CALCOMP

MODEL 114 DISK DRIVE

CalComp's Model 114 Disk Drive is a high speed, random access, mass storage device utilizing an 11-high removable disk pack for the storage and retrieval of data. Over 29 million 8-bit bytes of data can be stored on the 20 recording surfaces.

Electromagnetic head positioning allows for a maximum adjacent-track head positioning time of 12 msec, and an average positioning of 35 msec.

The transfer rate of the CalComp 114 is 312,000 bytes per second. With a rotational speed of 2400 rpm, the drive is up to speed and operational in 22 seconds, and is dynamically braked in 12 seconds.

Several available configurations of this unit each include both 60 Hz and 50 Hz models. Numerous options may be selected to meet individual requirements.

FEATURES

ELECTROMAGNETIC HEAD POSITIONING AND ELECTRONIC TRACK DETENTING provides superior reliability and positioning accuracy.

FAST ACCESS TIME allows greater system throughput.

FUNCTIONALLY ORGANIZED PRINTED CIRCUIT BOARDS facilitate maintenance and afford a very low MTTR.

CIRCUIT MONITORING OF THE READ, WRITE AND ERASE FUNCTIONS assures high data integrity.

FAST START TIME AND DYNAMIC BRAKING permits rapid pack changes.
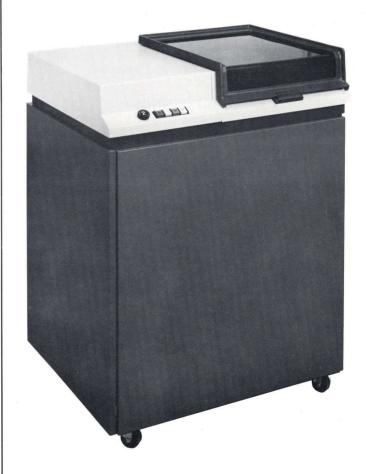
UL LISTED AND CSA APPROVED EDP equipment.

INDICATOR PUSHBUTTON SWITCHES on front panel give attractive, uncluttered appearance with simplicity of operation.

READ ONLY SWITCH inhibits any attempted Write operation, giving a Write Protected state.

SELECT LOCK INDICATOR detects an unsafe condition if any of the unsafe conditions monitored by the Disk Drive safety circuits exist.

STRADDLE ERASE HEADS sharpen the track edges and create a guard band between tracks to minimize crosstalk.

NUMEROUS OPTIONS INCLUDING Sector and Sector Divider Logic, 5v DTL or 3v "Q", 75 or 104 pin interface, and Internal Difference Calculator may be selected to meet individual OEM requirements.

114 SPECIFICATIONS AND CHARACTERISTICS

CAPACITY
29.2 million 8-bit bytes (233.4 Megabits)

TRANSFER RATE
2.5 Megabits per second

ACCESS TIME
Track to Track — 12 msec. max.
Average Positioning — 35 msec.
Full Stroke — 65 msec. max.
Average Latency — 12.5 msec.

ROTATIONAL SPEED
2400 rpm, ±2%

PACK START/STOP TIME
Start Time — 22 seconds
Dynamic Braking — 12 seconds

POWER REQUIREMENTS
Input Voltage — 208 or 230 VAC ±10%, single phase
Line Frequency — 60 ±0.5 Hz (50 Hz optional)
Operating Current — 3.5 amps rms
Starting Current — 20 amps for 7 seconds

DISK PACK CHARACTERISTICS
Disk Pack — IBM 2316 or equivalent
Recording Surfaces — 20
Tracks per Surface — 203

OPERATING METHODS
Recording Method — Double Frequency, bit serial
Positioning Method — Linear Motor

EXTERNAL DIMENSIONS
30" wide x 40.3" high x 24" deep

OPERATING ENVIRONMENT
Temperature — 60° to 90°F.
Temperature Gradient — 20°F. per hour
Humidity — 10% to 80% (no condensation)

ERROR RATE
Recoverable: 1 error in 10^{10} bits
Non-recoverable: 1 error in 10^{13} bits
Positioning: 1 error in 10^{6} seeks

RELIABILITY
MTBF: over 1200 hours
MTTR: under 2 hours
Service Life: 5 years or 24,000 hours

CONTROLS & INDICATORS
Power Switch
Access Ready Switch
Read Only Switch
Power On Indicator
Access Ready Indicator
Read Only Indicator
Select Lock Indicator