

# METRIC THREADS

Tolerance 5H



**NOMINAL PITCH DIAMETER  $D_2$  &  $d_2$  ( $PD_n = 0.6495P$ )  $D_2/d_2 = D/d - PD_n$**

Pitch	PDn	Pitch	PDn		<b>EXTERNAL THREADS</b> d = Major diameter d <sub>2</sub> = Pitch diameter d <sub>1</sub> = Minor diameter	
0.5	0.325	2	1.299		INTERNAL THREADS D = Major diameter D <sub>2</sub> = Pitch diameter D <sub>1</sub> = Minor diameter  P = Pitch α = Flank angle 60°	
0.6	0.390	2.5	1.624			
0.7	0.455	3	1.949			
		3.5	2.273			
0,75	0,487	4	2.598			
0.8	0.520					
1	0.650	4.5	2.923			
		5	3.248			
1.25	0.812	5.5	3.572			
1.5	0.974	6	3.897			
1.75	1.137	8	5.196			
Examples :-  $d_2/D_2 = d/D - PD_n$ Diameter - PD <sub>N</sub>			Nominal Pitch diameter for :			
			M6x1 = 6.00 - 0.650 = <b>5.350</b>	M20x2.5 = 20.00 - 1.624 = <b>18.376</b>		
			M10x1.5 = 10.00 - 0.974 = <b>9.026</b>	M30x2 = 30.00 - 1.299 = <b>28.701</b>		
			M16x2 = 16.00 - 1.299 = <b>14.701</b>	M36x2 = 36.00 - 1.299 = <b>34.701</b>		
			M20x2 = 20.00 - 1.299 = <b>18.701</b>	M36x3 = 36.00 - 1.949 = <b>34.051</b>		

<b>METRIC THREADS WITH STANDARD 5H TOLERANCES</b> Ref. ISO 965-3 1998 ISO general purpose metric screw threads - Tolerances <b>Pitch diameter(<math>d_2</math>) tolerances (5H) for internal threads</b>							
Pitch P	Diameter D/d (from – up to and including)						
	2,8 – 5,6	5,6 – 11,2	11,2 – 22,4	22,4 – 45	45 – 90	90 – 180	180 – 355
0,5	+0,080 / -0						
0,6	+0,090 / -0						
0,7	+0,095 / -0						
0,75	+0,095 / -0	+0,106 / -0					
0,8	+0,100 / -0						
1		+0,118 / -0	+0,125 / -0	+0,132 / -0			
1,25		+0,125 / -0	+0,140 / -0				
1,5		+0,140 / -0	+0,150 / -0	+0,160 / -0	+0,170 / -0		
1,75			+0,160 / -0				
2			+0,170 / -0	+0,180 / -0	+0,190 / -0	+0,200 / -0	
2,5			+0,180 / -0				
3				+0,212 / -0	+0,224 / -0	+0,236 / -0	+0,265 / -0
3,5				+0,224 / -0			
4				+0,236 / -0	+0,250 / -0	+0,335 / -0	+0,300 / -0
4,5				+0,250 / -0			
5					+0,265 / -0		
5,5					+0,280 / -0		
6					+0,300 / -0	+0,315 / -0	+0,335 / -0
8***						+0,355 / -0	+0,375 / -0

\*\*\* Only when D/d is equal to or greater than 125mm.

A pitch used on a diameter not in this table falls outside the scope of this standard