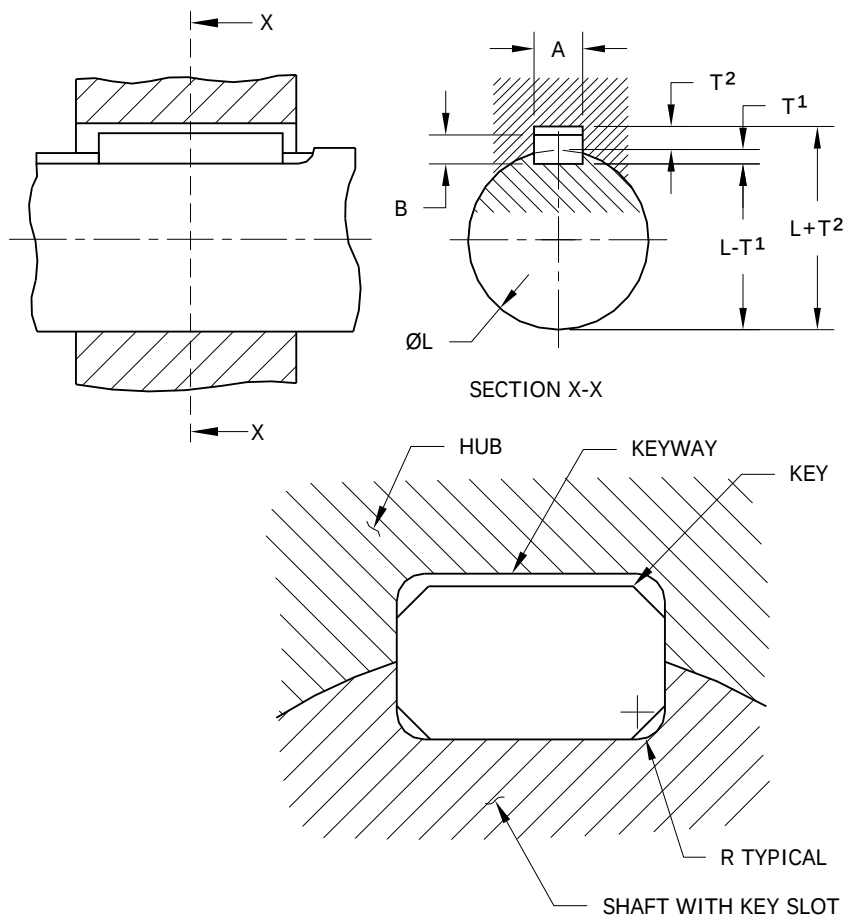


1. Dimensions and tolerances of key slots and keyways for rectangular and square parallel keys.
- 1.1. Table I is a tabulation of key slots and keyways to receive corresponding keys of the type dimensioned on standard part drawing



DETAIL OF KEY SLOT, KEYWAY, & KEY

Figure 1

Note: The section on rectangular and square parallel key slots and keyways conforms with ISO Recommendation R773.

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THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE KEYWAY AND KEY SLOT DIMENSIONS METRIC	CLASSIFICATION DESIGN STANDARD DA0139 SHEET 1 OF 7

TABLE I – KEY SLOT AND KEYWAY DIMENSIONS /a/

SHAFT ØL		/b/ KEY NOMINAL WIDTH X HEIGHT	KEY SLOT AND KEYWAY DIMENSIONS											
			WIDTH						DEPTH /c/				RADIUS R	
			NOMINAL	TOLERANCE					SHAFT T ¹		HUB T ²			
				FREE KEYS		NORMAL KEYS		CLOSE KEYS SHAFT & HUB						
OVER	TO	A x B			SHAFT	HUB	SHAFT		HUB		NOM	TOL	NOM	TOL
6	8	2x 2	2	+0,025	+0,060	-0,004	+0,0125	-0,006	1,2	+0,1 0	1	+0,1 0	0,16	0,08
8	10	3x 3	3	0	+0,020	-0,029	-0,0125	-0,031	1,8		1,4		0,16	0,08
10	12	4x 4	4						2,5		1,8		0,16	0,08
12	17	5x 5	5	+0,030	+0,078	0	+0,0150	-0,012	3,0	+0,2 0	2,3	+0,2 0	0,25	0,16
17	22	6x 6	6	0	+0,030	-0,030	-0,0150	-0,042	3,5		2,8		0,25	0,16
22	30	8x 7	8	+0,036	+0,098	0	+0,0180	-0,015	4,0		3,3		0,25	0,16
30	38	10x 8	10	0	+0,040	-0,036	-0,0180	-0,051	5,0	+0,3 0	3,3	+0,3 0	0,40	0,25
38	44	12x 8	12						5,0		3,3		0,40	0,25
44	50	14x 9	14	+0,043	+0,120	0	+0,0215	-0,018	5,5		3,8		0,40	0,25
50	58	16x10	16	0	+0,050	-0,043	-0,0215	-0,061	6,0	+0,2 0	4,3	+0,2 0	0,40	0,25
58	65	18x11	18						7,0		4,4		0,40	0,25
65	75	20x12	20						7,5		4,9		0,60	0,40
75	85	22x14	22	+0,052	+0,149	0	+0,0260	-0,022	9,0	+0,3 0	5,4	+0,3 0	0,60	0,40
85	95	25x14	25	0	+0,065	-0,052	-0,0260	-0,074	9,0		5,4		0,60	0,40
95	110	28x16	28						10,0		6,4		0,60	0,40
110	130	32x18	32						11,0	+0,3 0	7,4	+0,3 0	0,60	0,40
130	150	36x20	36						12,0		8,4		1,00	0,70
150	170	40x22	40	+0,062	+0,180	0	+0,0310	-0,026	13,0		9,4		1,00	0,70
170	200	45x25	45	0	+0,080	-0,062	-0,0310	-0,088	15,0	+0,3 0	10,4	+0,3 0	1,00	0,70
200	230	50x28	50						17,0		11,4		1,00	0,70
230	260	54x32	56						20,0		12,4		1,60	1,20
260	290	63x32	63	+0,074	+0,220	0	+0,0370	-0,032	20,0	+0,3 0	12,4	+0,3 0	1,60	1,20
290	330	70x36	70	0	+0,100	-0,074	-0,0370	-0,106	22,0		14,4		1,60	1,20
330	380	80x40	80						25,0		15,4		2,50	2,00
380	440	90x45	90	+0,087	+0,260	0	+0,0435	-0,037	28,0	+0,3 0	17,4	+0,3 0	2,50	2,00
440	500	100x50	100	0	+0,120	-0,087	-0,0435	-0,124	31,0		19,5		2,50	2,00

/a/ All dimensions in millimeters.

/b/ The relation between the diameter of shaft and the section of key applies to normal use. A smaller section of key may be used if adequate for the torque to be transmitted. In that case the depths T¹ and T² should be recalculated to maintain the relation B/2. A larger section of key shall not be used.

/c/ The depth of key slots and keyways in shafts and hubs should be obtained by direct measurement or by measuring the dimensions (L-T¹) and (L+T²). The tolerances applicable to T¹ and T² apply to these two composite dimensions (L-T¹) and (L+T²) but the sign for the tolerance given in Table I for T¹ has to be reversed. Key slot and keyway depths should not be measured from the side intersection.

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SHEET 2

2. Dimensions and tolerances of key slots and keyways for Woodruff keys.
- 2.1 Table II is a tabulation of key slots and keyways to receive the corresponding Type I keys dimensioned on standard part drawings NA0137 and NA0138.
- 2.2 Table III is a tabulation of key slots and keyways to receive the corresponding Type II keys dimensioned on standard part drawings NA0137 and NA0138.

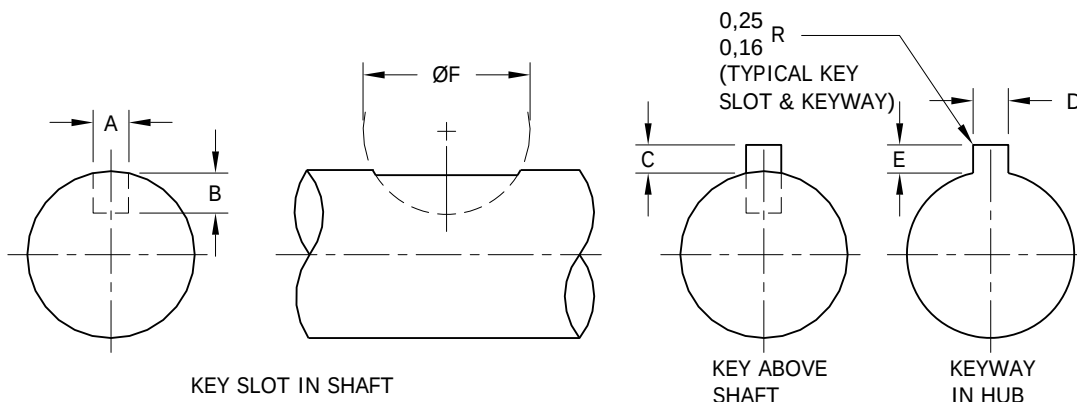


Figure 2

- 2.3 General specifications for dimensions shown in Tables II and III.

- (1) Key Slot Width- A: Dimensions shown are set with the maximum key slot width as that figure which will receive a key with the greatest amount of looseness permissible to assure the key sticking in the slot. Minimum key slot width is that figure permitting the largest shaft distortion acceptable when assembling maximum key in minimum key slot.
- (2) B, C, and E: Dimensions are taken at side intersection.
- (3) Key Slot Depth-B: Dimensions shown are set with the maximum as that figure which receives a key of maximum height and permits the key to project above the shaft a distance equal to one half the basic width.
- (4) Key Height Above Shaft-C: Dimensions shown are set with one half the basic key width as basic height.
- (5) Keyway Width-D: Dimensions shown are determined by using the maximum width of key.
- (6) Keyway Depth-E: Dimensions shown are determined by using for minimum depth of keyway, the maximum key in the minimum key slot plus 0,025.

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SHEET 3



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