

Manufacturing Standards

MATpoint® Never-Jam™ / USE "MATpoint-VR™" DIES ONLY

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

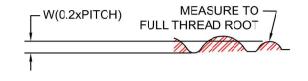
PREFERRED: SECONDARY: Lnom = Mmax-Z4-TLnom = Lf+U+T

T = 0.15 FOR PARTS SHORTER THAN OR EQUAL TO 50mm T = 0.25 FOR PARTS LONGER THAN 50mm

Lnom MUST BE ON EVERY PART AND BLANK DRAWING O NOT CHANGE ANY DIMENSION GIVEN WITHOUT CONSULTING MATHREAD

Mmax (Mmax=Lnom+T+Z₄) Lf(MINIMJM FULL THREAD) — U (Lf=Lnom-T-U) (REF) (T=0.15 FOR L≤50) (T=0.25 FOR L>50) Inom (SEE NOTE 1)

FINISHED PART DIMENSIONS Z₅, Dx, & U MUST NOT BE USED TO DESIGN THE BLANK!



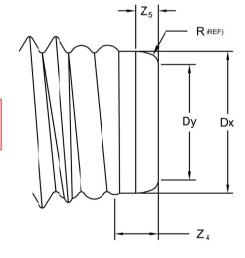
INSPECTION INFORMATION:

PARTS SHALL BE INSPECTED PER SECTION 7:

1. 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 STANDARD PROFILE THREAD.

(see sketch above) NOTE THAT TOLERANCE ON Lnom ON THREAD-ROLLED PARTS, IS DIFFERENT THAN TOLERANCE ON HEADED PARTS.

- MATpoint SHALL HAVE A MINIMUM OF 1.0 COMPLETE TURN 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, THREE COMPLETE RADIUSED THREAD PROFILES MUST BE VISIBLE.
- APPROPRIATE "GO" GAGE MUST COMPLETELY PASS OVER MATPOINT SECTION OF THREAD WITH MINIMAL DRAG BEFORE PLATING. GAGE MUST HAVE MINOR DIAMETER VERIFIED TO ANSI/ASME B1.16M-1984 BEFORE USE.
- 4. LAST TURN OF LEAD THREAD MUST HAVE ESSENTIALLY LINEAR REDUCTION IN HEIGHT AND SMOOTH CONTOUR SIMILAR TO FULL HEIGHT RADIUS THREAD



COARSE THREAD	THREAD S ZE & PITCH	R REF	Dy MAX	Z ₅ MIN	Dx MAX	Z ₄ MAX	+.01 01	U REF
	M4x.7	1.2	2.7	0.50	3.17	1.08	0.14	1.50
	M5x.8	1.5	3.4	0.60	4.03	1.37	0.16	1.80
	M6x1.0	1.8	4.0	0.75	4.80	1.45	0.20	230
	M8x1.25	2.3	5.5	1.00	6.54	1.90	0.25	280
	M10x1.5	2.8	6.8	1.25	8.23	2.51	0.30	340
	M12x1.75	3.3	8.2	1.50	9.95	3.12	0.35	4.00
	M14x2.0	4.1	9.6	1.75	11.72	3.38	0.40	4.50
	M16x2.0	4.7	10.9	2.00	13.72	3.64	0.40	4.50

DIMENSIONS ARE IN MILLIMETERS (mm)

M8x1.0	2.5	6.0	1.00	6.81	1.90	0.20	230
M10x1.25	3.0	7.5	1.25	8.54	2.28	0.25	280
M12x1.5	3.5	8.8	1.50	10.26	2.76	0.30	340
M14x1.5	4.3	10.8	1.75	12.26	3.17	0.30	340
M16x1.5	4.9	12.8	2.00	14.26	3.56	0.30	3.40
1	M10x1.25 M12x1.5 M14x1.5	M10x1.25 3.0 M12x1.5 3.5 M14x1.5 4.3	M10x1.25 3.0 7.5 M12x1.5 3.5 8.8 M14x1.5 4.3 10.8	M10x1.25 3.0 7.5 1.25 M12x1.5 3.5 8.3 1.50 M14x1.5 4.3 10.8 1.75	M10x1.25 3.0 7.5 1.25 8.54 M12x1.5 3.5 8.8 1.50 10.26 M14x1.5 4.3 10.8 1.75 12.26	M10x1.25 3.0 7.5 1.25 8.54 2.28 M12x1.5 3.5 8.3 1.50 10.26 2.76 M14x1.5 4.3 10.8 1.75 12.26 3.17	M10x1.25 3.0 7.5 1.25 8.54 2.28 0.25 M12x1.5 3.5 8.3 1.50 10.26 2.76 0.30 M14x1.5 4.3 10.8 1.75 12.26 3.17 0.30

THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF MATHREAD INC. ANY USE, DISCLOSURE OR COPYING IS PROHIBITED EXCEPT WITH THE WRITTEN AUTHORIZATION OF MATHREAD INC., MATHREAD AND MATPOINT ARE REGISTERED TRADEMARKS OF MATHREAD INC., WIXOM, MI. ALL RIGHTS ARE RESERVED

COVERED BY ONE OR WORE CF THE FOLLOWING U.S. PATENTS: 6.062,786 3.561.741 9.644.665 9.644.663 9.644.664 ADDITIONAL US & INTERNATIONAL PATENTS PENDING