

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1080

COTTER CLOTS WITH 5 % TAPER KEYS
FOR BORING MACHINE TAPERS

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**COTTER SLOTS WITH 5 % TAPER KEYS
FOR BORING MACHINE TAPERS**

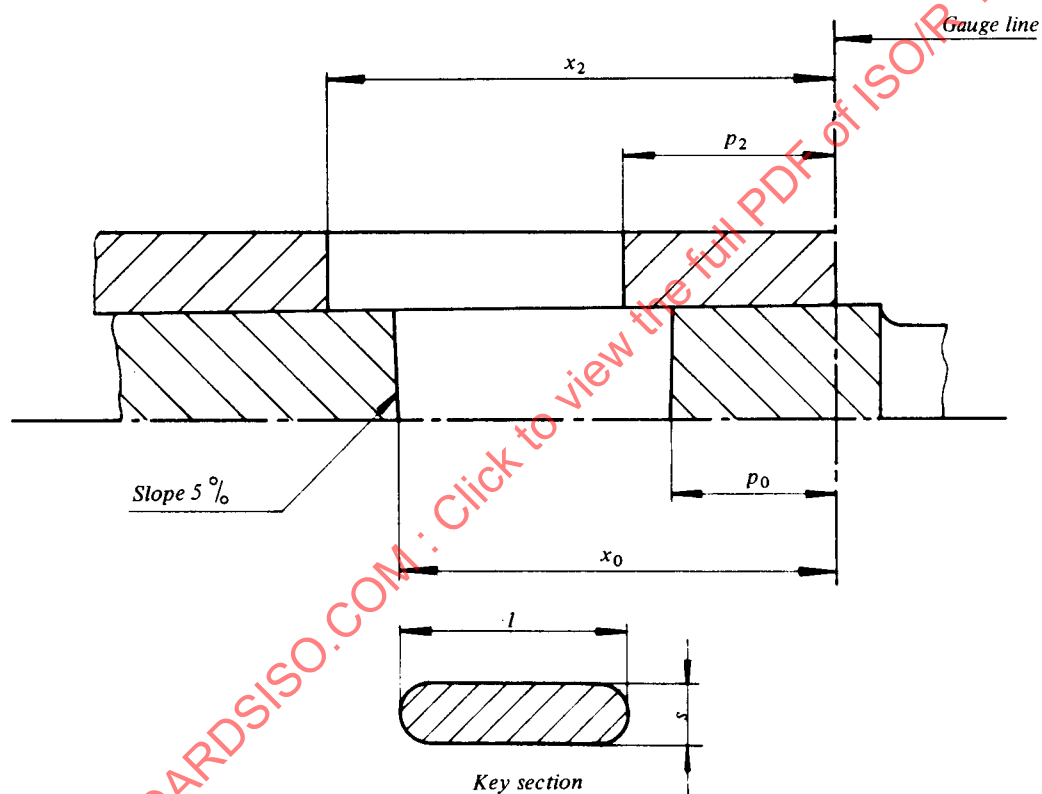
1. SCOPE

This ISO Recommendation relates to cotter slots and gives for the Morse tapers, outside and inside, and for the reduction sleeves

- a dimensioning system,
- the numerical values of the dimensions (in millimetres and in inches).

2. MORSE TAPERS, OUTSIDE AND INSIDE

2.1 Dimensioning



2.2 Numerical values of dimensions

TABLE 1 – Dimensions in millimetres

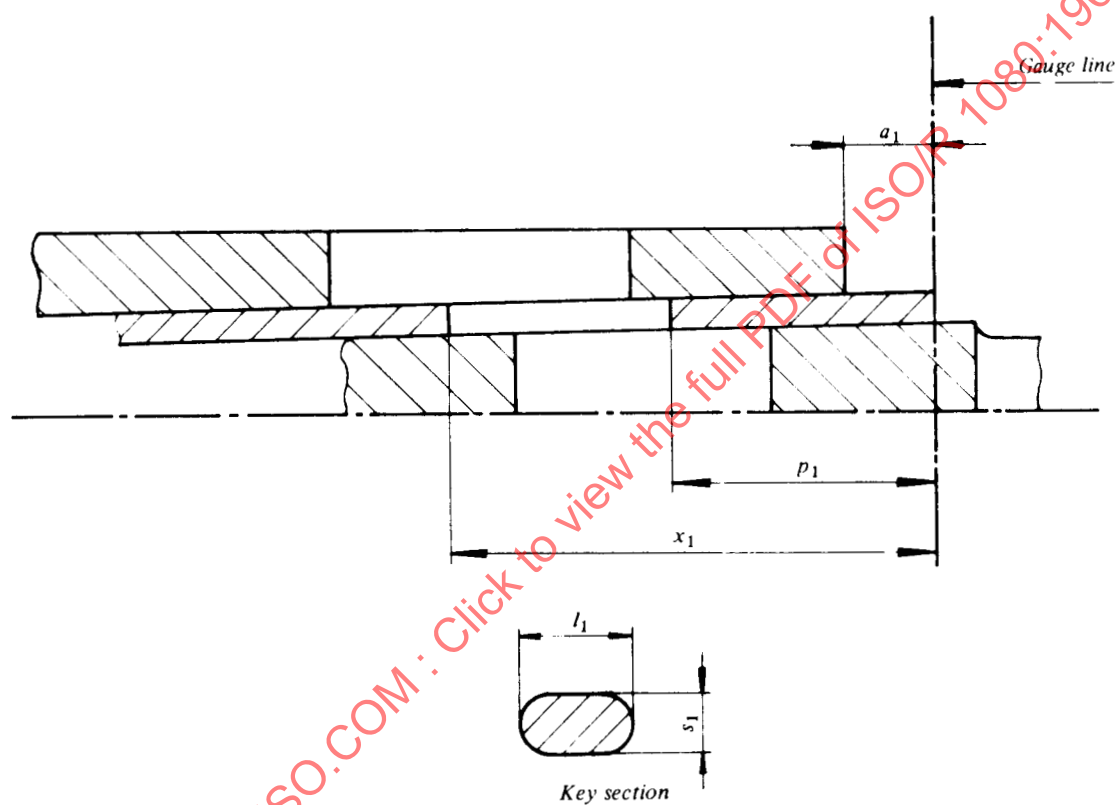
	Dimension \ No.	3	4	5	6
Outside taper	p_0	22	22	22	22
	x_0	55.5	58.5	63.5	57
Inside taper	p_2	28.5	28.5	28.5	28.5
	x_2	65	68	73	67
Key (taper 5 %)	l	27	30	35	28.5
	s	8	8	12.7	16
Key hole	t	8.3	8.3	13	16.3

TABLE 2 – Dimensions in inches

	Dimension \ No.	3	4	5	6
Outside taper	p_0	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$
	x_0	$2\frac{3}{16}$	$2\frac{5}{16}$	$2\frac{1}{2}$	$2\frac{1}{4}$
Inside taper	p_2	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$
	x_2	$2\frac{9}{16}$	$2\frac{11}{16}$	$2\frac{7}{8}$	$2\frac{5}{8}$
Key (taper 5 %)	l	$1\frac{1}{16}$	$1\frac{3}{16}$	$1\frac{3}{8}$	$1\frac{1}{8}$
	s	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{5}{8}$
Key hole	t	0.325	0.325	0.512	0.640

3. REDUCTION SLEEVE

3.1 Dimensioning



3.2 Numerical values of dimensions

TABLE 3 - Dimensions in millimetres

	Dimension \ No.	4/3	5/3	5/4	6/3	6/4	6/5
Socket	a_1 *	12.5	6.5	12.5	8	8	8
	p_1	35	29	35	30	30	30
	x_1	65	65	68	65	68	73
Key (taper 5 %)	l_1	14.5	20.5	17.5	19	22	27
	s_1	8	8	8	8	8	12.7
Key hole	t_1	8.3	8.3	8.3	8.3	8.3	13

TABLE 4 - Dimensions in inches

	Dimension \ No.	4/3	5/3	5/4	6/3	6/4	6/5
Socket	a_1 *	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$
	p_1	$1 \frac{3}{8}$	$1 \frac{1}{8}$	$1 \frac{3}{8}$	$1 \frac{3}{16}$	$1 \frac{3}{16}$	$1 \frac{3}{16}$
	x_1	$2 \frac{9}{16}$	$2 \frac{9}{16}$	$2 \frac{11}{16}$	$2 \frac{9}{16}$	$2 \frac{11}{16}$	$2 \frac{7}{8}$
Key (taper 5 %)	l_1	$\frac{9}{16}$	$\frac{13}{16}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	$1 \frac{1}{16}$
	s_1	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{1}{2}$
Key hole	t_1	0.325	0.325	0.325	0.325	0.325	0.512

* The values of a_1 are identical with those of the sockets specified in ISO Recommendation R 238, *Reduction sleeves and extension sockets for tools with Morse taper shanks*, except for Nos. 4/3 and 5/4 (12.5 mm = $\frac{1}{2}$ in, instead of 22.5 mm = $\frac{7}{8}$ in and 21.5 mm = $\frac{27}{32}$ in, respectively).