
International Standard



7298

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

Information processing — Magnetic disk for data storage devices — 158 000 flux transitions per track, 210 mm (8.3 in) outer diameter, 100 mm (3.9 in) inner diameter

Traitement de l'information — Disque magnétique pour unités de stockage des données — 158 000 transitions de flux par piste, diamètre extérieur 210 mm (8,3 in), diamètre intérieur 100 mm (3,9 in)

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Foreword

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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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7298 was prepared by Technical Committee ISO/TC 97, *Information processing systems*.

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Information processing — Magnetic disk for data storage devices — 158 000 flux transitions per track, 210 mm (8.3 in) outer diameter, 100 mm (3.9 in) inner diameter

1 Scope and field of application

This International Standard specifies the mechanical, physical and magnetic characteristics of a lubricated magnetic disk of 210 mm (8.3 in) outer diameter and 100 mm (3.9 in) inner diameter intended for mounting in data storage devices.

The International Standard defines the requirements for a disk to give satisfactory performance at 158 368 flux transitions per track.

When used at other densities, equivalent performance may require changes to the mechanical, magnetic and electrical criteria.

NOTE — The original design of the subject of this International Standard was made using the Imperial measurement system. Some later developments, however, have been made using SI units. In the process of conversion into the alternative system, values may have been rounded. Therefore, the two sets of figures are consistent with, but not exactly equal to, each other. Either set may be used, but the two shall be neither mixed nor reconverted.

2 Reference

ISO 1302, *Technical drawings — Method of indicating surface texture on drawings*.

3 General requirements

3.1 Operation and storage environment

To prevent corruption of data, the ambient stray magnetic field intensity at the surface of the disk shall not exceed 4 000 A/m. When heads are present, the general ambient field shall be reduced to take account of the concentrating effect of the core of the head.

NOTE — This will usually require the limitation of the allowed ambient field to the range of 300 to 2 000 A/m.

3.1.1 Operation

The operating temperature of the air surrounding the disk shall be within the range 15 to 57 °C (59 to 135 °F) at a relative humidity of 8 % to 80 %. The wet bulb temperature shall not exceed 26 °C (79 °F). The air surrounding the disk shall be of cleanliness class 100, as defined in annex A.

3.1.2 Storage

The storage temperature shall be within the range – 40 to + 65 °C (– 40 to + 150 °F) at a relative humidity of 8 % to 80 %. The wet bulb temperature shall not exceed 30 °C (86 °F). Under no circumstances shall condensation on the disk be allowed to occur.

Storage under the extreme conditions of the above range is not recommended. A temperature gradient of more than 10 °C (18 °F) per hour should be avoided.

3.2 Test conditions

Unless otherwise stated, measurements shall be carried out at 23 ± 3 °C (73 ± 5 °F), 40 % to 60 % relative humidity after a period of acclimatization during which condensation on the disk shall not be allowed to occur. Tests requiring the use of heads shall be performed in air of cleanliness class 100.

3.3 Material

The disk may be constructed from any suitable material so long as the dimensional, inertial and other functional requirements of this International Standard are maintained.