# **CALCOMP**



# **MODEL 225 DISK DRIVE**

The CalComp 225 is a high density, high speed, random access, mass storage unit consisting of two separate and independent disk drives. Each drive utilizes an 11-high removable disk pack for the storage and retrieval of data. Over 116 million 8-bit-bytes of data can be stored on the 20 recording surfaces of each pack, allowing a total unit capacity in excess of 232 million bytes.

Incorporating 200 tracks-per-inch and 4400 bits-per-inch technologies, the 225 accesses any one of 406 cylinder positions with a track-to-track access time of not more than 10 ms, and a maximum full stroke access time of 55 ms. Data is transferred at 625,000 bytes per second with a rotational speed of 2400 RPM. A single spindle version of the 225 (Model 224) is also available from CalComp.

## **FEATURES**

**HIGH DENSITY PACKING TECHNIQUES** provide four times the data storage of a 2314-type disk drive.

TWO INDEPENDENT SPINDLES IN A SINGLE CABINET greatly reduce floor space requirements.

**ELECTROMAGNETIC ACTUATOR** combined with **OPTICAL CYLINDER TRANSDUCER** provides superior head positioning accuracy and reliability, and assures pack interchangeability.

**PROGRAMMABLE ELECTRONIC SECTOR GENERATOR** allows the user to select his own sector count, avoiding the requirement for non-standard disk packs.

**DRIVE GENERATED WRITE CLOCK** tracks the disk speed, thereby eliminating rpm impact on data packing density.

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

**TEMPERATURE COMPENSATION SYSTEM** insures that read/write heads are positioned directly over the data track despite ambient or pack temperature changes.

**PROGRAM CONTROLLED HEAD POSITION OFFSET** enhances recovery of marginal data.

**DUAL ACCESS INTERFACE** (optional) allows two controllers to access either disk drive permitting simultaneous data transfer.

**SELF CONTAINED VFO** provides separation of recorded data in the drive and greatly simplifies controller read/write design requirements.

**INTERNAL DIFFERENCE CALCULATOR** provides absolute addressing capability, further simplifying controller design.

**FUNCTIONALLY ORGANIZED PRINTED CIRCUIT BOARDS** facilitate maintenance and afford the shortest possible MTTR.

**SPINDLE DRAWERS** can be extended from both the front and rear of the unit providing operator convenience and ease of maintenance.

U.L. LISTED AND CSA CERTIFIED.



MODEL 225 DISK DRIVE

# 225 SPECIFICATIONS AND CHARACTERISTICS

## CAPACITY

Per Pack - 116 million 8-bit bytes (125 million bytes

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Per Unit - 232 million 8-bit bytes (250 million bytes

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#### TRANSFER RATE

5 Megabits per second

## **ACCESS TIME**

Track to Track - 10 msec. max. 405 cylinder seek - 55 ms Latency Average - 12.5 ms, maximum - 25 ms

# **ROTATIONAL SPEED**

2400 rpm

## PACK START/STOP TIME

Start — 90 sec. to ready
Dynamic Braking — 20 sec. to stop

## **DISK PACK CHARACTERISTICS**

Recording Surfaces — 20 Tracks per Surface — 406

#### **DIMENSIONS**

32" wide x 24.75" deep x 61" high

#### WEIGHT

850 pounds

## POWER REQUIREMENTS

Input Voltage -208 or 230 VAC Line Frequency -60 Hz  $\pm 0.5$  Hz (50 Hz optional) Operating Current -4.3 amp rms/spindle Starting Current -20 amps/spindle for 7 seconds

## **HEAT DISSIPATION**

4250 BTU per hour

#### OPERATING ENVIRONMENT

Temperature  $-60^{\circ}$ F to  $90^{\circ}$ F. Relative Humidity -10% to 80% (no condensation)

