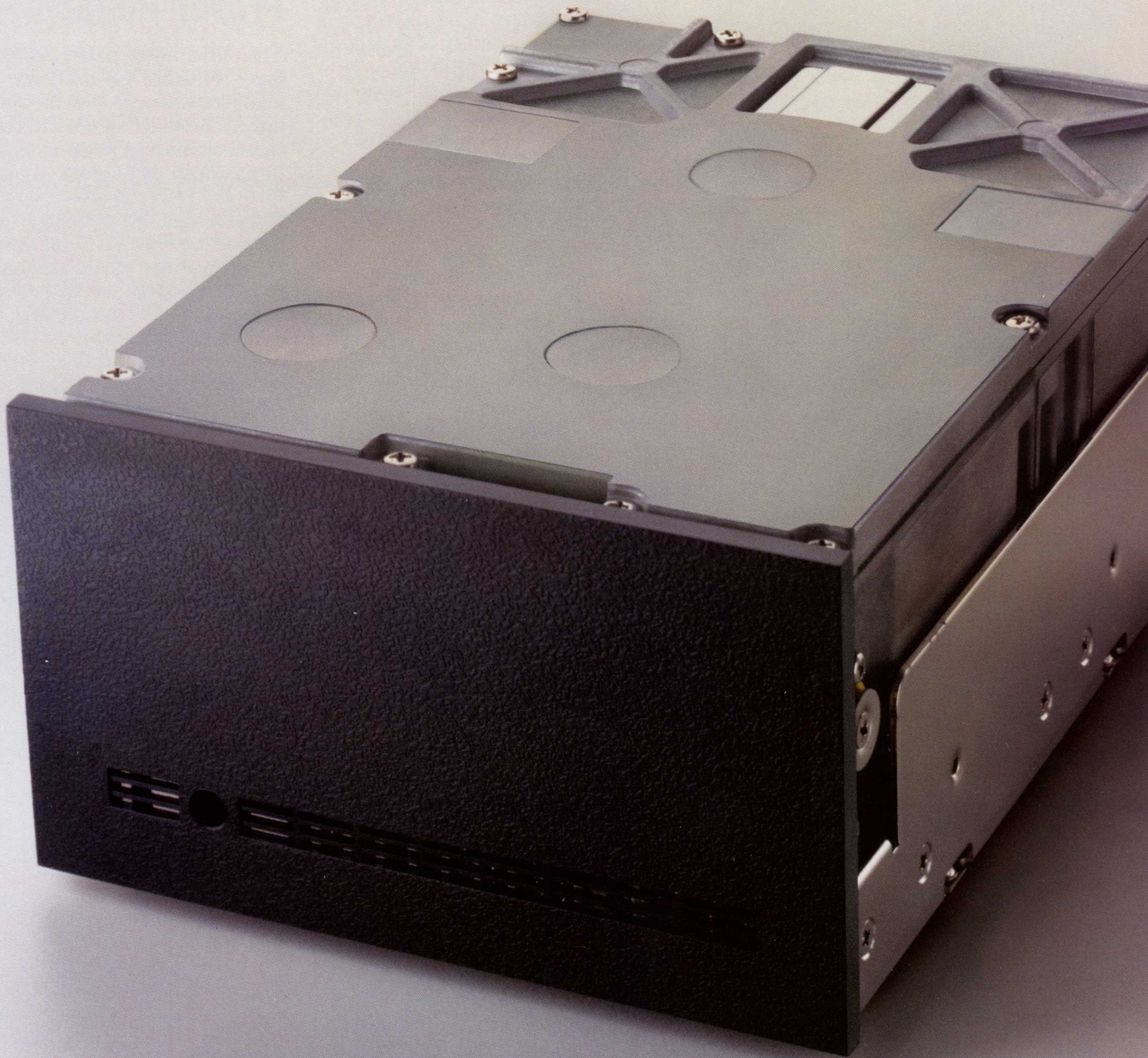


**M2263E (ESDI) 5¼" Winchester Drives**

1/90  
FEB 7 1991

**Fujitsu's High-performance,  
High-capacity 5¼" Drive**  
**We're developing technology for you.**



## No One is Developing Technology Like Fujitsu

As a leading supplier of the most complete line of data storage products, Fujitsu America, Inc. can provide you with the products you need for fast, reliable mass data storage.

Fujitsu quality is more than a promise. It is an established fact.

For over twenty years, companies have looked to us for high performance, high quality peripherals. Fujitsu storage products are the most reliable in the industry. We insure constant performance by using highly-automated production lines and computerized testing to control all phases of manufacture and assembly.

As a Fujitsu customer, you'll also enjoy superior service and field support. You'll have immediate access to highly skilled application engineers and product specialists, plus a network of full service distributors.

You can rely on Fujitsu America for quality products and outstanding service. You can also rely on us to continue developing the best data storage technology—technology that delivers the larger capacities, faster access times and higher reliability you need.

We're developing technology for you.

The Fujitsu logo consists of the word "FUJITSU" in a bold, sans-serif font. Above the letter "J" is a stylized infinity symbol or a similar graphic element.

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## Meeting The Most Demanding System Requirements

The M2263E disk drive has features that meet the requirements of your most demanding system applications.

The high transfer rate and fast access time make these drives ideal for use in high performance work stations and office systems handling a wide variety of storage applications including image, video, and voice. The high capacity, 778-megabyte (MB) drives match and even exceed existing 8-inch drives in capacity and throughput while allowing you to significantly reduce system package size and cost. These drives are ideal where quiet operation is required, such as desktop applications. They have an extremely low acoustical noise level of 45dB. Additional features include:

- The low current consumption of standard voltages minimize power supply requirements.
- The flexibility of horizontal and vertical drive mounting facilitates system integration.
- Low RFI levels simplify compliance with FCC requirements.
- Dampeners in two planes better isolate the head/disk assembly from shock and vibration.

## Dramatic Enhancements Through ESDI

Thanks to the full implementation of the ESDI interface on this new generation of drives, you benefit from significant enhancements in performance and ease of system integration.

The 1.875 MB/s transfer rate of the M2263 drive is 50% faster than

first generation ESDI drives and equal to that of MSMD.

A magnetically recorded defect map eliminates manual input of defect data.

## Outstanding Performance, Proven Reliability

The outstanding performance level of the M2263 has been achieved using proven technologies. These drives use sputtered metal media and Whitney-type heads. Both technologies have been field-proven on our larger diameter Winchester and third-generation 5¼-inch Winchesters.

To maximize reliability and data integrity, Fujitsu's design uses a combination of conservative casting design and encoding scheme to insure data reliability. The 15 data heads provide 469 kilobytes (KB) of unformatted data within each cylinder, thus reducing the number of seeks required by placing more data under each head. The use of ceramic packaging for components reflects Fujitsu's attention to quality. This material allows for better heat dissipation, and thus longer component life.

Our rotary voice coil actuator and in-line head arm assembly speeds access times to less than 4 milliseconds track-to-track. The closed loop, track-following servo system also contributes to a fast average positioning time of 16 ms.

A space-saving DC spindle motor and advanced LSI packaging keeps power consumption at a minimum.

Fujitsu disk drives are known for standards setting reliability, and the M2263 drives are no exception, with a 30,000 hour MTBF rating and an MTTR of less than 30 minutes. This drive provides the industry benchmark for low cost of ownership.

# M2263E (ESDI) 5¼" Winchester Drives

## The Performance You Get From A Leader

Fujitsu's legendary expertise in large system disk drives has been elegantly translated to the 5¼-inch form. Now the advantages of large system disk drives are available in a 5¼-inch form.

Putting ESDI's "big drive" sophistication into a 5¼-inch form factor required specialized circuitry. Hybrid components were critical to achieve the fast average positioning time of 16 milliseconds.

The use of gate array LSI made the more complex ESDI functionality possible.

## Precision Manufacturing

The advanced features of the M2263 series are the result of Fujitsu's sophisticated manufacturing expertise and experience gained in over 22 years of designing and building disk drives for the world.

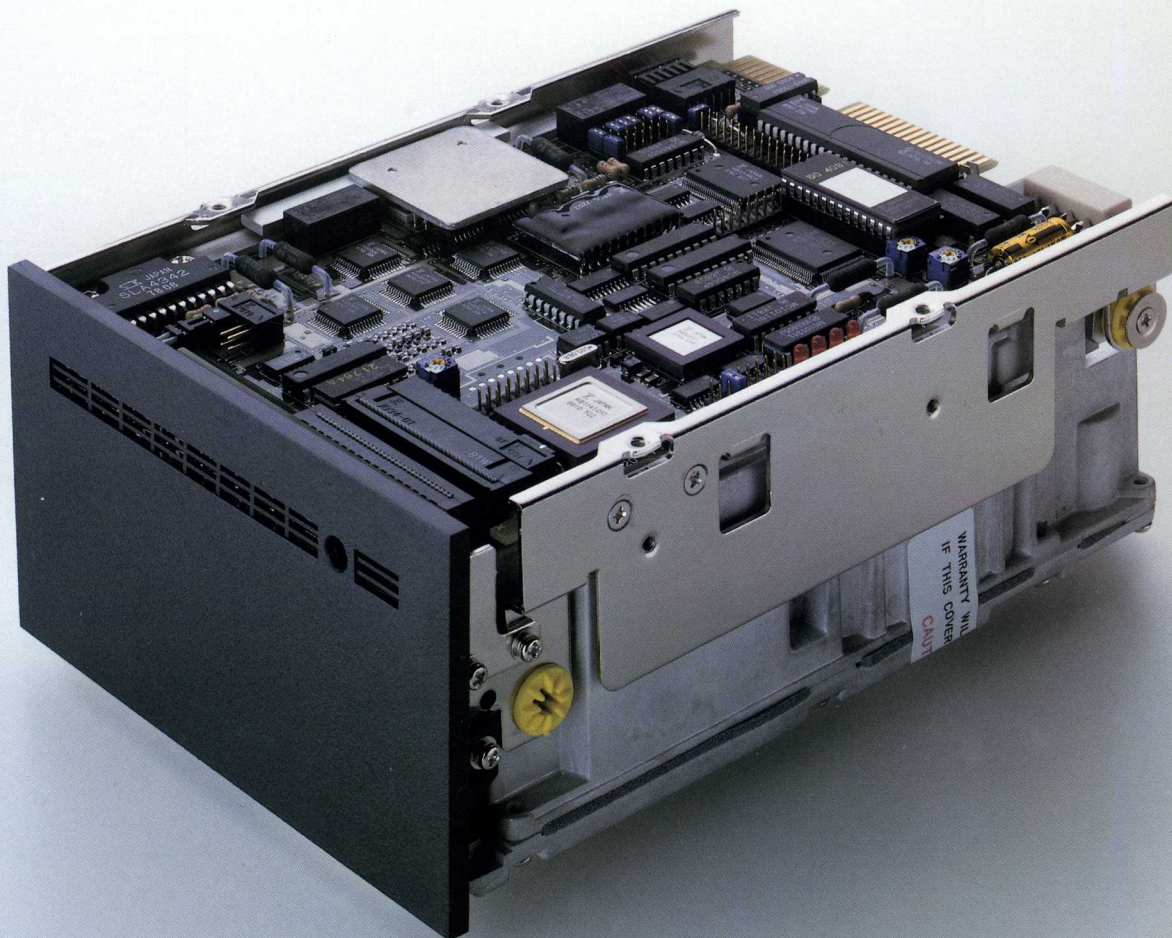
Through vertical integration, Fujitsu controls the manufacture of all the critical components

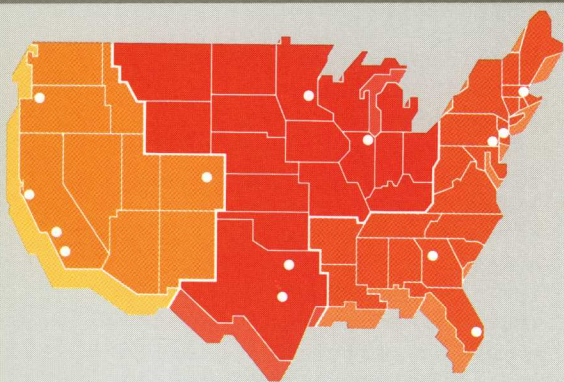
including heads, media, printed circuit assemblies, electronic components and motors.

In our advanced 220,000 square-foot manufacturing facility, extensive robotics are used throughout, from machining the substrate to loading the drives into test fixtures. This allows for accurate, efficient, and consistent quality for every drive. Fujitsu computer systems control the various subassembly test stations and final test.

Every step of the way, our highest priority is for each and every Fujitsu drive you receive to live up to your expectations—and ours.

The M2263E offers the capacity and performance of large diameter Winchesters in a 5¼-inch form factor.





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## SPECIFICATIONS

## M2263E

<b>CAPACITY (MB)</b>	unformatted formatted*	778.3 687.6
<b>DISKS</b>	5¼-inch	8
<b>HEADS</b>	read/write	15
<b>TRACK CAPACITY</b>	unformatted formatted*	31,296 B 27,648 B
<b>CYLINDERS</b>		1,658
<b>POSITIONING TIME</b>	track to track average maximum	4 ms 16 ms 30 ms
<b>AVERAGE LATENCY</b>		8.3 ms
<b>ROTATION SPEED</b>		3,600 RPM
<b>DATA TRANSFER RATE</b>		1.875 MB/s
<b>RECORDING CODE</b>		RLL (1,7)
<b>START TIME</b>		<20 seconds
<b>STOP TIME</b>		<15 seconds
<b>INTERFACE</b>		ESDI
<b>DIMENSIONS</b>	(HxWxD)	3.3"x5.7"x8"
<b>WEIGHT</b>		7.7 lbs
<b>MTBF</b>		30,000 power-on hrs.
<b>MTTR</b>		<30 minutes
<b>COMPONENT LIFE</b>		5 years
<b>ERROR RATES</b>	recoverable unrecoverable seek	10 per 10 <sup>11</sup> bits read 10 per 10 <sup>13</sup> bits read 10 per 10 <sup>7</sup> seeks
<b>TEMPERATURE</b>	operating not operating gradient	41°F to 113°F -40°F to 140°F <27°F/hour (non-condensing)
<b>HUMIDITY</b>	operating (non-condensing) not operating	20% to 80% 5% to 95%
<b>VIBRATION</b>	operating (3Hz to 100Hz) not operating	max. 0.2G max. 0.4G
<b>SHOCK</b>	operating not operating	max. 2G (max. 10 ms) max. 20G (max. 10 ms)
<b>ALTITUDE</b>	operating not operating	10,000 ft. 40,000 ft.

\*Based on 512-byte data field

Call 1-800-626-4686

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