Cat.No.BE07-6

ASAHI

ALUMINUM SERIES

BEARING UNITS

JP—1973

ISO 9001
JQA—1873

NEW



Ideal for Food Processing Machinery, Packaging Machinery, Medical Equipment, Textile Machinery

ASAHI SEIKO CO., LTD.

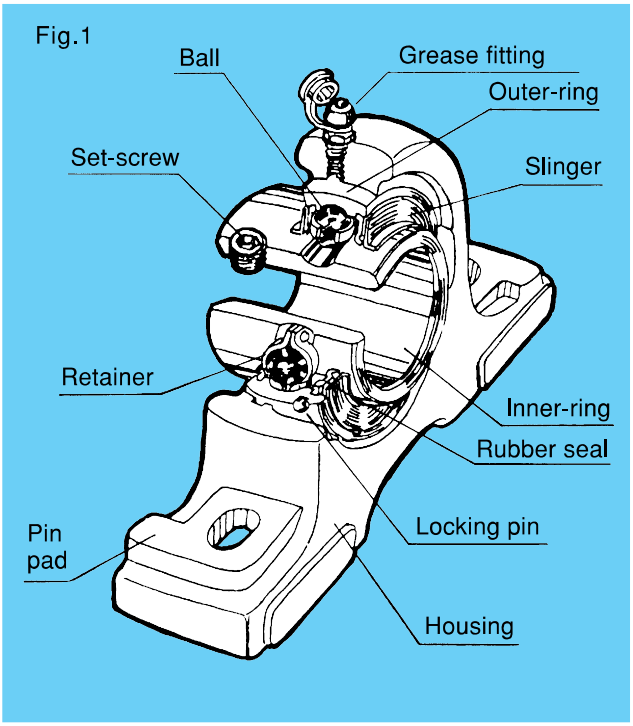
1. INTRODUCTION

This is a new series of light-weighted self-aligning bearing units consisting of stainless steel bearing inserts mounted in aluminum-alloy housings.
A combination of stainless steel bearing and aluminum housing offers an excellent corrosion-resistance, beautiful appearance, and hygienic machine design.
For added safety and protection against dust, bearing units fitted with pressed steel covers are also available.

2. CONSTRUCTION

The construction of new series is identical to our standard bearing units, which provide self-alignment, sealing and regreasable systems.

Fig.1



3. FEATURES

1) Excellent corrosion-resistance
Both stainless steel bearing and aluminum-alloy housing offer a very strong resistance against corrosion, water and chemicals.

2) Light-weight
While the new series weighs only 1/2 of the corresponding cast iron housed units, it is as good as standard units in terms of static breaking strength in every direction.

3) Perfectly interchangeable with JIS standard bearing units.

4. MATERIAL

Table 1

Bearing **MUC200**	
Ring	Stainless steel - **SUS440C EQ.**
Ball	Stainless steel - **SUS440C**
Retainer Set screw Slinger Locking pin	Stainless steel - **SUS304**
Seal	N B R
Housing **AP200, AF200, AFL200**	
Body	Aluminum alloy - **AC**
Grease fitting	Free-cutting brass - **C3604B**
Cover	Stainless steel - **SUS304**
Seal	N B R

5. NUMBERING SYSTEM

MUCAP205E

- With rubber-sealed open-end cover and closed-end cover
- Bearing bore diameter number (25mm bore)
- Outside diameter series (Series 2)
- Aluminum-alloy housing style (Pillow block)
- Stainless steel bearing

Table 2

Hsg. style	Bearing	Housing	Stainless steel cover		Unit No.
			Open-end	Closed-end	
Pillow block	MUC200	AP200	—	—	MUCAP200
		AP200C	200CPS20	—	MUCAP200C
		AP200C	200CPS20	200CPES20	MUCAP200E
Square flange	MUC200	AF200	—	—	MUCAF200
		AF200C	200CPS20	—	MUCAF200C
		AF200C	—	200CPES20	MUCAF200E
2-bolt flange	MUC200	AFL200	—	—	MUCAFL200
		AFL200C	200CPS20	—	MUCAFL200C
		AFL200C	—	200CPES20	MUCAFL200E

6. CORROSION-RESISTANCE

Table 3

◎ Excellent ○ Good △ Fair ▲ Bad × Very bad

Series	Material		Environmental conditions						
			Dry	Humid	Fresh water	Salt water	Nitric acid	Sulfuric acid	Hydrochloric acid
MUCAP	Stainless steel	SUS440C	○	△	△	▲	▲	×	×
	Stainless steel	SUS304	◎	◎	◎	○	◎	○	△
	Aluminum-alloy	AC	◎	◎	◎	○	▲	△	▲
UCP (reference)	High carbon chromium bearing steel	SUJ2	△	▲	▲	×	×	×	×
	Gray cast iron	FC200	△	×	×	×	×	×	×

7. TOLERANCE

Table 4

Unit : μm

Inner ring					Housing			
Bearing No. **MUC**	Mean bore diameter in a radial plane Δdmp		Bore diameter deviation in a radial plane Vdp	Width deviation ΔBs (reference)	Radial run-out Kia (reference)	Housing No. **AP, AF, AFL**	Base-to-center-height deviation		Tolerance for the distance between mounting-bolt-hole centers
	High	Low		High Low	Max.		Pillow block type ΔHs	Flange type ΔA_{2s}	
204~206	+18	0	12	0 −120	18	**204~208**	±150	±500	±700
207~208	+21	0	14	0 −120	20				

8. RECOMMENDED TIGHTENING TORQUE FOR SET-SCREWS AND MOUNTING BOLTS

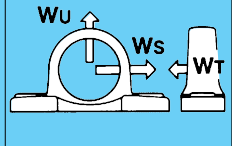
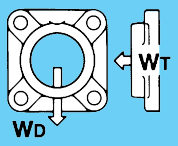
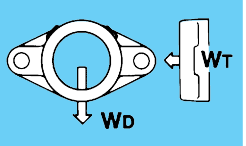
Table 5

Bearing			Housing				
Bearing No. **MUC**	Hex. wrench key size	Recommended tightening torque for set-screw (N·m) **MUC**	Housing No. **AP, AF, AFL**	Mounting bolt size **AP**	**AF**	**AFL**	Recommended tightening torque for bolts (N·m)
204	**3**	3.9	**204**	**M10**	**M10**	**M10**	17.7
205			**205**				24.5
206			**206**	**M14**		**M14**	29.4
207	**4**	8.3	**207**		**M12**		35.3
208			**208**		**M14**		45.1

9. STATIC BREAKING STRENGTH OF HOUSINGS

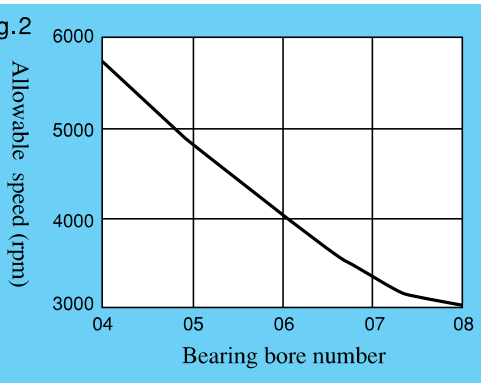
Table 6

Unit : kN

Housing No. **AP AF AFL**							
	W_U	W_S	W_T	W_D	W_T	W_D	W_T
204	32.5	51.5	14	24	29	30.5	26.5
205	38	56.5	16	26	35	42	29
206	42	61.5	17.5	28.5	35.5	52.5	32.5
207	48	72	21	31.5	44	64.5	37.5
208	53.5	82	22.5	34	49	75.5	42.5

10. ALLOWABLE SPEED

Fig.2



11. OPERATING TEMPERATURE RANGE

Standard (w/o covers) −20~+80℃

With covers −20~+60℃

12. DEMENSION TABLES
PILLOW BLOCKS
MUCAP 200

Fig.3

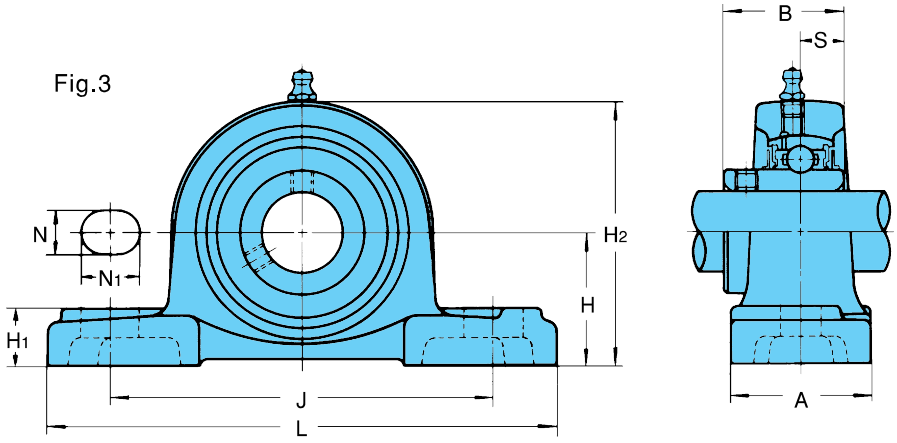
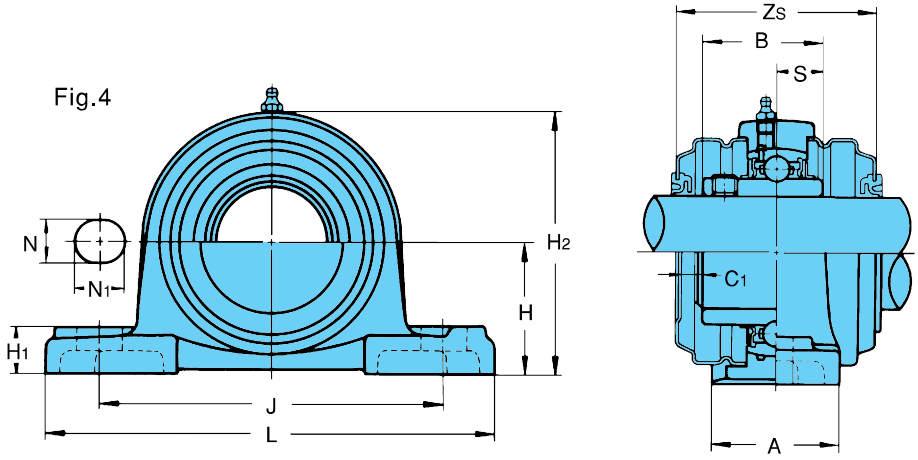


Table 7

Shaft dia. (mm)	Unit No.	Dimensions (mm)												Mounting bolt size
		H	L	J	A	N	N1	H1	H2	B	S	C1	Zs	
20	**MUCAP204**	33.3	127	95	38	13	19	15	65	31	12.7	8	56	M10
25	**MUCAP205**	36.5	140	105	38	13	16	16	70	34.1	14.3	11	63	M10
30	**MUCAP206**	42.9	165	121	48	17	21	18	83	38.1	15.9	9	65	M14
35	**MUCAP207**	47.6	167	127	48	17	21	19	94	42.9	17.5	8	70	M14
40	**MUCAP208**	49.2	184	137	54	17	25	19	100	49.2	19	10	82	M14

PILLOW BLOCKS FITTED WITH STAINLESS STEEL COVERS
MUCAP 200C
MUCAP 200E

Fig.4



Bearing			Housing No.		Unit No. with covers	Mass (kg)	
Bearing No.	Basic load rating (kN) 〔1kgf=9.8N〕		Standard	With cover groove	With two rubber sealed open covers (one open cover & one closed cover)	Standard	With covers
	Cr	Cor					
MUC 204	10.9	5.3	**AP204**	**AP204C**	**MUCAP204C (E)**	0.34	0.36
MUC 205	11.9	6.3	**AP205**	**AP205C**	**MUCAP205C (E)**	0.41	0.43
MUC 206	16.7	9	**AP206**	**AP206C**	**MUCAP206C (E)**	0.65	0.69
MUC 207	22	12.3	**AP207**	**AP207C**	**MUCAP207C (E)**	0.88	0.91
MUC 208	24.9	14.3	**AP208**	**AP208C**	**MUCAP208C (E)**	1.09	1.17

SQUARE FLANGE UNITS
MUCAF 200

Fig.5

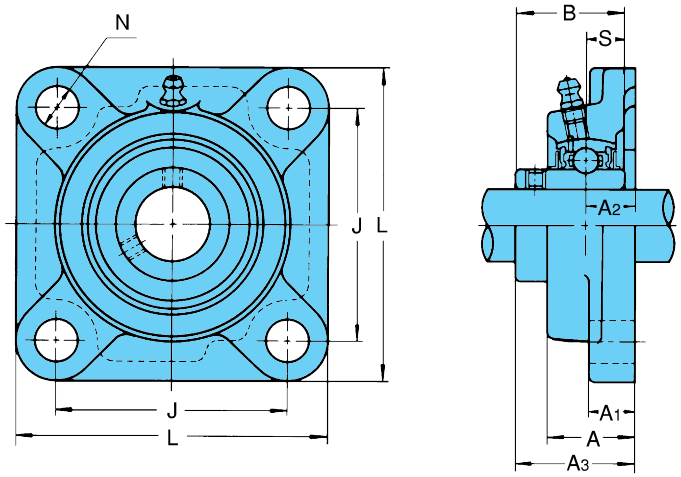
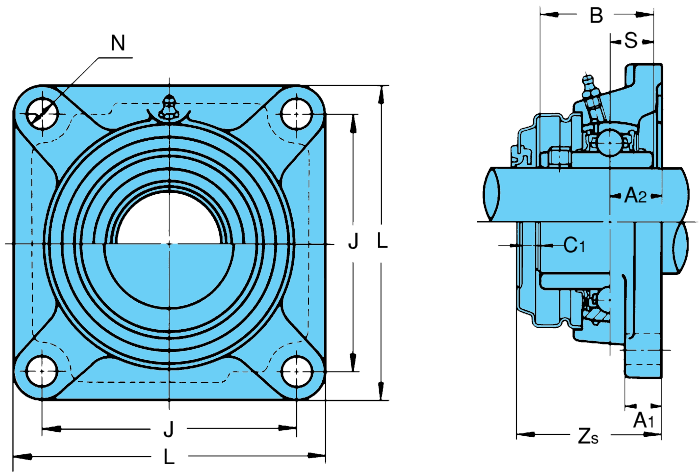


Table 8

Shaft dia. (mm)	Unit No.	Dimensions (mm)											Mounting bolt size
		L	J	A_2	A_1	A	N	A_3	B	S	C_1	Z_S	
20	**MUCAF204**	86	64	15	12	25.5	12	33.3	31	12.7	8	43	M10
25	**MUCAF205**	95	70	16	14	27	12	35.7	34.1	14.3	11	48	M10
30	**MUCAF206**	108	83	18	14	31	12	40.2	38.1	15.9	9	51	M10
35	**MUCAF207**	117	92	19	16	34	14	44.4	42.9	17.5	8	54	M12
40	**MUCAF208**	130	102	21	16	36	16	51.2	49.2	19	10	62	M14

SQUARE FLANGE UNITS FITTED WITH STAINLESS STEEL COVERS
MUCAF 200C
MUCAF 200E

Fig.6



Bearing			Housing No.		Unit No. with cover	Mass (kg)	
Bearing No.	Basic load rating (kN) 〔1kgf=9.8N〕		Standard	With cover groove	With rubber sealed open cover (closed cover)	Standard	With covers
	Cr	Cor					
MUC 204	10.9	5.3	**AF204**	**AF204C**	**MUCAF204C (E)**	0.31	0.32
MUC 205	11.9	6.3	**AF205**	**AF205C**	**MUCAF205C (E)**	0.4	0.41
MUC 206	16.7	9	**AF206**	**AF206C**	**MUCAF206C (E)**	0.57	0.64
MUC 207	22	12.3	**AF207**	**AF207C**	**MUCAF207C (E)**	0.85	0.89
MUC 208	24.9	14.3	**AF208**	**AF208C**	**MUCAF208C (E)**	1.06	1.16

2-BOLT FLANGE UNITS
MUCAFL 200

Fig.7

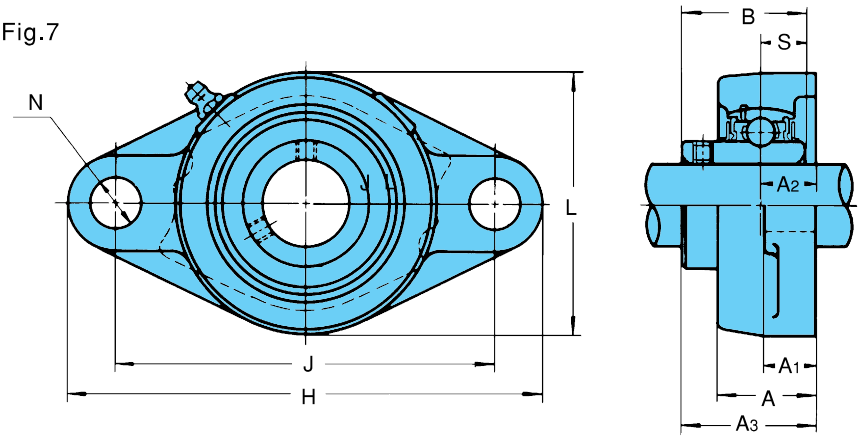
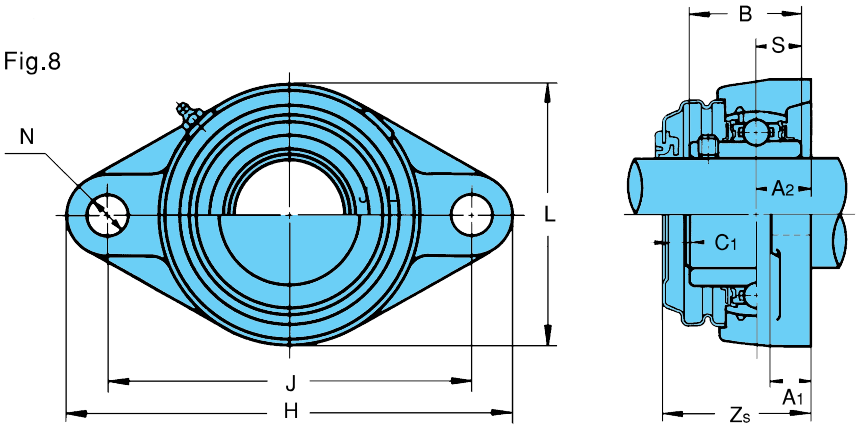


Table 9

Shaft dia. (mm)	Unit No.	Dimensions (mm)												Mounting bolt size
		H	J	A_2	A_1	A	N	L	A_3	B	S	C_1	Z_S	
20	**MUCAFL204**	113	90	15	12	25.5	12	60	33.3	31	12.7	8	43	M10
25	**MUCAFL205**	130	99	16	14	27	16	68	35.7	34.1	14.3	10	47	M14
30	**MUCAFL206**	148	117	18	14	31	16	80	40.2	38.1	15.9	8	49	M14
35	**MUCAFL207**	161	130	19	16	34	16	90	44.4	42.9	17.5	8	54	M14
40	**MUCAFL208**	175	144	21	16	36	16	100	51.2	49.2	19	9	61	M14

2-BOLT FLANGE UNITS FITTED WITH STAINLESS STEEL COVERS
MUCAFL 200C
MUCAFL 200E

Fig.8



Bearing			Housing No.		Unit No. with covers	Mass (kg)	
Bearing No.	Basic load rating (kN) 〔1kgf=9.8N〕		Standard	With cover groove	With rubber sealed open cover (closed cover)	Standard	With covers
	C_r	C_{or}					
MUC 204	10.9	5.3	**AFL204**	**AFL204C**	**MUCAFL204C (E)**	0.26	0.27
MUC 205	11.9	6.3	**AFL205**	**AFL205C**	**MUCAFL205C (E)**	0.34	0.35
MUC 206	16.7	9	**AFL206**	**AFL206C**	**MUCAFL206C (E)**	0.53	0.54
MUC 207	22	12.3	**AFL207**	**AFL207C**	**MUCAFL207C (E)**	0.74	0.78
MUC 208	24.9	14.3	**AFL208**	**AFL208C**	**MUCAFL208C (E)**	0.95	0.98

STAINLESS STEEL BEARING INSERTS
MUC 200

Fig.9

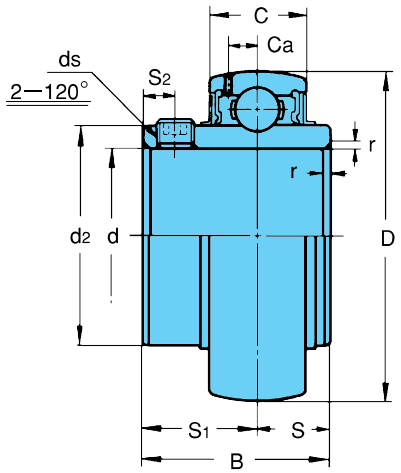


Table 10

Shaft dia. (mm)	Bearing No.	Dimensions (mm)											Basic load rating (kN) [1kgf=9.8N]		Mass (kg)
		d	D	B	C	r	S	S1	S2	ds	Ca	d2	Cr	Cor	
20	**MUC204**	20	47	31	17	1.5	12.7	18.3	4.5	M6×1	4.5	29	10.9	5.3	0.16
25	**MUC205**	25	52	34.1	17	1.5	14.3	19.8	5	M6×1	4.5	34	11.9	6.3	0.19
30	**MUC206**	30	62	38.1	19	1.5	15.9	22.2	5	M6×1	5.1	40.5	16.7	9.0	0.31
35	**MUC207**	35	72	42.9	20	2	17.5	25.4	6	M8×1	5.8	48	22.0	12.3	0.48
40	**MUC208**	40	80	49.2	21	2	19	30.2	8	M8×1	6.2	53	24.9	14.3	0.62

13. NOTICE

(1) Static breaking strength of housings shown in Table 6 is based on the averaged values. A proper safety factor must be taken into account depending on the working load, its characteristics and directions.

(2) Tighten two set-screws evenly according to the recommended tightening torque to prevent them from loosening due to vibration while in operation and to avoid inner-ring cracking due to overtightening. Mounting bolts should be tightened also according to their recommended tightening torque to avoid housing deformation due to overtightening.

14. SHAFT SELECTION

Table 11

Unit : μm

Bearing No.	Loose fit		Tighte fit
	js7	h7	m6
MUC204 **MUC205** **MUC206**	± 10.5	0～ — 21	+ 21 ～ + 8
MUC207 **MUC208**	± 12.5	0～ — 25	+ 25 ～ + 9

15. TYPICAL APPLICATIONS

Food Processing Machinery, Packaging Machinery,
Medical Equipment, Chemical Equipment, Textile Machinery