

130 or 182 MByte 5¼" Half-Height Winchester Disk Drives

NOV 16 1988

3130 3180 SERIES

- ESDI or SCSI interface
- Fast 17 msec. avg. access time
- 35,000 hour MTBF
- Proven technology
- Very low power consumption
- Single printed circuit board
- Non-data landing zone and automatic carriage lock
- Rugged thin film media
- Superior shock and vibration and thermal design

MiniScribe's 3130 and 3180 disk drives deliver true full-height performance in a half-height form factor.

The newest generation of personal computers and workstations are featuring smaller footprints, lower profiles and are packed with higher performance. The 3130 and 3180 models are available in either SCSI or ESDI interfaces to meet this need. This new series has been designed to bring the latest technologies to MiniScribe's full product line of data storage solutions.

Formatted storage capacities of the 3130/3180 Series range from 112 MBytes to 160 MBytes and average access times of 17 msec. are achieved. Data integrity is ensured by rugged thin film media.

Because of its extensive product line, MiniScribe is able to bring a variety of proven technology building blocks to the development of new products. The 3130 and 3180 products have benefited from this strength.

Superior shock and vibration and thermal performance are realized by the four-point mounting system and by an enhanced

baseplate design.

The series also features efficiencies of low power dissipation. The ESDI models maintain power dissipation of only 15 watts when idle and the SCSI models 17 watts.

The 3130/3180 Series has been designed for automated robotic assembly. MiniScribe's integrated manufacturing experience delivers the highest, most consistent quality. Assembly design has been simplified to include fewer subassemblies. Rapid production ramp-up is facilitated by MiniScribe's "designed-for-automation" principles and by its modular, software-based assembly techniques.

Prior to shipment, MiniScribe drives undergo rigorous burn-in and testing which ensures high standards of reliability and performance.

In addition to the 3130 and 3180 drives, the company produces a complete line of 3½-inch and 5¼-inch Winchester disk drives which begin at 20 MBytes, extend to high capacity/high performance models, and include a variety of standard, intelligent and custom interfaces.



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5 1/4" Half-Height Winchester Disk Drive Specifications

3130 3180 SERIES

	3130E	3180E	3130S	3180S
Capacity Unformatted				
Per Drive (MBytes)	130	182	130	182
Per Track (Bytes)	20,832	20,832	20,832	20,832
Capacity Formatted				
Per Drive (MBytes)	112	157	115	160
Per Track (Bytes)	17,920	17,920	18,432	18,432
Per Sector (Bytes)	512	512	512	512
Sectors Per Track	35	35	36	36
Functional				
Disks	3	4	3	4
Servo Heads	1	1	1	1
R/W Heads	5	7	5	7
Cylinders	1250	1250	1255	1255
Track Density (tpi)	1,193	1,193	1,193	1,193
Recording Density (bpi)	19,763	19,763	19,763	19,763
Areal Density (Mbits/sq.in.)	13.4	13.4	13.4	13.4
Rotational Speed (RPM)	3,600	3,600	3,600	3,600
Interface				
	ESDI	ESDI	SCSI	SCSI
Data Transfer Rate				
(per second)	10.0 Mbits	10.0 Mbits	4.0 MBytes	4.0 MBytes
Recording Method	2,7 RLL	2,7 RLL	2,7 RLL	2,7 RLL
Access Time (including settling)				
Average (msec.)	17	17	17	17
Track-to-track (msec.)	4.0	4.0	4.0	4.0
Maximum (msec.)	35	35	35	35
Latency (average, msec.)	8.33	8.33	8.33	8.33
DC Power Requirements				
	3130E/3180E		3130S/3180S	
+ 5 VDC ±5%	0.6 amps typical		1.0 amps typical	
+12 VDC ±5%	1.1 amps typical		1.1 amps typical	
Max. Starting (10 sec.)	2.5 amps		2.5 amps	
Power Dissipation				
Idle	15 watts typical		17 watts typical	
Seeking	18 watts typical		20 watts typical	
Environmental Limits				
Ambient Temperature	50°F to 122°F (10°C to 50°C)		50°F to 122°F (10°C to 50°C)	
Relative Humidity	8% to 80%		8% to 80%	
Maximum Wet Bulb	78°F (26°C)		78°F (26°C)	
Error Rates				
Soft Read Errors	1 per 10 ¹⁰ bits transferred		35,000 hours	
Hard Read Errors	1 per 10 ¹² bits transferred		None	
Seek Errors	1 per 10 ⁶ seeks		30 minutes	
Reliability				
			5 years	
Physical				
Operational	2 G's, 11 msec. pulse duration, 1/2 sine wave		Height 1.625 in. (41.3 mm)	
Non-Operational	40 G's, 15 msec. pulse duration, 1/2 sine wave		Width 5.75 in. (146 mm)	
			Depth 8.00 in. (203 mm)	
			Weight 3.2 lbs. (1.45 kg)	

Features and specifications subject to change without notice.
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