INTERNATIONAL STANDARD 2727

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Modular units for machine tool construction — Headstocks

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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 2727 was drawn up by Technical Committee ISO/TC 39, *Machine-tools,* and circulated to the Member Bodies in July 1972.

It has been approved by the Member Bodies of the following countries :

Australia	India	Switzerland
Belgium	Ireland	Thailand
Czechoslovakia	Poland	Turkey
Egypt, Arab Rep. of	Romania	U.S.A.
Germany	South Africa, Rep. of	
Hungary	Sweden	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

France
Japan
United Kingdom

Printed in Switzerland

Modular units for machine tool construction — Headstocks

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies certain dimensions relating to the interchangeability of headstocks used in special purpose machines constructed from modular units.

2 CLASSIFICATION AND DESIGNATION

The designation of each size of headstock is given by the nominal width of the saddle. Nine sizes are adopted, namely : 125, 160, 200, 250, 320, 400, 500, 630 and 800 mm.

3 SPECIFICATIONS

3.1 Range of nominal sizes from 125 to 250 mm

Dimensions shall be in accordance with Table 1.

Either a tenon drive or a shaft and key may be used.

The height of the centre of the driving spindle shall be in accordance with the values given in Table 1.

3.2 Range of nominal sizes from 320 to 800 mm

Dimensions shall be in accordance with Table 2.

Either a coupling, or gear drive, or any other suitable form of drive may be used.

The height of the centre of the driving spindle is not specified.

4 DIMENSIONS

4.1 Range 125 to 250 mm

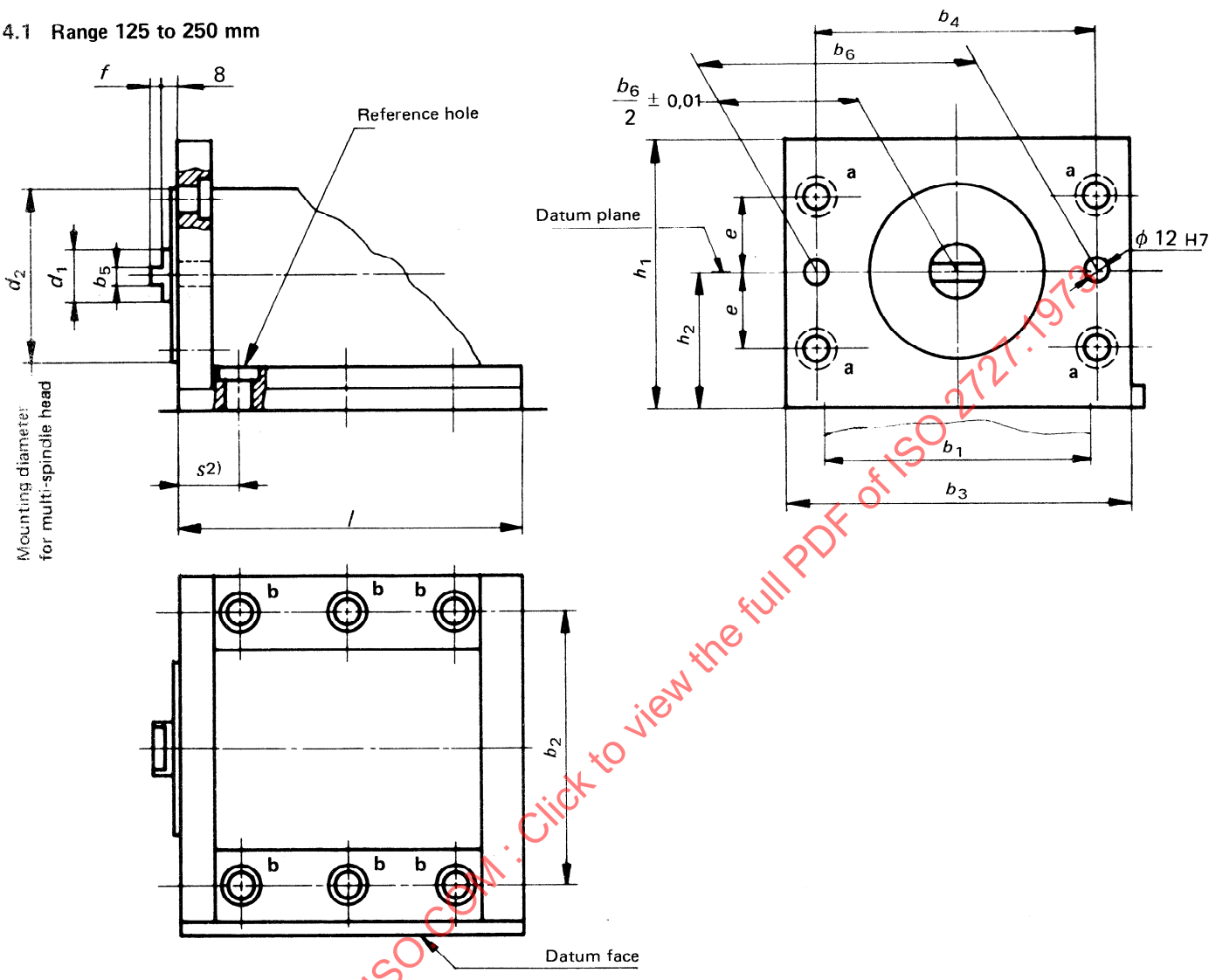

TABLE 1 — **Dimensions for the range 125 to 250 mm**

Dimensions in millimetres

Nominal dimension[1] b_1	b_2 ± 0,2	b_3	b_4 ± 0,2	b_5 e8	b_6 ± 0,02	d_1[3]	d_2 j6	e ± 0,2	f	h_1	h_2 ± 0,05	l	Clearance holes a and b to suit thread size
125	100	160	130	8	130	25	80	35	6	125	63	160	M 10
160	135	200	170	8	170	32	80	50	6	160	80	200	M 10
200	170	250	220	12	220	40	100	65	10	200	100	250	M 12
250	220	320	290	12	290	50	100	90	10	250	125	320	M 12

1) Conforming to nominal width of saddle.

2) s = 25 mm or whole multiples of 25 mm.

3) Two alternative methods of location are permitted :

a) by means of spigot d_2 in association with one dowel hole, or

b) by means of two dowel holes and without using spigot d_2.

4.2 Range 320 to 800 mm

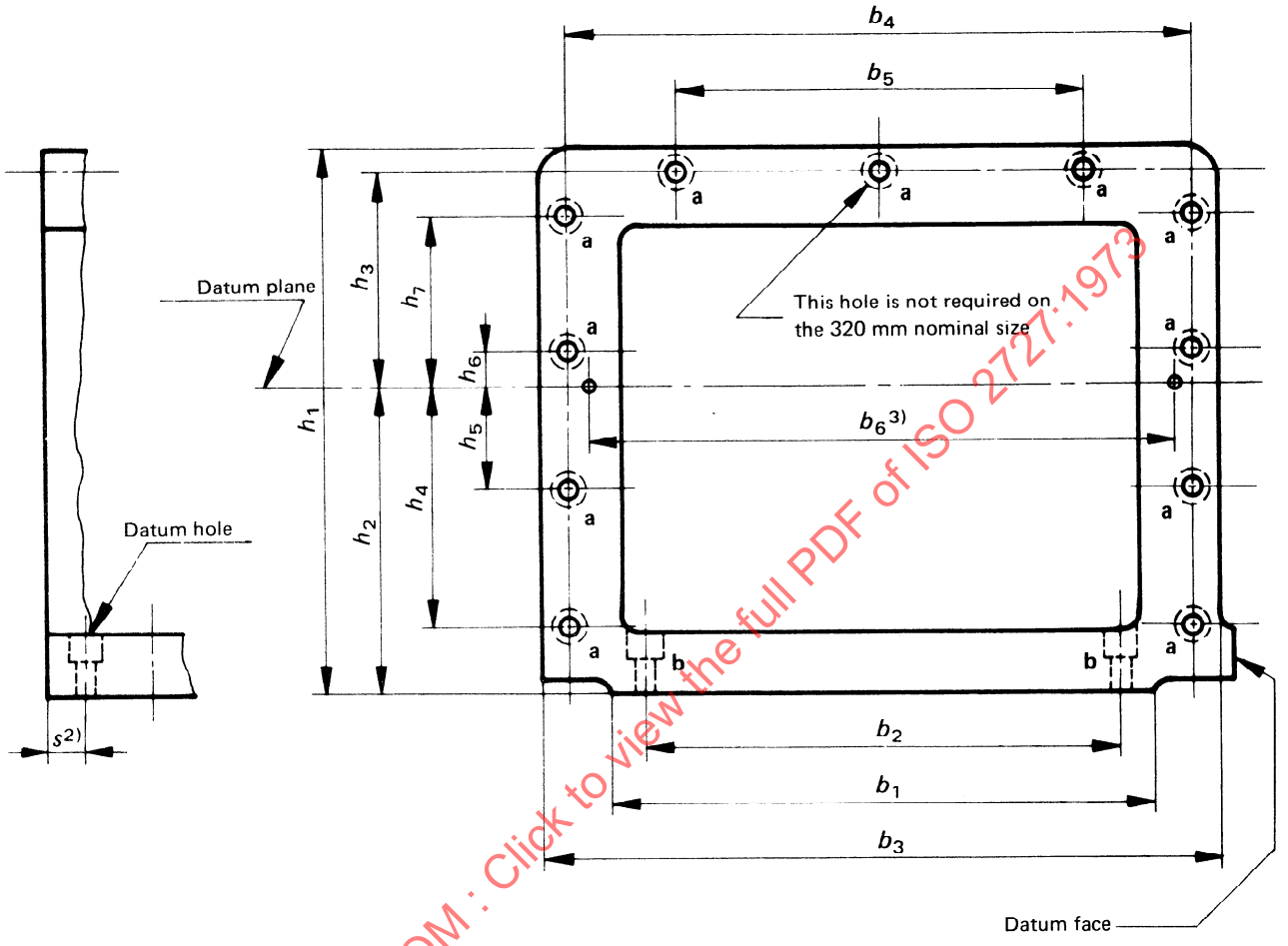

TABLE 2 — **Dimensions for the range 320 to 800 mm**

Dimensions in millimetres

Nominal size 1) b_1	b_2 ± 0,2	b_3	b_4 ± 0,2	b_5 ± 0,2	h_1	h_2 ± 0,05	h_3 ± 0,2	h_4 ± 0,2	h_5 ± 0,2	h_6 ± 0,2	h_7 ± 0,2	Clearance holes *a* and *b* to suit thread size
320	280	400	370	200	320	180	125	100	–	65	–	M 12
400	355	500	470	250	400	220	165	160	40	80	–	M 12
500	450	630	590	320	500	280	200	210	50	130	–	M 16
630	580	800	760	450	630	360	250	275	115	50	190	M 16
800	740	1 000	960	600	800	450	330	350	150	50	250	M 20

1) Conforming to nominal width of saddle.

2) s = 25 mm or whole multiples of 25 mm.

3) Dimension b_6 is left to national standards, as there are different manufacturing techniques used in various countries.

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