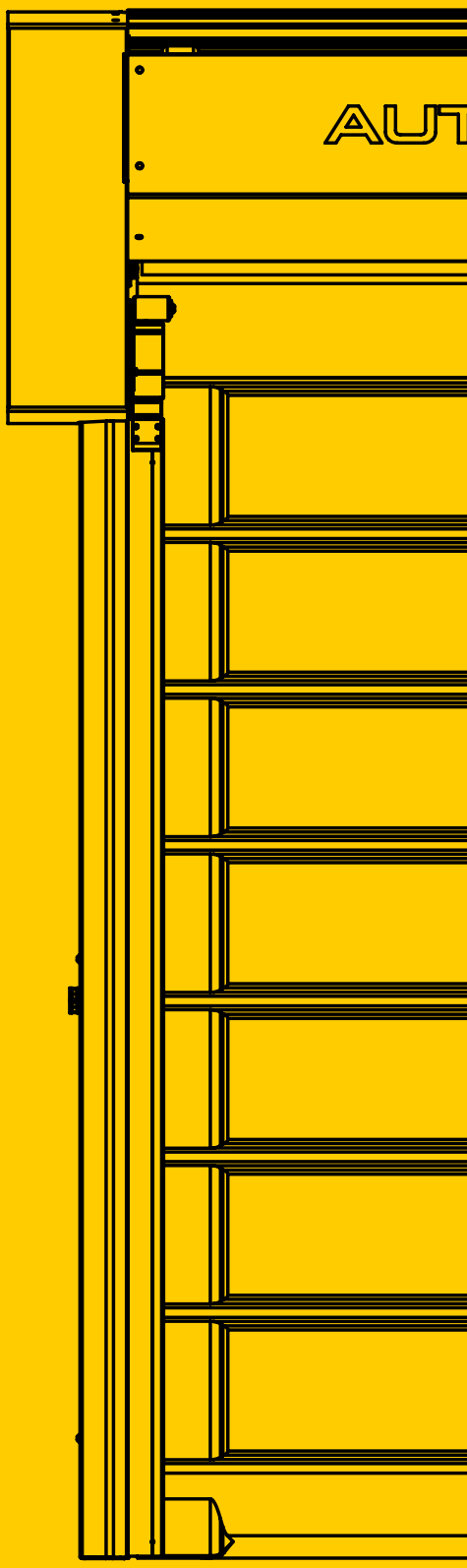
AUTO MOSSA



HYPERCHILL™ AND HYPERFREEZE™

INSTALLATION MANUAL

RELEASE 1.2

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1 PRODUCT DESCRIPTION

General Overview

1.1 Door Function

The AUTO MOSSA roll doors are vertically opening, high-speed roll-up doors. The side frames of the door serve as guides for the flexible PVC door curtain. This curtain rolls around and onto a top roll during the opening operation of the door. When the door closes of the curtain rolls down from the top roll and is using gravity and the weight of the curtain assembly to pull down.

1.2 Base Design

The doors contain two side columns, the curtain with flexible the soft bottom edge and the top roll. Within the tracks is a friction-less surface that captures the wind bars and the flexible bottom edge and allows them to move freely. The AUTO MOSSA roll door moves up and down via a directly powered top roll using a range of gearbox and motor sizes, powered either single phase or three phase, depending on door size and weight. The safety photocells are set into the side columns. Activation of these safety devices leads to the door stopping and reversing to the top position. In the event of an accidental collision, the door is equipped with a curtain relocating system that will allow the door blade to automatically re-insert itself into the door guides on the up cycle.

1.3 Control Equipment

The AUTO MOSSA roll doors come standard with a variable speed drive or frequency converter control unit which enables soft start and soft stop capability. The maximum opening speed depends on the door size and is max. 2.5 m/s. The door closes with a speed reduced to approx. 0.7 m/s.

1 PRODUCT DESCRIPTION

1.4 Optional Safety Devices

Certain applications may demand additional safety devices. Examples would be where there are a high number of personnel movements through a doorway. Also doors less than say 3.0 m in height where a requirement maybe needed to indicate or warn when the door is closing.
AUTO MOSSA offers a range of safety systems for high-speed doors, including safety light curtains, motion detectors, induction loops and pedestrian or activity warning signals. The AWS system gives the driver of a forklift a warning that personnel activity is occurring on the opposite side of the door.

1.5 Motor-Drive Unit

The AUTO MOSSA doors are operated using a range of electrical drive units. The units are installed at the end of the top roll either left hand or right hand side by choice of the customer. All drives are given a generous service factor which ensures the longevity of life. The motors are also protected from temperature increases and over current by the settings with in the VSD.

2 PRODUCT SPECIFICATION

2.1 HYPERGLIDE

Standard Equipment

Dimensions:	
Daylight Width (DW):	2000mm – 4000mm
Daylight Height (DH):	2000mm – 4500mm
Area:	2.0 – 18.0 m2)
Wind Class:	Class 2 according to EN 12424 Interior and exterior applications
Opening Speed:	2.5m/s
Closing Speed:	0.6 m/s
Resistance to Water Penetration:	-
Air Permeability:	-
Noise Emission:	-
Operating Temperature:	Standard* -0 °C to 40 °C
Door Blade:	900gsm rip-stop PVC with 1 row of windows, RAL Colour options available
AirStrip:	20mm x 50mm rubber strip with Lycra sleeve installed inside a two way interlocking stretch nylon pocket. Pocket welded and stitched to door blade.
Door Blade Colours:	RAL - Yellow, Orange, Red, Mid Blue, Dark Blue, Green
Head Assembly:	End plates, brackets, covers, Zinc plated
Side Frames:	Guides, Leg and Leg Cover, extruded Aluminium and UHMWPE glide strips, interior to guides. All fixings and small brackets SS
Wind Reinforcement:	Sliding Side locks with Fiberglass or Aluminum wind-bars
Bottom Beam:	Flexible soft bottom edge technology
Top Roll:	Aluminum Ø 165mm with Steel Shafts
Photo Safety Device:	Thru-beam photo sensors
Drive Unit:	Gear motor 0.75 kW, to 1.5kW fail safe brake, integrated encoder available for the left and right side
Drive Unit Cover:	Fully enclosed, galvanised sheet metal, powder coated to finish
Top Roll Cover:	Galvanised sheet metal, powder coated to finish
Emergency Egress:	In case of power failure, door can be opened by means of an extended hand crank

1 PRODUCT DESCRIPTION

Control Box:	Frequency converter control system. Control system and frequency converter mounted inside metal enclosure. Control components to be Schneider.
Power Supply:	PNE 230V, 50/60Hz

Optional Equipment

Emergency Egress:	In case of power failure, door can be opened by means of a chain hoist mounted to the bottom of the drive motor (No hand crank available with this option) 3Kva UPS – with Enclosure and available relay to controller
Door Blade:	900 gsm rip-stop PVC with up to 3 rows of windows depending on door height and wind class
Photo Safety Device:	Thru-beam light curtain – 500mm to 1800mm
Traffic Lights:	Integrated Traffic Lights to side frame
Proximity Lights:	Integrated Proximity Lights with accompanying Field Signal Detector
Activation:	As per requirement – Radar, Loop, Laser, Remote, Push Button, Pull Cord
Wind class;	Class 3 according to EN 12424 Interior and exterior applications
Power Supply:	PE 400V, 50/60Hz
Control Box Enclosure:	Option as SS enclosure Grade 316

1 PRODUCT DESCRIPTION

2.2 HYPERCHILL

Standard Equipment

Dimensions:	
Daylight Width (DW):	2000mm – 5500mm
Daylight Height (DH):	2000mm – 6000mm
Area:	4.0m2 - 22.0m2
Wind Class:	Class 1 according to EN 12424 Interior and exterior applications
Opening Speed:	2.6m/s
Closing Speed:	0.6 m/s
Resistance to Water Penetration:	-
Air Permeability:	-
Noise Emission:	-
Operating Temperature:	Standard* -0 °C to 40 °C
Door Blade:	900gsm rip-stop PVC with 2-3 layers of air foil RAL Colour options available 15mm Wide Curtain
AirStrip:	20mm x 50mm rubber strip with Lycra sleeve installed inside a two-way interlocking stretch nylon pocket. Pocket welded and stitched to door blade.
U-value:	1.7 W/m2C
Door Blade Colours:	RAL - Yellow, Orange, Mid Blue
Head Assembly:	End plates, brackets, covers, Zinc plated
Side Frames:	Guides, Leg & Leg Cover, extruded Aluminium and UHMWPE glide strips, interior to guides. All fixings and small brackets SS
Wind Reinforcement:	Sliding Side locks with Steel, Fiberglass or Aluminum wind-bars
Bottom Beam:	Flexible soft bottom edge technology
Top Roll:	Aluminum Ø165mm with Steel Shafts
Photo Safety Device:	Thru-beam photo sensors
Drive Unit:	Gear motor 2.2kW, to 3.0kW fail safe brake, integrated encoder available for the left and right side
Drive Unit Cover:	Fully enclosed, galvanised sheet metal, powder coated to finish

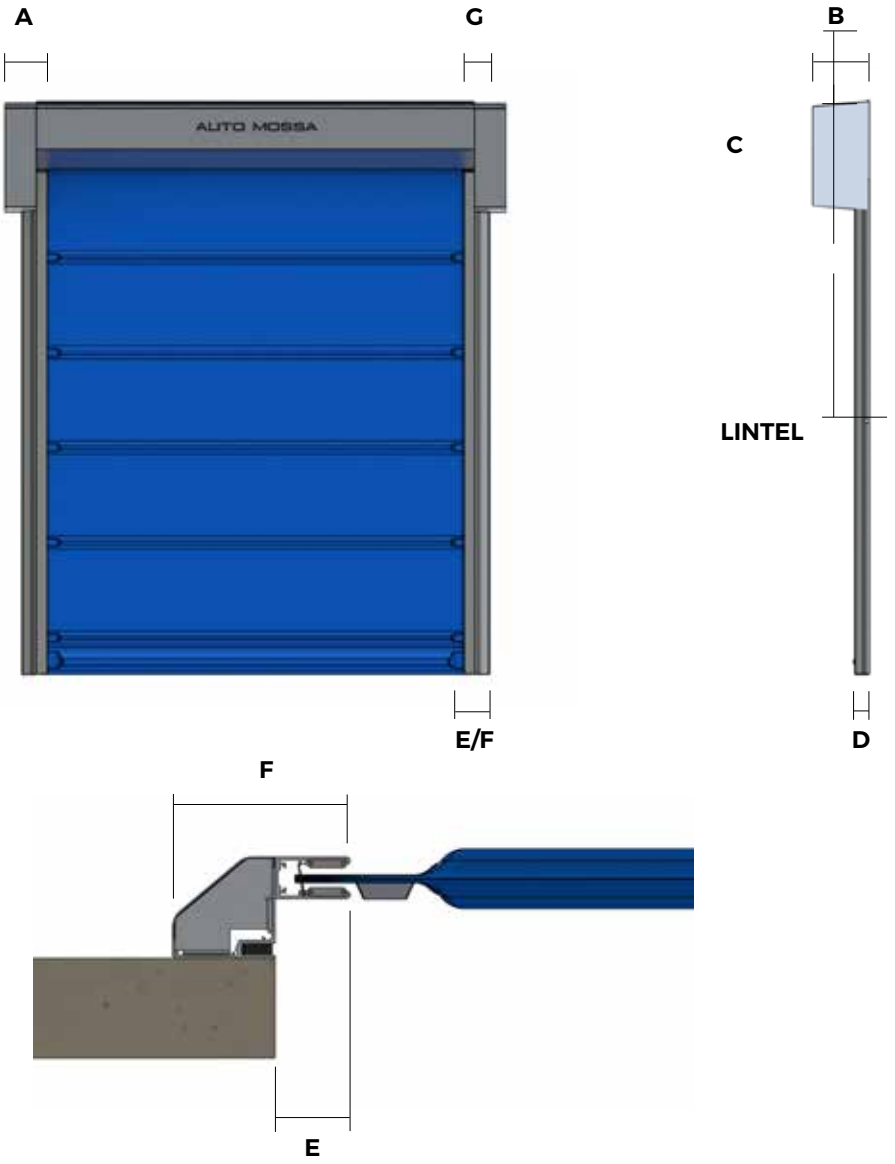
1 PRODUCT DESCRIPTION

Top Roll Cover:	Galvanised sheet metal, powder coated to finish
Emergency Egress:	In case of power failure, door can be opened by means of an extended hand crank
Control Box:	Frequency converter control system. Control system and frequency converter mounted inside metal enclosure. Control components to be Schneider.
Power Supply:	PNE 415V, 50/60Hz

Optional Equipment

Emergency Egress:	In case of power failure, door can be opened by means of a chain hoist mounted to the bottom of the drive motor (No hand crank available with this option)
Door Blade:	900gsm rip-stop PVC with up to 3 rows of windows depending on door height and wind class
Photo Safety Device:	Thru-beam light curtain – 500mm to 1800mm
Traffic Lights:	Integrated Traffic Lights to side frame
Proximity Lights:	Integrated Proximity Lights with accompanying Field Signal Detector
Activation:	As per requirement – Radar, Loop, Laser, Remote, Push Button, Pull Cord
Wind class:	Up to Class 2 according to EN 12424 Interior and exterior applications
Power Supply:	PE 400V, 50/60Hz
Control Box Enclosure:	Option as SS enclosure Grade 316

2.3 Principal Drawing



Model	A	B	C	D	E	F
HyperChill	330	330	330	330	330	330
HyperFreeze	330	330	330	330	330	330

3 SAFETY INFORMATION

3.1 Application Area and Use

AUTO MOSSA roll doors are developed and tested for normal conditions (30°C -30°C). For an application with special environmental conditions, etc it is important that the application should be discussed with an AUTO MOSSA sales engineer or an affiliate authorised AUTO MOSSA Dealer.

The door is generally designed for the closing of door openings, and particularly used for traffic movement in industrial buildings. Traffic may be personnel, Fork lifts or larger vehicles such as trucks.

The doors are designed for either internal or external use. Both applications may require design capabilities to withstand high winds our high positive pressures. In both cases the doors are expected to operate quickly and smoothly to ensure high frequency traffic flow.

3.2 The User and Duty of Care

The door itself has been designed and manufactured with components that are qualified and of a high standard. The parts, assembly process and testing of the product all form part of what gives the final product a high level of safety. But this safety standard can only be reached by the user if all necessary measures and precautions are observed. It is important that the user operates the doors in a responsible way and that all safety functions are in place around the door that fit with the doors location and application. Please read the operating manual carefully and keep in a safe place for future use.

The user is responsible to ensure the following:

- The installation, commissioning, inspection, maintenance and any repair work is undertaken only by personnel approved by the manufacturer.
- That trained personnel operate the door system.
- That the door is only used in accordance with its applied purpose and all related safety devices applicable to that usage are functioning as required.
- All safety devices should be checked regularly.
- That the operation manual shall be kept in a readable state and stored within the doors control box.
- That the customer shall ensure that operating personnel are trained with how the door operates and its safety features.

3 SAFETY INFORMATION

3.3 General Safety Advice

- Do not use this door for purposes it is not intended for. Should this door be transferred to a third party this user manual must also be transferred to this party.
- Do not put your hands within the side columns of the door or on the top roll during operation.
- Ensure persons do not use the main traffic door opening for pedestrian access. Pedestrian traffic should use existing pedestrian doors for access.
- When maintenance work is carried out on the door ensure the main isolator switch is powered OFF and must be secured/locked off during that time.
- Upon damage of the door (mechanical or electrical) it must immediately be set off OFF operation. It is important to note that operating the door during heavy wind pressure outside the specifications of the may be dangerous.
- For the safety of all who work in and around the these doors all safety instructions outlaid in this manual must be observed.

4 PRE-INSTALLATION INSPECTION

4.1 Visual Inspection of the Crate and Assemblies

The door is delivered in a crate which is not fully enclosed. The first inspection should be a visual check that there has been no obvious damage to the crate itself. Once the initial visual check has been done the crate then can be pulled apart to access the main assemblies of the door. Once the crate frame has been removed then the main assemblies can be inspected for any possible damage.
The assemblies consist of a head unit, with front hood, motor cover and end cover attached, two side frames, LHS and RHS and a control box and parts box. All should be inspected for damage and completeness comparing with parts list.

Note: Please ensure when dismantling the crates that nails are flattened down on the timber so are not left in a hazardous upright position
Please consider the environment when disposing of any packaging, recycle where possible.

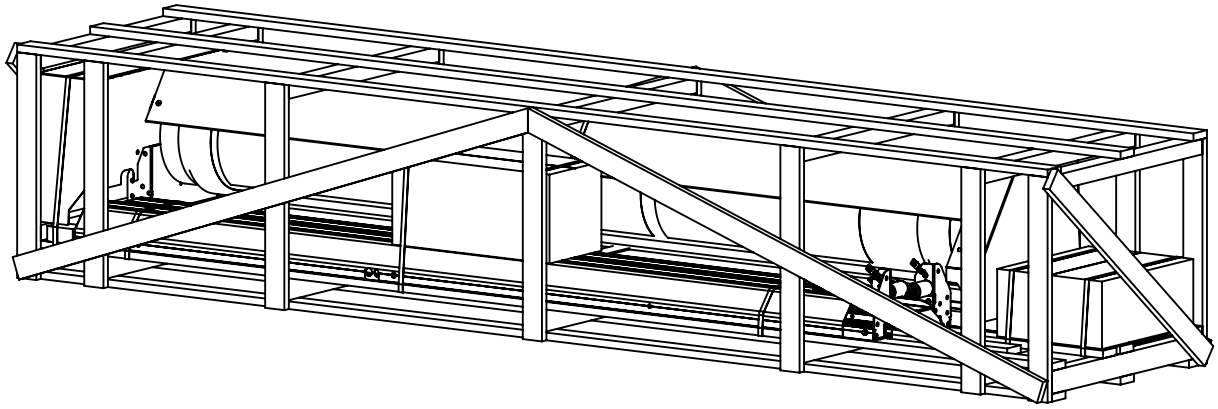
4.2 Pre-Installation Inspection

- The user is responsible to ensure the following:
- The installation, commissioning, inspection, maintenance and any repair work is undertaken only by personnel approved by the manufacturer.
- That trained personnel operate the door system.
- That the door is only used in accordance with its applied purpose and all related safety devices applicable to that usage are functioning as required.
- All safety devices should be checked regularly.
- That the operation manual shall be kept in a readable state and stored within the doors control box.
- That the customer shall ensure that operating personnel are trained with how the door operates and its safety features.

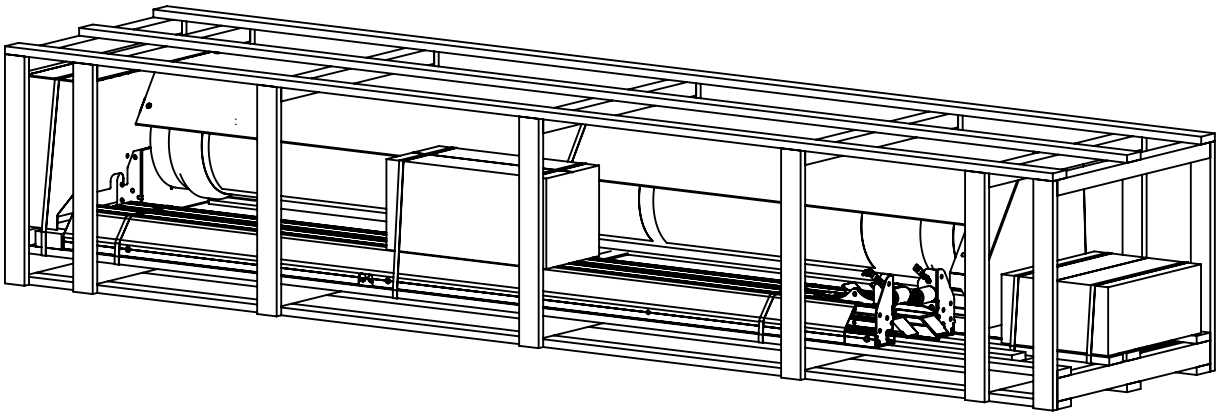
5 INSTALLATION

5.1 Removing Covers and Connecting Leg Assemblies

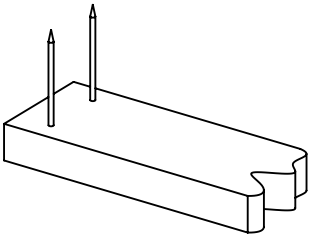
AS DELIVERED

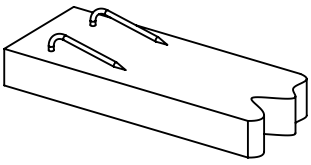


STEP 1
Cut steel strapping (if present).
Remove end and side supports.



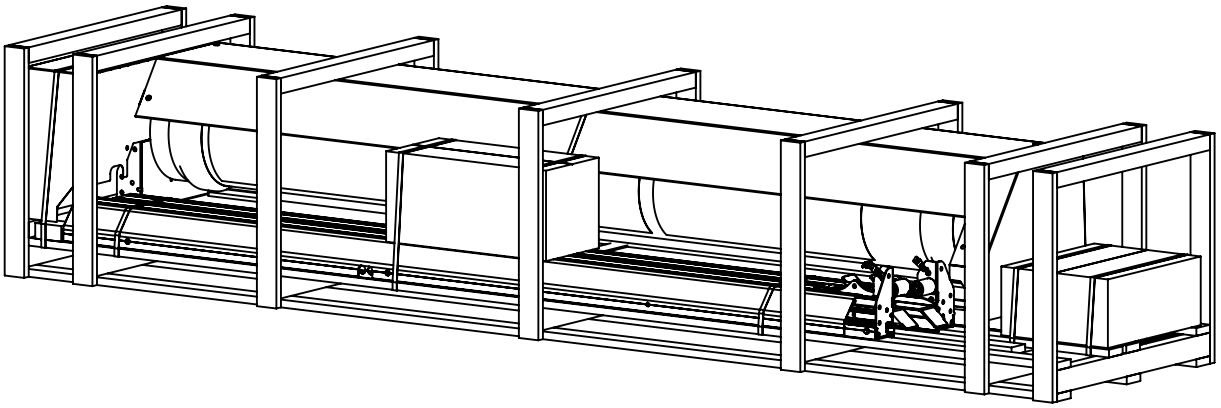
CAUTION:
Do not leave nails protruding. Either remove nails or bend down.



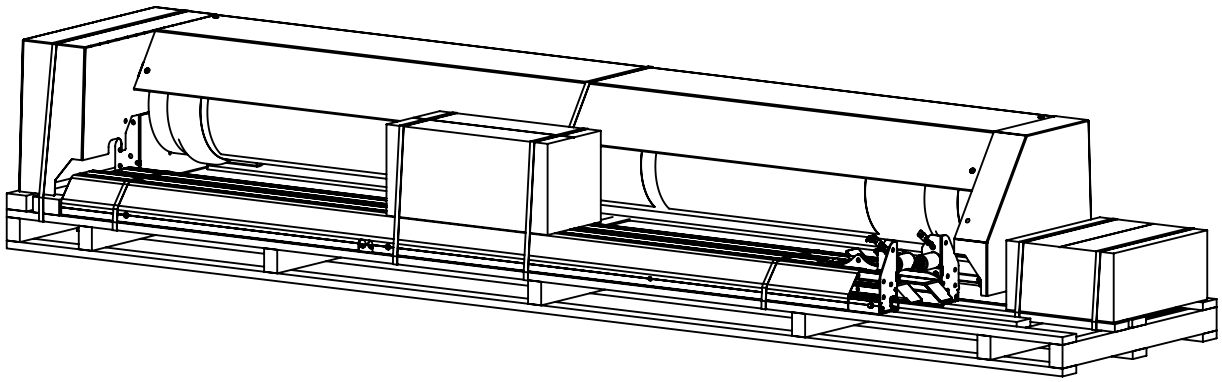


5 INSTALLATION

STEP 2
Remove tops from pallet

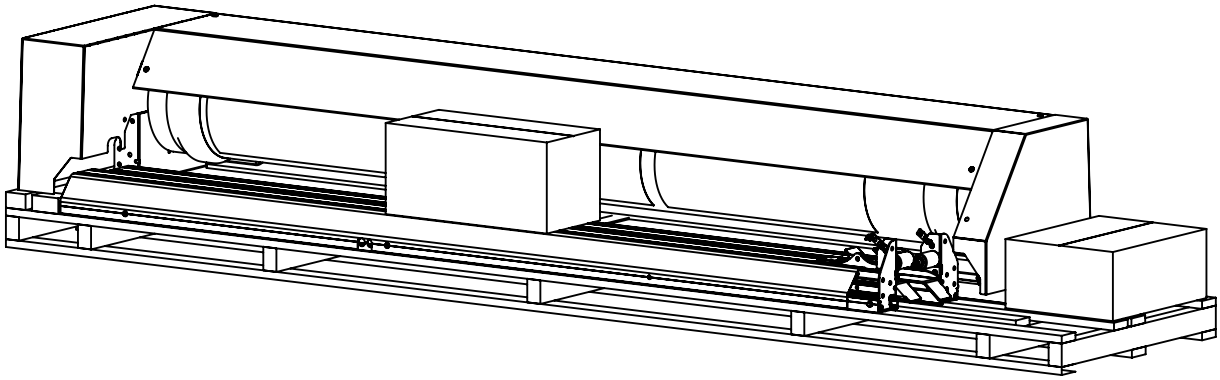


STEP 3
Remove ribs from pallet

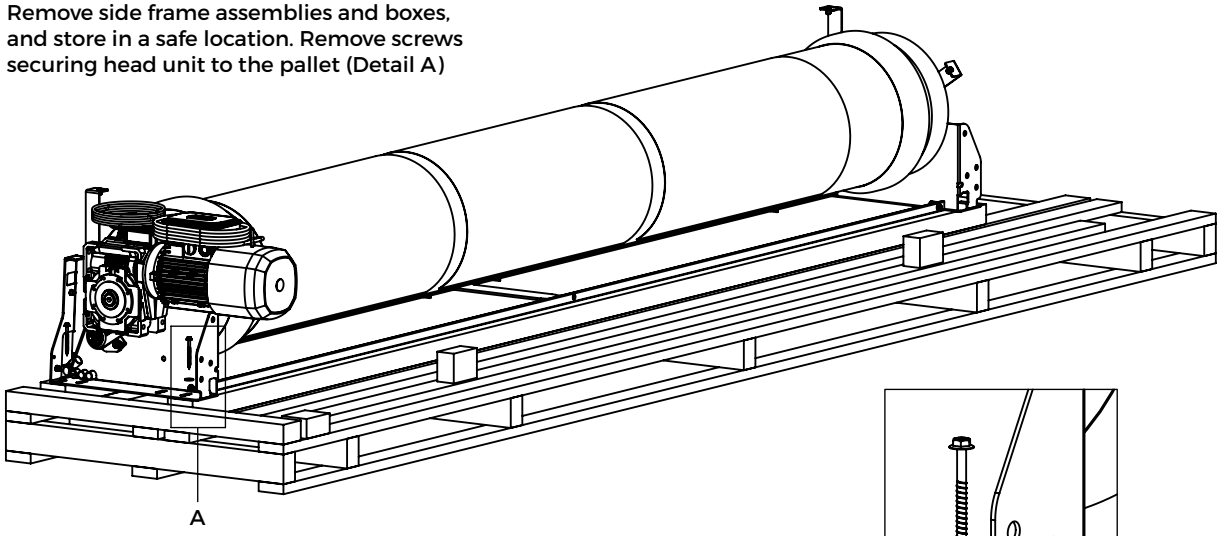


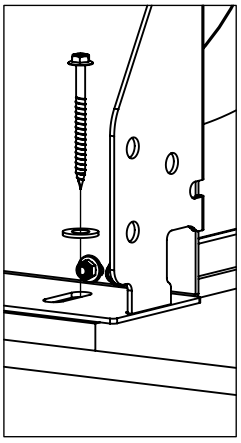
5 INSTALLATION

STEP 4
Remove straps to boxes and door components



STEP 5
Remove side frame assemblies and boxes, and store in a safe location. Remove screws securing head unit to the pallet (Detail A)



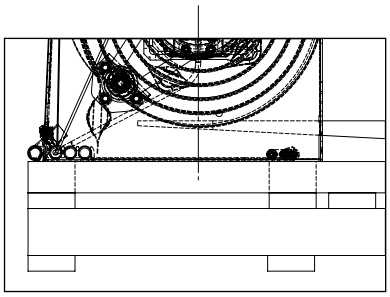


DETAIL A

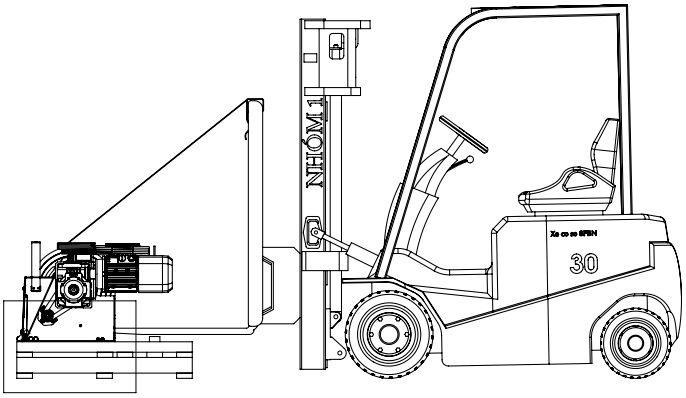
5 INSTALLATION

5.1 Removing Covers and Connecting Leg Assemblies

STEP 6
Wrap bubble wrap around forklift tines and drive in under curtain roll (note: the forks will need to be positioned slightly off-center towards the motor end to account for the weight balance). Ensure forks are roughly halfway between the roll center and the back hood channel as per detail A. Once forks are correctly positioned, tie two strops around the curtain roll and secure to the forklift at either end of the mast guard (as shown) to stop twist.



DETAIL A



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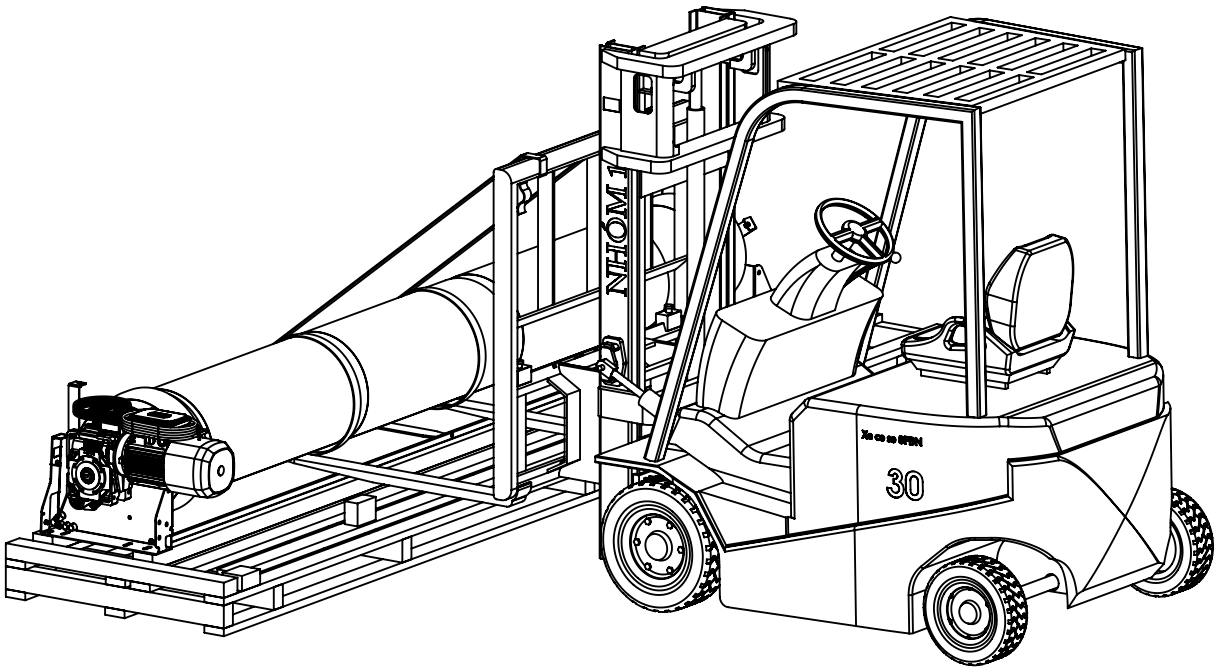
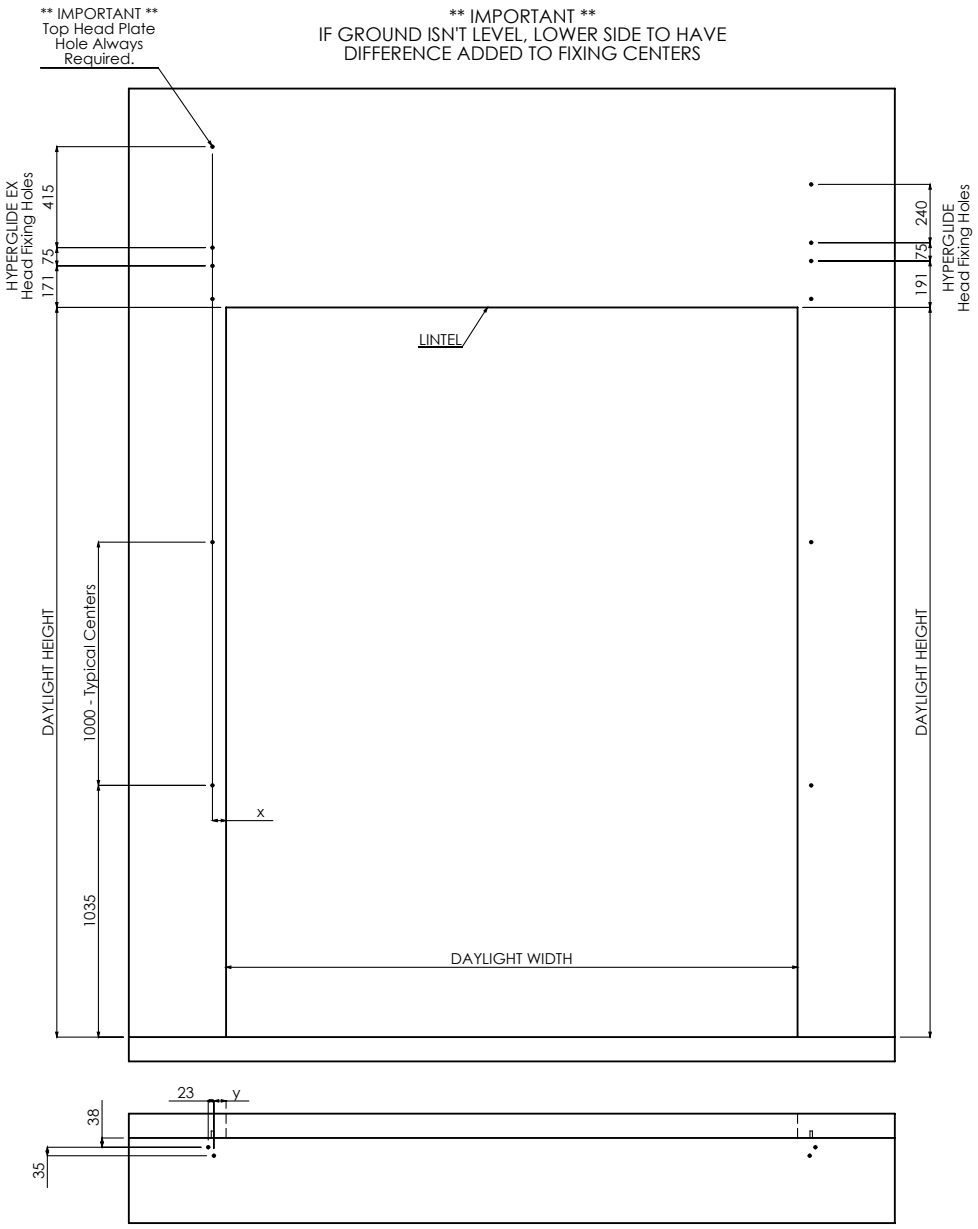


5 INSTALLATION



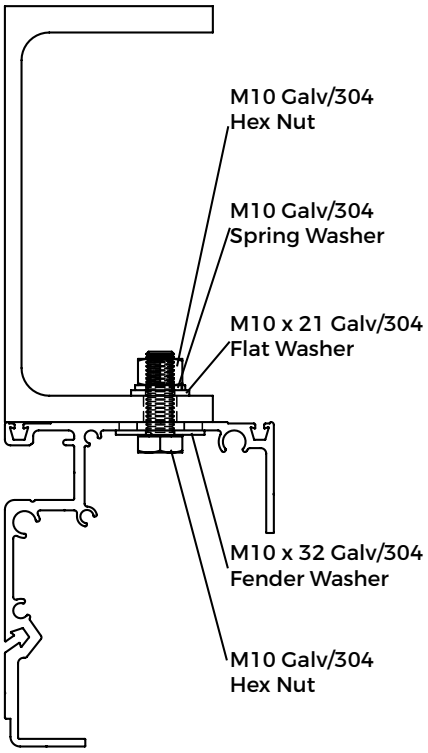
Clearance Variables		
Variable	Dimension	Condition
X	56 131 181	Standard 75mm Guides Flush 125mm Guides Flush
Y	50 125 175	Standard 75mm Guides Flush 125mm Guides Flush

5 STANDARD FIXING DETAILS

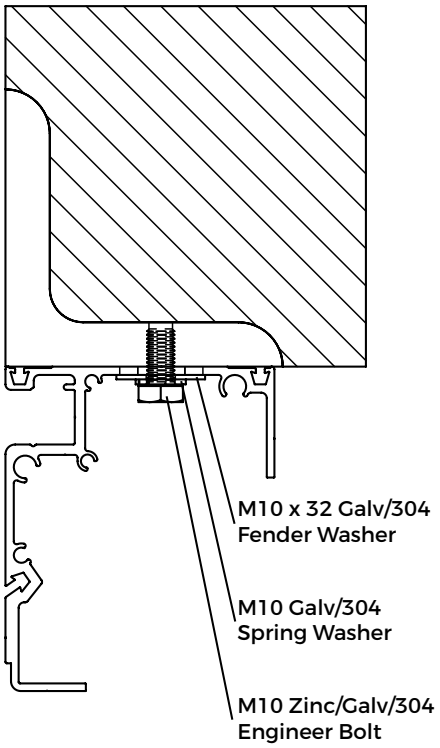
Notes:

- Dimensions assume openings are square and level
- Dimensions are the same for both sides of opening

Bolt Through Steel

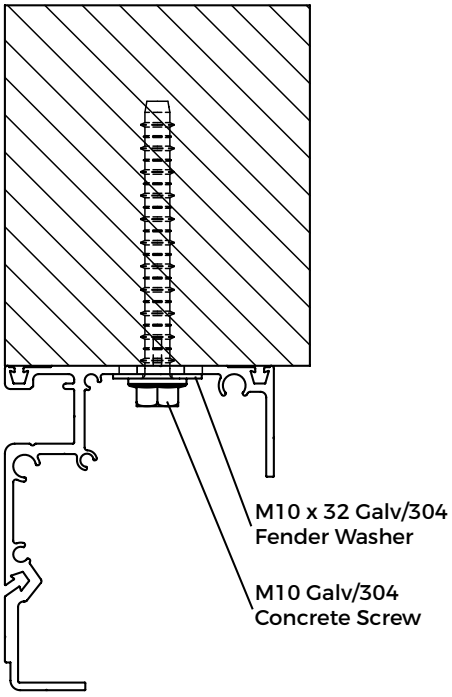


Tapped Steel

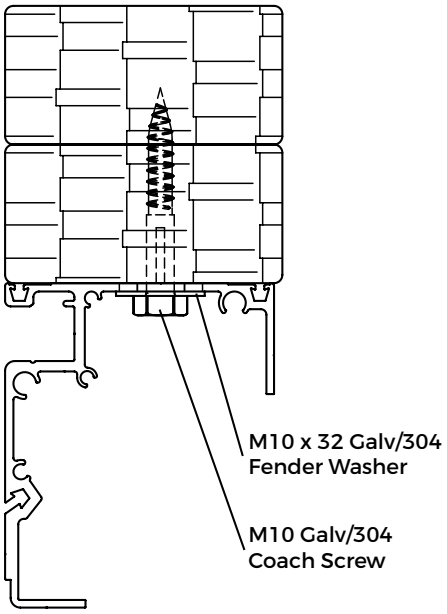


5 STANDARD FIXING DETAILS

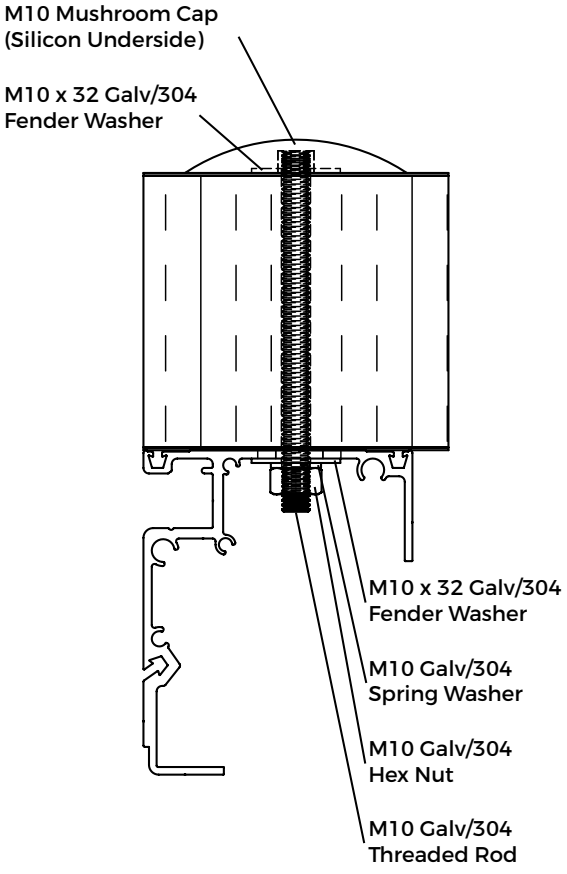
Concrete



Timber



Bolt Through Steel

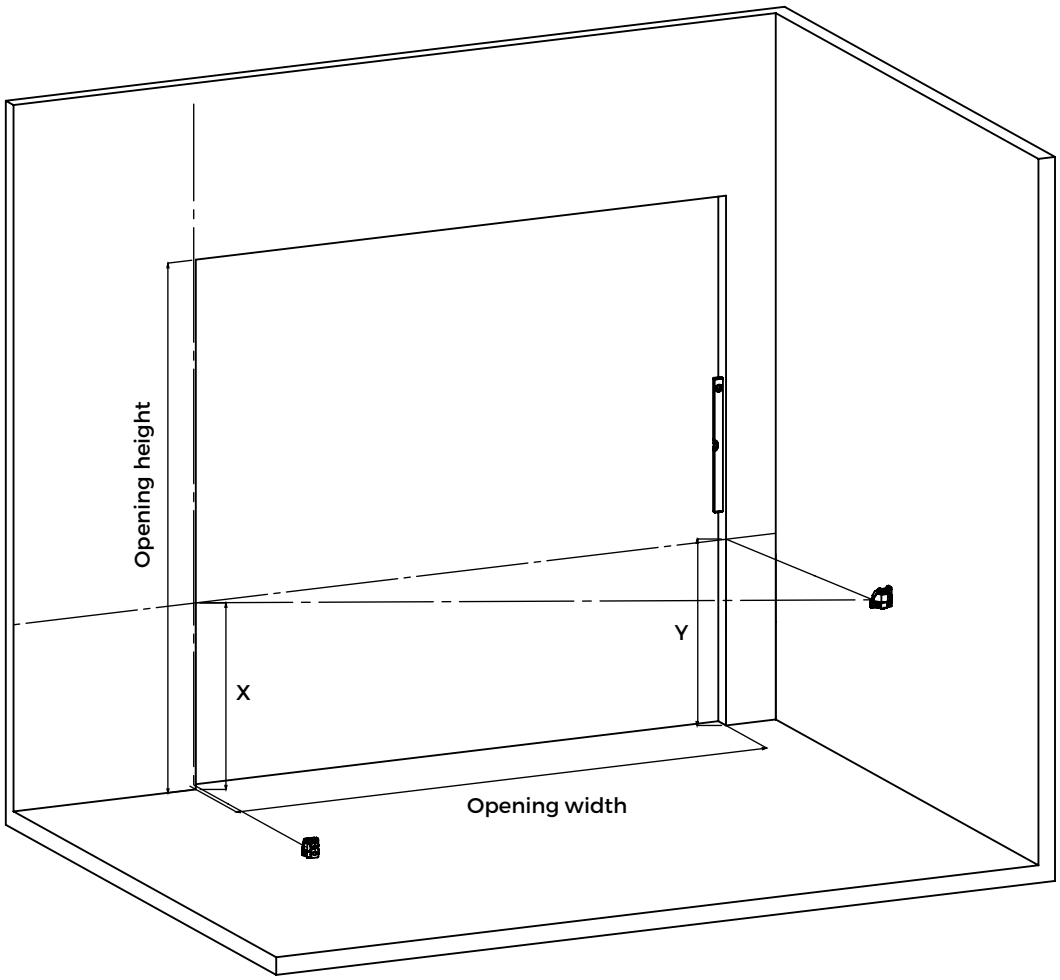


5 INSTALLATION

Checking The Opening

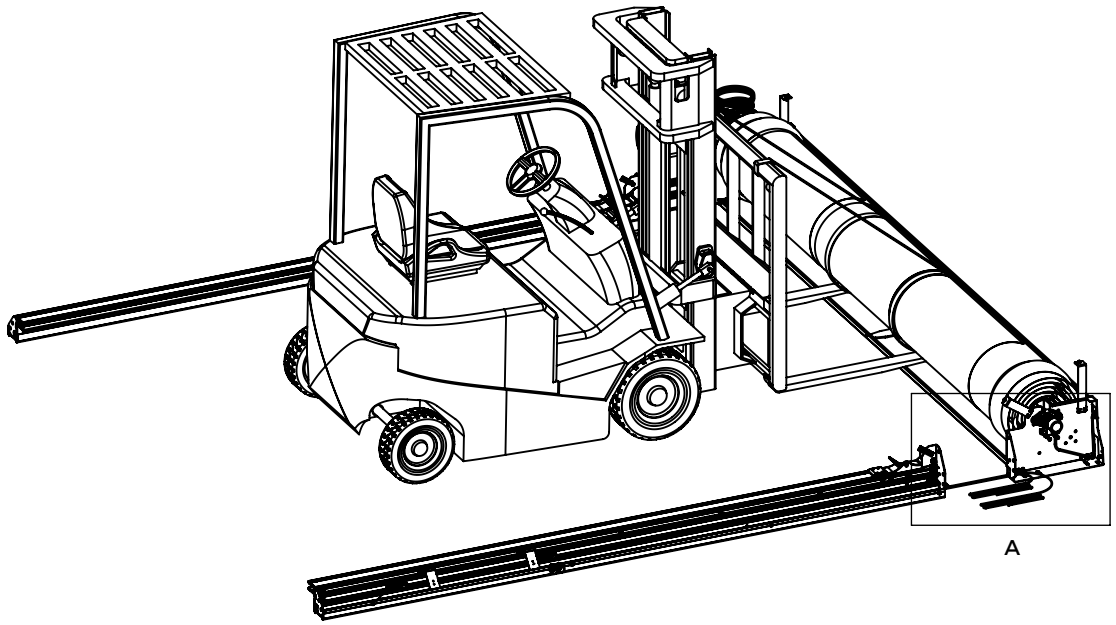
Before commencing any work, check the opening will be suitable for the provided door.

- Check the opening height against the order acknowledgement
- Check the opening width against the order acknowledgement and confirm if door guides step inside, or are flush with the door opening
- Check clearance dimensions against order acknowledgement incase of obstructions above and around the opening
- Using a spirit level or laser, check that the vertical door jambs are flush
- Using a laser, confirm the floor is level. Mount the laser approx. 1000mm off floor and measure lhs (dim X) and rhs (dim Y). If opening is uneven, add packers under lower side to bring to level.

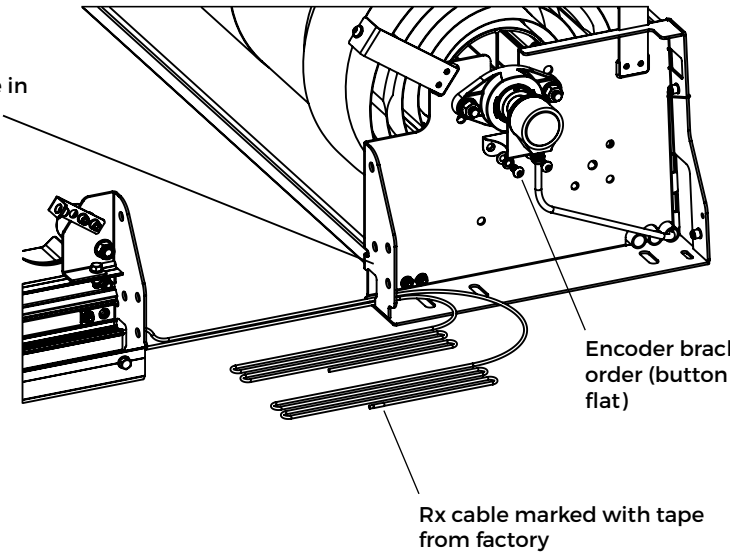


5 INSTALLATION

STEP 7
After finding center of balance, lift head section onto flat ground. Remove leg covers from side frames and store covers and removed fixings in a safe and secure location. Position side frame assemblies approx. 400mm back from head unit assembly and feed photocell cables (and proximity light/heat trace cables if present) through head plate (as per detail A). Remove encoder and bracket from protective packaging. Line encoder shaft up with slot In the end of the non-drive shaft and fix bracket in place (as per detail A).

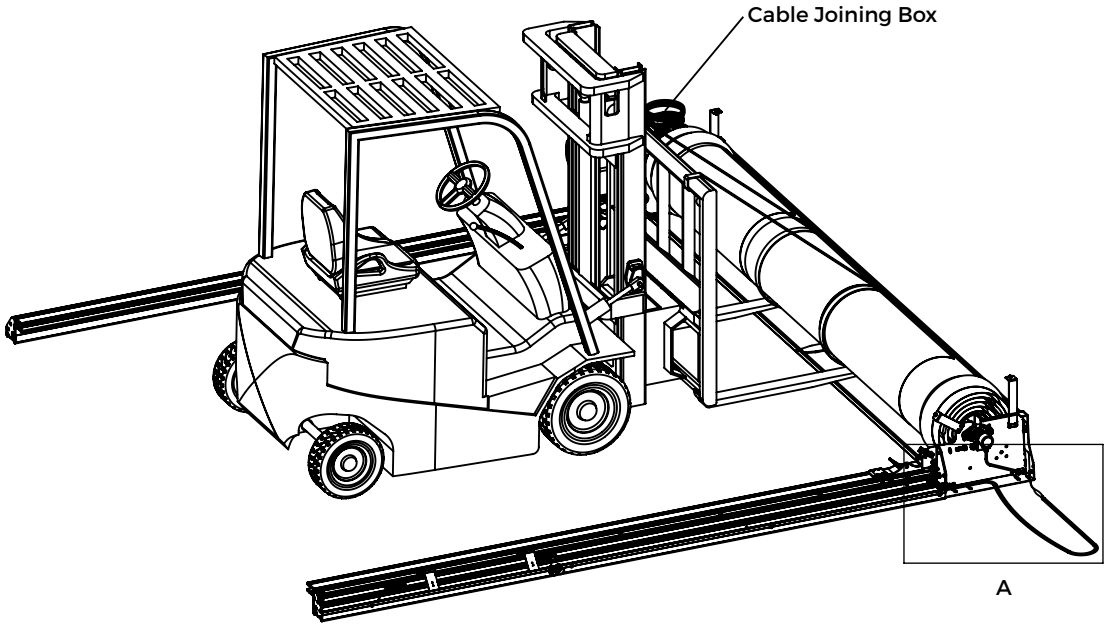


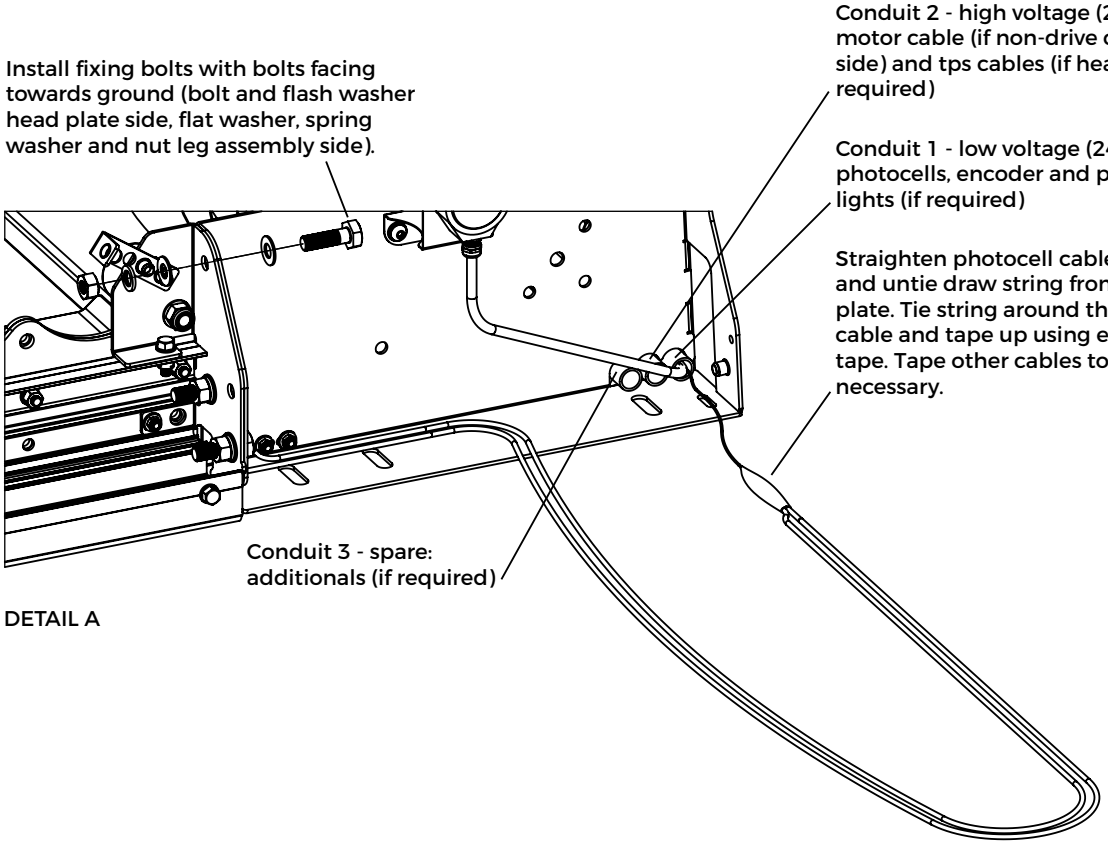
DETAIL A



5 INSTALLATION

STEP 8
Once cables have been drawn through head plate, bring the leg assemblies hard against the head plates. Fix in place with fixing positions as outlined in detail A. Tighten using 18mm spanner and socket. Pull remaining cable slack through head plates. Draw the cables on the opposite side of the cable joining box through the conduits installed to the back hood (using the draw string as per detail A). Ensure low voltage and high voltage cables aren't run in the same conduit.

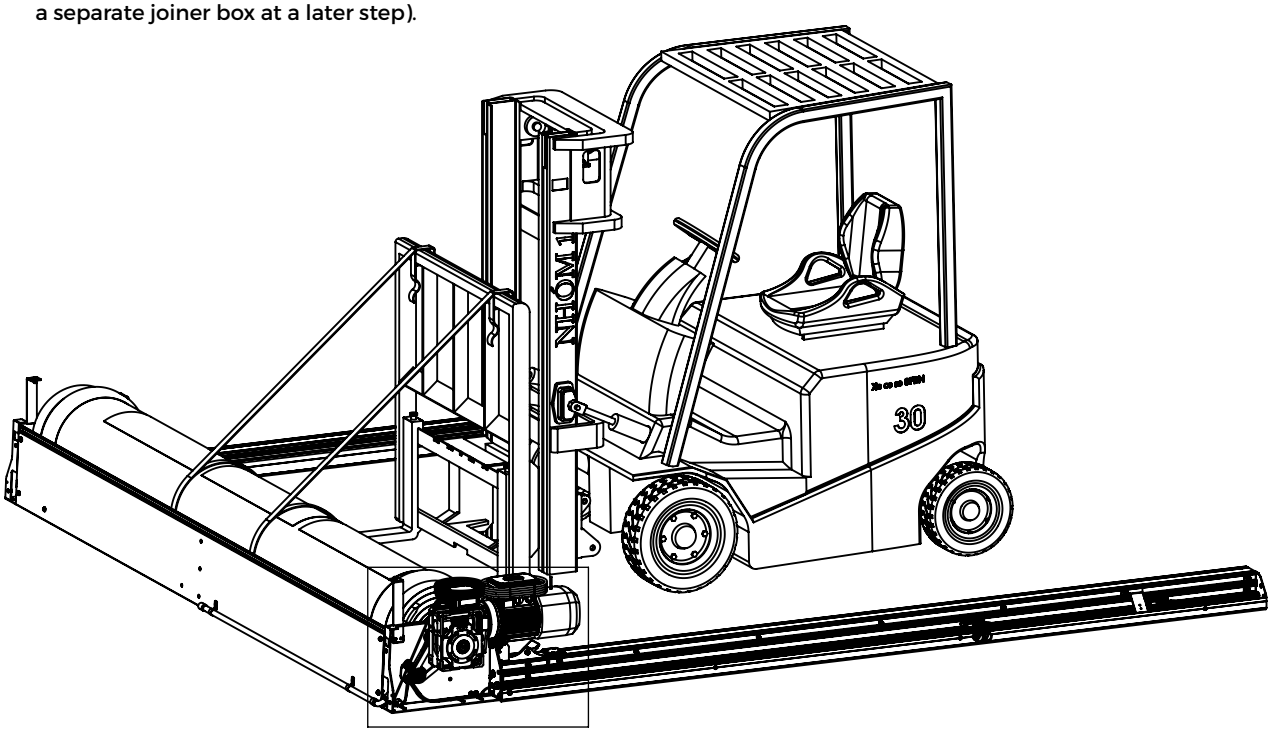




DETAIL A

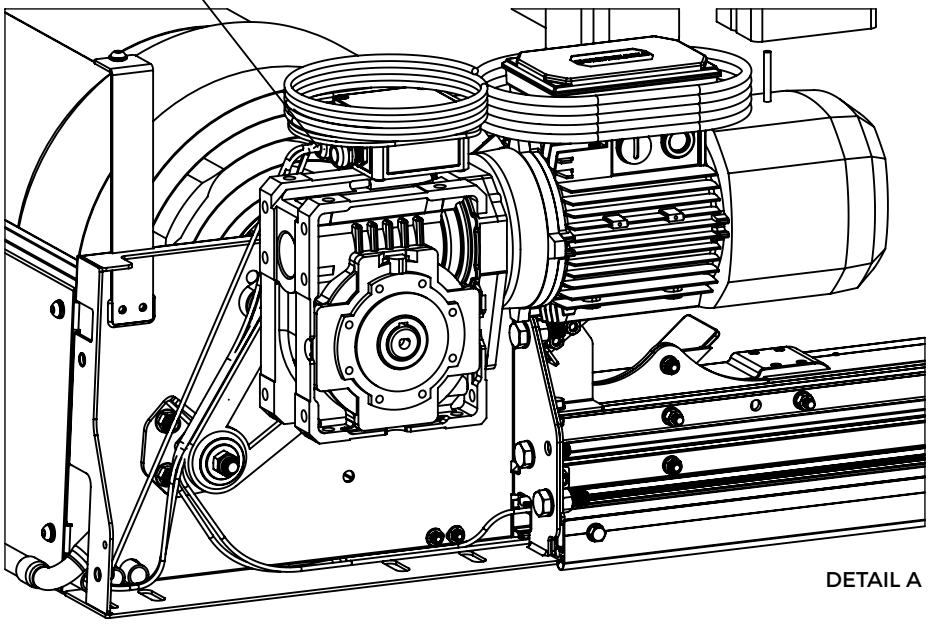
5 INSTALLATION

STEP 9
Once cables have been pulled through conduit via the draw string, run cables into cable joiner box (on motor if controller is motor side, or on head plate if controller is non-motor side). Once all slack has been removed (leave a small amount of slack so cables aren't over-tight) and cables have been fixed in place with cable ties, wire the cable joiner box as shown in the diagram for control cable connections for radars and photo-beams. (Note: if the door has heat trace cables, wire these into the heat trace joiner boxes on each head plate. If the door has proximity cables, these are wired into a separate joiner box at a later step).



A

All photocell cables to enter through single 20mm cable gland on cable joining box. Once cables are through, re-mark receiver cables at base of gland using electrical tape. Once marked, cut cables to 200mm inside box, and strip back 150mm of insulation.

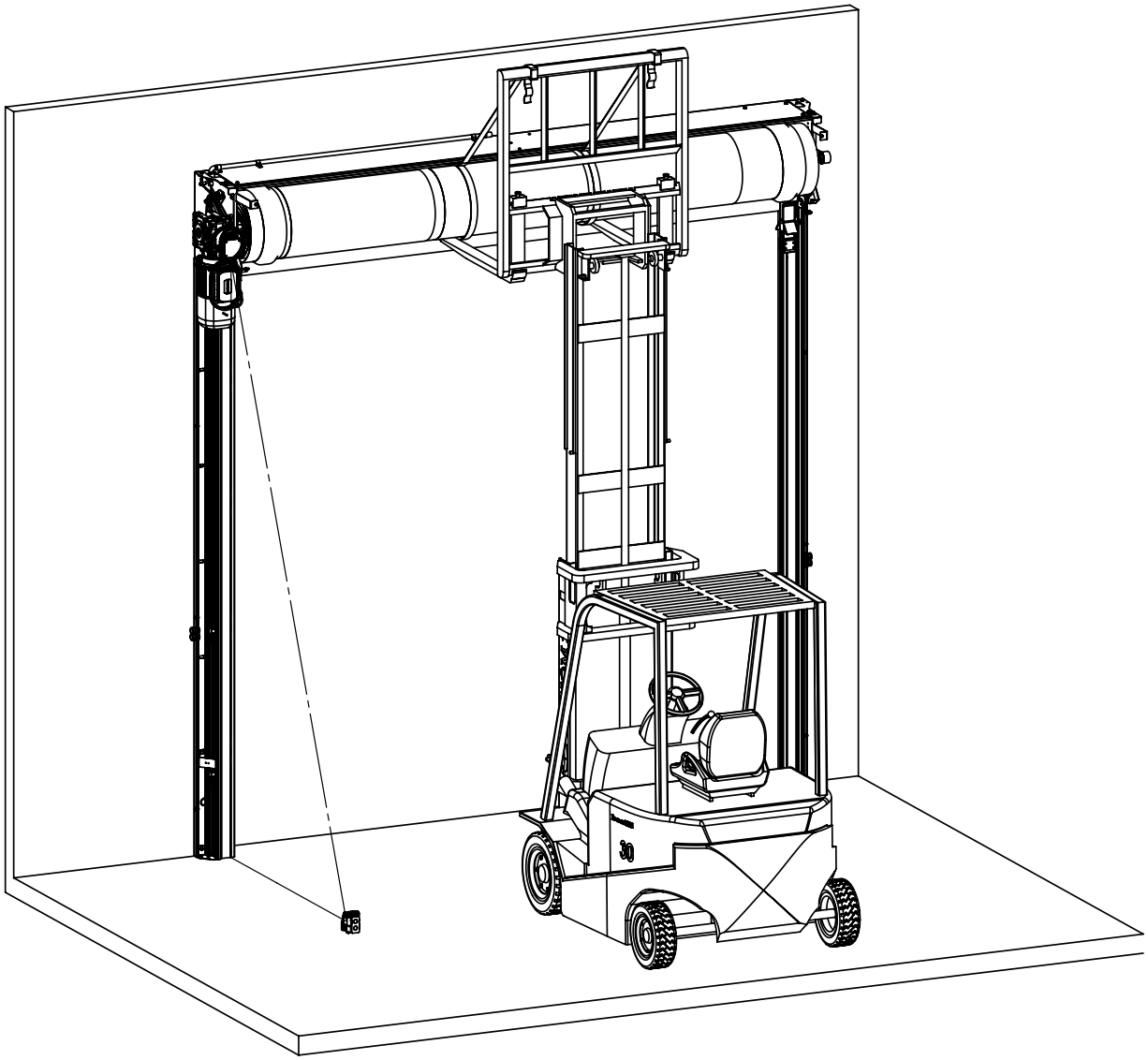


DETAIL A

Cable tie photocell cables and encoder cable in group along torque arm.

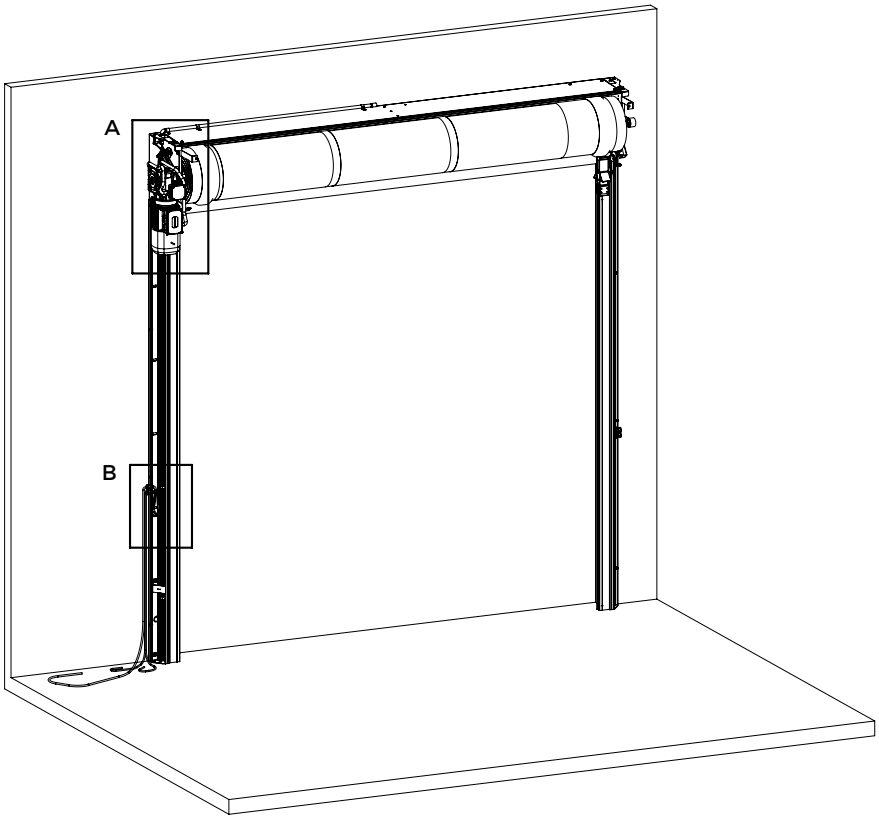
5 INSTALLATION

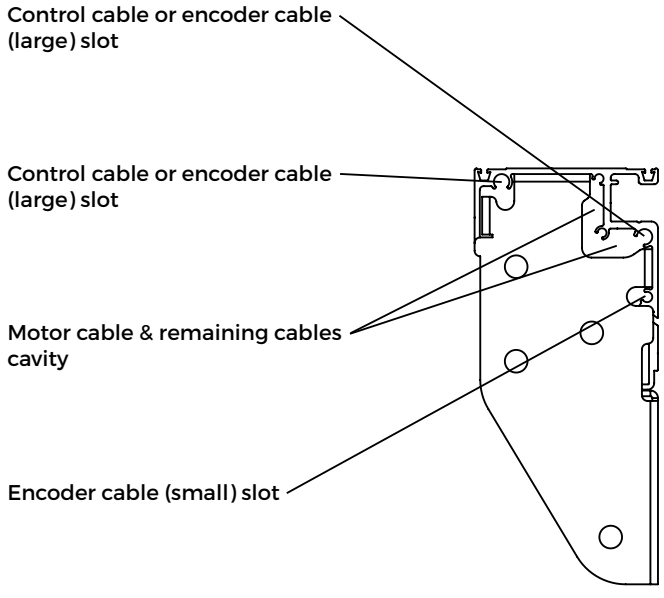
STEP 11
Pre-drill fixing holes in wall as per fixing layout plan, allowing for any discrepancies in opening dimensions. Install floor packers (if necessary) to allow for unevenness of floor. Lift door into place and loosely fix to opening using the correct fixings (refer to fixing layout plan). Level both side frames using a laser or spirit level, and once squared, tighten fixings in place. Once tightened, remove strops securing door to forklift, and remove forklift.



5 INSTALLATION

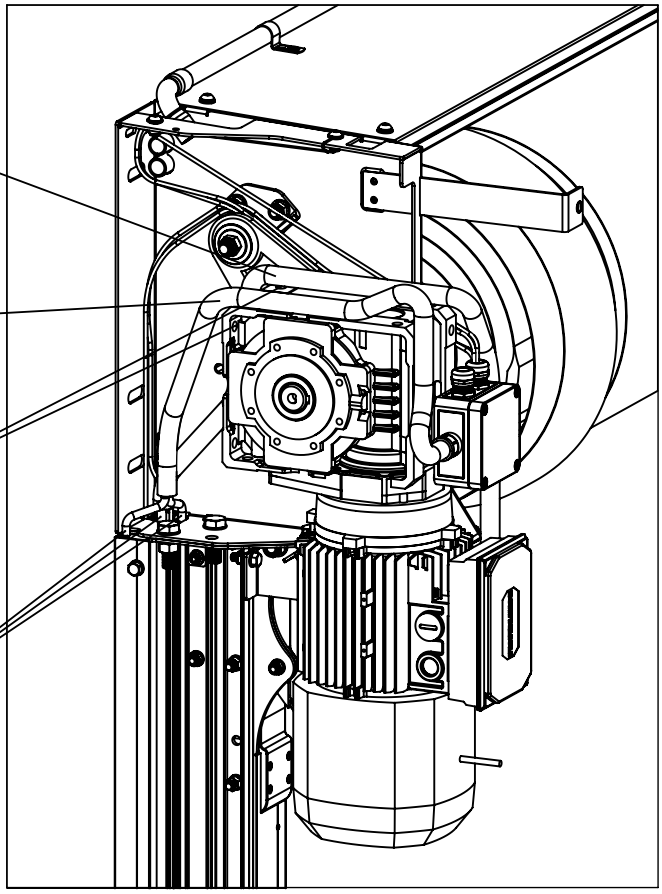
STEP 12
Uncoil the control cable, encoder cable and motor cables bunched up on the motor. Feed the low voltage encoder cable and control cable through flexi conduit (stop flexi conduit approx. 50mm above leg plate as per detail a) and down through slots in head/leg connector plates (if a lights cable is present, this shares the same conduit). Run the motor cable through a separate conduit and down into the side frame too. Press the smaller cables into the slots in the aluminium side frame and let the higher voltage cables hang freely inside the side frame. Loop cables and feed through cable glands as per detail B.



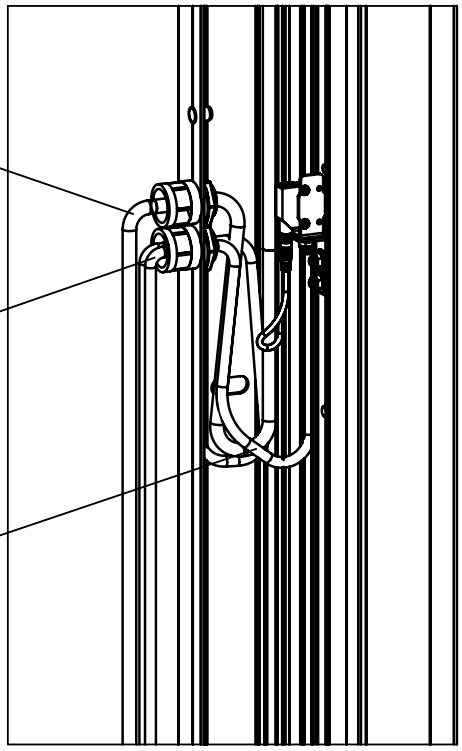


5 INSTALLATION

DETAIL A

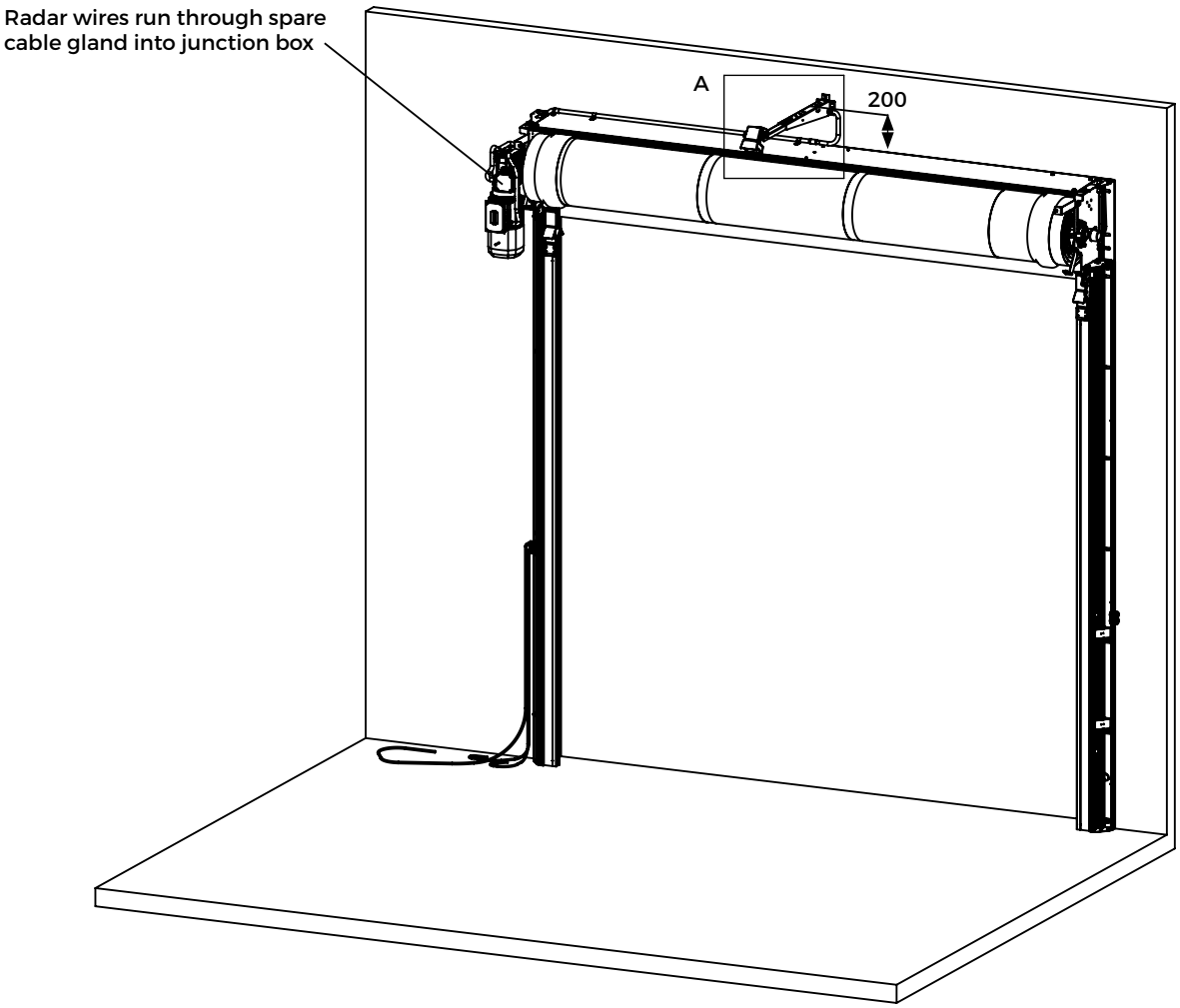


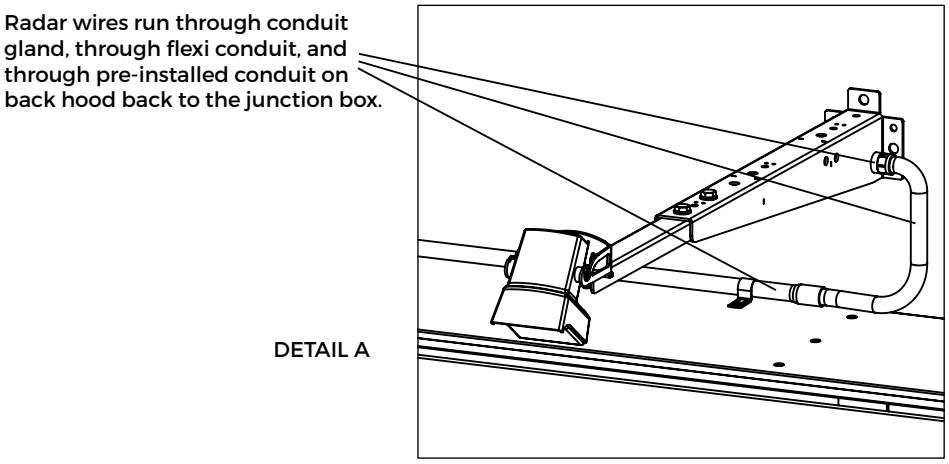
DETAIL B



5 INSTALLATION

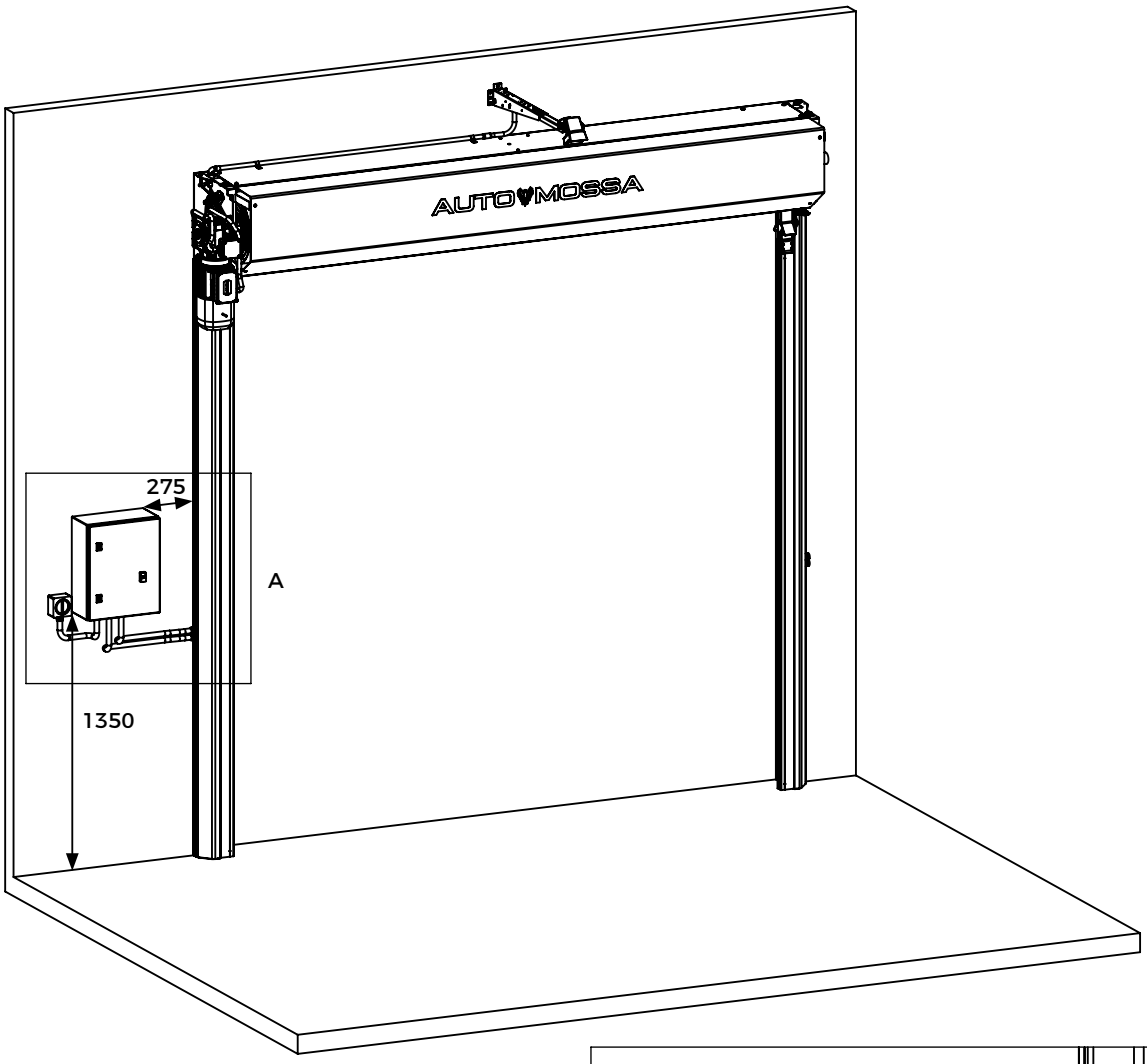
STEP 13 (If Radars Required)
Fix radar bracket above door approx. 200mm and center in door opening. If fixing to polypanel, at least 1x mushroom head fixing is required (top center hole is recommended). If radars are required both sides of door opening, drill a hole through the wall approx. 75mm below the top center hole. Bring wire through the wall and fill the hole with silicon. Feed both wires through the cable gland, through flexi conduit, through the conduit on back hood and into the spare cable gland on the junction box on the motor. Wire in as per the junction box wiring diagram.

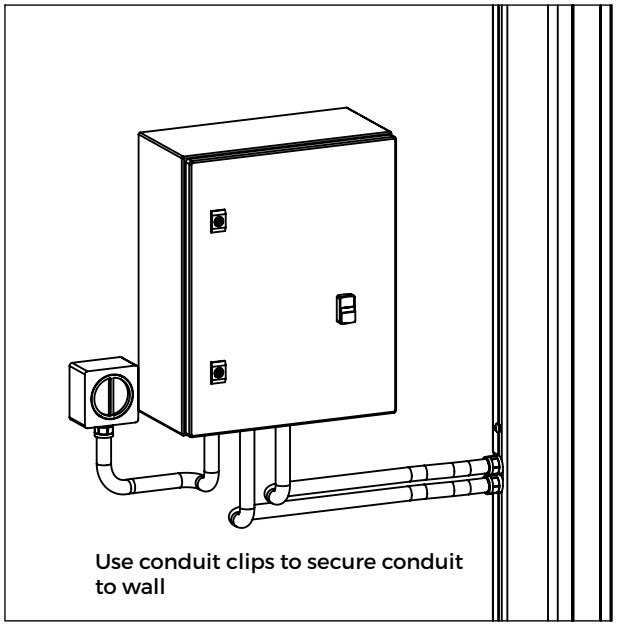




5 INSTALLATION

STEP 14
Fixing controller to wall using suitable fixings. Dimensions shown are for the standard mounting position. Run cables protruding from side frame cable glands through conduit into control box. Wire controller according to wiring diagram. Install side frame covers and front hood cover.

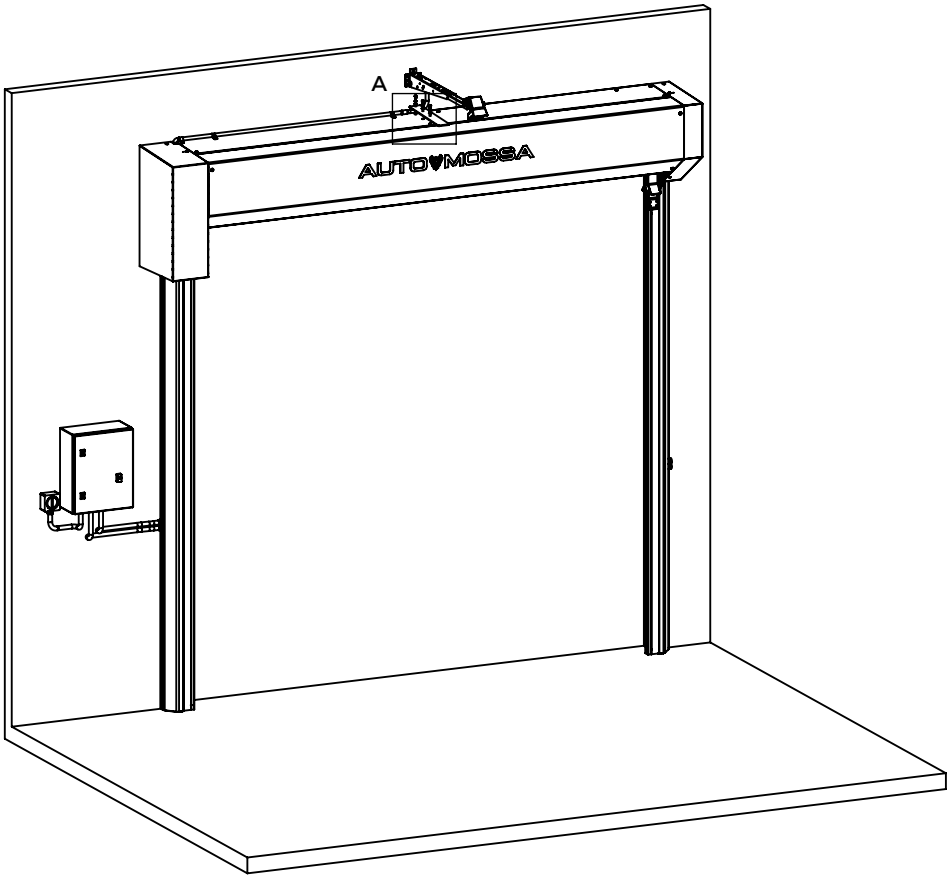




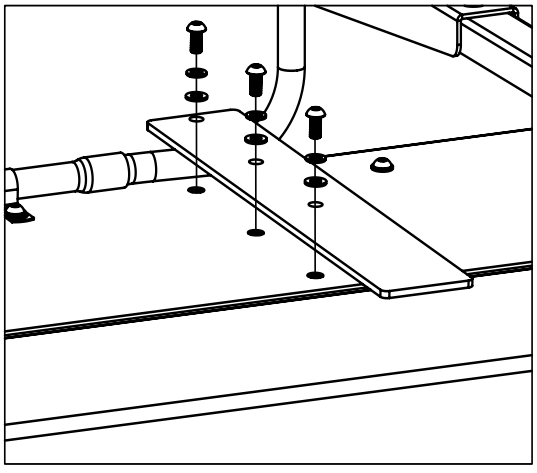
Use conduit clips to secure conduit to wall

5 INSTALLATION

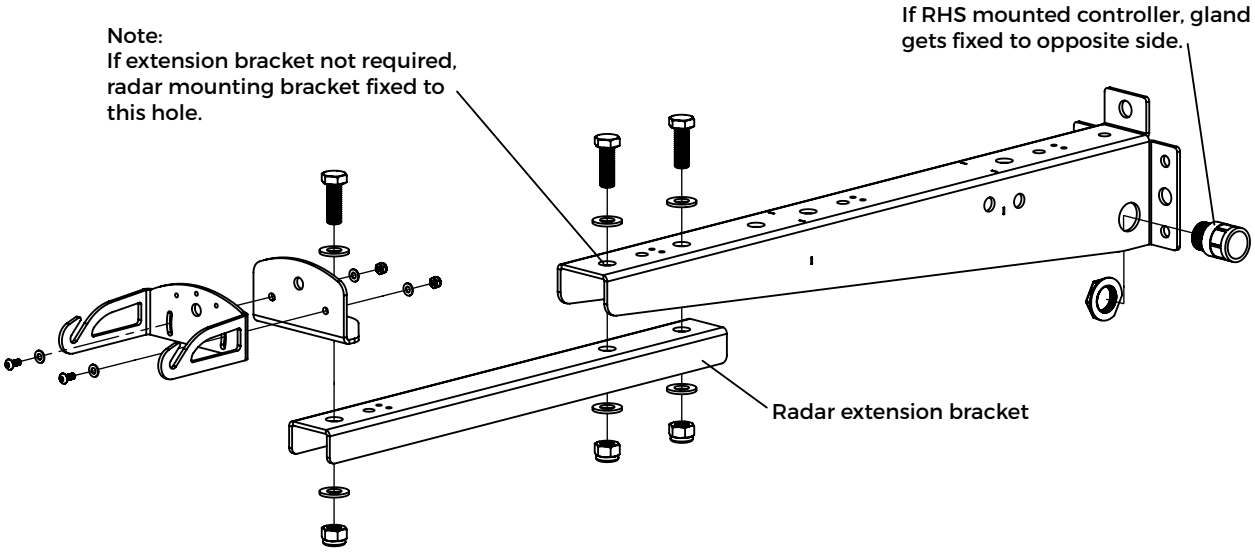
STEP 15
Install drive and non-drive covers. Install front hood stiffeners (if required). Procedure: remove center fixing from back hood, then fasten stiffener plate (loosely) horizontally to center hole. Remove front and back fixings, then spin plate straight. Install front and back fixings and tighten all fasteners.

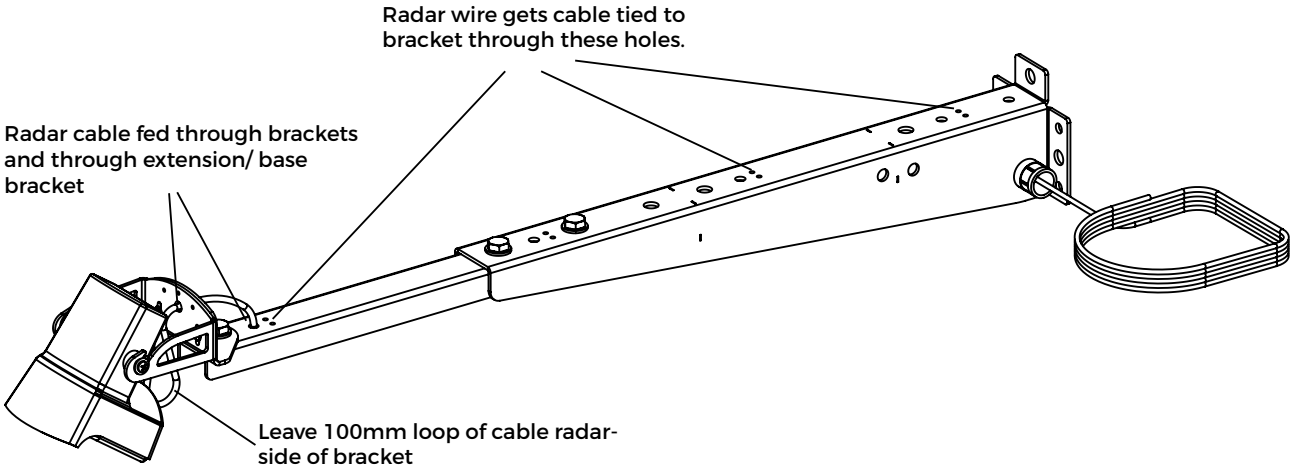


DETAIL A



5 INSTALLATION

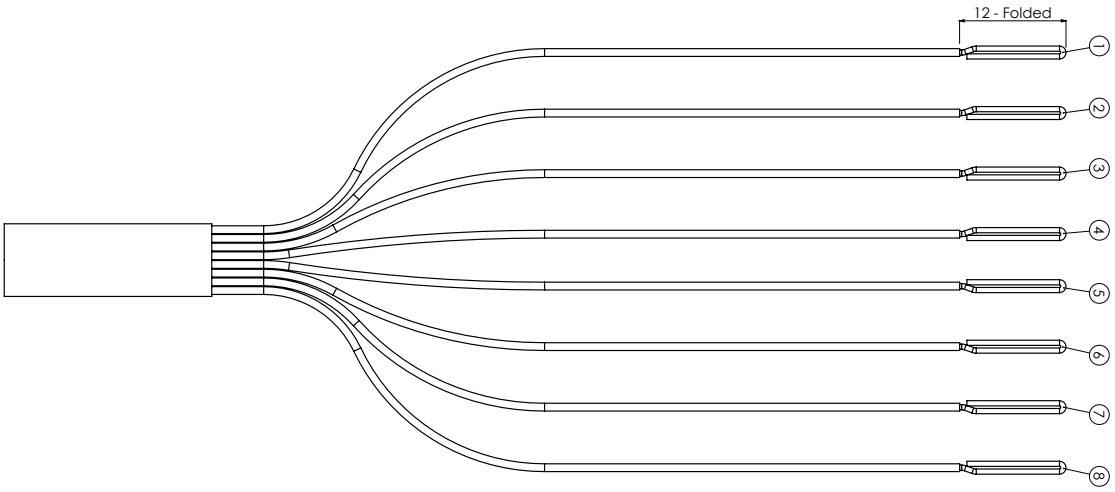




6 ELECTRICAL

6.1 Control Cable

CONTROL CABLE - 0.5mm 8C Security Cable



Item	Wire No./Colour	Control Box Connection	Terminal Number
1	Red	+ 24V	1
2	Brown	+24V	1
3	Green	0V	2
4	Yellow	Top Photocell Set	6
5	Purple	Bottom Photocell Set	7
6	Blue	Activation	8
7	White	Safety 1	11 (Tape Up If Unused)
8	Black	Safety 2	12 (Tape Up If Unused)

** NOTE **

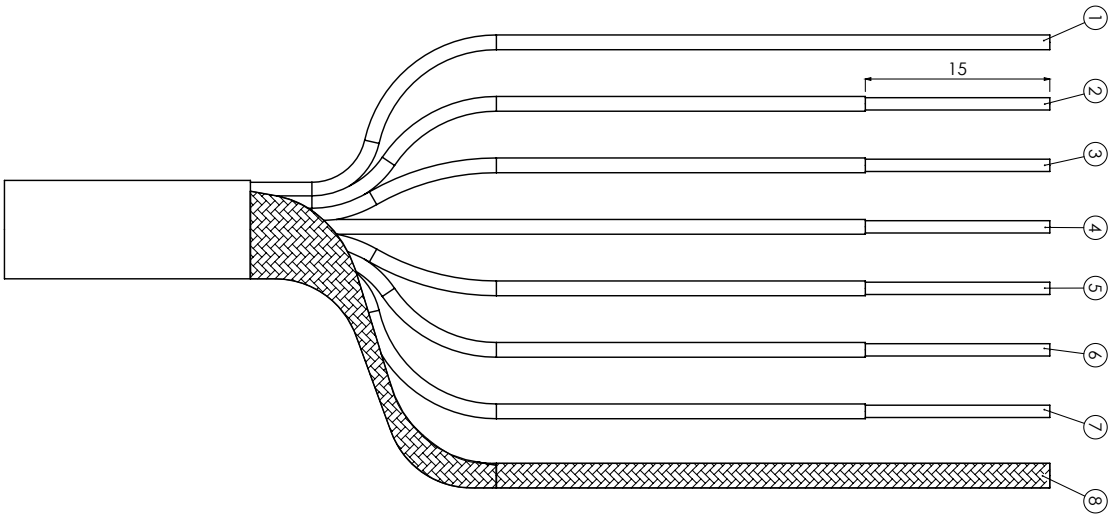
If Safety 1 Or Safety 2 Are Not Used, Tape Up White & Black Wires.

Insert A Bridging Wire From +24V (Terminal 1) To Terminal 11 And/Or Terminal 12.

6 ELECTRICAL

6.2 Motor Cable

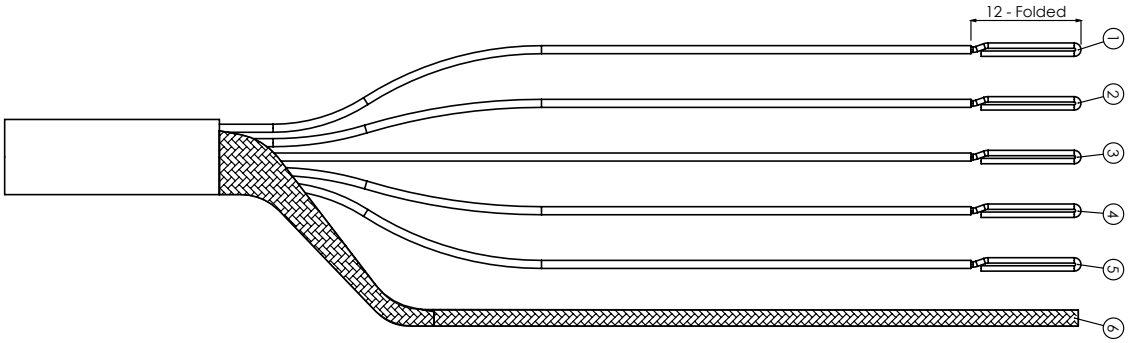
MOTOR CABLE - 1.0mm 7C Sheathed Cable



Item	Wire No./Colour	Control Box Connection	Terminal Number
1	1	N/A - Not Used	(Tape Up Wire)
2	2	Motor Brake	N
3	3	Motor Brake	17
4	4	3Ø Motor	18
5	5	3Ø Motor	19
6	6	3Ø Motor	20
7	Green/Yellow	Earth	PE
8	Earth Sheathing	Earth	PE

6.4 Encoder Cable - T2

ENCODER CABLE - 0.2mm 5C
Sheathed Cable

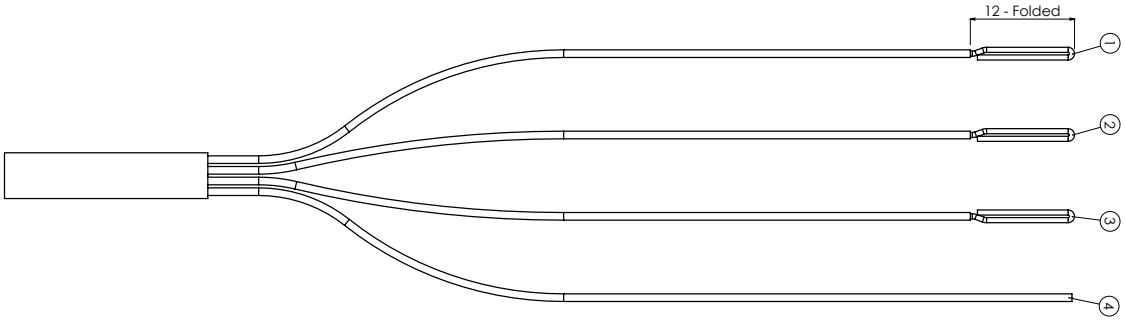


Item	Wire No./Colour	Control Box Connection	Terminal Number
1	Red	Power Supply 24v	1
2	Black	Power Supply 0v	2
3	Green	Encoder Channel A	3
4	White	Encoder Channel B	4
5	Yellow	Encoder Channel Z	5
6	Earth Sheathing	Earth	PE

6 ELECTRICAL

6.5 Traffic Lights

2 and 3 COLOUR TRAFFIC LIGHT CABLE - 0.34mm 4C Accessory Cable (M12 Female Plug Connection)



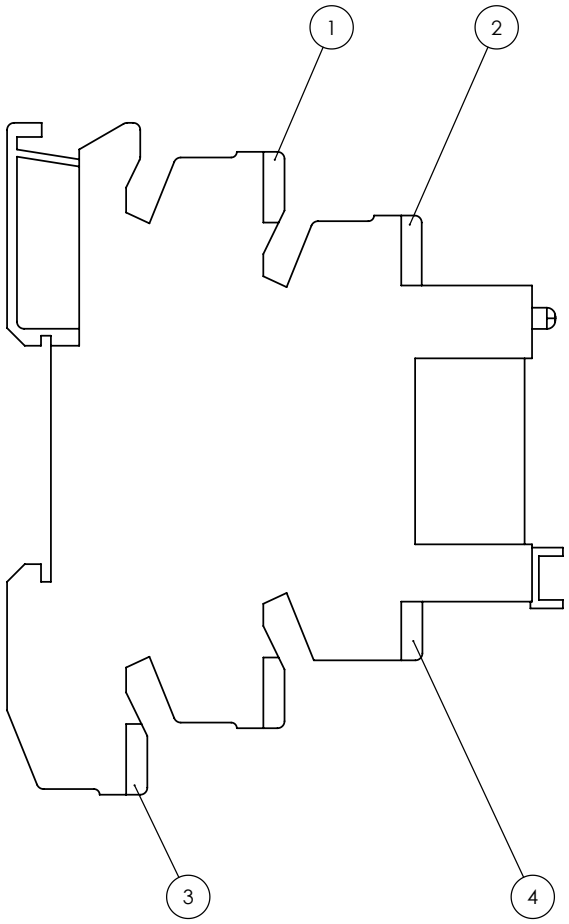
Wire	Wire No./Colour	Control Box Connection	Terminal Number
1	Blue	0V	2
2	Brown	Traffic Light 1	NO On Extra Relay*
3	Black	Traffic Light 2	NO On Extra Relay*
4	White	Traffic Light 3/N/A - Not Used (If 2 Colours)	15**/N/A

*If Colours Are Opposite To Desired, Swap NO & NC Wires

**If 3 Colours Are Used, Change Output 8 To Option 2 On Green Controller & Set Pre-Close Time

6.6 Traffic Lights

EXTRA 24V SLIM-LINE RELAY FOR 2 COLOUR TRAFFIC LIGHT CABLE

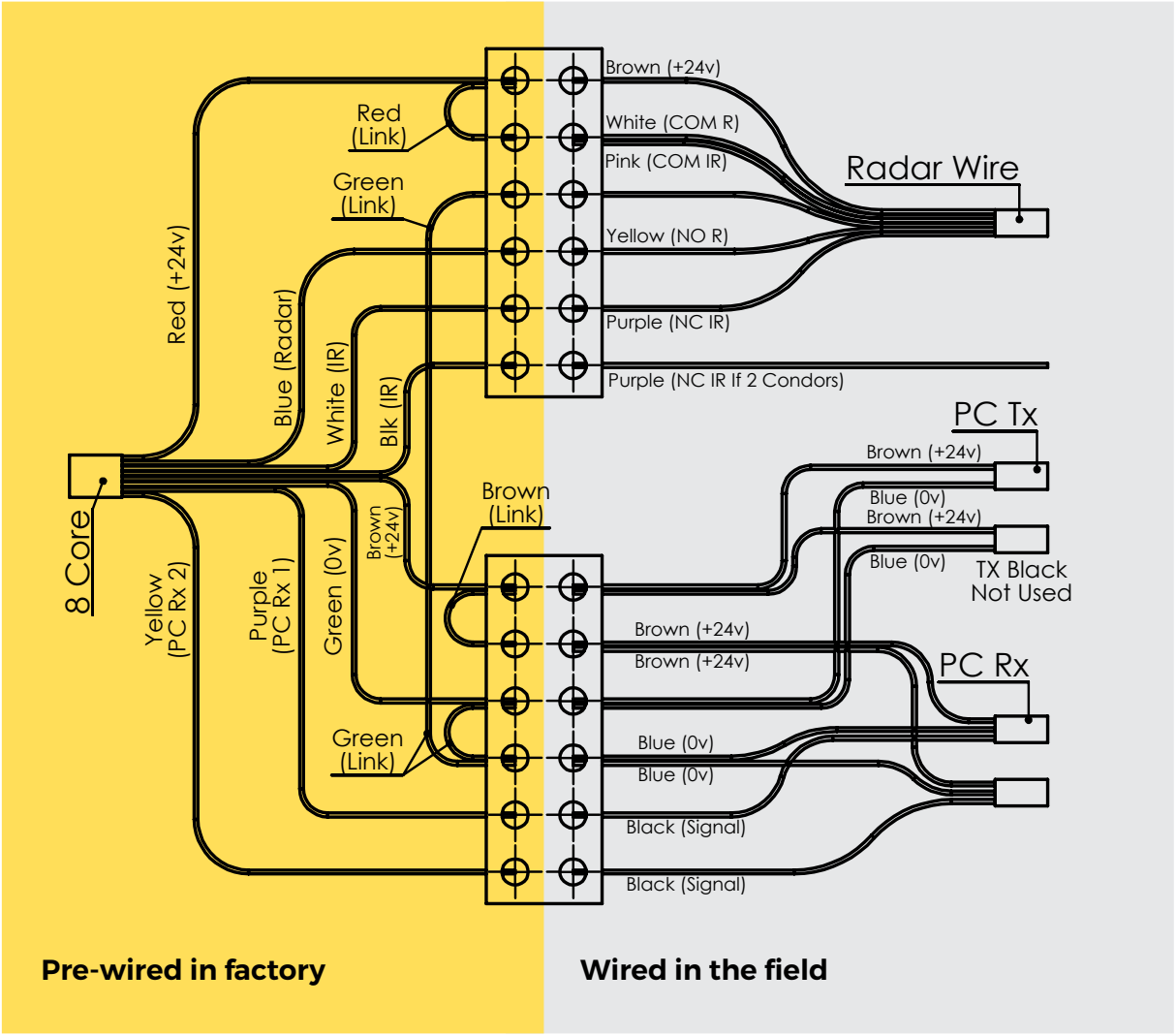


Wire	Relay Terminal	Control Box Connection	Terminal Number
1	Coil Side - A2 (0V)	Single Wire - 0V	2
2	Coil Side - A1 (24V)	Single Wire - Limit Signal	14
3	Relay Side - NO	Traffic Light 2*	-
4	Relay Side - NO	Traffic Light 1*	-

*If Colours Are Opposite To Desired, Swap NO & NC Wires

6.7 Radar and Photo-beam Connections

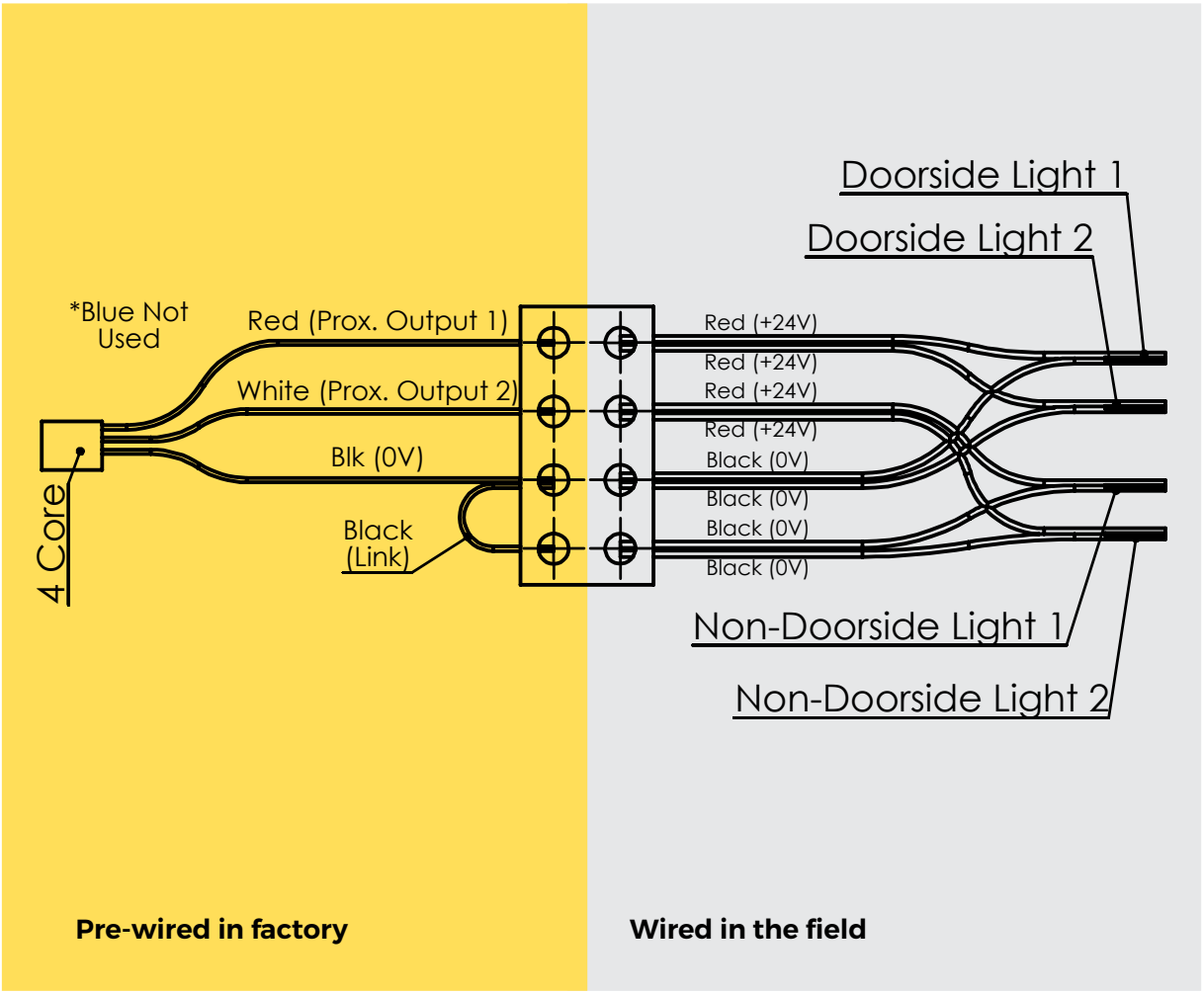
Control Cable Connections for Radar and Photo-beams



Rev. B
13.07.18

6.8 Proximity Light Connection

Control Cable Connections for Proximity Lights



Rev. A
13.07.18

7 COMMISSIONING

Controller Setup Procedure: Hyperglide, Hyperchill and Hyperfreeze

7.1 Commissioning Mode:

Step 1 - Hold in STOP button and press GO button 5 times, light flashes slowly to indicate instruction is successful. When the light stops flashing the door is ready to be positioned.

Step 2 – Setting down Position - Drive door to DOWN position using the STOP button, use the GO button if you need to jog the door up. Once the door is in the down position hold the STOP and GO button in for 3 seconds, indicator light will flash again indicating instruction is successful.

Step 3 – Setting Up Position - Repeat Step 2 for the UP position

Step 4 – Set slow down position (marked with red tape on door frame) – Position door at the required slow down point and press the STOP and GO button for 3 seconds, indicator light will flash again indicating instruction is successful.

Step 5 –Pedestrian Height Selection – Position door at the required pedestrian door height and press the STOP and GO button for 3 seconds, indicator light will flash again indicating instruction is successful.

Step 6 –Photo Sensor and Light Curtain Selection –
Photo Sensors - Position door at the required height above top photo sensor and press the STOP and GO button for 3 seconds, indicator light will flash again indicating instruction is successful. Repeat this instruction for the lower photo sensor.
Light curtain - Position door at the required height above light curtain and press the STOP and GO button for 3 seconds, indicator light will flash indicating instruction is successful

Step 7 – Set Hold Open Time - Hold open time (preset for 4 seconds) – Following on from step 6 bring the door down to bottom position and hold stop button in for 10 seconds, the light will flash indicating the hold open time is ready to be accepted, Press the Go button for however many seconds is required for hold open (1 pulse = 1second). If for example a hold open time of 10 seconds is required then 10 pulses of the GO button are required starting within the 5 second time frame. Once the 10 inputs have been completed the light will flash for a further 5 seconds and then stop. This is the final instruction required and once complete the light will go to solid and what for the user to activate the door.
Hold To Run Mode - this is required if the door blade has been knocked out and needs to be reset or in the event of power outage. This mode is driven directly from the VSD so gives the user the ability to drive the door up and down past both top and bottom limits.

7 COMMISSIONING

7.2 Manual Mode:

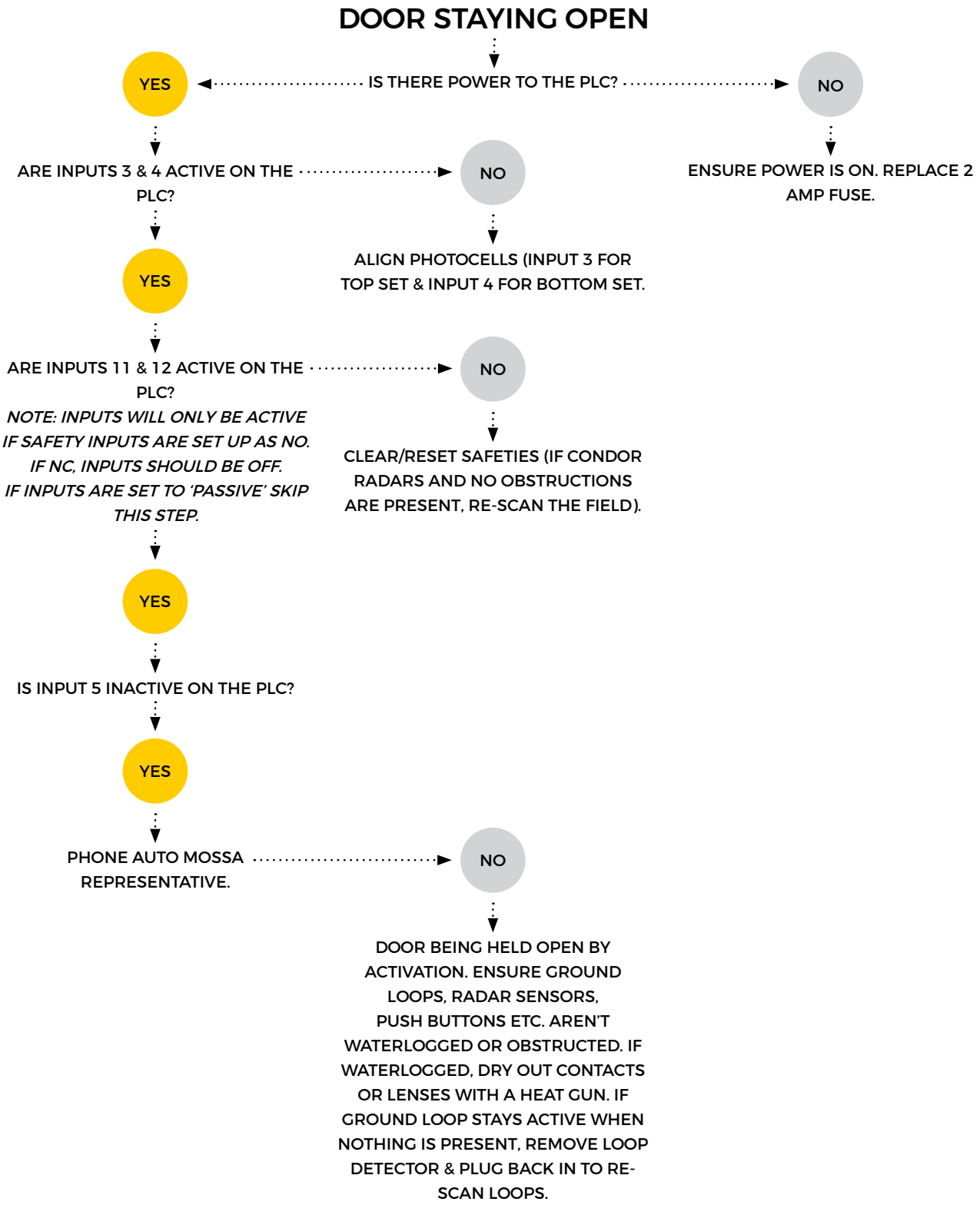
Hold STOP and Go for 10 seconds, light flashes to acknowledge instruction, door now able to be used in manual mode.

To reset to automatic, drive door down to bottom position and hold STOP and GO for 10 seconds, door now back to automatic mode, light on static ready for go command.

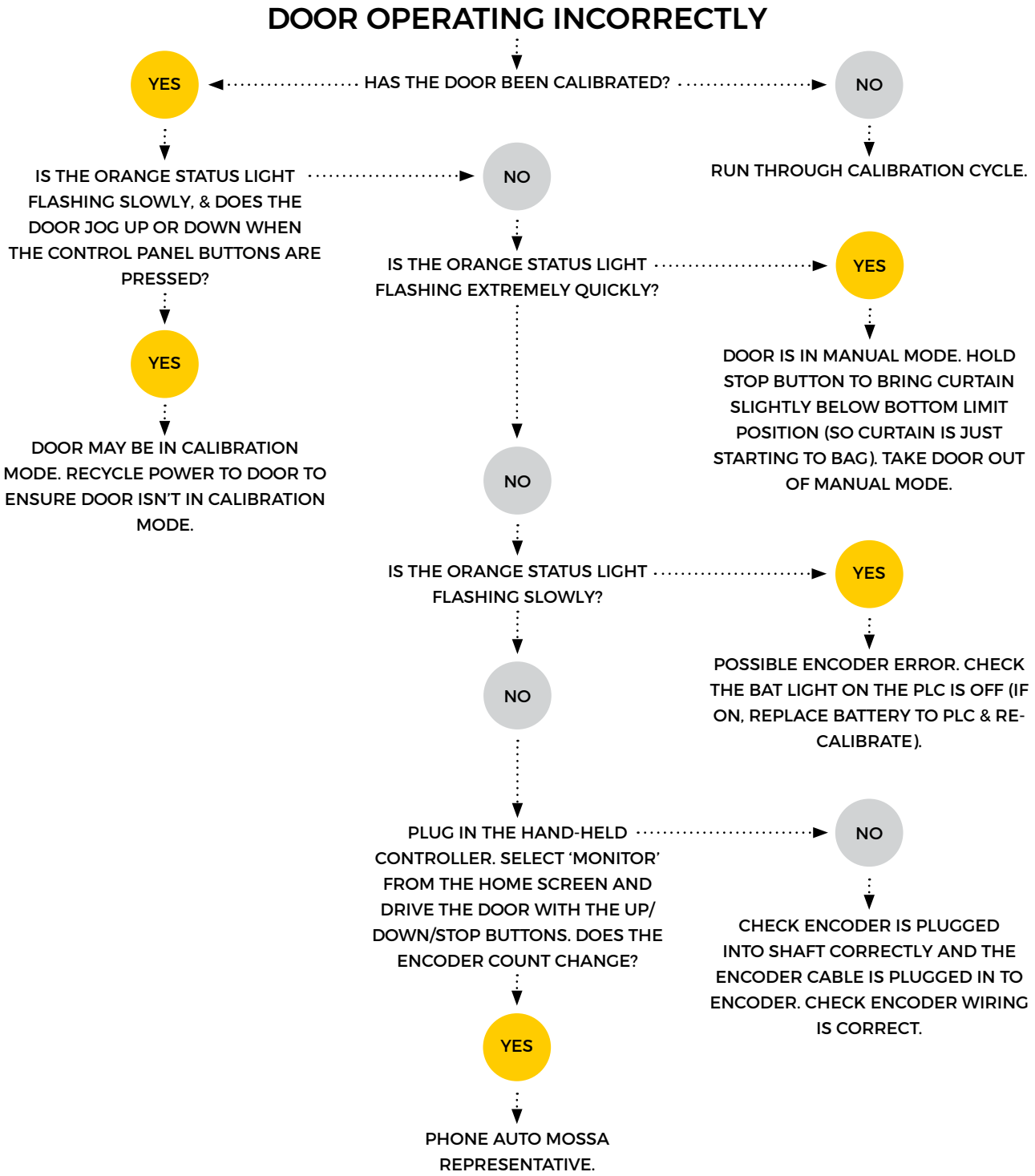
Important

It is important that all the above settings are done in sequence. The door must be in the down position or '0 position' before the door is reset to automatic.

8 TROUBLE SHOOTING

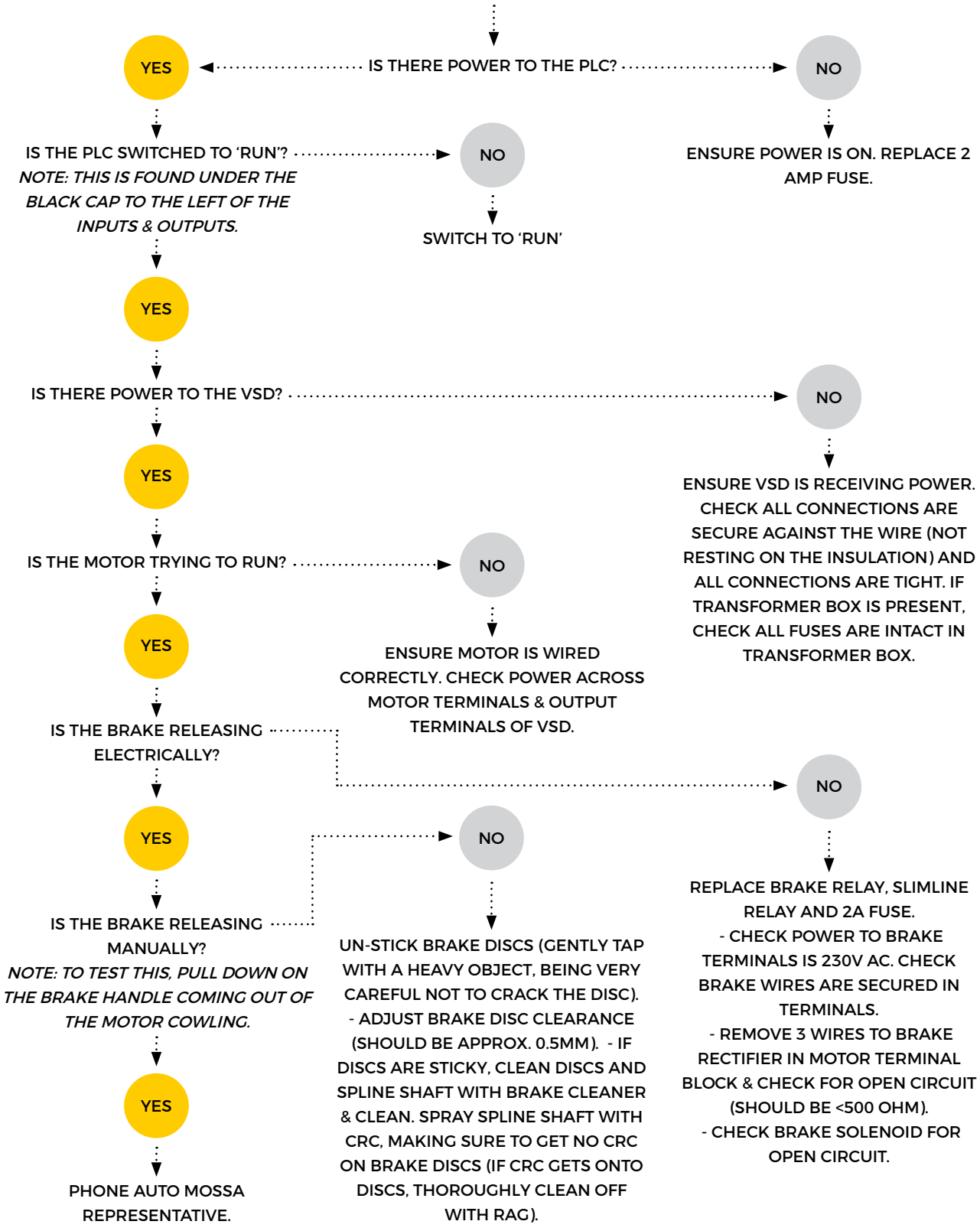


8 TROUBLE SHOOTING



8 TROUBLE SHOOTING

DOOR NOT OPERATING



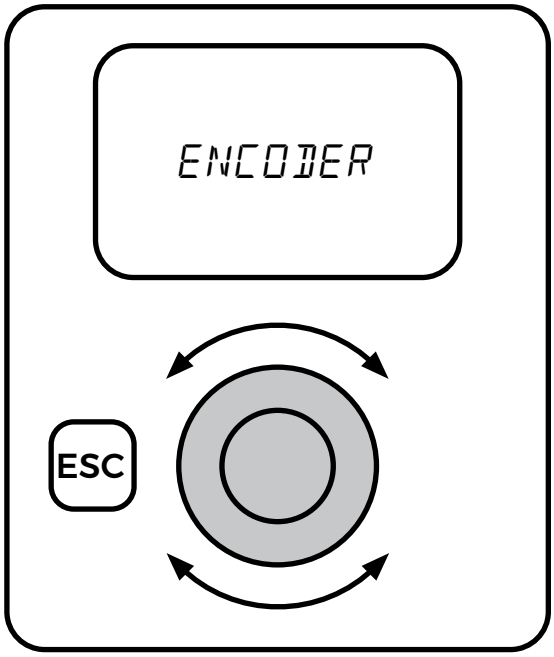
8 TROUBLE SHOOTING

Miscellaneous

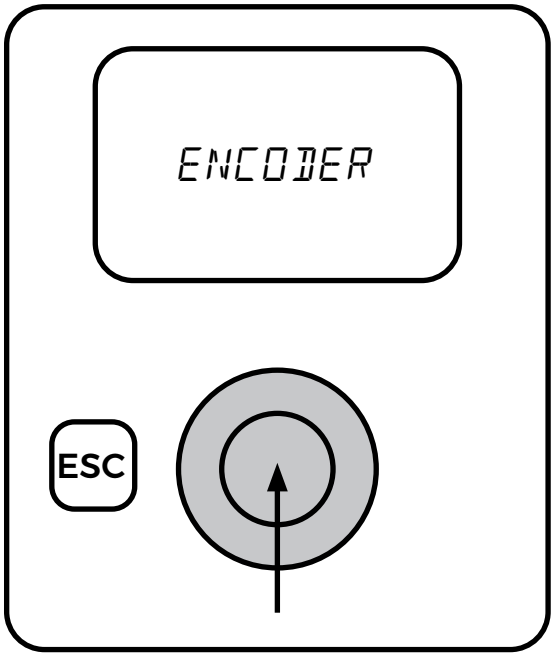
1. Door is re-triggering before closing	Check input 3 on the PLC turns of when the top set of photocells if obstructed. If not, switch the wires to the photocell terminals in the controller. Re-calibrate door and ensure photocell cut outs are programmed correctly (bottom of the door approx. 100mm above photocell). Ensure doorways aren't blocked (eg. steel shutter doors are fully up), and radars are positioned correctly (make sure they're not 'seeing' the door).
2. Photocells not working	Check 24v is being supplied to photocells. Ensure lenses of photocells are clean and intact. Check photocells are plugged in to joining cables correctly, and wires aren't crushed or damaged.
3. Motor running backwards	Switch any 2 of the motor wires in the control box terminals.
4. Motor moving excessively during operation	Check torque arm bush for wear and check torque arm fixings.
5. Overruns top limit	Check encoder is working correctly. Re-zero bottom limit using manual mode. Increase ramp zone on hand controller. Reduce VSD boost settings on hand controller. Reduce SP4 parameter on VSD.

9 VSD CONTROLLER

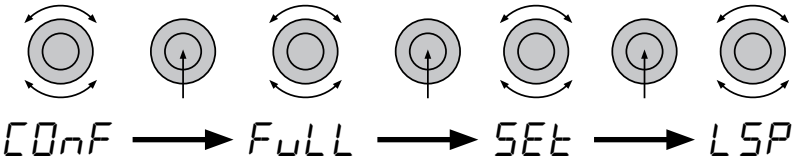
9.1 VSD Speed Adjustments



ROTATE TO MAKE SELECTION



PUSH TO ENTER SELECTION



SETS LOW SPEED. LOW SPEED USED DURING RAMP CREEP AND MANUAL OPERATION.

HSP — SETS 'UP' SPEED. HIGH SPEED USED DURING 'UP' CYCLE.

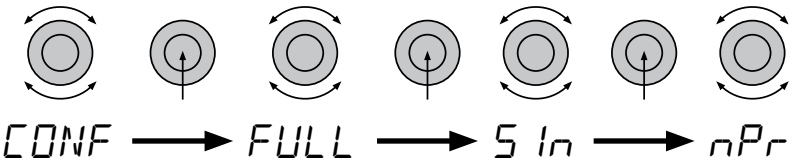
SP2 — SETS HIGH SPEED. HIGH SPEED USED DURING 'UP' CYCLE (SET SAME AS HSP).

SP3 — SETS 'DOWN' SPEED. LOWER SPEED USED DURING 'DOWN' CYCLE.

SP4 — SETS 'BOOST' SPEED. BOOST SPEED USED DURING RE-TRIGGER IN RAMP-DOWN ZONE ON 'UP' CYCLE. *IMPORTANT* - DO NOT ADJUST IF UNFAMILIAR WITH RAMP-ZONE MECHANICS.

9 VSD CONTROLLER

9.2 Motor Current and Frequency Settings



SETS 'RATED MOTOR POWER' IN KW. SET TO MATCH MOTOR POWER ON NAMEPLATE.

nCr

SETS 'RATED MOTOR CURRENT' IN AMPS. SET TO MATCH CURRENT ON NAMEPLATE (MAKE SURE CURRENT MATCHES MOTOR CONFIGURATION IN DELTA OR STAR)

tFr

SETS 'MAX FREQUENCY'. CAN ADJUST SPEEDS OVER 60HZ. SETTING CANNOT EXCEED 10 TIMES THE VALUE OF FRS.

9 VSD CONTROLLER

9.3 VSD Fault Codes

bLF	BRAKE'S MOTOR 3-PHASE LOSS	CHECK MOTOR IS WIRED CORRETLY (DELTA FOR 230V/STAR FOR 400V).
brF	BRAKE CONTACTOR DETECTED ERROR	CHECK BRAKE WIRING IS AS PER THE WIRING DIAGRAM. CHECK BRAKE AND FAILSAFE RELAYS.
nSt	FREEWHEEL STOP	CHECK STABLE MAINS POWER AND THAT MAINS CABLE IS RATED TO THE CORRECT SPEC. CHECK WIRES TO 'STOP' INPUTS ARE SECURE.
obF	OVERBRAKING	
oCF	OVERCURRENT	
oHF	DRIVE OVERHEATING	
oLF	MOTOR OVERLOAD	
oPF 1	MOTOR OVERLOAD	
oPF2	MOTOR 3-PHASE LOSS	
oSF	OVERSUPPLY DETECTED FAULT (OVERVOLTAGE)	
uSF	UNDERVOLTAGE	