

CONTROL DATA®
9425 and 9427 CARTRIDGE DISK DRIVES
DESIGNED FOR ORIGINAL EQUIPMENT MANUFACTURERS

CONTROL DATA
CORPORATION



Cartridge Disk Drive shown with optional cabinetry.

CONTROL DATA 9425 and 9427 Cartridge Disk Drives are medium capacity, random-access storage devices which record and read information on a cartridge disk. The basic 9425 or 9427 unit consists of a rack-mountable deck assembly which includes a spindle and drive motor, head-positioning mechanism, logic chassis, and air-filtration system. The read/recovery circuit will operate with or without missing clock patterns such as those found in variable sector formats. The unit features absolute (direct) addressing to position heads to desired track.

The CDC® 9425/9427 uses the CDC 847 Cartridge Disk or equivalent (IBM 5440). A single disk within the cartridge stores information on two oxide-coated surfaces. Head positioning is performed by a closed-loop, proportional-servo system. The carriage is driven by a voice-coil linear actuator, which provides rapid data accessing.

The basic 9425 has a capacity of 25×10^6 bits. The basic 9427 has a capacity of 50×10^6 bits. Storage capabilities of either the 9425 or the 9427 can be doubled by adding an optional disk. This disk provides the same facilities as the cartridge, except that it is non-removable.

SPECIFICATIONS

RECORDING FORMAT CAPACITY

Capacity (full track mode): 62,500 bits/track, nominal
125,000 bits/cylinder*
25 x 10⁶ bits/spindle* (9425)
50 x 10⁶ bits/spindle* (9427)

*An optional non-removable disk may be added,
doubling the stated capacity

Recording Mode: Double frequency

Recording Density: 1530 bpi, outer track
2220 bpi, inner track

Tracks per Surface: 200, plus 3 spares (9425)
400, plus 6 spares (9427)

PROCESSING SPEED

Bit Rate: 2.5 MHz, nominal

Spindle Speed: 2400 rpm

ACCESSING TIME (Direct seek, on track)

Full Stroke: 70 milliseconds

Average: 35 milliseconds

One Track: 10 milliseconds

CARTRIDGE DISK PACK

Type: CDC 847 or equivalent (IBM 5440)

Number of Disks: 1

Usable Surfaces: 2

Diameter: 14 inches

Coating: Magnetic oxide

RECORDING HEADS*

Type: Standard CDC

Total Number: 2 (increases to 4 heads with
fixed disk option)

Read/Write to Erase Gap: 0.045 inch, nominal

Track Spacing: 0.010 inch, nominal (9425)
0.005 inch, nominal (9427)

Head Positioning: Features closed loop servo,
requires no mechanical detent

*Self-loading, full-track erase before write
Self-clearing glass base

OPERATOR CONTROLS

Switch/Indicators: Start (stop)
Fault

Indicator Only: Spin
Maintenance

PHYSICAL

Height: 15 inches

Width: 17½ inches

Depth: 29.8 inches

Weight: 150 pounds

ENVIRONMENTAL

Operating Temperature: 60°F to 90°F

Operating Humidity: 10% to 80% R. H. (non-condensing)

Non-operating Temperature: -30°F to 150°F

Non-operating Humidity: 5% to 95% R. H.
(non-condensing)

ERROR RATE: Less than 1 in 10¹⁰ bits

STANDARD OPTIONS AVAILABLE

Cabinet: Height: 34 inches
Width: 17.25 inches
Length: 29.75 inches

Fixed disk: Non-removable, doubles capacity of both
9425 and 9427

Daisy-Chain Interface: Connects up to four drives

Sector Address: Shows sector presently under
read/write heads

Write Lockout: Via operator panel or controller

Power Supply: 50 Hz or 60 Hz

Slide Mounts and Front Panel

RELIABILITY AND SERVICE GOALS

MTBF: 2000 hours

MTR: Shall not exceed 1.5 man hours

P/M: Shall not exceed .5 man hours per 500 hours

Service Life: Five years or 30,000 hours

APPLICABLE SPECIFICATIONS

9425: 64013600

9427: 64016700

Specifications are subject to change without notice

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