

Memorex 102 OEM Disc Storage Drive

Product Description

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The Memorex 102 disc drive is a Winchester technology fixed disc drive providing storage capacity of 23.4 megabytes. It features outstanding compactness, economy and reliability, and is suitable for random access storages for micro-computers, intelligent terminals, word processing systems, etc. The Memorex 102 is equipped with the same interface as the Memorex 101 which offers ease of system integration, and is compatible with the SA4000. Available as an option is an LSI controller for a bidirectional data bus interface for connecting the drive with the host CPU. The drive consists of an HDA and two printed circuit boards. Winchester technology contact start/stop heads, four discs, head positioning actuator, and DC spindle motor are integrated in the HDA.

Extremely Compact Design

With the utilization of 8-inch discs and a DC motor directly connected to the spindle, the Memorex 102 is an extremely compact design — 111 mm (4.37 inches) in height, 217 mm (8.54 inches) in width and 356 mm (14.0 inches) in depth. It can be mounted either horizontally or vertically in a standard 19-inch rack. Since the Memorex 102 is the same physical size as that of a floppy disc drive, it can serve as a replacement for increased storage capacity. The Memorex 102 disc drive's compactness also contributes to noise reduction and lowered vibration. This means it is ideal for office use.

Enhanced Economy

The Memorex 102 disc drive's positioning mechanisms are substantially simplified because of a stepping motor using a steel band and a viscous damper, thus enhancing reliability and economy. Power consumption is only 60 watts when seeking and 50 watts when not seeking. It can operate in a wide range of environmental temperatures (5 to 45°C, or 41 to 113°F) without a cooling fan.

High Performance

The Memorex 102 is a high-performance compact and economical disc drive. Start and stop times are 25 seconds each. The head positioner with stepping motor allows 70 milliseconds average positioning time, and the direct drive DC spindle motor with 2,964 rpm rotational speed provides a high data transfer rate of 593 kilobytes per second.

Maintenance Free

With adoption of a completely sealed HDA as well as belt-eliminating built-in DC spindle motor and highly reliable printed circuit boards, the Memorex 102 drive results in greatly reduced maintenance: no preventive maintenance is needed, and mean-time-to-repair (MTTR) is under one-half hour.

Superb Reliability

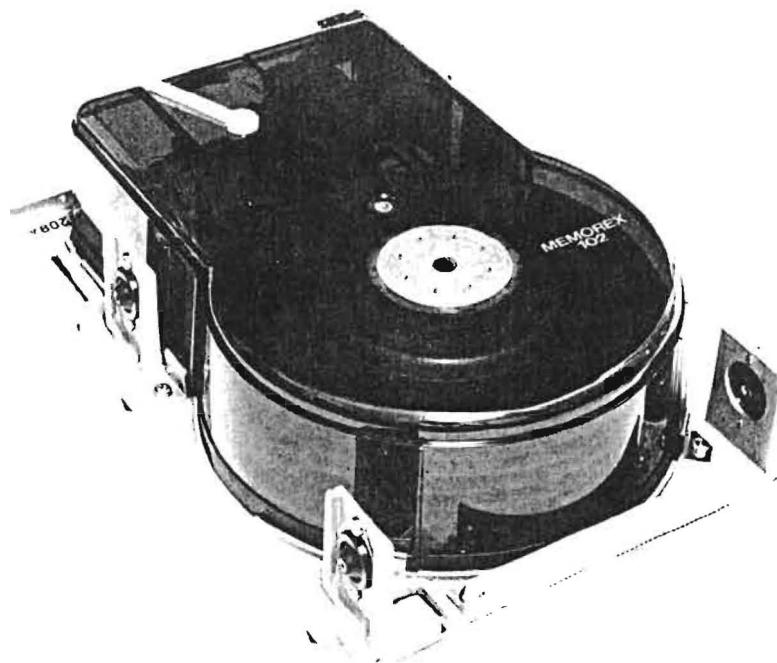
The Memorex 102 offers high reliability through the use of Winchester technology. In the completely sealed HDA, an absolute air filtration system including breathing filter and recirculation filter assures a contamination free environment. Winchester-type contact start/stop heads eliminate moving parts for loading and unloading. These features guarantee the Memorex 102 a mean-time-between-failures (MTBF) of more than 10,000 power-on hours.

Optional Interface With Powerful Commands

The Memorex 102 optional interface has an LSI controller providing a bidirectional data bus interface; which permits simplified host interfacing via its powerful commands, thus facilitating system design. In other words, the Memorex 102 can be easily incorporated into a host system with simple host adapter logic eliminating the need for a separate control unit. It also has self-diagnostic functions for easy trouble-shooting.

International Versatility

The standard DC power requirements permit international versatility and independence of power line fluctuations. Also, the industry standard interface adds further to international compatibility.



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Product Specifications

Capacity (unformatted)

Drive: 23.4 MB
Per Surface: 2.9 MB
Per Track: 12,000 Bytes

Data Retrieval Times

Track-to-Track Access Time: 30 ms
Average Access Time: 70 ms
Maximum Access Time: 140 ms
Average Latency: 10.1 ms
Transfer Rate: 593 Kbytes/sec.

Densities

Recording: 6100 Bits/inch
Track: 195 Tracks/inch

Dimensions

Height: 111 mm (4.4 inches)
Width: 217 mm (8.5 inches)
Depth: 356 mm (14.0 inches)
Weight: 6.3 kg (13.9 pounds)

Power Requirement

Voltage:
24 VDC \pm 10% 1.6A (max. 6A)
5 VDC \pm 5% 5.6A (max. 7.5A)
-5 VDC \pm 5% 0.5A
(-16V to -7V can be accommodated)

Environment

Ambient Temperature
Operating: 5 to 45°C (41 to 113°F)
Non-Operating: -40 to 60°C
(-40 to 140°F)
Gradient: Less than 15°C (27°F)/hour
Relative Humidity
Operating: 20 to 80%
(non-condensation)
Non-Operating: 5 to 95%

Specifications

Rotational Speed: 2964 RPM
Cylinders: 244
Heads
Read/Write: 8
Clock: 1
Encoding Method: MFM

Reliability Specifications

Fixed Disc
MTBF: 10,000+ power-on hours
MTTR: -30 minutes
Error Rate
Recoverable Errors:
10 per 10^{11} bits read
Unrecoverable Errors:
10 per 10^{13} bits read
Seek Errors: 10 per 10^7 seeks

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