

ISO INCH THREAD WITH A STANDARD UNC-1A 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

$$1A = 1,500 \times 2A$$

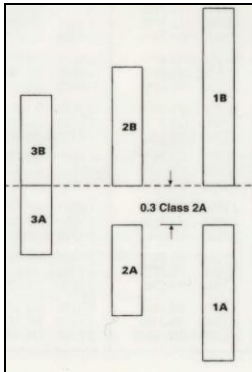
$$1B = 1,950 \times 2A$$

$$2A = 1,000$$

$$2B = 1,300 \times 2A$$

$$3A = 0,750 \times 2A$$

$$3B = 0,975 \times 2A$$



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

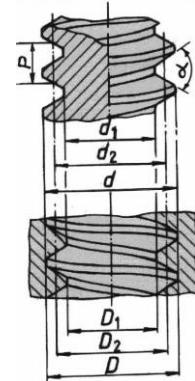
$$1A \text{ is } 0,127 \times 1,5 = \mathbf{0,1905}$$

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

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

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

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



Denomination	or	d (nom.)	d ₂ nom	d ₂ max	d ₂ min
$\frac{1}{4}$ -20 UNC	0,250-20 UNC	6,350	5,525	5,497	5,354
$\frac{5}{16}$ -18 UNC	0,3125-18 UNC	7,937	7,021	6,990	6,835
$\frac{3}{8}$ -16 UNC	0,375-16 UNC	9,525	8,494	8,461	8,296
$\frac{7}{16}$ -14 UNC	0,4375-14 UNC	11,112	9,934	9,830	9,718
$\frac{1}{2}$ -13 UNC	0,500-13 UNC	12,700	11,430	11,392	11,204
$\frac{9}{16}$ -12 UNC	0,5625-12 UNC	14,288	12,913	12,873	12,675
$\frac{5}{8}$ -11 UNC	0,625-11 UNC	15,875	14,376	14,336	14,125
$\frac{3}{4}$ -10 UNC	0,750-10 UNC	19,050	17,399	17,353	17,130
$\frac{7}{8}$ -9 UNC	0,875-9 UNC	22,225	20,391	20,343	20,102
1-8 UNC	1,000-8 UNC	25,400	23,338	23,287	23,030
$1\frac{1}{8}$ -7 UNC	1,125-7 UNC	28,575	26,218	26,162	25,885
$1\frac{1}{4}$ -7 UNC	1,250-7 UNC	31,750	29,393	29,337	29,185
$1\frac{3}{8}$ -6 UNC	1,375-6 UNC	34,925	32,174	32,113	31,808
$1\frac{1}{2}$ -6 UNC	1,500-6 UNC	38,100	35,349	35,288	34,981
$1\frac{3}{4}$ -5 UNC	1,750-5 UNC	44,450	41,151	41,082	40,742
2-4 $\frac{1}{2}$ UNC	2,000-4 $\frac{1}{2}$ UNC	50,800	47,135	47,061	46,698
2 $\frac{1}{4}$ -4 $\frac{1}{2}$ UNC	2,250-4 $\frac{1}{2}$ UNC	57,150	53,485	53,411	53,040
2 $\frac{1}{2}$ -4 UNC	2,500-4 UNC	63,500	59,375	59,296	58,903
2 $\frac{3}{4}$ -4 UNC	2,750-4 UNC	69,850	65,725	65,644	65,242
3-4 UNC	3,000-4 UNC	76,200	74,615	71,994	71,585
3 $\frac{1}{4}$ -4 UNC	3,250-4 UNC	82,550	78,425	78,341	77,927
3 $\frac{1}{2}$ -4 UNC	3,500-4 UNC	88,900	87,775	84,691	84,270
3 $\frac{3}{4}$ -4 UNC	3,750-4 UNC	92,250	91,125	91,039	90,612
4-4 UNC	4,000-4 UNC	101,600	97,475	97,389	97,957