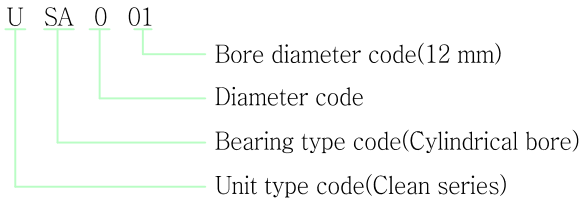
A. Technical section

1. Nomenclature

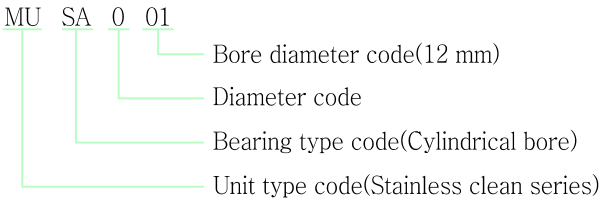
1.1 Bearing model code

The bearing model code describes the bearing type and basic dimensions, it is written in the order of the type code, the diameter code and the bore diameter code.

Ex.1)



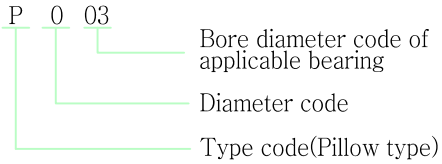
Ex.2)



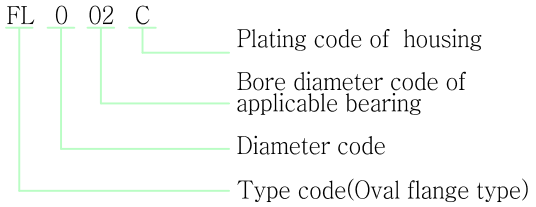
1.2 Housing model code

The housing code is written in the order of the housing type code, the diameter code and bore diameter code of the applicable bearing.

Ex.1)



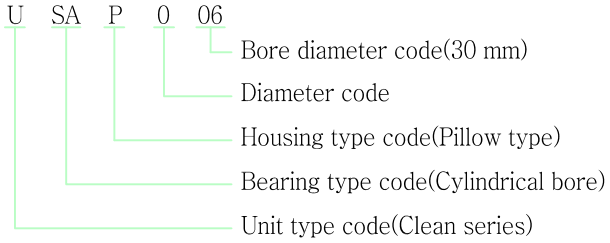
Ex.2)



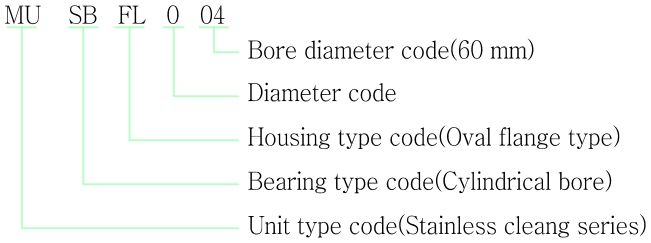
1.3 Ball bearing unit model code

The ball bearing unit model code comprises the bearing model code and the housing model code.

Ex.1)



Ex.2)



[Example of ball bearing unit code]

Type	Model code			Type code		Diameter code	Bore diameter code	Shaft diameter (mm)	Fixing to shaft
	Unit	Bearing	Housing	Bearing	Housing				
Pillow (P)	USBP001	USB001	P001	USB	P	0	01	12	Set screws
	MUSAP002	MUSA002	P002C	USA	P	0	02	15	Self-locking collar
Oval flange (FL)	USAFL08	USA08	FL08	USA	FL	0	8	8	Self-locking collar
	MUSBFL000	MUSB000	FL000C	MUSB	FL	0	00	10	Set screws

2. Tolerances

2.1 Tolerances of bearings

(Unit : 0.001mm)

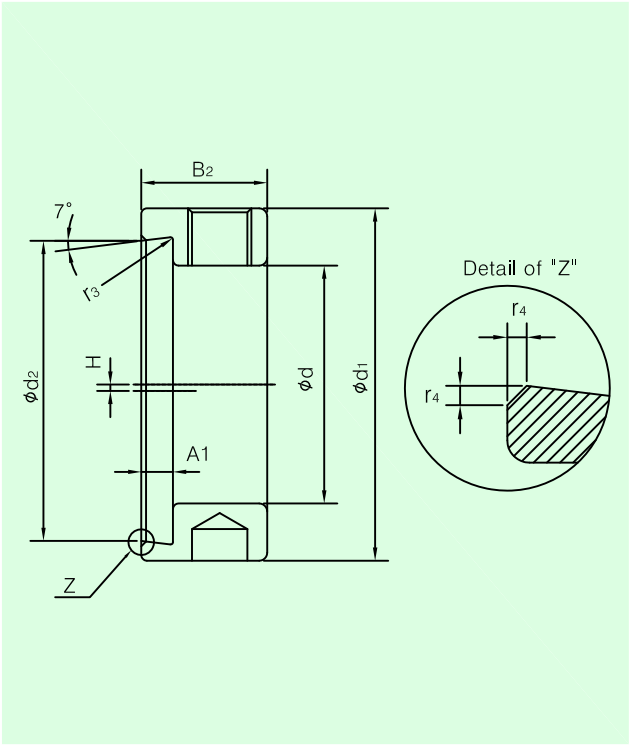
Inner ring								Outer ring				
Nominal bore diameter, φd(mm)		Single plane mean bore diameter deviation (Δdmp)		Single radial plane bore diameter variation (Vdp)	Single inner ring width deviation (ΔBs)		Radial runout of assembled bearing inner ring (Kia)	Nominal bore diameter, φD(mm)		Single plane means outer diameter deviation (ΔDmp)		Radial runout of assembled bearing outer ring (Kea)
over	incl.	high	low	max	high	low	max	over	incl.	high	low	max
–	10	+15	0	10	0	−120	10	18	30	0	−9	15
10	18	+15	0	10	0	−120	15	30	50	0	−11	20
18	31.75	+18	0	12	0	−120	18	50	80	0	−13	25

2.2 Radial internal clearance

(Unit : 0.001mm)

Nominal bore diameter, φd(mm)		Internal clearance									
		C2		CN(normal)		C3		C4		C5	
over	incl.	min	max	min	max	min	max	min	max	min	max
6	10	0	7	2	13	8	23	14	29	20	37
10	18	0	9	3	18	11	25	18	33	25	45
18	24	0	10	5	20	13	28	20	36	28	48
24	30	1	11	5	20	13	28	23	41	30	53

2.3 Tolerances of eccentric locking collars



[Eccentric locking collars]

(Unit : 0.001mm)

Collar code	Size							
	φd	φd1 max.	φd2	B2	H	A1	r3 max.	r4 min.
E000	10	17	13.5	8.5	0.5	2.0	0.3	0.3
E001	12	19	15.9	8.5	0.5	2.0	0.3	0.3
E002	15	22	18.5	8.5	0.5	2.0	0.3	0.3
E003	17	25	21	9.5	0.5	2.5	0.3	0.4
E004	20	30	25	11	0.8	3.0	0.3	0.4
E005	25	36	30.5	12	0.8	4.0	0.3	0.4
E006	30	42	36	12	0.8	4.3	0.3	0.4

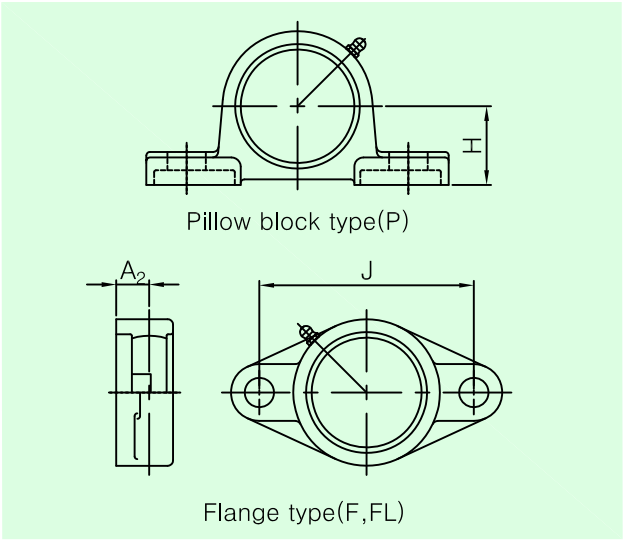
[Tolerances of eccentric locking collar]

(Unit : 0.001mm)

Nominal bore diameter,φd		φd		$φd_2$		H	
over	Incl.	high	low	high	low	high	low
10	36.512	+0.250	+0.025	+0.3	0	+0.1	−0.1

2.4 Tolerances of housings

(Unit : 0.001mm)

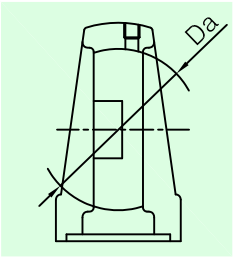


Housing code	Pillow block type(P)	Flange type(F,FL)	
	H	A_2	J
08 000 001 002 003 004 005 006	±150	±500	±700

[Tolerance classes of spherical bore diameter of housings]

(Unit : 0.001mm)

		H7		J7		K7	
		ΔDamp		ΔDamp		ΔDamp	
over	incl.	min	max	min	max	min	max
30	50	+25	0	+14	−11	+7	−18
50	80	+30	0	+18	−12	+9	−21



Remark :

ΔDamp is calculated by the equation where,
ΔDamp = (Da max+ Da min)/2
Da max and Da min are maximum and minimum measurements of Da.

3. Materials

3.1 Bearing materials

Component		Material	Type code	Standard code
Clean series bearing	Inner ring, outer ring	High carbon chromium bearing steel	STB2	KS D 3525
	Ball(rolling element)	High carbon chromium bearing steel	STB2	KS D 3525
	Slinger	Cold rolled steel sheet	SPCC	KS D 3512
	Cage	Cold rolled steel sheet	SPCC	KS D 3512
	Seal(standard type)	Nitrile rubber	NBR	-
	Set screw	Chrome molybdenum steel	SCM435	KS D 3867
Stainless clean series bearing	Inner ring, outer ring	Stainless steel	STS440C	KS D 3706
	Ball(rolling element)	Stainless steel	STS440C	KS D 3692
	Slinger	Stainless steel	STS304	KS D 3706
	Cage	Stainless steel	STS304	KS D 3706
	Seal(standard type)	Nitrile rubber	NBR	-
	Set screw	Stainless steel	STS304	KS D 3692

3.2 Housing materials

Component		Material	Type code	Standard code
Housing	Housing	Zinc alloys die casting	ZDC2	KS D 6005
	Plating (Clean series)	Zinc	Zn	-
	Plating (Stainless clean series)	Chromium	Cr	-

3.3 Grease materials

Product name	Thickner	Base oil	Dropping point(°C)	Operating temperature(°C)	Feature
Multis EP2	Lithium	Mineral oil	217	-20~130	All-purpose grease

4. Product overview

Bearing material : Bearing steel(KS-STB2)
Stainless(KS-STS440C)
Housing material : Zinc alloys die castings(KS-ZDC2)

Unit

Clean series
Pillow block type

- Mounting with USA, USB, USC bearing
- Bearing material : Bearing steel (KS-STB2)
- Housing plating : Zinc plating

USAP 0 – E01

USBP 0 – E01

USCP 0 – E01

Stainless clean series Pillow block type

- Mouting with MUSA, MUSB bearing
- Bearing material : Stainless (KS-STS440C)
- Housing plating : Chromium plating

MUSAP 0 – E01

MUSBP 0 – E01

Clean series Oval flange type

- Mouting with USA, USB, USC bearing
- Bearing material : Bearing steel (KS-STB2)
- Housing plating : Zinc plating

USAFL 0 – E02

USBFL 0 – E02

USCFL 0 – E02

Stainless clean series Oval flange type

- Mounting with MUSA, MUSB bearing
- Bearing material : Stainless (KS-STS440C)
- Housing plating : Chromium plating

MUSAFL 0 – E02

MUSBFL 0 – E02

Bearing

Clean/ Stainless clean series
Set screw type

USB 0 – E03 **MUSB** 0 – E03

- Cylindrical bore bearing
- Sealing method : L type
- USB material : Bearing steel(KS-STB2)
- MUSB material : Stainless(KS-STS440C)

Clean/ Stainless clean series
Eccentric locking collar type

USA 0 – E04 **MUSA** 0 – E04

- Cylindrical bore bearing
- Sealing method : L type
- USA material :Bearing steel(KS-STB2)
- MUSA material : Stainless(KS-STS440C)

Clean series
Tight fit type

USC 0 – E05

- Cylindrical bore bearing
- Sealing method : L type