

FED. SUP CLASS.  
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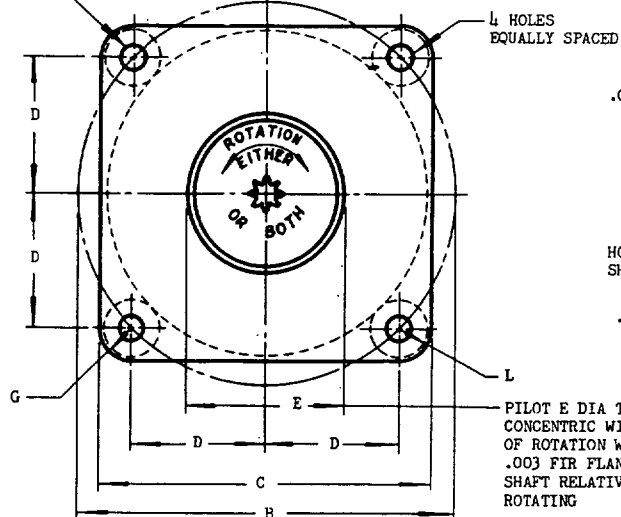
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F DIA, 4 HOLES, SHALL FIT A MATING PART HAVING A PILOT DIA W AND 4 STUDS EACH WITHIN AN AREA HAVING X DIA CENTRALLY LOCATED ON ITS BASIC POSITION

COMPOSITE ERROR, TOOTH TO TOOTH .0007, TOTAL .0020 WITH REFERENCE TO AXIS OF ROTATION, FLANGE AND SHAFT RELATIVELY ROTATING

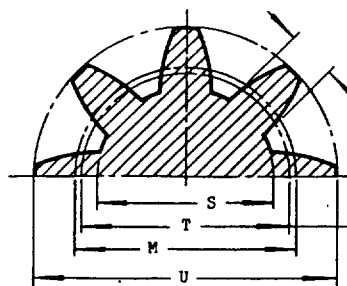
SURFACE SHALL BE FLAT AND SQUARE WITH AXIS OF ROTATION WITHIN .002 FIR PER INCH OF DIA, FLANGE AND SHAFT RELATIVELY ROTATING



SPLINE-PINION DATA

N = NUMBER OF TEETH  
P = DIAMETRAL PITCH  
20° PRESSURE ANGLE

ROCKWELL C OR EQUIVALENT HARDNESS:  
SURFACE 45 MINIMUM 55 MAXIMUM  
CORE 55 MAXIMUM



SPLINE-PINION DETAIL

R CIRCULAR TOOTH THICKNESS AT PITCH DIA M

TOOTH FORM OUTSIDE THIS DIA SHALL BE TRUE INVOLUTE

- A IS GREATEST DIAMETER OR DIMENSION OF ACCESSORY EXCLUSIVE OF ATTACHED DEVICES.
- OUTSIDE DIAMETERS OF SMALL PINIONS ARE ENLARGED TO .VOID UNDERCUT, TO MAINTAIN STANDARD CENTER DISTANCE, THE GEAR DIAMETERS MUST BE DECREASED BY THE AMOUNT OF THE PINION ENLARGEMENT GIVEN AT Q. IF MATING GEARS ARE MADE WITH STANDARD TOOTH PROPORTIONS, THE CENTER DISTANCES MUST BE INCREASED APPROXIMATELY BY 1/2 Q.
- OTHER MASTER GEARS MAY BE USED IF CENTER DISTANCE IS PROPERLY RECALCULATED.
- R MAX HAS BEEN REDUCED FROM THEORETICAL BY TOTAL COMPOSITE ERROR OF PINION ONLY, RANGE RESULTS FROM SIZE VAR ONLY.
- RANGE OF CENTER DISTANCE IS THAT RESULTING FROM RMS SUMMATION OF ALL VARIABLES IN THIS STRUCTURE.

SIZE DETERMINATION OF MATING GEAR MUST RECOGNIZE FURTHER VARIATIONS IN ITS SUPPORTING STRUCTURE.

SPLINE-PINION DIMENSIONS ARE BASIC MAXIMUM.

PINION DIMENSIONS ARE ADEQUATE FOR TYPE SHOWN BUT ALL PINIONS SHALL BE CHECKED FOR APPLICATION.

REMOVE ALL BURRS AND SHARP EDGES.

DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm .010$ , ANGLES  $\pm 2^\circ$ .

NOMINAL USE OF THIS DRIVE FOR AC OR DC ELECTRICAL MOTORS.

- (A) INACTIVE 1 JAN 1977 FOR NEW DESIGN SEE SAE STANDARDS AS959 THRU AS972, AS976 AND AS977. (CONTINUED APPLICATION OF THIS STANDARD ON CONTRACTS IN EFFECT PRIOR TO 1 JAN 1977 IS PERMISSIBLE).

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THIS IS A DESIGN STANDARD. NOT USED AS A PART NUMBER

CUSTODIANS Navy - AS Air Force 99	OTHER INT. A - N - AF -	<b>MILITARY STANDARD</b>		<b>MS33568</b> (ASG)
		DRIVE, SQUARE MOUNTING FLANGE WITH INVOLUTE SPLINE-PINION		
PROCUREMENT SPECIFICATION NONE		SUPERSEDES: AND10457		SHEET 1 OF 2

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NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

TYPE	(a)		B REF DIA	C REF DIA	D BASIC DIA	E DIA	F DIA	G RAD	H DIA	J MIN	K		L MIN RAD	M PD THEO	N	P	Q THEO
	MAX DIA	MIN DIA									MAX	MIN					
I	2.032	2.106	2.000	2.000	.850	.999	.161	.150	.138	.188	.172	.086	.190	.1111	8	72	.0118
II	2.532	3.000	2.500	2.500	1.060	1.499	.191	.187	.168	.219	.370	.185	.200	.1667	12	48	.0222
III	3.170	4.000	3.578	3.578	1.414	2.874	.344	.375	.500	.250	.370	.185	.400	.2500	12	40	.0124
IV	4.045	5.000	4.286	4.286	1.767	3.249			.605	.313				.3250	13	10	.0122

TYPE	(d) R		S DIA THEO	T MAX DIA	U DIA		W DIA	X DIA	MEAS WIRE DIA	MEAS OVER 2 WIRES		MASTER GEAR (c)		(e) CENTER DISTANCE WITH MASTER		
	MAX	MIN			MAX	MIN				NO. TEETH	TOOTH THKNS	THEO	MAX	MIN		
I	.0266	.0263	.0885	.1056	.1535	.1198	.9995	.1522	.02667	.1591	.1505	108	.0216	.8127	.8134	.8054
II	.0402	.0399	.1348	.1580	.2304	.2266	1.1595	.1791	.0400	.2390	.2384	96	.0327	1.0910	1.0918	1.0866
III	.0367	.0363	.2084	.2358	.3040	.3002	2.8745	.3310	.0480	.3157	.3180	80	.0393	1.1311	1.1316	1.1261
IV	.0431	.0427	.2730	.3063	.3868	.3831	3.2125	.3310	.0480	.4035	.4029	80	.0393	1.1684	1.1697	1.1593

(A) SEE SHEET 1 FOR CHANGES

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PROCUREMENT SPECIFICATION NONE		SUPERSEDES: AND10457		SHEET 2 OF 2

DD FORM 672-1  
1 OCT 52

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APPROVED 30 Nov 55 REVISED (A) 26 NOV 976