



Targetfour

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Product Datasheet

HP StorageWorks MSL5030 Tape Library

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MODELS

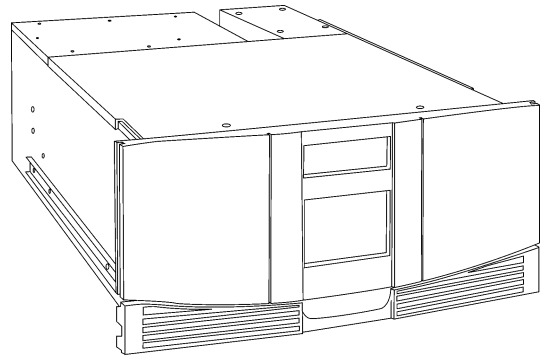
The HP StorageWorks MSL5030 Tape Library comes with 30 media slots (including one mail slot) and one or two HP LTO Ultrium 230 tape drives (number of drives determined by SKU chosen).

301897-B21	MSL5030, 0 DRV, RM Library
301897-B22	MSL5030, 1 DRV, LTO Ultrium 230, RM Library
301897-B23	MSL5030, 2 DRV, LTO Ultrium 230, RM Library
301897-B24	MSL5030, 1 DRV, LTO Ultrium 230, embedded Fibre, RM Library
301897-B25	MSL 5030, 2 DRV, LTO Ultrium 230, embedded Fibre, RM Library
301898-B21	MSL5030, 1 DRV, LTO Ultrium 230, TT Library
301898-B22	MSL5030, 2 DRV, LTO Ultrium 230, TT Library
301901-B21	MSL5000 LTO Ultrium 230 upgrade drive in hot plug canister

Each library installation will require, (1) library system, (1) geographically specific power cord, (1) SCSI cable for each drive pair, and up to 30 pieces of LTO Ultrium media with bar code labels for each MSL5030. Multiple configurations will require additional passthrough kits.

The minimum orderable configuration consists of a single library system (for instances where customer already has the necessary SCSI cables, power cord, and media).

Installation services may also be ordered for customers who want to have a certified HP engineer perform an on-site library installation.



OVERVIEW

The HP StorageWorks MSL5030 Tape Library provides growth opportunities and investment protection for your rapidly growing storage needs. Designed for flexibility, HP's midrange system library (MSL) can be scaled with additional MSL libraries. This feature allows a single library to grow dynamically with capacity and technology needs (up to 16 drives and 240 slots). In addition, the MSL5000 libraries are easily managed through an intuitive GUI control panel and integrated remote Web management.

MSL5030 Library Customer benefits include:

- Multi-unit scalability permits future growth and provides investment protection
- Web-based remote management permits monitoring and managing the unit from across the room or across the world
- User-friendly intuitive front panel Graphical User Interface (GUI) makes operation fast and easy as well as minimizes future training costs
- Removable magazines for easy off-site backup storage
- Hot-plug drives help to minimize downtime
- Reliable, cost effective backup, restoration and archival solution that fits a growing companies storage needs
- Efficient 5U form-factor provides 3TB of storage with out consuming much valuable rack space
- Compatible with a wide variety of operating systems, software applications, and server platforms, the MSL5030 will fit in your environment

KEY FEATURES

- Multi-unit modular scalability – any combination of MSL5030 and 5060s up to 40U high
- Web-based remote management system
- Touch screen GUI panel for easy library operation
- Two 15-slot magazines
- Thirty data slots for a native capacity of 3.0 TB, giving the highest density in a 5U form factor in the mainstream segment (including one mail slot for quick load/unload and removable magazine)
- Hot plug drives for on line repair and capacity expansion, without interrupting library operations for minimum downtime
- One or two LTO Ultrium 230 drives, with a throughput of 15 MB/s (native) per drive for a backup performance of up to 108 GB/hr for a single unit
- Ultra 2 LVD SCSI Interface or Embedded Fibre (2Gb)
- Two cPCI slots for added functionality through add-on cards in future
- Available as either a rackmount or tabletop configuration
- Qualified on a broad range of operating systems, ISV packages and hardware platforms (see Product Highlights for details)

PRODUCT HIGHLIGHTS

Multi-unit modular Scalability

The MSL 5030 has the capability for multi-unit scalability; up to eight libraries can be scaled together into a single library. The first two modules are linked using the MSL5000 passthrough mechanism, which has the elevator mechanism for tape movement. Additions of subsequent modules require the MSL5000 5U passthrough extender (one for each additional module).

High Availability and Hot Pluggable Drives

As data becomes more mission critical, and downtime becomes more costly, customers are requiring high availability features on tape automation devices. The MSL5030 uses hot pluggable drive carriers, allowing drive replacement without interrupting backup and restore functions. These hot pluggable drive trays allow for easy scalability of performance, as well as provide an easy upgrade path towards future drive technologies.

NOTE: The MSL5030 accepts only library ready drives specifically modified for use in the MSL5030 library.

Remote Management Interface

Web-based management is included to allow monitoring and managing the library from across the room or across the globe. Many of the functions that are available on the front panel are included in the remote management interface. These include, but are not limited to, library and drive status, moving media, load/unload tape drives, access to diagnostics, library configuration, library statistics, inventory check, and security settings.

Manageability

The MSL5030 library configurations are fully supported through Insight manager 7.0, providing information to administrators for robotic status, tape status changes and fault status. HP TSMC (tape storage management console) & HP Library and Tape Tools (LTT) provide diagnostics and easy firmware upgrade capabilities.

Proven Reliability

Using LTO Ultrium tape drives, and proven library robotics with a rating of 2,000,000 robot load/unload cycles, the MSL5030 provides the necessary high reliability for today's demanding environment.

LTO Ultrium Technology

LTO Ultrium tape drives use best of breed technology. By taking the best features from other tape technologies and combining them into a single new technology Ultrium tape drives are in a league of their own. Inclusion of innovative features such as Adaptive Tape Speed (ATS) ensure that Ultrium drives can meet the performance and reliability demands of a library environment, whether it is direct attach SCSI (DAS) or a Storage Area Network (SAN). Linear Tape Open (LTO) technology is an industry open-standard format; thus data written on HP StorageWorks Ultrium tape drives can be interchanged directly with other Ultrium tape drives from other vendors.

PRODUCT HIGHLIGHTS *(continued)*

Server Support

Enterprise ProLiant Servers

ProLiant DL760
ProLiant ML750

Departmental ProLiant Servers

ProLiant DL580 G2
ProLiant ML570 G2
ProLiant ML530 G2

Workgroup ProLiant Servers

ProLiant ML330 G2
ProLiant DL380 G2
ProLiant ML370
ProLiant ML350
ProLiant DL360
ProLiant DL320

HP-UX servers

Superdome
rp8400
rp7400 (N class)
rp5400 series (L Class)
rp2450/2470 (A class)
K class
D Class

HP Netserver

HP Ixr8500
HP Ih6000
HP Ih6000r
HP It6000r
HP tc4100
HP tc3100
HP Ih3000
HP Ic2000r
HP Ip2000r
HP Ip1000r
HP e200
HP e800

Non-HP systems

Dell PowerEdge
IBM Netfinity
IBM RS6000
Sun Sparc

Application Support

Automation and Network Utilities
HP Tape Storage Management Console (v2.3 for NT 2000, 2.0 for NetWare)
MRU (media robot utility) v1.4 (Windows/NT 2000 only)
HP Library and Tape Tools v2.9
Insight Manager v7.0

PRODUCT HIGHLIGHTS *(continued)*

Application Support *(continued)*

MSL5030 Supported under Direct Attach SCSI (DAS), Direct Attach Fibre, and Storage Area Networks (SAN)	Windows NT 4.0 SP6a	Windows 2000 SP2	NetWare 5.1 SP3	NetWare 6.0	Solaris v7	Solaris v8	HPUX 11.0	HPUX 11.i	Linux RH 7.1	Linux RH 7.2	Linux SuSe 7.3	AIX 4.3.3
HP Data Protector 5.0	✓	✓	✓		✓	✓	✓	✓		✓		✓
HP Omniback 4.1	✓	✓	✓		✓	✓	✓	✓		✓		✓
CA BrightStor ARCserve 2000	✓	✓										
CA BrightStor ARCserve 7			✓							SCSI only		
Legato NetWorker 6.1.2	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
VERITAS Backup Exec 8.6	✓	✓										
VERITAS Backup Exec 9.0			✓	✓								
VERITAS NetBackup 3.4.3	✓	✓			✓	✓	✓	✓				✓
VERITAS NetBackup 4.5	✓	✓			✓	✓	✓	✓				✓

✓ = supported

SPECIFICATIONS

Control Panel	Library and drive status								
	Move tape cartridges								
	Load/unload tape drives								
	Maintenance (diagnostics)								
	Library configuration								
	Statistics								
	Inventory check								
	Security level set: operator, user, service								
	Mail slot access								
	Offline/online status								
	Magazine removal/replacement								
	SCSI Interface	Ultra 2 LVD SCSI, VHDCI interconnect							
Form-factor	5U Rackmount								
	Tabletop								
Shipping Dimensions	Height [inches]	Height [cm]	Width [inches]	Width [cm]	Depth [inches]	Depth [cm]	Weight [lb]	Weight [kg]	
	Product Only								
	MSL5030 0 Drive, RM	8.75	22.2	17.00	43.2	30.00	76.2	43.0	19.5
	MSL5030 1 Drive, RM	8.75	22.2	17.00	43.2	31.50	80.0	52.0	23.6
	MSL5030 2 Drive, RM	8.75	22.2	17.00	43.2	31.50	80.0	61.0	27.7
	MSL5030 1 Drive, TT	10.00	25.4	19.00	48.3	31.50	80.0	61.0	27.2
	MSL5030 2 Drive, TT	10.00	25.4	19.00	48.3	31.50	80.0	69.0	31.3
Packaged									
	MSL5030 0 Drive, RM	15.25	38.7	23.00	58.4	38.25	97.2	75.0	34.0
	MSL5030 1 Drive, RM	15.25	38.7	23.00	58.4	38.25	97.2	84.0	38.1
	MSL5030 2 Drive, RM	15.25	38.7	23.00	58.4	38.25	97.2	93.0	42.2
	MSL5030 1 Drive, TT	15.75	40.0	25.25	64.1	40.00	101.6	90.0	40.8
	MSL5030 2 Drive, TT	15.75	40.0	25.25	64.1	40.00	101.6	99.0	44.9

SPECIFICATIONS *(continued)*

Capacity (native)	MSL5030 base unit	3.0 TB
Performance (native)	15 MB/s per drive	
	MSL5030 base unit	Supports 1 or 2 LTO Ultrium 230 drives for native transfer rates up to 108 GB/hr
	Maximum configuration (8 modules with multi-unit scalability)	Supports up to 16 LTO Ultrium 230 drives for native transfer rates up to 864 GB/hr
Storage Capacity (compressed @ 2:1)	200 GB per cartridge	
	MSL5030 base unit	30 slots (including one mail slot), for compressed (2:1) capacity up to 6.0 TB
	Maximum configuration (8 modules with multi-unit scalability)	8 * 30 slots, for compressed (2:1) capacity up to 48 TB
Power Consumption	MSL5030 base unit	90 to 140V AC @ 47 to 63Hz 176 to 259V AC @ 47 to 63Hz
	Power requirement	180 Watts (typical) 200 Watts (maximum)
	Heat dissipation	612 BTU's/hour (typical) 671 BTU's/hour (maximum)
Acoustic Noise	Noise power emission level	8 bels, maximum
	Avg. sound pressure level	52 dBA
Robotics Performance	Initialization time	100 sec
	Inventory time	60 sec
	Cartridge swap (drive to slot)	15 sec average
Reliability	MTBF	250,000 hours (100% duty cycle) (excludes drives)
	MSBF	2,000,000 robot load/unload cycles
Product Safety Requirements and Approvals	Safety EN60950/IEC950, UL, CSA/cUL, CE, VDE/TUV, GOST, BSMI EMI, Class A FCC, C.I.S.P.R., ICES-003, CE, VCCI	

Warranty

One year parts exchange, one year onsite next day service

Additional warranty protection can be purchased for all MSL5030 library products.

NOTE: Certain restrictions and exclusions apply. Consult the Hewlett-Packard Customer Support Center for details.

HEWLETT-PACKARD INSTALLATION AND CAREPAQ

Hewlett-Packard Services provides warranty support for the MSL5030 via HP services and a worldwide network of authorized service providers. Toll-free 7 x 24 hardware technical phone support is provided for the duration of the product warranty. In addition, available service offerings include a full range of CarePacs packaged hardware and software services:

- Installation and start up
- Extended coverage hours and enhanced response times
- System management and performance services

Hewlett-Packard Service & Warranty Support

Additional warranty protection and/or Hewlett-Packard Installation packages can be purchased for the MSL5030 Library products:

Software Product Services

- Stand-alone telephone support
- Rights to a new license
- Media and documentation updates

Hardware Product Services

- Installation services
- On-site Maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage

For additional hardware installation and maintenance information please refer to the URLs listed below:

http://www.compaq.com/services/CarePac/us/hardware/cp_storage.html

http://www.compaq.com/services/CarePac/us/install/cp_storage.html

Warranty Upgrade Options

- Response - Upgrade on-site response from next business day to same day 4-hours
- Coverage - Extend hours of coverage from 5 days x 9 hours to 7 days x 24 hours
- Duration - Select duration of coverage for a period of 1, 3, or 5 years

HEWLETT-PACKARD INSTALLATION AND CAREPAQ *(continued)*

NA CarePaq Information

- CarePaq is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.
- CarePaq is not available for less than the products warranty duration.
- CarePaq is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the warranty start date (delivery date to end user customer). Proof of purchase may be required.
- CarePaq services are prepaid.

For additional CarePaq (hardware & software) information, as well as, orderable part numbers please refer to the URL listed below:

<http://www.compaq.com/services/CarePaq/index.html>

EMEA CarePaq Information

Additional CarePaq services are being developed to cover a broader range of HP StorageWorks hardware and software. Existing CarePaqs are available today for LTO and SDLT technologies. Ask your local CarePaq Business Manager for the latest details.

CarePaq Priority Services (PS) Information for EMEA

- CarePaq Priority Services brings a totally new approach that removes the complexity from evaluating, planning and purchasing services on Hewlett-Packard Alpha and Storage platforms.
- CarePaq Priority Services are easy to purchase and easy to use and cover all external storage products not covered under server-based CarePaq services.

Standard Offerings

- CarePaq Priority Services provide an integrated hardware and software support that ensure consistent coverage across storage configurations.
- CarePaq Priority Service offers a rapid four-hour response with guaranteed work-through to completion for three years.
- CarePaq Priority Services have a standard call window of Monday to Friday 08:00 – 17:00 with uplifts to full 24x7 over three years with four-hour response time and work through to completion.
- CarePaq Priority Services also provide software support, with a two-hour response time for telephone access to highly trained support personnel.

For more information on how to order CarePaq Priority Services in EMEA please contact you local Certified Integration Partner or Authorized Reseller. Customized Installation Services (including installation of vendor backup software) and contract based support services are available by contacting your local Services department.

RELATED OPTIONS

	Part Description	UPC Code	Part Number
MSL5030 Library System	MSL5030, 0 DRV, RM Library	613326560655	301897-B21
	MSL5030, 1 DRV, LTO Ultrium 230, RM Library	613326560679	301897-B22
	MSL5030, 2 DRV, LTO Ultrium 230, RM Library	613326560693	301897-B23
	MSL5030, 1 DRV, LTO Ultrium 230, embedded Fibre, RM Library	613326560716	301897-B24
	MSL5030, 2 DRV, LTO Ultrium 230, embedded Fibre, RM Library	613326560730	301897-B25
	MSL5030, 1 DRV, LTO Ultrium 230, TT Library	613326560754	301898-B21
	MSL5030, 2 DRV, LTO Ultrium 230, TT Library	613326560631	301898-B22

Supplied with each Library Unit:

- Library Unit (pre-configured with drives)
- Documentation Kit
- EFIJS Translation CD
- Users Guide
- Diagnostic diskette/Software Guide
- Warranty Card
- Safety Card
- Driver CD
- (1) LTO Ultrium data Cartridge
- Bar Code Labels
- SCSI Terminators (1 per drive)
- SCSI Jumper Cable VHDCI
- Diagnostic Cable (for PC attach)
- Software: Tape Storage Management Console Media Robot Utility

Power Cord	Power Cord, US/Canada/Mexico (shipped with all units)*	720591673581	227099-001
	Power Cord, (Australia/China/New Zealand)	720591673567	227098-011
	Power Cord, (South East Asia/India)		157220-AR1
	Power Cord, (Central Europe)		157215-021
	Power Cord, (United Kingdom/Hong Kong)	720591547288	157216-031
	Power Cord, (Switzerland)	743172633156	157219-111
	Power Cord, (Italy)		157217-061
	Power Cord, (Denmark)		157218-081
	Power Cord, (Japan)		139867-006

*NOTE: (Shipped with all units.) Order Local power cords separately.

Passthrough Mechanism	MSL5000, universal passthrough mechanism (includes elevator mechanism and router, required to connect first two units in a stack) (capable of handling both SDLT and LTO media)	613326628447	304825-B21
	MSL5000, 5U passthrough extender (required one for each unit connected to the stack, for third and additional units)	720591730079	231824-B22

Drive, capacity, and memory upgrade kits	MSL5000 LTO Ultrium 230 Upgrade Drive	613326560594	301901-B21
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Interface Cards	Network Storage Router e1200 MSL5000 embedded fibre option kit - graphite		262672-B21
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RELATED OPTIONS *(continued)*

Media and Bar Code Labels	MSL5000 Dual Magazine LTO (2 x 15 slot magazines, left and right)	613326560617	301902-B21
	LTO Ultrium Media		
	HP LTO Ultrium Data Cartridge		C7971A
	HP LTO Ultrium Universal Cleaning Cartridge		C7978A
	HP Ultrium Barcode Labels, 100-Pack		C7970B
SCSI Cables	SCSI Cable, VHDCI/VHDCI, 6 feet	743172660817	341174-B21
	SCSI Cable, VHDCI/VHDCI, 12 feet	743172660824	341175-B21
	SCSI Cable, VHDCI/Wide, 6 feet	743172660831	341176-B21
	SCSI Cable, VHDCI/Wide, 12 feet	743172660848	341177-B21
	SCSI Cable, VHDCI/Wide, 10 meter	720591469108	201160-B21
	Check the cable-adapter matrix for tape libraries on: ftp://ftp.compaq.com/pub/products/storageworks/tape-and-optical-storage/adapter-cable-matrix.pdf		
FC Host Bus Adapters	HSC-eff Tachlite Fibre Channel Adapter		A6684A
	HSC Tachlite Fibre Channel Adapter		A6685A
	PCI 4X 2Gbps single port Fibre Channel Adapter		A6795A
SCSI Host Bus Adapters	ProLiant /Netserver		
	64-bit 66 MHz PCI Dual Channel Wide Ultra3 SCSI adapter	743172876379	129803-B21
	Ultra3 LVD, single channel controller	743172991447	154457-B21
	HP-UX		
	Ultra 2 LVD single port		A5149A
	Ultra 2 LVD dual port		A5150A
	Ultra 3 LVD single port		A6828
	Ultra 3 LVD dual port		A6829
	LVD single port		A4999A
Rackmounting Kits	MSL5000 system/e RM kit (HP racks)	613326628423	304826-B21
	MSL5026 TT-RM KIT, ProLiant Rack	720591734336	231894-B22
	MSL5026 TT-RM KIT, Alpha/HP Rack	720591734312	231894-B21
	Alpha Rail Kit	720591166243	254795-001
Omniback Backup Software	Part Description	Features	Part Number
	Omniback 4.1		
	Starter Packs		
	Cell Manager	Required once as starter pack; includes license-to-use, unlimited number of disk agents and media agents, one drive extension, libraries with up to 60 slots, CD-ROM media, manuals, and more; for Windows NT, 2000, XP/HP-UX	B6961AA/B6951AA
	Drive Extensions		
	Drive License	License-to-use for one concurrently used backup drive; for Windows NT, 2000, XP/Novell Netware/Linux	B963AA
	Drive License	License-to-use for one concurrently used backup drive; for UNIX [®] , NAS, SAN	B6953AA
For the most up-to-date information, visit: http://openview.hp.com/products/omniback/specifications/			

CONFIGURATION INFORMATION (for rackmount units only)

STEP 1 – SELECT A CONFIGURATION

The list below is not intended to show all possible configurations, but to show some of the most common. In some cases, it is advantageous to utilize 5060 libraries in the scaled stack. Please refer to the MSL5060 library QuickSpecs for more details. The Ultrium MSL5000 series of libraries is scalable to 40U resulting in 16 drives and 240 slots.

IMPORTANT NOTE: Each library unit comes with a rack kit specially designed for HP 9000 & 10000 racks. If the unit is going to be installed into a HP Surestore SytemE rack or an Alpha rack, then 1 rack mount kit per library unit must be purchased. Please utilize "STEP 2" of the configuration information

Common Scaled Configurations for MSL5000 Libraries Direct Attach SCSI

Slots	Drives	Interface	Qty	Description	Product #
60	2	SCSI	1	MSL5030L1 2-drive RM	301897-B23
			1	MSL5030L1 0-drive RM	301897-B21
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
60	3	SCSI	1	MSL5030L1 2-drive RM	301897-B23
			1	MSL5030L1 1-drive RM	301897-B22
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
60	4	SCSI	2	MSL5030L1 2-drive RM	301897-B23
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
90	2	SCSI	1	MSL5030L1 2-drive RM	301897-B23
			1	MSL5060L1 0-drive RM	301899-B21
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
90	3	SCSI	1	MSL5030L1 1-drive RM	301897-B22
			1	MSL5060L1 2-drive RM	301899-B22
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
90	4	SCSI	1	MSL5030L1 2-drive RM	301897-B23
			1	MSL5060L1 2-drive RM	301899-B22
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
90	6	SCSI	1	MSL5030L1 2-drive RM	301897-B23
			1	MSL5060L1 2-drive RM	301899-B22
			2	MSL5000 Ultrium 230 add-on drives	301901-B21
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
120	4	SCSI	2	MSL5060L1 2-drive RM	301899-B22
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details

CONFIGURATION INFORMATION (for rackmount units only) (continued)

STEP 1 – SELECT A CONFIGURATION (continued)

Common Scaled Configurations for MSL5000 Libraries

Direct Attach SCSI (continued)

Slots	Drives	Interface	QTY	Description	Product #
120	6	SCSI	2	MSL5060L1 2-drive RM	301899-B22
			2	MSL5000 Ultrium 230 add-on drives	301901-B21
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
120	8	SCSI	2	MSL5060L1 2-drive RM	301899-B22
			4	MSL5000 Ultrium 230 add-on drives	301901-B21
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details

Common Scaled Configurations for MSL5000 Libraries

SAN or Direct Attach Fibre

Slots	Drives	Interface	QTY	Description	Product #
60	2	Fibre Channel	1	MSL5030L1FC 2-drive RM	301897-B25
			1	MSL5030L1 0-drive RM	301897-B21
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
60	3	Fibre Channel	1	MSL5030L1FC 2-drive RM	301897-B25
			1	MSL5030L1FC 1-drive RM	301897-B24
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
60	4	Fibre Channel	2	MSL5030L1FC 2-drive RM	301897-B25
			1	Universal pass-thru mechanism	304825-B21
			2	Rack kits	See step 2 for details
90	2	Fibre Channel	1	MSL5030L1FC 2-drive RM	301897-B25
			1	MSL5060L1 0-drive RM	301899-B21
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
90	3	Fibre Channel	1	MSL5060L1FC 2-drive RM	301899-B23
			1	MSL5030L1FC 1-drive RM	301897-B24
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
90	4	Fibre Channel	1	MSL5060L1FC 2-drive RM	301899-B23
			1	MSL5030L1FC 2-drive RM	301897-B25
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details

CONFIGURATION INFORMATION (for rackmount units only) (continued)

STEP 1 – SELECT A CONFIGURATION (continued)

Common Scaled Configurations for MSL5000 Libraries

SAN or Direct Attach Fibre (continued)

90	6	Fibre Channel	1	MSL5060L1FC 2-drive RM	301899-B23
			1	MSL5030L1FC 2-drive RM	301897-B25
			1	Universal pass-thru mechanism	304825-B21
			1	5U pass-thru extender kit	231824-B22
			2	Rack kits	See step 2 for details
120	4	Fibre Channel	2	MSL5060L1FC 2-drive RM	301899-B23
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B23
			2	Rack kits	See step 2 for details
120	6	Fibre Channel	2	MSL5060L1FC 2-drive RM	301899-B23
			2	MSL5000 Ultrium 230 add-on drives	301901-B21
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B23
			2	Rack kits	See step 2 for details
120	8	Fibre Channel	2	MSL5060L1FC 2-drive RM	301899-B23
			4	MSL5000 Ultrium 230 add-on drives	301901-B21
			1	Universal pass-thru mechanism	304825-B21
			1	10U pass-thru extender kit	231824-B23
			2	Rack kits	See step 2 for details

STEP 2 – SELECT THE APPROPRIATE RACK

Depending on the environment, different rack kits are required. Each rackmounted version of MSL5000 libraries includes a rack kit designed for HP/Compaq 9000, 10000 and millennium racks. If installing into these racks no additional kits are needed. If the environment is different, one of the following kits is necessary (one for each library in a stack)

Rackmounting Kits	MSL5000 system/e RM kit (HP racks)	613326628423	304826-B21
	Alpha Rail Kit	720591166243	254795-001

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