

LiftMaster®

COMMERCIAL DOOR OPERATORS

**STARTS WHEN YOU NEED IT.
STOPS AT NOTHING.**

LIFTMASTER® COMMERCIAL DOOR OPERATORS

LiftMaster Commercial Door Operators are engineered with strength and durability, providing Customers with the reliability of knowing their doors will withstand heavy industrial usage several times an hour.

Our Elite Series® contains our next generation of commercial door operators, all equipped with MyQ® Technology. Now Customers can monitor their properties and operate their doors from any smartphone, tablet or computer.

LiftMaster guarantees a high level of quality and performance in all our commercial door operators by staying true to our unique features throughout our product line:

CONNECTIVITY

LiftMaster Commercial Door Operators help you stay connected with your business while you're away, giving you greater control, information and access.



P3 MOTORS®

LiftMaster designs our own purpose-built motor to meet the exact requirements needed to open and close your business's commercial doors.



SAFETY AND SECURITY

LiftMaster Commercial Door Operators have security features designed to help safeguard your business, giving you greater peace of mind.



Our line of commercial door operators provides a variety of access solutions that best serve specific needs while never compromising safety and security.



WARNING

To reduce the risk of **SERIOUS INJURY** or **DEATH**, the following should be read by **ANYONE** involved in the design, specification, selection or purchase of an industrial door operator or automated door system.

Automated Door Systems

For the purposes of this Safety Information, an automated door system consists of a vehicular door, an electric door operator, control equipment to interface with the door operator and safety equipment to protect people and property.

Vehicular Doors

A vehicular door is a large, heavy object that moves with the help of a counterbalance and electric motor. A moving door can cause **SERIOUS INJURY OR DEATH!** The safety and well-being of others depends on properly selecting products appropriate for the application and installing the products per the manufacturer's recommendations. In addition, it is imperative that all door components, including the door operator, be installed and serviced by a trained door systems technician.

The door itself must be properly balanced and aligned and work freely and smoothly by hand. The door operator is not intended to operate a poorly installed, improperly balanced or worn-out door. The use of a door operator to attempt to compensate for any door defect can result in a dangerous situation.

Door Operator Selection

The proper door operator must be selected for the application. Pay attention to all application information in this catalog, including door type, size, voltage and control wiring. **IMPROPER SELECTION CAN RESULT IN A DANGEROUS SYSTEM.** Be sure you understand the application and limitations of the model door operator you select for your door. If you are in doubt, contact your LiftMaster® Sales Representative.

Control Accessories

Door operators can present serious hazards to persons in the immediate area when not controlled in a safe manner or by responsible persons. Choose one or more controls that together will allow complete control of the door. Most importantly, **THE DOOR MUST BE ABLE TO BE STOPPED** at all times in case of emergency, and the control for stopping should be conveniently located and clearly marked and visible.

All controls should be located **OUT OF REACH OF SMALL CHILDREN.** **SERIOUS INJURY OR DEATH CAN RESULT FROM CHILDREN PLAYING WITH CONTROLS.**

ALL CONTROLS SHOULD BE LOCATED SO THAT THE PERSON OPERATING THEM CAN SEE THE FULL AREA OF DOOR MOVEMENT, but should not be so close that a person starting the door could be injured due to his/her proximity to the door.

Be especially careful in designing systems with automatic controls, that is, controls that can cause the door to operate without warning to persons in the immediate door area. Such controls include, but are not limited to, radio controls, remote mounted access controls, telephone access systems and timing devices. **SAFETY EQUIPMENT AND SIGNS WARNING OF THE AUTOMATIC OPERATION ARE A MUST IN THE DESIGN OF SUCH A SYSTEM.**

Entrapment Protection Devices

Any commercial/industrial door operator manufacturer wishing to list and label product to UL 325 on or after August 29, 2010, must be fully compliant with the requirements mandated by the new UL 325 regulations.

The UL 325 standard requires continuous monitoring of primary entrapment devices if the door operator is used with any operating mode or feature other than constant pressure on the CLOSE button to lower the door. These types of primary entrapment devices can be either monitored photo eyes or a 2- or 4-wire monitored edge sensor.

Other entrapment protection devices will be treated as ancillary. Installation of these types of entrapment protection devices is optional. Examples of these devices are 2-wire non-monitored and pneumatic edge sensors. These devices cannot be substituted for primary entrapment protection devices; instead, these devices may be used to supplement the primary devices or constant-pressure-to-close. Such devices can be attached to UL 325 compliant Logic 5.0, Logic 4.0 and Medium-Duty Logic Operators but cannot be used to replace the primary safety devices.

There are many types of primary and ancillary entrapment devices available, but LiftMaster Door Operators are designed to communicate with LiftMaster brand Monitored Primary Entrapment Protection Devices only. Types of LiftMaster photo eyes are the standard commercial/industrial CPS-U, NEMA 4 rated CPS-OPEN4 and CPS-UN4, and Retro-Reflective CPS-RPEN4 may be installed on a LiftMaster Door Operator in order to achieve any operating mode or feature beyond constant pressure on the CLOSE button to lower the door. In addition, LiftMaster also offers the Optical Edge System (OES), CPS-MEI and CPS-EI Edge Interfaces, which permit the attachment of a 2-wire or 4-wire monitored sensing edge to satisfy the requirement for primary entrapment protection. For easy reference, all UL 325 compliant LiftMaster Door Operator installation manuals provide a reference chart stating which entrapment protection devices have been approved for each door operator. The UL 325 listing is dependent on testing each door operator with each of the approved entrapment protection devices. Only those entrapment protection devices approved by UL for use with the door operator as primary entrapment protection devices are referenced in the instruction manual.

While LiftMaster Door Operators provide basic constant pressure on the CLOSE button to lower the door without a primary entrapment device, **IT IS STRONGLY RECOMMENDED THAT AN ENTRAPMENT PROTECTION DEVICE BE USED WITH EVERY DOOR OPERATOR.** There are many types of safety entrapment protection devices available; photo eyes, edge sensors, motion detectors and vehicle detectors are some of the more common types of primary and ancillary entrapment protection devices shown in the Accessories Section of the Commercial Door Operators and Accessories Price List. Audible and/or visible warning devices are recommended when automatic controls are used in the door operating system. A variety of warning signs and labels are also offered in this section. **WITHOUT ENTRAPMENT PROTECTION DEVICES, THE DOOR COULD CAUSE SERIOUS INJURY OR DEATH!**

Safe Installation Instructions

Door operators and associated control equipment should only be installed and serviced by qualified professionals. Professional Installers should observe the following safe installation procedures. To ensure that this is the case, provide a copy of this Safety Information Section to the Installer.

1. Read and follow all warnings and instructions within the installation manual.
2. Install the door operator only on a properly balanced and lubricated door. An improperly balanced door may not reverse when required and could result in SEVERE INJURY or DEATH.
3. All repairs to cables, spring assemblies and other hardware MUST be made by a trained door technician BEFORE installing the door operator.
4. Disable ALL locks and remove ALL ropes connected to the door before installing the door operator to avoid entanglement.
5. Install door operator 8 ft. or more above floor. Operators installed below this height must be enclosed with an operator cover.
6. NEVER connect the door operator to a power source until instructed within the manual to do so.
7. Installation and wiring must be in compliance with all applicable local building and electrical codes.
8. NEVER wear watches, rings or loose clothing, which could become caught within the door or operator mechanisms, while installing or servicing the door operator.
9. Install control station:
 - Within sight of the door
 - Out of reach of children at a minimum height of 5 ft.
 - Away from ALL moving parts of the door
10. Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.
11. Install the entrapment warning placard on the wall next to the control station in a prominent location that is visible from the door.
12. Place manual release/safety reverse test label in plain view on inside of door.
13. Upon completion of installation, test entrapment protection device.
14. The operation of the door, controls and primary entrapment protection devices should be reviewed with the owner and/or end user of the automated door system. Owner should also be informed of the need to maintain control and entrapment protection on a regular basis. Entrapment protection device should be checked at least once monthly to ensure that they are working properly. All installation manuals, instructions and safety information should be left with the owner.

UL 325 requires all commercial door operators to be either constant pressure to close or be equipped with a primary external Monitored Entrapment Protection Device. Failure to use an appropriate sensor, or failure to install the sensor properly, may expose the Installer and Customer to liability, should an accident occur. LiftMaster® offers a wide range of photo eyes and edge sensors that protect people and property while meeting this UL 325 requirement.

An automated vehicular door system includes several components, all of which must be selected in concert with each other and with the requirements of the job if the system is to be a successful one. In addition to the door itself, a system consists of a door operator, entry control equipment to interface with the door operator and safety equipment to protect people and property from hazards of an electrically powered door.

As a general rule, a medium-duty operator is not recommended for applications requiring more than 50 cycles per day. An industrial belt drive operator should be used in applications with cycles of up to 80–90 per day. High cycle modifications and/or Gearhead Operators should be used for applications requiring cycles in excess of 90 per day.

WARNING: This door operator is intended for use on vehicular doors. **MOTORIZED VEHICULAR DOORS CAN CAUSE SERIOUS INJURY OR DEATH!** Use entrapment protection equipment and other safety accessories on every door system.

HOW TO PLACE YOUR ORDERS

COMMERCIAL DOOR OPERATORS

Building a Complete Model Number

1 Select the proper model type for your door type. A brief description of the door type(s) for which a model is intended to be used is included at the beginning of each model page. If you are not sure of the proper model for your door, contact your LiftMaster® Sales Representative.

The model type will become the first part of the complete model number.

Example: H (Hoist)

2 Select the horsepower rating of your door operator by studying the Door Size Selection Guide for the model type you have chosen. This guide is based on the overall area of the door and is a general guideline only for new and properly installed doors. Light-duty and medium-duty model types are only available in one horsepower rating. If your door size is beyond the range on the guide for one of these models, go to the standard-duty or heavy-duty operator of the same type.

The ORDERING CODE for Horsepower Rating is as follows:

1/3 HP	33
1/2 HP	50
3/4 HP	75
1 HP	10
1 1/2 HP	15
2 HP	20
3 HP	30
5 HP	5HP

The Horsepower Rating code will become the second part of the complete model number.

Example: H50 (Hoist 1/2 HP)

3 Select the voltage, phase and frequency according to your installation requirement. The power available at the job site must be of the same voltage, phase and frequency as ordered for the door operator. A MISMATCH CAN CAUSE A DANGEROUS SITUATION AND RESULT IN DAMAGE TO THE OPERATOR AND/OR INSTALLATION POWER SUPPLY.

The ORDERING CODE for Voltage, Phase and Frequency is as follows:

Voltage	Phase	Hz	Code
115V/230V	1	60	1
208/230/460V	3	60	3
575V	3	60	5

The Voltage, Phase and Frequency code will become the third part of the complete model number.

Example: H501L5 (Hoist 1/2 HP 115/230V Single Phase Logic 5.0)

Additional Information Required

1 On all orders, please specify the door TYPE, WIDTH and HEIGHT, and VERTICAL or HIGH LIFT applications.

2 On all side-mount operators (models MJ, J, MGJ, MH, H and GH), please specify HANDING, DOOR SHAFT DIAMETER AND KEYWAY SIZE.

3 All door operators meeting UL 325 include the CPS-U Commercial Photo Eyes as part of the door operator standard package price. It is possible to upgrade the door operator to other safety devices at time of ordering. Please list the safety device on the order.

4 Please list any Modifications, Accessories and Omissions as separate line items.

5 Please indicate any markings required on packing cartons.

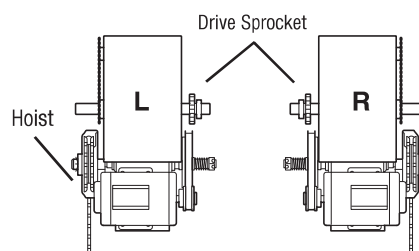
How to Choose the Proper Handing for Your Commercial Operator

Please note when ordering any hoisted operator, knowing the handing of the operator is important. When ordering any hoisted operator with a modification, such as the M102, M103 or a GH operator at 3 HP, this information is critical since the drive sprocket cannot be repositioned after production.

On all belt drive hoist operators (models MHS, MH and H), please specify the HOIST LOCATION (see graphic below). This is needed to ensure that the door operator is built with the manual hoist on the correct side of the door operator for your installation. The Model GH has a quick-change hoist design which allows the hoist wheel to be moved from one side to another in minutes in the field. These units will be supplied with the hoist wheel on the right side standard. It is not necessary to specify left or right when ordering a standard GH model.

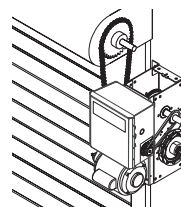
For GH 3 HP models or models with C/N4/N4X prefixes, the drive sprocket is not movable in the field. For these models, please specify the hoist and drive sprocket location at the time of order placement.

For Front of Hood Mount applications, with 3 HP and C/N4/N4X models, please clearly define the location of the hoist and drive sprocket.



Wall Mount

Example: H501L5R (shown mounted with door)



NOTE: On all slide door operators (models SD and GSD), please specify RIGHT or LEFT TO OPEN. (View from inside structure looking out.)

DOOR OPERATOR MODELS

DOOR OPERATOR MODELS					
Usage	Standard Lift Sectional	High or Vertical Lift Sectional	Rolling Doors and Grilles	Rolling Sheet Doors	Sliding Doors
Light-Duty: 7–8 cycles/hr.	ATS	3900	—	3950	—
Medium-Duty: 12 cycles/hr.; < 50 cycles/day	MT	MJ, MGJ	MGJ, MH	MHS	—
Standard-Duty: Up to 25 cycles/hr.; at peak periods Up to 80–90 cycles/day	T	H, DHJ, J, DJ	H, DHJ, J, DJ	—	SD
Heavy-Duty: 25 cycles/hr.; constant high loading in excess of 90 cycles/day	GT	GH	GH	—	GSD
Special Application	APT	—	—	—	—

Operating Amp Rating (Full Workload)

Heavy-Duty Logic 5.0 Operators: GT, GH, GSD

OPERATING AMP RATING (FULL WORKLOAD)							
VOLTAGE – PHASE 60 Hz	HP	1/2	3/4	1	1 1/2	2	3
	115-1Ø	11.2	13.6	16.0	20	N/A	N/A
	230-1Ø	5.6	6.8	8.0	10	N/A	N/A
	208/230-3Ø	3.1	4.0	6.0	7	8	10.6
	460-3Ø	1.75	2.0	3.0	3.5	4	4.8
	575-3Ø	1.4	1.6	1.8	2.75	3	N/A

Industrial-Duty Logic 5.0 Operators: T, H, DHJ, J, DJ, SD

OPERATING AMP RATING (FULL WORKLOAD)					
VOLTAGE – PHASE 60 Hz	HP	1/3	1/2	3/4	1
	115-1Ø	8.5	11.2	13.6	16.0
	230-1Ø	4.2	5.6	6.8	8.0
	208/230-3Ø	3.0	3.1	4.0	6.0
	460-3Ø	1.5	1.75	2.0	3.0
	575-3Ø	1.3	1.4	1.6	1.8

Medium-Duty Operators: MT, MH, MHS, MJ, MGJ

OPERATOR AMP RATING (FULL LOAD)		
VOLTAGE – PHASE 60 Hz	115-1Ø	
	6.6	

Light-Duty Operators: ATS, 3900, 3950

OPERATOR AMP RATING (FULL LOAD)			
VOLTAGE – PHASE 60 Hz	1/2 HP	ATS2113X	3900, 3950
	115-1Ø	5.6	1.5

Power supply will need to be delivered to meet product requirements.

DETERMINE AND SET WIRING TYPE

LiftMaster® Logic 5.0 Operators are equipped with seven field selectable operating wiring formats, allowing for customization of the door operator functionality in order to meet the commercial environment needs and requirements. This is accomplished through the positioning of the selectable dial on the desired type. See below for an explanation of these types.

CONTROL FUNCTION SELECTION SWITCHES

Allows for the selection of various control functions by positioning selector dial as indicated. The control functions which may be selected are as follows:

- C2** Momentary contact to open and stop with constant pressure to close, open override, plus wiring for sensing device to reverse.
- B2** Momentary contact to open, close and stop, plus wiring for sensing device to reverse and auxiliary devices to open and close with open override.
- D1** Constant pressure to open and close with wiring for sensing device to stop.
- E2** Momentary contact to open with override and constant pressure to close. Early release of CLOSE button will cause door to reverse (rollback feature), plus wiring for sensing device to reverse.
- F2** Fail-safe wiring can be selected with the addition of a CPS-U, CPS-UN4 or fail-safe edge and CPS3 card, or other approved LiftMaster Monitored Entrapment Protection Device (LMEP).
- T** Momentary contact to open, close and stop, with open override and Timer-to-Close. OPEN button may be connected to activate timer if desired. Auxiliary controls may be connected to open and activate Timer-to-Close, or to open and close without activating timer. If timer has been activated, all opening devices will recycle timer. Includes wiring for sensing devices to reverse, which will not activate timer. Timer will also work from mid-stop position.
- TS** Momentary contact to open, close and stop, with open override and Timer-to-Close. Every momentary contact (open, close and stop) with device that causes the door to open will activate Timer-to-Close, including sensing devices to reverse. Timer may be deactivated until next opening signal is received by depressing STOP button after door has reached open position. Timer will also work from mid-stop position.
- FSTS** Ideal for Fire Stations—Momentary contact to open, close and stop, with open override. A single-button station (panic button) can be used to activate the open cycle and the Timer-to-Close. Only the single-button control will activate the timer.

NOTE: All control functions require the use of a LiftMaster Monitored Entrapment Protection Device (LMEP). See commercial door operator pages for approved LMEP devices. In order to access the complete feature set of the Logic 5.0 control board. The Logic 5.0 Operator may be used without such safety devices; however, operation will be limited to C2 (with ability to use the Programmable Mid-Stop option), D1 or E2 operation only. LiftMaster safety options are mandatory for T, TS and FSTS control functions.

IMPORTANT NOTES

- External interlocks may be used with all functional modes.
- Auxiliary devices are any devices that have only dry contacts. Examples: photo eyes, loop detector, pneumatic or electrical treadles, radio controls, one-button stations, pull cords, etc.
- Open override means that the door may be reversed while closing by activating an opening device without the need to use the STOP button first.
- When the door is in a stopped position other than fully closed, and a safety input is activated (LMEP or EDGE), the Restricted Close (RC) feature will allow a CLOSE command when the CLOSE button is pressed and held. The door operator will begin closing after 5 seconds. If the CLOSE button is released, the door will stop. When in E2 mode, the door will move to the fully open position.

MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MODIFICATIONS AT A GLANCE

COMMERCIAL DOOR OPERATORS

Part No.	Description	MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD	Suffix	Ref. No.
Part I	LOGIC																
ARK	Auto-Reconnect Trolley Kit	●	●						1/3 and 1/2 HP Only								M1
B Model No.	Solenoid Brake		●				●	●	●			●					M2
B Model No.	Solenoid Brake, Hoisted Operators																M3
B Model No.	Solenoid Brake, Gearhead Operators																M4
65-9212	Friction Clutch												●			4	M6
65-5209	Manual Hoist (#48 Chain) Modification		●														M7
65-52091	Manual Hoist (#41 Chain) Modification		●														M8
65-52092	Manual Hoist, Model GT			●												BN	M9
HJ/DHJ	Manual Hoist, Models J and DJ						●	●									M10
65-7202	Manual Hoist, Center Mount						●	●									M12
65-9207	Auxiliary Trolley (#48 Chain)						●					●	●				M13
65-92071	Auxiliary Trolley (#41 Chain)						●					●	●				M13
65-9213	Dual Auxiliary (H and J #48 Chain)						●					●	●				M15
65-92131	Dual Auxiliary (H and J #41 Chain)						●					●	●				M15
65-5208	Dual Trolley Drive (#48 Chain)		●														M17
65-52081	Dual Trolley Drive (#41 Chain)		●	●													M17
65-5210	Minimum Depth Modification		●													CA	M19
65-7001	Center Mount (Model J)						●										M20
65-9001	Center Mount (Model GH)												●			CD	M21
65-5207	Slow-Speed Door, Belt (Models T and SD)		●											●		BQ	M22
65-52071	Slow-Speed Door, Gear (Models GT and GSD)			●											●	DT	M23
65-5211	High-Cycle Mod. (Models T and SD)		●											●		BH	M24
65-12729	Roller Bearing, 3/4 in. (Models T and SD)		●											●		CS	M25
65-5211A	Roller Bearing (Models APT, T and SD)		●		●									●		EC	M26
65-124164	Roller Bearing, 1 in. (Models J and H)						●					●				BZ	M27
65-5212	Dual V-Belt Modification		●		●		●					●				BI	M28
02-515	Emergency Egress, Flush, 15 ft.					●	●	●		●							M29
02-51530	Emergency Egress, Flush, 30 ft.					●	●	●		●							M29
02-516	Emergency Egress, Extended, 15 ft.					●	●	●		●							M30
02-51630	Emergency Egress, Extended, 30 ft.					●	●	●		●							M30
65-6202	Hand Crank (Models H and DHJ)								●			●				AZ	M31
65-9201	Hand Crank (Model GH)												●			AZ	M32
65-5501	Bi-Part Sliding Door Modification													●	●		M33
65-5502	Fusible Link, Single Slide													●	●		M34
65-5503	Fusible Link, Bi-Part Slide													●	●		M35
See M39	Limit and Sprocket Modifications		●	●	●	●	●	●	●			●	●	●	●		M39
90-MOTIONLADA	Door-in-Motion Circuit—Horn/Strobe		●	●	●		●	●	●			●	●	●	●	7	M40
65-LIMIT16	Limit and Sprocket Mod. for MDL					■				■	■					KM	M42
See M43	Horizontal Mount for GH												●			AJ	M43

● Available Modification (See specific item for details) ■ Available, but not in conjunction with the Logic Control Board

MODIFICATIONS AT A GLANCE

	Part No.	Description	MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD	Suffix	Ref. No.
POWER TRANSMISSION	Part I	LOGIC																
	65-20	TEFC Motor		●	●			●	●	●			●	●	●	●	3	M100
	65-9206	Watertight/Oiltight Control Enclosure		●	●			●					●	●	●	●	9	M101
	C Model No.	Damp Environment Modification		●	●			●					●	●		●		M102
	N4 Model No.	Watertight/Oiltight (NEMA 4,12)			●									●		●		M103
	N4X Model No.	Corrosion-Resistant (NEMA 4X)			●									●		●		M104
	Part II	MECHANICAL																
	90-9214	Dynamic Brake Modification			■									■			AC	M5
	V Model No.	Variable Speed			■									■		■		M37
	90-827	Decel. at Full Open/Close (with M37)			■									■		■	AV	M38
	90-MOTIONMADA	Door-in-Motion Circuit—Horn/Strobe			■									■			AY	M40
	90-MOTION	Door-in-Motion Circuit			■									■			AR	M41
	N7 Model No.	Hazardous Area Mod. (NEMA 7/9)			■									■				M105
	90-9204	JIC Specifications			■									■			EN	M106
	90-9212	Automotive Specifications			■									■			BY	M107
	90-921214	Automotive Specifications			■									■			AP	M107
	65-30121	Self-Reg. Heater 115V Plug												■			CV	M108
	See M108	Self-Reg. Heater 230/460V Plug												■				M109

PLEASE NOTE:

Prices Are Added to List Price of Door Operator: Modifications must be ordered at the same time the door operator is ordered unless a kit part number is shown on the description page. The modification prices shown are published as an "add" to the list price of the door operator and do not reflect the cost of a modification purchased without an operator (for field installation where available), such as a Combination Reversing Starter (CRS). Consult your LiftMaster® Sales Representative for specific details on a particular modification.

Costly and Prohibited Combinations: Certain combinations of modifications may together cost more than the sum of the costs for the individual modifications, or may not even be possible. This may also be true when combining certain modifications and accessories. Please carefully read the detailed description of the modifications being considered. If you have any questions, consult your LiftMaster Sales Representative.

Modifications are not available for GH 5 HP Door Operators.

MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MODIFICATIONS AT A GLANCE

Part No.	Description	MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD	Suffix	Ref. No.
Part I		LOGIC															
90-MLMotion	Door-in-Motion Circuit for MDL	■				■				■	■					EX	M46
71-MLMotion	Door-in-Motion Field Kit for MDL	■				■				■	■						M46
90-503000ML	Non-Resetable Ctr. Mod. for MDL	■				■					■						M47
71-503000ML	Non-Resetable Counter Field Kit	■				■					■						M47
90-MLAFCB	Int. Har. for AFCB Rel. Dev. for MDL	■				■				■	■					KN	M48
90-MLSBC	Single Button Cont. for MDL	■				■					■					JA	M49
71-MLSBC	Single Button Cont. Field Kit	■				■					■						M49
AUXCARD	Auxiliary Contact Option Board		●	●	●		●	●	●			●	●	●	●		M51
TLS1CARD	Timer Light Status Option Card		●	●	●		●	●	●			●	●	●	●		M52
90-9210MOC	Aux. Mini, Limit Sws. (Wire Leads)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	2	M62
90-9210MTOC	Aux. Mini, Limit Sws. (Term. Conn.)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	5	M63
65-ID	Two-Door Interlock System		●				●					●	●	●	●		M66
90-RL	Reverse Limits	●	●	●	●	●	●			●	●	●	●	●	●	6	M67
FDRCARD	FDR Plug-In Option Card						●	●	●			●	●				M69
90-503000	Non-Resetable Counter		●	●	●		●	●	●			●	●	●	●	1	M70
90-2140VAL	40VA Transformer		●	●	●		●	●	●			●	●	●	●	CM	M71
Part II		MECHANICAL															
90-TS	TS Wiring Type			■									■			AD	M53
90-T	T Wiring Type			■									■			KJ	M54
90-T1	T1 Wiring Type			■									■			GJ	M55
90-T2	T2 Wiring Type			■									■			KT	M56
90-D1	D1 Wiring Type			■									■			KQ	M57
90-E2	E2 Wiring Type			■									■			KR	M58
90-F2	F2 Wiring Type			■									■			AE	M59
90-92061	Delay-on-Reverse Modification			■									■				M60
90-9207M	Mid-Stop Modification			■									■			DS	M61
71-909207	Mid-Stop Field Kit			■									■				M61
90-78002K	Aux. Con. Blk., K Line (Wire Leads)			■									■			GA	M64
90-78002KT	Aux. Con. Blk., K Line (Term. Conn.)			■									■			GB	M65
90-5024	Long Dist. Cont. Wiring, 24VAC			■									■			BM	M68
5024	Long Dist. Cont. Wiring Field Kit			■									■				M68
90-EI	Electrically Interlocked Contactor		■	■			■					■	■	■	■	KP	M72
90-54029	Courtesy Light, Standard Operator			■			■	■	■			■	■	■	■	CX	M76
71-2954029	Courtesy Light Field Kit, Std. Operator			■			■	■	■			■	■	■	■		M76

PLEASE NOTE:

Prices Are Added to List Price of Operator: Modifications must be ordered at the same time the door operator is ordered unless a kit part number is shown on the description page. The modification prices shown are published as an "add" to the list price of the door operator and do not reflect the cost of a modification purchased without an operator (for field installation where available), such as a Combination Reversing Starter (CRS). Consult your Liftmaster® Sales Representative for specific details on a particular modification.

Costly and Prohibited Combinations: Certain combinations of modifications may together cost more than the sum of the costs for the individual modifications, or may not even be possible. This may also be true when combining certain modifications and accessories. Please carefully read the detailed description of the modifications being considered. If you have any questions, consult your LiftMaster Sales Representative.

Modifications are not available for GH 5 HP Door Operators.

● Available Modification (See specific item for details) ■ Available, but not in conjunction with the Logic Control Board

MODIFICATIONS AT A GLANCE

Part No.	Description	MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD	Suffix	Ref. No.
Part II	MECHANICAL CONTROL																
90-3001	WMS, NEMA 1, Screw Cover			■									■			BA	M130
90-3002	WMS, NEMA 1 rated, Hinged Cover			■									■			B	M131
90-3004	WMS, NEMA 4 rated, Hinged Cover			■									■			AA	M132
90-3012	WMS, NEMA 12 rated, Hinged Cover			■									■			BL	M132A
90-6002	CRS, NFDS, NEMA 1 rated, Size 0			■									■			AQ	M133
90-6004	CRS, NFDS, NEMA 4 rated, Size 0			■									■			DK	M134
90-6012	CRS, NFDS, NEMA 12 rated, Size 0			■									■				M135
90-7001	CRS, FDS, NEMA 1 rated, Size 0			■									■			BW	M136
90-7004	CRS, FDS, NEMA 4 rated, Size 0			■									■			CP	M137
90-7012	CRS, FDS, NEMA 12 rated, Size 0			■									■			BX	M138
90-80012	CRS, CB, NEMA 1 rated, Size 0, 250V			■									■			FA	M139
90-80014	CRS, CB, NEMA 1 rated, Size 0, 480V			■									■			EG	M140
90-80016	CRS, CB, NEMA 1 rated, Size 0, 600V			■									■			EP	M141
90-80042	CRS, CB, NEMA 4 rated, Size 0, 250V			■									■			HO	M142
90-80044	CRS, CB, NEMA 4 rated, Size 0, 480V			■									■			DL	M143
90-80046	CRS, CB, NEMA 4 rated, Size 0, 600V			■									■			HP	M144
90-80122	CRS, CB, NEMA 12 rated, Size 0, 250V			■									■			GC	M145
90-80124	CRS, CB, NEMA 12 rated, Size 0, 480V			■									■			EH	M146
90-80126	CRS, CB, NEMA 12 rated, Size 0, 600V			■									■			GD	M147
90-80072	CRS, CB, NEMA 7/9 rated, Size 0, 250V			■									■			HQ	M148
90-80074	CRS, CB, NEMA 7/9 rated, Size 0, 480V			■									■			HR	M149
90-80076	CRS, CB, NEMA 7/9 rated, Size 0, 600V			■									■			LE	M150
90-2504	External Reset OL, NEMA 1, 4, 12			■									■			EN	M152
90-1004	Size 1 Starter, NEMA 1, 4, 12			■									■			AG	M153
90-1007	Size 1 Starter, NEMA 7/9			■									■			LC	M154
90-100	100 VA Transformer, NEMA 1, 4, 12			■									■			BD	M155

M1 AUTO-RECONNECT TROLLEY (FIELD INSTALLED HARDWARE KIT)

ARK

Spring-loaded trolley features nylon inserts for quiet operation. Auto-reconnect feature eliminates the need to manually reattach the door arm to the trolley after emergency disconnect. For use on model MT and model T #48 roller chain (1/3 and 1/2 HP only).

Standard on APT operators; cannot be used with manual hoist, auxiliary trolley, dual trolley or high-cycle modifications.

NOTE: Internal-mounted brake is shown. External-mounted brake is installed outside the pulley belt.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
●	●												



M2 SOLENOID BRAKE FOR 1/2 HP T, J, H, DJ, DHJ (MAY BE INTERNAL OR EXTERNAL-MOUNTED)

Model 65-1/2BRAKE

Add a "B" prefix to your operator model number to have a brake factory installed.

Field Installation Kits:

- 71-EB1PH External-Mounted Brake Kit for single phase operators
- 71-EB3PH External-Mounted Brake Kit for three phase 208V, 230V and 460V operators
- 71-EB575-1 External-Mounted Brake Kit for three phase 575V operators

Internal-mounted brakes are mounted behind the pulley. **Internal brakes are a factory modification only.**

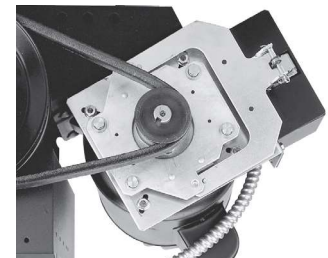
External-mounted brakes are mounted in front of the pulley. **External brakes may be factory or field installed.** To service the belt on an operator with an external-mounted brake, the brake must be removed. Brake provides up to 5 ft.-lb. of braking torque @ 1725 RPM motor shaft.

- Cannot be used with manual hoist, auxiliary trolley, dual trolley or high-cycle modifications.
- No factory-installed brake kits available on 1/3 HP operators.
- Brake standard on APT, SD and all Gearhead Logic 5.0 Operators.
- Brake standard on all 3/4 HP and higher Logic 5.0 Operators.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●				●	●	●			●			

M3 AND M4 (NO LONGER APPLICABLE), SEE M2

All Logic 5.0 Gearhead Operators have factory installed brakes as standard on all models.



LOGIC OPERATORS | POWER TRANSMISSION

M6 FRICTION CLUTCH MODIFICATION

65-9212

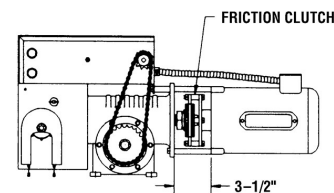
Used to adjust transmission of torque from motor to gear reducer for slip during starting. Mounted between motor and gear reducer; therefore, it does not provide protection for overloading of gear reducer, nor will it slip if door encounters an obstruction during travel.

Must be factory installed.

- Not available on 3 HP, NEMA 4X or with the NEMA 7/9 Hazardous Area Modification (M105).

NOTE: Not recommended for NEMA 4 rated door operators.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
											●		



NOTE: THIS MODIFICATION WILL ADD 3-1/2" TO THE OVERALL LENGTH OF THE OPERATOR

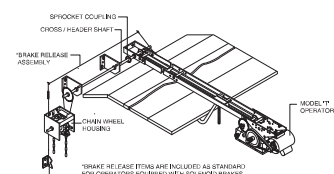
M7 MANUAL HOIST MODIFICATION—#48 CHAIN 1/3 AND 1/2 HP TROLLEY OPERATORS (FIELD INSTALLED HARDWARE KIT)

65-5209

Provides hand chain operation for manually opening/closing the door. A chain wheel is coupled to a cross-header shaft, which in turn is coupled to the front idler of the drawbar. The front idler pulley is replaced by a #48 sprocket, thus allowing the chain wheel to drive the door arm. For use with door operators with #48 drive chain only. Brake release cable included.

NOTE: Indicate door width and height when ordering.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●												



*BRAKE RELEASE ITEMS ARE INCLUDED AS STANDARD FOR OPERATORS EQUIPPED WITH SOLENOID BRAKES.

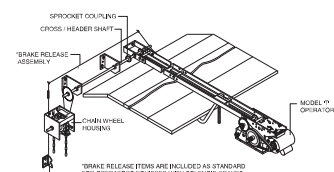
M8 MANUAL HOIST MODIFICATION—#41 CHAIN 3/4 AND 1 HP TROLLEY OPERATORS (FIELD INSTALLED HARDWARE KIT)

65-52091

Identical to (M7) except a #41 sprocket replaces the front idler pulley, allowing this version to be used with door operators with #41 drive chain. Includes floor-level brake release cable. Also for 1/3 and 1/2 HP trolley door operators with upgraded #41 chain.

NOTE: Indicate door width and height when ordering.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●												



*BRAKE RELEASE ITEMS ARE INCLUDED AS STANDARD FOR OPERATORS EQUIPPED WITH SOLENOID BRAKES.

M9 MANUAL HOIST FOR GT OPERATORS—#41 CHAIN

65-52092

Identical to (M8) except a power train disconnect mechanism is provided in the door operator. This is necessary on gear-reduced door operators (model GT) because the gear reducer cannot be back-driven from the output. A power train release cable is included. **Must be factory installed.**

NOTE: Indicate door width and height when ordering.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		●											

M10 MANUAL HOIST MODIFICATION FOR MODEL J

J/DJ Model No. Order Operator Model HJ or DHJ

Provides hand chain operation for manually opening or closing the door. For use with door operators that will be used on rolling grilles and doors where an emergency egress is required and where a chain hoist is necessary for emergency manual operation. The door disconnect mechanism for manual push-up, already built into the model J, is retained as well.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●	●							

M12 MANUAL HOIST MODIFICATION FOR CENTER MOUNT (FIELD INSTALLED HARDWARE KIT)

65-7202

Provides reduced-drive disconnect hand chain hoist for manually opening or closing doors. May be used with or without a commercial door operator and connected to the door shaft with sprocket and chain drive. Since the door shaft rotates when the door is moved, the chain wheel is engaged or disengaged by a floor-level disconnect chain. Includes an interlock switch for commercial door operator control circuit.

NOTE: See M7, M8 and M9 Modifications for use with MT, T, APT and GT.

NOTE: Bearing plate and door shaft are not supplied with this modification.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●	●							

M13 AUXILIARY TROLLEY MODIFICATION—#48 CHAIN AND #41 CHAIN (FIELD INSTALLED HARDWARE KIT)

65-9207 #48 Chain

65-92071 #41 Chain

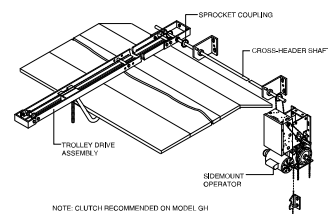
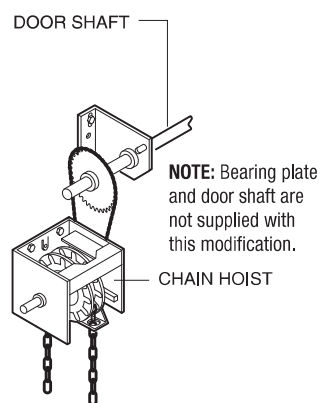
If a side-mount door operator is used on a standard lift door without this modification, door cables may unravel and jump off cable drums, allowing the door to fall. This modification provides drawbar-type operation on standard lift doors where a side-mount door operator is preferred over a drawbar operator. The output shaft of the side-mount operator is connected to the cross-header shaft (supplied) at the front end of a drawbar arrangement. Includes up to 12 ft. track. For operators utilizing #48 chain, typically 1/3 and 1/2 HP operators, use model (65-9207). For 3/4 HP and higher operators, use model (65-92071). If the door is 22 ft. or wider, use a Dual Auxiliary Trolley Modification (M15).

NOTES:

- Requires that limits be reversed on door operator when ordered with a Logic 5.0 Door Operator. When ordering with Mechanical Powerheads, the (M67) Reverse Limits Modification should also be ordered.
- Door width required when ordering.
- Indicate door height when ordering. For doors over 12 ft. high, add rail and chain upcharge.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●					●	●		



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M15 DUAL AUXILIARY TROLLEY MODIFICATION—#48 CHAIN AND #41 CHAIN (FIELD INSTALLED HARDWARE KIT)

65-9213 #48 Chain

65-92131 #41 Chain

65-92132 #41 Chain GH 1 1/2 and 2 HP only

65-92133 #41 Chain GH 3 HP only

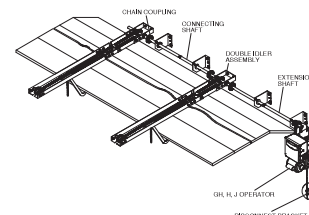
If a side-mount door operator is used on a standard lift door without this modification, door cables may unravel and jump off cable drums, allowing the door to fall. This modification provides drawbar-type operation on very wide (over 22 ft.) standard lift sectional doors where a side-mount door operator is preferred over a drawbar operator. The output shaft of the side-mount operator is connected to a cross-header shaft, which in turn is coupled to the drive shafts of two auxiliary trolley systems. Includes up to 12 ft. of track. For door operators utilizing #48 chain, typically 1/3 and 1/2 HP door operators, use model (65-9213). For 3/4 HP and higher door operators, use model (65-92131).

NOTES:

- Requires limits be reversed on operator when ordered with a Logic 5.0 Operator. When ordering with Mechanical Powerheads, the (M67) Reverse Limits Modification should also be ordered.
- Requires Delay-on-Reverse feature, which is standard with Logic 5.0 Operators. When ordered with Mechanical Powerheads, the (M60) Delay-on-Reverse Modification should also be ordered, see (Part II).
- Door width required when ordering.
- Indicate door height when ordering. For doors over 12 ft. high, add rail upcharge.

ADDITIONAL TRACK—Required for doors higher than 12 ft.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●					●	●		



M17 DUAL TROLLEY DRIVE MODIFICATION—#48 CHAIN AND #41 CHAIN (FIELD INSTALLED HARDWARE KIT)

65-5208 #48 Chain

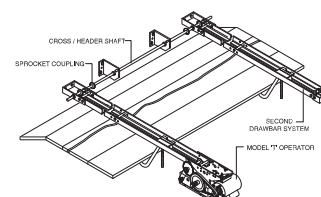
65-52081 #41 Chain

This model provides stabilization of drive system on very wide (over 22 ft.) standard lift sectional doors utilizing drawbar door operators. Will also greatly minimize the risk of damage to the top section of the door, which might otherwise occur on very wide doors driven by a single, centered drawbar system. The front idler pulley of the drawbar operator is replaced by a #48 sprocket, which acts as the drive for the second drawbar system. The two drawbar systems are coupled together by a cross-header shaft. Includes up to 12 ft. of track. For door operators utilizing #48 chain, typically 1/3 and 1/2 HP door operators, use model 65-5208. For 3/4 HP and higher and GT Door Operators, use model (65-52081).

NOTES:

- Door width required when ordering.
- Indicate door height when ordering. For doors over 12 ft. high, add rail upcharge.
- Requires Delay-on-Reverse feature, which is standard with Logic 5.0 Door Operators. When ordered with Mechanical Powerheads, the (M60) Delay-on-Reverse Modification should also be ordered. See Part II.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●											



MODIFICATIONS

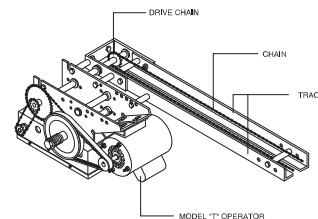
COMMERCIAL DOOR OPERATORS

LOGIC OPERATORS | POWER TRANSMISSION

M19 MINIMUM DEPTH MODIFICATION

65-5210

Allows the powerhead unit of a drawbar door operator to be mounted at the side of the rail instead of on the end. Reduces the overall length dimension of a standard drawbar door operator by 18 in. If used in conjunction with a Damp Environment Modification (M102) or Watertight/Oiltight Modification (M101), the overall length is reduced by only 12 in. For standard overall length dimension, refer to drawbar product sheet. **Must be factory installed.**



FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●												

M20 CENTER-MOUNT MODIFICATION FOR MODEL J (FIELD INSTALLED HARDWARE KIT)

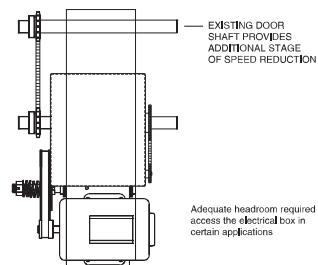
65-7001

An additional stage of speed reduction is provided in the door operator to reduce the output speed to 24 RPM. This allows the unit to be directly coupled in the center of the door shaft.

NOTE: Used only on sectional doors. Shaft coupling is not provided with this modification. Typically used with (M12) manual hoist modification.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●								



M21 CENTER-MOUNT MODIFICATION FOR MODEL GH

65-9001

Modifications to the chain hoist assembly allow the GH Door Operator to be vertically mounted over the center of the door shaft and the chain hoist to be rerouted to the side jamb. **Must be factory installed.**

NOTE: Used only on sectional doors and must be ordered right- or left-handed.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
											●		

M22 SLOW-SPEED DOOR MODIFICATION FOR MODELS T AND SD

65-5207

Required on belt drive drawbar or slide door operators to slow the door speed down from 1 ft./sec. to about 0.6 ft./sec. A third sprocket/chain reduction is provided in the powerhead. **Must be factory installed.**

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●											●	

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M23 SLOW-SPEED DOOR MODIFICATION FOR MODELS GT AND GSD

65-52071

Required on gear-reduced drawbar or slide door operators to slow the door speed down from 1 ft./sec. to 0.6 ft./sec. The speed reduction is achieved within secondary reduction of the door operator. The door operator powerhead is mounted in the normal manner. **Must be factory installed.**

NOTE: The slower door speed allows a proportional increase in door size for the same HP model. With this modification, a GT50 will operate the same size door as a GT75 will at normal speed.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		●											●

M24 HIGH-CYCLE MODIFICATION FOR MODEL T AND SD

65-5211

Helps to extend the life of 1/2 HP belt drive door operator that are used on doors where frequency of use is expected to be more than 100 cycles per day. Consists of heavy-duty roller bearings on all shafts and upgrades to #41 drive chain. **Must be factory installed.**

NOTE: Not necessary on gear-reduced operators. Not available on side-mount belt drive door operators.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●											●	



M25 ROLLER BEARING MODIFICATION FOR MODELS T AND SD

65-12729

Helps to extend the life of the drive system of T and SD Door Operators. Consists of heavy-duty roller bearings on both shafts in the operator frame. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●											●	

M26 ROLLER BEARING MODIFICATION FOR SLOW SPEED MODELS T, APT AND SD

65-5211A

Helps to extend the life of the drive system of slow speed T, APT and SD Door Operators. Consists of heavy-duty roller bearings on all 3 shafts in the operator frame. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●		●									●	

MODIFICATIONS

COMMERCIAL DOOR OPERATORS

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M27 ROLLER BEARING MODIFICATION FOR MODELS J AND H

65-124164-HL Model H Left Hand
 65-124164-HR Model H Right Hand
 65-124164-J Model J

Helps to extend the life of the drive system of belt drive side-mount door operators. Consists of heavy-duty roller bearings on all shafts. **Must be factory installed.**

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●					●			



M28 DUAL V-BELT MODIFICATION

65-5212

Provides a second belt to increase belt life and meet architectural specifications. **Must be factory installed.**

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●		●		●					●			



M29 EMERGENCY EGRESS MODIFICATION FLUSH HANDLE PANIC RELEASE (FIELD INSTALLED HARDWARE KIT)

02-515 15 ft. of Cable
 02-51530 30 ft. of Cable

Provides a public means for manual operation of a storefront grille. Attractive faceplate mounts flush on store wall and contains pull-handle to disconnect the door operator from the grille, thereby allowing the grille to be opened manually or by spring tension. Faceplate is silk-screened with user instructions. Comes with 15 ft. or 30 ft. of cable.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
				●	●	●		●					



M30 EMERGENCY EGRESS MODIFICATION EXTENDED HANDLE PANIC RELEASE (FIELD INSTALLED HARDWARE KIT)

02-516 15 ft. of Cable
 02-51630 30 ft. of Cable

Provides a public means for manual operation of a storefront grille. Attractive faceplate mounts flush on store wall and contains an EXTENDED pull-handle to disconnect the door operator from the grille, thereby allowing the grille to be opened manually or by spring tension. Faceplate is silk-screened with user instructions.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
				●	●	●		●					



LOGIC OPERATORS | POWER TRANSMISSION

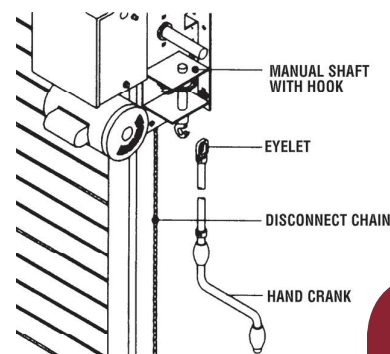
M31 HAND CRANK MODIFICATION FOR MODELS H AND DHJ

65-6202

Replaces operator hand chain wheel and chain with hook-and-eyelet connection for extended floor-level hand crank. In addition to door operator modification, crank and connecting hardware are provided. Requires 1/2 in. electrical conduit or pipe (not supplied) in a length sufficient to allow floor-level operation. **Must be factory installed.**

NOTE: Cannot be used if door operator is mounted horizontally.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
							●			●			



M32 HAND CRANK MODIFICATION (GH SERIES)

65-9201V

Vertically Mounted Operator

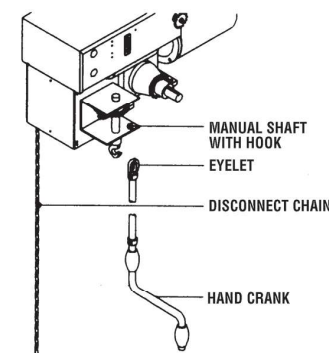
65-9201H

Horizontally Mounted Operator

Replaces operator hand chain wheel and chain with hook-and-eyelet connections for extended floor-level hand crank. In addition to door operator modification, crank and connecting hardware are provided. Requires 1/2 in. electrical conduit or pipe (not supplied) in a length sufficient to allow floor-level operation. **Must be factory installed.**

NOTE: Must specify vertical or horizontal mount at time of order. (Horizontal mount pictured.)

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
											●		



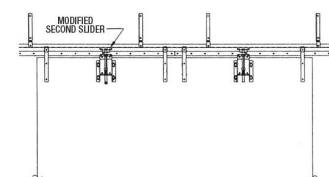
M33 BI-PART SLIDING DOOR MODIFICATION (FIELD INSTALLED HARDWARE KIT)

65-5501

Required on slide door operators where one door operator is used to open two bi-parting doors, one sliding left and the other sliding right to open. Includes a modified second slider and a second door bracket mechanism. Door operator powerhead is not affected. However, door operator horsepower must be selected using the area (in square feet) of the entire door opening. On narrow openings, it may be necessary to speed up the limit shaft for proper operation. Consult your LiftMaster® Sales Representative for additional cost.

NOTE: Overall width of door opening must be provided.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
												●	●

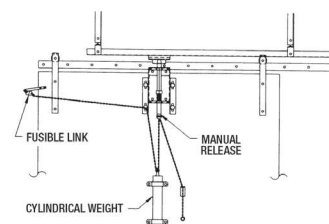


M34 FUSIBLE LINK MODIFICATION FOR SINGLE SLIDE DOOR (FIELD INSTALLED HARDWARE KIT)

65-5502

Used to mechanically release a sliding fire door from the door operator. A fusible link holds a cylindrical weight attached to the manual door release of a slide door operator. When the fusible link melts, the weight drops and releases the door. The door can then close by means of gravity (inclined track design) or by counterweight (by others). May not meet all building or regulatory codes; please consult your LiftMaster Sales Representative for additional specifications.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
												●	●



M35 FUSIBLE LINK MODIFICATION FOR BI-PARTING SLIDE DOOR

65-5503

Identical to (M34) except two release mechanisms are provided, one for each door of a bi-part sliding fire door.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
												●	●

M39 LIMIT AND SPROCKET MODIFICATIONS

Many applications require non-standard door speeds or limit travel. By changing the door, operator or limit sprockets supplied with a commercial door operator, we are able to adjust the speed at which a door opens and closes. Also, by modifying limit sprockets, larger doors that require longer limit travel may also be addressed. Most commonly requested limit modification is the (65-LIMIT18). Please consult your LiftMaster® Sales Representative with your specific application for pricing and specifications.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●	●	●	●	●	●			●	●	●	●

M40 DOOR-IN-MOTION CIRCUIT-LOGIC

90-MOTIONLADA Logic Operators with Horn/Strobe

The motion modification is to be used when the installation requires an ADA-compliant horn/strobe when door is in motion for Mechanical/Logic Door Operators. This is usually specification-driven. This provides 24VDC power when the operator is running. As only 10VA extra capacity has been provided for with the included transformer upgrade, the number of horn/strobe devices that can be connected is limited to one (1). Horn/Strobe (LMHS2475WPADA, white) included. **Must be factory installed.**

FOR USE WITH MODEL(S)

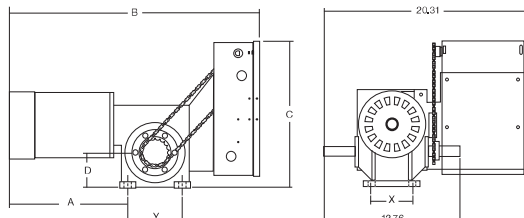
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●	●		●	●	●			●	●	●	●

M43 HORIZONTAL MOUNT MODIFICATION FOR GH

65-92021R	HORIZONTAL MOUNT 1 HP (RH)
65-92021L	HORIZONTAL MOUNT 1 HP (LH)
65-92021NR	HORIZONTAL MOUNT NEMA 4 1 HP (RH)
65-92021NL	HORIZONTAL MOUNT NEMA 4 1 HP (LH)
65-92022R	HORIZONTAL MOUNT 2 HP (RH)
65-92022L	HORIZONTAL MOUNT 2 HP (LH)
65-92022NR	HORIZONTAL MOUNT NEMA 4 2 HP (RH)
65-92022NL	HORIZONTAL MOUNT NEMA 4 2 HP (LH)

Note: Left (LH) and Right (RH) indicate the hoist and drive sprocket handing.

This modification alters the orientation of the electrical box on a GH Door Operator. This modification is used when the GH Door Operator is to be shelf mounted (motor and reducer are mounted horizontally instead of mounting vertically) and there will be insufficient room above the operator to access the electrical box. The electrical box orientation changes so that it faces into the room, instead of the ceiling, providing easy access.



DIMENSIONS

HP	Phase	Dimension			
		A	B	C	D
1/2	1	11.88	25.09	14.60	3.55
3/4	1	12.88	26.09	14.60	3.55
1	1	13.13	26.34	14.60	3.55
1 1/2	1	13.13	26.34	15.60	4.05
1/2	3	11.38	25.59	14.60	3.55
3/4	3	11.38	25.59	14.60	3.55
1	3	12.38	25.59	14.60	3.55
1 1/2	3	12.88	26.09	15.60	4.05
2	3	13.13	26.34	15.60	4.05

NOTES:

- Output Shaft: 1 in. dia. with 1/4 in. key for 1/2 through 1 HP door operators
1 3/16 in. dia. with 5/16 in. key for 1/2 through 1 1/2 and 2HP door operators
- Mounting Centers: X = 4 3/4 in. Y = 5 1/2 in. for 1/2 through 2 HP door operators
X = 3-17/32 in. Y = 9 1/16 in. for 3 HP door operators

LOGIC OPERATORS | POWER TRANSMISSION

M42 LIMIT AND SPROCKET MODIFICATIONS FOR MEDIUM-DUTY LOGIC

65-LIMIT16

Alternative limit sprocket with 16 teeth in lieu of 9-tooth sprocket. Many applications require non-standard door speeds or limit travel. By modifying limit sprockets, larger doors that require longer limit travel may also be addressed. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
				■				■	■				

M47 NON-RESETTABLE COUNTER MODIFICATION FOR MEDIUM-DUTY LOGIC

90-503000ML

71-503000ML

Non-Resettable Counter Field Kit

A 6-digit non-resettable 24VAC electromechanical counter is mounted in the door operator control enclosure. The device counts the number of times the CLOSE coil is energized (M wiring) or whenever the operator reaches an auxiliary open limit switch (medium-duty wiring). This corresponds to the number of complete door cycles of use (counts both partial or complete cycles as one cycle).

This modification, when combined with other modifications, may not fit inside a standard door operator's electrical box and an upgraded electrical enclosure may be required. Consult your LiftMaster® Sales Representative if you have any questions or if the door operator has 120V control circuits. **May be factory or field installed.** To order a kit for field installation on an existing door operator, use kit part number shown.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
●	●	●	●	●	●	●	●	●	●	●	●	●	■

M48 INTERFACE HARNESS FOR AFCB RELEASE DEVICE FOR MEDIUM-DUTY LOGIC

90-MLAFCB

Provides a point-to-point interface for connecting a Medium-Duty Logic Door Operator to the LM21AFCB fire door release mechanism. Consult your LiftMaster Sales Representative if you have any questions. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
■				■				■	■				

M49 SINGLE-BUTTON CONTROL FOR MEDIUM-DUTY LOGIC

90-MLSBC

71-MLSBC

Single-Button Control Field Kit

This modification kit provides an additional input for single-button control functionality. The input will function as a CLOSE input when the door operator is stopped at the OPEN limit. The input will function as an OPEN input at all other times. Required on Medium-Duty Logic Door Operators for single-button control with external radio receivers. **Recommended factory installed, but field modification kits are available.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
■				■					■				

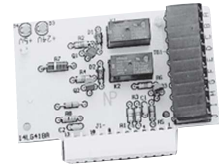
MODIFICATIONS

COMMERCIAL DOOR OPERATORS

LOGIC OPERATORS | POWER TRANSMISSION

M51 AUXILIARY CONTACT OPTION BOARD AUXCARD

Provides additional contacts for and control of auxiliary devices such as external heaters, security devices or warning devices (5V to 240VAC).



M52 TIMER LIGHT STATUS OPTION CARD TLS1CARD

Works in conjunction with Logic 4.0 and Logic 5.0 to provide seven DIP switch, field-selectable modifications, including six door traffic control options and a means to connect external OPEN and CLOSE limits. Traffic control light ordered separately (RGL24LY).



M62 AUXILIARY LIMIT SWITCH—WIRE LEADS

90-9210MOC OPEN and CLOSE
K90-9210M2L5 Field Kit (Two Switches)

Provides two limit switches, for use by others, to control auxiliary devices such as lights, heaters, dock levelers or other equipment. The switches can be used to turn on or off such equipment when the door is fully opened or fully closed. Each switch is SPDT (form C), is rated 10 Amps at 125/250VAC and is provided with three wire leads for wire nut connection to the field wiring. **Recommended factory installed, but field modification kits are available.** Not available with the Hazardous Area Modification (M105) or Variable Speed Modification (M37).

NOTE: This modification is available for both Logic Door Operators and Mechanical Powerheads.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
●	●	●	●	●	●	●	●	●	●	●	●	●	●

M63 AUXILIARY LIMIT SWITCHES—TERMINAL BLOCK CONNECTIONS

90-9210MTOC OPEN and CLOSE
K90-9210MT2L5 Field Kit (Two Switches)

Same as (M62) except terminal block connection points instead of wire leads are provided for field wiring. **Recommended factory installed, but field modification kits are available.** Not available with Hazardous Area Modification (M105) or Variable Speed (M37) Modifications. This modification, when combined with other modifications, may not fit inside a standard door operator's electrical box, and an upgraded electrical enclosure may be required.

NOTE: This modification is available for both Logic Door Operators and Mechanical Powerheads (see Part II).

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
●	●	●	●	●	●	●	●	●	●	●	●	●	●

M66 TWO-DOOR INTERLOCK SYSTEM (AIRLOCK)

Formerly ordered as 65-ID, order M62 or M63

Used for two-door systems when only one door can be open at a time, as in a security application such as a sally port. Provides a limit switch and terminals in the door operator for interdependent operation; one door will not electrically operate unless the other door is closed. Requires four wires between the two door operators. This modification must be added to each operator of the pair. If the interconnection wires will be over 50 feet long, please consult the factory. If more than two doors are to be interlocked, please consult your LiftMaster® Sales Representative. **Recommended factory installed, but field modification kits are available.**

NOTE: This modification is available for both Logic Door Operators and Mechanical Powerheads. (see Part II).

LOGIC OPERATORS | POWER TRANSMISSION

M67 REVERSE LIMITS

90-RL

In this modification, the OPEN and CLOSE limit switches are physically interchanged and the motor rotation is reversed. This modification is necessary if the door operator will have to run in the opposite direction from normal operation, such as in a through-the-wall installation, on certain rolling fire doors or if the door operator is mounted upside down. **If necessary, this modification may be performed in the field, but it is not recommended due to the likelihood of disrupting the control wiring.**

NOTE: This modification may be ordered for Logic 5.0 Door Operators, Medium-Duty Logic and Mechanical Powerheads. For Logic 5.0 Operators, the safety limit switch will be reversed and the motor direction switch on the Logic 5.0 board will be set to reverse. For Medium-Duty Logic and Mechanical Powerhead Door Operators, all three limit switches (OPEN, CLOSE and SAFETY) and the motor wiring will be reversed.

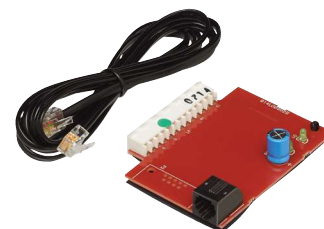
FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
●	●	●	●	●	●			●	●	●	●	●	●

M69 FDR PLUG-IN OPTION CARD

FDRCARD

For use in conjunction with the LiftMaster® Logic 5.0 Door Operator. The FDRCARD facilitates field connections between the release device and the door operator by reducing the standard 10-wire interconnection to the basic 4-wire phone card. Both the FDRCARD and the LM21AFCB (purchased through manufacturers of fire doors) are equipped with an RJ-11 phone jack as standard to accept the phone cord.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
					●	●	●			●	●		



M70 NON-RESETTABLE COUNTER MODIFICATION

90-503000

71-90503000L5 Non-Resettable Counter Field Kit

A 6-digit non-resettable 24VAC counter is mounted in the door operator control enclosure. The device counts the number of times the operator reaches an auxiliary OPEN limit switch (Logic 5.0 wiring) or whenever the CLOSE coil is energized (M wiring). This corresponds to the number of complete door cycles of use (counts both partial and complete cycles as one cycle).

This modification, when combined with other modifications, may not fit inside a standard door operator's electrical box and an upgraded electrical enclosure may be required. Consult your LiftMaster Sales Representative if you have any questions or if the operator has 120V control circuits. Not available with Hazardous Area Modification (M105). **Recommended factory installed, but field kits are available.**

NOTE: This modification is available for both Logic Door Operators and Mechanical Powerheads (see Part II).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●	●		●	●	●			●	●	●	●



MODIFICATIONS

COMMERCIAL DOOR OPERATORS

LOGIC OPERATORS | POWER TRANSMISSION

M71 40VA TRANSFORMER MODIFICATION

90-2140VAL

Upgrades the transformer in the door operator from 20VA to 40VA. This modification allows for additional control circuit power for auxiliary equipment such as loop detectors and other devices. For use on Logic 5.0 single-phase operators, utilize Model 71-40VA1PH; for use on Logic 5.0 three-phase operators, utilize Model 71-40VA3PH.

NOTE: A 40VA transformer is standard on 575V models only.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●	●		●	●	●			●	●	●	●

M100 TEFC MOTOR (TOTALLY ENCLOSED, FAN COOLED)

65-20

A standard door operator is supplied with an ODP (Open, Drip-Proof) Motor. The TEFC modification replaces the ODP Motor with a fully enclosed motor for applications where the door operator is expected to be located in a harsh environment (moisture, spray, flying particles, dirt). A fan is attached to the back of the motor for cooling purposes but is not enclosed itself. **Must be factory installed.**

NOTE: This modification is typically sufficient to satisfy specifications that call for a TENV (Totally Enclosed, Non-Ventilated) Motor. Consult your LiftMaster® Sales Representative for assistance.

NOTE: (M100) TEFC Motor and (M101) Watertight/Oiltight Control Enclosure Only are not offered as paired modifications. If both modifications are required, please order (M102) Damp Environment Modification.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●			●	●	●			●	●	●	●

M101 WATERTIGHT/OILTIGHT CONTROL ENCLOSURE ONLY

65-9206

In this modification, all electrical control equipment on the door operator is enclosed in a Watertight/Oiltight Control Enclosure. If the door operator is supplied with a solenoid brake, the solenoid itself is not considered part of the electrical control equipment (it has no electrical contact points) and is therefore supplied in a general-purpose enclosure only. If a separate wall-mounted starter is required to meet application specifications or environmental conditions, this modification may be required to enclose door operator limits and interlock switches. In this case, please add both the wall-mounted starter and (M101) Modification to the base door operator list price. **Must be factory installed.** This modification does not affect the standard Open Drip-Proof (ODP) Motor.

NOTE: The price for this modification does not include Watertight/Oiltight Enclosures for push-button stations or other similar remote control stations.

NOTE: (M100) TEFC Motor and (M101) Watertight/Oiltight Control Enclosure Only are not offered as paired modifications. If both modifications are required, please order the (M102) Damp Environment Modification.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●			●					●	●	●	●



LOGIC OPERATORS | POWER TRANSMISSION

M102 DAMP ENVIRONMENT MODIFICATION*

C Model No.

Provides a TEFC Motor (M100), Watertight/Oiltight Control Enclosure (M101), Watertight/Oiltight 3-Button Control Station and nickel-plated chain in place of all standard roller chains on the door operator. **Must be factory installed.**

NOTE: When ordering this modification, the solenoid brake is removed, except when used with Gearhead Operators.

NOTE: All door operators with this modification include the price of NEMA 4 rated photo eyes. If an Optical Edge System (OES) is ordered in place of photo eyes, an upcharge will be added. Specify your choice of safety device at the time of order entry.

- Not available on 1/3 HP.

*Formerly known as Carwash Modification.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
	●	●			●					●	●		●

M103 WATERTIGHT/OILTIGHT/DUST-TIGHT MODIFICATION (NEMA 4, 12)

N4 Model No.

Provides more complete protection against water spray, oil and other fluids than the Damp Environment Modification (M102). Includes a TEFC Motor (M100), Watertight/Oiltight Control Enclosure (M101), Watertight/Oiltight 3-Button Control Station, nickel-plated chain and a Dynamic Brake replacing the solenoid brake. See (M5) Dynamic Brake Modification for a description of this brake. This allows the brake to also be contained in a Watertight/Oiltight Enclosure. A Delay-on-Reverse Circuit (M60) is included with this modification. **Must be factory installed.**

IMPORTANT: Must identify handing of drive sprocket and hoist.

NOTE: All door operators with this modification include CPS-UN4 Photo Eyes. If an Edge Interface Device is ordered in place of a CPS-UN4, a list price reduction will occur. Specify your choice of safety device at the time of order entry.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		●									●		●

M104 CORROSION-RESISTANT MODIFICATION (NEMA 4X)

N4X Model No.

Provides Watertight/Oiltight and corrosion-resistant components wherever possible on the door operator. Includes a Wash Down or Dirty Duty motor which is far superior to a TEFC Motor in highly corrosive environments. Also includes NEMA 4X rated operator control enclosure, NEMA 4X rated 3-button control station, Dynamic Brake (M5), Delay-on-Reverse Circuit (M60), nickel-plated chain and corrosion-resistant coating on other door operator components wherever possible. **Must be factory installed.**

IMPORTANT: Must identify handing of drive sprocket and hoist.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		●									●		●

NOTE: Recommend stainless steel hand chain and sash chain for highly corrosive environments.

65-SSHAND	34 ft. Hand Chain—Stainless Steel
65-SSHAND46	46 ft. Hand Chain—Stainless Steel
65-SSSASH	12 ft. Sash Chain—Stainless Steel

Consult your LiftMaster® Sales Representative for stainless steel chain pricing.



DOOR OPERATOR MODIFICATIONS

Part II references the Variable Speed door operators, NEMA 7/9 rated door operators and a select group of GH and GT Mechanical (contactor-style) Powerhead units that may be used in conjunction only with Wall Mount Starter and Combination Reversing Starter panels. The modifications noted in Part II are available only in conjunction with the panels and powerhead units, as noted.

The separate starter modifications provide a wall-mountable enclosure designed to house all electrical control equipment not integral to the powerhead. These modifications are required to meet certain architectural specifications, or when it is not possible to fit optional components into the standard operator-mounted electrical enclosure.

The modifications in this section are based upon ordering the separate starter with a Mechanical Powerhead. If you require a starter without a powerhead, please consult your LiftMaster® Sales Representative for proper pricing and application assistance. Also, modifications (M152, M153 and M155) apply to powerheads that include one of the following separate starter modifications, (M131–M147). (M154) applies to powerheads that include one of the following separate starter modifications, (M148–M150).

In most cases, the Wall-Mounted Starter will contain the transformer(s), control relays and other optional components wired to terminals inside the enclosure. The motor, limit assembly and limit switches, internal interlock switch and solenoid brake often remain on the door operator or in the door operator electrical box.

Except for the (M130) modification, the separate starters have the electrical components mounted on a removable subpanel for easy maintenance. Terminal points are provided for the field wiring between the powerhead and the wall starter. Wiring for all control stations and safety equipment is intended to be located on terminals within the separate starter.

Note: All Wall-Mount Starter and Combination Reversing Starter Panels, (M106–M107) and (M130–M155), may be ordered with or without a UL 508 label. Pricing shown for these panels assumes non-UL-labeled product. Contact your LiftMaster Sales Representative for a quote on the UL 508 labeled panel.

Available Powerhead Units

All powerhead units listed below are Mechanical (contactor-style) Powerhead units. All modifications that follow are for use in conjunction with a starter panel and powerhead unit only and are not applicable to Logic 5.0 Door Operators. As noted, all powerhead units shown below must be used in conjunction with a starter panel and are not intended for separate purchase.

To calculate an overall list price, add together the individual list prices for the appropriate starter panel, powerhead unit and applicable modifications. For assistance, please contact your LiftMaster Sales Representative.

AVAILABLE POWERHEAD UNITS

Model	Volts	Phase	Hz
GH5011M	115	1	60
GH5021M	230	1	60
GH5023M	208/230	3	60
GH5043M	460	3	60
GH5053M	575	3	60
GH1011M	115	1	60
GH1021M	230	1	60
GH1023M	208/230	3	60
GH1043M	460	3	60
GH1053M	575	3	60
GH2023M	208/230	3	60
GH2043M	460	3	60
GH2053M	575	3	60
GH3023M	208/230	3	60
GH3043M	460	3	60
GH3053M	575	3	60
GT5011M	115	1	60
GT5021M	230	1	60
GT5023M	208/230	3	60
GT5043M	460	3	60
GT5053M	575	3	60
GT1511M	115	1	60
GT1521M	230	1	60
GT1523M	208/230	3	60
GT1543M	460	3	60
GT1553M	575	3	60

NOTE: 3/4 HP motors are available on M37 (Variable Speed) and M105 (Hazardous Area) modification applications.

MECHANICAL POWERHEADS | STARTER PANELS

M5 DYNAMIC BRAKE MODIFICATION

90-9214

Provides active electrical braking in the form of DC current to stop the motor. Acts as a stopping brake only, not a holding brake.

This modification is considered most useful on gear-reduced door operators (GT, GH) where the gear reducer may help act as a holding brake or where a solenoid brake is not desired. It is also recommended for use when extremely high braking requirements are anticipated. May be used in conjunction with a solenoid brake. Normally provided in a separate wall-mounted enclosure to be mounted near, and field connected to the door operator. A dynamic brake is standard on NEMA 4, 12 rated (M103), NEMA 4X rated (M104), NEMA 7/9 rated (M105) and Variable Speed (M37) modifications, and includes a Delay-on-Reverse Circuit (M60). Because of space requirements, this modification cannot be used with many options without also adding a Wall-Mounted Starter. **Must be factory installed.** Starter panel modification only.

NOTE: See NEMA 4 rated modifications for Logic 5.0 options.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M37 VARIABLE SPEED MODIFICATION

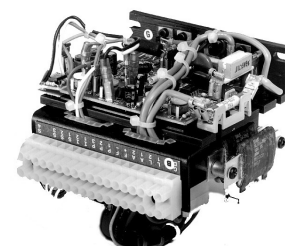
V Model No.

Replaces AC motor and control circuit in a door operator with a DC variable speed drive control and permanent magnet DC motor. May be supplied for either 115VAC 1Ø or 230VAC 1Ø power. Allows adjustment of door speed over a wide range; consult your LiftMaster® Sales Representative for specific applications. Dual-speed applications may be possible with faster open cycle and slower close cycle. Must consult your LiftMaster Sales Representative for specific applications and additional costs for this added feature. Acceleration adjustment gives “ramp up” or soft starts to allow operation of very heavy doors. Dynamic brake and current limit circuits replace mechanical brake and clutch respectively, minimizing the number of moving parts that may wear out. Suitable for continuous-duty and high-cycling applications. Please note that this modification will usually affect the horsepower selection for a given model. Higher speeds require higher horsepower for the same door. Consult your LiftMaster Sales Representative for specific horsepower rating information on your application. Not for use on Logic 5.0 Door Operators; Mechanical Operators only.

WARNING: Safety equipment must be used with door operators employing this modification (see CDO Accessories Section).

NOTE: Not available in conjunction with any Hazardous Area Modification (M105), on any door operator above 1 HP or on any door operator requiring 3-phase power. Specify door speed when ordering. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		■



MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MECHANICAL POWERHEADS | STARTER PANELS

M38 DECELERATION AT FULL OPEN/ CLOSE

90-827

Available only on door operators with Variable Speed Modification (M37). Provides an adjustable "ramp down" or soft stop at the full-open and full-close position. Recommended on very heavy doors, doors requiring speeds faster than normal or where high door usage is expected. Consult your LiftMaster Sales Representative for recommendations for your application. **Must be factory installed.**

Many applications require non-standard door speeds or limit travel. By changing the door, operator or limit sprockets supplied with a commercial door operator, we are able to adjust the speed at which a door opens and closes. Also, by modifying limit sprockets, larger doors that require longer limit travel may also be addressed. Please consult your LiftMaster Sales Representative with your specific application for pricing and specifications. Not for use on Logic 5.0 Door Operators; mechanical operators only.

NOTE: Door will not "ramp down" when using STOP button or reversed in mid-travel.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		■

M40 DOOR-IN-MOTION CIRCUIT— MECHANICAL

90-MOTIONMADA Mechanical Operators with Horn/Strobe

This modification is to be used when the installation requires an ADA-compliant horn/ strobe when door is in motion for Mechanical/Logic Door Operators. This is usually specification driven. This provides 24VDC power when the door operator is running. As only 10VA extra capacity has been provided for with the transformer upgrade, the number of horn/strobe devices that can be connected is limited to one (1). Horn/Strobe (29-17906, white) included. Starter panel modification only. **Must Be Factory Installed.**

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M41 DOOR-IN-MOTION CIRCUIT

90-MOTION

The 90-MOTION modification provides two auxiliary contact blocks and a 3-position terminal block to power an auxiliary device while the door is in motion. Auxiliary device and power supplied by others. Starter panel modification only.

NOTE: For Logic 5.0, utilize AUXCARD.

NOTE: T, TS, D1, E2 and F2 wiring types are standard features on Logic 5.0 Door Operators.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M53 TS WIRING TYPE (TIMER SECURE)

90-TS

Momentary contact to open, close and stop, with Open Override and Timer-to-Close. The timer is easily adjustable in 1-second increments from 1 second to 17 minutes via DIP switches. Every momentary contact (OPEN, CLOSE and STOP) that causes the door to open will activate Timer-to-Close, including sensing devices to reverse. Timer may be deactivated permanently by use of an optional Timer Defeat Switch (50402). Starter panel modification only.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M54 T WIRING TYPE

90-T

Momentary contact to open, close and stop, with Open Override and Timer-to-Close. OPEN button may be connected to activate timer, if desired. Auxiliary controls may be connected to open and activate Timer-to-Close, or to open and close without activating timer. If timer has been activated, all opening devices will recycle timer. Timer may be deactivated permanently by use of an optional Timer Defeat Switch (50402). Includes wiring for sensing devices to reverse but not reactivate timer. Starter panel modification only.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M55 T1 WIRING TYPE

90-T1

Will function the same as TS wiring above. Also provides a second set of contact points for A/V devices. Has the ability to provide a 9-second pre-warning before timed door closure. Starter panel modification only.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M56 T2 WIRING TYPE

90-T2

Same as T1, but gives the ability to isolate the OPEN button station, allowing a transmitter to cycle the timer, while another OPEN device would not. Starter panel modification only.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

MECHANICAL POWERHEADS | STARTER PANELS

M57 D1 WIRING TYPE

90-D1

Constant contact to open and close with the wiring for sensing device to stop. If a safety edge will be used, it should be an electric edge so that the door cannot restart in the close direction if the edge is obstructed. Starter panel modification only.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M58 E2 WIRING TYPE

90-E2

Momentary contact to open with Open Override and constant contact to close. Release of the CLOSE button will cause the door to reverse (roll-back feature) plus wiring for sensing device to reverse. A 2-button NEMA 1 rated control station is included. Starter panel modification only.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M59 F2 WIRING TYPE

90-F2

Required for use with 4-wire "fail-safe" type electrical edges on mechanical door operators. **Must be factory installed.** Not for use on Logic 5.0 Door Operators; starter panel modification only.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M60 DELAY-ON-REVERSE MODIFICATION

90-92061

Factory Installed 1 Delay Reverse Kit for 1Ø Operators

90-92063

Factory Installed 3 Delay Reverse Kit for 3Ø Operators

71-9092061

Delay Reverse Field Kit for 1Ø Operators

71-9092063

Delay Reverse Field Kit for 3Ø Operators

Modifies door operator control circuit so that the door must stop for one second before reversing or restarting, in either direction. Prevents shock loading of the door and operator, resulting in longer life. Recommended for heavy doors and where frequent reversing may be expected due to high usage. **May be factory or field installed.** To order a kit for field installation on an existing operator, use the kit part number shown. Starter panel modification only; standard feature on Logic 5.0 Door Operators.

NOTE: Required for (M15) Dual Auxiliary Modification and (M17) Dual Trolley Drive Modification.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M61 MID-STOP MODIFICATION

90-9207M

71-909207

Mid-Stop Field Kit

Provides a limit switch for stopping the door at a field adjustable, preset mid-position while opening. For field installation, use the kit part number shown. Not available with the Hazardous Area (M105) or Variable Speed (M37) Modifications. When modification is combined with a Timer-to-Close, please consult your LiftMaster® Sales Representative. Override of the mid-stop is possible by constant pressure on the OPEN button. Door will not stop at mid-stop when closing. Will not work with single-button radio control.

May be factory or field installed. To order a kit for field installation on an existing door operator, use the kit part number shown. Not available with Hazardous Area (M105) or Variable Speed (M37) Modifications. Starter panel modification only; standard feature on Logic 5.0 Door Operators.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MECHANICAL POWERHEADS | STARTER PANELS

M64 AUXILIARY CONTACT BLOCK WITH WIRE LEADS, K LINE 90-78002K

Provides additional contacts on the reversing contactor to control auxiliary devices such as lights or audible devices that are to be on or off when the door is moving in a particular direction. A maximum of two contact blocks can be supplied, one on the OPEN cycle and one on the CLOSE cycle. Each contact block has one normally OPEN (form A) and one normally CLOSED (form B) contact that can be used independently or paired to make a form C contact and is rated 10 Amps at 125/250VAC. Four wire leads are provided for wire nut connection to the field wiring. When ordering, specify whether the contact block will be on the OPEN or the CLOSE side of the contactor. **Must be factory installed.** Consult your LiftMaster® Sales Representative for field modification kits. Not available with Hazardous Area (M105), Dynamic Brake (M5) or Variable Speed (M37) Modifications. Starter panel modification only. Not for use with Logic 5.0 Door Operators; use (M51) modification instead.

FOR USE WITH MODEL(S)												
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	GSD
		■									■	

M65 AUXILIARY CONTACT BLOCK TERMINAL BLOCK CONNECTIONS, K LINE 90-78002KT

Same as (M64) except terminal block connection points instead of wire leads are provided for field wiring. **Must be factory installed.** Not available with Hazardous Area (M105) or Variable Speed (M37) Modifications.

This modification, when combined with other modifications, may not fit inside a standard door operator's electrical box and an upgraded electrical enclosure may be required. Consult your LiftMaster Sales Representative if you have any questions. Starter panel modification only. Not for use with Logic 5.0 Operators; use (M51) modification instead.

FOR USE WITH MODEL(S)												
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	GSD
		■									■	

M68 LONG-DISTANCE WIRING (24VAC)

90-5024

50-24 Long-Distance Wiring Kit Field Kit (24VAC)

A necessity when controls are to be located more than 100 ft. from the door operator. Allows up to 1,000 ft. of control wiring between controls and door operator with 16-gauge wire. **May be factory or field installed.** When not ordered at the same time as the door operator, use the kit part number shown. Not necessary or available with Hazardous Area (M105) or Variable Speed (M37) Modifications. Starter panel modification only; not required for Logic 5.0 Door Operators.

NOTE: Not necessary on Logic Door Operators. Logic Controls are rated for 1,000 ft. control runs utilizing 18-gauge wire.

WARNING: It is strongly recommended that all controls be located so that the person operating the control has a clear view of the door opening and the moving door.

FOR USE WITH MODEL(S)												
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	GSD
		■									■	

M72 ELECTRICALLY INTERLOCKED CONTACTOR

90-EI

Additional control circuit components are supplied with this modification to prevent the OPEN coil of the reversing contactor from being electrically energized when the CLOSE coil is held in, and vice versa.

NOTE: Since the reversing contactor is mechanically interlocked as a matter of standard procedure, this modification is necessary only to meet certain stringent architectural specifications. **Must be factory installed.** Starter panel modification only; not available for Logic 5.0 Door Operators.

FOR USE WITH MODEL(S)												
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	GSD
	■	■			■					■	■	■

MECHANICAL POWERHEADS | STARTER PANELS

M76 COURTESY LIGHT MODIFICATION—STANDARD OPERATOR 90-54029

Provides a light socket on the door operator control enclosure. The light will turn on when the door starts to open and remains on for several minutes via the thermal switch. Similar to the courtesy light in a standard residential garage door opener. Accepts up to a 100-watt bulb that is not included and requires a separate 115V power supply for the light if the door operator is not a 115V unit. The light delay is not adjustable and is affected by the temperature. Average time light stays on is approximately 90 seconds. **May be factory or field installed.** To order a kit for field installation, use (71-2954029), Starter panel modification only; not available for Logic 5.0 Door Operators or Hazardous Area Modification (M105).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■			■	■	■			■	■	■	■

M105 HAZARDOUS AREA MODIFICATION (NEMA 7/9)— WALL-MOUNT VERSION

IMPORTANT NOTE: Chamberlain®/LiftMaster® does not have third-party regulatory listing or certification for the complete electric operator with this Hazardous Area Modification. Ask your LiftMaster Sales Representative for the LiftMaster Positional Document for "Hazardous Area Modification. The Use of Intrinsically Safe Control Circuits."

N7 Model No.

Modifies a door operator to meet specifications for hazardous locations defined by NEC Article 501, Class I, Divisions 1 and 2, Group D, and Article 502, Class II, Divisions 1 and 2, Groups F and G. The modification includes a hazardous area motor and separate Wall Mount Starter with intrinsically safe control circuit. Since the control circuit is intrinsically safe, control circuit components (limit switches, control station) are housed in general-purpose enclosures in accordance with NEC Article 504. A Dynamic Brake and Delay-on-Reverse Circuit are included with this modification. No friction clutch or solenoid brake is supplied on any door operator with this modification.

The door operator must be factory supplied with this modification, not field modified. Specific NEC Article 501 and 502 specifications are required when ordering this modification. This modification comes wired B2; if another application is required, please consult your LiftMaster Sales Representative.

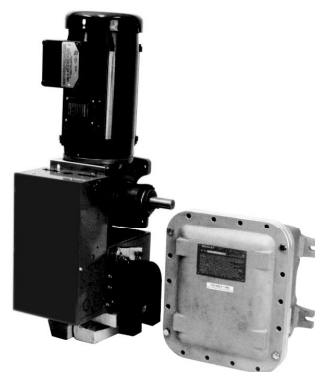
NOTE: This modification is not compatible with many other modifications and accessories, such as photo eyes, auxiliary limits and radio controls. Typically used accessories include 2-Wire Electric Edges, Pneumatic Edges, 3-Button Stations and Door Interlocks. Please consult your LiftMaster Sales Representative if you have any questions regarding compatibility.

Hazardous Area Modification for 3 HP GH requires an additional price premium; not available on 5 HP.

90 Group C Motor Upgrade

This modification provides a NEMA 7/9 rated motor for Class 1, Division 1, Group C environments in lieu of the standard motor provided on the NEMA 7/9 rated door operators, which are rated for Class I, Division 1, Group D and Class II, Division 1, Groups F and G.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MECHANICAL POWERHEADS | STARTER PANELS

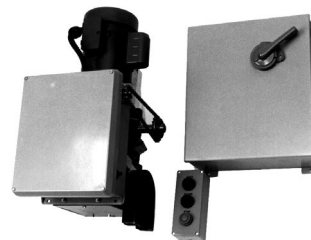
M106 JIC SPECIFICATIONS MODIFICATION

90-9204

Modifies a door operator to generally meet JIC (Joint Industry Conference) specifications for electrical equipment in industrial locations (some minor exceptions are taken). Includes a TEFC Motor, Oiltight/Dust-Tight Rotary Limit Switches, Oiltight/Dust-Tight 3-Button Control Station and a separate wall-mounted Combination Reversing Starter. The starter is an industrial size 1 with a Fusible Disconnect Switch in a NEMA 12 rated enclosure. The control circuit is 115VAC and the door operator supply voltage is available on 115V, 230V or 460V 1Ø and 3Ø operators. **Must be factory installed.**

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



M107 AUTOMOTIVE SPECIFICATIONS MODIFICATION (FORMERLY GM SPECIFICATIONS MODIFICATION)

90-9212

90-921214

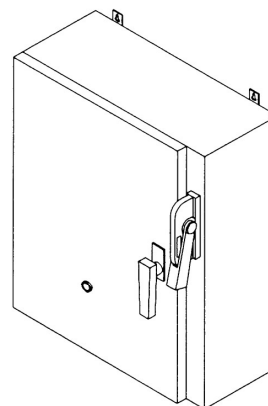
Includes 14-Gauge Tagged and Numbered Wire

Modifies a door operator to generally meet GM (General Motors) specifications for electrical equipment in industrial locations (some minor exceptions are taken). Includes a LiftMaster® stock totally enclosed motor, NEMA 12 rated Rotary Limit Switches, NEMA 12 rated 3-Button Control Station and a separate wall-mounted Combination Reversing Starter. The starter is a NEMA size 1 with a Fusible Disconnect Switch (flange-mount type) in a NEMA 12 rated enclosure and a 120VAC control circuit. **Must be factory installed.**

NOTE: Available on 460VAC 3Ø door operators only. Consult your LiftMaster Sales Representative for availability on other voltages.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



M108 SELF-REGULATING HEATER, 115V (PLUG TYPE)

65-30121

For 2 and 3 HP GH Operators

65-301212

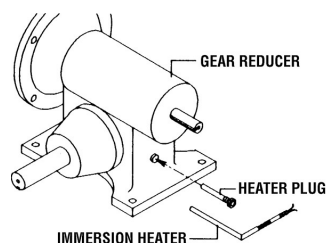
For 1/2 and 1 HP GH Operators. (Includes required upgraded gear reducer)

An immersion heater is inserted in the drain opening of the gear reducer. Heater is self-regulating and keeps gear oil warm to prevent sluggish operation or overloading in cold weather. Heater will shut off above 45F°. Requires 115V power. For door operators requiring 208V, 230V and 460V, a transformer kit (90-TRNSFRMR-2), enclosed in a separate box, is available. For 575V door operators, order the (90-TRNSFRMR-5). **Plug type gear reducer heater must be factory installed.**

NOTE: Starter Panel and Mechanical Powerhead modification only. Contact your LiftMaster Sales Representative for availability on Logic 5.0 Door Operators.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
											■		



M109, FORMERLY SELF-REGULATING HEATER, 230/460V (PLUG TYPE)

Formerly ordered as (65-30122) or (65-201222). Order (M108) and separate transformer kit to supply 115V to the heater.

MECHANICAL POWERHEADS | STARTER PANELS

M130 WALL MOUNT STARTER, NEMA 1 SCREW COVER ENCLOSURE

90-3001

The enclosure for this modification is a wall-mounted version of the standard door operator electrical box rated for NEMA 1 rated applications. All electrical components correspond to standard parts from associated door operator (no upgrades included). **Must be factory supplied.** See below for enclosure variations.

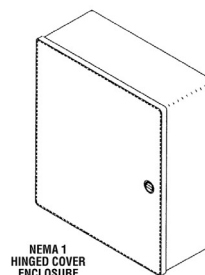
FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M131 WALL MOUNT STARTER, NEMA 1 HINGED COVER ENCLOSURE

90-3002

Identical to (M130) except NEMA 1 rated screw cover enclosure is replaced with a NEMA 1 rated hinged cover enclosure. The starter itself is an industrial size 0 but may be upgraded to a size 1 see (M153) and the control transformer is rated 50VA but may be upgraded to 100VA see (M155).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

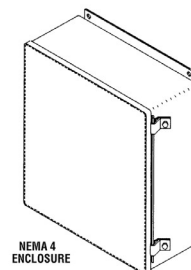


M132 WALL MOUNT STARTER, NEMA 4 HINGED COVER ENCLOSURE

90-3004

Identical to (M131) except NEMA 1 rated hinged cover enclosure is replaced with a NEMA 4 rated hinged cover enclosure.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

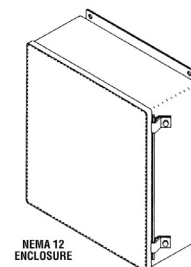


M132A WALL MOUNT STARTER, NEMA 12 HINGED COVER ENCLOSURE

90-3012

Identical to (M131) except NEMA 1 rated hinged cover enclosure is replaced with a NEMA 12 rated hinged cover enclosure.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



MODIFICATIONS

COMMERCIAL DOOR OPERATORS

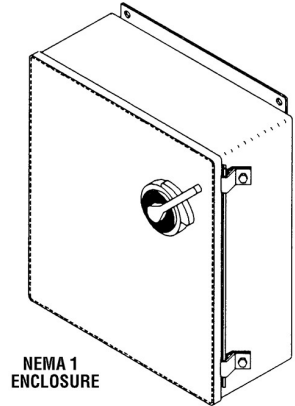
MECHANICAL POWERHEADS | STARTER PANELS

M133 COMBINATION REVERSING STARTER SIZE 0, NON-FUSIBLE DISCONNECT SWITCH (NFDS), NEMA 1 ENCLOSURE 90-6002

This Combination Reversing Starter modification provides for a Non-Fusible Disconnect Switch (NFDS) with external handle, which shuts off the power to the starter and door operator when the cover is opened. The starter and other optional components are prewired to terminals in the wall-mountable enclosure. The starter itself is an industrial size 0 but may be upgraded to a size 1 see (M153) and the control transformer is rated 50VA but may be upgraded to 100VA see (M155). Terminal points are provided both for the inter-wiring between door operator/starter and for the connection of control stations and safety equipment. Price includes an automatically resettable overload relay which may be converted to manual reset, but cover of starter must be opened to reset. For external manually resettable overload see (M152). **This modification must be factory supplied.** See below for enclosure variations.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



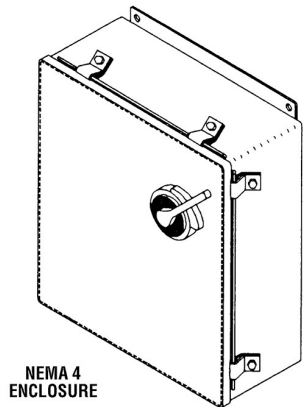
NEMA 1 ENCLOSURE

M134 COMBINATION REVERSING STARTER SIZE 0, NFDS, NEMA 4 ENCLOSURE 90-6004

Identical to (M133) except NEMA 1 rated enclosure is replaced with a NEMA 4 rated enclosure.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



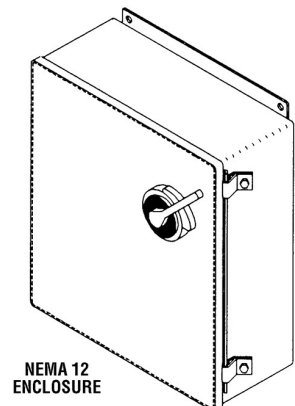
NEMA 4 ENCLOSURE

M135 COMBINATION REVERSING STARTER SIZE 0, NFDS, NEMA 12 ENCLOSURE 90-6012

Identical to (M133) except NEMA 1 rated enclosure is replaced with a NEMA 12 rated enclosure.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



NEMA 12 ENCLOSURE

MECHANICAL POWERHEADS | STARTER PANELS

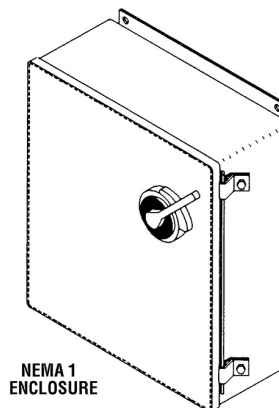
M136 COMBINATION REVERSING STARTER SIZE 0, FUSIBLE DISCONNECT SWITCH (FDS), NEMA 1 ENCLOSURE

90-7001

This Combination Reversing Starter modification provides for a Fusible Disconnect Switch (FDS) with external handle, which shuts off the power to the starter and door operator when the cover is opened. Fuses are not supplied. The starter and other optional components are prewired to terminals in the wall-mountable enclosure. The starter itself is an industrial size 0 but may be upgraded to a size 1 see (M153), and the control transformer is rated 50VA but may be upgraded to 100VA see (M155). Terminal points are provided both for the inter-wiring between operator/starter and for the connection of control stations and safety equipment. Price includes an automatically resettable overload relay which may be converted to manual reset, but cover of starter must be opened to reset. For external manually resettable overload, see (M152). **This modification must be factory supplied.** See below for enclosure variations.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



NEMA 1 ENCLOSURE

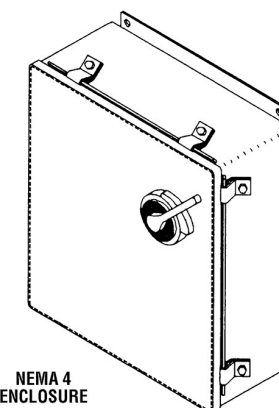
M137 COMBINATION REVERSING STARTER SIZE 0, FDS, NEMA 4 ENCLOSURE

90-7004

Identical to (M136) except NEMA 1 rated enclosure is replaced with a NEMA 4 rated enclosure.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



NEMA 4 ENCLOSURE

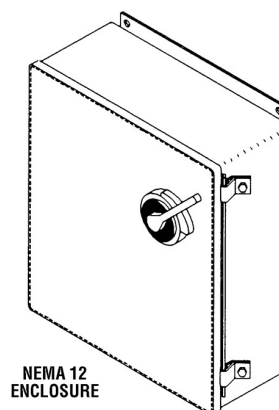
M138 COMBINATION REVERSING STARTER SIZE 0, FDS, NEMA 12 ENCLOSURE

90-7012

Identical to (M136) except NEMA 1 rated enclosure is replaced with a NEMA 12 rated enclosure.

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



NEMA 12 ENCLOSURE

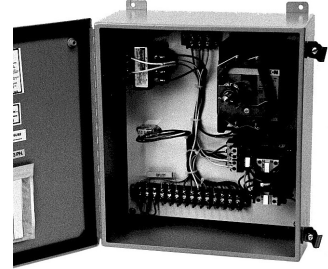
MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MECHANICAL POWERHEADS | STARTER PANELS

M139 COMBINATION REVERSING STARTER—SIZE 0, 250VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 1 ENCLOSURE 90-80012

The Combination Reversing Starter with Circuit Breaker (CB) modification provides all control equipment that is not mechanically connected to the door operator powerhead in a separate Wall Mount NEMA 1 rated enclosure. The limit switches and brake solenoid (when supplied) remain on the door operator. In addition to the normal control equipment (starter, control transformer, control relays), a circuit breaker with external handle is supplied, which shuts off the main power to the unit (and door operator also) when the cover is opened. The circuit breaker is rated for up to 250VAC incoming power; therefore, this version of the modification may be used only with door operators where the incoming power is less than 250VAC. The starter itself is an industrial size 0 but may be upgraded to size 1 see (M153), and the control transformer is rated 50VA but may be upgraded to 100VA see (M155). Terminal points are provided both for the inter-wiring between operator/starter and for the connection of control stations and safety equipment. Price includes an automatically resettable overload relay which may be converted to manual reset, but cover of starter must be opened to reset. For external manually resettable overload, see (M152). **This modification must be factory supplied.** See below for enclosure and voltage rating variations.



FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M140 COMBINATION REVERSING STARTER—SIZE 0, 480VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 1 ENCLOSURE 90-80014

Identical to (M139) except circuit breaker is rated for up to 480VAC (for use with operators where the incoming power is 480VAC or less).

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M141 COMBINATION REVERSING STARTER—SIZE 0, 600VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 1 ENCLOSURE 90-80016

Identical to (M139) except circuit breaker is rated for up to 600VAC (for use with door operators where the incoming power is 600VAC or less).

FOR USE WITH MODEL(S)

MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

MECHANICAL POWERHEADS | STARTER PANELS

NEMA 4

M142 COMBINATION REVERSING STARTER SIZE 0, 250VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 4 ENCLOSURE

90-80042

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 4 rated enclosure.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M143 COMBINATION REVERSING STARTER SIZE 0, 480VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 4 ENCLOSURE

90-80044

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 4 rated enclosure and circuit breaker is rated for up to 480VAC (for use with door operators where incoming power is 480VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M144 COMBINATION REVERSING STARTER SIZE 0, 600VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 4 ENCLOSURE

90-80046

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 4 rated enclosure and circuit breaker is rated for up to 600VAC (for use with door operators where incoming power is 600VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

NEMA 12

M145 COMBINATION REVERSING STARTER SIZE 0, 250VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 12 ENCLOSURE

90-80122

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 12 rated enclosure.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M146 COMBINATION REVERSING STARTER SIZE 0, 480VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 12 ENCLOSURE

90-80124

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 12 rated enclosure and circuit breaker is rated for up to 480VAC (for use with door operators where incoming power is 480VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M147 COMBINATION REVERSING STARTER SIZE 0, 600VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 12 ENCLOSURE

90-80126

Identical to (M139) except NEMA 1 rated enclosure is replaced with a NEMA 12 rated enclosure and circuit breaker is rated for up to 600VAC (for use with door operators where incoming power is 600VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

MODIFICATIONS

COMMERCIAL DOOR OPERATORS

MECHANICAL POWERHEADS | STARTER PANELS

M148 COMBINATION REVERSING STARTER—SIZE 0, 250VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 7/9 ENCLOSURE 90-80072

This modification provides a NEMA 7/9 rated wall-mounted separate starter with a hinged cover. The separate starter enclosure is a 250VAC circuit breaker and includes an external disconnect handle that shuts off the power to the Starter and door operator when the cover is opened. The enclosure holds the electrical control equipment that is not mechanically connected to the door operator powerhead. The limit switches, internal interlock switch (when supplied) and motor remain in the standard electrical enclosure on the door operator. The circuit breaker is rated for up to 250VAC, and is for use with door operator where incoming power is 250VAC or less.

The control circuit is intrinsically safe in accordance with NEC Article 504, therefore allowing control components (limit switches, control stations and safety edges) to be housed in general-purpose enclosures. A Dynamic Brake see (M5) with a Delay-on-Reverse Circuit see (M60) and automatic resetting overload are provided as standard. All components used in this modification are either UL listed or Factory Mutual (FM) approved. This equipment meets specifications for hazardous areas defined by NEC Article 501, Class I, Divisions 1 and 2, Group D, and Class II, Divisions 1 and 2, Groups F and G. All of the control stations and the safety edge would be connected to terminals in the limit enclosure on the door operator. The starter itself is an industrial size 0 but may be upgraded to a size 1 see (M154). This modification does not include a Hazardous Area Modification (M105) on the door operator; you must order (M105) in addition to this modification and it must be factory supplied. See (M149 and M150) for alternate voltage ratings.

NOTE: This modification is not compatible with many other modifications in this catalog and is limited in control options. Please contact your LiftMaster® Sales Representative if you have any questions regarding compatibility. **This modification must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M149 COMBINATION REVERSING STARTER SIZE 0, 480VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 7/9 ENCLOSURE 90-80074

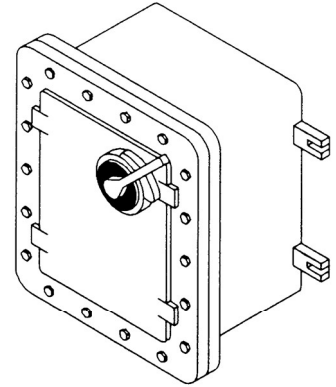
Identical to (M148) except circuit breaker is rated for up to 480VAC (for use with door operators where incoming power is 480VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M150 COMBINATION REVERSING STARTER SIZE 0, 600VAC CIRCUIT BREAKER DISCONNECT SWITCH, NEMA 7/9 ENCLOSURE 90-80076

Identical to (M148) except circuit breaker is rated for up to 600VAC (for use with door operators where incoming power is 600VAC or less).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		



MECHANICAL POWERHEADS | STARTER PANELS

M152 EXTERNAL RESET OVERLOAD NEMA 1, 4, 12

90-2504

Provides an external through-cover reset button for the overload relay for Wall Mount or Combination Reversing Starters see (M131–M147) for the given NEMA ratings. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M153 INDUSTRIAL SIZE 1 STARTER NEMA 1, 4, 12

90-1004

Upgrades the reversing starter in a NEMA 1, 4 or 12 rated Combination Reversing Starter from an industrial size 0 to a size 1. May provide longer starter life in applications where large-horsepower door operators experience high usage and frequent reversing. **Must be factory installed.**

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M154 INDUSTRIAL SIZE 1 STARTER NEMA 7/9

90-1007

Upgrades the reversing starter in a NEMA 7/9 rated Combination Reversing Starter from an industrial size 0 to a size 1. May provide longer starter life in applications where large-horsepower door operators experience high usage and frequent reversing. **Must be factory installed.** Available on (M148–M150) modifications only.

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		

M155 100 VA TRANSFORMER UPGRADE NEMA 1, 4, 12

90-100

Upgrades the transformer in operators with Wall-Mounted or Combination Reversing Starters (M131–M147) from the standard 50VA to a 100VA. Provides 50VA of additional control circuit power for auxiliary equipment such as loop detectors, photo eyes and motion detectors. **Must be factory installed.** Not available with a Dynamic Brake (M5) or any of the NEMA 7/9 rated separate starters (M148–M150, M154).

FOR USE WITH MODEL(S)													
MT/BMT	T	GT	APT	MJ	J	DJ	DHJ	MGJ	MH/MHS	H	GH	SD	GSD
		■									■		