

Product Reference Guide



INA USA CORPORATION



HIGH PRECISION BEARINGS



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FOREWORD

This publication was designed to serve as a quick reference to the standard product series offered by INA USA Corporation (INA) for its domestic market. The guide provides a current overview of INA products, including basic envelope dimensions and capacities, in one publication – it is not an engineering design guide intended to replace INA engineering catalogs. Consequently, the metric and inch conversions are listed to 3 decimal places for easy reference and rapid identification of correct replacement part(s), not 4 decimal places as necessary for quality control purposes.

This publication can be used to narrow the choices between the many different INA product lines and series for new designs. Detailed engineering information for new designs can be found in our traditional catalogs or by contacting the INA Engineering Department.

A significant portion of INA sales are special production sizes. The identification of those parts is sometimes difficult since a comprehensive listing is beyond the intent of this publication. Special part numbers take as many different forms as the series listed here, but the basic system is to use sequential numbers for each new design. Usually the prefix is F or FC but can include VH, INA or the bearing type such as NA. INA maintains a technical help desk to identify sizes not known or to match competitors' parts.

The toll free 800 numbers listed will give you access to INA Customer Service representatives. These representatives can tap into INA Worldwide resources to provide the bearings you need.

Storage Life

Lubricants age naturally due to environmental influences. It is therefore the user's responsibility to follow the directions given by the lubricant manufacturer.

The greases used in INA rolling bearings have a mineral oil base and experience shows that they can be stored for up to 3 years without deteriorating providing the following important conditions are met.

- Closed storage room
- Temperature between 0°C and 40°C
- Relative atmospheric humidity 65% or less
- Security from chemical agents (vapors, gases, fluids)
- Sealed rolling bearings

The frictional torque can be considerably higher after longer storage periods than in freshly greased bearings and the lubricity of the grease can also have deteriorated.

INA bearings have many optional features available including:

- ISO series of bearings generally include the standard clearance options CN, C2, C3 and C4.
- ISO bearing series include PN, P6 and P5 precision classes.

- Corrotect™ plating is available for most bearing designs. Corrotect is a patented process for zinc-iron and zinc-iron-cobalt plating in a thin layer which can be applied to standard components. The protection exceeds stainless steel and the cost is half. Add suffix RR.
- All sealed bearings are supplied pregreased. In most cases the standard lubricant is Shell Retinax LX 2 or equivalent. Other greases are available, some at extra cost.
- Unsealed bearings may not be greased when shipped.
- Speed limits as published, are based on oil lubrication for open bearings or grease lubrication for sealed bearings. The speed limits are calculated based on a nominal load and heat balance equation. Higher speeds may be allowed depending on the application.
- Dynamic capacities are published based on INA standard usage of ISO and ABMA formulas. New life theory threshold values are published in other INA publications.
- Life calculations and evaluations can be made from INA engineering based catalogs which are available from your INA Sales Representative.
- Other features are available based on current production volumes including heat stabilization of the rings, matched bearing sets, with oil holes and grooves, etc.

ABMA American Bearing Manufacturers Association

ASTM American Society Of Testing And Materials

DIN Deutsches Institut für Normung e.V.

ISO International Standards Organization

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All sales from catalog orders are subject to the Standard Terms and Conditions of Sale. Please contact your INA Sales Representative for a copy of the Standard Terms and Conditions of Sale.

INA USA Corporation reserves the right to make changes / revisions to specifications contained herein without notice.

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Use of INA Part Numbers & Suffixes

INA has extra options to give you the maximum flexibility in answering customer needs. Cage styles, seal types, internal clearances, and needle sorts are available to help you select the right part for your customers.

UG - Shell type open bearings come standard without grease (Example: SCE87 UG)

AA040 - Shell type sealed bearings come standard with 40% Retinax LX2 (Example: SCE8799 AA040)

0-7 - Radial needle roller & cage assemblies come standard with 0-7 Micron Needle Sorts
(Example: NRA5X49.8G2 0-7, K25X33X24B 0-7)

The table below provides a quick reference regarding our part numbers and integral suffixes. See each part section for part number schematics.

| PART / SUFFIX | DEFINITION | EXAMPLE |
|-----------------|----------------------------------|---------------------------------|
| HK1010, SCE86PP | INA Part Number | SCE87, PASE1-1/2, RA100RR |
| 2RS | 2 Lip Seals | 62032RS, 3200J2RS |
| 2Z | 2 Gap Shields | 62032Z, 3300J2Z |
| J | Steel Cage | 52100J, 3200J |
| KDD, KDDU | 2 Gap Shields | LR5208KDD, LR5307KDDU |
| M | Bronze Cage | 930M, 89460M |
| NPP, NPPU | 2 Lip Seals | GRA100NPPB, LR5202NPPU |
| PP | 2 Lip Seals | SCE87PP |
| RR | 2 Land Riding Seals | G1103KRRB, RA100RR |
| TN | Plastic Cage | 81102TN, 87410TN |
| X | Cylindrical OD for Track Rollers | NATV20PPX, NUTR20X |
| - | Normal Clearance | 6203, 62032RS |
| C2 | C2 Clearance | 6302 C2, 63022Z C2 |
| C3 | C3 Clearance | 6205 C3, 62052RS C3 |
| C4 | C4 Clearance | 5305J C4, 6210 C4 |
| AA040 | 40% - Shell Retinax LX2 | HK1010 AA040 |
| UG | Ungreased / Corrosion Protected | HK1010 UG |
| 0-7 | 0-7 Micron - Needle Sort | NRA5X49.8G2 0-7, K25X33X24B 0-7 |
| 0-10 | 0-10 Micron - Needle Sort | AXK6590 0-10 |



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General Information

HIGH PRECISION BEARINGS

PRODUCT DESCRIPTION

INA Combination Axial Ball And Radial Needle Bearings

- Radial precision ground needle bearing designed on ISO series NA4900 cross section.
- Various axial ball thrust bearings for light to heavy thrust loads adds length to bearing and may increase the outside diameter.
- Designed for applications where the thrust load is secondary to the radial load.

INA Combination Axial And Radial Needle Bearings

- Radial precision ground needle bearing designed on ISO series NA4900 cross section.
- Axial cylindrical thrust bearing for heavy thrust loads based on series 81100.
- Designed for applications where axial preload is required.

INA Combination Bearings For Ball Screw Support

- Matched axial cylindrical roller thrust cages with radial needle support.
- Made to P4 (ABEC 7) runout values for thrust.
- Extremely high rigidity with easily repeatable preloads.
- Available with predrilled integral mounting flange for ease of assembly without increased tolerance stack up.
- Available with seal mounting accessories.

INA 60° Contact Angle Angular Contact Ball Thrust Bearings For Ball Screw Support

- Individual bearings consist of 2 rows as a back to back arrangement with a single outer ring.
- Available as 2 matched bearings for 4 row applications.
- Available as 3 row design with one piece outer ring for stretched or vertical screws.
- Made to P4 (ABEC 7) axial runout values or available as PE version with P5(ABEC 5) runout.
- Available with integral shields or seals.
- Available with predrilled integral mounting flange for ease of assembly without increased tolerance stack up.
- Allows for economical arrangements since seals and mounting flanges included, reducing the need for associated parts.

INA Precision Locknuts

- Metric thread locknuts for high axial clamping forces.
- Designed with large axial and radial cross section for increased rigidity.
- Available with radial clamping plugs or axial deflection beams for doubling the back off torque.

INA Rotary Table Bearings

- Specialty bearing series for machine tool rotary tables and robots.
- Available in P4 precision for rotary tables with flange designs similar to Ball Screw Support Bearings.

INA YRT Series Bearings

- Large, double direction axial bearings with a radial guidance bearing.
- Support load combinations consisting of axial and radial forces as well as tilting moments.
- Holes are provided in the outer and inner rings which are suitable for flange mounting.
- The bearing consists of two axial needle roller and cage assemblies which are matched to the rings in such a way that a predetermined axial preload is achieved.
- Made to P4 (ABEC 7) tolerances.

INA ZKLDF Series Bearings

- Axial angular contact ball bearings of series ZKLDF are double row angular contact ball bearings with a 60° contact angle set in an "O" arrangement.
- They can support load combinations consisting of axial and radial forces as well as tilting moments.
- Bearings of this series have gap seals on both sides.
- The two-piece inner ring is matched to the two ball cages and the outer ring for a defined preload.
- The dimensional tolerances are class P5 (ABEC 5) and the geometrical tolerances are class P4 (ABEC 7) to DIN 620.

Part Number Identification

HIGH PRECISION BEARINGS

AXIAL ANGULAR CONTACT BALL BEARINGS AND NEEDLE ROLLER / AXIAL CYLINDRICAL ROLLER BEARINGS METRIC SERIES

ZKLN, ZKLF, ZARN, ZARF
DKLFA

ZKLN

4075

TN

| | |
|-------|---|
| ZKLN | Axial Angular Contact Ball Bearing, Double Direction |
| ZKLF | Axial Angular Contact Ball Bearing, Outer Ring Suitable for Flange Mounting |
| ZARN | Needle Roller / Axial Cylindrical Rollers Double Direction |
| ZARF | Needle Roller / Axial Cylindrical Rollers Double Direction, Outer Ring Suitable For Flange Mounting |
| DKLFA | Axial Angular Contact Ball Bearing, 3 Row, Double Direction, With Flange |

First Half – Shaft In mm
Second Half – OD In mm

| ZKL SUFFIXES | |
|--------------|------------------------------|
| 2RS | Two Contact Seals |
| 2Z | 2 Gap Seals |
| 2AP | Matched Pairs For 4 Ball Row |
| PE | Economy Version, P5 Runout |

| ZAR SUFFIXES | |
|--------------|---|
| TN | Plastic Cage |
| L | Stepped Extended Shaft Washer On 1 Side |
| PE | Economy Version, P5 Runout |

ZARF COMBINATION SEALS METRIC SERIES

DRS

DRS

40115

| PREFIX | |
|--------|---|
| DRS | Seal Ring Kit For Use With ZARF Series Bearings |

| NUMBER | |
|--------|--|
| 40115 | Shaft & OD, In Millimeters of mating ZARF Series Bearing |

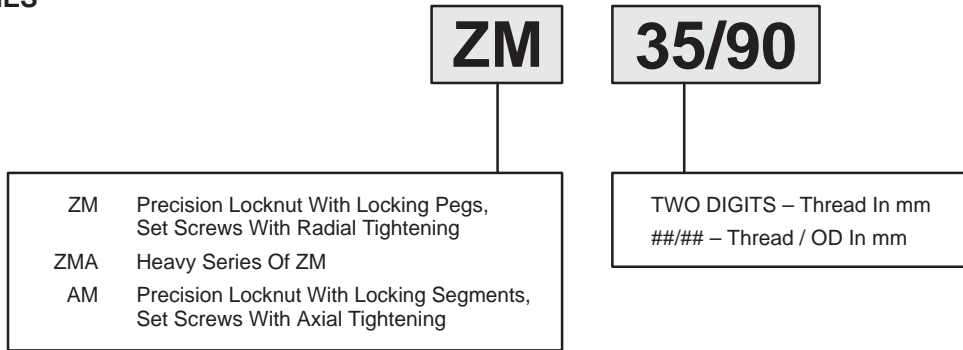


Part Number Identification

HIGH PRECISION BEARINGS

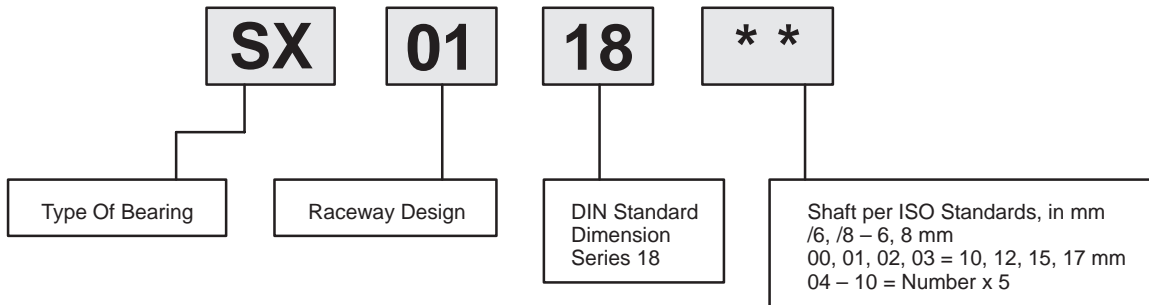
LOCKNUTS METRIC SERIES

ZM, ZMA, AM



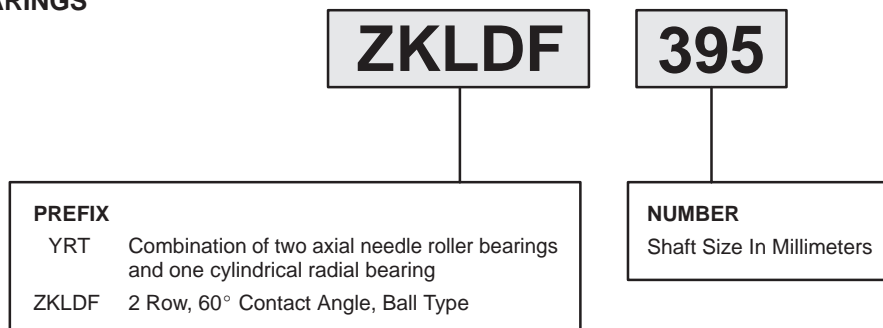
CROSSED ROLLER BEARINGS METRIC SERIES

SX



MACHINE TOOL TURNTABLE BEARINGS METRIC SERIES

YRT, ZKLDF

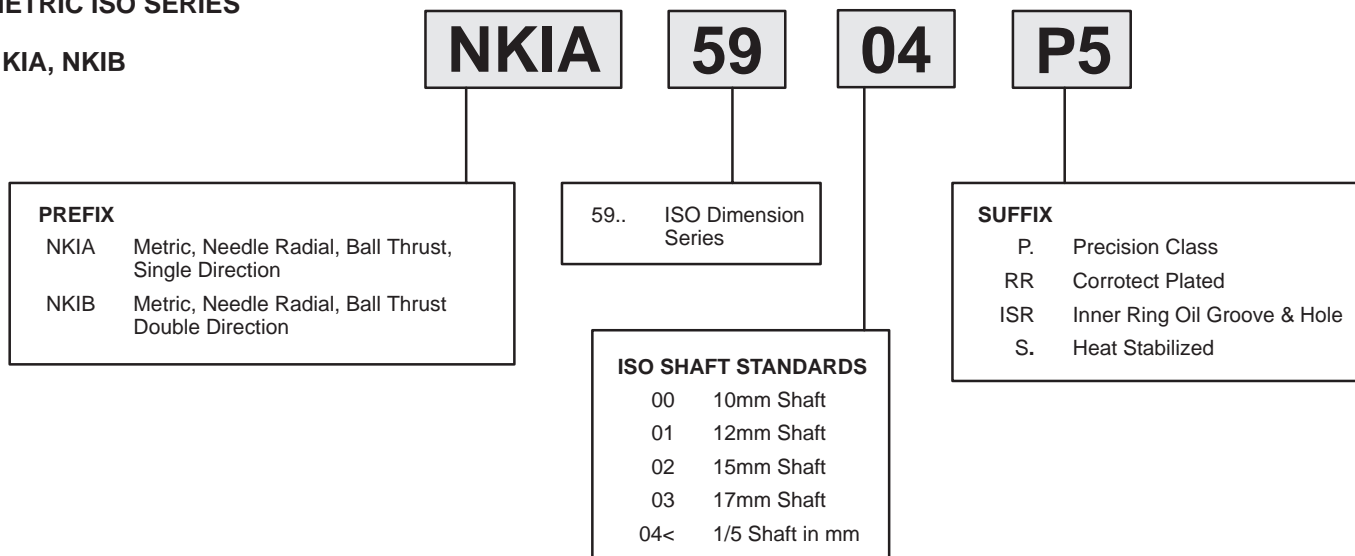


Part Number Identification

HIGH PRECISION BEARINGS

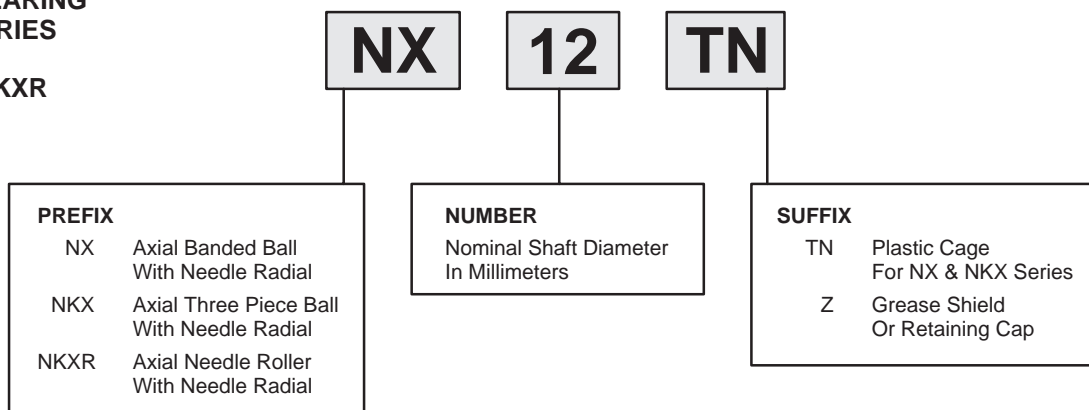
COMBINATION BEARINGS METRIC ISO SERIES

NKIA, NKIB



COMBINATION RADIAL NEEDLE BEARING METRIC SERIES

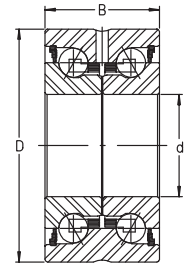
NX, NKX, NKXR



Angular Contact Thrust Ball Bearings

ZKLN..PE SERIES

- Double row, 60 degree contact angle
- Sealed
- For most ball screw support
- P5 runout with increased diameter tolerances



| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH B | WIDTH B | WGT | WGT | DYN. CAP. C | DYN. CAP. C | STAT. CAP. C ₀ | STAT. CAP. C ₀ |
|------------------|---------|---------|-------|------|---------|---------|-------|------|-------------|-------------|---------------------------|---------------------------|
| | inch | mm | inch | mm | inch | mm | lbs | kg | lbf | N | lbf | N |
| ZKLN 0624 2RS PE | 0.236 | 6 | 0.945 | 24 | 0.591 | 15 | 0.066 | 0.03 | 1,550 | 6900 | 1,910 | 8500 |
| ZKLN 1034 2RS PE | 0.394 | 10 | 1.339 | 34 | 0.787 | 20 | 0.221 | 0.1 | 3,000 | 13400 | 4,250 | 18800 |
| ZKLN 1242 2RS PE | 0.472 | 12 | 1.654 | 42 | 0.984 | 25 | 0.441 | 0.2 | 3,800 | 17000 | 5,600 | 24700 |
| ZKLN 1545 2RS PE | 0.591 | 15 | 1.772 | 45 | 0.984 | 25 | 0.463 | 0.21 | 4,000 | 17900 | 6,300 | 28000 |
| ZKLN 1747 2RS PE | 0.669 | 17 | 1.850 | 47 | 0.984 | 25 | 0.485 | 0.22 | 4,250 | 18800 | 7,000 | 31000 |
| F 822 17 | 0.669 | 17 | 1.850 | 47 | 1.181 | 30 | 0.617 | 0.28 | 5,800 | 26000 | 10,600 | 47000 |
| F 822 20 | 0.787 | 20 | 1.850 | 47 | 1.181 | 30 | 0.573 | 0.26 | 5,800 | 26000 | 10,600 | 47000 |
| ZKLN 2052 2RS PE | 0.787 | 20 | 2.047 | 52 | 1.102 | 28 | 0.684 | 0.31 | 5,800 | 26000 | 10,600 | 47000 |
| ZKLN 2557 2RS PE | 0.984 | 25 | 2.244 | 57 | 1.102 | 28 | 0.75 | 0.34 | 6,200 | 27500 | 12,400 | 55000 |
| F 822 25 | 0.984 | 25 | 2.441 | 62 | 1.181 | 30 | 1.014 | 0.46 | 6,500 | 29000 | 14,400 | 64000 |
| ZKLN 3062 2RS PE | 1.181 | 30 | 2.441 | 62 | 1.102 | 28 | 0.86 | 0.39 | 6,500 | 29000 | 14,400 | 64000 |
| F 822 30 | 1.181 | 30 | 2.441 | 62 | 1.181 | 30 | 0.904 | 0.41 | 6,500 | 29000 | 14,400 | 64000 |
| ZKLN 3572 2RS PE | 1.378 | 35 | 2.835 | 72 | 1.339 | 34 | 1.125 | 0.51 | 9,200 | 41000 | 20,000 | 89000 |
| ZKLN 4075 2RS PE | 1.575 | 40 | 2.953 | 75 | 1.339 | 34 | 1.345 | 0.61 | 9,700 | 43000 | 22,700 | 101000 |
| ZKLN 5090 2RS PE | 1.969 | 50 | 3.543 | 90 | 1.339 | 34 | 1.94 | 0.88 | 10,500 | 46500 | 28,500 | 126000 |

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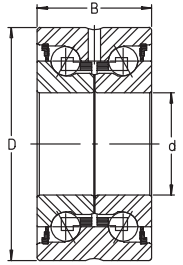
| PART NUMBER | FRICTION | FRICTION | LOCKNUT | LOCKNUT TORQUE | LOCKNUT TORQUE | SPEED LIMIT GREASE rpm |
|------------------|----------|----------|-------------|----------------|----------------|------------------------|
| | in-lbf | Nm | | ft-lbf | Nm | |
| ZKLN 0624 2RS PE | 0.35 | 0.04 | ZM 06 | 1.48 | 2 | 6800 |
| ZKLN 1034 2RS PE | 1.06 | 0.12 | ZM 10 | 4.43 | 6 | 4600 |
| ZKLN 1242 2RS PE | 1.42 | 0.16 | ZM 12 | 5.9 | 8 | 3800 |
| ZKLN 1545 2RS PE | 1.77 | 0.2 | ZM 15 | 7.38 | 10 | 3500 |
| ZKLN 1747 2RS PE | 2.12 | 0.24 | ZM 17/AM 17 | 11.06 | 15 | 3300 |
| F 822 17 | 2.66 | 0.3 | ZM 17/AM 17 | 12.5 | 17 | 3000 |
| F 822 20 | 2.66 | 0.3 | ZM 20/AM 20 | 13.28 | 18 | 3000 |
| ZKLN 2052 2RS PE | 2.66 | 0.3 | ZM 20/AM 20 | 13.28 | 18 | 3000 |
| ZKLN 2557 2RS PE | 3.54 | 0.4 | ZM 25/AM 25 | 18.44 | 25 | 2600 |
| F 822 25 | 4.43 | 0.5 | ZM 25/AM 25 | 21.4 | 29 | 2200 |
| ZKLN 3062 2RS PE | 4.43 | 0.5 | ZM 30/AM 30 | 23.6 | 32 | 2200 |
| F 822 30 | 4.43 | 0.5 | ZM 30/AM 30 | 23.6 | 32 | 2200 |
| ZKLN 3572 2RS PE | 5.31 | 0.6 | ZM 35/AM 35 | 29.5 | 40 | 2000 |
| ZKLN 4075 2RS PE | 6.2 | 0.7 | ZM 40/AM 40 | 40.6 | 55 | 1800 |
| ZKLN 5090 2RS PE | 7.97 | 0.9 | ZM 50/AM 50 | 62.7 | 85 | 1500 |

PE versions are relaxed tolerances for ball screw supports
 F 822 numbers match competitors paired bearings



Angular Contact Thrust Ball Bearings ZKLN SERIES

- Double row, 60 degree contact angle
- Sealed versions (2RS), also available shielded (2Z)
- For ball screw support
- P4 runout for highest precision



| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH B | WIDTH B | WGT | WGT | DYN. CAP. C | DYN. CAP. C | STAT. CAP. C ₀ | STAT. CAP. C ₀ |
|----------------|---------|---------|-------|------|---------|---------|--------|------|-------------|-------------|---------------------------|---------------------------|
| | inch | mm | inch | mm | inch | mm | lbs | kg | lbf | N | lbf | N |
| ZKLN 0619 2Z | 0.236 | 6 | 0.748 | 19 | 0.472 | 12 | 0.044 | 0.02 | 1,100 | 4900 | 1,400 | 6100 |
| ZKLN 0624 2RS | 0.236 | 6 | 0.945 | 24 | 0.591 | 15 | 0.066 | 0.03 | 1,550 | 6900 | 1,910 | 8500 |
| ZKLN 0832 2RS | 0.315 | 8 | 1.260 | 32 | 0.787 | 20 | 0.198 | 0.09 | 2,800 | 12500 | 3,650 | 16300 |
| ZKLN 1034 2RS | 0.394 | 10 | 1.339 | 34 | 0.787 | 20 | 0.221 | 0.1 | 3,000 | 13400 | 4,250 | 18800 |
| ZKLN 1242 2RS | 0.472 | 12 | 1.654 | 42 | 0.984 | 25 | 0.441 | 0.2 | 3,800 | 17000 | 5,600 | 24700 |
| ZKLN 1545 2RS | 0.591 | 15 | 1.772 | 45 | 0.984 | 25 | 0.463 | 0.21 | 4,000 | 17900 | 6,300 | 28000 |
| ZKLN 1747 2RS | 0.669 | 17 | 1.850 | 47 | 0.984 | 25 | 0.485 | 0.22 | 4,250 | 18800 | 7,000 | 31000 |
| ZKLN 2052 2RS | 0.787 | 20 | 2.047 | 52 | 1.102 | 28 | 0.684 | 0.31 | 5,800 | 26000 | 10,600 | 47000 |
| ZKLN 2557 2RS | 0.984 | 25 | 2.244 | 57 | 1.102 | 28 | 0.75 | 0.34 | 6,200 | 27500 | 12,400 | 55000 |
| ZKLN 3062 2RS | 1.181 | 30 | 2.441 | 62 | 1.102 | 28 | 0.86 | 0.39 | 6,500 | 29000 | 14,400 | 64000 |
| ZKLN 3072 2RS | 1.181 | 30 | 2.835 | 72 | 1.496 | 38 | 1.125 | 0.51 | 13,300 | 59000 | 24,300 | 108000 |
| ZKLN 3572 2RS | 1.378 | 35 | 2.835 | 72 | 1.339 | 34 | 1.125 | 0.51 | 9,200 | 41000 | 20,000 | 89000 |
| ZKLN 4075 2RS | 1.575 | 40 | 2.953 | 75 | 1.339 | 34 | 1.345 | 0.61 | 9,700 | 43000 | 22,700 | 101000 |
| ZKLN 4090 2RS | 1.575 | 40 | 3.543 | 90 | 1.811 | 46 | 2.095 | 0.95 | 16,200 | 72000 | 33,500 | 149000 |
| ZKLN 5090 2RS | 1.969 | 50 | 3.543 | 90 | 1.339 | 34 | 1.94 | 0.88 | 10,500 | 46500 | 28,500 | 126000 |
| ZKLN 50110 2RS | 1.969 | 50 | 4.331 | 110 | 2.126 | 54 | 5.513 | 2.5 | 25,500 | 113500 | 56,000 | 250000 |
| ZKLN 60110 2Z | 2.362 | 60 | 4.331 | 110 | 1.772 | 45 | 4.851 | 2.2 | 18,900 | 84000 | 48,000 | 214000 |
| ZKLN 70120 2Z | 2.756 | 70 | 4.724 | 120 | 1.772 | 45 | 5.292 | 2.4 | 19,800 | 88000 | 54,000 | 241000 |
| ZKLN 80130 2Z | 3.150 | 80 | 5.118 | 130 | 1.772 | 45 | 5.954 | 2.7 | 20,500 | 91000 | 60,000 | 265000 |
| ZKLN 90150 2Z | 3.543 | 90 | 5.906 | 150 | 2.165 | 55 | 9.923 | 4.5 | 30,500 | 135000 | 89,000 | 395000 |
| ZKLN 100160 2Z | 3.937 | 100 | 6.299 | 160 | 2.165 | 55 | 10.805 | 4.9 | 31,500 | 140000 | 98,000 | 435000 |

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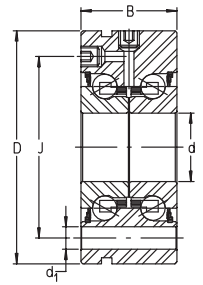
| PART NUMBER | FRICITION | FRICITION | LOCKNUT | LOCKNUT TORQUE | LOCKNUT TORQUE | SPEED LIMIT GREASE |
|----------------|-----------|-----------|------------------|----------------|----------------|--------------------|
| | in-lbf | Nm | | ft-lbf | Nm | |
| ZKLN 0619 2Z | 0.09 | 0.01 | ZM 06 | 1.48 | 2 | 14000 |
| ZKLN 0624 2RS | 0.35 | 0.04 | ZM 06 | 1.48 | 2 | 6800 |
| ZKLN 0832 2RS | 0.71 | 0.08 | ZM 08 | 2.95 | 4 | 5100 |
| ZKLN 1034 2RS | 1.06 | 0.12 | ZM 10 | 4.43 | 6 | 4600 |
| ZKLN 1242 2RS | 1.42 | 0.16 | ZM 12 | 5.9 | 8 | 3800 |
| ZKLN 1545 2RS | 1.77 | 0.2 | ZM 15 | 7.38 | 10 | 3500 |
| ZKLN 1747 2RS | 2.12 | 0.24 | ZM 17/AM 17 | 11.06 | 15 | 3300 |
| ZKLN 2052 2RS | 2.66 | 0.3 | ZM 20/AM 20 | 13.28 | 18 | 3000 |
| ZKLN 2557 2RS | 3.54 | 0.4 | ZM 25/AM 25 | 18.44 | 25 | 2600 |
| ZKLN 3062 2RS | 4.43 | 0.5 | ZM 30/AM 30 | 23.6 | 32 | 2200 |
| ZKLN 3072 2RS | 7.08 | 0.8 | ZM 30/52 AM 30 | 47.9 | 65 | 2100 |
| ZKLN 3572 2RS | 5.31 | 0.6 | ZM 35/AM 35 | 29.5 | 40 | 2000 |
| ZKLN 4075 2RS | 6.2 | 0.7 | ZM 40/AM 40 | 40.6 | 55 | 1800 |
| ZKLN 4090 2RS | 11.5 | 1.3 | ZMA 40/62/AM 40 | 81.1 | 110 | 1600 |
| ZKLN 5090 2RS | 7.97 | 0.9 | ZM 50/AM 50 | 62.7 | 85 | 1500 |
| ZKLN 50110 2RS | 23.01 | 2.6 | ZM 50/75/AM 50 | 110.6 | 150 | 2500 |
| ZKLN 60110 2Z | 8.85 | 1 | ZMA 60/98 AM 60 | 73.8 | 100 | 2400 |
| ZKLN 70120 2Z | 10.62 | 1.2 | ZMA 70/110 AM 70 | 95.9 | 130 | 2200 |
| ZKLN 80130 2Z | 12.39 | 1.4 | ZMA 80/120 | 118.0 | 160 | 2100 |
| ZKLN 90150 2Z | 20.36 | 2.3 | ZMA 90/130 AM 90 | 147.5 | 200 | 1800 |
| ZKLN 100160 2Z | 23.01 | 2.6 | ZMA 100/140 | 184.4 | 250 | 1700 |



Angular Contact Thrust Ball Bearings

ZKLF..PE SERIES

- Double row, 60 degree contact angle
- Sealed
- For most ball screw support
- With predrilled mounting flange
- P5 runout with increased diameter tolerances



| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH B | WIDTH B | WGT | WGT | DYN. CAP. C | DYN. CAP. C | STAT. CAP. C ₀ | STAT. CAP. C ₀ |
|-------------------|---------|---------|-------|------|---------|---------|------|------|-------------|-------------|---------------------------|---------------------------|
| | inch | mm | inch | mm | inch | mm | lbs | kg | lbf | N | lbf | N |
| ZKLF 1255 2RS PE | 0.472 | 12 | 2.165 | 55 | 0.984 | 25 | 0.82 | 0.37 | 3,800 | 17000 | 5,600 | 24700 |
| ZKLF 1560 2RS PE | 0.591 | 15 | 2.362 | 60 | 0.984 | 25 | 0.95 | 0.43 | 4,000 | 17900 | 6,300 | 28000 |
| ZKLF 1762 2RS PE | 0.669 | 17 | 2.441 | 62 | 0.984 | 25 | 0.99 | 0.45 | 4,250 | 18800 | 7,000 | 31000 |
| ZKLF 2068 2RS PE | 0.787 | 20 | 2.677 | 68 | 1.102 | 28 | 1.35 | 0.61 | 5,800 | 26000 | 10,600 | 47000 |
| ZKLF 2575 2RS PE | 0.984 | 25 | 2.953 | 75 | 1.102 | 28 | 1.59 | 0.72 | 6,200 | 27500 | 12,400 | 55000 |
| ZKLF 3080 2RS PE | 1.181 | 30 | 3.150 | 80 | 1.102 | 28 | 1.72 | 0.78 | 6,500 | 29000 | 14,400 | 64000 |
| ZKLF 3590 2RS PE | 1.378 | 35 | 3.543 | 90 | 1.339 | 34 | 2.49 | 1.13 | 9,200 | 41000 | 20,000 | 89000 |
| ZKLF 40100 2RS PE | 1.575 | 40 | 3.937 | 100 | 1.339 | 34 | 3.22 | 1.46 | 9,700 | 43000 | 22,700 | 101000 |
| ZKLF 50115 2RS PE | 1.969 | 50 | 4.528 | 115 | 1.339 | 34 | 4.10 | 1.86 | 10,500 | 46500 | 28,500 | 126000 |

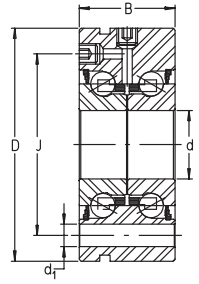
CONTINUED FROM ABOVE

| PART NUMBER | J | J | d ₁ | d ₁ | FRICTION | FRICTION | BOLTS SIZE & GRADE | BOLTS QTY. | LOCKNUT | LOCKNUT TORQUE | LOCKNUT TORQUE | SPEED LIMIT |
|-------------------|-------|----|----------------|----------------|----------|----------|--------------------|------------|-------------|----------------|----------------|-------------|
| | inch | mm | inch | mm | in-lbf | Nm | | | | ft-lbf | Nm | rpm |
| ZKLF 1255 2RS PE | 1.654 | 42 | 0.256 | 6.5 | 1.42 | 0.16 | M6-10.9 | 3 | ZM 12 | 5.9 | 8 | 3800 |
| ZKLF 1560 2RS PE | 1.811 | 46 | 0.256 | 6.5 | 1.77 | 0.2 | M6-10.9 | 3 | ZM 15 | 7.4 | 10 | 3500 |
| ZKLF 1762 2RS PE | 1.890 | 48 | 0.256 | 6.5 | 2.12 | 0.24 | M6-10.9 | 3 | ZM 17/AM 17 | 11.1 | 15 | 3300 |
| ZKLF 2068 2RS PE | 2.087 | 53 | 0.256 | 6.5 | 2.66 | 0.3 | M6-10.9 | 4 | ZM 20/AM 20 | 13.3 | 18 | 3000 |
| ZKLF 2575 2RS PE | 2.284 | 58 | 0.256 | 6.5 | 3.54 | 0.4 | M6-10.9 | 4 | ZM 25/AM 25 | 18.4 | 25 | 2600 |
| ZKLF 3080 2RS PE | 2.480 | 63 | 0.256 | 6.5 | 4.43 | 0.5 | M6-10.9 | 6 | ZM 30/AM 30 | 23.6 | 32 | 2200 |
| ZKLF 3590 2RS PE | 2.953 | 75 | 0.256 | 8.5 | 5.31 | 0.6 | M8-10.9 | 4 | ZM 35/AM 35 | 29.5 | 40 | 2000 |
| ZKLF 40100 2RS PE | 3.150 | 80 | 0.335 | 8.5 | 6.2 | 0.7 | M8-10.9 | 4 | ZM 40/AM 40 | 40.6 | 55 | 1800 |
| ZKLF 50115 2RS PE | 3.701 | 94 | 0.335 | 8.5 | 7.97 | 0.9 | M8-10.9 | 6 | ZM 50/AM 50 | 62.7 | 85 | 1500 |

Angular Contact Thrust Ball Bearings

ZKLF SERIES

- Double row, 60 degree contact angle
- Sealed version (2RS), also available shielded (2Z)
- With predrilled mounting flange
- For ball screw support
- P4 runout for highest precision



| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH B | WIDTH B | WGT | WGT | DYN. CAP. C | DYN. CAP. C | STAT. CAP. C ₀ | STAT. CAP. C ₀ | J | J |
|----------------|---------|---------|-------|------|---------|---------|-------|------|-------------|-------------|---------------------------|---------------------------|-------|-----|
| | inch | mm | inch | mm | inch | mm | lbs | kg | lbf | N | lbf | N | inch | mm |
| ZKLF 1255 2RS | 0.472 | 12 | 2.165 | 55 | 0.984 | 25 | 0.82 | 0.37 | 3,800 | 17000 | 5,600 | 24700 | 1.654 | 42 |
| ZKLF 1560 2RS | 0.591 | 15 | 2.362 | 60 | 0.984 | 25 | 0.95 | 0.43 | 4,000 | 17900 | 6,300 | 28000 | 1.811 | 46 |
| ZKLF 1762 2RS | 0.669 | 17 | 2.441 | 62 | 0.984 | 25 | 0.99 | 0.45 | 4,250 | 18800 | 7,000 | 31000 | 1.89 | 48 |
| ZKLF 2068 2RS | 0.787 | 20 | 2.677 | 68 | 1.102 | 28 | 1.35 | 0.61 | 5,800 | 26000 | 10,600 | 47000 | 2.087 | 53 |
| ZKLF 2575 2RS | 0.984 | 25 | 2.953 | 75 | 1.102 | 28 | 1.59 | 0.72 | 6,200 | 27500 | 12,400 | 55000 | 2.284 | 58 |
| ZKLF 3080 2RS | 1.181 | 30 | 3.15 | 80 | 1.102 | 28 | 1.72 | 0.78 | 6,500 | 29000 | 14,400 | 64000 | 2.48 | 63 |
| ZKLF 3590 2RS | 1.378 | 35 | 3.543 | 90 | 1.339 | 34 | 2.49 | 1.13 | 9,200 | 41000 | 20,000 | 89000 | 2.953 | 75 |
| ZKLF 40100 2RS | 1.575 | 40 | 3.937 | 100 | 1.339 | 34 | 3.22 | 1.46 | 9,700 | 43000 | 22,700 | 101000 | 3.15 | 80 |
| ZKLF 40115 2RS | 1.575 | 40 | 4.528 | 115 | 1.811 | 46 | 5 | 2.2 | 16,200 | 72000 | 33,500 | 149000 | 3.701 | 94 |
| ZKLF 50115 2RS | 1.969 | 50 | 4.528 | 115 | 1.339 | 34 | 4.1 | 1.86 | 10,500 | 46500 | 28,500 | 126000 | 3.701 | 94 |
| ZKLF 50140 2RS | 1.969 | 50 | 5.512 | 140 | 2.126 | 54 | 10.36 | 4.7 | 25,500 | 113000 | 56,000 | 250000 | 4.449 | 113 |
| ZKLF 60145 2Z | 2.362 | 60 | 5.709 | 145 | 1.772 | 45 | 9.48 | 4.3 | 18,900 | 84000 | 48,000 | 214000 | 4.724 | 120 |
| ZKLF 70155 2Z | 2.756 | 70 | 6.102 | 155 | 1.772 | 45 | 10.81 | 4.9 | 19,800 | 88000 | 54,000 | 241000 | 5.118 | 130 |
| ZKLF 80165 2Z | 3.15 | 80 | 6.496 | 165 | 1.772 | 45 | 11.69 | 5.3 | 20,500 | 91000 | 60,000 | 265000 | 5.512 | 140 |
| ZKLF 90190 2Z | 3.543 | 90 | 7.48 | 190 | 2.165 | 55 | 19.18 | 8.7 | 30,500 | 135000 | 89,000 | 395000 | 6.496 | 165 |
| ZKLF 100200 2Z | 3.937 | 100 | 7.874 | 200 | 2.165 | 55 | 20.51 | 9.3 | 31,500 | 140000 | 98,000 | 435000 | 6.89 | 175 |

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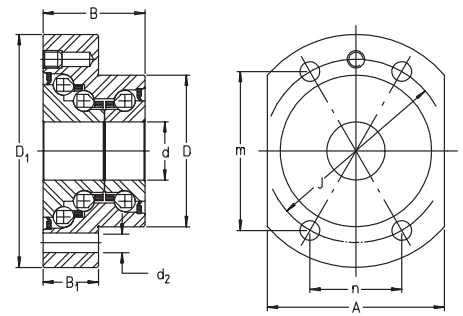
| PART NUMBER | d ₁ | d ₁ | FRICTION | FRICTION | BOLTS SIZE & GRADE | BOLTS QTY. | LOCKNUT | LOCKNUT TORQUE | LOCKNUT TORQUE | SPEED LIMIT |
|----------------|----------------|----------------|----------|----------|--------------------|------------|------------------|----------------|----------------|-------------|
| | inch | mm | in-lbf | Nm | | | | ft-lbf | Nm | |
| ZKLF 1255 2RS | 0.256 | 6.5 | 1.42 | 0.16 | M6-10.9 | 3 | ZM 12 | 5.9 | 8 | 3800 |
| ZKLF 1560 2RS | 0.256 | 6.5 | 1.77 | 0.2 | M6-10.9 | 3 | ZM 15 | 7.4 | 10 | 3500 |
| ZKLF 1762 2RS | 0.256 | 6.5 | 2.12 | 0.24 | M6-10.9 | 3 | ZM 17/AM 17 | 11.1 | 15 | 3300 |
| ZKLF 2068 2RS | 0.256 | 6.5 | 2.66 | 0.3 | M6-10.9 | 4 | ZM 20/AM 20 | 13.3 | 18 | 3000 |
| ZKLF 2575 2RS | 0.256 | 6.5 | 3.54 | 0.4 | M6-10.9 | 4 | ZM 25/AM 25 | 18.4 | 25 | 2600 |
| ZKLF 3080 2RS | 0.256 | 6.5 | 4.43 | 0.5 | M6-10.9 | 6 | ZM 30/AM 30 | 23.6 | 32 | 2200 |
| ZKLF 3590 2RS | 0.256 | 8.5 | 5.31 | 0.6 | M8-10.9 | 4 | ZM 35/AM 35 | 29.5 | 40 | 2000 |
| ZKLF 40100 2RS | 0.335 | 8.5 | 6.2 | 0.7 | M8-10.9 | 4 | ZM 40/AM 40 | 40.6 | 55 | 1800 |
| ZKLF 40115 2RS | 0.335 | 8.5 | 11.5 | 1.3 | M8-10.9 | 12 | ZMA 40/65/AM 40 | 81.1 | 110 | 1600 |
| ZKLF 50115 2RS | 0.335 | 8.5 | 7.97 | 0.9 | M8-10.9 | 6 | ZM 50/AM 50 | 62.7 | 85 | 1500 |
| ZKLF 50140 2RS | 0.413 | 10.5 | 23.01 | 2.6 | M10-10.9 | 12 | ZMA 50/75/AM 50 | 110.6 | 150 | 2500 |
| ZKLF 60145 2Z | 0.335 | 8.5 | 8.85 | 1 | M 8-8.8 | 8 | ZMA 60/98 /AM60 | 73.76 | 100 | 2400 |
| ZKLF 70155 2Z | 0.335 | 8.5 | 10.62 | 1.2 | M 8-8.8 | 8 | ZMA 70/110 /AM70 | 95.89 | 130 | 2200 |
| ZKLF 80165 2Z | 0.335 | 8.5 | 12.39 | 1.4 | M 8-8.8 | 8 | ZMA 80/120 | 118.02 | 160 | 2100 |
| ZKLF 90190 2Z | 0.413 | 10.5 | 20.36 | 2.3 | M 10-8.8 | 8 | ZMA 90/130/AM90 | 147.52 | 200 | 1800 |
| ZKLF 100200 2Z | 0.413 | 10.5 | 23.01 | 2.6 | M 10-8.8 | 8 | ZMA 100/140 | 184.4 | 250 | 1700 |



Angular Contact Thrust Ball Bearings

DKLFA SERIES

- 3 row design, 60 degree contact angle
- Ball screw support and stretching
- With predrilled mounting flange
- Sealed



| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH B | WIDTH B | WGT | WGT |
|-----------------|---------|---------|-------|------|---------|---------|-------|------|
| | inch | mm | inch | mm | inch | mm | lbs | kg |
| DKLFA 1575 2RS | 0.591 | 15 | 1.772 | 45 | 1.260 | 32 | 1.169 | 0.53 |
| DKLFA 2080 2RS | 0.787 | 20 | 2.047 | 52 | 1.378 | 35 | 1.544 | 0.7 |
| DKLFA 2590 2RS | 0.984 | 25 | 2.244 | 57 | 1.496 | 38 | 1.985 | 0.9 |
| DKLFA 30100 2RS | 1.181 | 30 | 2.441 | 62 | 1.496 | 38 | 2.205 | 1 |
| DKLFA 40115 2RS | 1.575 | 40 | 2.835 | 72 | 1.654 | 42 | 3.308 | 1.5 |

CONTINUED FROM ABOVE

| PART NUMBER | INBOARD ROWS DYN. CAP. C | INBOARD ROWS DYN. CAP. C | INBOARD ROWS STAT. CAP. C ₀ | INBOARD ROWS STAT. CAP. C ₀ | OUTBOARD STRETCHING ROWS DYN. CAP. C | OUTBOARD STRETCHING ROWS DYN. CAP. C | OUTBOARD STRETCHING ROWS STAT. CAP. C ₀ | OUTBOARD STRETCHING ROWS STAT. CAP. C ₀ | SPEED LIMIT GREASE |
|-----------------|--------------------------|--------------------------|--|--|--------------------------------------|--------------------------------------|--|--|--------------------|
| | lbf | N | lbf | N | lbf | N | lbf | N | rpm |
| DKLFA 1575 2RS | 4,000 | 17.9 | 6,300 | 28 | 8,300 | 37 | 18,700 | 83 | 2600 |
| DKLFA 2080 2RS | 5,800 | 26 | 10,600 | 47 | 10,000 | 44.5 | 24,700 | 110 | 2200 |
| DKLFA 2590 2RS | 6,200 | 27.5 | 12,400 | 55 | 11,700 | 52 | 32,500 | 144 | 2000 |
| DKLFA 30100 2RS | 6,500 | 29 | 14,400 | 64 | 12,400 | 55 | 37,000 | 165 | 1800 |
| DKLFA 40115 2RS | 9,700 | 43 | 22,700 | 101 | 16,400 | 73 | 51,000 | 227 | 1500 |

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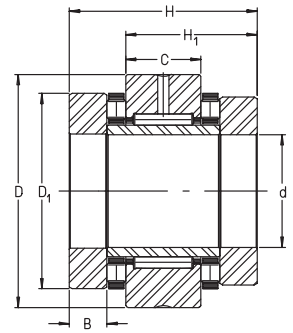
| PART NUMBER | D ₁ | D ₁ | B ₁ | B ₁ | J | J | d ₂ | d ₂ | m | m | n | n | A | A | THREAD | BOLT QTY. |
|-----------------|----------------|----------------|----------------|----------------|-------|----|----------------|----------------|-------|------|-------|------|-------|----|--------|-----------|
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | | |
| DKLFA 1575 2RS | 2.953 | 75 | 0.709 | 18 | 2.284 | 58 | 0.268 | 6.8 | 1.976 | 50.2 | 1.142 | 29 | 2.165 | 55 | M6 | 4 |
| DKLFA 2080 2RS | 3.150 | 80 | 0.748 | 19 | 2.480 | 63 | 0.268 | 6.8 | 2.150 | 54.6 | 1.240 | 31.5 | 2.441 | 62 | M6 | 4 |
| DKLFA 2590 2RS | 3.543 | 90 | 0.866 | 22 | 2.953 | 75 | 0.347 | 8.8 | 2.087 | 53 | 2.087 | 53 | 2.756 | 70 | M8 | 6 |
| DKLFA 30100 2RS | 3.937 | 100 | 0.866 | 22 | 3.150 | 80 | 0.347 | 8.8 | 2.228 | 56.6 | 2.228 | 56.6 | 2.835 | 72 | M8 | 6 |
| DKLFA 40115 2RS | 4.528 | 115 | 0.906 | 23 | 3.701 | 94 | 0.347 | 8.8 | 2.618 | 66.5 | 2.618 | 66.5 | 3.543 | 90 | M8 | 6 |

Independent capacity values are given for the ball rows depending on the load direction.

Ball Screw Support Bearings

ZARN SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearings
- Metric series
- P4 axial precision



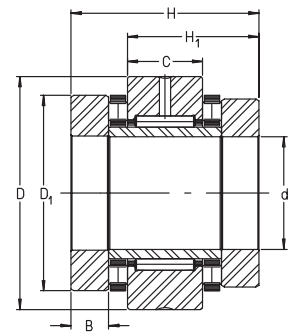
| PART NUMBER | SHAFT | OD | WIDTH | WEIGHT | DYN. CAP. | STAT. CAP. | DYN. CAP. | STAT. CAP. |
|---------------|--------|--------|--------|--------|-----------|------------|-----------|------------|
| | d | D | H | | AXIAL | AXIAL | RADIAL | RADIAL |
| | mm | mm | mm | kg | N | N | N | N |
| | inch | inch | inch | lbs | lbf | lbf | lbf | lbf |
| ZARN 1545 TN | 15 | 45 | 40 | 0.34 | 24900 | 53000 | 13000 | 17500 |
| ZARN 1545 TN | 0.5906 | 1.7717 | 1.5748 | 0.7 | 5600 | 11900 | 2900 | 3900 |
| ZARN 1747 TN | 17 | 47 | 43 | 0.37 | 26000 | 57000 | 14000 | 19900 |
| ZARN 1747 TN | 0.6693 | 1.8504 | 1.6929 | 0.8 | 5800 | 12800 | 3100 | 4500 |
| ZARN 2052 TN | 20 | 52 | 46 | 0.41 | 33500 | 76000 | 14900 | 22400 |
| ZARN 2052 TN | 0.7874 | 2.0472 | 1.811 | 0.9 | 7500 | 17100 | 3300 | 5000 |
| ZARN 2062 TN | 20 | 62 | 60 | 0.87 | 64000 | 141000 | 22600 | 36000 |
| ZARN 2062 TN | 0.7874 | 2.4409 | 2.3622 | 1.9 | 14400 | 31700 | 5100 | 8100 |
| ZARN 2572 TN | 25 | 72 | 60 | 1.17 | 80000 | 199000 | 24300 | 41000 |
| ZARN 2572 TN | 0.9843 | 2.8346 | 2.3622 | 2.6 | 18000 | 44700 | 5500 | 9200 |
| ZARN 2557 TN | 25 | 57 | 50 | 0.53 | 35500 | 86000 | 22600 | 36000 |
| ZARN 2557 TN | 0.9843 | 2.2441 | 1.9685 | 1.2 | 8000 | 19300 | 5100 | 8100 |
| ZARN 3080 TN | 30 | 80 | 66 | 1.5 | 107000 | 265000 | 26000 | 47000 |
| ZARN 3080 TN | 1.1811 | 3.1496 | 2.5984 | 3.3 | 24100 | 59600 | 5800 | 10600 |
| ZARN 3062 TN | 30 | 62 | 50 | 0.6 | 39000 | 101000 | 24300 | 41500 |
| ZARN 3062 TN | 1.1811 | 2.4409 | 1.9685 | 1.3 | 8800 | 22700 | 5500 | 9300 |
| ZARN 3585 TN | 35 | 85 | 66 | 1.65 | 105000 | 265000 | 27500 | 53000 |
| ZARN 3585 TN | 1.378 | 3.3465 | 2.5984 | 3.6 | 23600 | 59600 | 6200 | 11900 |
| ZARN 3570 TN | 35 | 70 | 54 | 0.8 | 56000 | 148000 | 26000 | 47000 |
| ZARN 3570 TN | 1.378 | 2.7559 | 2.126 | 1.8 | 12600 | 33300 | 5800 | 10600 |
| ZARN 4090 TN | 40 | 90 | 75 | 2.09 | 117000 | 315000 | 38000 | 74000 |
| ZARN 4090 TN | 1.5748 | 3.5433 | 2.9528 | 4.6 | 26300 | 70800 | 8500 | 16600 |
| ZARN 4075 TN | 40 | 75 | 54 | 0.9 | 59000 | 163000 | 27500 | 53000 |
| ZARN 4075 TN | 1.5748 | 2.9528 | 2.126 | 2 | 13300 | 36600 | 6200 | 11900 |
| ZARN 45105 TN | 45 | 105 | 82 | 3.02 | 154000 | 405000 | 40000 | 82000 |
| ZARN 45105 TN | 1.7717 | 4.1339 | 3.2283 | 6.7 | 34600 | 91100 | 9000 | 18400 |
| ZARN 4580 TN | 45 | 80 | 60 | 1.12 | 61000 | 177000 | 38000 | 74000 |
| ZARN 4580 TN | 1.7717 | 3.1496 | 2.3622 | 2.5 | 13700 | 39800 | 8500 | 16600 |
| ZARN 5090 TN | 50 | 90 | 60 | 1.43 | 90000 | 300000 | 40000 | 82000 |
| ZARN 5090 TN | 1.9685 | 3.5433 | 2.3622 | 3.2 | 20200 | 67400 | 9000 | 18400 |
| ZARN 50110 TN | 50 | 110 | 82 | 3.3 | 172000 | 480000 | 42000 | 90000 |
| ZARN 50110 TN | 1.9685 | 4.3307 | 3.2283 | 7.3 | 38700 | 107900 | 9400 | 20200 |
| ZARN 55115 TN | 55 | 115 | 82 | 3.5 | 177000 | 500000 | 44000 | 98000 |
| ZARN 55115 TN | 2.1654 | 4.5276 | 3.2283 | 7.7 | 39800 | 112400 | 9900 | 22000 |
| ZARN 60120 TN | 60 | 120 | 82 | 3.7 | 187000 | 550000 | 44500 | 92000 |
| ZARN 60120 TN | 2.3622 | 4.7244 | 3.2283 | 8.2 | 42000 | 123700 | 10000 | 20700 |
| ZARN 65125 TN | 65 | 125 | 82 | 4 | 172000 | 500000 | 54000 | 104000 |
| ZARN 65125 TN | 2.5591 | 4.9213 | 3.2283 | 8.8 | 38700 | 112400 | 12100 | 23400 |
| ZARN 70130 TN | 70 | 130 | 82 | 4.1 | 201000 | 630000 | 56000 | 119000 |
| ZARN 70130 TN | 2.7559 | 5.1181 | 3.2283 | 9 | 45200 | 141600 | 12600 | 26800 |
| ZARN 75155 TN | 75 | 155 | 100 | 7.9 | 290000 | 890000 | 72000 | 132000 |
| ZARN 75155 TN | 2.9528 | 6.1024 | 3.937 | 17.4 | 65200 | 200100 | 16200 | 29700 |
| ZARN 90180 TN | 90 | 180 | 110 | 11.6 | 325000 | 1030000 | 98000 | 210000 |
| ZARN 90180 TN | 3.5433 | 7.0866 | 4.3307 | 25.6 | 73100 | 231600 | 22000 | 47200 |



Ball Screw Support Bearings

ZARN SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearings
- Metric series
- P4 axial precision

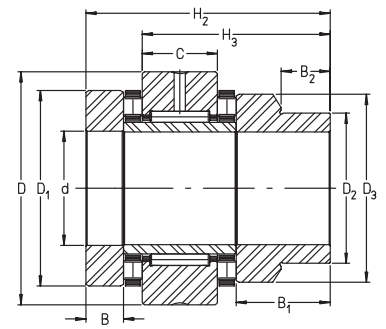


| H ₁ mm inch | C mm inch | D ₁ mm inch | B mm inch | SPEED LIMIT OIL rpm | SPEED LIMIT GREASE rpm | BEARING FRICTION Nm in-lbf | LOCKNUT TORQUE Nm in-lbf | PART NUMBER |
|------------------------------|-----------------|------------------------------|-----------------|---------------------------|------------------------------|----------------------------------|--------------------------------|------------------------------|
| 28 1.1024 | 16 0.6299 | 35 1.378 | 7.5 0.2953 | 8500 | 2200 | 0.35 3.1 | 10 89 | ZARN 1545 TN ZARN 1545 TN |
| 29.5 | 16 | 38 | 9 | 7800 | 2100 | 0.4 | 12 | ZARN 1747 TN |
| 1.1614 | 0.6299 | 1.4961 | 0.3543 | 7800 | 2100 | 3.54 | 106 | ZARN 1747 TN |
| 31 | 16 | 42 | 10 | 7000 | 2000 | 0.5 | 18 | ZARN 2052 TN |
| 1.2205 | 0.6299 | 1.6535 | 0.3937 | 7000 | 2000 | 4.43 | 159 | ZARN 2052 TN |
| 40 | 20 | 52 | 12.5 | 6000 | 1500 | 1.3 | 38 | ZARN 2062 TN |
| 1.5748 | 0.7874 | 2.0472 | 0.4921 | 6000 | 1500 | 11.51 | 336 | ZARN 2062 TN |
| 40 | 20 | 62 | 12.5 | 4900 | 1400 | 1.6 | 55 | ZARN 2572 TN |
| 1.5748 | 0.7874 | 2.4409 | 0.4921 | 4900 | 1400 | 14.16 | 487 | ZARN 2572 TN |
| 35 | 20 | 47 | 10 | 6000 | 1900 | 0.55 | 25 | ZARN 2557 TN |
| 1.378 | 0.7874 | 1.8504 | 0.3937 | 6000 | 1900 | 4.87 | 221 | ZARN 2557 TN |
| 43 | 20 | 68 | 14 | 4400 | 1300 | 2.1 | 75 | ZARN 3080 TN |
| 1.6929 | 0.7874 | 2.6772 | 0.5512 | 4400 | 1300 | 18.59 | 664 | ZARN 3080 TN |
| 35 | 20 | 52 | 10 | 5500 | 1800 | 0.65 | 32 | ZARN 3062 TN |
| 1.378 | 0.7874 | 2.0472 | 0.3937 | 5500 | 1800 | 5.75 | 283 | ZARN 3062 TN |
| 43 | 20 | 73 | 14 | 4000 | 1250 | 2.3 | 100 | ZARN 3585 TN |
| 1.6929 | 0.7874 | 2.874 | 0.5512 | 4000 | 1250 | 20.36 | 885 | ZARN 3585 TN |
| 37 | 20 | 60 | 11 | 4800 | 1700 | 0.9 | 42 | ZARN 3570 TN |
| 1.4567 | 0.7874 | 2.3622 | 0.4331 | 4800 | 1700 | 7.97 | 372 | ZARN 3570 TN |
| 50 | 25 | 78 | 16 | 3700 | 1200 | 2.5 | 120 | ZARN 4090 TN |
| 1.9685 | 0.9843 | 3.0709 | 0.6299 | 3700 | 1200 | 22.13 | 1062 | ZARN 4090 TN |
| 37 | 20 | 65 | 11 | 4400 | 1600 | 1 | 55 | ZARN 4075 TN |
| 1.4567 | 0.7874 | 2.5591 | 0.4331 | 4400 | 1600 | 8.85 | 487 | ZARN 4075 TN |
| 53.5 | 25 | 90 | 17.5 | 3300 | 1150 | 3.5 | 150 | ZARN 45105 TN |
| 2.1063 | 0.9843 | 3.5433 | 0.689 | 3300 | 1150 | 30.98 | 1328 | ZARN 45105 TN |
| 42.5 | 25 | 70 | 11.5 | 4000 | 1500 | 1.2 | 65 | ZARN 4580 TN |
| 1.6732 | 0.9843 | 2.7559 | 0.4528 | 4000 | 1500 | 10.62 | 575 | ZARN 4580 TN |
| 42.5 | 25 | 78 | 11.5 | 3600 | 1200 | 2.2 | 85 | ZARN 5090 TN |
| 1.6732 | 0.9843 | 3.0709 | 0.4528 | 3600 | 1200 | 19.47 | 752 | ZARN 5090 TN |
| 53.5 | 25 | 95 | 17.5 | 3100 | 1100 | 3.8 | 180 | ZARN 50110 TN |
| 2.1063 | 0.9843 | 3.7402 | 0.689 | 3100 | 1100 | 33.63 | 1593 | ZARN 50110 TN |
| 53.5 | 25 | 100 | 17.5 | 2900 | 1000 | 4 | 220 | ZARN 55115 TN |
| 2.1063 | 0.9843 | 3.937 | 0.689 | 2900 | 1000 | 35.4 | 1947 | ZARN 55115 TN |
| 53.5 | 25 | 105 | 17.5 | 2700 | 950 | 4.2 | 250 | ZARN 60120 TN |
| 2.1063 | 0.9843 | 4.1339 | 0.689 | 2700 | 950 | 37.17 | 2213 | ZARN 60120 TN |
| 53.5 | 25 | 110 | 17.5 | 2600 | 900 | 3.9 | 270 | ZARN 65125 TN |
| 2.1063 | 0.9843 | 4.3307 | 0.689 | 2600 | 900 | 34.52 | 2390 | ZARN 65125 TN |
| 53.5 | 25 | 115 | 17.5 | 2400 | 800 | 4.8 | 330 | ZARN 70130 TN |
| 2.1063 | 0.9843 | 4.5276 | 0.689 | 2400 | 800 | 42.49 | 2921 | ZARN 70130 TN |
| 65 | 30 | 135 | 21 | 2100 | 700 | 8 | 580 | ZARN 75155 TN |
| 2.5591 | 1.1811 | 5.315 | 0.8268 | 2100 | 700 | 70.81 | 5134 | ZARN 75155 TN |
| 72.5 | 35 | 160 | 22.5 | 1800 | 700 | 10.5 | 960 | ZARN 90180 TN |
| 2.8543 | 1.378 | 6.2992 | 0.8858 | 1800 | 700 | 92.94 | 8497 | ZARN 90180 TN |

Ball Screw Support Bearings

ZARN..LTN SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearings
- Extended shaft washer for DIN 3760 series metric seal
- Metric series
- P4 axial precision



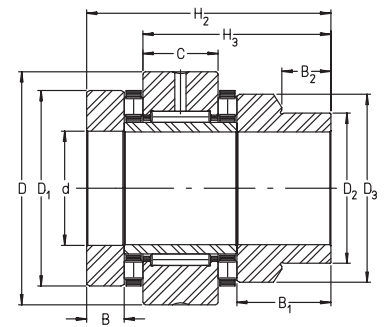
| PART NUMBER | SHAFT d mm inch | OD D mm inch | WIDTH H ₂ mm inch | WEIGHT kg lbs | DYN. CAP. AXIAL N lbf | STAT. CAP. AXIAL N lbf | DYN. CAP. RADIAL N lbf | STAT. CAP. RADIAL N lbf | H ₃ mm inch | C mm inch |
|----------------|--------------------------|-----------------------|---------------------------------------|---------------------|--------------------------------|---------------------------------|---------------------------------|----------------------------------|------------------------------|-----------------|
| ZARN 1545 LTN | 15 | 45 | 53 | 0.37 | 24900 | 53000 | 13000 | 17500 | 41 | 16 |
| ZARN 1545 LTN | 0.5906 | 1.7717 | 2.0866 | 0.82 | 5600 | 11900 | 2920 | 3930 | 1.6142 | 0.6299 |
| ZARN 1747 LTN | 17 | 47 | 57 | 0.41 | 26000 | 57000 | 14000 | 19900 | 43.5 | 16 |
| ZARN 1747 LTN | 0.6693 | 1.8504 | 2.2441 | 0.9 | 5850 | 12800 | 3150 | 4470 | 1.7126 | 0.6299 |
| ZARN 2052 LTN | 20 | 52 | 60 | 0.46 | 33500 | 76000 | 14900 | 22400 | 45 | 16 |
| ZARN 2052 LTN | 0.7874 | 2.0472 | 2.3622 | 1.01 | 7530 | 17100 | 3350 | 5040 | 1.7717 | 0.6299 |
| ZARN 2062 LTN | 20 | 62 | 75 | 0.99 | 64000 | 141000 | 22600 | 36000 | 55 | 20 |
| ZARN 2062 LTN | 0.7874 | 2.4409 | 2.9528 | 2.18 | 14400 | 32000 | 5080 | 8090 | 2.1654 | 0.7874 |
| ZARN 2557 LTN | 25 | 57 | 65 | 0.59 | 35500 | 86000 | 22600 | 36000 | 50 | 20 |
| ZARN 2557 LTN | 0.9843 | 2.2441 | 2.5591 | 1.3 | 8000 | 19000 | 5080 | 8090 | 1.9685 | 0.7874 |
| ZARN 2572 LTN | 25 | 72 | 75 | 1.32 | 80000 | 199000 | 24300 | 41000 | 55 | 20 |
| ZARN 2572 LTN | 0.9843 | 2.8346 | 2.9528 | 2.91 | 18000 | 45000 | 5460 | 9220 | 2.1654 | 0.7874 |
| ZARN 3062 LTN | 30 | 62 | 65 | 0.75 | 39000 | 101000 | 24300 | 41500 | 50 | 20 |
| ZARN 3062 LTN | 1.1811 | 2.4409 | 2.5591 | 1.65 | 8800 | 23000 | 5460 | 9330 | 1.9685 | 0.7874 |
| ZARN 3080 LTN | 30 | 80 | 82 | 1.7 | 107000 | 265000 | 26000 | 47000 | 59 | 20 |
| ZARN 3080 LTN | 1.1811 | 3.1496 | 3.2283 | 3.75 | 24100 | 60000 | 5850 | 10600 | 2.3228 | 0.7874 |
| ZARN 3570 LTN | 35 | 70 | 70 | 0.93 | 56000 | 148000 | 26000 | 47000 | 53 | 20 |
| ZARN 3570 LTN | 1.378 | 2.7559 | 2.7559 | 2.05 | 12600 | 33000 | 5850 | 10600 | 2.0866 | 0.7874 |
| ZARN 3585 LTN | 35 | 85 | 82 | 1.8 | 105000 | 265000 | 27500 | 53000 | 59 | 20 |
| ZARN 3585 LTN | 1.378 | 3.3465 | 3.2283 | 3.97 | 23600 | 60000 | 6180 | 11900 | 2.3228 | 0.7874 |
| ZARN 4075 LTN | 40 | 75 | 70 | 1 | 59000 | 163000 | 27500 | 53000 | 53 | 20 |
| ZARN 4075 LTN | 1.5748 | 2.9528 | 2.7559 | 2.21 | 13300 | 37000 | 6180 | 11900 | 2.0866 | 0.7874 |
| ZARN 4090 LTN | 40 | 90 | 93 | 2.39 | 117000 | 315000 | 38000 | 74000 | 68 | 25 |
| ZARN 4090 LTN | 1.5748 | 3.5433 | 3.6614 | 5.27 | 26300 | 71000 | 8540 | 16600 | 2.6772 | 0.9843 |
| ZARN 4580 LTN | 45 | 80 | 75 | 1.27 | 61000 | 177000 | 38000 | 74000 | 57.5 | 25 |
| ZARN 4580 LTN | 1.7717 | 3.1496 | 2.9528 | 2.8 | 13700 | 40000 | 8540 | 16600 | 2.2638 | 0.9843 |
| ZARN 45105 LTN | 45 | 105 | 103 | 3.42 | 154000 | 405000 | 40000 | 82000 | 74.5 | 25 |
| ZARN 45105 LTN | 1.7717 | 4.1339 | 4.0551 | 7.54 | 35000 | 91000 | 8990 | 18000 | 2.9331 | 0.9843 |
| ZARN 5090 LTN | 50 | 90 | 78 | 1.78 | 90000 | 300000 | 40000 | 82000 | 60.5 | 25 |
| ZARN 5090 LTN | 1.9685 | 3.5433 | 3.0709 | 3.92 | 20000 | 67000 | 8990 | 18000 | 2.3819 | 0.9843 |
| ZARN 50110 LTN | 50 | 110 | 103 | 3.75 | 172000 | 480000 | 42000 | 90000 | 74.5 | 25 |
| ZARN 50110 LTN | 1.9685 | 4.3307 | 4.0551 | 8.27 | 39000 | 108000 | 9440 | 20000 | 2.9331 | 0.9843 |
| ZARN 55115 LTN | 55 | 115 | 103 | 4 | 177000 | 500000 | 44000 | 98000 | 74.5 | 25 |
| ZARN 55115 LTN | 2.1654 | 4.5276 | 4.0551 | 8.82 | 40000 | 112000 | 9890 | 22000 | 2.9331 | 0.9843 |
| ZARN 60120 LTN | 60 | 120 | 103 | 4.85 | 187000 | 550000 | 44500 | 92000 | 74.5 | 25 |
| ZARN 60120 LTN | 2.3622 | 4.7244 | 4.0551 | 10.69 | 42000 | 124000 | 10000 | 21000 | 2.9331 | 0.9843 |
| ZARN 65125 LTN | 65 | 125 | 103 | 4.6 | 172000 | 500000 | 54000 | 104000 | 74.5 | 25 |
| ZARN 65125 LTN | 2.5591 | 4.9213 | 4.0551 | 10.14 | 39000 | 112000 | 12000 | 23000 | 2.9331 | 0.9843 |
| ZARN 70130 LTN | 70 | 130 | 103 | 4.85 | 201000 | 630000 | 56000 | 119000 | 74.5 | 25 |
| ZARN 70130 LTN | 2.7559 | 5.1181 | 4.0551 | 10.69 | 45000 | 142000 | 13000 | 27000 | 2.9331 | 0.9843 |
| ZARN 75155 LTN | 75 | 155 | 125 | 9.1 | 290000 | 890000 | 72000 | 132000 | 90 | 30 |
| ZARN 75155 LTN | 2.9528 | 6.1024 | 4.9213 | 20.07 | 65000 | 200000 | 16000 | 30000 | 3.5433 | 1.1811 |
| ZARN 90180 LTN | 90 | 180 | 135 | 13.05 | 325000 | 1030000 | 98000 | 210000 | 97.5 | 35 |
| ZARN 90180 LTN | 3.5433 | 7.0866 | 5.315 | 28.78 | 73000 | 232000 | 22000 | 47000 | 3.8386 | 1.378 |



Ball Screw Support Bearings

ZARN..LTN SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearings
- Extended shaft washer for DIN 3760 series metric seal
- Metric series
- P4 axial precision

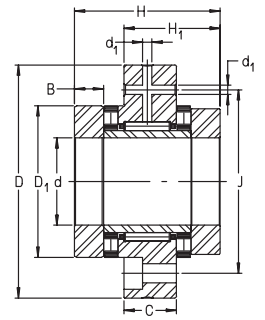


| D ₁ mm inch | D ₂ mm inch | D ₃ mm inch | B mm inch | B ₁ mm inch | B ₂ mm inch | SPEED LIMIT OIL rpm | SPEED LIMIT GREASE rpm | BEARING FRICTION Nm in-lbf | LOCKNUT TORQUE Nm ft-lbf | SEAL SIZE PER DIN3760 | PART NUMBER |
|------------------------------|------------------------------|------------------------------|-----------------|------------------------------|------------------------------|---------------------------|------------------------------|-------------------------------------|-----------------------------------|-----------------------------|----------------|
| 35 | 24 | 34 | 7.5 | 20.5 | 11 | 8500 | 2200 | 0.35 | 10 | 24x35x7 | ZARN 1545 LTN |
| 1.378 | 0.9449 | 1.3386 | 0.2953 | 0.8071 | 0.4331 | 8500 | 2200 | 3.1 | 7 | 24x35x7 | ZARN 1545 LTN |
| 38 | 28 | 38 | 9 | 23 | 11 | 7800 | 2100 | 0.4 | 12 | 28x40x7 | ZARN 1747 LTN |
| 1.4961 | 1.1024 | 1.4961 | 0.3543 | 0.9055 | 0.4331 | 7800 | 2100 | 3.5 | 9 | 28x40x7 | ZARN 1747 LTN |
| 42 | 30 | 40 | 10 | 24 | 11 | 7000 | 2000 | 0.5 | 18 | 30x42x7 | ZARN 2052 LTN |
| 1.6535 | 1.1811 | 1.5748 | 0.3937 | 0.9449 | 0.4331 | 7000 | 2000 | 4.4 | 13 | 30x42x7 | ZARN 2052 LTN |
| 52 | 40 | 50 | 12.5 | 27.5 | 11 | 6000 | 1500 | 1.3 | 38 | 40x52x7 | ZARN 2062 LTN |
| 2.0472 | 1.5748 | 1.9685 | 0.4921 | 1.0827 | 0.4331 | 6000 | 1500 | 11.5 | 28 | 40x52x7 | ZARN 2062 LTN |
| 47 | 36 | 45 | 10 | 25 | 11 | 6000 | 1900 | 0.55 | 25 | 36x47x7 | ZARN 2557 LTN |
| 1.8504 | 1.4173 | 1.7717 | 0.3937 | 0.9843 | 0.4331 | 6000 | 1900 | 4.9 | 18 | 36x47x7 | ZARN 2557 LTN |
| 62 | 48 | 60 | 12.5 | 27.5 | 11 | 4900 | 1400 | 1.6 | 55 | 48x62x8 | ZARN 2572 LTN |
| 2.4409 | 1.8898 | 2.3622 | 0.4921 | 1.0827 | 0.4331 | 4900 | 1400 | 14.2 | 41 | 48x62x8 | ZARN 2572 LTN |
| 52 | 40 | 50 | 10 | 25 | 11 | 5500 | 1800 | 0.65 | 32 | 40x52x7 | ZARN 3062 LTN |
| 2.0472 | 1.5748 | 1.9685 | 0.3937 | 0.9843 | 0.4331 | 5500 | 1800 | 5.8 | 24 | 40x52x7 | ZARN 3062 LTN |
| 68 | 52 | 66 | 14 | 30 | 12 | 4400 | 1300 | 2.1 | 75 | 52x68x8 | ZARN 3080 LTN |
| 2.6772 | 2.0472 | 2.5984 | 0.5512 | 1.1811 | 0.4724 | 4400 | 1300 | 18.6 | 55 | 52x68x8 | ZARN 3080 LTN |
| 60 | 45 | 58 | 11 | 27 | 12 | 4800 | 1700 | 0.9 | 42 | 45x60x8 | ZARN 3570 LTN |
| 2.3622 | 1.7717 | 2.2835 | 0.4331 | 1.063 | 0.4724 | 4800 | 1700 | 8 | 31 | 45x60x8 | ZARN 3570 LTN |
| 73 | 60 | 73 | 14 | 30 | 12 | 4000 | 1250 | 2.3 | 100 | 60x75x8 | ZARN 3585 LTN |
| 2.874 | 2.3622 | 2.874 | 0.5512 | 1.1811 | 0.4724 | 4000 | 1250 | 20.4 | 74 | 60x75x8 | ZARN 3585 LTN |
| 65 | 50 | 63 | 11 | 27 | 12 | 4400 | 1600 | 1 | 55 | 50x65x8 | ZARN 4075 LTN |
| 2.5591 | 1.9685 | 2.4803 | 0.4331 | 1.063 | 0.4724 | 4400 | 1600 | 8.9 | 41 | 50x65x8 | ZARN 4075 LTN |
| 78 | 60 | 78 | 16 | 34 | 12 | 3700 | 1200 | 2.5 | 120 | 60x80x8 | ZARN 4090 LTN |
| 3.0709 | 2.3622 | 3.0709 | 0.6299 | 1.3386 | 0.4724 | 3700 | 1200 | 22.1 | 89 | 60x80x8 | ZARN 4090 LTN |
| 70 | 56 | 68 | 11.5 | 26.5 | 12 | 4000 | 1500 | 1.2 | 65 | 56x70x8 | ZARN 4580 LTN |
| 2.7559 | 2.2047 | 2.6772 | 0.4528 | 1.0433 | 0.4724 | 4000 | 1500 | 10.6 | 48 | 56x70x8 | ZARN 4580 LTN |
| 90 | 70 | 88 | 17.5 | 38.5 | 14 | 3300 | 1150 | 3.5 | 150 | 70x90x10 | ZARN 45105 LTN |
| 3.5433 | 2.7559 | 3.4646 | 0.689 | 1.5157 | 0.5512 | 3300 | 1150 | 31 | 111 | 70x90x10 | ZARN 45105 LTN |
| 78 | 60 | 78 | 11.5 | 29.5 | 12 | 3600 | 1200 | 2.2 | 85 | 60x80x8 | ZARN 5090 LTN |
| 3.0709 | 2.3622 | 3.0709 | 0.4528 | 1.1614 | 0.4724 | 3600 | 1200 | 19.5 | 63 | 60x80x8 | ZARN 5090 LTN |
| 95 | 75 | 93 | 17.5 | 38.5 | 14 | 3100 | 1100 | 3.8 | 180 | 75x95x10 | ZARN 50110 LTN |
| 3.7402 | 2.9528 | 3.6614 | 0.689 | 1.5157 | 0.5512 | 3100 | 1100 | 33.6 | 133 | 75x95x10 | ZARN 50110 LTN |
| 100 | 80 | 98 | 17.5 | 38.5 | 14 | 2900 | 1000 | 4 | 220 | 80x100x10 | ZARN 55115 LTN |
| 3.937 | 3.1496 | 3.8583 | 0.689 | 1.5157 | 0.5512 | 2900 | 1000 | 35.4 | 162 | 80x100x10 | ZARN 55115 LTN |
| 105 | 90 | 105 | 17.5 | 38.5 | 16 | 2700 | 950 | 4.2 | 250 | 90x110x12 | ZARN 60120 LTN |
| 4.1339 | 3.5433 | 4.1339 | 0.689 | 1.5157 | 0.6299 | 2700 | 950 | 37.2 | 184 | 90x110x12 | ZARN 60120 LTN |
| 110 | 90 | 108 | 17.5 | 38.5 | 16 | 2600 | 900 | 3.9 | 270 | 90x110x12 | ZARN 65125 LTN |
| 4.3307 | 3.5433 | 4.252 | 0.689 | 1.5157 | 0.6299 | 2600 | 900 | 34.5 | 199 | 90x110x12 | ZARN 65125 LTN |
| 115 | 100 | 115 | 17.5 | 38.5 | 16 | 2400 | 800 | 4.8 | 330 | 100x120x12 | ZARN 70130 LTN |
| 4.5276 | 3.937 | 4.5276 | 0.689 | 1.5157 | 0.6299 | 2400 | 800 | 42.5 | 243 | 100x120x12 | ZARN 70130 LTN |
| 135 | 115 | 135 | 21 | 46 | 16 | 2100 | 700 | 8 | 580 | 115x140x12 | ZARN 75155 LTN |
| 5.315 | 4.5276 | 5.315 | 0.8268 | 1.811 | 0.6299 | 2100 | 700 | 70.8 | 428 | 115x140x12 | ZARN 75155 LTN |
| 160 | 130 | 158 | 22.5 | 47.5 | 16 | 1800 | 700 | 10.5 | 960 | 130x160x12 | ZARN 90180 LTN |
| 6.2992 | 5.1181 | 6.2205 | 0.8858 | 1.8701 | 0.6299 | 1800 | 700 | 92.9 | 708 | 130x160x12 | ZARN 90180 LTN |

Ball Screw Support Bearings

ZARF SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearing
- Predrilled mounting flange
- Metric series
- P4 axial precision

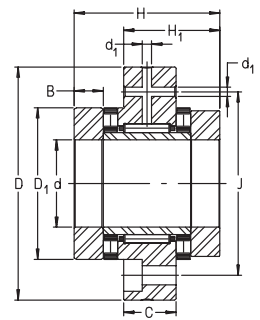


| PART NUMBER | SHAFT | OD | WIDTH | WEIGHT | DYN. CAP. | STAT. CAP. | DYN. CAP. | STAT. CAP. | H ₁ | C | D ₁ |
|---------------|--------|--------|--------|--------|-----------|------------|-----------|------------|----------------|--------|----------------|
| | d | D | H | | AXIAL | AXIAL | RADIAL | RADIAL | | | |
| | mm | mm | mm | kg | N | N | N | N | mm | mm | mm |
| | inch | inch | inch | lbs | lbf | lbf | lbf | lbf | inch | inch | inch |
| ZARF 1560 TN | 15 | 60 | 40 | 0.42 | 24900 | 53000 | 13000 | 17500 | 26 | 14 | 35 |
| ZARF 1560 TN | 0.5906 | 2.3622 | 1.5748 | 0.926 | 5600 | 11900 | 2900 | 3900 | 1.0236 | 0.5512 | 1.378 |
| ZARF 1762 TN | 17 | 62 | 43 | 0.49 | 26000 | 57000 | 14000 | 19900 | 27.5 | 14 | 38 |
| ZARF 1762 TN | 0.6693 | 2.4409 | 1.6929 | 1.08 | 5800 | 12800 | 3100 | 4500 | 1.0827 | 0.5512 | 1.4961 |
| ZARF 2068 TN | 20 | 68 | 46 | 0.56 | 33500 | 76000 | 14900 | 22400 | 29 | 14 | 42 |
| ZARF 2068 TN | 0.7874 | 2.6772 | 1.811 | 1.235 | 7500 | 17100 | 3300 | 5000 | 1.1417 | 0.5512 | 1.6535 |
| ZARF 2080 TN | 20 | 80 | 60 | 1.1 | 64000 | 141000 | 22600 | 36000 | 38 | 18 | 52 |
| ZARF 2080 TN | 0.7874 | 3.1496 | 2.3622 | 2.426 | 14400 | 31700 | 5100 | 8100 | 1.4961 | 0.7087 | 2.0472 |
| ZARF 2575 TN | 25 | 75 | 50 | 0.78 | 35500 | 86000 | 22600 | 36000 | 33 | 18 | 47 |
| ZARF 2575 TN | 0.9843 | 2.9528 | 1.9685 | 1.72 | 8000 | 19300 | 5100 | 8100 | 1.2992 | 0.7087 | 1.8504 |
| ZARF 2590 TN | 25 | 90 | 60 | 1.6 | 80000 | 199000 | 24300 | 41500 | 38 | 18 | 62 |
| ZARF 2590 TN | 0.9843 | 3.5433 | 2.3622 | 3.528 | 18000 | 44700 | 5500 | 9300 | 1.4961 | 0.7087 | 2.4409 |
| ZARF 3080 TN | 30 | 80 | 50 | 0.85 | 39000 | 101000 | 24300 | 41500 | 33 | 18 | 52 |
| ZARF 3080 TN | 1.1811 | 3.1496 | 1.9685 | 1.874 | 8800 | 22700 | 5500 | 9300 | 1.2992 | 0.7087 | 2.0472 |
| ZARF 3590 TN | 35 | 90 | 54 | 1.12 | 56000 | 148000 | 26000 | 47000 | 35 | 18 | 60 |
| ZARF 3590 TN | 1.378 | 3.5433 | 2.126 | 2.47 | 12600 | 33300 | 5800 | 10600 | 1.378 | 0.7087 | 2.3622 |
| ZARF 30105 TN | 30 | 105 | 66 | 1.95 | 107000 | 265000 | 26000 | 47000 | 41 | 18 | 68 |
| ZARF 30105 TN | 1.1811 | 4.1339 | 2.5984 | 4.3 | 24100 | 59600 | 5800 | 10600 | 1.6142 | 0.7087 | 2.6772 |
| ZARF 35110 TN | 35 | 110 | 66 | 1.6 | 105000 | 265000 | 27500 | 53000 | 41 | 18 | 73 |
| ZARF 35110 TN | 1.378 | 4.3307 | 2.5984 | 3.528 | 23600 | 59600 | 6200 | 11900 | 1.6142 | 0.7087 | 2.874 |
| ZARF 40100 TN | 40 | 100 | 54 | 1.35 | 59000 | 163000 | 27500 | 53000 | 35 | 18 | 65 |
| ZARF 40100 TN | 1.5748 | 3.937 | 2.126 | 2.977 | 13300 | 36600 | 6200 | 11900 | 1.378 | 0.7087 | 2.5591 |
| ZARF 40115 TN | 40 | 115 | 75 | 2.7 | 117000 | 315000 | 38000 | 74000 | 47.5 | 22.5 | 78 |
| ZARF 40115 TN | 1.5748 | 4.5276 | 2.9528 | 5.954 | 26300 | 70800 | 8500 | 16600 | 1.8701 | 0.8858 | 3.0709 |
| ZARF 45105 TN | 45 | 105 | 60 | 1.7 | 61000 | 177000 | 38000 | 74000 | 40 | 22.5 | 70 |
| ZARF 45105 TN | 1.7717 | 4.1339 | 2.3622 | 3.749 | 13700 | 39800 | 8500 | 16600 | 1.5748 | 0.8858 | 2.7559 |
| ZARF 45130 TN | 45 | 130 | 82 | 3.9 | 154000 | 405000 | 40000 | 82000 | 51 | 22.5 | 90 |
| ZARF 45130 TN | 1.7717 | 5.1181 | 3.2283 | 8.6 | 34600 | 91100 | 9000 | 18400 | 2.0079 | 0.8858 | 3.5433 |
| ZARF 50115 TN | 50 | 115 | 60 | 2.1 | 90000 | 300000 | 40000 | 82000 | 40 | 22.5 | 78 |
| ZARF 50115 TN | 1.9685 | 4.5276 | 2.3622 | 4.631 | 20200 | 67400 | 9000 | 18400 | 1.5748 | 0.8858 | 3.0709 |
| ZARF 50140 TN | 50 | 140 | 82 | 4.2 | 172000 | 480000 | 42000 | 90000 | 51 | 22.5 | 95 |
| ZARF 50140 TN | 1.9685 | 5.5118 | 3.2283 | 9.261 | 38700 | 107900 | 9400 | 20200 | 2.0079 | 0.8858 | 3.7402 |
| ZARF 55145 TN | 55 | 145 | 82 | 4.5 | 177000 | 500000 | 44000 | 98000 | 51 | 22.5 | 100 |
| ZARF 55145 TN | 2.1654 | 5.7087 | 3.2283 | 9.923 | 39800 | 112400 | 9900 | 22000 | 2.0079 | 0.8858 | 3.937 |
| ZARF 60150 TN | 60 | 150 | 82 | 4.7 | 187000 | 550000 | 44500 | 92000 | 51 | 22.5 | 105 |
| ZARF 60150 TN | 2.3622 | 5.9055 | 3.2283 | 10.364 | 42000 | 123700 | 10000 | 20700 | 2.0079 | 0.8858 | 4.1339 |
| ZARF 65155 TN | 65 | 155 | 82 | 5.1 | 172000 | 500000 | 54000 | 104000 | 51 | 22.5 | 110 |
| ZARF 65155 TN | 2.5591 | 6.1024 | 3.2283 | 11.246 | 38700 | 112400 | 12100 | 23400 | 2.0079 | 0.8858 | 4.3307 |
| ZARF 70160 TN | 70 | 160 | 82 | 5.2 | 201000 | 630000 | 56000 | 119000 | 51 | 22.5 | 115 |
| ZARF 70160 TN | 2.7559 | 6.2992 | 3.2283 | 11.466 | 45200 | 141600 | 12600 | 26800 | 2.0079 | 0.8858 | 4.5276 |
| ZARF 75185 TN | 75 | 185 | 100 | 9.4 | 290000 | 890000 | 72000 | 132000 | 62 | 27 | 135 |
| ZARF 75185 TN | 2.9528 | 7.2835 | 3.937 | 20.727 | 65200 | 200100 | 16200 | 29700 | 2.4409 | 1.063 | 5.315 |
| ZARF 90210 TN | 90 | 210 | 110 | 13.7 | 300000 | 940000 | 98000 | 210000 | 69.5 | 32 | 160 |
| ZARF 90210 TN | 3.5433 | 8.2677 | 4.3307 | 30.209 | 67400 | 211300 | 22000 | 47200 | 2.7362 | 1.2598 | 6.2992 |

Ball Screw Support Bearings

ZARF SERIES

- Combination double direction axial cylindrical roller and radial needle roller bearing
- Predrilled mounting flange
- Metric series
- P4 axial precision



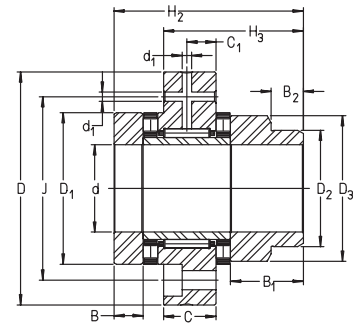
| B | d ₁ | J | SPEED LIMIT OIL | SPEED LIMIT GREASE | BEARING FRICTION | MTG. BOLT | BOLT HOLE QTY | LOCKNUT NUMBER | LOCKNUT TORQUE | PART NUMBER |
|---------|----------------|---------|-----------------|--------------------|------------------|-----------|---------------|----------------|----------------|---------------|
| mm inch | mm inch | mm inch | rpm | rpm | Nm in-lbf | | | | Nm ft-lbf | |
| 7.5 | 3.2 | 46 | 8500 | 2200 | 0.35 | M6-10.9 | 6 | ZMA 15/33 | 10 | ZARF 1560 TN |
| 0.2953 | 0.126 | 1.811 | 8500 | 2200 | 3.1 | M6-10.9 | 6 | ZMA 15/33 | 7 | ZARF 1560 TN |
| 9 | 3.2 | 48 | 7800 | 2100 | 0.4 | M6-10.9 | 6 | ZMA 17/38 | 12 | ZARF 1762 TN |
| 0.3543 | 0.126 | 1.8898 | 7800 | 2100 | 3.5 | M6-10.9 | 6 | ZMA 17/38 | 9 | ZARF 1762 TN |
| 10 | 3.2 | 53 | 7000 | 2000 | 0.5 | M6-10.9 | 8 | ZMA 20/38 | 18 | ZARF 2068 TN |
| 0.3937 | 0.126 | 2.0866 | 7000 | 2000 | 4.4 | M6-10.9 | 8 | ZMA 20/38 | 13 | ZARF 2068 TN |
| 12.5 | 3.2 | 63 | 6000 | 1500 | 1.3 | M6-10.9 | 12 | ZMA 20/52 | 38 | ZARF 2080 TN |
| 0.4921 | 0.126 | 2.4803 | 6000 | 1500 | 11.5 | M6-10.9 | 12 | ZMA 20/52 | 28 | ZARF 2080 TN |
| 10 | 3.2 | 58 | 6000 | 1900 | 0.55 | M6-10.9 | 8 | ZMA 25/45 | 25 | ZARF 2575 TN |
| 0.3937 | 0.126 | 2.2835 | 6000 | 1900 | 4.9 | M6-10.9 | 8 | ZMA 25/45 | 18 | ZARF 2575 TN |
| 12.5 | 3.2 | 73 | 4900 | 1400 | 1.6 | M6-10.9 | 12 | ZMA 25/58 | 55 | ZARF 2590 TN |
| 0.4921 | 0.126 | 2.874 | 4900 | 1400 | 14.2 | M6-10.9 | 12 | ZMA 25/58 | 41 | ZARF 2590 TN |
| 10 | 3.2 | 63 | 5500 | 1800 | 0.65 | M6-10.9 | 12 | ZMA 30/52 | 32 | ZARF 3080 TN |
| 0.3937 | 0.126 | 2.4803 | 5500 | 1800 | 5.8 | M6-10.9 | 12 | ZMA 30/52 | 24 | ZARF 3080 TN |
| 11 | 3.2 | 73 | 4800 | 1700 | 0.9 | M6-10.9 | 12 | ZMA 35/58 | 42 | ZARF 3590 TN |
| 0.4331 | 0.126 | 2.874 | 4800 | 1700 | 8 | M6-10.9 | 12 | ZMA 35/58 | 31 | ZARF 3590 TN |
| 14 | 3.2 | 85 | 4400 | 1300 | 2.1 | M8-10.9 | 12 | ZMA 30/65 | 75 | ZARF 30105 TN |
| 0.5512 | 0.126 | 3.3465 | 4400 | 1300 | 18.6 | M8-10.9 | 12 | ZMA 30/65 | 55 | ZARF 30105 TN |
| 14 | 3.2 | 88 | 4000 | 1250 | 2.3 | M8-10.9 | 12 | ZMA 35/70 | 100 | ZARF 35110 TN |
| 0.5512 | 0.126 | 3.4646 | 4000 | 1250 | 20.4 | M8-10.9 | 12 | ZMA 35/70 | 74 | ZARF 35110 TN |
| 11 | 3.2 | 80 | 4400 | 1600 | 1 | M8-10.9 | 8 | ZMA 40/62 | 55 | ZARF 40100 TN |
| 0.4331 | 0.126 | 3.1496 | 4400 | 1600 | 8.9 | M8-10.9 | 8 | ZMA 40/62 | 41 | ZARF 40100 TN |
| 16 | 6 | 94 | 3700 | 1200 | 2.5 | M8-10.9 | 12 | ZMA 40/75 | 120 | ZARF 40115 TN |
| 0.6299 | 0.2362 | 3.7008 | 3700 | 1200 | 22.1 | M8-10.9 | 12 | ZMA 40/75 | 89 | ZARF 40115 TN |
| 11.5 | 6 | 85 | 4000 | 1500 | 1.2 | M8-10.9 | 8 | ZMA 45/68 | 65 | ZARF 45105 TN |
| 0.4528 | 0.2362 | 3.3465 | 4000 | 1500 | 10.6 | M8-10.9 | 8 | ZMA 45/68 | 48 | ZARF 45105 TN |
| 17.5 | 6 | 105 | 3300 | 1150 | 3.5 | M8-10.9 | 12 | ZMA 45/85 | 150 | ZARF 45130 TN |
| 0.689 | 0.2362 | 4.1339 | 3300 | 1150 | 31 | M8-10.9 | 12 | ZMA 45/85 | 111 | ZARF 45130 TN |
| 11.5 | 6 | 94 | 3600 | 1200 | 2.2 | M8-10.9 | 12 | ZMA 50/75 | 85 | ZARF 50115 TN |
| 0.4528 | 0.2362 | 3.7008 | 3600 | 1200 | 19.5 | M8-10.9 | 12 | ZMA 50/75 | 63 | ZARF 50115 TN |
| 17.5 | 6 | 113 | 3100 | 1100 | 3.8 | M10-10.9 | 12 | ZMA 50/92 | 180 | ZARF 50140 TN |
| 0.689 | 0.2362 | 4.4488 | 3100 | 1100 | 33.6 | M10-10.9 | 12 | ZMA 50/92 | 133 | ZARF 50140 TN |
| 17.5 | 6 | 118 | 2900 | 1000 | 4 | M10-10.9 | 12 | ZMA 55/98 | 220 | ZARF 55145 TN |
| 0.689 | 0.2362 | 4.6457 | 2900 | 1000 | 35.4 | M10-10.9 | 12 | ZMA 55/98 | 162 | ZARF 55145 TN |
| 17.5 | 6 | 123 | 2700 | 950 | 4.2 | M10-10.9 | 12 | ZMA 60/98 | 250 | ZARF 60150 TN |
| 0.689 | 0.2362 | 4.8425 | 2700 | 950 | 37.2 | M10-10.9 | 12 | ZMA 60/98 | 184 | ZARF 60150 TN |
| 17.5 | 6 | 128 | 2600 | 900 | 3.9 | M10-10.9 | 12 | ZMA 65/105 | 270 | ZARF 65155 TN |
| 0.689 | 0.2362 | 5.0394 | 2600 | 900 | 34.5 | M10-10.9 | 12 | ZMA 65/105 | 199 | ZARF 65155 TN |
| 17.5 | 6 | 133 | 2400 | 800 | 4.8 | M10-10.9 | 12 | ZMA 70/110 | 330 | ZARF 70160 TN |
| 0.689 | 0.2362 | 5.2362 | 2400 | 800 | 42.5 | M10-10.9 | 12 | ZMA 70/110 | 243 | ZARF 70160 TN |
| 21 | 6 | 155 | 2100 | 700 | 8 | M12-10.9 | 12 | ZMA 75/125 | 580 | ZARF 75185 TN |
| 0.8268 | 0.2362 | 6.1024 | 2100 | 700 | 70.8 | M12-10.9 | 12 | ZMA 75/125 | 428 | ZARF 75185 TN |
| 22.5 | 8 | 180 | 1800 | 700 | 9.5 | M12-10.9 | 16 | ZMA 90/155 | 960 | ZARF 90210 TN |
| 0.8858 | 0.315 | 7.0866 | 1800 | 700 | 84.1 | M12-10.9 | 16 | ZMA 90/155 | 708 | ZARF 90210 TN |



Ball Screw Support Bearings

ZARF..LTN SERIES

- Combination double direction axial cylindrical roller and radial needle bearings
- Predrilled mounting flange
- Extended shaft washer for DIN 3760 metric series seal
- Metric series
- P4 axial precision



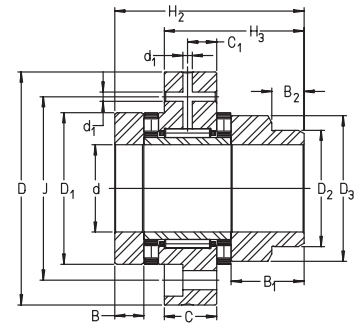
| PART NUMBER | SHAFT | OD | WIDTH | WEIGHT | DYN. CAP. AXIAL | STAT. CAP. AXIAL | DYN. CAP. RADIAL | STAT. CAP. RADIAL | H ₃ | C | D ₁ | D ₂ | D ₃ |
|----------------|------------|------------|----------------|-----------|-----------------|------------------|------------------|-------------------|----------------|------------|----------------|----------------|----------------|
| | d | D | H ₂ | | | | | | | | | | |
| | mm inch | mm inch | mm inch | kg lbs | N lbf | N lbf | N lbf | N lbf | mm inch | mm inch | mm inch | mm inch | mm inch |
| ZARF 1560 LTN | 15 | 60 | 53 | 0.45 | 24900 | 53000 | 13000 | 17500 | 39 | 14 | 35 | 24 | 34 |
| ZARF 1560 LTN | 0.5906 | 2.3622 | 2.0866 | 0.99 | 5600 | 11900 | 2900 | 3900 | 1.5354 | 0.5512 | 1.378 | 0.9449 | 1.3386 |
| ZARF 1762 LTN | 17 | 62 | 57 | 0.52 | 26000 | 57000 | 14000 | 19900 | 41.5 | 14 | 38 | 28 | 38 |
| ZARF 1762 LTN | 0.6693 | 2.4409 | 2.2441 | 1.15 | 5800 | 12800 | 3100 | 4500 | 1.6339 | 0.5512 | 1.4961 | 1.1024 | 1.4961 |
| ZARF 2068 LTN | 20 | 68 | 60 | 0.61 | 33500 | 76000 | 14900 | 22400 | 43 | 14 | 42 | 30 | 40 |
| ZARF 2068 LTN | 0.7874 | 2.6772 | 2.3622 | 1.35 | 7500 | 17100 | 3300 | 5000 | 1.6929 | 0.5512 | 1.6535 | 1.1811 | 1.5748 |
| ZARF 2080 LTN | 20 | 80 | 75 | 1.22 | 64000 | 141000 | 22600 | 36000 | 53 | 18 | 52 | 40 | 50 |
| ZARF 2080 LTN | 0.7874 | 3.1496 | 2.9528 | 2.69 | 14400 | 31700 | 5100 | 8100 | 2.0866 | 0.7087 | 2.0472 | 1.5748 | 1.9685 |
| ZARF 2575 LTN | 25 | 75 | 65 | 0.84 | 35500 | 86000 | 22600 | 36000 | 48 | 18 | 47 | 36 | 45 |
| ZARF 2575 LTN | 0.9843 | 2.9528 | 2.5591 | 1.85 | 8000 | 19300 | 5100 | 8100 | 1.8898 | 0.7087 | 1.8504 | 1.4173 | 1.7717 |
| ZARF 2590 LTN | 25 | 90 | 75 | 1.75 | 80000 | 199000 | 24300 | 41500 | 53 | 18 | 62 | 48 | 60 |
| ZARF 2590 LTN | 0.9843 | 3.5433 | 2.9528 | 3.86 | 18000 | 44700 | 5500 | 9300 | 2.0866 | 0.7087 | 2.4409 | 1.8898 | 2.3622 |
| ZARF 3080 LTN | 30 | 80 | 65 | 0.9 | 39000 | 101000 | 24300 | 41500 | 48 | 18 | 52 | 40 | 50 |
| ZARF 3080 LTN | 1.1811 | 3.1496 | 2.5591 | 1.98 | 8800 | 22700 | 5500 | 9300 | 1.8898 | 0.7087 | 2.0472 | 1.5748 | 1.9685 |
| ZARF 3590 LTN | 35 | 90 | 70 | 1.25 | 56000 | 148000 | 26000 | 47000 | 51 | 18 | 60 | 45 | 58 |
| ZARF 3590 LTN | 1.378 | 3.5433 | 2.7559 | 2.76 | 12600 | 33300 | 5800 | 10600 | 2.0079 | 0.7087 | 2.3622 | 1.7717 | 2.2835 |
| ZARF 30105 LTN | 30 | 105 | 82 | 2.15 | 107000 | 265000 | 26000 | 47000 | 57 | 18 | 68 | 52 | 66 |
| ZARF 30105 LTN | 1.1811 | 4.1339 | 3.2283 | 4.74 | 24100 | 59600 | 5800 | 10600 | 2.2441 | 0.7087 | 2.6772 | 2.0472 | 2.5984 |
| ZARF 35110 LTN | 35 | 110 | 82 | 1.85 | 105000 | 265000 | 27500 | 53000 | 57 | 18 | 73 | 60 | 73 |
| ZARF 35110 LTN | 1.378 | 4.3307 | 3.2283 | 4.08 | 23600 | 59600 | 6200 | 11900 | 2.2441 | 0.7087 | 2.874 | 2.3622 | 2.874 |
| ZARF 40100 LTN | 40 | 100 | 70 | 1.45 | 59000 | 163000 | 27500 | 53000 | 51 | 18 | 65 | 50 | 63 |
| ZARF 40100 LTN | 1.5748 | 3.937 | 2.7559 | 3.2 | 13300 | 36600 | 6200 | 11900 | 2.0079 | 0.7087 | 2.5591 | 1.9685 | 2.4803 |
| ZARF 40115 LTN | 40 | 115 | 93 | 3 | 117000 | 315000 | 38000 | 74000 | 65.5 | 22.5 | 78 | 60 | 78 |
| ZARF 40115 LTN | 1.5748 | 4.5276 | 3.6614 | 6.62 | 26300 | 70800 | 8500 | 16600 | 2.5787 | 0.8858 | 3.0709 | 2.3622 | 3.0709 |
| ZARF 45105 LTN | 45 | 105 | 75 | 1.85 | 61000 | 177000 | 38000 | 74000 | 55 | 22.5 | 70 | 56 | 68 |
| ZARF 45105 LTN | 1.7717 | 4.1339 | 2.9528 | 4.08 | 13700 | 39800 | 8500 | 16600 | 2.1654 | 0.8858 | 2.7559 | 2.2047 | 2.6772 |
| ZARF 45130 LTN | 45 | 130 | 103 | 4.3 | 154000 | 405000 | 40000 | 82000 | 72 | 22.5 | 90 | 70 | 88 |
| ZARF 45130 LTN | 1.7717 | 5.1181 | 4.0551 | 9.48 | 34600 | 91100 | 9000 | 18400 | 2.8346 | 0.8858 | 3.5433 | 2.7559 | 3.4646 |
| ZARF 50115 LTN | 50 | 115 | 78 | 2.45 | 90000 | 300000 | 40000 | 82000 | 58 | 22.5 | 78 | 60 | 78 |
| ZARF 50115 LTN | 1.9685 | 4.5276 | 3.0709 | 5.4 | 20200 | 67400 | 9000 | 18400 | 2.2835 | 0.8858 | 3.0709 | 2.3622 | 3.0709 |
| ZARF 50140 LTN | 50 | 140 | 103 | 4.65 | 172000 | 480000 | 42000 | 90000 | 72 | 22.5 | 95 | 75 | 93 |
| ZARF 50140 LTN | 1.9685 | 5.5118 | 4.0551 | 10.25 | 38700 | 107900 | 9400 | 20200 | 2.8346 | 0.8858 | 3.7402 | 2.9528 | 3.6614 |
| ZARF 55145 LTN | 55 | 145 | 103 | 5 | 177000 | 500000 | 44000 | 98000 | 72 | 22.5 | 100 | 80 | 98 |
| ZARF 55145 LTN | 2.1654 | 5.7087 | 4.0551 | 11.03 | 39800 | 112400 | 9900 | 22000 | 2.8346 | 0.8858 | 3.937 | 3.1496 | 3.8583 |
| ZARF 60150 LTN | 60 | 150 | 103 | 5.35 | 187000 | 550000 | 44500 | 92000 | 72 | 22.5 | 105 | 90 | 105 |
| ZARF 60150 LTN | 2.3622 | 5.9055 | 4.0551 | 11.8 | 42000 | 123700 | 10000 | 20700 | 2.8346 | 0.8858 | 4.1339 | 3.5433 | 4.1339 |
| ZARF 65155 LTN | 65 | 155 | 103 | 5.7 | 172000 | 500000 | 54000 | 104000 | 72 | 22.5 | 110 | 90 | 108 |
| ZARF 65155 LTN | 2.5591 | 6.1024 | 4.0551 | 12.57 | 38700 | 112400 | 12100 | 23400 | 2.8346 | 0.8858 | 4.3307 | 3.5433 | 4.252 |
| ZARF 70160 LTN | 70 | 160 | 103 | 5.95 | 201000 | 630000 | 56000 | 119000 | 72 | 22.5 | 115 | 100 | 115 |
| ZARF 70160 LTN | 2.7559 | 6.2992 | 4.0551 | 13.12 | 45200 | 141600 | 12600 | 26800 | 2.8346 | 0.8858 | 4.5276 | 3.937 | 4.5276 |
| ZARF 75185 LTN | 75 | 185 | 125 | 10.6 | 290000 | 890000 | 72000 | 132000 | 87 | 27 | 135 | 115 | 135 |
| ZARF 75185 LTN | 2.9528 | 7.2835 | 4.9213 | 23.37 | 65200 | 200100 | 16200 | 29700 | 3.4252 | 1.063 | 5.315 | 4.5276 | 5.315 |
| ZARF 90210 LTN | 90 | 210 | 135 | 15.1 | 325000 | 103000 | 98000 | 210000 | 94.5 | 32 | 160 | 130 | 158 |
| ZARF 90210 LTN | 3.5433 | 8.2677 | 5.315 | 33.3 | 73100 | 23200 | 22000 | 47200 | 3.7205 | 1.2598 | 6.2992 | 5.1181 | 6.2205 |



Ball Screw Support Bearings

ZARF..LTN SERIES

- Combination double direction axial cylindrical roller and radial needle bearings
- Predrilled mounting flange
- Extended shaft washer for DIN 3760 metric series seal
- Metric series
- P4 axial precision



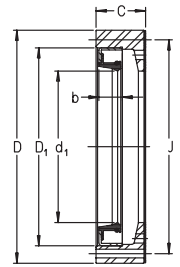
| B | B ₁ | B ₂ | d ₁ | J | SPEED LIMIT OIL | SPEED LIMIT GREASE | MTG. BOLT | BOLT QTY | LOCKNUT NUMBER | LOCKNUT TORQUE | SEAL SIZE | PART NUMBER |
|---------|----------------|----------------|----------------|---------|-----------------|--------------------|-----------|----------|----------------|----------------|------------|----------------|
| mm inch | mm inch | mm inch | mm inch | mm inch | rpm | rpm | | | | Nm ft-lbf | DIN3760 | |
| 7.5 | 20.5 | 11 | 3.2 | 46 | 8500 | 2200 | M6-10.9 | 6 | ZMA 15/33 | 10 | 24x35x7 | ZARF 1560 LTN |
| 0.2953 | 0.8071 | 0.4331 | 0.126 | 1.811 | 8500 | 2200 | M6-10.9 | 6 | ZMA 15/33 | 7.4 | 24x35x7 | ZARF 1560 LTN |
| 9 | 23 | 11 | 3.2 | 48 | 8000 | 2100 | M6-10.9 | 6 | ZM 17 | 12 | 28x40x7 | ZARF 1762 LTN |
| 0.3543 | 0.9055 | 0.4331 | 0.126 | 1.8898 | 8000 | 2100 | M6-10.9 | 6 | ZM 17 | 8.9 | 28x40x7 | ZARF 1762 LTN |
| 10 | 24 | 11 | 3.2 | 53 | 7000 | 2000 | M6-10.9 | 8 | ZMA 20/38 | 18 | 30x42x7 | ZARF 2068 LTN |
| 0.3937 | 0.9449 | 0.4331 | 0.126 | 2.0866 | 7000 | 2000 | M6-10.9 | 8 | ZMA 20/38 | 13.3 | 30x42x7 | ZARF 2068 LTN |
| 12.5 | 27.5 | 11 | 3.2 | 63 | 6000 | 1500 | M6-10.9 | 12 | ZMA 20/52 | 38 | 40x52x7 | ZARF 2080 LTN |
| 0.4921 | 1.0827 | 0.4331 | 0.126 | 2.4803 | 6000 | 1500 | M6-10.9 | 12 | ZMA 20/52 | 28 | 40x52x7 | ZARF 2080 LTN |
| 10 | 25 | 11 | 3.2 | 58 | 6000 | 1900 | M6-10.9 | 8 | ZMA 25/45 | 25 | 36x47x7 | ZARF 2575 LTN |
| 0.3937 | 0.9843 | 0.4331 | 0.126 | 2.2835 | 6000 | 1900 | M6-10.9 | 8 | ZMA 25/45 | 18.4 | 36x47x7 | ZARF 2575 LTN |
| 12.5 | 27.5 | 11 | 3.2 | 73 | 4900 | 1400 | M6-10.9 | 12 | ZMA 25/58 | 55 | 48x62x8 | ZARF 2590 LTN |
| 0.4921 | 1.0827 | 0.4331 | 0.126 | 2.874 | 4900 | 1400 | M6-10.9 | 12 | ZMA 25/58 | 40.6 | 48x62x8 | ZARF 2590 LTN |
| 10 | 25 | 11 | 3.2 | 63 | 5500 | 1800 | M6-10.9 | 12 | ZMA 30/52 | 32 | 40x52x7 | ZARF 3080 LTN |
| 0.3937 | 0.9843 | 0.4331 | 0.126 | 2.4803 | 5500 | 1800 | M6-10.9 | 12 | ZMA 30/52 | 23.6 | 40x52x7 | ZARF 3080 LTN |
| 11 | 27 | 12 | 3.2 | 73 | 4800 | 1700 | M6-10.9 | 12 | ZMA 35/58 | 42 | 45x60x8 | ZARF 3590 LTN |
| 0.4331 | 1.063 | 0.4724 | 0.126 | 2.874 | 4800 | 1700 | M6-10.9 | 12 | ZMA 35/58 | 31 | 45x60x8 | ZARF 3590 LTN |
| 14 | 30 | 12 | 3.2 | 85 | 4400 | 1300 | M8-10.9 | 12 | ZMA 30/65 | 75 | 52x68x8 | ZARF 30105 LTN |
| 0.5512 | 1.1811 | 0.4724 | 0.126 | 3.3465 | 4400 | 1300 | M8-10.9 | 12 | ZMA 30/65 | 55.3 | 52x68x8 | ZARF 30105 LTN |
| 14 | 30 | 12 | 3.2 | 88 | 4000 | 1250 | M8-10.9 | 12 | ZMA 35/70 | 100 | 60x75x8 | ZARF 35110 LTN |
| 0.5512 | 1.1811 | 0.4724 | 0.126 | 3.4646 | 4000 | 1250 | M8-10.9 | 12 | ZMA 35/70 | 73.8 | 60x75x8 | ZARF 35110 LTN |
| 11 | 27 | 12 | 3.2 | 80 | 4400 | 1600 | M8-10.9 | 8 | ZMA 40/62 | 55 | 50x65x8 | ZARF 40100 LTN |
| 0.4331 | 1.063 | 0.4724 | 0.126 | 3.1496 | 4400 | 1600 | M8-10.9 | 8 | ZMA 40/62 | 40.6 | 50x65x8 | ZARF 40100 LTN |
| 16 | 34 | 12 | 6 | 94 | 3700 | 1200 | M8-10.9 | 12 | ZMA 40/75 | 120 | 60x80x8 | ZARF 40115 LTN |
| 0.6299 | 1.3386 | 0.4724 | 0.2362 | 3.7008 | 3700 | 1200 | M8-10.9 | 12 | ZMA 40/75 | 88.5 | 60x80x8 | ZARF 40115 LTN |
| 11.5 | 26.5 | 12 | 6 | 85 | 4000 | 1500 | M8-10.9 | 8 | ZMA 45/68 | 65 | 56x70x8 | ZARF 45105 LTN |
| 0.4528 | 1.0433 | 0.4724 | 0.2362 | 3.3465 | 4000 | 1500 | M8-10.9 | 8 | ZMA 45/68 | 47.9 | 56x70x8 | ZARF 45105 LTN |
| 17.5 | 38.5 | 14 | 6 | 105 | 3300 | 1150 | M8-10.9 | 12 | ZMA 45/85 | 150 | 70x90x10 | ZARF 45130 LTN |
| 0.689 | 1.5157 | 0.5512 | 0.2362 | 4.1339 | 3300 | 1150 | M8-10.9 | 12 | ZMA 45/85 | 110.6 | 70x90x10 | ZARF 45130 LTN |
| 11.5 | 29.5 | 12 | 6 | 94 | 3600 | 1200 | M8-10.9 | 12 | ZMA 50/75 | 85 | 60x80x8 | ZARF 50115 LTN |
| 0.4528 | 1.1614 | 0.4724 | 0.2362 | 3.7008 | 3600 | 1200 | M8-10.9 | 12 | ZMA 50/75 | 62.7 | 60x80x8 | ZARF 50115 LTN |
| 17.5 | 38.5 | 14 | 6 | 113 | 3100 | 1100 | M10-10.9 | 12 | ZMA 50/92 | 180 | 75x95x10 | ZARF 50140 LTN |
| 0.689 | 1.5157 | 0.5512 | 0.2362 | 4.4488 | 3100 | 1100 | M10-10.9 | 12 | ZMA 50/92 | 132.8 | 75x95x10 | ZARF 50140 LTN |
| 17.5 | 38.5 | 14 | 6 | 118 | 2900 | 1000 | M10-10.9 | 12 | ZMA 55/98 | 220 | 80x100x10 | ZARF 55145 LTN |
| 0.689 | 1.5157 | 0.5512 | 0.2362 | 4.6457 | 2900 | 1000 | M10-10.9 | 12 | ZMA 55/98 | 162.3 | 80x100x10 | ZARF 55145 LTN |
| 17.5 | 38.5 | 16 | 6 | 123 | 2700 | 950 | M10-10.9 | 12 | ZMA 60/98 | 250 | 90x110x12 | ZARF 60150 LTN |
| 0.689 | 1.5157 | 0.6299 | 0.2362 | 4.8425 | 2700 | 950 | M10-10.9 | 12 | ZMA 60/98 | 184.4 | 90x110x12 | ZARF 60150 LTN |
| 17.5 | 38.5 | 16 | 6 | 128 | 2600 | 900 | M10-10.9 | 12 | ZMA 65/105 | 270 | 90x110x12 | ZARF 65155 LTN |
| 0.689 | 1.5157 | 0.6299 | 0.2362 | 5.0394 | 2600 | 900 | M10-10.9 | 12 | ZMA 65/105 | 199.2 | 90x110x12 | ZARF 65155 LTN |
| 17.5 | 38.5 | 16 | 6 | 133 | 2400 | 800 | M10-10.9 | 12 | ZMA 70/110 | 330 | 100x120x12 | ZARF 70160 LTN |
| 0.689 | 1.5157 | 0.6299 | 0.2362 | 5.2362 | 2400 | 800 | M10-10.9 | 12 | ZMA 70/110 | 243.4 | 100x120x12 | ZARF 70160 LTN |
| 21 | 46 | 16 | 6 | 155 | 2100 | 700 | M12-10.9 | 12 | ZMA 75/125 | 580 | 115x140x12 | ZARF 75185 LTN |
| 0.8268 | 1.811 | 0.6299 | 0.2362 | 6.1024 | 2100 | 700 | M12-10.9 | 12 | ZMA 75/125 | 427.8 | 115x140x12 | ZARF 75185 LTN |
| 22.5 | 47.5 | 16 | 8 | 180 | 1800 | 700 | M12-10.9 | 16 | ZMA 90/155 | 960 | 130x160x12 | ZARF 90210 LTN |
| 0.8858 | 1.8701 | 0.6299 | 0.315 | 7.0866 | 1800 | 700 | M12-10.9 | 16 | ZMA 90/155 | 708.1 | 130x160x12 | ZARF 90210 LTN |



Seal Carriers & Seals

DRS SERIES

- Seal rings with mounting hardware for use with series ZARF..TN and ZARF..LTN ball screw support bearings



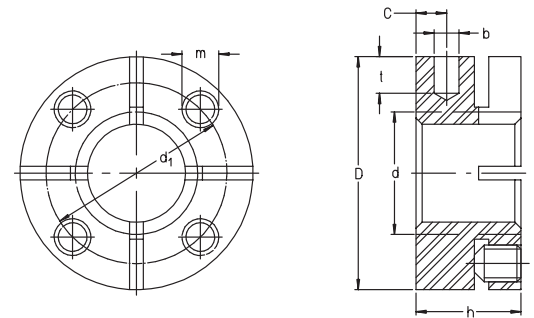
| PART NUMBER | SHAFT d ₁ mm inch | WIDTH C mm inch | OD D mm inch | J mm inch | D ₁ mm inch | b mm inch | WEIGHT PER PIECE kg lbs | BOLT THREAD DIN 912 | MATING BEARING |
|-------------|---------------------------------------|--------------------------|-----------------------|-----------------|------------------------------|-----------------|----------------------------------|------------------------|----------------|
| DRS 1560 | 35 | 14 | 60 | 52.4 | 45 | 7 | 0.16 | M3x20 | ZARF 1560 TN |
| DRS 1560 | 1.378 | 0.551 | 2.362 | 2.063 | 1.772 | 0.276 | 0.353 | M3x20 | ZARF 1560 TN |
| DRS 1762 | 38 | 15.5 | 62 | 54.4 | 45 | 7 | 0.18 | M3x25 | ZARF 1762 TN |
| DRS 1762 | 1.496 | 0.61 | 2.441 | 2.142 | 1.772 | 0.276 | 0.397 | M3x25 | ZARF 1762 TN |
| DRS 2068 | 42 | 17 | 68 | 60.4 | 55 | 8 | 0.11 | M3x25 | ZARF 2068 TN |
| DRS 2068 | 1.654 | 0.669 | 2.677 | 2.378 | 2.165 | 0.315 | 0.243 | M3x25 | ZARF 2068 TN |
| DRS 2080 | 52 | 22 | 80 | 73.4 | 68 | 8 | 0.2 | M3x30 | ZARF 2080 TN |
| DRS 2080 | 2.047 | 0.866 | 3.15 | 2.89 | 2.677 | 0.315 | 0.441 | M3x30 | ZARF 2080 TN |
| DRS 2575 | 47 | 17 | 75 | 67.4 | 62 | 6 | 0.16 | M3x25 | ZARF 2575 TN |
| DRS 2575 | 1.85 | 0.669 | 2.953 | 2.654 | 2.441 | 0.236 | 0.353 | M3x25 | ZARF 2575 TN |
| DRS 2590 | 62 | 22 | 90 | 81 | 75 | 10 | 0.3 | M3x30 | ZARF 2590 TN |
| DRS 2590 | 2.441 | 0.866 | 3.543 | 3.189 | 2.953 | 0.394 | 0.662 | M3x30 | ZARF 2590 TN |
| DRS 3080 | 52 | 17 | 80 | 73.4 | 68 | 8 | 0.15 | M3x25 | ZARF 3080 TN |
| DRS 3080 | 2.047 | 0.669 | 3.15 | 2.89 | 2.677 | 0.315 | 0.331 | M3x25 | ZARF 3080 TN |
| DRS 30105 | 68 | 25 | 105 | 95 | 85 | 10 | 0.35 | M4x35 | ZARF 30105 TN |
| DRS 30105 | 2.677 | 0.984 | 4.134 | 3.74 | 3.346 | 0.394 | 0.772 | M4x35 | ZARF 30105 TN |
| DRS 3590 | 60 | 19 | 90 | 80 | 72 | 8 | 0.15 | M4x30 | ZARF 3590 TN |
| DRS 3590 | 2.362 | 0.748 | 3.543 | 3.15 | 2.835 | 0.315 | 0.331 | M4x30 | ZARF 3590 TN |
| DRS 35110 | 73 | 25 | 110 | 101 | 95 | 10 | 0.3 | M3x30 | ZARF 35110 TN |
| DRS 35110 | 2.874 | 0.984 | 4.331 | 3.976 | 3.74 | 0.394 | 0.662 | M3x30 | ZARF 35110 TN |
| DRS 40100 | 65 | 19 | 100 | 90 | 80 | 8 | 0.25 | M4x30 | ZARF 40100 TN |
| DRS 40100 | 2.559 | 0.748 | 3.937 | 3.543 | 3.15 | 0.315 | 0.551 | M4x30 | ZARF 40100 TN |
| DRS 40115 | 78 | 27.5 | 115 | 106 | 100 | 10 | 0.5 | M3x35 | ZARF 40115 TN |
| DRS 40115 | 3.071 | 1.083 | 4.528 | 4.173 | 3.937 | 0.394 | 1.103 | M3x35 | ZARF 40115 TN |
| DRS 45105 | 70 | 20 | 105 | 95 | 85 | 8 | 0.3 | M4x30 | ZARF 45105 TN |
| DRS 45105 | 2.756 | 0.787 | 4.134 | 3.74 | 3.346 | 0.315 | 0.662 | M4x30 | ZARF 45105 TN |
| DRS 45130 | 90 | 31 | 130 | 120 | 110 | 12 | 0.7 | M4x40 | ZARF 45130 TN |
| DRS 45130 | 3.543 | 1.22 | 5.118 | 4.724 | 4.331 | 0.472 | 1.544 | M4x40 | ZARF 45130 TN |
| DRS 50115 | 78 | 20 | 115 | 106 | 100 | 10 | 0.2 | M3x30 | ZARF 50115 TN |
| DRS 50115 | 3.071 | 0.787 | 4.528 | 4.173 | 3.937 | 0.394 | 0.441 | M3x30 | ZARF 50115 TN |
| DRS 50140 | 95 | 30 | 140 | 127.5 | 115 | 13 | 0.8 | M5x40 | ZARF 50140 TN |
| DRS 50140 | 3.74 | 1.181 | 5.512 | 5.02 | 4.528 | 0.512 | 1.764 | M5x40 | ZARF 50140 TN |
| DRS 55145 | 100 | 30 | 145 | 132.5 | 120 | 12 | 0.9 | M5x40 | ZARF 55145 TN |
| DRS 55145 | 3.937 | 1.181 | 5.709 | 5.217 | 4.724 | 0.472 | 1.985 | M5x40 | ZARF 55145 TN |
| DRS 60150 | 105 | 30 | 150 | 137.5 | 125 | 12 | 0.9 | M5x40 | ZARF 60150 TN |
| DRS 60150 | 4.134 | 1.181 | 5.906 | 5.413 | 4.921 | 0.472 | 1.985 | M5x40 | ZARF 60150 TN |
| DRS 65155 | 110 | 30 | 155 | 142.5 | 130 | 12 | 1 | M5x40 | ZARF 65155 TN |
| DRS 65155 | 4.331 | 1.181 | 6.102 | 5.61 | 5.118 | 0.472 | 2.205 | M5x40 | ZARF 65155 TN |
| DRS 70160 | 115 | 30 | 160 | 147.5 | 135 | 13 | 1 | M5x40 | ZARF 70160 TN |
| DRS 70160 | 4.528 | 1.181 | 6.299 | 5.807 | 5.315 | 0.512 | 2.205 | M5x40 | ZARF 70160 TN |
| DRS 75185 | 135 | 36 | 185 | 172.5 | 160 | 15 | 1.8 | M5x50 | ZARF 75185 TN |
| DRS 75185 | 5.315 | 1.417 | 7.283 | 6.791 | 6.299 | 0.591 | 3.969 | M5x50 | ZARF 75185 TN |
| DRS 90210 | 160 | 38 | 210 | 194 | 180 | 15 | 2.7 | M5x50 | ZARF 90210 |
| DRS 90210 | 6.299 | 1.496 | 8.268 | 7.638 | 7.087 | 0.591 | 5.954 | M5x50 | ZARF 90210 |



Locknuts

AM SERIES

- Axial set screws to prevent loss of preload
- Preloading axial bearings
- Metric series

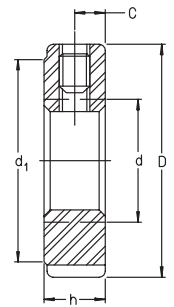


| PART NUMBER | d inch | d mm | D inch | D mm | h inch | h mm | WGT lbs | WGT kg | b inch | b mm | t inch | t mm | d ₁ inch | d ₁ mm | c inch | c mm | m inch | m mm | FaB lbf | FaB kN |
|-------------|--------|-----------|--------|------|--------|------|---------|--------|--------|------|--------|------|---------------------|-------------------|--------|------|--------|------|---------|--------|
| AM 15 | 0.591 | M15 x 1 | 1.181 | 30 | 0.709 | 18 | 0.132 | 0.06 | 0.157 | 4 | 0.197 | 5 | 0.906 | 23 | 0.197 | 5 | 0.157 | M4 | 22900 | 102 |
| AM 17 | 0.669 | M17 x 1 | 1.26 | 32 | 0.709 | 18 | 0.154 | 0.07 | 0.157 | 4 | 0.197 | 5 | 1.024 | 26 | 0.197 | 5 | 0.157 | M4 | 27000 | 120 |
| AM 20 | 0.787 | M20 x 1 | 1.496 | 38 | 0.709 | 18 | 0.287 | 0.13 | 0.157 | 4 | 0.236 | 6 | 1.161 | 29.5 | 0.197 | 5 | 0.236 | M6 | 32600 | 145 |
| AM 25 | 0.984 | M25 x 1.5 | 1.772 | 45 | 0.787 | 20 | 0.353 | 0.16 | 0.197 | 5 | 0.236 | 6 | 1.378 | 35 | 0.236 | 6 | 0.236 | M6 | 46100 | 205 |
| AM 30 | 1.181 | M30 x 1.5 | 2.047 | 52 | 0.787 | 20 | 0.441 | 0.2 | 0.197 | 5 | 0.276 | 7 | 1.575 | 40 | 0.236 | 6 | 0.236 | M6 | 55300 | 246 |
| AM 35 | 1.378 | M35 x 1.5 | 2.559 | 65 | 0.866 | 22 | 0.728 | 0.33 | 0.236 | 6 | 0.315 | 8 | 1.89 | 48 | 0.236 | 6 | 0.236 | M6 | 74000 | 329 |
| AM 40 | 1.575 | M40 x 1.5 | 2.559 | 65 | 0.866 | 22 | 0.662 | 0.3 | 0.236 | 6 | 0.315 | 8 | 2.008 | 51 | 0.236 | 6 | 0.236 | M6 | 78000 | 347 |
| AM 45 | 1.772 | M45 x 1.5 | 2.756 | 70 | 0.866 | 22 | 0.75 | 0.34 | 0.236 | 6 | 0.315 | 8 | 2.205 | 56 | 0.236 | 6 | 0.236 | M6 | 80900 | 360 |
| AM 50 | 1.969 | M50 x 1.5 | 2.953 | 75 | 0.984 | 25 | 0.948 | 0.43 | 0.236 | 6 | 0.315 | 8 | 2.441 | 62 | 0.315 | 8 | 0.236 | M6 | 101200 | 450 |
| AM 60 | 2.362 | M60 x 2 | 3.543 | 90 | 1.024 | 26 | 1.433 | 0.65 | 0.236 | 6 | 0.315 | 8 | 2.953 | 75 | 0.315 | 8 | 0.236 | M6 | 123000 | 547 |

Locknuts

ZM SERIES

- Radial set screws to prevent loss of preload
- Preload for axial bearings
- Metric series



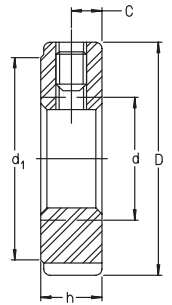
| PART NUMBER | d | d | D | D | h | h | WGT | WGT | d ₁ | d ₁ |
|-------------|--------|------------|-------|-----|-------|----|-------|-------|----------------|----------------|
| | inch | mm | inch | mm | inch | mm | lbs | kg | inch | mm |
| ZM 06 | 0.2362 | M 6 x 0.5 | 0.63 | 16 | 0.315 | 8 | 0.022 | 0.01 | 0.472 | 12 |
| ZM 08 | 0.315 | M 8 x 0.75 | 0.63 | 16 | 0.315 | 8 | 0.022 | 0.01 | 0.472 | 12 |
| ZM 10 | 0.3937 | M 10 x 1 | 0.709 | 18 | 0.315 | 8 | 0.022 | 0.01 | 0.551 | 14 |
| ZM 12 | 0.4724 | M 12 x 1 | 0.866 | 22 | 0.315 | 8 | 0.033 | 0.015 | 0.709 | 18 |
| ZM 15 | 0.5906 | M 15 x 1 | 0.984 | 25 | 0.315 | 8 | 0.04 | 0.018 | 0.827 | 21 |
| ZMA 15/33 | 0.5906 | M 15 x 1 | 1.299 | 33 | 0.63 | 16 | 0.176 | 0.08 | 1.102 | 28 |
| ZM 17 | 0.6693 | M 17 x 1 | 1.102 | 28 | 0.394 | 10 | 0.062 | 0.028 | 0.906 | 23 |
| ZM 20 | 0.7874 | M 20 x 1 | 1.26 | 32 | 0.394 | 10 | 0.077 | 0.035 | 1.063 | 27 |
| ZMA 20/38 | 0.7874 | M 20 x 1 | 1.496 | 38 | 0.787 | 20 | 0.265 | 0.12 | 1.299 | 33 |
| ZM 25 | 0.9843 | M 25 x 1.5 | 1.496 | 38 | 0.472 | 12 | 0.121 | 0.055 | 1.299 | 33 |
| ZMA 25/45 | 0.9843 | M 25 x 1.5 | 1.772 | 45 | 0.787 | 20 | 0.353 | 0.16 | 1.575 | 40 |
| ZM 30 | 1.1811 | M 30 x 1.5 | 1.772 | 45 | 0.472 | 12 | 0.165 | 0.075 | 1.575 | 40 |
| ZMA 30/52 | 1.1811 | M 30 x 1.5 | 2.047 | 52 | 0.866 | 22 | 0.485 | 0.22 | 1.85 | 47 |
| ZM 35 | 1.378 | M 35 x 1.5 | 2.047 | 52 | 0.472 | 12 | 0.218 | 0.099 | 1.85 | 47 |
| ZMA 35/58 | 1.378 | M 35 x 1.5 | 2.283 | 58 | 0.866 | 22 | 0.573 | 0.26 | 2.047 | 52 |
| ZM 40 | 1.5748 | M 40 x 1.5 | 2.283 | 58 | 0.551 | 14 | 0.309 | 0.14 | 2.047 | 52 |
| ZMA 40/62 | 1.5748 | M 40 x 1.5 | 2.441 | 62 | 0.866 | 22 | 0.595 | 0.27 | 2.205 | 56 |
| ZM 45 | 1.7717 | M 45 x 1.5 | 2.559 | 65 | 0.551 | 14 | 0.375 | 0.17 | 2.323 | 59 |
| ZMA 45/68 | 1.7717 | M 45 x 1.5 | 2.677 | 68 | 0.945 | 24 | 0.772 | 0.35 | 2.441 | 62 |
| ZM 50 | 1.9685 | M 50 x 1.5 | 2.756 | 70 | 0.551 | 14 | 0.419 | 0.19 | 2.52 | 64 |
| ZMA 50/75 | 1.9685 | M 50 x 1.5 | 2.953 | 75 | 0.984 | 25 | 0.948 | 0.43 | 2.677 | 68 |
| ZM 55 | 2.1654 | M 55 x 2 | 2.953 | 75 | 0.63 | 16 | 0.507 | 0.23 | 2.677 | 68 |
| ZMA 55/98 | 2.1654 | M 55 x 2 | 3.858 | 98 | 1.26 | 32 | 2.58 | 1.17 | 3.543 | 90 |
| ZM 60 | 2.3622 | M 60 x 2 | 3.15 | 80 | 0.63 | 16 | 0.551 | 0.25 | 2.874 | 73 |
| ZMA 60/98 | 2.3622 | M 60 x 2 | 3.858 | 98 | 1.26 | 32 | 2.359 | 1.07 | 3.543 | 90 |
| ZM 65 | 2.5591 | M 65 x 2 | 3.346 | 85 | 0.63 | 16 | 0.595 | 0.27 | 3.071 | 78 |
| ZMA 65/105 | 2.5591 | M 65 x 2 | 4.134 | 105 | 1.26 | 32 | 2.668 | 1.21 | 3.819 | 97 |
| ZM 70 | 2.7559 | M 70 x 2 | 3.622 | 92 | 0.709 | 18 | 0.794 | 0.36 | 3.346 | 85 |
| ZMA 70/110 | 2.7559 | M 70 x 2 | 4.331 | 110 | 1.378 | 35 | 3.087 | 1.4 | 4.016 | 102 |
| ZM 75 | 2.9528 | M 75 x 2 | 3.858 | 98 | 0.709 | 18 | 0.882 | 0.4 | 3.543 | 90 |
| ZMA 75/125 | 2.9528 | M 75 x 2 | 4.921 | 125 | 1.496 | 38 | 4.653 | 2.11 | 4.606 | 117 |
| ZM 80 | 3.1496 | M 80 x 2 | 4.134 | 105 | 0.709 | 18 | 1.014 | 0.46 | 3.74 | 95 |
| ZM 85 | 3.3465 | M 85 x 2 | 4.331 | 110 | 0.709 | 18 | 1.08 | 0.49 | 4.016 | 102 |
| ZM 90 | 3.5433 | M 90 x 2 | 4.724 | 120 | 0.787 | 20 | 1.544 | 0.7 | 4.252 | 108 |
| ZMA 90/155 | 3.5433 | M 90 x 2 | 6.102 | 155 | 1.496 | 38 | 7.409 | 3.36 | 5.748 | 146 |
| ZM 100 | 3.937 | M 100 x 2 | 5.118 | 130 | 0.787 | 20 | 1.698 | 0.77 | 4.724 | 120 |
| ZM 105 | 4.1339 | M 105 x 2 | 5.512 | 140 | 0.866 | 22 | 2.315 | 1.05 | 4.961 | 126 |
| ZM 110 | 4.3307 | M 110 x 2 | 5.709 | 145 | 0.866 | 22 | 2.403 | 1.09 | 5.236 | 133 |
| ZM 115 | 4.5276 | M 115 x 2 | 5.906 | 150 | 0.866 | 22 | 2.492 | 1.13 | 5.394 | 137 |
| ZM 120 | 4.7244 | M 120 x 2 | 6.102 | 155 | 0.945 | 24 | 2.822 | 1.28 | 5.433 | 138 |
| ZM 125 | 4.9213 | M 125 x 2 | 6.299 | 160 | 0.945 | 24 | 2.933 | 1.33 | 5.827 | 148 |
| ZM 130 | 5.1181 | M 130 x 2 | 6.496 | 165 | 0.945 | 24 | 2.999 | 1.36 | 5.866 | 149 |
| ZM 140 | 5.5118 | M 140 x 2 | 7.087 | 180 | 1.024 | 26 | 4.079 | 1.85 | 6.299 | 160 |
| ZM 150 | 5.9055 | M 150 x 2 | 7.677 | 195 | 1.024 | 26 | 4.939 | 2.24 | 6.732 | 171 |



Locknuts

ZM SERIES

- Radial set screws to prevent loss of preload
- Preload for axial bearings
- Metric series

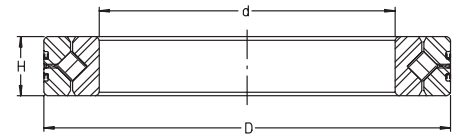


| c inch | c mm | SET SCREW THREAD | GROOVE WIDTH inch | GROOVE WIDTH mm | GROOVE DEPTH inch | GROOVE DEPTH mm | FRACTURE LOAD lbf | FRACTURE LOAD kN | PART NUMBER |
|-----------|---------|---------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|------------------------|----------------|
| 0.157 | 4 | M4 | 0.118 | 3 | 0.079 | 2 | 3800 | 17 | ZM 06 |
| 0.157 | 4 | M4 | 0.118 | 3 | 0.079 | 2 | 5200 | 23 | ZM 08 |
| 0.157 | 4 | M4 | 0.118 | 3 | 0.079 | 2 | 7000 | 31 | ZM 10 |
| 0.157 | 4 | M4 | 0.118 | 3 | 0.079 | 2 | 8500 | 38 | ZM 12 |
| 0.157 | 4 | M4 | 0.118 | 3 | 0.079 | 2 | 11200 | 50 | ZM 15 |
| 0.315 | 8 | M5 | 0.157 | 4 | 0.079 | 2 | 23800 | 106 | ZMA 15/33 |
| 0.197 | 5 | M5 | 0.157 | 4 | 0.079 | 2 | 12800 | 57 | ZM 17 |
| 0.197 | 5 | M5 | 0.157 | 4 | 0.079 | 2 | 15500 | 69 | ZM 20 |
| 0.394 | 10 | M5 | 0.197 | 5 | 0.079 | 2 | 39100 | 174 | ZMA 20/38 |
| 0.236 | 6 | M6 | 0.197 | 5 | 0.079 | 2 | 20200 | 90 | ZM 25 |
| 0.394 | 10 | M6 | 0.197 | 5 | 0.079 | 2 | 47400 | 211 | ZMA 25/45 |
| 0.236 | 6 | M6 | 0.197 | 5 | 0.079 | 2 | 25200 | 112 | ZM 30 |
| 0.433 | 11 | M6 | 0.197 | 5 | 0.079 | 2 | 60700 | 270 | ZMA 30/52 |
| 0.236 | 6 | M6 | 0.197 | 5 | 0.079 | 2 | 30100 | 134 | ZM 35 |
| 0.433 | 11 | M6 | 0.236 | 6 | 0.098 | 2.5 | 67400 | 300 | ZMA 35/58 |
| 0.276 | 7 | M6 | 0.236 | 6 | 0.098 | 2.5 | 35300 | 157 | ZM 40 |
| 0.433 | 11 | M8 | 0.236 | 6 | 0.098 | 2.5 | 69700 | 310 | ZMA 40/62 |
| 0.276 | 7 | M6 | 0.236 | 6 | 0.098 | 2.5 | 40700 | 181 | ZM 45 |
| 0.472 | 12 | M8 | 0.236 | 6 | 0.098 | 2.5 | 80900 | 360 | ZMA 45/68 |
| 0.276 | 7 | M6 | 0.236 | 6 | 0.098 | 2.5 | 46100 | 205 | ZM 50 |
| 0.492 | 12.5 | M8 | 0.236 | 6 | 0.098 | 2.5 | 93300 | 415 | ZMA 50/75 |
| 0.315 | 8 | M6 | 0.276 | 7 | 0.118 | 3 | 51500 | 229 | ZM 55 |
| 0.63 | 16 | M8 | 0.315 | 8 | 0.138 | 3.5 | 139400 | 620 | ZMA 55/98 |
| 0.315 | 8 | M6 | 0.276 | 7 | 0.118 | 3 | 57300 | 255 | ZM 60 |
| 0.63 | 16 | M8 | 0.315 | 8 | 0.138 | 3.5 | 152900 | 680 | ZMA 60/98 |
| 0.315 | 8 | M6 | 0.276 | 7 | 0.118 | 3 | 62900 | 280 | ZM 65 |
| 0.63 | 16 | M8 | 0.315 | 8 | 0.138 | 3.5 | 168600 | 750 | ZMA 65/105 |
| 0.354 | 9 | M8 | 0.315 | 8 | 0.138 | 3.5 | 68600 | 305 | ZM 70 |
| 0.689 | 17.5 | M8 | 0.315 | 8 | 0.138 | 3.5 | 182100 | 810 | ZMA 70/110 |
| 0.354 | 9 | M8 | 0.315 | 8 | 0.138 | 3.5 | 74400 | 331 | ZM 75 |
| 0.748 | 19 | M8 | 0.315 | 8 | 0.138 | 3.5 | 197800 | 880 | ZMA 75/125 |
| 0.354 | 9 | M8 | 0.315 | 8 | 0.138 | 3.5 | 79800 | 355 | ZM 80 |
| 0.354 | 9 | M8 | 0.315 | 8 | 0.138 | 3.5 | 86600 | 385 | ZM 85 |
| 0.394 | 10 | M8 | 0.394 | 10 | 0.157 | 4 | 92200 | 410 | ZM 90 |
| 0.748 | 19 | M8 | 0.394 | 10 | 0.157 | 4 | 242800 | 1080 | ZMA 90/155 |
| 0.394 | 10 | M8 | 0.394 | 10 | 0.157 | 4 | 104500 | 465 | ZM 100 |
| 0.433 | 11 | M10 | 0.472 | 12 | 0.197 | 5 | 111300 | 495 | ZM 105 |
| 0.433 | 11 | M10 | 0.472 | 12 | 0.197 | 5 | 116900 | 520 | ZM 110 |
| 0.433 | 11 | M10 | 0.472 | 12 | 0.197 | 5 | 123700 | 550 | ZM 115 |
| 0.472 | 12 | M10 | 0.472 | 12 | 0.197 | 5 | 130400 | 580 | ZM 120 |
| 0.472 | 12 | M10 | 0.472 | 12 | 0.197 | 5 | 137100 | 610 | ZM 125 |
| 0.472 | 12 | M10 | 0.472 | 12 | 0.197 | 5 | 141600 | 630 | ZM 130 |
| 0.512 | 13 | M12 | 0.551 | 14 | 0.236 | 6 | 155100 | 690 | ZM 140 |
| 0.512 | 13 | M12 | 0.551 | 14 | 0.236 | 6 | 168600 | 750 | ZM 150 |

Cross Roller Bearings

SX SERIES

- Cross roller bearings ISO series 18 (same envelope as 618 14 etc.)

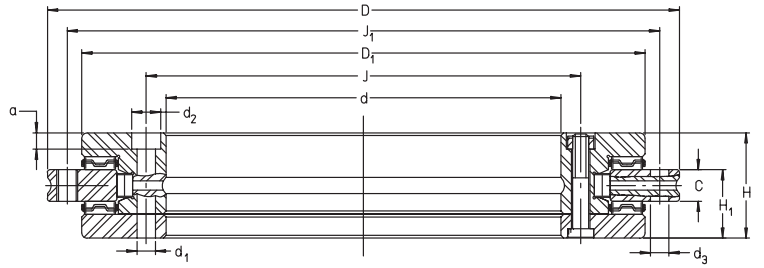


| PART NUMBER | SHAFT d | SHAFT d | OD D | OD D | WIDTH H | WIDTH H | WGT | WGT | DYN. CAP. AXIAL | DYN. CAP. AXIAL | STAT. CAP. AXIAL | STAT. CAP. AXIAL | SPEED LIMIT |
|---------------|---------|---------|--------|------|---------|---------|-------|------|-----------------|-----------------|------------------|------------------|-------------|
| | inch | mm | inch | mm | inch | mm | lbs | kg | lbf | kN | lbf | kN | rpm |
| SX 01 18 14 | 2.756 | 70 | 3.543 | 90 | 0.394 | 10 | 0.662 | 0.3 | 4,050 | 18 | 13,500 | 60 | 955 |
| SX 01 18 20 | 3.937 | 100 | 4.921 | 125 | 0.512 | 13 | 0.882 | 0.4 | 6,300 | 28 | 23,800 | 106 | 680 |
| SX 01 18 24 | 4.724 | 120 | 5.906 | 150 | 0.630 | 16 | 1.764 | 0.8 | 9,200 | 41 | 34,500 | 153 | 565 |
| SX 01 18 28 | 5.512 | 140 | 6.890 | 175 | 0.709 | 18 | 2.426 | 1.1 | 14,400 | 64 | 53,000 | 237 | 485 |
| SX 01 18 32 | 6.299 | 160 | 7.874 | 200 | 0.787 | 20 | 3.749 | 1.7 | 15,500 | 69 | 61,000 | 272 | 425 |
| SX 01 18 36 | 7.087 | 180 | 8.858 | 225 | 0.866 | 22 | 5.072 | 2.3 | 22,000 | 98 | 86,000 | 381 | 375 |
| SX 01 18 40 | 7.874 | 200 | 9.843 | 250 | 0.945 | 24 | 6.836 | 3.1 | 23,800 | 106 | 96,000 | 425 | 340 |
| SX 01 18 48 | 9.449 | 240 | 11.811 | 300 | 1.102 | 28 | 11.7 | 5.3 | 33,500 | 149 | 138,000 | 612 | 280 |
| SX 01 18 60 | 11.811 | 300 | 14.961 | 380 | 1.496 | 38 | 26.5 | 12 | 55,000 | 245 | 231,000 | 1027 | 558 |
| SX 01 18 68 | 13.386 | 340 | 16.535 | 420 | 1.496 | 38 | 29.8 | 13.5 | 60,000 | 265 | 260,000 | 1148 | 200 |
| SX 01 18 80 | 15.748 | 400 | 19.685 | 500 | 1.811 | 46 | 52.9 | 24 | 87,000 | 385 | 380,000 | 1699 | 170 |
| SX 01 18 /500 | 19.685 | 500 | 24.409 | 620 | 2.205 | 56 | 97.0 | 44 | 126,000 | 560 | 570,000 | 2538 | 135 |

Axial Radial Bearings for Rotary Tables

YRT SERIES

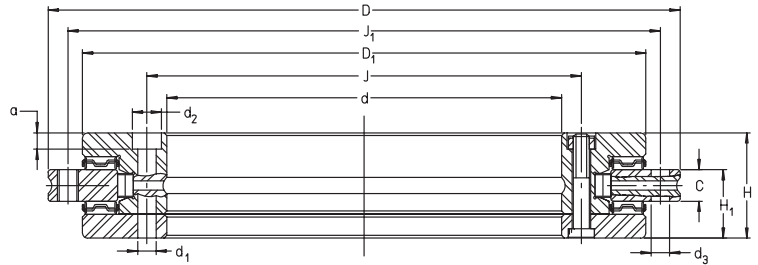
- Double direction
- Axially preloaded, radially preloaded
- Predrilled for flange mounting
- P4 precision



| PART NUMBER | SHAFT d | OD D | WIDTH H | DYN. CAP AXIAL | STAT. CAP. AXIAL | DYN. CAP RADIAL | STAT. CAP. RADIAL | H ₁ | C | D ₁ | INNER BOLT CIRCLE J | OUTER BOLT CIRCLE J ₁ | BOLT TORQUE |
|-------------|------------|------------|------------|----------------|------------------|-----------------|-------------------|----------------|------------|----------------|---------------------|----------------------------------|--------------|
| | mm inch | mm inch | mm inch | kN lbf | kN lbf | kN lbf | kN lbf | mm inch | mm inch | mm inch | mm inch | mm inch | Nm lbf-ft |
| YRT 80 | 80 | 146 | 35 | 38.5 | 158 | 36.5 | 47 | 23.35 | 12 | 130 | 92 | 138 | 8.5 |
| YRT 80 | 3.15 | 5.748 | 1.378 | 8700 | 36000 | 8200 | 10600 | 0.919 | 0.472 | 5.118 | 3.622 | 5.433 | 6.3 |
| YRT 100 | 100 | 185 | 38 | 72 | 370 | 54 | 115 | 25 | 12 | 160 | 112 | 170 | 8.5 |
| YRT 100 | 3.937 | 7.283 | 1.496 | 16000 | 83000 | 12100 | 25900 | 0.984 | 0.472 | 6.299 | 4.409 | 6.693 | 6.3 |
| YRT 120 | 120 | 210 | 40 | 79 | 430 | 70 | 148 | 26 | 12 | 184 | 135 | 195 | 14 |
| YRT 120 | 4.724 | 8.268 | 1.575 | 18000 | 97000 | 15700 | 33000 | 1.024 | 0.472 | 7.244 | 5.315 | 7.677 | 10.3 |
| YRT 150 | 150 | 240 | 40 | 85 | 510 | 77 | 179 | 26 | 12 | 214 | 165 | 225 | 14 |
| YRT 150 | 5.906 | 9.449 | 1.575 | 19000 | 115000 | 17300 | 40000 | 1.024 | 0.472 | 8.425 | 6.496 | 8.858 | 10.3 |
| YRT 180 | 180 | 280 | 43 | 92 | 580 | 83 | 208 | 29 | 15 | 244 | 194 | 260 | 14 |
| YRT 180 | 7.087 | 11.024 | 1.693 | 21000 | 130000 | 18700 | 47000 | 1.142 | 0.591 | 9.606 | 7.638 | 10.236 | 10.3 |
| YRT 200 | 200 | 300 | 45 | 98 | 650 | 88 | 235 | 30 | 15 | 274 | 215 | 285 | 14 |
| YRT 200 | 7.874 | 11.811 | 1.772 | 22000 | 146000 | 20000 | 53000 | 1.181 | 0.591 | 10.787 | 8.465 | 11.22 | 10.3 |
| YRT 260 | 260 | 385 | 55 | 109 | 810 | 101 | 305 | 36.5 | 18 | 345 | 280 | 365 | 34 |
| YRT 260 | 10.236 | 15.157 | 2.165 | 25000 | 182000 | 23000 | 69000 | 1.437 | 0.709 | 13.583 | 11.024 | 14.37 | 25.1 |
| YRT 325 | 325 | 450 | 60 | 186 | 1710 | 133 | 410 | 40 | 20 | 415 | 342 | 430 | 34 |
| YRT 325 | 12.795 | 17.717 | 2.362 | 42000 | 384000 | 30000 | 92000 | 1.575 | 0.787 | 16.339 | 13.465 | 16.929 | 25.1 |
| YRT 395 | 395 | 525 | 65 | 202 | 2010 | 146 | 495 | 42.5 | 20 | 486 | 415 | 505 | 34 |
| YRT 395 | 15.551 | 20.669 | 2.559 | 45000 | 452000 | 33000 | 111000 | 1.673 | 0.787 | 19.134 | 16.339 | 19.882 | 25.1 |
| YRT 460 | 460 | 600 | 70 | 217 | 2300 | 197 | 690 | 46 | 22 | 560 | 482 | 580 | 34 |
| YRT 460 | 18.11 | 23.622 | 2.756 | 49000 | 517000 | 44000 | 155000 | 1.811 | 0.866 | 22.047 | 18.976 | 22.835 | 25.1 |
| YRT 580 | 580 | 750 | 90 | 385 | 3550 | 215 | 830 | 60 | 30 | 700 | 610 | 720 | 68 |
| YRT 580 | 22.835 | 29.528 | 3.543 | 87000 | 798000 | 48000 | 187000 | 2.362 | 1.181 | 27.559 | 24.016 | 28.346 | 50.2 |
| YRT 650 | 650 | 870 | 122 | 495 | 5100 | 415 | 1520 | 78 | 34 | 800 | 680 | 830 | 116 |
| YRT 650 | 25.591 | 34.252 | 4.803 | 111000 | 1147000 | 93000 | 342000 | 3.071 | 1.339 | 31.496 | 26.772 | 32.677 | 85.6 |
| YRT 850 | 850 | 1095 | 124 | 560 | 6500 | 480 | 1990 | 80.5 | 37 | 1018 | 890 | 1055 | 284 |
| YRT 850 | 33.465 | 43.11 | 4.882 | 126000 | 1461000 | 108000 | 447000 | 3.169 | 1.457 | 40.079 | 35.039 | 41.535 | 209.5 |
| YRT 950 | 950 | 1200 | 132 | 1040 | 10300 | 600 | 2480 | 86 | 40 | 1130 | 990 | 1160 | 284 |
| YRT 950 | 37.402 | 47.244 | 5.197 | 234000 | 2316000 | 135000 | 558000 | 3.386 | 1.575 | 44.488 | 38.976 | 45.669 | 209.5 |

Axial Radial Bearings for Rotary Tables YRT SERIES

- Double direction
- Axially preloaded, radially preloaded
- Pre drilled for flange mounting
- P4 precision



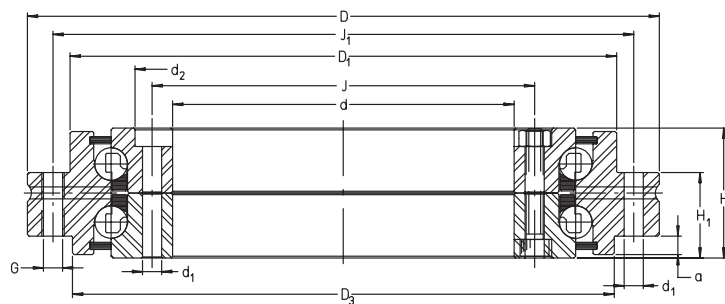
| a | d1 | d2 | QTY * | HOLE SPACING | d3 | QTY ** | REMOVAL THREADS G | QTY | BEARING FRICTIONAL TORQUE | RIGIDITY AXIAL | RIGIDITY RADIAL | RIGIDITY MOMENT | WGT. | SPEED LIMIT GREASE | PART NUMBER |
|---------|---------|---------|-------|--------------|---------|--------|-------------------|-----|---------------------------|---------------------------|---------------------------|-------------------|--------|--------------------|-------------|
| mm inch | mm inch | mm inch | | | mm inch | | | | Nm lbf-ft | N/μm lbf ⁶ /in | N/μm lbf ⁶ /in | Nm/mrad ftlbf/deg | kg lbs | rpm | |
| 4 | 5.6 | 10 | 10 | 30° | 4.6 | 12 | — | — | 3 | 500 | 1800 | 2500 | 2.4 | 350 | YRT 80 |
| 0.157 | 0.22 | 0.394 | 10 | 30° | 0.181 | 12 | — | — | 2.2 | 2.86 | 10.28 | 32200 | 5.29 | 350 | YRT 80 |
| 5.4 | 5.6 | 10 | 16 | 20° | 5.6 | 15 | M5 | 3 | 3 | 800 | 2000 | 5000 | 4.1 | 280 | YRT 100 |
| 0.213 | 0.22 | 0.394 | 16 | 20° | 0.22 | 15 | M5 | 3 | 2.2 | 4.57 | 11.42 | 64400 | 9.04 | 280 | YRT 100 |
| 6.2 | 7 | 11 | 22 | 15° | 7 | 21 | M8 | 3 | 7 | 1000 | 2200 | 7000 | 5.3 | 230 | YRT 120 |
| 0.244 | 0.276 | 0.433 | 22 | 15° | 0.276 | 21 | M8 | 3 | 5.2 | 5.71 | 12.56 | 90100 | 11.69 | 230 | YRT 120 |
| 6.2 | 7 | 11 | 34 | 10° | 7 | 33 | M8 | 3 | 10 | 1500 | 2600 | 11000 | 6.2 | 210 | YRT 150 |
| 0.244 | 0.276 | 0.433 | 34 | 10° | 0.276 | 33 | M8 | 3 | 7.4 | 8.57 | 14.85 | 141600 | 13.67 | 210 | YRT 150 |
| 6.2 | 7 | 11 | 46 | 7.5° | 7 | 45 | M8 | 3 | 12 | 2200 | 3000 | 17000 | 7.7 | 190 | YRT 180 |
| 0.244 | 0.276 | 0.433 | 46 | 7.5° | 0.276 | 45 | M8 | 3 | 8.9 | 12.56 | 17.13 | 218800 | 16.98 | 190 | YRT 180 |
| 6.2 | 7 | 11 | 46 | 7.5° | 7 | 45 | M8 | 3 | 14 | 3000 | 3500 | 23000 | 9.7 | 170 | YRT 200 |
| 0.244 | 0.276 | 0.433 | 46 | 7.5° | 0.276 | 45 | M8 | 3 | 10.3 | 17.13 | 19.99 | 296100 | 21.39 | 170 | YRT 200 |
| 8.2 | 9.3 | 15 | 34 | 10° | 9.3 | 33 | M12 | 3 | 20 | 5500 | 4500 | 45000 | 18.3 | 130 | YRT 260 |
| 0.323 | 0.366 | 0.591 | 34 | 10° | 0.366 | 33 | M12 | 3 | 14.8 | 31.41 | 25.7 | 579300 | 40.35 | 130 | YRT 260 |
| 8.2 | 9.3 | 15 | 34 | 10° | 9.3 | 33 | M12 | 3 | 40 | 8500 | 5000 | 80000 | 25 | 110 | YRT 325 |
| 0.323 | 0.366 | 0.591 | 34 | 10° | 0.366 | 33 | M12 | 3 | 29.5 | 48.54 | 28.55 | 1029800 | 55.13 | 110 | YRT 325 |
| 8.2 | 9.3 | 15 | 46 | 7.5° | 9.3 | 45 | M12 | 3 | 55 | 12500 | 6000 | 130000 | 33 | 90 | YRT 395 |
| 0.323 | 0.366 | 0.591 | 46 | 7.5° | 0.366 | 45 | M12 | 3 | 40.6 | 71.38 | 34.26 | 1673400 | 72.77 | 90 | YRT 395 |
| 8.2 | 9.3 | 15 | 46 | 7.5° | 9.3 | 45 | M12 | 3 | 70 | 18000 | 7000 | 200000 | 45 | 80 | YRT 460 |
| 0.323 | 0.366 | 0.591 | 46 | 7.5° | 0.366 | 45 | M12 | 3 | 51.6 | 102.79 | 39.97 | 2574500 | 99.23 | 80 | YRT 460 |
| 11 | 11.4 | 18 | 46 | 7.5° | 11.4 | 42 | M12 | 6 | 140 | 30000 | 9000 | 380000 | 89 | 60 | YRT 580 |
| 0.433 | 0.449 | 0.709 | 46 | 7.5° | 0.449 | 42 | M12 | 6 | 103.3 | 171.31 | 51.39 | 4891600 | 196.25 | 60 | YRT 580 |
| 13 | 14 | 20 | 46 | 7.5° | 14 | 42 | M12 | 6 | 200 | 45000 | 10000 | 550000 | 170 | 55 | YRT 650 |
| 0.512 | 0.551 | 0.787 | 46 | 7.5° | 0.551 | 42 | M12 | 6 | 147.5 | 256.97 | 57.1 | 7079900 | 374.85 | 55 | YRT 650 |
| 17 | 18 | 26 | 58 | 6° | 18 | 54 | M16 | 6 | 300 | 80000 | 13000 | 1100000 | 253 | 40 | YRT 850 |
| 0.669 | 0.709 | 1.024 | 58 | 6° | 0.709 | 54 | M16 | 6 | 221.3 | 456.83 | 74.24 | 14159800 | 557.87 | 40 | YRT 850 |
| 17 | 18 | 26 | 58 | 6° | 18 | 54 | M16 | 6 | — | 100000 | 14000 | 1500000 | 312 | 40 | YRT 950 |
| 0.669 | 0.709 | 1.024 | 58 | 6° | 0.709 | 54 | M16 | 6 | — | 571.04 | 79.95 | 19308800 | 687.96 | 40 | YRT 950 |

Equal hole spacing includes
 * quantity of mounting holes – spacing includes two holes with retaining bolts for shipping
 ** equal hole spacing is sum of bolt holes and threaded removal holes

Rotary Table Bearings

ZKLDF SERIES

- Double direction axial angular contact ball bearings
- 60° contact angle with axial mounting bolt holes
- Bolt pattern matches YRT series
- Metric series



| PART NUMBER | SHAFT | OD | WIDTH | WEIGHT | DYN. CAP. AXIAL | STAT. CAP. AXIAL | H ₁ | D ₁ | D ₃ | INNER BOLT CIRCLE DIA. J | OUTER BOLT CIRCLE DIA. J ₁ | HOLE DIA. d ₁ |
|-------------|---------|---------|-------|--------|-----------------|------------------|----------------|----------------|----------------|--------------------------|---------------------------------------|--------------------------|
| | d | D | H | | | | | | | | | |
| ZKLDF 100 | 100 | 185 | 38 | 4.5 | 51000 | 162000 | 25 | 160 | 158 | 112 | 170 | 5.6 |
| ZKLDF 100 | 3.937 | 7.2835 | 1.496 | 9.9 | 11000 | 36000 | 0.984 | 6.299 | 6.22 | 4.409 | 6.693 | 0.22 |
| ZKLDF 120 | 120 | 210 | 40 | 6 | 61000 | 207000 | 26 | 184 | 181 | 135 | 195 | 7 |
| ZKLDF 120 | 4.7244 | 8.2677 | 1.575 | 13.2 | 14000 | 47000 | 1.024 | 7.244 | 7.126 | 5.315 | 7.677 | 0.276 |
| ZKLDF 150 | 150 | 240 | 40 | 7.5 | 65000 | 247000 | 26 | 214 | 211 | 165 | 225 | 7 |
| ZKLDF 150 | 5.9055 | 9.4488 | 1.575 | 16.5 | 15000 | 56000 | 1.024 | 8.425 | 8.307 | 6.496 | 8.858 | 0.276 |
| ZKLDF 200 | 200 | 300 | 45 | 11 | 87000 | 365000 | 30 | 274 | 271 | 215 | 285 | 7 |
| ZKLDF 200 | 7.874 | 11.811 | 1.772 | 24.3 | 20000 | 82000 | 1.181 | 10.787 | 10.669 | 8.465 | 11.22 | 0.276 |
| ZKLDF 260 | 260 | 385 | 55 | 22 | 115000 | 540000 | 36.5 | 345 | 348 | 280 | 365 | 9.3 |
| ZKLDF 260 | 10.2362 | 15.1575 | 2.165 | 48.5 | 26000 | 121000 | 1.437 | 13.583 | 13.701 | 11.024 | 14.37 | 0.366 |
| ZKLDF 325 | 325 | 450 | 60 | 28 | 138000 | 720000 | 40 | 415 | 413 | 342 | 430 | 9.3 |
| ZKLDF 325 | 12.7953 | 17.7165 | 2.362 | 61.7 | 31000 | 162000 | 1.575 | 16.339 | 16.26 | 13.465 | 16.929 | 0.366 |
| ZKLDF 395 | 395 | 525 | 65 | 39 | 172000 | 960000 | 42.5 | 486 | 488 | 415 | 505 | 9.3 |
| ZKLDF 395 | 15.5512 | 20.6693 | 2.559 | 86 | 39000 | 216000 | 1.673 | 19.134 | 19.213 | 16.339 | 19.882 | 0.366 |
| ZKLDF 460 | 460 | 600 | 70 | 50 | 207000 | 1210000 | 46 | 560 | 563 | 482 | 580 | 9.3 |
| ZKLDF 460 | 18.1102 | 23.622 | 2.756 | 110.3 | 47000 | 272000 | 1.811 | 22.047 | 22.165 | 18.976 | 22.835 | 0.366 |

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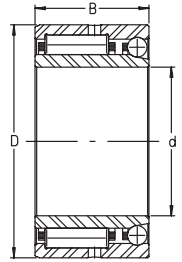
| PART NUMBER | COUNTER BORE DIA. d ₂ | a | HOLE SPACING | QTY. MOUNTING HOLES | QTY. SHIPPING SCREWS | THREADED HOLES G | QTY. THREADED HOLES G | BOLT TORQUE | SPEED LIMIT OIL | SPEED LIMIT GREASE | FRICITION TORQUE |
|-------------|----------------------------------|---------|--------------|---------------------|----------------------|------------------|-----------------------|-------------|-----------------|--------------------|------------------|
| | mm inch | mm inch | | | | | | Nm inch-lbf | rpm | rpm | Nm inch-lbf |
| ZKLDF 100 | 10 | 5.4 | 18X20° | 15 | 3 | M5 | 3 | 8.5 | 2100 | 1400 | 1.6 |
| ZKLDF 100 | 0.394 | 0.213 | 18X20° | 15 | 3 | M5 | 3 | 75.2 | 2100 | 1400 | 14.2 |
| ZKLDF 120 | 11 | 6.2 | 24X15° | 21 | 3 | M8 | 3 | 14 | 1800 | 1200 | 2 |
| ZKLDF 120 | 0.433 | 0.244 | 24X15° | 21 | 3 | M8 | 3 | 123.9 | 1800 | 1200 | 17.7 |
| ZKLDF 150 | 11 | 6.2 | 36X10° | 33 | 3 | M8 | 3 | 14 | 1500 | 1000 | 3 |
| ZKLDF 150 | 0.433 | 0.244 | 36X10° | 33 | 3 | M8 | 3 | 123.9 | 1500 | 1000 | 26.6 |
| ZKLDF 200 | 11 | 6.2 | 48X7.5° | 45 | 3 | M8 | 3 | 14 | 1200 | 800 | 4.5 |
| ZKLDF 200 | 0.433 | 0.244 | 48X7.5° | 45 | 3 | M8 | 3 | 123.9 | 1200 | 800 | 39.8 |
| ZKLDF 260 | 15 | 8.2 | 36X10° | 33 | 3 | M12 | 3 | 34 | 900 | 600 | 7.5 |
| ZKLDF 260 | 0.591 | 0.323 | 36X10° | 33 | 3 | M12 | 3 | 300.9 | 900 | 600 | 66.4 |
| ZKLDF 325 | 15 | 8.2 | 36X10° | 33 | 3 | M12 | 3 | 34 | 750 | 500 | 11 |
| ZKLDF 325 | 0.591 | 0.323 | 36X10° | 33 | 3 | M12 | 3 | 300.9 | 750 | 500 | 97.4 |
| ZKLDF 395 | 15 | 8.2 | 48X7.5° | 45 | 3 | M12 | 3 | 34 | 600 | 400 | 16 |
| ZKLDF 395 | 0.591 | 0.323 | 48X7.5° | 45 | 3 | M12 | 3 | 300.9 | 600 | 400 | 141.6 |
| ZKLDF 460 | 15 | 8.2 | 48X7.5° | 45 | 3 | M12 | 3 | 34 | 525 | 350 | 21 |
| ZKLDF 460 | 0.591 | 0.323 | 48X7.5° | 45 | 3 | M12 | 3 | 300.9 | 525 | 350 | 185.9 |



Combination Bearings

NKIA SERIES

- Radial needle roller and single direction axial angular contact ball bearings
- Metric series
- Removeable inner ring

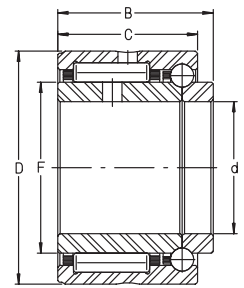


| PART NUMBER | SHAFT d | | OD D | | WIDTH B | | WGT. | WGT. | DYN. CAP. RADIAL | DYN. CAP. RADIAL | STAT. CAP. RADIAL | STAT. CAP. RADIAL | DYN. CAP. AXIAL | DYN. CAP. AXIAL | STAT. CAP. AXIAL | STAT. CAP. AXIAL | SPEED LIMIT rpm |
|-------------|---------|----|-------|-----|---------|----|-------|------|------------------|------------------|-------------------|-------------------|-----------------|-----------------|------------------|------------------|-----------------|
| | inch | mm | inch | mm | inch | mm | lbs | g | lbf | N | lbf | N | lbf | N | lbf | N | |
| NKIA 5901 | 0.472 | 12 | 0.945 | 24 | 0.630 | 16 | 0.088 | 40 | 1,710 | 7600 | 1,870 | 8300 | 485 | 2160 | 510 | 2250 | 24000 |
| NKIA 5902 | 0.591 | 15 | 1.102 | 28 | 0.709 | 18 | 0.11 | 50 | 2,380 | 10600 | 3,050 | 13600 | 530 | 2340 | 620 | 2750 | 22000 |
| NKIA 5903 | 0.669 | 17 | 1.181 | 30 | 0.709 | 18 | 0.123 | 56 | 2,470 | 11000 | 3,300 | 14600 | 560 | 2500 | 720 | 3200 | 21000 |
| NKIA 5904 | 0.787 | 20 | 1.457 | 37 | 0.906 | 23 | 0.227 | 103 | 4,700 | 21000 | 5,700 | 25500 | 890 | 3950 | 1,090 | 4850 | 17000 |
| NKIA 59/22 | 0.866 | 22 | 1.535 | 39 | 0.906 | 23 | 0.26 | 118 | 5,100 | 22800 | 6,600 | 29500 | 960 | 4250 | 1,260 | 5600 | 16000 |
| NKIA 5905 | 0.984 | 25 | 1.654 | 42 | 0.906 | 23 | 0.287 | 130 | 5,300 | 23600 | 7,100 | 31500 | 980 | 4350 | 1,370 | 6100 | 15000 |
| NKIA 5906 | 1.181 | 30 | 1.850 | 47 | 0.906 | 23 | 0.324 | 147 | 5,600 | 25000 | 8,000 | 35500 | 1,070 | 4750 | 1,640 | 7300 | 13000 |
| NKIA 5907 | 1.378 | 35 | 2.165 | 55 | 1.063 | 27 | 0.536 | 243 | 7,100 | 31500 | 11,200 | 50000 | 1,350 | 6000 | 2,200 | 9800 | 11000 |
| NKIA 5908 | 1.575 | 40 | 2.441 | 62 | 1.181 | 30 | 0.695 | 315 | 9,700 | 43000 | 15,100 | 67000 | 1,660 | 7400 | 2,850 | 12700 | 9500 |
| NKIA 5909 | 1.772 | 45 | 2.677 | 68 | 1.181 | 30 | 0.827 | 375 | 10,100 | 45000 | 16,400 | 73000 | 1,730 | 7700 | 3,150 | 14000 | 8500 |
| NKIA 5910 | 1.969 | 50 | 2.835 | 72 | 1.181 | 30 | 0.838 | 380 | 10,600 | 47000 | 18,000 | 80000 | 1,820 | 8100 | 3,600 | 15900 | 8000 |
| NKIA 5911 | 2.165 | 55 | 3.150 | 80 | 1.339 | 34 | 1.213 | 550 | 13,000 | 58000 | 22,500 | 100000 | 2,180 | 9700 | 4,300 | 19200 | 7500 |
| NKIA 5912 | 2.362 | 60 | 3.347 | 85 | 1.339 | 34 | 1.301 | 590 | 13,500 | 60000 | 24,300 | 108000 | 2,250 | 10000 | 4,700 | 20800 | 7000 |
| NKIA 5913 | 2.559 | 65 | 3.543 | 90 | 1.339 | 34 | 1.4 | 635 | 13,700 | 61000 | 25,000 | 112000 | 2,320 | 10300 | 5,000 | 22300 | 6500 |
| NKIA 5914 | 2.756 | 70 | 3.937 | 100 | 1.575 | 40 | 2.161 | 980 | 18,900 | 84000 | 35,000 | 156000 | 3,050 | 13500 | 6,500 | 29000 | 6000 |

Combination Bearings

NKIB SERIES

- Radial needle roller and double direction axial angular contact ball bearing
- Metric series
- Removeable inner rings



| PART NUMBER | SHAFT d inch | SHAFT d mm | OD D inch | OD D mm | WIDTH B inch | WIDTH B mm | WIDTH C inch | WIDTH C mm | WGT. lbs | WGT. g |
|-------------|-----------------|---------------|--------------|------------|-----------------|---------------|-----------------|---------------|-------------|-----------|
| NKIB 5901 | 0.472 | 12 | 0.945 | 24 | 0.689 | 17.5 | 0.630 | 16 | 0.095 | 43 |
| NKIB 5902 | 0.591 | 15 | 1.102 | 28 | 0.787 | 20 | 0.709 | 18 | 0.115 | 52 |
| NKIB 5903 | 0.669 | 17 | 1.181 | 30 | 0.787 | 20 | 0.709 | 18 | 0.128 | 58 |
| NKIB 5904 | 0.787 | 20 | 1.457 | 37 | 0.984 | 25 | 0.906 | 23 | 0.236 | 107 |
| NKIB 59/22 | 0.866 | 22 | 1.535 | 39 | 0.984 | 25 | 0.906 | 23 | 0.269 | 122 |
| NKIB 5905 | 0.984 | 25 | 1.654 | 42 | 0.984 | 25 | 0.906 | 23 | 0.295 | 134 |
| NKIB 5906 | 1.181 | 30 | 1.850 | 47 | 0.984 | 25 | 0.906 | 23 | 0.333 | 151 |
| NKIB 5907 | 1.378 | 35 | 2.165 | 55 | 1.181 | 30 | 1.063 | 27 | 0.545 | 247 |
| NKIB 5908 | 1.575 | 40 | 2.441 | 62 | 1.339 | 34 | 1.181 | 30 | 0.706 | 320 |
| NKIB 5909 | 1.772 | 45 | 2.677 | 68 | 1.339 | 34 | 1.181 | 30 | 0.838 | 380 |
| NKIB 5910 | 1.969 | 50 | 2.835 | 72 | 1.339 | 34 | 1.181 | 30 | 0.849 | 385 |
| NKIB 5911 | 2.165 | 55 | 3.150 | 80 | 1.496 | 38 | 1.339 | 34 | 1.224 | 555 |
| NKIB 5912 | 2.362 | 60 | 3.347 | 85 | 1.496 | 38 | 1.339 | 34 | 1.312 | 595 |
| NKIB 5913 | 2.559 | 65 | 3.543 | 90 | 1.496 | 38 | 1.339 | 34 | 1.411 | 640 |
| NKIB 5914 | 2.756 | 70 | 3.937 | 100 | 1.772 | 45 | 1.575 | 40 | 2.172 | 985 |

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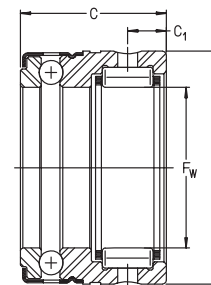
| PART NUMBER | DYN. CAP. RADIAL lbf | DYN. CAP. RADIAL N | STAT. CAP. RADIAL lbf | STAT. CAP. RADIAL N | DYN. CAP. AXIAL lbf | DYN. CAP. AXIAL N | STAT. CAP. AXIAL lbf | STAT. CAP. AXIAL N | SPEED LIMIT rpm |
|-------------|-------------------------|-----------------------|--------------------------|------------------------|------------------------|----------------------|-------------------------|-----------------------|--------------------|
| NKIB 5901 | 1,710 | 7600 | 1,870 | 8300 | 485 | 2160 | 510 | 2250 | 24000 |
| NKIB 5902 | 2,380 | 10600 | 3,050 | 13600 | 530 | 2340 | 620 | 2750 | 22000 |
| NKIB 5903 | 2,470 | 11000 | 3,300 | 14600 | 560 | 2500 | 720 | 3200 | 21000 |
| NKIB 5904 | 4,700 | 21000 | 5,700 | 25500 | 890 | 3950 | 1,090 | 4850 | 17000 |
| NKIB 59/22 | 5,100 | 22800 | 6,600 | 29500 | 960 | 4250 | 1,260 | 5600 | 16000 |
| NKIB 5905 | 5,300 | 23600 | 7,100 | 31500 | 980 | 4350 | 1,370 | 6100 | 15000 |
| NKIB 5906 | 5,600 | 25000 | 8,000 | 35500 | 1,070 | 4750 | 1,640 | 7300 | 13000 |
| NKIB 5907 | 7,100 | 31500 | 11,200 | 50000 | 1,350 | 6000 | 2,200 | 9800 | 11000 |
| NKIB 5908 | 9,700 | 43000 | 15,100 | 67000 | 1,660 | 7400 | 2,850 | 12700 | 9500 |
| NKIB 5909 | 10,100 | 45000 | 16,400 | 73000 | 1,730 | 7700 | 3,150 | 14000 | 8500 |
| NKIB 5910 | 10,600 | 47000 | 18,000 | 80000 | 1,820 | 8100 | 3,600 | 15900 | 8000 |
| NKIB 5911 | 13,000 | 58000 | 22,500 | 100000 | 2,180 | 9700 | 4,300 | 19200 | 7500 |
| NKIB 5912 | 13,500 | 60000 | 24,300 | 108000 | 2,250 | 10000 | 4,700 | 20800 | 7000 |
| NKIB 5913 | 13,700 | 61000 | 25,000 | 112000 | 2,320 | 10300 | 5,000 | 22300 | 6500 |
| NKIB 5914 | 18,900 | 84000 | 35,000 | 156000 | 3,050 | 13500 | 6,500 | 29000 | 6000 |



Combination Bearings

NX SERIES

- Radial needle roller and axial banded ball bearing
- Metric series



| PART NUMBER | SHAFT F _w | SHAFT F _w | OD D | OD D | WIDTH C | WIDTH C | WGT. | WGT. |
|-------------|----------------------|----------------------|-------|------|---------|---------|-------|------|
| | inch | mm | inch | mm | inch | mm | | |
| NX 7 TN | 0.276 | 7 | 0.551 | 14 | 0.709 | 18 | 0.031 | 14 |
| NX 10 | 0.394 | 10 | 0.748 | 19 | 0.709 | 18 | 0.055 | 25 |
| NX 12 | 0.472 | 12 | 0.827 | 21 | 0.709 | 18 | 0.062 | 28 |
| NX 15 | 0.591 | 15 | 0.945 | 24 | 1.102 | 28 | 0.106 | 48 |
| NX 17 | 0.669 | 17 | 1.024 | 26 | 1.102 | 28 | 0.117 | 53 |
| NX 20 | 0.787 | 20 | 1.181 | 30 | 1.102 | 28 | 0.15 | 68 |
| NX 25 | 0.984 | 25 | 1.457 | 37 | 1.181 | 30 | 0.254 | 115 |
| NX 30 | 1.181 | 30 | 1.654 | 42 | 1.181 | 30 | 0.287 | 130 |
| NX 35 | 1.378 | 35 | 1.850 | 47 | 1.181 | 30 | 0.353 | 160 |

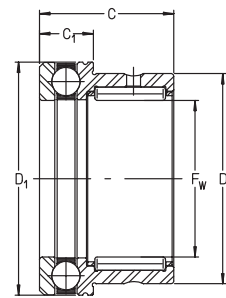
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| PART NUMBER | DYN. CAP. RADIAL | DYN. CAP. RADIAL | STAT. CAP. RADIAL | STAT. CAP. RADIAL | DYN. CAP. AXIAL | DYN. CAP. AXIAL | STAT. CAP. AXIAL | STAT. CAP. AXIAL | OIL GROOVE CENTER C ₁ | OIL GROOVE CENTER C ₁ | SPEED LIMIT | CORRECT SNAP RING |
|-------------|------------------|------------------|-------------------|-------------------|-----------------|-----------------|------------------|------------------|----------------------------------|----------------------------------|-------------|-------------------|
| | lbf | N | lbf | N | lbf | N | lbf | N | inch | mm | | |
| NX 7 TN | 640 | 2850 | 600 | 2650 | 780 | 3450 | 1,030 | 4600 | 0.185 | 4.7 | 15000 | WR 14 |
| NX 10 | 1,000 | 4450 | 830 | 3700 | 1,150 | 5100 | 1,750 | 7800 | 0.185 | 4.7 | 11000 | WR 19 |
| NX 12 | 1,080 | 4800 | 970 | 4300 | 1,190 | 5300 | 2,000 | 8900 | 0.185 | 4.7 | 9500 | WR 21 |
| NX 15 | 2,410 | 10700 | 2,850 | 12700 | 1,370 | 6100 | 2,500 | 11200 | 0.315 | 8 | 8000 | WR 24 |
| NX 17 | 2,700 | 11900 | 3,350 | 15000 | 1,440 | 6400 | 2,800 | 12400 | 0.315 | 8 | 7500 | WR 26 |
| NX 20 | 2,900 | 13000 | 3,950 | 17500 | 1,730 | 7700 | 3,550 | 15800 | 0.315 | 8 | 6500 | WR 30 |
| NX 25 | 3,350 | 14900 | 5,000 | 22400 | 2,750 | 12200 | 5,800 | 26000 | 0.315 | 8 | 4900 | WR 37 |
| NX 30 | 5,100 | 22600 | 8,100 | 36000 | 2,900 | 12800 | 6,700 | 30000 | 0.394 | 10 | 4300 | WR 42 |
| NX 35 | 5,500 | 24300 | 9,300 | 41500 | 3,050 | 13600 | 7,900 | 35000 | 0.394 | 10 | 3700 | WR 47 |

Combination Bearings

NKX SERIES

- Radial needle based on RNA49.. series
- Thrust ball based on 511.. series
- Per DIN 5429
- Available with grease retaining cap, suffix Z



| PART NUMBER | DIN 5429 PART NUMBER | SHAFT Fw inch | SHAFT Fw mm | OD D inch | OD D mm | WIDTH C inch | WIDTH C mm | WGT. lbs | WGT. g | D ₁ max inch | D ₁ max mm | C ₁ inch | C ₁ mm |
|-------------|----------------------|------------------|----------------|--------------|------------|-----------------|---------------|-------------|-----------|----------------------------|--------------------------|------------------------|----------------------|
| NKX 10 TN | NAXK 10 TN | 0.394 | 10 | 0.748 | 19 | 0.906 | 23 | 0.075 | 34 | 0.949 | 24.1 | 0.354 | 9 |
| NKX 12 | NAXK 12 | 0.472 | 12 | 0.827 | 21 | 0.906 | 23 | 0.084 | 38 | 1.028 | 26.1 | 0.354 | 9 |
| NKX 15 | NAXK 15 | 0.591 | 15 | 0.945 | 24 | 0.906 | 23 | 0.097 | 44 | 1.106 | 28.1 | 0.354 | 9 |
| NKX 17 | NAXK 17 | 0.669 | 17 | 1.024 | 26 | 0.984 | 25 | 0.117 | 53 | 1.185 | 30.1 | 0.354 | 9 |
| NKX 20 | NAXK 20 | 0.787 | 20 | 1.181 | 30 | 1.181 | 30 | 0.183 | 83 | 1.382 | 35.1 | 0.394 | 10 |
| NKX 25 | NAXK 25 | 0.984 | 25 | 1.457 | 37 | 1.181 | 30 | 0.276 | 125 | 1.658 | 42.1 | 0.433 | 11 |
| NKX 30 | NAXK 30 | 1.181 | 30 | 1.654 | 42 | 1.181 | 30 | 0.311 | 141 | 1.854 | 47.1 | 0.433 | 11 |
| NKX 35 | NAXK 35 | 1.378 | 35 | 1.850 | 47 | 1.181 | 30 | 0.359 | 163 | 2.051 | 52.1 | 0.472 | 12 |
| NKX 40 | NAXK 40 | 1.575 | 40 | 2.047 | 52 | 1.260 | 32 | 0.441 | 200 | 2.366 | 60.1 | 0.512 | 13 |
| NKX 45 | NAXK 45 | 1.772 | 45 | 2.284 | 58 | 1.260 | 32 | 0.556 | 252 | 2.567 | 65.2 | 0.551 | 14 |
| NKX 50 | NAXK 50 | 1.969 | 50 | 2.441 | 62 | 1.378 | 35 | 0.617 | 280 | 2.764 | 70.2 | 0.551 | 14 |
| NKX 60 | NAXK 60 | 2.362 | 60 | 2.835 | 72 | 1.575 | 40 | 0.794 | 360 | 3.354 | 85.2 | 0.669 | 17 |
| NKX 70 | NAXK 70 | 2.756 | 70 | 3.347 | 85 | 1.575 | 40 | 1.103 | 500 | 3.748 | 95.2 | 0.709 | 18 |

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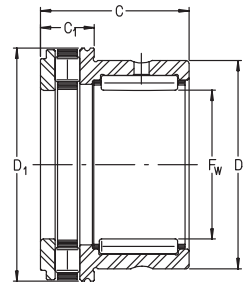
| PART NUMBER | DIN 5429 PART NUMBER | DYN. CAP. RADIAL lbf | DYN. CAP. RADIAL N | STAT. CAP. RADIAL lbf | STAT. CAP. RADIAL N | DYN. CAP. AXIAL lbf | DYN. CAP. AXIAL N | STAT. CAP. AXIAL lbf | STAT. CAP. AXIAL N | SPEED LIMIT OIL rpm |
|-------------|----------------------|-------------------------|-----------------------|--------------------------|------------------------|------------------------|----------------------|-------------------------|-----------------------|------------------------|
| NKX 10 TN | NAXK 10 TN | 1,390 | 6200 | 1,750 | 7800 | 2,250 | 10000 | 3,150 | 14000 | 12000 |
| NKX 12 | NAXK 12 | 2,020 | 9000 | 2,470 | 11000 | 2,320 | 10300 | 3,450 | 15400 | 11000 |
| NKX 15 | NAXK 15 | 2,410 | 10700 | 2,850 | 12700 | 2,360 | 10500 | 3,800 | 16800 | 9500 |
| NKX 17 | NAXK 17 | 2,700 | 11900 | 3,350 | 15000 | 2,430 | 10800 | 4,100 | 18200 | 8500 |
| NKX 20 | NAXK 20 | 3,700 | 16400 | 5,400 | 23800 | 3,200 | 14300 | 5,600 | 24700 | 7500 |
| NKX 25 | NAXK 25 | 4,250 | 18800 | 6,900 | 30500 | 4,400 | 19600 | 8,400 | 37500 | 6000 |
| NKX 30 | NAXK 30 | 5,100 | 22600 | 8,100 | 36000 | 4,600 | 20400 | 9,400 | 42000 | 5000 |
| NKX 35 | NAXK 35 | 5,500 | 24300 | 9,300 | 41500 | 4,750 | 21200 | 10,600 | 47000 | 4600 |
| NKX 40 | NAXK 40 | 5,800 | 26000 | 10,600 | 47000 | 6,100 | 27000 | 14,200 | 63000 | 4000 |
| NKX 45 | NAXK 45 | 6,200 | 27500 | 11,900 | 53000 | 6,300 | 28000 | 15,500 | 69000 | 3600 |
| NKX 50 | NAXK 50 | 8,500 | 38000 | 16,600 | 74000 | 6,500 | 29000 | 16,900 | 75000 | 3300 |
| NKX 60 | NAXK 60 | 9,400 | 42000 | 20,200 | 90000 | 9,300 | 41500 | 25,500 | 113000 | 2800 |
| NKX 70 | NAXK 70 | 10,000 | 44500 | 20,700 | 92000 | 9,700 | 43000 | 28,500 | 127000 | 2400 |



Combination Bearings

NKXR SERIES

- Radial needle based on RNA49.. series
- Thrust roller based on 811.. series
- Per DIN 5429
- Available with grease retaining cap, suffix Z



| PART NUMBER | DIN 5429 PART NUMBER | SHAFT Fw inch | SHAFT Fw mm | OD D inch | OD D mm | WIDTH C inch | WIDTH C mm | WGT. lbs | WGT. g | D ₁ max inch | D ₁ max mm | C ₁ inch | C ₁ mm |
|-------------|----------------------|---------------|-------------|-----------|---------|--------------|------------|----------|--------|-------------------------|-----------------------|---------------------|-------------------|
| NKXR 15 | NAXR 15 | 0.591 | 15 | 0.945 | 24 | 0.906 | 23 | 0.093 | 42 | 1.106 | 28.1 | 0.354 | 9 |
| NKXR 17 | NAXR 17 | 0.669 | 17 | 1.024 | 26 | 0.984 | 25 | 0.11 | 50 | 1.185 | 30.1 | 0.354 | 9 |
| NKXR 20 | NAXR 20 | 0.787 | 20 | 1.181 | 30 | 1.181 | 30 | 0.176 | 80 | 1.382 | 35.1 | 0.394 | 10 |
| NKXR 25 | NAXR 25 | 0.984 | 25 | 1.457 | 37 | 1.181 | 30 | 0.265 | 120 | 1.658 | 42.1 | 0.433 | 11 |
| NKXR 30 | NAXR 30 | 1.181 | 30 | 1.654 | 42 | 1.181 | 30 | 0.298 | 135 | 1.854 | 47.1 | 0.433 | 11 |
| NKXR 35 | NAXR 35 | 1.378 | 35 | 1.850 | 47 | 1.181 | 30 | 0.346 | 157 | 2.051 | 52.1 | 0.472 | 12 |
| NKXR 40 | NAXR 40 | 1.575 | 40 | 2.047 | 52 | 1.260 | 32 | 0.45 | 204 | 2.366 | 60.1 | 0.512 | 13 |
| NKXR 45 | NAXR 45 | 1.772 | 45 | 2.284 | 58 | 1.260 | 32 | 0.538 | 244 | 2.567 | 65.2 | 0.551 | 14 |
| NKXR 50 | NAXR 50 | 1.969 | 50 | 2.441 | 62 | 1.378 | 35 | 0.591 | 268 | 2.764 | 70.2 | 0.551 | 14 |

CONTINUED FROM ABOVE

| PART NUMBER | DIN 5429 PART NUMBER | DYN. CAP. RADIAL lbf | DYN. CAP. RADIAL N | STAT. CAP. RADIAL lbf | STAT. CAP. RADIAL N | DYN. CAP. AXIAL lbf | DYN. CAP. AXIAL N | STAT. CAP. AXIAL lbf | STAT. CAP. AXIAL N | SPEED LIMIT OIL rpm |
|-------------|----------------------|----------------------|--------------------|-----------------------|---------------------|---------------------|-------------------|----------------------|--------------------|---------------------|
| NKXR 15 | NAXR 15 | 2,410 | 10700 | 2,850 | 12700 | 3,250 | 14400 | 6,400 | 28500 | 13000 |
| NKXR 17 | NAXR 17 | 2,700 | 11900 | 3,350 | 15000 | 3,600 | 15900 | 7,500 | 33500 | 12000 |
| NKXR 20 | NAXR 20 | 3,700 | 16400 | 5,400 | 23800 | 5,600 | 24900 | 11,900 | 53000 | 10000 |
| NKXR 25 | NAXR 25 | 4,250 | 18800 | 6,900 | 30500 | 7,500 | 33500 | 17,100 | 76000 | 8500 |
| NKXR 30 | NAXR 30 | 5,100 | 22600 | 8,100 | 36000 | 8,000 | 35500 | 19,300 | 86000 | 7500 |
| NKXR 35 | NAXR 35 | 5,500 | 24300 | 9,300 | 41500 | 8,800 | 39000 | 22,700 | 101000 | 6500 |
| NKXR 40 | NAXR 40 | 5,800 | 26000 | 10,600 | 47000 | 12,600 | 56000 | 33,500 | 148000 | 6000 |
| NKXR 45 | NAXR 45 | 6,200 | 27500 | 11,900 | 53000 | 13,300 | 59000 | 36,500 | 163000 | 5000 |
| NKXR 50 | NAXR 50 | 8,500 | 38000 | 16,600 | 74000 | 13,700 | 61000 | 40,000 | 177000 | 4800 |