

## **Customer Design Standards**

## MAThread <sup>®</sup>- RADIUSED DOG (PILOT) POINT

CRITICAL DESIGN INFORMATION

## START EVERY DESIGN BY FINDING "Lnom"

IF "Lnom" IS NOT GIVEN ON THE CUSTOMER DRAWING, USE EITHER THE MAXIMUM LENGTH (Mmax) OR MINIMUM FULL THREAD LENGTH (Lf) FROM THE CUSTOMER DRAWING TO CALCULATE IT USING ONE OF THE FOLLOWING EQUATIONS

PREFERRED: SECONDARY:

Date Issued: 12/1/99

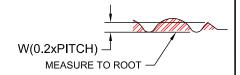
Revision Level: AE

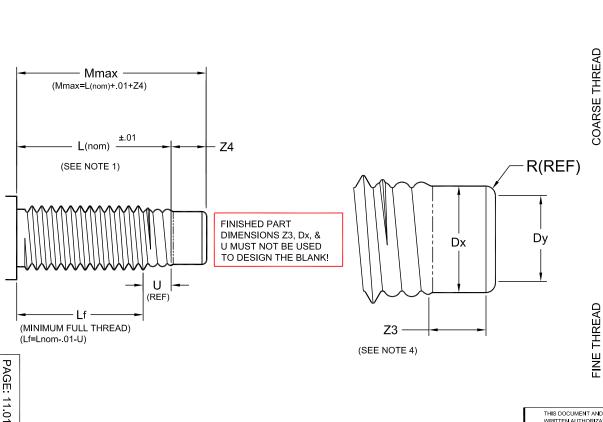
Lnom = Mmax-Z4-.01 Lnom = Lf+U+.01

Lnom MUST BE ON EVERY PART DRAWING DO NOT CHANGE ANY DIMENSION GIVEN WITHOUT CONSULTING MATHREAD

## INSPECTION INFORMATION:

- Lnom ON ROLLED PART IS MEASURED TO THE POINT ON THE LEAD THREAD WHERE IT FIRST REACHES A HEIGHT OF 'W' (0.2xPITCH) WHEN MEASURED FROM THE ROOT OF THE THREAD. (see sketch above)
- MAThread SHALL HAVE A MINIMUM OF 1.5 COMPLETE TURNS OF RADIUSED THREAD.
  THREAD MUST BE FULLY FORMED, WITH NO UNDER FILL (FLATS, FISSURES) AT PEAK OF
   THREAD. WHEN VIEWED IN THE DESIGNATED INSPECTION POSITION, FOUR COMPLETE
   RADIUSED THREAD PROFILES MUST BE VISIBLE.
- APPROPRIATE "GO GAGE MUST COMPLETELY PASS OVER MAThread SECTION OF THREAD WITH MINIMAL DRAG BEFORE PLATING. GAGE MUST HAVE MINOR DIAMETER VERIFIED TO ANSI/ASME B1.2-1983 BEFORE USE.
- "Z3" MUST BE MEASURED TO TANGENT POINT OF 'R', USING MAThread APPROVED RADIUS CHART FROM POINT "W" TO TANGENT.





Date Revised: 3/1/09

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	THREAD SIZE & PITCH	R MIN.	Dy <sub>MAX</sub>	<b>W</b> ±.0004	Dx	Z <sub>3</sub> MIN	Z <sub>4</sub>	U REF
	1/4-20	0.02	.154	.0100	.189 .193	.065	.100	.150
)	5/16-18	0.03	.190	.0111	.245 .249	.085	.130	.167
	3/8-16	0.05	.205	.0125	.301 .305	.115	.180	.188
1	7/16-14	0.07	.220	.0143	352 356	.135	.220	.214
	1/2-13	80.0	.260	.0154	409 413	.165	.260	.231
	9/16-12	0.10	.275	.0167	.464 .468	.180	.295	.250
ı	5/8-11	0.12	.290	.0182	.519 .523	.215	.350	.273
	DIMENSIONS ARE IN ENGLISH (inch)							
	1/4-28	0.02	.174	.0071	.204 .208	.093	.150	.108
ı	5/16-24	0.03	.217	.0083	.259 .263	.117	.195	.125
I	3/8-24	0.04	.272	.0083	.322 .326	.180	.276	.125
) j	7/16-20	0.06	.325	.0100	.375 .379	.197	.295	.150
:	1/2-20	0.07	.365	.0100	.438 .442	.240	.358	.150
:	9/16-18	0.09	.414	.0111	.494 .498	.275	.404	.167
	5/8-18	0.10	.474	.0111	.557 .561	.308	.466	.167

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SEE PAGE 1.02 FOR PATENT INFORMATION