

Australian Standard[®]

INFORMATION PROCESSING

**SELF-LOADING CARTRIDGES
FOR 12.7 mm WIDE MAGNETIC
TAPE**

This Australian standard was prepared by Committee IS/1, Information Processing Systems. It was approved on behalf of the Council of the Standards Association of Australia on 5 May 1983 and published on 4 July 1983.

The following interests are represented on Committee IS/1:

Australian Banks Payment Systems Committee
Australian Bureau of Statistics
Australian Computer Equipment Suppliers Association
Australian Computer Users Association
Australian Electrical and Electronic Manufacturers Association
CSIRO, Division of Computing Research
Department of Defence
Life Insurance Federation of Australia
National Library of Australia
Office Equipment Industry Association of Australia
Public Service Board, N.S.W.
Qantas Airways Limited
Telecom Australia
Universities and Colleges

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This standard was issued in draft form for comment as DR 80157.

Australian Standard[®]

INFORMATION PROCESSING

**SELF-LOADING CARTRIDGES
FOR 12.7 mm WIDE MAGNETIC
TAPE**

First published 1983

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 3018 9

PREFACE

This standard was prepared by the Association's Committee on Information Processing Systems. It is substantially identical with and has been reproduced from International Standard ISO 6098, drawn up by ISO/TC 97, Information Processing Systems.

The purpose of this standard is to specify mechanical and functional interchangeability requirements for self-loading cartridges, to be used with reels of 12.7 mm wide magnetic tape specified in AS 1011. Dimensional and functional requirements for ensuring interchangeability are specified, and in addition, other requirements are given which are not mandatory, and not essential for interchangeability.

To assist Australian usage, additions to the text of the ISO standard have been made as follows:

- (a) Clause 7.3.1 introduces requirements for a second optional hook.
- (b) Figs 1 to 4 modified to include the second hook.

For the purpose of this Australian standard, the text of the ISO standard given herein should be modified as follows:

- (a) *Terminology*. The words 'Australian standard' should replace the words 'International Standard' wherever they appear.
- (b) *Decimal comma*. The decimal point should replace the decimal comma wherever it appears.
- (c) *Cross-references*. The references to International Standards should be replaced by references to Australian standards as follows.

<i>Reference to International Standard</i>	<i>Appropriate Australian Standard</i>
ISO 1864, Information processing—Unrecorded 12,7 mm (0.5 in) wide magnetic tape for information interchange—32 ftpmm (800 ftpi) NRZI. 126 ftpmm (3200 ftpi) phase encoded and 356 ftpmm (9042 ftpi), NRZI.	AS 1011, Unrecorded magnetic tape for information interchange—8 and 32 rpm NRZI and 63 rpm phase encoded

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

Contents	Page
1 Scope and field of application	4
2 Reference	4
3 Environment	4
3.1 Testing environment	4
3.2 Operating environment	4
3.3 Storage environment	4
4 Description and operation	4
4.1 General	4
4.2 Types	5
4.3 Use of Latch	5
4.4 Operation	5
4.5 Figures	5
5 Dimensions	6
5.1 Outer radius	6
5.2 Width	6
5.3 Radius of the front flange	6
5.4 Radius of the rear flange	6
5.5 Tangential restraint key	6
5.6 Axial restraint key	6
5.7 Upper restraint keys	7
5.8 Lower restraint keys	7
5.9 Air intake area	7
6 Cartridge/drive interface	7
6.1 Latch device	7
6.2 Position of the tangential restraint key	8
6.3 Position of the air intake area	8
6.4 Tape exit opening	8
7 Optional features	8
7.1 Tabs	8
7.2 Stacking rings	8
7.3 Hook	8
8 Functional characteristics	9
8.1 Mechanical characteristics	9
8.2 Pneumatic characteristics	9
9 Tape and reel requirements	9
9.1 <i>E</i> value	9
9.2 End of the tape	9
 Annexes	
A Instrumentation for measuring the pneumatic impedance	13
B Examples of tape leader configuration for use with self-loading cartridge	14

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

Information processing — Self-loading cartridges for 12,7 mm (0.5 in) wide magnetic tape

1 Scope and field of application

This International Standard specifies mechanical and functional interchangeability requirements for self-loading cartridges, to be used with reels of 12,7 mm (0.5 in) wide magnetic tape specified in ISO 1864.

Minimum dimensional and functional requirements of the cartridge are given, in order to ensure interchangeability of cartridges between tape drives designed for self-loading operation. Some dimensions and features, other than those strictly required for interchangeability, are also given but have to be considered as recommended or optional.

The numeric values in the SI and Imperial measurement systems in this International Standard may have been rounded and, therefore, are consistent with, but not exactly equal to, each other. Either system may be used but the two should be neither intermixed nor reconverted. The original design was completed using the Imperial measurement system.

2 Reference

ISO 1864, *Information processing — Unrecorded 12,7 mm (0.5 in) wide magnetic tape for interchangeability* — 32 ftpmm (800 ftpi) NRZ¹, 126 ftpmm (3 200 ftpi) phase encoded and 356 ftpmm (9 042 ftpi), NRZ¹.

3 Environment

3.1 Testing environment

Tests and measurements made to check the requirements of this International Standard shall be carried out under following conditions:

temperature: $23 \pm 2^\circ\text{C}$ ($73 \pm 5^\circ\text{F}$)

relative humidity: 40 to 60 %

conditioning time before testing: 24 h

3.2 Operating environment

temperature: 16 to 32°C (60 to 90°F)

relative humidity: 20 to 80 %

wet bulb temperature: not greater than 25°C (78°F)

3.3 Storage environment

3.3.1 Cartridges loaded with unrecorded tape

temperature: 5 to 48°C (40 to 120°F)

relative humidity: 20 to 80 %

wet bulb temperature: not greater than 26°C (80°F)

3.3.2 Cartridges loaded with recorded tape

temperature: 5 to 32°C (40 to 90°F)

relative humidity: 20 to 80 %

wet bulb temperature: not greater than 25°C (78°F)

3.3.3 Cartridges without tape

Temperature and relative humidity of storage environment for cartridges without tape should be according to the recommendations of the manufacturers of the cartridge.

4 Description and operation

4.1 General

The self-loading cartridge is a collar which can be attached to the rim of a reel of magnetic tape and protect the tape against dust and contamination during storage and handling.

1) At present at the stage of draft. (Revision of ISO 1864-1975.)