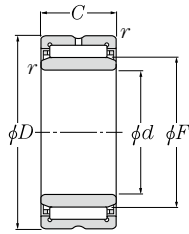
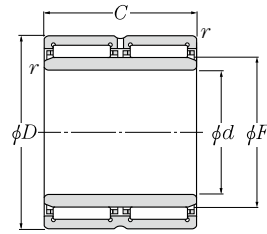


Machined-ring needle roller bearings with an inner ring

NA49 type  
NA59 type  
NA69 type  
NK+IR type



NA49···R type  
NA59 type  
NA69···R type ( $\phi d \leq 30\text{mm}$ )  
NK···R+IR type

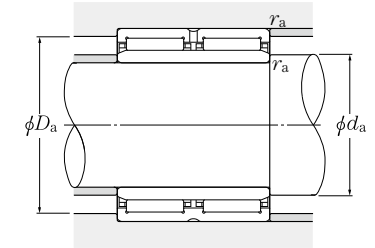
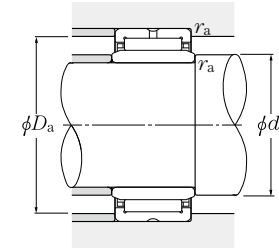


NA69···R type  
( $\phi d \geq 32\text{mm}$ )

d 32 ~ 55mm

| Boundary dimensions |    |    |                                  |    |                 | Basic load rating |         | Fatigue load limit | Allowable speed    |                 | Number              |
|---------------------|----|----|----------------------------------|----|-----------------|-------------------|---------|--------------------|--------------------|-----------------|---------------------|
| mm                  |    |    |                                  |    |                 | dynamic           | static  |                    | min <sup>-1</sup>  |                 |                     |
| d                   | D  | C  | r <sub>s min</sub> <sup>1)</sup> | F  | s <sup>2)</sup> | C <sub>r</sub>    | N       | N                  | Grease lubrication | Oil lubrication |                     |
| 32                  | 52 | 27 | 0.6                              | 40 | 0.8             | 38 000            | 61 000  | 7 450              | 6 500              | 10 000          | NA59/32             |
|                     | 52 | 36 | 0.6                              | 40 | 0.5             | 47 500            | 82 000  | 10 000             | 6 500              | 10 000          | NA69/32R            |
| 35                  | 50 | 20 | 0.3                              | 40 | 0.5             | 26 400            | 47 000  | 5 750              | 6 500              | 10 000          | NK40/20R+IR35×40×20 |
|                     | 50 | 30 | 0.3                              | 40 | 1               | 38 500            | 76 000  | 9 250              | 6 500              | 10 000          | NK40/30R+IR35×40×30 |
|                     | 55 | 20 | 0.6                              | 42 | 0.8             | 32 000            | 50 000  | 6 100              | 6 500              | 9 500           | NA4907R             |
|                     | 55 | 27 | 0.6                              | 42 | 0.8             | 39 000            | 64 500  | 7 850              | 6 500              | 9 500           | NA5907              |
| 38                  | 55 | 36 | 0.6                              | 42 | 0.5             | 49 000            | 86 500  | 10 500             | 6 500              | 9 500           | NA6907R             |
|                     | 53 | 20 | 0.3                              | 43 | 0.5             | 27 500            | 51 000  | 6 200              | 6 500              | 9 500           | NK43/20R+IR38×43×20 |
| 40                  | 53 | 30 | 0.3                              | 43 | 1               | 40 000            | 82 000  | 10 000             | 6 500              | 9 500           | NK43/30R+IR38×43×30 |
|                     | 55 | 20 | 0.3                              | 45 | 0.5             | 28 000            | 52 500  | 6 450              | 6 000              | 9 000           | NK45/20R+IR40×45×20 |
|                     | 55 | 30 | 0.3                              | 45 | 1               | 41 000            | 85 500  | 10 400             | 6 000              | 9 000           | NK45/30R+IR40×45×30 |
|                     | 62 | 22 | 0.6                              | 48 | 1               | 43 500            | 66 500  | 8 150              | 5 500              | 8 500           | NA4908R             |
| 42                  | 62 | 30 | 0.6                              | 48 | 1               | 53 000            | 92 500  | 11 300             | 5 500              | 8 500           | NA5908              |
|                     | 62 | 40 | 0.6                              | 48 | 0.5             | 67 000            | 116 000 | 14 100             | 5 500              | 8 500           | NA6908R             |
| 45                  | 57 | 20 | 0.3                              | 47 | 0.5             | 28 800            | 55 500  | 6 800              | 5 500              | 8 500           | NK47/20R+IR42×47×20 |
|                     | 57 | 30 | 0.3                              | 47 | 1               | 42 500            | 91 500  | 11 200             | 5 500              | 8 500           | NK47/30R+IR42×47×30 |
| 50                  | 62 | 25 | 0.6                              | 50 | 1.5             | 38 500            | 74 500  | 9 050              | 5 500              | 8 000           | NK50/25R+IR45×50×25 |
|                     | 62 | 35 | 0.6                              | 50 | 2               | 51 000            | 106 000 | 12 900             | 5 500              | 8 000           | NK50/35R+IR45×50×35 |
|                     | 68 | 22 | 0.6                              | 52 | 1               | 46 000            | 73 000  | 8 950              | 5 000              | 7 500           | NA4909R             |
|                     | 68 | 30 | 0.6                              | 52 | 1               | 56 000            | 101 000 | 12 300             | 5 000              | 7 500           | NA5909              |
| 55                  | 68 | 40 | 0.6                              | 52 | 0.5             | 70 500            | 127 000 | 15 500             | 5 000              | 7 500           | NA6909R             |
|                     | 68 | 25 | 0.6                              | 55 | 1.5             | 41 000            | 82 000  | 10 000             | 5 000              | 7 500           | NK55/25R+IR50×55×25 |
|                     | 68 | 35 | 0.6                              | 55 | 2               | 54 000            | 118 000 | 14 300             | 5 000              | 7 500           | NK55/35R+IR50×55×35 |
|                     | 72 | 22 | 0.6                              | 58 | 1               | 48 000            | 80 000  | 9 750              | 4 700              | 7 000           | NA4910R             |
| 55                  | 72 | 30 | 0.6                              | 58 | 1               | 58 000            | 110 000 | 13 400             | 4 700              | 7 000           | NA5910              |
|                     | 72 | 40 | 0.6                              | 58 | 0.5             | 74 000            | 139 000 | 17 000             | 4 700              | 7 000           | NA6910R             |
|                     | 72 | 25 | 0.6                              | 60 | 1.5             | 41 000            | 85 000  | 10 400             | 4 300              | 6 500           | NK60/25R+IR55×60×25 |
| 55                  | 72 | 35 | 0.6                              | 60 | 2               | 57 000            | 130 000 | 15 800             | 4 300              | 6 500           | NK60/35R+IR55×60×35 |
|                     | 80 | 25 | 1                                | 63 | 1.5             | 58 500            | 99 500  | 12 100             | 4 300              | 6 500           | NA4911R             |

1) Smallest allowable dimension for chamfer dimension r.  
2) Allowable axial movement amount of the inner ring with respect to the outer ring.  
3) Largest allowable dimension for fillet radius r<sub>a</sub> of housing and shaft.



| Installation-related dimensions |                |                               | Mass      |
|---------------------------------|----------------|-------------------------------|-----------|
| mm                              |                |                               |           |
| d <sub>a</sub>                  | D <sub>a</sub> | r <sub>as</sub> <sup>3)</sup> | kg        |
| Min.                            | Max.           | Max.                          | (approx.) |
| 36                              | 48             | 0.6                           | 0.241     |
| 36                              | 48             | 0.6                           | 0.286     |
| 37                              | 48             | 0.3                           | 0.130     |
| 37                              | 48             | 0.3                           | 0.193     |
| 39                              | 51             | 0.6                           | 0.171     |
| 39                              | 51             | 0.6                           | 0.256     |
| 39                              | 51             | 0.6                           | 0.310     |
| 40                              | 51             | 0.3                           | 0.134     |
| 40                              | 51             | 0.3                           | 0.207     |
| 42                              | 53             | 0.3                           | 0.143     |
| 42                              | 53             | 0.3                           | 0.216     |
| 44                              | 58             | 0.6                           | 0.232     |
| 44                              | 58             | 0.6                           | 0.348     |
| 44                              | 58             | 0.6                           | 0.426     |
| 44                              | 55             | 0.3                           | 0.148     |
| 44                              | 55             | 0.3                           | 0.222     |
| 48                              | 58             | 0.6                           | 0.229     |
| 48                              | 58             | 0.6                           | 0.322     |
| 49                              | 64             | 0.6                           | 0.270     |
| 49                              | 64             | 0.6                           | 0.396     |
| 49                              | 64             | 0.6                           | 0.437     |
| 53                              | 64             | 0.6                           | 0.271     |
| 53                              | 64             | 0.6                           | 0.379     |
| 54                              | 68             | 0.6                           | 0.276     |
| 54                              | 68             | 0.6                           | 0.498     |
| 54                              | 68             | 0.6                           | 0.529     |
| 58                              | 68             | 0.6                           | 0.271     |
| 58                              | 68             | 0.6                           | 0.379     |
| 60                              | 75             | 1                             | 0.396     |

Note: The number of inner rings (IR) is composed of the IR inner diameter dimension × outer diameter dimension × width dimension.