

# Tandberg LTO HH LTO-1, LTO-2, LTO-3

(220LTO, 420LTO, 820LTO)

Tape Drive



## Quick Installation Guide



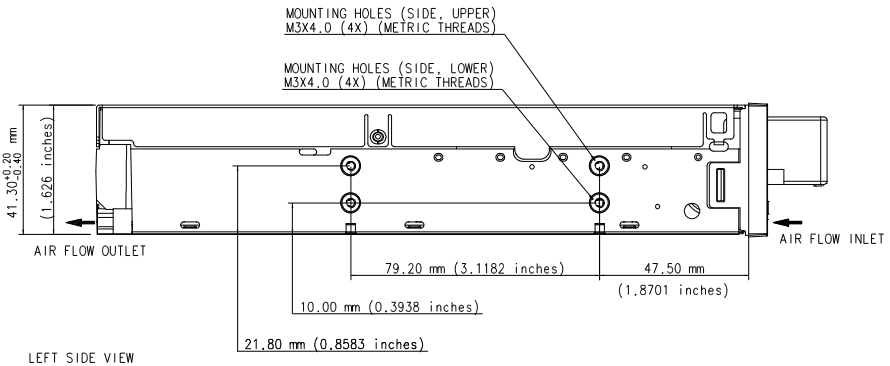
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# Mechanical Installation Internal Tape Drive

For mechanical mounting specifications, please refer to *Figure 1*.

Allowed mounting position is either horizontal with the indicator LEDs to the right, or vertical with the LEDs up.

The drive occupies a half-size 5.25-inch slot with standard holes for mounting screws on both sides of the drive chassis and at the bottom of the drive.



*Figure 1 Mounting specifications*

## Important!

### Mounting screw requirements

- Only M3 (metric) screws must be used for mounting the drive
- **Maximum permitted screw penetration: 2.5 mm**
- Minimum required screw penetration: 2.0 mm
- Screw torque, mounting screws: 0.5 Nm
- Screws are supplied with all the Tandberg 220/420/820LTO drive variants
- Bags with 4 screws and 4 SCSI ID jumpers are available (Ordering no. 43 32 65)

***Do not use longer screws or higher screw torque than specified!***



*Figure 2 Allowed mounting orientations*

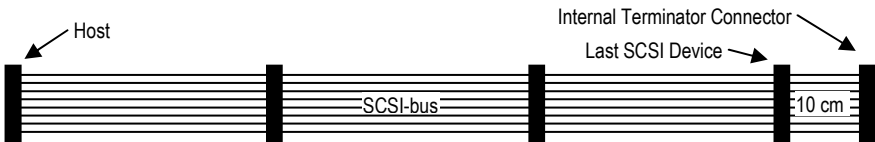


## Termination Internal Tape Drive

The Internal SCSI-bus cable must be terminated as shown in *Figure 4* according to SCSI specifications. If the tape drive is the last device on the bus, the bus must be terminated within 10 cm of the tape drive connection.

Tandberg LTO-1, LTO-2, LTO-3 have a combined SCSI-LVD/SE interface embedded. The PC-98 Specification specifies that the termination of the SCSI-bus system is a part of the SCSI-cable and not a part of the SCSI-device. As a result, termination cannot be turned on or off directly on the tape drive itself.

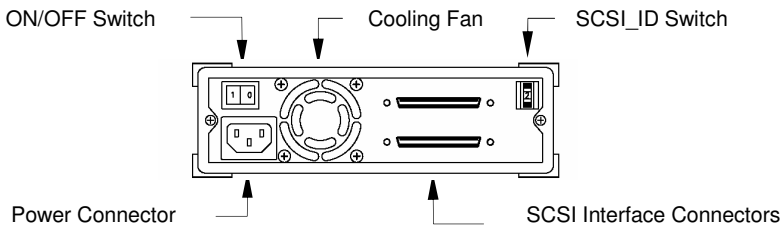
For internal devices, a SCSI-cable with an integrated terminator or a separate terminator applied to the end connector of the cable, 10 cm from the last device, must be used.



*Figure 4 Internal SCSI cable and termination*

## External Tabletop Enclosure

For front view, please see the picture on the front page.



*Figure 5 External tabletop enclosure, rear side*

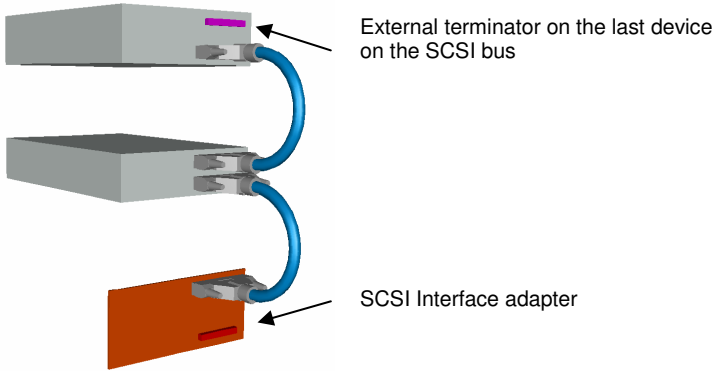
## SCSI Identification on External Tabletop

Make sure that the drive unit has the proper SCSI-ID before it is connected to a computer system. Refer to manuals for host computer and application software to obtain the correct ID.

External Tabletop Enclosures have a thumb-wheel switch to set the SCSI-ID for the tape drive (see *Figure 5*).

# Termination External Tape Drive

External devices must be terminated with an external terminator on the last device on the SCSI-bus. Please see *Figure 5* for SCSI connectors and *Figure 6* for SCSI termination.



*Figure 6 External SCSI cabling and termination*

## SCSI Cables Ordering no.

- Internal SCSI-LVD/SE-cable with 5 connectors (Ordering no. 43 20 51)
- Internal, removable SCSI-LVD/SE-terminator (Ordering no. 43 20 53)
- External, removable SCSI-LVD/SE-terminator (Ordering no. 43 26 17)
- External SCSI 68HD/VHDCI 320MBs-cable (Ordering no. 43 32 64)

# Front LED Indicators

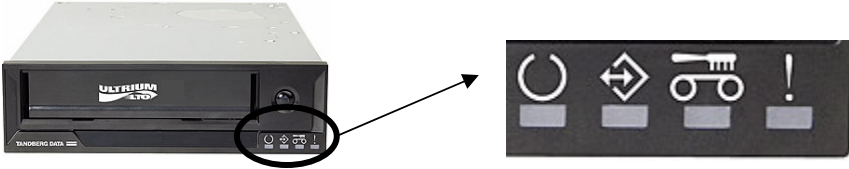


Figure 7 Light Emitting Diodes (LED)





				
Drive State	READY LED (Green left)	ACTIVITY LED (Green)	CLEAN LED (Amber)	FAULT LED (Amber right)
LED-test. The LEDs are turned ON one-by-one. Power-On Self-Test starts in parallel with the LED-test .	ON	ON	ON	ON
Cartridge not loaded.	OFF	OFF	ON / OFF	OFF
Cartridge loaded, no activity	ON	OFF	ON / OFF	OFF
Cartridge loaded, activity	ON	Flashing	ON / OFF	OFF
Cleaning	OFF	Flashing	ON	OFF
Cartridge loading or unloading	OFF	Flashing	ON / OFF	OFF
Unrecoverable drive failure	ON / OFF	OFF	ON / OFF	Flashing
Over temperature	OFF	OFF	ON / OFF	ON
Media Error (wrong, write protected or harmed media)	OFF	Flashing	ON / OFF	Flashing

Table 2 Front LED behavior during normal operation

# Software Installation

For Software Application support and software drivers, please see [www.tandbergdata.com](http://www.tandbergdata.com). Then select SUPPORT and Select Product.

For installation of Backup Application software, refer to the software vendor’s software application user guide supplied with the software or on the software vendor’s web.

# Media and Capacities

To achieve and maintain the maximum quality of your Tandberg Data tape drive, we recommend using Tandberg Data media.

Drive Model	Media Name	Tape Length	Capacity (Native)	Ordering no.
LTO-1	LTO Ultrium Generation 1 (Native format)	609 m	100 GByte	<b>43 26 30</b>
LTO-2	LTO Ultrium Generation 2 (Native format)	609 m	200 GByte	<b>43 27 44</b>
	LTO Ultrium Generation 1 (Read/Write compatible)	609 m	100 GByte	<b>43 26 30</b>
LTO-3	LTO Ultrium Generation 3 (Native format)	680m	400 GByte	<b>43 32 16</b>
	LTO Ultrium Generation 2 (Read/Write compatible)	609 m	200 GByte	<b>43 27 44</b>
	LTO Ultrium Generation 1 (Read compatible)	609 m	100 GByte	<b>43 26 30</b>
LTO1, 2, 3	Cleaning Cartridge for LTO1, LTO2 and LTO3			<b>43 26 31</b>

*Table 3 Media alternatives*

# Power Requirements

## Tandberg LTO-1, LTO-2, LTO-3 in external tabletop enclosure:

AC Input: 100 VAC / 0.6 A or 240 VAC / 0.3 A, 50-60 Hz

Tandberg LTO as standalone:	LTO-1/LTO-2	LTO-3
DC Input (typical operation) 5 VDC	2.1 A	0.8 A
DC Input (typical operation) 12 VDC	0.6 A	0.7 A

# Heat Dissipation

Tandberg LTO as standalone:	LTO-1/LTO-2	LTO-3
Operating:	18 W	13 W
Sleep mode with cartridge inserted:	9 W	6 W

# Tandberg Data

*Total customer satisfaction is of the utmost importance  
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If you are not satisfied with the quality of this product,  
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*For more documentation and information, please see our website  
[www.tandbergdata.com](http://www.tandbergdata.com).*

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