

ASAHI

ALUMINUM SERIES

BEARING UNITS



JP-1973



JQA-1973



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

ASAHI SEIKO CO., LTD.

1. INTRODUCTION

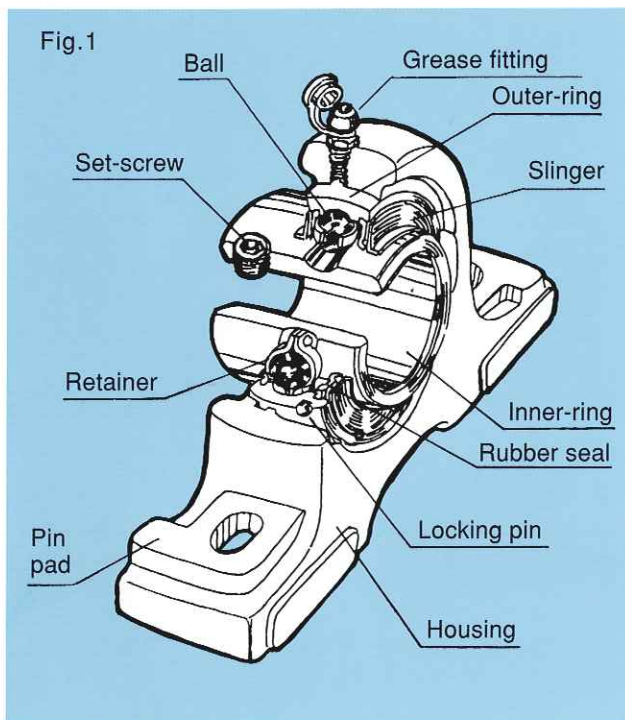
This is a new series of light-weighted self-aligning bearing units consisting of stainless steel bearing inserts mounted in aluminum-alloy housings.

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.



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

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.

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(EQ.)	○	△	△	▲		▲	×	×
	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 $\Delta A2s$		
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

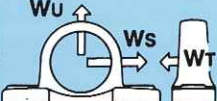
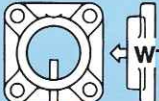
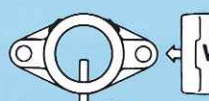
Table 5

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			Recommended tightening torque for bolts (N•m)
				AP	AF	AFL	
204	3	3.9	204	M10	M10	M10	17.7
205			205				24.5
206			206	M14	M12	M14	29.4
207	4	8.3	207				35.3
208			208				45.1

9. STATIC BREAKING STRENGTH OF HOUSINGS

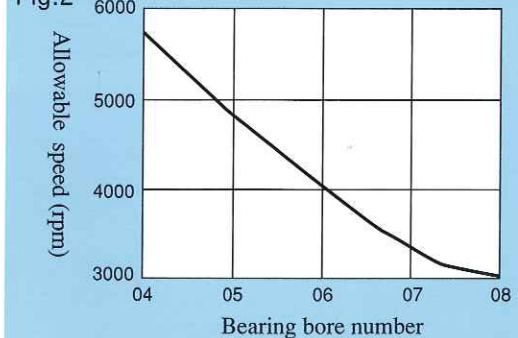
Table 6

Unit : kN

Housing No. AP AF AFL							
	Wu	Ws	Wt	Wd	Wt	Wd	Wt
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°C
With covers	-20~+60°C

12. DEMENSION TABLES PILLOW BLOCKS MUCAP 200

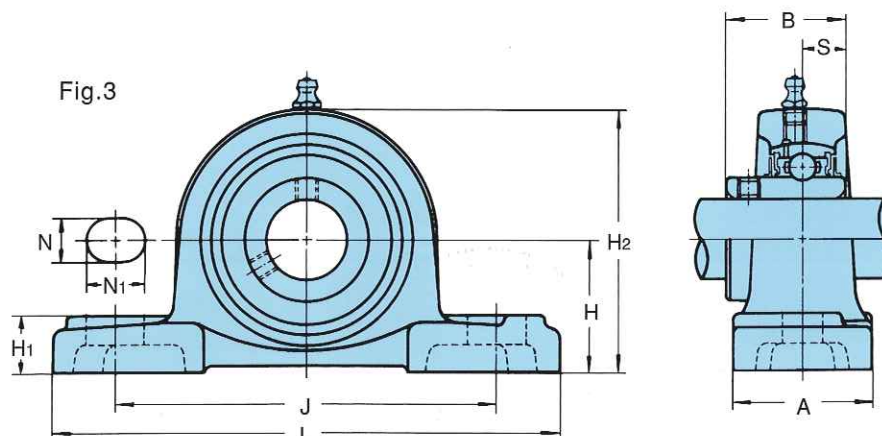


Table 7

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

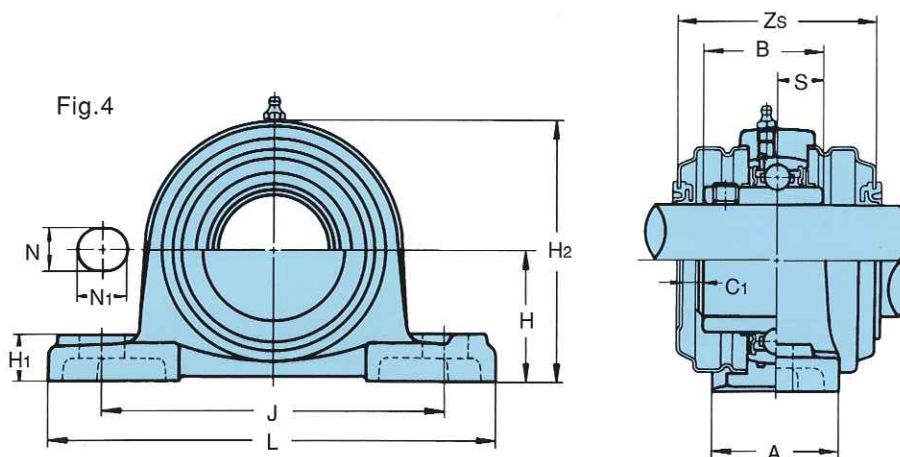


Table 8

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

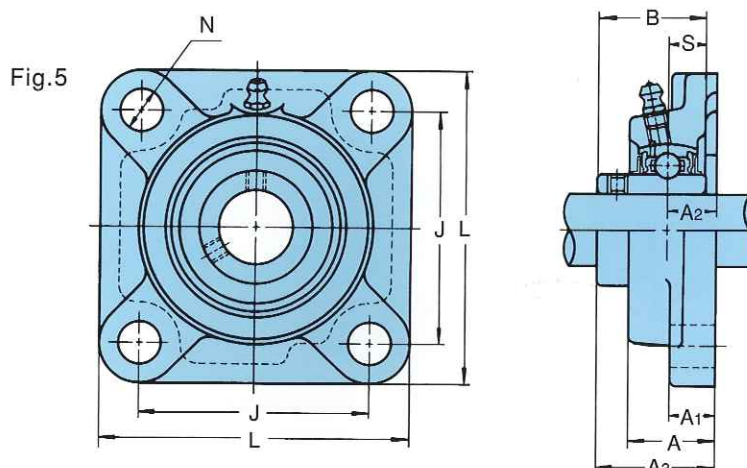


Table 9

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

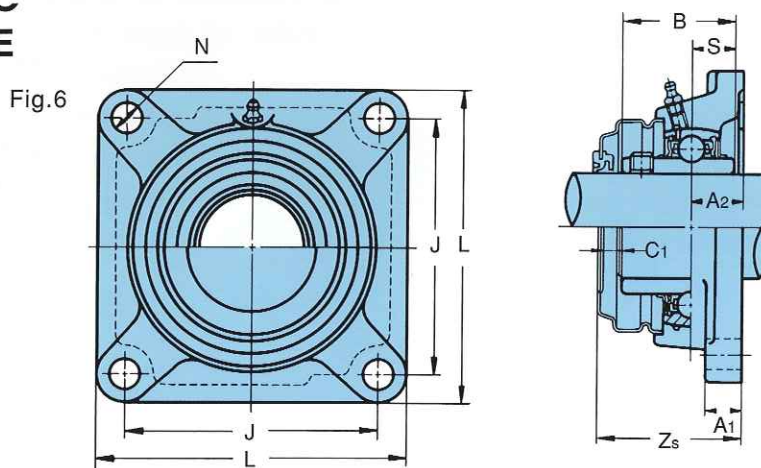


Table 10

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
	C _r	C _{or}					
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

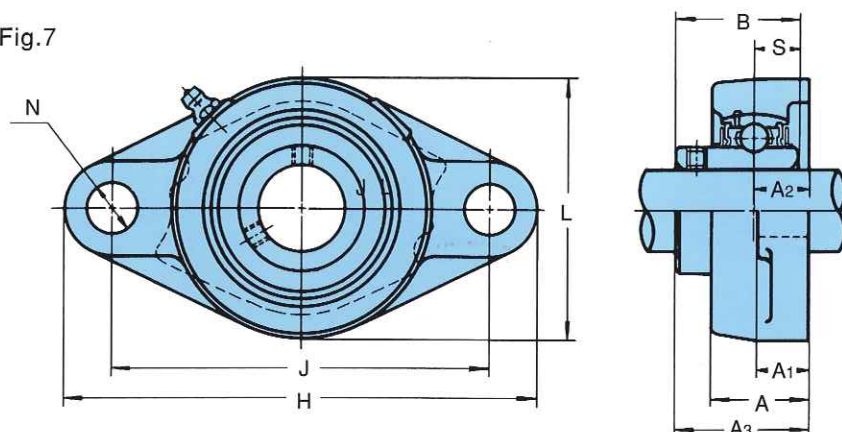


Table 11

Shaft dia. (mm)	Unit No.	Dimensions (mm)												Mounting bolt size
		H	J	A2	A1	A	N	L	A3	B	S	C1	Zs	
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

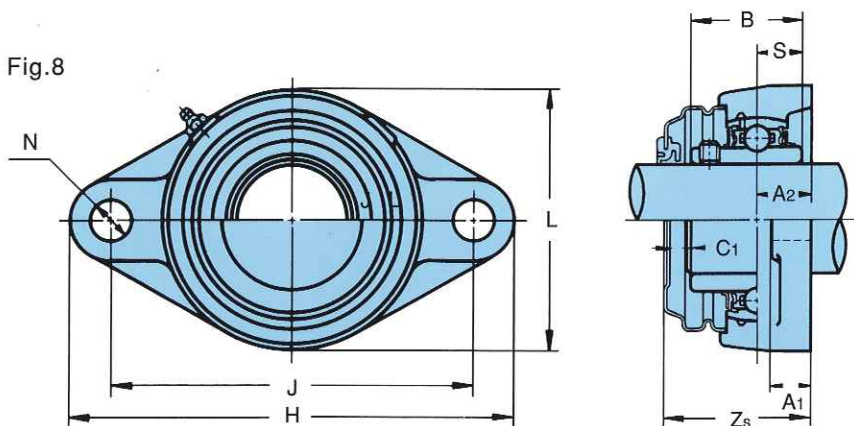


Table 12

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
	Cr	Cor					
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

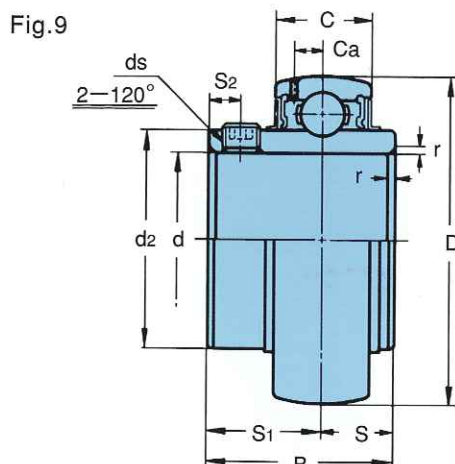


Table 13

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 14

Unit : μm

Bearing No.	Loose fit		Tight 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