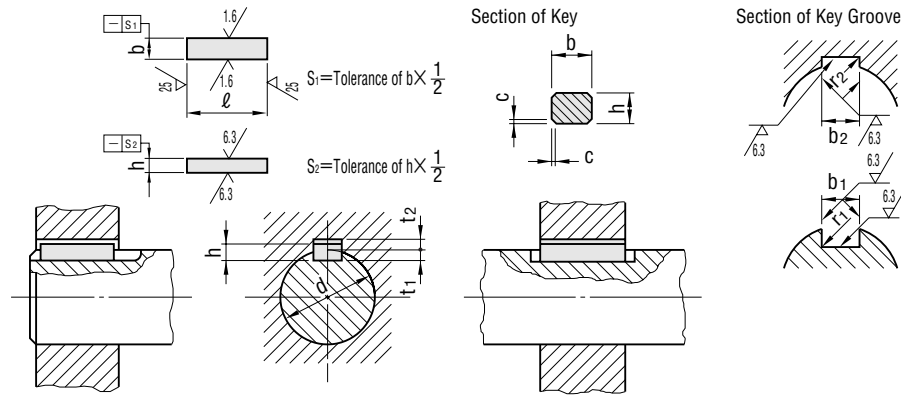


## 1. Parallel Keys and Key Grooves



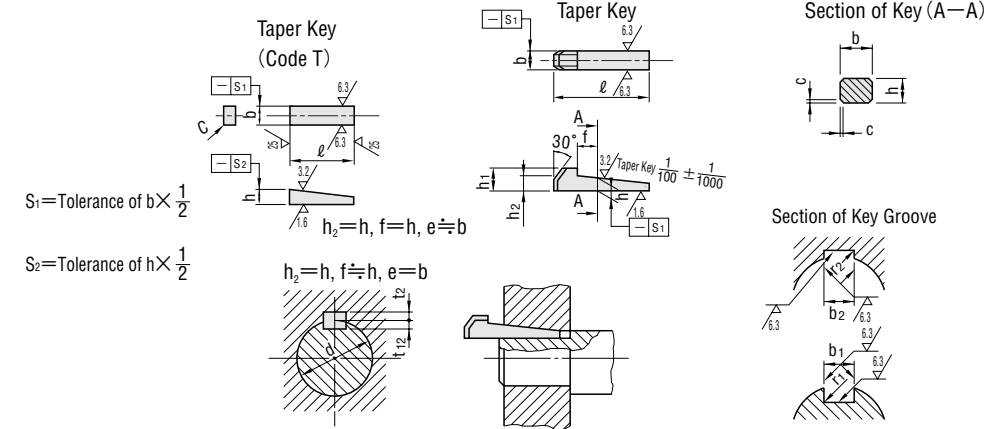
Unit : mm

Key Nominal Dimension b×h	Dimension of Key Groove							Reference			
	(Sliding Type)		Standard		Precision Class	r <sub>1</sub> and r <sub>2</sub>	Reference Dimension of t <sub>1</sub>	Reference Dimension of t <sub>2</sub>	Reference Dimension of t <sub>1</sub> , t <sub>2</sub>	Applicable Shaft Dia. (1)	
	b <sub>1</sub>	b <sub>2</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>1</sub> and b <sub>2</sub>						
2×2	2	+0.025	+0.060	-0.004	±0.0125	-0.006	-0.031	0.08~0.16	1.2	1.0	6~8
3×3	3	0	+0.020	-0.029		-0.031		+0.1 0	1.8	1.4	8~10
4×4	4								2.5	1.8	10~12
5×5	5	+0.030	+0.078	0	±0.0150	-0.012	-0.042		3.0	2.3	12~17
6×6	6	0	+0.030	-0.030		-0.042		0.16~0.25	3.5	2.8	17~22
(7×7)	7								4.0	3.0	20~25
8×8	8	+0.036	+0.098	0	±0.0180	-0.015	-0.051		4.0	3.3	22~30
10×8	10	0	+0.040	-0.036		-0.051		0.25~0.40	5.0	3.3	30~38
12×8	12								5.0	3.3	38~44
14×9	14	+0.043	+0.120	0	±0.0215	-0.018	-0.061		5.5	3.8	44~50
(15×10)	15	0	+0.050	-0.043		-0.061		+0.2 0	5.0	5.0	50~55
16×10	16								6.0	4.3	50~58
18×11	18								7.0	4.4	58~65
20×12	20							0.40~0.60	7.5	4.9	65~75
22×14	22	+0.052	+0.149	0	±0.0260	-0.022	-0.074		9.0	5.4	75~85
(24×16)	24	0	+0.065	-0.052		-0.074			8.0	8.0	80~90
25×14	25							+0.3 0	9.0	5.4	85~95
28×16	28								10.0	6.4	95~110
32×18	32								11.0	7.4	110~130
(35×22)	35							0.70~1.00	11.0	11.0	125~140
36×20	36	+0.062	+0.180	0	±0.0310	-0.026	-0.088		12.0	8.4	130~150
(38×24)	38	0	+0.080	-0.062		-0.088			12.0	12.0	140~160
40×22	40							+0.3 0	13.0	9.4	150~170
(42×26)	42								13.0	13.0	160~180
45×25	45								15.0	10.4	170~200
50×28	50							1.20~1.60	17.0	11.4	200~230
56×32	56	+0.074	+0.220	0	±0.0370	-0.032	-0.106		20.0	12.4	230~260
63×32	63	0	+0.100	-0.074		-0.106			20.0	12.4	260~290
70×36	70							2.00~2.50	22.0	14.4	290~330
80×40	80								25.0	15.4	330~380
90×45	90	+0.087	+0.260	0	±0.0435	-0.037	-0.124		28.0	17.4	380~440
100×50	100	0	+0.120	-0.087		-0.124		31.0	19.5	440~500	

Note (1) : The applicable shaft diameter is calculated from the torque corresponding to the strength of the key, for presentation as referential data for general-purpose use. When the key is of an appropriate size relative to the torque to be transmitted, a shaft thicker than the applicable shaft diameter may be used. In some cases, t<sub>1</sub> and t<sub>2</sub> should be adjusted so that a side of the key will come into uniform contact with the shaft and the hub. A shaft narrower than the applicable shaft diameter should not be used.

Remarks : The nominal sizes given in ( ) do not conform to the relevant international standard and must not be used in new design.

## 2. Taper Key, Gib Head Key and Key Groove



Unit : mm

Key Nominal Dimension b×h	Dimension of Key Groove							Dimension of Key Groove							Reference Applicable Shaft Dia. (2)
	b		h		h <sub>1</sub>	c	ℓ (1)	b <sub>1</sub> and b <sub>2</sub>		r <sub>1</sub> and r <sub>2</sub>	Reference Dimension of t <sub>1</sub>	Reference Dimension of t <sub>2</sub>	Reference Dimension of t <sub>1</sub> , t <sub>2</sub>		
	Reference Dimension	Tolerance (h9)	Reference Dimension	Tolerance				Reference Dimension	Tolerance (D10)						
2×2	2	0	2	0	—	—	6~30	2	+0.060	0.08	1.2	0.5	+0.05	6~8	
3×3	3	-0.025	3	-0.025	h9	0.16~0.25	6~36	3	+0.020	0.16~0.25	1.8	0.9	0	8~10	
4×4	4		4	0	7	8~45	4	+0.078	2.5		1.2	10~12			
5×5	5	-0.030	5	-0.030	8	10~56	5	+0.030	3.0		1.7	12~17			
6×6	6		6	0	10	14~70	6		+0.078 +0.030	3.5	2.2	+0.1 0	17~22		
(7×7)	7		7.2	-0.036	10	16~80	7			4.0	3.0	20~25			
8×7	8	0	7	0	11	18~90	8	+0.098		4.0	2.4	22~30			
10×8	10	-0.036	8	0	12	22~110	10	+0.040	+0.098 +0.040	5.0	2.4	+0.2 0	30~38		
12×8	12		8	-0.090	12	28~140	12			5.0	2.4	38~54			
14×9	14		9	0	14	36~160	14			5.5	2.9	44~50			
(15×10)	15	0	10.2	-0.070	h10	15	40~180	15	+0.120	0.25~0.40	5.0	5.0	+0.1 0	50~55	
16×10	16	-0.043	10	-0.090	16	45~180	16	+0.050	6.0		3.4	50~58			
18×11	18		11	0	18	50~200	18		7.0		3.4	58~65			
20×12	20		12	0	20	56~220	20		+0.149 +0.065	7.5	3.9	0	65~75		
22×14	22		14	-0.110	22	63~250	22			9.0	4.4	75~85			
(24×16)	24	0	16.2	-0.070	h10	24	70~280	24		+0.149	8.0	8.0	+0.1 0	80~90	
25×14	25	-0.052	14	0	22	70~280	25		+0.149 +0.065	9.0	4.4	0	85~95		
28×16	28		16	0	25	80~320	28			10.0	5.4	+0.2 0	95~110		
32×18	32		18	-0.110	28	90~360	32			11.0	6.4	110~130			
(35×22)	35		22.3	-0.084	h10	32	100~400	35		0.40~0.60	11.0	11.0	+0.15 0	125~140	
36×20	36	0	20	-0.130	h11	36	—	36	+0.180		12.0	7.1	+0.3 0	130~150	
(38×24)	38	-0.062	24.3	-0.084	h10	36	—	38	+0.080		12.0	12.0	+0.15 0	140~160	
40×22	40		22	-0.130	h11	36	1.00~1.20	40		0.70~1.00	13.0	8.1	+0.3 0	150~170	
(42×26)	42		26.3	-0.084	h10	40	—	42			13.0	13.0	+0.15 0	160~180	
45×25	45		25	0	40	—	45		15.0		9.1	170~200			
50×28	50		28	-0.130	45	—	50		+0.220 +0.100	17.0	10.1	0	200~230		
56×32	56		32	0	50	—	56			20.0	11.1	230~260			
63×32	63	0	32	0	50	1.60~2.00	63	+0.220		1.20~1.60	20.0	11.1	+0.3 0	260~290	
70×36	70	-0.074	36	-0.160	56	—	70	+0.100	22.0		13.1	290~330			
80×40	80		40	0	63	—	80		25.0		14.1	330~380			
90×45	90	0	45	0	70	2.50~3.00	—	90	+0.260	2.00~2.50	28.0	16.1	380~440		
100×50	100	-0.087	50	0	80	—	100	+0.120	31.0		18.1	440~500			

Note (1) : From the values for ℓ given below, which are in the appropriate range in the table, one should be selected.

The tolerance for ℓ should be h12 under JIS B0401 (dimension tolerance and fitting), in principle.

6, 8, 10, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 70, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220, 250, 280, 320, 360, 400

Note (2) : The appropriate shaft diameter should be matched with the torque corresponding to the strength of the key.

Remarks : The nominal sizes given in ( ) should not be used unless they are absolutely necessary.

The groove for the boss should be slanted to 1/100, in principle.