

TEAC®

SD-340H/SD-380H

NOV 13 1990

3.5 Inch Hard Disk Drive

- Remarkable Data Storage Capacity of 43MB or 86MB (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 Data Buffer with Read Look Ahead Function
- High-Speed Data Transfer: 12.5Mbits/sec. (Buffer-to-Disk)



Speed and Efficiency Up to 86Mbytes In a 1" High, 3.5" Format Hard Disk

Take a good look at TEAC's new SD-340H and SD-380H and you'll see just how many great features can fit in a height of only 1". First, they pack an astonishing 43Mbytes and an amazing 86Mbytes, respectively. True high-speed data transfer (buffer-to-disk) is realized via a disk rotation velocity of 3,600rpm, giving you 12.5Mbits per second. And an incredible

19msec access time ranks these drives among the fastest in their class. Also included is a built-in auto-shipping lock function which provides protection against ambient vibration and shock. Above all, the compact design makes either the perfect choice for laptop computers.

1" High 3.5" Hard Disk Drive **SD-340H/SD-380H**

43MB, 86MB Storage Capacity Now a Reality

The SD-340H/SD-380H drive has a remarkable data storage capacity of 43.01Mbytes, 86.02Mbytes (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-340H/SD-380H 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 Data Buffer

Using RLA (Read Look Ahead), this buffer allows very high data transfer efficiencies between disk and host computer to be achieved. The buffer's size is 8Kbytes or 64Kbytes for PC/AT and 64Kbytes for SCSI.

Embedded PC/AT, SCSI Controller

Smooth and simple system integration of the SD-340H/SD-380H 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-340H/SD-380H 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-340H/SD-380H 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:	43.01 Mbytes (SD-340H) 86.02 Mbytes (SD-380H)
Per track:	20.48 kbytes
Per block:	512 bytes (fixed)

Data Block:

Per drive:	84,000 (SD-340H), 168,000 (SD-380H)
Per track:	40 (fixed)

Interface:

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

Number of Disks:

1 (SD-340H), 2 (SD-380H)

Number of Surfaces:

2 (SD-340H), 4 (SD-380H)

Number of Heads:

2 (SD-340H), 4 (SD-380H)

Number of Cylinders:

1,050

Number of Tracks:

2,100 (SD-340H), 4,200 (SD-380H)

Track Density:

1,500 tpi

Innermost Track Recording Density:

33,142 bpi

Innermost Track Magnetic Flux Transition

Density: 22,095 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, 11msec)
Non-Operating:	70G or less (SD-340H), 60G or less (SD-380H) (half-sine pulse, 11msec)

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

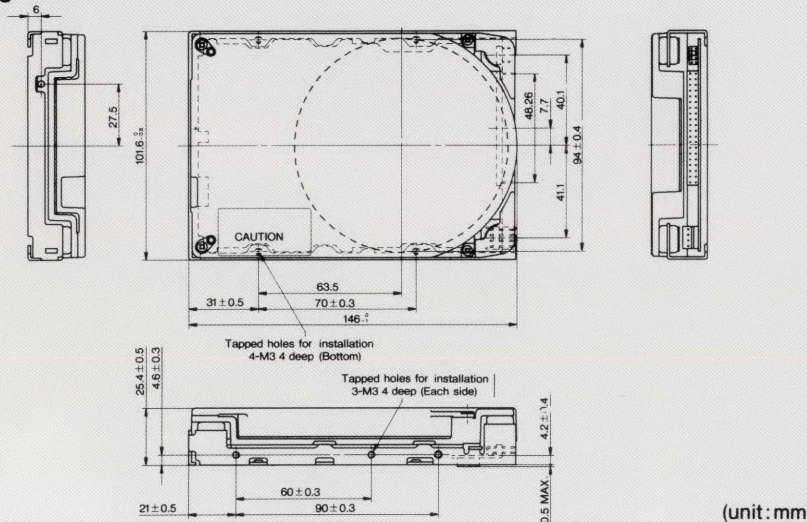
Dimensions (W \times H \times D):

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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