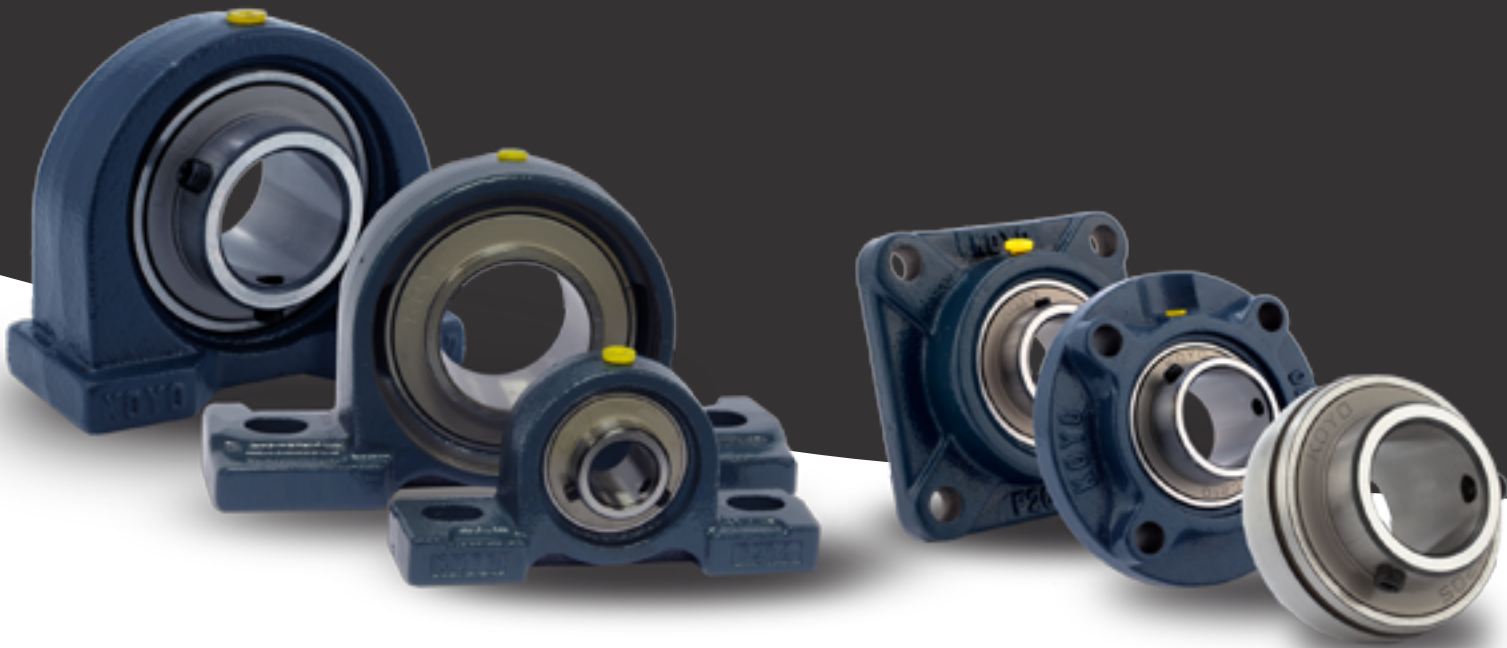
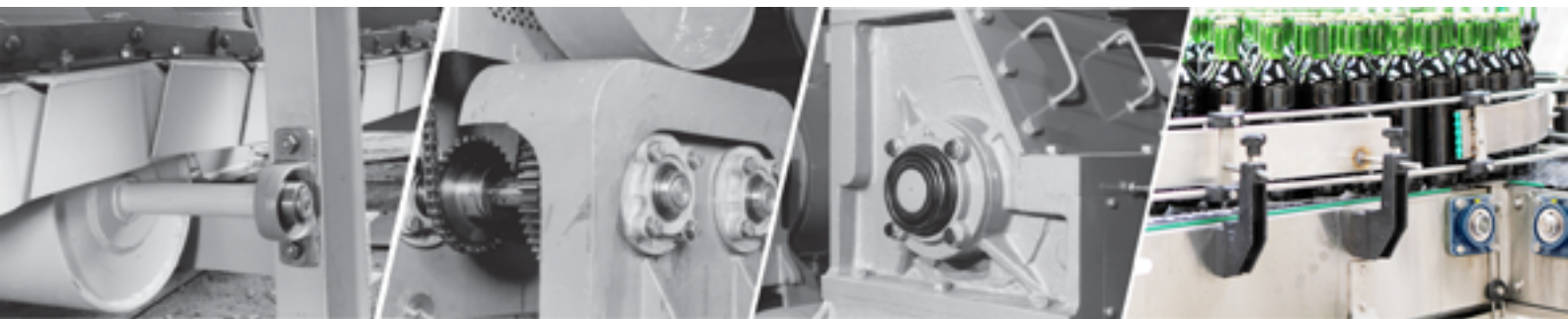


Koyo



Ball Bearing Units



JTEKT

Koyo

TOYODA

Koyo Ball Bearing Units

“Experience our Quality...”

Introduction

With a legacy of Quality & Performance, Koyo Ball Bearing Units are the most reliable products when it comes to accuracy and excellent load resistance. Ball bearing units consist of a housing with an installed bearing. They are available in a variety of materials and housings allowing easy handling and installation.

Our bearing units provide topmost service life even in challenging environments when they have been well selected for an application. When customers experience our products, they experience quality.

Features

Our product range features ball bearing units which are offering:

- ✓ High load capacity and accuracy
- ✓ Superior sealing performance
- ✓ Highly rigid and strong housing
- ✓ Self-aligning mechanism and optimal fit
- ✓ Easy lubrication
- ✓ Simple installation and handling.

1. High load capacity and accuracy

The insert of our bearing unit is identical to the single row deep groove ball bearing, which can bear axial- and radial load in both directions. The tolerance is equal to a standard bearing. They feature high rotation accuracy and allow high speed rotation.

2. Self-aligning mechanism and optimal fit

The spherical outside surface of the outer ring, together with a concave bore of the housing can compensate static misalignment of the shaft. Our ball bearing units have been designed to deliver great accuracy, optimal fit and a superior self-aligning capability. The maximum aligning angle of a standard ball bearing unit is 3° (for a ball bearing unit with a cover, the maximum angle is 1°)

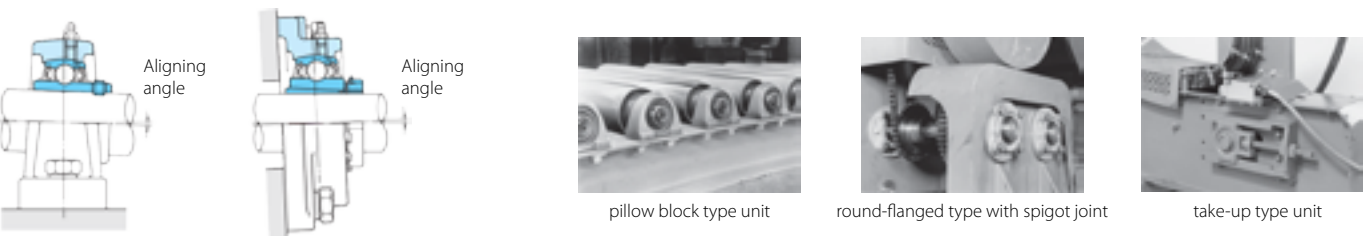


Fig. 1 Allowable aligning angle of the ball bearing unit

3. Superior sealing performance

Protection from contaminants can be offered by an oil seal made of synthetic rubber, installed on the outer ring of the bearing and a slinger which has been installed on the inner ring of the bearing.

A re-designed pressed seal with an inward facing lip allows grease to flow back towards the balls and raceway during operation. This will improve the lubrication performance and extend the bearing life.

Environments with a lot of dust or high humidity may require a double or triple-lip seal unit (supplementary code: L2/ L3) or a unit with cover (supplementary code: C, CD, FC, FD). These two solutions are preventing contamination of water and dust from the outside, resulting in a longer service life of the bearing.

4. Easy lubrication

Each ball bearing unit is equipped with a grease nipple on the housing, in order to have fresh grease evenly deposited within the bearing cavity during operation. If a bearing is used in environments with a lot of dust, high humidity and or high temperatures, our advice is to add the grease at regular intervals.

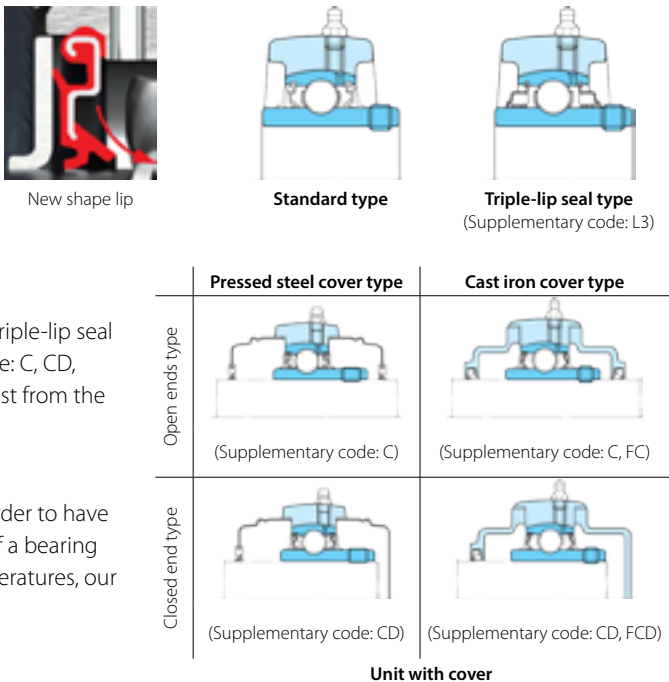


Fig. 2 Ball bearing unit sealing mechanism



5. Highly rigid and strong housing

The ball bearing unit housing has been designed in such way, that it centralizes the stress and load on the bearing and therefore has the ability to reduce deformation. By combining advanced casting-or press work technique, a special powder coating on the surface and with the selection of the best materials we can ensure an extended service life for our bearing units.

6. Simple installation and handling

The ball bearing units can be bolted to machinery without any complicated modification. No additional lubrication or seal installation are needed and a perfect fit can be achieved by applying the optimal clearance between the bore and shaft. Therefore installation of Koyo Ball Bearing Units demand little of your valuable time as they are easy to assemble and require minimal maintenance.

There are 3 methods to fix the bearing to the shaft:

1. Set screw mounted to the cylindrical bore wide inner ring.
2. Adapter installed to the tapered bore inner ring.
3. Eccentric locking collar installed to the cylindrical bore wide inner ring.

New JHS-3i Pillow Block

With 3 major improvements in the housing design, sealing and grease, customers can experience the quality of our products.

3 Major Improvements: 3i

1. New optimized housing design

The optimized housing design ensures a more secure and firm mounting of the pillow block on a frame. No vibration occurs because there is no clearance between the housing and the frame. The removal of conventional ribs at both sides and the increase of bolt area improved the workability. This is an epoch-making new housing that has enabled a 30% increase in strength despite of the removal of the ribs and a 7% lower weight.

2. New seal design for high performance lubrication

Also for our Pillow Block Housing range, a new seal design has been applied to achieve a perfect lubrication performance and extend the bearing life.

3. Upgrade in Lithium bearing grease —> *High Load - Extreme pressure - Water Resistant*

Our ball bearing units are supplied with high quality Lithium Bearing grease. The NLGI 2 lithium complex grease provides substantial improvements over general lithium soap based lubricants. It functions extremely well under a variety of high demanding operating conditions including wide temperature ranges, variable speeds, water contamination, vibration, extreme pressure, heavy- and shock loads. This Lithium grease is also compatible with the existing grease formula.

For more information about our JHS-3i Pillow Block Housing, please refer to a separate flyer issued for this range.



Common applications



conveyor systems



textile machinery



construction machinery



agricultural machinery



food & beverages systems



















packing systems

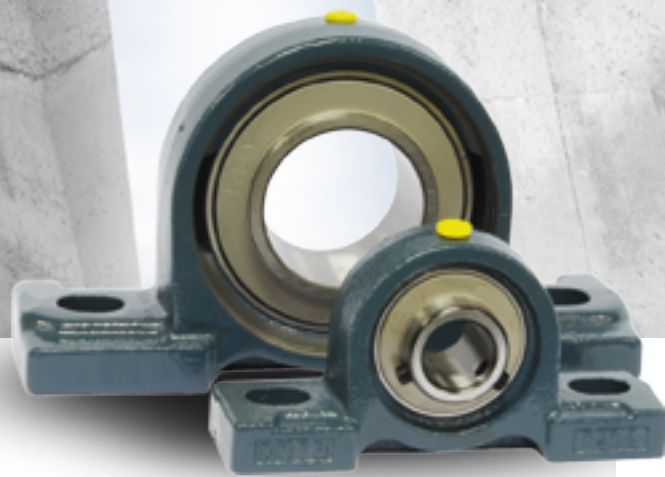
Koyo Ball Bearing units are being used in an extensive range of applications that involve moving parts where accuracy and high load resistance are required. The operational reliability, superior service life and cost-effectiveness of our comprehensive range, offers our customers a secure solution for their application. Typical applications for our ball bearing units are for example; conveyor systems, textile-, construction- and agricultural machinery, food and beverage processing and packaging systems.












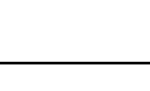
Tough on Friction, Kind to Earth

Our Ball Bearing Units Range



Housings in: cast iron and for limited ranges * Aluminium-Alloy / ** Stainless steel / *** Steel plate				
	Type	Bore diameter Metric	Bore diameter Inch	Accessoires
        	UCP201~UCP218	12~90 mm	1/2~3 1/2"	Note 1)
	UCP305~UCP328	25~140 mm	1~4"	Note 2)
	UCPX05~UCPX20	25~100 mm	1~4"	Note 1)
	UKP205~UKP218	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 1)
	UKP305~UKP328	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 2)
	UKPX05~UKPX20	conic bore adapter H/HE/HS	3/4~3 1/2"	Note 1)
	NAP201~NAP215	12~75 mm	1/2~2 15/16"	Note 3)
	NAPK201~NAPK215	12~75 mm	1/2~2 15/16"	Note 3)
	UCIP208~UCIP213	40~65 mm	1 1/2~2 1/2"	Note 1)
	UCIP313~UCIP328	65~140 mm	2 1/2~4"	Note 2)
	UKIP208~UKIP213	conic bore adapter H/HE/HS	1 1/4~2 3/8"	Note 1)
	UKIP313~UKIP328	conic bore adapter H/HE/HS	2 1/4~4 1/2"	Note 2)
	UCPA201~UCPA210	12~50 mm	1/2~2"	Note 3)
	UCPH201~UCPH210	12~50 mm	1/2~2"	Note 3)
	BLP201~BLP208	12~40 mm	1/2~1 1/2"	Note 3)
	ALP201~ALP208	12~40 mm	1/2~1 9/16"	Note 3)
	*UP000~UP006	10~30 mm	no inch	Note 4)
	**UCSP204H1S6~UCSP210H1S6	20~50 mm	no inch	Note 5)
	**UCSPA204H1S6~UCSPA208H1S6	20~40 mm	no inch	Note 5)
	**UCSP000S6~UCSP006S6	10~30 mm	no inch	Note 4)
 	UCF201~UCF218	12~90 mm	1/2~2 1/2"	Note 1)
	UCF305~UCF328	25~140 mm	1~4"	Note 2)
	UCFX05~UCFX20	25~100 mm	1~4"	Note 1)
	UCF201E~UCF217E	12~85 mm	1~3 1/4"	Note 3)
	UCFX05E~UCFX17E	25~85 mm	1~3 7/16"	Note 3)
	NANF201~NANF212	12~60 mm	1/2~2 7/16"	Note 3)
	UKF205~UKF218	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 1)
	UKF305~UKF328	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 1)
	UKFX05~UKFX20	conic bore adapter H/HE/HS	3/4~3 1/2"	Note 1)
	UCFS305~UCFS328	25~140 mm	1~4"	Note 2)
	UKFS305~UKFS328	20~125 mm	3/4~4 1/2"	Note 2)
	**UCSF204H1S6~UCSF210H1S6	20~50 mm	no inch	Note 5)
	UCFL201~UCFL218	12~90 mm	1/2~3 1/2"	Note 1)
    	UCFL305~UCFL326	25~130 mm	1/2~4"	Note 2)
	UCFLX05~UCFLX10	25~50 mm	1/2"	Note 1)
	UCFL201E~UCFL217E	12~75 mm	1/2~3	Note 3)
	NANFL201~NANFL211	12~55 mm	1/2~2 3/16"	Note 3)
	UKFL205~UKFL218	conic bore adapter H/HE/HS	3/4~3"	Note 1)
	UKFL305~UKFL326	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 2)
	UKFLX05~UKFLX10	conic bore adapter H/HE/HS	3/4~1 3/4"	Note 6)
	UCFA201~UCFA211	12~55 mm	2 3/16"	Note 3)
	UCFB201~UCFB210	12~50 mm	1/2~2"	Note 3)
	BLF201~BLF207	12~35 mm	1/2~1 7/16"	Note 3)
	ALF201~ALF207	12~35 mm	1/2~1 7/16"	Note 3)
	*UFL08~UFL000~UFL006	8~30 mm	no inch	Note 4)
	**UCSFL204H1S6~UCSFL210H1S6	20~50 mm	no inch	Note 5)
	**USFL000S6~USFL006S6	10~30 mm	no inch	Note 4)
 	UCFC201~UCFC218	12~90 mm	1/2~3 1/2"	Note 1)
	UCFCX05~UCFCX20	25~100 mm	1~4"	Note 1)
	UKFC205~UKFC218	conic bore adapter H/HE/HS	3/4~3"	Note 1)
	UKFCX05~UKFCX20	conic bore adapter H/HE/HS	3/4~3 1/2"	Note 1)
	UCFCX05E~UCFCX20E	25~100 mm	1~4"	Note 3)

Housings of spheroidal graphite iron casting are also available. "J" Fitting is standard, but "H" & "K" fitting is also available upon request.
















Housings in: cast iron and for limited ranges * Aluminium-Alloy / ** Stainless steel / *** Steel plate				
	Type	Bore diameter Metric	Bore diameter Inch	Accessoires
	***SBPF201~SBPF207	12~35 mm	1/2~1 7/16"	Note 3)
	***SBPFL201~SBPFL207	12~35 mm	1/2~1 7/16"	Note 3)
	***SAPF201~SAPF207	12~35 mm	1/2~1 7/16"	Note 3)
	***SAPFL201~SAPFL207	12~35 mm	1/2~1 7/16"	Note 3)
 	UCT201~UCT217	12~85 mm	1/2~3 1/4"	Note 1)
	UCT305~UCT328	25~140 mm	1~4"	Note 2)
	UCTX05~UCTX17	25~85 mm	1~3 7/16"	Note 6)
	UKT205~UKT217	conic bore adapter H/HE/HS	3/4~3"	Note 1)
	UKT305~UKT328	conic bore adapter H/HE/HS	3/4~4 1/2"	Note 2)
	UKTX05~UKTX17	conic bore adapter H/HE/HS	3/4~3"	Note 6)
	UCT201E~UCT217E	12~85 mm	1/2~3 1/4"	Note 3)
	UCTX05E~UCTX17E	25~85 mm	1~3 7/16"	Note 3)
	**UCST204H1S6~UCST210H1S6	20~50 mm	no inch	Note 5)
 	UCC201~UCC213	12~65 mm	1/2~2 1/2"	Note 3)
	UCC305~UCC328	25~140 mm	1~4"	Note 3)
	UCCX05~UCCX12	25~60 mm	1~2 7/16"	Note 3)
	UKC205~UKC213	conic bore adapter H/HE/HS	3/4~2 3/8"	Note 3)
	UKC305~UKC328	conic bore adapter H/HF/HS	3/4~4 1/2"	Note 3)
	UKCX05~UKCX12	conic bore adapter H/HF/HS	3/4~2 1/8"	Note 3)
	UCHA201~UCHA215	12~75 mm	1/2~3"	Note 3)
 	UCTH201/150~UCTH213/300	12~65 mm	1/2~2 1/2"	Note 1)
	UCTL204/100~UCTL209/400	20~45 mm	no inch	Note 1)
	UCTU208~UCTU212	40~60mm	no inch	Note 1)
	UCTU313~UCTU318	65~90 mm	no inch	Note 2)
	SBPTH201~SBPTH205	12~25 mm	no inch	Note 3)
	SBNTH201~SBNTH205	12~25 mm	no inch	Note 3)
  	INSERT BEARINGS:			
	UC201~UC218	12~90mm	3/4~3 1/2"	option: L2 or L3 seal lip
	UC305~UC328	25~140 mm	1~4"	option: L3 seal lip
	UCX05~UCX20	25~100 mm	1~3 15/16"	option: L3 seal lip
	UK205~UK218	conic bore adapter H/HE/HS	3/4~3"	option: L2 or L3 seal lip
	UK305~UK328	conic bore adapter H/HE/HS	3/4~4 1/2"	option: L3 seal lip
	UKX05~UKX20	conic bore adapter H/HE/HS	3/4~3 1/2"	
	SU08+SU000~SU006	8~30 mm	no inch	
	SB201~SB208	12~40 mm	no inch	
	**UC204S6~UC210S6	20~50 mm	no inch	stainless steel
	**SU000S6~SU006S6	10~30 mm	no inch	stainless steel
 	SA201~SA208	12~40 mm	1/2~1 9/16"	eccentric collar ring
	SA201F~SA211F	12~55 mm	1/2~2 3/16"	eccentric collar ring
	NA201~NA215	12~75 mm	1/2~3"	eccentric collar ring
	ER201~ER212	12~60 mm	1/2~2 7/16"	cylindric bore and OD
	RB201~RB208	12~40 mm	1/2~1 9/16"	cylindric bore and OD
	## High / low temperature grease			Code: D1/K2 and D2/K2 or special order
	ADAPTER Sleeve / Nut / Washer			
	H2305X~H2322X	20~100 mm	no inch	Adapter complete set
	H2324~H2328	110~125 mm	no inch	Adapter complete set
	HE2305X~HE2322X	no metric	3/4~4"	Adapter complete set
	HE2324~HE2328	no metric	4 1/4~5"	Adapter complete set
	HS2306X~HS2315X	no metric	7/8~2 5/8"	Adapter complete set
	HA2306X~HA2320X	no metric	15/16~3 7/16"	Adapter complete set
	HA2324~2328	no metric	4 3/16~4 15/16"	Adapter complete set
	Note: accessoires	1) covers in pressed steel or cast iron		4) covers with rubber coating
		2) covers in cast iron		5) covers in stainless steel
		3) no covers		6) covers in pressed steel

Simplified chart of 'Ball Bearing Unit' possible combinations

Type	Housing for units	Ball bearing for units							
		Cylindrical bore (with set screws)				Tapered bore (with adapter)			
									
		UC200	UCX00	UC300	Stainless steel UC200S6	UK200	UKX00	UK300	
 Pillow block type	P200, PX00, P300	UCP200	UCPX00	UCP300		UKP200	UKPX00	UKP300	
	PK200								
	P200SC, P300SC	UCP200SC		UCP300SC		UKP200SC		UKP300SC	
	IP200, IP300	UCIP200		UCIP300		UKIP200		UKIP300	
	PA200, SPA200H1	UCPA200			UCSPA200H1S6				
	PH200	UCPH200							
	LP200								
	P000, SP000								
	SP200H1				UCSP200H1S6				
 Square-flanged type	F200, FX00, F300	UCF200	UCFX00	UCF300		UKF200	UKFX00	UKF300	
	F200E, FX00E	UCF200E	UCFX00E						
	SF200H1				UCSF200H1S6				
	NF200								
	FS300			UCFS300				UKFS300	
 Oval flange type	FL200, FLX00, FL300	UCFL200	UCFLX00	UCFL300		UKFL200	UKFLX00	UKFL300	
	FL200E	UCFL200E							
	FA200	UCFA200							
	FB200	UCFB200							
	LF200								
	FL000, SFL000								
	NFL200								
	SFL200H1				UCSFL200H1S6				
 Round-flanged type with spigot joint	FC200, FCX00, FCX00E	UCFC200	UCFCX00			UKFC200	UKFCX00		
			UCFCX00E						
 Pressed steel type	PF200								
	PFL200								
	PP200								
 Take-up type	T200, TX00, T300	UCT200	UCTX00	UCT300		UKT200	UKTX00	UKT300	
	T200E, TX00E	UCT200E	UCTX200E						
	ST200H1				UCST200H1S6				
	T200+H	UCTH200							
	TL200	UCTL200				(UKTL200)			
	TU200, TU300	UCTU200		UCTU300		(UKTU200)		(UKTU300)	
	PTH200								
	NPTH200								
 Cartridge type	C200, CX00, C300	UCC200	UCCX00	UCC300		UKC200	UKCX00	UKC300	
 Hanger type	HA200	UCHA200							
 Take-up type	TH200	UCTH200							
	TL200	UCTL200							
	TU200-300	UCTU200		UCTH300					
	PTH200	UCPTH200							
	NPTH200	UCNPTH200							



Ball bearing for units						Housing for units	Type	
Cylindrical bore (with set screws)			Cylindrical bore (with eccentric locking collar)					
								
"Compact" series SU000	Stainless steel SU000S6	SB200	SA200	NA200				
				NAP200 NAPK200	P200, PX00, P300 PK200 P200SC, P300SC		Pillow block type	
					IP200, IP300 PA200, SPA200H1			
		BLP200	ALP200		PH200 LP200			
UP000	USP000S6				P000, SP000 SP200H1			
					NANF200	F200, FX00, F300 F200E, FX00E SF200H1 NF200 FS300	Square-flanged type	
						FL200, FLX00, FL300 FL200E, FA200	Oval flange type	
		BLF200	ALF200			FB200 LF200		
UFL000	USFL000S6				NANFL200	FL000, SFL000 NFL200 SFL200H1		
					NAFC200	FC200, FCX00, FCX00E	Round-flanged type with spigot joint	
		SBPF200 SBPFL200 SBPP200	SAPF200 SAPFL200 SAPP200			PF200 PFL200 PP200	Pressed steel type	
					NAT200	T200, TX00, T300 T200E, TX00E ST200H1 T200+H	Take-up type	
						TL200 TU200, TU300		
		SBPTH200 SBNPTH200				PTH200 NPTH200		
					NAC200	C200, CX00, C300	Cartridge type	
						HA200	Hanger type	
							Take-up type	

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