INTERNATIONAL STANDARD 100

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Pulleys for flat transmission belts — Crowns

Poulies pour courroies plates de transmission — Bombement

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 41 has reviewed ISO Recommendation R 100 and found it technically suitable for transformation. International Standard ISO 100 therefore replaces ISO Recommendation R 100-1959 to which it is technically identical.

ISO Recommendation R 100 was approved by the Member Bodies of the following countries :

Austria	Germany	Romania
Belgium	Greece	South Africa, Rep. of
Bulgaria	India	Spain
Canada	Ireland	Sweden
Czechoslovakia	Italy	Switzerland
Denmark	Japan	U.S.S.R.
Finland	Pakistan	
France	Portugal	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 100 into an International Standard.

Printed in Switzerland

Pulleys for flat transmission belts — Crowns

1 SCOPE AND FIELD OF APPLICATION

This International Standard lays down the shape and the approximate dimensions of crowns of pulleys for flat transmission belts.

NOTE — The rim-widths and the diameters (and tolerances) of these pulleys are given respectively in ISO 22 and ISO 99.

2 SHAPE OF CROWN

It is recommended that the shape of the profile should be a regular, symmetrical curve.

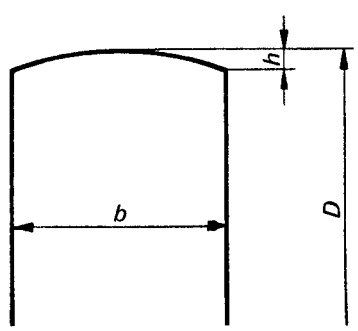
A symmetrical profile with a flat central part is acceptable provided that

a) the flat part is tangential to the curve;

b) its width is not more than 40 % of the width of the pulley.

3 APPROXIMATE DIMENSIONS OF CROWN

The height of the crown *h* of a pulley for a flat transmission belt is given by one of the following tables and varies with the diameter of the pulley (and, for the larger diameters, with the width of the rim).



3.1 Diameters from 40 to 355 mm inclusive : Crown unrelated to the width

Metric series

Dimensions in millimetres

Diameter *D*	Crown *h*
40 to 112	0,3
125 and 140	0,4
160 and 180	0,5
200 and 224	0,6
250 and 280	0,8
315 and 355	1

Inch series

Dimensions in inches

Diameter *D*	Crown *h*
1.6 to 4.5	0.012
5 and 5.6	0.016
6.3 and 7.1	0.020
8 and 9	0.024
10 and 11.2	0.030
12.5 and 14	0.040

3.2 Diameters from 400 to 2 000 mm : Crown varies with the width

Metric series

Dimensions in millimetres

Width *b*	⩽ 125	140 160	180 200	224 250	280 315	355	⩾ 400
Diameter *D*	**Crown *h***						
400	1	1,2	1,2	1,2	1,2	1,2	1,2
450	1	1,2	1,2	1,2	1,2	1,2	1,2
500	1	1,5	1,5	1,5	1,5	1,5	1,5
560	1	1,5	1,5	1,5	1,5	1,5	1,5
630	1	1,5	2	2	2	2	2
710	1	1,5	2	2	2	2	2
800	1	1,5	2	2,5	2,5	2,5	2,5
900	1	1,5	2	2,5	2,5	2,5	2,5
1 000	1	1,5	2	2,5	3	3	3
1 120	1,2	1,5	2	2,5	3	3	3,5
1 250	1,2	1,5	2	2,5	3	3,5	4
1 400	1,5	2	2,5	3	3,5	4	4
1 600	1,5	2	2,5	3	3,5	4	5
1 800	2	2,5	3	3,5	4	5	5
2 000	2	2,5	3	3,5	4	5	6

Inch series

Dimensions in inches

Width *b*	⩽ 5	5.6 6.3	7.1 8	9 10	11.2 12.5	14	⩾ 16
Diameter *D*	**Crown *h***						
16	0.040	0.050	0.050	0.050	0.050	0.050	0.050
18	0.040	0.050	0.050	0.050	0.050	0.050	0.050
20	0.040	0.060	0.060	0.060	0.060	0.060	0.060
22	0.040	0.060	0.060	0.060	0.060	0.060	0.060
25	0.040	0.060	0.080	0.080	0.080	0.080	0.080
28	0.040	0.060	0.080	0.080	0.080	0.080	0.080
32	0.040	0.060	0.080	0.100	0.100	0.100	0.100
36	0.040	0.060	0.080	0.100	0.100	0.100	0.100
40	0.040	0.060	0.080	0.100	0.120	0.120	0.120
45	0.050	0.060	0.080	0.100	0.120	0.120	0.140
50	0.050	0.060	0.080	0.100	0.120	0.140	0.160
55	0.060	0.080	0.100	0.120	0.140	0.160	0.160
63	0.060	0.080	0.100	0.120	0.140	0.160	0.200
71	0.080	0.100	0.120	0.140	0.160	0.200	0.200
80	0.080	0.100	0.120	0.140	0.160	0.200	0.240

NOTE – The crown values given in the above tables are calculated by the formula $h = 0{,}003 \times D$, where D is the diameter of the pulley. An upper limit has, however, been applied above a certain value of the diameter D for each range of widths.