

# INTERNATIONAL STANDARD



# 3413

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

## Information processing — Recorded magnetic tapes for interchange instrumentation applications — Standard tape speeds and track configurations

*Traitement de l'information — Bandes magnétiques enregistrées pour l'enregistrement de mesures — Normalisation des vitesses de bande et des dispositions des pistes*

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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.

International Standard ISO 3413 was drawn up by Technical Committee ISO/TC 97, *Computers and information processing*, and circulated to the Member Bodies in August 1974.

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

Australia	Germany	Spain
Belgium	Hungary	Switzerland
Bulgaria	Japan	Turkey
Canada	New Zealand	United Kingdom
Czechoslovakia	Portugal	U.S.A.
France	Romania	U.S.S.R.

No Member Body expressed disapproval of the document.

ISO/TC 97/SC 12 is concerned with the preparation of International Standards in the field of magnetic tape for instrumentation applications. The programme of work envisages an inter-related series of International Standards concerning I) Reels, II) Unrecorded magnetic tape, III) Recorded magnetic tape and IV) Recording methods. This International Standard forms part of that series and should be read accordingly.

#### STANDARDS PUBLISHED AND IN PREPARATION

ISO/R 1858, *General purpose hubs and reels with 76 mm (3 in) centrehole, for magnetic tape used in interchange instrumentation applications.*

ISO 1859, *Information processing — Unrecorded magnetic tapes for interchange instrumentation applications — General dimensional requirements.*

ISO 1860, *Information processing — Precision reels for magnetic tape for interchange instrumentation applications.*

ISO 2690, *Unrecorded magnetic tapes for instrumentation applications — Physical properties and test methods.*

ISO 3105, *Magnetic tape for instrumentation applications — Standardization of analogue modes of recording.<sup>1)</sup>*

ISO . . . , *Interchange practices and test methods for unrecorded instrumentation magnetic tape.*

ISO . . . , *Interchange practices and test methods for recorded magnetic tape.*

1) At present at the stage of draft.

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Information processing – Recorded magnetic tapes for interchange instrumentation applications – Standard tape speeds and track configurations

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies standard tape speeds and track configurations to allow maximum interchange of instrumentation magnetic tape records.

NOTE – See annex for definition of terms and symbols.

2 TAPE SPEEDS

The standard tape speeds for instrumentation magnetic tape recorders shall be 2,38 cm/s (15/16 in/s); 4,76 cm/s (1 7/8 in/s); 9,52 cm/s (3 3/4 in/s); 19,05 cm/s (7 1/2 in/s); 38,1 cm/s (15 in/s); 76,2 cm/s (30 in/s); 152,4 cm/s (60 in/s); and 304,8 cm/s (120 in/s).

3 TAPE WIDTHS

Standard tape widths are specified in the table below, which is an excerpt from ISO 1859.

Standard widths	
mm	in
6,3 <sup>0</sup> / <sub>− 0,06</sub>	0.248 <sup>0</sup> / <sub>− 0.0025</sub>
12,70 <sup>0</sup> / <sub>− 0,10</sub>	0.500 <sup>0</sup> / <sub>− 0.004</sub>
25,40 <sup>0</sup> / <sub>− 0,10</sub>	1.000 <sup>0</sup> / <sub>− 0.004</sub>
50,80 <sup>0</sup> / <sub>− 0,10</sub>	2.000 <sup>0</sup> / <sub>− 0.004</sub>

4 TRACK GEOMETRY : DIMENSIONS – RECORDED TAPE FORMAT (see figure 1)

4.1 4 Tracks in line on 6,3 mm (1/4 in) wide tape

Track width (*W*)

0,64 ± 0,05 mm (0.025 ± 0.002 in)

Track spacing (*D*)

1,78 mm (0.070 in)

Track location (reference edge to track 1 centreline) (*G*)

0,43 ± 0,05 mm (0.017 ± 0.002 in)

Track spacing tolerance ( $\Delta H_n$ )

± 0,05 mm (± 0.002 in)

Track number (*H<sub>n</sub>*)

	mm	in
<i>H</i> <sub>1</sub>	0	0
<i>H</i> <sub>2</sub>	1,78	0.070
<i>H</i> <sub>3</sub>	3,56	0.140
<i>H</i> <sub>4</sub>	5,34	0.210

NOTE – The simultaneous applications of the tolerances quoted shall not result in the centreline of track 4 being closer to the edge of the tape than 0,35 mm (0.014 in).