INTERNATIONAL STANDARD ISO 2250

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Finishing reamers for morse and metric tapers, with parallel shanks and morse taper shanks

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FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2250 was drawn up by Technical Committee ISO/TC 29, *Small tools.*

It was approved in May 1971 by the Member Bodies of the following countries :

Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
Czechoslovakia	Japan	Sweden
France	Korea, Dem. P. Rep. of	Switzerland
Egypt, Arab Rep. of	Netherlands	United Kingdom
Germany	Poland	U.S.A.
India	Portugal	U.S.S.R.
Ireland	Romania	

No Member Body expressed disapproval of the document.

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Finishing reamers for morse and metric tapers, with parallel shanks and morse taper shanks

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the dimensions of parallel shank socket reamers and taper shank socket reamers manufactured to produce self-holding taper sockets for self-holding taper shanks of the following designations, and which are in accordance with ISO/R 296 :

- metric Tapers No. 4 and No. 6;
- Morse Tapers No. 0 to 6 inclusive.

Values are given, in millimetres and inches, for the following dimensions of these tools:

- gauge plane diameter d;
- overall length L;
- cutting edge length l;
- distance from gauge plane to tool end l_1;
- diameter of shank d_1, or Morse taper shank size.

The taper on diameter is also shown.

The shanks and driving squares of the tools are in accordance with ISO/R 237.

The Morse taper shanks are in accordance with ISO/R 296.

Unless otherwise stated these reamers will be right hand cutting.

2 REFERENCES

ISO/R 237, *Diameters of shanks and sizes of driving squares for rotating tools with parallel shanks.*

ISO/R 296, *Self-holding tapers for tool shanks.*

3 DIMENSIONS

3.1 Parallel shank reamers

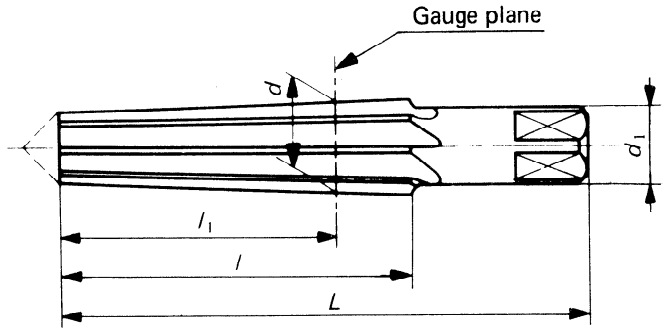

FIGURE 1

TABLE 1 — **Dimensions, in millimetres and inches**

Taper		mm					in				
Designation	Rate of taper	d	L	l	l_1	d_1 h9	d	L	l	l_1	d_1 h9
Metric No. 4	1 : 20.000	4.000	48	30	22	4.0	0.157 5	1 7/8	1 3/16	7/8	0.157 5
Metric No. 6	1 : 20.000	6.000	63	40	30	5.0	0.236 2	2 15/32	1 9/16	1 3/16	0.196 9
Morse No. 0	1 : 19.212	9.045	93	61	48	8.0	0.356 1	3 21/32	2 13/32	1 7/8	0.315 0
Morse No. 1	1 : 20.047	12.065	102	66	50	10.0	0.475 0	4 1/32	2 19/32	1 31/32	0.393 7
Morse No. 2	1 : 20.020	17.780	121	79	61	14.0	0.700 0	4 3/4	3 1/8	2 13/32	0.551 2
Morse No. 3	1 : 19.922	23.825	146	96	76	20.0	0.938 0	5 3/4	3 25/32	3	0.787 4
Morse No. 4	1 : 19.254	31.267	179	119	97	25.0	1.231 0	7 1/16	4 11/16	3 13/16	0.984 3
Morse No. 5	1 : 19.002	44.399	222	150	124	31.5	1.748 0	8 3/4	5 29/32	4 7/8	1.240 2
Morse No. 6	1 : 19.180	63.348	300	208	176	45.0	2.494 0	11 13/16	8 3/16	6 15/16	1.771 7

3.2 Morse taper shank reamers

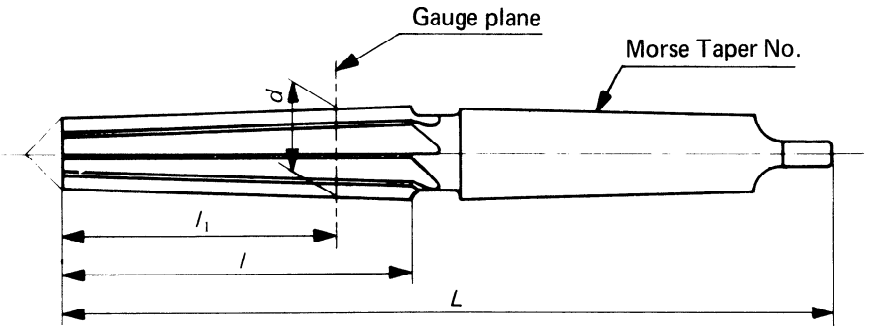

FIGURE 2

TABLE 2 — **Dimensions, in millimetres and inches**

Taper		mm				in				Morse taper shank No.
Designation	Rate of taper	*d*	*L*	*l*	l_1	*d*	*L*	*l*	l_1	
Metric No. 4	1 : 20.000	4.000	106	30	22	0.157 5	4 3/16	1 3/16	7/8	1
Metric No. 6	1 : 20.000	6.000	116	40	30	0.236 2	4 9/16	1 9/16	1 3/16	1
Morse No. 0	1 : 19.212	9.045	137	61	48	0.356 1	5 13/32	2 13/32	1 7/8	1
Morse No. 1	1 : 20.047	12.065	142	66	50	0.475 0	5 19/32	2 19/32	1 31/32	1
Morse No. 2	1 : 20.020	17.780	173	79	61	0.700 0	6 13/16	3 1/8	2 13/32	2
Morse No. 3	1 : 19.922	23.825	212	96	76	0.938 0	8 11/32	3 25/32	3	3
Morse No. 4	1 : 19.254	31.267	263	119	97	1.231 0	10 11/32	4 11/16	3 13/16	4
Morse No. 5	1 : 19.002	44.399	331	150	124	1.748 0	13 1/32	5 29/32	4 7/8	5
Morse No. 6	1 : 19.180	63.348	389	208	176	2.494 0	15 5/16	8 3/16	6 15/16	5

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