

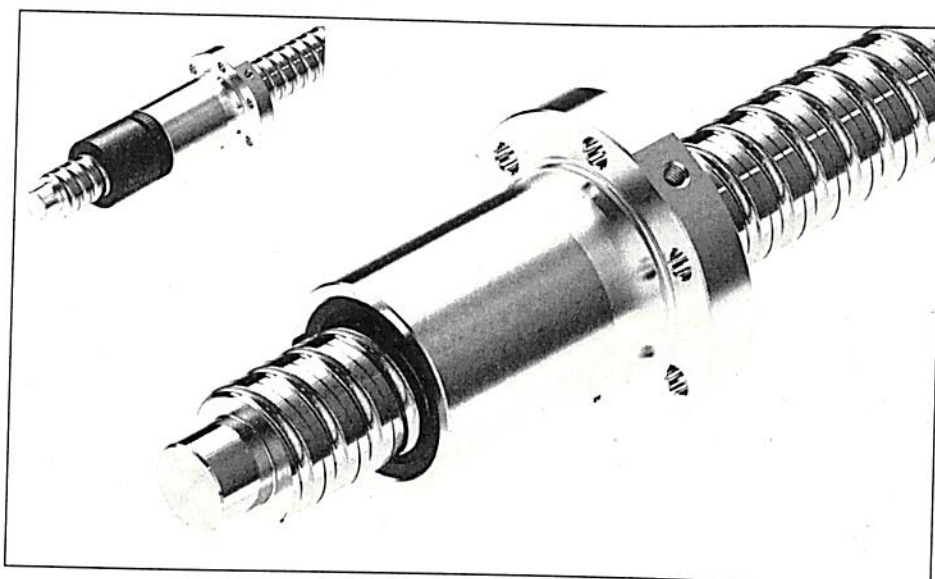
## Flanged Single Nut FEM-E-S

### Rexroth mounting dimensions

With seals  
With left-hand thread in some versions  
With backlash or reduced backlash  
Preload 2%, 3% or 5%  
Tolerance grade: T3<sup>2)</sup>, T5, T7, T9

**Note:** The Front Lube Unit is only available for right-hand screw threads.

**⚠** When setting up applications, do not allow components to collide with the Front Lube Unit.



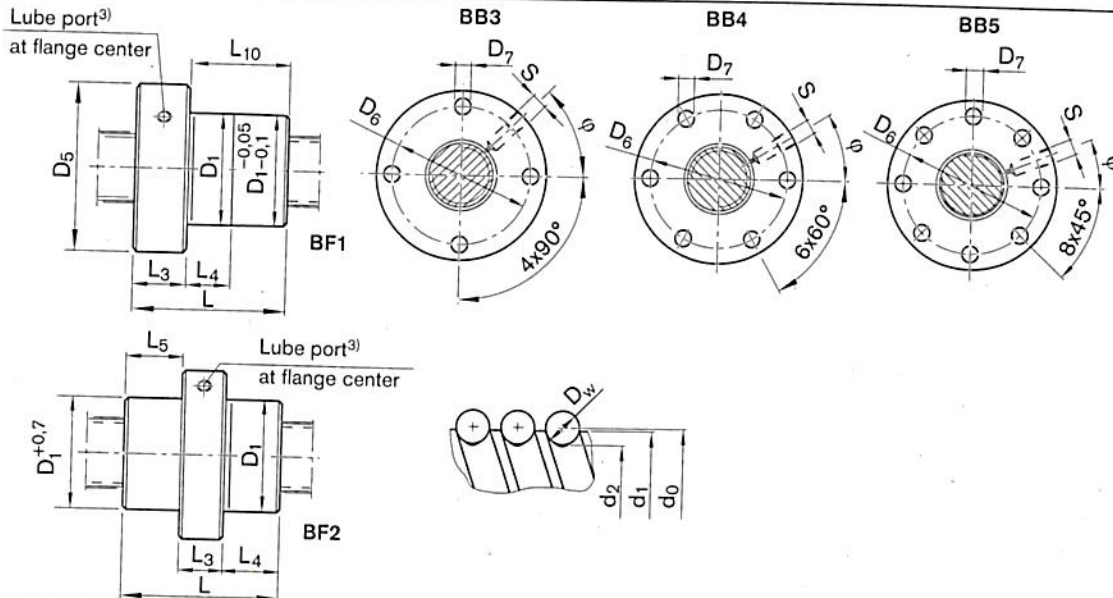
Ordering code:

|      |             |             |    |   |   |    |   |        |        |      |   |   |
|------|-------------|-------------|----|---|---|----|---|--------|--------|------|---|---|
| BASA | 20 x 5R x 3 | FEM-E-S - 4 | 00 | 1 | 2 | T7 | R | 82Z120 | 41Z120 | 1250 | 0 | 1 |
|------|-------------|-------------|----|---|---|----|---|--------|--------|------|---|---|

$d_0$  = nominal diameter  
 $P$  = lead (R = right-hand, L = left-hand)  
 $D_w$  = ball diameter  
 $i$  = number of ball track turns

| Category                     | Size<br>$d_0 \times P \times D_w - i$ | Part number  | Load ratings  |                             | Linear speed <sup>1)</sup><br>$v_{max}$<br>(m/min) |
|------------------------------|---------------------------------------|--------------|---------------|-----------------------------|----------------------------------------------------|
|                              |                                       |              | dyn. C<br>(N) | stat. C <sub>0</sub><br>(N) |                                                    |
| A                            | 16 x 5R x 3 - 4                       | R1512 010 23 | 12 300        | 16 100                      | 30                                                 |
| A                            | 16 x 10R x 3 - 3                      | R1512 040 13 | 9 600         | 12 300                      | 60                                                 |
| A                            | 16 x 16R x 3 - 2                      | R1512 060 13 | 6 300         | 7 600                       | 96                                                 |
| A                            | 20 x 5R x 3 - 4                       | R1512 110 13 | 14 300        | 21 500                      | 30                                                 |
| A                            | 20 x 10R x 3 - 4                      | R1512 140 13 | 14 100        | 21 300                      | 60                                                 |
| A                            | 20 x 20R x 3.5 - 2                    | R1512 170 13 | 9 100         | 12 100                      | 120                                                |
| A                            | 25 x 5R x 3 - 4                       | R1512 210 13 | 15 900        | 27 200                      | 30                                                 |
| A                            | 25 x 10R x 3 - 4                      | R1512 240 13 | 15 700        | 27 000                      | 60                                                 |
| A                            | 25 x 25R x 3.5 - 2                    | R1512 280 13 | 10 100        | 15 100                      | 150                                                |
| A                            | 32 x 5R x 3.5 - 4                     | R1512 310 13 | 21 600        | 40 000                      | 23                                                 |
| A                            | 32 x 10R x 3.969 - 5                  | R1512 340 13 | 31 700        | 58 300                      | 47                                                 |
| A                            | 32 x 20R x 3.969 - 2                  | R1512 370 13 | 13 500        | 21 800                      | 94                                                 |
| A                            | 32 x 32R x 3.969 - 2                  | R1512 390 13 | 13 400        | 22 000                      | 150                                                |
| A                            | 40 x 5R x 3.5 - 5                     | R1512 410 13 | 29 100        | 64 100                      | 19                                                 |
| A                            | 40 x 10R x 6 - 4                      | R1512 440 13 | 50 000        | 86 400                      | 38                                                 |
| A                            | 40 x 10R x 6 - 6                      | R1512 440 23 | 72 100        | 132 200                     | 38                                                 |
| A                            | 40 x 20R x 6 - 3                      | R1512 470 13 | 37 900        | 62 800                      | 75                                                 |
| A                            | 40 x 40R x 6 - 2                      | R1512 490 13 | 25 500        | 40 300                      | 150                                                |
| B                            | 50 x 5R x 3.5 - 5                     | R1512 510 13 | 32 000        | 81 300                      | 15                                                 |
| B                            | 50 x 10R x 6 - 6                      | R1512 540 13 | 79 700        | 166 500                     | 30                                                 |
| C                            | 50 x 16R x 6 - 6                      | R1512 560 13 | 79 400        | 166 000                     | 48                                                 |
| B                            | 50 x 20R x 6.5 - 3                    | R1512 570 13 | 47 900        | 87 900                      | 60                                                 |
| B                            | 50 x 40R x 6.5 - 2                    | R1512 590 13 | 32 100        | 55 800                      | 120                                                |
| B                            | 63 x 10R x 6 - 6                      | R1512 640 13 | 88 800        | 214 300                     | 24                                                 |
| B                            | 63 x 20R x 6.5 - 3                    | R1512 670 13 | 53 200        | 112 100                     | 48                                                 |
| B                            | 63 x 40R x 6.5 - 2                    | R1512 690 13 | 36 900        | 74 300                      | 95                                                 |
| C                            | 80 x 10R x 6.5 - 6                    | R1512 740 13 | 108 400       | 291 700                     | 19                                                 |
| C                            | 80 x 20R x 12.7 - 6                   | R1512 770 23 | 262 700       | 534 200                     | 30                                                 |
| Versions with left-hand lead |                                       |              |               |                             |                                                    |
| B                            | 16 x 5L x 3 - 4                       | R1552 010 03 | 12 300        | 16 100                      | 30                                                 |
| B                            | 20 x 5L x 3 - 4                       | R1552 110 13 | 14 300        | 21 500                      | 30                                                 |
| B                            | 25 x 5L x 3 - 4                       | R1552 210 13 | 15 900        | 27 200                      | 30                                                 |
| B                            | 32 x 5L x 3.5 - 4                     | R1552 310 03 | 21 600        | 40 000                      | 23                                                 |
| B                            | 40 x 5L x 3.5 - 5                     | R1552 410 03 | 29 100        | 64 100                      | 19                                                 |
| B                            | 40 x 10L x 6 - 4                      | R1552 440 03 | 50 000        | 86 400                      | 38                                                 |

1) See "Characteristic speed  $d_0 \cdot n$ " on page 141 and "Critical speed  $n_{cr}$ " on page 178  
2) Tolerance grade T3 for sizes shown in table on page 12



3) Lube port machining: flat surface  $L_3 \leq 15$  mm, countersink  $L_3 > 15$  mm;

| Size                          | (mm)  |       |             |       |              |       |       |      |     |       |       |       |          |          |                  |           | Weight |  |
|-------------------------------|-------|-------|-------------|-------|--------------|-------|-------|------|-----|-------|-------|-------|----------|----------|------------------|-----------|--------|--|
| $d_0 \times P \times D_w - i$ | $d_1$ | $d_2$ | $D_1$<br>g6 | $D_5$ | Hole pattern | $D_6$ | $D_7$ | Type | L   | $L_3$ | $L_4$ | $L_5$ | $L_{10}$ | $S^{3)}$ | $\varphi$<br>(°) | m<br>(kg) |        |  |
| 16 x 5R x 3 - 4               | 15.0  | 12.9  | 28          | 53    | BB3          | 40    | 6.6   | BF1  | 38  | 12    | 10.0  | -     | 26       | M6       | 315.0            | 0.24      |        |  |
| 16 x 10R x 3 - 3              | 15.0  | 12.9  | 28          | 53    | BB3          | 40    | 6.6   | BF1  | 45  | 12    | 16.0  | -     | 33       | M6       | 315.0            | 0.25      |        |  |
| 16 x 16R x 3 - 2              | 15.0  | 12.9  | 33          | 58    | BB4          | 45    | 6.6   | BF2  | 45  | 15    | 15.0  | 15.0  | -        | M6       | 30.0             | 0.39      |        |  |
| 20 x 5R x 3 - 4               | 19.0  | 16.9  | 33          | 58    | BB4          | 45    | 6.6   | BF1  | 40  | 12    | 10.0  | -     | 28       | M6       | 30.0             | 0.28      |        |  |
| 20 x 10R x 3 - 4              | 19.0  | 16.9  | 33          | 58    | BB4          | 45    | 6.6   | BF1  | 60  | 12    | 16.0  | -     | 48       | M6       | 30.0             | 0.36      |        |  |
| 20 x 20R x 3.5 - 2            | 19.0  | 16.7  | 38          | 63    | BB4          | 50    | 6.6   | BF2  | 57  | 20    | 18.5  | 18.5  | -        | M6       | 30.0             | 0.60      |        |  |
| 25 x 5R x 3 - 4               | 24.0  | 21.9  | 38          | 63    | BB4          | 50    | 6.6   | BF1  | 45  | 12    | 10.0  | -     | 33       | M6       | 30.0             | 0.35      |        |  |
| 25 x 10R x 3 - 4              | 24.0  | 21.9  | 38          | 63    | BB4          | 50    | 6.6   | BF1  | 64  | 12    | 16.0  | -     | 52       | M6       | 30.0             | 0.44      |        |  |
| 25 x 25R x 3.5 - 2            | 24.0  | 21.4  | 48          | 73    | BB4          | 60    | 6.6   | BF2  | 70  | 25    | 22.5  | 22.5  | -        | M6       | 18.0             | 1.09      |        |  |
| 32 x 5R x 3.5 - 4             | 31.0  | 28.4  | 48          | 73    | BB4          | 60    | 6.6   | BF1  | 48  | 13    | 10.0  | -     | 35       | M6       | 30.0             | 0.54      |        |  |
| 32 x 10R x 3.969 - 5          | 31.0  | 27.9  | 48          | 73    | BB4          | 60    | 6.6   | BF1  | 77  | 13    | 16.0  | -     | 64       | M6       | 30.0             | 0.72      |        |  |
| 32 x 20R x 3.969 - 2          | 31.0  | 27.9  | 56          | 80    | BB4          | 68    | 6.6   | BF1  | 64  | 15    | 25.0  | -     | 49       | M6       | 30.0             | 1.02      |        |  |
| 32 x 32R x 3.969 - 2          | 31.0  | 27.9  | 56          | 80    | BB4          | 68    | 6.6   | BF2  | 88  | 20    | 34.0  | 34.0  | -        | M6       | 30.0             | 1.40      |        |  |
| 40 x 5R x 3.5 - 5             | 39.0  | 36.4  | 56          | 80    | BB4          | 68    | 6.6   | BF1  | 54  | 15    | 10.0  | -     | 39       | M8x1     | 30.0             | 0.71      |        |  |
| 40 x 10R x 6 - 4              | 38.0  | 33.8  | 63          | 95    | BB4          | 78    | 9.0   | BF1  | 70  | 15    | 16.0  | -     | 55       | M8x1     | 30.0             | 1.29      |        |  |
| 40 x 10R x 6 - 6              | 38.0  | 33.8  | 63          | 95    | BB4          | 78    | 9.0   | BF1  | 90  | 15    | 16.0  | -     | 75       | M8x1     | 30.0             | 1.59      |        |  |
| 40 x 20R x 6 - 3              | 38.0  | 33.8  | 63          | 95    | BB4          | 78    | 9.0   | BF1  | 88  | 15    | 25.0  | -     | 73       | M8x1     | 30.0             | 1.54      |        |  |
| 40 x 40R x 6 - 2              | 38.0  | 33.8  | 72          | 110   | BB4          | 90    | 11.0  | BF2  | 102 | 40    | 31.0  | 31.0  | -        | M8x1     | 19.0             | 3.59      |        |  |
| 50 x 5R x 3.5 - 5             | 49.0  | 46.4  | 68          | 98    | BB4          | 82    | 9.0   | BF1  | 54  | 15    | 10.0  | -     | 39       | M8x1     | 30.0             | 1.02      |        |  |
| 50 x 10R x 6 - 6              | 48.0  | 43.8  | 72          | 110   | BB4          | 90    | 11.0  | BF1  | 90  | 18    | 16.0  | -     | 72       | M8x1     | 30.0             | 2.02      |        |  |
| 50 x 16R x 6 - 6              | 48.0  | 43.8  | 72          | 110   | BB4          | 90    | 11.0  | BF1  | 128 | 18    | 25.0  | -     | 110      | M8x1     | 30.0             | 2.58      |        |  |
| 50 x 20R x 6.5 - 3            | 48.0  | 43.4  | 85          | 125   | BB4          | 105   | 11.0  | BF1  | 92  | 22    | 25.0  | -     | 70       | M8x1     | 30.0             | 3.40      |        |  |
| 50 x 40R x 6.5 - 2            | 48.0  | 43.4  | 85          | 125   | BB4          | 105   | 11.0  | BF1  | 109 | 22    | 45.0  | -     | 87       | M8x1     | 30.0             | 3.87      |        |  |
| 63 x 10R x 6 - 6              | 61.0  | 56.8  | 85          | 125   | BB4          | 105   | 11.0  | BF1  | 90  | 22    | 16.0  | -     | 68       | M8x1     | 30.0             | 2.62      |        |  |
| 63 x 20R x 6.5 - 3            | 61.0  | 56.4  | 95          | 140   | BB4          | 118   | 14.0  | BF1  | 92  | 22    | 25.0  | -     | 70       | M8x1     | 30.0             | 3.71      |        |  |
| 63 x 40R x 6.5 - 2            | 61.0  | 56.4  | 95          | 140   | BB4          | 118   | 14.0  | BF1  | 109 | 22    | 45.0  | -     | 87       | M8x1     | 30.0             | 4.21      |        |  |
| 80 x 10R x 6.5 - 6            | 78.0  | 73.3  | 105         | 150   | BB4          | 125   | 14.0  | BF1  | 95  | 22    | 16.0  | -     | 73       | M8x1     | 30.0             | 3.78      |        |  |
| 80 x 20R x 12.7 - 6           | 76.0  | 67.0  | 125         | 180   | BB5          | 152   | 18.0  | BF1  | 170 | 25    | 25.0  | -     | 145      | M8x1     | 22.5             | 11.00     |        |  |
| Versions with left-hand lead  |       |       |             |       |              |       |       |      |     |       |       |       |          |          |                  |           |        |  |
| 16 x 5L x 3 - 4               | 15.0  | 12.9  | 28          | 53    | BB3          | 40    | 6.6   | BF1  | 38  | 12    | 10.0  | -     | 26       | M6       | 45               | 0.24      |        |  |
| 20 x 5L x 3 - 4               | 19.0  | 16.9  | 33          | 58    | BB4          | 45    | 6.6   | BF1  | 40  | 12    | 10.0  | -     | 28       | M6       | 30               | 0.28      |        |  |
| 25 x 5L x 3 - 4               | 24.0  | 21.9  | 38          | 63    | BB4          | 50    | 6.6   | BF1  | 45  | 12    | 10.0  | -     | 33       | M6       | 30               | 0.35      |        |  |
| 32 x 5L x 3.5 - 4             | 31.0  | 28.4  | 48          | 73    | BB4          | 60    | 6.6   | BF1  | 48  | 13    | 10.0  | -     | 35       | M6       | 30               | 0.54      |        |  |
| 40 x 5L x 3.5 - 5             | 39.0  | 36.4  | 56          | 80    | BB4          | 68    | 6.6   | BF1  | 54  | 15    | 10.0  | -     | 39       | M8x1     | 30               | 0.71      |        |  |
| 40 x 10L x 6 - 4              | 38.0  | 33.8  | 63          | 95    | BB4          | 78    | 9.0   | BF1  | 70  | 15    | 16.0  | -     | 55       | M8x1     | 30               | 1.29      |        |  |