

# 32.0 - 128.0 MByte 5¼" Full-Height Winchester Disk Drives

NOV 1 1987

## 6000 SERIES

- Storage capacities of 32, 53.3 and 85.3 MBytes unformatted with MFM; and 79.9 and 128 MBytes unformatted with 2,7 RLL
- 2.8 msec. avg. seek time (including settling)
- Linear voice coil closed loop servo system
- 14.1 watt standby power requirement
- Fail-safe automatic actuator lock
- Single printed circuit board for improved reliability
- 5.0 Mbit/sec. data transfer rate with MFM and 7.5 Mbit/sec. with 2,7 RLL
- ST506/ST412 compatible interface

High storage capacity and high performance backed by MiniScribe's reputation for reliability, best describe the company's 6000 family of Winchester disk drives. The 6000 series has been expanded with the RLL version disk drives, Model 6128 and Model 6079.

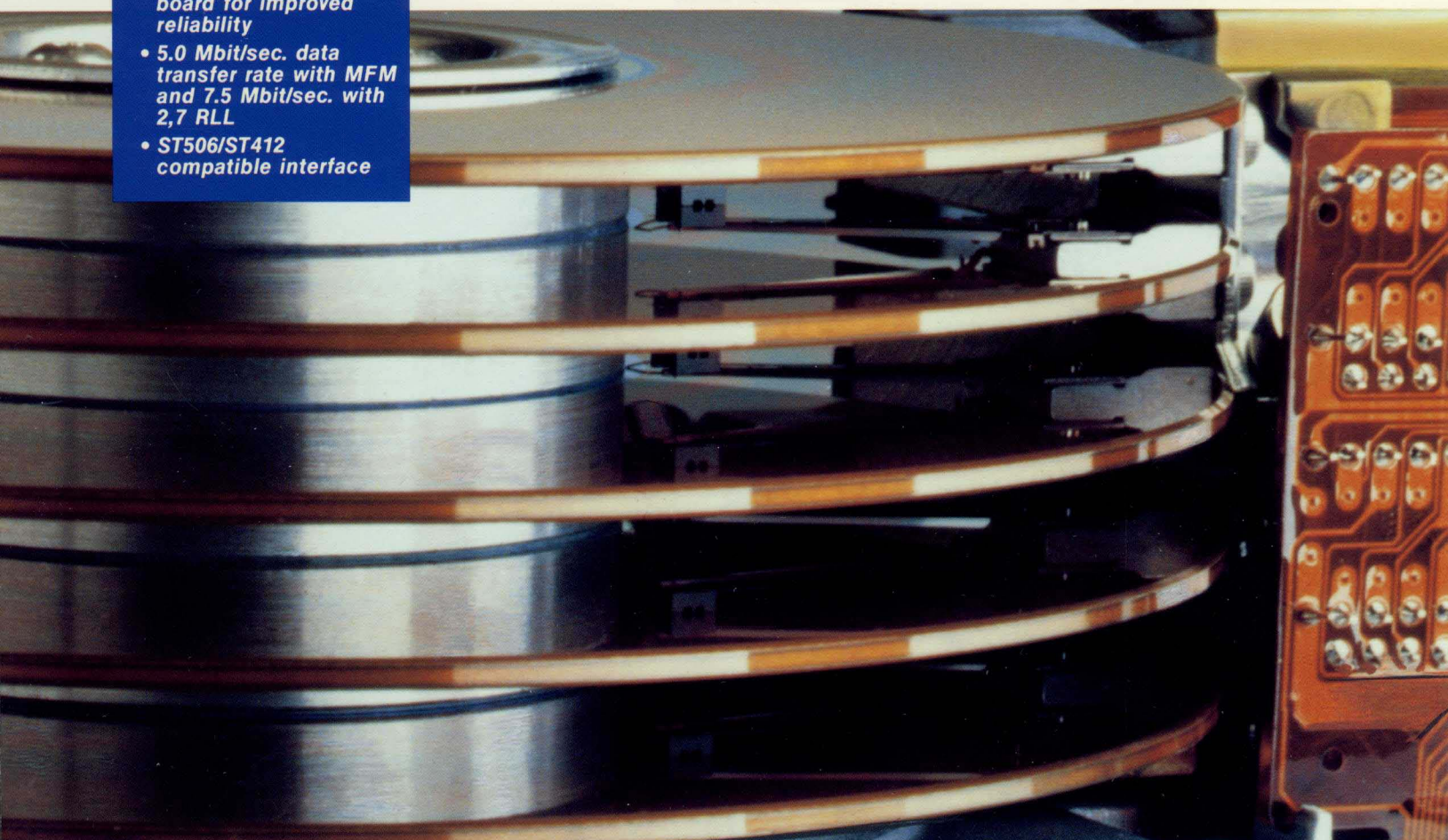
The 6000s feature up to 85.3 MBytes of unformatted storage with MFM data encoding and up to 128.0 MBytes of unformatted storage with 2,7 RLL data encoding. All versions feature an average access time of 28 milliseconds. The drives' positioning system uses a rugged linear voice coil actuator that eliminates head skew problems common with other positioning mechanisms. Microprocessor-aided control provides fast, accurate head positioning. In addition, superior head/disk tracking is achieved through the use of Whitney technology head sliders and flexures.

The 6000's dual-chassis construction protects the HDA from shock and vibration

to provide excellent protection during adverse operating conditions. With MiniScribe's fail-safe actuator lock, data zone contact at power-down is eliminated by retracting and locking the positioner in a nondata shipping area.

The 6000 family utilizes a patented breather filter system with a recirculating air filter that keeps the 6000's pressurized HDA chamber at a cleanliness level exceeding a Class 100 environment. The drives' IC preamplifier is positioned inside the sealed HDA, close to the recording heads for high-clarity signal processing.

Like all MiniScribe products, the 6000s undergo a rigorous testing and burn-in process before shipment. The MiniScribe line of 3½-inch and 5¼-inch Winchester disk drives begins at 12.75 MByte and extends to high capacity/high performance models. MiniScribe's tradition of excellence continues to lead the industry in Winchester disk drive technology.





# 5 1/4" Winchester Disk Drive Specifications

# 6000 SERIES

	6128	6079	6085	6053	6032
<b>Capacity Unformatted</b>					
Per Drive (MBytes)	128.0	79.9	85.3	53.3	32.0
Per Track (Bytes)	15,624	15,624	10,416	10,416	10,416
<b>Capacity Formatted</b>					
Per Drive (MBytes)	110.1	68.8	71.3	44.6	26.7
Per Track (Bytes)	13,440	13,440	8,704	8,704	8,704
Per Sector (Bytes)	512	512	512	512	512
Sectors Per Track	26	26	17	17	17
<b>Functional</b>					
Disks	5	3	5	3	2
Servo Heads	1	1	1	1	1
R/W Heads	8	5	8	5	3
Cylinders	1,024	1,024	1,024	1,024	1,024
Total Data Tracks	8,192	5,120	8,192	5,120	3,072
Track Density (tpi)	1,000	1,000	1,000	1,000	1,000
Recording Density (bpi)	14,925	14,925	9,950	9,950	9,950
Areal Density (Mbits/sq.in.)	14.925	14.925	9.95	9.95	9.95
Rotational Speed (RPM)	3,600	3,600	3,600	3,600	3,600
<b>Data Transfer Rate</b>					
(Mbits per second)	7.5	7.5	5.0	5.0	5.0
Recording Method	2,7 RLL	2,7 RLL	MFM	MFM	MFM

<b>Access Time</b> (including settling)	
Average (msec.)*	28
Track-to-track (msec.)	6
Maximum (msec.)	55
Latency (average, msec.)	8.33

<b>Interface</b>	ST506/ST412
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<b>Reliability</b>	
MTBF	25,000 POH
PM	None
MTTR	30 minutes
Component Design Life	5 years

<b>Error Rates</b>	
Soft Read Errors	1 per 10 <sup>10</sup> bits transferred
Hard Read Errors	1 per 10 <sup>12</sup> bits transferred
Seek Errors	1 per 10 <sup>6</sup> seeks

<b>DC Power Requirements</b>	
+ 5 VDC ±5%	0.9 amps typical
+12 VDC ±5%	0.8 amps typical 1.8 amps max. seeking
Starting (6 sec.)	4.0 amps max.

<b>Power Dissipation</b>	
Standby	14.1 watts typical
Positioning	26.1 watts max.
Average	18 watts

<b>Environmental Limits</b>	
Ambient Temperature	
Operating	50°F to 113°F (10°C to 45°C)
Non-Operating	-40°F to 140°F (-40°C to 60°C)
Relative Humidity (non-condensing)	
Operating	8% to 80%
Non-Operating	8% to 80%
Maximum Wet Bulb	78°F (26°C)

<b>Physical</b>	
Height	3.25 in. (82.6 mm)
Width	5.75 in. (146 mm)
Depth	8.00 in. (203 mm)
Weight	6 lbs. (2.7 kg)

Features and specifications subject to change without notice.

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\* Average of all possible seeks.

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