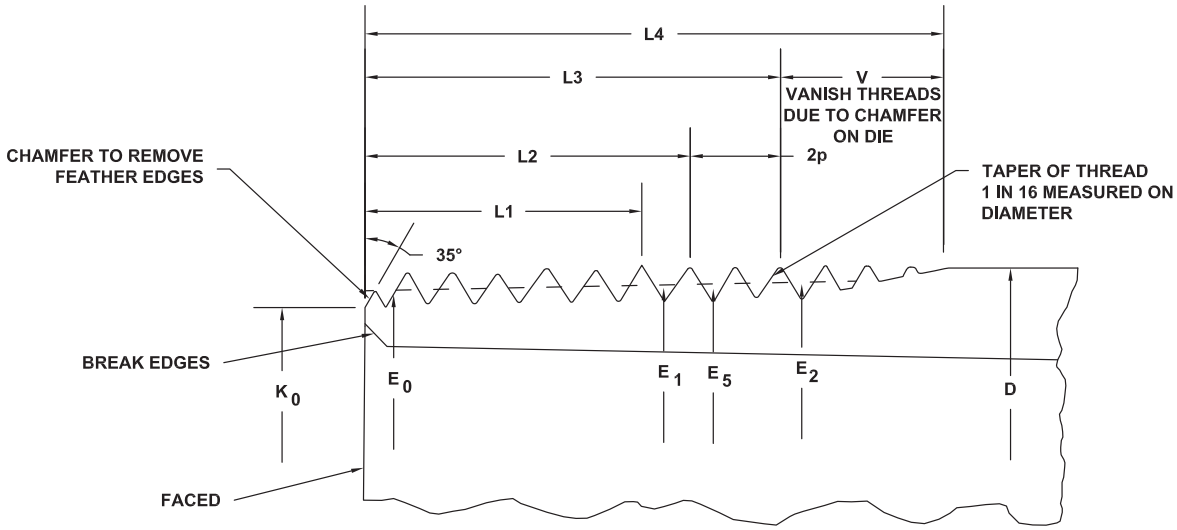
Screw Threads for Clean Out Nipples



BASIC DIMENSIONS OF USA (AMERICAN) STANDARD TAPER PIPE THREAD, NPT

NOMINAL[8] PIPE SIZE	OUTSIDE DIAMETER OF PIPE D	THREADS PER INCH n	PITCH OF THREAD p	PITCH DIA AT BEGINNING OF EXTERNAL THREAD E_0	HANDTIGHT ENGAGEMENT			EFFECTIVE THREAD EXTERNAL		
					LENGTH[2] L_1		DIA[3] E_1	LENGTH[4] L_2		DIA E_2
					IN.	THDS.		IN.	THDS.	
2	2.375	11.5	0.08696	2.26902	0.436	5.01	2.29627	0.7365	8.70	2.31630
2 ½	2.875	8	0.12500	2.71953	0.682	5.46	2.76216	1.1375	9.10	2.79062
3	3.500	8	0.12500	3.34062	0.766	6.13	3.38850	1.2000	9.60	3.41562
4	4.500	8	0.12500	4.33438	0.844	6.75	4.38712	1.3000	10.40	4.41562

NOMINAL[8] PIPE SIZE	WRENCH MAKE-UP LENGTH FOR EXTERNAL THREAD $L_1 - L_1$		VANISH THREAD V		OVERALL LENGTH EXTERNAL THREAD L_4	NOMINAL COMPLETE EXTERNAL THREADS[5]		HEIGHT OF THREADS h	INCREASE IN DIA PER THREAD 0.625/N	BASIC & MINOR DIA AT SMALL END OF PIPE K_0 6
	IN.	THDS.	IN.	THDS.		LENGTH L_5	DIA E_5			
2	0.3205	3.69	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2 ½	0.4555	3.64	0.4337	3.47	1.5712	0.8873	2.77300	0.100000	0.00781	2.6195
3	0.4343	3.47	0.4337	3.47	1.6337	0.9500	3.40000	0.100000	0.00781	3.2406
4	0.4560	3.65	0.4337	3.47	1.7337	10.500	4.40000	0.100000	0.00781	4.2344

1. The basic dimensions of the USA (American) Standard Taper Pipe Thread are given in inches to four of five decimal places. While this implies a greater degree of precision than is ordinarily attained, these dimensions are the basis of gage dimensions and are so expresses for the purpose of eliminating errors in computations.
2. Also length of thin ring gage and length from gauging notch to small end of plug gage.
3. Also pitch diameter of gauging notch (hand tight plane).
4. Also length of plug gage.
5. The length L_5 from the end of the pipe determines the plane beyond which the thread from is incomplete at the crest. The next two 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 $L_5 = l_2 \cdot 2p$.
6. Given as information for use in selecting tap drills.
7. On pipe nipples it is intended that ring gage practice in this standard (USAS B2.1 1968) will provide a satisfactory check of accumulated deviations in taper, lead angle and diameter (i.e. a check of functional size).
8. Designated, for example as 3 NPT or 3.500 NPT.

Girard Equipment, Inc.

4360 Old Dixie Hwy, Vero Beach, FL 32967

(800) 526-4330 • www.girardequip.com • gsales@girardequip.com