

### 13.1.2 TS3500 tape library frames L23 and D23

The Model L23 and D23 frames integrate the TS1160, TS1155, TS1150, and TS1140 tape drive with 8 Gbps dual-ported switched fabric Fibre Channel attachment. The TS1130 tape drive and IBM TotalStorage 3592 Tape Drive, is provided with a 4 Gbps dual-ported switched fabric Fibre Channel attachment.

The TS3500 tape library Model L23 and D23 frames can be attached to LTO Frames. Therefore, IBM 3592 models E tape drives and LTO tape drives can be intermixed within the same TS3500 tape library.

The IBM 3592 models E tape drives that are used in the TS3500 tape library models L23 and D23 are for automation and use a tape cartridge with a form factor similar to the IBM 3590 tape cartridges. The TS1140, TS1150, and TS1155 tape drives have dual-ported 8 Gbps Fibre Channel interfaces. The TS1160 has dual-ported 16Gbps Fibre Channel interfaces. Consider the following points:

- ▶ The TS1130 tape drive has a native data rate of up to 160 MBps.
- ▶ The TS1140 tape drive has a native data rate of up to 250 MBps.
- ▶ The TS1150 and TS1155 tape drive has a native data rate of up to 360 MBps.
- ▶ The TS1160 tape drive has a native data rate of up to 400 MBps.

The 3592 tape drives provide high levels of performance, functionality, and cartridge capacity and support the 3592 tape format, including Write Once Read Many (WORM) media support.

#### IBM TS3500 tape library Model L23 Frame

The TS3500 tape library Model L23 Frame provides cartridge slots for 3592 media and support for up to 12 IBM 3592 tape drives with an incremental reduction of storage slots beyond four drives or with more I/O slots. This model has the same footprint as the model L53. The L23 can be installed on its own as a complete library enclosure, or up to 15 Model D23 or D53 frames can be attached to it. The library capacity and number of drives can be expanded to meet changing needs.

The L23 frame provides the major library components for the whole library, regardless of whether it has single or multiple frames. The expansion frames must be added to the right of the L53 frame.

The number of 3592 cartridge storage slots ranges 58 - 260. The minimum configuration provides 58 slots that are available for use, although all 260 slots already are installed. To enable the other slots for use (up to the total of 260), obtain another license key by ordering one of the following Capacity-on-Demand features:

- ▶ The Intermediate Capacity feature (FC1643) gives a total number of 117 usable cartridge slots. This feature is required to add a Full Capacity feature (FC1644), which gives the capacity of 260 cartridge slots.
- ▶ The Full Capacity feature (FC1644) is required to add an I/O slots feature (FC1658 or FC1659) or to attach the optional expansion frame models D23 or D53.

Up to 12 IBM 3592 tape drives can be installed. Adding more than four drives or drive mounting kits, or installing the other I/O station reduces the number of storage slots that are available for use (see Table 13-4 on page 359). The 3592 FC Drive Mounting Kit (FC1513 or FC1515) for 3592 tape drives can be installed in advance, which simplifies future tape drive installation. This kit reduces the storage slots to the appropriate number and provides the power supply and necessary cables for installing a TS1160, TS1155, TS1150, TS1140, and TS1130 tape drive.