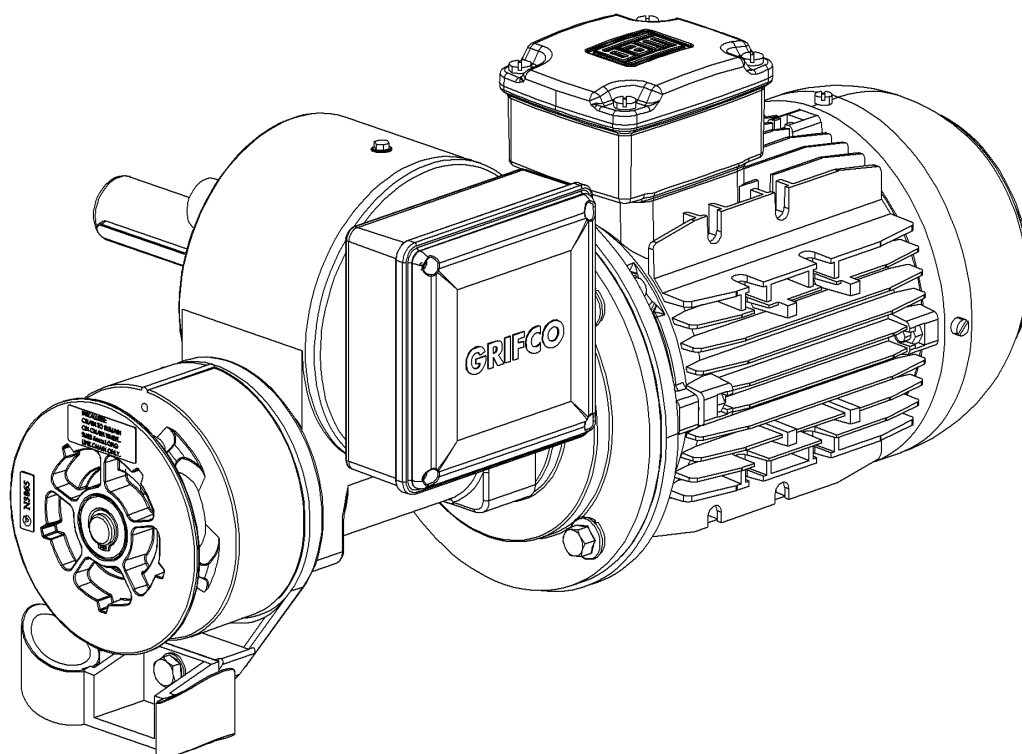


GRIFCO®

Heavy Duty

Mechanical Industrial Door Opener



Installation and Users Manual for Heavy Duty Mechanical Industrial Door Operator

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SAFETY SYMBOL AND SIGNAL WORD REVIEW

Safety symbol and signal word review

This commercial door opener has been designed and tested to offer safe service provided it is installed, operated, maintained and tested in strict accordance with the instructions and warnings contained in this manual.



WARNING

Mechanical



WARNING

Electrical



CAUTION

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock.

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your commercial door and/or the commercial door opener if you do not comply with the cautionary statements that accompany it.

THESE ARE IMPORTANT SAFETY INSTRUCTIONS. FOLLOW ALL INSTRUCTIONS AS INCORRECT INSTALLATION CAN LEAD TO SEVERE INJURY OR DEATH

	Keep commercial door balanced. Sticking or binding doors must be repaired. Commercial doors, door springs, pulleys, brackets and their hardware are under extreme tension and can cause serious personal injury. Do not attempt to loosen, move or adjust them. Call for commercial door service.		Disengage all existing commercial door locks to avoid damage to commercial door. Install the wall control (or any additional push buttons) in a location where the commercial door is visible during operation. Do not allow children to operate push button(s) or remote control(s). Serious personal injury from a closing commercial door may result from misuse of the opener.
	Do not wear rings, watches or loose clothing while installing or servicing a commercial door opener.		Permanently fasten all supplied labels adjacent to the wall control as a convenient reference and reminder of safe operating procedures.
	To avoid serious personal injury from entanglement, remove all ropes connected to the commercial door before installing the door opener.		Activate opener only when the door is in full view, free of obstructions and opener is properly adjusted. No one should enter or leave the building while the door is in motion.
	Installation and wiring must be in compliance with your local building and electrical codes. Connect the power supply cord only to properly earthed mains.		An electrician must disconnect electric power to the commercial door opener before making repairs or removing covers.
	Moisture and water can destroy the electronic components. Make sure under all circumstances that water moisture or storage moisture cannot penetrate the electronics. The same applies for openings and cable entries.		If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. A disconnection device incorporated in the fixed wiring must be provided in accordance with the wiring rules of the country in which it is installed.
	After the installation a final test of the full function of the system and the full function of the safety devices must be done.		The actuating member of a biased-off switch is to be located within direct sight of the door but away from moving parts. Unless it is key operated, it is to be installed at a minimum height of 1500mm and not accessible to the public.
	When operating a biased-off switch, make sure that other persons are kept away.		Make sure that people who install, maintain or operate the door follow these instructions. Keep these instructions in a safe place so that you can refer to them quickly when you need to.
	The opener cannot be used with a driven part incorporating a wicket door (unless the opener cannot be operated with the wicket door open).		If the opener is installed at a height less than 2.5 metres from floor level or any other level from which the unit can be accessed (eg mezzanine) the installer is responsible to fit guards to the opener to prevent access to the chain drive.
	Ensure that entrapment between the driven part and the surrounding fixed parts due to the opening movement of the driven part is avoided		This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
	Motor may become hot during operation. Appropriate clearance and/or shielding should be supplied by the installer to ensure any cabling, wiring and/or other items cannot come in contact with the motor. If temperature rise exceeds 50°C all fixed wiring insulation must be protected, for example, by insulating sleeving having an appropriate temperature rating.		Use the commercial door opener for its intended purpose. Openers in this manual are designed for operating spring balanced roller shutters, spring balanced roller doors and counterweighted bi-fold and vertical lift doors.



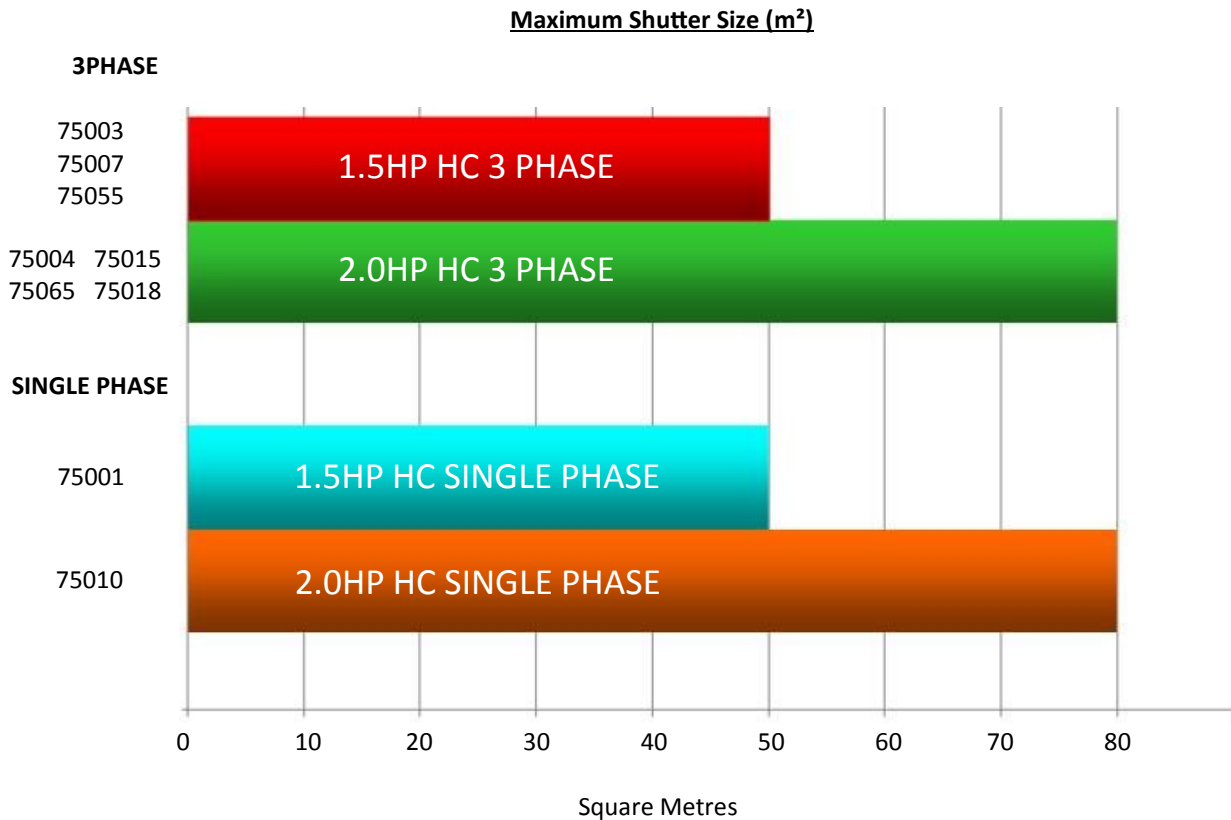
WARNING: Important safety instructions. It is important for the safety of persons to follow all instructions. SAVE these instructions.

INTRODUCTION

Congratulations on your purchase of the Heavy Duty Roller Shutter Operator. For more than 50 years, we have been producing industrial mechanical operators that are well known for their proven reliability & robust design.

PLANNING

Identify the type and dimensions of your commercial door. A survey of the application is recommended to see if any of the requirements below are not applicable with your installation.



Based on “standard shutter”:

- The shutter is correctly spring balanced
- The shutter has $\leq 1.0\text{mm}$ x $\geq 100\text{mm}$ slats
- The shutter has no wind-locks
- A $\geq 4:1$ sprocket ratio is used

If any conditions above are not met, some consideration should be given to increasing the sprocket ratio, or operator size. The operator should be installed on the correct side of the commercial door. Select the side that meets the requirements listed below.

- Must have minimum distance of 15mm between mounting plate and door drum sprocket
- Must have minimum distance of 200mm between limit housing and imposing structure
- Must have minimum clearance of 200mm from the terminal box

Before installing the operator, check that the commercial door is in good mechanical condition, correctly balanced and open & closes properly.



CAUTION

The roller shutter guides must be fitted with mechanical stops that prevent the bottom rail from passing through in the opening direction. The operator must stall if driving into the mechanical stops

PLANNING

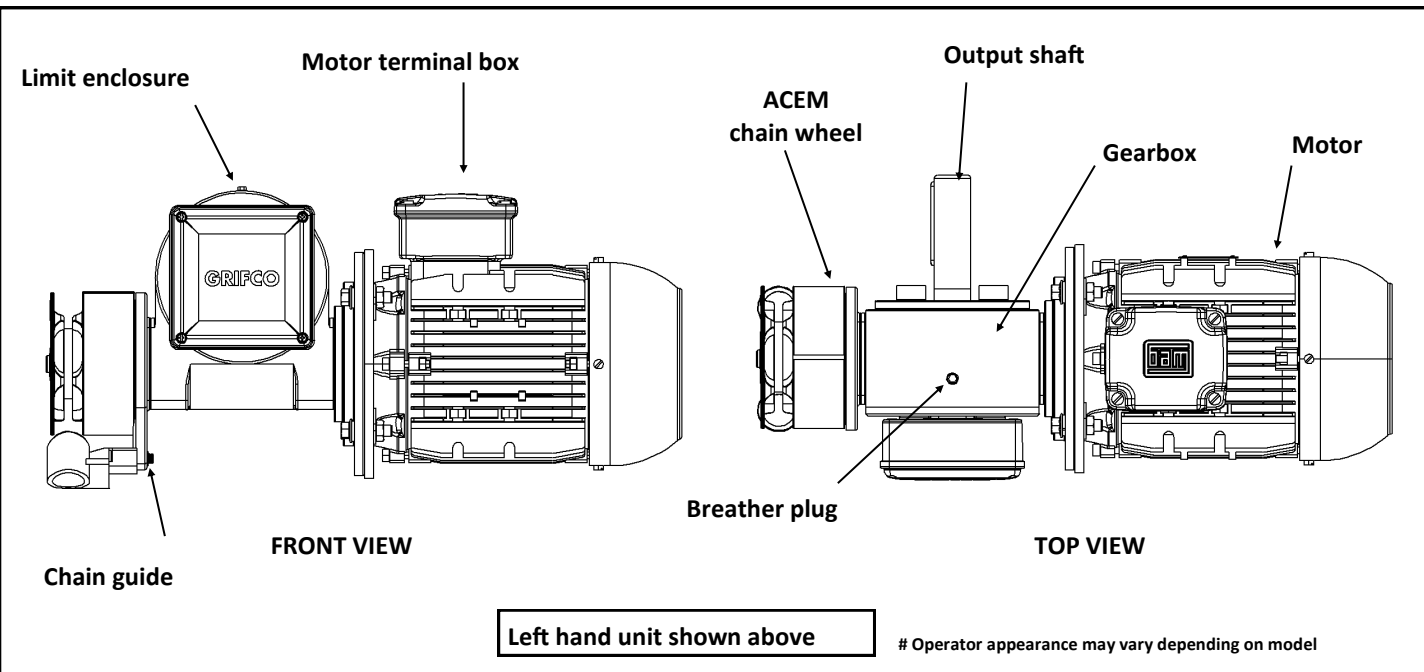
Reversing Starters

3 Phase operator		Reversing Starter	Logic Controller
75003	1.5HP HC 3 Phase	RG374-LB3E008	GLMe2H Series
75004	2.0HP HC 3 Phase	RG374-LB3E008	GLMe2H Series
75007	1.5HP HC 3 Phase Dust Ignition Proof DIP (IP66)	RG374-LR3E008-EX	N/A
75015	2.0HP HC 3 Phase Solenoid Brake (IP50)	RG374-LB3E008	GLMe2H Series
75018	2.0HP HC 3 Phase Flameproof EXD	RG374-LR3E008-EX	N/A
75055	1.5HP HC 3 Phase Waterproof (IP55)	RG374-LB3E008	GLMe2H Series
75065	2.0HP HC 3 Phase	RG374-LB3E008	GLMe2H Series

If NEUTRAL is not available on a 3 Phase installation, substitute the RG378 variant.

Single Phase operator		Reversing Starter	Logic Controller
75001	1.5HP HC Single Phase	RG376-LB1E010	GLMe2H Series
75012	2.0HP HC Single Phase	RG376-LB1E012	GLMe2H Series

IDENTIFYING YOUR OPERATOR



WARNING

Please remove any locks fitted to the door before operation in order to prevent damage to the door.



WARNING

It is important to make sure the door always runs smoothly. Doors which stick or jam must be repaired immediately. Employ a qualified technician to repair the door, never attempt to repair it yourself.

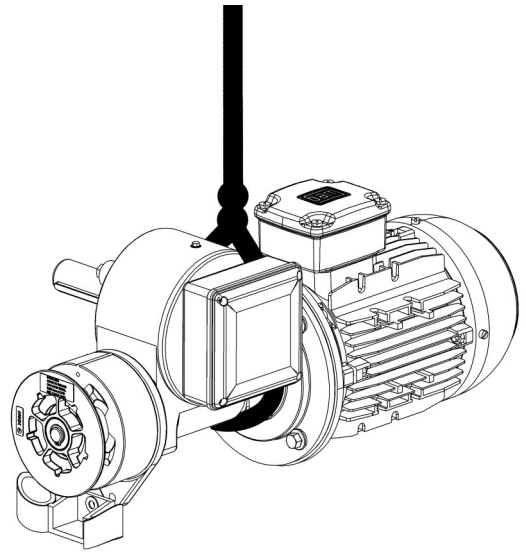
INSTALLATION

Mounting the Unit

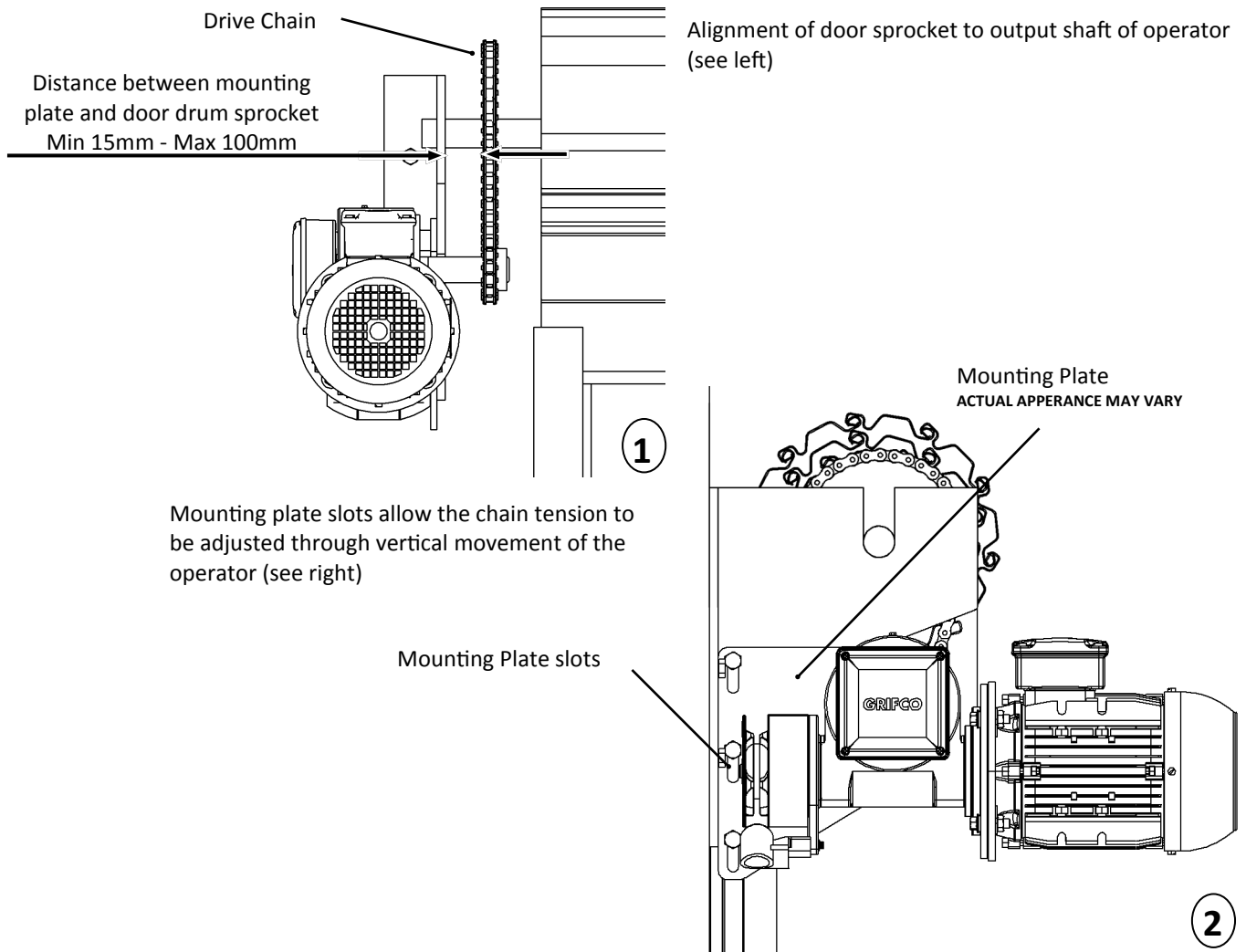
The Heavy Duty operator is typically flag mounted below the door drum so that the operator shaft points toward the door opening and lies beneath the sprocket of the door drum. For mounting you will need to either secure the operator to the roller shutter head plate with prepared holes or slots, or use a mounting plate that will need fixing via a wall angle or similar existing fixture.

Note: The chain guide must not be repositioned.

It is strongly recommended a strap be used to raise the operator to necessary height, shown right. The top end of the strap should be connected to a secure support beam above the door axle.



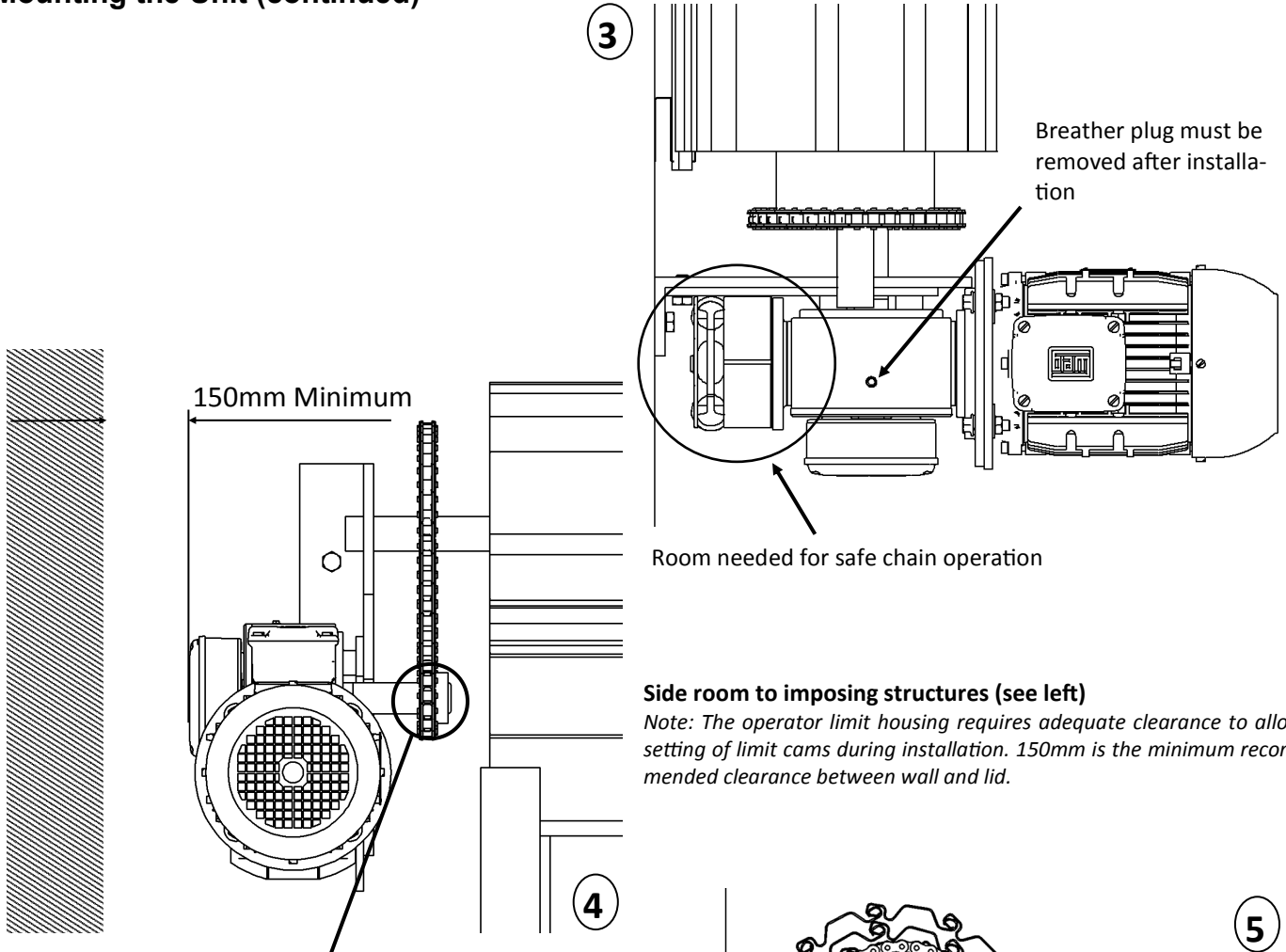
When assessing and selecting an appropriate mounting location, the following considerations should be made:



Clear path for manual chain to hang downward (refer pg 6 image no. 5)

INSTALLATION

Mounting the Unit (continued)



The drive sprocket must be aligned with the door sprocket, and locked using 2 x M8 hi-tensile grub screws tightened to min 20Nm. Grub screws must be set between 90° and 120° apart, with one grub screw lying over the drive key.

Chain tension should be set between 10-20kgs, ensuring both sides of the linkage are taught. Where practicable, use the weight of the operator as a preload, then tighten mounting bolts. ½' x 1 ¼' fasteners should be between to 80-90Nm min.

Ensure the mounting position allows the hand chain to hang free of obstructions (see right)

Ensure hand chain is not twisted when making the join!

Side room to imposing structures (see left)
Note: The operator limit housing requires adequate clearance to allow setting of limit cams during installation. 150mm is the minimum recommended clearance between wall and lid.

INSTALLATION

CAUTION

When Securing the Heavy Duty Operator with the 4 x ½' x 1 ¼' long fasteners (based on a 12mm mounting plate) and spring washers provided, it is critical to ensure that the applied torque is between 80-90Nm. When mounting through thicker sections, ensure a minimum of 20mm of screw thread is engaged with the female thread. Use of incorrect fasteners or torque may cause serious product damage and/or personal injury. When fixing through a slotted plate, ensure that the slots are no wider than 14mm as a spring washer may not be adequate in outside diameter to support the hexagon head.

CAUTION

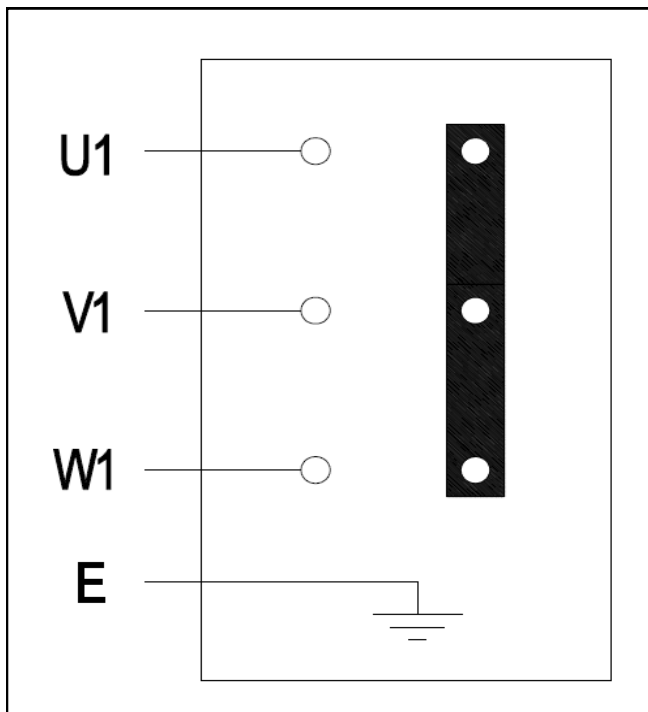
The operator **must**:

- be connected via a device that is capable of being locked for maintenance
- be connected via a suitable circuit breaker that disconnects all live conductors
- be connected in accordance with the wiring rules of the country in which it is installed
- not have control enclosures left open for extended periods (excess dust will void warranty)
- have all cables run in non-flexible conduit and use appropriate conduit entries

Electrical Connections

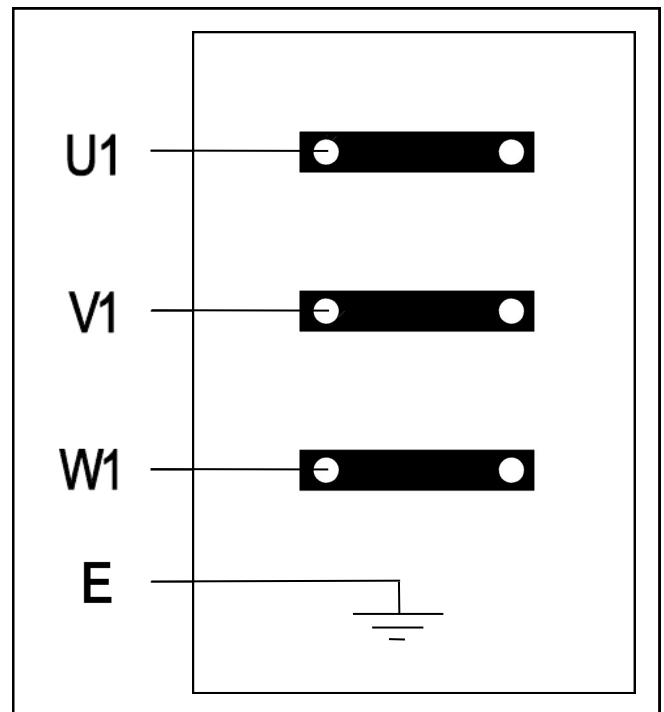
Motor connections

415V 3 Phase Star



Use with Reversing Starter and GLMe2HS

415V 3 Phase Delta



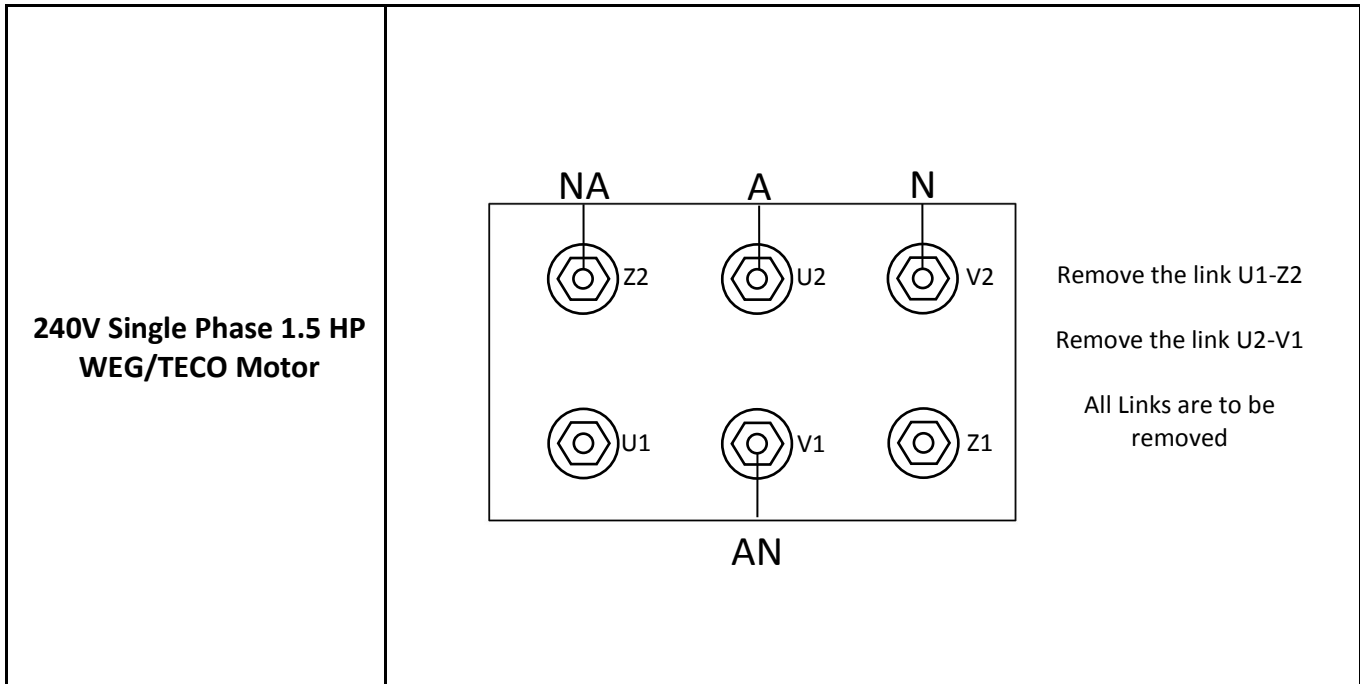
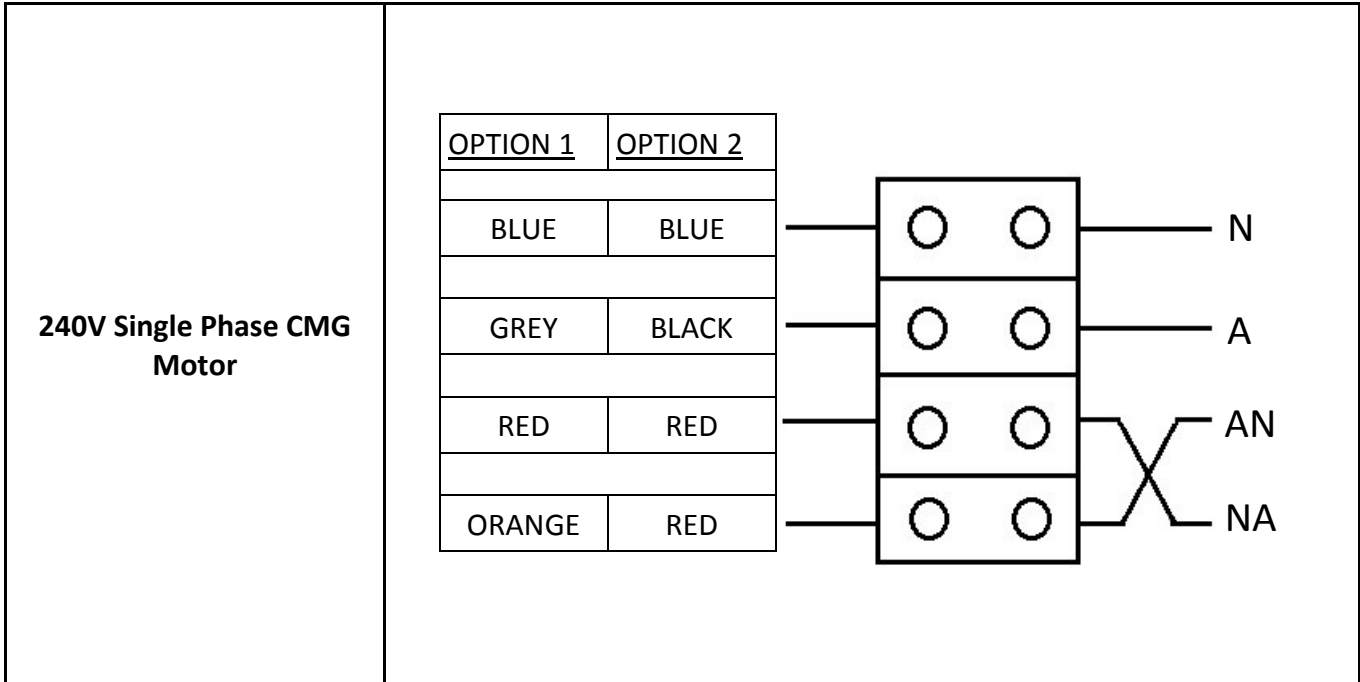
Optional wiring method used with some third party Variable Speed Drive inverters.

For details refer to you controller manual.

INSTALLATION

Electrical Connections

Motor connections



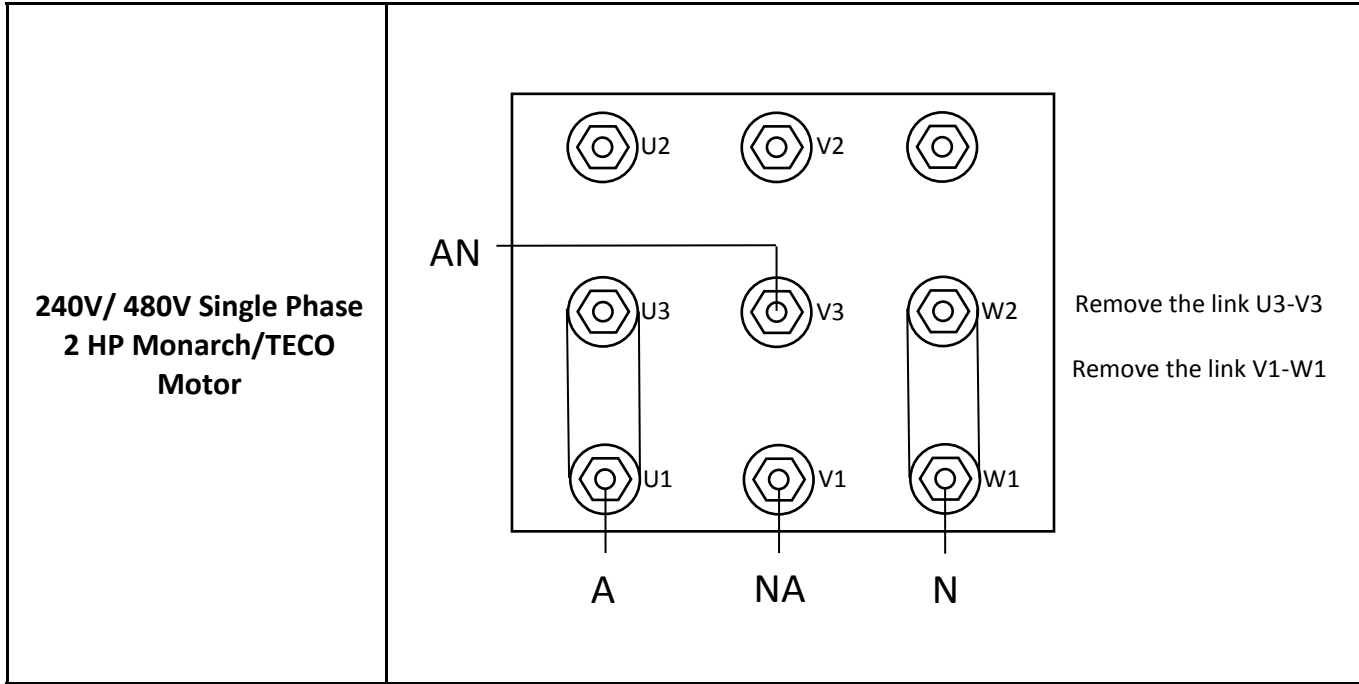
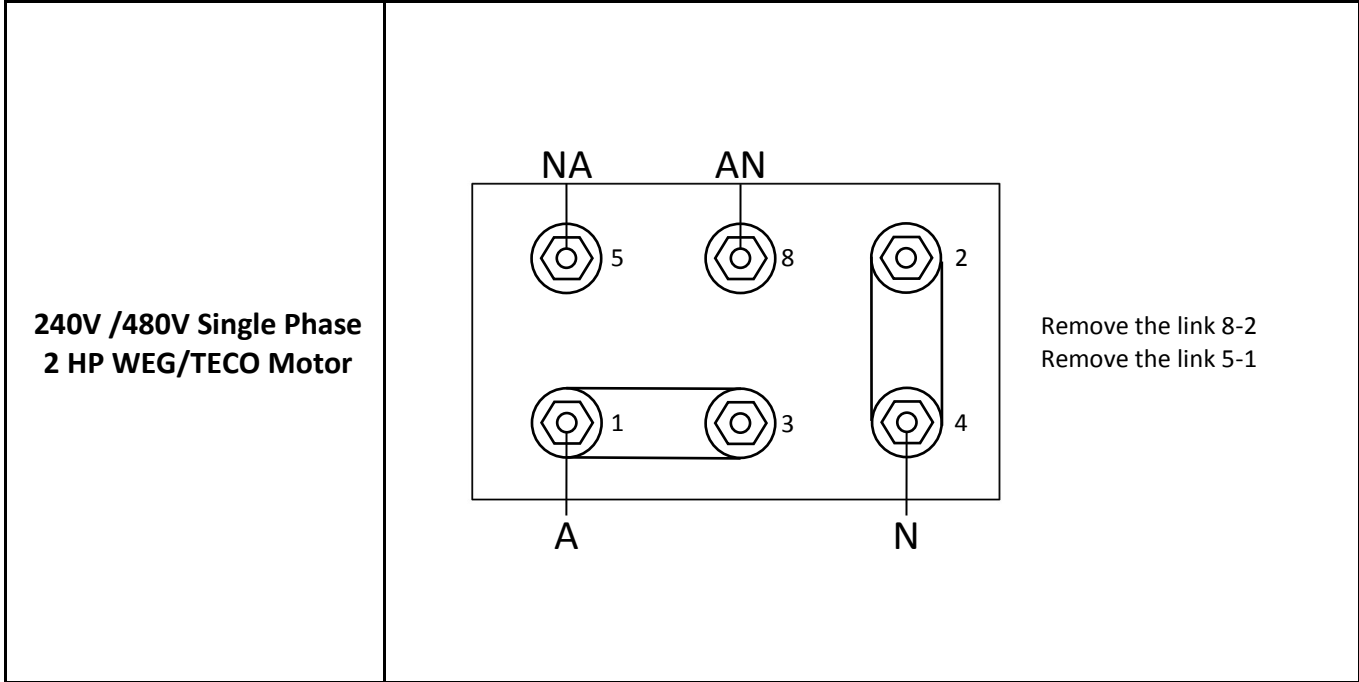
COMPATIBLE LOGIC CONTROL

For compliant installations, we recommend using the GLMe2H Controller.
 For connection details and user instructions refer to the GLMe2H manual.

INSTALLATION

Electrical Connections

Motor connections



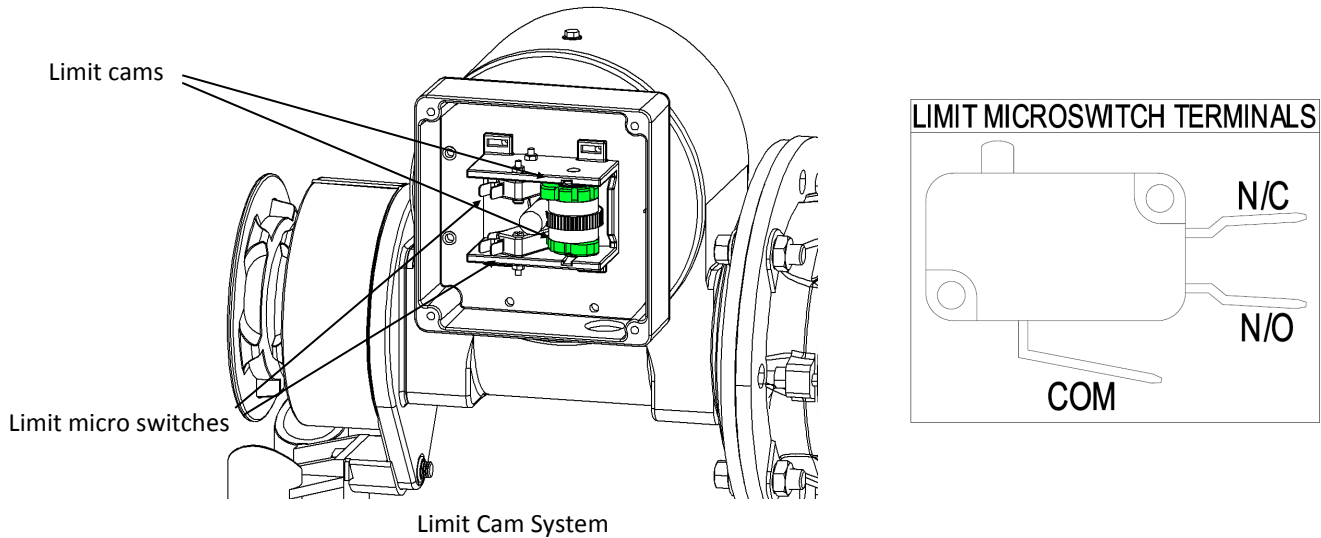
COMPATIBLE LOGIC CONTROL

For compliant installations, we recommend using the GLMe2H Controller.
For connection details and user instructions refer to the GLMe2H manual.

INSTALLATION

Limit Switch Connection

The limit switches must be connected to the control gear being used via the NORMALLY CLOSED (N/C) and COMMON (COM) of the microswitch:



The limit switch mechanism is a worm driven friction held adjustable cam system using two micro switches.

SETUP AND ADJUSTMENT

Limit setting procedure

- ISOLATE MAINS BEFORE SETTING LIMITS
- AVOID CRAMMING WIRES INTO LIMIT ENCLOSURE AS IT MAY AFFECT CAM MOVEMENT

Follow the steps below:

1. Manually position the door in the centre of the opening.
2. Position one cam to depress a switch and the other so that it is well clear of the switch (note which switch it is that you have depressed).

For controls with up and down functions:

- Supply power and activate control in the upward direction.
- If the door travels up, then the limit switch which is engaged by the cam is the CLOSED limit.
- If the door doesn't move it is at the OPEN limit.
- Continue to Step 3 below

For single button controls:

- Supply power and push the button.
- If the door travels up, then the limit switch which is engaged by the cam is the CLOSED limit.
- If the door travels down, then the limit switch which is engaged by the cam is the OPEN limit.
- Continue to Step 3 below

3. Isolate power and adjust the limit cams to depress the switches when the shutter reaches its OPEN and CLOSED positions.
4. Supply power and cycles the door between the OPEN and CLOSED positions. Adjust cam position if necessary.



WARNING

Limits are extremely sensitive, a small cam movement may correspond to a large amount of shutter travel

MAINTENANCE

Monthly

- Check chain alignment and tension. *Adjust if required **
- Check PE / IR beam/s and bump edge functionality where applicable

Quarterly

- Check tightness of fixing bolts and (sprocket) grub screws. *Adjust if required ** refer page 6
- Check correct electrical operation
- Check manual operation via hand chain
- Lubricate the drive chain *
- Check door balance. *Adjust if required **
- Conduct door maintenance in accordance with door manufactures guidelines. This will include door balance *
- SERVICE MUST BE CARRIED OUT BY A QUALIFIED TECHNICIAN

IMPORTANT NOTE:

If a problem is found with an installation, be sure to read the troubleshooting guide thoroughly. If the problem persists call Chamberlain for technical assistance on 1800 GRIFCO® or email customerservice@chamberlainanz.com in Australia or in New Zealand call 0800 653 667.

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CHAMBERLAIN LIMITED WARRANTY - Grifco Products

Chamberlain Australia Pty Limited / Chamberlain New Zealand Limited (**Chamberlain**) is committed to manufacturing and supplying high quality goods. As part of this commitment, we seek to provide reliable service and support for our goods and are pleased to provide you, the original purchaser, with this Chamberlain Limited Warranty.

We also provide the following statement as required by the Australian Consumer Law: In Australia, in addition to your rights under this Chamberlain Limited Warranty, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Chamberlain's warranty

Chamberlain warrants to the original purchaser of the Grifco product (**Unit**) that:

- 1 The Unit is free from defects in materials and workmanship for a period of 24 months from the date of purchase.
- 2 Genuine accessories are free from defects in materials and workmanship for a period of 12 Months from the date of purchase.
- 3 Genuine spare parts are free from defects in materials and workmanship for a period of 6 Months from the date of purchase.

During the applicable Chamberlain Warranty period, if you are concerned that the Unit or electric motor may be defective, call our service centre on the toll free number below before removing the Unit and a Chamberlain technician will diagnose the problem. Once the problem has been diagnosed, subject to your rights under the Australian Consumer Law with respect to major failures, Chamberlain will provide you with:

- 1 parts for "do-it-yourself" repairs; or
- 2 shipping instructions for a factory repair or replacement.

If a factory repair or replacement is required, provided the defective part or Unit is returned to Chamberlain well-packaged and in accordance with Chamberlain's shipping instructions, Chamberlain will, subject to your rights under the Australian Consumer Law with respect to major failures:

- 1 in relation to the Unit repair or, at its option where permissible, replace any defective part or Unit (excluding the electric motor) and return it to you at no cost; and
- 2 in relation to the electric motor, replace the electric motor and return it to you at no cost.

Where the Unit has been installed by an authorised installer, you must call them for prompt on-site service. Chamberlain will furnish replacement parts free of charge through the authorised installer. A service fee for on-site service may apply.

Repairs and replacement parts provided under this Chamberlain Limited Warranty are provided free of charge and are warranted for the remaining portion of the original warranty period.

This Chamberlain Limited Warranty provides benefits which are in addition to your other rights and remedies as a consumer.

Exclusions

If our service centre determines that a warranty claim has been made in respect of a failure or defect arising under or out of any exclusion detailed below such that the claim is not covered under this Chamberlain Limited Warranty, we may, subject to your other rights and remedies as a consumer, charge you a fee to repair, replace and/or return the Unit to you.

This Chamberlain Limited Warranty does not cover any failure of, or defect in, the Unit due to:

- 1 non-compliance with the instructions regarding installation, operation, maintenance and testing of the Unit or of any product with which the Unit is used;
- 2 any attempt by a person other than an authorised installer to change settings, repair, dismantle, reinstall or move the Unit to another location once it has been installed;
- 3 tampering, neglect, abuse, wear and tear, accident, electrical storm, excessive use or conditions other than normal commercial use;
- 4 use of the Unit in conjunction with controls which have not been supplied, or pre-approved, by Chamberlain;
- 5 problems with, or relating to, the commercial door or commercial door hardware, including but not limited to the door springs, door rollers, door alignment, hinges, guides, slats and drums; or
- 6 problems caused by electrical faults.

If this Chamberlain Limited Warranty does not apply, you may have rights available to you under the Australian Consumer Law.

Liability – Australia only

Except as set out in the Australian Consumer Law (being Schedule 2 of the *Competition and Consumer Act 2010*) (as amended, consolidated or replaced):

- 1 all other guarantees, warranties and representations in relation to the Unit or its supply are excluded to the extent that Chamberlain can lawfully exclude them; and
- 2 under no circumstances will Chamberlain be liable for consequential, incidental or special damages arising in connection with the use, or inability to use, the Unit, other than those which were reasonably foreseeable as liable to result from the failure.

Liability – New Zealand only

Except as set out in the *Fair Trading Act 1986* and the *Consumer Guarantees Act 1993* (as amended, consolidated or replaced):

- 1 all other guarantees, warranties and representations in relation to the Unit or its supply are excluded to the extent that Chamberlain can lawfully exclude them; and
- 2 under no circumstances will Chamberlain be liable for consequential, incidental or special damages arising in connection with the use, or inability to use, the Unit, other than those which were reasonably foreseeable as liable to result from the failure.

Note

We request that you retain your sales docket or invoice as proof-of-purchase and attach it to this manual to enable you to establish the date of purchase in the unlikely event of a warranty service being required. Chamberlain reserves the right to change the design and specifications of the Unit without prior notification. Some features or accessories of the Unit may not be available in certain markets or areas. Please check with your distributor.

Chamberlain service centre contact details

Australia

Phone toll free 1800 474 326

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Unit 1, 75 Epping Road

North Ryde, NSW 2113

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