

# RATIONALE

CADMIUM WARNING NOTE MODIFIED, METRIC DIMENSIONS REMOVED FROM TABLES, GREASE NOTE 2 AMENDED, CODE "E" FOR ZN-NI CALLOUT ADDED AND EXAMPLE OF PART NUMBER ADDED.

## NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS8914.

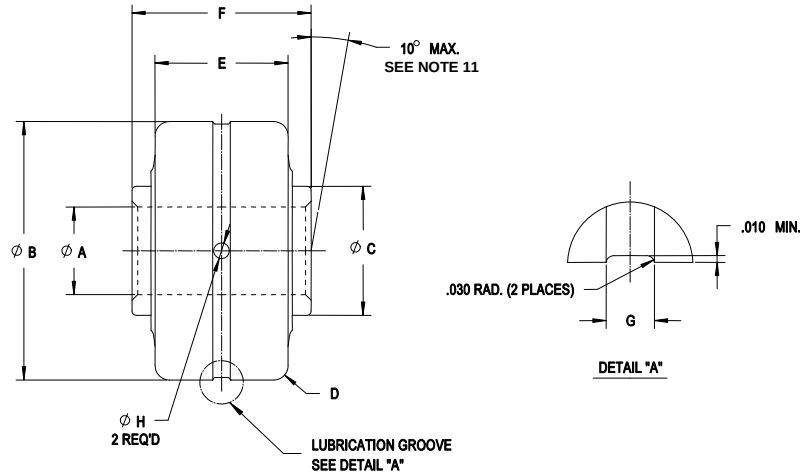


FIGURE 1

TABLE 1 - DIMENSIONS AND STRENGTHS

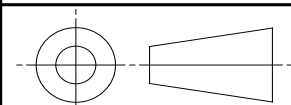
| DASH NO. | φA               | φ B              | φ C              | D                | E                | F                | G                | φ H              | RADIAL INTERNAL CLEARANCE | WT MAX. LB | STATIC LIMIT LOAD LB |                | DYNAMIC LOAD LB |        |      |        |      |
|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|------------|----------------------|----------------|-----------------|--------|------|--------|------|
|          | +0.000<br>-0.005 | +0.000<br>-0.005 | +0.005<br>-0.005 | +0.015<br>-0.000 | +0.000<br>-0.005 | +0.000<br>-0.005 | GROOVE WIDTH MIN | LUBRICATION HOLE |                           |            | RADIAL               | AXIAL          | RADIAL          | AXIAL  |      |        |      |
|          | BORE             | OD *1            | DIA              | RAD              | WIDTH OUTER RING | WIDTH INNER RING |                  |                  |                           |            |                      |                |                 |        |      |        |      |
| -4C      | .2500            | 1.2500           | .490             | .050             | .750             | 1.000            | .080             | .060             | .0002<br>.0010            | .21        | 6870                 | 4250           | 5700            | 3525   |      |        |      |
| -5C      | .3125            | 1.5625           | .670             |                  | .844             | 1.187            |                  |                  |                           | .110       | .090                 | .0004<br>.0012 | .38             | 12 300 | 7100 | 10 200 | 5890 |
| -6C      | .3750            |                  |                  |                  |                  |                  |                  |                  |                           |            |                      |                |                 |        |      |        |      |
| -7C      | .4375            | 2.0000           | .920             |                  | 1.000            | 1.500            | .74              | 19 100           | 10 400                    |            |                      |                | 15 800          | 8600   |      |        |      |
| -8C      | .5000            |                  |                  |                  |                  |                  |                  |                  |                           |            |                      |                |                 |        |      |        |      |
| -9C      | .5625            | 2.3750           | 1.000            |                  | 1.125            | 1.687            | 1.15             | 29 000           | 14 500                    |            |                      |                | 24 000          | 12 000 |      |        |      |
| -10C     | .6250            |                  |                  |                  |                  |                  |                  |                  |                           |            |                      |                |                 |        |      |        |      |
| -12C     | .7500            | 2.6250           | 1.230            |                  | 1.250            | 1.875            | 1.50             | 38 300           | 18 600                    | 31 700     | 15 395               |                |                 |        |      |        |      |
| -14C     | .8750            | 3.0000           | 1.350            |                  | 1.500            | 2.000            | 2.28             | 59 100           | 29 500                    | 49 000     | 25 150               |                |                 |        |      |        |      |

| BASIC (NOMINAL) DIAMETER |        | BEARING ROUNDNESS LIMITS *2 |               |         |         |                      |               |         |         |
|--------------------------|--------|-----------------------------|---------------|---------|---------|----------------------|---------------|---------|---------|
|                          |        | BORE ACCEPTANCE LIMITS      |               |         |         | OD ACCEPTANCE LIMITS |               |         |         |
|                          |        | d MIN                       | MEAN DIAMETER |         | d MAX   | D MIN                | MEAN DIAMETER |         | D MAX   |
| OVER                     | INCL   |                             | LOW           | HIGH    |         |                      | LOW           | HIGH    |         |
| .0000                    | 2.0000 | -0.0006                     | -0.0005       | +0.0000 | +0.0001 | -0.0008              | -0.0005       | +0.0000 | +0.0003 |
| 2.0000                   | 4.0000 | -0.0009                     | -0.0007       | +0.0000 | +0.0002 | -0.0012              | -0.0007       | +0.0000 | +0.0005 |

\*1 TOLERANCE ON -10C, -12C AND -14C O.D. IS +0.0000 TO -0.0007.  
\*2 BORE AND OD ROUNDNESS MEASUREMENT PER AS8914, SECTION 4.5.15.

For more information on this standard, visit  
<https://www.sae.org/standards/content/AS28914C>

THIRD ANGLE PROJECTION



CUSTODIAN: ACBG

PROCUREMENT SPECIFICATION: AS8914



## AEROSPACE STANDARD

BEARING, ROLLER, SELF-ALIGNING,  
DOUBLE ROW, AIRFRAME,  
ANTI-FRICTION, SEALED, TYPE III

AS28914™  
SHEET 1 OF 2

REV. C

Documents

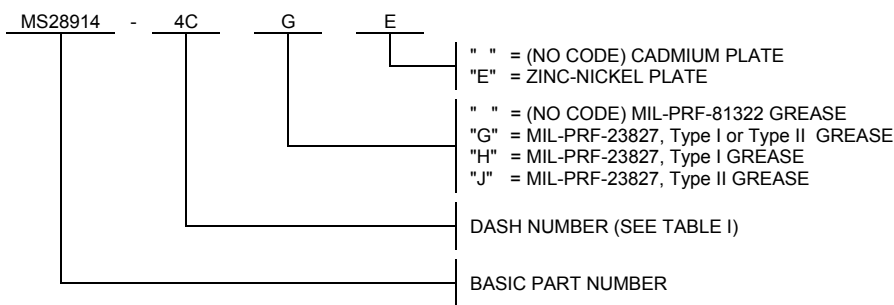
NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH MAY CONTAIN CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

REQUIREMENTS:

1. MATERIAL: RETAINERS: SAE 4140 STEEL PER AMS6382, ALUMINUM BRONZE ALLOY PER AMS4640, OR COPPER ALLOY PER ASTM B505, ASTM B271, ASTM B30 OR EQUIVALENT.  
RINGS AND ROLLERS: SAE 52100 STEEL PER AMS6440.
2. MIL-PRF-81322 OR MIL-PRF-23827 (TYPE I OR TYPE II). ALL BEARINGS SHALL BE PACKED WITH GREASE CONFORMING TO MIL-PRF-81322 UNLESS OTHERWISE SPECIFIED. ALL BEARINGS SHALL BE FILLED 80% MINIMUM WITH GREASE. IF MIL-PRF-23827 (TYPE I OR TYPE II) IS REQUIRED, ADD THE LETTER "G" (TYPE I OR TYPE II) OR "H" (TYPE I) OR "J" (TYPE II) AFTER THE MS28914 DASH NUMBER. MIL-PRF-23827 (TYPE I OR TYPE II) SHALL NOT BE USED WHERE TEMPERATURE EXCEEDS 250 °F MAX.
3. FINISH: ZINC-NICKEL PLATED IN ACCORDANCE WITH AMS2417, TYPE 2, GRADE B OR CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE I, CLASS 2, TO A THICKNESS OF .0003 TO .0006 INCHES. IF ZINC-NICKEL PLATING IS REQUIRED, ADD THE LETTER "E" TO THE END OF THE PART NUMBER AS SHOWN IN REQUIREMENT 8.
4. SURFACE ROUGHNESS: RACEWAYS 8 MICROINCHES Ra, ROLLERS 6 MICROINCHES Ra. ALL OTHER SURFACES 32 MICROINCHES Ra IN ACCORDANCE WITH ANSI/ASME B46.1. REMOVE BURRS AND SHARP EDGES.
5. DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED.
6. TOLERANCES: DECIMALS +.010 TO -.000, UNLESS OTHERWISE SPECIFIED.
7. DIMENSIONS TO BE MET AFTER PLATING.
8. EXAMPLE OF PART NUMBER:



9. FOR DESIGN FEATURE PURPOSE, THIS SPECIFICATION TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
10. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS.
11. SELF-ALIGNING TO 10° MAX. IN EITHER DIRECTION.
12. A CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

|                                                                                     |                                                                                             |                                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  | <b>AEROSPACE STANDARD</b>                                                                   | <b>AS28914™</b>                                                                                       | <b>REV.</b>                                                                           |
|                                                                                     | BEARING, ROLLER, SELF-ALIGNING,<br>DOUBLE ROW, AIRFRAME,<br>ANTI-FRICTION, SEALED, TYPE III | SHEET 2 OF 2<br> |  |