

CONTROL DATA® 844-2 MASS STORAGE SUBSYSTEM

CONTROL DATA
CORPORATION



The CONTROL DATA Mass Storage Subsystem consists of up to eight 844-2 Disk Storage Units, with associated single or dual 7054 or 7654 storage controllers. This provides a large-capacity, multi-access storage device, using removable disk packs. Each drive has a capacity of 708 million bits, and an expanded subsystem with eight on-line drives, has a capacity of 5.7 billion bits. Additional data may be stored off-line, using Model 872 Disk Packs.

The 844-2 cabinet contains a single drive mechanism. This achieves modularity on a unit basis, and permits the addition of a single disk storage unit at a time.

A track-packing method consisting of 4,000 bits per inch, coupled with a track density of 200 tracks per inch, yields the total usable capacity of 708 million bits per drive. Head positioning is controlled by a voice-coil positioner, with an average positioning time of 30 milliseconds. The disk rotates at 3600 RPM, providing an average latency time of 8.3 milliseconds. The high bit density and rotational speed combine to provide a transfer rate of 7.8 billion bits per second.

The 7054 Disk Controller is used with the CDC CYBER 70/Models 72, 73, and 74. The 7654 Disk Controller is used with the Model 76. Using a single controller, it is possible to perform multiple-overlapped seek operations concurrently with one read or write operation. Two controllers in a subsystem provides two simultaneous data transfers (read and/or write) to any two drives, while retaining the multiple seek feature.

The disk controller includes a small, programmable processor. The ability to program the processor enhances the normal operation of the subsystem and provides for more diagnostics and recovery capability.

CDC Model 872 Disk Packs are used with the 844-2 Disk Storage Units. The 872 consists of a stack of eleven, 14-inch diameter, magnetic recording disks. Nineteen surfaces are used for data recording and one is used for permanently-recorded positioning information.

SPECIFICATIONS

Capacity (per drive)

Sector: sector sizes of 644, with the 7054 Controller,
or 5160 characters, with the 7654 Controller
Track: 24 small sectors or 3 of the larger sectors
Tracks per Surface: 404
Number of Surfaces: 19
Drive: 6.8 million bits
Capacity (8 drives): 5.7 billion bits

Positioning Time

Minimum: 10 milliseconds
Maximum: 55 milliseconds
Average: 30 milliseconds, random non-optimized
Rotational Speed: 3600 RPM
Average Latency Time: 8.3 milliseconds
Disk Pack: Type CDC 872 or equivalent

Physical Dimensions & Weight

Height: 39 inches
Depth: 49 inches
Width: 22 inches
Weight: 600 pounds

Power Requirements

Power Source: 208 VAC, 3 phase
Operating Current: 6.5 amps