



MAY

1983

MiniScribe V



5 1/4" Winchester Disk Drive 30 to 51 MBytes unformatted storage capacity

The MiniScribe V series of 5 1/4-inch Winchester disk drives provides extended storage capacities, previously available only on high-performance and high-cost products, at prices in the low-performance range. At the same time, the series offers an unprecedented array of configurations that enable the OEM computer system manufacturer to balance capacity and access times with desired system performance.

Using the matrix as a guide, the system integrator can choose a three or four disk version with capacities ranging from 30 to 51 megabytes and average access time from 85 to 95 milliseconds. All models feature the proven technology that has made MiniScribe the fastest-growing 5 1/4-inch Winchester manufacturer in the industry. Each model is fully compatible with industry standards.

Access Time	85	95
Number of Cylinders	480	612
Number of Disks	Capacity (MBytes)	
4	40	51.0
3	30	38.2

- Field proven rack-and-pinion motion translator allows an increased number of recording tracks, yet retains the full-step holding torque and positioning repeatability of the stepper-motor actuator.
- IC preamplifier, within the sealed enclosure and in close proximity to the read/write heads, assures data reliability in electrically noisy environments.
- Efficient temperature compensation system (patent pending) enhances the positioning repeatability over the operating temperature range.

- Unique breather filter arrangement (patent pending), plus a recirculating air system, guarantees a clean pressurized operating environment to the heads and disks.
- Microprocessor-controlled buffered seek takes full advantage of the stepper motor high-speed slew characteristics. This results in a fast 85 millisecond average access time.
- Crystal control assures constant spin-motor speed, regardless of temperature variations and effects of motor life, and eliminates all adjustments.
- Microprocessor-controlled internal self diagnostics provide fast performance verification.
- A head shipping zone in a non-data area of the disk, coupled with a carriage locking feature, prevents disk damage during transport.

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MODEL SPECIFICATIONS

	Model 5330	Model 5440	Model 5338	Model 5451
Storage Capacity—Unformatted				
Per Drive (MBytes)	30.0	40.0	38.2	51.0
Per Track (Bytes)	10,416	10,416	10,416	10,416
Storage Capacity—Formatted				
Per Drive (MBytes)	23.6	31.4	30.0	40.0
Per Track (Bytes)	8192	8192	8192	8192
Per Sector (Bytes)	256	256	256	256
Sectors per Track	32	32	32	32
No. of Disks	3	4	3	4
Data Tracks	2880	3840	3672	4896
Recording Density				
Areal (Bits/Square inch)	5.04x10 ⁶	5.04x10 ⁶	5.90x10 ⁶	5.90x10 ⁶
Linear (Bits per inch/MFM)	8574	8574	10,030	10,030
Radial (Tracks per Inch)	588	588	588	588
Cylinders	480	480	612	612
Data Transfer Rate (MBytes per Second)	5.0	5.0	5.0	5.0
Access Time (MSec)				
Average Latency	8.33	8.33	8.33	8.33
Seek Time (including settling)				
Track-to-Track	6.0	6.0	6.0	6.0
Average	85.0	85.0	95.0	95.0
Maximum	160.0	160.0	185.0	185.0

GENERAL SPECIFICATIONS

MTBF	10,000 hours (continuous operation)
MTRR	30 minutes
Preventive Maintenance	None
Data Reliability	1 soft error in 10 ¹⁰ bits read 1 permanent error in 10 ¹² bits read 1 seek error in 10 ⁶ seeks
Input Power Required	+12VDC ±5%, 1.5 amps 4.5 amps start (15 sec) +5VDC ±5%, 1.0 amp
Operating Temperature	40°F (4°C) to 122°F (50°C)
Relative Humidity	8% to 80% non-condensing 78°F (26°C) max wet bulb
Physical Size	3.25 in. H x 5.75 in. W x 8.0 in. D
Weight	6.0 pounds

Features and specifications subject to change without notice.

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