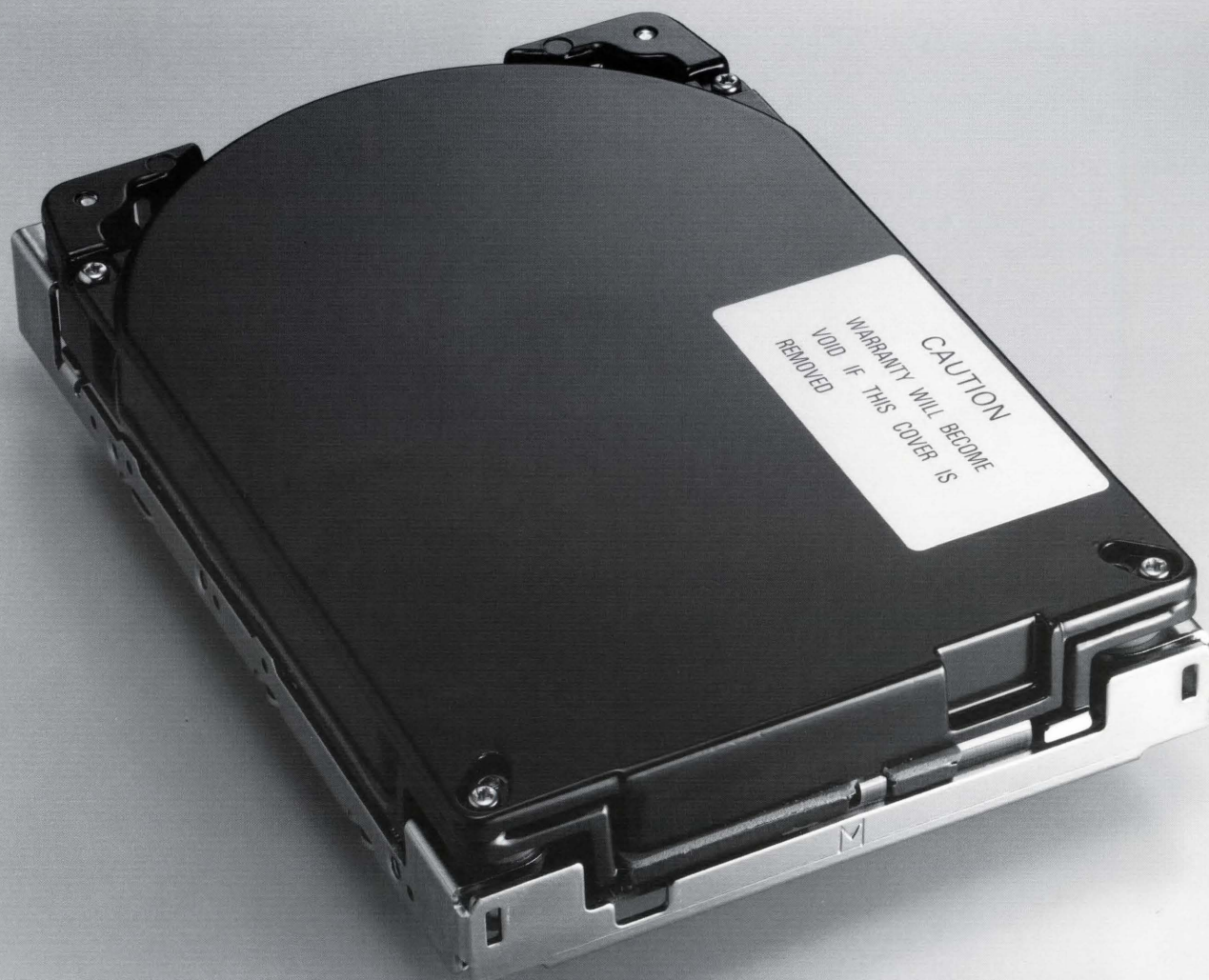


TEAC® SD-3105

NOV 13 1990

3.5 Inch Hard Disk Drive

- Remarkable Data Storage Capacity of 105MB (formatted)
- 3.5" Drive and a Height of Only 1" (including embedded controller)
- The Auto-Shipping Lock Function Protects the Media
- Fast 19msec Access Time
- Internal 64KB Data Buffer with Read Look Ahead Function
- High-Speed Data Transfer: 12.5Mbits/sec. (Buffer-to-Disk)



1" High and Packed with 105MB of Shear Power

At 1" high, the SD-3105 might be considered a small hard disk drive. But don't be fooled by its appearance. Within that height of 1" resides two 3.5" format fast-accessing hard disks, packing a formatted storage capacity of 105Mbytes. Needless to say, remarkable. Yet not only does its compact design make it perfect for laptop computers, but SD-3105's speed and power

put it in the working class with high-end PCs and small workstations. With a fast access time of 19msec and a disk rotation speed of 3,600rpm, the SD-3105 gives you 12.5Mbits of data per second. An auto-shipping lock protects against ambient vibration and shock and TEAC's custom drive circuit chips significantly upgrade cost performance and reliability.

105MB Storage Capacity Now a Reality

The SD-3105 drive has a remarkable data storage capacity of 105.02Mbytes (formatted). This is ample to meet current demand for personal computer and laptop external storage devices with ever-larger storage capacities.

3.5" Drive and a Height of Only 1", Including Embedded Controller

To meet current needs for more compact computer peripherals, the 3.5" SD-3105 offers all the benefits of a slim design at a height of only 1" including an embedded controller. This achieves further size reductions for personal computers and laptops.

Auto-Shipping Lock Function

The auto-shipping lock is designed to protect the media against the risks of damage due to vibrations and shock in transport. When the power is off, the head carriage is locked automatically at the shipping zone, within the inside limit of the work zone, to protect the all-important stored data.

Fast 19msec Access Time

The average access time is only 19msec.

High-Speed Data Transfer

Data transfer is achieved at a fast speed of 12.5Mbytes/sec (buffer-to-disk transfer).

Internal 64kbyte Data Buffer

Using RLA (Read Look Ahead), this buffer allows very high data-transfer efficiency between disk and host computer to be achieved.

Embedded PC/AT, SCSI Controller

Smooth and simple system integration of the SD-3105 is ensured by provision of the PC/AT interface or the SCSI interface (ANSI standard X3.131-1986). These are the most popular hard disk drive interfaces.

High-Performance Drive Mechanism

This is an extremely durable, maintenance-free motor, with a performance capability of over MTBF 30,000POH. Designed with an average noise level of less than 40dBa (0.5m max.).

Remarkably Improved CSS Durability

Thanks to the highly reliable CSS (Contact Start/Stop) characteristics, the SD-3105 can achieve durability standards in excess of 50,000 start/stop operations.

Universal Installation Orientation

The head assembly uses a rotary actuator that provides circular arc head motion about the support point. This keeps the drive well-balanced and allows it to be installed in any physical orientation.

Built-in Self-Diagnostic Functions

When the power is switched on, the SD-3105 will automatically perform a self-check sequence to check the program ROM, buffer RAM, and the register in the interface controller.

Automatic Replacement Processing for Error Correction

Error sectors are automatically replaced during formatting.

SPECIFICATIONS

Recording Capacity (Formatted):

Per drive:	105.02 Mbytes
Per track:	20.48 kbytes
Per block:	512 bytes (fixed)

Data Block:

Per drive:	205,120
Per track:	40 (fixed)

Interface:

PC/AT or SCSI (ANSI Standard X3.131-1986)

Number of Disks:

2

Number of Surfaces:

4

Number of Heads:

4

Number of Cylinders:

1,282

Number of Tracks:

5,128

Track Density:

1,814tpi

Innermost Track Recording Density:

33,087 bpi

Innermost Track Magnetic Flux Transition Density:

22,058 frpi

Recording Method:

2-7 RLL code

Access Time (including settling time):

Track to Track:	8 msec
Average:	19 msec
Maximum:	50 msec

Disk Rotational Speed:

3600 rpm \pm 0.5%

Average Rotational Latency:

8.33 msec

Data Transfer Rate:

Buffer-to-Disk:	12.5 Mbytes/sec.
Buffer-to-Initiator:	4.0 Mbytes/sec. (max. PC/AT)
	2.0 Mbytes/sec. (max. SCSI)

Data Buffer:

	8,192 or 65,536 bytes (PC/AT)
	63,488 bytes (SCSI)

MTBF:

30,000 POH or more (subject to typical usage)

MTTR:

10 minutes (typical)

Error Rate:

1 or less per 10^{12} bits (irretrievable read error)

Safety Standards:

UL, CSA, TÜV

CSS:

50,000 start/stop operations or more

Ambient Temperature:

Operating:	5°—50°C (41°—122°F)
Non-Operating:	−40°—60°C (−40°—140°F)

Temperature Gradient:

Operating:	20°C/hour or less (non-condensing)
Non-Operating:	30°C/hour or less (non-condensing)

Relative Humidity:

Operating:	8—80% (non-condensing)
	[Maximum wet-bulb temperature: 29°C (84°F)]
Non-Operating:	8—80% (non-condensing)
	[Maximum wet-bulb temperature: 29°C (84°F)]

Shock:

Operating:	5G or less (half-sine pulse, 11 msec)
Non-Operating:	60G or less (half-sine pulse, 11 msec)

Vibration:

Operating:	0.5G or less
	5—500Hz, sweep time 1 OCT/min
Non-Operating:	2G or less
	5—500Hz, sweep time 1 OCT/min

Power Requirements:

	12V DC \pm 5%
	Permissible ripple: 100 mVp-p (including spike noise)
	5V DC \pm 5%
	Permissible ripple: 100 mVp-p (including spike noise)

Power Consumption:

Average value at seek:	4.7W (typical)
Average value at read/write:	3.8W (typical)

At idle: 3.7W (typical)

At standby: 0.3W (typical)

At sleep: 0.2W (typical, PC/AT)

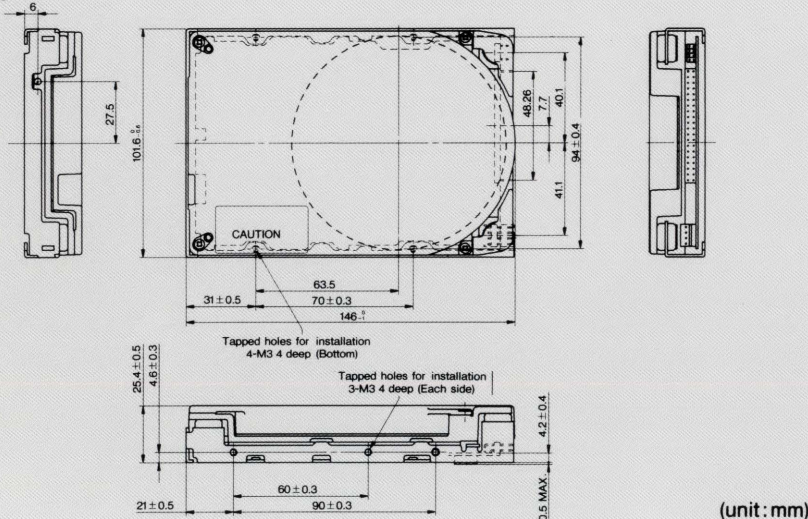
Dimensions (W \times H \times D):

101.6 \times 25.4 \times 146(mm)

Weight:

480g (typical)

Dimensions



(unit: mm)

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Features and specifications are subject to change without notice.

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