

# TEAC®

# SD-380

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## 3.5 Inch Hard Disk Drive

- Remarkable Data-Storage Capacity of 86MB Formatted
- 3.5" Drive and a Height of Only 1" (including embedded controller)
- The Auto-Shipping Lock Function Protects the Media
- Fast 22msec Access Time
- Internal 64KB Data Buffer with Read Look Ahead Function
- High-Speed Data Transfer



## 1" Height, 86MB Data-Storage Capacity A Hard Disk Drive with 3.5" Form Factor

Only 1" high, including its built-in interface, and weighing just 480g, the SD-380 has a full formatted capacity of 86Mbytes. Built-in auto-shipping lock protects the data against vibration and shock. With its low power consumption, it is perfectly at

home even in a lap-top computer.

The useful range of applications is significantly expanded by combination with the MT-2ST/N series of 3.5" form-factor cassette streamers.



**86MB Storage Capacity—Now a Reality**

The SD-380 drive has a remarkable data-storage capacity of 86.02 Mbytes (formatted). This is ample to meet current demand for personal computer and lap-top 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-380 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 lap-tops.

**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 22msec Access Time**

The average access time is only 22msec.

**High-Speed Data Transfer**

Data transfer is achieved at a fast speed of 8.0Mbytes/sec (buffer-to-disk transfer).

**Internal 64kbyte Data Buffer**

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

**Embedded PC/AT, SCSI Controller**

Smooth and simple system integration of the SD-380 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.

**Remarkably Improved CSS Durability**

Thanks to the highly reliable CSS (Contact Start/Stop) characteristics, the SD-380 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-380 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: 86.02Mbytes  
Per track: 20.48Kbytes  
Per block: 512 bytes (fixed)

**Data Block:**

Per drive: 168,800  
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:**

1,050

**Number of Tracks:**

4,200

**Track Density:**

1,500tpi

**Innermost Track Recording Density:**

32,048bpi

**Innermost Track Magnetic Flux Transition**

Density: 21,365frpi

**Recording Method:**

2-7 RLL code

**Access Time (including settling time):**

Track to Track: 8msec

Average: 22msec

Maximum: 50msec

**Disk Rotational Speed:**

2,358rpm  $\pm 0.5\%$

**Average Rotational Latency:**

12.7msec.

**Data Transfer Rate:**

Buffer to Disk: 8.0 Mbytes/sec.

Buffer to Initiator: 4.0 Mbytes/sec. (PC/AT)

2.0 Mbytes/sec. (SCSI)

**Start Time:**

At Power ON: 5 sec. (typical), 7 sec. (max.)

Start Command Executed:

3 sec. (typical), 5 sec. (max.)

**Stop Time:**

At Power OFF: 15 sec. (typical), 20 sec. (max.)

Stop Command Executed:

6 sec. (typical), 10 sec. (max.)

**Data Buffer:**

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: 60G or less

(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: 4.0W (typical)

Average value at read/write: 3.3W (typical)

At idle: 3.2W (typical)

At stand-by: 0.2W (typical)

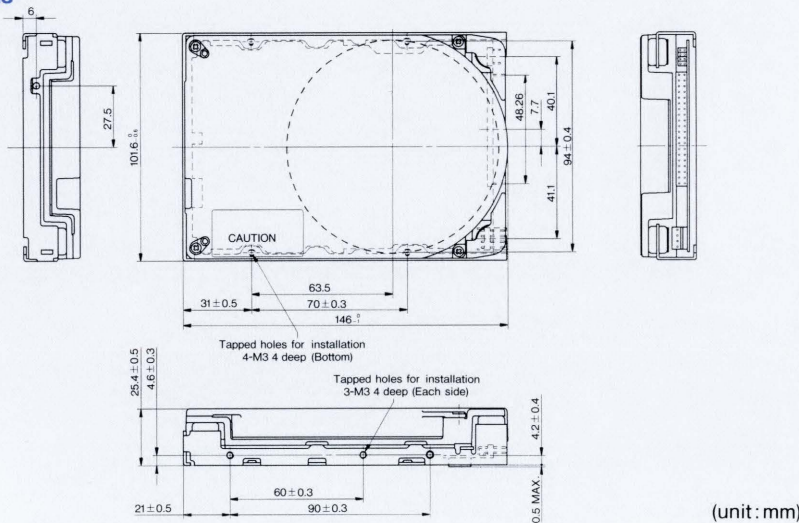
At sleep: 0.1W (typical, PC/AT)

**Dimensions (W×H×D):**

101.6×25.4×146(mm)

**Weight:**

480g (typical)

**Dimensions****TEAC CORPORATION****DATA STORAGE PRODUCTS DIVISION**

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Features and specifications are subject to change without notice.

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