

Bearing Units Plastic Housing Series

CAT. No. 3904-N/E



The NTN plastic series ensures a clean operating environment.

1. Features

Guards against corrosion	NTN bearing units in the plastic series feature ball bearings inserted into housings made of plastics that provide superior resistance to corrosion as compared to standard series cast iron units. This series is especially useful in a wide variety of applications because of the nonmagnetic and rust free properties of the housing.
Maintains a clean operating environment	The solid grease lubricant in the ball bearing, solely developed by NTN , reduces leakage from the bearing, significantly reducing environmental pollution. Also, the housing will not stain, nor is there paint to peel and contaminate the environment.
Low torque characteristics	The standard solid grease type for these ball bearing units is spot-pack which places the lubricant on the bearing cage. Torque consumption capabilities of spot-pack bearings is low due to reduced whip resistance in comparison to standard grease lubricated ball bearings.
Light weight	Weight is reduced more than 30% to 60% over standard series units.
Water resistant	The glass filled polyester housing not only reduces corrosion but offers better water resistance.

2. Materials

	Parts	Materials					
	Raceways	Martensite stainless steel (equivalent to SUS440C)					
	Rolling element	Martensite stainless steel (SUS440C)					
Bearing	Slinger, Cage	Austenite stainless steel (SUS304)					
	Rubber seal	Nitryl rubber					
	Set screw(W shape screw head)	Martensite stainless steel (SUS410)					
	Housing	Glass reinforced Polyester					
Bearing housing	Sleeve for set bolt	Austenite stainless steel (SUS 304)					
	Nut for grease nipple	Austenite stainless steel (SUS 304)					
	Dust cover	Polypropylene					
	Plug	Polyethylene					

3. Recommended operating temperature and allowable speed

Bearings with solid grease are recommended to operate under -20 to +80 $^{\circ}$ C. However, operating temperature should be below +60 $^{\circ}$ C when bearing is operated with continuous use.

dn value: 12×10^4

 $(dn = bore diameter in mm \times speed in min^{-1})$

Remarks: The recommended operating temperature range and allowable speed is applied to all bearings with solid grease. Contact NTN when your application exceeds these recommendations. For standard grease, the maximum recommended temperature for plastic units is 80°C to prevent creeping between bearing outer ring and housing bore.

4. Compatibility and Handling

Basically, the plastic housing series is compatible with standard cast iron series units when setting, however, the nominal setting bolt diameter may differ from the standard series. The housing should be handled carefully and may be damaged if dropped on hard surfaces or hit with metal hammers. An electrostatic charge may be generated in certain operating conditions, making it inadvisable for use when flammable or explosive conditions may occur. The unit may be regreased using the plug on the housing, however relubrication is not recommended when unit ball bearings are packed with solid grease.

5. Applications

Bearings with solid grease are suitable for applications requiring a clean operating environment such as: food processing and packaging machinery, chemical processing machines, etc.

6. Option

When a stainless steel insert bearing is not required, a standard steel insert bearing can applied. In that case a relubricable type will be provided. Contact **NTN** for additional information.

Recommended tightening torque for set screw

Bearing number	Designnation (W shape s	of set screws crew head)	Tightening torques (Max)				
(1-00)	Metric series	Inch series	N∙m	lbf•inch			
204, 205	M5×0.8	No.10-32UNF	3.9	34			
206	M6×0.75	1/4-28UNF	4.9	43			
207	M6×0.75	1/4-28UNF	5.8	52			
208	M8×1	5/16-24UNF	7.8	69			

Tighten the two set screws uniformly using the torque listed in this table. Over tightening the set screw may cause the inner ring to crack.

Recommended tightening torque for setting bolt

				Unit: N·m/lbf·inch			
Housing number	Nominal	bolt dia.	Tightening torques (Max.)				
	Metric series	Inch series	N∙m	lbf • inch			
PR204D1	M10	3/8	17.7	156			
PR205D1	WITO	0/0	24.5	217			
PR206D1	M12		29.4	260			
PR207D1		7/16	35.3	312			
PR208D1			45.1	399			
FLR204D1			17.7	156			
FLR205D1	M10	3/8	24.5	217			
FLR206D1			29.4	260			
FLR207D1 FLR208D1	M12	7/16	35.3	312			
	IVI I Z	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	40.2	356			

Over tightening the setting bolt may deform the plastic housing. Use the tightening torque guideline listed in this table.

NTN recommends the use of a washer between the bolt and housing base.

If a washer is not used, damage to the base could occur.

Plastic housing static strength

The table below indicates the static strength of plastic housings at room temperature $(23.5^{\circ}C)$. The static strength of plastic housings varies by operating temperature, housing type and load direction and must be factored into the selection process. **NTN** recommends using safety equipment should the housing become damaged or broken, creating a dangerous working environment.

						Unit: N/lbf					
Type of		Static strength of housing									
housing	Direction of load		Nominal number								
g		204	205	206	207	208					
	Downward	16,600	19,600	2,830	38,300	44,500					
		3,730	4,410	6,370	8,620	10,000					
	Horizontal	7,000	7,400	8,600	10,300	12,100					
PB		1,570	1,680	1,940	2,310	2,710					
		5,600	5,800	6,000	6,600	11,100					
	*Not recommended.	1,260	1,300	1,340	1,480	2,490					
		3,000	3,200	4,000	5,700	8,500					
	*Not recommended.	680	730	900	1,280	1,920					
	Horizontal	5,600	8,000	10,800	13,800	17,300					
		1,260	1,810	2,430	3,110	3,880					
51.5	45 degrees	6,600	8,400	10,300	12,200	14,000					
FLR	upward	1,480	1,900	2,310	2,730	3,150					
	Linward	7,400	7,600	8,500	10,700	15,100					
	opward	1,680	1,720	1,920	2,400	3,400					

Dimensions for dust cover

			ι	Jnit: mm/ inch						
Cover		Dimensions								
number	L	D ₂	1	Ľ						
RM-204	50.1	1 ³¹ / ₃₂	23	²⁹ / ₃₂						
RM-205	55	2 ⁵ ⁄ ₃₂	25	³¹ / ₃₂						
RM-206	64	2 ¹⁷ ⁄ ₃₂	30	1 ³ / ₁₆						
RM-207	74.6	2 ¹⁵ /16	32	1 1/4						
RM-208	84	3 5/16	37	1 ¹⁵ / ₃₂						



Water and chemical resistance of housing

Among engineering plastics, polyester plastics has better water absorption characteristics (0.06% at 23°C over 24 hours) and better dimensional stability. Polyester plastics made of crystallized polymer and while not affected by organic solvents, is affected by alkaline, making it important to consider the operating environment. The table demonstrates polyester plastics chemical resistance when soaked in solvent at 30 or 90 days.

			Deterioratio	on ratio ¹⁾ %			Tomporatura	Deterioration ratio ¹⁾ %		
	Chemicals	Temperature	Number of c	days soaked		Chemicals	°C	Number of days soaked		
		U	30 days	90 days			<u> </u>	30 days	90 days	
	Hydrochloric acid, 10%	23	89	85		Ethyl alcohol	23	99	96	
Acid	Sulfuric acid, 36%	23	97	97		Methyl alcohol	23	91	82	
Aciu		60	84	60		Isopropyl alcohol	23	100	100	
	Acetic acid 10%	23	88	88	Organic	Acetone	23	86	74	
	Potassium hydroacid, 5%	23	88	10	solven	Methyl Ethyl Keton	23	90	80	
Alkaline	Sodium hydroacid, 10%	23	*	*		Ethyl acetate	23	96	86	
	Ammonia hydroacid, 10%	23	96	87		Methylene chloride	23	54	54	
	Motor oil	23	100	100		ethylene grycole	23	100	100	
01	Brake oil	23	100	100		Zinc chrolide 10%	23	97	94	
	Gasoline (Regular)	23	100	100	Sodium	Calcium chrolide 10%	23	98	98	
		60	93	90		Sodium chrolide 5%	23	97	97	

Remarks 1) Deterioration (%) is the strength after test divided by the strength before test.

The % symbol indicates that results could not be measured as the test piece dissolved.

Remarks 2) The values listed in the table are not guaranteed as they are the result of soaking without operating stresses on the sample. Because this strength data is general, it does not apply under all operating conditions. Actual housing strength will vary depending on the type and concentration of liquid, temperature, load, etc.

Anti-Corrosion capability

NTN recommends ratings	excellent -)	▲ × →poor					
Condition	Atmos	sphere Water			Acid			
Materials	Dry	Wet	Natural water	Sodium water	Nitric acid	Sulfuric acid	Hydrochloric acid	
Martensite stainless steel SUS440C, SUS410	0	\bigtriangleup				×	×	
Austenite stainless steel SUS304, SCS13	O	O	O	0	O	0	\bigtriangleup	
Polyester plastics	O	O	O	O		0	0	
Polypropylene, polyethylene	O	O	0	O	0	0	0	
High carbon steel SUJ2	Δ			×	X	×	×	
Carbon steel, Cast iron		×	×	×	×	×	×	

Remarks: This data is obtained by observation of the surface conditions of materials.

Note that these anti-corrosion capabilities are altered by anti-corrosion surface treatment.

Not recommended for use in liquid.

Pillow type bearing unit F-UCPR2 series

Cylindrical bore, set screw type

Shaft dia.	Unit number			N	omiı	nal d mm	l imei incł	ารioเ	าร			Bolt	Bearing number	Housing	Mass of unit
mm inch		Н	L	J	A	Ν	N_1	H_1	H_2	В	S	size	Ŭ	number	(Ref.) kg lb
20 3⁄4	F-UCPR204/LP03 F-UCPR204-012/LP03	33.3 1	127 5	95 3 ¾	38 1 ½	11 7⁄16	14 9⁄16	14.2 %16	65 2 %	31 1.2205	12.7 0.500	M10 3/8	F-UC204D1/LP03 F-UC204-012D1/LP03	PR204D1 PR204D1	0.3 0.7
25 ¹³ / ₁₆ ⁷ / ₈ ¹⁵ / ₁₆ 1	F-UCPR205/LP03 F-UCPR205-013/LP03 F-UCPR205-014/LP03 F-UCPR205-015/LP03 F-UCPR205-100/LP03	36.5 1 7⁄ ₁₆	140 5 ½	105 4 ¹ / ₈	38 1 ½	11 7⁄16	14 9⁄16	14.5 9/16	71 2 ²⁵ ⁄ ₃₂	34.1 1.3425	14.3 0.563	M10 3%	F-UC205D1/LP03 F-UC205-013D1/LP03 F-UC205-014D1/LP03 F-UC205-015D1/LP03 F-UC205-100D1/LP03	PR205D1 PR205D1	0.3
$\begin{array}{c} \textbf{30} \\ \textbf{1}^{1}_{16} \\ \textbf{1}^{1}_{8} \\ \textbf{1}^{3}_{16} \\ \textbf{1}^{1}_{4} \end{array}$	F-UCPR206/LP03 F-UCPR206-101/LP03 F-UCPR206-102/LP03 F-UCPR206-103/LP03 F-UCPR206-104/LP03	42.9 1 ¹¹ / ₁₆	162 6 ³ / ₈	119 4 ¹¹ / ₁₆	46 1 ¹³ / ₁₆	14 9/16	18 ²³ / ₃₂	17.8 ¹¹ / ₁₆	83 3 ⁹ ⁄32	38.1 1.5000	15.9 0.626	M12 7⁄16	F-UC206-D1/LP03 F-UC206-101D1/LP03 F-UC206-102D1/LP03 F-UC206-103D1/LP03 F-UC206-104D1/LP03	PR206D1 PR206D1	0.5
$\begin{array}{c} \textbf{35} \\ \textbf{1} \ \frac{1}{4} \\ \textbf{15}{16} \\ \textbf{1} \ \frac{3}{8} \\ \textbf{17}{16} \end{array}$	F-UCPR207/LP03 F-UCPR207-104/LP03 F-UCPR207-105/LP03 F-UCPR207-106/LP03 F-UCPR207-107/LP03	47.6 1 ⁷ / ₈	167 6 %	127 5	48 1 7⁄8	14 9/16	18 ²³ / ₃₂	18 ²³ / ₃₂	94 3 ¹¹ / ₁₆	42.9 1.6890	17.5 0.689	M12 7⁄16	F-UC207D1/LP03 F-UC207-104D1/LP03 F-UC207-105D1/LP03 F-UC207-106D1/LP03 F-UC207-107D1/LP03	PR207D1 PR207D1	0.7
40 1 $\frac{1}{2}$ 1 $\frac{9}{16}$	F-UCPR208/LP03 F-UCPR208-108/LP03 F-UCPR208-109/LP03	49.2 1 ¹⁵ ⁄16	184 7 ¼	137 5 ¹³ ⁄ ₃₂	54 2 ½	14 9⁄16	18 ²³ ⁄ ₃₂	19.5 ²⁵ ⁄ ₃₂	98 3 ²⁷ ⁄32	49.2 1.9370	19 0.748	M12 7⁄16	F-UC208D1/LP03 F-UC208-108D1/LP03 F-UC208-109D1/LP03	PR208D1 PR208D1	1.0 2.2

Stainless bearing with solid grease + glass fiber reinforced plastic housing.



Rhombus flange type bearing unit F-UCFLR2 series

Cylindrical bore, set screw type

Shaft dia.	Unit number			N	lomiı	hal d mm	imei inch	nsior	Bolt	Bearing number	Housing	Mass of unit			
mm inch		Н	J	<i>A</i> ₂	A_1	A	Ν	L	A_0	В	S	size	3 • • •	number	(Ref.) kg Ib
20 3⁄4	F-UCFLR204/LP03 F-UCFLR204-012/LP03	113 4 1/16	90 3 ³⁵ ⁄64	15.4 ¹⁹ ⁄ ₃₂	11.4 7⁄16	26.5 1 ½2	11 %	64.8 2 %	33.7 1 ²¹ ⁄ ₆₄	31 1.2205	12.7 0.500	M10 3/8	F-UC204D1/LP03 F-UC204-012D1/LP03	FLR204D1 FLR204D1	0.3 0.7
25	F-UCFLR205/LP03 F-UCFL R205-013/LP03	130	99	17	13.5	29.1	11	70	36.8	34.1	14.3	M10	F-UC205D1/LP03 F-UC205-013D1/LP03	FLR205D1	0.3
7/8 15/16 1	F-UCFLR205-015/LP03 F-UCFLR205-015/LP03 F-UCFLR205-100/LP03	5 ½	3 ⁵⁷ ⁄64	²¹ / ₃₂	17/32	1 32	7∕ ₁₆	2 3⁄4	1 ²⁹ ⁄64	1.3425	0.563	3/8	F-UC205-014D1/LP03 F-UC205-015D1/LP03 F-UC205-100D1/LP03	FLR205D1	0.7
30 11/16	F-UCFLR206/LP03 F-UCFLR206-101/LP03	148	117	19	13.3	30.5	11	80	41.2	38.1	15.9	M10	F-UC206-D1/LP03 F-UC206-101D1/LP03	FLR206D1	0.5
$ 1 \frac{1}{8} \\ 1\frac{3}{16} \\ 1\frac{1}{4} $	F-UCFLR206-102/LP03 F-UCFLR206-103/LP03 F-UCFLR206-104/LP03	5 ¹³ ⁄16	4 ³⁹ ⁄64	3⁄4	17 _{/32}	1 ³ ⁄ ₁₆	⅔6	3 ⁵ ⁄ ₃₂	1 %	1.5000	0.626	3/8	F-UC206-102D1/LP03 F-UC206-103D1/LP03 F-UC206-104D1/LP03	FLR206D1	1.1
35 1 1/2	F-UCFLRM207/LP03	163	130	18	16.1	32.8	13	90	43.4	42.9	17.5	M12	F-UC207D1/LP03	FLR207D1	0.7
$1\frac{5}{16}$ $1\frac{3}{8}$ $1\frac{7}{16}$	F-UCFLR207-105/LP03 F-UCFLR207-106/LP03 F-UCFLR207-107/LP03	6 ¹³ ⁄ ₃₂	5 ½	²³ / ₃₂	5/8	1 ⁹ ⁄ ₃₂	1/2	3 ¹⁷ ⁄ ₃₂	1 45/64	1.6890	0.689	7∕16	F-UC207-105D1/LP03 F-UC207-106D1/LP03 F-UC207-107D1/LP03	FLR207D1	1.5
40	F-UCFLR208/LP03	175	144	21.5	20	37.5	14	100	51.7	49.2	19	M12	F-UC208D1/LP03	FLR208D1	0.9
1 [%] / ₁₆	F-UCFLR208-108/LP03	6%	5 ⁴³ ⁄64	27/32	²⁵ / ₃₂	1 ¹⁵ / ₃₂	⁹ ⁄16	3 ¹⁵ ⁄16	2 ¹ / ₃₂	1.9370	0.748	7⁄16	F-UC208-109D1/LP03	FLR208D1	2.0

Stainless bearing with solid grease + glass fiber reinforced plastic housing



Housing tolerances

1. Center height tolerances for pillow type bearing unit.

	Unit: mm/inch
Housing part number	H deviation ΔH_s
PR204D1	
PR205D1	10.05
PR206D1	± 0.25 ± 0.010
PR207D1	_0.010
PR208D1	





Pillow type bearing unit F-RM-UCPR2 series

Cylindrical bore, set screw type

Shaft dia.	Unit number				Nom	nina mr	l din n i	nens nch	ions	S			Bolt	Bearing number	Housing	Mass of unit
mm inch		H	L	J	A	N	<i>N</i> 1	H_1	H_2	A 1	B	S	size		number	(Ref.) kg Ib
20 3⁄4	F-RM-UCPR204/LP03 F-RM-UCPR204-012/LP03	33.3 1 ⁵ ⁄16	127 5	95 3 ³ ⁄ ₄	38 1 ½	11 7⁄16	14 9⁄16	14.2 %16	65 2 %	39 1 ¹⁷ ⁄ ₃₂	31 1.2205	12.7 0.500	M10 3/8	F-UC204D1/LP03 F-UC204-012D1/LP03	PR204D1 PR204D1	0.3 0.7
25 ¹³ / ₁₆ ⁷ / ₈ ¹⁵ / ₁₆ 1	F-RM-UCPR205/LP03 F-RM-UCPR205-013/LP03 F-RM-UCPR205-014/LP03 F-RM-UCPR205-015/LP03 F-RM-UCPR205-100/LP03	36.5 1 7/ ₁₆	140 5½	105 4 ¹ / ₈	38 1½	11 7⁄16	14 9⁄16	14.5 9/16	71 2 ²⁵ ⁄ ₃₂	40 1 %	34.1 1.3425	14.3 0.563	M10	F-UC205D1/LP03 F-UC205-013D1/LP03 F-UC205-014D1/LP03 F-UC205-015D1/LP03 F-UC205-100D1/LP03	PR205D1 PR205D1	0.3 0.7
$\begin{array}{c} \textbf{30} \\ \textbf{1}^{1}_{16} \\ \textbf{1}^{1}_{8} \\ \textbf{1}^{3}_{16} \\ \textbf{1}^{1}_{4} \end{array}$	F-RM-UCPR206/LP03 F-RM-UCPR206-101/LP03 F-RM-UCPR206-102/LP03 F-RM-UCPR206-103/LP03 F-RM-UCPR206-104/LP03	42.9 1 ¹¹ / ₁₆	162 6 ³ / ₈	119 4 ¹¹ / ₁₆	46 1 ¹³ / ₁₆	14 9/16	18 ²³ / ₃₂	17.8 ¹¹ / ₁₆	83 3 ⁹ ⁄32	46 1 ¹³ / ₁₆	38.1 1.5000	15.9 0.626	M12 7⁄16	F-UC206-D1/LP03 F-UC206-101D1/LP03 F-UC206-102D1/LP03 F-UC206-103D1/LP03 F-UC206-104D1/LP03	PR206D1 PR206D1	0.5
$\begin{array}{c} \textbf{35} \\ \textbf{1} \ {}^{1}\!\!\!/_4 \\ \textbf{15}\!\!\!/_{16} \\ \textbf{1} \ {}^{3}\!\!\!/_8 \\ \textbf{1}^{7}\!\!\!/_{16} \end{array}$	F-RM-UCPR207/LP03 F-RM-UCPR207-104/LP03 F-RM-UCPR207-105/LP03 F-RM-UCPR207-106/LP03 F-RM-UCPR207-107/LP03	47.6 1 ⁷ / ₈	167 6 %	127 5	48 1 7⁄8	14 %16	18 ²³ / ₃₂	18 ²³ / ₃₂	94 3 ¹¹ ⁄16	49 1 ¹⁵ ⁄16	42.9 1.6890	17.5 0.689	M12 7⁄16	F-UC207D1/LP03 F-UC207-104D1/LP03 F-UC207-105D1/LP03 F-UC207-106D1/LP03 F-UC207-107D1/LP03	PR207D1 PR207D1	0.7
40 1 $\frac{1}{2}$ 1 $\frac{9}{16}$	F-RM-UCPR208/LP03 F-RM-UCPR208-108/LP03 F-RM-UCPR208-109/LP03	49.2 1 ¹⁵ ⁄16	184 7 ½	137 5 ¹³ ⁄32	54 2 ½	14 %16	18 ²³ ⁄ ₃₂	19.5 ²⁵ ⁄ ₃₂	98 3 ²⁷ ⁄32	52 2 ½	49.2 1.9370	19 0.748	M12 7⁄16	F-UC208D1/LP03 F-UC208-108D1/LP03 F-UC208-109D1/LP03	PR208D1 PR208D1	1.0 2.2





Rhombus Flange type bearing unit F-RM-UCFLR2 series

Cylindrical bore, set screw type

Shaft dia.	Unit number		Nominal dimensions mm inch											Bearing number	Housing	Mass of unit
mm inch		Н	J	A_2	A_1	Α	Ν	L	A_0	A_4	В	S	size	Ŭ	number	(Ref.) kg lb
20 3⁄4	F-RM-UCFLR204/LP03 F-RM-UCFLR204-012/LP03	113 4 ½	90 3 ³⁵ ⁄64	15.4 ¹⁹ ⁄ ₃₂	11.4 7⁄16	26.5 1 ¹ ⁄ ₃₂	11 7/16	64.8 2 %	33.7 1 ²¹ ⁄ ₆₄	53 2 ½	31 1.2205	12.7 0.500	M10 3/8	F-UC204D1/LP03 F-UC204-012D1/LP03	FLR204D1 FLR204D1	0.3 0.7
25 ¹³ / ₁₆ ⁷ / ₈ ¹⁵ / ₁₆ 1	F-RM-UCFLR205/LP03 F-RM-UCFLR205-013/LP03 F-RM-UCFLR205-014/LP03 F-RM-UCFLR205-015/LP03 F-RM-UCFLR205-100/LP03	130 5 ½	99 3 ⁵⁷ ⁄64	17 ²¹ ⁄ ₃₂	13.5 ¹⁷ ⁄ ₃₂	29.1 1 ⁵ ⁄ ₃₂	11 7⁄16	70 2 ³ ⁄ ₄	36.8 1 ²⁹ ⁄64	57 2¼	34.1 1.3425	14.3 0.563	M10 3%	F-UC205D1/LP03 F-UC205-013D1/LP03 F-UC205-014D1/LP03 F-UC205-015D1/LP03 F-UC205-100D1/LP03	FLR205D1 FLR205D1	0.3
$\begin{array}{c} \textbf{30} \\ \textbf{1}^{1}_{16} \\ \textbf{1}^{1}_{8} \\ \textbf{1}^{3}_{16} \\ \textbf{1}^{1}_{4} \end{array}$	F-RM-UCFLR206/LP03 F-RM-UCFLR206-101/LP03 F-RM-UCFLR206-102/LP03 F-RM-UCFLR206-103/LP03 F-RM-UCFLR206-104/LP03	148 5 ¹³ / ₁₆	117 4 ³⁹ ⁄64	19 3⁄4	13.3 ¹⁷ ⁄ ₃₂	30.5 1 ³ / ₁₆	11 7⁄16	80 3 ⁵ ⁄ ₃₂	41.2 1	64 2 ¹⁷ ⁄ ₃₂	38.1 1.5000	15.9 0.626	M10 3%	F-UC206-D1/LP03 F-UC206-101D1/LP03 F-UC206-102D1/LP03 F-UC206-103D1/LP03 F-UC206-104D1/LP03	FLR206D1 FLR206D1	0.5
$\begin{array}{c} \textbf{35} \\ \textbf{1} \ \frac{1}{4} \\ \textbf{1} \ \frac{5}{16} \\ \textbf{1} \ \frac{3}{8} \\ \textbf{1} \ \frac{7}{16} \end{array}$	F-RM-UCFLRM207/LP03 F-RM-UCFLR207-104/LP03 F-RM-UCFLR207-105/LP03 F-RM-UCFLR207-106/LP03 F-RM-UCFLR207-107/LP03	163 6 ¹³ ⁄ ₃₂	130 5 ½	18 ²³ ⁄ ₃₂	16.1 5/8	32.8 1 ⁹ ⁄ ₃₂	13 ½	90 3 ¹⁷ / ₃₂	43.4 1 ⁴⁵ ⁄64	67 2 5⁄8	42.9 1.6890	17.5 0.689	M12 7⁄16	F-UC207D1/LP03 F-UC207-104D1/LP03 F-UC207-105D1/LP03 F-UC207-106D1/LP03 F-UC207-107D1/LP03	FLR207D1 FLR207D1	0.7
40 1 $\frac{1}{2}$ 1 $\frac{9}{16}$	F-RM-UCFLR208/LP03 F-RM-UCFLR208-108/LP03 F-RM-UCFLR208-109/LP03	175 6	144 5 ⁴³ ⁄64	21.5 ²⁷ ⁄ ₃₂	20 ²⁵ ⁄32	37.5 1 ¹⁵ ⁄ ₃₂	14 %16	100 3 ¹⁵ ⁄16	51.7 2 ¹ / ₃₂	74 2 ¹⁵ ⁄16	49.2 1.9370	19 0.748	M12 7⁄16	F-UC208D1/LP03 F-UC208-108D1/LP03 F-UC208-109D1/LP03	FLR208D1 FLR208D1	0.9 2.0

Stainless bearing with solid grease + glass fiber reinforced plastic housing



Housing tolerances

2. Tolerances for rhombus flange type housing. Unit: mm/inch

Housing number	A_2 deviation ΔA_2	Tolerances for mounting bolt holes
FLR204D1		
FLR205D1		1.0.5
FLR206D1	±0.7 +0.028	±0.5 ±0.020
FLR207D1	_0.020	_0.020
FLR208D1		



Stainless insert bearing

Cylindrical bore, set screw type with solid grease





Grease fill plan (Spot-pack type is standard)

Shaft						Nominal	dimen	sions				Basic loa	ad rating	Mass
dia.	Bearing number		1	I	1	mm I	inch	I	I	1	I	N dvnamic	lbf static	(Ref.)
inch		d	D	В	C	∦ s min	S	S 1	G	ds	d_4	Cr	Cor	KG ID
20 3⁄4	F-UC204D1/LP03 F-UC204-012D1/LP03	20 0.7500	47 1.8504	31 1.2205	17 0.6693	1 0.039	12.7 0.500	18.3 0.720	4.5 0.177	M5×0.8 No.10-32UNF	29.6 1.1654	9 900 2 220	6 650 1 500	0.17 0.39
25 ¹³ / ₁₆ ⁷ / ₈ ¹⁵ / ₁₆ 1	F-UC205D1/LP03 F-UC205-013D1/LP03 F-UC205-014D1/LP03 F-UC205-015D1/LP03 F-UC205-100D1/LP03	25 0.8125 0.8750 0.9375 1.0000	52 2.0472	34.1 1.3425	17 0.6693	1 0.039	14.3 0.563	19.8 0.780	5 0.197	M5×0.8 No.10-32UNF	33.9 1.3346	10 800 2 430	7 850 1 770	0.20 0.53 0.51 0.46 0.44
$ \begin{array}{c} 30 \\ 1^{1}_{16} \\ 1^{1}_{8} \\ 1^{3}_{16} \\ 1^{1}_{4} \end{array} $	F-UC206D1/LP03 F-UC206-101D1/LP03 F-UC206-102D1/LP03 F-UC206-103D1/LP03 F-UC206-104D1/LP03	30 1.0625 1.1250 1.1875 1.2500	62 2.4409	38.1 1.5000	19 0.7480	1 0.039	15.9 0.626	22.2 0.874	5 0.197	M6×0.75 1/4-28UNF	40.8 1.6063	15 000 3 350	11 300 2 540	0.33 0.82 0.77 0.73 0.66
$\begin{array}{c} 35 \\ 1 \frac{1}{4} \\ 15 \frac{1}{16} \\ 1 \frac{3}{8} \\ 1\frac{7}{16} \end{array}$	F-UC207D1/LP03 F-UC207-104D1/LP03 F-UC207-105D1/LP03 F-UC207-106D1/LP03 F-UC207-107D1/LP03	35 1.2500 1.3125 1.3750 1.4375	72 2.8346	42.9 1.6890	20 0.7874	1.5 0.059	17.5 0.689	25.4 1.000	6 0.236	M6×0.75 1/4-28UNF	46.8 1.8425	19 700 4 450	15 300 3 450	0.49 1.21 1.15 1.08 1.01
40 1 $\frac{1}{2}$ 1 $\frac{9}{16}$	F-UC208D1/LP03 F-UC208-108D1/LP03 F-UC208-109D1/LP03	40 1.5000 1.5625	80 3.1496	49.2 1.9370	21 0.8268	1.5 0.059	19 0.748	30.2 1.189	8 0.315	M8×1 5/16-24UNF	53 2.0866	22 400 5 050	17 800 4 000	0.65 1.52 1.46

Note) Insert bearings can be supplied with USDA qualified food grade grease. The resulting grease suffix is "L791". Ex. F-UC204 D1/L791.

Unit: μ m/0.0001 inch

Grease name	Allowable temp. range.	Applications	Note
SHC POLYREE (POLYREX) 462	−20~+80°C	Food processing and general machines.	H1 standard grease qualified by NSF.

Unit ball bearing tolerances (JIS B 1558)

1. Inner ring tolerances.

Non	ninal bo	re diam	eter	Bor	e diam	eter	Wi	Badial	
ov	over		cl.	$\Delta d_{\rm mp}$ Deviations		$\Delta V_{ m dp}$ Variations	ے Deviatio	runout (ref.)	
mm	inch	mm	inch	high	low	max.	high	low	max.
10	0 7007	21 750	1.2500	+18	0	12	0	-120	18
10	0.7087	31.750		+ 7	0	5	0	- 47	7
31.750	1 2500	50 800	0,0000	+21	0	14	0	-120	20
	1.2500	50.600	2.0000	+ 8	0	6	0	- 47	8

 Δd_{mp} ; Mean bore diameter deviation. ΔV_{dp} ; Bore diameter variation. $\Delta B_{\rm s}$; Inner ring width deviation.

Attaching the dust cover

- ① Insert the edge of the dust cover in the housing's groove. 2 Insert the other side of the dust cover in the opposite housing groove
- either by hand or with assistance of a plastic/rubber mallet/hammer.
- 3 To remove the dust cover, pry the edge from the housing groove using a screw driver or similar tool.
- * Note: frequent mounting/dismounting of the dust cover may damage the edge of the housing and is not recommended.

2. Outer ring tolerances. Unit: µm/0.0001 inch

Nomi	nal outs	∆i Devia	Radial runout										
٥v	ver	in	cl.	2011		(ref.)							
mm	inch	mm	inch	high	low	max.							
20	1 1011	50	1 0695	0	-11	20							
30	1.1011	50	1.9005	0	- 4	8							
50	1 0695	90	2 1 4 0 6	0	-13	25							
50	1.9005	00	3.1490	0	- 5	10							

 ΔDm ; Mean outside diameter deviation. The low deviation of outside diameter ΔDm dose not apply within the distance of 1/4 the width of the outer ring from the side.

