

はめあいの寸法許容差 (JIS B0401-1998 抜粋) Deviations of Fits (JIS B0401 Extract)

常用するはめあいの軸で用いる寸法許容差 (単位: μm) Deviation of Shafts to be Used in Commonly Used Fits (Unit: μm)

標準寸法の区分 (mm) Basic size step (mm)		軸の公差域クラス WORK MATERI Tolerance zone class of shaft																				
越え Over	以下 Up to	e7	e8	e9	f6	f7	f8	g5	g6	h5	h6	h7	h8	h9	js5	js6	js7	k5	k6	m5	m6	n6
—	3	-14 -24	-14 -28	-14 -39	-6 -12	-6 -16	-6 -20	-2 -6	-2 -8	0 -4	0 -6	0 -10	0 -14	0 -25	±2	±3	±5	+4 0	+6 0	+6 +2	+8 +2	+10 +4
3	6	-20 -32	-20 -38	-20 -50	-10 -18	-10 -22	-10 -28	-4 -9	-4 -12	0 -5	0 -8	0 -12	0 -18	0 -30	±2.5	±4	±6	+6 +1	+9 +1	+9 +4	+12 +4	+16 +8
6	10	-25 -40	-25 -47	-25 -61	-13 -22	-13 -28	-13 -35	-5 -11	-5 -14	0 -6	0 -9	0 -15	0 -22	0 -36	±3	±4.5	±7	+7 +1	+10 +1	+12 +6	+15 +6	+19 +10
10	14	-32 -50	-32 -59	-32 -75	-16 -27	-16 -34	-16 -43	-6 -14	-6 -17	0 -8	0 -11	0 -18	0 -27	0 -43	±4	±5.5	±9	+9 +1	+12 +1	+15 +7	+18 +7	+23 +12
14	18	-40 -61	-40 -73	-40 -92	-20 -33	-20 -41	-20 -53	-7 -16	-7 -20	0 -9	0 -13	0 -21	0 -33	0 -52	±4.5	±6.5	±10	+11 +2	+15 +2	+17 +8	+21 +8	+28 +15
18	24	-40 -61	-40 -73	-40 -92	-20 -33	-20 -41	-20 -53	-7 -16	-7 -20	0 -9	0 -13	0 -21	0 -33	0 -52	±4.5	±6.5	±10	+11 +2	+15 +2	+17 +8	+21 +8	+28 +15
24	30	-50 -75	-50 -89	-50 -112	-25 -41	-25 -50	-25 -64	-9 -20	-9 -25	0 -11	0 -16	0 -25	0 -39	0 -62	±5.5	±8	±12	+13 +2	+18 +2	+20 +9	+25 +9	+33 +17
30	40	-50 -75	-50 -89	-50 -112	-25 -41	-25 -50	-25 -64	-9 -20	-9 -25	0 -11	0 -16	0 -25	0 -39	0 -62	±5.5	±8	±12	+13 +2	+18 +2	+20 +9	+25 +9	+33 +17
40	50	-60 -90	-60 -106	-60 -134	-30 -49	-30 -60	-30 -76	-10 -23	-10 -29	0 -13	0 -19	0 -30	0 -46	0 -74	±6.5	±9.5	±15	+15 +2	+21 +2	+24 +11	+30 +11	+39 +20
50	65	-60 -90	-60 -106	-60 -134	-30 -49	-30 -60	-30 -76	-10 -23	-10 -29	0 -13	0 -19	0 -30	0 -46	0 -74	±6.5	±9.5	±15	+15 +2	+21 +2	+24 +11	+30 +11	+39 +20
65	80	-72 -107	-72 -126	-72 -159	-36 -58	-36 -71	-36 -90	-12 -27	-12 -34	0 -15	0 -22	0 -35	0 -54	0 -87	±7.5	±11	±17	+18 +3	+25 +3	+28 +13	+35 +13	+45 +23
80	100	-72 -107	-72 -126	-72 -159	-36 -58	-36 -71	-36 -90	-12 -27	-12 -34	0 -15	0 -22	0 -35	0 -54	0 -87	±7.5	±11	±17	+18 +3	+25 +3	+28 +13	+35 +13	+45 +23
100	120	-85 -125	-85 -148	-85 -185	-43 -68	-43 -83	-43 -106	-14 -32	-14 -39	0 -18	0 -25	0 -40	0 -63	0 -100	±9	±12.5	±20	+21 +3	+28 +3	+33 +15	+40 +15	+52 +27
120	140	-85 -125	-85 -148	-85 -185	-43 -68	-43 -83	-43 -106	-14 -32	-14 -39	0 -18	0 -25	0 -40	0 -63	0 -100	±9	±12.5	±20	+21 +3	+28 +3	+33 +15	+40 +15	+52 +27
140	160	-100 -146	-100 -172	-100 -215	-50 -79	-50 -96	-50 -122	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31
160	180	-100 -146	-100 -172	-100 -215	-50 -79	-50 -96	-50 -122	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31
180	200	-100 -146	-100 -172	-100 -215	-50 -79	-50 -96	-50 -122	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31
200	225	-100 -146	-100 -172	-100 -215	-50 -79	-50 -96	-50 -122	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31
225	250	-100 -146	-100 -172	-100 -215	-50 -79	-50 -96	-50 -122	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31

表中の上側の数値は上の寸法許容差、下側の数値は下の寸法許容差を示す。
in every step given in the table, the value on the upper side shows the upper deviation and the value on the lower side, the lower deviation.

常用するはめあいで用いる穴の寸法許容差 (単位: μm) Deviation of Holes to be Used in Commonly Used Fits (Unit: μm)

標準寸法の区分 (mm) Basic size step (mm)		穴の公差域クラス Tolerance zone class of hole																				
越え Over	以下 Up to	E7	E8	E9	F6	F7	F8	G6	G7	H6	H7	H8	H9	H10	JS6	JS7	K6	K7	M6	M7	N6	N7
—	3	+24 +14	+28 +14	+39 +14	+12 +6	+16 +6	+20 +6	+8 +2	+12 +2	+6 0	+10 0	+14 0	+25 0	+40 0	±3	±5	0 -6	0 -10	-2 -8	-2 -12	-4 -10	-4 -14
3	6	+32 +20	+38 +20	+50 +20	+18 +10	+22 +10	+28 +10	+12 +4	+16 +4	+8 0	+12 0	+18 0	+30 0	+48 0	±4	±6	+2 -6	+3 -9	-1 -9	0 -12	-5 -13	-4 -16
6	10	+40 +25	+47 +25	+61 +25	+22 +13	+28 +13	+35 +13	+14 +5	+20 +5	+9 0	+15 0	+22 0	+36 0	+58 0	±4.5	±7	+2 -7	+5 -10	-3 -12	0 -15	-7 -16	-4 -19
10	14	+50 +32	+59 +32	+75 +32	+27 +16	+34 +16	+43 +16	+17 +6	+24 +6	+11 0	+18 0	+27 0	+43 0	+70 0	±5.5	±9	+2 -9	+6 -12	-4 -15	0 -18	-9 -20	-5 -23
14	18	+50 +32	+59 +32	+75 +32	+27 +16	+34 +16	+43 +16	+17 +6	+24 +6	+11 0	+18 0	+27 0	+43 0	+70 0	±5.5	±9	+2 -9	+6 -12	-4 -15	0 -18	-9 -20	-5 -23
18	24	+61 +40	+73 +40	+92 +40	+33 +20	+41 +20	+53 +20	+20 +7	+28 +7	+13 0	+21 0	+33 0	+52 0	+84 0	±6.5	±10	+2 -11	+6 -15	-4 -17	0 -21	-11 -24	-7 -28
24	30	+61 +40	+73 +40	+92 +40	+33 +20	+41 +20	+53 +20	+20 +7	+28 +7	+13 0	+21 0	+33 0	+52 0	+84 0	±6.5	±10	+2 -11	+6 -15	-4 -17	0 -21	-11 -24	-7 -28
30	40	+75 +50	+89 +50	+112 +50	+41 +25	+50 +25	+64 +25	+25 +9	+34 +9	+16 0	+25 0	+39 0	+62 0	+100 0	±8	±12	+3 -13	+7 -18	-4 -20	0 -25	-12 -28	-8 -33
40	50	+75 +50	+89 +50	+112 +50	+41 +25	+50 +25	+64 +25	+25 +9	+34 +9	+16 0	+25 0	+39 0	+62 0	+100 0	±8	±12	+3 -13	+7 -18	-4 -20	0 -25	-12 -28	-8 -33
50	65	+90 +60	+106 +60	+134 +60	+49 +30	+60 +30	+76 +30	+29 +10	+40 +10	+19 0	+30 0	+46 0	+74 0	+120 0	±9.5	±15	+4 -15	+9 -21	-5 -24	0 -30	-14 -33	-9 -39
65	80	+90 +60	+106 +60	+134 +60	+49 +30	+60 +30	+76 +30	+29 +10	+40 +10	+19 0	+30 0	+46 0	+74 0	+120 0	±9.5	±15	+4 -15	+9 -21	-5 -24	0 -30	-14 -33	-9 -39
80	100	+107 +72	+126 +72	+159 +72	+58 +36	+71 +36	+90 +36	+34 +12	+47 +12	+22 0	+35 0	+54 0	+87 0	+140 0	±11	±17	+4 -18	+10 -25	-6 -28	0 -35	-16 -38	-10 -45
100	120	+107 +72	+126 +72	+159 +72	+58 +36	+71 +36	+90 +36	+34 +12	+47 +12	+22 0	+35 0	+54 0	+87 0	+140 0	±11	±17	+4 -18	+10 -25	-6 -28	0 -35	-16 -38	-10 -45
120	140	+125 +85	+148 +85	+185 +85	+68 +43	+83 +43	+106 +43	+39 +14	+54 +14	+25 0	+40 0	+63 0	+100 0	+160 0	±12.5	±20	+4 -21	+12 -28	-8 -33	0 -40	-20 -45	-12 -52
140	160	+125 +85	+148 +85	+185 +85	+68 +43	+83 +43	+106 +43	+39 +14	+54 +14	+25 0	+40 0	+63 0	+100 0	+160 0	±12.5	±20	+4 -21	+12 -28	-8 -33	0 -40	-20 -45	-12 -52
160	180	+125 +85	+148 +85	+185 +85	+68 +43	+83 +43	+106 +43	+39 +14	+54 +14	+25 0	+40 0	+63 0	+100 0	+160 0	±12.5	±20	+4 -21	+12 -28	-8 -33	0 -40	-20 -45	-12 -52
180	200	+146 +100	+172 +100	+215 +100	+79 +50	+96 +50	+122 +50	+44 +15	+61 +15	+29 0	+46 0	+72 0	+115 0	+185 0	±14.5	±23	+5 -24	+13 -33	-8 -37	0 -46	-22 -51	-14 -60
200	225	+146 +100	+172 +100	+215 +100	+79 +50	+96 +50	+122 +50	+44 +15	+61 +15	+29 0	+46 0	+72 0	+115 0	+185 0	±14.5	±23	+5 -24	+13 -33	-8 -37	0 -46	-22 -51	-14 -60
225	250	+146 +100	+172 +100	+215 +100	+79 +50	+96 +50	+122 +50	+44 +15	+61 +15	+29 0	+46 0	+72 0	+115 0	+185 0	±14.5	±23	+5 -24	+13 -33	-8 -37	0 -46	-22 -51	-14 -60

表中の上側の数値は上の寸法許容差、下側の数値は下の寸法許容差を示す。
in every step given in the table, the value on the upper side shows the upper deviation and the value on the lower side, the lower deviation.

ねじ下穴径表 Table for Screw Prepared Hole

1. メートル並目ねじ (単位: mm) Metric Standard Screw (Unit: mm)

ねじの呼び	ドリル径	めねじ内径 等級6H (旧JIS2級) ^{*1}	
		最小寸法	最大寸法
M 1 × 0.25	0.75	(0.729)	(0.785)
M 1.1 × 0.25	0.85	(0.829)	(0.885)
M 1.2 × 0.25	0.95	(0.929)	(0.985)
M 1.4 × 0.3	1.1	(1.075)	(1.142)
M 1.6 × 0.35	1.25	1.221	1.321
M 1.7 × 0.35	1.35	1.321	1.421
M 1.8 × 0.35	1.45	1.421	1.521
M 2 × 0.4	1.6	1.567	1.679
M 2.2 × 0.45	1.75	1.713	1.838
M 2.3 × 0.4	1.9	1.867	1.979
M 2.5 × 0.45	2.1	2.013	2.138
M 2.6 × 0.45	2.2	2.113	2.238
M 3 × 0.5	2.5	2.459	2.599
M 3.5 × 0.6	2.9	2.85	3.01
M 4 × 0.7	3.3	3.242	3.422
M 4.5 × 0.75	3.25	3.106	3.326
M 5 × 0.8	4.2	4.134	4.334
M 6 × 1	5	4.917	5.153
M 7 × 1	6	5.917	6.153
M 8 × 1.25	6.8	6.647	6.912
M 9 × 1.25	7.8	7.647	7.912
M 10 × 1.5	8.5	8.376	8.676
M 11 × 1.5	9.5	9.376	9.676
M 12 × 1.75	10.3	10.106	10.441
M 14 × 2	12	11.835	12.21
M 16 × 2	14	13.835	14.21
M 18 × 2.5	15.5	15.294	15.744
M 20 × 2.5	17.5	17.294	17.744
M 22 × 2.5	19.5	19.294	19.744
M 24 × 3	21	20.752	21.252
M 27 × 3	24	23.752	24.252

メートルねじの呼びとピッチの一覧表 Table of nominal designation and pitches of metric threads

(単位: mm)

ねじの呼び Nominal designation of threads	並目ピッチ Coarse pitch		細目ピッチ Fine pitch				ねじの呼び Nominal designation of threads	並目ピッチ Coarse pitch		細目ピッチ Fine pitch			
M1	0.25	0.2					M72		*6	*4	*3	2	1.5
1.1	*0.25	*0.2					75			*4	*3	2	1.5
1.2	0.25	0.2					76		*6	*4	*3	*2	*1.5
1.4	0.3	0.2					78					2	▲1.5
1.6	*0.35	*0.2					80		*6	*4	*3	2	1.5
1.7	▽0.35	▲0.2					82					2	▲1.5
1.8	*0.35	*0.2					85		*6	*4	*3	2	▲1.5
2	0.4	0.25					88					▲2	▲1.5
2.2	*0.45	*0.25					90		*6	*4	*3	2	▲1.5
2.3	▽0.4	▲0.25					92					▲2	▲1.5
2.5	*0.45	*0.35					95		*6	*4	*3	2	▲1.5
2.6	▽0.45	▲0.35					98					▲2	▲1.5
3	*0.5						100		*6	*4	*3	2	▲1.5
3	▲0.6	0.35					102					▲2	▲1.5
3.5	0.6	0.35					105		*6	*4	*3	2	▲1.5
4	*0.7						108					▲2	▲1.5
4	▲0.75	0.5					110		*6	*4	*3	2	▲1.5
4.5	0.75	0.5					112					▲2	▲1.5
5	*0.8						115		*6	*4	*3	2	▲1.5
5	▲0.9	0.5					118					▲2	▲1.5
5.5	▲0.9	0.5					120		*6	*4	*3	2	▲1.5
6	1	0.75	▲0.5				122					▲2	
7	1	0.75	▲0.5				125		*8	*6	*4	*3	2
8	1.25	1	0.75	▲0.5			128					▲2	
9	1.25	1	0.75	▲0.5			130		*8	*6	*4	*3	2
10	1.5	1.25	1	*0.75	▲0.5		132					▲2	
11	*1.5	▲1.25	1	*0.75	▲0.5		135			*6	*4	*3	2
12	1.75	1.5	*1.25	1	▲0.5		138					▲2	
13		▲1.5	▲1	▲0.5			140		*8	*6	*4	*3	2
14	2	1.5	*1.25	1	▲0.5		142					▲2	
15		1.5	1	▲0.5			145			*6	*4	*3	2
16	2	1.5	1	▲0.5			148					▲2	
17		*1.5	*1				150		*8	*6	*4	*3	2
18	2.5	2	1.5	1	▲0.5		155			*6	*4	*3	
20	2.5	2	1.5	1	▲0.5		160		*8	*6	*4	*3	
22	2.5	2	1.5	1	▲0.5		165			*6	*4	*3	
24	3	2	1.5	1	▲0.5		170		*8	*6	*4	*3	
25		2	1.5	1	▲0.5		175			*6	*4	*3	
26		▲2	1.5	▲1	▲0.5		180		*8	*6	*4	*3	
27	3	*2	1.5	*1			185			*6	*4	*3	
28		2	1.5	1	▲0.5		190		*8	*6	*4	*3	
30	3.5	*3	2	1.5	1	▲0.5	195			*6	*4	*3	
32			2	1.5	▲1	▲0.5	200		*8	*6	*4	*3	
33	3.5	*3	*2	1.5			205			*6	*4	*3	
34			▲2	▲1.5	▲1	▲0.5	210		*8	*6	*4	*3	
35				1.5			215			*6	*4	*3	
36	4	*3	2	1.5	▲1	▲0.5	220		*8	*6	*4	*3	
38			▲2	1.5	▲1	▲0.5	225			*6	*4	*3	
39	4	*3	*2	*1.5			230		*8	*6	*4	*3	
40		*3	2	1.5	▲1		235			*6	*4	*3	
42	4.5	*4	*3	2	1.5	▲1	240		*8	*6	*4	*3	
45	4.5	*4	*3	2	1.5	▲1	245			*6	*4	*3	
48	5	*4	*3	2	1.5	▲1	250		*8	*6	*4	*3	
50			*3	2	1.5	▲1	255			*6	*4		
52	*5	*4	*3	2	1.5		260		*8	*6	*4		
55		*4	*3	2	1.5		265			*6	*4		
56	*5.5	*4	*3	*2	*1.5		270		*8	*6	*4		
58		*4	*3	2	1.5		275			*6	*4		
60	*5.5	*4	*3	2	1.5		280		*8	*6	*4		
62		*4	*3	2	1.5		285			*6	*4		
64	*6	*4	*3	*2	*1.5		290		*8	*6	*4		
65		*4	*3	2	1.5		295			*6	*4		
68	*6	*4	*3	2	1.5		300		*8	*6	*4		
70		*6	*4	*3	2	1.5							

注) *: ISOより採用されたもの ▲: 1968年3月で廃止されたもの(旧JIS) ▽: 1997年6月で廃止されたもの(旧JIS)
 Note) *: Values adopted from ISO ▲: Values disused in March 1968(Old JIS) ▽: Values disused in June 1997(Old JIS)

ユニファイねじの呼びと山数の一覧表 Table of nominal designation and threads per inch(25.4mm) of unified screw thread

呼び Nominal designation	外径 Major diameter		山数(山/インチ) Threads per inch			山数(山/インチ)・・・系列ねじ Threads per inch・・・Series thread							
	インチ inch	ミリ mm	UNC	UNF	UNEF	4UN	6UN	8UN	12UN	16UN	20UN	28UN	32UN
No. 0	No. 1	0.0600	1.524	64	80								
		0.0730	1.854	72	72								
No. 2		0.0860	2.184	56	64								
	No. 3	0.0990	2.515	48	56								
No. 4		0.1120	2.845	40	48								
No. 5		0.1250	3.175	40	44								
No. 6		0.1380	3.505	32	40								
No. 8		0.1640	4.166	32	36								
No.10		0.1900	4.826	24	32								
	No.12	0.2160	5.486	24	28	32							
1/4		0.2500	6.350	20	28	32							
5/16		0.3125	7.938	18	24	32					20	28	
3/8		0.3750	9.525	16	24	32					20	28	
7/16		0.4375	11.113	14	20	28					16		32
1/2		0.5000	12.700	13	20	28					16		32
9/16		0.5625	14.288	12	18	24					16	20	28
5/8		0.6250	15.875	11	18	24					12	16	20
	11/16	0.6875	17.463			24					12	16	20
		0.7500	19.050	10	16	20					12	16	20
		0.8125	20.638			20					12	16	20
7/8		0.8750	22.225	9	14	20					12	16	20
	15/16	0.9375	23.813			20					12	16	20
		1.0000	25.400	8	12	20					16	20	28
1 1/8	1 1/16	1.0625	26.988			18					8	12	16
		1.1250	28.575	7	12	18					8	12	16
	1 3/16	1.1875	30.163			18					8	12	16
1 1/4		1.2500	31.750	7	12	18					8	12	16
	1 5/16	1.3125	33.338			18					8	12	16
1 3/8		1.3750	34.925	6	12	18					8	12	16
	1 7/16	1.4375	36.513			18					6	8	12
1 1/2		1.5000	38.100	6	12	18					6	8	12
	1 9/16	1.5625	39.688			18					6	8	12
1 5/8		1.6250	41.275			18					6	8	12
	1 11/16	1.6875	42.863			18					6	8	12
1 3/4		1.7500	44.450	5							6	8	12
	1 13/16	1.8125	46.038								6	8	12
1 7/8		1.8750	47.625								6	8	12
	1 15/16	1.9375	49.213								6	8	12
2		2.0000	50.800	4 1/2							6	8	12
	2 1/8	2.1250	53.975								6	8	12
2 1/4		2.2500	57.150	4 1/2							6	8	12
	2 3/8	2.3750	60.325								6	8	12
2 1/2		2.5000	63.500	4							6	8	12
	2 5/8	2.6250	66.675								6	8	12
2 3/4		2.7500	69.850	4							4	6	8
	2 7/8	2.8750	73.025								4	6	8
3		3.0000	76.200	4							6	8	12
	3 1/8	3.1250	79.375								4	6	8
3 1/4		3.2500	82.550	4							4	6	8
	3 3/8	3.3750	85.725								4	6	8
3 1/2		3.5000	88.900	4							4	6	8
	3 5/8	3.6250	92.075								4	6	8
3 3/4		3.7500	95.250	4							4	6	8
	3 7/8	3.8750	98.425								4	6	8
4		4.0000	101.600	4							4	6	8
	4 1/8	4.1250	104.775								4	6	8
4 1/4		4.2500	107.950								4	6	8
	4 3/8	4.3750	111.125								4	6	8
4 1/2		4.5000	114.300								4	6	8
	4 5/8	4.6250	117.475								4	6	8
4 3/4		4.7500	120.650								4	6	8
	4 7/8	4.8750	123.825								4	6	8
5		5.0000	127.000								4	6	8
	5 1/8	5.1250	130.175								4	6	8
5 1/4		5.2500	133.350								4	6	8
	5 3/8	5.3750	136.525								4	6	8
5 1/2		5.5000	139.700								4		