



THIN SECTION, SLEWING RINGS & OTHER PRODUCTS



This product section has been excerpted from our full Product Reference Guide to reduce download time. Our complete Product Reference Guide is available in print and on CD-ROM. To receive the full version, please contact your nearest INA Sales Office listed on the last page of this file.

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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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information contained in this catalog, INA shall not be liable for any omissions or errors. Purchasers should consult their own testing to determine the suitability of any product for a particular purpose. In no event shall INA be liable for any claims for damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

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

THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

PRODUCT DESCRIPTION

INA Thin Section Bearings

- Inch size series of constant cross section bearings (radial cross section is equal to axial cross section).
- Available in conrad radial, angular contact and four point contact designs.

INA Radial Ball Bearings, Type C

- Radial ball bearings (type C) are single row ball bearings. The depth of the raceway groove is about 25% of the ball diameter and includes a snap cage.

Four Point Contact Ball Bearings, Type X

- Four point contact ball bearings (type X) are single row angular contact ball bearings which can support axial loads in both directions.
- The raceways have a Gothic arch on the inner and outer ring with a contact angle of 30°. A snap cage keeps the balls apart.
- Four point contact ball bearings support moment loads as well as combined loads or pure radial and axial loads.

Angular Contact Ball Bearings, Type E

- Angular contact ball bearings of type E are self-retaining and have a contact angle α of 30°.
- The outer ring has one shoulder of larger diameter, which allows an optimum number of balls to be inserted in the bearing.

INA Slewing Rings

- Available with an outside diameter up to 1200 mm for nearly all applications.
- INA slewing rings include:
 - closing plug and safety dowel in one bearing ring
 - plastic spacers or plastic cages
 - seals
 - initial greasing
 - lubricating nipples
- Bearings are available with gear teeth on the outer ring or inner ring or without gear teeth (shown in the designation by A, I and U respectively).
- The bearing rings have through holes or threaded holes for mounting screws.
- Slewing rings can be used at operating temperatures from -25°C to +80°C.

Four Point Contact Bearings, Series V

- INA four point contact bearings can safely support medium axial, radial and tilting moment loads.
- Due to their more straightforward design, bearings of series VL.20 and VS.20 are suitable where the accuracy requirements are not so high.
- The permissible circumferential speed is 4 m/s or 5.2 m/s for short periods of time.

Crossed Roller Bearings, Series X

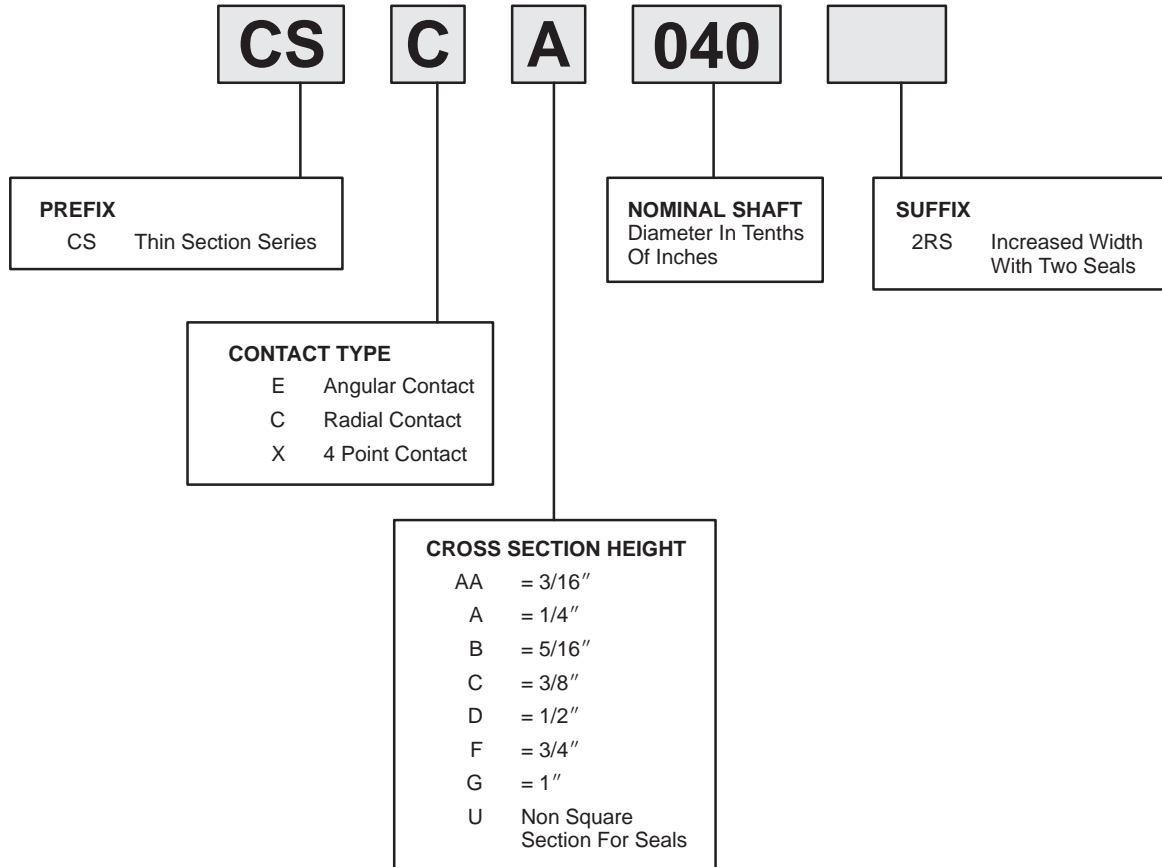
- INA crossed roller bearings are preloaded as standard.
- They are used when higher accuracy and rigidity of the bearing arrangement are required.
- They are suitable for applications where high radial forces and medium axial and tilting moment loads act on the bearing arrangement.
- The permissible circumferential speed is 2 m/s or 2.6 m/s for short periods of time.

Part Number Identification

THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

THIN SECTION BALL BEARINGS INCH SERIES

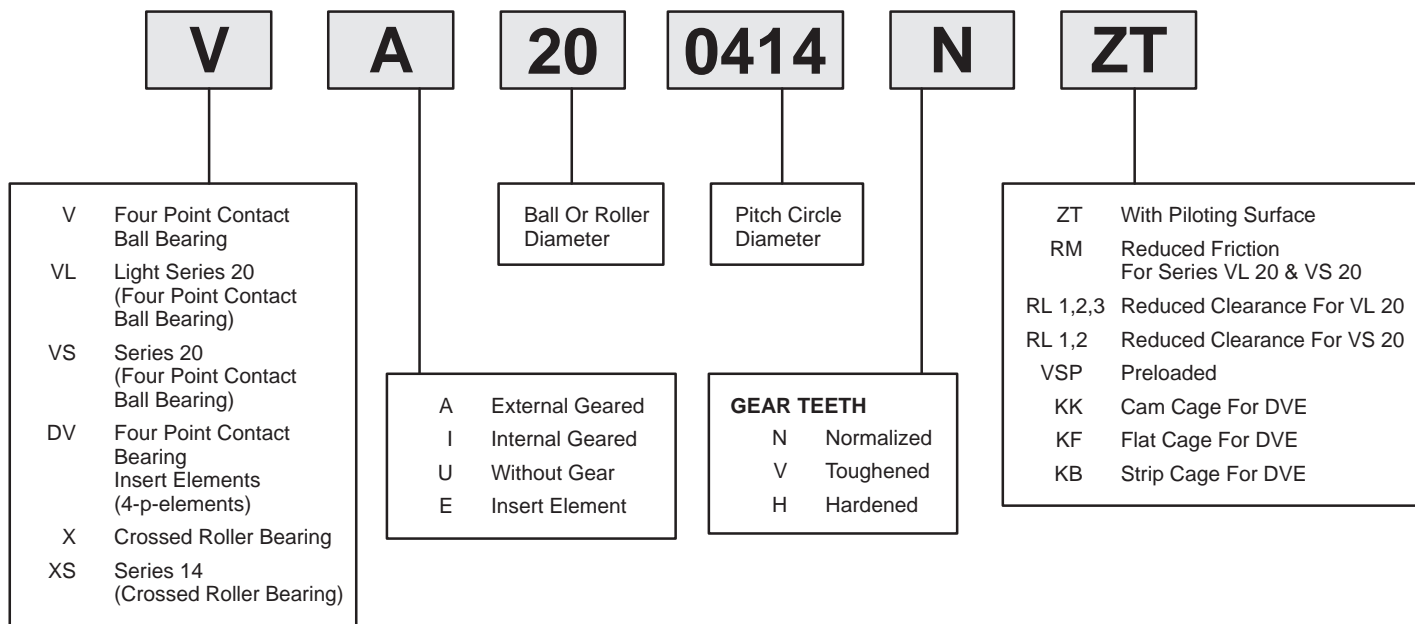
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Part Number Identification

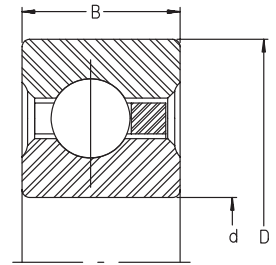
THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

SLEWING RINGS



Thin Section Conrad Ball Bearings CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series



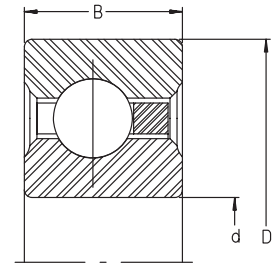
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCA010	1	25.4	1.375	34.925	0.1875	4.763	140	620	0.026	0.012
CSCA015	1.5	38.1	1.875	47.625	0.1875	4.763	190	850	0.039	0.018
CSCA020	2	50.8	2.5	63.5	0.25	6.35	310	1380	0.1	0.045
CSCA025	2.5	63.5	3	76.2	0.25	6.35	360	1600	0.13	0.059
CSCA030	3	76.2	3.5	88.9	0.25	6.35	400	1780	0.15	0.068
CSCA035	3.5	88.9	4	101.6	0.25	6.35	430	1910	0.18	0.082
CSCA040	4	101.6	4.5	114.3	0.25	6.35	480	2140	0.19	0.086
CSCA042	4.25	107.95	4.75	120.65	0.25	6.35	500	2220	0.2	0.091
CSCA045	4.5	114.3	5	127	0.25	6.35	510	2270	0.22	0.1
CSCA047	4.75	120.65	5.25	133.35	0.25	6.35	530	2360	0.23	0.104
CSCA050	5	127	5.5	139.7	0.25	6.35	540	2400	0.24	0.109
CSCA055	5.5	139.7	6	152.4	0.25	6.35	580	2580	0.25	0.113
CSCA060	6	152.4	6.5	165.1	0.25	6.35	610	2710	0.28	0.127
CSCA065	6.5	165.1	7	177.8	0.25	6.35	640	2850	0.3	0.136
CSCA070	7	177.8	7.5	190.5	0.25	6.35	680	3020	0.31	0.141
CSCA075	7.5	190.5	8	203.2	0.25	6.35	710	3160	0.34	0.154
CSCA080	8	203.2	8.5	215.9	0.25	6.35	740	3290	0.38	0.172
CSCA090	9	228.6	9.5	241.3	0.25	6.35	800	3560	0.44	0.2
CSCA100	10	254	10.5	266.7	0.25	6.35	860	3830	0.5	0.227
CSCA110	11	279.4	11.5	292.1	0.25	6.35	910	4050	0.52	0.236
CSCA120	12	304.8	12.5	317.5	0.25	6.35	970	4310	0.56	0.254
CSCB020	2	50.8	2.625	66.675	0.3125	7.938	440	1960	0.16	0.073
CSCB025	2.5	63.5	3.125	79.375	0.3125	7.938	510	2270	0.2	0.091
CSCB030	3	76.2	3.625	92.075	0.3125	7.938	560	2490	0.24	0.109
CSCB035	3.5	88.9	4.125	104.775	0.3125	7.938	610	2710	0.27	0.122
CSCB040	4	101.6	4.625	117.475	0.3125	7.938	680	3020	0.3	0.136
CSCB042	4.25	107.95	4.875	123.825	0.3125	7.938	690	3070	0.31	0.141
CSCB045	4.5	114.3	5.125	130.175	0.3125	7.938	720	3200	0.33	0.15
CSCB050	5	127	5.625	142.875	0.3125	7.938	770	3420	0.38	0.172
CSCB055	5.5	139.7	6.125	155.575	0.3125	7.938	820	3650	0.41	0.186
CSCB060	6	152.4	6.625	168.275	0.3125	7.938	870	3870	0.44	0.2
CSCB065	6.5	165.1	7.125	180.975	0.3125	7.938	910	4050	0.47	0.213
CSCB080	8	203.2	8.625	219.075	0.3125	7.938	1040	4630	0.57	0.259
CSCC040	4	101.6	4.75	120.65	0.375	9.525	860	3830	0.45	0.204
CSCC042	4.25	107.95	5	127	0.375	9.525	900	4000	0.47	0.213
CSCC045	4.5	114.3	5.25	133.35	0.375	9.525	920	4090	0.48	0.218
CSCC047	4.75	120.65	5.5	139.7	0.375	9.525	950	4230	0.5	0.227
CSCC050	5	127	5.75	146.05	0.375	9.525	990	4400	0.58	0.263
CSCC055	5.5	139.7	6.25	158.75	0.375	9.525	1050	4670	0.59	0.268
CSCC060	6	152.4	6.75	171.45	0.375	9.525	1100	4890	0.63	0.286
CSCC065	6.5	165.1	7.25	184.15	0.375	9.525	1150	5120	0.68	0.308
CSCC070	7	177.8	7.75	196.85	0.375	9.525	1210	5380	0.73	0.331
CSCC075	7.5	190.5	8.25	209.55	0.375	9.525	1260	5600	0.78	0.354
CSCC080	8	203.2	8.75	222.25	0.375	9.525	1320	5870	0.84	0.381
CSCC090	9	228.6	9.75	247.65	0.375	9.525	1440	6410	0.94	0.426
CSCC100	10	254	10.75	273.05	0.375	9.525	1490	6630	1.06	0.481



Thin Section Conrad Ball Bearings CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series



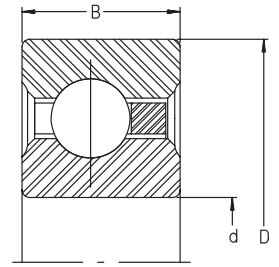
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCC110	11	279.4	11.75	298.45	0.375	9.525	1610	7160	1.16	0.526
CSCC120	12	304.8	12.75	323.85	0.375	9.525	1720	7650	1.25	0.567
CSCD040	4	101.6	5	127	0.5	12.7	1330	5920	0.78	0.354
CSCD042	4.25	107.95	5.25	133.35	0.5	12.7	1390	6180	0.88	0.399
CSCD045	4.5	114.3	5.5	139.7	0.5	12.7	1450	6450	0.88	0.399
CSCD047	4.75	120.65	5.75	146.05	0.5	12.7	1460	6490	0.94	0.426
CSCD050	5	127	6	152.4	0.5	12.7	1510	6720	1	0.454
CSCD055	5.5	139.7	6.5	165.1	0.5	12.7	1630	7250	1.06	0.481
CSCD060	6	152.4	7	177.8	0.5	12.7	1700	7560	1.16	0.526
CSCD065	6.5	165.1	7.5	190.5	0.5	12.7	1820	8100	1.22	0.553
CSCD070	7	177.8	8	203.2	0.5	12.7	1880	8360	1.31	0.594
CSCD075	7.5	190.5	8.5	215.9	0.5	12.7	2000	8900	1.41	0.639
CSCD080	8	203.2	9	228.6	0.5	12.7	2060	9160	1.53	0.694
CSCD090	9	228.6	10	254	0.5	12.7	2240	9960	1.72	0.78
CSCD100	10	254	11	279.4	0.5	12.7	2360	10500	1.88	0.853
CSCD110	11	279.4	12	304.8	0.5	12.7	2540	11300	2.06	0.934
CSCD120	12	304.8	13	330.2	0.5	12.7	2660	11830	2.25	1.02
CSCF040	4	101.6	5.5	139.7	0.75	19.05	2680	11920	1.9	0.862
CSCF042	4.25	107.95	5.75	146.05	0.75	19.05	2750	12230	2	0.907
CSCF045	4.5	114.3	6	152.4	0.75	19.05	2820	12540	2.1	0.952
CSCF047	4.75	120.65	6.25	158.75	0.75	19.05	2950	13120	2.2	0.998
CSCF050	5	127	6.5	165.1	0.75	19.05	3020	13430	2.3	1.043
CSCF055	5.5	139.7	7	177.8	0.75	19.05	3220	14320	2.5	1.134
CSCF060	6	152.4	7.5	190.5	0.75	19.05	3350	14900	2.7	1.224
CSCF065	6.5	165.1	8	203.2	0.75	19.05	3550	15790	2.9	1.315
CSCF075	7.5	190.5	9	228.6	0.75	19.05	3820	16990	3.4	1.542
CSCF080	8	203.2	9.5	241.3	0.75	19.05	4020	17880	3.5	1.587
CSCF090	9	228.6	10.5	266.7	0.75	19.05	4290	19080	3.9	1.769
CSCF100	10	254	11.5	292.1	0.75	19.05	4630	20590	4.3	1.95
CSCF110	11	279.4	12.5	317.5	0.75	19.05	4890	21750	4.8	2.177
CSCF120	12	304.8	13.5	342.9	0.75	19.05	5160	22950	5.2	2.358
CSCF140	14	355.6	15.5	393.7	0.75	19.05	5700	25350	6	2.721
CSCG042	4.25	107.95	6.25	158.75	1	25.4	4430	19700	3.8	1.723
CSCG047	4.75	120.65	6.75	171.45	1	25.4	4870	21660	4.1	1.859
CSCG050	5	127	7	177.8	1	25.4	5020	22330	4.3	1.95
CSCG055	5.5	139.7	7.5	190.5	1	25.4	5240	23310	4.7	2.132
CSCG060	6	152.4	8	203.2	1	25.4	5610	24950	5.1	2.313
CSCG065	6.5	165.1	8.5	215.9	1	25.4	5760	25620	5.4	2.449
CSCG070	7	177.8	9	228.6	1	25.4	6120	27220	5.8	2.63
CSCG075	7.5	190.5	9.5	241.3	1	25.4	6270	27890	6.1	2.766
CSCG080	8	203.2	10	254	1	25.4	6640	29530	6.5	2.948
CSCG090	9	228.6	11	279.4	1	25.4	7080	31490	7.2	3.265
CSCG100	10	254	12	304.8	1	25.4	7530	33490	7.9	3.583
CSCG110	11	279.4	13	330.2	1	25.4	8040	35760	8.6	3.9
CSCG120	12	304.8	14	355.6	1	25.4	8490	37760	9.3	4.218
CSCG140	14	355.6	16	406.4	1	25.4	9300	41370	10.8	4.898



Thin Section Conrad Ball Bearings CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series



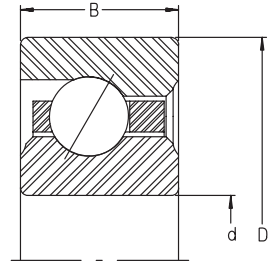
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCG160	16	406.4	18	457.2	1	25.4	10100	44920	12.3	5.578
CSCG180	18	457.2	20	508	1	25.4	10900	48480	13.7	6.213
CSCG200	20	508	22	558.8	1	25.4	11700	52040	18.8	8.526
CSCG250	25	635	27	685.8	1	25.4	13400	59600	19.5	8.844
CSCG300	30	762	32	812.8	1	25.4	15100	67160	23.3	10.567

Thin Section Angular Contact Ball Bearings

CSE SERIES

- Symmetric cross section angular contact ball bearings
- Inch series



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

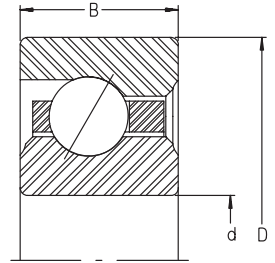
PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSEA010	1	25.4	1.375	34.93	0.1875	4.76	150	670	0.025	0.011
CSEA015	1.5	38.1	1.875	47.63	0.1875	4.76	200	890	0.038	0.017
CSEA020	2	50.8	2.5	63.5	0.25	6.35	320	1420	0.1	0.045
CSEA025	2.5	63.5	3	76.2	0.25	6.35	380	1690	0.12	0.054
CSEA030	3	76.2	3.5	88.9	0.25	6.35	420	1870	0.14	0.063
CSEA035	3.5	88.9	4	101.6	0.25	6.35	460	2050	0.17	0.077
CSEA040	4	101.6	4.5	114.3	0.25	6.35	500	2220	0.19	0.086
CSEA045	4.25	107.95	4.75	120.65	0.25	6.35	510	2270	0.2	0.091
CSEA050	4.5	114.3	5	127	0.25	6.35	530	2360	0.21	0.095
CSEA047	4.75	120.65	5.25	133.35	0.25	6.35	560	2490	0.22	0.1
CSEA050	5	127	5.5	139.7	0.25	6.35	570	2540	0.23	0.104
CSEA060	6	152.4	6.5	165.1	0.25	6.35	640	2850	0.28	0.127
CSEA065	6.5	165.1	7	177.8	0.25	6.35	680	3020	0.3	0.136
CSEA075	7.5	190.5	8	203.2	0.25	6.35	740	3290	0.34	0.154
CSEA100	10	254	10.5	266.7	0.25	6.35	890	3960	0.45	0.204
CSEB020	2	50.8	2.625	66.68	0.3125	7.94	460	2050	0.15	0.068
CSEB025	2.5	63.5	3.125	79.38	0.3125	7.94	530	2360	0.19	0.086
CSEB030	3	76.2	3.625	92.08	0.3125	7.94	600	2670	0.22	0.1
CSEB035	3.5	88.9	4.125	104.78	0.3125	7.94	650	2890	0.27	0.122
CSEB040	4	101.6	4.625	117.48	0.3125	7.94	710	3160	0.3	0.136
CSEB042	4.25	107.95	4.875	123.83	0.3125	7.94	730	3250	0.31	0.141
CSEB060	6	152.4	6.625	168.28	0.3125	7.94	910	4050	0.44	0.2
CSEB065	6.5	165.1	7.125	180.98	0.3125	7.94	960	4270	0.47	0.213
CSEB090	9	228.6	9.625	244.48	0.3125	7.94	1180	5250	0.64	0.29
CSEC040	4	101.6	4.75	120.65	0.375	9.53	930	4140	0.44	0.2
CSEC040	4.5	114.3	5.25	133.35	0.375	9.53	1010	4490	0.49	0.222
CSEC047	4.75	120.65	5.5	139.7	0.375	9.53	1050	4670	0.51	0.231
CSEC050	5	127	5.75	146.05	0.375	9.53	1080	4800	0.54	0.245
CSEC055	5.5	139.7	6.25	158.75	0.375	9.53	1140	5070	0.58	0.263
CSEC060	6	152.4	6.75	171.45	0.375	9.53	1210	5380	0.64	0.29
CSEC070	7	177.8	7.75	196.85	0.375	9.53	1320	5870	0.74	0.336
CSEC075	7.5	190.5	8.25	209.55	0.375	9.53	1380	6140	0.78	0.354
CSEC110	11	279.4	11.75	298.45	0.375	9.53	1780	7920	1.14	0.517
CSED040	4	101.6	5	127	0.5	12.7	1390	6180	0.8	0.363
CSED042	4.25	107.95	5.25	133.35	0.5	12.7	1450	6450	0.84	0.381
CSED045	4.5	114.3	5.5	139.7	0.5	12.7	1510	6720	0.88	0.399
CSED047	4.75	120.65	5.75	146.05	0.5	12.7	1570	6980	0.93	0.422
CSED050	5	127	6	152.4	0.5	12.7	1630	7250	0.98	0.444
CSED055	5.5	139.7	6.5	165.1	0.5	12.7	1700	7560	1.06	0.481
CSED060	6	152.4	7	177.8	0.5	12.7	1820	8100	1.15	0.522
CSED065	6.5	165.1	7.5	190.5	0.5	12.7	1880	8360	1.24	0.562
CSED070	7	177.8	8	203.2	0.5	12.7	2000	8900	1.33	0.603
CDED075	7.5	190.5	8.5	215.9	0.5	12.7	2060	9160	1.42	0.644
CSED080	8	203.2	9	228.6	0.5	12.7	2180	9700	1.52	0.689
CSED090	9	228.6	10	254	0.5	12.7	2300	10230	1.69	0.766
CSEF047	4.75	120.65	6.25	158.75	0.75	19.05	3150	14010	2.26	1.025



Thin Section Angular Contact Ball Bearings

CSE SERIES

- Symmetric cross section angular contact ball bearings
- Inch series

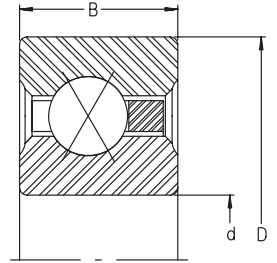


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSEF055	5.5	139.7	7	177.8	0.75	19.05	3420	15210	2.59	1.175
CSEF060	6	152.4	7.5	190.5	0.75	19.05	3620	16100	2.72	1.234
CSEF065	6.5	165.1	8	203.2	0.75	19.05	3750	16680	2.94	1.333
CSEF075	7.5	190.5	9	228.6	0.75	19.05	4090	18190	3.39	1.537
CSEF080	8	203.2	9.5	241.3	0.75	19.05	4290	19080	3.61	1.637
CSEF090	9	228.6	10.5	266.7	0.75	19.05	4630	20590	3.95	1.791
CSEF100	10	254	11.5	292.1	0.75	19.05	4890	21750	4.4	1.995
CSEF120	12	304.8	13.5	342.9	0.75	19.05	5500	24460	5.2	2.358
CSEG042	4.25	107.95	6.25	158.75	1	25.4	4360	19390	3.83	1.737
CSEG060	6	152.4	8	203.2	1	25.4	5830	25930	5.07	2.299
CSEG065	6.5	165.1	8.5	215.9	1	25.4	6120	27220	5.41	2.454
CSEG075	7.5	190.5	9.5	241.3	1	25.4	6640	29530	6.2	2.812
CSEG080	8	203.2	10	254	1	25.4	6940	30870	6.54	2.966
CSEG090	9	228.6	11	279.4	1	25.4	7450	33140	7.22	3.274
CSEG120	12	304.8	14	355.6	1	25.4	8860	39410	9.47	4.295
CSEG140	14	355.6	16	406.4	1	25.4	9740	43320	10.9	4.943
CSEG160	16	406.4	18	457.2	1	25.4	10600	47150	12.4	5.624
CSEG180	18	457.2	20	508	1	25.4	11400	50710	13.8	6.259
CSEG200	20	508	22	558.8	1	25.4	12300	54710	15.2	6.893
CSEG250	25	635	27	685.8	1	25.4	14100	62720	18.8	8.526
CSEG300	30	762	32	812.8	1	25.4	15900	70720	22.5	10.204

Thin Section 4 Point Contact Ball Bearings CSX SERIES

- Symmetric cross section 4 point contact ball bearings
- Inch series



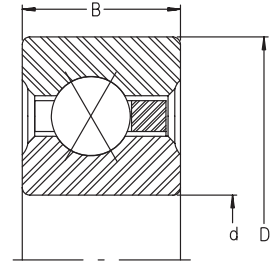
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXA010	1	25.4	1.375	34.925	0.1875	4.763	140	620	0.026	0.012
CSXA015	1.5	38.1	1.875	47.625	0.1875	4.763	190	850	0.039	0.018
CSXA020	2	50.8	2.5	63.5	0.25	6.35	310	1380	0.1	0.045
CSXA025	2.5	63.5	3	76.2	0.25	6.35	360	1600	0.13	0.059
CSXA030	3	76.2	3.5	88.9	0.25	6.35	400	1780	0.15	0.068
CSXA035	3.5	88.9	4	101.6	0.25	6.35	430	1910	0.18	0.082
CSXA040	4	101.6	4.5	114.3	0.25	6.35	480	2140	0.19	0.086
CSXA042	4.25	107.95	4.75	120.65	0.25	6.35	500	2220	0.2	0.091
CSXA045	4.5	114.3	5	127	0.25	6.35	510	2270	0.22	0.1
CSXA047	4.75	120.65	5.25	133.35	0.25	6.35	530	2360	0.23	0.104
CSXA050	5	127	5.5	139.7	0.25	6.35	540	2400	0.24	0.109
CSXA055	5.5	139.7	6	152.4	0.25	6.35	580	2580	0.25	0.113
CSXA060	6	152.4	6.5	165.1	0.25	6.35	610	2710	0.28	0.127
CSXA065	6.5	165.1	7	177.8	0.25	6.35	640	2850	0.3	0.136
CSXA070	7	177.8	7.5	190.5	0.25	6.35	680	3020	0.31	0.141
CSXA120	12	304.8	12.5	317.5	0.25	6.35	970	4310	0.56	0.254
CSXB020	2	50.8	2.625	66.675	0.3125	7.938	440	1960	0.16	0.073
CSXB025	2.5	63.5	3.125	79.375	0.3125	7.938	510	2270	0.19	0.086
CSXB030	3	76.2	3.625	92.075	0.3125	7.938	560	2490	0.24	0.109
CSXB035	3.5	88.9	4.125	104.775	0.3125	7.938	610	2710	0.27	0.122
CSXB040	4	101.6	4.625	117.475	0.3125	7.938	680	3020	0.3	0.136
CSXB042	4.25	107.95	4.875	123.825	0.3125	7.938	690	3070	0.31	0.141
CSXB045	4.5	114.3	5.125	130.175	0.3125	7.938	720	3200	0.33	0.15
CSXB055	5.5	139.7	6.125	155.575	0.3125	7.938	820	3650	0.41	0.186
CSXB060	6	152.4	6.625	168.275	0.3125	7.938	870	3870	0.44	0.2
CSXB065	6.5	165.1	7.125	180.975	0.3125	7.938	910	4050	0.47	0.213
CSXB070	7	177.8	7.625	193.675	0.3125	7.938	960	4270	0.5	0.227
CSXB075	7.5	190.5	8.125	206.375	0.3125	7.938	1000	4450	0.53	0.24
CSXB080	8	203.2	8.625	219.075	0.3125	7.938	1040	4630	0.57	0.259
CSXB090	9	228.6	9.625	244.475	0.3125	7.938	1130	5030	0.66	0.299
CSXB160	16	406.4	16.625	422.275	0.3125	7.938	1630	7300	1.2	0.544
CSXC040	4	101.6	4.75	120.65	0.375	9.525	860	3830	0.45	0.204
CSXC045	4.5	114.3	5.25	133.35	0.375	9.525	920	4090	0.48	0.218
CSXC050	5	127	5.75	146.05	0.375	9.525	990	4400	0.58	0.263
CSXC055	5.5	139.7	6.25	158.75	0.375	9.525	1050	4670	0.59	0.268
CSXC060	6	152.4	6.75	171.45	0.375	9.525	1100	4890	0.63	0.286
CSXC065	6.5	165.1	7.25	184.15	0.375	9.525	1150	5100	0.68	0.308
CSXC070	7	177.8	7.75	196.85	0.375	9.525	1210	5400	0.73	0.331
CSXC080	8	203.2	8.75	222.25	0.375	9.525	1320	5900	0.84	0.381
CSXC090	9	228.6	9.75	247.65	0.375	9.525	1440	6400	0.94	0.426
CSXC100	10	254	10.75	273.05	0.375	9.525	1490	6600	1.06	0.481
CSXC110	11	279.4	11.75	298.45	0.375	9.525	1610	7200	1.16	0.526
CSXC120	12	304.8	12.75	323.85	0.375	9.525	1720	7700	1.25	0.567
CSXC160	16	406.4	16.75	425.45	0.375	9.525	2070	9200	1.73	0.785
CSXD040	4	101.6	5	127	0.5	12.7	1330	5900	0.78	0.354
CSXD042	4.25	107.95	5.25	133.35	0.5	12.7	1390	6200	0.83	0.376



Thin Section 4 Point Contact Ball Bearings CSX SERIES

- Symmetric cross section 4 point contact ball bearings
- Inch series



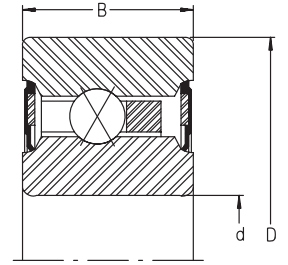
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXD045	4.5	114.3	5.5	139.7	0.5	12.7	1450	6400	0.88	0.399
CSXD050	5	127	6	152.4	0.5	12.7	1510	6700	1	0.454
CSXD055	5.5	139.7	6.5	165.1	0.5	12.7	1630	7300	1.06	0.481
CSXD060	6	152.4	7	177.8	0.5	12.7	1700	7600	1.16	0.526
CSXD065	6.5	165.1	7.5	190.5	0.5	12.7	1820	8100	1.22	0.553
CSXD070	7	177.8	8	203.2	0.5	12.7	1880	8400	1.31	0.594
CSXD075	7.5	190.5	8.5	215.9	0.5	12.7	2000	8900	1.41	0.639
CSXD080	8	203.2	9	228.6	0.5	12.7	2060	9200	1.53	0.694
CSXD090	9	228.6	10	254	0.5	12.7	2240	10000	1.72	0.78
CSXD100	10	254	11	279.4	0.5	12.7	2360	10500	1.88	0.853
CSXD110	11	279.4	12	304.8	0.5	12.7	2540	11300	2.06	0.934
CSXD120	12	304.8	13	330.2	0.5	12.7	2660	11800	2.25	1.02
CSXD140	14	355.6	15	381	0.5	12.7	2970	13200	2.73	1.238
CSXD180	18	457.2	19	482.6	0.5	12.7	3450	15300	3.48	1.578
CSXD250	25	635	26	660.4	0.5	12.7	4300	19100	4.79	2.172
CSXF040	4	101.6	5.5	139.7	0.75	19.05	2680	11900	1.9	0.862
CSXF045	4.5	114.3	6	152.4	0.75	19.05	2820	12500	2.1	0.952
CSXF047	4.75	120.65	6.25	158.75	0.75	19.05	2950	13100	2.2	0.998
CSXF050	5	127	6.5	165.1	0.75	19.05	3020	13400	2.3	1.043
CSXF055	5.5	139.7	7	177.8	0.75	19.05	3220	14300	2.5	1.134
CSXF060	6	152.4	7.5	190.5	0.75	19.05	3350	14900	2.7	1.224
CSXF065	6.5	165.1	8	203.2	0.75	19.05	3550	15800	2.9	1.315
CSXF075	7.5	190.5	9	228.6	0.75	19.05	3820	17000	3.4	1.542
CSXF080	8	203.2	9.5	241.3	0.75	19.05	4020	17900	3.5	1.587
CSXF090	9	228.6	10.5	266.7	0.75	19.05	4290	19100	3.9	1.769
CSXF100	10	254	11.5	292.1	0.75	19.05	4630	20600	4.3	1.95
CSXF110	11	279.4	12.5	317.5	0.75	19.05	4890	21800	4.8	2.177
CSXF120	12	304.8	13.5	342.9	0.75	19.05	5160	23000	5.2	2.358
CSXF140	14	355.6	15.5	393.7	0.75	19.05	5700	25400	6	2.721
CSXG045	4.5	114.3	6.5	165.1	1	25.4	4650	20700	4	1.814
CSXG050	5	127	7	177.8	1	25.4	5020	22300	4.3	1.95
CSXG060	6	152.4	8	203.2	1	25.4	5610	25000	5.1	2.313
CSXG070	7	177.8	9	228.6	1	25.4	6120	27200	5.8	2.63
CSXG075	7.5	190.5	9.5	241.3	1	25.4	6270	27900	6.1	2.766
CSXG080	8	203.2	10	254	1	25.4	6640	29500	6.5	2.948
CSXG090	9	228.6	11	279.4	1	25.4	7080	31500	7.2	3.265
CSXG100	10	254	12	304.8	1	25.4	7530	33500	7.9	3.583
CSXG110	11	279.4	13	330.2	1	25.4	8040	35800	8.6	3.9
CSXG120	12	304.8	14	355.6	1	25.4	8490	37800	9.3	4.218
CSXG140	14	355.6	16	406.4	1	25.4	9300	41400	10.8	4.898
CSXG160	16	406.4	18	457.2	1	25.4	10100	44900	12.3	5.578
CSXG180	18	457.2	20	508	1	25.4	10900	48500	13.7	6.213
CSXG200	20	508	22	558.8	1	25.4	11700	52000	18.8	8.526
CSXG250	25	635	27	685.8	1	25.4	13400	59600	19.5	8.844
CSXG300	30	762	32	812.8	1	25.4	15100	67200	23.3	10.567
CSXG350	35	889	37	939.8	1	25.4	16700	74300	27.1	12.29



Thin Section, 4 Point Contact Ball Bearings With Seals CSXU SERIES

- Inch series

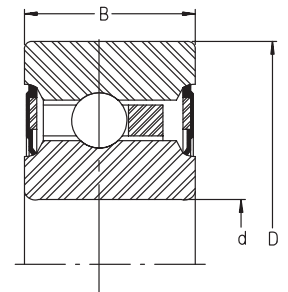


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXU0402RS	4	101.6	4.75	120.65	0.5	12.7	860	3820	0.55	0.250
CSXU0452RS	4.5	114.3	5.25	133.35	0.5	12.7	920	4090	0.61	0.277
CSXU0502RS	5	127	5.75	146.05	0.5	12.7	990	4400	0.68	0.308
CSXU0652RS	6.5	165.1	7.25	184.15	0.5	12.7	1100	4890	0.87	0.395
CSXU0752RS	7.5	190.5	8.25	209.55	0.5	12.7	1210	5380	0.99	0.449
CSXU0802RS	8	203.2	8.75	222.25	0.5	12.7	1320	5870	1.06	0.481
CSXU0902RS	9	228.6	9.75	247.65	0.5	12.7	1440	6410	1.18	0.535
CSXU1002RS	10	254	10.75	273.05	0.5	12.7	1490	6630	1.31	0.594
CSXU1102RS	11	279.4	11.75	298.45	0.5	12.7	1610	7160	1.43	0.649

Thin Section, Conrad Ball Bearings With Seals CSCU SERIES

- Inch series



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

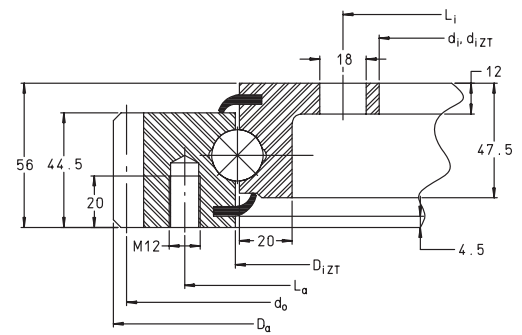
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCU0402RS	4	101.6	4.75	120.65	0.5	12.7	860	3820	0.55	0.250
CSCU0452RS	4.5	114.3	5.25	133.35	0.5	12.7	920	4090	0.61	0.277
CSCU0502RS	5	127	5.75	146.05	0.5	12.7	990	4400	0.68	0.308
CSCU0652RS	6.5	165.1	7.25	184.15	0.5	12.7	1100	4890	0.87	0.395
CSCU0752RS	7.5	190.5	8.25	209.55	0.5	12.7	1210	5380	0.99	0.449
CSCU0802RS	8	203.2	8.75	222.25	0.5	12.7	1320	5870	1.06	0.481
CSCU0902RS	9	228.6	9.75	247.65	0.5	12.7	1440	6410	1.18	0.535
CSCU1002RS	10	254	10.75	273.05	0.5	12.7	1490	6630	1.31	0.594
CSCU1102RS	11	279.4	11.75	298.45	0.5	12.7	1610	7160	1.43	0.649

Slewing Ring Bearings

VLA SERIES

- Light series 20
- With external gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	$d_i ZT$	D_a	D_a	$D_i ZT$	WGT.	WGT.	L_a	L_a	n_a	L_i	L_i	n_i
	inch	mm	mm	inch	mm	mm								
VLA20 0414 N	11.969	304	306	19.815	503.3	417	65.0	29.5	17.913	455	10	13.071	332	12
VLA20 0544 N	17.087	434	436	25.209	640.3	547	91.5	41.5	23.032	585	14	18.189	462	14
VLA20 0644 N	21.024	534	536	29.224	742.3	647	106.9	48.5	26.969	685	16	22.126	562	16
VLA20 0744 N	24.961	634	636	32.996	838.1	747	120.2	54.5	30.906	785	18	26.063	662	16
VLA20 0844 N	28.898	734	736	37.406	950.1	847	144.4	65.5	34.843	885	18	30.000	762	18
VLA20 0944 N	32.835	834	836	41.185	1046.1	947	157.7	71.5	38.780	985	20	33.937	862	20
VLA20 1094 N	38.740	984	986	47.169	1198.1	1097	184.1	83.5	44.685	1135	22	39.843	1012	20

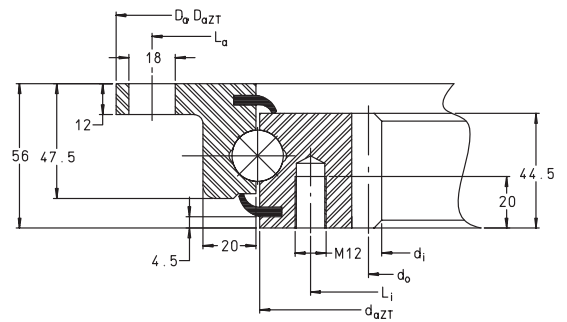
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PART NUMBER	RAD. LOAD LIMIT	RAD. LOAD LIMIT	d_0	d_0	m	z	F_z norm	F_z norm	F_z max	F_z max	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbf	kN	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VLA20 0414 N	9300	41.3	19.5	495	5	99	3600	15.9	5300	23.6	38000	169	66000	295	25000	111	24700	110
VLA20 0544 N	13000	57.8	24.8	630	6	105	4800	21.3	7100	31.5	42500	188	87000	385	27500	123	32500	145
VLA20 0644 N	14900	66.1	28.8	732	6	122	4800	21.3	7100	31.5	45000	200	102000	455	29500	131	38500	171
VLA20 0744 N	16700	74.3	32.6	828	6	138	4800	21.3	7100	31.5	47500	211	119000	530	31000	138	44500	198
VLA20 0844 N	16700	74.3	36.9	936	8	117	6400	28.3	9400	42	50000	222	135000	600	32500	145	50000	224
VLA20 0944 N	18600	82.6	40.6	1032	8	129	6400	28.3	9400	42	52000	231	151000	670	34000	151	56000	250
VLA20 1094 N	20400	90.9	46.6	1184	8	148	6400	28.3	9400	42	55000	244	173000	770	36000	160	65000	290

Slewing Ring Bearings

VLI SERIES

- Light series 20
- With internal gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	D _a	D _a	D _{aZT}	d _{aZT}	WGT.	WGT.	L _a	L _a	n _a	L _i	L _i	n _i
	inch	mm	inch	mm	mm	mm	lbs	kg	inch	mm		inch	mm	
VLI200414N	12.795	325	20.394	518	516	411	60.6	27.5	19.291	490	8	14.764	375	12
VLI200544N	17.480	444	25.512	648	646	541	83.8	38	24.409	620	10	19.882	505	16
VLI200644N	21.496	546	29.449	748	746	641	99.2	45	28.347	720	12	23.819	605	18
VLI200744N	25.512	648	33.386	848	846	741	113.6	51.5	32.284	820	12	27.756	705	20
VLI200844N	28.976	736	37.323	948	946	841	135.6	61.5	36.221	920	14	31.693	805	20
VLI200944N	33.071	840	41.260	1048	1046	941	148.8	67.5	40.158	1020	16	35.630	905	22
VLI201094N	38.740	984	47.165	1198	1196	1091	179.7	81.5	46.063	1170	16	41.535	1055	24

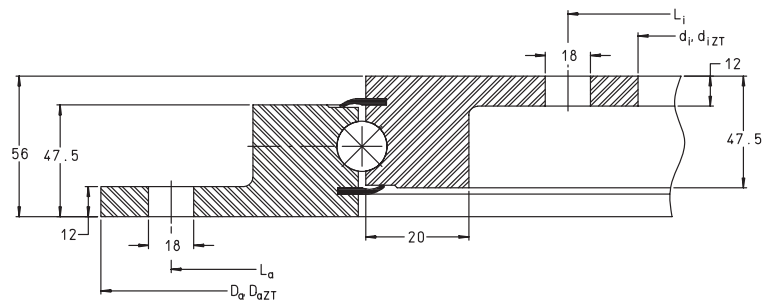
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PART NUMBER	MAX. RAD. LOAD LIMIT	MAX. RAD. LOAD LIMIT	d ₀	d ₀	m	z	F _{z norm} TOOTH FORCE	F _{z norm} TOOTH FORCE	F _{z max} TOOTH FORCE	F _{z max} TOOTH FORCE	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbf	kN	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VLI200414N	11,200	49.6	13.189	335	5	67	4,000	17.7	5,900	26.2	38,000	169	66,000	295	25,000	111	24,700	110
VLI200544N	14,900	66.1	17.953	456	6	76	5,300	23.7	7,900	35	42,500	188	87,000	385	27,500	123	32,500	145
VLI200644N	16,700	74.3	21.969	558	6	93	5,300	23.7	7,900	35	45,000	200	102,000	455	29,500	131	38,500	171
VLI200744N	18,600	82.6	25.984	660	6	110	5,300	23.7	7,900	35	47,500	211	119,000	530	31,000	138	44,500	198
VLI200844N	18,600	82.6	29.606	752	8	94	7,100	31.4	10,500	46.7	50,000	222	135,000	600	32,500	145	50,000	224
VLI200944N	20,400	90.9	33.701	856	8	107	7,100	31.4	10,500	46.7	52,000	231	151,000	670	34,000	151	56,000	250
VLI201094N	22,300	99.1	39.370	1000	8	125	7,100	31.4	10,500	46.7	55,000	244	173,000	770	36,000	160	65,000	290

Slewing Ring Bearings

VLU SERIES

- Light series 20
- Without gear teeth
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	$d_i ZT$	D_a	D_a	$D_a ZT$	WGT.	WGT.	L_a	L_a	n_a
	inch	mm	mm	inch	mm	mm					
VLU20 0414	11.969	304	306	20.394	518	516	51.8	23.5	19.291	490	8
VLU20 0544	17.087	434	436	25.512	648	646	68.4	31	24.409	620	10
VLU20 0644	21.024	534	536	29.449	748	746	80.5	36.5	28.347	720	12
VLU20 0744	24.961	634	636	33.386	848	846	93.7	42.5	32.284	820	12
VLU20 0844	28.898	734	736	37.323	948	946	105.8	48	36.221	920	14
VLU20 0944	32.835	834	836	41.260	1048	1046	119.1	54	40.158	1020	16
VLU20 1094	38.740	984	986	47.165	1198	1196	137.8	62.5	46.063	1170	16

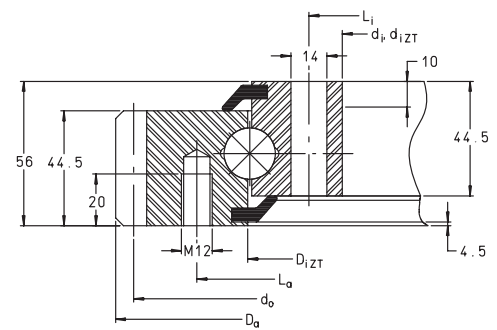
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PART NUMBER	L_i	L_i	n_i	$F_r \max$	$F_r \max$	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm		lbf	kN								
VLU20 0414	13.071	332	12	12,400	55	38,000	169	66,000	295	25,000	111	24,700	110
VLU20 0544	18.189	462	14	16,300	72.5	42,500	188	87,000	385	27,500	123	32,500	145
VLU20 0644	22.126	562	16	19,200	85.5	45,000	200	102,000	455	29,500	131	38,500	171
VLU20 0744	26.063	662	16	21,000	93.6	47,500	211	119,000	530	31,000	138	44,500	198
VLU20 0844	30.000	762	18	24,600	109.2	50,000	222	135,000	600	32,500	145	50,000	224
VLU20 0944	33.937	862	20	28,000	124.8	52,000	231	151,000	670	34,000	151	56,000	250
VLU20 1094	39.843	1012	20	28,000	124.8	55,000	244	173,000	770	36,000	160	65,000	290

Slewing Ring Bearings

VSA SERIES

- Standard series 20
- With external gear teeth – metric module
- four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	d _{i ZT}	D _a	D _a	D _{i ZT}	WGT.	WGT.	L _a	L _a	n _a	L _i	L _i	n _i	RAD. LOAD LIMIT	RAD. LOAD LIMIT
	inch	mm	mm	inch	mm	mm	lbs	kg	inch	mm		inch	mm		lbf	kN
VSA20 0414N	13.465	342	344	19.815	503.3	417	68.4	31	17.913	455	20	14.488	368	24	18,600	82.6
VSA20 0544N	18.583	472	474	25.209	640.3	547	94.8	43	23.032	585	28	19.606	498	32	26,000	115.6
VSA20 0644N	22.520	572	574	29.224	742.3	647	114.7	52	26.969	685	32	23.543	598	36	29,500	132.2
VSA20 0744N	26.457	672	674	32.996	838.1	747	130.1	59	30.906	785	36	27.480	698	40	33,500	148.7
VSA20 0844N	30.394	772	774	37.406	950.1	847	156.6	71	34.843	885	36	31.417	798	40	33,500	148.7
VSA20 0944N	34.331	872	874	41.185	1046.1	947	169.8	77	38.780	985	40	35.354	898	44	37,000	165.2
VSA20 1094N	40.236	1022	1024	47.169	1198.1	1097	200.7	91	44.685	1135	44	41.260	1048	48	41,000	181.7

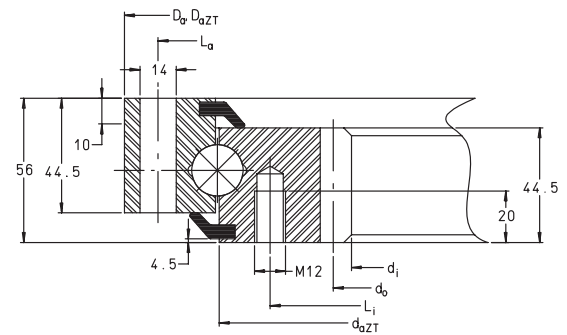
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PART NUMBER	d ₀	d ₀	m	z	F _z norm TOOTH FORCE	F _z norm TOOTH FORCE	F _z max TOOTH FORCE	F _z max TOOTH FORCE	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VSA20 0414N	19.488	495	5	99	3,600	15.9	5,300	23.6	38,000	169	126,000	560	25,000	111	56,000	248
VSA20 0544N	24.803	630	6	105	4,800	21.3	7,100	31.5	42,500	188	166,000	740	27,500	123	73,000	325
VSA20 0644N	28.819	732	6	122	4,800	21.3	7,100	31.5	45,000	200	198,000	880	29,500	131	87,000	385
VSA20 0744N	32.598	828	6	138	4,800	21.3	7,100	31.5	47,500	211	227,000	1010	31,000	138	100,000	445
VSA20 0844N	36.850	936	8	117	6,400	28.3	9,400	42	50,000	222	260,000	1150	32,500	145	115,000	510
VSA20 0944N	40.630	1032	8	129	6,400	28.3	9,400	42	52,000	231	290,000	1280	34,000	151	128,000	570
VSA20 1094N	46.614	1184	8	148	6,400	28.3	9,400	42	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings

VSI SERIES

- Standard series 20
- With internal gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	D _a	D _a	D _{aZT}	d _{aZT}	WGT.	WGT.	L _a	L _a	n _a	L _i	L _i	n _i	MAX. RAD. LOAD LIMIT	MAX. RAD. LOAD LIMIT
	inch	mm	inch	mm	mm	mm	lbs	kg	inch	mm		inch	mm		lbf	kN
VSI20 0414 N	9.252	235	19.134	486	484	411	68.4	31	18.110	460	24	14.764	375	24	22,300	99.1
VSI20 0544 N	17.480	444	24.252	616	614	541	92.6	42	23.228	590	32	19.882	505	32	29,500	132.2
VSI20 0644 N	21.496	546	28.189	716	714	641	110.3	50	27.165	690	36	23.819	605	36	33,500	148.7
VSI20 0744 N	25.512	648	32.126	816	814	741	127.9	58	31.102	790	40	27.756	705	40	37,000	165.2
VSI20 0844 N	28.976	736	36.063	916	914	841	152.1	69	35.039	890	40	31.693	805	40	37,000	165.2
VSI20 0944 N	37.008	940	40.000	1016	1014	941	167.6	76	38.976	990	44	35.630	905	44	41,000	181.7
VSI20 1094 N	38.740	984	45.906	1166	1164	1091	200.7	91	44.882	1140	48	41.535	1055	48	44,500	198.2

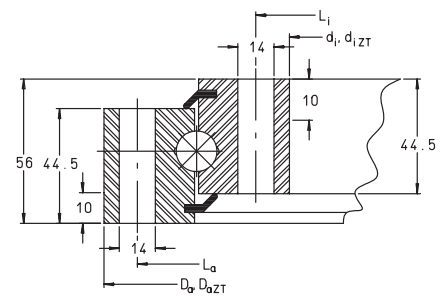
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PART NUMBER	d ₀	d ₀	m	z	F _z norm TOOTH FORCE	F _z norm TOOTH FORCE	F _z max TOOTH FORCE	F _z max TOOTH FORCE	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VSI20 0414 N	13.189	335	5	67	4,000	17.7	5,900	26.2	38,000	169	126,000	560	25,000	111	56,000	248
VSI20 0544 N	17.953	456	6	76	5,300	23.7	7,900	35	42,500	188	166,000	740	27,500	123	73,000	325
VSI20 0644 N	21.969	558	6	93	5,300	23.7	7,900	35	45,000	200	198,000	880	29,500	131	64,000	285
VSI20 0744 N	25.984	660	6	110	5,300	23.7	7,900	35	47,500	211	227,000	1010	31,000	138	100,000	445
VSI20 0844 N	29.606	752	8	94	7,100	31.4	10,500	46.7	50,000	222	260,000	1150	32,500	145	115,000	510
VSI20 0944 N	33.701	856	8	107	7,100	31.4	10,500	46.7	52,000	231	290,000	1280	34,000	151	128,000	570
VSI20 1094 N	39.370	1000	8	125	7,100	31.4	10,500	46.7	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings

VSU SERIES

- Standard series 20
- Without gear teeth
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	d_{iZT}	D_a	D_a	D_{aZT}	WGT.	WGT.	L_a	L_a	n_a
	inch	mm	mm	inch	mm	mm					
VSU20 0414	13.465	342	344	19.134	486	484	63.9	29	18.110	460	24
VSU20 0544	18.583	472	474	24.252	616	614	81.6	37	23.228	590	32
VSU20 0644	22.520	572	574	28.189	716	714	97.0	44	27.165	690	36
VSU20 0744	26.457	672	674	32.126	816	814	114.7	52	31.102	790	40
VSU20 0844	30.394	772	774	36.063	916	914	132.3	60	35.039	890	40
VSU20 0944	34.331	872	874	40.000	1016	1014	147.7	67	38.976	990	44
VSU20 1094	40.236	1022	1024	45.906	1166	1164	169.8	77	44.882	1140	48

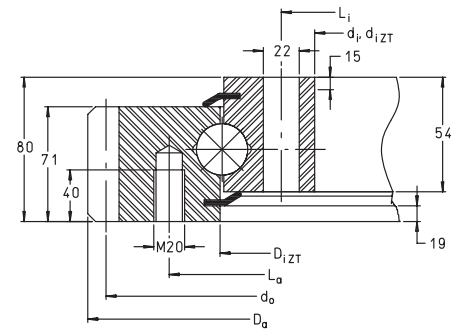
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PART NUMBER	L_i	L_i	n_i	F_r max	F_r max	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm		lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VSU20 0414	14.488	368	24	22,300	99.1	38,000	169	126,000	560	25,000	111	56,000	248
VSU20 0544	19.606	498	32	29,500	132.2	42,500	188	166,000	740	27,500	123	73,000	325
VSU20 0644	23.543	598	36	33,500	148.7	45,000	200	198,000	880	29,500	131	87,000	385
VSU20 0744	27.480	698	40	37,000	165.2	47,500	211	227,000	1010	31,000	138	100,000	445
VSU20 0844	31.417	798	40	37,000	165.2	50,000	222	260,000	1150	32,500	145	115,000	510
VSU20 0944	35.354	898	44	41,000	181.7	52,000	231	290,000	1280	34,000	151	128,000	570
VSU20 1094	41.260	1048	48	44,500	198.2	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings

VSA SERIES

- With external gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	$d_i ZT$	D_a	D_a	$D_i ZT$	WGT.	WGT.	L_a	L_a	n_a	L_i	L_i	n_i	RAD. LOAD LIMIT	RAD. LOAD LIMIT
	inch	mm	mm	inch	mm	mm	lbs	kg	inch	mm		inch	mm		lbf	kN
VSA25 0755 N	25.787	655	657	35.354	898	755	282.2	128	32.126	816	24	27.362	695	24	65,000	290.4
VSA25 0855 N	29.724	755	757	39.252	997	855	319.7	145	36.063	916	28	31.299	795	28	76,000	338.8
VSA25 0955 N	33.661	855	857	43.150	1096	955	341.8	155	40.000	1016	30	35.236	895	30	82,000	363
VSA25 1055 N	37.598	955	957	47.165	1198	1055	377.1	171	43.937	1116	30	39.173	995	30	82,000	363

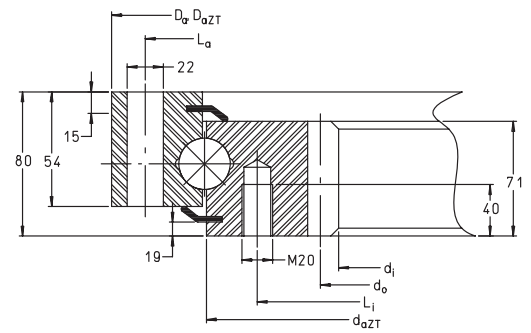
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PART NUMBER	d_0	d_0	m	z	F_z norm TOOTH FORCE	F_z norm TOOTH FORCE	F_z max TOOTH FORCE	F_z max TOOTH FORCE	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VSA25 0755 N	34.724	882	9	98	12,400	55.1	18,000	80.2	103,000	460	510,000	2250	67,000	300	227,000	1010
VSA25 0855 N	38.622	981	9	109	12,400	55.1	18,000	80.2	109,000	485	570,000	2550	71,000	315	260,000	1150
VSA25 0955 N	42.520	1080	9	120	12,400	55.1	18,000	80.2	112,000	500	640,000	2850	74,000	330	290,000	1280
VSA25 1055 N	46.457	1180	10	118	13,800	61.2	20,000	89	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings

VSI SERIES

- With internal gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	D _a	D _a	D _a ZT	d _a ZT	WGT.	WGT.	L _a	L _a	L _i	L _i	n _a	MAX. RAD. LOAD LIMIT	MAX. RAD. LOAD LIMIT
	inch	mm	inch	mm	mm	mm	lbs	kg	inch	mm	inch	mm		lbf	kN
VSI25 0755 N	24.016	610	33.661	855	853	755	262.4	119	32.087	815	27.323	694	24	65,000	290.4
VSI25 0855 N	27.953	710	37.598	955	953	855	302.1	137	36.024	915	31.260	794	28	76,000	338.8
VSI25 0955 N	31.890	810	41.535	1055	1053	955	328.5	149	39.961	1015	35.197	894	30	82,000	363.3
VSI25 1055 N	35.827	910	45.472	1155	1153	1055	363.8	165	43.898	1115	39.134	994	30	82,000	363.3

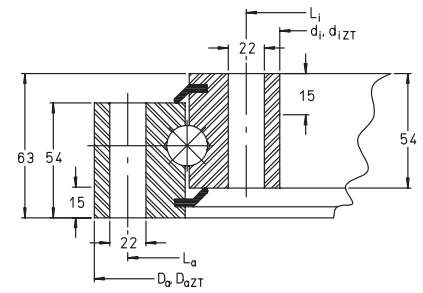
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PART NUMBER	d ₀	d ₀	m	z	F _z norm TOOTH FORCE	F _z norm TOOTH FORCE	F _z max TOOTH FORCE	F _z max TOOTH FORCE	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm			lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf.	kN	lbf	kN
VSI25 0755 N	24.803	630	10	63	15,300	68	22,200	98.9	103,000	460	510,000	2250	67,000	300	227,000	1010
VSI25 0855 N	28.740	730	10	73	15,300	68	22,200	98.9	109,000	485	570,000	2550	71,000	315	260,000	1150
VSI25 0955 N	32.677	830	10	83	15,300	68	22,200	98.9	112,000	500	640,000	2850	74,000	330	290,000	1280
VSI25 1055 N	36.614	930	10	93	15,300	68	22,200	98.9	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings

VSU SERIES

- Without gear teeth
- Four point contact ball type
- 25mm ball series



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	$d_i ZT$	D_a	D_a	$D_a ZT$	D_i	D_i	d_a	d_a	WGT.	WGT.	L_a	L_a	n_a
	inch	mm	mm	inch	mm	mm	inch	mm	inch	mm					
VSU25 0755	25.787	655	657	33.661	855	853	29.646	753	29.803	757	198.5	90	32.087	815	24
VSU25 0855	29.724	755	757	37.598	955	953	33.583	853	33.740	857	222.7	101	36.024	915	28
VSU25 0955	33.661	855	857	41.535	1055	1053	37.520	953	37.677	957	253.6	115	39.961	1015	30
VSU25 1055	37.598	955	957	45.472	1155	1153	41.457	1053	41.614	1057	282.2	128	43.898	1115	30

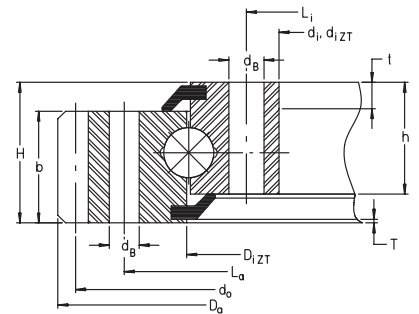
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PART NUMBER	L_i	L_i	n_B	$F_{r max}$	$F_{r max}$	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	inch	mm		lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VSU25 0755	27.362	695	24	65,000	290.4	103,000	460	510,000	2250	67,000	300	227,000	1010
VSU25 0855	31.299	795	28	76,000	338.8	109,000	485	570,000	2550	71,000	315	260,000	1150
VSU25 0955	35.236	895	30	82,000	363.3	112,000	500	640,000	2850	74,000	330	290,000	1280
VSU25 1055	39.173	995	30	82,000	363.3	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings

VA SERIES

- With external gear teeth – metric module
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	PART NUMBER	d_i inch	d_i mm	$d_i zT$ mm	D_a inch	D_a mm	$D_i zT$ mm	H inch	H mm	h inch	h mm	T inch	T mm
VA 140188V	F153515.1	5.315	135		10.211	259.36		1.378	35	1.1811	30	0.1575	4
VA 160235N		6.7323	171	173	12.5433	318.6	236	1.5748	40	1.378	35	0.0866	2.2
VA 160302N	F150431	9.4488	240		15.1181	384		1.2598	32	1.1811	30	0.1575	4
VA 250309N		9.252	235	237	16.0787	408.4	310	2.3622	60	2.0669	52.5	0.1181	3
VA 300475N		15.0394	382	384	23.5512	598.2	475	2.5591	65	2.3622	60	0.0984	2.5
VA 220596N		20.0787	510	512	28.0394	712.2	597	2.1654	55	1.8898	48	0.0984	2.5
VA 300685N		22.7165	577	579	32.6732	829.9	685	2.6772	68	2.4016	61	0.0984	2.5
VA 300980N	F97110	34.252	870		45.0394	1144		3.937	100	3.5433	90	0.5118	13

CONTINUED FROM ABOVE

PART NUMBER	PART NUMBER	t inch	t mm	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	b inch	b mm	F_z norm TOOTH FORCE lbf	F_z norm TOOTH FORCE kN	F_z max TOOTH FORCE lbf	F_z max TOOTH FORCE kN	WGT. lbs	WGT. kg
VA 140188V	F153515.1	0.3937	10	10100	44.8	9.7638	248	4	62	1.0236	26	2340	10.4	3450	15.3	16.538	7.5
VA 160235N		0.2362	6	11200	49.6	12.2835	312	4	78	1.378	35	2470	11	3600	16.1	28.665	13
VA 160302N	F150431	0.7087	18	18600	82.6	14.8031	376	4	94	1.1811	30	2470	11	3600	16.1	29.988	13.6
VA 250309N		0.315	8	22300	99.1	15.748	400	5	80	2.0669	52.5	2900	12.9	4250	18.8	65.048	29.5
VA 300475N		0.3543	9	45500	201.6	23.1496	588	6	98	2.3622	60	5600	24.8	8100	36.1	141.12	64
VA 220596N		0.315	8	42000	187.2	27.6378	702	6	117	1.8898	48	5600	24.8	8100	36.1	136.71	62
VA 300685N		0.3937	10	65000	290.4	32.126	816	8	102	2.4016	61	7400	33.1	10800	48.2	246.96	112
VA 300980N	F97110	0.3937	10	98000	435.6	44.1732	1122	11	102	2.6772	68	14500	64.5	21100	93.8	507.15	230

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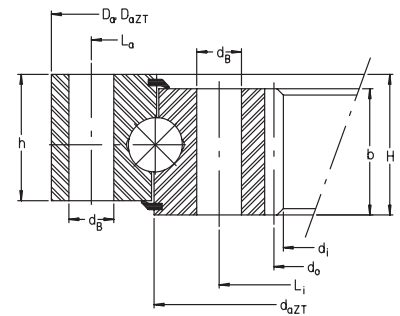
PART NUMBER	PART NUMBER	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	d_B inch	d_B mm	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VA 140188V	F153515.1	8.7402	222	16	6.063	154	16			26500	118	92000	410	17300	77	41500	185
VA 160235N		10.8268	275	12	7.6772	195	12	0.5118	13	34500	153	78000	345	22700	101	35000	156
VA 160302N	F150431	13.5039	343	20	10.315	262	20			38000	168	100000	445	24700	110	45000	200
VA 250309N		14.1339	359	24	10.1969	259	24	0.5118	13	73000	325	146000	650	48500	215	66000	295
VA 300475N		21.2598	540	36	16.1417	410	36	0.6299	16	105000	465	290000	1280	69000	305	128000	570
VA 220596N		25.5906	650	24	21.3386	542	24	0.7087	18	79000	350	270000	1210	51000	228	124000	550
VA 300685N		29.6457	753	24	24.2913	617	24	0.8661	22	119000	530	485000	2160	79000	350	218000	970
VA 300980N	F97110	41.3386	1050	26	35.8268	910	36	0.8661	22	137000	610	690000	3090	90000	400	315000	1390



Slewing Ring Bearings

VI SERIES

- With internal gear teeth – metric module
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	PART NUMBER	d _i inch	d _i mm	D _a inch	D _a mm	D _{aZT} mm	d _{aZT} mm	H inch	H mm	h inch	h mm	WGT. lbs	WGT. kg
VI 160288 N	F79832	8.504	216	13.386	340	338	287	1.535	39	1.339	34	26.5	12
VI 140326 V		9.843	250	15.039	382			2.323	59			39.7	18
VI 160420 N		13.071	332	19.134	486	484	419	1.535	39	1.339	34	52.9	24
VI 250489 N		15.118	384	22.126	562	560	488	2.165	55	1.969	50	94.8	43
VI 200575 N		18.189	462	25.866	657	655	574	2.165	55	1.693	43	121.3	55
VI 250635 N		19.843	504	28.425	722	720	634	2.323	59	2.047	52	154.4	70
VI 300720 N		22.992	584	31.969	812	810	720	2.677	68	2.402	61	220.5	100
VI 200897 N		30.551	776	38.425	976	974	896	2.362	60	1.693	43	198.5	90

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PART NUMBER	PART NUMBER	L _a inch	L _a mm	n _a	L _i inch	L _i mm	n _i	d _B inch	d _B mm	MAX. RAD. LOAD LIMIT lbf	MAX. RAD. LOAD LIMIT kN	d ₀ inch	d ₀ mm	m	z
VI 160288 N	F79832	12.756	324	20	9.921	252	20	0.354	9	7,900	35	8.819	224	4	56
VI 140326 V		14.252	362	8	11.417	290	8			5,000	22.4	10.059	255.5	3.5	73
VI 160420 N		18.189	462	16	14.882	378	16	0.551	14	14,900	66.1	13.386	340	4	85
VI 250489 N		21.181	538	40	17.323	440	40	0.551	14	37,000	165.2	15.591	396	6	66
VI 200575 N		24.606	625	16	20.669	525	16	0.709	18	28,000	124.8	18.661	474	6	79
VI 250635 N		27.165	690	24	22.835	580	24	0.709	18	42,000	187.2	20.472	520	8	65
VI 300720 N		30.709	780	40	25.984	660	40	0.709	18	70,000	312	23.622	600	8	75
VI 200897 N		37.165	944	32	33.465	850	32	0.709	18	56,000	249.6	31.181	792	8	99

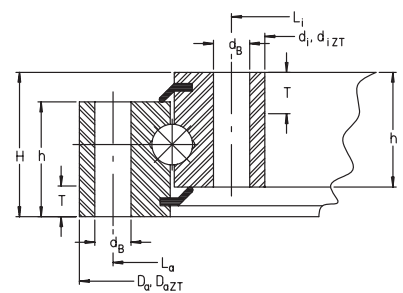
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PART NUMBER	PART NUMBER	b inch	b mm	F _Z norm TOOTH FORCE lbf	F _Z norm TOOTH FORCE kN	F _Z max TOOTH FORCE lbf	F _Z max TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VI 160288 N	F79832	1.339	34	2,750	12.3	4,000	17.8	37,000	165	94,000	420	24,300	108	42,500	190
VI 140326 V		1.575	40	2,430	10.8	3,600	16.1	18,700	83	46,500	206	17,500	78	20,900	93
VI 160420 N		1.339	34	2,750	12.3	4,000	17.8	43,000	191	139,000	620	28,000	125	62,000	275
VI 250489 N		1.969	50	6,200	27.6	9,000	40.1	89,000	395	232,000	1030	57,000	255	105,000	465
VI 200575 N		1.890	48	6,200	27.6	9,000	40.1	66,000	295	255,000	1140	43,500	193	115,000	510
VI 250635 N		2.047	52	9,000	39.9	13,000	58	98,000	435	300,000	1340	64,000	285	135,000	600
VI 300720 N		2.402	61	10,500	46.8	15,300	68	121,000	540	435,000	1940	80,000	355	196,000	870
VI 200897 N		2.087	53	9,100	40.6	13,300	59.1	79,000	350	405,000	1810	51,000	228	175,000	780

Slewing Ring Bearings

VU SERIES

- Without gear teeth
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	PART NUMBER	d _i	d _i	d _{i ZT}	D _a	D _a	D _{a ZT}	H	H	h	h	L _a	L _a	n _a	L _i	L _i	n _i
		inch	mm	mm	inch	mm	mm	inch	mm	inch	mm	inch	mm		inch	mm	
VU200405		13.228	336	338	18.661	474	472	1.811	46	1.614	41	17.717	450	30	14.173	360	30
VU250433		13.543	344	346	20.551	522	520	2.165	55	1.969	50	19.291	490	20	14.803	376	20
VU300574		18.425	468	470	26.772	680	679	2.677	68	2.402	61	25.197	640	20	20.000	508	20
VU360680		23.032	585	567	31.299	795	793	3.110	79	2.835	72	29.724	755	30	23.819	605	30
VU400785		26.378	670	672	35.433	900	898	3.504	89	3.110	79	33.858	860	36	27.953	710	36
VU360980		34.252	870	872	42.913	1090	1088	3.110	79	2.835	72	41.339	1050	44	35.827	910	44
VU201125		41.575	1056	1058	47.008	1194	1192	2.205	56	1.811	46	46.063	1170	80	42.520	1080	80
VU140179		4.902	124.5	126.5	9.213	234	232	1.378	35	1.181	30	8.425	214	12	5.689	144.5	12
VU200220		5.433	138	140	11.890	302	300	1.811	46	1.614	41	10.630	270	10	6.693	170	10
VU130225	F151733	7.874	200	237.6	11.417	290	—	0.945	24	0.945	24	10.630	270	6	—	—	—
VU200260		7.520	191		12.953	329	327	1.811	46	1.614	41	12.008	305	20	8.465	215	20
VU140325		10.630	270	272	14.961	380	378	1.378	35	1.181	30	14.173	360	24	11.417	290	24
VU250380		10.827	275	277	19.095	485	483	2.165	55	1.969	50	17.835	453	16	12.087	307	16

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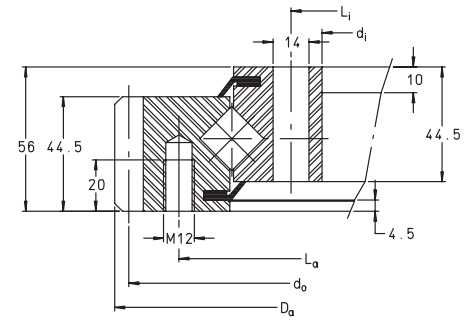
PART NUMBER	PART NUMBER	WGT.	WGT.	d _b	d _b	F _{r max}	F _{r max}	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RADIAL DYN. CAP.	RADIAL DYN. CAP.	RADIAL STAT. CAP.	RADIAL STAT. CAP.
		lbs	kg	inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VU200405		55.1	25	0.551	14	28,000	123.9	58,000	260	182,000	810	38,000	169	81,000	360
VU250433		90.4	41	0.709	18	35,000	156	83,000	370	205,000	910	55,000	243	92,000	410
VU300574		180.8	82	0.866	22	54,000	242	111,000	495	345,000	1540	73,000	325	155,000	690
VU360680		264.6	120	0.866	22	82,000	363	144,000	640	510,000	2260	93,000	415	229,000	1020
VU400785		341.8	155	0.866	22	98,000	435.6	171,000	760	700,000	3100	111,000	495	315,000	1390
VU360980		357.2	162	0.866	22	120,000	532.4	164,000	730	730,000	3250	108,000	480	330,000	1470
VU201125		156.6	71	0.551	14	74,000	330.4	85,000	380	500,000	2240	56,000	248	227,000	1010
VU140179		15.4	7	0.433	11	7,600	33.6	26,000	115	57,000	255	16,900	75	25,500	114
VU200220		35.3	16	0.709	18	17,500	78	45,000	201	98,000	435	29,500	132	44,500	197
VU130225	F151733	13.2	6			4,450	19.8	11,000	49	19,600	87	10,300	46	8,900	39.5
VU200260		33.1	15	0.551	14	18,600	82.6	49,000	217	117,000	520	32,000	143	52,000	233
VU140325		26.5	12	0.433	11	15,100	67.2	33,000	146	103,000	460	21,400	95	47,000	208
VU250380		97.0	44	0.709	18	28,000	124.8	79,000	350	180,000	800	52,000	230	81,000	360



Slewing Ring Bearings

XSA SERIES

- With external metric module gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _j	D _a	D _a	L _a	L _a	n _a	L _i	L _i	n _i	WGT.	WGT.
	inch	mm	inch	mm	inch	mm		inch	mm		lbs	kg
XSA14 0414N	13.543	344	19.815	503.3	17.913	455	20	14.488	368	24	70.6	32
XSA14 0544N	18.661	474	25.209	640.3	23.032	585	28	19.606	498	32	97.0	44
XSA14 0644N	22.598	574	29.224	742.3	26.969	685	32	23.543	598	36	114.7	52
XSA14 0744N	26.535	674	32.996	838.1	30.906	785	36	27.480	698	40	130.1	59
XSA14 0844N	30.472	774	37.406	950.1	34.843	885	36	31.417	798	40	156.6	71
XSA14 0944N	34.409	874	41.185	1046.1	38.780	985	40	35.354	898	44	169.8	77
XSA14 1094N	40.315	1024	47.169	1198.1	44.685	1135	44	41.260	1048	48	200.7	91

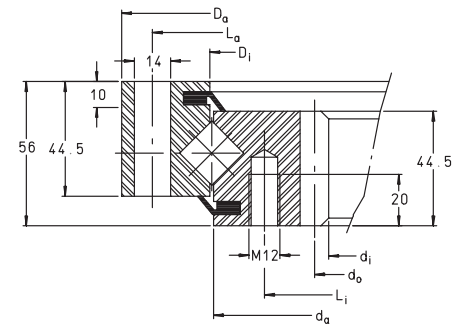
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PART NUMBER	RAD. LOAD LIMIT	RAD. LOAD LIMIT	d ₀	d ₀	m	z	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbf	kN	inch	mm			lbf	kN	lbf	kN	lbf.	kN	lbf	kN
XSA14 0414N	18,600	82.6	19.488	495	5	99	51,000	229	117,000	520	33,000	146	56,000	250
XSA14 0544N	26,000	115.6	24.803	630	6	105	61,000	270	153,000	680	38,000	170	74,000	330
XSA14 0644N	29,500	132.2	28.819	732	6	122	65,000	290	180,000	800	41,500	185	89,000	395
XSA14 0744N	33,500	148.7	32.598	828	6	138	71,000	315	209,000	930	45,000	200	102,000	455
XSA14 0844N	33,500	148.7	36.850	936	8	117	76,000	340	236,000	1050	48,500	215	115,000	510
XSA14 0944N	37,000	165.2	40.630	1032	8	129	81,000	360	265,000	1170	51,000	227	130,000	580
XSA14 1094N	41,000	181.7	46.614	1184	8	148	88,000	390	305,000	1360	55,000	246	151,000	670

Slewing Ring Bearings

XSI SERIES

- With internal metric module gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d_i	d_i	D_a	D_a	D_i	D_i	d_a	d_a	WGT.	WGT.	L_a	L_a	n_a	L_i	L_i	n_i
	inch	mm	inch	mm	inch	mm	inch	mm								
XSI14 0414 N	12.795	325	19.055	484	16.339	415	16.181	411	68.355	31	18.110	460	24	14.764	375	24
XSI14 0544 N	17.480	444	24.173	614	21.457	545	21.299	541	94.815	43	23.228	590	32	19.882	505	32
XSI14 0644 N	21.496	546	28.110	714	25.394	645	25.236	641	110.25	50	27.165	690	36	23.819	605	36
XSI14 0744 N	25.512	648	32.047	814	29.331	745	29.173	741	127.89	58	31.102	790	40	27.756	705	40
XSI14 0844 N	28.976	736	35.984	914	33.268	845	33.110	841	152.145	69	35.039	890	40	31.693	805	40
XSI14 0944 N	33.071	840	39.921	1014	37.205	945	37.047	941	167.58	76	38.976	990	44	35.630	905	44
XSI14 1094 N	38.740	984	45.827	1164	43.110	1095	42.953	1091	200.655	91	44.882	1140	48	41.535	1055	48

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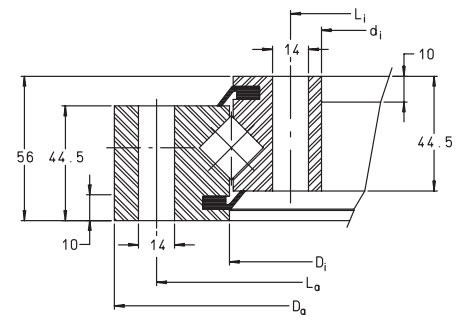
PART NUMBER	RAD. LOAD LIMIT	RAD. LOAD LIMIT	d_0	d_0	m	z	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbf	kN	inch	mm										
XSI14 0414 N	22,300	99.1	13.189	335	5	67	51,000	229	117,000	520	33,000	146	56,000	250
XSI14 0544 N	29,500	132.2	17.953	456	6	76	61,000	270	153,000	680	38,000	170	74,000	330
XSI14 0644 N	33,500	148.7	21.969	558	6	93	65,000	290	180,000	800	41,500	185	89,000	395
XSI14 0744 N	37,000	165.2	25.984	660	6	110	71,000	315	209,000	930	45,000	200	102,000	455
XSI14 0844 N	37,000	165.2	29.606	752	8	94	76,000	340	236,000	1050	48,500	215	115,000	510
XSI14 0944 N	41,000	181.7	33.701	856	8	107	81,000	360	265,000	1170	51,000	227	130,000	580
XSI14 1094 N	44,500	198.2	39.370	1000	8	125	88,000	390	305,000	1360	55,000	246	151,000	670



Slewing Ring Bearings

XSU SERIES

- Without gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	D _a	D _a	D _i	d _a	L _a	L _a	n _a	L _i	L _i	n _i
	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	
XSU 140414	13.543	344	19.055	484	415	413	18.110	460	24	14.488	368	24
XSU 140544	18.661	474	24.173	614	545	543	23.228	590	32	19.606	498	32
XSU 140644	22.598	574	28.110	714	645	643	27.165	690	36	23.543	598	36
XSU 140744	26.535	674	32.047	814	745	743	31.102	790	40	27.480	698	40
XSU 140844	30.472	774	35.984	914	845	843	35.039	890	40	31.417	798	40
XSU 140944	34.409	874	39.921	1014	945	943	38.976	990	44	35.354	898	44
XSU 141094	40.315	1024	45.827	1164	1095	1093	44.882	1140	48	41.260	1048	48

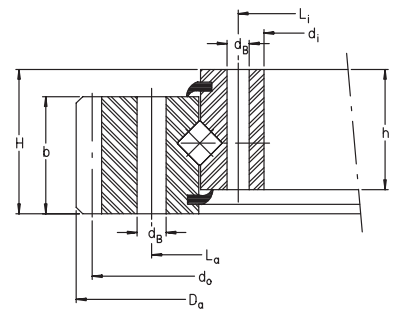
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PART NUMBER	WGT.	WGT.	F _{r max}	F _{r max}	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbs	kg	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
XSU 140414	61.7	28	22,300	99.1	51,000	229	117,000	520	33,000	146	56,000	250
XSU 140544	83.8	38	29,500	132.2	61,000	270	153,000	680	38,000	170	74,000	330
XSU 140644	97.0	44	33,500	148.7	65,000	290	180,000	800	41,500	185	89,000	395
XSU 140744	114.7	52	37,000	165.2	71,000	315	209,000	930	45,000	200	102,000	455
XSU 140844	132.3	60	37,000	165.2	76,000	340	236,000	1050	48,500	215	115,000	510
XSU 140944	147.7	67	41,000	181.7	81,000	360	265,000	1170	51,000	227	130,000	580
XSU 141094	169.8	77	44,500	198.2	88,000	390	305,000	1360	55,000	246	151,000	670

Slewing Ring Bearings

XA SERIES

- With external metric module gear teeth
- Crossed roller type
- Sealed
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	PART NUMBER	d _i	d _i	D _a	D _a	H	H	h	h	WGT.	WGT.	L _a	L _a	n _a	L _i	L _i	n _i	d _B	d _B
		inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm		inch	mm		inch	mm
XA 120235 N		6.732	171	12.551	318.8	1.575	40	1.378	35	29.3	13.3	10.827	275	12	7.677	195	12	0.512	13
XA 180309 N		9.252	235	16.079	408.4	2.362	60	2.067	52.5	66.2	30	14.134	359	24	10.197	259	24	0.512	13
XA 200352 H	F98937	14.724	374	18.189	462	2.323	59	2.126	54	77.2	35	16.024	407	24	11.732	298	24	0.551	14
XA 160407 N		13.189	335	19.815	503.3	1.969	50	1.772	45	72.8	33	17.913	455	30	14.134	359	30	0.512	13
XA 240574 N	F151682	18.898	480	27.362	695	3.032	77	2.520	64	185.2	84	25.197	640	18	20.000	508	18	0.709	18
XA 200720 N		24.803	630	33.240	844.3	2.323	59	2.047	52	191.8	87	30.709	780	30	26.063	662	30	0.709	18
XA 200810 N	F97948	28.740	730	37.953	964	3.543	90	2.953	75	348.4	158	34.252	870	24	30.000	762	24	-	-
XA 280995 N		34.724	882	45.591	1158	3.268	83	2.874	73	467.5	212	42.047	1068	40	36.299	922	40	0.866	22

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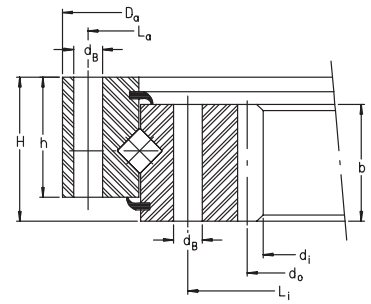
PART NUMBER	PART NUMBER	RAD. LOAD LIMIT	RAD. LOAD LIMIT	d ₀	d ₀	m	z	b	b	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
		lbf	kN	inch	mm			inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf	kN
XA 120235 N		11,200	49.6	12.284	312	4	78	1.378	35	30,500	135	53,000	235	19,300	86	26,000	115
XA 180309 N		22,300	99.1	15.748	400	5	80	2.067	52.5	61,000	270	99,000	440	38,500	172	48,500	215
XA 200352 H	F98937	22,300	99.1	17.717	450	6	75	1.181	30	75,000	335	162,000	720	48,000	214	80,000	355
XA 160407 N		28,000	123.9	19.488	495	5	99	1.772	45	61,000	270	124,000	550	38,500	172	61,000	270
XA 240574 N	F151682	31,500	140.4	26.969	685	5	137	1.654	42	128,000	570	280,000	1250	81,000	360	137,000	610
XA 200720 N		53,000	234	32.835	834	6	139	2.047	52	112,000	500	285,000	1260	71,000	315	139,000	620
XA 200810 N	F97948	42,000	187.2	37.165	944	8	118	2.874	73	119,000	530	320,000	1420	75,000	335	148,000	660
XA 280995 N		109,000	484	44.882	1140	10	114	2.874	73	209,000	930	510,000	2280	133,000	590	275,000	1220



Slewing Ring Bearings

XI SERIES

- With internal metric module gear teeth
- Crossed roller type
- Sealed
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	d _i	d _i	D _a	D _a	H	H	h	h	WGT.	WGT.	L _a	L _a	n _a	L _i	L _i	n _i	d _B	d _B
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm		inch	mm		inch	mm
XI 120288 N	8.504	216	13.386	340	1.496	38	1.299	33	26.5	12	12.756	324	20	9.921	252	20	0.354	9
XI 120321 V	10.126	257.2	15.079	383	1.496	38	1.299	33	33.1	15	14.055	357	20	11.299	287	20	—	—
XI 120420 N	13.071	332	19.134	486	1.535	39	1.339	34	50.7	23	18.189	462	16	14.882	378	16	0.551	14
XI 160489 N	15.118	384	22.126	562	1.772	45	1.575	40	77.2	35	21.181	538	40	17.323	440	40	0.551	14
XI 180635 N	19.843	504	28.425	722	2.126	54	1.850	47	147.7	67	27.165	690	24	22.835	580	24	0.709	18
XI 200720 N	22.992	584	31.969	812	2.284	58	2.008	51	185.2	84	30.709	780	40	25.984	660	40	0.709	18
XI 180865 N	28.976	736	33.543	852	2.126	54	1.850	47	205.1	93	36.221	920	20	31.890	810	20	0.709	18
XI 201100 N	37.402	950	47.244	1200	2.756	70	2.126	54	330.8	150	45.669	1160	30	40.945	1040	30	0.866	22

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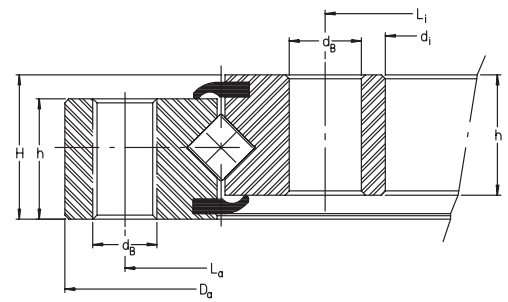
PART NUMBER	RAD. LOAD LIMIT	RAD. LOAD LIMIT	d ₀	d ₀	m	z	b	b	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
	lbf	kN	inch	mm			inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf	kN
XI 120288 N	7,900	35	8.819	224	4	56	1.339	34	33,500	150	65,000	290	21,400	95	31,500	141
XI 120321 V	12,600	56	10.276	261	3	87	1.339	34	36,500	163	72,000	320	23,400	104	35,500	157
XI 120420 N	14,900	66.1	13.386	340	4	85	1.339	34	42,500	189	94,000	420	27,000	120	46,500	206
XI 160489 N	29,000	130	15.591	396	6	66	1.575	40	67,000	300	119,000	530	43,000	192	58,000	260
XI 180635 N	42,000	187.2	20.472	520	8	65	1.850	47	91,000	405	202,000	900	58,000	260	99,000	440
XI 200720 N	58,000	260	23.622	600	8	75	2.008	51	112,000	500	238,000	1060	71,000	315	117,000	520
XI 180865 N	35,000	156	29.606	752	8	94	1.850	47	108,000	480	275,000	1230	69,000	305	135,000	600
XI 201100 N	82,000	363	38.189	970	10	97	2.362	60	142,000	630	360,000	1610	90,000	400	178,000	790



Slewing Ring Bearings

XU SERIES

- Without gear teeth
- Crossed roller type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER	PART NUMBER	d _i	d _i	D _a	D _a	H	H	h	h	L _a	L _a	n _a	L _i	L _i	n _i
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	
XU 050077	F152053.1	1.575	40	4.409	112	0.866	22	0.827	21	3.819	97	6	2.205	56	6
XU 060094	F151798.1	2.244	57	5.512	140	1.024	26	0.984	25	4.724	120	6	2.756	70	6
XU 060111	F98565	3.000	76.2	5.740	145.79	0.625	15.87	—	—	5.240	133.1	8	3.500	88.9	8
XU 080120	F151799.1	2.717	69	6.693	170	1.181	30	1.142	29	5.827	148	6	3.543	90	6
XU 080149	F98865	4.000	101.6	7.750	196.85	0.875	22.22	0.875	22.22	7.000	177.8	16	4.559	115.8	16
XU 120179	F152473	4.902	124.5	9.213	234	1.378	35	1.181	30	8.425	214	12	5.689	144.5	12
XU120222		5.512	140	11.811	300	1.417	36	1.181	30	10.630	270	12	6.693	170	12
XU160260		7.520	191	12.953	329	1.811	46	1.614	41	12.008	305	20	8.465	215	20
XU080264	F151264	8.500	215.9	12.250	311.15	1.000	25.4	1.000	25.4	11.626	295.3	12	9.126	231.8	12
XU160405		13.228	336	18.661	474	1.811	46	1.614	41	17.717	450	30	14.173	360	30
XU080430		F154119	14.961	380	18.898	480	1.024	26	1.024	26	18.189	462	20	15.669	398
XU300515	15.118		384	25.433	646	3.386	86	3.110	79	23.543	598	18	17.008	432	18
XU280680	22.244		565	31.299	795	3.110	79	2.835	72	29.724	755	30	23.819	605	30
XU300785	26.378		670	35.433	900	3.386	86	3.110	79	33.858	860	36	27.953	710	36
XU260980	34.252		870	42.913	1090	3.110	79	2.717	69	41.339	1050	44	35.827	910	44

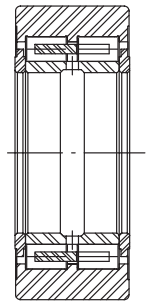
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PART NUMBER	PART NUMBER	WGT.	WGT.	d _B	d _B	F _{r max}	F _{r max}	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
		lbs	kg	inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
XU 050077	F152053.1	3.087	1.4	0.260	6.6	1,300	5.8	5,000	22.4	6,500	29	3,200	14.3	3,200	14.2
XU 060094	F151798.1	5.292	2.4	0.354	9	2,070	9.2	7,300	32.5	8,400	37.5	4,650	20.7	4,150	18.4
XU 060111	F98565	2.646	1.2	0.236	6	1,730	7.7	8,100	36	10,000	44.5	5,100	22.8	4,850	21.5
XU 080120	F151799.1	88.20	40	0.354	9	2,360	10.5	12,600	56	11,900	53	8,000	35.5	5,800	26
XU 080149	F98865	7.94	3.6	0.272	6.9	3,450	15.4	14,200	63	14,800	66	9,000	40	7,300	32.5
XU 120179	F152473	15.44	7	0.433	11	7,600	33.6	26,500	118	40,000	179	16,900	75	19,800	88
XU120222		26.5	12	0.709	18	14,700	65.5	30,000	133	62,000	275	19,100	85	29,500	131
XU160260		35.3	16	0.551	14	18,600	82.6	47,500	212	79,000	350	30,500	135	39,000	173
XU080264	F151264	15.2	6.9	0.343	8.7	4,700	21	19,100	85	26,500	117	12,100	54	12,800	57
XU160405		55.1	25	0.551	14	28,000	123.9	61,000	270	124,000	550	38,500	172	61,000	270
XU080430		F154119	26.5	12	0.354	9	7,900	35	24,700	110	63,000	280	15,700	70	31,000
XU300515	253.6		115	1.024	26	70,000	313.2	162,000	720	310,000	1370	102,000	455	151,000	670
XU280680	264.6		120	0.866	22	82,000	363	169,000	750	350,000	1560	108,000	480	171,000	760
XU300785	341.8		155	0.866	22	98,000	435.6	202,000	900	470,000	2090	128,000	570	232,000	1030
XU260980	348.4		158	0.866	22	120,000	532.4	189,000	840	490,000	2180	119,000	530	241,000	1070



Rolling Mill Backing Bearing WGTR SERIES

This is a special category for which drawings, application data and specifications are available upon request.

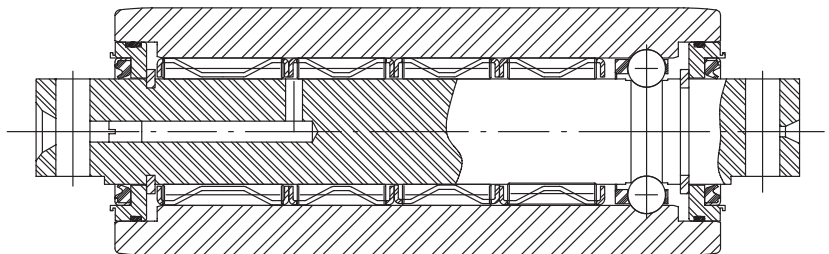


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

PART NUMBER
WGTR 25 x 55 x 31.2
WGTR x 36 x 80 x 40
WGTR x 55 x 120 x 52
WGTR x 55 x 120 x 64
WGTR x 70 x 160 x 75
WGTR x 70 x 160 x 90
WGTR x 100 x 225 x 96
WGTR x 100 x 225 x 120
WGTR x 130300.02 x 150
WGTR x 130 x300.02 x 172.65
WGTR x 180 x 406.04 x 171.04
WGTR x 180 x 406.4 x 224
WGTR x 200 x 460 x 171
WGTR x 200 x 460 x 241

Tensioner – Leveler Backup Rollers RLB SERIES

This is a special category for which drawings, application data and specifications are available upon request.

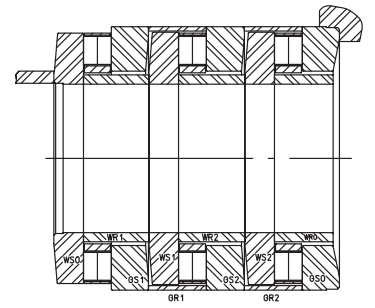


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

Tandem Cylindrical Roller Thrust Bearing

TAR SERIES

This is a special category for which drawings, application data and specifications are available upon request.



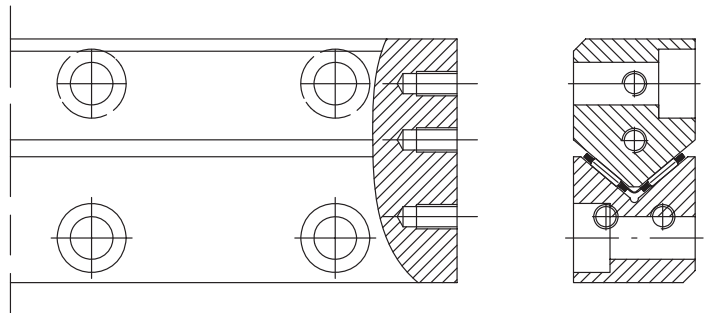
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

HYDREL/EGIS Guideways

M & V SERIES

- Standard quality: Q10

This is a special category for which drawings, application data and specifications are available upon request.

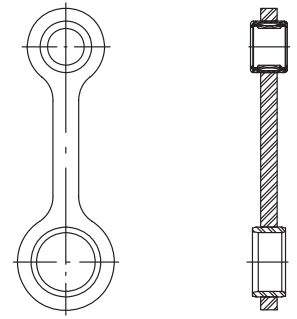


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

Products and company names are trademarks or registered trademarks of their respective companies.

Connecting Rods

This is a special category for which drawings, application data and specifications are available upon request.

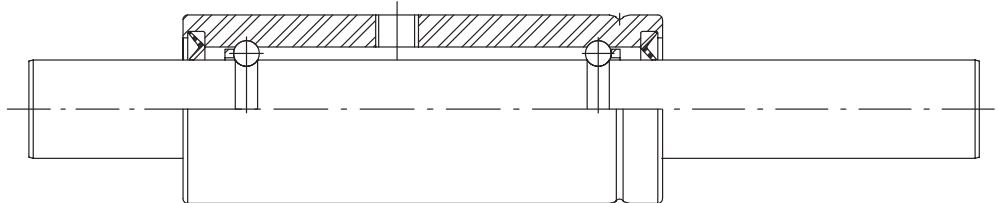


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

Rotor Bearings

RTL SERIES

This is a special category for which drawings, application data and specifications are available upon request.



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.