

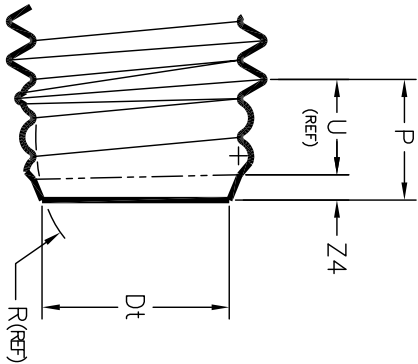
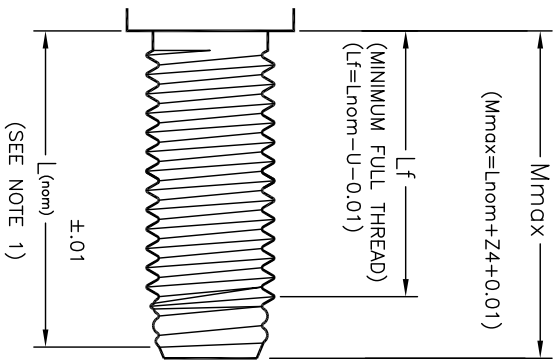
IMPORTANT NOTE: THIS DESIGN IS INTENDED TO MINIMIZE CROSS-THREADING UP TO 9 DEGREES AXIAL MISALIGNMENT. IT IS POSSIBLE (THOUGH VERY DIFFICULT) TO CROSS-THREAD THESE PARTS IF YOU NEED 100% EFFECTIVENESS. USE A STANDARD MATHREAD OR MATPOINT.

## CRITICAL DESIGN INFORMATION START EVERY DESIGN BY FINDING "L<sub>nom</sub>"

IF "L<sub>nom</sub>" IS NOT GIVEN ON THE CUSTOMER DRAWING, USE EITHER THE MAXIMUM LENGTH (M<sub>max</sub>) OR MINIMUM FULL THREAD LENGTH (L<sub>f</sub>) FROM THE CUSTOMER DRAWING TO CALCULATE IT USING ONE OF THE FOLLOWING EQUATIONS

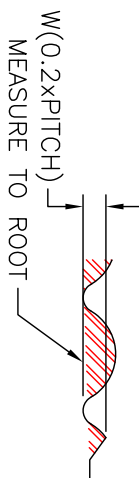
PREFERRED:  $L_{nom} = M_{max} - Z_4 - .01$   
SECONDARY:  $L_{nom} = L_f + M + .01$

**L<sub>nom</sub> MUST BE ON EVERY PART DRAWING  
DO NOT CHANGE ANY DIMENSION GIVEN WITHOUT CONSULTING MATHREAD**



### INSPECTION INFORMATION:

1. L<sub>nom</sub> 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)
2. 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.
3. 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.



### FINE THREAD

### COARSE THREAD

THREAD SIZE & PITCH	Dt	W	P	Z <sub>4</sub>	U
	MAX	±.0004	MAX	REF	REF
1/4-20	.170	.0100	.163	.025	.113
5/16-18	.220	.0111	.188	.030	.125
3/8-16	.273	.0125	.205	.035	.141
7/16-14	.321	.0143	.225	.040	.161
1/2-13	.376	.0154	.245	.043	.173
9/16-12	.450	.0167	.275	.050	.188
5/8-11	.470	.0182	.300	.053	.205
DIMENSIONS ARE IN ENGLISH (inch)					
1/4-28	.185	.0071	.133	.020	.080
5/16-24	.235	.0083	.150	.023	.094
3/8-24	.298	.0083	.150	.023	.094
7/16-20	.358	.0100	.163	.025	.113
1/2-20	.420	.0100	.163	.025	.113
9/16-18	.470	.0111	.188	.030	.125
5/8-18	.533	.0111	.188	.030	.125