

Helical-scan video tape cassette system using 8 mm magnetic tape — 8 mm video —

Part 1: General specifications

The European Standard EN 60843-1:1994 has the status of a
British Standard

UDC 621.397.454

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI
Documents

AVA

Document Sharing Hub

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

This British Standard, having been prepared under the direction of the Electronic Equipment Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 October 1994

© BSI 01-2000

The following BSI references relate to the work on this standard:
Committee reference EEL/22
Draft for comment 91/34807 DC

ISBN 0 580 23447 9

Amendments issued since publication

Amd. No.	Date	Comments

Contents

	Page
Cooperating organizations	Inside front cover
National foreword	ii
Foreword	2
Text of EN 60843-1	5
National annex NA (informative) Committees responsible	Inside back cover
National annex NB (informative) Cross-references	Inside back cover

National foreword

This Part of BS EN 60843 has been prepared under the direction of the Electronic Equipment Standards Policy Committee and is the English language version of EN 60843-1:1994 *Helical-scan video tape cassette system using 8 mm magnetic tape — 8 mm Video, Part 1: General specifications*, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 843-1:1993 published by the International Electrotechnical Commission (IEC).

This British Standard supersedes BS 7065:1989. Any references elsewhere to BS 7065:1989 should be read as references to BS EN 60843-1:1994.

The foreword of EN 6043-1 makes reference to the “date of withdrawal”, dow of the relevant national standard. In this case the relevant national standard is BS 7065:1989 which will be withdrawn on the 15 March 1995.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 48, 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.

Descriptors: Electroacoustics, video recording, recording apparatus, video tape recorders, magnetic tapes, cassettes for magnetic tapes, interchangeability, electrical properties, mechanical properties, recording characteristics

English version

Helical-scan video tape cassette system using 8 mm magnetic tape — 8 mm Video Part 1: General specifications

(IEC 843-1:1993)

Système de magnétoscope à cassette à
balayage hélicoïdal utilisant la bande
magnétique de 8 mm — Vidéo 8 mm
Partie 1: Généralités
(CEI 843-1:1993)

Video-Bandkassettensystem mit
Schrägspuraufzeichnung auf
Magnetband 8 mm — Video 8
Teil 1: Allgemeine Festlegungen
(IEC 843-1:1993)

This European Standard was approved by CENELEC on 1994-03-08. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The text of document 60B (CO) 148, as prepared by Sub-Committee 60B: Video recording, of IEC Technical Committee 60: Recording, was submitted to the IEC-CENELEC parallel vote in March 1993.

The reference document was approved by CENELEC as EN 60843-1 on 8 March 1994.

This European Standard replaces HD 531 S1:1989.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1995-03-15
- latest date of withdrawal of conflicting national standards (dow) 1995-03-15

For products which have complied with HD 531 S1:1989 before 1995-03-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-03-15.

Annexes designated “normative” are part of the body of the standard. Annexes designated “informative” are given only for information. In this standard, Annex A is informative and Annex ZA is normative.

Contents

	Page
Foreword	2
Section 1. General	
1.1 Scope and object	5
1.2 Normative references	5
1.3 Environmental conditions	5
Section 2. Video tape	
2.1 Types of magnetic tape and reference tape	5
2.2 Physical properties of the tape	5
2.2.1 Magnetic tape width	5
2.2.2 Magnetic tape width fluctuation	5
2.2.3 Magnetic tape thickness	5
2.2.4 Transparency of the magnetic tape	6
2.3 Magnetic properties of the tape	6
2.4 Recording characteristics of the tape	6
2.4.1 Video characteristics of the tape	6
2.4.2 Auxiliary audio characteristics	7
Section 3. Video tape cassette	
3.1 Mechanical parameters	7
3.1.1 Dimensions of the cassette	7
3.1.2 Datum planes Z, X and Y	7
3.1.3 Tape winding	7
3.1.4 Window and label	7
3.1.5 Withdrawal force	7
3.1.6 Support areas A, B, C and D	7
3.1.7 Cassette holding areas	8
3.1.8 Incorrect insertion protection	8
3.1.9 Accidental erasure protection	8
3.1.10 Recognition holes	8
3.1.11 Changer grip	8
3.1.12 Lid	8
3.1.13 Reels	9
3.1.14 Reel spring	9
3.2 Magnetic tape length	9
3.3 Leader and trailer tape	9
3.3.1 Automatic stop	9
3.3.2 Dimensions of the leader and trailer tape	9
3.3.3 Transparency of the leader and trailer tape	9
3.3.4 Splicing	9
3.4 Cassette designation	9
Section 4. Video cassette recorders	
4.1 Tape speed	23

	Page		Page
4.1.1 525 line — 60 field system	23	6.3.6 Modulation	42
4.1.2 625 line — 50 field system	23	6.3.7 Recording conditions	42
4.2 Drum diameter	23	6.3.8 Noise reduction	42
4.3 Tape tension	24	6.4 Audio signal recording on the auxiliary audio track	42
4.4 Inclined azimuth angle	24	6.4.1 Reference level	42
4.5 Track configuration and dimensions	24	6.4.2 Playback equalization	42
Section 5. Recording characteristics of the video signal		6.4.3 Noise reduction	42
5.1 Video recording system	27	6.5 Noise reduction system	42
5.1.1 Block diagram for video recording	27	6.5.1 Specifications for FM and PCM audio	42
5.1.2 Frequency spectrum allocation of recording signals	27	6.5.2 Specifications for AUX audio	44
5.2 Recording of the luminance component	28	Section 7. Characteristics of the tracking system	
5.2.1 Luminance filter	28	7.1 Tracking pilot signal recording	46
5.2.2 Pre-emphasis and clipping	28	7.1.1 Tracking pilot signal frequencies	46
5.2.3 Modulation characteristics	30	7.1.2 Recording current	46
5.2.4 FM high-pass filter	30	7.2 Recording head positioning pilot signal recording (optional)	47
5.2.5 Recording current	30	7.2.1 The burst pilot signal write and read area	47
5.3 Recording of the chrominance component	30	7.2.2 The burst pilot signal frequency	47
5.3.1 Recording method	30	7.2.3 Recording current	47
5.3.2 Pre-emphasis	30	Section 8. Auxiliary track for cue	
5.3.3 Conversion method	30	8.1 Recording on auxiliary cue track	47
5.3.4 Recording equalization	31	Annex A (informative) Reference tape and sub-reference tape	48
5.3.5 Recording current	31	Annex ZA (normative) Other international publications quoted in this standard with the reference of this relevant European publications	48
5.3.6 Colour burst amplitude	31	Figure 1 — Appearance of the video cassette (top and side view)	10
5.3.7 Time difference between luminance and chrominance	31	Figure 2 — Appearance of the video cassette (bottom view)	11
Section 6. Recording characteristics of the audio signal		Figure 3 — Datum areas and supported areas	12
6.1 Audio recording system	31	Figure 4 — Internal structure, tape path and light path (top view)	13
6.2 FM audio signal recording	32	Figure 5 — Reel of the cassette	14
6.2.1 Carrier frequency	32	Figure 6 — Relationship between the reel and reel table	15
6.2.2 Reference deviation	32	Figure 7 — Reel lock and release	16
6.2.3 Maximum deviation	32	Figure 8 — Lid lock and release	17
6.2.4 Recording FM signal channel bandwidth	32	Figure 9 — Maximum size of lid (side view)	18
6.2.5 Recording current	32	Figure 10 — Lid structure	18
6.2.6 Noise reduction	32	Figure 11 — Lid configuration when rotating and when open	19
6.2.7 Others	32	Figure 12 — Minimum space for recorder and/or player loading mechanism	20
6.3 PCM audio signal recording	32		
6.3.1 Audio signal format	32		
6.3.2 PCM signal format	33		
6.3.3 PCM signal train	40		
6.3.4 Error correction	40		
6.3.5 Error detection	42		

	Page		Page
Figure 13 — Light path and light window	21	Table 2 — Pre-emphasis characteristics (sub + main + AC Clip)	29
Figure 14 — Leader and trailer tape	22	Table 3 — Sub pre-emphasis characteristics for reference	29
Figure 15 — Force needed to unlock the reel lock	22	Table 4 — Pre-emphasis characteristics of chrominance signal	30
Figure 16 — Force needed to unlock the lid lock	23	Table 5 — Audio channel arrangement	32
Figure 17 — Force needed to open the lid	23	Table 6 — PCM conversion algorithm	34
Figure 18 — Azimuth angle of video heads (looking at the gap)	24	Table 7 — ID word contents	37
Figure 19 — Track configuration and dimensions (viewed on the magnetic sensitive side)	24	Table 8 — Numeral code	39
Figure 20 — Video track area allocation and wrap angle (viewed on the magnetic sensitive side)	26	Table 9 — Month code	40
Figure 21 — Block diagram for video recording	27	Table 10 — Day code	40
Figure 22 — Frequency spectrum allocation of recording signals	28	Table 11 — Frequency response for FM and PCM audio	43
Figure 23 — Example of a sub pre-emphasis circuit	29	Table 12 — Frequency response for AUX audio	45
Figure 24 — Typical main pre-emphasis circuit	29		
Figure 25 — Example of phase shift circuit	31		
Figure 26 — Typical equalization circuit	31		
Figure 27 — CRC block contents	35		
Figure 28 — Data arrangement in the 525 line — 60 field system	36		
Figure 29 — Data arrangement in the 625 line — 50 field system	36		
Figure 30 — Interleave format in the 525 line — 60 field system	41		
Figure 31 — Interleave format in the 625 line — 50 field system	41		
Figure 32 — Measurement method of transient response	43		
Figure 33 — Linearity for FM and PCM audio	44		
Figure 34 — Example of noise reduction circuit for FM and PCM audio	44		
Figure 35 — Linearity for AUX audio	45		
Figure 36 — Example of a noise reduction circuit for AUX audio	46		
Figure 37 — Burst pilot signal area allocation	47		
Table 1 — General tolerances for various dimensions of video tape cassette (except those for which tolerances are otherwise specified)	23		

Section 1. General

1.1 Scope and object

This part of IEC 843 applies to magnetic video recording and/or playback with 8 mm tape cassettes on two-head helical-scan video cassette recorders, suitable for the recording and/or playback of monochrome as well as colour television signals.

The object of this part is to define the electrical and mechanical characteristics of equipment which will provide for interchangeability of recorded cassettes. This will include the ability to reproduce recordings made on both types of magnetic tapes defined in section 2. The requirements given are related to 525 line – 60 field or 625 line – 50 field systems, NTSC and PAL respectively.

1.2 Normative references

The following normative document contains provisions which, though reference in this text, constitute provisions of this part of IEC 843. At the time of publication, the edition indicated was valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 843 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 843-2:1993, *Helical-scan video tape cassette system using 8 mm magnetic tape — 8 mm video — Part 2: PCM multi-track audio systems.*

IEC 843-3:1993, *Helical-scan video tape cassette system using 8 mm magnetic tape — 8 mm video — Part 3: High-band specifications for 8 mm video — Hi 8.*

IEC 1105:1991, *Reference tapes for video tape recorder systems.*

1.3 Environmental conditions

Tests and measurements made on the system to check the requirements of this standard shall be carried out under the following conditions:

Temperature:	20 °C ± 1 °C
Relative humidity:	(50 ± 2) %
Air pressure:	86 kPa to 106 kPa
Conditioning before testing:	24 h

Section 2. Video tape

2.1 Types of magnetic tape and reference tape

The 8 mm video tape exists in two types: type A and type B.

Type A is a metal powder tape or its equivalent, the characteristics of which are referred to as type A reference (see Annex A).

Type B is a metal evaporated tape or its equivalent, the characteristics of which are referred to as type B reference (see Annex A).

The performance of reference tapes is specified in IEC 1105.

The reference tapes are intended as reference only for video and audio characteristics specified in 2.4.

2.2 Physical properties of the tape

2.2.1 Magnetic tape width

The width of the magnetic tape shall be 8,000 mm ± 0,010 mm.

2.2.2 Magnetic tape width fluctuation

The fluctuation of the magnetic tape width shall be no more than 0,006 mm peak-to-peak.

2.2.3 Magnetic tape thickness

The thickness of the magnetic tape shall be:

- 13,0 µm ± 1,0 µm
- (10,0 µm ± 0,8 µm) (under consideration)

2.2.4 Transparency of the magnetic tape

The transparency of the magnetic tape for 800 nm – 900 nm wavelength light shall be less than 5 %.

2.3 Magnetic properties of the tape

The magnetic properties of the magnetic tape, such as coercivity, remanence and magnetic orientation, are not specified.

The compatibility of tapes of the same type shall be maintained by the characteristics of the tape specified in 2.4.

2.4 Recording characteristics of the tape

All measurements are to be made in comparison to the reference tape as described in 2.1, whereby the reference values are taken as the 0 dB point.

2.4.1 Video characteristics of the tape

2.4.1.1 RF optimum recording current

The RF optimum recording current shall be 0 dB $\pm$ 2 dB at 5 MHz.

The RF optimum recording current is the RF recording current necessary to obtain the maximum output signal level during playback. It shall be expressed in decibels as the ratio relative to the RF reference recording current.

The RF reference recording current is the RF optimum recording current of the reference tape.

2.4.1.2 RF output level

The RF output level shall be:

For luminance: greater than – 3 dB at 5 MHz.

For chrominance: greater than – 2 dB at 0,75 MHz and
less than – 20 dB for 3,5 MHz spurious level relative to 5 MHz.

a) Luminance output

The luminance output is the playback level of the 5 MHz signal recorded at the RF reference recording current. It shall be expressed in decibels as the ratio relative to the (see 2.4.1.1) luminance output of the reference tape.

b) Chrominance output

The output level of the 0,75 MHz signal played back from the tape which 5,0 MHz and 0,75 MHz signals have been recorded in a superposed manner shall be measured under the following conditions.

5 MHz recording current:

The RF reference recording current at 5 MHz.

0,75 MHz recording current:

The current of the reference tape at which 3,5 MHz spurious level is – 22 dB relative to the playback level of the 5 MHz signal.

The chrominance output is then defined as the ratio, expressed in decibels, of the output level of the 0,75 MHz signal played back from the tape to be tested to that from the reference tape.

2.4.1.3 RF frequency response

The RF frequency response D of the video signal shall be between + 3 dB and – 2 dB.

The playback output levels of the 2,0 MHz signal and the 5,0 MHz signal which are recorded at the RF reference recording current of the respective frequencies shall be measured.

The RF frequency response is defined by D .

$$D = d - d_0$$

where d is the relative value in dB of the playback output level of the 5,0 MHz signal to that of the 2,0 MHz signal for the tape to be tested, and d_0 is the same for the reference tape.

2.4.2 Auxiliary audio characteristics

2.4.2.1 Sensitivity

The sensitivity of the AUX audio signal specified in 6.4 shall be greater than -3 dB at 1 kHz:

The playback output level of the 1 kHz signal shall be measured, with a recording made at a reference recording level and at a reference bias current.

Audio sensitivity is defined as the ratio, expressed in decibels, of the playback output level at 1 kHz of the tape to be tested to that of the reference tape.

Reference bias current:

The reference bias current is the bias current necessary to obtain the maximum playback output level from the reference tape on which the 1 kHz signal has been recorded at a constant recording level lower than the reference recording level.

Reference recording level:

The reference recording level is the input level of 1 kHz for the reference tape and at the reference bias current, which results in 3rd harmonic distortion of 3 %.

2.4.2.2 Erasability

The erasability of the AUX audio signal shall be greater than 55 dB at 1 kHz.

A signal of 1 kHz shall be recorded on the tape to be tested at the reference bias current and at a recording level 10 dB higher than the reference recording level.

A portion of the above-mentioned recording shall be erased. The erasing current used in the erasability measurement shall be 2 dB higher than the erasing current necessary to obtain an erasability of 55 dB for the reference tape. The erasability is expressed as the ratio in decibels of the playback output level of the non-erased portion to the residual playback output level of the erased portion.

Section 3. Video tape cassette

3.1 Mechanical parameters

3.1.1 Dimensions of the cassette

The dimensions necessary to permit interchangeability of cassettes shall be in accordance with Figure 1 to Figure 17, pages 10 to 23, and Table 1.

3.1.2 Datum planes Z, X and Y

Datum plane Z shall be determined by datum areas A, B and C, indicated in Figure 3, page 12, by hatching. Datum plane X shall be orthogonal to datum plane Z and shall run through the centre of datum hole A and datum hole B, as shown in Figure 3.

Datum plane Y shall be orthogonal to both datum plane X and datum plane Z and shall run through the centre of datum hole A as shown in Figure 3.

3.1.3 Tape winding

The magnetic coating on the tape shall face out of the cassette. The direction of tape travel is from left to right, i.e. from supply reel and outside on to the take-up reel as shown in Figure 4, page 13.

3.1.4 Window and label

Part of the reels shall be visible somewhere within the cross-hatched area shown in Figure 1, page 10.

The window through which a part of the reels can be seen shall not extend beyond the height of the cassette. The label shall not extend beyond the height of the cassette.

3.1.5 Withdrawal force

The attachment of the leader and trailer tape to the hub shall be capable of withstanding a force of 10 N. The manner of attachment is a matter of the manufacturer's own individual choice.

3.1.6 Support areas A, B, C and D

Support areas A, B and C in Figure 3 shall be coplanar with datum areas A, B and C, respectively, within $\pm 0,1$ mm. Support area D shall be coplanar with datum plane Z within $\pm 0,15$ mm. The support area is suppressed 0,5 mm from the edge of the cassette.

3.1.7 Cassette holding areas

The cassette shall be supported by the recorder and/or player unit in the hatched area shown in Figure 1.

3.1.8 Incorrect insertion protection

The cassette shall be provided with the channel, recess and incline shown in Figure 1, page 10, to protect it from being wrongly inserted in three directions.

3.1.9 Accidental erasure protection

The cassette shall be provided with a mechanism allowing the user to open and close the accidental erasure protection hole as desired. When the accidental erasure protection hole is open, it will be impossible to record on the cassette. When the accidental erasure protection hole is closed, it will be possible to record the cassette. The mechanism shall be constructed so that it can withstand a force of 0,5 N (see Figure 2, page 11). The accidental erasure protection hole on the upper shell may be either closed or open at the manufacturer's discretion.

3.1.10 Recognition holes

The cassette shall be provided with five recognition holes on the lower shell as shown in Figure 2.

Recognition hole 1 shall be used to distinguish tape type A from tape type B. The closed hole shall signify type A. The open hole shall signify type B. Recognition holes 2 and 3 shall be used for distinguishing tape thickness. Hole 2 shall be closed for tape 13 μm thick and open for tape 10 μm thick. The use of hole 3 has not been defined in detail. Use of recognition holes 4 and 5 is under consideration.

The holes will remain closed until their use is decided. Recognition holes 1 to 5 on the upper shell may be either closed or open at the manufacturer's discretion. A closed recognition hole shall be constructed so that it can withstand a force of 0,5 N.

3.1.11 Changer grip

The cassette shall be provided with two changer grips for an automatic changing machine as shown in Figure 1.

3.1.12 Lid

3.1.12.1 Lid structure

- a) The lid is in two pieces, the main section and the smaller auxiliary section.
- b) Pivot A of the main section shall be positioned 0,55 mm from datum plane X and 7,5 mm from datum plane Z (see Figure 10, page 18).
- c) The main lid revolves around pivot A. The auxiliary section slides along the cam and around pivot B so that neither section extends above a plane maximum 22,3 mm from and parallel to datum plane Z with the lid open (see Figure 11, page 19).
- d) Pivot B of the auxiliary section shall be positioned in the sockets inside the main section 10,1 mm from pivot A of the main section in the X direction and 7 mm from datum plane Z (see Figure 10). The socket of the main section may be positioned anywhere in the Y direction and anywhere outside plane D in Figure 12, page 20, when the lid is closed.
- e) The maximum permissible rotation radius when the lid is open is 14,9 mm. This means the maximum permissible height when the lid is open is 22,5 mm (see Figure 11).
- f) When the lid is open, surface D of the main section (see Figure 13, page 21) shall be within $5^{\circ} \begin{smallmatrix} +2^{\circ} \\ -1^{\circ} \end{smallmatrix}$ of datum plane X.
- g) The length of the upper side of the auxiliary section has not been specified.
- h) The light window in the main section shall be aligned with the light window in the shell when the lid is open.

3.1.12.2 Automatic locking

The lid shall unlock automatically when the cassette is inserted into a recorder and/or player and lock automatically when the cassette is ejected.

3.1.12.3 Force needed to unlock the lid

The lid shall be unlocked by causing the unlocking lever to move in the X-X, Z-Z or Y-Y direction, as illustrated in Figure 8, page 17. The force needed to unlock the lid shall not be greater than 0,25 N in the Y-direction (see Figure 16, page 23).

3.1.12.4 Force needed to open the lid

The maximum force needed to open the lid shall be 1,0 N (see Figure 17, page 23).

3.1.13 Reels

3.1.13.1 Dimensions of the reels

The dimensions of reels and the relationship between the reel and reel table are shown in Figure 5 and Figure 6, pages 14 and 15. Within the range of maximum 0,7 mm, the height of the stopper is a matter of the manufacturer's own individual choice.

3.1.13.2 Locking the reel

The reels shall lock when the cassette is removed from the recorder and/or player in order to prevent the tape loosening during storage or transportation. When the cassette is in the recorder and/or player, the reels shall be unlocked automatically with the release of the reel lock (see Figure 7, page 16). The maximum force needed to release the reel lock shall be 1,0 N in the Y-direction (see Figure 15, page 22).

3.1.14 Reel spring

The reels shall be held in position in the cassette by a reel spring with a force of 0,4 N to 0,8 N (see Figure 6).

3.2 Magnetic tape length

The length of the magnetic tape shall be determined by the following formula:

$$L = \left[(1 + 0,005) Vt \times (T + 2) \times \frac{60}{1\,000} \right] \begin{matrix} + 2 \\ - 0 \end{matrix} \text{ m}$$

where

Vt is the tape speed in millimetres per second

T is the playable time in minutes

3.3 Leader and trailer tape

3.3.1 Automatic stop

When the leader or trailer tape passes behind the light window (see Figure 13, page 21), the recorder and/or player shall stop automatically (for the light path, see Figure 4, page 13).

3.3.2 Dimensions of the leader and trailer tape

The length of the leader and trailer tape shall be 80 mm $\pm$ 10 mm as shown in Figure 14, page 22. The width of the leader and trailer tape shall be 8 mm $\pm$ 0,02 mm. The thickness of the leader and trailer tape shall be sufficient to allow the tape to withstand a tension of 10 N.

3.3.3 Transparency of the leader and trailer tape

The transparency of the leader and trailer tape shall be 60 % or more, measured in the same way as the transparency of the magnetic tape (see 2.2.4).

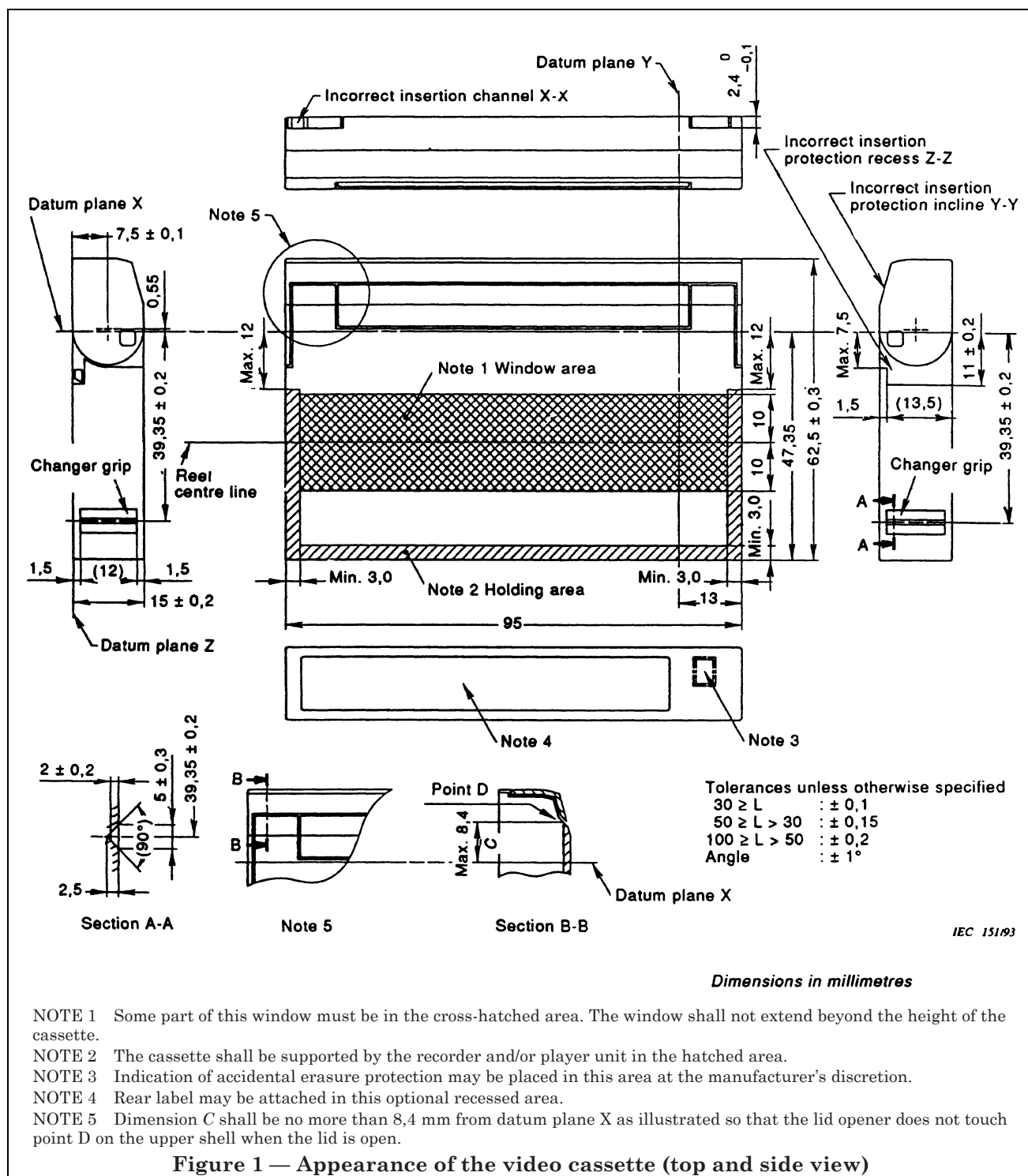
3.3.4 Splicing

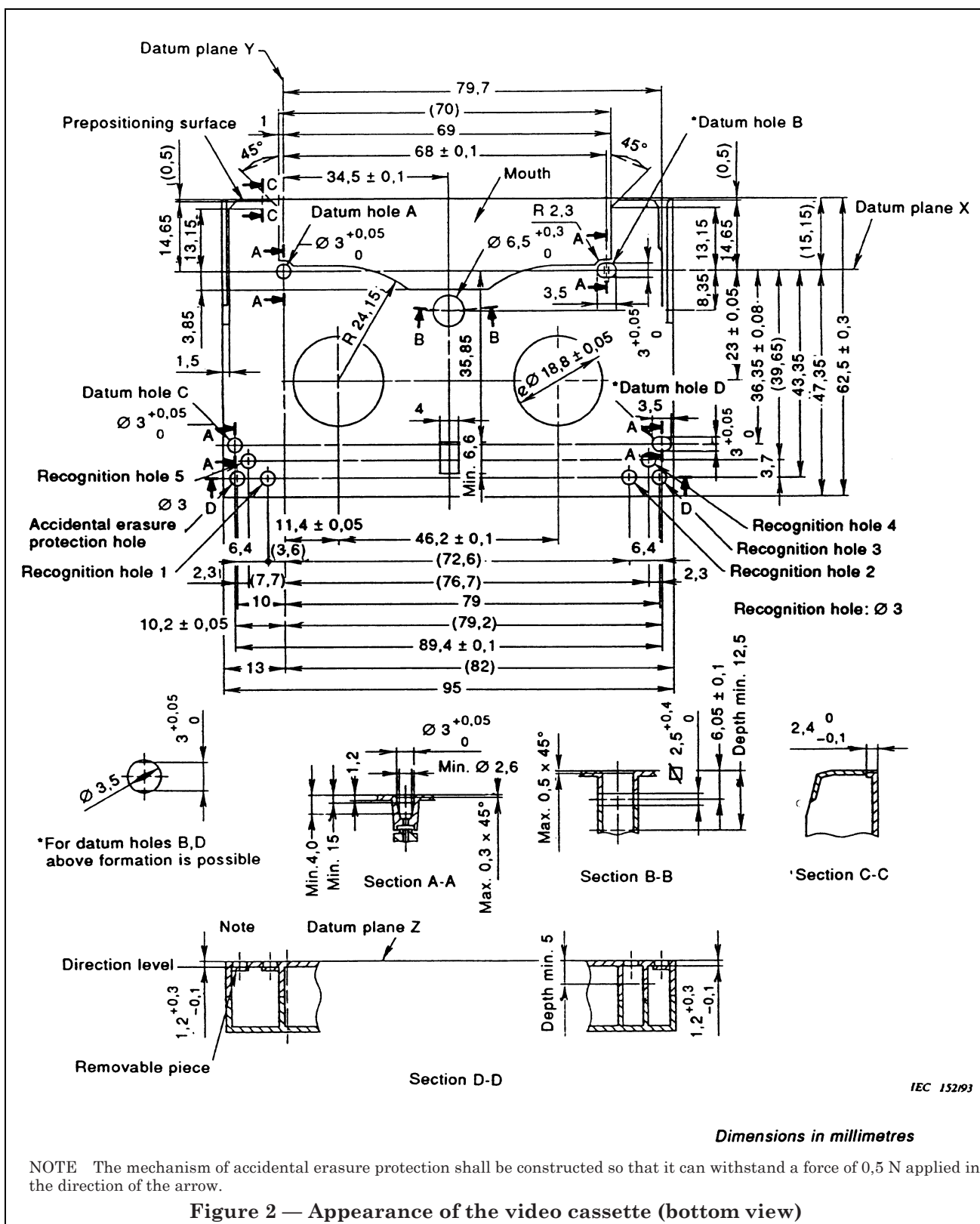
The splice shall withstand a tension of 10 N. The splicing tape shall be no more than 13 mm long.

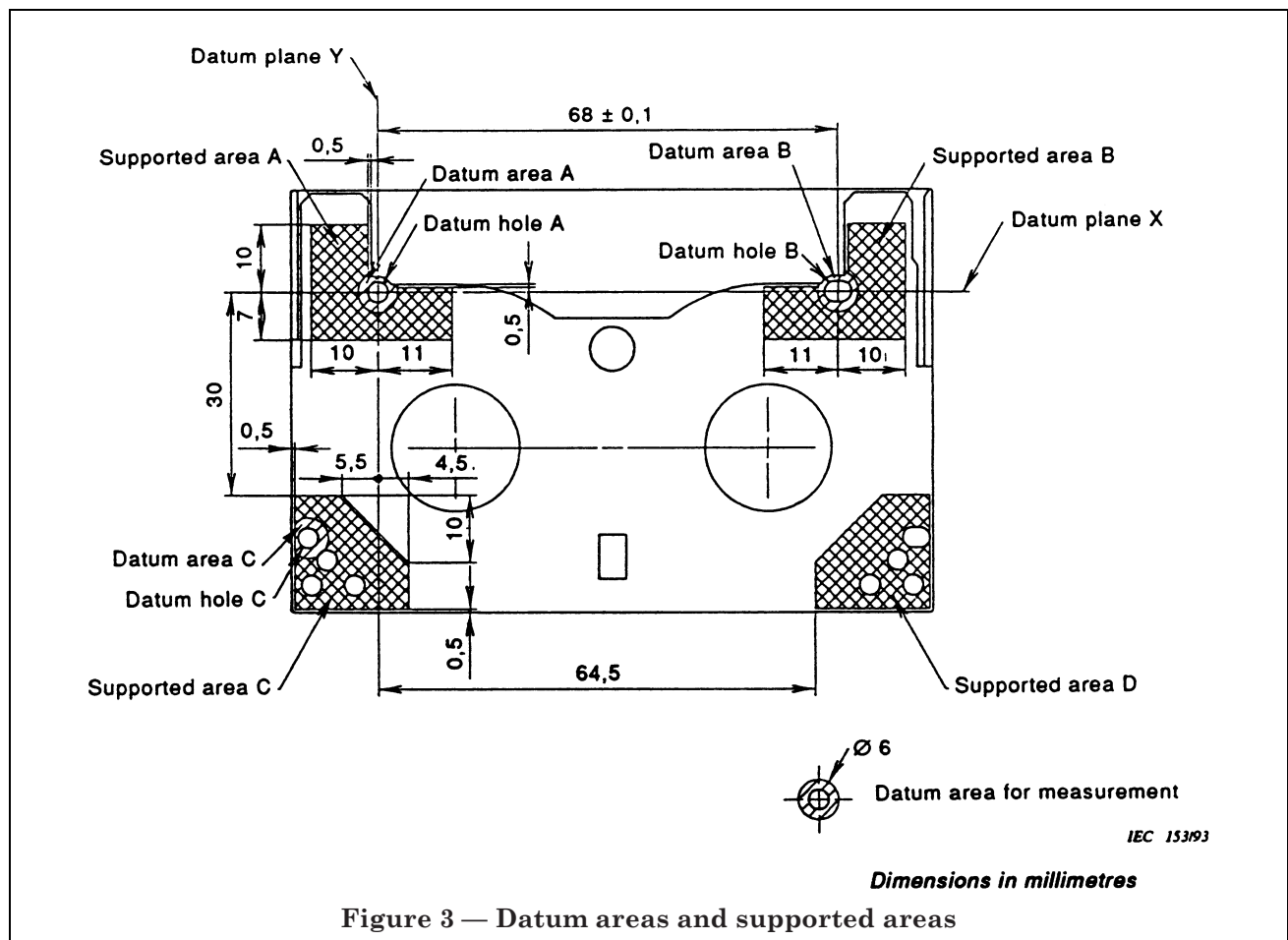
3.4 Cassette designation

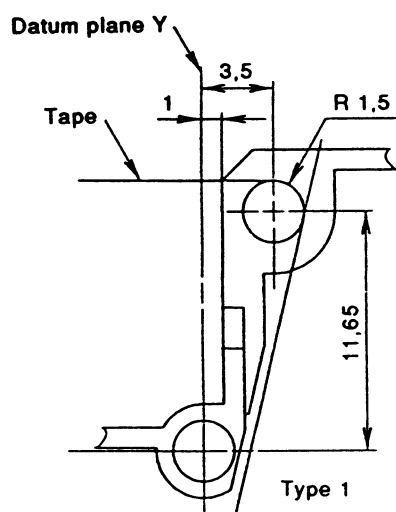
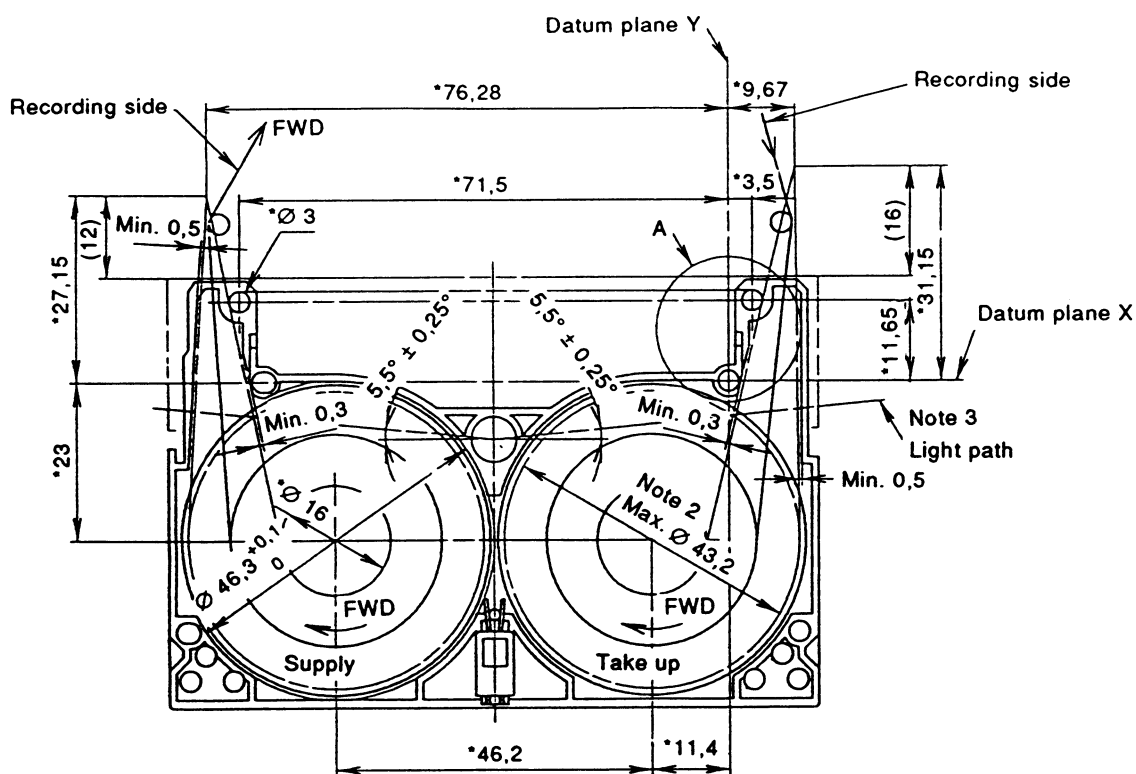
The following type name shall be used uniformly to identify 8 mm video cassettes:

Television system	Type of magnetic tape	
	Type A	Type B
525 line – 60 field	$P6 - T$	$E6 - T$
625 line – 50 field	$P5 - T$	$E5 - T$
where T is the playable time in minutes.		

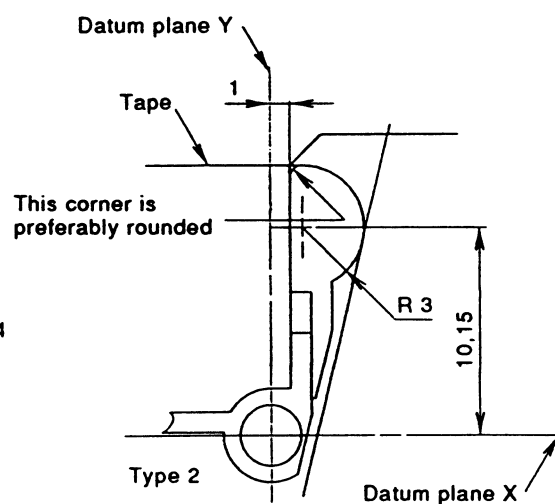








Note 4
Details of A



IEC 154/93

Dimensions in millimetres

NOTE 1 Dimensions marked with * are nominal values specifying the tape path.

NOTE 2 Maximum diameter of wound magnetic tape including leader and trailer tape.

NOTE 3 Refer to Figure 13, page 21, for height of light path.

NOTE 4 Forms type 1 and type 2 are possible.

Figure 4 — Internal structure, tape path and light path (top view)