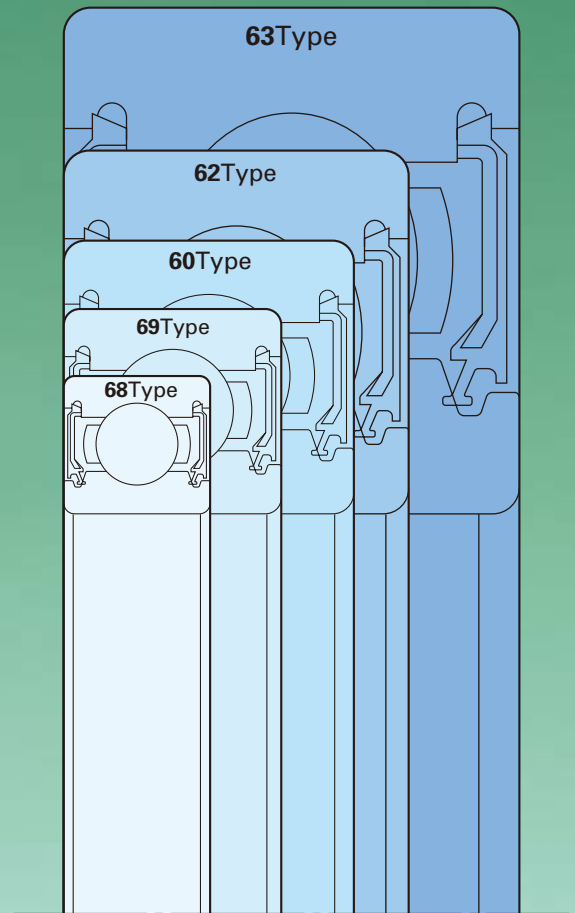


**EXCEL<sup>®</sup> SERIES**  
**RADIAL BALL BEARINGS**  
**68 69 60 62 63 Type**



# Smooth NACHI Excel Series Quiet Long life



**A new design for the next generation** Responding to demands for higher performance.

**Improved closure** Special triple lip seals — Contact type & Labyrinth type

## Reduced torque

- Low starting and Low running torque  
— Energy saving —
- Revised internal design  
— Diminished axial play —

## Reduced running noise

- Improved accuracy of running elements  
— Low running noise —
- Enhanced sound quality

## Longer life

- Contains long life grease  
— Wider application ranges —
- Equipped with high performance seals  
— To keep out dust —

## Ranges

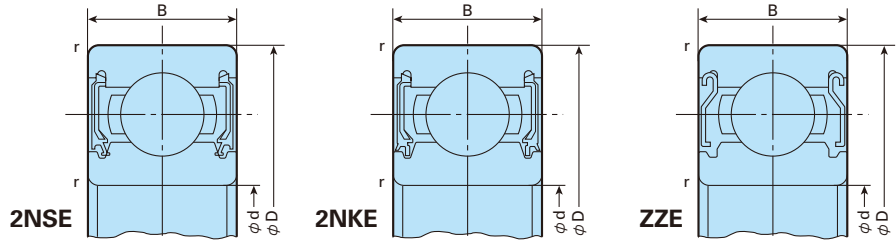
6800~6810  
6900~6910  
6000~6015  
6200~6215  
6300~6315

## Type

Example:	Type of Closure	Excel series	Replacing
	Contact seals	<b>6203-2NSE</b>	6203-2NSL
	Labyrinth seals	<b>6203-2NKE</b>	6203-2NK
	Shields	<b>6203ZZE</b>	6203ZZ

# EXCEL<sup>®</sup> SERIES RADIAL BALL BEARINGS

## Boundary Dimensions



## 60, 62, 63Type

UNIT : mm

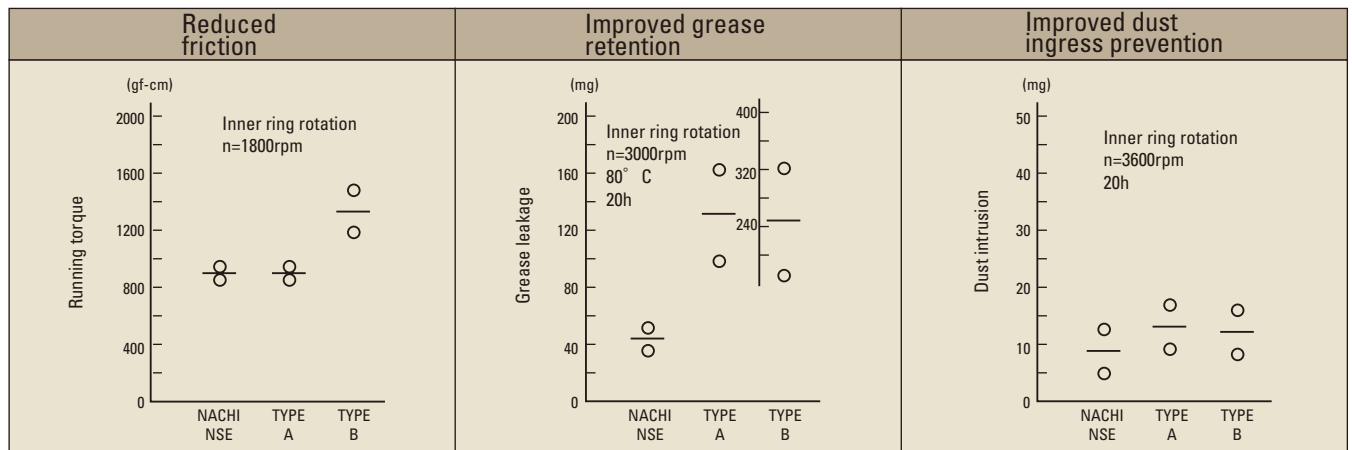
Bore Number	Bore Diameter d	6000Type (2NSE, 2NKE, ZZE)			6200Type (2NSE, 2NKE, ZZE)			6300Type (2NSE, 2NKE, ZZE)		
		D	B	r min	D	B	r min	D	B	r min
00	10	26	8	0.3	30	9	0.6	35	11	0.6
01	12	28	8	0.3	32	10	0.6	37	12	1
02	15	32	9	0.3	35	11	0.6	42	13	1
03	17	35	10	0.3	40	12	0.6	47	14	1
04	20	42	12	0.6	47	14	1	52	15	1.1
05	25	47	12	0.6	52	15	1	62	17	1.1
06	30	55	13	1	62	16	1	72	19	1.1
07	35	62	14	1	72	17	1.1	80	21	1.5
08	40	68	15	1	80	18	1.1	90	23	1.5
09	45	75	16	1	85	19	1.1	100	25	1.5
10	50	80	16	1	90	20	1.1	110	27	2
11	55	90	18	1.1	100	21	1.5	120	29	2
12	60	95	18	1.1	110	22	1.5	130	31	2.1
13	65	100	18	1.1	120	23	1.5	140	33	2.1
14	70	110	20	1.1	125	24	1.5	150	35	2.1
15	75	115	20	1.1	130	25	1.5	160	37	2.1

## 68, 69Type

UNIT : mm

Bore Number	Bore Diameter d	6800Type (2NSE, 2NKE, ZZE)			6900Type (2NSE, 2NKE, ZZE)		
		D	B	r min	D	B	r min
00	10	19	5	0.3	22	6	0.3
01	12	21	5	0.3	24	6	0.3
02	15	24	5	0.3	28	7	0.3
03	17	26	5	0.3	30	7	0.3
04	20	32	7	0.3	37	9	0.3
05	25	37	7	0.3	42	9	0.3
06	30	42	7	0.3	47	9	0.3
07	35	47	7	0.3	55	10	0.6
08	40	52	7	0.3	62	12	0.6
09	45	58	7	0.3	68	12	0.6
10	50	65	7	0.3	72	12	0.6

## Major Improvements



\* Test data was compiled from 6908 bearing using SHELL ALVANIA-2 grease.

# NACHI-FUJIKOSHI CORP.

**Tokyo Head Office** Shiodome Sumitomo Bldg. 17F, 1-9-2 Higashi-Shinbashi, Minato-ku, Tokyo 105-0021 Phone: +81-(0)3-5568-5111 Fax: 03-5568-5206  
Web Site URL <http://www.nachi-fujikoshi.co.jp/> E-mail [webmaster@nachi-fujikoshi.co.jp](mailto:webmaster@nachi-fujikoshi.co.jp)

**Toyama Head Office** 1-1-1 Fujikoshi-Honmachi, Toyama 930-8511 Phone: +81-(0)76-423-5111 Fax: +81-(0)76-493-5111

## Overseas Sales Companies

### AMERICA

#### ● NACHI AMERICA INC. HEADQUARTERS

17500 Twenty-Three Mile Road, Macomb, Michigan, 48044, U.S.A.

Phone: +1-586-226-5151  
Fax: +1-888-383-8665  
URL: <http://www.nachi.com/>

#### INDIANA OFFICE

5022 West 79th Street, Indianapolis, Indiana 46268, U.S.A.

Phone: +1-317-228-1010  
Fax: +1-317-228-9986

#### WEST COAST OFFICE

12652 E. Alondra Blvd. Cerritos, California, 90703, U.S.A.

Phone: +1-562-802-0055  
Fax: +1-562-802-2455

#### LATIN AMERICA DIV.

2315 N.W. 107th Ave., Miami, Florida, 33172, U.S.A.

Phone: +1-305-591-0054/0059/2604  
Fax: +1-305-591-3110

#### ● NACHI ROBOTIC SYSTEMS INC.

22285 Roethel Drive, Novi, Michigan, 48375, U.S.A.

Phone: +1-248-305-6545 Fax: +1-248-305-6542  
URL: <http://www.nachirobotics.com/>

#### ● NACHI CANADA INC.

89 Courtland Ave., Unit No.2, Concord, Ontario, L4K 3T4, CANADA

Phone: +1-905-660-0088  
Fax: +1-905-660-1146  
URL: <http://www.nachicanada.com/>

#### ● NACHI MEXICANA, S.A. DE C.V.

Gral. Mariano Arista No.54, Local 5, Col. Argentina C.P. 11230, Mexico D.F. MEXICO

Phone: +52-55-5386-1396  
Fax: +52-55-5386-1336

### EUROPE

#### ● NACHI EUROPE GmbH

Wiesenstrasse 148, 41460 Neuss (Heerd), GERMANY

Phone: +49-(0)2131-26830  
Fax: +49-(0)2131-268330/268340  
URL: <http://www.nachi.de/>

#### SOUTH GERMANY BRANCH

Stuifenstr.52, 74385 Pleidelsheim, GERMANY

Phone: +49-(0)7144-8045-0

Fax: +49-(0)7144-8045-20

#### SPAIN BRANCH

Calle Cardenal Marcelo Spinola no 8, Bajo 28036 Madrid, SPAIN

Phone: +34-091-302-6440 Fax: +34-091-383-9486

#### BARCELONA OFFICE

Josep Tarradellas, 58, 1-5, 08029 Barcelona, SPAIN

Phone: +34-(0)93-430-6247

Fax: +34-(0)93-419-0897

#### ● NACHI (U.K.) LTD.

Unit 7, Junction Six Industrial Estate, Electric Avenue, Birmingham B6 7JJ, U.K.

Phone: +44-(0)121-250-1880

Fax: +44-(0)121-250-1889

URL: <http://www.nachi.co.uk/>

#### ● NACHI-FUJIKOSHI CORP.

##### ITALY REPRESENTATIVE OFFICE

Via delle Lame 75, 3° piano-interno 8 40122, Bologna, ITALY

Phone: +39-051-649-4808

Fax: +39-051-528-2149

### ASIA and OCEANIA

#### ● NACHI SINGAPORE PTE. LTD.

No.2 Joo Koon Way, Jurong Town, Singapore 628943, SINGAPORE

Phone: +65-65587393 Fax: +65-65587371

#### VIETNAM OFFICE

Room 1608, 16/F Saigon Tower 29 Le Duan Street, District 1, Ho Chi Minh City, VIETNAM

Phone: +84-8-823-6299

Fax: +84-8-823-6288

#### ● FUJIKOSHI-NACHI (MALAYSIA) SDN. BHD.

No.17, Jalan USJ 21/3, 47630 UEP Subang Jaya, Selangor Darul Ehsan, MALAYSIA

Phone: +60-(0)3-80247900

Fax: +60-(0)3-80235884

#### ● P.T.NACHI INDONESIA

Jl.H.R.Rasuna Said Kav.X-O Kuningan, Jakarta 12950, INDONESIA

Phone: +62-012-527-2841

Fax: +62-021-527-3029

#### ● NACHI PILIPINAS INDUSTRIES, INC.

1st Avenue, Manalac Compound, Sta. Maria Industrial Estate, Bagumbayan, Taguig, Metro Manila, PHILIPPINES

Phone: +63-(0)2-838-3620

Fax: +63-(0)2-838-3623

#### MANILA OFFICE

Km23 East Service Road, Capang Muntinlupa, City Metro Manila PHILIPPINES

Phone: +63-(0)2-850-0864

Fax: +63-(0)2-850-0864

#### ● NACHI-FUJIKOSHI CORP.

##### SHANGHAI REPRESENTATIVE OFFICE

Rm No.1602, Ocean Towers No. 550, Yanan Road .E. Huangpu District, Shanghai, CHINA

Post Code 200001

Phone: +86-(0)21-6360-3680

Fax: +86-(0)21-6360-3682

#### ● NACHI-FUJIKOSHI CORP.

##### TAIPEI REPRESENTATIVE OFFICE

3F No.276, Sec3, Chung Ching N.Road, Taipei, TAIWAN

Phone: +886-(0)2-2596-0118

Fax: +886-(0)2-2596-5346

#### ● NACHI-FUJIKOSHI CORP.

##### THAILAND REPRESENTATIVE OFFICE

Chai-ho Wongwaiwat Bldg. 889 Srinakarim Road, Samutprakarn, THAILAND 10270

Phone: +66-2-748-7322-4

Fax: +66-2-748-7325

#### ● NACHI-FUJIKOSHI CORP.

##### KOREA REPRESENTATIVE OFFICE

2F Dongsan Bldg. 276-4, Sungsu 2GA-3DONG Sungdong-Ku. Seoul 133-123, KOREA

Phone: +82-(0)2-469-2254

Fax: +82-(0)2-469-2264

#### ● NACHI (AUSTRALIA) PTY. LTD.

Unit 1, 23-29 South Street, Rydalmere, N.S.W, 2116, AUSTRALIA

Phone: +61-(0)2-9898-1511

Fax: +61-(0)2-9898-1678

URL: <http://www.nachi.com.au/>

## Overseas Manufacturing Companies

### AMERICA

#### ● NACHI TECHNOLOGY INC.

713 Pushville Road, Greenwood, Indiana, 46143, U.S.A.

Phone: +1-317-535-5000

Fax: +1-317-535-8484

URL: <http://nachtech.com/>

#### ● NACHI MACHINING TECHNOLOGY CO.

17500 Twenty-three Mile Road, Macomb, Michigan, 48044, U.S.A.

Phone: +1-586-263-0100

Fax: +1-586-263-4571

URL: <http://www.nachimtc.com/>

#### ● NACHI BRASIL LTDA.

Avenida João XX III, No.2330, Jardim São Pedro, Mogi das Cruzes, S.P., BRAZIL, CEP 08830-000

Phone: +55-11-4793-8800

Fax: +55-11-4793-8870

URL: <http://www.nachi.com.br/>

### EUROPE

#### ● NACHI INDUSTRIAL, S.A.

Poligono Industrial, El Montalvo, Parcelas 74 y 75, 37080 Salamanca, SPAIN

Phone: +34-(0)923-19-0516

Fax: +34-(0)923-19-0527

#### ● NACHI CZECH S.R.O.

Prumyslova Zona, 44001 Louny, CZECH

Phone: +420-415-930-630

Fax: +420-415-930-940

### ASIA and OCEANIA

#### ● NACHI INDUSTRIES PTE. LTD.

No.2 Joo Koon Way, Jurong Town, Singapore 628943, SINGAPORE

Phone: +65-68613944

Fax: +65-68611153

URL: <http://www.nachinip.com.sg/>

#### ● NACHI TECHNOLOGY (THAILAND) CO., LTD.

3/16 M, 2, Rojana Industrial Estate Nongbua, Ban Khai, Rayong, 21120, THAILAND

Phone: +66-38-961-682

Fax: +66-38-961-683

#### ● 建越工業股份有限公司

##### NACHI C.Y. CORP.

No.109, Kao Young North Rd, Lung-Tan Hsin, Tao-Yuan Hsien, TAIWAN

Phone: +886-(0)3-471-7651

Fax: +886-(0)3-471-8402

#### ● 東莞建越精密軸承有限公司

##### DONGGUAN NACHI C.Y. CORPORATION

Dangyong Village, Hongmci Town Dongguan City, Guangdong, CHINA

Phone: +86-(0)769-843-1300

Fax: +86-(0)769-843-1330

#### ● 大成・NACHI油圧工業(株)

##### DAESUNG-NACHI HYDRAULICS CO., LTD.

289-22, Yousan-Dong, Yangsan-Si Kyungnam 626-800, KOREA

Phone: +82-(0)55-385-7891~3

Fax: +82-(0)55-384-3270

#### ● 上海不二越精密軸承有限公司

##### SHANGHAI NACHI BEARINGS CO.,LTD

258,Fengmao Rd. Malu Town, Jiading, Shanghai, CHINA

Phone: +86-(0)21-6915-6200

Fax: +86-(0)21-6915-6202

CATALOG NO.

B4031E-2

2004.12.W-ABE-ABE