

Spools for broadcast videotape recorders (VTRS)

The European Standard EN 60503:1998 has the status of a
British Standard

ICS 33.160.40

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National foreword

This British Standard is the English language version of EN 60503:1998. It is identical with IEC 60503:1998. It supersedes BS 5575:1978 which will be withdrawn on 2001-01-01.

The UK participation in its preparation was entrusted by Technical Committee EPL/100, Audio, video and multimedia systems and equipment, to Subcommittee EPL/100/3, Equipment and systems in the field of audio, video and audiovisual engineering, which has the responsibility to:

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Cross-references

Attention is drawn to the fact that CEN and CENELEC standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 June 1998

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Amendments issued since publication

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ICS 33.160.40

Descriptors: Recording apparatus, magnetoscopes, video recording, magnetic tapes, bobbins, dimensions

English version

Spools for broadcast videotape recorders (VTRS)

(IEC 60503:1998)

Bobines pour magnétoscopes de
radiodiffusion
(CEI 60503:1998)

Spulen für Videobandgeräte für den
Rundfunk (VTRS)
(IEC 60503:1998)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 60503:1998 E

Foreword

The text of document 100B/110/FDIS, future edition 2 of IEC 60503, prepared by SC 60B, Video recording, then by SC 100B, Recording, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60503 on 1998-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2001-01-01

Annexes designated “normative” are part of the body of the standard.

In this standard, Annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60503:1998 was approved by CENELEC as a European Standard without any modification.

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1 Scope and object

This International Standard is applicable to tape spools which are used with video recorders for broadcast purposes. The object of this standard is to standardize the spools used throughout the various broadcast video recording formats.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents listed below. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60347:1982, *Transverse track recorders*.

IEC 60558:1982, *Type C helical video tape recorders*.

IEC 60602:1980, *Type B helical video recorders*.

3 Nominal spool sizes

Table 1 — Nominal spool size

Tape size	Format	Nominal diameter of spools		Dimensions			IEC standard
		mm	in	Table		Figure	
25,40 mm/1,0 in	Type C	165	6,5	Table 2a	Table 2b	Figure 1	None
		203	8,0	Table 2a	Table 2b	Figure 1	60503 and 60558
		229	9,0	Table 2a	Table 2b	Figure 1	60503 and 60558
		248	9,75	Table 2a	Table 2b	Figure 1	60503 and 60558
		267	10,5	Table 2a	Table 2b	Figure 1	60503 and 60558
		298	11,75	Table 2a	Table 2b	Figure 1	None
		318	12,5	Table 2a	Table 2b	Figure 1	60503
		356	14,0	Table 2a	Table 2b	Figure 1	60503
25,40 mm/1,0 in	Type B	165	6,5	Table 3a	Table 3b	Figure 1	60602
		203	8,0	Table 3a	Table 3b	Figure 1	60602 and 60503
		229	9,0	Table 3a	Table 3b	Figure 1	60602 and 60503
		248	9,75	Table 3a	Table 3b	Figure 1	60602 and 60503
		267	10,5	Table 3a	Table 3b	Figure 1	60602 and 60503
		298	11,75	Table 3a	Table 3b	Figure 1	None
		305	12,0	Table 3a	Table 3b	Figure 1	60602
		318	12,5	Table 3a	Table 3b	Figure 1	60602 and 60503
50,80 mm/2,0 in	Transverse	165	6,5	Table 4a	Table 4b	Figure 1	60347
		203	8,0	Table 4a	Table 4b	Figure 1	60347
		267	10,5	Table 4a	Table 4b	Figure 1	60347
		318	12,5	Table 4a	Table 4b	Figure 1	60347
		356	14,0	Table 4a	Table 4b	Figure 1	60347
		397	15,6	Table 4a	Table 4b	Figure 1	60347

4 Spool dimensions

Table 2a — Spool type C, spool dimensions (see Figure 1)

Dimensions	Millimetres	Inches	Degrees
A	76,2 ^{+0,1} _{0,0}	3,000 ^{+0,004} _{0,000}	
C	114,0 ^{+0,5} _{0,0}	4,500 ± 0,010	
D	82,2 ^{+0,1} _{0,0}	3,250 ± 0,002	
E	5,60 ^{+0,15} _{0,00}	0,219 ^{+0,006} _{0,000}	
G			120,0 ± 0,1
H	0,65 max.	0,025 max.	
J	2,5 max.	0,098 max.	
K	91,5 min.	3,600 min.	
L	153 min.	6,000 min.	
M	30,8 ± 0,1	1,212 ± 0,003	
NOTE In the case of plastic hubs, dimension A shall be 76,2 ^{+0,3} _{0,0} mm/3,000 ^{+0,012} _{0,000} in			

Table 2b — Spool type C, dimension B (see Figure 1)

Millimetres	Inches
164,8 ^{+0,5} _{0,0}	6,500 ± 0,010
203,0 ^{+0,5} _{0,0}	8,000 ± 0,010
229,0 ^{+0,5} _{0,0}	9,000 ± 0,010
248,0 ^{+0,5} _{0,0}	9,750 ± 0,010
267,0 ^{+0,5} _{0,0}	10,500 ± 0,010
298,2 ^{+0,5} _{0,0}	11,750 ± 0,010
318,0 ^{+0,5} _{0,0}	12,500 ± 0,010
356,0 ^{+0,5} _{0,0}	14,000 ± 0,010

Table 3a — Spool type B, spool dimensions (see Figure 1)

Dimensions	Millimetres	Inches	Degrees
A	76,2 ^{+0,1} _{0,0}	3,000 ^{+0,004} _{0,000}	
C	114,0 ^{+0,5} _{0,0}	4,500 ± 0,010	
D	82,5 ^{+0,1} _{0,0}	3,250 ± 0,002	
E	5,60 ^{+0,15} _{0,0}	0,219 ^{+0,006} _{0,000}	
G			120,0 ± 0,1
H	0,65 max.	0,025 max.	
J	2,5 max.	0,098 max.	
K	91,5 min.	3,600 min.	
L	153 min.	6,000 min.	
M	30,8 ± 0,1	1,212 ± 0,003	

Table 3b — Spool type B, dimension B (see Figure 1)

Millimetres	Inches
164,8 ^{+0,5} _{0,0}	6,500 ± 0,010
203,0 ^{+0,5} _{0,0}	8,000 ± 0,010
229,0 ^{+0,5} _{0,0}	9,000 ± 0,010
248,0 ^{+0,5} _{0,0}	9,750 ± 0,010
267,0 ^{+0,5} _{0,0}	10,500 ± 0,010
298,2 ^{+0,5} _{0,0}	11,750 ± 0,010
304,5 ^{+0,5} _{0,0}	12,000 ± 0,010
317,2 ^{+0,5} _{0,0}	12,500 ± 0,010
356,0 ^{+0,5} _{0,0}	14,000 ± 0,010

Table 4a — Spool transverse type, spool dimensions (see Figure 1)

Dimensions	Millimetres	Inches	Degrees
A	76,2 ^{+0,1} _{0,0}	3,000 ^{+0,004} _{0,000}	
C ^a	114,0 ^{+0,50} _{0,00}	4,500 ± 0,010	
D	82,5 ^{+0,1} _{0,0}	3,250 ± 0,002	
E	5,60 ^{+0,15} _{0,00}	0,219 ^{+0,006} _{0,000}	
F	E/2	E/2	
G			120,0 ± 0,1
H	0,65 max.	0,025 max.	
J	2,5 max.	0,098 max.	
K	91,5 min.	3,600 min.	
L	153 min.	6,000 min.	
M	56,2 ± 0,1	2,212 ± 0,003	

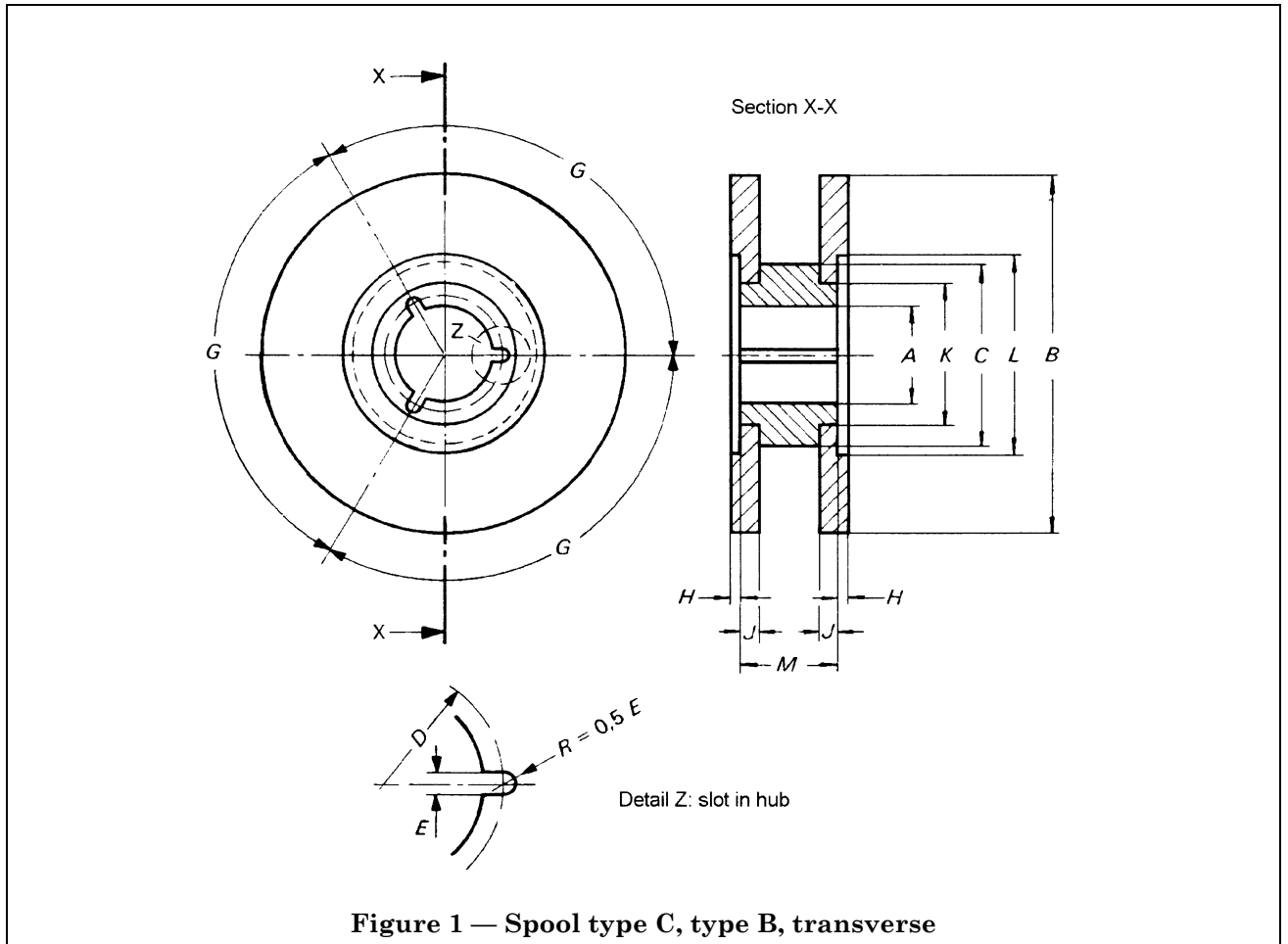
^a Exclusive of friction ring. Friction rings, if provided, shall be such as not to impair spool performance.

Table 4b — Spool transverse type, dimensions B (see Figure 1)

Millimetres	Inches
165 ^{+0,5} _{0,0}	6,500 ± 0 010
203 ^{+0,5} _{0,0}	8,000 ± 0,010
267 ^{+0,5} _{0,0}	10,500 ± 0,010
318 ^{+0,5} _{0,0}	12,500 ± 0,010
356 ^{+0,5} _{0,0}	14,000 ± 0,010
397 ^{+0,5} _{0,0}	15,625 ± 0,010 ^a

^a The size reel is for special applications only and may not fit on certain machines.

5 Spool diagram



Annex ZA (normative)**Normative references to international publications with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60347	1982	Transverse track video recorders	—	—
IEC 60558	1982	Type C helical video tape recorders	HD 573 S1 ^a	1990
IEC 60602	1980	Type B helical video recorders	HD 574 S1 ^b	1990

^a HD 573 S1 includes A1:1987 to IEC 60558.

^b HD 574 S1 includes A1:1987 to IEC 60602.

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