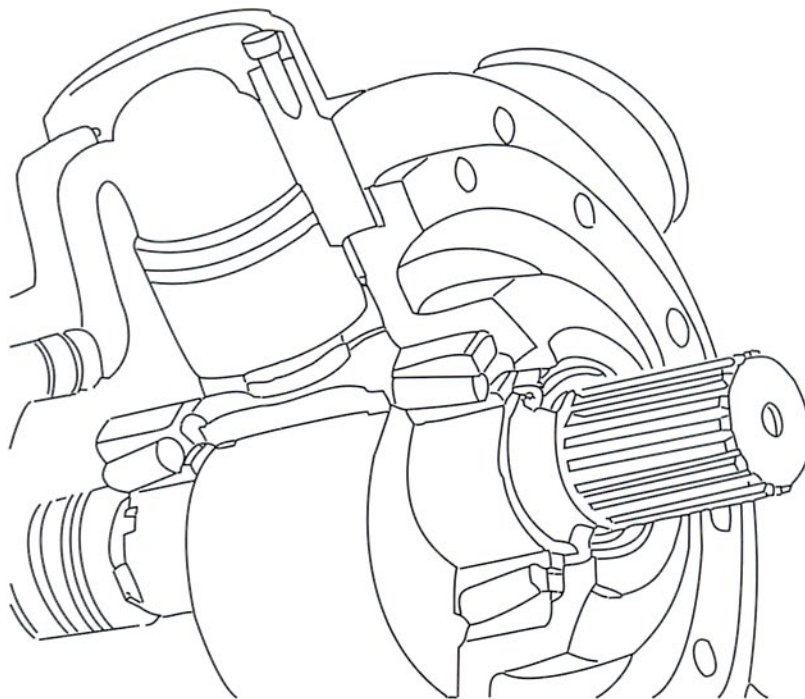


Fluid Power Designers'

LIGHTNING® REFERENCE HANDBOOK

Eighth Edition

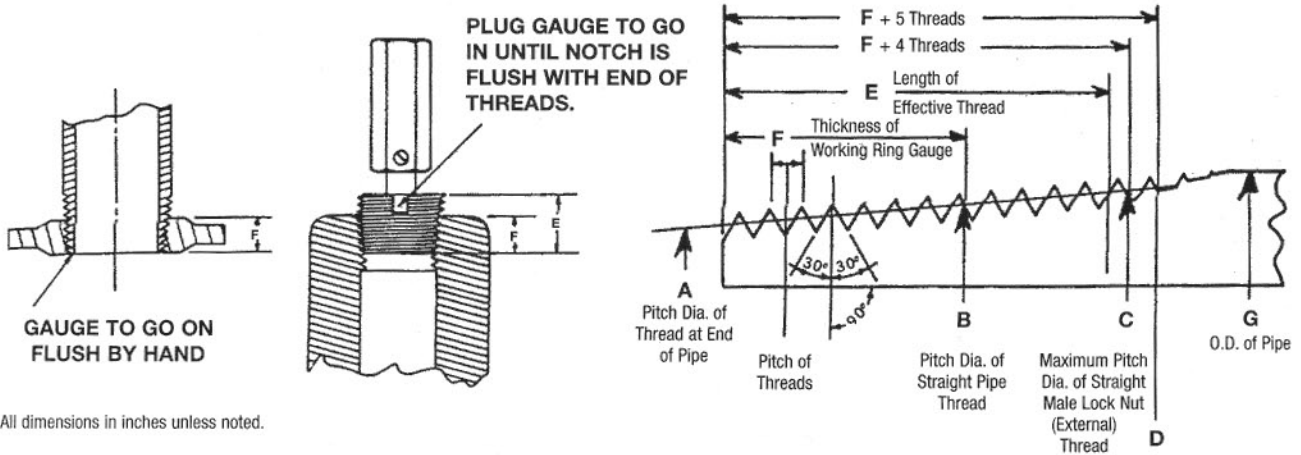


STANDARD ENGINEERING DATA
ANSI . API . ASTM . ISO . JIC . NEMA . NFPA . SAE . SI

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PIPE THREADS – AMERICAN STANDARDS



All dimensions in inches unless noted.

- A** equals $G - (0.05G + 1.1)P$
- B** equals $A + 0.0625F$
- C** equals $B + (4P \times 0.0625)$
- D** equals $B + (5P \times 0.0625)$
- E** equals $(0.8G + 6.8)P$
- F** equals thickness of Working Ring Gauge
- P** equals Pitch
- Total Taper 3/4 in/ft.
- Depth of Thread 0.8P

TOLERANCE FOR MALE THREADS:

One Turn Large (max. size), One Turn Small (min. size), from Face of Ring Gauge.

TOLERANCE FOR FEMALE THREADS:

One Turn Large (max. size), One Turn Small (min. size), from Gauging Notch.

THREAD DIMENSIONS IN INCHES

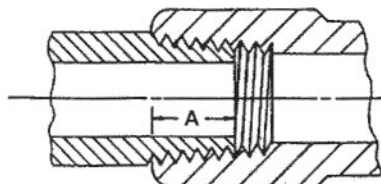
SIZE	A	B ^①	C	E ^②	F ^③	G	Pitch of Thread	Threads per Inch	Tap Drill Size
1/8	0.2834	0.2834	0.2907	0.2611	0.160	0.3125	0.02963	27	1/4
1/4	0.3750	0.3750	0.3844	0.2639	0.180	0.405	0.02963	27	11/32
3/8	0.47739	0.47739	0.4909	0.5073	0.200	0.540	0.04444	18	7/16
1/2	0.61201	0.62701	0.6409	0.6444	0.240	0.675	0.04444	18	37/64
5/8	0.7784	0.7963	0.808	0.5337	0.320	0.840	0.05714	14	23/32
3/4	0.90766	0.9388	0.955	0.6112	0.5457	1.050	0.05714	14	59/64
1	1.21363	1.2363	1.2658	0.6828	0.400	1.315	0.06957	11 1/2	1 1/2
1 1/4	1.55713	1.5838	1.6051	0.7068	0.420	1.660	0.06957	11 1/2	1 1/2
1 1/2	1.799	1.82234	1.8441	0.7235	0.420	1.900	0.06957	11 1/2	1 1/2
2	2.29627	2.3180	2.3234	0.7565	0.436	2.375	0.06957	11 1/2	2 3/16
2 1/2	2.71953	2.76216	2.7934	1.1375	0.682	2.875	0.100	8	2 9/16
3	3.34062	3.38850	3.4198	1.2000	0.766	3.500	0.100	8	3 3/16
3 1/2	3.83750	3.88881	3.9201	1.2500	0.821	4.000	0.100	8	3 11/16
4	4.33438	4.38712	4.4184	1.3000	0.844	4.500	0.100	8	4 9/16
5	5.39073	5.44929	5.4805	1.4063	0.937	5.563	0.100	8	5 5/16
6	6.44609	6.50597	6.5372	1.5125	0.958	6.625	0.100	8	6 5/16

① Also pitch diameter at gauging notch

② Also length of plug gauge

③ Also length of ring gauge

INFORMATION ABOVE TAKEN FROM AMERICAN STANDARD FOR PIPE THREADS, ANSI - B2.1



THREAD ENGAGEMENT

Size	1/16	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
A	3/16	1/4	3/8	3/8	7/16	9/16	9/16	5/8	5/8	3/4	7/8	15/16	1 1/16	1 1/8	1 1/4	1 5/16

NO ALLOWANCE FOR VARIATION IN TAPPING AND THREADING
FOR BEST RESULTS, TAP DRILL HOLES SHOULD BE REAMED TO THE DEPTH OF THREAD WITH A 3/4 IN/FT REAMER.