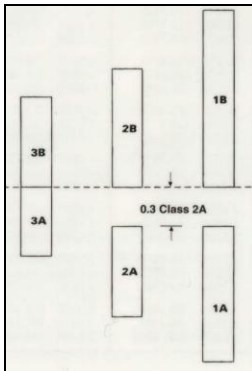


ISO INCH THREAD WITH A STANDARD UNC-3A TOLERANCE

Ref. ASME B1.1 1989 Unified Inch Screw Threads

Relationship between the tolerances

mm to ins. / 25,4
ins. to mm x 25,4



Tolerance class **2A** is the foundation

$$\begin{aligned} 1A &= 1,500 \times 2A \\ 2A &= 1,000 \\ 3A &= 0,750 \times 2A \end{aligned}$$

$$\begin{aligned} 1B &= 1,950 \times 2A \\ 2B &= 1,300 \times 2A \\ 3B &= 0,975 \times 2A \end{aligned}$$

Example :

On a $\frac{1}{2}$ -13 UNC-2A screw the pitch diameter tolerance is **0,127 mm**

Allowance from the nominal pitch diameter for **2A** and **1A**
is $0,127 \times 0,3 = \mathbf{0,038}$ i.e. $0.3 \times 2A$ pitch diameter tolerance

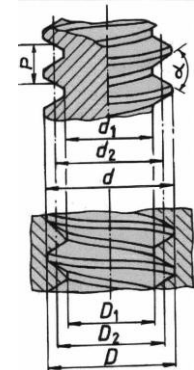
$$1A \text{ is } 0,127 \times 1,5 = \mathbf{0,1905}$$

$$1B \text{ is } 0,127 \times 1,950 = \mathbf{0,248}$$

$$2B \text{ is } 0,127 \times 1,300 = \mathbf{0,165}$$

$$3A \text{ is } 0,127 \times 0,75 = \mathbf{0,095}$$

$$3B \text{ is } 0,127 \times 0,975 = \mathbf{0,124}$$



Denomination	or	d mm (nom.)	d ₂ nom	d ₂ max	d ₂ min
3-48 UNC	0,099-48 UNC	2,515	2,172	2,172	2,129
4-40 UNC	0,112-40 UNC	2,845	2,433	2,433	2,385
5-40 UNC	0,125-40 UNC	3,175	2,764	2,764	2,715
6-32 UNC	0,138-32 UNC	3,505	2,990	2,990	2,936
8-32 UNC	0,164-32 UNC	4,166	3,650	3,650	3,594
10-24 UNC	0,190-24 UNC	4,826	4,138	4,138	4,074
12-24 UNC	0,216-24 UNC	5,486	4,798	4,798	4,732
$\frac{1}{4}$ -20 UNC	0,250-20 UNC	6,350	5,525	5,525	5,453
$\frac{5}{16}$ -18 UNC	0,3125-18 UNC	7,937	7,021	7,021	6,944
$\frac{3}{8}$ -16 UNC	0,375-16 UNC	9,525	8,494	8,494	8,410
$\frac{7}{16}$ -14 UNC	0,4375-14 UNC	11,112	9,934	9,934	9,845
$\frac{1}{2}$ -13 UNC	0,500-13 UNC	12,700	11,430	11,430	11,336
$\frac{9}{16}$ -12 UNC	0,5625-12 UNC	14,288	12,913	12,913	12,814
$\frac{5}{8}$ -11 UNC	0,625-11 UNC	15,875	14,376	14,376	14,272
$\frac{3}{4}$ -10 UNC	0,750-10 UNC	19,050	17,399	17,399	17,287
$\frac{7}{8}$ -9 UNC	0,875-9 UNC	22,225	20,391	20,391	20,272
1-8 UNC	1,000-8 UNC	25,400	23,338	23,338	23,208
1 $\frac{1}{8}$ -7 UNC	1,125-7 UNC	28,575	26,218	26,218	26,081
1 $\frac{1}{4}$ -7 UNC	1,250-7 UNC	31,750	29,393	29,393	29,253
1 $\frac{3}{8}$ -6 UNC	1,375-6 UNC	34,925	32,174	32,174	32,022
1 $\frac{1}{2}$ -6 UNC	1,500-6 UNC	38,100	35,349	35,349	35,194
1 $\frac{3}{4}$ -5 UNC	1,750-5 UNC	44,450	41,151	41,151	40,980
2-4 $\frac{1}{2}$ UNC	2,000-4 $\frac{1}{2}$ UNC	50,800	47,135	47,135	46,954
2 $\frac{1}{4}$ -4 $\frac{1}{2}$ UNC	2,250-4 $\frac{1}{2}$ UNC	57,150	53,485	53,485	53,299
2 $\frac{1}{2}$ -4 UNC	2,500-4 UNC	63,500	59,375	59,375	59,177
2 $\frac{3}{4}$ -4 UNC	2,750-4 UNC	69,850	65,725	65,725	65,524
3-4 UNC	3,000-4 UNC	76,200	74,615	74,615	71,872
3 $\frac{1}{4}$ -4 UNC	3,250-4 UNC	82,550	78,425	78,425	78,217
3 $\frac{1}{2}$ -4 UNC	3,500-4 UNC	88,900	87,775	87,775	84,564
3 $\frac{3}{4}$ -4 UNC	3,750-4 UNC	92,250	91,125	91,125	90,912
4-4 UNC	4,000-4 UNC	101,600	97,475	97,475	97,259