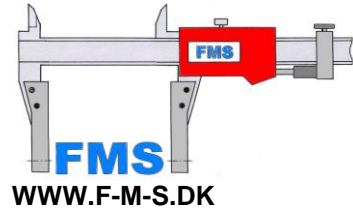


**ACME  
SCREW THREADS**

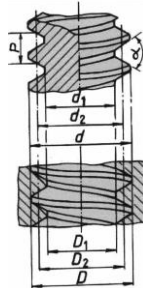


**NOMINAL PITCH DIAMETER  $d_2$  &  $D_2$**

$d_2/D_2 = d/D - PDn$                       ( $PDn = 0.5P$ )

**EXTERNAL THREAD**

- d = Major diameter
- $d_2$  = Pitch diameter
- $d_1$  = Minor diameter



**INTERNAL THREAD**

- D = Major diameter
- $D_2$  = Pitch diameter
- $D_1$  = Minor diameter

P = Pitch  
 $\alpha$  = Flank angle  
**29°**

*Ref.: ASME/ANSI B1.5 ACME SCREW THREADS  
This standard has much more information than given here.*

**GENERAL PURPOSE SINGLE START ACME SCREW THREADS, STANDARD SERIES**

**NOMINAL DIAMETERS & PITCH DIAMETERS**

Denomination (inches)		Nominal diameter mm	T.P.I.	Pitch P (mm)	Nominal pitch diameter mm
1/4	0,2500	<b>6,350</b>	16	1,587	<b>5,558</b>
5/16	0,3125	<b>7,937</b>	14	1,814	<b>7,031</b>
3/8	0,3750	<b>9,525</b>	12	2,117	<b>8,466</b>
7/16	0,4375	<b>11,112</b>	12	2,117	<b>10,053</b>
1/2	0,5000	<b>12,700</b>	10	2,540	<b>11,430</b>
5/8	0,6250	<b>15,875</b>	8	3,175	<b>14,287</b>
3/4	0,7500	<b>19,050</b>	6	4,233	<b>16,934</b>
7/8	0,8750	<b>22,225</b>	6	4,233	<b>20,109</b>
1	1,0000	<b>25,400</b>	5	5,080	<b>22,860</b>
1 1/8	1,1250	<b>28,575</b>	5	5,080	<b>26,035</b>
1 1/4	1,2500	<b>31,750</b>	5	5,080	<b>29,210</b>
1 3/8	1,3750	<b>34,925</b>	4	6,350	<b>31,750</b>
1 1/2	1,5000	<b>38,100</b>	4	6,350	<b>34,925</b>
1 3/4	1,7500	<b>44,450</b>	4	6,350	<b>41,275</b>
2	2,0000	<b>50,800</b>	4	6,350	<b>47,625</b>
2 1/4	2,2500	<b>57,150</b>	3	8,467	<b>52,916</b>
2 1/2	2,5000	<b>63,500</b>	3	8,467	<b>59,266</b>
2 3/4	2,7500	<b>69,850</b>	3	8,467	<b>65,616</b>
3	3,0000	<b>76,200</b>	2	12,700	<b>69,850</b>
3 1/2	3,5000	<b>88,900</b>	2	12,700	<b>82,550</b>
4	4,0000	<b>101,600</b>	2	12,700	<b>95,250</b>
4 1/2	4,5000	<b>114,300</b>	2	12,700	<b>107,950</b>
5	5,0000	<b>127,000</b>	2	12,700	<b>120,650</b>

Nominal diameter (mm) & Nominal Pitch diameter (mm) are for tolerance classes **2G, 3G** and **4G**

Pitch diameter tolerances for external threads (d<sub>2</sub>) – classes 2G, 3G and 4G

Denomination (inches)		T.P.I.	2G			3G			4G		
			max	min	tol.	max	min	tol.	max	min	tol.
1/4	0,2500	16	5,456	5,189	0,267	5,481	5,357	0,124	5,507	5,418	0,089
5/16	0,3125	14	6,929	6,640	0,290	6,955	6,820	0,135	6,980	6,883	0,097
3/8	0,3750	12	8,341	8,029	0,312	8,372	8,225	0,147	8,405	8,301	0,104
7/16	0,4375	12	9,929	9,609	0,320	9,959	9,809	0,150	9,992	9,886	0,107
1/2	0,5000	10	11,285	10,937	0,348	11,323	11,161	0,163	11,359	11,242	0,117
5/8	0,6250	8	14,127	13,736	0,391	14,168	13,985	0,183	14,206	14,077	0,130
3/4	0,7500	6	16,759	16,317	0,442	16,802	16,596	0,206	16,845	16,698	0,147
7/8	0,8750	6	19,919	19,464	0,455	19,967	19,756	0,211	20,015	19,863	0,152
1	1,0000	5	22,657	22,164	0,493	22,708	22,476	0,231	22,758	22,593	0,165
1 1/8	1,1250	5	25,819	25,316	0,503	25,872	25,639	0,234	25,928	25,761	0,168
1 1/4	1,2500	5	28,984	28,473	0,511	29,040	28,801	0,239	29,096	28,926	0,170
1 3/8	1,3750	4	31,511	30,958	0,559	31,572	31,311	0,262	31,631	31,445	0,185
1 1/2	1,5000	4	34,676	34,110	0,566	34,740	34,475	0,264	34,801	34,613	0,188
1 3/4	1,7500	4	41,008	40,427	0,582	41,074	40,803	0,272	41,143	40,950	0,193
2	2,0000	4	47,338	46,741	0,597	47,409	47,130	0,279	47,480	47,282	0,198
2 1/4	2,2500	3	52,611	51,943	0,668	52,687	52,375	0,312	52,763	52,540	0,224
2 1/2	2,5000	3	58,946	58,265	0,681	59,025	58,707	0,317	59,106	58,880	0,226
2 3/4	2,7500	3	65,278	64,585	0,693	65,364	65,042	0,323	65,448	65,217	0,231
3	3,0000	2	69,494	68,692	0,803	69,583	69,210	0,373	69,672	69,405	0,267
3 1/2	3,5000	2	82,169	81,346	0,823	82,266	81,882	0,384	82,360	82,085	0,274
4	4,0000	2	94,844	94,000	0,843	94,945	94,552	0,394	95,047	94,765	0,282
4 1/2	4,5000	2	107,518	106,657	0,861	107,627	107,226	0,401	107,734	107,447	0,287
5	5,0000	2	120,190	119,311	0,879	120,305	119,893	0,411	120,419	120,127	0,292

All dimensions in these columns are in mm

Pitch diameter tolerances for internal threads (D<sub>2</sub>) – classes 2G, 3G and 4G

Denomination (inches)		T.P.I.	2G			3G			4G		
			min	max	tol.	min	max	tol.	min	max	tol.
1/4	0,2500	16	5,558	5,824	0,267	5,558	5,682	0,124	5,558	5,646	0,089
5/16	0,3125	14	7,031	7,320	0,290	7,031	7,165	0,135	7,031	7,127	0,097
3/8	0,3750	12	8,466	8,778	0,312	8,466	8,613	0,147	8,466	8,570	0,104
7/16	0,4375	12	10,053	10,373	0,320	10,053	10,203	0,150	10,053	10,160	0,107
1/2	0,5000	10	11,430	11,778	0,348	11,430	11,593	0,163	11,430	11,547	0,117
5/8	0,6250	8	14,287	14,679	0,391	14,287	14,470	0,183	14,287	14,417	0,130
3/4	0,7500	6	16,934	17,376	0,442	16,934	17,140	0,206	16,934	17,081	0,147
7/8	0,8750	6	20,109	20,564	0,455	20,109	20,320	0,211	20,109	20,262	0,152
1	1,0000	5	22,860	23,353	0,493	22,860	23,091	0,231	22,860	23,025	0,165
1 1/8	1,1250	5	26,035	26,538	0,503	26,035	26,269	0,234	26,035	26,203	0,168
1 1/4	1,2500	5	29,210	29,721	0,511	29,210	29,449	0,239	29,210	29,380	0,170
1 3/8	1,3750	4	31,750	32,309	0,559	31,750	32,012	0,262	31,750	31,935	0,185
1 1/2	1,5000	4	34,925	35,491	0,566	34,925	35,189	0,264	34,925	35,113	0,188
1 3/4	1,7500	4	41,275	41,857	0,582	41,275	41,547	0,272	41,275	41,468	0,193
2	2,0000	4	47,625	48,222	0,597	47,625	47,904	0,279	47,625	47,823	0,198
2 1/4	2,2500	3	52,916	53,384	0,668	52,916	53,228	0,312	52,916	53,139	0,224
2 1/2	2,5000	3	59,266	59,947	0,681	59,266	59,583	0,317	59,266	59,492	0,226
2 3/4	2,7500	3	65,616	66,309	0,693	65,616	65,938	0,323	65,616	65,847	0,231
3	3,0000	2	69,850	70,653	0,803	69,850	70,223	0,373	69,850	70,117	0,267
3 1/2	3,5000	2	82,550	83,373	0,823	82,550	82,934	0,384	82,550	82,824	0,274
4	4,0000	2	95,250	96,093	0,843	95,250	95,644	0,394	95,250	95,532	0,282
4 1/2	4,5000	2	107,950	108,811	0,861	107,950	108,351	0,401	107,950	108,237	0,287
5	5,0000	2	120,650	121,529	0,879	120,650	121,061	0,411	120,650	120,942	0,292

All dimensions in these columns are in mm

Examples

Denomination	Bolt	Pitch diameter d <sub>2</sub>	max	min
<b>1,250-5-ACME-3G</b>		<b>29,210</b>	<b>29,040</b>	<b>28,801</b>

Denomination	Nut	Pitch diameter D <sub>2</sub>	max	min
<b>1,750-4-ACME-2G</b>		<b>41,275</b>	<b>41,857</b>	<b>41,275</b>