5,854 |                |                |                                 |                                 |                |                |                |                |                |

## Размеры, мм

| Обозначение<br>протяжки и исполнения |           | $D_{10}$ | $D_{11}$ | $D_{12}$ | $L$<br>для исполне-<br>ния |      | $L_1$<br>для исполне-<br>ния |      | $l$  | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{10}$ |     |    |     |     |
|--------------------------------------|-----------|----------|----------|----------|----------------------------|------|------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|----|-----|-----|
|                                      |           |          |          |          | 1                          | 2    | 1                            | 2    |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3412                            | 2403-3413 | 27,0     | 32       | 45       | 1300                       | 1425 | 1125                         | 1250 | 9,5  | 390   | 140   | 56    | 40    | 490   | 90    | 70    | 24    | 14    | 215      |     |    |     |     |
| 2403-3414                            | 2403-3415 |          |          |          | 1500                       | 1625 | 1300                         | 1425 | 11,0 | 430   | 192   | 64    | 44    | 560   | 99    | 80    |       |       | 12       | 230 |    |     |     |
| 2403-3416                            | 2403-3417 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       | 23       |     |    |     |     |
| 2403-3418                            | 2403-3419 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3421                            | 2403-3422 | 31,5     | 38       | 50       | 1300                       | 1425 | 1125                         | 1250 | 9,5  | 380   | 154   | 56    | 40    | 490   | 90    | 70    |       |       | 13       | 205 |    |     |     |
| 2403-3423                            | 2403-3424 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3425                            | 2403-3426 |          |          |          | 1475                       | 1600 | 1275                         | 1400 | 11,0 | 425   | 192   | 61    | 11    | 511   | 90    | 80    | 25    | 11    |          |     |    | 225 |     |
| 2403-3427                            | 2403-3428 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3429                            | 2403-3431 |          |          |          | 1300                       | 1425 | 1125                         | 1250 | 9,5  | 380   | 151   | 56    | 40    | 490   | 90    | 70    | 23    |       |          |     | 13 | 205 |     |
| 2403-3432                            | 2403-3433 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3434                            | 2403-3435 |          |          |          | 1500                       | 1625 | 1300                         | 1425 | 11,0 |       | 208   | 61    | 44    | 560   | 99    | 80    | 21    |       |          |     |    |     | 220 |
| 2403-3436                            | 2403-3437 |          |          |          |                            |      |                              |      |      |       | 420   |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3438                            | 2403-3439 |          |          |          |                            |      |                              | 1390 | 1515 | 1175  | 1300  | 9,5   |       | 151   | 56    | 40    | 532   | 90    | 70       | 22  | 12 |     | 205 |
| 2403-3441                            | 2403-3442 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3443                            | —         |          |          |          | 1590                       | —    | 1375                         | —    | 12,0 | 455   | 180   | 72    | 52    | 594   | 117   | 95    | 26    | 13    |          | 240 |    |     |     |
| 2403-3444                            | —         |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3445                            | 2403-3446 |          |          | 63       | 1390                       | 1515 | 1175                         | 1300 | 9,5  | 420   | 154   | 56    | 40    | 532   | 90    | 70    | 22    | 12    |          | 205 |    |     |     |
| 2403-3447                            | 2403-3448 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3449                            | —         |          |          |          | 1590                       | —    | 1375                         | —    | 12,0 | 455   | 180   | 72    | 52    | 594   | 117   | 95    | 26    | 13    |          | 240 |    |     |     |
| 2403-3451                            | —         |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3452                            | 2403-3453 | 43,5     | 50       | 70       |                            |      |                              |      |      |       | 154   |       |       | 532   |       |       |       |       |          |     |    |     |     |
| 2403-3454                            | 2403-3455 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3456                            | 2403-3457 |          |          |          |                            |      |                              |      |      |       |       |       | 168   |       |       | 518   |       |       |          |     |    |     |     |
| 2403-3458                            | 2403-3459 |          |          |          | 1415                       | 1540 | 1175                         | 1300 | 9,5  | 445   |       | 56    | 40    |       |       | 90    | 70    | 22    | 12       |     |    | 205 |     |
| 2403-3461                            | 2403-3462 |          |          |          |                            |      |                              |      |      |       |       |       | 154   |       |       | 532   |       |       |          |     |    |     |     |
| 2403-3463                            | 2403-3464 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |
| 2403-3465                            | 2403-3466 |          |          |          |                            |      |                              |      |      |       |       |       | 168   |       |       | 518   |       |       |          |     |    |     |     |
| 2403-3467                            | 2403-3468 |          |          |          |                            |      |                              |      |      |       |       |       |       |       |       |       |       |       |          |     |    |     |     |

Размеры, мм

| Обозначение<br>протяжки исполнения |           | Зубья<br>черновые и переходные |          |     |                   | Зубья<br>чистовые<br>и калибру-<br>ющие |                  | $t_3$ | $b$<br>(пред.<br>огл.<br>—0,04) | $b_1$  | $\Phi$<br>(пред.<br>откл.<br>$\pm 1^\circ$ ) | $q$    | $F$ ,<br>не<br>более | $c$<br>для исполнения |       | $n$    | $a$ | $l$ |       |       |      |        |
|------------------------------------|-----------|--------------------------------|----------|-----|-------------------|---|------------------|-------|---------------------------------|--------|--|--------|----------------------|-----------------------|-------|--------|-----|-----|-------|-------|------|--------|
|                                    |           | Число зубьев                   |          | $t$ | Номер<br>про, для | $t_1$                                   | Номер<br>профиля |       |                                 |        |  |        |                      | 1                     | 2     |        |     |     |       |       |      |        |
|                                    |           | фасочных                       | шлицевых |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 1                                  | 2         |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3412                          | 2403-3413 | 11                             |          | 14  | 10                | 10                                      | 6                | 16    | 37,56                           | 1,40   | 105°52'                                      | 5      | 0,24                 | 0,281                 | 0,313 | 3      | 1,5 | 33  |       |       |      |        |
| 2403-3414                          | 2403-3415 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3416                          | 2403-3417 | 13                             | 35       | 16  | 11                | 11                                      | 7                |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3418                          | 2403-3419 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      | 0,325                 | 0,356 | 5      |     |     | 35    |       |      |        |
| 2403-3421                          | 2403-3422 | 12                             |          | 14  | 10                | 10                                      | 6                |       | 39,63                           | 1,54   | 100°00'                                      |        |                      | 0,281                 | 0,313 | 3      |     |     | 34    |       |      |        |
| 2403-3423                          | 2403-3424 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3425                          | 2403-3426 | 13                             | 34       | 16  | 11                | 11                                      | 7                |       | 46,23                           | 1,22   | 108°00'                                      |        |                      | 0,319                 | 0,350 | 4      |     |     | 35    |       |      |        |
| 2403-3427                          | 2403-3428 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3429                          | 2403-3431 | 12                             |          | 14  | 10                | 10                                      | 6                |       |                                 |        |  |        |                      | 46,66                 | 1,48  | 98°10' |     |     | 0,281 | 0,313 | 3    | 34     |
| 2403-3432                          | 2403-3433 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3434                          | 2403-3435 | 14                             |          | 16  | 11                | 11                                      | 7                |       | 53,20                           | 1,28   | 105°00'                                      |        |                      | 0,325                 | 0,356 | 4      |     |     | 37    |       |      |        |
| 2403-3436                          | 2403-3537 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3438                          | 2403-3439 | 12                             | 38       | 14  | 10                | 10                                      | 6                |       |                                 |        |  |        |                      | 46,66                 | 1,48  | 98°10' |     |     | 0,294 | 0,325 | 4    | 35     |
| 2403-3441                          | 2403-3442 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3443                          | —         | 11                             | 33       | 18  | 12                | 13                                      | 8                |       | 18                              | 55,36  | 1,44   |        |                      | 100°48'               | 0,344 | —      |     |     | 5     | 32    |      |        |
| 2403-3444                          | —         |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3445                          | 2403-3446 | 12                             | 38       | 14  | 10                | 10                                      | 6                | 55,65 | 1,62                            |        |  | 93°20' | 8                    |                       | 0,294 | 0,325  | 4   | 35  |       |       |      |        |
| 2403-3447                          | 2403-3448 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3449                          | —         | 11                             | 33       | 18  | 12                | 13                                      | 8                | 18    | 61,05                           | 1,40   | 102°52'                                      | 0,294  |                      | 0,325                 |       |        |     |     | 4     | 35    |      |        |
| 2403-3451                          | —         |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3452                          | 2403-3453 | 12                             | 38       |     |                   |   |                  | 64,38 |                                 |        |  |        |                      |                       |       |        |     |     |       |       | 1,56 | 96°00' |
| 2403-3454                          | 2403-3455 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3456                          | 2403-3457 | 13                             | 37       |     |                   |   |                  | 64,38 | 1,56                            | 96°00' |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3458                          | 2403-3459 |                                |          | 14  | 10                | 10                                      | 6                |       |                                 |        | 64,38  | 1,56   |                      | 96°00'                |       |        |     |     |       |       |      |        |
| 2403-3461                          | 2403-3462 | 12                             | 38       |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3463                          | 2403-3464 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3465                          | 2403-3466 | 13                             | 37       |     |                   |   |                  | 64,38 | 1,56                            | 96°00' |  |        |                      |                       |       |        |     |     |       |       |      |        |
| 2403-3467                          | 2403-3468 |                                |          |     |                   |   |                  |       |                                 |        |  |        |                      |                       |       |        |     |     |       |       |      |        |

## Размеры, мм

| Обозначение прогажки исполнения |           | Применяемость |   | $D \times m$ | $z$ | Сочетание полей допусков $D$ и $e$ | $S$   | $D_1$ | $D_2$ | $D_3$ , не более | $D_4$ , не более | $D_5$ | $D_6$ | $D_7$ | $D_8$ | $D_9$ |
|---------------------------------|-----------|---------------|---|--------------|-----|------------------------------------|-------|-------|-------|------------------|------------------|-------|-------|-------|-------|-------|
| 1                               | 2         | 1             | 2 |              |     |                                    |       |       |       |                  |                  |       |       |       |       |       |
| 2403-3469                       | 2403-3471 |               |   | 100×3        | 32  | H7—9H                              | 5,197 | 63    | 93,4  | 93,1             | 93,4             | 99,3  | 91    | 50    | 99,3  | M48×3 |
| 2403-3472                       | 2403-3473 |               |   |              |     | H8—11H                             | 5,277 |       |       |                  |                  |       |       |       |       |       |
| 2403-3474                       | 2403-3475 |               |   | 105×3        | 34  | H7—9H                              | 4,629 | 63    | 98,4  | 98,1             | 98,4             | 104,3 | 96    | 50    | 104,6 | M48×3 |
| 2403-3476                       | 2403-3477 |               |   |              |     | H8—11H                             | 4,719 |       |       |                  |                  |       |       |       |       |       |
| 2403-3478                       | —         |               |   | 110×3        | 35  | H7—9H                              | 5,784 | 70    | 103,4 | 103,1            | 103,4            | 109,3 | 101   | 50    | 109,2 | M48×3 |
| 2403-3479                       | —         |               |   |              |     | H8—11H                             | 5,874 |       |       |                  |                  |       |       |       |       |       |
| 2403-3481                       | —         |               |   | 120×3        | 38  | H7—9H                              | 6,361 | 70    | 113,4 | 113,1            | 113,4            | 119,3 | 111   | 50    | 120,3 | M48×3 |
| 2403-3482                       | —         |               |   |              |     | H8—11H                             | 6,451 |       |       |                  |                  |       |       |       |       |       |
| 2403-3483                       | —         |               |   | 130×3        | 22  | H7—9H                              | 5,207 | 70    | 123,4 | 123,1            | 123,4            | 129,3 | 121   | 50    | 129,5 | M48×3 |
| 2403-3484                       | —         |               |   |              |     | H8—11H                             | 5,297 |       |       |                  |                  |       |       |       |       |       |
| 2403-3485                       | 2403-3486 |               |   | 55×3,5       | 14  | H7—9H                              | 6,810 | 45    | 47,5  | 47,2             | 47,4             | 51,1  | 45    | 30    | 51,4  | M30×2 |
| 2403-3487                       | 2403-3488 |               |   |              |     | H8—11H                             | 6,879 |       |       |                  |                  |       |       |       |       |       |
| 2403-3489                       | 2403-3491 |               |   | 60×3,5       | 16  | H7—9H                              | 5,664 | 50    | 52,4  | 52,1             | 52,4             | 59,3  | 50    | 50    | 60,2  | M36×3 |
| 2403-3492                       | 2403-3493 |               |   |              |     | H8—11H                             | 5,744 |       |       |                  |                  |       |       |       |       |       |
| 2403-3494                       | 2403-3495 |               |   | 65×3,5       | 18  | H7—9H                              | 4,510 | 50    | 57,4  | 57,1             | 57,4             | 64,3  | 55    | 50    | 61,8  | M36×3 |
| 2403-3496                       | 2403-3497 |               |   |              |     | H8—11H                             | 4,590 |       |       |                  |                  |       |       |       |       |       |
| 2403-3498                       | 2403-3499 |               |   | 70×3,5       | 18  | H7—9H                              | 7,396 | 50    | 62,4  | 62,1             | 62,4             | 69,3  | 60    | 50    | 69,8  | M48×3 |
| 2403-3501                       | 2403-3502 |               |   |              |     | H8—11H                             | 7,476 |       |       |                  |                  |       |       |       |       |       |
| 2403-3503                       | 2403-3504 |               |   | 75×3,5       | 20  | H7—9H                              | 6,242 | 63    | 67,4  | 67,1             | 67,4             | 74,3  | 65    | 50    | 75,3  | M48×3 |
| 2403-3505                       | 2403-3506 |               |   |              |     | H8—11H                             | 6,322 |       |       |                  |                  |       |       |       |       |       |
| 2403-3507                       | 2403-3508 |               |   | 80×3,5       | 22  | H7—9H                              | 5,087 | 63    | 72,4  | 72,1             | 72,4             | 79,3  | 70    | 50    | 79,7  | M48×3 |
| 2403-3509                       | 2403-3511 |               |   |              |     | H8—11H                             | 5,167 |       |       |                  |                  |       |       |       |       |       |
| 2403-3512                       | 2403-3513 |               |   | 85×3,5       | 21  | H7—9H                              | 3,932 | 63    | 77,4  | 77,1             | 77,4             | 84,3  | 75    | 50    | 85,2  | M48×3 |
| 2403-3514                       | 2403-3515 |               |   |              |     | H8—11H                             | 4,012 |       |       |                  |                  |       |       |       |       |       |
| 2403-3516                       | 2403-3517 |               |   | 90×3,5       | 21  | H7—9H                              | 6,819 | 63    | 82,4  | 82,1             | 82,4             | 89,3  | 80    | 50    | 90,4  | M48×3 |
| 2403-3518                       | 2403-3519 |               |   |              |     | H8—11H                             | 6,899 |       |       |                  |                  |       |       |       |       |       |
| 2403-3521                       | 2403-3522 |               |   | 95×3,5       | 26  | H7—9H                              | 5,664 | 63    | 87,4  | 87,1             | 87,4             | 94,3  | 85    | 50    | 94,5  | M48×3 |
| 2403-3523                       | 2403-3524 |               |   |              |     | H8—11H                             | 5,744 |       |       |                  |                  |       |       |       |       |       |

Размеры, мм

| Осозначение<br>протяжки исполнения |           | D <sub>10</sub> | D <sub>11</sub> | D <sub>12</sub> | L<br>для исполне-<br>ния |      | L <sub>1</sub><br>для исполне-<br>ния |      | l   | l <sub>1</sub> | l <sub>2</sub> | l <sub>3</sub> | l <sub>4</sub> | l <sub>5</sub> | l <sub>6</sub> | l <sub>7</sub> | l <sub>8</sub> | l <sub>9</sub> | l <sub>10</sub> |     |
|------------------------------------|-----------|-----------------|-----------------|-----------------|--------------------------|------|---------------------------------------|------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----|
|                                    |           |                 |                 |                 | 1                        | 2    | 1                                     | 2    |     |                |                |                |                |                |                |                |                |                |                 |     |
| 1                                  | 2         |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3469                          | 2403-3471 |                 |                 |                 |                          |      |                                       |      |     |                | 154            |                |                | 532            |                |                |                |                |                 |     |
| 2403-3472                          | 2403-3473 |                 |                 |                 |                          | 1540 |                                       | 1300 |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3474                          | 2403-3475 |                 |                 |                 |                          |      |                                       |      | 445 |                |                |                |                |                |                |                | 22             | 12             | 205             |     |
| 2403-3476                          | 2403-3477 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3478                          | —         | 43,5            | 50              | 70              | 1115                     |      | 1175                                  |      |     |                | 168            |                |                | 518            |                |                |                |                |                 |     |
| 2403-3479                          | —         |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3481                          | —         |                 |                 |                 |                          |      |                                       |      | 450 |                |                |                |                |                |                |                | 24             | 14             | 210             |     |
| 2403-3482                          | —         |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3483                          | —         |                 |                 |                 | 1365                     |      | 1125                                  |      | 415 |                |                |                |                | 490            |                |                | 23             | 13             | 205             |     |
| 2403-3484                          | —         |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3485                          | 2403-3486 | 27,0            | 32              | 45              |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3487                          | 2403-3488 |                 |                 |                 |                          |      |                                       |      |     |                | 154            |                |                |                |                |                |                |                |                 |     |
| 2403-3489                          | 2403-3491 |                 |                 |                 |                          |      |                                       |      | 390 |                |                | 56             | 40             |                | 90             | 70             |                | 21             | 11              | 215 |
| 2403-3492                          | 2403-3493 |                 |                 |                 |                          |      |                                       |      | 9,5 |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3494                          | 2403-3495 | 31,5            | 38              | 50              | 1400                     | 1525 | 1225                                  | 1350 |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3496                          | 2403-3497 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3498                          | 2403-3499 |                 |                 |                 |                          |      |                                       |      | 380 | 168            |                |                |                |                |                |                | 24             | 14             | 205             |     |
| 2403-3501                          | 2403-3502 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                | 574            |                |                |                |                |                 |     |
| 2403-3503                          | 2403-3504 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3505                          | 2403-3506 |                 |                 | 63              | 1415                     | 1540 |                                       |      | 410 |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3507                          | 2403-3508 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3509                          | 2403-3511 |                 |                 |                 |                          |      |                                       |      |     |                | 154            |                |                |                |                |                |                |                |                 |     |
| 2403-3512                          | 2403-3513 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3514                          | 2403-3515 | 43,5            | 50              |                 |                          |      | 1200                                  | 1325 |     |                |                |                |                |                |                |                | 23             | 13             | 195             |     |
| 2403-3516                          | 2403-3517 |                 |                 | 70              | 1440                     | 1565 |                                       |      | 435 |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3518                          | 2403-3519 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |
| 2403-3521                          | 2403-3522 |                 |                 |                 |                          |      |                                       |      |     |                | 168            |                |                | 560            |                |                |                |                |                 |     |
| 2403-3523                          | 2403-3524 |                 |                 |                 |                          |      |                                       |      |     |                |                |                |                |                |                |                |                |                |                 |     |

## Размеры, мм

| Обозначение<br>протяжки и исполнения |           | Зубья<br>черновые и переходные |          |     |                  | Зубья<br>чистовые<br>и калибру-<br>ющие |                  | $t_2$ | $b$<br>(пред.<br>откл.<br>—0,04) | $b_1$   | $\varphi$<br>(пред.<br>откл.<br>$\pm 1^\circ$ ) | $q$  | $F$ ,<br>не<br>более | с<br>для исполнения |   | $n$ | $a$ | $f$ |
|--------------------------------------|-----------|--------------------------------|----------|-----|------------------|---|------------------|-------|----------------------------------|---------|---|------|----------------------|---------------------|---|-----|-----|-----|
|                                      |           | Число зубьев                   |          | $t$ | Номер<br>профиля | $t_1$                                   | Номер<br>профиля |       |                                  |         |   |      |                      | 1                   | 2 |     |     |     |
|                                      |           | фасонных                       | шлицевых |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 1                                    | 2         |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3469                            | 2403-3471 | 12                             | 38       |     |                  |   |                  | 71,05 | 1,58                             | 101°16' |   |      |                      |                     |   |     |     | 35  |
| 2403-3472                            | 2403-3473 |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      | 0,325               |   |     |     |     |
| 2403-3474                            | 2403-3475 |                                |          |     |                  |   |                  | 71,42 | 1,52                             | 95°18'  | 9   |      |                      |                     | 4 |     |     | 34  |
| 2403-3476                            | 2403-3477 |                                |          |     |                  |   |                  |       |                                  |         |   |      | 0,294                |                     |   |     |     |     |
| 2403-3478                            | —         | 13                             | 37       |     |                  | 6                                       |                  | 73,35 | 1,63                             | 92°34'  |   | 0,24 |                      |                     |   | 1,5 |     | 35  |
| 2403-3479                            | —         |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3481                            | —         |                                |          |     |                  |   |                  | 82,08 | 1,60                             | 94°44'  | 10  |      |                      |                     | 3 |     |     |     |
| 2403-3482                            | —         |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3483                            | —         |                                | 35       |     |                  |   |                  | 89,14 | 1,55                             | 94°18'  | 11  |      | 0,281                |                     |   |     |     | 33  |
| 2403-3484                            | —         |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3485                            | 2403-3486 |                                |          |     |                  |   |                  | 35,56 | 2,04                             | 102°52' | 4   |      |                      |                     |   |     |     | 35  |
| 2403-3487                            | 2403-3488 | 12                             |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3489                            | 2403-3491 |                                |          |     |                  |   |                  | 42,43 | 1,49                             | 112°30' |   |      |                      |                     | 4 |     |     | 34  |
| 2403-3492                            | 2403-3493 |                                |          | 14  | 10               | 10                                      | 16               |       |                                  |         |   |      | 0,306                | 0,328               |   |     |     |     |
| 2403-3494                            | 2403-3495 |                                |          |     |                  |   |                  | 42,41 | 1,97                             |         | 5   |      |                      |                     |   |     |     | 30  |
| 2403-3496                            | 2403-3497 |                                |          |     |                  |   |                  |       |                                  | 100°00' |   |      |                      |                     |   |     |     |     |
| 2403-3498                            | 2403-3499 | 13                             |          |     |                  |   |                  | 46,22 | 2,02                             |         |   |      |                      |                     |   |     |     | 37  |
| 2403-3501                            | 2403-3502 |                                | 41       |     |                  |   |                  |       |                                  |         |   | 0,28 |                      |                     |   |     | 2,0 |     |
| 2403-3503                            | 2403-3504 |                                |          |     |                  |   |                  | 53,26 | 1,65                             | 108°00' |   |      |                      |                     |   |     |     | 35  |
| 2403-3505                            | 2403-3506 |                                |          |     |                  |   |                  |       |                                  |         | 6   |      |                      |                     |   |     |     |     |
| 2403-3507                            | 2403-3508 |                                |          |     |                  |   |                  | 53,15 | 1,96                             | 98°10'  |   |      |                      |                     |   |     |     | 33  |
| 2403-3509                            | 2403-3511 |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3512                            | 2403-3513 | 12                             |          |     |                  |   |                  | 59,98 | 1,85                             |         |   |      |                      |                     | 3 |     |     | 30  |
| 2403-3514                            | 2403-3515 |                                |          |     |                  |   |                  |       |                                  | 105°00' |   |      | 0,300                | 0,331               |   |     |     |     |
| 2403-3516                            | 2403-3517 |                                |          |     |                  |   |                  | 64,01 | 1,77                             |         | 7   |      |                      |                     |   |     |     | 35  |
| 2403-3518                            | 2403-3519 |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |
| 2403-3521                            | 2403-3522 | 13                             | 40       |     |                  |   |                  | 63,85 | 1,98                             | 96°56'  |   |      |                      |                     |   |     |     | 34  |
| 2403-3523                            | 2403-3524 |                                |          |     |                  |   |                  |       |                                  |         |   |      |                      |                     |   |     |     |     |



| Обозначение<br>протяжки исполнения |           | Применяе-<br>мость |   | D×m     | z  | Сочетание<br>полей<br>допусков<br>D и e | S     | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> ,<br>не<br>более | D <sub>4</sub> ,<br>не<br>более | D <sub>5</sub> | D <sub>6</sub> | D <sub>7</sub> | D <sub>8</sub> | D <sub>9</sub> |
|------------------------------------|-----------|--------------------|---|---------|----|---|-------|----------------|----------------|---------------------------------|---------------------------------|----------------|----------------|----------------|----------------|----------------|
| 1                                  | 2         | 1                  | 2 |         |    |   |       |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3525                          | 2403-3526 |                    |   | 100×3,5 | 28 | H7—9H                                   | 4,510 | 63             | 92,4           | 92,1                            | 92,4                            | 99,3           | 90             | 50             | 100,0          |                |
| 2403-3527                          | 2403-3528 |                    |   |         |    | H8—11H                                  | 4,590 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3529                          | 2403-3531 |                    |   | 105×3,5 | 29 | H7—9H                                   | 5,386 | 63             | 97,1           | 97,1                            | 97,4                            | 101,3          | 95             |                | 104,8          |                |
| 2403-3532                          | 2403-3533 |                    |   |         |    | H8—11H                                  | 5,476 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3534                          | —         |                    |   | 110×3,5 | 30 | H7—9H                                   | 6,252 | 70             | 102,4          | 102,1                           | 102,4                           | 109,3          | 100            |                | 109,4          | M48×3          |
| 2403-3535                          | —         |                    |   |         |    | H8—11H                                  | 6,342 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3536                          | —         |                    |   | 120×3,5 | 34 | H7—9H                                   | 3,942 | 70             | 112,4          | 112,1                           | 112,4                           | 119,3          | 110            |                | 120,3          |                |
| 2403-3537                          | —         |                    |   |         |    | H8—11H                                  | 4,032 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3538                          | —         |                    |   | 130×3,5 | 36 | H7—9H                                   | 5,674 | 70             | 122,4          | 122,1                           | 122,4                           | 129,3          | 120            |                | 129,8          |                |
| 2403-3539                          | —         |                    |   |         |    | H8—11H                                  | 5,764 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3541                          | —         |                    |   | 60×4    | 13 | H7—9H                                   | 8,442 | 50             | 51,4           | 51,1                            | 51,2                            | 59,2           | 49             |                | 59,3           |                |
| 2403-3542                          | —         |                    |   |         |    | H8—11H                                  | 8,522 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3543                          | —         |                    |   | 65×4    | 15 | H7—9H                                   | 6,710 | 50             | 56,4           | 56,1                            | 56,2                            | 64,2           | 54             |                | 65,3           | M36×3          |
| 2403-3544                          | —         |                    |   |         |    | H8—11H                                  | 6,790 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3545                          | —         |                    |   | 70×4    | 16 | H7—9H                                   | 7,287 | 50             | 61,4           | 61,1                            | 61,2                            | 69,2           | 59             |                | 70,0           |                |
| 2403-3546                          | —         |                    |   |         |    | H8—11H                                  | 7,367 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3547                          | —         |                    |   | 75×4    | 17 | H7—9H                                   | 7,864 | 50             | 66,4           | 66,1                            | 66,2                            | 74,2           | 64             |                | 75,0           |                |
| 2403-3548                          | —         |                    |   |         |    | H8—11H                                  | 7,944 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3549                          | —         |                    |   | 80×4    | 18 | H7—9H                                   | 8,442 | 50             | 71,4           | 71,1                            | 71,2                            | 79,2           | 69             |                | 79,7           |                |
| 2403-3551                          | —         |                    |   |         |    | H8—11H                                  | 8,522 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3552                          | —         |                    |   | 85×4    | 20 | H7—9H                                   | 6,710 | 63             | 76,4           | 76,1                            | 76,2                            | 84,2           | 74             |                | 84,8           | M48×3          |
| 2403-3553                          | —         |                    |   |         |    | H8—11H                                  | 6,790 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3554                          | —         |                    |   | 90×4    | 21 | H7—9H                                   | 7,287 | 63             | 81,4           | 81,1                            | 81,2                            | 89,2           | 79             |                | 89,6           |                |
| 2403-3555                          | —         |                    |   |         |    | H8—11H                                  | 7,367 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3556                          | —         |                    |   | 95×4    | 22 | H7—9H                                   | 7,864 | 63             | 86,4           | 86,1                            | 86,2                            | 94,2           | 84             |                | 94,4           |                |
| 2403-3557                          | —         |                    |   |         |    | H8—11H                                  | 7,944 |                |                |                                 |                                 |                |                |                |                |                |
| 2403-3558                          | —         |                    |   | 100×4   | 24 | H7—9H                                   | 6,132 | 63             | 91,4           | 91,1                            | 91,2                            | 99,2           | 89             |                | 100,3          |                |
| 2403-3559                          | —         |                    |   |         |    | H8—11H                                  | 6,212 |                |                |                                 |                                 |                |                |                |                |                |

## Размеры, мм

| Обозначение<br>протяжки исполнения |           | $D_{10}$ | $D_{11}$ | $D_{12}$ | $L$<br>для исполне-<br>ния |      | $L_1$<br>для исполне-<br>ния |     | $l$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{10}$ |     |
|------------------------------------|-----------|----------|----------|----------|----------------------------|------|------------------------------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|
|                                    |           |          |          |          | 1                          | 2    | 1                            | 2   |     |       |       |       |       |       |       |       |       |       |          |     |
| 1                                  | 2         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3525                          | 2403-3526 |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3527                          | 2403-3528 |          |          |          |                            | 1540 | 1300                         |     |     | 154   |       |       |       | 574   |       |       |       |       |          |     |
| 2403-3529                          | 2403-3531 |          |          |          |                            |      |                              |     | 415 |       |       |       |       |       |       |       | 22    | 12    | 175      |     |
| 2403-3532                          | 2403-3533 |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3534                          | —         | 43,5     | 50       | 70       | 1415                       |      | 1175                         |     |     |       |       |       | 40    |       | 90    |       |       |       |          |     |
| 2403-3535                          | —         |          |          |          |                            |      |                              |     |     | 168   |       |       |       | 560   |       |       |       |       |          |     |
| 2403-3536                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3537                          | —         |          |          |          |                            |      |                              |     | 420 |       |       |       |       |       |       |       | 20    | 10    | 180      |     |
| 2403-3538                          | —         |          |          |          |                            |      |                              |     |     | 154   |       |       |       | 574   |       |       |       |       |          |     |
| 2403-3539                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3541                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3542                          | —         |          |          |          | 1500                       |      | 1325                         |     | 385 |       |       |       |       | 658   |       |       |       |       |          | 210 |
| 2403-3543                          | —         | 31,5     | 38       | 50       |                            |      |                              | 9,5 |     |       | 56    |       |       |       |       | 70    | 23    | 12    |          |     |
| 2403-3544                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3545                          | —         |          |          |          | 1525                       |      | 1350                         |     | 395 |       |       |       |       | 672   |       |       |       |       |          | 220 |
| 2403-3546                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3547                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3548                          | —         |          |          | 63       |                            |      | 1325                         |     | 420 | 168   |       | 44    |       | 99    |       |       | 25    | 14    | 205      |     |
| 2403-3549                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3551                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3552                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3553                          | —         | 43,5     | 50       |          | 1540                       |      |                              |     |     |       |       |       |       | 658   |       |       |       |       |          |     |
| 2403-3554                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3555                          | —         |          |          |          |                            |      | 1300                         |     | 425 |       |       |       |       |       |       |       | 23    | 12    | 185      |     |
| 2403-3556                          | —         |          |          | 70       |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3557                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3558                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3559                          | —         |          |          |          |                            |      |                              |     |     |       |       |       |       |       |       |       |       |       |          |     |

Размеры, мм

| Обозначение<br>про.яжки исполнения |           | Зубья<br>черновые и переходные |          |     |                  | Зубья<br>чистовые<br>и калибру-<br>ющие |                  | $t_2$ | $b$<br>(пред.<br>откл.<br>-0,04) | $b_1$   | $\varphi$<br>(пред.<br>откл.<br>$\pm 1^\circ$ ) | $q$ | $F$ ,<br>не<br>более | $c$<br>для исполнения |   | $n$ | $a$ | $j$ |
|------------------------------------|-----------|--------------------------------|----------|-----|------------------|---|------------------|-------|----------------------------------|---------|---|-----|----------------------|-----------------------|---|-----|-----|-----|
|                                    |           | Число зубьев                   |          | $t$ | Номер<br>профиля | $t_1$                                   | Номер<br>профиля |       |                                  |         |   |     |                      | 1                     | 2 |     |     |     |
|                                    |           | фасочных                       | шлицевых |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 1                                  | 2         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3525                          | 2403-3526 |                                |          |     |                  |   |                  | 70,81 | 1,84                             | 102°52' |   |     |                      |                       |   |     |     | 32  |
| 2403-3527                          | 2403-3528 | 12                             | 41       |     |                  |   |                  |       |                                  |         |   |     |                      | 0,325                 |   |     |     |     |
| 2403-3529                          | 2403-3531 |                                |          |     |                  |   |                  | 72,74 | 1,89                             | 99°18'  | 8   |     |                      |                       |   |     | 34  |     |
| 2403-3532                          | 2403-3533 |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3534                          | —         |                                |          |     |                  | 10                                      | 7                | 16    | 74,49                            | 2,00    | 96°00'  |     | 0,28                 | 0,294                 |   | 20  | 35  |     |
| 2403-3535                          | —         | 13                             | 40       |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3536                          | —         |                                |          |     |                  |   |                  |       | 81,40                            | 2,07    | 95°18'  | 9   |                      |                       |   |     | 31  |     |
| 2403-3537                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3538                          | —         | 12                             | 41       |     |                  |   |                  |       | 92,30                            | 1,83    | 100°00'   | 10  |                      |                       |   |     | 34  |     |
| 2403-3539                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3541                          | —         |                                |          |     |                  |   |                  |       | 40,72                            | 2,20    | 110°46'   |     |                      |                       |   |     | 39  |     |
| 2403-3542                          | —         |                                | 47       |     |                  |   |                  |       |                                  |         |   | 4   |                      | 0,331                 |   |     |     |     |
| 2403-3543                          | —         |                                |          |     |                  |   |                  |       | 39,95                            | 2,48    | 96°00'  |     |                      |                       |   | 3   | 36  |     |
| 2403-3544                          | —         |                                |          | 14  | 10               |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3545                          | —         |                                | 48       |     |                  |   |                  |       | 49,65                            |         | 112°30'   |     |                      | 0,338                 |   |     |     |     |
| 2403-3546                          | —         |                                |          |     |                  |   |                  |       |                                  | 1,95    |   |     |                      |                       |   |     |     |     |
| 2403-3547                          | —         |                                |          |     |                  |   |                  |       | 51,33                            |         | 105°52'   | 5   |                      |                       |   |     | 38  |     |
| 2403-3548                          | —         | 13                             |          |     |                  | 11                                      | 8                | 17    |                                  |         |   |     | 0,32                 | 0,331                 |   | 2,5 |     |     |
| 2403-3549                          | —         |                                |          |     |                  |   |                  |       | 52,79                            | 2,50    | 100°00'   |     |                      |                       |   |     |     |     |
| 2403-3551                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3552                          | —         |                                |          |     |                  |   |                  |       | 60,27                            | 2,09    | 108°00'   |     |                      |                       |   |     | 36  |     |
| 2403-3553                          | —         |                                | 47       |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3554                          | —         |                                |          |     |                  |   |                  |       | 61,92                            | 2,27    | 102°52'   | 6   |                      |                       |   |     |     |     |
| 2403-3555                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3556                          | —         |                                |          |     |                  |   |                  |       | 63,40                            | 2,46    | 98°10'  |     |                      | 0,325                 |   |     | 37  |     |
| 2403-3557                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |
| 2403-3558                          | —         |                                |          |     |                  |   |                  |       | 70,88                            | 2,22    | 105°00'   | 7   |                      |                       |   |     | 35  |     |
| 2403-3559                          | —         |                                |          |     |                  |   |                  |       |                                  |         |   |     |                      |                       |   |     |     |     |

Размеры, мм

Продолжение табл. 1

| Обозначение<br>протяжки исполнения |   | Приме-<br>мость |   | $D \times t$ | $z$ | Сочетание<br>полей<br>допусков<br>$D$ и $e$ | $S$   | $D_1$ | $D_2$ | $D_3$ ,<br>не<br>более | $D_4$ ,<br>не<br>более | $D_5$ | $D_6$ | $D_7$ | $D_8$ | $D_9$ |
|------------------------------------|---|-----------------|---|--------------|-----|---|-------|-------|-------|------------------------|------------------------|-------|-------|-------|-------|-------|
| 1                                  | 2 | 1               | 2 |              |     |   |       |       |       |                        |                        |       |       |       |       |       |
| 2403-3561                          | — |                 |   | 105×4        | 25  | H7—9H                                       | 6,710 | 63    | 96,4  | 96,1                   | 96,2                   | 104,2 | 94    |       |       | 105,2 |
| 2403-3562                          | — |                 |   |              |     | H8—11H                                      | 6,790 |       |       |                        |                        |       |       |       |       |       |
| 2403-3563                          | — |                 |   | 110×4        | 26  | H7—9H                                       | 7,297 | 70    | 101,4 | 101,1                  | 101,2                  | 109,2 | 99    |       |       | 110,0 |
| 2403-3564                          | — |                 |   |              |     | H8—11H                                      | 7,387 |       |       |                        |                        |       |       |       |       |       |
| 2403-3565                          | — |                 |   | 120×4        | 28  | H7—9H                                       | 8,452 | 70    | 111,4 | 111,1                  | 111,2                  | 119,2 | 109   |       |       | 119,5 |
| 2403-3566                          | — |                 |   |              |     | H8—11H                                      | 8,542 |       |       |                        |                        |       |       |       |       |       |
| 2403-3567                          | — |                 |   | 130×4        | 31  | H7—9H                                       | 7,297 | 70    | 121,4 | 121,1                  | 121,2                  | 129,2 | 119   |       |       | 130,2 |
| 2403-3568                          | — |                 |   |              |     | H8—11H                                      | 7,387 |       |       |                        |                        |       |       |       |       |       |

Размеры, мм

Продолжение табл. 1

| Обозначение<br>протяжки исполнения |   | $D_{10}$ | $D_{11}$ | $D_{12}$ | $L$<br>для исполне-<br>ния |   | $L_1$<br>для исполне-<br>ния |   | $l$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{10}$ |     |
|------------------------------------|---|----------|----------|----------|----------------------------|---|------------------------------|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|
| 1                                  | 2 |          |          |          | 1                          | 2 | 1                            | 2 |     |       |       |       |       |       |       |       |       |       |          | 1   |
| 2403-3561                          | — |          |          |          |                            |   |                              |   |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3562                          | — |          |          |          |                            |   |                              |   |     | 425   |       |       |       |       |       |       |       | 23    | 12       | 185 |
| 2403-3563                          | — |          |          |          |                            |   |                              |   |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3564                          | — | 43,5     | 50       | 70       | 1540                       | — | 1300                         | — | 9,5 | 168   | 56    | 44    | 658   | 99    | 70    |       |       |       |          |     |
| 2403-3565                          | — |          |          |          |                            |   |                              |   |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3566                          | — |          |          |          |                            |   |                              |   |     | 430   |       |       |       |       |       |       |       | 21    | 10       | 190 |
| 2403-3567                          | — |          |          |          |                            |   |                              |   |     |       |       |       |       |       |       |       |       |       |          |     |
| 2403-3568                          | — |          |          |          |                            |   |                              |   |     |       |       |       |       |       |       |       |       |       |          |     |

Размеры, мм

Продолжение табл. 1

| Обозначение<br>протяжки исполнения |   | Зубья<br>черновые и переходные |          |     |                  | Зубья<br>чистовые<br>и калибру-<br>ющие |                  | $t_2$ | $b$<br>(пред.<br>откл.<br>—0,04) | $b_1$ | $\varphi$<br>(пред.<br>откл.<br>$\pm 1^\circ$ ) | $q$  | $F$ ,<br>не<br>более | $c$<br>для исполнения |   | $n$ | $a$ | $f$ |
|------------------------------------|---|--------------------------------|----------|-----|------------------|---|------------------|-------|----------------------------------|-------|---|------|----------------------|-----------------------|---|-----|-----|-----|
| 1                                  | 2 | Число зубьев                   |          | $t$ | Номер<br>профиля | $t_1$                                   | Номер<br>профиля |       |                                  |       |   |      |                      | 1                     | 2 |     |     |     |
|                                    |   | фасонных                       | шлицевых |     |                  |   |                  |       |                                  |       |   |      |                      |                       |   |     |     |     |
| 2403-3561                          | — |                                |          |     |                  |   |                  |       | 72,50                            | 2,32  | 100°48'   |      |                      |                       |   |     |     | 36  |
| 2403-3562                          | — |                                |          |     |                  |   |                  |       |                                  |       |   | 7    |                      |                       |   |     |     |     |
| 2403-3563                          | — |                                |          |     |                  |   |                  |       | 74,00                            | 2,43  | 96°56'  |      |                      |                       |   |     |     |     |
| 2403-3564                          | — | 13                             | 47       | 14  | 10               | 11                                      | 8                | 17    |                                  |       |   | 0,32 | 0,325                | —                     | 3 | 2,5 | 37  |     |
| 2403-3565                          | — |                                |          |     |                  |   |                  |       | 85,35                            | 2,35  | 102°52'   |      |                      |                       |   |     |     |     |
| 2403-3566                          | — |                                |          |     |                  |   |                  |       |                                  |       |   | 8    |                      |                       |   |     |     |     |
| 2403-3567                          | — |                                |          |     |                  |   |                  |       | 85,96                            | 2,55  | 92°54'  |      |                      |                       |   |     |     |     |
| 2403-3568                          | — |                                |          |     |                  |   |                  |       |                                  |       |   |      |                      |                       |   |     |     |     |

Пример условного обозначения протяжки длиной  $L=1500$  мм для шлицевого эвольвентного отверстия диаметром 65 мм, модулем 3 мм с центрированием по наружному диаметру, полем допуска центрирующего диаметра H8 и ширины впадины 11H, группы заточки II исполнения I:

Протяжка 2403-3436 II ГОСТ Р 50037—92

То же, протяжки с откорректированными исполнительными размерами:

Протяжка 2403-3436 K II ГОСТ Р 50037—92

| Обозначение протяжки исполнения |           | D×t<br>мм | Сочетание полей допусков D и e | Поз. 1                       |             | Поз. 2             |
|---------------------------------|-----------|-----------|--------------------------------|------------------------------|-------------|--------------------|
|                                 |           |           |                                | Протяжка исполнения (кол. 1) |             |                    |
| 1                               | 2         |           |                                | 1                            | 2           | Хвостовик (кол. 1) |
| Обозначение                     |           |           |                                |                              |             |                    |
| 2403-3412                       | 2403-3413 | 55×3      | H7—9H                          | 2403-3412/1                  | 2403-3413/1 | 2403-2201/2        |
| 2403-3414                       | 2403-3415 |           | H8—11H                         | 2403-3414/1                  | 2403-3415/1 |                    |
| 2403-3416                       | 2403-3417 |           | H7—9H                          | 2403-3416/1                  | 2403-3417/1 |                    |
| 2403-3418                       | 2403-3419 |           | H8—11H                         | 2403-3418/1                  | 2403-3419/1 |                    |
| 2403-3421                       | 2403-3422 | 60×3      | H7—9H                          | 2403-3421/1                  | 2403-3422/1 | 2403-2218/2        |
| 2403-3423                       | 2403-3424 |           | H8—11H                         | 2403-3423/1                  | 2403-3424/1 |                    |
| 2403-3425                       | 2403-3426 |           | H7—9H                          | 2403-3425/1                  | 2403-3426/1 |                    |
| 2403-3427                       | 2403-3428 |           | H8—11H                         | 2403-3427/1                  | 2403-3428/1 |                    |
| 2403-3429                       | 2403-3431 | 65×3      | H7—9H                          | 2403-3429/1                  | 2403-3431/1 | 2403-2218/2        |
| 2403-3432                       | 2403-3433 |           | H8—11H                         | 2403-3432/1                  | 2403-3433/1 |                    |
| 2403-3434                       | 2403-3435 |           | H7—9H                          | 2403-3434/1                  | 2403-3435/1 |                    |
| 2403-3536                       | 2403-3437 |           | H8—11H                         | 2403-3436/1                  | 2403-3437/1 |                    |
| 2403-3438                       | 2403-3439 | 70×3      | H7—9H                          | 2403-3438/1                  | 2403-3439/1 | 2403-2223/2        |
| 2403-3441                       | 2403-3442 |           | H8—11H                         | 2403-3441/1                  | 2403-3442/1 |                    |
| 2403-3443                       | —         |           | H7—9H                          | 2403-3443/1                  | —           |                    |
| 2403-3444                       | —         |           | H8—11H                         | 2403-3444/1                  | —           |                    |
| 2403-3445                       | 2403-3446 | 75×3      | H7—9H                          | 2403-3445/1                  | 2403-3446/1 | 2403-2245/2        |
| 2403-3447                       | 2403-3448 |           | H8—11H                         | 2403-3447/1                  | 2403-3448/1 |                    |
| 2403-3449                       | —         |           | H7—9H                          | 2403-3449/1                  | —           |                    |
| 2403-3451                       | —         |           | H8—11H                         | 2403-3451/1                  | —           |                    |
| 2403-3452                       | 2403-3453 | 80×3      | H7—9H                          | 2403-3452/1                  | 2403-3453/1 | 2403-2263/2        |
| 2403-3454                       | 2403-3455 |           | H8—11H                         | 2403-3454/1                  | 2403-3455/1 |                    |
| 2403-3456                       | 2403-3457 | 85×3      | H7—9H                          | 2403-3456/1                  | 2403-3457/1 | 2403-2263/2        |
| 2403-3458                       | 2403-3459 |           | H8—11H                         | 2403-3458/1                  | 2403-3459/1 |                    |
| 2403-3461                       | 2403-3462 | 90×3      | H7—9H                          | 2403-3461/1                  | 2403-3462/1 | 2403-2263/2        |
| 2403-3463                       | 2403-3464 |           | H8—11H                         | 2403-3463/1                  | 2403-3464/1 |                    |
| 2403-3465                       | 2403-3466 | 95×3      | H7—9H                          | 2403-3465/1                  | 2403-3466/1 | 2403-2263/2        |
| 2403-3467                       | 2403-3468 |           | H8—11H                         | 2403-3467/1                  | 2403-3468/1 |                    |
| 2403-3469                       | 2403-3471 | 100×3     | H7—9H                          | 2403-3469/1                  | 2403-3471/1 | 2403-2263/2        |
| 2403-3472                       | 2403-3473 |           | H8—11H                         | 2403-3472/1                  | 2403-3473/1 |                    |
| 2403-3474                       | 2403-3475 | 105×3     | H7—9H                          | 2403-3474/1                  | 2403-3475/1 | 2403-2263/2        |
| 2403-3476                       | 2403-3477 |           | H8—11H                         | 2403-3476/1                  | 2403-3477/1 |                    |
| 2403-3478                       | —         | 110×3     | H7—9H                          | 2403-3478/1                  | —           | 2403-2263/2        |
| 2403-3479                       | —         |           | H8—11H                         | 2403-3479/1                  | —           |                    |
| 2403-3481                       | —         | 120×3     | H7—9H                          | 2403-3481/1                  | —           | 2403-2476/2        |
| 2403-3482                       | —         |           | H8—11H                         | 2403-3482/1                  | —           |                    |
| 2403-3483                       | —         | 130×3     | H7—9H                          | 2403-3483/1                  | —           | 2403-2476/2        |
| 2403-3484                       | —         |           | H8—11H                         | 2403-3484/1                  | —           |                    |

Продолжение табл. 2

| Обозначение протяжки исполнения |           | D×t<br>мм | Сочетание полей допусков<br>D и e | Поз. 1                       |             | Поз. 2             |
|---------------------------------|-----------|-----------|-----------------------------------|------------------------------|-------------|--------------------|
|                                 |           |           |                                   | Протяжка исполнения (кол. 1) |             | Хвостовик (кол. 1) |
| 1                               | 2         |           |                                   | 1                            | 2           |                    |
|                                 |           |           |                                   | Обозначение                  |             |                    |
| 2403-3485                       | 2403-3486 | 55×3,5    | H7—9H                             | 2403-3485/1                  | 2403-3486/1 | 2403-2201/2        |
| 2403-3487                       | 2403-3488 |           | H8—11H                            | 2403-3487/1                  | 2403-3488/1 |                    |
| 2403-3489                       | 2403-3491 | 60×3,5    | H7—9H                             | 2403-3489/1                  | 2403-3491/1 | 2403-2218/2        |
| 2403-3492                       | 2403-3493 |           | H8—11H                            | 2403-3492/1                  | 2403-3493/1 |                    |
| 2403-3494                       | 2403-3495 | 65×3,5    | H7—9H                             | 2403-3494/1                  | 2403-3495/1 |                    |
| 2403-3496                       | 2403-3497 |           | H8—11H                            | 2403-3496/1                  | 2403-3497/1 |                    |
| 2403-3498                       | 2403-3499 | 70×3,5    | H7—9H                             | 2403-3498/1                  | 2403-3499/1 | 2403-2245/2        |
| 2403-3501                       | 2403-3502 |           | H8—11H                            | 2403-3501/1                  | 2403-3502/1 |                    |
| 2403-3503                       | 2403-3504 | 75×3,5    | H7—9H                             | 2403-3503/1                  | 2403-3504/1 | 2403-2263/2        |
| 2403-3505                       | 2403-3506 |           | H8—11H                            | 2403-3505/1                  | 2403-3506/1 |                    |
| 2403-3507                       | 2403-3508 | 80×3,5    | H7—9H                             | 2403-3507/1                  | 2403-3508/1 |                    |
| 2403-3509                       | 2403-3511 |           | H8—11H                            | 2403-3509/1                  | 2403-3511/1 |                    |
| 2403-3512                       | 2403-3513 | 85×3,5    | H7—9H                             | 2403-3512/1                  | 2403-3513/1 | 2403-2476/2        |
| 2403-3514                       | 2403-3515 |           | H8—11H                            | 2403-3514/1                  | 2403-3515/1 |                    |
| 2403-3516                       | 2403-3517 | 90×3,5    | H7—9H                             | 2403-3516/1                  | 2403-3517/1 |                    |
| 2403-3518                       | 2403-3519 |           | H8—11H                            | 2403-3518/1                  | 2403-3519/1 |                    |
| 2403-3521                       | 2403-3522 | 95×3,5    | H7—9H                             | 2403-3521/1                  | 2403-3522/1 | 2403-2476/2        |
| 2403-3523                       | 2403-3524 |           | H8—11H                            | 2403-3523/1                  | 2403-3524/1 |                    |
| 2403-3525                       | 2403-3526 | 100×3,5   | H7—9H                             | 2403-3525/1                  | 2403-3526/1 |                    |
| 2403-3527                       | 2403-3528 |           | H8—11H                            | 2403-3527/1                  | 2403-3528/1 |                    |
| 2403-3529                       | 2403-3531 | 105×3,5   | H7—9H                             | 2403-3529/1                  | 2403-3531/1 | 2403-2476/2        |
| 2403-3532                       | 2403-3533 |           | H8—11H                            | 2403-3532/1                  | 2403-3533/1 |                    |
| 2403-3534                       | —         | 110×3,5   | H7—9H                             | 2403-3534/1                  | —           |                    |
| 2403-3535                       | —         |           | H8—11H                            | 2403-3535/1                  | —           |                    |
| 2403-3536                       | —         | 120×3,5   | H7—9H                             | 2403-3536/1                  | —           |                    |
| 2403-3537                       | —         |           | H8—11H                            | 2403-3537/1                  | —           |                    |
| 2403-3538                       | —         | 130×3,5   | H7—9H                             | 2403-3538/1                  | —           |                    |
| 2403-3539                       | —         |           | H8—11H                            | 2403-3539/1                  | —           |                    |

| Обозначение протяжки исполнения |   | D×t<br>мм | Сочетание полей допусков<br>D и e | Поз. 1                          |   | Поз. 2                |             |
|---------------------------------|---|-----------|-----------------------------------|---------------------------------|---|-----------------------|-------------|
|                                 |   |           |                                   | Протяжка исполнения<br>(кол. 1) |   | Хвостовик<br>(кол. 1) |             |
| 1                               | 2 |           |                                   | 1                               | 2 |                       | Обозначение |
| 2403-3541                       | — | 60×4      | H7—9H                             | 2403-3541/1                     | — | 2403-2218/2           |             |
| 2403-3542                       | — |           | H8—11H                            | 2403-3542/1                     | — |                       |             |
| 2403-3543                       | — | 65×4      | H7—9H                             | 2403-3543/1                     | — |                       |             |
| 2403-3544                       | — |           | H8—11H                            | 2403-3544/1                     | — |                       |             |
| 2403-3545                       | — | 70×4      | H7—9H                             | 2403-3545/1                     | — |                       |             |
| 2403-3546                       | — |           | H8—11H                            | 2403-3546/1                     | — |                       |             |
| 2403-3547                       | — | 75×4      | H7—9H                             | 2403-3547/1                     | — |                       | 2403-2245/2 |
| 2403-3548                       | — |           | H8—11H                            | 2403-3548/1                     | — |                       |             |
| 2403-3549                       | — | 80×4      | H7—9H                             | 2403-3549/1                     | — |                       |             |
| 2403-3551                       | — |           | H8—11H                            | 2403-3551/1                     | — |                       |             |
| 2403-3552                       | — | 85×4      | H7—9H                             | 2403-3552/1                     | — |                       | 2403-2263/2 |
| 2403-3553                       | — |           | H8—11H                            | 2403-3553/1                     | — |                       |             |
| 2403-3554                       | — | 90×4      | H7—9H                             | 2403-3554/1                     | — |                       |             |
| 2403-3555                       | — |           | H8—11H                            | 2403-3555/1                     | — |                       |             |
| 2403-3556                       | — | 95×4      | H7—9H                             | 2403-3556/1                     | — |                       |             |
| 2403-3557                       | — |           | H8—11H                            | 2403-3557/1                     | — |                       |             |
| 2403-3558                       | — | 100×4     | H7—9H                             | 2403-3558/1                     | — |                       |             |
| 2403-3559                       | — |           | H8—11H                            | 2403-3559/1                     | — |                       |             |
| 2403-3561                       | — | 105×4     | H7—9H                             | 2403-3561/1                     | — |                       |             |
| 2403-3562                       | — |           | H8—11H                            | 2403-3562/1                     | — |                       |             |
| 2403-3563                       | — | 110×4     | H7—9H                             | 2403-3563/1                     | — |                       |             |
| 2403-3564                       | — |           | H8—11H                            | 2403-3564/1                     | — |                       |             |
| 2403-3565                       | — | 120×4     | H7—9H                             | 2403-3565/1                     | — | 2403-2476/2           |             |
| 2403-3566                       | — |           | H8—11H                            | 2403-3566/1                     | — |                       |             |
| 2403-3567                       | — | 130×4     | H7—9H                             | 2403-3567/1                     | — |                       |             |
| 2403-3568                       | — |           | H8—11H                            | 2403-3568/1                     | — |                       |             |

## Размеры, мм

| Обозначение<br>протяжки | $D \times m$ | Сочетание<br>полостей<br>допусков<br>$D$ и $e$ | $x_1$ | $x_2$ | $x_3$ | $y_1$  | $y_2$  | $y_3$  | $x_0$  | $y_0$  | $R$    | $d_p$          | $W$ | М  |                      |  |
|-------------------------|--------------|--|-------|-------|-------|--------|--------|--------|--------|--------|--------|----------------|-----|--|----------------------|--|
|                         |              |  |       |       |       |        |        |        |        |        |        |                |     | на шлице-<br>вом контр-<br>рольном;<br>буртике | на зубе<br>номер $W$ | на послед-<br>нем калле-<br>рующей<br>зубе |
| 2403-3412<br>2403-3413  |              | H7—9H  | 1,785 | 2,584 | 3,538 | 24,916 | 26,108 | 27,262 | 14,411 | 17,307 | 14,742 | 6,212<br>7,000 | 40  | 61,647<br>63,739                               | 61,514               | 61,358<br>63,450                           |
| 2403-3414<br>2403-3415  |              | H8—11H   | 1,744 | 3,514 | 3,497 |        |        |        | 14,370 |        |        | 6,212<br>7,000 | 40  | 61,758<br>63,843                               | 61,625               | 61,469<br>63,555                           |
| 2403-3416<br>2403-3417  | 55×3         | H7—9H  | 1,767 | 2,563 | 3,513 |        |        |        | 14,482 |        |        | 6,212<br>7,000 | 43  | 61,666<br>63,763                               | 61,507               | 61,338<br>63,435                           |
| 2403-3418<br>2403-3419  |              | H8—11H   | 1,726 | 2,522 | 3,472 | 24,887 | 26,088 | 27,251 | 14,441 | 17,324 | 14,795 | 6,212<br>7,000 | 43  | 61,778<br>63,868                               | 61,619               | 61,450<br>63,540                           |
| 2403-3421<br>2403-3422  |              | H7—9H  | 1,869 | 2,765 | 3,799 |        |        |        | 16,196 |        |        | 6,212<br>7,000 | 39  | 66,499<br>68,552                               | 66,380               | 66,209<br>68,262                           |
| 2403-3423<br>2403-3424  |              | H8—11H   | 1,827 | 2,722 | 3,757 | 27,441 | 28,628 | 29,775 | 16,153 | 17,558 | 17,405 | 6,212<br>7,000 | 39  | 66,608<br>68,655                               | 66,489               | 66,318<br>68,365                           |
| 2403-3425<br>2403-3426  | 60×3         | H7—9H  | 1,880 | 2,777 | 3,813 |        |        |        | 16,341 |        |        | 6,212<br>7,000 | 40  | 66,509<br>68,566                               | 66,373               | 66,187<br>68,244                           |
| 2403-3427<br>2403-3428  |              | H8—11H   | 1,837 | 2,734 | 3,770 | 27,456 | 28,649 | 29,804 | 16,298 | 17,521 | 17,545 | 6,212<br>7,000 | 40  | 66,618<br>68,670                               | 66,482               | 66,297<br>68,349                           |
| 2403-3429<br>2403-3431  |              | H7—9H  | 1,827 | 2,660 | 3,620 |        |        |        | 17,127 |        |        | 6,212<br>7,000 | 40  | 71,764<br>73,862                               | 71,638               | 71,474<br>73,572                           |
| 2403-3432<br>2403-3433  | 65×3         | H8—11H   | 1,786 | 2,618 | 3,579 | 29,949 | 31,147 | 32,314 | 17,086 | 20,211 | 18,136 | 6,212<br>7,000 | 40  | 71,877<br>73,970                               | 71,751               | 71,587<br>73,680                           |
|                         |              |  |       |       |       |        |        |        |        |        |        | 8,690          |     | 78,333   |                      | 78,043                                     |



Продолжение табл. 3

| Обозначение<br>протяжки | D × m  | Сочетание<br>полей<br>допусков<br>D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | x <sub>0</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W  | M   |                    |  |
|-------------------------|--------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----|---|--------------------|--|
|                         |        |   |                |                |                |                |                |                |                |                |        |                |    | на шлице-<br>вом кон-<br>тольном<br>буртике | на зубе<br>номер W | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3434<br>2403-3435  | 65 × 3 | H7—9H                                   | 1,799          | 2,682          | 3,646          | 29,906         | 31,188         | 32,361         | 17,267         | 20,192         | 18,266 | 6,212          | 43 | 71,783                                      | 71,631             | 71,453                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 73,886                                      | —                  | 73,557                                     |
| 2403-3436<br>2403-3437  | 65 × 3 | H8—11H                                  | 1,757          | 2,641          | 3,605          | 29,906         | 31,188         | 32,361         | 17,226         | 20,192         | 18,266 | 6,212          | 43 | 71,896                                      | 71,744             | 71,567                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 73,994                                      | —                  | 73,664                                     |
| 2403-3438<br>2403-3439  | 65 × 3 | H7—9H                                   | 1,774          | 2,589          | 3,480          | 29,906         | 31,188         | 32,361         | 18,030         | 20,192         | 18,266 | 5,454          | 40 | 74,883                                      | 74,757             | 74,572                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 79,142                                      | —                  | 78,831                                     |
| 2403-3441<br>2403-3442  | 70 × 3 | H8—11H                                  | 1,733          | 2,548          | 3,439          | 32,401         | 33,673         | 34,849         | 17,989         | 22,863         | 18,838 | 5,454          | 40 | 75,007                                      | 74,881             | 74,696                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 82,542                                      | —                  | 82,231                                     |
| 2403-3443               | 70 × 3 | H7—9H                                   | 1,791          | 2,568          | 3,464          | 32,401         | 33,673         | 34,849         | 18,164         | 22,863         | 18,838 | 8,282          | —  | 82,644                                      | —                  | 82,333                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 79,157                                      | —                  | 78,801                                     |
| 2403-3444               | 70 × 3 | H8—11H                                  | 1,751          | 2,527          | 3,423          | 32,341         | 33,649         | 34,843         | 18,124         | 22,861         | 18,964 | 8,282          | —  | 82,563                                      | —                  | 82,208                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 75,012                                      | —                  | 74,657                                     |
| 2403-3445<br>2403-3446  | 70 × 3 | H7—9H                                   | 1,771          | 2,538          | 3,377          | 34,905         | 36,184         | 37,370         | 18,819         | 25,551         | 19,445 | 8,282          | —  | 82,666                                      | —                  | 82,311                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 80,005                                      | —                  | 79,694                                     |
| 2403-3447<br>2403-3448  | 75 × 3 | H8—11H                                  | 1,731          | 2,498          | 3,337          | 34,905         | 36,184         | 37,370         | 18,779         | 25,551         | 19,445 | 5,454          | 40 | 80,133                                      | 80,007             | 79,822                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 6,212          | —  | 82,287                                      | —                  | 81,976                                     |
| 2403-3449               | 75 × 3 | H7—9H                                   | 1,788          | 2,518          | 3,362          | 34,934         | 36,160         | 37,363         | 18,979         | 25,518         | 19,601 | 5,454          | —  | 84,472                                      | —                  | 84,161                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 84,376                                      | —                  | 84,021                                     |
| 2403-3451               | 75 × 3 | H8—11H                                  | 1,748          | 2,478          | 3,322          | 34,934         | 36,160         | 37,363         | 18,939         | 25,518         | 19,601 | 5,454          | 37 | 80,142                                      | 79,998             | 79,787                                     |
|                         |        |   |                |                |                |                |                |                |                |                |        | 6,212          | —  | 82,302                                      | —                  | 81,946                                     |
|                         | 75 × 3 |   |                |                |                |                |                |                |                |                |        | 7,000          | —  | 84,491                                      | —                  | 84,136                                     |

Размеры, мм

| Обозначение<br>протяжки | D×m   | Сочетание<br>полей<br>допусков<br>D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | x <sub>0</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W  | M   |                    |  |
|-------------------------|-------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----|---|--------------------|--|
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | на шлице-<br>вом конт-<br>рольном<br>буртилке | на зубе<br>номер W | на послед-<br>нем калис-<br>рующем<br>зубе |
| 2403-3452<br>2403-3453  | 80×3  | H7—9H                                   | 1,79           | 2,636          | 3,538          | 37,407         | 38,683         | 39,865         | 20,735         | 25,814         | 22,208 | 6,212          | 43 | 86,722  | 86,575             | 86,411                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3454<br>2403-3455  | 80×3  | H8—11H                                  | 1,752          | 2,595          | 3,497          | 39,979         | 41,189         | 42,380         | 20,694         | 28,438         | 22,901 | 6,212          | 43 | 86,839  | 86,692             | 86,528                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3456<br>2403-3457  | 85×3  | H7—9H                                   | 1,819          | 2,577          | 3,432          | 42,411         | 43,691         | 44,879         | 21,600         | 34,052         | 26,863 | 5,454          | 40 | 89,773  | 89,654             | 89,470                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3458<br>2403-3459  | 90×3  | H8—11H                                  | 1,779          | 2,536          | 3,391          | 44,982         | 46,195         | 47,391         | 21,559         | 31,363         | 26,256 | 8,282          | 42 | 94,206  | 94,091             | 93,787                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3461<br>2403-3462  | 90×3  | H7—9H                                   | 1,820          | 2,683          | 3,593          | 47,417         | 48,705         | 49,907         | 23,401         | 34,042         | 26,863 | 6,212          | 42 | 96,767  | 96,627             | 96,456                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3463<br>2403-3464  | 95×3  | H8—11H                                  | 1,778          | 2,542          | 3,551          | 48,705         | 49,907         | 49,907         | 23,360         | 26,863         | 26,863 | 8,282          | 42 | 99,017  | 98,884             | 98,706                                     |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3465<br>2403-3466  | 95×3  | H7—9H                                   | 1,837          | 2,518          | 3,485          | 49,907         | 49,907         | 49,907         | 24,297         | 34,052         | 26,863 | 5,454          | 40 | 102,417                                       | 102,310            | 102,106                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3467<br>2403-3468  | 100×3 | H8—11H                                  | 1,796          | 2,577          | 3,444          | 49,907         | 49,907         | 49,907         | 24,256         | 34,052         | 26,863 | 8,282          | 40 | 107,581                                       | 107,444            | 107,277                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3469<br>2403-3471  | 100×3 | H7—9H                                   | 1,781          | 2,559          | 3,398          | 49,907         | 49,907         | 49,907         | 25,083         | 34,052         | 26,863 | 5,454          | 40 | 109,325                                       | 109,188            | 109,014                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |
| 2403-3472<br>2403-3473  | 100×3 | H8—11H                                  | 1,740          | 2,528          | 3,358          | 49,907         | 49,907         | 49,907         | 25,042         | 34,052         | 26,863 | 6,212          | 40 | 109,443                                       | 109,306            | 109,132                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    |   |                    |  |

Размеры, мм

| Обозначение<br>протяжки | D×m    | Сочетание<br>полей<br>допусков<br>D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | x <sub>0</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W  | M   |                    |  |
|-------------------------|--------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----|---|--------------------|--|
|                         |        |   |                |                |                |                |                |                |                |                |        |                |    | на шлице-<br>вом кон-<br>тольном<br>буртике | на зубе<br>номер W | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3474<br>2403-3475  | 105×3  | H7—9H                                   | 1,813          | 2,529          | 3,324          | 49,987         | 51,207         | 52,413         | 25,906         | 36,665         | 27,531 | 5,454          | 41 | 110,053                                     | 109,927            | 109,749                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 111,950        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 114,191        |    |   |                    |  |
| 2403-3476<br>2403-3477  | 105×3  | H8—11H                                  | 1,768          | 2,484          | 3,279          | 49,987         | 51,207         | 52,413         | 25,861         | 36,665         | 27,531 | 5,454          | 41 | 110,202                                     | 110,076            | 109,898                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 112,396        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 114,631        |    |   |                    |  |
| 2403-3478               | 110×3  | H7—9H                                   | 1,832          | 2,600          | 3,442          | 52,488         | 53,707         | 54,911         | 27,823         | 36,971         | 30,271 | 5,454          | 40 | 114,767                                     | 114,648            | 114,463                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 116,914        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 119,109        |    |   |                    |  |
| 2403-3479               | 110×3  | H8—11H                                  | 1,786          | 2,554          | 3,396          | 52,488         | 53,707         | 54,911         | 27,777         | 36,971         | 30,271 | 5,454          | 40 | 114,911                                     | 114,792            | 114,607                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 117,053        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 119,242        |    |   |                    |  |
| 2403-3481               | 120×3  | H7—9H                                   | 1,853          | 2,637          | 3,490          | 57,490         | 58,710         | 59,917         | 30,534         | 39,911         | 33,640 | 5,454          | 40 | 124,785                                     | 124,666            | 124,481                                    |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 129,109        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 8,282          |                |        | 132,605        |    |   |                    |  |
| 2403-3482               | 120×3  | H8—11H                                  | 1,806          | 2,591          | 3,443          | 57,490         | 58,710         | 59,917         | 30,488         | 39,911         | 33,640 | 5,454          | 40 | 124,927                                     | 124,808            | 124,623                                    |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 129,243        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 8,282          |                |        | 132,731        |    |   |                    |  |
| 2403-3483               | 130×3  | H7—9H                                   | 1,812          | 2,550          | 3,353          | 62,479         | 63,710         | 64,930         | 31,962         | 45,240         | 34,730 | 5,454          | 39 | 134,996                                     | 134,877            | 134,706                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 137,183        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 139,431        |    |   |                    |  |
| 2403-3484               | 130×3  | H8—11H                                  | 1,767          | 2,505          | 3,307          | 62,479         | 63,710         | 64,930         | 31,916         | 45,240         | 34,730 | 5,454          | 39 | 135,145                                     | 135,026            | 134,855                                    |
|                         |        |   |                |                |                |                |                |                | 6,212          |                |        | 137,332        |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 7,000          |                |        | 139,569        |    |   |                    |  |
| 2403-3485<br>2403-3486  | 55×3,5 | H7—9H                                   | 2,127          | 3,191          | 4,470          | 24,463         | 25,850         | 27,171         | 15,033         | 15,664         | 15,620 | 7,000          | 42 | 61,956                                      | 61,816             | 61,624                                     |
|                         |        |   |                |                |                |                |                |                | 8,690          |                |        | 66,294         |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 10,353         |                |        | 70,421         |    |   |                    |  |
| 2403-3487<br>2403-3488  | 55×3,5 | H8—11H                                  | 2,090          | 3,154          | 4,434          | 24,463         | 25,850         | 27,171         | 14,997         | 15,664         | 15,620 | 7,000          | 42 | 62,049                                      | 61,909             | 61,717                                     |
|                         |        |   |                |                |                |                |                |                | 8,690          |                |        | 66,377         |    |   |                    |  |
|                         |        |   |                |                |                |                |                |                | 10,353         |                |        | 70,497         |    |   |                    |  |



Продолжение табл. 3

| Обозначение проточки   | D×m     | Сочетание допусков D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | x <sub>0</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W  | M                              |                 |                               |
|------------------------|---------|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----|--------------------------------|-----------------|-------------------------------|
|                        |         |                          |                |                |                |                |                |                |                |                |        |                |    | на шлицевом коническом буртике | на зубе попер W | на последнем калибрующем зубе |
| 2403-3512<br>2403-3513 | 85×3,5  | H7—9H                    | 2,104          | 2,906          | 3,817          | 39,449         | 40,972         | 42,394         | 20,168         | 30,913         | 19,979 | 6,518          | 44 | 91,431                         | 91,277          | 91,099                        |
| 2403-3514<br>2403-3515 |         | H8—11H                   | 2,065          | 2,867          | 3,778          |                |                |                | 20,130         |                |        | 8,282          | —  | 96,567                         | —               | 96,235                        |
| 2403-3516<br>2403-3517 |         | H7—9H                    | 2,091          | 3,106          | 4,204          |                |                |                | 23,364         |                |        | 8,690          | —  | 97,712                         | —               | 97,380                        |
| 2403-3518<br>2403-3519 | 90×3,5  | H8—11H                   | 2,049          | 3,064          | 4,163          | 41,953         | 43,464         | 44,869         | 23,323         | 28,757         | 25,034 | 10,353         | —  | 91,566                         | 91,412          | 91,234                        |
| 2403-3521<br>2403-3522 |         | H7—9H                    | 2,107          | 2,993          | 4,004          |                |                |                | 23,881         |                |        | 8,282          | —  | 96,685                         | —               | 96,353                        |
| 2403-3523<br>2403-3524 | 95×3,5  | H8—11H                   | 2,067          | 2,953          | 3,964          | 44,530         | 45,974         | 47,394         | 23,840         | 32,167         | 25,038 | 8,690          | —  | 97,827                         | —               | 97,495                        |
| 2403-3525<br>2403-3526 |         | H7—9H                    | 2,079          | 2,930          | 3,863          |                |                |                | 24,164         |                |        | 8,690          | —  | 95,945                         | 95,805          | 95,613                        |
| 2403-3527<br>2403-3528 | 100×3,5 | H8—11H                   | 2,039          | 2,890          | 3,823          | 46,959         | 48,486         | 49,917         | 24,124         | 35,657         | 24,809 | 8,282          | —  | 100,742                        | —               | 100,410                       |
| 2403-3529<br>2403-3531 |         | H7—9H                    | 2,061          | 2,966          | 3,943          |                |                |                | 25,981         |                |        | 8,690          | —  | 106,066                        | 95,926          | 95,734                        |
| 2403-3532<br>2403-3533 | 105×3,5 | H8—11H                   | 2,016          | 2,921          | 3,898          | 49,462         | 50,989         | 52,418         | 25,935         | 36,315         | 27,294 | 8,282          | —  | 100,852                        | —               | 100,520                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 106,271                        | —               | 105,939                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 42 | 101,213                        | 101,080         | 100,888                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 106,151                        | —               | 105,826                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 107,264                        | —               | 106,939                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 42 | 101,340                        | 101,207         | 101,015                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 106,265                        | —               | 105,940                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 107,376                        | —               | 107,051                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 44 | 106,393                        | 106,239         | 106,061                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 111,485                        | —               | 111,153                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 112,628                        | —               | 112,296                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 44 | 106,526                        | 106,372         | 106,194                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 111,604                        | —               | 111,272                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 112,744                        | —               | 112,412                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 42 | 111,151                        | 111,011         | 110,819                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 116,148                        | —               | 115,816                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 117,274                        | —               | 116,943                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 6,518          | 42 | 111,296                        | 111,156         | 110,965                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,282          | —  | 116,280                        | —               | 115,948                       |
|                        |         |                          |                |                |                |                |                |                |                |                |        | 8,690          | —  | 117,404                        | —               | 117,072                       |

Продолжение табл. 3

## Размеры, мм

| Обозначение<br>протяжки | $D \times m$ | Сочетание<br>подлей<br>допуска<br>$D$ и $e$ | $x_1$ | $x_2$ | $x_3$ | $y_1$  | $y_2$  | $y_3$  | $x_0$  | $y_0$  | $R$    | $d_p$  | $W$    | М  |                      |  |
|-------------------------|--------------|---|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--|----------------------|--|
|                         |              |   |       |       |       |        |        |        |        |        |        |        |        | на плите-<br>вом кон-<br>рольном<br>буртке | на зубе<br>номер $W$ | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3534               | 110×3,5      | H7—9H                                       | 2,115 | 3,023 | 4,039 | 52,037 | 53,486 | 54,914 | 27,826 | 36,923 | 29,825 | 6,518  | 42     | 116,156                                    | 116,023              | 115,831                                    |
|                         |              |   |       |       |       |        |        |        | 8,282  |        |        | —      | —      | 121,085                                    | —                    | 120,759                                    |
| 2403-3535               |              | H8—11H                                      | 2,069 | 2,978 | 3,994 |        |        |        | 27,780 |        |        | 6,690  | 42     | 122,200                                    | —                    | 121,875                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 6,518  | —  | 116,298              | 116,165                                    |
| 2403-3536               |              | H7—9H                                       | 2,132 | 2,916 | 3,803 |        |        |        | 28,378 |        |        | 8,282  | —      | 121,215                                    | —                    | 120,890                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,690  | —  | 122,328              | —  |
| 2403-3537               | 120×3,5      | H8—11H                                      | 2,088 | 2,872 | 3,758 | 57,040 | 58,499 | 59,942 | 28,334 | 43,863 | 29,369 | 6,518  | 44     | 126,602                                    | 126,300              | 126,122                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,282  | —  | 131,650              | —  |
| 2403-3538               |              | H7—9H                                       | 2,067 | 2,978 | 3,938 |        |        |        | 31,989 |        |        | 8,690  | —      | 132,820                                    | —                    | 132,495                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 6,518  | 44   | 126,602              | 126,455                                    |
| 2403-3539               | 130×3,5      | H8—11H                                      | 2,022 | 2,933 | 3,893 | 61,971 | 63,505 | 64,947 | 31,944 | 45,235 | 34,285 | 8,282  | —      | 132,957                                    | —                    | 132,632                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,690  | —  | 142,471              | —  |
| 2403-3541               | 60×4         | H7—9H                                       | 2,458 | 3,780 | 5,367 |        |        |        | 16,679 |        |        | 10,353 | —      | 141,467                                    | —                    | 141,135                                    |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,282  | 45   | 67,906               | 67,753                                     |
| 2403-3542               |              | H8—11H                                      | 2,415 | 3,737 | 5,323 | 26,466 | 28,053 | 29,548 | 16,636 | 15,959 | 17,681 | 13,133 | —      | 73,070                                     | —                    | 72,694                                     |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,282  | —  | 79,762               | —  |
| 2403-3543               |              | H7—9H                                       | 2,346 | 3,439 | 4,779 |        |        |        | 17,129 |        |        | 10,353 | 45     | 68,007                                     | 67,854               | 67,631                                     |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 10,353 | —  | 73,160               | —  |
| 2403-3544               | 65×4         | H8—11H                                      | 2,306 | 3,398 | 4,739 | 28,965 | 30,614 | 32,179 | 17,088 | 20,248 | 17,172 | 13,133 | —      | 79,842                                     | —                    | 79,467                                     |
|                         |              |   |       |       |       |        |        |        |        |        |        |        | 8,282  | 48   | 73,782               | 73,608                                     |
|                         |              |   |       |       |       |        |        |        |        |        | 10,353 | —      | 79,179 | —  | 78,802               |  |
|                         |              |   |       |       |       |        |        |        |        |        | 12,423 | —      | 84,359 | —  | 83,982               |  |
|                         |              |   |       |       |       |        |        |        |        |        | 8,282  | 48     | 73,891 | 73,717                                     | 73,514               |  |
|                         |              |   |       |       |       |        |        |        |        |        | 10,353 | —      | 79,275 | —  | 78,899               |  |
|                         |              |   |       |       |       |        |        |        |        |        | 12,423 | —      | 84,446 | —  | 84,069               |  |

Продолжение табл. 3

| Обозначение<br>проточки | D × n  | Сочетание<br>полей<br>допусков<br>D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W       | M  |                    |  |
|-------------------------|--------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|---------|--|--------------------|--|
|                         |        |   |                |                |                |                |                |                |                |        |                |         | на плече-<br>вом конт-<br>рольном<br>буртике | на зубе<br>номер W | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3545               | 70 × 4 | H7—9H                                   | 2,331          | 3,523          | 4,896          | 31,434         | 33,138         | 34,707         | 18,609         | 19,163 | 8,282          | 47      | 78,982                                       | 78,814             | 78,597                                     |
|                         |        |   |                |                |                |                |                |                | 10,353         |        | 84,374         | 83,988  |  |                    |  |
| 2403-3546               | 70 × 4 | H8—11H                                  | 2,290          | 3,482          | 4,855          | 33,995         | 35,626         | 37,200         | 21,322         | 21,158 | 12,423         | 47      | 89,568                                       | 89,189             | 89,189                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 79,092         | 78,706  |  |                    |  |
| 2403-3547               | 75 × 4 | H7—9H                                   | 2,401          | 3,587          | 4,985          | 36,498         | 38,131         | 39,708         | 20,087         | 23,119 | 10,353         | 45      | 84,472                                       | 84,086             | 84,086                                     |
|                         |        |   |                |                |                |                |                |                | 12,423         |        | 94,018         | 93,641  |  |                    |  |
| 2403-3548               | 75 × 4 | H8—11H                                  | 2,359          | 3,546          | 4,943          | 39,009         | 40,663         | 42,276         | 20,045         | 24,545 | 10,353         | 45      | 83,593                                       | 83,216             | 83,216                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 88,938         | 88,562  |  |                    |  |
| 2403-3549               | 80 × 4 | H7—9H                                   | 2,442          | 3,665          | 5,086          | 41,512         | 43,167         | 44,782         | 21,537         | 28,773 | 12,423         | 46      | 94,108                                       | 93,731             | 93,731                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 94,108         | 93,731  |  |                    |  |
| 2403-3551               | 80 × 4 | H8—11H                                  | 2,400          | 3,623          | 5,043          | 42,276         | 43,816         | 45,431         | 21,495         | 28,773 | 10,353         | 46      | 88,634                                       | 88,473             | 88,473                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 93,987         | 93,608  |  |                    |  |
| 2403-3552               | 85 × 4 | H7—9H                                   | 2,359          | 3,418          | 4,665          | 43,167         | 44,811         | 46,455         | 21,847         | 28,773 | 12,423         | 46      | 99,174                                       | 98,796             | 98,796                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 99,174         | 98,796  |  |                    |  |
| 2403-3553               | 85 × 4 | H8—11H                                  | 2,319          | 3,378          | 4,625          | 44,811         | 46,455         | 48,100         | 21,807         | 28,773 | 10,353         | 49      | 88,743                                       | 88,582             | 88,582                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 94,086         | 93,707  |  |                    |  |
| 2403-3554               | 90 × 4 | H7—9H                                   | 2,376          | 3,475          | 4,750          | 46,455         | 48,100         | 49,849         | 23,356         | 28,773 | 12,423         | 48      | 99,266                                       | 98,887             | 98,887                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 99,266         | 98,887  |  |                    |  |
| 2403-3555               | 90 × 4 | H8—11H                                  | 2,335          | 3,434          | 4,709          | 48,100         | 49,849         | 51,698         | 23,315         | 28,773 | 10,353         | 48      | 94,285                                       | 94,103             | 94,103                                     |
|                         |        |   |                |                |                |                |                |                | 8,282          |        | 101,398        | 101,019 |  |                    |  |
|                         |        |   |                |                |                |                |                |                |                | 8,282  | 49             | 94,400  | 94,218                                       | 94,218             |  |
|                         |        |   |                |                |                |                |                |                |                | 10,353 | —              | —       | —  | 99,564             |  |
|                         |        |   |                |                |                |                |                |                |                | 10,950 | —              | —       | —  | 101,120            |  |
|                         |        |   |                |                |                |                |                |                |                | 8,282  | 48             | 98,883  | 98,709                                       | 98,506             |  |
|                         |        |   |                |                |                |                |                |                |                | 10,353 | —              | —       | —  | 104,020            |  |
|                         |        |   |                |                |                |                |                |                |                | 10,950 | —              | —       | —  | 105,572            |  |
|                         |        |   |                |                |                |                |                |                |                | 8,282  | 48             | 98,998  | 98,824                                       | 98,620             |  |
|                         |        |   |                |                |                |                |                |                |                | 10,353 | —              | —       | —  | 104,123            |  |
|                         |        |   |                |                |                |                |                |                |                | 10,950 | —              | —       | —  | 106,050            |  |

Продолжение табл. 3

| Обозначение<br>проточки | $D \times m$ | Сочетание<br>полей<br>допусков<br>$D$ и $e$ | $x_1$ | $x_2$ | $x_3$ | $y_1$  | $y_2$  | $y_3$  | $x_0$  | $y_0$  | $R$    | $d_p$   | $W$     | М  |                      |  |
|-------------------------|--------------|---|-------|-------|-------|--------|--------|--------|--------|--------|--------|---------|---------|--|----------------------|--|
|                         |              |   |       |       |       |        |        |        |        |        |        |         |         | на шлице-<br>вой конт-<br>рольным<br>буртике | на зубе<br>номер $W$ | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3556               | 95 × 4       | H7—9H                                       | 2,401 | 3,535 | 4,836 | 44,015 | 45,670 | 47,287 | 24,852 | 29,847 | 26,547 | 8,282   | 46      | 103,984                                      | 103,823              | 103,606                                    |
|                         |              |   |       |       |       |        |        |        | 10,353 | —      |        | 109,482 | —       | 109,103                                      |                      |  |
| 2403-3557               | 95 × 4       | H8—11H                                      | 2,359 | 3,494 | 4,794 | 44,015 | 45,670 | 47,287 | 24,810 | 29,847 | 26,547 | 8,282   | 46      | 111,032                                      | 103,937              | 110,653                                    |
|                         |              |   |       |       |       |        |        |        | 10,950 | —      |        | 104,098 | —       | 103,720                                      |                      |  |
| 2403-3558               | 100 × 4      | H7—9H                                       | 2,363 | 3,364 | 4,527 | 46,520 | 48,190 | 49,828 | 24,969 | 34,098 | 25,794 | 7,000   | 45      | 105,836                                      | 105,682              | 105,458                                    |
|                         |              |   |       |       |       |        |        |        | 8,690  | —      |        | 110,646 | —       | 110,267                                      |                      |  |
| 2403-3559               | 100 × 4      | H8—11H                                      | 2,323 | 3,324 | 4,486 | 46,520 | 48,190 | 49,828 | 24,928 | 34,098 | 25,794 | 7,000   | 45      | 105,967                                      | 105,813              | 105,588                                    |
|                         |              |   |       |       |       |        |        |        | 8,690  | —      |        | 110,764 | —       | 110,385                                      |                      |  |
| 2403-3561               | 105 × 4      | H7—9H                                       | 2,367 | 3,405 | 4,595 | 49,023 | 50,693 | 52,332 | 26,518 | 35,165 | 27,844 | 7,000   | 46      | 110,548                                      | 110,387              | 110,170                                    |
|                         |              |   |       |       |       |        |        |        | 8,690  | —      |        | 115,303 | —       | 114,926                                      |                      |  |
| 2403-3562               | 105 × 4      | H8—11H                                      | 2,327 | 3,365 | 4,555 | 49,023 | 50,693 | 52,332 | 26,477 | 35,165 | 27,844 | 7,000   | 46      | 110,676                                      | 110,515              | 110,298                                    |
|                         |              |   |       |       |       |        |        |        | 8,690  | —      |        | 115,421 | —       | 115,043                                      |                      |  |
| 2403-3563               | 110 × 4      | H7—9H                                       | 2,375 | 3,446 | 4,662 | 51,525 | 53,195 | 54,836 | 28,049 | 36,237 | 29,881 | 8,282   | 49      | 119,265                                      | 119,083              | 118,886                                    |
|                         |              |   |       |       |       |        |        |        | 10,353 | —      |        | 124,887 | —       | 124,509                                      |                      |  |
| 2403-3564               | 110 × 4      | H8—11H                                      | 2,329 | 3,400 | 4,616 | 51,525 | 53,195 | 54,836 | 28,003 | 36,237 | 29,881 | 8,282   | 49      | 119,399                                      | 119,217              | 119,020                                    |
|                         |              |   |       |       |       |        |        |        | 10,353 | —      |        | 125,010 | —       | 124,631                                      |                      |  |
| 2403-3565               | 120 × 4      | H7—9H                                       | 2,421 | 3,550 | 4,810 | 56,528 | 58,199 | 59,841 | 31,064 | 38,393 | 33,901 | 8,282   | 47      | 128,989                                      | 128,821              | 128,610                                    |
|                         |              |   |       |       |       |        |        |        | 10,353 | —      |        | 134,557 | —       | 134,178                                      |                      |  |
| 2403-3566               | 120 × 4      | H8—11H                                      | 2,375 | 3,503 | 4,763 | 56,528 | 58,199 | 59,841 | 31,017 | 38,393 | 33,901 | 8,282   | 47      | 129,120                                      | 128,952              | 128,742                                    |
|                         |              |   |       |       |       |        |        |        | 10,353 | —      |        | 134,679 | —       | 134,300                                      |                      |  |
|                         |              |   |       |       |       |        |        |        |        |        | 10,950 | —       | 136,251 | —  | 135,873              |  |



Продолжение табл. 3

Размеры, мм

| Обозначение<br>протяжки | D×m   | Сочетание<br>полей<br>допусков<br>D и e | x <sub>1</sub> | x <sub>2</sub> | x <sub>3</sub> | y <sub>1</sub> | y <sub>2</sub> | y <sub>3</sub> | x <sub>0</sub> | y <sub>0</sub> | R      | d <sub>p</sub> | W  | M   |                    |  |
|-------------------------|-------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----|---|--------------------|--|
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | на шлице-<br>вом кон-<br>тельном<br>буртике | на зубе<br>номер W | на послед-<br>нем калиб-<br>рующем<br>зубе |
| 2403-3567               | 130×4 | H7—9H                                   | 2,378          | 3,430          | 4,604          | 61,534         | 63,214         | 64,870         | 32,745         | 43,680         | 35,227 | 7,000          | 47 | 135,547                                     | 135,380            | 135,169                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | 140,318                                     | —                  | 139,940                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | 146,484                                     | —                  | 146,106                                    |
| 2403-3568               | 130×4 | H8—11H                                  | 2,332          | 3,384          | 4,559          | 61,534         | 63,214         | 64,870         | 32,700         | 43,680         | 35,227 | 7,000          | 47 | 135,692                                     | 135,524            | 135,314                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | 140,453                                     | —                  | 140,075                                    |
|                         |       |   |                |                |                |                |                |                |                |                |        |                |    | 146,608                                     | —                  | 146,230                                    |

## Примечания:

1. Число черновых круглых зубьев: 4, чистовых и калибрующих зубьев: круглых — 5, шлицевых — 10.
2. С (см. табл. 1) — величина подъяма заднего центра на длине  $L_1$  при шлифовании фасонным кругом боковых поверхностей фасонных и шлицевых зубьев.
3. Полный размер фаски  $F$  — на калибрующих зубьях.
4. Размер  $b$  относится к последнему фасочному зубу.
5. Размеры профиля (глубина и радиусы) зубьев с шагом  $t_2$  одинаковы с размерами профиля зубьев с шагом  $t$ .
6. Номер последнего зуба со стружкоделительной канавкой —  $j$ . Канавки выполняются на фасочных и шлицевых зубьях, располагая их в шахматном порядке.
7. Диаметры роликов  $d_p$  (см. табл. 3 и 5) для контроля профиля соответствуют ГОСТ 2475.
8. После контроля профиля зубьев протяжки контрольный буртик шлифовать до диаметра первого шлицевого зуба. При этом допускается увеличение ширины задней поверхности этого зуба.
9. Допускается изготовление протяжек без стружкоделительных канавок на фасочных зубьях.
10. Размеры  $M$  (см. табл. 3) относятся к протяжкам с профилем зубьев, выполненным по заменяющей дуге окружности.
11. Допускается выполнение резьбы протяжки без резьбовой канавки с соответствующим увеличением ширины центрирующего пояска хвостовика.

Таблица 4

| Обозначение<br>про-явки           |          | Размеры, мм            |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |        |        |        |
|-----------------------------------|----------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------|--------|--------|--------|
|                                   |          | 55×3                   |                        |                        | 60×3                   |                        |                        | 65×3                   |                        |                        | 70×3                   |                        |                        |        |        |        |        |
| Сочетание полей<br>допусков D и e | D×m      | И7—9H                  |                        | И8—11H                 |                        | И7—9H                  |                        | И8—11H                 |                        | И7—9H                  |                        | И8—11H                 |                        | И7—9H  |        | И8—11H |        |
|                                   |          | 2403-3412<br>2403-3413 | 2403-3414<br>2403-3415 | 2403-3416<br>2403-3417 | 2403-3418<br>2403-3419 | 2403-3421<br>2403-3422 | 2403-3423<br>2403-3424 | 2403-3425<br>2403-3426 | 2403-3427<br>2403-3428 | 2403-3429<br>2403-3431 | 2403-3432<br>2403-3433 | 2403-3434<br>2403-3435 | 2403-3436<br>2403-3437 |        |        |        |        |
| фасочных                          | 1        | 48,500                 | 48,500                 | 48,500                 | 48,500                 | 53,400                 | 53,400                 | 53,400                 | 53,400                 | 58,400                 | 58,400                 | 58,400                 | 58,400                 | 58,400 | 58,400 | 58,400 | 58,400 |
|                                   | 2        | 48,650                 | 48,650                 | 48,620                 | 48,620                 | 53,550                 | 53,550                 | 53,540                 | 53,540                 | 58,550                 | 58,550                 | 58,520                 | 58,520                 | 58,520 | 58,520 | 58,520 | 58,520 |
|                                   | 3        | 48,800                 | 48,800                 | 48,740                 | 48,740                 | 53,700                 | 53,700                 | 53,680                 | 53,680                 | 58,700                 | 58,700                 | 58,640                 | 58,640                 | 58,640 | 58,640 | 58,640 | 58,640 |
|                                   | 4        | 48,950                 | 48,950                 | 48,860                 | 48,860                 | 53,850                 | 53,850                 | 53,820                 | 53,820                 | 58,850                 | 58,850                 | 58,760                 | 58,760                 | 58,760 | 58,760 | 58,760 | 58,760 |
|                                   | 5        | 49,100                 | 49,100                 | 48,980                 | 48,980                 | 54,000                 | 54,000                 | 53,960                 | 53,960                 | 59,000                 | 59,000                 | 58,880                 | 58,880                 | 58,880 | 58,880 | 58,880 | 58,880 |
|                                   | 6        | 49,250                 | 49,250                 | 49,100                 | 49,100                 | 54,150                 | 54,150                 | 54,100                 | 54,100                 | 59,150                 | 59,150                 | 59,000                 | 59,000                 | 59,000 | 59,000 | 59,000 | 59,000 |
|                                   | 7        | 49,400                 | 49,400                 | 49,220                 | 49,220                 | 54,300                 | 54,300                 | 54,240                 | 54,240                 | 59,300                 | 59,300                 | 59,120                 | 59,120                 | 59,120 | 59,120 | 59,120 | 59,120 |
|                                   | 8        | 49,550                 | 49,550                 | 49,340                 | 49,340                 | 54,450                 | 54,450                 | 54,380                 | 54,380                 | 59,450                 | 59,450                 | 59,240                 | 59,240                 | 59,240 | 59,240 | 59,240 | 59,240 |
|                                   | 9        | 49,700                 | 49,700                 | 49,460                 | 49,460                 | 54,600                 | 54,600                 | 54,520                 | 54,520                 | 59,600                 | 59,600                 | 59,360                 | 59,360                 | 59,360 | 59,360 | 59,360 | 59,360 |
|                                   | 10       | 49,850                 | 49,850                 | 49,580                 | 49,580                 | 54,750                 | 54,750                 | 54,660                 | 54,660                 | 59,750                 | 59,750                 | 59,480                 | 59,480                 | 59,480 | 59,480 | 59,480 | 59,480 |
|                                   | 11       | 50,000                 | 50,000                 | 49,700                 | 49,700                 | 54,900                 | 54,900                 | 54,800                 | 54,800                 | 59,900                 | 59,900                 | 59,600                 | 59,600                 | 59,600 | 59,600 | 59,600 | 59,600 |
| круглых                           | 12       | 48,650                 | 48,650                 | 49,820                 | 49,820                 | 55,050                 | 55,050                 | 54,940                 | 54,940                 | 60,050                 | 60,050                 | 59,720                 | 59,720                 | 59,720 | 59,720 | 59,720 | 59,720 |
|                                   | 13       | 48,800                 | 48,800                 | 49,940                 | 49,940                 | 55,200                 | 55,200                 | 55,080                 | 55,080                 | 60,200                 | 60,200                 | 59,840                 | 59,840                 | 59,840 | 59,840 | 59,840 | 59,840 |
|                                   | 14       | 48,950                 | 48,950                 | 48,700                 | 48,700                 | 55,350                 | 55,350                 | 55,240                 | 55,240                 | 60,350                 | 60,350                 | 59,960                 | 59,960                 | 59,960 | 59,960 | 59,960 | 59,960 |
|                                   | 15       | 49,100                 | 49,100                 | 48,820                 | 48,820                 | 55,500                 | 55,500                 | 55,380                 | 55,380                 | 60,500                 | 60,500                 | 60,050                 | 60,050                 | 60,050 | 60,050 | 60,050 | 60,050 |
|                                   | 16       | 49,250                 | 49,250                 | 48,940                 | 48,940                 | 55,650                 | 55,650                 | 55,520                 | 55,520                 | 60,650                 | 60,650                 | 60,200                 | 60,200                 | 60,200 | 60,200 | 60,200 | 60,200 |
|                                   | 17       | 49,400                 | 49,400                 | 49,060                 | 49,060                 | 55,800                 | 55,800                 | 55,660                 | 55,660                 | 60,800                 | 60,800                 | 60,360                 | 60,360                 | 60,360 | 60,360 | 60,360 | 60,360 |
|                                   | 18       | 49,550                 | 49,550                 | 49,180                 | 49,180                 | 55,950                 | 55,950                 | 55,800                 | 55,800                 | 60,950                 | 60,950                 | 60,520                 | 60,520                 | 60,520 | 60,520 | 60,520 | 60,520 |
|                                   | 19       | 49,700                 | 49,700                 | 49,300                 | 49,300                 | 56,100                 | 56,100                 | 55,920                 | 55,920                 | 61,100                 | 61,100                 | 60,680                 | 60,680                 | 60,680 | 60,680 | 60,680 | 60,680 |
|                                   | 20       | 49,850                 | 49,850                 | 49,420                 | 49,420                 | 56,250                 | 56,250                 | 56,040                 | 56,040                 | 61,250                 | 61,250                 | 60,840                 | 60,840                 | 60,840 | 60,840 | 60,840 | 60,840 |
|                                   | 21       | 49,950                 | 49,950                 | 49,500                 | 49,500                 | 56,400                 | 56,400                 | 56,160                 | 56,160                 | 61,400                 | 61,400                 | 61,000                 | 61,000                 | 61,000 | 61,000 | 61,000 | 61,000 |
|                                   | шлицевых | 22                     | 50,110                 | 50,110                 | 49,960                 | 49,960                 | 56,550                 | 56,550                 | 56,310                 | 56,310                 | 61,550                 | 61,550                 | 61,160                 | 61,160 | 61,160 | 61,160 | 61,160 |
| 23                                |          | 50,260                 | 50,260                 | 50,080                 | 50,080                 | 56,700                 | 56,700                 | 56,460                 | 56,460                 | 61,700                 | 61,700                 | 61,320                 | 61,320                 | 61,320 | 61,320 | 61,320 | 61,320 |
| 24                                |          | 50,410                 | 50,410                 | 50,200                 | 50,200                 | 56,850                 | 56,850                 | 56,610                 | 56,610                 | 61,850                 | 61,850                 | 61,480                 | 61,480                 | 61,480 | 61,480 | 61,480 | 61,480 |
| 25                                |          | 50,560                 | 50,560                 | 50,320                 | 50,320                 | 57,000                 | 57,000                 | 56,760                 | 56,760                 | 62,000                 | 62,000                 | 61,640                 | 61,640                 | 61,640 | 61,640 | 61,640 | 61,640 |
| 26                                |          | 50,710                 | 50,710                 | 50,440                 | 50,440                 | 57,150                 | 57,150                 | 56,910                 | 56,910                 | 62,150                 | 62,150                 | 61,800                 | 61,800                 | 61,800 | 61,800 | 61,800 | 61,800 |
| 27                                |          | 50,860                 | 50,860                 | 50,560                 | 50,560                 | 57,300                 | 57,300                 | 57,060                 | 57,060                 | 62,300                 | 62,300                 | 62,000                 | 62,000                 | 62,000 | 62,000 | 62,000 | 62,000 |
| 28                                |          | 51,010                 | 51,010                 | 50,680                 | 50,680                 | 57,450                 | 57,450                 | 57,210                 | 57,210                 | 62,450                 | 62,450                 | 62,160                 | 62,160                 | 62,160 | 62,160 | 62,160 | 62,160 |

Номера и диаметры D<sub>з</sub> зубьев

Продолжение табл. 4

Размеры, мм

| Обозначение<br>профильки          | 2403-3412<br>2403-3413 |        | 2403-3414<br>2403-3415 |        | 2403-3416<br>2403-3417 |        | 2403-3418<br>2403-3419 |        | 2403-3421<br>2403-3422 |        | 2403-3423<br>2403-3424 |        | 2403-3425<br>2403-3426 |        | 2403-3427<br>2403-3428 |        | 2403-3429<br>2403-3431 |        | 2403-3432<br>2403-3433 |        | 2403-3434<br>2403-3435 |        | 2403-3436<br>2403-3437 |        |
|-----------------------------------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
|                                   | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        |
| Сочетание полей<br>допусков D и e | 60×3                   |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
|                                   | 65×3                   |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| D×m                               | 55×3                   |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
|                                   | 60×3                   |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 29                                | 51.160                 | 51.160 | 51.160                 | 50.800 | 50.800                 | 50.800 | 50.800                 | 50.800 | 56.060                 | 56.060 | 56.060                 | 55.940 | 55.940                 | 55.940 | 55.940                 | 55.940 | 61.060                 | 61.060 | 61.060                 | 61.060 | 60.670                 | 60.670 | 60.670                 | 60.670 |
| 30                                | 51.310                 | 51.310 | 51.310                 | 50.950 | 50.950                 | 50.950 | 50.950                 | 50.950 | 56.210                 | 56.210 | 56.210                 | 56.090 | 56.090                 | 56.090 | 56.090                 | 56.090 | 61.210                 | 61.210 | 61.210                 | 61.210 | 60.820                 | 60.820 | 60.820                 | 60.820 |
| 31                                | 51.460                 | 51.460 | 41.460                 | 51.100 | 51.100                 | 51.100 | 51.100                 | 51.100 | 56.360                 | 56.360 | 56.360                 | 56.240 | 56.240                 | 56.240 | 56.240                 | 56.240 | 61.360                 | 61.360 | 61.360                 | 61.360 | 60.970                 | 60.970 | 60.970                 | 60.970 |
| 32                                | 51.610                 | 51.610 | 51.610                 | 51.250 | 51.250                 | 51.250 | 51.250                 | 51.250 | 56.510                 | 56.510 | 56.510                 | 56.390 | 56.390                 | 56.390 | 56.390                 | 56.390 | 61.510                 | 61.510 | 61.510                 | 61.510 | 61.120                 | 61.120 | 61.120                 | 61.120 |
| 33                                | 51.760                 | 51.760 | 51.760                 | 51.400 | 51.400                 | 51.400 | 51.400                 | 51.400 | 56.660                 | 56.660 | 56.660                 | 56.540 | 56.540                 | 56.540 | 56.540                 | 56.540 | 61.660                 | 61.660 | 61.660                 | 61.660 | 61.270                 | 61.270 | 61.270                 | 61.270 |
| 34                                | 51.910                 | 51.910 | 51.910                 | 51.550 | 51.550                 | 51.550 | 51.550                 | 51.550 | 56.810                 | 56.810 | 56.810                 | 56.690 | 56.690                 | 56.690 | 56.690                 | 56.690 | 61.810                 | 61.810 | 61.810                 | 61.810 | 61.420                 | 61.420 | 61.420                 | 61.420 |
| 35                                | 52.060                 | 52.060 | 52.060                 | 51.700 | 51.700                 | 51.700 | 51.700                 | 51.700 | 56.960                 | 56.960 | 56.960                 | 56.840 | 56.840                 | 56.840 | 56.840                 | 56.840 | 61.960                 | 61.960 | 61.960                 | 61.960 | 61.570                 | 61.570 | 61.570                 | 61.570 |
| 36                                | 52.210                 | 52.210 | 52.210                 | 51.850 | 51.850                 | 51.850 | 51.850                 | 51.850 | 57.110                 | 57.110 | 57.110                 | 56.990 | 56.990                 | 56.990 | 56.990                 | 56.990 | 62.110                 | 62.110 | 62.110                 | 62.110 | 61.720                 | 61.720 | 61.720                 | 61.720 |
| 37                                | 52.360                 | 52.360 | 52.360                 | 52.000 | 52.000                 | 52.000 | 52.000                 | 52.000 | 57.260                 | 57.260 | 57.260                 | 57.140 | 57.140                 | 57.140 | 57.140                 | 57.140 | 62.260                 | 62.260 | 62.260                 | 62.260 | 61.870                 | 61.870 | 61.870                 | 61.870 |
| 38                                | 52.510                 | 52.510 | 52.510                 | 52.150 | 52.150                 | 52.150 | 52.150                 | 52.150 | 57.410                 | 57.410 | 57.410                 | 57.290 | 57.290                 | 57.290 | 57.290                 | 57.290 | 62.410                 | 62.410 | 62.410                 | 62.410 | 62.020                 | 62.020 | 62.020                 | 62.020 |
| 39                                | 52.660                 | 52.660 | 52.660                 | 52.300 | 52.300                 | 52.300 | 52.300                 | 52.300 | 57.560                 | 57.560 | 57.560                 | 57.440 | 57.440                 | 57.440 | 57.440                 | 57.440 | 62.560                 | 62.560 | 62.560                 | 62.560 | 62.170                 | 62.170 | 62.170                 | 62.170 |
| 40                                | 52.810                 | 52.810 | 52.810                 | 52.450 | 52.450                 | 52.450 | 52.450                 | 52.450 | 57.710                 | 57.710 | 57.710                 | 57.590 | 57.590                 | 57.590 | 57.590                 | 57.590 | 62.710                 | 62.710 | 62.710                 | 62.710 | 62.320                 | 62.320 | 62.320                 | 62.320 |
| 41                                | 52.960                 | 52.960 | 52.960                 | 52.600 | 52.600                 | 52.600 | 52.600                 | 52.600 | 57.860                 | 57.860 | 57.860                 | 57.740 | 57.740                 | 57.740 | 57.740                 | 57.740 | 62.860                 | 62.860 | 62.860                 | 62.860 | 62.470                 | 62.470 | 62.470                 | 62.470 |
| 42                                | 53.110                 | 53.110 | 53.110                 | 52.750 | 52.750                 | 52.750 | 52.750                 | 52.750 | 58.010                 | 58.010 | 58.010                 | 57.890 | 57.890                 | 57.890 | 57.890                 | 57.890 | 63.010                 | 63.010 | 63.010                 | 63.010 | 62.620                 | 62.620 | 62.620                 | 62.620 |
| 43                                | 53.260                 | 53.260 | 53.260                 | 52.900 | 52.900                 | 52.900 | 52.900                 | 52.900 | 58.160                 | 58.160 | 58.160                 | 58.040 | 58.040                 | 58.040 | 58.040                 | 58.040 | 63.160                 | 63.160 | 63.160                 | 63.160 | 62.770                 | 62.770 | 62.770                 | 62.770 |
| 44                                | 53.410                 | 53.410 | 53.410                 | 53.050 | 53.050                 | 53.050 | 53.050                 | 53.050 | 58.310                 | 58.310 | 58.310                 | 58.190 | 58.190                 | 58.190 | 58.190                 | 58.190 | 63.310                 | 63.310 | 63.310                 | 63.310 | 62.920                 | 62.920 | 62.920                 | 62.920 |
| 45                                | 53.560                 | 53.560 | 53.560                 | 53.200 | 53.200                 | 53.200 | 53.200                 | 53.200 | 58.460                 | 58.460 | 58.460                 | 58.340 | 58.340                 | 58.340 | 58.340                 | 58.340 | 63.460                 | 63.460 | 63.460                 | 63.460 | 63.070                 | 63.070 | 63.070                 | 63.070 |
| 46                                | 53.710                 | 53.710 | 53.710                 | 53.350 | 53.350                 | 53.350 | 53.350                 | 53.350 | 58.610                 | 58.610 | 58.610                 | 58.490 | 58.490                 | 58.490 | 58.490                 | 58.490 | 63.610                 | 63.610 | 63.610                 | 63.610 | 63.220                 | 63.220 | 63.220                 | 63.220 |
| 47                                | 53.860                 | 53.860 | 53.860                 | 53.500 | 53.500                 | 53.500 | 53.500                 | 53.500 | 58.760                 | 58.760 | 58.760                 | 58.640 | 58.640                 | 58.640 | 58.640                 | 58.640 | 63.760                 | 63.760 | 63.760                 | 63.760 | 63.370                 | 63.370 | 63.370                 | 63.370 |
| 48                                | 54.010                 | 54.010 | 54.010                 | 53.650 | 53.650                 | 53.650 | 53.650                 | 53.650 | 58.910                 | 58.910 | 58.910                 | 58.790 | 58.790                 | 58.790 | 58.790                 | 58.790 | 63.910                 | 63.910 | 63.910                 | 63.910 | 63.520                 | 63.520 | 63.520                 | 63.520 |
| 49                                | 54.160                 | 54.160 | 54.160                 | 53.800 | 53.800                 | 53.800 | 53.800                 | 53.800 | 59.060                 | 59.060 | 59.060                 | 58.940 | 58.940                 | 58.940 | 58.940                 | 58.940 | 64.060                 | 64.060 | 64.060                 | 64.060 | 63.670                 | 63.670 | 63.670                 | 63.670 |
| 50                                | 54.310                 | 54.310 | 54.310                 | 53.950 | 53.950                 | 53.950 | 53.950                 | 53.950 | 59.210                 | 59.210 | 59.210                 | 59.090 | 59.090                 | 59.090 | 59.090                 | 59.090 | 64.210                 | 64.210 | 64.210                 | 64.210 | 63.820                 | 63.820 | 63.820                 | 63.820 |
| 51                                | 54.460                 | 54.460 | 54.460                 | 54.100 | 54.100                 | 54.100 | 54.100                 | 54.100 | 59.360                 | 59.360 | 59.360                 | 59.240 | 59.240                 | 59.240 | 59.240                 | 59.240 | 64.360                 | 64.360 | 64.360                 | 64.360 | 63.970                 | 63.970 | 63.970                 | 63.970 |

Номера и диаметры D<sub>1</sub> зубьев

шлицевых

черновых и переходных

Продолжение табл. 4

| Обозначение<br>проточки           |        | Размеры, мм            |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
|-----------------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
|                                   |        | 2403-3412<br>2403-3413 |        | 2403-3414<br>2403-3415 |        | 2403-3416<br>2403-3417 |        | 2403-3418<br>2403-3419 |        | 2403-3421<br>2403-3422 |        | 2403-3423<br>2403-3424 |        | 2403-3425<br>2403-3426 |        | 2403-3427<br>2403-3428 |        | 2403-3429<br>2403-3431 |        | 2403-3432<br>2403-3433 |        | 2403-3434<br>2403-3435 |        | 2403-3436<br>2403-3437 |        |
| Сочетание полей<br>допусков D и e |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        | H7—9H                  |        | H8—11H                 |        |
| D × m                             |        | 55 × 3                 |        | 55 × 3                 |        | 55 × 3                 |        | 55 × 3                 |        | 60 × 3                 |        | 60 × 3                 |        | 60 × 3                 |        | 65 × 3                 |        | 65 × 3                 |        | 65 × 3                 |        | 65 × 3                 |        | 65 × 3                 |        |
| 52                                | 54,610 | 54,610                 | 54,610 | 54,250                 | 54,250 | 54,250                 | 54,250 | 54,250                 | 54,250 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 | 59,510                 | 59,510 |
| 53                                | 54,760 | 54,760                 | 54,760 | 54,400                 | 54,400 | 54,400                 | 54,400 | 54,400                 | 54,400 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 | 59,660                 | 59,660 |
| 54                                | 54,880 | 54,880                 | 54,880 | 54,550                 | 54,550 | 54,550                 | 54,550 | 54,550                 | 54,550 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 | 59,810                 | 59,810 |
| 55                                | 54,940 | 54,940                 | 54,940 | 54,700                 | 54,700 | 54,700                 | 54,700 | 54,700                 | 54,700 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 | 59,890                 | 59,890 |
| 56                                | 54,970 | 54,970                 | 54,970 | 54,850                 | 54,850 | 54,850                 | 54,850 | 54,850                 | 54,850 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 | 59,940                 | 59,940 |
| 57                                | 54,990 | 54,990                 | 54,990 | 54,930                 | 54,930 | 54,930                 | 54,930 | 54,930                 | 54,930 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 | 59,970                 | 59,970 |
| 58                                | 55,010 | 55,025                 | 55,025 | 54,970                 | 54,970 | 54,970                 | 54,970 | 54,970                 | 54,970 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 | 59,990                 | 59,990 |
| 59                                | 55,030 | 55,046                 | 55,046 | 54,990                 | 54,990 | 54,990                 | 54,990 | 54,990                 | 54,990 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 | 60,010                 | 60,010 |
| 60                                |        |                        |        | 55,010                 | 55,025 | 55,025                 | 55,025 | 55,025                 | 55,025 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 |
| 61                                |        |                        |        | 55,030                 | 55,046 | 55,046                 | 55,046 | 55,046                 | 55,046 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 |
| 62                                | 55,030 | 55,046                 | 55,046 |                        |        |                        |        |                        |        | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 | 60,030                 | 60,030 |
| 63                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 64                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 65                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 66                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 67                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 68                                |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |

Номера и диаметры D<sub>2</sub> зубьев

шлицевых

чистовых

калибрующих







Размеры, мм

| Обозначение<br>протяжки | 90×3                   |        | 95×3                   |        | 100×3                  |        | 105×3                  |                        | 110×3                  |                        | 120×3     |         |         |         |         |           |           |
|-------------------------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|------------------------|------------------------|------------------------|-----------|---------|---------|---------|---------|-----------|-----------|
|                         | 2403-3461<br>2403-3462 | Н7-9Н  | 2403-3463<br>2403-3464 | Н8-11Н | 2403-3467<br>2403-3468 | Н8-9Н  | 2403-3469<br>2403-3471 | 2403-3472<br>2403-3473 | 2403-3474<br>2403-3475 | 2403-3476<br>2403-3477 | 2403-3478 | Н7-9Н   | Н8-11Н  | Н7-9Н   | Н8-11Н  | 2403-3481 | 2403-3482 |
| D × m                   | 1                      | 83.400 | 83.400                 | 88.400 | 88.400                 | 93.400 | 93.400                 | 93.400                 | 98.400                 | 98.400                 | 103.400   | 103.400 | 103.400 | 113.400 | 113.400 |           |           |
|                         | 2                      | 83.540 | 83.540                 | 88.540 | 88.540                 | 93.540 | 93.540                 | 93.540                 | 98.540                 | 98.540                 | 103.540   | 103.540 | 103.540 | 113.540 | 113.540 |           |           |
|                         | 3                      | 83.680 | 83.680                 | 88.680 | 88.680                 | 93.680 | 93.680                 | 93.680                 | 98.680                 | 98.680                 | 103.680   | 103.680 | 103.680 | 113.680 | 113.680 |           |           |
|                         | 4                      | 83.820 | 83.820                 | 88.820 | 88.820                 | 93.820 | 93.820                 | 93.820                 | 98.820                 | 98.820                 | 103.820   | 103.820 | 103.820 | 113.820 | 113.820 |           |           |
|                         | 5                      | 83.960 | 83.960                 | 88.960 | 88.960                 | 93.960 | 93.960                 | 93.960                 | 98.960                 | 98.960                 | 103.960   | 103.960 | 103.960 | 113.960 | 113.960 |           |           |
|                         | 6                      | 84.100 | 84.100                 | 89.100 | 89.100                 | 94.100 | 94.100                 | 94.100                 | 99.100                 | 99.100                 | 104.100   | 104.100 | 104.100 | 114.100 | 114.100 |           |           |
|                         | 7                      | 84.240 | 84.240                 | 89.240 | 89.240                 | 94.240 | 94.240                 | 94.240                 | 99.240                 | 99.240                 | 104.240   | 104.240 | 104.240 | 114.240 | 114.240 |           |           |
|                         | 8                      | 84.380 | 84.380                 | 89.380 | 89.380                 | 94.380 | 94.380                 | 94.380                 | 99.380                 | 99.380                 | 104.380   | 104.380 | 104.380 | 114.380 | 114.380 |           |           |
|                         | 9                      | 84.520 | 84.520                 | 89.520 | 89.520                 | 94.520 | 94.520                 | 94.520                 | 99.520                 | 99.520                 | 104.520   | 104.520 | 104.520 | 114.520 | 114.520 |           |           |
|                         | 10                     | 84.660 | 84.660                 | 89.660 | 89.660                 | 94.660 | 94.660                 | 94.660                 | 99.660                 | 99.660                 | 104.660   | 104.660 | 104.660 | 114.660 | 114.660 |           |           |
|                         | 11                     | 84.800 | 84.800                 | 89.800 | 89.800                 | 94.800 | 94.800                 | 94.800                 | 99.800                 | 99.800                 | 104.800   | 104.800 | 104.800 | 114.800 | 114.800 |           |           |
|                         | 12                     | 84.940 | 84.940                 | 89.940 | 89.940                 | 94.940 | 94.940                 | 94.940                 | 99.940                 | 99.940                 | 104.940   | 104.940 | 104.940 | 114.940 | 114.940 |           |           |
|                         | 13                     | 83.610 | 83.610                 | 90.080 | 90.080                 | 93.610 | 93.610                 | 93.610                 | 100.080                | 100.080                | 105.080   | 105.080 | 105.080 | 115.080 | 115.080 |           |           |
|                         | 14                     | 83.770 | 83.770                 | 88.610 | 88.610                 | 93.770 | 93.770                 | 93.770                 | 98.610                 | 98.610                 | 103.610   | 103.610 | 103.610 | 113.610 | 113.610 |           |           |
|                         | 15                     | 83.930 | 83.930                 | 88.770 | 88.770                 | 93.930 | 93.930                 | 93.930                 | 98.770                 | 98.770                 | 103.770   | 103.770 | 103.770 | 113.770 | 113.770 |           |           |
|                         | 16                     | 84.090 | 84.090                 | 88.930 | 88.930                 | 94.090 | 94.090                 | 94.090                 | 98.930                 | 98.930                 | 103.930   | 103.930 | 103.930 | 113.930 | 113.930 |           |           |
|                         | 17                     | 84.160 | 84.160                 | 89.090 | 89.090                 | 94.160 | 94.160                 | 94.160                 | 99.090                 | 99.090                 | 104.090   | 104.090 | 104.090 | 114.090 | 114.090 |           |           |
|                         | 18                     | 84.190 | 84.190                 | 89.160 | 89.160                 | 94.190 | 94.190                 | 94.190                 | 99.160                 | 99.160                 | 104.160   | 104.160 | 104.160 | 114.160 | 114.160 |           |           |
|                         | 19                     |        |                        | 89.190 | 89.190                 | 94.190 | 94.190                 | 94.190                 | 99.190                 | 99.190                 | 104.190   | 104.190 | 104.190 | 114.190 | 114.190 |           |           |
|                         | 20                     | 84.190 | 84.190                 | 89.190 | 89.190                 | 94.190 | 94.190                 | 94.190                 | 99.190                 | 99.190                 | 104.190   | 104.190 | 104.190 | 114.190 | 114.190 |           |           |
|                         | 21                     |        |                        |        | 89.190                 | 94.190 | 94.190                 | 94.190                 | 99.190                 | 99.190                 | 104.190   | 104.190 | 104.190 | 114.190 | 114.190 |           |           |
|                         | 22                     | 84.900 | 84.900                 |        | 90.040                 | 94.900 | 94.900                 | 94.900                 | 100.040                | 100.040                | 105.040   | 105.040 | 105.040 | 115.040 | 115.040 |           |           |
|                         | 23                     | 85.040 | 85.040                 | 90.040 | 90.040                 | 95.040 | 95.040                 | 95.040                 | 100.040                | 100.040                | 105.040   | 105.040 | 105.040 | 115.040 | 115.040 |           |           |
|                         | 24                     | 85.180 | 85.180                 | 90.180 | 90.180                 | 95.180 | 95.180                 | 95.180                 | 100.180                | 100.180                | 105.180   | 105.180 | 105.180 | 115.180 | 115.180 |           |           |

Номера и диаметры D; зубьев



Продолжение табл. 4

| Обозначение<br>протяжки           | Размеры, мм            |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |         |         |         |         |         |         |
|-----------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                   | 90×3                   |                        |                        | 95×3                   |                        |                        | 100×3                  |                        |           | 105×3     |           |           | 110×3   |         |         | 120×3   |         |         |         |         |         |         |         |         |
|                                   | 2403-3461<br>2403-3462 | 2403-3463<br>2403-3464 | 2403-3465<br>2403-3466 | 2403-3467<br>2403-3468 | 2403-3469<br>2403-3471 | 2403-3472<br>2403-3473 | 2403-3474<br>2403-3475 | 2403-3476<br>2403-3477 | 2403-3478 | 2403-3479 | 2403-3481 | 2403-3482 |         |         |         |         |         |         |         |         |         |         |         |         |
| Сочетание полей<br>допусков D и e | H7-9H                  | H8-11H                 | H7-9H                  | H8-11H                 | H7-9H                  | H8-11H                 | H7-9H                  | H8-11H                 | H7-9H     | H8-11H    | H7-9H     | H8-11H    |         |         |         |         |         |         |         |         |         |         |         |         |
| D×m                               | 25                     | 26                     | 27                     | 28                     | 29                     | 30                     | 31                     | 32                     | 33        | 34        | 35        | 36        | 37      | 38      | 39      | 40      | 41      | 42      | 43      | 44      | 45      | 46      | 47      | 48      |
|                                   | 85.320                 | 85.460                 | 85.600                 | 85.740                 | 85.880                 | 86.020                 | 86.160                 | 86.300                 | 86.440    | 86.580    | 86.720    | 86.860    | 87.000  | 87.140  | 87.280  | 87.420  | 87.560  | 87.700  | 87.840  | 87.980  | 88.120  | 88.260  | 88.400  | 88.540  |
|                                   | 85.320                 | 85.460                 | 85.600                 | 85.740                 | 85.880                 | 86.020                 | 86.160                 | 86.300                 | 86.440    | 86.580    | 86.720    | 86.860    | 87.000  | 87.140  | 87.280  | 87.420  | 87.560  | 87.700  | 87.840  | 87.980  | 88.120  | 88.260  | 88.400  | 88.540  |
|                                   | 90.320                 | 90.460                 | 90.600                 | 90.740                 | 90.880                 | 91.020                 | 91.160                 | 91.300                 | 91.440    | 91.580    | 91.720    | 91.860    | 92.000  | 92.140  | 92.280  | 92.420  | 92.560  | 92.700  | 92.840  | 92.980  | 93.120  | 93.260  | 93.400  | 93.540  |
|                                   | 90.320                 | 90.460                 | 90.600                 | 90.740                 | 90.880                 | 91.020                 | 91.160                 | 91.300                 | 91.440    | 91.580    | 91.720    | 91.860    | 92.000  | 92.140  | 92.280  | 92.420  | 92.560  | 92.700  | 92.840  | 92.980  | 93.120  | 93.260  | 93.400  | 93.540  |
|                                   | 95.320                 | 95.460                 | 95.600                 | 95.740                 | 95.880                 | 96.020                 | 96.160                 | 96.300                 | 96.440    | 96.580    | 96.720    | 96.860    | 97.000  | 97.140  | 97.280  | 97.420  | 97.560  | 97.700  | 97.840  | 97.980  | 98.120  | 98.260  | 98.400  | 98.540  |
|                                   | 95.320                 | 95.460                 | 95.600                 | 95.740                 | 95.880                 | 96.020                 | 96.160                 | 96.300                 | 96.440    | 96.580    | 96.720    | 96.860    | 97.000  | 97.140  | 97.280  | 97.420  | 97.560  | 97.700  | 97.840  | 97.980  | 98.120  | 98.260  | 98.400  | 98.540  |
|                                   | 100.320                | 100.460                | 100.600                | 100.740                | 100.880                | 101.020                | 101.160                | 101.300                | 101.440   | 101.580   | 101.720   | 101.860   | 102.000 | 102.140 | 102.280 | 102.420 | 102.560 | 102.700 | 102.840 | 102.980 | 103.120 | 103.260 | 103.400 | 103.540 |
|                                   | 100.320                | 100.460                | 100.600                | 100.740                | 100.880                | 101.020                | 101.160                | 101.300                | 101.440   | 101.580   | 101.720   | 101.860   | 102.000 | 102.140 | 102.280 | 102.420 | 102.560 | 102.700 | 102.840 | 102.980 | 103.120 | 103.260 | 103.400 | 103.540 |
|                                   | 105.320                | 105.460                | 105.600                | 105.740                | 105.880                | 106.020                | 106.160                | 106.300                | 106.440   | 106.580   | 106.720   | 106.860   | 107.000 | 107.140 | 107.280 | 107.420 | 107.560 | 107.700 | 107.840 | 107.980 | 108.120 | 108.260 | 108.400 | 108.540 |
|                                   | 105.320                | 105.460                | 105.600                | 105.740                | 105.880                | 106.020                | 106.160                | 106.300                | 106.440   | 106.580   | 106.720   | 106.860   | 107.000 | 107.140 | 107.280 | 107.420 | 107.560 | 107.700 | 107.840 | 107.980 | 108.120 | 108.260 | 108.400 | 108.540 |
|                                   | 110.320                | 110.460                | 110.600                | 110.740                | 110.880                | 111.020                | 111.160                | 111.300                | 111.440   | 111.580   | 111.720   | 111.860   | 112.000 | 112.140 | 112.280 | 112.420 | 112.560 | 112.700 | 112.840 | 112.980 | 113.120 | 113.260 | 113.400 | 113.540 |
|                                   | 110.320                | 110.460                | 110.600                | 110.740                | 110.880                | 111.020                | 111.160                | 111.300                | 111.440   | 111.580   | 111.720   | 111.860   | 112.000 | 112.140 | 112.280 | 112.420 | 112.560 | 112.700 | 112.840 | 112.980 | 113.120 | 113.260 | 113.400 | 113.540 |
|                                   | 115.320                | 115.460                | 115.600                | 115.740                | 115.880                | 116.020                | 116.160                | 116.300                | 116.440   | 116.580   | 116.720   | 116.860   | 117.000 | 117.140 | 117.280 | 117.420 | 117.560 | 117.700 | 117.840 | 117.980 | 118.120 | 118.260 | 118.400 | 118.540 |
|                                   | 115.320                | 115.460                | 115.600                | 115.740                | 115.880                | 116.020                | 116.160                | 116.300                | 116.440   | 116.580   | 116.720   | 116.860   | 117.000 | 117.140 | 117.280 | 117.420 | 117.560 | 117.700 | 117.840 | 117.980 | 118.120 | 118.260 | 118.400 | 118.540 |

Номера и диаметры D<sub>1</sub> зубьев

ШЛИЦЕВЫХ

ЧЕРНОВЫХ И ПЕРЕХОДНЫХ

Продолжение табл. 4

| Обозначение<br>протяжки | Размеры, мм            |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|---------|---------|
|                         | 90×3                   |                        |                        | 95×3                   |                        |                        | 100×3                  |                        |           | 105×3     |           |           | 110×3   |         |         | 120×3   |         |         |
|                         | 2403-3461<br>2403-3462 | 2403-3463<br>2403-3464 | 2403-3465<br>2403-3466 | 2403-3467<br>2403-3468 | 2403-3469<br>2403-3471 | 2403-3472<br>2403-3473 | 2403-3474<br>2403-3475 | 2403-3476<br>2403-3477 | 2403-3478 | 2403-3479 | 2403-3481 | 2403-3482 | Н7-9Н   | Н8-11Н  | Н7-9Н   | Н8-11Н  | Н7-9Н   | Н8-11Н  |
| Шлицевых                | 49                     | 88,680                 | 88,680                 | 93,680                 | 93,680                 | 98,680                 | 98,680                 | 103,680                | 103,680   | 108,680   | 108,680   | 118,680   | 118,680 | 118,680 | 118,680 | 118,680 | 118,680 | 118,680 |
|                         | 50                     | 88,820                 | 88,820                 | 93,820                 | 93,820                 | 98,820                 | 98,820                 | 103,820                | 103,820   | 108,820   | 108,820   | 118,820   | 118,820 | 118,820 | 118,820 | 118,820 | 118,820 | 118,820 |
|                         | 51                     | 88,960                 | 88,960                 | 93,960                 | 93,960                 | 98,960                 | 98,960                 | 103,960                | 103,960   | 108,960   | 108,960   | 118,960   | 118,960 | 118,960 | 118,960 | 118,960 | 118,960 | 118,960 |
|                         | 52                     | 89,100                 | 89,100                 | 94,100                 | 94,100                 | 99,100                 | 99,100                 | 104,100                | 104,100   | 109,100   | 109,100   | 119,100   | 119,100 | 119,100 | 119,100 | 119,100 | 119,100 | 119,100 |
|                         | 53                     | 89,240                 | 89,240                 | 94,240                 | 94,240                 | 99,240                 | 99,240                 | 104,240                | 104,240   | 109,240   | 109,240   | 119,240   | 119,240 | 119,240 | 119,240 | 119,240 | 119,240 | 119,240 |
|                         | 54                     | 89,380                 | 89,380                 | 94,380                 | 94,380                 | 99,380                 | 99,380                 | 104,380                | 104,380   | 109,380   | 109,380   | 119,380   | 119,380 | 119,380 | 119,380 | 119,380 | 119,380 | 119,380 |
|                         | 55                     | 89,520                 | 89,520                 | 94,520                 | 94,520                 | 99,520                 | 99,520                 | 104,520                | 104,520   | 109,520   | 109,520   | 119,520   | 119,520 | 119,520 | 119,520 | 119,520 | 119,520 | 119,520 |
|                         | 56                     | 89,660                 | 89,660                 | 94,660                 | 94,660                 | 99,660                 | 99,660                 | 104,660                | 104,660   | 109,660   | 109,660   | 119,660   | 119,660 | 119,660 | 119,660 | 119,660 | 119,660 | 119,660 |
|                         | 57                     | 89,800                 | 89,800                 | 94,800                 | 94,800                 | 99,800                 | 99,800                 | 104,800                | 104,800   | 109,800   | 109,800   | 119,800   | 119,800 | 119,800 | 119,800 | 119,800 | 119,800 | 119,800 |
|                         | 58                     | 89,890                 | 89,890                 | 94,890                 | 94,890                 | 99,890                 | 99,890                 | 104,890                | 104,890   | 109,890   | 109,890   | 119,890   | 119,890 | 119,890 | 119,890 | 119,890 | 119,890 | 119,890 |
| Чистовых                | 59                     | 89,950                 | 89,950                 | 94,950                 | 94,950                 | 99,950                 | 99,950                 | 104,950                | 104,950   | 109,950   | 109,950   | 119,950   | 119,950 | 119,950 | 119,950 | 119,950 | 119,950 | 119,950 |
|                         | 60                     | 89,980                 | 89,980                 | 94,980                 | 94,980                 | 99,980                 | 99,980                 | 104,980                | 104,980   | 109,980   | 109,980   | 119,980   | 119,980 | 119,980 | 119,980 | 119,980 | 119,980 | 119,980 |
|                         | 61                     | 90,000                 | 90,010                 | 95,000                 | 95,010                 | 100,000                | 100,010                | 105,000                | 105,010   | 110,000   | 110,010   | 120,000   | 120,010 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 |
|                         | 62                     | 90,020                 | 90,035                 | 95,020                 | 95,035                 | 100,020                | 100,035                | 105,020                | 105,035   | 110,020   | 110,035   | 120,020   | 120,035 | 120,020 | 120,020 | 120,020 | 120,020 | 120,020 |
|                         | 63                     | 90,035                 | 90,054                 | 95,035                 | 95,054                 | 100,035                | 100,054                | 105,035                | 105,054   | 110,035   | 110,054   | 120,035   | 120,054 | 120,035 | 120,035 | 120,035 | 120,035 | 120,035 |
|                         | 64                     |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         | 65                     |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         | 66                     | 90,035                 | 90,054                 | 95,035                 | 95,054                 | 100,035                | 100,054                | 105,035                | 105,054   | 110,035   | 110,054   | 120,035   | 120,054 | 120,035 | 120,035 | 120,035 | 120,035 | 120,035 |
|                         | 67                     |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         | 68                     |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
| 69                      |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
| Капильрующих            |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |
|                         |                        |                        |                        |                        |                        |                        |                        |                        |           |           |           |           |         |         |         |         |         |         |

Номера и диаметры D, зубьев

Размеры, мм

| Обозначение<br>протяжки   | 2 403-3483 |         | 2403-3484 |        | 2403-3485<br>2403-3486 |        | 2403-3487<br>2403-3488 |        | 60×3,5 |        | 65×3,5 |        | 70×3,5 |        | 75×3,5 |        |        |        |        |        |        |        |        |        |        |        |        |        |
|---|------------|---------|-----------|--------|------------------------|--------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   | Н7-9Н      | Н8-11Н  | Н7-9Н     | Н8-11Н | Н7-9Н                  | Н8-11Н | Н7-9Н                  | Н8-11Н | Н7-9Н  | Н8-11Н | Н7-9Н  | Н8-11Н | Н7-9Н  | Н8-11Н | Н7-9Н  | Н8-11Н |        |        |        |        |        |        |        |        |        |        |        |        |
| Сочетание полей<br>допусков D и e   | 130×3      |         | 55×3,5    |        | 60×3,5                 |        | 65×3,5                 |        | 70×3,5 |        | 75×3,5 |        | 80×3,5 |        | 85×3,5 |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1          | 2       | 3         | 4      | 5                      | 6      | 7                      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     |        |        |        |        |
| Шлицевых<br>переходных<br>и<br>переходных<br>и<br>рысчатых<br>калин-<br>чистых<br>круглых | 1          | 123.400 | 123.400   | 47.500 | 47.500                 | 47.500 | 47.500                 | 47.500 | 52.400 | 52.400 | 52.400 | 52.400 | 57.400 | 57.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 | 62.400 |        |        |        |
|   | 2          | 123.550 | 123.550   | 47.650 | 47.650                 | 47.650 | 47.650                 | 47.650 | 52.550 | 52.550 | 52.550 | 52.550 | 57.550 | 57.550 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 | 62.540 |        |        |
|   | 3          | 123.700 | 123.700   | 47.800 | 47.800                 | 47.800 | 47.800                 | 47.800 | 52.700 | 52.700 | 52.700 | 52.700 | 57.700 | 57.700 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 | 62.680 |        |
|   | 4          | 123.850 | 123.850   | 47.950 | 47.950                 | 47.950 | 47.950                 | 47.950 | 52.850 | 52.850 | 52.850 | 52.850 | 57.850 | 57.850 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 | 62.820 |
|   | 5          | 124.000 | 124.000   | 48.100 | 48.100                 | 48.100 | 48.100                 | 48.100 | 53.000 | 53.000 | 53.000 | 53.000 | 58.000 | 58.000 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 | 62.960 |
|   | 6          | 124.150 | 125.150   | 48.250 | 48.250                 | 48.250 | 48.250                 | 48.250 | 53.150 | 53.150 | 53.150 | 53.150 | 58.150 | 58.150 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 | 63.100 |
|   | 7          | 124.300 | 124.300   | 48.400 | 48.400                 | 48.400 | 48.400                 | 48.400 | 53.300 | 53.300 | 53.300 | 53.300 | 58.300 | 58.300 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 | 63.240 |
|   | 8          | 124.450 | 124.450   | 48.550 | 48.550                 | 48.550 | 48.550                 | 48.550 | 53.450 | 53.450 | 53.450 | 53.450 | 58.450 | 58.450 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 | 63.380 |
|   | 9          | 124.600 | 124.600   | 48.700 | 48.700                 | 48.700 | 48.700                 | 48.700 | 53.600 | 53.600 | 53.600 | 53.600 | 58.600 | 58.600 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 | 63.520 |
|   | 10         | 124.750 | 124.750   | 48.850 | 48.850                 | 48.850 | 48.850                 | 48.850 | 53.750 | 53.750 | 53.750 | 53.750 | 58.750 | 58.750 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 | 63.660 |
|   | 11         | 124.900 | 124.900   | 49.000 | 49.000                 | 49.000 | 49.000                 | 49.000 | 53.900 | 53.900 | 53.900 | 53.900 | 58.900 | 58.900 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 | 63.800 |
|   | 12         | 125.050 | 125.050   | 49.150 | 49.150                 | 49.150 | 49.150                 | 49.150 | 54.050 | 54.050 | 54.050 | 54.050 | 59.050 | 59.050 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 | 63.940 |
|   | 13         | 123.630 | 123.630   | 47.650 | 47.650                 | 47.650 | 47.650                 | 47.650 | 52.610 | 52.610 | 52.610 | 52.610 | 57.610 | 57.610 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 | 64.080 |
|   | 14         | 123.790 | 123.790   | 47.800 | 47.800                 | 47.800 | 47.800                 | 47.800 | 52.760 | 52.760 | 52.760 | 52.760 | 57.760 | 57.760 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 | 62.610 |
|   | 15         | 123.950 | 123.950   | 47.950 | 47.950                 | 47.950 | 47.950                 | 47.950 | 52.910 | 52.910 | 52.910 | 52.910 | 57.910 | 57.910 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 | 62.760 |
|   | 16         | 124.110 | 124.110   | 48.060 | 48.060                 | 48.060 | 48.060                 | 48.060 | 53.060 | 53.060 | 53.060 | 53.060 | 58.060 | 58.060 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 | 62.910 |
|   | 17         | 124.180 | 124.180   | 48.110 | 48.110                 | 48.110 | 48.110                 | 48.110 | 53.130 | 53.130 | 53.130 | 53.130 | 58.130 | 58.130 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 | 63.060 |
|   | 18         | 124.210 | 124.210   | 48.140 | 48.140                 | 48.140 | 48.140                 | 48.140 | 53.160 | 53.160 | 53.160 | 53.160 | 58.160 | 58.160 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 | 63.130 |
|   | 19         |         |           |        |                        |        |                        |        |        | 53.160 | 53.160 | 53.160 | 58.160 | 58.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 |
|   | 20         | 124.210 | 124.210   | 48.140 | 48.140                 | 48.140 | 48.140                 | 48.140 | 53.160 | 53.160 | 53.160 | 53.160 | 58.160 | 58.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 | 63.160 |
|   | 21         |         |           |        |                        |        |                        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 22         | 125.010 | 125.010   | 49.110 | 49.110                 | 49.110 | 49.110                 | 49.110 | 54.010 | 54.010 | 54.010 | 54.010 | 59.010 | 59.010 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 | 64.040 |
|   | 23         | 125.160 | 125.160   | 49.260 | 49.260                 | 49.260 | 49.260                 | 49.260 | 54.160 | 54.160 | 54.160 | 54.160 | 59.160 | 59.160 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 | 64.190 |
|   | 24         | 125.310 | 125.310   | 49.410 | 49.410                 | 49.410 | 49.410                 | 49.410 | 54.310 | 54.310 | 54.310 | 54.310 | 59.310 | 59.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 | 64.310 |

Номера и диаметры D, z/зубья

Продолжение табл. 4

| Обозначение<br>проточки | Размеры, мм |         |        |           |        |        |           |        |        |           |        |        |          |        |
|-------------------------|-------------|---------|--------|-----------|--------|--------|-----------|--------|--------|-----------|--------|--------|----------|--------|
|                         | 2403-3483   |         |        | 2403-3484 |        |        | 2403-3485 |        |        | 2403-3486 |        |        |          |        |
|                         | Н7-9Н       | Н8-11Н  | Н7-9Н  | Н8-11Н    | Н7-9Н  | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н  | Н8-11Н    | Н7-9Н  | Н8-11Н |          |        |
| D × m                   | 130 × 3     |         |        |           |        |        |           |        |        |           |        |        |          |        |
|                         | 55 × 3,5    |         |        | 60 × 3,5  |        |        | 65 × 3,5  |        |        | 70 × 3,5  |        |        | 75 × 3,5 |        |
| 25                      | 125.460     | 125.460 | 49.560 | 49.560    | 54.460 | 54.460 | 59.460    | 59.460 | 64.340 | 64.340    | 64.340 | 69.460 | 69.460   | 69.460 |
| 26                      | 125.610     | 125.610 | 49.710 | 49.710    | 54.610 | 54.610 | 59.610    | 59.610 | 64.490 | 64.490    | 64.490 | 69.610 | 69.610   | 69.610 |
| 27                      | 125.760     | 125.760 | 49.860 | 49.860    | 54.760 | 54.760 | 59.760    | 59.760 | 64.640 | 64.640    | 64.640 | 69.760 | 69.760   | 69.760 |
| 28                      | 125.910     | 125.910 | 50.010 | 50.010    | 54.910 | 54.910 | 59.910    | 59.910 | 64.790 | 64.790    | 64.790 | 69.910 | 69.910   | 69.910 |
| 29                      | 126.060     | 126.060 | 50.160 | 50.160    | 55.060 | 55.060 | 60.060    | 60.060 | 64.940 | 64.940    | 64.940 | 70.060 | 70.060   | 70.060 |
| 30                      | 126.210     | 126.210 | 50.310 | 50.310    | 55.210 | 55.210 | 60.210    | 60.210 | 65.090 | 65.090    | 65.090 | 70.210 | 70.210   | 70.210 |
| 31                      | 126.360     | 126.360 | 50.460 | 50.460    | 55.360 | 55.360 | 60.360    | 60.360 | 65.240 | 65.240    | 65.240 | 70.360 | 70.360   | 70.360 |
| 32                      | 126.510     | 126.510 | 50.610 | 50.610    | 55.510 | 55.510 | 60.510    | 60.510 | 65.390 | 65.390    | 65.390 | 70.510 | 70.510   | 70.510 |
| 33                      | 126.660     | 126.660 | 50.760 | 50.760    | 55.660 | 55.660 | 60.660    | 60.660 | 65.540 | 65.540    | 65.540 | 70.660 | 70.660   | 70.660 |
| 34                      | 126.810     | 126.810 | 50.910 | 50.910    | 55.810 | 55.810 | 60.810    | 60.810 | 65.690 | 65.690    | 65.690 | 70.810 | 70.810   | 70.810 |
| 35                      | 126.960     | 126.960 | 51.060 | 51.060    | 55.960 | 55.960 | 60.960    | 60.960 | 65.840 | 65.840    | 65.840 | 70.960 | 70.960   | 70.960 |
| 36                      | 127.110     | 127.110 | 51.210 | 51.210    | 56.110 | 56.110 | 61.110    | 61.110 | 65.990 | 65.990    | 65.990 | 71.110 | 71.110   | 71.110 |
| 37                      | 127.260     | 127.260 | 51.360 | 51.360    | 56.260 | 56.260 | 61.260    | 61.260 | 66.140 | 66.140    | 66.140 | 71.260 | 71.260   | 71.260 |
| 38                      | 127.410     | 127.410 | 51.510 | 51.510    | 56.410 | 56.410 | 61.410    | 61.410 | 66.290 | 66.290    | 66.290 | 71.410 | 71.410   | 71.410 |
| 39                      | 127.560     | 127.560 | 51.660 | 51.660    | 56.560 | 56.560 | 61.560    | 61.560 | 66.440 | 66.440    | 66.440 | 71.560 | 71.560   | 71.560 |
| 40                      | 127.710     | 127.710 | 51.810 | 51.810    | 56.710 | 56.710 | 61.710    | 61.710 | 66.590 | 66.590    | 66.590 | 71.710 | 71.710   | 71.710 |
| 41                      | 127.860     | 127.860 | 51.960 | 51.960    | 56.860 | 56.860 | 61.860    | 61.860 | 66.740 | 66.740    | 66.740 | 71.860 | 71.860   | 71.860 |
| 42                      | 128.010     | 128.010 | 52.110 | 52.110    | 57.010 | 57.010 | 62.010    | 62.010 | 66.890 | 66.890    | 66.890 | 72.010 | 72.010   | 72.010 |
| 43                      | 128.160     | 128.160 | 52.260 | 52.260    | 57.160 | 57.160 | 62.160    | 62.160 | 67.040 | 67.040    | 67.040 | 72.160 | 72.160   | 72.160 |
| 44                      | 128.310     | 128.310 | 52.410 | 52.410    | 57.310 | 57.310 | 62.310    | 62.310 | 67.190 | 67.190    | 67.190 | 72.310 | 72.310   | 72.310 |
| 45                      | 128.460     | 128.460 | 52.560 | 52.560    | 57.460 | 57.460 | 62.460    | 62.460 | 67.340 | 67.340    | 67.340 | 72.460 | 72.460   | 72.460 |
| 46                      | 128.610     | 128.610 | 52.710 | 52.710    | 57.610 | 57.610 | 62.610    | 62.610 | 67.490 | 67.490    | 67.490 | 72.610 | 72.610   | 72.610 |
| 47                      | 128.760     | 128.760 | 52.860 | 52.860    | 57.760 | 57.760 | 62.760    | 62.760 | 67.640 | 67.640    | 67.640 | 72.760 | 72.760   | 72.760 |
| 48                      | 128.910     | 128.910 | 53.010 | 53.010    | 57.910 | 57.910 | 62.910    | 62.910 | 67.790 | 67.790    | 67.790 | 72.910 | 72.910   | 72.910 |

Номера и диаметры D<sub>1</sub> зубьев

ШЛИЦЕВЫХ

ЧЕРНОВЫХ И ПЕРЕХОДНЫХ

Продолжение табл. 4

| Обозначение<br>протяжки           | Размеры, мм |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
|-----------------------------------|-------------|---------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|--------|--|
|                                   | 2403-3483   |         | 2403-3484 |        | 2403-3487 |        | 2403-3489 |        | 2403-3492 |        | 2403-3494 |        | 2403-3496 |        | 2403-3498 |        | 2403-3501 |        | 2403-3503 |        | 2403-3505 |        |        |  |
|                                   | Н7-9Н       |         | Н8-11Н    |        | Н7-9Н     |        | Н8-11Н    |        | Н7-9Н     |        | Н8-11Н    |        | Н7-9Н     |        | Н8-11Н    |        | Н7-9Н     |        | Н8-11Н    |        | Н7-9Н     |        | Н8-11Н |  |
| Сочетание полет<br>допусков D и e | 130×3       |         | 55×3,5    |        | 60×3,5    |        | 65×3,5    |        | 70×3,5    |        | 75×3,5    |        |           |        |           |        |           |        |           |        |           |        |        |  |
|                                   | D < e       |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
| 49                                | 129,060     | 129,060 | 53,160    | 58,060 | 58,060    | 58,060 | 58,060    | 58,060 | 63,060    | 63,060 | 63,060    | 63,060 | 63,060    | 67,940 | 67,940    | 67,940 | 67,940    | 67,940 | 67,940    | 73,060 | 73,060    | 73,060 | 73,060 |  |
| 50                                | 129,210     | 129,210 | 53,310    | 58,210 | 58,210    | 58,210 | 58,210    | 58,210 | 63,210    | 63,210 | 63,210    | 63,210 | 63,210    | 68,090 | 68,090    | 68,090 | 68,090    | 68,090 | 68,090    | 73,210 | 73,210    | 73,210 | 73,210 |  |
| 51                                | 129,360     | 129,360 | 53,460    | 58,360 | 58,360    | 58,360 | 58,360    | 58,360 | 63,360    | 63,360 | 63,360    | 63,360 | 63,360    | 68,240 | 68,240    | 68,240 | 68,240    | 68,240 | 68,240    | 73,360 | 73,360    | 73,360 | 73,360 |  |
| 52                                | 129,510     | 129,510 | 53,610    | 58,510 | 58,510    | 58,510 | 58,510    | 58,510 | 63,510    | 63,510 | 63,510    | 63,510 | 63,510    | 68,390 | 68,390    | 68,390 | 68,390    | 68,390 | 68,390    | 73,510 | 73,510    | 73,510 | 73,510 |  |
| 53                                | 129,660     | 129,660 | 53,760    | 58,660 | 58,660    | 58,660 | 58,660    | 58,660 | 63,660    | 63,660 | 63,660    | 63,660 | 63,660    | 68,540 | 68,540    | 68,540 | 68,540    | 68,540 | 68,540    | 73,660 | 73,660    | 73,660 | 73,660 |  |
| 54                                | 129,810     | 129,810 | 53,910    | 58,810 | 58,810    | 58,810 | 58,810    | 58,810 | 63,810    | 63,810 | 63,810    | 63,810 | 63,810    | 68,690 | 68,690    | 68,690 | 68,690    | 68,690 | 68,690    | 73,810 | 73,810    | 73,810 | 73,810 |  |
| 55                                | 129,900     | 129,900 | 54,060    | 58,960 | 58,960    | 58,960 | 58,960    | 58,960 | 63,960    | 63,960 | 63,960    | 63,960 | 63,960    | 68,840 | 68,840    | 68,840 | 68,840    | 68,840 | 68,840    | 73,960 | 73,960    | 73,960 | 73,960 |  |
| 56                                | 129,950     | 129,950 | 54,210    | 59,110 | 59,110    | 59,110 | 59,110    | 59,110 | 64,110    | 64,110 | 64,110    | 64,110 | 64,110    | 68,990 | 68,990    | 68,990 | 68,990    | 68,990 | 68,990    | 74,110 | 74,110    | 74,110 | 74,110 |  |
| 57                                | 129,980     | 129,990 | 54,360    | 59,260 | 59,260    | 59,260 | 59,260    | 59,260 | 64,260    | 64,260 | 64,260    | 64,260 | 64,260    | 69,140 | 69,140    | 69,140 | 69,140    | 69,140 | 69,140    | 74,260 | 74,260    | 74,260 | 74,260 |  |
| 58                                | 130,000     | 130,020 | 54,510    | 59,410 | 59,410    | 59,410 | 59,410    | 59,410 | 64,410    | 64,410 | 64,410    | 64,410 | 64,410    | 69,290 | 69,290    | 69,290 | 69,290    | 69,290 | 69,290    | 74,410 | 74,410    | 74,410 | 74,410 |  |
| 59                                | 130,020     | 130,045 | 54,660    | 59,560 | 59,560    | 59,560 | 59,560    | 59,560 | 64,560    | 64,560 | 64,560    | 64,560 | 64,560    | 69,440 | 69,440    | 69,440 | 69,440    | 69,440 | 69,440    | 74,560 | 74,560    | 74,560 | 74,560 |  |
| 60                                | 130,040     | 130,063 | 54,810    | 59,710 | 59,710    | 59,710 | 59,710    | 59,710 | 64,710    | 64,710 | 64,710    | 64,710 | 64,710    | 69,590 | 69,590    | 69,590 | 69,590    | 69,590 | 69,590    | 74,710 | 74,710    | 74,710 | 74,710 |  |
| 61                                |             |         | 54,900    | 59,860 | 59,860    | 59,860 | 59,860    | 59,860 | 64,860    | 64,860 | 64,860    | 64,860 | 64,860    | 69,740 | 69,740    | 69,740 | 69,740    | 69,740 | 69,740    | 74,860 | 74,860    | 74,860 | 74,860 |  |
| 62                                |             |         | 54,950    | 59,930 | 59,930    | 59,930 | 59,930    | 59,930 | 64,930    | 64,930 | 64,930    | 64,930 | 64,930    | 69,870 | 69,870    | 69,870 | 69,870    | 69,870 | 69,870    | 74,930 | 74,930    | 74,930 | 74,930 |  |
| 63                                | 130,040     | 130,063 | 54,970    | 59,970 | 59,970    | 59,970 | 59,970    | 59,970 | 64,970    | 64,970 | 64,970    | 64,970 | 64,970    | 69,940 | 69,940    | 69,940 | 69,940    | 69,940 | 69,940    | 74,970 | 74,970    | 74,970 | 74,970 |  |
| 64                                |             |         | 55,000    | 60,000 | 60,000    | 60,000 | 60,000    | 60,000 | 65,000    | 65,000 | 65,000    | 65,000 | 65,000    | 70,000 | 70,000    | 70,000 | 70,000    | 70,000 | 70,000    | 75,000 | 75,000    | 75,000 | 75,000 |  |
| 65                                |             |         | 55,010    | 60,010 | 60,010    | 60,010 | 60,010    | 60,010 | 65,010    | 65,010 | 65,010    | 65,010 | 65,010    | 70,010 | 70,010    | 70,010 | 70,010    | 70,010 | 70,010    | 75,010 | 75,010    | 75,010 | 75,010 |  |
| 66                                |             |         | 55,030    | 60,030 | 60,030    | 60,030 | 60,030    | 60,030 | 65,030    | 65,030 | 65,030    | 65,030 | 65,030    | 70,030 | 70,030    | 70,030 | 70,030    | 70,030 | 70,030    | 75,030 | 75,030    | 75,030 | 75,030 |  |
| 67                                |             |         |           |        |           |        |           |        |           |        |           |        |           | 70,030 | 70,030    | 70,030 | 70,030    | 70,030 | 70,030    | 75,030 | 75,030    | 75,030 | 75,030 |  |
| 68                                |             |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
| 69                                |             |         | 55,046    | 60,046 | 60,046    | 60,046 | 60,046    | 60,046 | 65,046    | 65,046 | 65,046    | 65,046 | 65,046    | 70,046 | 70,046    | 70,046 | 70,046    | 70,046 | 70,046    | 75,046 | 75,046    | 75,046 | 75,046 |  |
| 70                                |             |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
| 71                                |             |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
| 72                                |             |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |
| 73                                |             |         |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |        |  |

Номера и диаметры D<sub>1</sub> звеньев

шлицевых

калнбрующихся

чистовых

черновых и переходных

Продолжение табл. 4

Размеры, мм

| Обозначение<br>протяжки           | 2403-3507<br>2403-3508 |        | 2403-3509<br>2403-3511 |        | 2403-3512<br>2403-3513 |        | 2403-3514<br>2403-3515 |        | 2403-3516<br>2403-3517 |        | 2403-3518<br>2403-3519 |        | 2403-3521<br>2403-3522 |        | 2403-3523<br>2403-3524 |        | 2403-3525<br>2403-3526 |        | 2403-3527<br>2403-3528 |        | 2403-3529<br>2403-3531 |        | 2403-3532<br>2403-3533 |        |
|-----------------------------------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
|                                   | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        |
| Сочетание полей<br>допусков D и e | 80×3,5                 |        | 80×3,5                 |        | 80×3,5                 |        | 80×3,5                 |        | 90×3,5                 |        | 95×3,5                 |        | 100×3,5                |        | 105×3,5                |        |                        |        |                        |        |                        |        |                        |        |
|                                   | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      |
| 1                                 | 72,400                 | 72,400 | 72,400                 | 72,400 | 77,400                 | 77,400 | 77,400                 | 77,400 | 82,400                 | 82,400 | 87,400                 | 87,400 | 87,400                 | 87,400 | 87,400                 | 87,400 | 92,400                 | 92,400 | 92,400                 | 92,400 | 97,400                 | 97,400 | 97,400                 | 97,400 |
| 2                                 | 72,550                 | 72,550 | 72,550                 | 72,550 | 77,550                 | 77,550 | 77,550                 | 77,550 | 82,550                 | 82,550 | 87,550                 | 87,550 | 87,550                 | 87,550 | 87,550                 | 87,550 | 92,550                 | 92,550 | 92,550                 | 92,550 | 97,550                 | 97,550 | 97,550                 | 97,550 |
| 3                                 | 72,700                 | 72,700 | 72,700                 | 72,700 | 77,700                 | 77,700 | 77,700                 | 77,700 | 82,700                 | 82,700 | 87,700                 | 87,700 | 87,700                 | 87,700 | 87,700                 | 87,700 | 92,700                 | 92,700 | 92,700                 | 92,700 | 97,700                 | 97,700 | 97,700                 | 97,700 |
| 4                                 | 72,850                 | 72,850 | 72,850                 | 72,850 | 77,850                 | 77,850 | 77,850                 | 77,850 | 82,850                 | 82,850 | 87,850                 | 87,850 | 87,850                 | 87,850 | 87,850                 | 87,850 | 92,850                 | 92,850 | 92,850                 | 92,850 | 97,850                 | 97,850 | 97,850                 | 97,850 |
| 5                                 | 73,000                 | 73,000 | 73,000                 | 73,000 | 78,000                 | 78,000 | 78,000                 | 78,000 | 83,000                 | 83,000 | 88,000                 | 88,000 | 88,000                 | 88,000 | 88,000                 | 88,000 | 93,000                 | 93,000 | 93,000                 | 93,000 | 98,000                 | 98,000 | 98,000                 | 98,000 |
| 6                                 | 73,150                 | 73,150 | 73,150                 | 73,150 | 78,150                 | 78,150 | 78,150                 | 78,150 | 83,150                 | 83,150 | 88,150                 | 88,150 | 88,150                 | 88,150 | 88,150                 | 88,150 | 93,150                 | 93,150 | 93,150                 | 93,150 | 98,150                 | 98,150 | 98,150                 | 98,150 |
| 7                                 | 73,300                 | 73,300 | 73,300                 | 73,300 | 78,300                 | 78,300 | 78,300                 | 78,300 | 83,300                 | 83,300 | 88,300                 | 88,300 | 88,300                 | 88,300 | 88,300                 | 88,300 | 93,300                 | 93,300 | 93,300                 | 93,300 | 98,300                 | 98,300 | 98,300                 | 98,300 |
| 8                                 | 73,450                 | 73,450 | 73,450                 | 73,450 | 78,450                 | 78,450 | 78,450                 | 78,450 | 83,450                 | 83,450 | 88,450                 | 88,450 | 88,450                 | 88,450 | 88,450                 | 88,450 | 93,450                 | 93,450 | 93,450                 | 93,450 | 98,450                 | 98,450 | 98,450                 | 98,450 |
| 9                                 | 73,600                 | 73,600 | 73,600                 | 73,600 | 78,600                 | 78,600 | 78,600                 | 78,600 | 83,600                 | 83,600 | 88,600                 | 88,600 | 88,600                 | 88,600 | 88,600                 | 88,600 | 93,600                 | 93,600 | 93,600                 | 93,600 | 98,600                 | 98,600 | 98,600                 | 98,600 |
| 10                                | 73,750                 | 73,750 | 73,750                 | 73,750 | 78,750                 | 78,750 | 78,750                 | 78,750 | 83,750                 | 83,750 | 88,750                 | 88,750 | 88,750                 | 88,750 | 88,750                 | 88,750 | 93,750                 | 93,750 | 93,750                 | 93,750 | 98,750                 | 98,750 | 98,750                 | 98,750 |
| 11                                | 73,900                 | 73,900 | 73,900                 | 73,900 | 78,900                 | 78,900 | 78,900                 | 78,900 | 83,900                 | 83,900 | 88,900                 | 88,900 | 88,900                 | 88,900 | 88,900                 | 88,900 | 93,900                 | 93,900 | 93,900                 | 93,900 | 98,900                 | 98,900 | 98,900                 | 98,900 |
| 12                                | 74,050                 | 74,050 | 74,050                 | 74,050 | 79,050                 | 79,050 | 79,050                 | 79,050 | 84,050                 | 84,050 | 89,050                 | 89,050 | 89,050                 | 89,050 | 89,050                 | 89,050 | 94,050                 | 94,050 | 94,050                 | 94,050 | 99,050                 | 99,050 | 99,050                 | 99,050 |
| 13                                | 72,610                 | 72,610 | 72,610                 | 72,610 | 77,610                 | 77,610 | 77,610                 | 77,610 | 82,610                 | 82,610 | 87,610                 | 87,610 | 87,610                 | 87,610 | 87,610                 | 87,610 | 92,610                 | 92,610 | 92,610                 | 92,610 | 97,610                 | 97,610 | 97,610                 | 97,610 |
| 14                                | 72,760                 | 72,760 | 72,760                 | 72,760 | 77,760                 | 77,760 | 77,760                 | 77,760 | 82,760                 | 82,760 | 87,760                 | 87,760 | 87,760                 | 87,760 | 87,760                 | 87,760 | 92,760                 | 92,760 | 92,760                 | 92,760 | 97,760                 | 97,760 | 97,760                 | 97,760 |
| 15                                | 72,910                 | 72,910 | 72,910                 | 72,910 | 77,910                 | 77,910 | 77,910                 | 77,910 | 82,910                 | 82,910 | 87,910                 | 87,910 | 87,910                 | 87,910 | 87,910                 | 87,910 | 92,910                 | 92,910 | 92,910                 | 92,910 | 97,910                 | 97,910 | 97,910                 | 97,910 |
| 16                                | 73,060                 | 73,060 | 73,060                 | 73,060 | 78,060                 | 78,060 | 78,060                 | 78,060 | 83,060                 | 83,060 | 88,060                 | 88,060 | 88,060                 | 88,060 | 88,060                 | 88,060 | 93,060                 | 93,060 | 93,060                 | 93,060 | 98,060                 | 98,060 | 98,060                 | 98,060 |
| 17                                | 73,130                 | 73,130 | 73,130                 | 73,130 | 78,130                 | 78,130 | 78,130                 | 78,130 | 83,130                 | 83,130 | 88,130                 | 88,130 | 88,130                 | 88,130 | 88,130                 | 88,130 | 93,130                 | 93,130 | 93,130                 | 93,130 | 98,130                 | 98,130 | 98,130                 | 98,130 |
| 18                                | 73,160                 | 73,160 | 73,160                 | 73,160 | 78,160                 | 78,160 | 78,160                 | 78,160 | 83,160                 | 83,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 93,160                 | 93,160 | 93,160                 | 93,160 | 98,160                 | 98,160 | 98,160                 | 98,160 |
| 19                                |                        |        |                        |        | 78,160                 | 78,160 | 78,160                 | 78,160 | 83,160                 | 83,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 93,160                 | 93,160 | 93,160                 | 93,160 | 98,160                 | 98,160 | 98,160                 | 98,160 |
| 20                                | 73,160                 | 73,160 | 73,160                 | 73,160 | 78,160                 | 78,160 | 78,160                 | 78,160 | 83,160                 | 83,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 88,160                 | 88,160 | 93,160                 | 93,160 | 93,160                 | 93,160 | 98,160                 | 98,160 | 98,160                 | 98,160 |
| 21                                |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |                        |        |
| 22                                | 74,010                 | 74,010 | 74,010                 | 74,010 | 79,010                 | 79,010 | 79,010                 | 79,010 | 84,010                 | 84,010 | 89,010                 | 89,010 | 89,010                 | 89,010 | 89,010                 | 89,010 | 94,010                 | 94,010 | 94,010                 | 94,010 | 99,010                 | 99,010 | 99,010                 | 99,010 |
| 23                                | 74,160                 | 74,160 | 74,160                 | 74,160 | 79,160                 | 79,160 | 79,160                 | 79,160 | 84,160                 | 84,160 | 89,160                 | 89,160 | 89,160                 | 89,160 | 89,160                 | 89,160 | 94,160                 | 94,160 | 94,160                 | 94,160 | 99,160                 | 99,160 | 99,160                 | 99,160 |
| 24                                | 74,310                 | 74,310 | 74,310                 | 74,310 | 79,310                 | 79,310 | 79,310                 | 79,310 | 84,310                 | 84,310 | 89,310                 | 89,310 | 89,310                 | 89,310 | 89,310                 | 89,310 | 94,310                 | 94,310 | 94,310                 | 94,310 | 99,310                 | 99,310 | 99,310                 | 99,310 |

Номера и диаметры D: зубьев

Продолжение табл. 4

Размеры, мм

| Обозначение проточки           | 2403-3507<br>2403-3508 |        | 2403-3509<br>2403-3511 |        | 2403-3512<br>2403-3513 |        | 2403-3514<br>2403-3515 |        | 2403-3516<br>2403-3517 |        | 2403-3518<br>2403-3519 |        | 2403-3521<br>2403-3522 |        | 2403-3523<br>2403-3524 |        | 2403-3525<br>2403-3526 |        | 2403-3527<br>2403-3528 |        | 2403-3529<br>2403-3531 |         | 2403-3532<br>2403-3533 |         |
|--------------------------------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|------------------------|---------|------------------------|---------|
|                                | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |        | H8-11H                 |        | H7-9H                  |         | H8-11H                 |         |
| Сочетание полей допусков D и e | 80×3,5                 |        | 85×3,5                 |        | 85×3,5                 |        | 85×3,5                 |        | 90×3,5                 |        | 90×3,5                 |        | 95×3,5                 |        | 100×3,5                |        | 100×3,5                |        | 105×3,5                |        | 105×3,5                |         | 105×3,5                |         |
|                                | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e      | D                      | e       | D                      | e       |
| 25                             | 74.460                 | 74.460 | 79.460                 | 79.460 | 79.460                 | 79.460 | 84.460                 | 84.460 | 84.460                 | 84.460 | 84.460                 | 84.460 | 89.460                 | 89.460 | 89.460                 | 89.460 | 94.460                 | 94.460 | 94.460                 | 94.460 | 99.460                 | 99.460  | 99.460                 | 99.460  |
| 26                             | 74.610                 | 74.610 | 79.610                 | 79.610 | 79.610                 | 79.610 | 84.610                 | 84.610 | 84.610                 | 84.610 | 84.610                 | 84.610 | 89.610                 | 89.610 | 89.610                 | 89.610 | 94.610                 | 94.610 | 94.610                 | 94.610 | 99.610                 | 99.610  | 99.610                 | 99.610  |
| 27                             | 74.760                 | 74.760 | 79.760                 | 79.760 | 79.760                 | 79.760 | 84.760                 | 84.760 | 84.760                 | 84.760 | 84.760                 | 84.760 | 89.760                 | 89.760 | 89.760                 | 89.760 | 94.760                 | 94.760 | 94.760                 | 94.760 | 99.760                 | 99.760  | 99.760                 | 99.760  |
| 28                             | 74.910                 | 74.910 | 79.910                 | 79.910 | 79.910                 | 79.910 | 84.910                 | 84.910 | 84.910                 | 84.910 | 84.910                 | 84.910 | 89.910                 | 89.910 | 89.910                 | 89.910 | 94.910                 | 94.910 | 94.910                 | 94.910 | 99.910                 | 99.910  | 99.910                 | 99.910  |
| 29                             | 75.060                 | 75.060 | 80.060                 | 80.060 | 80.060                 | 80.060 | 85.060                 | 85.060 | 85.060                 | 85.060 | 85.060                 | 85.060 | 90.060                 | 90.060 | 90.060                 | 90.060 | 95.060                 | 95.060 | 95.060                 | 95.060 | 100.060                | 100.060 | 100.060                | 100.060 |
| 30                             | 75.210                 | 75.210 | 80.210                 | 80.210 | 80.210                 | 80.210 | 85.210                 | 85.210 | 85.210                 | 85.210 | 85.210                 | 85.210 | 90.210                 | 90.210 | 90.210                 | 90.210 | 95.210                 | 95.210 | 95.210                 | 95.210 | 100.210                | 100.210 | 100.210                | 100.210 |
| 31                             | 75.360                 | 75.360 | 80.360                 | 80.360 | 80.360                 | 80.360 | 85.360                 | 85.360 | 85.360                 | 85.360 | 85.360                 | 85.360 | 90.360                 | 90.360 | 90.360                 | 90.360 | 95.360                 | 95.360 | 95.360                 | 95.360 | 100.360                | 100.360 | 100.360                | 100.360 |
| 32                             | 75.510                 | 75.510 | 80.510                 | 80.510 | 80.510                 | 80.510 | 85.510                 | 85.510 | 85.510                 | 85.510 | 85.510                 | 85.510 | 90.510                 | 90.510 | 90.510                 | 90.510 | 95.510                 | 95.510 | 95.510                 | 95.510 | 100.510                | 100.510 | 100.510                | 100.510 |
| 33                             | 75.660                 | 75.660 | 80.660                 | 80.660 | 80.660                 | 80.660 | 85.660                 | 85.660 | 85.660                 | 85.660 | 85.660                 | 85.660 | 90.660                 | 90.660 | 90.660                 | 90.660 | 95.660                 | 95.660 | 95.660                 | 95.660 | 100.660                | 100.660 | 100.660                | 100.660 |
| 34                             | 75.810                 | 75.810 | 80.810                 | 80.810 | 80.810                 | 80.810 | 85.810                 | 85.810 | 85.810                 | 85.810 | 85.810                 | 85.810 | 90.810                 | 90.810 | 90.810                 | 90.810 | 95.810                 | 95.810 | 95.810                 | 95.810 | 100.810                | 100.810 | 100.810                | 100.810 |
| 35                             | 75.960                 | 75.960 | 80.960                 | 80.960 | 80.960                 | 80.960 | 85.960                 | 85.960 | 85.960                 | 85.960 | 85.960                 | 85.960 | 90.960                 | 90.960 | 90.960                 | 90.960 | 95.960                 | 95.960 | 95.960                 | 95.960 | 100.960                | 100.960 | 100.960                | 100.960 |
| 36                             | 76.110                 | 76.110 | 81.110                 | 81.110 | 81.110                 | 81.110 | 86.110                 | 86.110 | 86.110                 | 86.110 | 86.110                 | 86.110 | 91.110                 | 91.110 | 91.110                 | 91.110 | 96.110                 | 96.110 | 96.110                 | 96.110 | 101.110                | 101.110 | 101.110                | 101.110 |
| 37                             | 76.260                 | 76.260 | 81.260                 | 81.260 | 81.260                 | 81.260 | 86.260                 | 86.260 | 86.260                 | 86.260 | 86.260                 | 86.260 | 91.260                 | 91.260 | 91.260                 | 91.260 | 96.260                 | 96.260 | 96.260                 | 96.260 | 101.260                | 101.260 | 101.260                | 101.260 |
| 38                             | 76.410                 | 76.410 | 81.410                 | 81.410 | 81.410                 | 81.410 | 86.410                 | 86.410 | 86.410                 | 86.410 | 86.410                 | 86.410 | 91.410                 | 91.410 | 91.410                 | 91.410 | 96.410                 | 96.410 | 96.410                 | 96.410 | 101.410                | 101.410 | 101.410                | 101.410 |
| 39                             | 76.560                 | 76.560 | 81.560                 | 81.560 | 81.560                 | 81.560 | 86.560                 | 86.560 | 86.560                 | 86.560 | 86.560                 | 86.560 | 91.560                 | 91.560 | 91.560                 | 91.560 | 96.560                 | 96.560 | 96.560                 | 96.560 | 101.560                | 101.560 | 101.560                | 101.560 |
| 40                             | 76.710                 | 76.710 | 81.710                 | 81.710 | 81.710                 | 81.710 | 86.710                 | 86.710 | 86.710                 | 86.710 | 86.710                 | 86.710 | 91.710                 | 91.710 | 91.710                 | 91.710 | 96.710                 | 96.710 | 96.710                 | 96.710 | 101.710                | 101.710 | 101.710                | 101.710 |
| 41                             | 76.860                 | 76.860 | 81.860                 | 81.860 | 81.860                 | 81.860 | 86.860                 | 86.860 | 86.860                 | 86.860 | 86.860                 | 86.860 | 91.860                 | 91.860 | 91.860                 | 91.860 | 96.860                 | 96.860 | 96.860                 | 96.860 | 101.860                | 101.860 | 101.860                | 101.860 |
| 42                             | 77.010                 | 77.010 | 82.010                 | 82.010 | 82.010                 | 82.010 | 87.010                 | 87.010 | 87.010                 | 87.010 | 87.010                 | 87.010 | 92.010                 | 92.010 | 92.010                 | 92.010 | 97.010                 | 97.010 | 97.010                 | 97.010 | 102.010                | 102.010 | 102.010                | 102.010 |
| 43                             | 77.160                 | 77.160 | 82.160                 | 82.160 | 82.160                 | 82.160 | 87.160                 | 87.160 | 87.160                 | 87.160 | 87.160                 | 87.160 | 92.160                 | 92.160 | 92.160                 | 92.160 | 97.160                 | 97.160 | 97.160                 | 97.160 | 102.160                | 102.160 | 102.160                | 102.160 |
| 44                             | 77.310                 | 77.310 | 82.310                 | 82.310 | 82.310                 | 82.310 | 87.310                 | 87.310 | 87.310                 | 87.310 | 87.310                 | 87.310 | 92.310                 | 92.310 | 92.310                 | 92.310 | 97.310                 | 97.310 | 97.310                 | 97.310 | 102.310                | 102.310 | 102.310                | 102.310 |
| 45                             | 77.460                 | 77.460 | 82.460                 | 82.460 | 82.460                 | 82.460 | 87.460                 | 87.460 | 87.460                 | 87.460 | 87.460                 | 87.460 | 92.460                 | 92.460 | 92.460                 | 92.460 | 97.460                 | 97.460 | 97.460                 | 97.460 | 102.460                | 102.460 | 102.460                | 102.460 |
| 46                             | 77.610                 | 77.610 | 82.610                 | 82.610 | 82.610                 | 82.610 | 87.610                 | 87.610 | 87.610                 | 87.610 | 87.610                 | 87.610 | 92.610                 | 92.610 | 92.610                 | 92.610 | 97.610                 | 97.610 | 97.610                 | 97.610 | 102.610                | 102.610 | 102.610                | 102.610 |
| 47                             | 77.760                 | 77.760 | 82.760                 | 82.760 | 82.760                 | 82.760 | 87.760                 | 87.760 | 87.760                 | 87.760 | 87.760                 | 87.760 | 92.760                 | 92.760 | 92.760                 | 92.760 | 97.760                 | 97.760 | 97.760                 | 97.760 | 102.760                | 102.760 | 102.760                | 102.760 |
| 48                             | 77.910                 | 77.910 | 82.910                 | 82.910 | 82.910                 | 82.910 | 87.910                 | 87.910 | 87.910                 | 87.910 | 87.910                 | 87.910 | 92.910                 | 92.910 | 92.910                 | 92.910 | 97.910                 | 97.910 | 97.910                 | 97.910 | 102.910                | 102.910 | 102.910                | 102.910 |

Номера и диаметры D, зубьев

шлицевых

черновых и переходных

Продолжение табл. 4

Размеры, мм

| Обозначение<br>протяжки           | 2403-3507<br>2403-3508 |         | 2403-3509<br>2403-3511 |         | 2403-3512<br>2403-3513 |         | 2403-3514<br>2403-3515 |         | 2403-3516<br>2403-3517 |         | 2403-3518<br>2403-3519 |         | 2403-3521<br>2403-3522 |         | 2403-3523<br>2403-3524 |         | 2403-3525<br>2403-3526 |         | 2403-3527<br>2403-3528 |         | 2403-3529<br>2403-3531 |         | 2403-3532<br>2403-3533 |         |
|-----------------------------------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|
|                                   | Н7—9Н                  |         | Н8—11Н                 |         | Н7—9Н                  |         | Н8—11Н                 |         | Н7—9Н                  |         | Н8—11Н                 |         | Н7—9Н                  |         | Н8—11Н                 |         | Н7—9Н                  |         | Н8—11Н                 |         | Н7—9Н                  |         | Н8—11Н                 |         |
| Сочетание полей<br>допусков D и e | 80×3,5                 |         | 80×3,5                 |         | 85×3,5                 |         | 85×3,5                 |         | 90×3,5                 |         | 90×3,5                 |         | 95×3,5                 |         | 95×3,5                 |         | 100×3,5                |         | 100×3,5                |         | 105×3,5                |         | 105×3,5                |         |
|                                   | 49                     | 50      | 51                     | 52      | 53                     | 54      | 55                     | 56      | 57                     | 58      | 59                     | 60      | 61                     | 62      | 63                     | 64      | 65                     | 66      | 67                     | 68      | 69                     | 70      | 71                     | 72      |
| Шлицевых                          | 78,060                 | 78,210  | 78,360                 | 78,510  | 78,660                 | 78,810  | 78,960                 | 79,110  | 79,260                 | 79,410  | 79,560                 | 79,710  | 79,860                 | 79,930  | 79,970                 | 79,990  | 80,010                 | 80,025  | 80,030                 | 80,046  | 80,060                 | 80,076  | 80,092                 | 80,108  |
|                                   | 83,060                 | 83,210  | 83,360                 | 83,510  | 83,660                 | 83,810  | 83,960                 | 84,110  | 84,260                 | 84,410  | 84,560                 | 84,710  | 84,860                 | 84,940  | 84,980                 | 85,000  | 85,020                 | 85,035  | 85,040                 | 85,056  | 85,072                 | 85,088  | 85,104                 | 85,120  |
| Черновых и переходных             | 88,060                 | 88,210  | 88,360                 | 88,510  | 88,660                 | 88,810  | 88,960                 | 89,110  | 89,260                 | 89,410  | 89,560                 | 89,710  | 89,860                 | 89,940  | 89,980                 | 90,000  | 90,020                 | 90,035  | 90,040                 | 90,056  | 90,072                 | 90,088  | 90,104                 | 90,120  |
|                                   | 93,060                 | 93,210  | 93,360                 | 93,510  | 93,660                 | 93,810  | 93,960                 | 94,110  | 94,260                 | 94,410  | 94,560                 | 94,710  | 94,860                 | 94,940  | 94,980                 | 95,000  | 95,020                 | 95,035  | 95,040                 | 95,056  | 95,072                 | 95,088  | 95,104                 | 95,120  |
| Чистовых                          | 98,060                 | 98,210  | 98,360                 | 98,510  | 98,660                 | 98,810  | 98,960                 | 99,110  | 99,260                 | 99,410  | 99,560                 | 99,710  | 99,860                 | 99,940  | 99,980                 | 100,000 | 100,020                | 100,035 | 100,040                | 100,056 | 100,072                | 100,088 | 100,104                | 100,120 |
|                                   | 103,060                | 103,210 | 103,360                | 103,510 | 103,660                | 103,810 | 103,960                | 104,110 | 104,260                | 104,410 | 104,560                | 104,710 | 104,860                | 104,940 | 104,980                | 105,000 | 105,020                | 105,035 | 105,040                | 105,056 | 105,072                | 105,088 | 105,104                | 105,120 |
| Калибрующих                       | 108,060                | 108,210 | 108,360                | 108,510 | 108,660                | 108,810 | 108,960                | 109,110 | 109,260                | 109,410 | 109,560                | 109,710 | 109,860                | 109,940 | 109,980                | 110,000 | 110,020                | 110,035 | 110,040                | 110,056 | 110,072                | 110,088 | 110,104                | 110,120 |
|                                   | 113,060                | 113,210 | 113,360                | 113,510 | 113,660                | 113,810 | 113,960                | 114,110 | 114,260                | 114,410 | 114,560                | 114,710 | 114,860                | 114,940 | 114,980                | 115,000 | 115,020                | 115,035 | 115,040                | 115,056 | 115,072                | 115,088 | 115,104                | 115,120 |

Номера и диаметры D<sub>г</sub> зубьев



Размеры, мм

| Обозначение<br>проточки | 2403-3534 |         | 2403-3535 |         | 2403-3536 |         | 2403-3537 |         | 2403-3538 |         | 2403-3539 |         | 2403-3541 |        | 2403-3542 |        | 2403-3543 |        | 2403-3544 |        | 2403-3545 |        | 2403-3546 |        |        |        |
|-------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|--------|--------|
|                         | H7-9H     |         | H8-11H    |         | H7-9H     |         | H8-11H    |         | H7-9H     |         | H8-11H    |         | H7-9H     |        | H8-11H    |        | H7-9H     |        | H8-11H    |        | H7-9H     |        | H8-11H    |        | H7-9H  |        |
| D × m                   | 110 × 3,5 |         | 120 × 3,5 |         | 130 × 3,5 |         | 60 × 4    |         | 65 × 4    |         | 70 × 4    |         | 60 × 4    |        | 65 × 4    |        | 70 × 4    |        | 60 × 4    |        | 65 × 4    |        | 70 × 4    |        | 60 × 4 |        |
|                         | 1         | 102,400 | 102,400   | 112,400 | 112,400   | 122,400 | 122,400   | 122,400 | 122,400   | 122,400 | 122,400   | 122,400 | 122,400   | 51,400 | 51,400    | 51,400 | 51,400    | 56,400 | 56,400    | 56,400 | 56,400    | 61,400 | 61,400    | 61,400 | 61,400 | 61,400 |
| 2                       | 102,550   | 102,550 | 112,550   | 112,550 | 122,550   | 122,550 | 122,550   | 122,550 | 122,550   | 122,550 | 122,550   | 122,550 | 51,550    | 51,550 | 51,550    | 51,550 | 56,550    | 56,550 | 56,550    | 56,550 | 61,540    | 61,540 | 61,540    | 61,540 | 61,540 |        |
| 3                       | 102,700   | 102,700 | 112,700   | 112,700 | 122,700   | 122,700 | 122,700   | 122,700 | 122,700   | 122,700 | 122,700   | 122,700 | 51,700    | 51,700 | 51,700    | 51,700 | 56,700    | 56,700 | 56,700    | 56,700 | 61,680    | 61,680 | 61,680    | 61,680 | 61,680 |        |
| 4                       | 102,850   | 102,850 | 112,850   | 112,850 | 122,850   | 122,850 | 122,850   | 122,850 | 122,850   | 122,850 | 122,850   | 122,850 | 51,850    | 51,850 | 51,850    | 51,850 | 56,850    | 56,850 | 56,850    | 56,850 | 61,820    | 61,820 | 61,820    | 61,820 | 61,820 |        |
| 5                       | 103,000   | 103,000 | 113,000   | 113,000 | 123,000   | 123,000 | 123,000   | 123,000 | 123,000   | 123,000 | 123,000   | 123,000 | 52,000    | 52,000 | 52,000    | 52,000 | 57,000    | 57,000 | 57,000    | 57,000 | 61,960    | 61,960 | 61,960    | 61,960 | 61,960 |        |
| 6                       | 103,150   | 103,150 | 113,150   | 113,150 | 123,150   | 123,150 | 123,150   | 123,150 | 123,150   | 123,150 | 123,150   | 123,150 | 52,150    | 52,150 | 52,150    | 52,150 | 57,150    | 57,150 | 57,150    | 57,150 | 62,100    | 62,100 | 62,100    | 62,100 | 62,100 |        |
| 7                       | 103,300   | 103,300 | 113,300   | 113,300 | 123,300   | 123,300 | 123,300   | 123,300 | 123,300   | 123,300 | 123,300   | 123,300 | 52,300    | 52,300 | 52,300    | 52,300 | 57,300    | 57,300 | 57,300    | 57,300 | 62,240    | 62,240 | 62,240    | 62,240 | 62,240 |        |
| 8                       | 103,450   | 103,450 | 113,450   | 113,450 | 123,450   | 123,450 | 123,450   | 123,450 | 123,450   | 123,450 | 123,450   | 123,450 | 52,450    | 52,450 | 52,450    | 52,450 | 57,450    | 57,450 | 57,450    | 57,450 | 62,380    | 62,380 | 62,380    | 62,380 | 62,380 |        |
| 9                       | 103,600   | 103,600 | 113,600   | 113,600 | 123,600   | 123,600 | 123,600   | 123,600 | 123,600   | 123,600 | 123,600   | 123,600 | 52,600    | 52,600 | 52,600    | 52,600 | 57,600    | 57,600 | 57,600    | 57,600 | 62,520    | 62,520 | 62,520    | 62,520 | 62,520 |        |
| 10                      | 103,750   | 103,750 | 113,750   | 113,750 | 123,750   | 123,750 | 123,750   | 123,750 | 123,750   | 123,750 | 123,750   | 123,750 | 52,750    | 52,750 | 52,750    | 52,750 | 57,750    | 57,750 | 57,750    | 57,750 | 62,660    | 62,660 | 62,660    | 62,660 | 62,660 |        |
| 11                      | 103,900   | 103,900 | 113,900   | 113,900 | 123,900   | 123,900 | 123,900   | 123,900 | 123,900   | 123,900 | 123,900   | 123,900 | 52,900    | 52,900 | 52,900    | 52,900 | 57,900    | 57,900 | 57,900    | 57,900 | 62,800    | 62,800 | 62,800    | 62,800 | 62,800 |        |
| 12                      | 104,050   | 104,050 | 114,050   | 114,050 | 124,050   | 124,050 | 124,050   | 124,050 | 124,050   | 124,050 | 124,050   | 124,050 | 53,050    | 53,050 | 53,050    | 53,050 | 58,050    | 58,050 | 58,050    | 58,050 | 62,940    | 62,940 | 62,940    | 62,940 | 62,940 |        |
| 13                      | 104,200   | 104,200 | 114,200   | 114,200 | 124,200   | 124,200 | 124,200   | 124,200 | 124,200   | 124,200 | 124,200   | 124,200 | 53,200    | 53,200 | 53,200    | 53,200 | 58,200    | 58,200 | 58,200    | 58,200 | 63,080    | 63,080 | 63,080    | 63,080 | 63,080 |        |
| 14                      | 102,640   | 102,640 | 112,640   | 112,640 | 122,640   | 122,640 | 122,640   | 122,640 | 122,640   | 122,640 | 122,640   | 122,640 | 51,610    | 51,610 | 51,610    | 51,610 | 56,610    | 56,610 | 56,610    | 56,610 | 61,610    | 61,610 | 61,610    | 61,610 | 61,610 |        |
| 15                      | 102,790   | 102,790 | 112,790   | 112,790 | 122,790   | 122,790 | 122,790   | 122,790 | 122,790   | 122,790 | 122,790   | 122,790 | 51,760    | 51,760 | 51,760    | 51,760 | 56,760    | 56,760 | 56,760    | 56,760 | 61,760    | 61,760 | 61,760    | 61,760 | 61,760 |        |
| 16                      | 102,940   | 102,940 | 112,940   | 112,940 | 122,940   | 122,940 | 122,940   | 122,940 | 122,940   | 122,940 | 122,940   | 122,940 | 51,910    | 51,910 | 51,910    | 51,910 | 56,910    | 56,910 | 56,910    | 56,910 | 61,910    | 61,910 | 61,910    | 61,910 | 61,910 |        |
| 17                      | 103,090   | 103,090 | 113,090   | 113,090 | 123,090   | 123,090 | 123,090   | 123,090 | 123,090   | 123,090 | 123,090   | 123,090 | 52,060    | 52,060 | 52,060    | 52,060 | 57,060    | 57,060 | 57,060    | 57,060 | 62,060    | 62,060 | 62,060    | 62,060 | 62,060 |        |
| 18                      | 103,160   | 103,160 | 113,160   | 113,160 | 123,160   | 123,160 | 123,160   | 123,160 | 123,160   | 123,160 | 123,160   | 123,160 | 52,130    | 52,130 | 52,130    | 52,130 | 57,130    | 57,130 | 57,130    | 57,130 | 62,130    | 62,130 | 62,130    | 62,130 | 62,130 |        |
| 19                      | 103,190   | 103,190 | 113,190   | 113,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 52,160    | 52,160 | 52,160    | 52,160 | 57,160    | 57,160 | 57,160    | 57,160 | 62,160    | 62,160 | 62,160    | 62,160 | 62,160 |        |
| 20                      | 103,190   | 103,190 | 113,190   | 113,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 52,160    | 52,160 | 52,160    | 52,160 | 57,160    | 57,160 | 57,160    | 57,160 | 62,160    | 62,160 | 62,160    | 62,160 | 62,160 |        |
| 21                      | 103,190   | 103,190 | 113,190   | 113,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 123,190   | 123,190 | 52,160    | 52,160 | 52,160    | 52,160 | 57,160    | 57,160 | 57,160    | 57,160 | 62,160    | 62,160 | 62,160    | 62,160 | 62,160 |        |
| 22                      | 104,160   | 104,160 | 114,160   | 114,160 | 124,160   | 124,160 | 124,160   | 124,160 | 124,160   | 124,160 | 124,160   | 124,160 | 53,160    | 53,160 | 53,160    | 53,160 | 58,160    | 58,160 | 58,160    | 58,160 | 63,040    | 63,040 | 63,040    | 63,040 | 63,040 |        |
| 23                      | 104,310   | 104,310 | 114,310   | 114,310 | 124,310   | 124,310 | 124,310   | 124,310 | 124,310   | 124,310 | 124,310   | 124,310 | 53,310    | 53,310 | 53,310    | 53,310 | 58,310    | 58,310 | 58,310    | 58,310 | 63,190    | 63,190 | 63,190    | 63,190 | 63,190 |        |
| 24                      | 104,460   | 104,460 | 114,460   | 114,460 | 124,460   | 124,460 | 124,460   | 124,460 | 124,460   | 124,460 | 124,460   | 124,460 | 53,460    | 53,460 | 53,460    | 53,460 | 58,460    | 58,460 | 58,460    | 58,460 | 63,340    | 63,340 | 63,340    | 63,340 | 63,340 |        |
| 25                      | 104,610   | 104,610 | 114,610   | 114,610 | 124,610   | 124,610 | 124,610   | 124,610 | 124,610   | 124,610 | 124,610   | 124,610 | 53,610    | 53,610 | 53,610    | 53,610 | 58,610    | 58,610 | 58,610    | 58,610 | 63,490    | 63,490 | 63,490    | 63,490 | 63,490 |        |
| 26                      | 104,760   | 104,760 | 114,760   | 114,760 | 124,760   | 124,760 | 124,760   | 124,760 | 124,760   | 124,760 | 124,760   | 124,760 | 53,760    | 53,760 | 53,760    | 53,760 | 58,760    | 58,760 | 58,760    | 58,760 | 63,640    | 63,640 | 63,640    | 63,640 | 63,640 |        |
| 27                      | 104,910   | 104,910 | 114,910   | 114,910 | 124,910   | 124,910 | 124,910   | 124,910 | 124,910   | 124,910 | 124,910   | 124,910 | 53,910    | 53,910 | 53,910    | 53,910 | 58,910    | 58,910 | 58,910    | 58,910 | 63,790    | 63,790 | 63,790    | 63,790 | 63,790 |        |
| 28                      | 104,910   | 104,910 | 114,910   | 114,910 | 124,910   | 124,910 | 124,910   | 124,910 | 124,910   | 124,910 | 124,910   | 124,910 | 53,910    | 53,910 | 53,910    | 53,910 | 58,910    | 58,910 | 58,910    | 58,910 | 63,790    | 63,790 | 63,790    | 63,790 | 63,790 |        |

Номера и диаметры D<sub>2</sub> зубьев

## Размеры, мм

| Обозначение<br>протяжки | 2403-3534 |         | 2403-3535 |         | 2403-3536 |         | 2403-3537 |         | 2403-3538 |         | 2403-3539 |         | 2403-3541 |         | 2403-3542 |        | 2403-3543 |        | 2403-3544 |        | 2403-3545 |        | 2403-3546 |        |
|-------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
|                         | Н7—9Н     |         | Н8—11Н    |         | Н7—9Н     |         | Н8—11Н    |         | Н7—9Н     |         | Н8—11Н    |         | Н7—9Н     |         | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        |
| D × m                   | 110 × 3,5 |         |           |         | 120 × 3,5 |         |           |         | 130 × 3,5 |         |           |         | 60 × 4    |         |           |        | 65 × 4    |        |           |        | 70 × 4    |        |           |        |
|                         | 29        | 105,060 | 105,060   | 115,060 | 115,060   | 125,060 | 125,060   | 125,060 | 125,060   | 125,060 | 125,060   | 125,060 | 125,060   | 125,060 | 54,060    | 54,060 | 54,060    | 59,060 | 59,060    | 59,060 | 59,060    | 63,940 | 63,940    | 63,940 |
| 30                      | 105,210   | 105,210 | 115,210   | 115,210 | 125,210   | 125,210 | 125,210   | 125,210 | 125,210   | 125,210 | 125,210   | 125,210 | 125,210   | 54,210  | 54,210    | 54,210 | 59,210    | 59,210 | 59,210    | 59,210 | 64,090    | 64,090 | 64,090    | 64,090 |
| 31                      | 105,360   | 105,360 | 115,360   | 115,360 | 125,360   | 125,360 | 125,360   | 125,360 | 125,360   | 125,360 | 125,360   | 125,360 | 125,360   | 54,360  | 54,360    | 54,360 | 59,360    | 59,360 | 59,360    | 59,360 | 64,240    | 64,240 | 64,240    | 64,240 |
| 32                      | 105,510   | 105,510 | 115,510   | 115,510 | 125,510   | 125,510 | 125,510   | 125,510 | 125,510   | 125,510 | 125,510   | 125,510 | 125,510   | 54,510  | 54,510    | 54,510 | 59,510    | 59,510 | 59,510    | 59,510 | 64,390    | 64,390 | 64,390    | 64,390 |
| 33                      | 105,660   | 105,660 | 115,660   | 115,660 | 125,660   | 125,660 | 125,660   | 125,660 | 125,660   | 125,660 | 125,660   | 125,660 | 125,660   | 54,660  | 54,660    | 54,660 | 59,660    | 59,660 | 59,660    | 59,660 | 64,540    | 64,540 | 64,540    | 64,540 |
| 34                      | 105,810   | 105,810 | 115,810   | 115,810 | 125,810   | 125,810 | 125,810   | 125,810 | 125,810   | 125,810 | 125,810   | 125,810 | 125,810   | 54,810  | 54,810    | 54,810 | 59,810    | 59,810 | 59,810    | 59,810 | 64,690    | 64,690 | 64,690    | 64,690 |
| 35                      | 105,960   | 105,960 | 115,960   | 115,960 | 125,960   | 125,960 | 125,960   | 125,960 | 125,960   | 125,960 | 125,960   | 125,960 | 125,960   | 54,960  | 54,960    | 54,960 | 59,960    | 59,960 | 59,960    | 59,960 | 64,840    | 64,840 | 64,840    | 64,840 |
| 36                      | 106,110   | 106,110 | 116,110   | 116,110 | 126,110   | 126,110 | 126,110   | 126,110 | 126,110   | 126,110 | 126,110   | 126,110 | 126,110   | 55,110  | 55,110    | 55,110 | 60,110    | 60,110 | 60,110    | 60,110 | 64,990    | 64,990 | 64,990    | 64,990 |
| 37                      | 106,260   | 106,260 | 116,260   | 116,260 | 126,260   | 126,260 | 126,260   | 126,260 | 126,260   | 126,260 | 126,260   | 126,260 | 126,260   | 55,260  | 55,260    | 55,260 | 60,260    | 60,260 | 60,260    | 60,260 | 65,140    | 65,140 | 65,140    | 65,140 |
| 38                      | 106,410   | 106,410 | 116,410   | 116,410 | 126,410   | 126,410 | 126,410   | 126,410 | 126,410   | 126,410 | 126,410   | 126,410 | 126,410   | 55,410  | 55,410    | 55,410 | 60,410    | 60,410 | 60,410    | 60,410 | 65,290    | 65,290 | 65,290    | 65,290 |
| 39                      | 106,560   | 106,560 | 116,560   | 116,560 | 126,560   | 126,560 | 126,560   | 126,560 | 126,560   | 126,560 | 126,560   | 126,560 | 126,560   | 55,560  | 55,560    | 55,560 | 60,560    | 60,560 | 60,560    | 60,560 | 65,440    | 65,440 | 65,440    | 65,440 |
| 40                      | 106,710   | 106,710 | 116,710   | 116,710 | 126,710   | 126,710 | 126,710   | 126,710 | 126,710   | 126,710 | 126,710   | 126,710 | 126,710   | 55,710  | 55,710    | 55,710 | 60,710    | 60,710 | 60,710    | 60,710 | 65,590    | 65,590 | 65,590    | 65,590 |
| 41                      | 106,860   | 106,860 | 116,860   | 116,860 | 126,860   | 126,860 | 126,860   | 126,860 | 126,860   | 126,860 | 126,860   | 126,860 | 126,860   | 55,860  | 55,860    | 55,860 | 60,860    | 60,860 | 60,860    | 60,860 | 65,740    | 65,740 | 65,740    | 65,740 |
| 42                      | 107,010   | 107,010 | 117,010   | 117,010 | 127,010   | 127,010 | 127,010   | 127,010 | 127,010   | 127,010 | 127,010   | 127,010 | 127,010   | 56,010  | 56,010    | 56,010 | 61,010    | 61,010 | 61,010    | 61,010 | 65,890    | 65,890 | 65,890    | 65,890 |
| 43                      | 107,160   | 107,160 | 117,160   | 117,160 | 127,160   | 127,160 | 127,160   | 127,160 | 127,160   | 127,160 | 127,160   | 127,160 | 127,160   | 56,160  | 56,160    | 56,160 | 61,160    | 61,160 | 61,160    | 61,160 | 66,040    | 66,040 | 66,040    | 66,040 |
| 44                      | 107,310   | 107,310 | 117,310   | 117,310 | 127,310   | 127,310 | 127,310   | 127,310 | 127,310   | 127,310 | 127,310   | 127,310 | 127,310   | 56,310  | 56,310    | 56,310 | 61,310    | 61,310 | 61,310    | 61,310 | 66,190    | 66,190 | 66,190    | 66,190 |
| 45                      | 107,460   | 107,460 | 117,460   | 117,460 | 127,460   | 127,460 | 127,460   | 127,460 | 127,460   | 127,460 | 127,460   | 127,460 | 127,460   | 56,460  | 56,460    | 56,460 | 61,460    | 61,460 | 61,460    | 61,460 | 66,340    | 66,340 | 66,340    | 66,340 |
| 46                      | 107,610   | 107,610 | 117,610   | 117,610 | 127,610   | 127,610 | 127,610   | 127,610 | 127,610   | 127,610 | 127,610   | 127,610 | 127,610   | 56,610  | 56,610    | 56,610 | 61,610    | 61,610 | 61,610    | 61,610 | 66,490    | 66,490 | 66,490    | 66,490 |
| 47                      | 107,760   | 107,760 | 117,760   | 117,760 | 127,760   | 127,760 | 127,760   | 127,760 | 127,760   | 127,760 | 127,760   | 127,760 | 127,760   | 56,760  | 56,760    | 56,760 | 61,760    | 61,760 | 61,760    | 61,760 | 66,640    | 66,640 | 66,640    | 66,640 |
| 48                      | 107,910   | 107,910 | 117,910   | 117,910 | 127,910   | 127,910 | 127,910   | 127,910 | 127,910   | 127,910 | 127,910   | 127,910 | 127,910   | 56,910  | 56,910    | 56,910 | 61,910    | 61,910 | 61,910    | 61,910 | 66,790    | 66,790 | 66,790    | 66,790 |
| 49                      | 108,060   | 108,060 | 118,060   | 118,060 | 128,060   | 128,060 | 128,060   | 128,060 | 128,060   | 128,060 | 128,060   | 128,060 | 128,060   | 57,060  | 57,060    | 57,060 | 62,060    | 62,060 | 62,060    | 62,060 | 66,940    | 66,940 | 66,940    | 66,940 |
| 50                      | 108,210   | 108,210 | 118,210   | 118,210 | 128,210   | 128,210 | 128,210   | 128,210 | 128,210   | 128,210 | 128,210   | 128,210 | 128,210   | 57,210  | 57,210    | 57,210 | 62,210    | 62,210 | 62,210    | 62,210 | 67,090    | 67,090 | 67,090    | 67,090 |
| 51                      | 108,360   | 108,360 | 118,360   | 118,360 | 128,360   | 128,360 | 128,360   | 128,360 | 128,360   | 128,360 | 128,360   | 128,360 | 128,360   | 57,360  | 57,360    | 57,360 | 62,360    | 62,360 | 62,360    | 62,360 | 67,240    | 67,240 | 67,240    | 67,240 |
| 52                      | 108,510   | 108,510 | 118,510   | 118,510 | 128,510   | 128,510 | 128,510   | 128,510 | 128,510   | 128,510 | 128,510   | 128,510 | 128,510   | 57,510  | 57,510    | 57,510 | 62,510    | 62,510 | 62,510    | 62,510 | 67,390    | 67,390 | 67,390    | 67,390 |
| 53                      | 108,660   | 108,660 | 118,660   | 118,660 | 128,660   | 128,660 | 128,660   | 128,660 | 128,660   | 128,660 | 128,660   | 128,660 | 128,660   | 57,660  | 57,660    | 57,660 | 62,660    | 62,660 | 62,660    | 62,660 | 67,540    | 67,540 | 67,540    | 67,540 |
| 54                      | 108,810   | 108,810 | 118,810   | 118,810 | 128,810   | 128,810 | 128,810   | 128,810 | 128,810   | 128,810 | 128,810   | 128,810 | 128,810   | 57,810  | 57,810    | 57,810 | 62,810    | 62,810 | 62,810    | 62,810 | 67,690    | 67,690 | 67,690    | 67,690 |
| 55                      | 108,960   | 108,960 | 118,960   | 118,960 | 128,960   | 128,960 | 128,960   | 128,960 | 128,960   | 128,960 | 128,960   | 128,960 | 128,960   | 57,960  | 57,960    | 57,960 | 62,960    | 62,960 | 62,960    | 62,960 | 67,840    | 67,840 | 67,840    | 67,840 |
| 56                      | 109,110   | 109,110 | 119,110   | 119,110 | 129,110   | 129,110 | 129,110   | 129,110 | 129,110   | 129,110 | 129,110   | 129,110 | 129,110   | 58,110  | 58,110    | 58,110 | 63,110    | 63,110 | 63,110    | 63,110 | 67,990    | 67,990 | 67,990    | 67,990 |

Номера и диаметры  $D_2$  зубьев

шлицевых

черновых и переходных

Продолжение табл. 4

Размеры, мм

| Обозначение<br>профиля   | 110×3,5            |                     | 120×3,5            |                     | 130×3,5            |                     | 60×4               |                     | 65×4               |                     | 70×4               |                     |
|--------------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|
|                          | 2403-3534<br>Н7-9Н | 2403-3535<br>Н8-11Н | 2403-3536<br>Н7-9Н | 2403-3537<br>Н8-11Н | 2403-3538<br>Н7-9Н | 2403-3539<br>Н8-11Н | 2403-3541<br>Н7-9Н | 2403-3542<br>Н8-11Н | 2403-3543<br>Н7-9Н | 2403-3544<br>Н8-11Н | 2403-3545<br>Н7-9Н | 2403-3546<br>Н8-11Н |
| Черновых и<br>переходных | 57                 | 109,260             | 109,260            | 119,260             | 129,260            | 129,260             | 58,260             | 58,260              | 63,260             | 63,260              | 68,140             | 68,140              |
|                          | 58                 | 109,410             | 109,410            | 119,410             | 119,410            | 129,410             | 58,410             | 58,410              | 63,410             | 63,410              | 68,290             | 68,290              |
|                          | 59                 | 109,560             | 109,560            | 119,560             | 119,560            | 129,560             | 58,560             | 58,560              | 63,560             | 63,560              | 68,440             | 68,440              |
|                          | 60                 | 109,710             | 109,710            | 119,710             | 119,710            | 129,710             | 58,710             | 58,710              | 63,710             | 63,710              | 68,590             | 68,590              |
|                          | 61                 | 109,860             | 109,860            | 119,860             | 119,860            | 129,860             | 58,860             | 58,860              | 63,860             | 63,860              | 68,740             | 68,740              |
|                          | 62                 | 109,940             | 109,940            | 119,940             | 119,940            | 129,940             | 59,010             | 59,010              | 64,010             | 64,010              | 68,890             | 68,890              |
| Чистовых                 | 63                 | 109,980             | 109,980            | 119,980             | 119,980            | 129,990             | 59,160             | 59,160              | 64,160             | 64,160              | 69,040             | 69,040              |
|                          | 64                 | 110,000             | 110,010            | 120,000             | 120,010            | 130,020             | 59,310             | 59,310              | 64,310             | 64,310              | 69,190             | 69,190              |
|                          | 65                 | 110,020             | 110,035            | 120,020             | 120,035            | 130,045             | 59,460             | 59,460              | 64,460             | 64,460              | 69,340             | 69,340              |
|                          | 66                 | 110,035             | 110,054            | 120,035             | 120,054            | 130,063             | 59,610             | 59,610              | 64,610             | 64,610              | 69,490             | 69,490              |
| Шлицевых                 | 67                 |                     |                    |                     |                    |                     | 59,760             | 59,760              | 64,760             | 64,760              | 69,640             | 69,640              |
|                          | 68                 |                     |                    |                     |                    |                     | 59,880             | 59,880              | 64,880             | 64,880              | 69,790             | 69,790              |
|                          | 69                 | 110,035             | 110,054            | 120,035             | 120,054            | 130,063             | 59,940             | 59,940              | 64,940             | 64,940              | 69,890             | 69,890              |
|                          | 70                 |                     |                    |                     |                    |                     | 59,970             | 59,970              | 64,970             | 64,970              | 69,940             | 69,940              |
|                          | 71                 |                     |                    |                     |                    |                     | 59,990             | 60,000              | 64,990             | 65,000              | 69,970             | 69,970              |
|                          | 72                 |                     |                    |                     |                    |                     | 60,010             | 60,025              | 65,010             | 65,025              | 69,990             | 70,000              |
| 73                       |                    |                     |                    |                     |                    | 60,030              | 60,046             | 65,030              | 65,046             | 70,010              | 70,025             |                     |
| 74                       |                    |                     |                    |                     |                    |                     |                    |                     |                    | 70,030              | 70,046             |                     |
| 75                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |
| 76                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |
| 77                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |
| 78                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |
| 79                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |
| 80                       |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |                    |                     |

Номера и диаметры D; зубьев

Размеры, мм

| Обозначение<br>проточки              | 2403-3547 |        | 2403-3548 |        | 2403-3549 |        | 2403-3551 |        | 2403-3552 |        | 2403-3553 |        | 2403-3554 |        | 2403-3555 |         | 2403-3556 |         | 2403-3557 |         | 2403-3558 |         | 2403-3559 |         |         |
|--------------------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|---------|
|                                      | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  |         |
| D × m                                | 75 × 4    |        |           |        | 80 × 4    |        |           |        | 85 × 4    |        |           |        | 90 × 4    |        |           |         | 95 × 4    |         |           |         | 100 × 4   |         |           |         |         |
|                                      | фасочных  | 1      | 66,400    | 66,400 | 71,400    | 71,400 | 76,400    | 76,400 | 81,400    | 81,400 | 86,400    | 86,400 | 91,400    | 91,400 | 96,400    | 96,400  | 101,400   | 101,400 | 106,400   | 106,400 | 111,400   | 111,400 | 116,400   | 116,400 | 121,400 |
| 2                                    |           | 66,550 | 66,550    | 71,550 | 71,550    | 76,550 | 76,550    | 81,550 | 81,550    | 86,550 | 86,550    | 91,550 | 91,550    | 96,550 | 96,550    | 101,550 | 101,550   | 106,550 | 106,550   | 111,550 | 111,550   | 116,550 | 116,550   | 121,550 | 121,550 |
| 3                                    |           | 66,700 | 66,700    | 71,700 | 71,700    | 76,700 | 76,700    | 81,700 | 81,700    | 86,700 | 86,700    | 91,700 | 91,700    | 96,700 | 96,700    | 101,700 | 101,700   | 106,700 | 106,700   | 111,700 | 111,700   | 116,700 | 116,700   | 121,700 | 121,700 |
| 4                                    |           | 66,850 | 66,850    | 71,850 | 71,850    | 76,850 | 76,850    | 81,850 | 81,850    | 86,850 | 86,850    | 91,850 | 91,850    | 96,850 | 96,850    | 101,850 | 101,850   | 106,850 | 106,850   | 111,850 | 111,850   | 116,850 | 116,850   | 121,850 | 121,850 |
| 5                                    |           | 67,000 | 67,000    | 72,000 | 72,000    | 77,000 | 77,000    | 82,000 | 82,000    | 87,000 | 87,000    | 92,000 | 92,000    | 97,000 | 97,000    | 102,000 | 102,000   | 107,000 | 107,000   | 112,000 | 112,000   | 117,000 | 117,000   | 122,000 | 122,000 |
| 6                                    |           | 67,150 | 67,150    | 72,150 | 72,150    | 77,150 | 77,150    | 82,150 | 82,150    | 87,150 | 87,150    | 92,150 | 92,150    | 97,150 | 97,150    | 102,150 | 102,150   | 107,150 | 107,150   | 112,150 | 112,150   | 117,150 | 117,150   | 122,150 | 122,150 |
| 7                                    |           | 67,300 | 67,300    | 72,300 | 72,300    | 77,300 | 77,300    | 82,300 | 82,300    | 87,300 | 87,300    | 92,300 | 92,300    | 97,300 | 97,300    | 102,300 | 102,300   | 107,300 | 107,300   | 112,300 | 112,300   | 117,300 | 117,300   | 122,300 | 122,300 |
| 8                                    |           | 67,450 | 67,450    | 72,450 | 72,450    | 77,450 | 77,450    | 82,450 | 82,450    | 87,450 | 87,450    | 92,450 | 92,450    | 97,450 | 97,450    | 102,450 | 102,450   | 107,450 | 107,450   | 112,450 | 112,450   | 117,450 | 117,450   | 122,450 | 122,450 |
| 9                                    |           | 67,600 | 67,600    | 72,600 | 72,600    | 77,600 | 77,600    | 82,600 | 82,600    | 87,600 | 87,600    | 92,600 | 92,600    | 97,600 | 97,600    | 102,600 | 102,600   | 107,600 | 107,600   | 112,600 | 112,600   | 117,600 | 117,600   | 122,600 | 122,600 |
| 10                                   |           | 67,750 | 67,750    | 72,750 | 72,750    | 77,750 | 77,750    | 82,750 | 82,750    | 87,750 | 87,750    | 92,750 | 92,750    | 97,750 | 97,750    | 102,750 | 102,750   | 107,750 | 107,750   | 112,750 | 112,750   | 117,750 | 117,750   | 122,750 | 122,750 |
| 11                                   |           | 67,900 | 67,900    | 72,900 | 72,900    | 77,900 | 77,900    | 82,900 | 82,900    | 87,900 | 87,900    | 92,900 | 92,900    | 97,900 | 97,900    | 102,900 | 102,900   | 107,900 | 107,900   | 112,900 | 112,900   | 117,900 | 117,900   | 122,900 | 122,900 |
| 12                                   |           | 68,050 | 68,050    | 73,050 | 73,050    | 78,050 | 78,050    | 83,050 | 83,050    | 88,050 | 88,050    | 93,050 | 93,050    | 98,050 | 98,050    | 103,050 | 103,050   | 108,050 | 108,050   | 113,050 | 113,050   | 118,050 | 118,050   | 123,050 | 123,050 |
| 13                                   |           | 68,200 | 68,200    | 73,200 | 73,200    | 78,200 | 78,200    | 83,200 | 83,200    | 88,200 | 88,200    | 93,200 | 93,200    | 98,200 | 98,200    | 103,200 | 103,200   | 108,200 | 108,200   | 113,200 | 113,200   | 118,200 | 118,200   | 123,200 | 123,200 |
| круглых                              | 14        | 66,610 | 66,610    | 71,610 | 71,610    | 76,610 | 76,610    | 81,610 | 81,610    | 86,610 | 86,610    | 91,610 | 91,610    | 96,610 | 96,610    | 101,610 | 101,610   | 106,610 | 106,610   | 111,610 | 111,610   | 116,610 | 116,610   | 121,610 | 121,610 |
|                                      | 15        | 66,760 | 66,760    | 71,760 | 71,760    | 76,760 | 76,760    | 81,760 | 81,760    | 86,760 | 86,760    | 91,760 | 91,760    | 96,760 | 96,760    | 101,760 | 101,760   | 106,760 | 106,760   | 111,760 | 111,760   | 116,760 | 116,760   | 121,760 | 121,760 |
|                                      | 16        | 66,910 | 66,910    | 71,910 | 71,910    | 76,910 | 76,910    | 81,910 | 81,910    | 86,910 | 86,910    | 91,910 | 91,910    | 96,910 | 96,910    | 101,910 | 101,910   | 106,910 | 106,910   | 111,910 | 111,910   | 116,910 | 116,910   | 121,910 | 121,910 |
|                                      | 17        | 67,060 | 67,060    | 72,060 | 72,060    | 77,060 | 77,060    | 82,060 | 82,060    | 87,060 | 87,060    | 92,060 | 92,060    | 97,060 | 97,060    | 102,060 | 102,060   | 107,060 | 107,060   | 112,060 | 112,060   | 117,060 | 117,060   | 122,060 | 122,060 |
|                                      | 18        | 67,130 | 67,130    | 72,130 | 72,130    | 77,130 | 77,130    | 82,130 | 82,130    | 87,130 | 87,130    | 92,130 | 92,130    | 97,130 | 97,130    | 102,130 | 102,130   | 107,130 | 107,130   | 112,130 | 112,130   | 117,130 | 117,130   | 122,130 | 122,130 |
|                                      | 19        | 67,160 | 67,160    | 72,160 | 72,160    | 77,160 | 77,160    | 82,160 | 82,160    | 87,160 | 87,160    | 92,160 | 92,160    | 97,160 | 97,160    | 102,160 | 102,160   | 107,160 | 107,160   | 112,160 | 112,160   | 117,160 | 117,160   | 122,160 | 122,160 |
| чис-<br>л кан-<br>д-<br>рующих       | 20        |        |           | 72,160 | 72,160    | 77,160 | 77,160    | 82,160 | 82,160    | 87,160 | 87,160    | 92,160 | 92,160    | 97,160 | 97,160    | 102,160 | 102,160   | 107,160 | 107,160   | 112,160 | 112,160   | 117,160 | 117,160   | 122,160 | 122,160 |
|                                      | 21        | 67,160 | 67,160    | 72,160 | 72,160    | 77,160 | 77,160    | 82,160 | 82,160    | 87,160 | 87,160    | 92,160 | 92,160    | 97,160 | 97,160    | 102,160 | 102,160   | 107,160 | 107,160   | 112,160 | 112,160   | 117,160 | 117,160   | 122,160 | 122,160 |
| 22                                   |           |        |           | 72,160 | 72,160    | 77,160 | 77,160    | 82,160 | 82,160    | 87,160 | 87,160    | 92,160 | 92,160    | 97,160 | 97,160    | 102,160 | 102,160   | 107,160 | 107,160   | 112,160 | 112,160   | 117,160 | 117,160   | 122,160 | 122,160 |
| шлифовых<br>переходных и<br>черновых | 23        | 68,160 | 68,160    | 73,160 | 73,160    | 78,160 | 78,160    | 83,160 | 83,160    | 88,160 | 88,160    | 93,160 | 93,160    | 98,160 | 98,160    | 103,160 | 103,160   | 108,160 | 108,160   | 113,160 | 113,160   | 118,160 | 118,160   | 123,160 | 123,160 |
|                                      | 24        | 68,310 | 68,310    | 73,310 | 73,310    | 78,310 | 78,310    | 83,310 | 83,310    | 88,310 | 88,310    | 93,310 | 93,310    | 98,310 | 98,310    | 103,310 | 103,310   | 108,310 | 108,310   | 113,310 | 113,310   | 118,310 | 118,310   | 123,310 | 123,310 |
|                                      | 25        | 68,460 | 68,460    | 73,460 | 73,460    | 78,460 | 78,460    | 83,460 | 83,460    | 88,460 | 88,460    | 93,460 | 93,460    | 98,460 | 98,460    | 103,460 | 103,460   | 108,460 | 108,460   | 113,460 | 113,460   | 118,460 | 118,460   | 123,460 | 123,460 |
|                                      | 26        | 68,610 | 68,610    | 73,610 | 73,610    | 78,610 | 78,610    | 83,610 | 83,610    | 88,610 | 88,610    | 93,610 | 93,610    | 98,610 | 98,610    | 103,610 | 103,610   | 108,610 | 108,610   | 113,610 | 113,610   | 118,610 | 118,610   | 123,610 | 123,610 |
|                                      | 27        | 68,760 | 68,760    | 73,760 | 73,760    | 78,760 | 78,760    | 83,760 | 83,760    | 88,760 | 88,760    | 93,760 | 93,760    | 98,760 | 98,760    | 103,760 | 103,760   | 108,760 | 108,760   | 113,760 | 113,760   | 118,760 | 118,760   | 123,760 | 123,760 |
|                                      | 28        | 68,910 | 68,910    | 73,910 | 73,910    | 78,910 | 78,910    | 83,910 | 83,910    | 88,910 | 88,910    | 93,910 | 93,910    | 98,910 | 98,910    | 103,910 | 103,910   | 108,910 | 108,910   | 113,910 | 113,910   | 118,910 | 118,910   | 123,910 | 123,910 |
|                                      | 29        | 69,060 | 69,060    | 74,060 | 74,060    | 79,060 | 79,060    | 84,060 | 84,060    | 89,060 | 89,060    | 94,060 | 94,060    | 99,060 | 99,060    | 104,060 | 104,060   | 109,060 | 109,060   | 114,060 | 114,060   | 119,060 | 119,060   | 124,060 | 124,060 |
|                                      | 30        | 69,210 | 69,210    | 74,210 | 74,210    | 79,210 | 79,210    | 84,210 | 84,210    | 89,210 | 89,210    | 94,210 | 94,210    | 99,210 | 99,210    | 104,210 | 104,210   | 109,210 | 109,210   | 114,210 | 114,210   | 119,210 | 119,210   | 124,210 | 124,210 |

Номера и диаметры D<sub>2</sub> зубьев

Размеры, мм

| Обозначение<br>прокладки | 2403-3547 |        | 2403-3548 |        | 2403-3549 |        | 2403-3551 |        | 2403-3552 |        | 2403-3553 |        | 2403-3554 |        | 2403-3555 |        | 2403-3556 |        | 2403-3557 |        | 2403-3558 |        | 2403-3559 |        |       |
|--------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-------|
|                          | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н     |        | Н8—11Н    |        | Н7—9Н |
| D × m                    | 75 × 4    |        |           |        | 80 × 4    |        |           |        | 85 × 4    |        |           |        | 90 × 4    |        |           |        | 95 × 4    |        |           |        | 100 × 4   |        |           |        |       |
| 29                       | 69,060    | 69,060 | 74,060    | 74,060 | 79,060    | 79,060 | 84,060    | 84,060 | 89,060    | 89,060 | 89,060    | 89,060 | 84,060    | 84,060 | 89,060    | 89,060 | 89,060    | 89,060 | 89,060    | 89,060 | 94,060    | 94,060 | 94,060    | 94,060 |       |
| 30                       | 69,210    | 69,210 | 74,210    | 74,210 | 79,210    | 79,210 | 84,210    | 84,210 | 89,210    | 89,210 | 89,210    | 89,210 | 84,210    | 84,210 | 89,210    | 89,210 | 89,210    | 89,210 | 89,210    | 89,210 | 94,210    | 94,210 | 94,210    | 94,210 |       |
| 31                       | 69,360    | 69,360 | 74,360    | 74,360 | 79,360    | 79,360 | 84,360    | 84,360 | 89,360    | 89,360 | 89,360    | 89,360 | 84,360    | 84,360 | 89,360    | 89,360 | 89,360    | 89,360 | 89,360    | 89,360 | 94,360    | 94,360 | 94,360    | 94,360 |       |
| 32                       | 69,510    | 69,510 | 74,510    | 74,510 | 79,510    | 79,510 | 84,510    | 84,510 | 89,510    | 89,510 | 89,510    | 89,510 | 84,510    | 84,510 | 89,510    | 89,510 | 89,510    | 89,510 | 89,510    | 89,510 | 94,510    | 94,510 | 94,510    | 94,510 |       |
| 33                       | 69,660    | 69,660 | 74,660    | 74,660 | 79,660    | 79,660 | 84,660    | 84,660 | 89,660    | 89,660 | 89,660    | 89,660 | 84,660    | 84,660 | 89,660    | 89,660 | 89,660    | 89,660 | 89,660    | 89,660 | 94,660    | 94,660 | 94,660    | 94,660 |       |
| 34                       | 69,810    | 69,810 | 74,810    | 74,810 | 79,810    | 79,810 | 84,810    | 84,810 | 89,810    | 89,810 | 89,810    | 89,810 | 84,810    | 84,810 | 89,810    | 89,810 | 89,810    | 89,810 | 89,810    | 89,810 | 94,810    | 94,810 | 94,810    | 94,810 |       |
| 35                       | 69,960    | 69,960 | 74,960    | 74,960 | 79,960    | 79,960 | 84,960    | 84,960 | 89,960    | 89,960 | 89,960    | 89,960 | 84,960    | 84,960 | 89,960    | 89,960 | 89,960    | 89,960 | 89,960    | 89,960 | 94,960    | 94,960 | 94,960    | 94,960 |       |
| 36                       | 70,110    | 70,110 | 75,110    | 75,110 | 80,110    | 80,110 | 85,110    | 85,110 | 90,110    | 90,110 | 90,110    | 90,110 | 85,110    | 85,110 | 90,110    | 90,110 | 90,110    | 90,110 | 90,110    | 90,110 | 95,110    | 95,110 | 95,110    | 95,110 |       |
| 37                       | 70,260    | 70,260 | 75,260    | 75,260 | 80,260    | 80,260 | 85,260    | 85,260 | 90,260    | 90,260 | 90,260    | 90,260 | 85,260    | 85,260 | 90,260    | 90,260 | 90,260    | 90,260 | 90,260    | 90,260 | 95,260    | 95,260 | 95,260    | 95,260 |       |
| 38                       | 70,410    | 70,410 | 75,410    | 75,410 | 80,410    | 80,410 | 85,410    | 85,410 | 90,410    | 90,410 | 90,410    | 90,410 | 85,410    | 85,410 | 90,410    | 90,410 | 90,410    | 90,410 | 90,410    | 90,410 | 95,410    | 95,410 | 95,410    | 95,410 |       |
| 39                       | 70,560    | 70,560 | 75,560    | 75,560 | 80,560    | 80,560 | 85,560    | 85,560 | 90,560    | 90,560 | 90,560    | 90,560 | 85,560    | 85,560 | 90,560    | 90,560 | 90,560    | 90,560 | 90,560    | 90,560 | 95,560    | 95,560 | 95,560    | 95,560 |       |
| 40                       | 70,710    | 70,710 | 75,710    | 75,710 | 80,710    | 80,710 | 85,710    | 85,710 | 90,710    | 90,710 | 90,710    | 90,710 | 85,710    | 85,710 | 90,710    | 90,710 | 90,710    | 90,710 | 90,710    | 90,710 | 95,710    | 95,710 | 95,710    | 95,710 |       |
| 41                       | 70,860    | 70,860 | 75,860    | 75,860 | 80,860    | 80,860 | 85,860    | 85,860 | 90,860    | 90,860 | 90,860    | 90,860 | 85,860    | 85,860 | 90,860    | 90,860 | 90,860    | 90,860 | 90,860    | 90,860 | 95,860    | 95,860 | 95,860    | 95,860 |       |
| 42                       | 71,010    | 71,010 | 76,010    | 76,010 | 81,010    | 81,010 | 86,010    | 86,010 | 91,010    | 91,010 | 91,010    | 91,010 | 86,010    | 86,010 | 91,010    | 91,010 | 91,010    | 91,010 | 91,010    | 91,010 | 96,010    | 96,010 | 96,010    | 96,010 |       |
| 43                       | 71,160    | 71,160 | 76,160    | 76,160 | 81,160    | 81,160 | 86,160    | 86,160 | 91,160    | 91,160 | 91,160    | 91,160 | 86,160    | 86,160 | 91,160    | 91,160 | 91,160    | 91,160 | 91,160    | 91,160 | 96,160    | 96,160 | 96,160    | 96,160 |       |
| 44                       | 71,310    | 71,310 | 76,310    | 76,310 | 81,310    | 81,310 | 86,310    | 86,310 | 91,310    | 91,310 | 91,310    | 91,310 | 86,310    | 86,310 | 91,310    | 91,310 | 91,310    | 91,310 | 91,310    | 91,310 | 96,310    | 96,310 | 96,310    | 96,310 |       |
| 45                       | 71,460    | 71,460 | 76,460    | 76,460 | 81,460    | 81,460 | 86,460    | 86,460 | 91,460    | 91,460 | 91,460    | 91,460 | 86,460    | 86,460 | 91,460    | 91,460 | 91,460    | 91,460 | 91,460    | 91,460 | 96,460    | 96,460 | 96,460    | 96,460 |       |
| 46                       | 71,610    | 71,610 | 76,610    | 76,610 | 81,610    | 81,610 | 86,610    | 86,610 | 91,610    | 91,610 | 91,610    | 91,610 | 86,610    | 86,610 | 91,610    | 91,610 | 91,610    | 91,610 | 91,610    | 91,610 | 96,610    | 96,610 | 96,610    | 96,610 |       |
| 47                       | 71,760    | 71,760 | 76,760    | 76,760 | 81,760    | 81,760 | 86,760    | 86,760 | 91,760    | 91,760 | 91,760    | 91,760 | 86,760    | 86,760 | 91,760    | 91,760 | 91,760    | 91,760 | 91,760    | 91,760 | 96,760    | 96,760 | 96,760    | 96,760 |       |
| 48                       | 71,910    | 71,910 | 76,910    | 76,910 | 81,910    | 81,910 | 86,910    | 86,910 | 91,910    | 91,910 | 91,910    | 91,910 | 86,910    | 86,910 | 91,910    | 91,910 | 91,910    | 91,910 | 91,910    | 91,910 | 96,910    | 96,910 | 96,910    | 96,910 |       |
| 49                       | 72,060    | 72,060 | 77,060    | 77,060 | 82,060    | 82,060 | 87,060    | 87,060 | 92,060    | 92,060 | 92,060    | 92,060 | 87,060    | 87,060 | 92,060    | 92,060 | 92,060    | 92,060 | 92,060    | 92,060 | 97,060    | 97,060 | 97,060    | 97,060 |       |
| 50                       | 72,210    | 72,210 | 77,210    | 77,210 | 82,210    | 82,210 | 87,210    | 87,210 | 92,210    | 92,210 | 92,210    | 92,210 | 87,210    | 87,210 | 92,210    | 92,210 | 92,210    | 92,210 | 92,210    | 92,210 | 97,210    | 97,210 | 97,210    | 97,210 |       |
| 51                       | 72,360    | 72,360 | 77,360    | 77,360 | 82,360    | 82,360 | 87,360    | 87,360 | 92,360    | 92,360 | 92,360    | 92,360 | 87,360    | 87,360 | 92,360    | 92,360 | 92,360    | 92,360 | 92,360    | 92,360 | 97,360    | 97,360 | 97,360    | 97,360 |       |
| 52                       | 72,510    | 72,510 | 77,510    | 77,510 | 82,510    | 82,510 | 87,510    | 87,510 | 92,510    | 92,510 | 92,510    | 92,510 | 87,510    | 87,510 | 92,510    | 92,510 | 92,510    | 92,510 | 92,510    | 92,510 | 97,510    | 97,510 | 97,510    | 97,510 |       |
| 53                       | 72,660    | 72,660 | 77,660    | 77,660 | 82,660    | 82,660 | 87,660    | 87,660 | 92,660    | 92,660 | 92,660    | 92,660 | 87,660    | 87,660 | 92,660    | 92,660 | 92,660    | 92,660 | 92,660    | 92,660 | 97,660    | 97,660 | 97,660    | 97,660 |       |
| 54                       | 72,810    | 72,810 | 77,810    | 77,810 | 82,810    | 82,810 | 87,810    | 87,810 | 92,810    | 92,810 | 92,810    | 92,810 | 87,810    | 87,810 | 92,810    | 92,810 | 92,810    | 92,810 | 92,810    | 92,810 | 97,810    | 97,810 | 97,810    | 97,810 |       |
| 55                       | 72,960    | 72,960 | 77,960    | 77,960 | 82,960    | 82,960 | 87,960    | 87,960 | 92,960    | 92,960 | 92,960    | 92,960 | 87,960    | 87,960 | 92,960    | 92,960 | 92,960    | 92,960 | 92,960    | 92,960 | 97,960    | 97,960 | 97,960    | 97,960 |       |
| 56                       | 73,110    | 73,110 | 78,110    | 78,110 | 83,110    | 83,110 | 88,110    | 88,110 | 93,110    | 93,110 | 93,110    | 93,110 | 88,110    | 88,110 | 93,110    | 93,110 | 93,110    | 93,110 | 93,110    | 93,110 | 98,110    | 98,110 | 98,110    | 98,110 |       |

Номера и диаметры D<sub>г</sub> зубьев

шлицевых

черновых и переходных

Продолжение табл. 4

## Размеры, мм

| Обозначение<br>прогнжек | 2403-3547 |        | 2304-3548 |        | 2403-3549 |        | 2403-3551 |        | 2403-3552 |        | 2403-3553 |         | 2403-3554 |         | 2403-3555 |         | 2403-3556 |         | 2403-3557 |         | 2403-3558 |         | 2403-3559 |         |
|-------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|                         | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  | Н7-9Н     | Н8-11Н  |
| D × m                   | 75 × 4    |        | 80 × 4    |        | 85 × 4    |        | 90 × 4    |        | 95 × 4    |        | 100 × 4   |         |           |         |           |         |           |         |           |         |           |         |           |         |
|                         | 57        | 73,260 | 73,260    | 78,260 | 78,260    | 83,260 | 83,260    | 88,260 | 88,260    | 93,260 | 93,260    | 98,260  | 98,260    | 98,260  | 98,260    | 98,260  | 98,260    | 98,260  | 98,260    | 98,260  | 98,260    | 98,260  | 98,260    | 98,260  |
| 58                      | 73,410    | 73,410 | 78,410    | 78,410 | 83,410    | 83,410 | 88,410    | 88,410 | 93,410    | 93,410 | 98,410    | 98,410  | 98,410    | 98,410  | 98,410    | 98,410  | 98,410    | 98,410  | 98,410    | 98,410  | 98,410    | 98,410  | 98,410    | 98,410  |
| 59                      | 73,560    | 73,560 | 78,560    | 78,560 | 83,560    | 83,560 | 88,560    | 88,560 | 93,560    | 93,560 | 98,560    | 98,560  | 98,560    | 98,560  | 98,560    | 98,560  | 98,560    | 98,560  | 98,560    | 98,560  | 98,560    | 98,560  | 98,560    | 98,560  |
| 60                      | 73,710    | 73,710 | 78,710    | 78,710 | 83,710    | 83,710 | 88,710    | 88,710 | 93,710    | 93,710 | 98,710    | 98,710  | 98,710    | 98,710  | 98,710    | 98,710  | 98,710    | 98,710  | 98,710    | 98,710  | 98,710    | 98,710  | 98,710    | 98,710  |
| 61                      | 73,860    | 73,860 | 78,860    | 78,860 | 83,860    | 83,860 | 88,860    | 88,860 | 93,860    | 93,860 | 98,860    | 98,860  | 98,860    | 98,860  | 98,860    | 98,860  | 98,860    | 98,860  | 98,860    | 98,860  | 98,860    | 98,860  | 98,860    | 98,860  |
| 62                      | 74,010    | 74,010 | 79,010    | 79,010 | 84,010    | 84,010 | 89,010    | 89,010 | 94,010    | 94,010 | 99,010    | 99,010  | 99,010    | 99,010  | 99,010    | 99,010  | 99,010    | 99,010  | 99,010    | 99,010  | 99,010    | 99,010  | 99,010    | 99,010  |
| 63                      | 74,160    | 74,160 | 79,160    | 79,160 | 84,160    | 84,160 | 89,160    | 89,160 | 94,160    | 94,160 | 99,160    | 99,160  | 99,160    | 99,160  | 99,160    | 99,160  | 99,160    | 99,160  | 99,160    | 99,160  | 99,160    | 99,160  | 99,160    | 99,160  |
| 64                      | 74,310    | 74,310 | 79,310    | 79,310 | 84,310    | 84,310 | 89,310    | 89,310 | 94,310    | 94,310 | 99,310    | 99,310  | 99,310    | 99,310  | 99,310    | 99,310  | 99,310    | 99,310  | 99,310    | 99,310  | 99,310    | 99,310  | 99,310    | 99,310  |
| 65                      | 74,460    | 74,460 | 79,460    | 79,460 | 84,460    | 84,460 | 89,460    | 89,460 | 94,460    | 94,460 | 99,460    | 99,460  | 99,460    | 99,460  | 99,460    | 99,460  | 99,460    | 99,460  | 99,460    | 99,460  | 99,460    | 99,460  | 99,460    | 99,460  |
| 66                      | 74,610    | 74,610 | 79,610    | 79,610 | 84,610    | 84,610 | 89,610    | 89,610 | 94,610    | 94,610 | 99,610    | 99,610  | 99,610    | 99,610  | 99,610    | 99,610  | 99,610    | 99,610  | 99,610    | 99,610  | 99,610    | 99,610  | 99,610    | 99,610  |
| 67                      | 74,760    | 74,760 | 79,760    | 79,760 | 84,760    | 84,760 | 89,760    | 89,760 | 94,760    | 94,760 | 99,760    | 99,760  | 99,760    | 99,760  | 99,760    | 99,760  | 99,760    | 99,760  | 99,760    | 99,760  | 99,760    | 99,760  | 99,760    | 99,760  |
| 68                      | 74,880    | 74,880 | 79,880    | 79,880 | 84,880    | 84,880 | 89,880    | 89,880 | 94,880    | 94,880 | 99,880    | 99,880  | 99,880    | 99,880  | 99,880    | 99,880  | 99,880    | 99,880  | 99,880    | 99,880  | 99,880    | 99,880  | 99,880    | 99,880  |
| 69                      | 74,940    | 74,940 | 79,940    | 79,940 | 84,940    | 84,940 | 89,940    | 89,940 | 94,940    | 94,940 | 99,940    | 99,940  | 99,940    | 99,940  | 99,940    | 99,940  | 99,940    | 99,940  | 99,940    | 99,940  | 99,940    | 99,940  | 99,940    | 99,940  |
| 70                      | 74,970    | 74,970 | 79,970    | 79,970 | 84,980    | 84,980 | 89,980    | 89,980 | 94,980    | 94,980 | 99,980    | 99,980  | 99,980    | 99,980  | 99,980    | 99,980  | 99,980    | 99,980  | 99,980    | 99,980  | 99,980    | 99,980  | 99,980    | 99,980  |
| 71                      | 74,990    | 75,000 | 79,990    | 80,000 | 85,000    | 85,010 | 90,000    | 90,000 | 95,010    | 95,010 | 100,010   | 100,010 | 100,010   | 100,010 | 100,010   | 100,010 | 100,010   | 100,010 | 100,010   | 100,010 | 100,010   | 100,010 | 100,010   | 100,010 |
| 72                      | 75,010    | 75,025 | 80,010    | 80,025 | 85,020    | 85,035 | 90,020    | 90,020 | 95,035    | 95,035 | 100,035   | 100,035 | 100,035   | 100,035 | 100,035   | 100,035 | 100,035   | 100,035 | 100,035   | 100,035 | 100,035   | 100,035 | 100,035   | 100,035 |
| 73                      | 75,030    | 75,046 | 80,030    | 80,046 | 85,035    | 85,054 | 90,035    | 90,035 | 95,054    | 95,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 |
| 74                      |           |        |           |        |           |        |           |        |           |        |           |         |           |         |           |         |           |         |           |         |           |         |           |         |
| 75                      |           |        |           |        |           |        |           |        |           |        |           |         |           |         |           |         |           |         |           |         |           |         |           |         |
| 76                      | 75,030    | 75,046 | 80,030    | 80,046 | 85,035    | 85,054 | 90,035    | 90,035 | 95,054    | 95,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 | 100,054   | 100,054 |
| 77                      |           |        |           |        |           |        |           |        |           |        |           |         |           |         |           |         |           |         |           |         |           |         |           |         |
| 78                      |           |        |           |        |           |        |           |        |           |        |           |         |           |         |           |         |           |         |           |         |           |         |           |         |
| 79                      |           |        |           |        |           |        |           |        |           |        |           |         |           |         |           |         |           |         |           |         |           |         |           |         |

Номера и диаметры D, зубьев

шлицевых

черновых и переходных

Соединение полей  
допусков D и e

Размеры, мм

| Обозначение прокладки                    | 2403-3561           |        | 2403-3562           |         | 2403-3563           |         | 2403-3564           |         | 2403-3565           |         | 2403-3566           |         | 2403-3567           |         | 2403-3568           |         |
|--|---------------------|--------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|
|  | H7-9H               |        | H8-11H              |         | H7-9H               |         | H8-11H              |         | H7-9H               |         | H8-11H              |         | H7-9H               |         | H8-11H              |         |
| Сочетание полей допусков<br><i>D и e</i> | 105×4               |        | 110×4               |         | 110×4               |         | 110×4               |         | 120×4               |         | 120×4               |         | 130×4               |         | 130×4               |         |
|  | <i>D</i> × <i>m</i> |        | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         | <i>D</i> × <i>m</i> |         |
| Фасонных                                 | 1                   | 96,400 | 96,400              | 101,400 | 101,400             | 101,400 | 101,400             | 111,400 | 111,400             | 111,400 | 111,400             | 121,400 | 121,400             | 121,400 | 121,400             | 121,400 |
|  | 2                   | 96,550 | 96,550              | 101,550 | 101,550             | 101,550 | 101,550             | 111,550 | 111,550             | 111,550 | 111,550             | 121,550 | 121,550             | 121,550 | 121,550             | 121,550 |
|  | 3                   | 96,700 | 96,700              | 101,700 | 101,700             | 101,700 | 101,700             | 111,700 | 111,700             | 111,700 | 111,700             | 121,700 | 121,700             | 121,700 | 121,700             | 121,700 |
|  | 4                   | 96,850 | 96,850              | 101,850 | 101,850             | 101,850 | 101,850             | 111,850 | 111,850             | 111,850 | 111,850             | 121,850 | 121,850             | 121,850 | 121,850             | 121,850 |
|  | 5                   | 97,000 | 97,000              | 102,000 | 102,000             | 102,000 | 102,000             | 112,000 | 112,000             | 112,000 | 112,000             | 122,000 | 122,000             | 122,000 | 122,000             | 122,000 |
|  | 6                   | 97,150 | 97,150              | 102,150 | 102,150             | 102,150 | 102,150             | 112,150 | 112,150             | 112,150 | 112,150             | 122,150 | 122,150             | 122,150 | 122,150             | 122,150 |
|  | 7                   | 97,300 | 97,300              | 102,300 | 102,300             | 102,300 | 102,300             | 112,300 | 112,300             | 112,300 | 112,300             | 122,300 | 122,300             | 122,300 | 122,300             | 122,300 |
|  | 8                   | 97,450 | 97,450              | 102,450 | 102,450             | 102,450 | 102,450             | 112,450 | 112,450             | 112,450 | 112,450             | 122,450 | 122,450             | 122,450 | 122,450             | 122,450 |
|  | 9                   | 97,600 | 97,600              | 102,600 | 102,600             | 102,600 | 102,600             | 112,600 | 112,600             | 112,600 | 112,600             | 122,600 | 122,600             | 122,600 | 122,600             | 122,600 |
|  | 10                  | 97,750 | 97,750              | 102,750 | 102,750             | 102,750 | 102,750             | 112,750 | 112,750             | 112,750 | 112,750             | 122,750 | 122,750             | 122,750 | 122,750             | 122,750 |
|  | 11                  | 97,900 | 97,900              | 102,900 | 102,900             | 102,900 | 102,900             | 112,900 | 112,900             | 112,900 | 112,900             | 122,900 | 122,900             | 122,900 | 122,900             | 122,900 |
|  | 12                  | 98,050 | 98,050              | 103,050 | 103,050             | 103,050 | 103,050             | 113,050 | 113,050             | 113,050 | 113,050             | 123,050 | 123,050             | 123,050 | 123,050             | 123,050 |
|  | 13                  | 98,200 | 98,200              | 103,200 | 103,200             | 103,200 | 103,200             | 113,200 | 113,200             | 113,200 | 113,200             | 123,200 | 123,200             | 123,200 | 123,200             | 123,200 |
|  | 14                  | 96,640 | 96,640              | 101,640 | 101,640             | 101,640 | 101,640             | 111,640 | 111,640             | 111,640 | 111,640             | 121,630 | 121,630             | 121,630 | 121,630             | 121,630 |
|  | 15                  | 96,790 | 96,790              | 101,790 | 101,790             | 101,790 | 101,790             | 111,790 | 111,790             | 111,790 | 111,790             | 121,790 | 121,790             | 121,790 | 121,790             | 121,790 |
|  | 16                  | 96,940 | 96,940              | 101,940 | 101,940             | 101,940 | 101,940             | 111,940 | 111,940             | 111,940 | 111,940             | 121,950 | 121,950             | 121,950 | 121,950             | 121,950 |
|  | 17                  | 97,090 | 97,090              | 102,090 | 102,090             | 102,090 | 102,090             | 112,090 | 112,090             | 112,090 | 112,090             | 122,110 | 122,110             | 122,110 | 122,110             | 122,110 |
| Круглых                                  | 18                  | 97,160 | 97,160              | 102,160 | 102,160             | 102,160 | 102,160             | 112,160 | 112,160             | 112,160 | 122,180             | 122,180 | 122,180             | 122,180 | 122,180             | 122,180 |
|  | 19                  | 97,190 | 97,190              | 102,190 | 102,190             | 102,190 | 102,190             | 112,190 | 112,190             | 112,190 | 122,210             | 122,210 | 122,210             | 122,210 | 122,210             | 122,210 |
|  | 20                  | 97,190 | 97,190              | 102,190 | 102,190             | 102,190 | 102,190             | 112,190 | 112,190             | 112,190 | 122,210             | 122,210 | 122,210             | 122,210 | 122,210             | 122,210 |
| Калиб-<br>рующих<br>ручных               | 21                  | 97,190 | 97,190              | 102,190 | 102,190             | 102,190 | 102,190             | 112,190 | 112,190             | 112,190 | 122,210             | 122,210 | 122,210             | 122,210 | 122,210             | 122,210 |
|  | 22                  | 97,190 | 97,190              | 102,190 | 102,190             | 102,190 | 102,190             | 112,190 | 112,190             | 112,190 | 122,210             | 122,210 | 122,210             | 122,210 | 122,210             | 122,210 |
| Шлицевых                                 | 23                  | 98,160 | 98,160              | 103,160 | 103,160             | 103,160 | 103,160             | 113,160 | 113,160             | 113,160 | 123,160             | 123,160 | 123,160             | 123,160 | 123,160             | 123,160 |
|  | 24                  | 98,310 | 98,310              | 103,310 | 103,310             | 103,310 | 103,310             | 113,310 | 113,310             | 113,310 | 123,310             | 123,310 | 123,310             | 123,310 | 123,310             | 123,310 |
|  | 25                  | 98,460 | 98,460              | 103,460 | 103,460             | 103,460 | 103,460             | 113,460 | 113,460             | 113,460 | 123,460             | 123,460 | 123,460             | 123,460 | 123,460             | 123,460 |
|  | 26                  | 98,610 | 98,610              | 103,610 | 103,610             | 103,610 | 103,610             | 113,610 | 113,610             | 113,610 | 123,610             | 123,610 | 123,610             | 123,610 | 123,610             | 123,610 |
|  | 27                  | 98,760 | 98,760              | 103,760 | 103,760             | 103,760 | 103,760             | 113,760 | 113,760             | 113,760 | 123,760             | 123,760 | 123,760             | 123,760 | 123,760             | 123,760 |
|  | 28                  | 98,910 | 98,910              | 103,910 | 103,910             | 103,910 | 103,910             | 113,910 | 113,910             | 113,910 | 123,910             | 123,910 | 123,910             | 123,910 | 123,910             | 123,910 |
|  | 29                  | 98,910 | 98,910              | 103,910 | 103,910             | 103,910 | 103,910             | 113,910 | 113,910             | 113,910 | 123,910             | 123,910 | 123,910             | 123,910 | 123,910             | 123,910 |
|  | 30                  | 98,910 | 98,910              | 103,910 | 103,910             | 103,910 | 103,910             | 113,910 | 113,910             | 113,910 | 123,910             | 123,910 | 123,910             | 123,910 | 123,910             | 123,910 |

Номера и диаметры *D*, зубьев

## Размеры, мм

| Обозначение проточки<br>D и e | 2403-3561 |         | 2403-3562 |         | 2403-3563 |         | 2403-3564 |         | 2403-3565 |         | 2403-3566 |         | 2403-3567 |         | 2403-3568 |         |
|-------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|                               | Н7—9H     | Н8—11H  | Н8—11H    | Н8—11H  | Н7—9H     | Н7—9H   | Н8—11H    | Н8—11H  | Н7—9H     | Н7—9H   | Н8—11H    | Н8—11H  | Н7—9H     | Н7—9H   | Н8—11H    | Н8—11H  |
| D × m                         | 105 × 4   |         | 110 × 4   |         | 120 × 4   |         | 130 × 4   |         |           |         |           |         |           |         |           |         |
| 29                            | 99,060    | 99,060  | 99,060    | 104,060 | 104,060   | 104,060 | 104,060   | 104,060 | 114,060   | 114,060 | 114,060   | 114,060 | 124,060   | 124,060 | 124,060   | 124,060 |
| 30                            | 99,210    | 99,210  | 99,210    | 104,210 | 104,210   | 104,210 | 104,210   | 104,210 | 114,210   | 114,210 | 114,210   | 114,210 | 124,210   | 124,210 | 124,210   | 124,210 |
| 31                            | 99,360    | 99,360  | 99,360    | 104,360 | 104,360   | 104,360 | 104,360   | 104,360 | 114,360   | 114,360 | 114,360   | 114,360 | 124,360   | 124,360 | 124,360   | 124,360 |
| 32                            | 99,510    | 99,510  | 99,510    | 104,510 | 104,510   | 104,510 | 104,510   | 104,510 | 114,510   | 114,510 | 114,510   | 114,510 | 124,510   | 124,510 | 124,510   | 124,510 |
| 33                            | 99,660    | 99,660  | 99,660    | 104,660 | 104,660   | 104,660 | 104,660   | 104,660 | 114,660   | 114,660 | 114,660   | 114,660 | 124,660   | 124,660 | 124,660   | 124,660 |
| 34                            | 99,810    | 99,810  | 99,810    | 104,810 | 104,810   | 104,810 | 104,810   | 104,810 | 114,810   | 114,810 | 114,810   | 114,810 | 124,810   | 124,810 | 124,810   | 124,810 |
| 35                            | 99,960    | 99,960  | 99,960    | 104,960 | 104,960   | 104,960 | 104,960   | 104,960 | 114,960   | 114,960 | 114,960   | 114,960 | 124,960   | 124,960 | 124,960   | 124,960 |
| 36                            | 100,110   | 100,110 | 100,110   | 105,110 | 105,110   | 105,110 | 105,110   | 105,110 | 115,110   | 115,110 | 115,110   | 115,110 | 125,110   | 125,110 | 125,110   | 125,110 |
| 37                            | 100,260   | 100,260 | 100,260   | 105,260 | 105,260   | 105,260 | 105,260   | 105,260 | 115,260   | 115,260 | 115,260   | 115,260 | 125,260   | 125,260 | 125,260   | 125,260 |
| 38                            | 100,410   | 100,410 | 100,410   | 105,410 | 105,410   | 105,410 | 105,410   | 105,410 | 115,410   | 115,410 | 115,410   | 115,410 | 125,410   | 125,410 | 125,410   | 125,410 |
| 39                            | 100,560   | 100,560 | 100,560   | 105,560 | 105,560   | 105,560 | 105,560   | 105,560 | 115,560   | 115,560 | 115,560   | 115,560 | 125,560   | 125,560 | 125,560   | 125,560 |
| 40                            | 100,710   | 100,710 | 100,710   | 105,710 | 105,710   | 105,710 | 105,710   | 105,710 | 115,710   | 115,710 | 115,710   | 115,710 | 125,710   | 125,710 | 125,710   | 125,710 |
| 41                            | 100,860   | 100,860 | 100,860   | 105,860 | 105,860   | 105,860 | 105,860   | 105,860 | 115,860   | 115,860 | 115,860   | 115,860 | 125,860   | 125,860 | 125,860   | 125,860 |
| 42                            | 101,010   | 101,010 | 101,010   | 106,010 | 106,010   | 106,010 | 106,010   | 106,010 | 116,010   | 116,010 | 116,010   | 116,010 | 126,010   | 126,010 | 126,010   | 126,010 |
| 43                            | 101,160   | 101,160 | 101,160   | 106,160 | 106,160   | 106,160 | 106,160   | 106,160 | 116,160   | 116,160 | 116,160   | 116,160 | 126,160   | 126,160 | 126,160   | 126,160 |
| 44                            | 101,310   | 101,310 | 101,310   | 106,310 | 106,310   | 106,310 | 106,310   | 106,310 | 116,310   | 116,310 | 116,310   | 116,310 | 126,310   | 126,310 | 126,310   | 126,310 |
| 45                            | 101,460   | 101,460 | 101,460   | 106,460 | 106,460   | 106,460 | 106,460   | 106,460 | 116,460   | 116,460 | 116,460   | 116,460 | 126,460   | 126,460 | 126,460   | 126,460 |
| 46                            | 101,610   | 101,610 | 101,610   | 106,610 | 106,610   | 106,610 | 106,610   | 106,610 | 116,610   | 116,610 | 116,610   | 116,610 | 126,610   | 126,610 | 126,610   | 126,610 |
| 47                            | 101,760   | 101,760 | 101,760   | 106,760 | 106,760   | 106,760 | 106,760   | 106,760 | 116,760   | 116,760 | 116,760   | 116,760 | 126,760   | 126,760 | 126,760   | 126,760 |
| 48                            | 101,910   | 101,910 | 101,910   | 106,910 | 106,910   | 106,910 | 106,910   | 106,910 | 116,910   | 116,910 | 116,910   | 116,910 | 126,910   | 126,910 | 126,910   | 126,910 |
| 49                            | 102,060   | 102,060 | 102,060   | 107,060 | 107,060   | 107,060 | 107,060   | 107,060 | 117,060   | 117,060 | 117,060   | 117,060 | 127,060   | 127,060 | 127,060   | 127,060 |
| 50                            | 102,210   | 102,210 | 102,210   | 107,210 | 107,210   | 107,210 | 107,210   | 107,210 | 117,210   | 117,210 | 117,210   | 117,210 | 127,210   | 127,210 | 127,210   | 127,210 |
| 51                            | 102,360   | 102,360 | 102,360   | 107,360 | 107,360   | 107,360 | 107,360   | 107,360 | 117,360   | 117,360 | 117,360   | 117,360 | 127,360   | 127,360 | 127,360   | 127,360 |
| 52                            | 102,510   | 102,510 | 102,510   | 107,510 | 107,510   | 107,510 | 107,510   | 107,510 | 117,510   | 117,510 | 117,510   | 117,510 | 127,510   | 127,510 | 127,510   | 127,510 |
| 53                            | 102,660   | 102,660 | 102,660   | 107,660 | 107,660   | 107,660 | 107,660   | 107,660 | 117,660   | 117,660 | 117,660   | 117,660 | 127,660   | 127,660 | 127,660   | 127,660 |
| 54                            | 102,810   | 102,810 | 102,810   | 107,810 | 107,810   | 107,810 | 107,810   | 107,810 | 117,810   | 117,810 | 117,810   | 117,810 | 127,810   | 127,810 | 127,810   | 127,810 |
| 55                            | 102,960   | 102,960 | 102,960   | 107,960 | 107,960   | 107,960 | 107,960   | 107,960 | 117,960   | 117,960 | 117,960   | 117,960 | 127,960   | 127,960 | 127,960   | 127,960 |
| 56                            | 103,110   | 103,110 | 103,110   | 108,110 | 108,110   | 108,110 | 108,110   | 108,110 | 118,110   | 118,110 | 118,110   | 118,110 | 128,110   | 128,110 | 128,110   | 128,110 |

Номера и диаметры D<sub>1</sub> зубьев

шлицевых

черновых и переходных



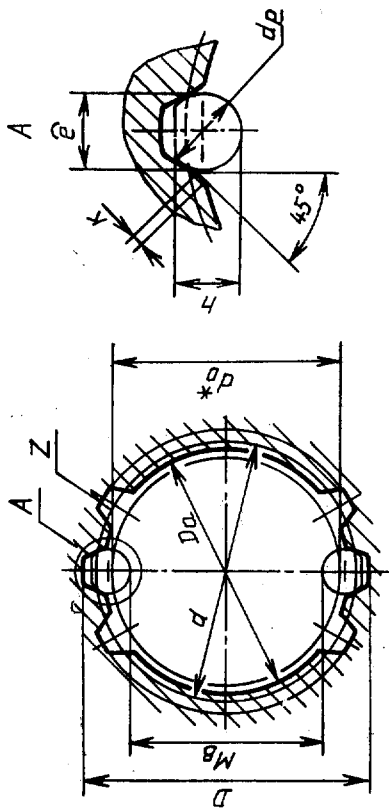
Продолжение табл. 4

Размеры, мм

| Обозначение протяжки | 2403-3561 |                       | 2403-3562 |         | 2403-3563 |         | 2403-3564 |         | 2403-3565 |         | 2403-3566 |         | 2403-3567 |         | 2403-3568 |         |         |         |         |
|----------------------|-----------|-----------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|---------|---------|---------|
|                      | H7-9H     |                       | H8-11H    |         | H7-9H     |         | H8-11H    |         | H7-9H     |         | H8-11H    |         | H7-9H     |         | H8-11H    |         |         |         |         |
|                      | 105×4     |                       | 110×4     |         | 120×4     |         | 130×4     |         |           |         |           |         |           |         |           |         |         |         |         |
| Шлицевых             | D × m     | черновых и переходных |           |         |           |         |           |         |           |         |           |         |           |         |           |         |         |         |         |
|                      |           | 57                    | 103,260   | 103,260 | 103,260   | 108,260 | 108,260   | 108,260 | 108,260   | 118,260 | 118,260   | 118,260 | 128,260   | 128,260 | 128,260   | 128,260 | 128,260 | 128,260 |         |
|                      |           | 58                    | 103,410   | 103,410 | 103,410   | 108,410 | 108,410   | 108,410 | 108,410   | 118,410 | 118,410   | 118,410 | 128,410   | 128,410 | 128,410   | 128,410 | 128,410 | 128,410 |         |
|                      |           | 59                    | 103,560   | 103,560 | 103,560   | 108,560 | 108,560   | 108,560 | 108,560   | 118,560 | 118,560   | 118,560 | 128,560   | 128,560 | 128,560   | 128,560 | 128,560 | 128,560 |         |
|                      |           | 60                    | 103,710   | 103,710 | 103,710   | 108,710 | 108,710   | 108,710 | 108,710   | 118,710 | 118,710   | 118,710 | 128,710   | 128,710 | 128,710   | 128,710 | 128,710 | 128,710 |         |
|                      |           | 61                    | 103,860   | 103,860 | 103,860   | 108,860 | 108,860   | 108,860 | 108,860   | 118,860 | 118,860   | 118,860 | 128,860   | 128,860 | 128,860   | 128,860 | 128,860 | 128,860 | 128,860 |
|                      |           | 62                    | 104,010   | 104,010 | 104,010   | 109,010 | 109,010   | 109,010 | 109,010   | 119,010 | 119,010   | 119,010 | 129,010   | 129,010 | 129,010   | 129,010 | 129,010 | 129,010 | 129,010 |
|                      |           | 63                    | 104,160   | 104,160 | 104,160   | 109,160 | 109,160   | 109,160 | 109,160   | 119,160 | 119,160   | 119,160 | 129,160   | 129,160 | 129,160   | 129,160 | 129,160 | 129,160 | 129,160 |
|                      |           | 64                    | 104,310   | 104,310 | 104,310   | 109,310 | 109,310   | 109,310 | 109,310   | 119,310 | 119,310   | 119,310 | 129,310   | 129,310 | 129,310   | 129,310 | 129,310 | 129,310 | 129,310 |
|                      |           | 65                    | 104,460   | 104,460 | 104,460   | 109,460 | 109,460   | 109,460 | 109,460   | 119,460 | 119,460   | 119,460 | 129,460   | 129,460 | 129,460   | 129,460 | 129,460 | 129,460 | 129,460 |
| 66                   | 104,610   | 104,610               | 104,610   | 109,610 | 109,610   | 109,610 | 109,610   | 119,610 | 119,610   | 119,610 | 129,610   | 129,610 | 129,610   | 129,610 | 129,610   | 129,610 | 129,610 |         |         |
| 67                   | 104,760   | 104,760               | 104,760   | 109,760 | 109,760   | 109,760 | 109,760   | 119,760 | 119,760   | 119,760 | 129,760   | 129,760 | 129,760   | 129,760 | 129,760   | 129,760 | 129,760 |         |         |
| 68                   | 104,890   | 104,890               | 104,890   | 109,890 | 109,890   | 109,890 | 109,890   | 119,890 | 119,890   | 119,890 | 129,890   | 129,890 | 129,890   | 129,890 | 129,890   | 129,890 | 129,890 |         |         |
| 69                   | 104,950   | 104,950               | 104,950   | 109,950 | 109,950   | 109,950 | 109,950   | 119,950 | 119,950   | 119,950 | 129,950   | 129,950 | 129,950   | 129,950 | 129,950   | 129,950 | 129,950 |         |         |
| Чистовых             | 70        | 104,980               | 104,980   | 104,980 | 109,980   | 109,980 | 109,980   | 109,980 | 119,980   | 119,980 | 119,980   | 129,980 | 129,980   | 129,980 | 129,980   | 129,980 | 129,980 |         |         |
|                      | 71        | 105,000               | 105,010   | 105,010 | 110,000   | 110,010 | 110,010   | 110,010 | 120,000   | 120,010 | 120,010   | 130,000 | 130,000   | 130,000 | 130,000   | 130,000 | 130,000 |         |         |
|                      | 72        | 105,020               | 105,035   | 105,035 | 110,020   | 110,035 | 110,035   | 110,035 | 120,020   | 120,035 | 120,035   | 130,020 | 130,020   | 130,020 | 130,020   | 130,020 | 130,020 |         |         |
|                      | 73        | 105,035               | 105,054   | 105,054 | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,020 | 130,020   | 130,020 | 130,020   | 130,020 | 130,020 |         |         |
|                      | 74        |                       |           |         | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 |         |         |
| Календрованных       | 75        |                       |           |         | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 |         |         |
|                      | 76        | 105,035               | 105,054   | 105,054 | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 |         |         |
|                      | 77        |                       |           |         | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 |         |         |
|                      | 78        |                       |           |         | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 | 130,040 |         |
|                      | 79        |                       |           |         | 110,035   | 110,054 | 110,054   | 110,054 | 120,035   | 120,054 | 120,054   | 130,040 | 130,040   | 130,040 | 130,040   | 130,040 | 130,040 | 130,040 |         |

Номера и диаметры D<sub>1</sub> зубьев

Таблица 5



\* Диаметр отверстия до протягивания, для справок

Черт. 2

## Размеры, мм

| Обозначение протяжки | $D \times m$ | $z$ | Сочетание полей допусков $D$ и $e$ | $d$  | $e$   | $D_a$ (поле допуска Н11) | $K$  | $d_o$ (поле допуска Н11) | $d_p$ | $h$ | $M_B$  |              | Длина протягивания         |                       | Усилие протягивания $P, H$ (кгс) при переднем угле |                   |        |
|----------------------|--------------|-----|------------------------------------|------|-------|--------------------------|------|--------------------------|-------|-----|--------|--------------|----------------------------|-----------------------|--|-------------------|--------|
|                      |              |     |                                    |      |       |                          |      |                          |       |     | Накл.  | Верхн. откл. | Сталь и алюминиевые сплавы | Чугун, бронза, латунь | 20°  | 15°               | 10°    |
| 2403-3412; 2403-3413 | 55 × 3       | 17  | H7—9H<br>H8—11H                    | 51,0 | 5,117 | 49                       |      | 48,5                     |       |     | 43,197 | +0,100       | 36—82                      | 154000<br>(157000)    | 168500<br>(17180)                                  | 181150<br>(18470) |        |
| 2403-3414; 2403-3415 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 43,257 |
| 2403-3416; 2403-3417 |              |     | H7—9H<br>H8—11H                    |      |       |                          |      |                          |       |     | 43,197 | +0,100       | 40—110                     | 155300<br>(15830)     | 169900<br>(17320)                                  | 182650<br>(18620) |        |
| 2403-3418; 2403-3419 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 43,257 |
| 2403-3421; 2403-3422 | 60 × 3       | 18  | H7—9H<br>H8—11H                    | 51,0 | 6,271 | 54                       | 0,45 | 53,4                     | 5,45  | 5,2 | 48,552 | +0,086       | 36—82                      | 169900<br>(17320)     | 185900<br>(18950)                                  | 199850<br>(20370) |        |
| 2403-3423; 2403-3424 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 48,603 |
| 2403-3425; 2403-3426 |              |     | H7—9H<br>H8—11H                    | 51,0 |       |                          |      |                          |       |     | 48,552 | +0,086       | 40—110                     | 187100<br>(19075)     | 204700<br>(20870)                                  | 220050<br>(22435) |        |
| 2403-3427; 2403-3428 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 48,603 |
| 2403-3429; 2403-3431 | 65 × 3       | 20  | H7—9H<br>H8—11H                    | 60,0 | 5,694 | 59                       |      | 58,4                     |       |     | 53,525 | +0,091       | 36—82                      | 190350<br>(19400)     | 208250<br>(21230)                                  | 223850<br>(22820) |        |
| 2403-3432; 2403-3433 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 53,580 |
| 2403-3434; 2403-3435 |              |     | H7—9H<br>H8—11H                    |      |       |                          |      |                          |       |     | 53,525 | +0,091       | 40—110                     | 187550<br>(19120)     | 205200<br>(20920)                                  | 220600<br>(22490) |        |
| 2403-3436; 2403-3437 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 53,580 |
| 2403-3438; 2403-3439 | 70 × 3       | 22  | H7—9H<br>H8—11H                    | 66,0 | 5,117 | 64                       |      | 63,4                     |       |     | 58,445 | +0,097       | 36—96                      | 221450<br>(22575)     | 242300<br>(24700)                                  | 260475<br>(26550) |        |
| 2403-3441; 2403-3442 |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 58,503 |
| 2403-3443            |              |     | H7—9H<br>H8—11H                    |      |       |                          |      |                          |       |     | 58,445 | +0,097       | 45—124                     | 244250<br>(24900)     | 267220<br>(27240)                                  | 287250<br>(29280) |        |
| 2403-3444            |              |     |                                    |      |       |                          |      |                          |       |     |        |              |                            |                       |  |                   | 58,503 |

Продолжение табл. 5

Размеры, мм

| Обозначение прокладки | D×t                  | z      | Сочетание полей допусков D и e | d     | e     | D <sub>а</sub> (поле доп. с/з Н11) | K    | d <sub>о</sub> (поле доп. с/з Н11) | d <sub>p</sub> | h   | МВ      |              | Длина протягивания        |                       | Усилие протягивания Р, П (кгс) при переднем угле |                   |                   |
|-----------------------|----------------------|--------|--------------------------------|-------|-------|------------------------------------|------|------------------------------------|----------------|-----|---------|--------------|---------------------------|-----------------------|--|-------------------|-------------------|
|                       |                      |        |                                |       |       |                                    |      |                                    |                |     | Наим.   | Верхн. откл. | Сталь и алюминевые сплавы | Чугун, бронза, латунь | 20°  | 15°               | 10°               |
| 2403-3445; 2403-3446  | 75×3                 | 24     | H7-9H                          | 72,0  | 4,539 | 69                                 |      | 68,4                               |                | 5,2 | 63,311  | +0,102       | 36-96                     | 36-110                | 241700<br>(24640)                                | 264450<br>(26960) | 284300<br>(28980) |
| 2403-3447; 2403-3448  |                      | H8-11H | 63,373                         |       |       |                                    |      |                                    |                |     | +0,203  |              |                           |                       |  |                   |                   |
| 2403-3449             | 80×3                 | 25     | H7-9H                          | 75,0  | 5,694 | 74                                 |      | 73,4                               |                |     | 63,311  | +0,102       | 45-124                    | 45-150                | 266100<br>(27130)                                | 291150<br>(29680) | 313000<br>(31910) |
| 2403-3451             |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 63,373  | +0,203       |                           |                       |  |                   |                   |
| 2403-3452; 2403-3453  | 85×3                 | 27     | H7-9H                          | 81,0  | 5,117 | 79                                 |      | 78,4                               | 5,454          |     | 68,385  | +0,090       |                           |                       | 258050<br>(26300)                                | 282325<br>(28780) | 303500<br>(30940) |
| 2403-3454; 2403-3455  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 68,439  | +0,179       |                           |                       |  |                   |                   |
| 2403-3456; 2403-3457  | 90×3                 | 28     | H7-9H                          | 84,0  | 6,271 | 84                                 |      | 83,4                               |                |     | 73,335  | +0,094       |                           |                       | 270850<br>(27610)                                | 296350<br>(30210) | 318575<br>(32475) |
| 2403-3458; 2403-3459  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 73,391  | +0,188       |                           |                       |  |                   |                   |
| 2403-3461; 2403-3462  | 95×3                 | 30     | H7-9H                          | 90,0  | 5,694 | 89                                 | 0,45 | 88,4                               |                |     | 78,552  | +0,086       |                           |                       | 294100<br>(29980)                                | 321770<br>(32800) | 345900<br>(35260) |
| 2403-3463; 2403-3464  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 78,604  | +0,172       |                           |                       |  |                   |                   |
| 2403-3465; 2403-3466  | 100×3                | 32     | H7-9H                          | 96,0  | 5,117 | 94                                 |      | 93,4                               |                |     | 83,535  | +0,089       |                           |                       | 307550<br>(31350)                                | 336500<br>(34300) | 361750<br>(36870) |
| 2403-3467; 2403-3468  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 83,588  | +0,179       |                           |                       |  |                   |                   |
| 2403-3469; 2403-3471  | 105×3                | 34     | H7-9H                          | 102,0 | 4,539 | 99                                 |      | 98,4                               |                |     | 88,483  | +0,093       | 36-96                     | 36-110                | 328850<br>(33525)                                | 359800<br>(36680) | 386800<br>(39430) |
| 2403-3472; 2403-3473  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 88,539  | +0,185       |                           |                       |  |                   |                   |
| 2403-3474; 2403-3475  | 110×3                | 35     | H7-9H                          | 105,0 | 5,694 | 104                                |      | 103,4                              |                | 5,2 | 93,403  | +0,108       |                           |                       | 342050<br>(34870)                                | 374250<br>(38150) | 402300<br>(41010) |
| 2403-3476; 2403-3477  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 93,469  | +0,215       |                           |                       |  |                   |                   |
| 2403-3478             | 120×3                | 38     | H7-9H                          | 114,0 | 6,271 | 114                                |      | 113,4                              | 6,212          |     | 98,440  | +0,099       |                           |                       | 358000<br>(36500)                                | 391700<br>(39930) | 421075<br>(42925) |
| 2403-3479             |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 98,500  | +0,199       |                           |                       |  |                   |                   |
| 2403-3481             | 130×3                | 42     | H7-9H                          | 126,0 | 5,117 | 124                                |      | 123,4                              | 5,454          | 5,2 | 106,253 | +0,101       |                           |                       | 393700<br>(40130)                                | 430750<br>(43910) | 463050<br>(47200) |
| 2403-3482             |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 106,314 | +0,202       |                           |                       |  |                   |                   |
| 2403-3483             | 55×3,5               | 14     | H7-9H                          | 49,0  | 6,739 | 48                                 |      | 47,5                               | 6,518          |     | 118,509 | +0,102       |                           |                       | 390550<br>(39810)                                | 427300<br>(43560) | 459350<br>(46830) |
| 2403-3484             |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 118,571 | +0,203       |                           |                       |  |                   |                   |
| 2403-3485; 2403-3486  | 60×3,5               | 16     | H7-9H                          | 56,0  | 5,584 | 53                                 | 0,52 | 52,4                               |                | 5,8 | 41,101  | +0,086       |                           |                       | 148100<br>(15100)                                | 162050<br>(16520) | 174200<br>(17760) |
| 2403-3487; 2403-3488  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 41,147  | +0,170       |                           |                       |  |                   |                   |
| 2403-3489; 2403-3491  | 65×3,5               | 18     | H7-9H                          | 63,0  | 4,430 | 58                                 |      | 57,4                               | 6,212          |     | 46,823  | +0,106       | 36-82                     | 36-100                | 169750<br>(17300)                                | 185720<br>(18930) | 199650<br>(20350) |
| 2403-3492; 2403-3493  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 46,887  | +0,210       |                           |                       |  |                   |                   |
| 2403-3494; 2403-3495  | 2403-3496; 2403-3497 |        | H7-9H                          |       |       |                                    |      |                                    |                |     | 51,143  | +0,138       |                           |                       | 176630<br>(18000)                                | 193250<br>(19700) | 207750<br>(21180) |
| 2403-3496; 2403-3497  |                      |        | H8-11H                         |       |       |                                    |      |                                    |                |     | 51,226  | +0,271       |                           |                       |  |                   |                   |

Продолжение табл. 5

Размеры, мм

| Обозначение прорезки | D × t     | z  | Сочетание полей допусков D и e | d     | e     | D <sub>a</sub> (поле допуска Н11) | K    | d <sub>p</sub> (поле допуска Н11) | d <sub>p</sub> | h   | МВ      |              | Длина протягивания        |                       | Усилие протягивания Р, Н (кгс) при переднем угле |                   |                   |
|----------------------|-----------|----|--------------------------------|-------|-------|-----------------------------------|------|-----------------------------------|----------------|-----|---------|--------------|---------------------------|-----------------------|--|-------------------|-------------------|
|                      |           |    |                                |       |       |                                   |      |                                   |                |     | Найм.   | Верхн. откл. | Сталь и алюминевые сплавы | Чугун, бронза, латунь | 20°  | 15°               | 10°               |
| 2403-3498; 2403-3499 | 70 × 3,5  | 18 | H7-9H                          | 63,0  | 7,316 | 63                                |      | 62,4                              | 6,518          | —   | 56,167  | +0,088       | 36-82                     | 36-100                | 186500<br>(19010)                                | 204050<br>(20800) | 219350<br>(22360) |
| 2403-3501; 2403-3502 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 56,220  | +0,174       |                           |                       |  |                   |                   |
| 2403-3503; 2403-3504 | 75 × 3,5  | 20 | H7-9H                          | 70,0  | 6,162 | 68                                |      | 67,4                              |                |     | 62,018  | +0,094       |                           |                       | 250350<br>(25520)                                | 273900<br>(27920) | 294450<br>(30015) |
| 2403-3505; 2403-3506 |           |    | H8-11H                         |       |       |                                   |      |                                   | 6,212          | 5,8 | 62,074  | +0,188       |                           |                       |  |                   |                   |
| 2403-3507; 2403-3508 | 80 × 3,5  | 22 | H7-9H                          | 77,0  | 5,007 | 73                                |      | 72,4                              |                |     | 66,727  | +0,107       |                           |                       | 260625<br>(26570)                                | 285150<br>(29070) | 306550<br>(31250) |
| 2403-3509; 2403-3511 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 66,791  | +0,211       |                           |                       |  |                   |                   |
| 2403-3512; 2403-3513 | 85 × 3,5  | 24 | H7-9H                          |       | 3,852 | 78                                |      | 77,4                              | 5,454          | 5,2 | 73,932  | +0,108       |                           |                       | 276625<br>(28200)                                | 302650<br>(30850) | 325350<br>(33165) |
| 2403-3514; 2403-3515 |           |    | H8-11H                         | 84,0  |       |                                   |      |                                   |                |     | 73,997  | +0,213       |                           | 36-88                 |  |                   |                   |
| 2403-3516; 2403-3517 | 90 × 3,5  | 26 | H7-9H                          |       | 6,739 | 83                                | 0,52 | 82,4                              |                | 5,8 | 77,079  | +0,089       |                           |                       | 304350<br>(31030)                                | 333000<br>(33950) | 357975<br>(36500) |
| 2403-3518; 2403-3519 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 77,132  | +0,177       |                           |                       |  |                   |                   |
| 2403-3521; 2403-3522 | 95 × 3,5  | 26 | H7-9H                          | 91,0  | 5,584 | 88                                |      | 87,4                              | 6,212          |     | 81,945  | +0,097       |                           |                       | 316250<br>(32250)                                | 346000<br>(35270) | 371950<br>(37915) |
| 2403-3523; 2403-3524 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 82,003  | +0,192       |                           |                       |  |                   |                   |
| 2403-3525; 2403-3526 | 100 × 3,5 | 28 | H7-9H                          | 98,0  | 4,430 | 93                                |      | 92,4                              |                |     | 86,631  | +0,107       |                           |                       | 334350<br>(34080)                                | 365800<br>(37290) | 393250<br>(40090) |
| 2403-3527; 2403-3528 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 86,695  | +0,212       |                           |                       |  |                   |                   |
| 2403-3529; 2403-3531 | 105 × 3,5 | 29 | H7-9H                          | 101,5 | 5,296 | 98                                |      | 97,4                              |                | —   | 91,771  | +0,109       |                           |                       | 354400<br>(36130)                                | 387750<br>(39530) | 416850<br>(42500) |
| 2403-3532; 2403-3533 |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 91,837  | +0,217       |                           |                       |  |                   |                   |
| 2403-3534            | 110 × 3,5 | 30 | H7-9H                          | 105,0 | 6,162 | 103                               |      | 102,4                             | 6,518          |     | 96,092  | +0,105       |                           |                       | 371675<br>(37885)                                | 406650<br>(41450) | 437150<br>(44560) |
| 2403-3535            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 96,156  | +0,208       |                           |                       |  |                   |                   |
| 2403-3536            | 120 × 3,5 | 34 | H7-9H                          | 119,0 | 3,852 | 113                               |      | 112,4                             |                |     | 106,542 | +0,119       |                           |                       | 345100<br>(35180)                                | 377580<br>(38490) | 405900<br>(41380) |
| 2403-3537            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 106,614 | +0,237       |                           |                       |  |                   |                   |
| 2403-3538            | 130 × 3,5 | 36 | H7-9H                          | 126,0 | 5,584 | 123                               |      | 122,4                             | 6,212          | 5,8 | 116,997 | +0,105       |                           |                       | 387250<br>(39475)                                | 423700<br>(43190) | 455475<br>(46430) |
| 2403-3539            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 117,061 | +0,208       |                           |                       |  |                   |                   |
| 2403-3541            | 60 × 4    | 13 | H7-9H                          | 52,0  | 8,362 | 52                                |      | 51,4                              |                | —   | 45,144  | +0,034       |                           |                       | 163875<br>(16710)                                | 179300<br>(18280) | 192750<br>(19650) |
| 2403-3542            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 45,195  | +0,165       |                           | 36-82                 |  |                   |                   |
| 2403-3543            | 65 × 4    | 15 | H7-9H                          | 60,0  | 6,630 | 57                                | 0,60 | 55,4                              | 7,000          |     | 50,026  | +0,102       |                           |                       | 174350<br>(17780)                                | 190750<br>(19450) | 205050<br>(20910) |
| 2403-3544            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 50,087  | +0,202       |                           |                       |  |                   |                   |
| 2403-3545            | 70 × 4    | 16 | H7-9H                          | 64,0  | 7,207 | 62                                |      | 61,4                              |                | 6,6 | 55,478  | +0,093       |                           |                       | 187850<br>(19150)                                | 205520<br>(20950) | 220950<br>(22520) |
| 2403-3546            |           |    | H8-11H                         |       |       |                                   |      |                                   |                |     | 55,534  | +0,186       |                           |                       |  |                   |                   |

Продолжение табл. 5

Размеры, мм

| Обозначение протяжки | D×t   | z  | Сочетание<br>полей<br>допусков<br>D и e | d     | e     | D <sub>a</sub><br>(поле<br>допу-<br>ска<br>H11) | K    | d <sub>o</sub><br>(поле<br>допу-<br>ска<br>H11) | d <sub>p</sub> | h   | МВ      |                 | Длина протягивания                    |                             | Усилие протягивания Р <sub>н</sub><br>(кгс) при переднем угле |                   |                   |
|----------------------|-------|----|---|-------|-------|---|------|---|----------------|-----|---------|-----------------|---------------------------------------|-----------------------------|---|-------------------|-------------------|
|                      |       |    |   |       |       |   |      |   |                |     | Наим.   | Верхн.<br>откл. | Сталь<br>и алюми-<br>ниевые<br>сплавы | Чугун,<br>бронза,<br>латунь | 20°   | 15°               | 10°               |
| 2403-3547            | 75×4  | 17 | H7-9H<br>H8-11H                         | 68,0  | 7,784 | 67  |      | 66,4  |                | 6,6 | 60,241  | +0,088          |                                       |                             | 243450<br>(24815)   | 266340<br>(27150) | 286300<br>(29190) |
| 2403-3548            |       |    |   |       |       |   |      |   |                |     | 60,294  | +0,175          |                                       |                             |   |                   |                   |
| 2403-3549            | 80×4  | 18 | H7-9H<br>H8-11H                         | 72,0  | 8,362 | 72  |      | 71,4  |                |     | 65,530  | +0,084          |                                       |                             | 257850<br>(26290)   | 282100<br>(28760) | 303250<br>(30920) |
| 2403-3551            |       |    |   |       |       |   |      |   |                |     | 65,580  | +0,169          |                                       |                             |   |                   |                   |
| 2403-3552            | 85×4  | 20 | H7-9H<br>H8-11H                         | 80,0  | 6,630 | 77  |      | 76,4  |                | 6,6 | 70,400  | +0,097          |                                       |                             | 280875<br>(28635)   | 307300<br>(31330) | 330350<br>(33680) |
| 2403-3553            |       |    |   |       |       |   |      |   |                |     | 70,458  | +0,193          |                                       |                             |   |                   |                   |
| 2403-3554            | 90×4  | 21 | H7-9H<br>H8-11H                         | 84,0  | 7,207 | 82  |      | 81,4  |                |     | 75,262  | +0,092          |                                       |                             | 296850<br>(30260)   | 324800<br>(33110) | 349150<br>(35600) |
| 2403-3555            |       |    |   |       |       |   |      |   |                |     | 75,317  | +0,182          |                                       |                             |   |                   |                   |
| 2403-3556            | 95×4  | 22 | H7-9H<br>H8-11H                         | 88,0  | 7,784 | 87  | 0,60 | 86,4  | 7,000          |     | 80,530  | +0,088          |                                       |                             | 312250<br>(31835)   | 341650<br>(34830) | 367275<br>(37440) |
| 2403-3557            |       |    |   |       |       |   |      |   |                |     | 80,583  | +0,175          |                                       |                             |   |                   |                   |
| 2403-3558            | 100×4 | 24 | H7-9H<br>H8-11H                         | 96,0  | 6,052 | 92  |      | 91,4  |                |     | 85,302  | +0,099          |                                       |                             | 332975<br>(33945)   | 364300<br>(37140) | 391625<br>(39925) |
| 2403-3559            |       |    |   |       |       |   |      |   |                |     | 85,362  | +0,198          |                                       |                             |   |                   |                   |
| 2403-3561            | 105×4 | 25 | H7-9H<br>H8-11H                         | 100,0 | 6,630 | 97  |      | 96,4  |                |     | 90,239  | +0,094          |                                       |                             | 349375<br>(35620)   | 382250<br>(38970) | 410925<br>(41890) |
| 2403-3562            |       |    |   |       |       |   |      |   |                |     | 90,295  | +0,188          |                                       |                             |   |                   |                   |
| 2403-3563            | 110×4 | 26 | H7-9H<br>H8-11H                         | 104,0 | 7,207 | 102   |      | 101,4   |                | 6,6 | 95,508  | +0,102          |                                       |                             | 366050<br>(37320)   | 400500<br>(40830) | 430550<br>(43890) |
| 2403-3564            |       |    |   |       |       |   |      |   |                |     | 95,570  | +0,202          |                                       |                             |   |                   |                   |
| 2403-3565            | 120×4 | 28 | H7-9H<br>H8-11H                         | 112,0 | 8,362 | 112   |      | 111,4   |                |     | 105,538 | +0,096          |                                       |                             | 351025<br>(35780)   | 384050<br>(39150) | 412850<br>(42090) |
| 2403-3566            |       |    |   |       |       |   |      |   |                |     | 105,596 | +0,191          |                                       |                             |   |                   |                   |
| 2403-3567            | 130×4 | 31 | H7-9H<br>H8-11H                         | 124,0 | 7,207 | 122   |      | 121,4   |                |     | 115,357 | +0,100          |                                       |                             | 375750<br>(38305)   | 411100<br>(41910) | 441950<br>(45060) |
| 2403-3568            |       |    |   |       |       |   |      |   |                |     | 115,418 | +0,200          |                                       |                             |   |                   |                   |

4. Наибольшие расчетные усилия протягивания  $P$  указаны для обработки деталей из стали I—V групп обрабатываемости по ГОСТ 20365.
- Для определения усилия протягивания для закаленных сталей и других материалов следует величину  $P$  умножить на коэффициент  $K$ , указанный в ГОСТ Р 50035.
5. Центровые отверстия формы В, Т или R — по ГОСТ 14034.
6. Хвостовики типа 2 исполнения 1 — по ГОСТ 4044.
- Изготовление протяжек с хвостовиком типа 2 исполнений 2, 3 или 4 — по взаимной договоренности потребителя с изготовителем.
- Продольные лыски на хвостовиках исполнений 2 и 4 должны располагаться перпендикулярно оси впадины профиля протяжки.
- Допуск перпендикулярности на 10 мм ширины лыски не должен превышать 0,015 мм.
- Длину лыски на заднем хвостовике указывает потребитель при заказе.
7. Допуск симметричности боковых поверхностей фасочных зубьев относительно боковых поверхностей шлицевых зубьев не должен превышать Т 0,1 мм.
8. Форма и размеры профиля зубьев протяжек, группы заточки, форма передней грани зубьев протяжек — по ГОСТ 20365.
9. Задний угол зубьев протяжек должен быть:
- |                       |    |
|-----------------------|----|
| черновых и переходных | 3° |
| чистовых              | 2° |
| калибрующих           | 1° |
10. Пределы длины протягивания заготовок из чугуна, бронзы и латуни — справочные. Для протягивания заготовок из этих материалов с длиной протягивания, превышающей верхний предел длины протягивания по стали, следует применять наивернейший хвостовик увеличенной длины.
11. Технические требования — по ГОСТ 28442.

### ИНФОРМАЦИОННЫЕ ДАННЫЕ

#### 1. РАЗРАБОТАН И ВНЕСЕН Техническим комитетом по стандартизации «Инструмент» ТК—95

#### РАЗРАБОТЧИКИ:

А. С. Симкин, А. И. Либерман, И. Н. Зазулина, Г. Н. Осипова, А. И. Прохорова

#### 2. УТВЕРЖДЕН И ВВЕДЕН В ДЕЙСТВИЕ Постановлением Госстандарта России от 22.07.92 № 750

3. Срок проверки 1998 г., периодичность проверки 5 лет

4. Введен впервые

#### 5. ССЫЛОЧНЫЕ НОРМАТИВНО-ТЕХНИЧЕСКИЕ ДОКУМЕНТЫ

| Обозначение НТД,<br>на который дана ссылка | Номер пункта  |
|--|---------------|
| ГОСТ 2475—88                               | 1             |
| ГОСТ 4044—70                               | 6             |
| ГОСТ 6033—80                               | Вводная часть |
| ГОСТ 14034—74                              | 5             |
| ГОСТ 20365—74                              | 4,8           |
| ГОСТ 28048—89                              | 1             |
| ГОСТ 28442—90                              | 11            |
| ГОСТ Р 50035—92                            | 4             |