



## Product Families

- Spherical Plain Bearings
- Rod Ends
- Ball Joints
- Tie Rod Assemblies
- Bushings
- Roller Bearings
- Square Ball Universal Joint®

**China**  
CCTY  
458 Jinrun Boulevard, Zhenjiang, China, 212141  
Tel: +86-511-8883388  
E-mail: info.cn@cctygroup.com

**North America**  
CCTY  
1111 Rose Road, Lake Zurich, IL60047, USA  
Tel: +1-847-540-8196  
E-mail: info@cctygroup-us.com

**Europe**  
CCTY GmbH  
Gewerbepark West 5, 97525 Schwebheim, Germany  
Tel: +49-(0)-9723-9339-000  
E-mail: info.de@cctygroup.com

**India**  
CCTY India Private Limited  
904-A, at OZONE, Vikram Sarabhai Marg,  
Wadivadi, Vadodara-390023, Gujarat, India  
Tel: +91 96876 33753/+91 98230 17144  
E-mail: info.in@cctygroup.com

**Japan**  
CCTY Japan Corporation  
11-5 Shiba 4-chome Minato-ku  
Tokyo 108-0014 Japan  
Tel: +81-3-5444-4451  
E-mail: info.jp@cctygroup.com

## About CCTY

Bold engineering produces bold design. At CCTY our engineers reimagine what is possible in motion control. These innovative ideas lead to patented products like the Square Ball Universal Joint® and assemblies.

As a full-service manufacturing partner, we lend our engineering support to OEMs to quickly turn ideas into reality. More than 90% of the products we manufacture are assemblies and unique designs specific to OEM applications.

Our 110,000 m<sup>2</sup> plant featuring precision robotics and CNC-controlled production is located in Zhenjiang, China. The plant's size allows for all critical processes, such as heat treatment, sintering, welding and phosphating, to be conducted onsite.

Engineering support and warehousing are offered at our offices in India, China, Germany, Japan and the United States. For more information about CCTY Bearing or to speak with an expert, visit [CCTYGroup.com](https://www.CCTYGroup.com).

CCTY reserves the right to make modifications to the information contained in this product catalog. Any reproduction is prohibited unless authorized by CCTY.

All rights reserved © 2024 CCTY

Issued: July 2024

## Contents

	Page
<b>Spherical Plain Bearings</b>	
Radial Spherical Plain Bearings	
GE .. ES / GE .. ES 2RS .....	05
GE .. LO .....	05
GEF.. ES .....	05
GE .. FO / GE .. FO 2RS .....	06
GE .. HO 2RS .....	06
PB .....	06
GE .. C .....	07
GEH .. C .....	07
GEH .. HO 2RS .....	07
GE .. UK 2RS .....	08
GE .. FW 2RS .....	08
GEZ .. ES / GE .. ES 2RS .....	09
COM .....	09
COM .. T .....	10
Angular Contact Spherical Plain Bearings	
GE .. SX .....	11
GE .. SW .....	11
Axial/Thrust Spherical Plain Bearings	
GE .. AX .....	12
GE .. AW .....	12
<b>Rod Ends</b>	
POS .. DF / PHS .. DF .....	15
GAR .. DO / GIR .. DO .....	15
GAR .. DO 2RS / GIR .. DO 2RS .....	15
MC / FC .....	16
MA / FA .....	16
EM / EF .....	16
COS .. BK / CHS .. BK .....	17
COS .. N / CHS .. N .....	17
SQF.. N RS .....	17
GAR .. C / GIR .. C .....	18
GAR .. UK 2RS / GIR .. UK 2RS .....	18
MCN / FCN .....	18
<b>Ball Joints</b>	
BJH .. RS .....	19
<b>Tie Rod Assemblies</b>	
TRM .. RS .....	19
TR .. N .....	19
TR SQ .. RS .....	20
TR COM .. HJM .. RS .....	20
TR SQF.. HJM .. RS .....	20

## Contents

	Page
<b>Bushings</b>	
PTFE Composite/ Metal Bushings	
TSA .....	23
B-TSA .....	23
TFA .....	24
TOA .....	24
TGA .....	25
Ball cups .....	25
PTFE Fabric / Metal Bushings	
FSA .....	26
FHA .....	26
Polymer Composite / Metal Bushings	
PSA .....	27
PHA .....	27
Bimetal / Metal Bushings	
MBA .....	28
MBB .....	28
MCA .....	29
KDB .....	29
Steel Bushings	
GT .....	30
CB .....	30
<b>Rolling Bearings</b>	
Ball Bearings	
Deep Groove Ball Bearings .....	33
Angular Contact Ball Bearings .....	33
Four-Point Contact Ball Bearings .....	34
Hydraulic Motor Single Row Angular Contact Ball Bearings .....	34
Hydraulic Motor Double Row Angular Contact Ball Bearings .....	34
Mast Guide Bearings	
Load Rollers .....	35
Chain Rollers/Chain Sheaves .....	35
Side Rollers .....	35
Roller Bearings	
Cylindrical Roller Bearings .....	36
Full Complement Cylindrical Roller Bearings .....	36
Inner Rings .....	36
<b>Square Ball Universal Joint®</b>	
SBJ .....	39
<b>Others</b>	
Chain Anchor Bolts .....	40

# SPHERICAL PLAIN BEARINGS



## Spherical Plain Bearings

Radial Spherical Plain Bearings	05
Angular Contact Spherical Plain Bearings	11
Axial/Thrust Spherical Plain Bearings	12

# Radial Spherical Plain Bearings

Metric - Requires Maintenance

## GE .. ES / GE .. ES 2RS

ISO 12240-1, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150 (open)
	°C	-30 / +130 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	Open or sealed
Range (inner diameter)	mm	6 - 220



## GE .. FO / GE .. FO 2RS

ISO 12240-1, dimension series G, heavy duty

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150 (open)
	°C	-30 / +130 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	Open or sealed
Range (inner diameter)	mm	6 - 200

## GE .. LO

ISO 12240-1, dimension series W

With extended inner ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	12 - 200



## GE .. HO 2RS

With extended inner ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-30 / +130 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	With lip seals
Range (inner diameter)	mm	17 - 80

## GEF .. ES

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	12 - 150



## PB

ISO 12240-1, dimension series K

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Bronze
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	5 - 30

# Radial Spherical Plain Bearings

Metric - Maintenance Free

## GE .. C

ISO 12240-1, dimension series E  
Formed steel outer ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE composite
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	6 - 30



## GE .. UK 2RS

ISO 12240-1, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE Fabric
Working temperature	°C	-30 / +130 (sealed)
Type of lubrication	—	Self-lubricating
Seal configuration	—	With lip seals
Range (inner diameter)	mm	17 - 220

## GEH .. C

ISO 12240-1, dimension series G, heavy duty  
Formed steel outer ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE composite
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	6 - 25



## GE .. FW 2RS

ISO 12240-1, dimension series G, heavy duty

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE Fabric
Working temperature	°C	-30 / +130 (sealed)
Type of lubrication	—	Self-lubricating
Seal configuration	—	With lip seals
Range (inner diameter)	mm	20 - 200

## GEH .. HO 2RS

With extended inner ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	With boots
Range (inner diameter)	mm	10 - 30



## Radial Spherical Plain Bearings

Inch - Requires Maintenance

### GEZ .. ES /GEZ .. ES 2RS

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°F	-58 / +302 (open)
	°F	-22 / +266 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	Open or sealed
Range (inner diameter)	inch	1/2" - 6"



### COM

Formed steel outer ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
	°F	-58 / +302
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	inch	3/16" - 1"



## Radial Spherical Plain Bearings

Inch - Maintenance Free

### COM .. T

Maintenance free, inch sizes  
Formed steel outer ring

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE fabric
Working temperature	°C	-50 / +150
	°F	-58 / +302
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	inch	3/16" - 1"



## Angular Contact Spherical Plain Bearings

### GE .. SX

Requires maintenance, metric sizes  
ISO 12240-2

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	25 - 200



### GE .. SW

Maintenance free, metric sizes  
ISO 12240-2

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE fabric
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	25 - 200



## Axial/Thrust Spherical Plain Bearings

### GE .. AX

Requires Maintenance, metric sizes  
ISO 12240-3

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	10 - 100

### GE .. AW

Maintenance-free, metric sizes  
ISO 12240-3

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE fabric
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	10 - 100



ROD ENDS  
BALL JOINTS  
TIE ROD ASSEMBLIES



<b>Rod Ends</b>	15
<b>Ball Joints</b>	19
<b>Tie Rod Assemblies</b>	19

## Rod Ends

Metric - Requires Maintenance

### POS .. DF / PHS .. DF

ISO 12240-4, dimension series K

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Bronze
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	5 - 30



### GAR .. DO / GIR .. DO

ISO 12240-4, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	mm	6 - 45



### GAR .. DO 2RS / GIR .. DO 2RS

ISO 12240-4, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-30 / +130 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	With lip seals
Range (inner diameter)	mm	20 - 45



## Rod Ends

Inch - Requires Maintenance

### MC / FC

Precision rod ends

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
	°F	-58 / +302
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	inch	$\frac{3}{16}$ " - 1"



### MA / FA

Precision rod ends, heavy duty

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
	°F	-58 / +302
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	inch	$\frac{3}{16}$ " - 1"



### EM / EF

Economical rod ends

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-50 / +150
	°F	-58 / +302
Type of lubrication	—	Grease or oil
Seal configuration	—	Open design
Range (inner diameter)	inch	$\frac{3}{16}$ " - $\frac{3}{4}$ "



## Rod Ends

### Maintenance Free

#### COS .. BK / CHS .. BK

ISO 12240-4, dimension series K

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE composite
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	5 - 30



#### COS .. N / CHS .. N

ISO 12240-4, dimension series K

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Nylon
Working temperature	°C	-40 / +120
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	5 - 30



#### SQF .. N RS

Ball joint rod ends

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Nylon
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Self-lubricating
Seal configuration	—	With boot
Range (thread size)	mm	M8 - M16



#### GAR .. C / GIR .. C

ISO 12240-4, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE composite
Working temperature	°C	-50 / +150
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	6 - 30



#### GAR .. UK 2RS / GIR .. UK 2RS

ISO 12240-4, dimension series E

Technical parameters	Units	Values
Sliding contact surface	—	Steel / PTFE fabric
Working temperature	°C	-30 / +130
Type of lubrication	—	Self-lubricating
Seal configuration	—	With lip seals
Range (inner diameter)	mm	20 - 45



#### MCN / FCN

Inch sizes

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Nylon
Working temperature	°C	-40 / +120
	°F	-40 / +248
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	inch	$\frac{3}{16}$ " - $\frac{3}{4}$ "



## Ball Joints and Tie Rod Assemblies

Maintenance Free

### BJH .. RS

Ball joints

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel (polymer)
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	With boot
Range (thread size)	mm	Customizable



### TR SQ .. RS

Linkages

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel (polymer)
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	With boots
Range (thread size)	mm	Customizable

### TRM .. RS

Sway bar link

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel (polymer)
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	With boot(s)
Range (thread size)	mm	Customizable



### TR .. COM

Tie rods

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel (polymer)
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	Open or with boot
Range (thread size)	mm	Customizable

### TR .. N

Sway bar link

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Polymer
Working temperature	°C	-40 / +120 (sealed)
Type of lubrication	—	Self-lubricating
Seal configuration	—	Open design
Range (inner diameter)	mm	Customizable



### TR SQF .. HJM .. RS

Tie rods

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel (polymer)
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease
Seal configuration	—	With boot
Range (thread size)	mm	Customizable



# BUSHINGS

## Bushings

PTFE Composite / Metal Bushings	23
PTFE Fabric / Metal Bushings	26
Polymer Composite / Metal Bushings	27
Bimetal / Metal Bushings	28
Steel Bushings	30

## PTFE Composite / Metal Bushings

### TSA

- Low carbon steel backing with sintered porous bronze and impregnated PTFE composite polymer.
- Excellent wear resistance and low friction performance covering a wide range of loads, speeds and temperatures in dry running conditions.
- Also suitable for lubricated applications.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-200 / +280
Coefficient of friction		—	0.02 - 0.20 (dry)
Maximum sliding speed		m/s	2.5 (dry)
Range (inner diameter)		mm	4 - 300



### B-TSA

- Bronze backing with with sintered porous bronze and impregnated PTFE composite polymer.
- The bronze backing offers improved corrosion resistance compared to the standard TSA bushing.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	140
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-200 / +280
Coefficient of friction		—	0.02 - 0.20 (dry)
Maximum sliding speed		m/s	2.5 (dry)
Range (inner diameter)		mm	5 - 300



### TFA

- Steel backed, bronze sintered and impregnated with a PTFE composite material.
- Suitable for dry applications with high frequency and low amplitude oscillating motion.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-200 / +280
Coefficient of friction		—	0.04 - 0.20 (dry)
Maximum sliding speed		m/s	2.5 (dry)
Range (inner diameter)		mm	Customizable



### TOA

- Steel backed, bronze sintered and impregnated with a PTFE composite polymer.
- Excellent wear resistance and low friction in oil lubricated applications.
- Excellent flow erosion and cavitation resistance.
- Good chemical resistance.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-200 / +280
Coefficient of friction		—	0.01 - 0.05 (oil)
Maximum sliding speed		m/s	2.5 (oil)
Range (inner diameter)		mm	5 - 300



## PTFE Composite / Metal Bushings

### TGA

- Steel backed, bronze sintered and impregnated with a PTFE composite material.
- Excellent wear resistance and low friction performance in a range of loads, speeds and temperatures in grease lubricated conditions.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature	°C	-200 / +280	
Coefficient of friction	—	0.02 - 0.15 (grease)	
Maximum sliding speed	m/s	2.5 (grease)	
Range (inner diameter)	mm	4 - 300	



### Ball Cups

- Excellent wear resistance and low friction performance in a range of loads, speeds and temperatures in grease lubricated conditions.
- Suitable for oscillating movements.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature	°C	-200 / +280	
Coefficient of friction	—	0.02 - 0.20 (dry)	
Maximum sliding speed	m/s	2.5 (dry)	
Range (inner diameter)	mm	Customizable	



## PTFE Fabric / Metal Bushings

### FSA

- PTFE and support fibers bonded to metal backing; maintenance-free.
- Designed for heavy duty applications.
- Good resistance to fatigue under shock loads.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature	°C	-50 / +150	
Coefficient of friction	—	0.03 - 0.20 (dry)	
Maximum sliding speed	m/s	3.0 (dry)	
Range (inner diameter)	mm	10 - 300	



### FHA

- PTFE and high performance support fibers bonded to metal backing; maintenance-free.
- Designed for high-performance and heavy-duty applications.
- Good resistance to fatigue under shock loads.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	200
Working temperature	°C	-50 / +150	
Coefficient of friction	—	0.03 - 0.20 (dry)	
Maximum sliding speed	m/s	3.0 (dry)	
Range (inner diameter)	mm	10 - 300	



## Polymer Composite / Metal Bushings

### PSA

- Steel backed, bronze sintered and POM impregnated material; low maintenance.
- Standard components contain grease indents in the sliding layer.
- Suitable for grease or oil lubricated applications.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	140
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-40 / +130
Coefficient of friction		—	0.05 - 0.15 (grease)
Maximum sliding speed		m/s	2.5 (grease)
Range (inner diameter)		mm	10 - 300



### PHA

- Steel backed, bronze sintered and high-performance impregnated material; low maintenance.
- Good wear resistance performance in greased applications.
- Perfect for heavy-duty and high-temperature conditions.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	250
	Dynamic	N/mm <sup>2</sup>	140
Working temperature		°C	-40 / +175
Coefficient of friction		—	0.01 - 0.10 (grease)
Maximum sliding speed		m/s	2.5 (grease)
Range (inner diameter)		mm	10 - 300



## Bimetal / Metal Bushings

### MBA

- Bimetal bearing with steel backing.
- Bearing material contains lead, good resistance to fatigue strength.
- Suitable for oscillating motion with high loads.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	300
	Dynamic	N/mm <sup>2</sup>	140
Working temperature	Greased	°C	-40 / +150
	Oil lubricated	°C	-40 / +250
Coefficient of friction		—	0.05 - 0.12(lubricated)
Maximum sliding speed		m/s	2.5(lubricated)
Range (inner diameter)		mm	10 - 300

### MBB

- Bimetal bearing with steel backing.
- Very good resistance to fatigue strength.
- Suitable for oscillating motion with high loads.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	300
	Dynamic	N/mm <sup>2</sup>	140
Working temperature	Greased	°C	-40 / +150
	Oil lubricated	°C	-40 / +250
Coefficient of friction		—	0.06 - 0.15(lubricated)
Maximum sliding speed		m/s	2.5(lubricated)
Range (inner diameter)		mm	10 - 300



## Bimetal / Metal Bushings

### MCA

- Bronze strip contains dimples for lubrication.
- Good wear resistance.
- Suitable for rough conditions.

Technical parameters		Units	Values
Maximum load, p	Static	N/mm <sup>2</sup>	120
	Dynamic	N/mm <sup>2</sup>	40
Working temperature	Greased	°C	-40 / +150
	Oil lubricated	°C	-40 / +250
Coefficient of friction		—	0.06 - 0.15(lubricated)
Maximum sliding speed		m/s	2.5(lubricated)
Range (inner diameter)		mm	10 - 300



## Steel Bushings

### GT

Steel bushings

Technical parameters	Units	Values
Maximum load, p	N/mm <sup>2</sup>	250
Working temperature	°C	-50 / +150
Coefficient of friction	—	—
Maximum sliding speed	m/s	0.1
Range (inner diameter)	mm	15 - 160

### KDB

- Bronze bushing with modified graphite.
- Improved corrosion resistance.
- Suitable for grease or oil lubricated applications.

Technical parameters		Units	Values
Maximum load, p		N/mm <sup>2</sup>	100
Working temperature	Greased	°C	-40 / +150
	Oil lubricated	°C	-40 / +250
Coefficient of friction		—	0.03 - 0.16(lubricated)
Maximum sliding speed		m/s	1.5(lubricated)
Range (inner diameter)		mm	30 - 160



### CB

Cushion bearings

Technical parameters	Units	Values
Maximum load, p	N/mm <sup>2</sup>	250
Working temperature	°C	-50 / +150
Coefficient of friction	—	—
Maximum sliding speed	m/s	0.1
Range (inner diameter)	mm	15 - 160

# ROLLING BEARINGS

## Rolling Bearings

Ball Bearings	33
Mast Guide Bearings	35
Roller Bearings	36

# Ball Bearings

## Deep Groove Ball Bearings

Series		Units	Range (inner diameter)
6	miniature	mm	4 - 9
618 / 619	superlight	mm	10 - 160
160	superthin	mm	10 - 100
60	light	mm	10 - 160
62	medium	mm	10 - 160
63	heavy	mm	10 - 160



## Angular Contact Ball Bearings

Series		Units	Range (inner diameter)
70		mm	30 - 100
72		mm	30 - 100
73		mm	25 - 90
52		mm	25 - 100
53		mm	25 - 100



## Four-Point Contact Ball Bearings

Series		Units	Range (inner diameter)
QJ		mm	25 - 100

## Hydraulic Motor Single Row Angular Contact Ball Bearings

Technical parameters	Units	Range
Inner diameter	mm	50 - 250
Outer diameter	mm	80 - 350
Width of inner ring	mm	15 - 50
Width of outer ring	mm	20 - 60

## Hydraulic Motor Double Row Angular Contact Ball Bearings

Technical parameters	Units	Range
Inner diameter	mm	50 - 250
Outer diameter	mm	80 - 350
Width of inner ring	mm	15 - 50
Width of outer ring	mm	20 - 60



## Mast Guide Bearings

### Load Rollers

Technical parameters	Units	Range
Inner diameter	mm	25 - 110
Outer diameter	mm	52 - 200
Width of inner ring	mm	15 - 50
Width of outer ring	mm	20 - 60

Inch dimensions are the same as metric.  
Custom dimensions are available upon request.



### Chain Rollers / Chain Sheaves

Technical parameters	Units	Range
Inner diameter	mm	25 - 110
Outer diameter	mm	52 - 200
Width of inner ring	mm	15 - 50
Width of outer ring	mm	20 - 60

Inch dimensions are the same as metric.  
Custom dimensions are available upon request.



### Side Rollers

Technical parameters	Units	Range
Shaft diameter	mm	24 - 55
Outer diameter	mm	40 - 120
Length of stud	mm	24 - 80

Inch dimensions are the same as metric.  
Custom dimensions are available upon request.



## Roller Bearings

### Cylindrical Roller Bearings

Series	Units	Range (inner diameter)
N	mm	25 - 100
NU	mm	25 - 100
NJ	mm	25 - 100
NF	mm	25 - 100
NUP	mm	25 - 100

### Full Complement Cylindrical Roller Bearings

Technical parameters	Units	Range
Inner diameter	mm	25 - 60
Outer diameter	mm	52 - 160
Width of inner ring	mm	15 - 70

Custom dimensions are available upon request.

### Inner Rings

Technical parameters	Units	Values
Inner diameter	mm	10 - 100
Outer diameter	mm	52 - 160
Width of inner ring	mm	15 - 70

Custom Dimensions are available upon request.

SQUARE BALL  
UNIVERSAL JOINT®



Square Ball Universal Joint®

# Square Ball Universal Joint®

## SBJ

The patented Square Ball Universal Joint is a smoother, more consistent universal joint for intermittent applications. The design reduces the number of components from nearly 100 to just eight. The improved design provides:

- More consistent & lower operating torque values < 0.025 N·m.
- Minimized tolerance stackup due to fewer parts.
- Larger grease volume which is more resistant to contaminant saturation.
- Elimination of line fretting leading to premature part failure.
- External seal free of frictional wear.

Technical parameters	Units	Values
Sliding contact surface	—	Steel / Steel
Working temperature	°C	-30 / +120 (sealed)
Type of lubrication	—	Grease or oil
Seal configuration	—	With boot(s)
Tilt angle	°	0 - 40 (single)

Backwards compatible to mating components.



## Chain Anchor Bolts

Technical parameter	Unit	Range
Thread size	mm	M6 - M30

Custom dimensions are available upon request.



## Custom Designs and Assemblies

Notes

If you did not find a bearing solution that fits your application in this brochure, contact us. As a manufacturer, CCTY is able to produce unique designs for specific applications and tolerances.

We also manufacture housings so that an entire assembly is shipped as a single unit. This streamlined approach to inventory management improves production timelines and reduces costs.