

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



**Pacific International
Bearing, Inc.**
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CYLINDRICAL ROLLER BEARINGS



Super precision cylindrical roller bearings are designated as Series N10, NN30, N19 and NNU49.

NN30 double row bearings are typically used in combination with double direction angular contact thrust bearings in applications where radial stiffness, high radial capacity and high precision support is required. They represent the ideal solution for a floating bearing location, since they are internally adjusting (floating).

For axial loads, double direction angular contact thrust bearings, Series 2344 are used in combination with Series NN30 bearings.

A single row cylindrical roller bearing (Series N10, N19) would be most commonly used as the “floating” bearing

in combination with a set of preloaded angular contact spindle bearings.

Double row cylindrical roller bearings have a high load carrying capacity because of the high number of cylindrical rollers in each row, and the exclusive optimized roller crown profile which results in the best load distribution.

The cage is of solid machined brass construction, making this bearing suitable for rugged applications.

Single row cylindrical roller bearings also have a solid brass cage and are

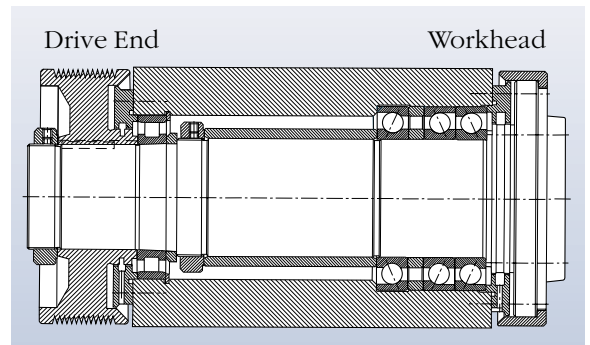


Illustration shows a CNC spindle with a single row cylindrical roller bearing used in the drive end. A triplex set of angular contact ball bearings is used in the workhead end of the spindle. The combination provides high speed and precision machining capabilities with high radial load carrying capacity.

specially designed for the demands of high speed spindles. They are available with both steel and ceramic rollers.

BARDEN/FAG BEARING NOMENCLATURE SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

N 10 20 K .M1 .SP
HCN 10 20 K .M1 .SP
N 19 20 K .M1 .SP

Bearing type

N Cylindrical roller bearing, single row
Lips on inner ring, outer ring lipless
HCN Hybrid cylindrical roller bearing, single row
Ceramic rollers, lips on inner ring,
Outer ring lipless

Dimension Series

19 Light series
10 Medium series

Bore Reference Number

06 6 · 5 = 30 mm
08 8 · 5 = 40 mm

Accuracy

SP Special Precision
UP Ultra Precision

Cage

M1 Brass cage, roller-centered

Tapered Bore

K Tapered bore (taper 1:12)

NNU 49 20 SK .M .SP
NN 30 20 ASK .M .SP
NN 30 20 ASK .M .SP

Bearing Type

NNU Cylindrical roller bearing, double row
Lips on outer ring, inner ring lipless
NN Cylindrical roller bearing, double row
Lips on inner ring, outer ring lipless

Dimension Series

49 Light series
30 Medium series

Bore Reference Number

06 6 · 5 = 30 mm
08 8 · 5 = 40 mm

Accuracy

SP Special Precision
UP Ultra Precision

Cage

M Brass cage, roller-centered

Tapered Bore

K Tapered bore (taper 1:12)

External Form

S Lubricating groove and holes
on the outer ring
AS Lubricating groove and holes
on the outer ring (Series NN30)

The bearing bore is tapered (taper = 1: 12). The desired radial preload or radial clearance can be set by an axial adjustment on the conical shaft. Generally, the bearings should be mounted with zero clearance to a very slight preload.

Cylindricals generally have lower limiting speed than ball bearings. They are the limiting factor when used in conjunction with spindle bearings on the work end of a spindle.

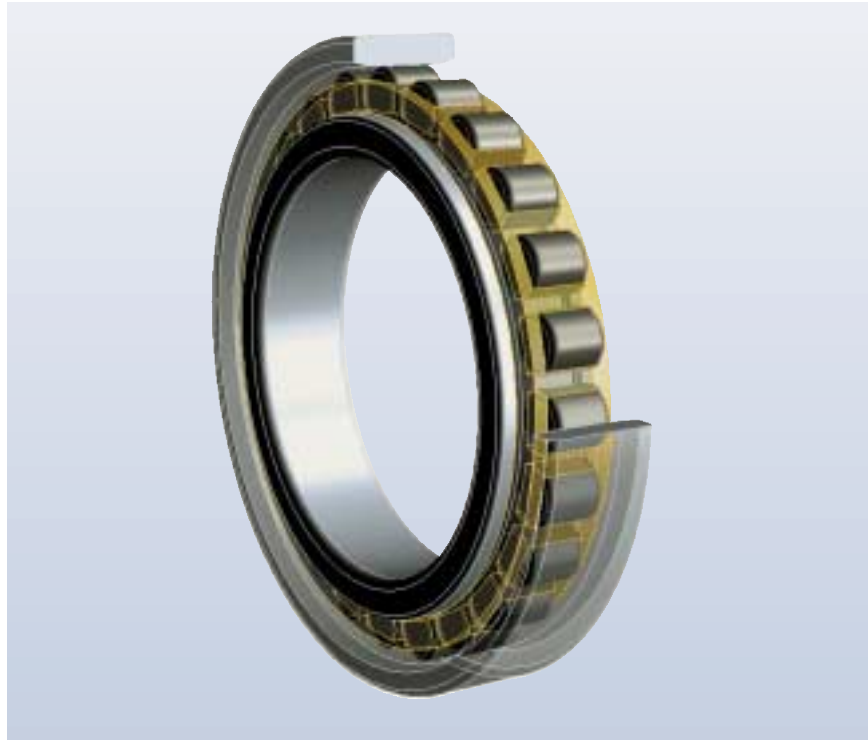
Cylindrical roller bearings can be lubricated with either grease or oil.

Double row bearings feature a lubricating groove and lubricating hole in the middle of the outer ring.

Cylindrical roller bearings have a higher rigidity than comparable size angular contact ball bearings.

Hybrid cylindrical roller bearings — which feature rollers made from ceramic (silicon nitride) material — are now part of the standard Barden product line. The use of ceramic rollers offers significantly improved performance characteristics in terms of bearing friction and wear. For example, ceramic rollers operate at lower temperatures, thus reducing the demand on the lubricant. Consequently, higher speeds are permissible and the service life can be extended to a significant degree.

The higher static and dynamic rigidity characteristics of ceramic



Hybrid cylindrical roller bearings HCN series

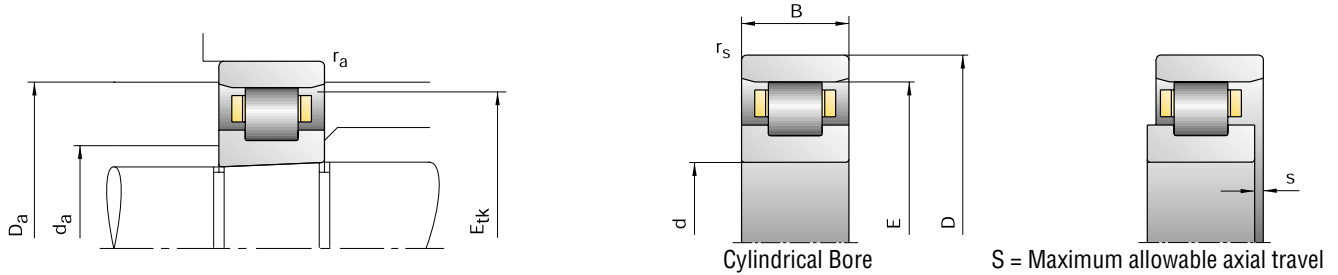
rollers, coupled with a lower thermal expansion coefficient, means preload values can be lower under elevated temperature conditions.

Because of the high surface quality of ring raceways and rollers, FAG cylindrical roller bearings are particularly suited for grease lubrication.

In an oil lubrication system, cylindrical roller bearings have lower oil consumption requirements compared to angular contact ball bearings. Care must be taken to ensure that oil circuits are kept separate if these two bearing types are to be mounted side by side.

Excess cylindrical roller bearing lubrication due to oil flow “contamination” from adjacent angular contact ball bearings may cause a sharp increase in cylindrical roller bearing temperatures.

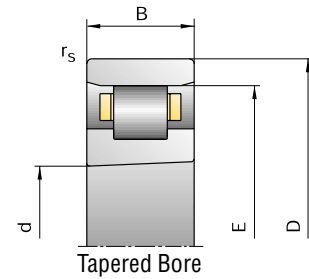
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | |
|-----------------------------|------------|-----------------|----|-------------------|-------|------------------|-------------------------------------|-----------------------|-----------------------|-----------------|
| | d | D | B | r _{smin} | E | s | d _a h12 | D _a H12 | r _a max | E _{tk} |
| mm | | | | | | | | | | |
| N1006K.M1.SP | 30 | 55 | 13 | 0.60 | 48.5 | 1.9 | 36.5 | 49 | 0.60 | 47.0 |
| HCN1006K.M1.SP | 30 | 55 | 13 | 0.60 | 48.5 | 1.9 | 36.5 | 49 | 0.60 | 47.0 |
| N1007K.M1.SP | 35 | 62 | 14 | 0.60 | 55.0 | 2.0 | 42.0 | 56 | 0.60 | 53.4 |
| HCN1007K.M1.SP | 35 | 62 | 14 | 0.60 | 55.0 | 2.0 | 42.0 | 56 | 0.60 | 53.4 |
| N1008K.M1.SP | 40 | 68 | 15 | 0.60 | 61.0 | 2.1 | 47.0 | 62 | 0.60 | 59.3 |
| HCN1008K.M1.SP | 40 | 68 | 15 | 0.60 | 61.0 | 2.1 | 47.0 | 62 | 0.60 | 59.3 |
| N1009K.M1.SP | 45 | 75 | 16 | 0.60 | 67.5 | 2.2 | 52.5 | 69 | 0.60 | 65.6 |
| HCN1009K.M1.SP | 45 | 75 | 16 | 0.60 | 67.5 | 2.2 | 52.5 | 69 | 0.60 | 65.6 |
| N1910K.M1.SP | 50 | 72 | 12 | 0.60 | 66.5 | 1.8 | 55.5 | 67 | 0.60 | 65.1 |
| N1010K.M1.SP | 50 | 80 | 16 | 0.60 | 72.5 | 2.2 | 57.5 | 74 | 0.60 | 70.6 |
| HCN1010K.M1.SP | 50 | 80 | 16 | 0.60 | 72.5 | 2.2 | 57.5 | 74 | 0.60 | 70.6 |
| N1911K.M1.SP | 55 | 80 | 13 | 1.00 | 73.5 | 1.9 | 61.5 | 74 | 1.00 | 72.0 |
| N1011K.M1.SP | 55 | 90 | 18 | 1.00 | 80.5 | 2.5 | 64.5 | 82 | 1.00 | 78.5 |
| HCN1011K.M1.SP | 55 | 90 | 18 | 1.00 | 80.5 | 2.5 | 64.5 | 82 | 1.00 | 78.5 |
| N1912K.M1.SP | 60 | 85 | 13 | 1.00 | 78.5 | 1.9 | 66.5 | 79 | 1.00 | 77.0 |
| N1012K.M1.SP | 60 | 95 | 18 | 1.00 | 85.5 | 2.5 | 69.5 | 87 | 1.00 | 83.5 |
| HCN1012K.M1.SP | 60 | 95 | 18 | 1.00 | 85.5 | 2.5 | 69.5 | 87 | 1.00 | 83.5 |
| N1913K.M1.SP | 65 | 90 | 13 | 1.00 | 83.5 | 1.9 | 71.5 | 84 | 1.00 | 82.0 |
| N1013K.M1.SP | 65 | 100 | 18 | 1.00 | 90.5 | 2.5 | 74.5 | 92 | 1.00 | 88.5 |
| HCN1013K.M1.SP | 65 | 100 | 18 | 1.00 | 90.5 | 2.5 | 74.5 | 92 | 1.00 | 88.5 |
| N1914K.M1.SP | 70 | 100 | 16 | 1.00 | 92.0 | 2.3 | 78.0 | 93 | 1.00 | 90.3 |
| N1014K.M1.SP | 70 | 110 | 20 | 1.00 | 100.0 | 2.5 | 80.0 | 101 | 1.00 | 97.5 |
| HCN1014K.M1.SP | 70 | 110 | 20 | 1.00 | 100.0 | 2.5 | 80.0 | 101 | 1.00 | 97.5 |
| N1915K.M1.SP | 75 | 105 | 16 | 1.00 | 97.0 | 2.3 | 83.0 | 98 | 1.00 | 95.3 |
| N1015K.M1.SP | 75 | 115 | 20 | 1.00 | 105.0 | 2.5 | 85.0 | 106 | 1.00 | 102.5 |
| HCN1015K.M1.SP | 75 | 115 | 20 | 1.00 | 105.0 | 2.5 | 85.0 | 106 | 1.00 | 102.5 |
| Designation examples: | | Standard design | | | | Cylindrical bore | | | | |
| | | N1014K.M1.SP | | | | N1014M1.SP | | | | |
| | | N1914K.M1.SP | | | | N1914M1.SP | | | | |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

N19, N10, HCN10



| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight kg | FAG Basic Bearing Number [†] |
|-----------------|----------------------------------|----------------------------|----------------|------------------------------|--------------|------------------------------------------|
| C_{dyn} kN | C_{0stat} min ⁻¹ | | | | | |
| 20.40 | 20.40 | 19000 | 22000 | 330 | 0.13 | N1006K.M1.SP |
| 16.00 | 17.00 | 24000 | 28000 | | 0.13 | HCN1006K.M1.SP |
| 23.60 | 24.50 | 16000 | 18000 | 410 | 0.17 | N1007K.M1.SP |
| 19.00 | 20.40 | 20000 | 24000 | | 0.17 | HCN1007K.M1.SP |
| 27.50 | 29.00 | 15000 | 17000 | 440 | 0.22 | N1008K.M1.SP |
| 21.60 | 24.50 | 20000 | 24000 | | 0.21 | HCN1008K.M1.SP |
| 34.50 | 39.00 | 13000 | 15000 | 500 | 0.27 | N1009K.M1.SP |
| 28.00 | 33.50 | 17000 | 19000 | | 0.27 | HCN1009K.M1.SP |
| 22.40 | 27.50 | 13000 | 15000 | 470 | 0.15 | N1910K.M1.SP |
| 36.00 | 41.50 | 12000 | 14000 | 580 | 0.30 | N1010K.M1.SP |
| 28.50 | 34.50 | 16000 | 18000 | | 0.30 | HCN1010K.M1.SP |
| 25.00 | 31.50 | 12000 | 14000 | 540 | | 0.21 N1911K.M1.SP |
| 41.50 | 50.00 | 11000 | 13000 | 650 | 0.44 | N1011K.M1.SP |
| 33.50 | 42.50 | 14000 | 16000 | | 0.44 | HCN1011K.M1.SP |
| 26.00 | 34.00 | 11000 | 13000 | 580 | 0.22 | N1912K.M1.SP |
| 44.00 | 55.00 | 10000 | 12000 | 710 | 0.47 | N1012K.M1.SP |
| 35.50 | 46.50 | 13000 | 15000 | | 0.47 | HCN1012K.M1.SP |
| 29.00 | 40.00 | 10000 | 12000 | 680 | 0.24 | N1913K.M1.SP |
| 45.00 | 58.50 | 9500 | 11000 | 740 | 0.50 | N1013K.M1.SP |
| 36.00 | 48.00 | 12000 | 14000 | | 0.50 | HCN1013K.M1.SP |
| 36.50 | 49.00 | 9500 | 11000 | 710 | 0.38 | N1914K.M1.SP |
| 64.00 | 81.50 | 9000 | 10000 | 820 | 0.69 | N1014K.M1.SP |
| 52.00 | 68.00 | 12000 | 14000 | | 0.69 | HCN1014K.M1.SP |
| 38.00 | 53.00 | 9000 | 10000 | 760 | 0.41 | N1915K.M1.SP |
| 65.50 | 85.00 | 8500 | 9500 | 850 | 0.73 | N1015K.M1.SP |
| 53.00 | 71.00 | 11000 | 13000 | | 0.72 | HCN1015K.M1.SP |

Hybrid design

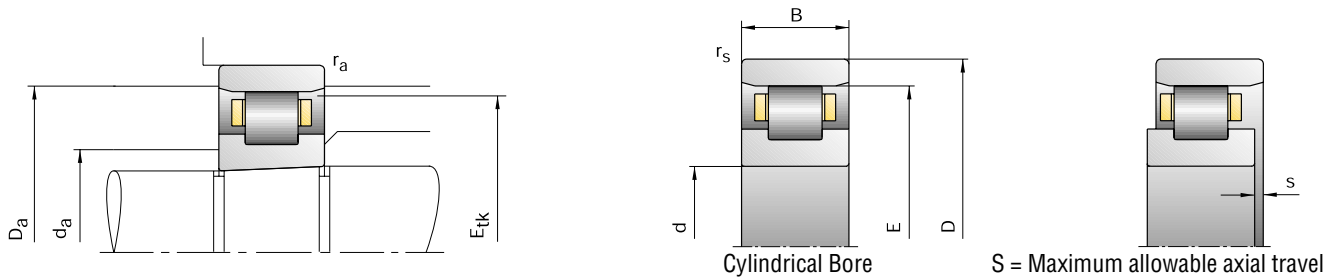
HCN1014K.M1.SP

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.



30
75

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | |
|-----------------------------|------------|-----|----|------------|-------|-----|-------------------------------------|-------|-------|----------|
| | d | D | B | r_{smin} | E | s | d_a | D_a | r_a | E_{tk} |
| | mm | | | | | | | | | |
| N1916K.M1.SP | 80 | 110 | 16 | 1.00 | 102.0 | 2.3 | 88.0 | 103 | 1.00 | 100.3 |
| N1016K.M1.SP | 80 | 125 | 22 | 1.00 | 113.5 | 3.0 | 91.5 | 115 | 1.00 | 110.8 |
| HCN1016K.M1.SP | 80 | 125 | 22 | 1.00 | 113.5 | 3.0 | 91.5 | 115 | 1.00 | 110.8 |
| N1917K.M1.SP | 85 | 120 | 18 | 1.00 | 110.5 | 2.5 | 94.5 | 112 | 1.00 | 108.5 |
| N1017K.M1.SP | 85 | 130 | 22 | 1.00 | 118.5 | 3.0 | 96.5 | 120 | 1.00 | 115.8 |
| HCN1017K.M1.SP | 85 | 130 | 22 | 1.00 | 118.5 | 3.0 | 96.5 | 120 | 1.00 | 115.8 |
| N1918K.M1.SP | 90 | 125 | 18 | 1.00 | 115.5 | 2.5 | 99.5 | 117 | 1.00 | 113.5 |
| N1018K.M1.SP | 90 | 140 | 24 | 1.10 | 127.0 | 3.2 | 103.0 | 129 | 1.10 | 124.0 |
| HCN1018K.M1.SP | 90 | 140 | 24 | 1.10 | 127.0 | 3.2 | 103.0 | 129 | 1.10 | 124.0 |
| N1919K.M1.SP | 95 | 130 | 18 | 1.00 | 120.5 | 2.5 | 104.5 | 122 | 1.00 | 118.5 |
| N1019K.M1.SP | 95 | 145 | 24 | 1.10 | 132.0 | 3.2 | 108.0 | 134 | 1.10 | 129.0 |
| HCN1019K.M1.SP | 95 | 145 | 24 | 1.10 | 132.0 | 3.2 | 108.0 | 134 | 1.10 | 129.0 |
| N1920K.M1.SP | 100 | 140 | 20 | 1.00 | 130.0 | 2.5 | 110.0 | 132 | 1.00 | 127.5 |
| N1020K.M1.SP | 100 | 150 | 24 | 1.10 | 137.0 | 3.2 | 113.0 | 139 | 1.10 | 134.0 |
| HCN1020K.M1.SP | 100 | 150 | 24 | 1.10 | 137.0 | 3.2 | 113.0 | 139 | 1.10 | 134.0 |
| N1921K.M1.SP | 105 | 145 | 20 | 1.00 | 135.0 | 2.5 | 115.0 | 137 | 1.00 | 132.5 |
| N1021K.M1.SP | 105 | 160 | 26 | 1.10 | 145.5 | 3.4 | 119.5 | 147 | 1.10 | 142.3 |
| HCN1021K.M1.SP | 105 | 160 | 26 | 1.10 | 145.5 | 3.4 | 119.5 | 147 | 1.10 | 142.3 |
| N1922K.M1.SP | 110 | 150 | 20 | 1.00 | 140.0 | 2.5 | 120.0 | 142 | 1.00 | 137.5 |
| N1022K.M1.SP | 110 | 170 | 28 | 1.10 | 155.0 | 3.4 | 125.0 | 157 | 1.10 | 151.3 |
| HCN1022K.M1.SP | 110 | 170 | 28 | 1.10 | 155.0 | 3.4 | 125.0 | 157 | 1.10 | 151.3 |
| N1924K.M1.SP | 120 | 165 | 22 | 1.00 | 153.5 | 3.0 | 131.5 | 156 | 1.00 | 150.8 |
| N1024K.M1.SP | 120 | 180 | 28 | 1.10 | 165.0 | 3.4 | 135.0 | 167 | 1.10 | 161.3 |
| HCN1024K.M1.SP | 120 | 180 | 28 | 1.10 | 165.0 | 3.4 | 135.0 | 167 | 1.10 | 161.3 |
| N1926K.M1.SP | 130 | 180 | 24 | 1.10 | 167.0 | 3.2 | 143.0 | 170 | 1.10 | 164.0 |
| N1026K.M1.SP | 130 | 200 | 33 | 1.10 | 182.0 | 4.2 | 148.0 | 184 | 1.10 | 177.8 |

Designation examples:

Standard design

Cylindrical bore

N1020K.M1.SP

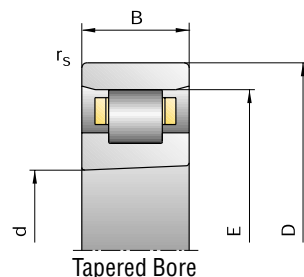
N1020M1.SP

N1920K.M1.SP

N1920M1.SP

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

N19, N10, HCN10



| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight kg | FAG Basic Bearing Number [†] |
|-----------------|----------------------------------|----------------------------|----------------|------------------------------|--------------|------------------------------------------|
| C_{dyn} kN | C_{0stat} min ⁻¹ | | | | | |
| 39.00 | 56.00 | 8500 | 9500 | 810 | 0.43 | N1916K.M1.SP |
| 76.50 | 98.00 | 7500 | 8500 | 900 | 0.99 | N1016K.M1.SP |
| 61.00 | 83.00 | 10000 | 12000 | | 0.98 | HCN1016K.M1.SP |
| 50.00 | 71.00 | 7500 | 8500 | 880 | 0.61 | N1917K.M1.SP |
| 78.00 | 104.00 | 7500 | 8500 | 940 | 1.04 | N1017K.M1.SP |
| 63.00 | 86.50 | 10000 | 12000 | | 1.04 | HCN1017K.M1.SP |
| 51.00 | 75.00 | 7500 | 8500 | 930 | 0.64 | N1918K.M1.SP |
| 93.00 | 125.00 | 6700 | 7500 | 1030 | 1.34 | N1018K.M1.SP |
| 75.00 | 104.00 | 8500 | 9500 | | 1.33 | HCN1018K.M1.SP |
| 52.00 | 78.00 | 7000 | 8000 | 960 | 0.67 | N1919K.M1.SP |
| 96.50 | 129.00 | 6300 | 7000 | 1070 | 1.40 | N1019K.M1.SP |
| 76.50 | 108.00 | 8000 | 9000 | | 1.39 | HCN1019K.M1.SP |
| 78.00 | 112.00 | 6300 | 7000 | 1100 | 0.92 | N1920K.M1.SP |
| 98.00 | 134.00 | 6000 | 6700 | 1100 | 1.46 | N1020K.M1.SP |
| 78.00 | 114.00 | 8000 | 9000 | | 1.45 | HCN1020K.M1.SP |
| 78.00 | 116.00 | 6000 | 6700 | 1140 | 0.96 | N1921K.M1.SP |
| 112.00 | 153.00 | 5600 | 6300 | 1160 | 1.82 | N1021K.M1.SP |
| 88.00 | 129.00 | 7500 | 8500 | | 1.81 | HCN1021K.M1.SP |
| 80.00 | 120.00 | 6000 | 6700 | 1180 | 0.99 | N1922K.M1.SP |
| 140.00 | 190.00 | 5300 | 6000 | 1240 | 2.30 | N1022K.M1.SP |
| 112.00 | 160.00 | 7000 | 8000 | | 2.29 | HCN1022K.M1.SP |
| 95.00 | 143.00 | 5300 | 6000 | 1270 | 1.36 | N1924K.M1.SP |
| 150.00 | 208.00 | 5000 | 5600 | 1340 | 2.47 | N1024K.M1.SP |
| 118.00 | 176.00 | 6700 | 7500 | | 2.46 | HCN1024K.M1.SP |
| 110.00 | 170.00 | 4800 | 5300 | 1350 | 1.80 | N1926K.M1.SP |
| 180.00 | 250.00 | 4300 | 4800 | 1420 | 3.72 | N1026K.M1.SP |

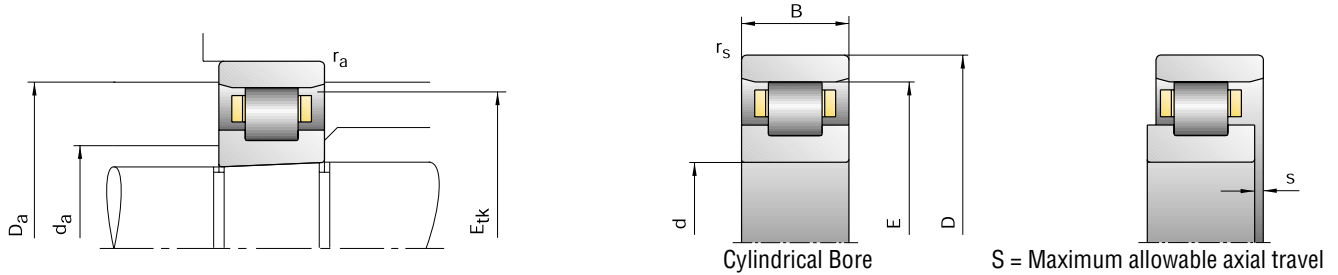


80
-
130

Hybrid design
HCN1020K.M1.SP

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.

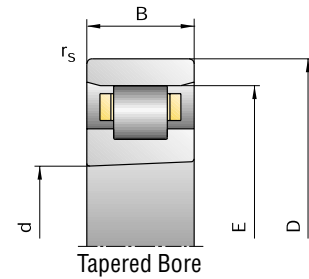
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | |
|------------------------------|------------|-----|------------------------|-------------------|-------|-----|-------------------------------------|-----------------------|-----------------------|-----------------|
| | d | D | B | r _{smin} | E | s | d _a h12 | D _a H12 | r _a max | E _{tk} |
| mm | | | | | | | | | | |
| N1928K.M1.SP | 140 | 190 | 24 | 1.10 | 177.0 | 3.2 | 153.0 | 180 | 1.10 | 174.0 |
| N1028K.M1.SP | 140 | 210 | 33 | 1.10 | 192.0 | 4.2 | 158.0 | 194 | 1.10 | 187.8 |
| N1930K.M1.SP | 150 | 210 | 28 | 1.10 | 194.0 | 3.6 | 166.0 | 197 | 1.10 | 190.5 |
| N1030K.M1.SP | 150 | 225 | 35 | 1.50 | 205.5 | 4.4 | 169.5 | 208 | 1.50 | 201.0 |
| N1932K.M1.SP | 160 | 220 | 28 | 1.10 | 204.0 | 3.6 | 176.0 | 206 | 1.10 | 200.5 |
| N1032K.M1.SP | 160 | 240 | 38 | 1.50 | 220.0 | 4.6 | 180.0 | 222 | 1.50 | 215.0 |
| N1934K.M1.SP | 170 | 230 | 28 | 1.10 | 214.0 | 3.6 | 186.0 | 216 | 1.10 | 210.5 |
| N1034K.M1.SP | 170 | 260 | 42 | 2.10 | 237.0 | 5.0 | 193.0 | 240 | 2.10 | 231.5 |
| N1936K.M1.SP | 180 | 250 | 33 | 1.10 | 232.0 | 4.2 | 198.0 | 234 | 1.10 | 227.8 |
| N1036K.M1.SP | 180 | 280 | 46 | 2.10 | 255.0 | 5.6 | 205.0 | 258 | 2.10 | 248.8 |
| N1938K.M1.SP | 190 | 260 | 33 | 1.10 | 242.0 | 4.2 | 208.0 | 244 | 1.10 | 237.8 |
| N1038K.M1.SP | 190 | 290 | 46 | 2.10 | 265.0 | 5.6 | 215.0 | 268 | 2.10 | 258.8 |
| N1940K.M1.SP | 200 | 280 | 38 | 1.50 | 259.0 | 4.8 | 221.0 | 261 | 1.50 | 254.3 |
| N1040K.M1.SP | 200 | 310 | 51 | 2.10 | 281.0 | 6.4 | 229.0 | 284 | 2.10 | 274.5 |
| N1944K.M1.SP | 220 | 300 | 38 | 1.50 | 279.0 | 4.8 | 241.0 | 281 | 1.50 | 274.3 |
| N1044K.M1.SP | 220 | 340 | 56 | 3.00 | 310.0 | 6.6 | 250.0 | 313 | 3.00 | 302.5 |
| N1948K.M1.SP | 240 | 320 | 38 | 1.50 | 299.0 | 4.8 | 261.0 | 301 | 1.50 | 294.3 |
| N1048K.M1.SP | 240 | 360 | 56 | 3.00 | 330.0 | 6.6 | 270.0 | 333 | 3.00 | 322.5 |
| N1952K.M1.SP | 260 | 360 | 46 | 1.50 | 334.0 | 5.4 | 286.0 | 336 | 1.50 | 328.0 |
| N1052K.M1.SP | 260 | 400 | 65 | 4.00 | 364.0 | 8.1 | 296.0 | 368 | 4.00 | 355.5 |
| N1956K.M1.SP | 280 | 380 | 46 | 1.50 | 354.0 | 5.4 | 306.0 | 356 | 1.50 | 348.0 |
| N1056K.M1.SP | 280 | 420 | 65 | 4.00 | 384.0 | 8.1 | 316.0 | 388 | 4.00 | 375.5 |
| N1960K.M1.SP | 300 | 420 | 56 | 3.00 | 390.0 | 6.6 | 330.0 | 392 | 3.00 | 382.5 |
| N1060K.M1.SP | 300 | 460 | 74 | 4.00 | 420.0 | 8.7 | 340.0 | 425 | 4.00 | 410.0 |
| Designation examples: | | | Standard design | | | | Cylindrical bore | | | |
| | | | N1030K.M1.SP | | | | N1030M1.SP | | | |
| | | | N1930K.M1.SP | | | | N1930M1.SP | | | |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

N19, N10, HCN10



| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight kg | FAG Basic Bearing Number [†] |
|-----------------|-------------|----------------------------|----------------|------------------------------|--------------|------------------------------------------|
| C_{dyn} kN | C_{0stat} | | | | | |
| 116.00 | 186.00 | 4300 | 4800 | 1480 | 1.92 | N1928K.M1.SP |
| 183.00 | 265.00 | 4000 | 4500 | 1480 | 3.94 | N1028K.M1.SP |
| 150.00 | 236.00 | 4000 | 4500 | 1590 | 2.95 | N1930K.M1.SP |
| 208.00 | 310.00 | 3800 | 4300 | 1630 | 4.75 | N1030K.M1.SP |
| 153.00 | 250.00 | 3800 | 4300 | 1690 | 3.10 | N1932K.M1.SP |
| 245.00 | 355.00 | 3400 | 3800 | 1680 | 5.79 | N1032K.M1.SP |
| 160.00 | 265.00 | 3400 | 3800 | 1780 | 3.26 | N1934K.M1.SP |
| 300.00 | 430.00 | 3200 | 3600 | 1860 | 7.77 | N1034K.M1.SP |
| 208.00 | 335.00 | 3200 | 3600 | 1880 | 4.81 | N1936K.M1.SP |
| 360.00 | 520.00 | 3000 | 3400 | 1960 | 10.20 | N1036K.M1.SP |
| 220.00 | 365.00 | 3000 | 3400 | 1990 | 5.05 | N1938K.M1.SP |
| 365.00 | 550.00 | 2800 | 3200 | 2040 | 10.60 | N1038K.M1.SP |
| 265.00 | 430.00 | 2800 | 3200 | 2110 | 7.07 | N1940K.M1.SP |
| 400.00 | 600.00 | 2600 | 3000 | 2130 | 14.00 | N1040K.M1.SP |
| 265.00 | 450.00 | 2600 | 3000 | 2170 | 7.64 | N1944K.M1.SP |
| 510.00 | 765.00 | 2400 | 2800 | 2360 | 17.90 | N1044K.M1.SP |
| 285.00 | 500.00 | 2400 | 2800 | 2430 | 8.24 | N1948K.M1.SP |
| 540.00 | 850.00 | 2200 | 2600 | 2560 | 19.30 | N1048K.M1.SP |
| 430.00 | 750.00 | 2000 | 2400 | 2840 | 14.00 | N1952K.M1.SP |
| 655.00 | 1020.00 | 1900 | 2200 | 2710 | 28.60 | N1052K.M1.SP |
| 440.00 | 800.00 | 1900 | 2200 | 3000 | 14.90 | N1956K.M1.SP |
| 680.00 | 1100.00 | 1800 | 2000 | 2930 | 30.90 | N1056K.M1.SP |
| 610.00 | 1060.00 | 1700 | 1900 | 3150 | 23.60 | N1960K.M1.SP |
| 900.00 | 1430.00 | 1600 | 1800 | 3200 | 43.70 | N1060K.M1.SP |

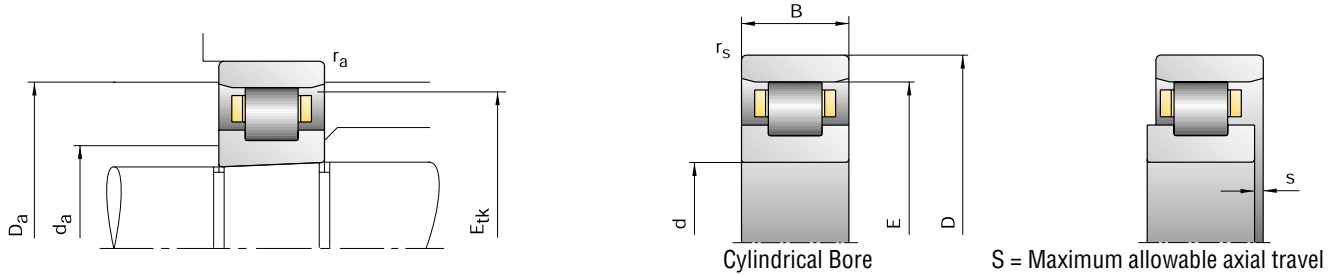


140
300

Hybrid design
HCN1030K.M1.SP

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | |
|-----------------------------|------------|-----|-----|-------------------|-------|------|-------------------------------------|-----------------------|-----------------------|-----------------|
| | d | D | B | r _{smin} | E | s | d _a h12 | D _a H12 | r _a max | E _{tk} |
| mm | | | | | | | | | | |
| N1964K.M1.SP | 320 | 440 | 56 | 3.00 | 410.0 | 6.6 | 350.0 | 412 | 3.00 | 402.5 |
| N1064K.M1.SP | 320 | 480 | 74 | 4.00 | 440.0 | 8.7 | 360.0 | 445 | 4.00 | 430.0 |
| N1968K.M1.SP | 340 | 460 | 56 | 3.00 | 430.0 | 6.6 | 370.0 | 433 | 3.00 | 422.5 |
| N1068K.M1.SP | 340 | 520 | 82 | 5.00 | 475.0 | 9.3 | 385.0 | 480 | 5.00 | 463.8 |
| N1972K.M1.SP | 360 | 480 | 56 | 3.00 | 450.0 | 6.6 | 390.0 | 453 | 3.00 | 442.5 |
| N1072K.M1.SP | 360 | 540 | 82 | 5.00 | 495.0 | 9.3 | 405.0 | 500 | 5.00 | 483.8 |
| N1976K.M1.SP | 380 | 520 | 65 | 4.00 | 484.0 | 8.1 | 416.0 | 487 | 4.00 | 475.5 |
| N1076K.M1.SP | 380 | 560 | 82 | 5.00 | 515.0 | 9.3 | 425.0 | 520 | 5.00 | 503.8 |
| N1980K.M1.SP | 400 | 540 | 65 | 4.00 | 504.0 | 8.1 | 436.0 | 507 | 4.00 | 495.5 |
| N1080K.M1.SP | 400 | 600 | 90 | 5.00 | 550.0 | 10.4 | 450.0 | 555 | 5.00 | 537.5 |
| N1984K.M1.SP | 420 | 560 | 65 | 4.00 | 524.0 | 8.1 | 456.0 | 527 | 4.00 | 515.5 |
| N1084K.M1.SP | 420 | 620 | 90 | 5.00 | 570.0 | 10.4 | 470.0 | 575 | 5.00 | 557.5 |
| N1988K.M1.SP | 440 | 600 | 74 | 4.00 | 558.0 | 9.1 | 482.0 | 562 | 4.00 | 548.5 |
| N1088K.M1.SP | 440 | 650 | 94 | 6.00 | 597.0 | 10.8 | 493.0 | 603 | 6.00 | 584.0 |
| N1992K.M1.SP | 460 | 620 | 74 | 4.00 | 578.0 | 9.1 | 502.0 | 582 | 4.00 | 568.5 |
| N1092K.M1.SP | 460 | 680 | 100 | 6.00 | 624.0 | 11.6 | 516.0 | 630 | 6.00 | 610.5 |
| N1996K.M1.SP | 480 | 650 | 78 | 5.00 | 605.0 | 9.5 | 525.0 | 609 | 5.00 | 595.0 |
| N1096K.M1.SP | 480 | 700 | 100 | 6.00 | 644.0 | 11.6 | 536.0 | 650 | 6.00 | 630.5 |
| N19/500K.M1.SP | 500 | 670 | 78 | 5.00 | 625.0 | 9.5 | 545.0 | 629 | 5.00 | 615.0 |
| N10/500K.M1.SP | 500 | 720 | 100 | 6.00 | 664.0 | 11.6 | 556.0 | 670 | 6.00 | 650.5 |

Designation examples:

Standard design

Cylindrical bore

N1064K.M1.SP

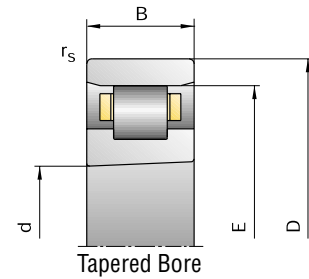
N1064M1.SP

N1964K.M1.SP

N1964M1.SP

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

N19, N10, HCN10



| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight | FAG Basic Bearing Number [†] |
|--------------|-------------|----------------------------|----------------|------------------------------|--------|------------------------------------------|
| C_{dyn} | C_{0stat} | | | | | |
| kN | | min^{-1} | | | kg | |
| 620.00 | 1100.00 | 1600 | 1800 | 3250 | 24.90 | N1964K.M1.SP |
| 915.00 | 1500.00 | 1500 | 1700 | 3330 | 45.10 | N1064K.M1.SP |
| 655.00 | 1200.00 | 1500 | 1700 | 3550 | 26.30 | N1968K.M1.SP |
| 1120.00 | 1830.00 | 1400 | 1600 | 3610 | 60.70 | N1068K.M1.SP |
| 655.00 | 1220.00 | 1400 | 1600 | 3640 | 27.50 | N1972K.M1.SP |
| 1140.00 | 1900.00 | 1300 | 1500 | 3750 | 64.40 | N1072K.M1.SP |
| 815.00 | 1500.00 | 1300 | 1500 | 3900 | 40.00 | N1976K.M1.SP |
| 1180.00 | 2000.00 | 1300 | 1500 | 3900 | 66.60 | N1076K.M1.SP |
| 815.00 | 1560.00 | 1300 | 1500 | 4010 | 41.70 | N1980K.M1.SP |
| 1370.00 | 2320.00 | 1200 | 1400 | 4090 | 88.10 | N1080K.M1.SP |
| 850.00 | 1630.00 | 1200 | 1400 | 4230 | 43.50 | N1984K.M1.SP |
| 1400.00 | 2450.00 | 1100 | 1300 | 4240 | 90.70 | N1084K.M1.SP |
| 1020.00 | 1960.00 | 1100 | 1300 | 4500 | 60.20 | N1988K.M1.SP |
| 1560.00 | 2750.00 | 1100 | 1300 | 4580 | 106.00 | N1088K.M1.SP |
| 1060.00 | 2080.00 | 1100 | 1300 | 4740 | 62.60 | N1992K.M1.SP |
| 1660.00 | 3000.00 | 1000 | 1200 | 4760 | 120.00 | N1092K.M1.SP |
| 1140.00 | 2240.00 | 1000 | 1200 | 4870 | 73.10 | N1996K.M1.SP |
| 1700.00 | 3100.00 | 950 | 1100 | 4840 | 125.00 | N1096K.M1.SP |
| 1180.00 | 2360.00 | 1000 | 1200 | 5100 | 75.70 | N19/500K.M1.SP |
| 1760.00 | 3200.00 | 950 | 1100 | 5100 | 130.00 | N10/500K.M1.SP |

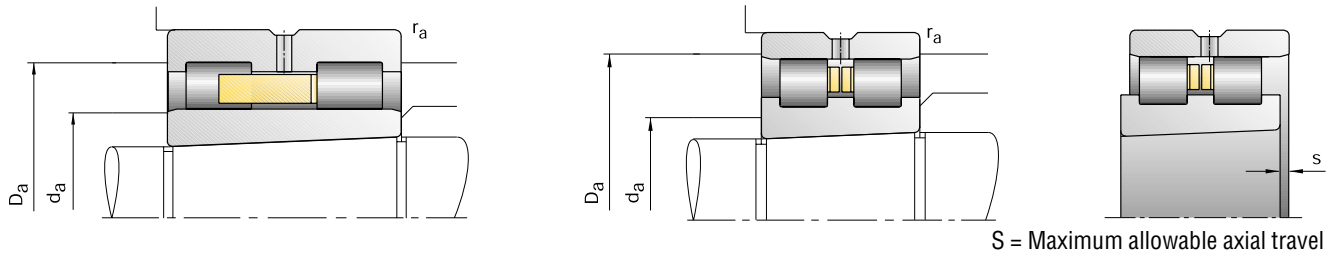


320
-
500

Hybrid design
HCN1064K.M1.SP

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.

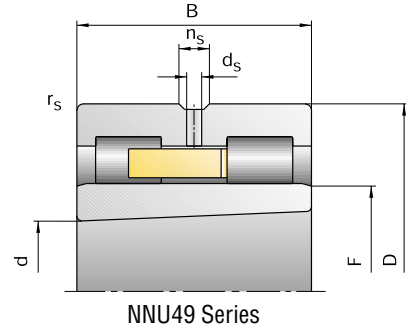
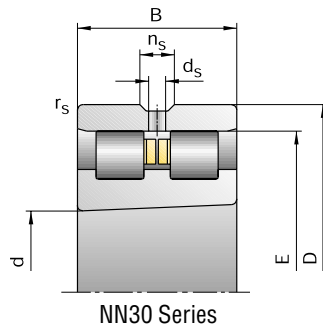
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | | | |
|--------------------------------|------------|-----|------------------------|------------|-------|-------|----------------------------------------|--------------|--------------|----------|-----|-----|
| | d | D | B | r_{smin} | E | s | d_a h12 | D_a H12 | r_a max | E_{tk} | | |
| mm | | | | | | | | | | | | |
| NN3006ASK.M.SP | 30 | 55 | 19 | 1.0 | 48.5 | 1.4 | 4.8 | 3.2 | 38 | 50 | 1.0 | |
| NN3007ASK.M.SP | 35 | 62 | 20 | 1.0 | 55.0 | 1.4 | 4.8 | 3.2 | 43 | 57 | 1.0 | |
| NN3008ASK.M.SP | 40 | 68 | 21 | 1.0 | 61.0 | 1.4 | 4.8 | 3.2 | 48 | 63 | 1.0 | |
| NN3009ASK.M.SP | 45 | 75 | 23 | 1.0 | 67.5 | 1.7 | 4.8 | 3.2 | 54 | 69 | 1.0 | |
| NN3010ASK.M.SP | 50 | 80 | 23 | 1.0 | 72.5 | 1.7 | 4.8 | 3.2 | 59 | 74 | 1.0 | |
| NN3011ASK.M.SP | 55 | 90 | 26 | 1.1 | 81.0 | 1.9 | 4.8 | 3.2 | 65 | 83 | 1.1 | |
| NN3012ASK.M.SP | 60 | 95 | 26 | 1.1 | 86.1 | 1.9 | 4.8 | 3.2 | 70 | 88 | 1.1 | |
| NN3013ASK.M.SP | 65 | 100 | 26 | 1.1 | 91.0 | 1.9 | 4.8 | 3.2 | 75 | 93 | 1.1 | |
| NNU4914SK.M.SP | 70 | 100 | 30 | 1.0 | | 80.0 | 1.8 | 4.8 | 3.2 | 79 | 92 | 1.0 |
| NN3014ASK.M.SP | 70 | 110 | 30 | 1.1 | 100.0 | | 2.3 | 6.5 | 3.2 | 82 | 102 | 1.1 |
| NNU4915SK.M.SP | 75 | 105 | 30 | 1.0 | | 85.0 | 1.8 | 4.8 | 3.2 | 84 | 97 | 1.0 |
| NN3015ASK.M.SP | 75 | 115 | 30 | 1.1 | 105.0 | | 2.3 | 6.5 | 3.2 | 87 | 107 | 1.1 |
| NNU4916SK.M.SP | 80 | 110 | 30 | 1.0 | | 90.0 | 1.8 | 4.8 | 3.2 | 89 | 102 | 1.0 |
| NN3016ASK.M.SP | 80 | 125 | 34 | 1.1 | 113.0 | | 2.5 | 6.5 | 3.2 | 93 | 116 | 1.1 |
| NNU4917SK.M.SP | 85 | 120 | 35 | 1.1 | | 96.5 | 2.0 | 4.8 | 3.2 | 96 | 111 | 1.1 |
| NN3017ASK.M.SP | 85 | 130 | 34 | 1.1 | 118.0 | | 2.5 | 6.5 | 3.2 | 98 | 121 | 1.1 |
| NNU4918SK.M.SP | 90 | 125 | 35 | 1.1 | | 101.5 | 2.0 | 4.8 | 3.2 | 101 | 116 | 1.1 |
| NN3018ASK.M.SP | 90 | 140 | 37 | 1.5 | 127.0 | | 2.6 | 6.5 | 3.2 | 105 | 130 | 1.5 |
| NNU4919SK.M.SP | 95 | 130 | 35 | 1.1 | | 106.5 | 2.0 | 4.8 | 3.2 | 106 | 121 | 1.1 |
| NN3019ASK.M.SP | 95 | 145 | 37 | 1.5 | 132.0 | | 2.6 | 6.5 | 3.2 | 110 | 135 | 1.5 |
| NNU4920SK.M.SP | 100 | 140 | 40 | 1.1 | | 113.0 | 2.0 | 6.5 | 3.2 | 112 | 129 | 1.1 |
| NN3020ASK.M.SP | 100 | 150 | 37 | 1.5 | 137.0 | | 2.6 | 6.5 | 3.2 | 115 | 140 | 1.5 |
| Designation examples: | | | Standard design | | | | Cylindrical bore | | | | | |
| | | | NNU4920SK.M.SP | | | | NNU4920S.M.SP | | | | | |
| | | | NN3020ASK.M.SP | | | | NN3020AS.M.SP | | | | | |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

NNU49, NN30

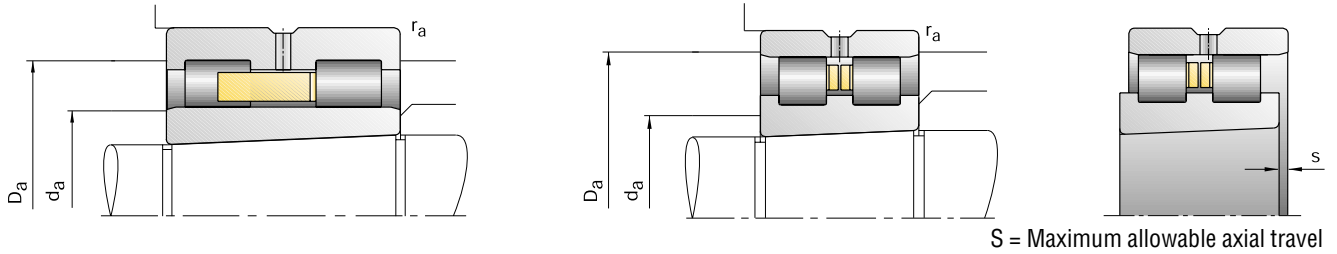


| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight | FAG Basic Bearing Number [†] |
|--------------|-------------|----------------------------|----------------|------------------------------|--------|------------------------------------------|
| C_{dyn} | C_{0stat} | | | | | |
| kN | | min^{-1} | | | kg | |
| 29 | 34 | 16000 | 19000 | 680 | 0.19 | NN3006ASK.M.SP |
| 36 | 44 | 14000 | 17000 | 790 | 0.25 | NN3007ASK.M.SP |
| 45 | 59 | 12000 | 15000 | 950 | 0.30 | NN3008ASK.M.SP |
| 54 | 72 | 11000 | 14000 | 1080 | 0.39 | NN3009ASK.M.SP |
| 57 | 80 | 10000 | 13000 | 1180 | 0.43 | NN3010ASK.M.SP |
| 72 | 100 | 9000 | 11000 | 1300 | 0.63 | NN3011ASK.M.SP |
| 75 | 110 | 8500 | 10000 | 1410 | 0.67 | NN3012ASK.M.SP |
| 77 | 116 | 8000 | 9500 | 1470 | 0.72 | NN3013ASK.M.SP |
| 60 | 104 | 7500 | 9000 | 1700 | 0.73 | NNU4914SK.M.SP |
| 98 | 150 | 7000 | 8500 | 1660 | 1.04 | NN3014ASK.M.SP |
| 63 | 114 | 7000 | 8500 | 1870 | 0.77 | NNU4915SK.M.SP |
| 100 | 156 | 6700 | 8000 | 1730 | 1.09 | NN3015ASK.M.SP |
| 66 | 122 | 6700 | 8000 | 1980 | 0.81 | NNU4916SK.M.SP |
| 120 | 186 | 6300 | 7500 | 1850 | 1.51 | NN3016ASK.M.SP |
| 90 | 166 | 6300 | 7500 | 2280 | 1.20 | NNU4917SK.M.SP |
| 125 | 200 | 6000 | 7000 | 1990 | 1.58 | NN3017ASK.M.SP |
| 93 | 176 | 6000 | 7000 | 2420 | 1.26 | NNU4918SK.M.SP |
| 140 | 224 | 5600 | 6700 | 2020 | 2.05 | NN3018ASK.M.SP |
| 95 | 186 | 5600 | 6700 | 2560 | 1.32 | NNU4919SK.M.SP |
| 143 | 236 | 5300 | 6300 | 2100 | 2.14 | NN3019ASK.M.SP |
| 129 | 255 | 5300 | 6300 | 3000 | 1.86 | NNU4920SK.M.SP |
| 146 | 245 | 5300 | 6300 | 2170 | 2.23 | NN3020ASK.M.SP |

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.



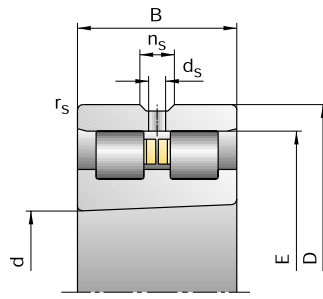
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



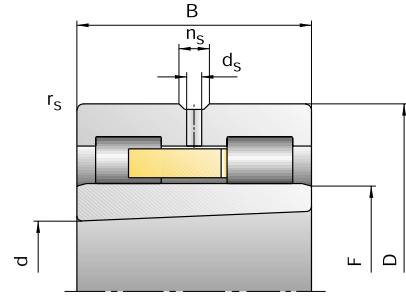
| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | | | |
|--------------------------------|------------|-----|------------------------|------------|-------|-------|----------------------------------------|-------------------------|--------------|----------|-----|-----|
| | d | D | B | r_{smin} | E | s | d_a h12 | D_a H12 | r_a max | E_{tk} | | |
| | mm | | | | | | | | | | | |
| NNU4921SK.M.SP | 105 | 145 | 40 | 1.1 | | 118.0 | 2.0 | 6.5 | 3.2 | 117 | 134 | 1.1 |
| NN3021ASK.M.SP | 105 | 160 | 41 | 2.0 | 146.0 | | 2.6 | 6.5 | 3.2 | 120 | 149 | 2.0 |
| NNU4922SK.M.SP | 110 | 150 | 40 | 1.1 | | 123.0 | 2.0 | 6.5 | 3.2 | 122 | 139 | 1.1 |
| NN3022ASK.M.SP | 110 | 170 | 45 | 2.0 | 155.0 | | 2.9 | 6.5 | 3.2 | 127 | 158 | 2.0 |
| NNU4924SK.M.SP | 120 | 165 | 45 | 1.1 | | 134.5 | 2.3 | 6.5 | 3.2 | 133 | 155 | 1.1 |
| NN3024ASK.M.SP | 120 | 180 | 46 | 2.0 | 165.0 | | 3.1 | 6.5 | 3.2 | 137 | 168 | 2.0 |
| NNU4926SK.M.SP | 130 | 180 | 50 | 1.5 | | 146.0 | 2.7 | 6.5 | 3.2 | 145 | 166 | 1.5 |
| NN3026ASK.M.SP | 130 | 200 | 52 | 2.0 | 182.0 | | 3.1 | 9.5 | 4.8 | 150 | 186 | 2.0 |
| NNU4928SK.M.SP | 140 | 190 | 50 | 1.5 | | 156.0 | 1.8 | 6.5 | 3.2 | 155 | 176 | 1.5 |
| NN3028ASK.M.SP | 140 | 210 | 53 | 2.0 | 192.0 | | 3.4 | 9.5 | 4.8 | 160 | 196 | 2.0 |
| NNU4930SK.M.SP | 150 | 210 | 60 | 2.0 | | 168.5 | 2.7 | 6.5 | 3.2 | 167 | 197 | 2.0 |
| NN3030ASK.M.SP | 150 | 225 | 56 | 2.1 | 206.0 | | 3.8 | 9.5 | 4.8 | 172 | 210 | 2.1 |
| NNU4932SK.M.SP | 160 | 220 | 60 | 2.0 | | 178.5 | 2.7 | 6.5 | 3.2 | 177 | 207 | 2.0 |
| NN3032ASK.M.SP | 160 | 240 | 60 | 2.1 | 219.0 | | 4.3 | 9.5 | 4.8 | 183 | 224 | 2.1 |
| NNU4934SK.M.SP | 170 | 230 | 60 | 2.0 | | 188.5 | 2.7 | 6.5 | 3.2 | 187 | 217 | 2.0 |
| NN3034ASK.M.SP | 170 | 260 | 67 | 2.1 | 236.0 | | 4.6 | 9.5 | 4.8 | 196 | 241 | 2.1 |
| NNU4936SK.M.SP | 180 | 250 | 69 | 2.0 | | 202.0 | 3.2 | 9.5 | 4.8 | 200 | 232 | 2.0 |
| NN3036ASK.M.SP | 180 | 280 | 74 | 2.1 | 255.0 | | 4.8 | 12.2 | 6.3 | 209 | 260 | 2.1 |
| NNU4938SK.M.SP | 190 | 260 | 69 | 2.0 | | 212.0 | 3.2 | 9.5 | 4.8 | 210 | 242 | 2.0 |
| NN3038ASK.M.SP | 190 | 290 | 75 | 2.1 | 265.0 | | 4.8 | 12.2 | 6.3 | 219 | 271 | 2.1 |
| NNU4940SK.M.SP | 200 | 280 | 80 | 2.1 | | 225.0 | 4.3 | 12.2 | 6.3 | 223 | 259 | 2.1 |
| NN3040ASK.M.SP | 200 | 310 | 82 | 2.1 | 282.0 | | 5.7 | 12.2 | 6.3 | 232 | 288 | 2.1 |
| NNU4944SK.M.SP | 220 | 300 | 80 | 2.1 | | 245.0 | 4.3 | 12.2 | 6.3 | 243 | 279 | 2.1 |
| NN3044ASK.M.SP | 220 | 340 | 90 | 3.0 | 310.0 | | 5.7 | 15.0 | 8.0 | 254 | 317 | 3.0 |
| Designation examples: | | | Standard design | | | | | Cylindrical bore | | | | |
| | | | NNU4930SK.M.SP | | | | | NNU4930S.M.SP | | | | |
| | | | NN3030ASK.M.SP | | | | | NN3030AS.M.SP | | | | |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

NNU49, NN30



NN30 Series



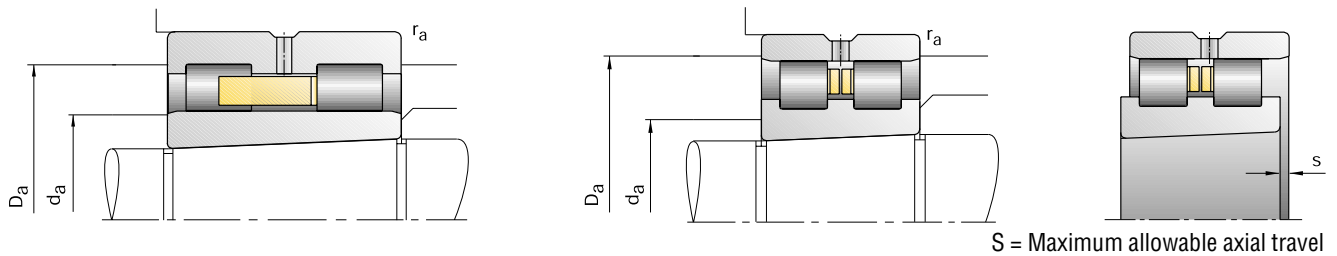
NNU49 Series

| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight | FAG Basic Bearing Number [†] |
|--------------|-------------|----------------------------|----------------|------------------------------|--------|------------------------------------------|
| C_{dyn} | C_{0stat} | | | | | |
| kN | | min^{-1} | | | kg | |
| 129 | 260 | 5300 | 6300 | 3080 | 1.93 | NNU4921SK.M.SP |
| 190 | 310 | 4800 | 5600 | 2320 | 2.84 | NN3021ASK.M.SP |
| 132 | 270 | 5000 | 6000 | 3170 | 2.01 | NNU4922SK.M.SP |
| 220 | 360 | 4500 | 5300 | 2500 | 3.61 | NN3022ASK.M.SP |
| 176 | 340 | 4500 | 5300 | 3200 | 2.71 | NNU4924SK.M.SP |
| 232 | 390 | 4300 | 5000 | 2700 | 3.94 | NN3024ASK.M.SP |
| 190 | 390 | 4000 | 4800 | 3600 | 3.73 | NNU4926SK.M.SP |
| 290 | 500 | 3800 | 4500 | 2980 | 5.79 | NN3026ASK.M.SP |
| 190 | 400 | 3800 | 4500 | 3700 | 4.04 | NNU4928SK.M.SP |
| 300 | 520 | 3600 | 4300 | 3090 | 6.22 | NN3028ASK.M.SP |
| 325 | 655 | 3600 | 4300 | 4280 | 6.10 | NNU4930SK.M.SP |
| 335 | 585 | 3400 | 4000 | 3300 | 7.58 | NN3030ASK.M.SP |
| 335 | 680 | 3400 | 4000 | 4420 | 6.41 | NNU4932SK.M.SP |
| 375 | 670 | 3200 | 3800 | 3510 | 9.23 | NN3032ASK.M.SP |
| 340 | 695 | 3200 | 3800 | 4560 | 6.73 | NNU4934SK.M.SP |
| 450 | 800 | 3000 | 3600 | 3770 | 12.50 | NN3034ASK.M.SP |
| 405 | 850 | 3000 | 3600 | 5160 | 9.96 | NNU4936SK.M.SP |
| 570 | 1000 | 2800 | 3400 | 4040 | 16.40 | NN3036ASK.M.SP |
| 405 | 880 | 2800 | 3400 | 5310 | 10.40 | NNU4938SK.M.SP |
| 585 | 1040 | 2600 | 3200 | 4190 | 17.30 | NN3038ASK.M.SP |
| 490 | 1040 | 2600 | 3200 | 5510 | 14.70 | NNU4940SK.M.SP |
| 655 | 1200 | 2400 | 3000 | 4410 | 22.20 | NN3040ASK.M.SP |
| 510 | 1140 | 2400 | 3000 | 6000 | 15.90 | NNU4944SK.M.SP |
| 800 | 1460 | 2200 | 2800 | 4770 | 29.10 | NN3044ASK.M.SP |

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.



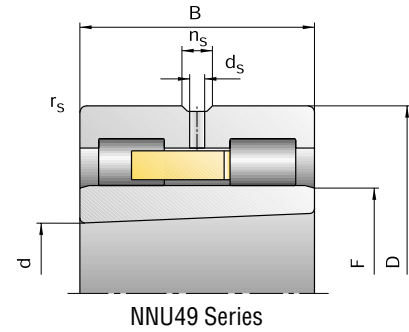
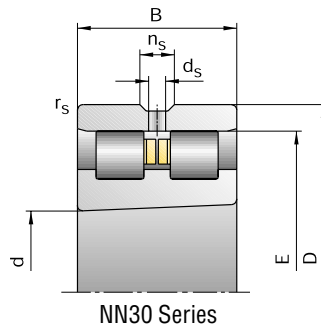
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



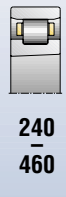
| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | | | |
|--------------------------------|------------|-----|------------------------|------------|-------|-------|----------------------------------------|-------------------------|--------------|----------|-----|-----|
| | d | D | B | r_{smin} | E | s | d_a h12 | D_a H12 | r_a max | E_{tk} | | |
| mm | | | | | | | | | | | | |
| NNU4948SK.M.SP | 240 | 320 | 80 | 2.1 | | 265.0 | 4.3 | 12.2 | 6.3 | 263 | 299 | 2.1 |
| NN3048ASK.M.SP | 240 | 360 | 92 | 3.0 | 330.0 | | 6.1 | 15.0 | 8.0 | 274 | 337 | 3.0 |
| NNU4952SK.M.SP | 260 | 360 | 100 | 2.1 | | 292.0 | 5.4 | 15.0 | 8.0 | 289 | 334 | 2.1 |
| NN3052ASK.M.SP | 260 | 400 | 104 | 4.0 | 364.0 | | 6.6 | 15.0 | 8.0 | 300 | 372 | 4.0 |
| NNU4956SK.M.SP | 280 | 380 | 100 | 2.1 | | 312.0 | 5.4 | 15.0 | 8.0 | 309 | 354 | 2.1 |
| NN3056ASK.M.SP | 280 | 420 | 106 | 4.0 | 384.0 | | 6.9 | 15.0 | 8.0 | 320 | 392 | 4.0 |
| NNU4960SK.M.SP | 300 | 420 | 118 | 3.0 | | 339.0 | 6.3 | 17.7 | 9.5 | 336 | 389 | 3.0 |
| NN3060ASK.M.SP | 300 | 460 | 118 | 4.0 | 418.0 | | 7.5 | 17.7 | 9.5 | 346 | 427 | 4.0 |
| NNU4964SK.M.SP | 320 | 440 | 118 | 3.0 | | 359.0 | 6.3 | 17.7 | 9.5 | 356 | 409 | 3.0 |
| NN3064ASK.M.SP | 320 | 480 | 121 | 4.0 | 438.0 | | 8.0 | 17.7 | 9.5 | 366 | 447 | 4.0 |
| NNU4968SK.M.SP | 340 | 460 | 118 | 3.0 | | 379.0 | 6.3 | 17.7 | 9.5 | 376 | 429 | 3.0 |
| NN3068ASK.M.SP | 340 | 520 | 133 | 5.0 | 473.0 | | 8.8 | 17.7 | 9.5 | 393 | 483 | 5.0 |
| NNU4972SK.M.SP | 360 | 480 | 118 | 3.0 | | 399.0 | 6.3 | 17.7 | 9.5 | 396 | 449 | 3.0 |
| NN3072ASK.M.SP | 360 | 540 | 134 | 5.0 | 493.0 | | 8.8 | 17.7 | 9.5 | 413 | 503 | 5.0 |
| NNU4976SK.M.SP | 380 | 520 | 140 | 4.0 | | 426.0 | 7.2 | 17.7 | 9.5 | 423 | 482 | 4.0 |
| NN3076ASK.M.SP | 380 | 560 | 135 | 5.0 | 513.0 | | 9.1 | 17.7 | 9.5 | 433 | 523 | 5.0 |
| NNU4980SK.M.SP | 400 | 540 | 140 | 4.0 | | 446.0 | 7.2 | 17.7 | 9.5 | 443 | 502 | 4.0 |
| NN3080ASK.M.SP | 400 | 600 | 148 | 5.0 | 549.0 | | 9.5 | 17.7 | 9.5 | 459 | 560 | 5.0 |
| NNU4984SK.M.SP | 420 | 560 | 140 | 4.0 | | 466.0 | 7.2 | 17.7 | 9.5 | 463 | 522 | 4.0 |
| NN3084ASK.M.SP | 420 | 620 | 150 | 5.0 | 569.0 | | 10.0 | 17.7 | 9.5 | 479 | 580 | 5.0 |
| NNU4988SK.M.SP | 440 | 600 | 160 | 4.0 | | 490.0 | 6.8 | 17.7 | 9.5 | 487 | 558 | 4.0 |
| NN3088ASK.M.SP | 440 | 650 | 157 | 6.0 | 597.0 | | 10.2 | 23.5 | 12.5 | 501 | 609 | 6.0 |
| NNU4992SK.M.SP | 460 | 620 | 160 | 4.0 | | 510.0 | 6.8 | 17.7 | 9.5 | 507 | 578 | 4.0 |
| NN3092ASK.M.SP | 460 | 680 | 163 | 6.0 | 624.0 | | 10.9 | 23.5 | 12.5 | 524 | 636 | 6.0 |
| Designation examples: | | | Standard design | | | | | Cylindrical bore | | | | |
| | | | NNU4960SK.M.SP | | | | | NNU4960S.M.SP | | | | |
| | | | NN3060ASK.M.SP | | | | | NN3060AS.M.SP | | | | |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

NNU49, NN30

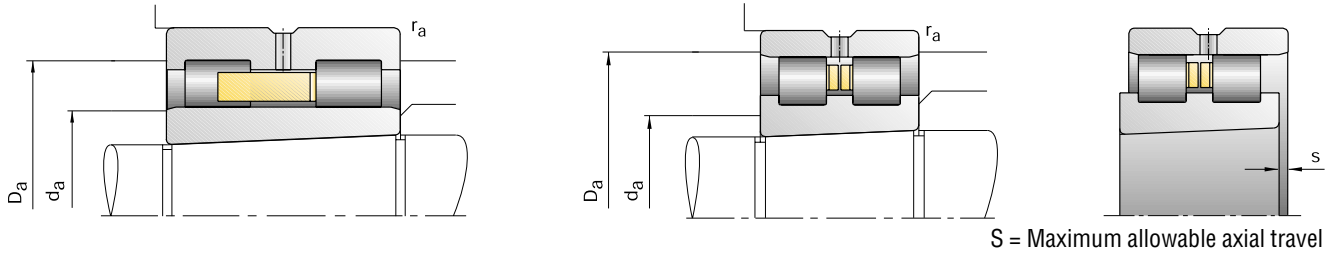


| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight | FAG Basic Bearing Number [†] |
|--------------|-------------|----------------------------|----------------|------------------------------|--------|------------------------------------------|
| C_{dyn} | C_{0stat} | | | | | |
| kN | | min^{-1} | | | kg | |
| 530 | 1200 | 2200 | 2800 | 6320 | 17.10 | NNU4948SK.M.SP |
| 850 | 1560 | 2000 | 2600 | 5140 | 31.60 | NN3048ASK.M.SP |
| 750 | 1700 | 2000 | 2600 | 7080 | 29.70 | NNU4952SK.M.SP |
| 1060 | 2000 | 1900 | 2400 | 5680 | 46.20 | NN3052ASK.M.SP |
| 765 | 1800 | 1900 | 2400 | 7480 | 31.60 | NNU4956SK.M.SP |
| 1080 | 2080 | 1800 | 2200 | 5890 | 49.70 | NN3056ASK.M.SP |
| 1040 | 2400 | 1700 | 2000 | 8280 | 49.10 | NNU4960SK.M.SP |
| 1270 | 2400 | 1600 | 1900 | 5930 | 68.80 | NN3060ASK.M.SP |
| 1060 | 2550 | 1600 | 1900 | 8750 | 51.80 | NNU4964SK.M.SP |
| 1320 | 2600 | 1600 | 1900 | 6440 | 74.20 | NN3064ASK.M.SP |
| 1100 | 2650 | 1500 | 1800 | 9230 | 54.50 | NNU4968SK.M.SP |
| 1630 | 3250 | 1400 | 1700 | 7170 | 99.30 | NN3068ASK.M.SP |
| 1140 | 2800 | 1500 | 1800 | 9700 | 57.30 | NNU4972SK.M.SP |
| 1660 | 3350 | 1400 | 1700 | 7430 | 104 | NN3072ASK.M.SP |
| 1430 | 3600 | 1400 | 1700 | 10970 | 85.80 | NNU4976SK.M.SP |
| 1700 | 3450 | 1300 | 1600 | 7690 | 110 | NN3076ASK.M.SP |
| 1500 | 3800 | 1300 | 1600 | 11540 | 89.40 | NNU4980SK.M.SP |
| 2160 | 4500 | 1200 | 1500 | 8660 | 143 | NN3080ASK.M.SP |
| 1530 | 4000 | 1300 | 1600 | 12120 | 93.20 | NNU4984SK.M.SP |
| 2120 | 4500 | 1200 | 1500 | 8660 | 150 | NN3084ASK.M.SP |
| 2040 | 5200 | 1200 | 1500 | 12690 | 129 | NNU4988SK.M.SP |
| 2450 | 5100 | 1100 | 1400 | 9240 | 172 | NN3088ASK.M.SP |
| 2120 | 5500 | 1100 | 1400 | 13390 | 134 | NNU4992SK.M.SP |
| 2600 | 5400 | 1100 | 1400 | 9430 | 197 | NN3092ASK.M.SP |



[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.

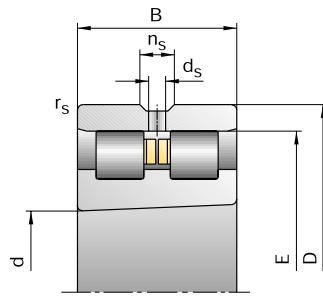
SUPER PRECISION CYLINDRICAL ROLLER BEARINGS



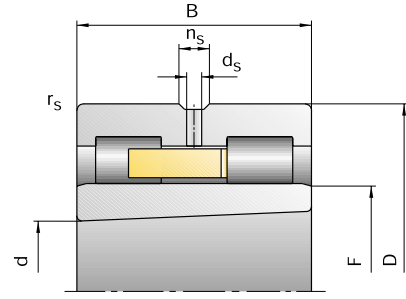
| Barden Basic Bearing Number | Dimensions | | | | | | Shaft & Shoulder Housing Dimensions | | | | | |
|--------------------------------|------------|-----|-----|------------|-------|-------|----------------------------------------|--------------|--------------|----------|-----|-----|
| | d | D | B | r_{smin} | E | s | d_a h12 | D_a H12 | r_a max | E_{tk} | | |
| | mm | | | | | | | | | | | |
| NNU4996SK.M.SP | 480 | 650 | 170 | 5.0 | | 534.0 | 7.2 | 17.7 | 9.5 | 531 | 606 | 5.0 |
| NN3096ASK.M.SP | 480 | 700 | 165 | 6.0 | 644.0 | | 11.2 | 23.5 | 12.5 | 544 | 656 | 6.0 |
| NNU49/500SK.M.SP | 500 | 670 | 170 | 5.0 | | 568.0 | 7.2 | 17.7 | 9.5 | 551 | 626 | 5.0 |
| NN30/500ASK.M.SP | 500 | 720 | 167 | 6.0 | 664.0 | | 11.7 | 23.5 | 12.5 | 564 | 677 | 6.0 |

SUPER PRECISION CYLINDRICAL ROLLER BEARINGS

NNU49, NN30



NN30 Series



NNU49 Series

| Load Ratings | | Attainable Speed Grease | Oil minimal | Radial Stiffness C_s | Weight kg | FAG Basic Bearing Number [†] |
|--------------|-------------|----------------------------|----------------|------------------------------|--------------|------------------------------------------|
| C_{dyn} | C_{0stat} | | | | | |
| kN | | min^{-1} | | | | |
| 2360 | 6100 | 1100 | 1400 | 14110 | 158 | NNU4996SK.M.SP |
| 2700 | 5850 | 1000 | 1300 | 10060 | 206 | NN3096ASK.M.SP |
| 2320 | 6100 | 1000 | 1300 | 14110 | 162 | NNU49/500SK.M.SP |
| 2650 | 5850 | 1000 | 1300 | 10060 | 214 | NN30/500ASK.M.SP |



480
—
500

[†] FAG Basic Bearing Number is for reference only. All bearings are available exclusively from Barden, and must be ordered using the Barden Basic Bearing Number.

