

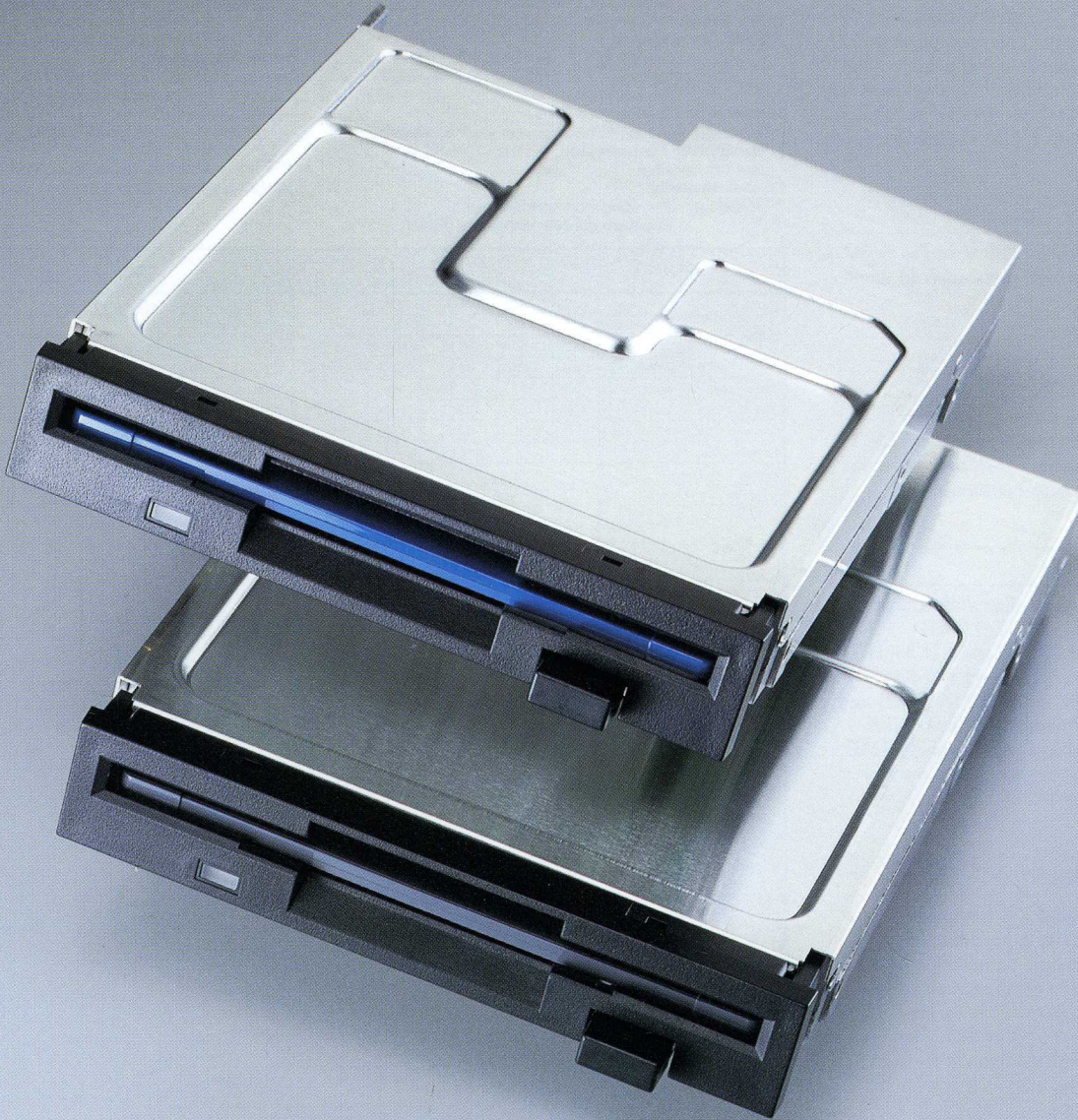
# TEAC®

## 3.5-Inch Micro Floppy Disk Drive

### FD-335 SERIES FD-335F/FD-335GF/FD-335HF FD-335HG/FD-335J

MAR 12 1992

- Super slim 19mm high & lightweight 265g
- Direct drive spindle motor for high reliability
- Low power consumption
- Operates on DC +5V power
- A choice of models to match your requirements: FD-335F (1 MB), FD-335GF (1.6 MB), FD-335HF/FD335HG (2 MB), FD-335J (4 MB)



## Total reliability in a unit 19mm high 3.5-inch Micro Floppy Disk Drive

FD-335 Series offers super-slim floppy disk drives that are only 19mm high. Total reliability is made possible by the incorporation of a direct-drive spindle motor. FD-335F, FD-335GF, FD-335HF/FD-335HG, and FD-335J provide 1MB, 1.6MB, 2MB, and 4MB capacity, respectively. Models FD-335HG and FD-335J offer 3 modes for a wide variety

of applications. All models operate on a single +5V DC battery. The FD-335 Series packs the high reliability of a 1-inch-high drive into a compact unit, and with up to 4MB of memory capacity, these models are fit perfectly into the trend toward smaller notebook-type personal computers with larger memory capacities.

## 19mm high and 265g Super Lightweight, Compact Body

The new FD-335 Series is a small 3.5-inch FDD, approximately 101.6W×19H×135D (mm) and only 265g in weight. All units incorporate a direct-drive motor and support the trend toward smaller notebook-type computers.

## Simplified Design and High Reliability

LSI technology is used to integrate read/write functions, control, and stepping motor drive circuits into a single chip. The incorporation of a direct-drive spindle motor using a high-performance magnet in addition to simplified mechanisms provide the high level of reliability generally associated with a 1-inch-high drive.

## +5V DC Battery Operation

FD-335 Series is operable with a single +5V DC battery for even easier application in small, lightweight units.

## Low Power Consumption

Low power consumption results in more efficient operation under battery power—15mW during standby (excluding FD-335J) and 1.4W (typical) during read/write operations.

## 5 Models Available

FD-335 Series includes models with storage capacities of 1MB (FD-335F), 1.6MB (FD-335GF), 2MB (FD-335HF and FD-335HG), 4MB (FD-335J). FD-335HG and FD-335J support 3 modes of operation—2/1.6/1MB and 4/2 (or 1.6)/1MB, respectively. Read/write capabilities of up to 135tpi, double-sided 1MB type data allow system designs for a variety of software using a single FDD.

## Large 4MB Capacity (FD-335J)

Model FD-335J provides a large capacity of 4MB due to high-density, perpendicular magnetic recording method. In addition, models with 4/2 (or 1.6)/1MB modes ensure full compatibility with existing FDDs in read/write and overwrite operations, permitting the continued use of current systems with more sophisticated FDDs.

## Interface Connectors

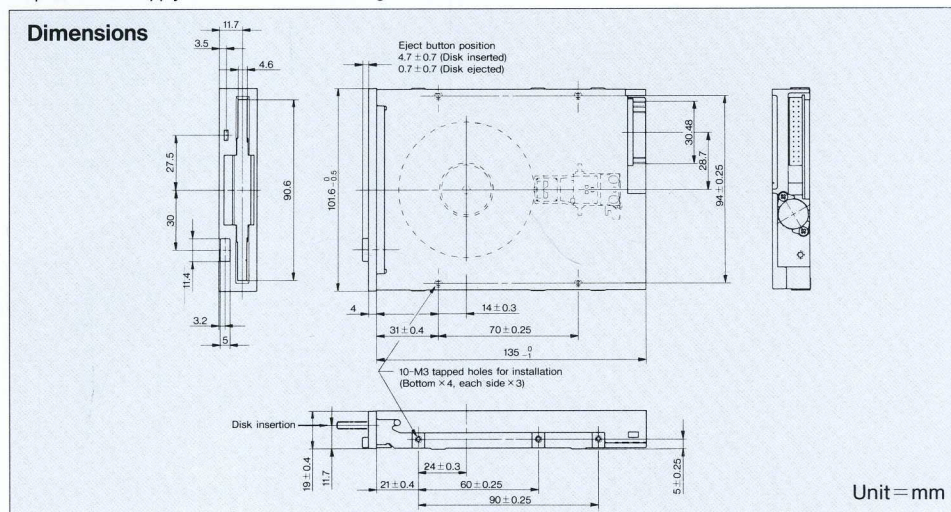
Flat cables are also available.

## SPECIFICATIONS

<b>Recording Method:</b> FM or MFM	<b>Storage:</b> 5—90% (non condensing) (Maximum wet-bulb temperature of 40°C (104°F))
<b>Media:</b> Extra high density (2ED), high density (2HD) or normal density (2DD) 3.5-inch micro floppy disks	<b>Transportation:</b> 5—95% (non condensing) (Maximum wet-bulb temperature of 45°C (113°F))
<b>Motor Starting Time:</b> 480msec. or less	<b>Vibration:</b>
<b>Average Latency Time:</b>	Operating: 1.5G or less (10—100Hz, 1oct/min.) 1.0G or less (100—200Hz, 1oct/min.) (FD-335J: 0.75G or less (100—200Hz, 1oct/min.)
<b>Index:</b> 1/revolution Detection interval: 200msec.±1.5% (300rpm) 166.7msec.±1.5% (360rpm)	0.5G or less (200—600Hz, 1oct/min.) (FD-335J: 0.4G or less (200—600Hz, 1oct/min.)
<b>MTBF:</b> 20,000 hours or more	<b>Transportation:</b> 2G or less (10—100Hz, 1oct/min.)
<b>MTRR:</b> 30 minutes or less	<b>Shock:</b>
<b>Error Rate:</b> Soft read error: 1/10 <sup>9</sup> bits or less Hard read error: 1/10 <sup>12</sup> bits or less Seek error: 1/10 <sup>6</sup> seeks or less	Operating: 5G or less (half-sine pulse, 11msec.) Transportation (single occurrence): 70G or less (half-sine pulse, 11msec.) (FD-335J: 60G or less (half-sine pulse, 11msec.))
<b>Safety Standard:</b> Complies with UL, CSA and TÜV	<b>Power Requirements:</b>
<b>Ambient Temperature:</b>	Operating: 4—51.7°C (40—125°F) Storage: -22—60°C (-8—140°F) Transportation: -40—65°C (-40—149°F)
<b>Temperature Gradient:</b>	<b>Power Consumption:</b>
Operating: 20°C (36°F)/hour or less (non condensing) Storage and Transportation: 30°C (54°F)/hour or less (non condensing)	Standby: 15mW typical (FD-335J: 30mW typical) During R/W: 1.40W typical
<b>Relative Humidity:</b>	<b>Dimensions (W×H×D) (approx.):</b> 101.6×19×135 (mm) <b>Weight (approx.):</b> 265g typical
Operating: 20—80% (non condensing) (Maximum wet-bulb temperature of 29.4°C (85°F))	

	FD-335F	FD-335GF		FD-335HF		FD-335HG		FD-335J				
		High density	Normal density	High density	Normal density	High density	Normal density	Extra high density	High density	Normal density		
Data capacity (Kbyte)	Per disk	1,000	1,666.56	1,000	2,000	1,000	2,000	1,666.56	1,000	4,000	2,000/1,666.56	1,000
	Per track	6.25	10.416	6.25	12.50	6.25	12.50	10.416	6.25	25.00	12.50/10.416	6.25
Formatted (512 byte/sector)	Per disk	737.28	1,228.80	737.28	1,474.56	737.28	1,474.56	1,228.80	737.28	2,949.12	1,474.56/1,228.80	737.28
	Per track	4.608	7.680	4.608	9.216	4.608	9.216	7.680	4.608	18.432	9.216/7.680	4.608
Data transfer rate (Kbits/sec.)	250	500	250	300	500	250	500	250	500	500	500	250
Innermost track bit density (tpi)	8,717	14,528	8,717	17,434	8,717	17,434	14,528	8,717	34,868	17,434/14,528	8,717	
Innermost track flux density (frpi)	8,717	14,528	8,717	17,434	8,717	17,434	14,528	8,717	34,868	17,434/14,528	8,717	
Tracks/disk	160											
Track density (tpi)	135											
Number of cylinders	80											
Track radius (mm)	Outermost	side 0: 39.500										
		side 1: 38.000										
		Innermost	side 0: 24.6875									
side 1: 23.1875												
Average access time (msec.) (includes settling time)	94											
Track to track time (msec.)	3											
Settling time (msec.)	15											
Rotation speed (rpm)	300	360	300	360	300	360	300	360	300	360	300/360	300

\*Specifications apply when the MFM recording method is used.



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Features and specifications are subject to change without notice.