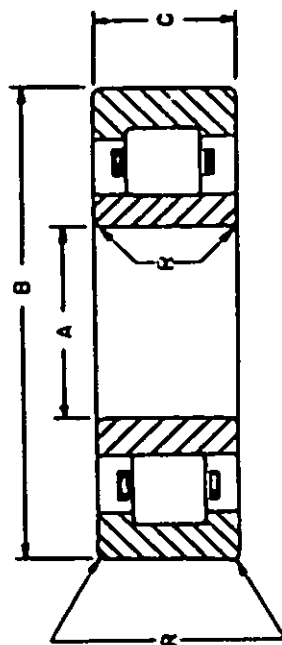


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THE CORNER RADIUS OR ONLY ONE OF BOTH SIZE OF THE BEARING MUST CLEAR THE SHAFT AND HOUSING FILLET RADIUS LISTED IN THE TABLE BELOW

FED. SUP CLASS
3110

P.A. Nono Other Cast ORD UCAF	TITLE BEARINGS, ROLLER, CYLINDRICAL, SINGLE ROW OF ROLLERS, CYLINDRICAL INNER RING, THE ROLLER RETAINING RINGS ON OUTER RING, NON-LOCATING.	MILITARY STANDARD MS 19076
PROCUREMENT SPECIFICATION FF-3-185	SUPERSEDES:	SHEET 1 OF 1

DD FORM 672-1

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

APPROVED 30 APR 1956 REVISED

MS PART NO	FIN	A		B		C		R	RECOMMENDED		INTERNAL RADIAL CLEARANCE -0.001 INCH	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING	REDUCED LIMITING SPEED	EST LEAK
		INCH	MM	INCH	MM	INCH	MM		SHAFT	HOUSING					
MS19076 - 1		1.6693	40	1.5748	12	.4724	.025	.04	1.44	1.67	4	2500	1400	6750	.19
MS19076 - 2		.6623	47	1.8504	14	.5512	.040	.00	1.67	1.82	4	2900	1500	7000	.32
MS19076 - 3		.7974	52	2.0472	15	.6506	.040	.00	1.82	1.86	4	3500	1800	8750	.37
MS19076 - 4		.9843	52	2.0472	15	.6506	.040	.00	1.86	2.20	4	3000	1600	6500	.35
MS19076 - 5		.8343	62	2.4409	17	.6633	.040	.00	2.20	2.24	4	5100	2600	5000	.64
MS19076 - 6		1.1811	62	2.4409	16	.6290	.040	.00	2.24	2.55	4	3750	2200	5500	.57
MS19076 - 7		1.1811	72	2.8346	19	.7480	.040	.00	2.55	2.61	6	6750	3250	6000	.92
MS19076 - 8		1.3780	72	2.8346	17	.6633	.040	.00	2.61	2.83	6	5200	3450	4700	.76
MS19076 - 9		1.3780	80	3.1496	21	.8260	.060	.00	2.83	2.88	6	6250	3550	4350	1.20
MS19076 - 10		1.5740	80	3.1496	19	.7037	.040	.00	2.88	3.19	6	7650	4650	4200	.89
MS19076 - 11		1.5748	90	3.5433	23	.9055	.060	.00	3.19	3.06	6	10300	6350	3050	1.74
MS19076 - 12		1.7717	85	3.3465	19	.7400	.040	.00	3.06	3.54	8	6050	5000	3850	1.15
MS19076 - 13		1.7717	100	3.6370	25	.9943	.060	.00	3.54	3.60	8	12000	6050	3450	2.32
MS19076 - 14		1.9685	110	4.3307	27	1.0630	.060	.00	3.60	4.25	8	17000	11100	3150	3.04
MS19076 - 15		2.1654	100	3.9370	21	.8268	.060	.00	4.25	3.11	8	10300	6700	3250	1.71
MS19076 - 16		2.1654	120	4.7244	29	1.1417	.080	.00	4.25	4.06	8	20700	13500	2950	3.85
MS19076 - 17		2.3622	110	4.3307	22	.8661	.060	.00	4.06	4.61	8	17600	8450	2950	2.29
MS19076 - 18		2.3622	130	5.1181	31	1.2205	.080	.00	4.61	5.07	8	23200	15500	2900	4.82
MS19076 - 19		2.5591	120	4.7244	23	.9055	.060	.00	5.07	5.67	8	14000	10200	2700	2.83
MS19076 - 20		2.5591	140	5.5118	33	1.2992	.080	.00	5.67	6.05	8	25000	17100	2400	5.09
MS19076 - 21		2.7559	125	4.9213	24	.9449	.060	.00	6.05	6.12	10	14800	10200	2350	3.02
MS19076 - 22		2.7559	150	5.9055	35	1.3760	.080	.00	6.12	6.40	10	20100	20200	2150	7.47
MS19076 - 23		2.9528	130	5.1181	25	.9943	.060	.00	6.40	6.30	10	17000	12100	2400	3.32
MS19076 - 24		2.9528	160	5.2962	37	1.4567	.080	.00	6.30	6.73	10	33300	25600	2100	9.55
MS19076 - 25		3.1496	140	5.5118	26	1.0236	.080	.00	6.73	7.03	10	19600	13700	2250	3.54
MS19076 - 26		3.1496	170	6.6329	39	1.5354	.080	.00	7.03	7.40	10	36500	25600	1950	10.47
MS19076 - 27		3.3465	150	5.9055	28	1.0234	.080	.00	7.40	7.89	12	22400	15900	2100	5.00
MS19076 - 28		3.3465	180	7.0068	41	1.6142	.100	.00	7.89	8.29	12	42000	30500	1850	12.26
MS19076 - 29		3.5433	160	5.5118	30	1.1811	.080	.00	8.29	8.73	12	28000	20200	1950	5.98
MS19076 - 30		3.5433	190	7.4603	43	1.6920	.100	.00	8.73	9.12	12	46500	33300	1750	14.21
MS19076 - 31		3.7402	170	6.6329	32	1.2593	.080	.00	9.12	9.50	12	31400	22800	1950	7.10
MS19076 - 32		3.7402	200	7.8740	45	1.7717	.100	.00	9.50	9.89	12	53200	39100	1650	10.94
MS19076 - 33		3.9370	180	7.0068	34	1.3386	.080	.00	9.89	10.28	12	34800	25000	1750	8.62

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FED. SUP CLASS
3110

MS PART NO	FIN	A INSIDE DIA	B OUTSIDE DIA	C WIDTH	R SHAFT & HOUSING FILLET RADIUS	RECOMMENDED SHOULDER DIAMETER		INTERNAL RADIAL CLEARANCE - .0001 INCH	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING	RECOMMENDED LIMITING SPEED	EST WEIGHT
						SHAFT	HOUSING					
		INCH	INCH	INCH	MAX	MIN	MAX	MIN	LBS	LBS	RPM	LBS
MS19076 - 34		100	124	47	.100	4.83	7.62	12	61500	45000	1550	19.50
MS19076 - 35		105	130	36	.080	4.77	6.84	14	38000	30000	1500	10.32
MS19076 - 36		105	133	49	.100	5.05	7.87	14	69700	52400	1450	22.95
MS19076 - 37		110	133	38	.080	5.01	7.20	14	45000	34000	1550	11.81
MS19076 - 38		110	133	50	.100	5.37	8.50	14	78100	60300	1350	27.38
MS19075 - 39		120	154	40	.080	8.47	7.74	14	49500	37500	1450	14.70
MS19076 - 40		120	154	55	.100	5.32	9.21	14	93400	71100	1150	35.10
MS19076 - 41		130	161	58	.120	6.32	9.92	16	110000	90100	950	43.95
MS19076 - 42		150	185	65	.120	7.11	11.34	16	133000	106000	950	50.00

P.A. NORD

Other Cast
ORD
USAF

PROCUREMENT SPECIFICATION
FF-B-185

TITLE

BEARINGS, ROLLER, CYLINDRICAL, SINGLE ROW OF ROLLERS, CYLINDRICAL
INNER RING, TWO ROLLER RETAINING RIBS ON OUTER RING, NON-LOCATING.

SUPERSEDES:

MILITARY STANDARD

MS 19076

SHEET 2 OF 3

APPROVED 30 APR 1959 REVISED

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TOLERANCES: STANDARD GRADE (TOLERANCES IN .0001 INCH)

BORE IN		INNER RING		RADIAL RUNOUT	
		OVER	INCL	MIN	MAX
0	10	-3	+0	3	
10	16	-3	+0	4	
16	30	-4	+0	5	
30	50	-5	+0	6	
50	80	-6	+0	8	
80	120	-8	+0	10	
120	180	-10	+0	12	
180	250	-12	+0	16	

OD IN		OUTER RING		RADIAL RUNOUT	
		OVER	INCL	MIN	MAX
0	16	+0	-4	6	
16	30	+0	-4	6	
30	50	+0	-5	6	
50	80	+0	-5	10	
80	120	+0	-6	14	
120	180	+0	-8	16	
180	250	+0	-10	18	
250	315	+0	-12	20	
315	400	+0	-16	28	

NOMINAL BORE IN		EIGHTH		C	
		OVER	INCL	MAX	MIN
0	100	0	0	0	50

THE TOLERANCES FOR EIGHTH APPLIED TO INDIVIDUAL RINGS.

RINGS AND ROLLERS: ALLOY STEEL, FED STD. 56 STEEL No's., 4320, 4620, 8620 or E52100. CASE; BRASS, BRONZE OR STEEL (LACHINED).

RINGS AND ROLLERS, 56 RC. TO 58 RC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.

THE IDENTIFYING NUMBER DOES NOT INCLUDE LUBRICATION.

BASIC DYNAMIC LOAD RATING:

BASIC DYNAMIC LOAD RATING IS THAT CONSTANT STATIONARY RADIAL LOAD WHICH A GROUP OF APPARENTLY IDENTICAL BEARINGS WITH STATIONARY OUTER RING CAN ENDURE FOR A RATING LIFE OF ONE MILLION REVOLUTIONS OF THE INNER RING.

RATING LIFE (HOURS):

RATING LIFE IS THE NUMBER OF HOURS AT SOME CONSTANT SPEED OF THE INNER RING THAT 90 PER CENT OF A GROUP OF APPARENTLY IDENTICAL BEARINGS WILL COMPLETE OR EXCEED BEFORE THE FIRST EVIDENCE OF FATIGUE DEVELOPS.

THE MAGNITUDE OF THE APPROXIMATE RATING LIFE IN HOURS, H , IS FOUND FROM THE FORMULA

$$H = \frac{10^6}{P} \left(\frac{C}{R} \right)^3$$

WHERE C = BASIC DYNAMIC LOAD RATING

P = EQUIVALENT LOAD (COMBINED RADIAL AND THRUST LOAD)

R = REVOLUTIONS PER MINUTE

AVERAGE LIFE IS APPROXIMATELY FIVE TIMES THE RATING LIFE.

BASIC STATIC LOAD RATING:

BASIC STATIC LOAD RATING IS THE MAXIMUM STATIC RADIAL LOAD WHICH WILL PRODUCE A PERMANENT DEFORMATION IN THE RACE AND ROLLERS, COMBINED AT ANY ONE CONTACT POINT, OF NOT MORE THAN .0001 OF THE ROLLER DIAMETER.

OPERATING TEMPERATURE:

RECOMMENDED OPERATING TEMPERATURE NOT TO EXCEED 250 DEGREES FARENHEIT.

LIMITING RPM:

LIMITING RPM IS THE RECOMMENDED SAFE DESIGN SPEED FOR NORMAL OPERATING CONDITIONS WITH GREASE LUBRICATION (INNER RING ROTATING).

NOTES:

(A) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERRED HEREIN.

(B) REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.

APPROVED 30 APR 1959
REVISED

P.A. NORD	TITLE	MILITARY STANDARD
Other Cast ORO USAF	BEARINGS, ROLLER, CYLINDRICAL, SINGLE ROW OF ROLLERS, CYLINDRICAL INNER RING, TWO ROLLER RETAINING RINGS ON OUTER RING, NON-LOCATING.	MS 19076
PROCUREMENT SPECIFICATION FF-0-178	SUPERSEDES:	SHEET 3 OF 3