

677 Disc Storage Drive Description

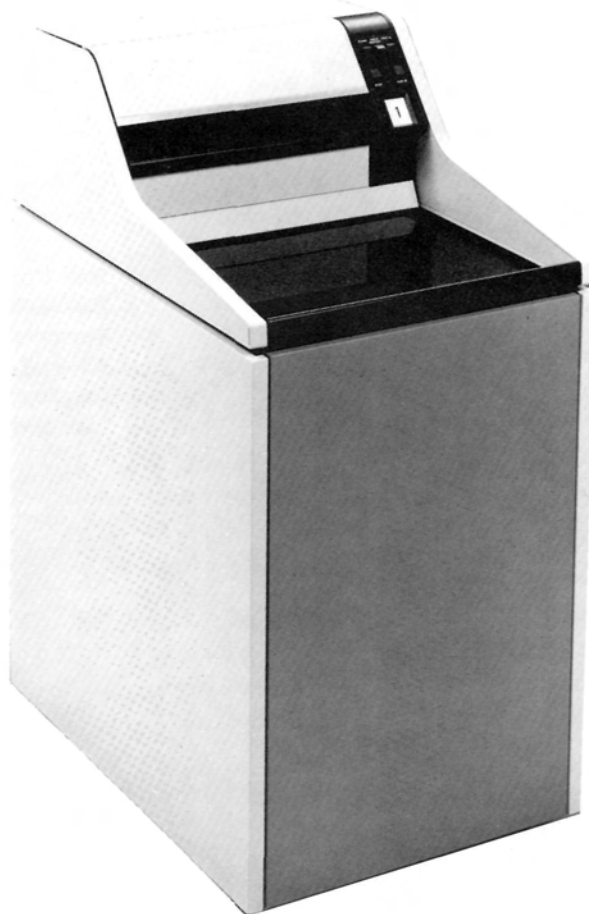
The Memorex 677 is a 100 MB/200 MB, direct-access disc storage drive featuring fast data access and a simplicity of design and packaging that provides high reliability and ease of maintenance. The drive rotates the disc pack at 3600 RPM, selects one of nineteen read/write heads for an operation, positions the selected head to one of 815 tracks on the disc surface, and enables the system to synchronize the data transfer. The mechanical and electrical characteristics of the drive can be tailored to match the customer's control-unit/drive interface specifications.

The 677 is Memorex's fourth generation large scale disc storage drive. Manufacturing experience (over 30,000 spindles) and operating experience (over 150 million hours) provide a proven technological base. Memorex is expanding this base with new products and technologies and is committed to supporting the OEM with products, spare parts and worldwide support. Memorex is the world's second largest supplier of disc storage drives, and maintains complete technological control of manufacturing not only the critical drive components such as the read/write heads, but also the disc packs. The engineering and marketing experience acquired in providing Original Equipment Manufacturers with three generations of disc devices, offers a broad range of design flexibility to accommodate unconventional as well as conventional OEM requirements.

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677 OEM Disc Storage Drive

677 Disc Storage Drive Advantages

Superior Head Design

The unique manganese-zinc ferrite core's higher permeability across the operating frequency of the head allows Memorex 100 MB/200 MB Disc Drive Heads to "fly" 30% higher than competition with superior recording performance. This higher flying height significantly reduces the possibility of HDI's (head-to-disc interference).

Patented Air Flow System

The system utilizes the revolving pack as an air pump which draws air through the absolute filter and into the disc pack shroud area through baffles designed for effective air distribution. This design enables the 677 to become temperature stabilized rapidly, greatly reducing idle time.

Excellent Serviceability

The 677 is designed so that all areas of the drive are accessible. For example, the logic printed circuit boards are packaged above the shroud area allowing easy accessibility. Great attention has been paid toward reducing the MTTR, providing greater overall system performance while reducing operational costs.

Worldwide Field Service

Memorex maintains field service operations throughout the world. The spare parts and trained service personnel can be utilized by the OEM user if such arrangements are desirable.

Complete Training Facilities

Memorex operates three training facilities which are available to 677 OEM customers. These facilities are located in Santa Clara, California; Liege, Belgium; and Tokyo, Japan.

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Detailed Product Documentation

The 677 is supported with the following documentation:

Technical Manual
Illustrated Parts Catalog
Logics and Schematics

Full Function Off-Line Tester

Memorex offers the OEM user an off-line diagnostic tester. In addition to normal disc drive exercise features, the tester includes read/write capabilities.

677 Disc Storage Drive Specifications

Data Retrieval Times

Average Latency: 8.33 msec
Track-to-Track Access Time: 6 msec
(maximum)
Maximum Access Time: 53 msec
Average Access Time: 28.5 msec
Data Transfer Rate: 806,000 bytes/sec

Disc Pack Characteristics

Number of Recording Discs: 10
Number of Recording Surfaces: 19
Tracks per Surface: 815
Track Density: 370 tracks/inch
Bit Density (Innermost Track):
4040 bits/inch
Bit Density (Outermost Track):
2660 bits/inch
Encoding Scheme: MFM (Miller)
Coating Material (Memorex Mark XI):

Oriented pfizer iron oxide
Servo Surface: Surface 10
Index Pattern: 111110101101
Rotational Speed: 3600 rpm

Capacity

Track Capacity: 13,440 bytes
Cylinder Capacity: 255,360 bytes
Disc Pack Capacity: 208,118,400 bytes

Dimensions

Width: 22 inches
Depth: 32 inches
Overall Height (Top of Control Panel):
47 inches

Start/Stop Time

20 sec nominal

Weight

550 lbs.

Power Requirements

Voltage: 60 Hz model
208/230 VAC $\pm 10\%$
3 phase
(DELTA)
50 Hz model
220/230/240 VAC $\pm 10\%$
3 phase
(DELTA)
380/398/415 VAC $\pm 10\%$
3 phase
(WYE)
Frequency: 60 Hz model
60 $\pm 1\%$
50 Hz model
50 $\pm 1\%$

Maximum Heat Dissipation

4450 BTU/hour

Internal Air Flow

550 CFM

Operating Environmental Conditions

Temperature: Range, 60° to 90°F;
Optimum, 75°F; Allowed variation,
5°F/hour
Relative Humidity: Range, 20% to 80%;
Optimum, 50%
Maximum Wet Bulb: 78°F

Non-Operating Environmental Conditions

Temperature: Range, 50° to 110°F;
Allowed variation, No condensation
Relative Humidity: 10% to 90%
Maximum Wet Bulb: 80°F

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