



FYH[®]

MOUNTED BEARING UNITS



NIPPON PILLOW BLOCK CO., LTD.

CAT.NO.3320



RODAVIGO, S.A.
RODAMIENTOS VIGO, S.A.

www.rodavigo.net











+34 986 288118
Servicio de Att. al Cliente

FYH®





Mounted Bearing Units (contents)

BALL BEARING UNITS	Technical Section	Technical Section
	Pillow Block Units	
	4-Bolt Flange Units	
	Oval Flange Units	
	4-Bolt Flange Cartridge Units	
	Stamped Steel Flange Units	
	Take-Up Units	
	Cartridge Units	
	Hanger Units	
	Ball Bearing Inserts	
	Parts and Accessories	Parts and Accessories
SPHERICAL ROLLER BEARING UNITS	Technical Section	Technical Section
	Spherical Roller Bearing Units	
	Appendix Table	Appendix Table



Contents

BALL BEARING UNITS

Technical Section

1 Structure and Features

1.1 Structure	5
1.2 Features	5

2 Selection Guide

2.1 Selection Guide	8
2.2 High / Low Temperature Series	10
2.3 Corrosion Resistant Series	12
2.4 Air Handling Series	13
2.5 Dust Resistant Units	15

3 Models

3.1 Model List	18
3.2 Models and Features	20

4 Rating Life of Bearings

4.1 Basic Rating Life and Basic Load Rating ..	33
4.2 Calculation of Rating Life	33
4.3 Grease Life	35

5 Bearing Load

5.1 Loads Applied to Bearings	36
5.2 Distribution of Bearing Load	38
5.3 Dynamic Equivalent Load	38
5.4 Basic Static Load Rating and Static Equivalent Load	39
5.5 Example of Applied Calculation	40

6 Allowable Rotating Speed

6.1 Allowable Rotating Speed	46
6.2 Rotational Speed Adjustment Due to Shaft Fit	47

7 Operating Temperature and Bearing Specifications

7.1 Operating Temperature Range	47
7.2 Operating Temperature and Internal Clearance of Bearings	47

8 Strength of Housings

8.1 Strength of Cast Iron Housings	48
8.2 Strength of Ductile Cast Iron Housings ...	48
8.3 Strength of Stamped Steel Housings	54
8.4 Strength of Stainless Steel Housings	54
8.5 Strength of Die-cast Housings	54
8.6 Static Rupture Strength of Plastic Housings ..	55

9 Design of Shaft and Base

9.1 Design of Shaft	56
9.2 Mounting Base Design	59
9.3 Dowel Pins for Accurate Unit Mounting ...	60

10 Nomenclature

11 Accuracy and Internal Clearance

11.1 Accuracy of Bearings	63
11.2 Accuracy of Housings	65
11.3 Internal Bearing Clearance	67

12 Materials

12.1 Bearing Material	68
12.2 Housing Material	68
12.3 Materials of Parts and Accessories	69

13 Performance

13.1 Bearing Friction Torque	70
13.2 Bearing Temperature Increase	70

14 Handling

14.1 Installation	71
14.2 Test Run Inspection	75
14.3 Periodic Inspection	75
14.4 Supply of Grease	76
14.5 Replacing Bearings	78



Unit Dimensional Table

15 Dimensional Tables for

Ball Bearing Units 79

1 Pillow Block Units

Pillow Block Units 82
 Thick Pillow Block Units 102
 Tapped-Base Pillow Block Units 106
 High-Base Pillow Block Units 114
 Narrow Inner Ring Bearing Pillow Block Units ... 116
 Light Pillow Block Units 120
 Compact Pillow Block Units 122
 Corrosion Resistant Series Pillow Block Units ... 124
 Stamped Steel Pillow Block Units 136

2 4-Bolt Flange Units

4-Bolt Flange Units 138
 Square Piloted 4-Bolt Flange Units 160
 Narrow Inner Ring Bearing 4-Bolt Flange Units ... 164
 Corrosion Resistant Series 4-Bolt Flange Units ... 166

3 Oval Flange Units

2-Bolt Flange Units 174
 Adjustable 2-Bolt Flange Units 194
 3-Bolt Flange Units 196
 Narrow Inner Ring Bearing 2-Bolt Flange Units ... 198
 Light 3-Bolt Flange Units 200
 Light 2-Bolt Flange Units 202
 Compact 2-Bolt Flange Units 204
 Corrosion Resistant Series 2-Bolt Flange Units ... 206
 Corrosion Resistant Series 3-Bolt Flange Units ... 216

4 4-Bolt Flange Cartridge Units

4-Bolt Flange Cartridge Units 218
 Narrow Inner Ring Bearing 4-Bolt Flange Cartridge Units 232
 Corrosion Resistant Series 4-Bolt Flange Cartridge Units 234

5 Stamped Steel Flange Units

Stamped Steel 3-Bolt Flange Cartridge Units ... 236
 Stamped Steel 2-Bolt Flange Units 238

6 Take-Up Units

Take-Up Units 240
 Narrow Slot Take-Up Units 260
 Corrosion Resistant Series Take-Up Units 262
 Section Steel Frame Take-Up Units 266
 Channel Steel Frame Take-Up Units 268
 Steel Plate Frame Take-Up Units 274

7 Other Units

Cartridge Units 278
 Hanger Units 284

8 Ball Bearing Inserts

Cylindrical bore (with set screws) 286
 Stainless steel series Cylindrical bore (with set screws) 294
 Cylindrical bore (with eccentric locking collar) 296
 Cylindrical bore (with concentric locking collar) ... 302
 Cylindrical bore (with concentric locking collar) Cylindrical O. D. 304
 Tapered bore (with adapter) 306
 Cylindrical bore (with set screws) Cylindrical O. D. 312
 Cylindrical bore (with eccentric locking collar) Cylindrical O. D. 314
 Cylindrical bore 316

9 Bearing Adapter 318

Parts and Accessories

16 Parts and Accessories

16.1 Part No. of Steel Plate Covers 322
 16.2 Part No. of Cast Iron Covers 323



Contents

SPHERICAL ROLLER BEARING UNITS

Spherical Roller Bearing Units (contents)	325
1 Structure and Features	
1.1 Structure	326
1.2 Features	326
2 Models	
2.1 Model List	329
2.2 Models and Features	330
3 Nomenclature	332
4 Engineering Information	332
5 Installation Guide	
5.1 Precautions	334
5.2 Preparation	334
5.3 Installation	335
5.4 Lubrication	336
6 Dimensional Tables for Spherical Roller Bearing Units	338

Appendix Table

Appendix Table (contents)	357
1 Simplified Chart of Ball Bearing Unit Combinations	358
2 Tightening Torques of Housings and Cast Iron Cover Mounting Bolts	360
3 Tightening Torques of Inner Rings and Eccentric Locking Collar Set Screws	360
4 Tightening Torques of Adapter Lock Nuts (reference)	361
5 Machining Dimensions of Holes of Housing Dowel Pins	362
6 Dimensional Tolerances of Shafts	364
7 Dimensional Tolerances of Housing Bores	366
8 Basic Tolerance Values	368
9 SI Unit Conversion Charts	369
10 Inch-meter Conversion Chart	370
11 Hardness Conversion Chart	371
12 Viscosity Conversion Chart	372
13 Mechanical Properties of Metal Materials (reference)	373
14 Hexagon Socket Head Cap Screws (abstract from JIS B 1176)	374
15 Hexagon Head Bolts (abstract from JIS B 1180)	376
16 Hexagon Head Nuts (abstract from JIS B 1181)	378
17 Ball Bearing Units Interchange Guide	379
18 Spherical Roller Bearing Units Interchange Guide	381

★The contents of this catalogue are subject to change without prior notice. Every possible effort has been made to ensure that the data listed in this catalog is correct. However, we can not assume responsibility for any errors or omissions.

All rights reserved.