Believe it!

HIGH PERFORMANCE 3.5 inch Disk Drives
44 to 110 Mbyte CAPACITIES

Far reaching specifications for the five disk drives in our new 3.5 inch family, and there's more: Voice Coil technology, 4ms track to track access (including head settling time), less heat, lower power consumption.

It's what you expect from Microscience, developers and manufacturer of the first Half-Height 5.25 inch Winchester Disk Drive.

- 18ms average positioning time
- Closed loop dedicated servo system
- Single PCB with SMD-VLSI circuitry
- ST506, SCSI, ESDI, AT choices
- Microprocessor control
- Dedicated head landing zone
- Dynamic spindle brake
- Actuator lock

MICROSCIENCE INTERNATIONAL CORPORATION

CORPORATE HEADQUARTERS
305 N. Mathilda Avenue
Sunnyvale, CA 94086
(408) 730-5965

EUROPEAN SALES
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D-8000, Munich 83, WEST GERMANY
(49) 89-671062

ASIA/PACIFIC SALES
12 Fl., No. 51-2, Sec. 4, Nanking East Rd.
Taipei, TAIWAN
(8862) 715-6650
**Microscience**

### 3.5 inch High Performance Winchester Disk Drive

#### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>4050</th>
<th>4060</th>
<th>4070</th>
<th>4090</th>
<th>5100</th>
<th>6100</th>
<th>7040</th>
<th>7100</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capacity Unformatted</strong></td>
<td>53.3 MB</td>
<td>80.0 MB</td>
<td>74.2 MB</td>
<td>111.3 MB</td>
<td>124.6 MB</td>
<td>124.6 MB</td>
<td>53.4 MB</td>
<td>124.6 MB</td>
<td></td>
</tr>
<tr>
<td><strong>Capacity Formatted</strong></td>
<td>44.5 MB</td>
<td>66.8 MB</td>
<td>62.3 MB</td>
<td>93.4 MB</td>
<td>110.3 MB</td>
<td>110.3 MB</td>
<td>47.2 MB</td>
<td>110.3 MB</td>
<td></td>
</tr>
<tr>
<td>Per sector</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td></td>
</tr>
<tr>
<td>Sectors per track</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>36</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Data Transfer Rate</strong></td>
<td>5 Mb/s</td>
<td>7.5 Mb/s</td>
<td>5 Mb/s</td>
<td>7.5 Mb/s</td>
<td>10 Mb/s</td>
<td>10 Mb/s</td>
<td>10 Mb/s</td>
<td>10 Mb/s</td>
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</tr>
<tr>
<td><strong>Average Latency</strong></td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
<td>8.33 ms</td>
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</tr>
<tr>
<td><strong>Seek Time (incl. settling)</strong></td>
<td>4 ms</td>
<td>4 ms</td>
<td>4 ms</td>
<td>4 ms</td>
<td>4 ms</td>
<td>4 ms</td>
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<tr>
<td>Track to track</td>
<td>18 ms</td>
<td>18 ms</td>
<td>18 ms</td>
<td>18 ms</td>
<td>18 ms</td>
<td>18 ms</td>
<td>18 ms</td>
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<tr>
<td><strong>Functional Specifications</strong></td>
<td>40 ms</td>
<td>40 ms</td>
<td>40 ms</td>
<td>40 ms</td>
<td>40 ms</td>
<td>40 ms</td>
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<tr>
<td>Recording density</td>
<td>14,445 bpi</td>
<td>21,668 bpi</td>
<td>14,445 bpi</td>
<td>21,668 bpi</td>
<td>25,406 bpi</td>
<td>25,406 bpi</td>
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</tr>
<tr>
<td>Track density</td>
<td>1,250 tpi</td>
<td>1,250 tpi</td>
<td>1,250 tpi</td>
<td>1,250 tpi</td>
<td>855</td>
<td>855</td>
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<tr>
<td>Cylinders per surface</td>
<td>1,024</td>
<td>1,024</td>
<td>1,024</td>
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<td>4</td>
<td>4</td>
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<tr>
<td><strong>Read write heads</strong></td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>7</td>
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<tr>
<td><strong>Servo heads</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>1</td>
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<tr>
<td><strong>Recording code</strong></td>
<td>MFM</td>
<td>RLL (2,7)</td>
<td>MFM</td>
<td>RLL (2,7)</td>
<td>RLL (2,7)</td>
<td>RLL (2,7)</td>
<td>RLL (2,7)</td>
<td>RLL (2,7)</td>
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<tr>
<td><strong>Interface</strong></td>
<td>ST506/412</td>
<td>ST506/412</td>
<td>ST506/412</td>
<td>ST506/412</td>
<td>ESDI</td>
<td>SCSI</td>
<td>AT</td>
<td>AT</td>
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</tr>
</tbody>
</table>

### GENERAL SPECIFICATIONS:

**Environmental limits (operating)**
- Ambient temperature: 40° to 122°F (5° to 50°C)
- Relative humidity: 8% to 80% non-condensing
- Wet bulb, maximum: 78°F non-condensing (25.5°C)
- Altitude: -1,000 to 40,000 ft.
- Vibration: 10 G, 11 ms
- Shock: 11 ms

**Environmental Limits (non-operating)**
- Ambient temperature: -40° to 140°F (-40° to 60°C)
- Relative humidity: 8% to 80% non-condensing
- Wet bulb, maximum: 78°F non-condensing (25.5°C)
- Altitude: -1,000 to 40,000 ft.
- Vibration: 75 G (7040), 60 G (others)
- Shock: 11 ms

**Mechanical Dimensions**
- Height: 1.625 in.
- Width: 4.000 in.
- Length: 5.750 in.
- Weight: 2.0 lb.

**Safety Approvals**
- UL, CSA, TUV

**Power Requirements**
- DC voltage: +12 volts ±5% @ 0.6A typ., 1.5A starting +5 volts ±5% @ 0.5A typ.
- Soft read errors: 1 in 109 bit read
- Hard read errors: 1 in 1012 bit read
- Seek errors: 1 in 109 seeks

**Reliability Specifications**
- MTBF (typical usage): 36,000 poh
- Preventive maintenance: none
- Component life: 5 years
- Error rates:
  - Soft read errors: 1 in 109 bit read
  - Hard read errors: 1 in 1012 bit read
  - Seek errors: 1 in 109 seeks

**Power Requirements**
- DC voltage: +12 volts ±5% @ 0.6A typ., 1.5A starting +5 volts ±5% @ 0.5A typ.

**Interface**
- ST506/412, ESDI, SCSI, AT, AT

**DISTRIBUTOR:**
- UL, CSA, TUV