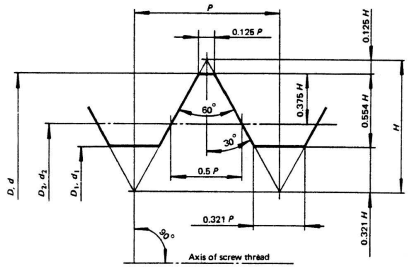
Metric & Multistandard

ISO MINIATURE SCREW THREADS INFORMATION

Ref: ISO R 1501-1970

BASIC PROFILE



D = Major diameter of Internal Thread
d = Major diameter of External Thread
D2 = Pitch Diameter of Internal Thread
d2 = Pitch Diameter of External Thread
D1 = Minor Diameter of Internal Thread
d1 = Minor Diameter of External Thread
P = Pitch
H = Height of Fundamental Triangle

BASIC PROFILE DIMENSIONS

PITCH P	H 0.866025 P	0.554256 H 0.48 P	0.375 H 0.324760 P	0.320744 H 0.277772 P	0.125 H 0.108253 P
0.08	0.069282	0.038400	0.025981	0.022222	0.008660
0.09	0.077942	0.043200	0.029228	0.024999	0.009743
0.1	0.086603	0.048000	0.032476	0.027778	0.010825
0.125	0.108253	0.060000	0.040595	0.034721	0.013532
0.15	0.129904	0.072000	0.048714	0.041666	0.016238
0.175	0.151551	0.084000	0.056833	0.048610	0.018940
0.2	0.173205	0.096000	0.064952	0.055554	0.021651
0.225	0.194856	0.108000	0.073071	0.062499	0.024357
0.25	0.216506	0.120000	0.081190	0.069443	0.027063
0.3	0.259808	0.144000	0.097428	0.083332	0.032476

SCREW THREAD - TOLERANCE 5 h3

THREAD SIZE	MAJOR DIA. d		PITCH DIA. d2		MINOR DIA. d1	
	max.	min.	max.	min.	max.	min.
S 0.3	0.300	0.284	0.248	0.228	0.210	0.190
S 0.35	0.350	0.332	0.292	0.270	0.250	0.228
S 0.4	0.400	0.380	0.335	0.311	0.288	0.264
S 0.45	0.450	0.430	0.385	0.361	0.338	0.314
S 0.5	0.500	0.480	0.419	0.393	0.360	0.332
S 0.55	0.550	0.530	0.469	0.443	0.410	0.382
S 0.6	0.600	0.575	0.503	0.475	0.432	0.400
S 0.7	0.700	0.675	0.586	0.554	0.504	0.468
S 0.8	0.800	0.770	0.670	0.634	0.576	0.536
S 0.9	0.900	0.870	0.754	0.714	0.648	0.604
S 1	1.000	0.965	0.838	0.794	0.720	0.672
S 1.1	1.100	1.065	0.938	0.894	0.820	0.772
S 1.2	1.200	1.165	1.038	0.994	0.920	0.872
S 1.4	1.400	1.360	1.205	1.155	1.064	1.008

NUT THREAD - TOLERANCES 4 H5 and 4 H6

THREAD SIZE	MAJOR DIA.	4 H		GRADE 5		GRADE 6	
		PITCH DIA. D2		MINOR DIAMETER D1			
	min.	max.	min.	max.	min.	max.	min.
S 0.3	0.3	0.268	0.248	0.240	0.223	-	-
S 0.35	0.35	0.314	0.292	0.286	0.264	-	-
S 0.4	0.4	0.359	0.335	0.330	0.304	0.342	0.304
S 0.45	0.45	0.409	0.385	0.380	0.354	0.392	0.354
S 0.5	0.5	0.445	0.419	0.415	0.380	0.435	0.380
S 0.55	0.55	0.495	0.469	0.465	0.430	0.485	0.430
S 0.6	0.6	0.531	0.503	0.502	0.456	0.522	0.456
S 0.7	0.7	0.618	0.586	0.585	0.532	0.605	0.532
S 0.8	0.8	0.706	0.670	0.665	0.608	0.685	0.608
S 0.9	0.9	0.794	0.754	0.745	0.684	0.765	0.684
S 1	1	0.882	0.838	0.825	0.760	0.845	0.760
S 1.1	1.1	0.982	0.938	0.925	0.860	0.945	0.860
S 1.2	1.2	1.082	1.038	1.025	0.960	1.045	0.960
S 1.4	1.4	1.255	1.205	1.185	1.112	1.205	1.112

FUNDAMENTAL DEVIATIONS

PITCH P	NUT THREAD		BOLT THREAD	
	G	H	g	h
	D, D2	D1, D2, D	d1	d, d2
	EI	EI	es	es
	um	um	um	um
0.08	+6	0	-13	0
0.09	+6	0	-14	0
0.1	+6	0	-16	0
0.125	+8	0	-20	0
0.15	+8	0	-24	0
0.175	+10	0	-28	0
0.2	+10	0	-32	0
0.225	+10	0	-36	0
0.25	+12	0	-40	0
0.3	+12	0	-48	0

SCREW THREAD SIZES AND BASIC DIMENSIONS

NOM. DIA.	PITCH P	MAJOR DIA. D, d	PITCH DIA. D2, d2	MINOR DIA. D1, d1
0.3	0.08	0.300000	0.248038	0.223200
(0.35)	0.09	0.350000	0.291543	0.263600
0.4	0.1	0.400000	0.335048	0.304000
(0.45)	0.1	0.450000	0.385048	0.354000
0.5	0.125	0.500000	0.418810	0.380000
(0.55)	0.125	0.550000	0.468810	0.430000
0.6	0.15	0.600000	0.502572	0.456000
(0.7)	0.175	0.700000	0.586334	0.532000
0.8	0.2	0.800000	0.670096	0.608000
(0.9)	0.225	0.900000	0.753858	0.684000
1	0.25	1.000000	0.837620	0.760000
(1.1)	0.25	1.100000	0.937620	0.860000
1.2	0.25	1.200000	1.037620	0.960000
(1.4)	0.3	1.400000	1.205144	1.112000

( ) not recommended for new design

PITCH DIAMETER TOLERANCES

PITCH P	TD2		Td2
	Tolerance Grade		Tolerance
	3	4	5
	um	um	um
0.08	14	20	20
0.09	16	22	22
0.1	18	24	24
0.125	18	26	26
0.15	20	28	28
0.175	22	32	32
0.2	26	36	36
0.225	30	40	40
0.25	32	44	44
0.3	38	50	50