

REV.
B

AS20218™

FEDERAL SUPPLY CLASS
3110

RATIONALE

IN ORDER TO BRING THE AS20218 DOCUMENT UP TO DATE WITH ALL THE REFERENCE DOCUMENTS, REVISION WAS CREATED. THE CHANGES MADE WERE EDITORIAL AND TO MAKE THE FORMAT THE SAME AS SIMILAR DOCUMENTS WITHIN THE WORKING GROUP. A CODE "E" FOR USE OF ZINC-NICKEL PLATING WAS IMPLEMENTED. THE ADDITION OF SPECIFYING TYPE I TO THE MIL-PRF-23827 GREASE SPECIFICATION.

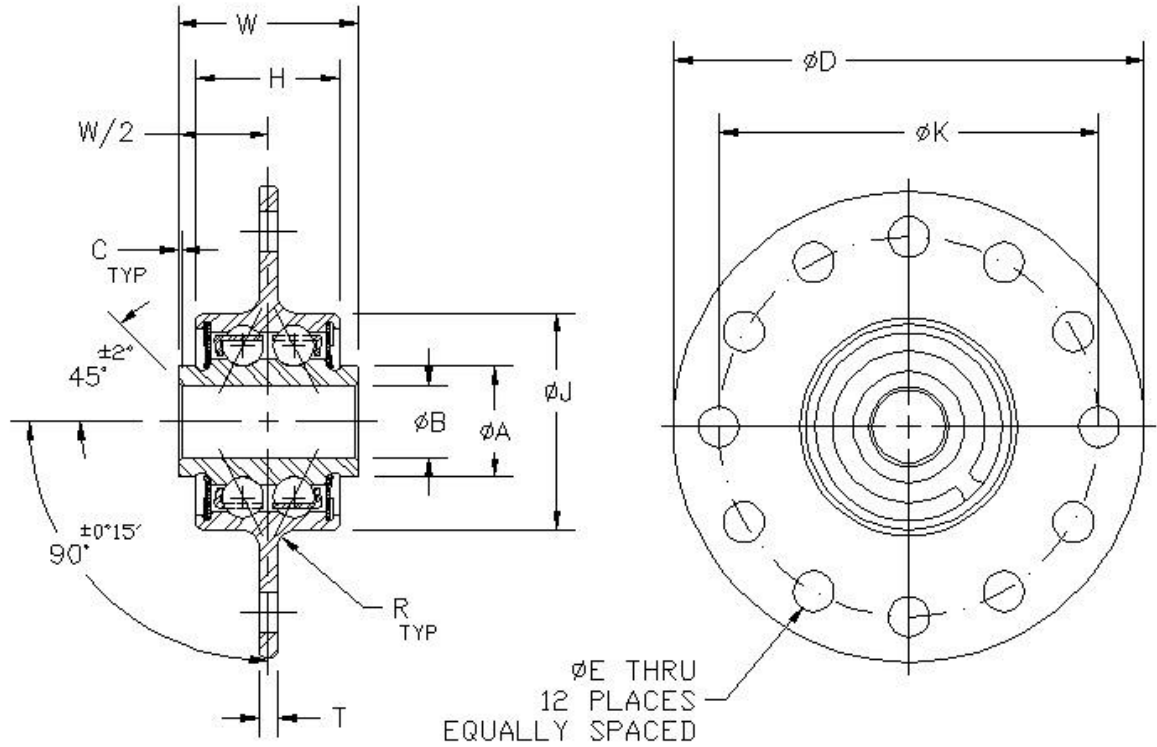
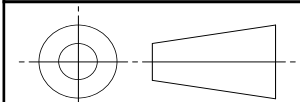


FIGURE 1

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AS20218E>

THIRD ANGLE PROJECTION



CUSTODIAN: ACBG

PROCUREMENT SPECIFICATION: AS6038



AEROSPACE STANDARD

(R) BEARING, BALL, ANTI-FRICTION, AIRFRAME

AS20218™
SHEET 1 OF 3

REV.
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TABLE 1 – DIMENSIONS AND TOLERANCES

MS DASH NO.	BORE SIZE NOM.	A MIN. 3/ 4/	B +.0000 -.0005 1/	C +.010 -.005 2/ 3/	D ±.010 4/	E +.000 -.005 4/	H ±.005 4/	J ±.010 3/ 4/	K ± .005	R +.010 -.000 3/	T ± .005 4/	W +.000 -.005 4/
-1	.2500	.382	.2500	.015	1.625	.145	.500	.750	1.312	.062	.062	.625
-2	.3125	.441	.3125	.015	1.687	.145	.562	.875	1.375	.062	.062	.687

1/ OUT-OF-ROUND TOLERANCES: BORE: +.0002, -.0007

2/ A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE

3/ DIMENSIONS ARE TYPICAL

4/ DIMENSIONS ARE MET AFTER PLATING

5 REMOVE ALL BURRS AND SHARP EDGES

TABLE 2 – INTERNAL SPECIFICATIONS AND LOAD REQUIREMENTS

MS DASH NO.	RADIAL CLEARANCE MAX.	AXIAL CLEARANCE MAX.	WOBBLE MAX.	RADIAL STATIC CAPACITY LB MIN.	AXIAL STATIC CAPACITY LB MIN.	RADIAL ENDURANCE LOAD LB MIN.	LIMIT MOMENT RATING IN-LB MIN.	WEIGHT LB MAX.
-1	.0010	.0020	.0050	2770	700	500	414	.06
-2	.0010	.0020	.0050	3280	900	680	551	.08

REQUIREMENTS

1. MATERIALS:

INNER RING: 52100 STEEL PER AMS6440

OUTER RING: 52100 STEEL PER AMS6440 OR 6150 STEEL PER AMS6448

BALLS : 52100 STEEL PER AMS6440

SEALS: NITRILE BUTADIENE OR POLYTETRAFLUOROETHYLENE (PTFE) PER AMS3652

SEAL RETAINER: 300 SERIES CRES

CAGE: CARBON STEEL OR CRES

2. HEAT TREATMENT:

INNER RING: 58-64 HRC

OUTER RING: RACEWAYS 58-62 HRC AND RIVETING FLANGE HRC 25 MAXIMUM.

BALLS: 60-67 HRC

3. STABILITY:

RINGS AND BALLS SHALL BE STABILIZED FOR OPERATION AT -67°F TO +250°F.

4. SURFACE ROUGHNESS:

32 MICROINCHES RA ALL OVER, RACEWAYS 4 MICROINCHES RA, IN ACCORDANCE WITH ASME B46.1.

5. PLATING: ALL EXTERNAL SURFACES EXCEPT BORE, SEALS AND SEAL RETAINERS SHALL BE PLATED .0003 TO .0005 THICK WITH:

(NO DESIGNATOR) CADMIUM IN ACCORDANCE WITH AMS-QQ-P-416, TYPE I, CLASS 2

DESIGNATOR "E" ZINC-NICKEL IN ACCORDANCE WITH AMS2417, TYPE 2, GRADE B

	AEROSPACE STANDARD		AS20218™ SHEET 2 OF 3	REV. B
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