

# Thread tolerances for metric ISO-threads

**Table I I7 Internal threads - Coarse threads acc. to ISO 965-2**

Thread	Length of thread engagement		Pitch diameter		Minor diameter	
	over	up to and incl.	max.	min.	max.	min.
M1*	0,6	1,7	0,894	0,838	0,785	0,729
M1,2*	0,6	1,7	1,094	1,038	0,985	0,929
M1,4*	0,7	2	1,265	1,205	1,142	1,075
M1,6	0,8	2,6	1,458	1,373	1,321	1,221
M1,8	0,8	2,6	1,658	1,573	1,521	1,421
M2	1	3	1,830	1,740	1,679	1,567
M2,5	1,3	3,8	2,303	2,208	2,138	2,013
M3	1,5	4,5	2,775	2,675	2,599	2,459
M3,5	1,7	5	3,222	3,110	3,010	2,850
M4	2	6	3,663	3,545	3,422	3,242
M5	2,5	7,5	4,605	4,480	4,334	4,134
M6	3	9	5,500	5,350	5,153	4,917
M7	3	9	6,500	6,350	6,153	5,917
M8	4	12	7,348	7,188	6,912	6,647
M10	5	15	9,206	9,026	8,676	8,376
M12	6	18	11,063	10,863	10,441	10,106
M14	8	24	12,913	12,701	12,210	11,835
M16	8	24	14,913	14,701	14,210	13,385
M18	10	30	16,600	16,376	15,744	15,924
M20	10	30	18,600	18,376	17,744	17,294
M22	10	30	20,600	20,376	19,744	19,294
M24	12	36	22,316	22,051	21,252	20,752
M27	12	36	25,316	25,051	24,252	23,752
M30	15	45	28,007	27,727	26,771	26,211
M33	15	45	31,007	30,727	29,771	29,211
M36	18	53	33,702	33,402	32,270	31,670
M39	18	53	36,702	36,402	35,270	34,670
M42	21	63	39,392	39,077	37,799	37,129
M45	21	63	42,392	42,077	40,799	40,129
M48	24	71	45,087	44,752	43,297	42,587
M52	24	71	49,087	48,752	47,297	46,587
M56	28	85	52,783	52,428	50,796	50,046
M60	28	85	56,783	56,428	54,796	54,046
M64	32	95	60,478	60,103	58,305	57,505

Tolerance quality: Medium Thread engagement group: Normal Tolerance class: 6H

\* The table's values for thread M1,4 and smaller correspond to tolerance class 5H.

**Table I I8 External threads - Coarse threads acc. to ISO 965-2**

Thread	Length of thread engagement		Major diameter		Pitch diameter		Root radius min <sup>1)</sup>
	over	up to and incl.	max.	min.	max.	min.	
M1*	0,6	1,7	1,000	0,933	0,838	0,785	0,031
M1,2*	0,6	1,7	1,200	1,133	1,038	0,985	0,031
M1,4*	0,7	2	1,400	1,325	1,205	1,149	0,038
M1,6	0,8	2,6	1,581	1,496	1,354	1,291	0,044
M1,8	0,8	2,6	1,781	1,696	1,554	1,491	0,044
M2	1	3	1,981	1,886	1,721	1,654	0,050
M2,5	1,3	3,8	2,480	2,380	2,188	2,117	0,056
M3	1,5	4,5	2,980	2,874	2,655	2,580	0,063
M3,5	1,7	5	3,479	3,354	3,089	3,004	0,075
M4	2	6	3,978	3,838	3,523	3,433	0,088
M5	2,5	7,5	4,976	4,826	4,456	4,361	0,100
M6	3	9	5,974	5,794	5,324	5,212	0,125
M7	3	9	6,974	6,794	6,324	6,212	0,125
M8	4	12	7,972	7,760	7,160	7,042	0,156
M10	5	15	9,968	9,732	8,994	8,862	0,188
M12	6	18	11,966	11,701	10,829	10,679	0,219
M14	8	24	13,962	13,682	12,663	12,503	0,250
M16	8	24	15,962	15,682	14,663	14,503	0,250
M18	10	30	17,958	17,623	16,334	16,164	0,313
M20	10	30	19,958	19,623	18,334	18,164	0,313
M22	10	30	21,958	21,623	20,334	20,164	0,313
M24	12	36	23,952	23,577	22,003	21,803	0,375
M27	12	36	26,952	26,577	25,003	24,803	0,375
M30	15	45	29,947	29,522	27,674	27,462	0,438
M33	15	45	32,947	32,522	30,674	30,462	0,438
M36	18	53	35,940	35,465	33,342	33,118	0,500
M39	18	53	38,940	38,465	36,342	36,118	0,500
M42	21	63	41,937	41,437	39,014	38,778	0,563
M45	21	63	44,937	44,437	42,014	41,778	0,563
M48	24	71	47,929	47,399	44,681	44,431	0,625
M52	24	71	51,929	51,399	48,681	48,431	0,625
M56	28	85	55,925	55,365	52,353	52,088	0,688
M60	28	85	59,925	59,365	56,353	56,088	0,688
M64	32	95	63,920	63,320	60,023	59,743	0,750

Tolerance quality: Medium Thread engagement group: Normal Tolerance class: 6g

\* The table's values for thread M1,4 and smaller correspond to tolerance class 6h.

<sup>1)</sup> See ISO 965-1, section 11.

**Table 223 Internal threads - Fine threads acc. to ISO 965-2**

Thread	Length of thread engagement		Pitch diameter		Minor diameter	
	over	up to and incl.	max.	min.	max.	min.
M8 x 1	3	9	7,500	7,350	7,153	6,917
M10 x 1	4	12	9,500	9,350	9,153	8,917
M10 x 1,25	4	12	9,348	9,188	8,912	8,647
M12 x 1,25	4,5	13	11,368	11,188	10,912	10,647
M12 x 1,5	4,5	13	11,216	11,026	10,676	10,376
M14 x 1,5	5,6	16	13,216	13,026	12,676	12,376
M16 x 1,5	5,6	16	15,216	15,026	14,676	14,376
M18 x 1,5	5,6	16	17,216	17,026	16,676	16,376
M18 x 2	5,6	16	16,913	16,701	16,210	15,835
M20 x 1,5	5,6	16	19,216	19,026	18,676	18,376
M20 x 2	5,6	16	18,913	18,701	18,210	17,835
M22 x 1,5	5,6	16	21,216	21,026	20,676	20,376
M22 x 2	5,6	16	20,913	20,701	20,210	19,835
M24 x 2	8,5	25	22,925	22,701	22,210	21,835
M27 x 2	8,5	25	25,925	25,701	25,210	24,835
M30 x 2	8,5	25	28,925	28,701	28,210	27,835
M33 x 2	8,5	25	31,925	31,701	31,210	30,835
M36 x 3	12	36	34,316	34,051	33,252	32,752
M39 x 3	12	36	37,316	37,051	36,252	35,752
M42 x 3	12	36	40,316	40,051	39,252	38,752
M45 x 3	12	36	43,316	43,051	42,252	41,752
M48 x 3	15	45	46,331	46,051	45,252	44,752
M52 x 4	19	56	49,717	49,402	48,270	47,670
M56 x 4	19	56	53,717	53,402	52,270	51,670
M60 x 4	19	56	57,717	57,402	56,270	55,670
M64 x 4	19	56	61,717	61,402	60,270	59,670

Tolerance quality: Medium

Thread engagement group: Normal

Tolerance class: 6H

**Table 224 External threads - Fine threads acc. to ISO 965-2**

Thread	Length of thread engagement		Major diameter		Pitch diameter		Root radius
	over	up to and incl.	max.	min.	max.	min.	min. <sup>1)</sup>
M8 x 1	3	9	7,974	7,794	7,324	7,212	0,125
M10 x 1	4	12	9,974	9,794	9,324	9,212	0,125
M10 x 1,25	4	12	9,972	9,760	9,160	9,042	0,156
M12 x 1,25	4,5	13	11,972	11,760	11,160	11,028	0,156
M12 x 1,5	4,5	13	11,968	11,732	10,994	10,854	0,188
M14 x 1,5	5,6	16	13,968	13,732	12,994	12,854	0,188
M16 x 1,5	5,6	16	15,968	15,732	14,994	14,854	0,188
M18 x 1,5	5,6	16	17,968	17,732	16,994	16,854	0,188
M18 x 2	5,6	16	17,962	17,682	16,663	16,503	0,250
M20 x 1,5	5,6	16	19,968	19,732	18,994	18,854	0,188
M20 x 2	5,6	16	19,962	19,682	18,663	18,503	0,250
M22 x 1,5	5,6	16	21,968	21,732	20,994	20,854	0,188
M22 x 2	5,6	16	21,962	21,682	20,663	20,503	0,250
M24 x 2	8,5	25	23,962	23,682	22,663	22,493	0,250
M27 x 2	8,5	25	26,962	26,682	25,663	25,493	0,250
M30 x 2	8,5	25	29,962	29,682	28,663	28,493	0,250
M33 x 2	8,5	25	32,962	32,682	31,663	31,493	0,250
M36 x 3	12	36	35,952	35,577	34,003	33,803	0,375
M39 x 3	12	36	38,952	38,577	37,003	36,803	0,375
M42 x 3	12	36	41,952	41,577	40,003	39,803	0,375
M45 x 3	12	36	44,952	44,577	43,003	42,803	0,375
M48 x 3	15	45	47,952	47,577	46,003	45,791	0,375
M52 x 4	19	56	51,940	51,465	49,342	49,106	0,500
M56 x 4	19	56	55,940	55,465	53,342	53,106	0,500
M60 x 4	19	56	59,940	59,465	57,342	57,106	0,500
M64 x 4	19	56	63,940	63,465	61,342	61,106	0,500

Tolerance quality: Medium

Thread engagement group: Normal

Tolerance class: 6g

<sup>1)</sup> See ISO 965-1.