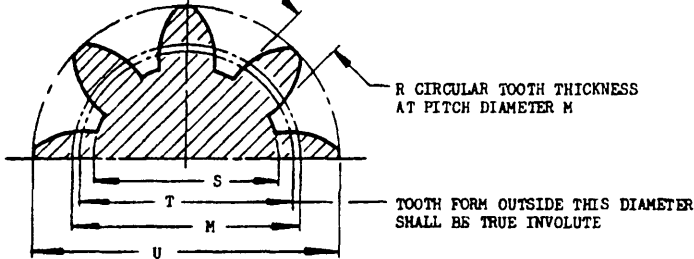


SPLINE-PINION DATA

N = NUMBER OF TEETH
 P = DIAMETRAL PITCH
 20° PRESSURE ANGLE
 ROCKWELL C OR EQUIVALENT
 HARDNESS: SURFACE 45 MIN, 55 MAX



SPLINE-PINION DETAIL

- (a) A IS GREATEST DIAMETER OR DIMENSION OF ACCESSORY EXCLUSIVE OF ATTACHED DEVICES.
- (b) OUTSIDE DIAMETERS OF SMALL PINIONS ARE ENLARGED TO AVOID 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 1/2 Q.
- (c) R MAX HAS BEEN REDUCED FROM THEORETICAL BY TOTAL COMPOSITE ERROR OF PINION ONLY. RANGE RESULTS FROM SIZE VARIABLE ONLY.
- (d) OTHER MASTER GEARS MAY BE USED IF CENTER DISTANCE IS PROPERLY RECALCULATED.
- (e) RANGE OF CENTER DISTANCE IS THAT RESULTING FROM RMS SUMMATION OF ALL VARIABLES IN THE 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 ±.010, ANGLES ±2°.

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

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CUSTODIANS Navy - BJAer Air Force	OTHER INT. A - N - AF -	MILITARY STANDARD		MS33600 (ASG)
		DRIVE, MINIATURE, POWER MOTOR WITH INVOLUTE SPLINE - PINION		
PROCUREMENT SPECIFICATION NONE		SUPERSEDES:		SHEET 1 OF 4

APPROVED 1 May 58 REVISED

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DATA FOR BASIC DRIVE

TYPE	FILN	SIZE	(a)		E	F	H		J		I		M	N	P	Q	(c) R		S	T
			BASIC	MAX			MAX	MIN	MAX	MIN	MAX	MIN					MAX	EFF		
1		06	.625	.635	.3125	0-80	.321	.306	.125	.073	.067	.067	.0667	8	120	.0089	.0162	.0515	.0589	
2		08	.750	.760	.3750	1-64	.356	.341	.145	.082	.076	.0833	9	96	.0111	.0202	.0654	.0736		
3		09	.875	.891	.5000	.4820	.378	.358	.180	.101	.095	.1111	72	72	.0099	.0192	.0716	.0828		
4		11	1.062	1.078	.5625	3-18	.458	.438	.180	.101	.095	.1111	8	64	.0118	.0270	.0886	.0982		
5		13	1.250	1.270	.6250	1-40	.503	.473	.197	.115	.135	.1250	56	56	.0156	.0305	.1001	.1104		
6		15	1.500	1.520	.7500	6-32	.584	.554	.220	.115	.135	.1429	18	18	.0190	.0348	.1150	.1262		
7		18	1.750	1.781	.8750		.656	.616	.250	.163	.153	.1667	9		.0222	.0407	.1348	.1472		
8		20	2.000	2.031	1.0236		.673	.633				.1875	9		.0197	.0397	.1532	.1656		

TYPE	SIZE	U		V	W	X	Y	Z	MEAS WIRE DIA		MEAS OVER 2 WIRES		(g) MASTER GEAR		(e) WITH MASTER		COMPOSITE ERROR		MIN BORE OF MATING HOUSING
		MAX	MIN						MAX	MIN	MAX	MIN	TOOTH TO TOOTH	TOTAL	TOOTH TO TOOTH	TOTAL			
1	06	.0921	.0902	.516	.3130	.0444	.109	.047	.01600	.0955	.0952	120	.01309	.5376	.5375	.0003	.0006	.280	
2	08	.1118	.1130	.630	.3755	.0532	.156	.062	.02000	.1193	.1190	96	.01636	.5470	.5468	.0004	.0008	.315	
3	09	.1240	.1222	.750	.5005					.1277	.1274	72	.02182	.5517	.5515	.0005	.0011	.440	
4	11	.1530	.1508	.937	.5630	.0730	.203		.02667	.1591	.1587	64	.02454	.5626	.5624	.0005	.0011	.524	
5	13	.1722	.1700	1.125	.6955	.0784			.03000	.1791	.1787	56	.02805	.5704	.5703	.0006	.0015	.565	
6	15	.1965	.1943	1.375	.7505		.250		.078	.2046	.2042	18	.03272	.5804	.5802	.0007	.0020	.670	
7	18	.2294	.2270	1.625	.8755	.0966		.0914	.04000	.2388	.2383			.5938	.5937			.795	
8	20	.2474	.2450	1.875	1.0244					.2554	.2549			.6031	.6028			.920	

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CUSTODIANS Navy - BuAer Air Force	OTHER INT. A N AF
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:

MILITARY STANDARD

DRIVE, MINIATURE, POWER MOTOR WITH INVOLUTE SPLINE - PINION

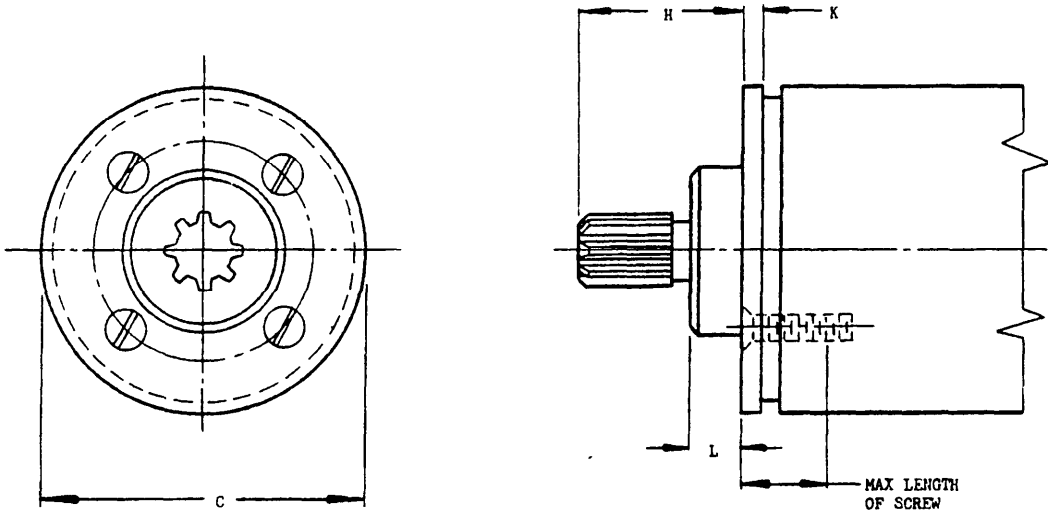
MS33600
(ASG)

SHEET 2 OF 4

APPROVED 1 May 58 REVISED

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FED SUP CLASS.



DATA FOR BASIC DRIVE WITH ROUND PLATE ATTACHMENT

TYPE	PIIN	SIZE	C +.003 -.010 DIA	H		K		L REF MEAN	MAXIMUM LENGTH OF SCREW
				MAX	MIN	MAX	MIN		
11		06	.625	.291	.276	.033	.027	.040	.1250
12		08	.750	.320	.305	.039	.033	.042	
13		09	.875	.336	.316	.045	.039	.056	.1875
14		11	1.062	.407	.387	.056	.046	.047	
15		13	1.250	.443	.413	.065	.055	.038	.2500
16		15	1.500	.512	.482	.077	.067	.069	
17		18	1.750	.571	.531	.090	.080	.056	.3125
18		20	2.000	.576	.536	.102	.092	.060	

SEE SHEET 2 FOR DIMENSIONS NOT SHOWN.

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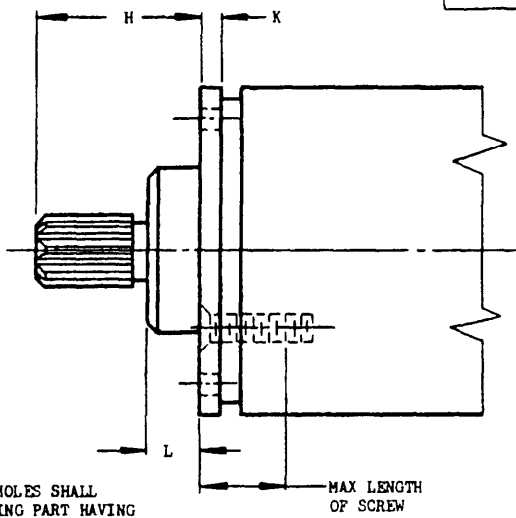
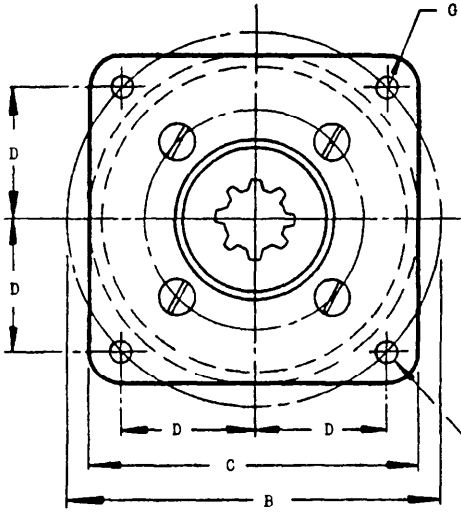
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CUSTODIANS Navy - BuAer Air Force	OTHER INT. A - N - AF -	MILITARY STANDARD	MS33600 (ASG)
		DRIVE, MINIATURE, POWER MOTOR WITH INVOLUTE SPLINE - PINION	
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:	SHEET 3 OF 4	

APPROVED 1 May 58 REVISED

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FED SUP CLASS



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

DATA FOR BASIC DRIVE WITH SQUARE PLATE ATTACHMENT

TYPE	FIN	SIZE	B DIA REF	C		D BASIC	F DIA		G +.000 -.020 RAD	H		K		L REF MEAN	W ±.0001 DIA	X DIA	MAXIMUM LENGTH OF SCREW
				MAX	MIN		MAX	MIN		MAX	MIN	MAX	MIN				
21		06	.736	.635	.625	.260	.072	.069	.050	.291	.276	.033	.027	.010	.3130	.0670	.1250
22		08	.883	.760	.750	.312	.089	.085	.062	.320	.305	.039	.033	.042	.3755	.0821	.1875
23		09	1.016	.891	.875	.359	.103	.085	.078	.336	.316	.045	.039	.056	.5005		
24		11	1.225	1.078	1.062	.433	.103	.099	.094	.407	.387	.056	.046	.047	.5630	.0960	.2500
25		13	1.463	1.270	1.250	.517	.110	.134	.109	.443	.413	.065	.055	.038	.6255	.1375	
26		15	1.756	1.520	1.500	.621			.125	.512	.482	.077	.067	.069	.7505		
27		18	2.021	1.781	1.750	.715	.170	.163	.156	.571	.531	.090	.080	.056	.8755	.1554	.3125
28		20	2.271	2.031	2.000	.803			.203	.576	.536	.102	.092	.060	1.0211		

SEE SHEET 2 FOR DIMENSIONS NOT SHOWN.

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CUSTODIANS Navy - BuAer Air Force	OTHER INT. A - N - AF -	MILITARY STANDARD		MS33600 (ASG)
		DRIVE, MINIATURE, POWER MOTOR WITH INVOLUTE SPLINE - PINION		
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:			SHEET 4 OF 4

APPROVED 1 May 58 REVISED