ROCHESTER GAUGES, INC.
ISO 9001:2008 CERTIFIED

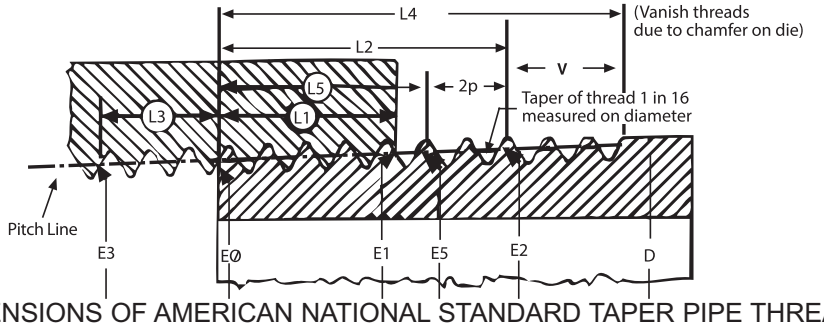
MS-508

Magnetel® Gauge Adapter Machining Standard

DRAWING NUMBER MS-508

AN AMERICAN NATIONAL STANDARD PIPE THREADS, GENERAL PURPOSE (INCH)

ANSI/ASME B1.20.1-1983



BASIC DIMENSIONS OF AMERICAN NATIONAL STANDARD TAPER PIPE THREAD, NPT[1]

Nominal Pipe Thread	O.D. of Pipe (D)	Thread/ in. (n)	Pitch Dia. at Thread (p)	Pitch Dia. at Beginning of External Thread (EO)	Handtight Engagement			Effective Thread, External		
					Length 2 (L1)		Dia. 3 (E1)	Length 4 (L2)		Dia. (E2)
					Inch	Thread		Inch	Thread	
1*	1.315	11-1/2	0.08696	1.21363	0.400	4.60	1.23863	.6828	7.85	1.25630
2	2.375	11-1/2	0.08696	2.26902	0.436	5.01	2.29627	0.7565	8.70	2.31630
2.5	2.875	8	0.12500	2.71953	0.682	5.46	2.76216	1.1375	9.10	2.79062

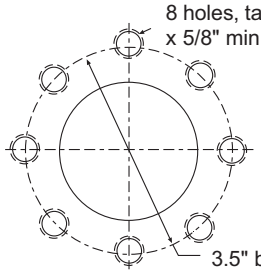
Nominal Pipe Size	Length, L1 Plane to L2 Plane External Thread (L2-L1)		Wrench Makeup Length for Internal Thread 7			Vanish Thread (V)		Overall Length External Thread (L4)	Nominal Complete External Threads		Height of Thread (H)	Increase in Diameter/ Thread (0.0625/n)	Basic Minor Diameter at Small End of Pipe (K0)
			Length (L3)		Dia. (E3)				Length (L5)	Dia. (E5)			
	Inch	Thread	Inch	Thread		Inch	Thread						
1*	0.2828	3.25	0.2609	3	1.19733	0.3017	3.47	0.9845	0.5089	1.24543	0.06957	0.00543	1.1441
2	0.3205	3.69	0.2609	3	2.25272	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2.5	0.4555	3.64	0.2500	2	2.70391	0.4337	3.47	1.5712	0.8875	2.77500	0.10000	0.00781	2.6195

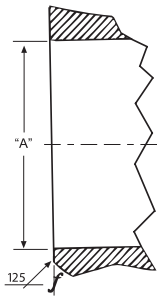
1. Basic dimensions of the American National Standard Taper Pipe Thread are given in inches to 4 or 5 decimal places. While this implies a greater degree of precision than is ordinarily attained, these dimensions are the basis of the gauge dimensions and are so expressed for the purpose of eliminating errors in computations.
2. Also length of thin ring gauge and length from gauging notch to small end of plug gauge.
3. Also pitch diameter at gauging notch (handtight plane).
4. Also length of plug gauge.
5. The length L5 from the end of the pipe determines the plane beyond which the thread form is incomplete at the crest. The next 2 threads are complete at the root. At this plane, the cone formed by the crests of the thread intersects the cylinder forming the external surface of the pipe. L5=L2-2p
6. Given as information for use in selecting tap drills.
7. Military Specification MIL-P-7105 gives the wrench makeup as three threads for sizes 3 & smaller.
8. Reference dimension.

Thread	Dry Torque (ft-lb)
1" NPT	100 [136Nm]
2" NPT	138 [186 Nm]
2 ½" NPT	146 [198 Nm]

Please see note **7** above.

NOTE: MOUNT STANDARD, STRADDLE MOUNT REQUIRES SPECIAL GAUGE CONSTRUCTION.





"A" = 2.320" for standard
"A" = 1.93" for "Y" Magnetel® if mounted, it will fit through a 2" pipe coupling but will NOT fit through 2" pipe nipple.
(All "Y" Magnetel® gauges are furnished with a 2" NPT adapter.)

* Robogauge & Eliminator

Note: Materials and specifications are subject to change without notice.
Pressure ratings subject to change due to temperature and other environmental considerations.

07/12/2016

See reverse side for dimensional data, materials of construction, performance, and advice on how to order.

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