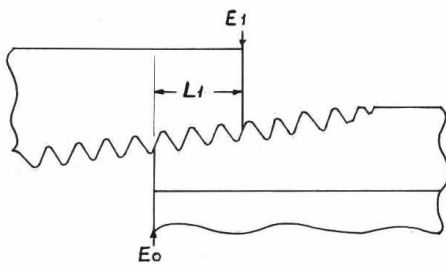
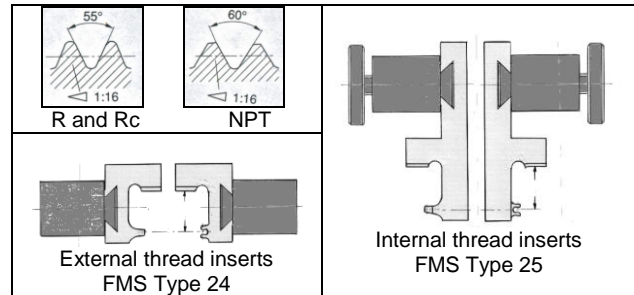


# TAPERED PIPE THREADS R, Rc & NPT – PITCH DIAMETER

Ref. **DS/ISO 7-1 PIPE THREADS WHERE PRESSURE-TIGHT JOINTS ARE NOT MADE ON THE THREADS (WHITWORTH)**  
& **ANSI/ASME B1.20.1 Pipe Threads, General Purpose**



E<sub>0</sub> is the internal measuring point and E<sub>1</sub> is the external measuring point



<b>R &amp; Rc (WHITWORTH PIPE THREAD) BSPT</b>					
Nominal pipe diam.	T.P.I.	P mm	Pitch diam. E <sub>0</sub>	Pitch diam. E <sub>1</sub>	Measurement point L <sub>1</sub>
1/4	19	1.337	11.93	12.30	6.0
3/8	19	1.337	15.41	15.81	6.4
1/2	14	1.814	19.28	19.79	8.2
3/4	14	1.814	24.69	25.28	9.5
1	11	2.309	31.12	31.77	10.4
1 1/4	11	2.309	39.64	40.43	12.7
1 1/2	11	2.309	45.53	46.32	12.7
2	11	2.309	57.15	58.14	15.9
2 1/2	11	2.309	72.62	73.71	17.5
3	11	2.309	85.12	86.41	20.5
4	11	2.309	109.96	111.55	25.4
5	11	2.309	135.16	136.95	28.6
6	11	2.309	160.56	162.35	28.6

**FMS thread inserts type 24A and 25A**  
can measure pitches from 19 to 8 T.P.I.

<b>NPT (AMERICAN PIPE THREAD)</b>					
Nominal pipe diam.	T.P.I.	P mm	Pitch diam. E <sub>0</sub>	Pitch diam. E <sub>1</sub>	Measurement point L <sub>1</sub>
1/4	18	1.411	12.13	12.49	5.79
3/8	18	1.411	15.55	15.93	6.10
1/2	14	1.814	19.26	19.77	8.13
3/4	14	1.814	24.58	25.12	8.61
1	11 1/2	2.209	30.83	31.46	10.16
1 1/4	11 1/2	2.209	39.55	40.22	10.67
1 1/2	11 1/2	2.209	45.62	46.29	10.67
2	11 1/2	2.209	57.63	58.33	11.07
2 1/2	8	3.175	69.08	70.16	17.32
3	8	3.175	84.85	86.07	19.46
3 1/2	8	3.175	97.47	98.78	20.85
4	8	3.175	110.09	111.43	21.44
5	8	3.175	136.92	138.41	23.80
6	8	3.175	163.73	165.25	24.33

<b>R &amp; Rc (WHITWORTH PIPE THREAD) (BSPT)</b>				
Nominal pipe diameter	T.P.I.	P	Pitch diameter at 6 mm depth	
			External	Internal
1/4	19	1.337	12.30	11.93
3/8	19	1.337	15.78	15.44
1/2	14	1.814	19.65	19.42
3/4	14	1.814	25.06	24.91
1	11	2.309	31.49	31.40
1 1/4	11	2.309	40.01	40.06
1 1/2	11	2.309	45.90	45.95
2	11	2.309	57.52	57.77
2 1/2	11	2.309	72.99	73.34
3	11	2.309	85.49	86.10
4	11	2.309	110.33	111.18
5	11	2.309	135.53	136.58
6	11	2.309	160.93	161.98

<b>NPT (AMERICAN PIPE THREAD)</b>				
Nominal pipe diameter	T.P.I.	P	Pitch diameter at 6 mm depth	
			External	Internal
1/4	18	1.411	12.50	12.12
3/8	18	1.411	15.92	15.56
1/2	14	1.814	19.63	19.40
3/4	14	1.814	24.95	24.75
1	11 1/2	2.209	31.20	31.09
1 1/4	11 1/2	2.209	39.92	39.85
1 1/2	11 1/2	2.209	45.99	45.92
2	11 1/2	2.209	58.00	57.96
2 1/2	8	3.175	69.45	69.79
3	8	3.175	85.22	85.70
3 1/2	8	3.175	97.84	98.41
4	8	3.175	110.46	111.06
5	8	3.175	137.29	138.04
6	8	3.175	164.10	164.88

**Pitch diameter tolerances on external threads**

- 19 T.P.I. ± 0.08
- 14 T.P.I. ± 0.11
- 1) 11T.P.I. ± 0.14
- 2) 11T.P.I. ± 0.21

**Pitch diameter tolerances on internal threads**

- 19 T.P.I. ± 0.10
- 14 T.P.I. ± 0.14
- 1) 11 T.P.I. ± 0.18
- 2) 11 T.P.I. ± 0.21

**Pitch diameter tolerances on external threads**

- 18 T.P.I. ± 0.09
- 14 T.P.I. ± 0.11
- 11 1/2 T.P.I. ± 0.14
- 8 T.P.I. ± 0.20

**Pitch diameter tolerances on internal threads**

- 18 T.P.I. ± 0.09
- 14 T.P.I. ± 0.11
- 11 1/2 T.P.I. ± 0.14
- 8 T.P.I. ± 0.20

1) up to and including R 2 and Rc 2  
2) above R 2 and Rc 2