



SYSTEMS INCORPORATED

# Xebec Moving Head Disk Systems

...XMD series

The XMD-Series of mini-computer mass memory systems offers 10 to 160 million bits of storage. The disk drives are similar to the IBM 2310 drive, and the disks come in 1025 or 2200 bit-per-inch densities — each with a fixed or removable platter.

A mini-computer coupler, controller, necessary cables and power supplies, plus one to four disks comprise the system. Software includes a disk formatter, I/O driver and a diagnostic maintenance program.

The disks have 203 cylinders (head positions) — and each cylinder contains two tracks (single platter) or four tracks (double platter). The tracks are divided into eight sectors (1025 BPI density) or 16 sectors (2200 BPI density) — and each sector contains 256 12-bit data words or 192 16-bit data words.

Available at a modest additional cost is our complete disk operating system software package (XDOS) which provides the user with a turnkey-type system for creating and manipulating named files on the disks.



## FEATURES

### CONTROLLER

- Automatic Formatting
- Write Protect
- Write Data Verification
- Unrestricted Data Transfer
- Continuous Transfer of Multiple Sectors
- Positioning Verification
- Data-Error Checking
- Overlap Seek
- User-Error Checking

### DISK DRIVE

- Self-Clocking Recording Technique
- Interchangeable Unit-to-Unit
- Easy Loading

## SPECIFICATIONS

	XMD-2100	XMD-5200	XMD-5220
No. of Removable Disks	1	1	1
No. of Fixed Disks	0	0	1
Recording Density (BPI)	1025	2200	2200
No. of Cylinders	203	203	203
Tracks/Cylinders	2	2	2
Sectors/Track	8	16	16
No. of Formatted Words/Sector			
Formatted in: 12-Bit Words	256	256	256
16-Bit Words	192	192	192
No. of Formatted Words/Drive			
12-Bit	831,488	1,662,976	3,325,952
16-Bit	623,616	1,247,232	2,494,464
Word Transfer Rate:			
12-Bits/Word	60 K Wd/s	60 K Wd/s	130 K Wd/s
16-Bits/Word	45 K Wd/s	45 K Wd/s	98 K Wd/s
Rotational Access Time:			
Average	20 ms	20 ms	20 ms
Maximum	40 ms	40 ms	40 ms
Positioning Access Time (Inc. Settling)			
Cyl. to Cyl.	22 ms Read 38 ms Write	15 ms	15 ms
Average (Min+Max) 3 + Settle	224 ms Read 240 ms Write	60 ms	60 ms
200 Cyl.	420 ms Read 436 ms Write	100 ms	100 ms
Positioner Type	Stepping Motor	Voice Coil	Voice Coil
Disk Type	IBM 2315	IBM 2315	IBM 2314 in 2315 Cartridge

## SECTOR LAYOUTS

	Overhead	SYNC	Preamble	Data	Checksum	Overhead
1025 BPI	202 $\mu$ sec	1 Wd.	1 Wd.	256 Wds. 3072 Bits	1 Wd.	230 $\mu$ sec
2200 BPI	202 $\mu$ sec	1 Wd.	1 Wd.	256 Wds. 3072 Bits	1 Wd.	125 $\mu$ sec

## SIZES

	Panel Width	Panel Height	Module Depth* Behind Front Rails
Controller	19"	5-1/4"	27"
Disk Drive	19"	17-1/2"	29"
Disk Drive Power Supply	19"	8-3/4"	24"

\* Module depth includes space for adequate airflow, and cable access.

## POWER REQUIREMENTS

	50 Hz	60 Hz
Voltage	220-240 VAC	105-125 VAC
Current (Average)	3.5 Amps	4.5 Amps
Current (Peak)	6 Amps	9 Amps
Phase	Single	Single
Frequency Tolerance	$\pm 1/2$ Hz	$\pm 1/2$ Hz



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