

AUTO  MOSSA

HYPERGLIDE™ SE
&

HYPERCHILL™ SE

INSTALLATION MANUAL

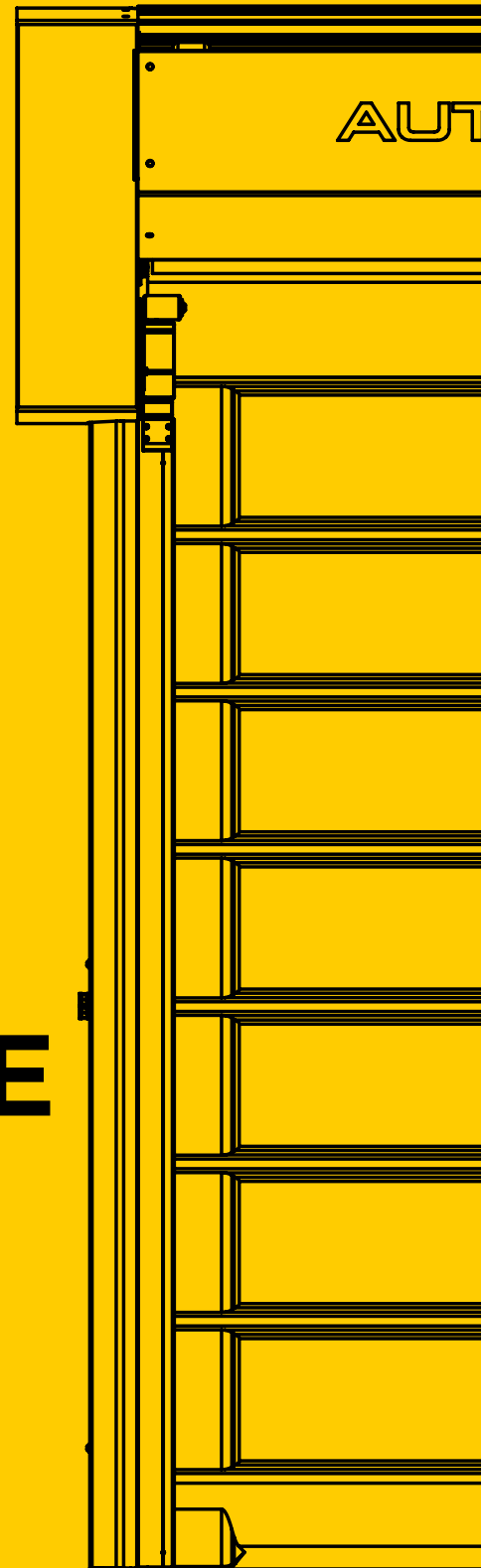


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1 PRODUCT DESCRIPTION

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 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. 2.0 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 control system.

2 PRODUCT SPECIFICATION

2.1 HYPERGLIDE SE

Standard Equipment

Dimensions:	
Daylight Width (DW):	2000mm – 5000mm
Daylight Height (DH):	2000mm – 5000mm
Area:	2.0 – 20.0 m ²)
Wind Class:	Class 2 according to EN 12424 Interior and exterior applications
Opening Speed:	2.0m/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
Door Blade Colours:	RAL - Yellow, Orange, Red, Mid Blue, Light 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:	Fiberglass wind-bars
Bottom Beam:	Flexible soft bottom edge technology
Top Roll:	Aluminum Ø 190mm 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:	Semi 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 a hand crank

1 PRODUCT DESCRIPTION

Control Box: Frequency converter control system. Control box all-in-one control system with integrated screen.

Power Supply: PNE 230V, 50/60Hz

Optional Equipment

Emergency Egress: 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: -

Power Supply: PE 400V, 50/60Hz

Control Box Enclosure: -

2 PRODUCT SPECIFICATION

2.1 HYPERCHILL SE

Standard Equipment

Dimensions:

Daylight Width (DW): 2000mm – 5000mm

Daylight Height (DH): 2000mm – 5000mm

Area: 2.0 – 20.0 m²)

Wind Class: Class 2 according to EN 12424
Interior and exterior applications

Opening Speed: 2.0m/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: 10mm Insulated 900gsm rip-stop PVC with 1 row of windows, RAL Colour options available

Door Blade Colours: RAL - Yellow, Orange, Red, Mid Blue, Light Blue, Dark Blue, Green

Head Assembly: End plates, brackets, covers, Zinc plated

Side Frames: Insulated Guides, Leg and Leg Cover, extruded Aluminium and UHMWPE glide strips, interior to guides. All fixings and small brackets SS.

Wind Reinforcement: Fiberglass wind-bars

Bottom Beam: Flexible soft bottom edge technology

Top Roll: Aluminum Ø 190mm 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: Semi enclosed, galvanised sheet metal, powder coated to finish

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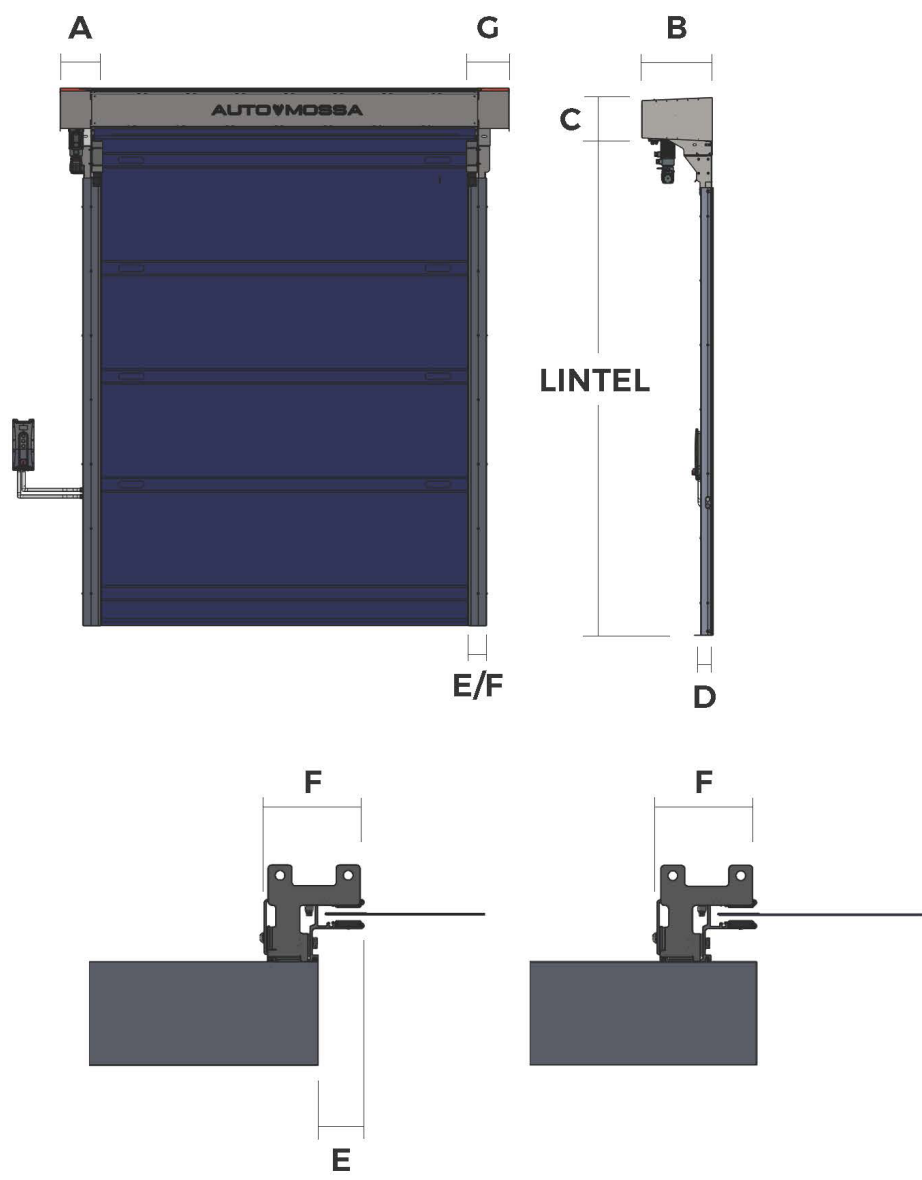
Wind class: -

Power Supply: PE 400V, 50/60Hz

Control Box Enclosure: -

1 PRODUCT DESCRIPTION

2.3 Principal Drawing



Model	A	B	C	D	E	F
HyperGlide SE	245	550	670	90	145	125
HyperChill SE	245	550	670	90	145	125

3 SAFETY INFORMATION

3.1 Application Area and Use

AUTO MOSSA roll doors are developed and tested for normal conditions (0°C - 40°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 or 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.

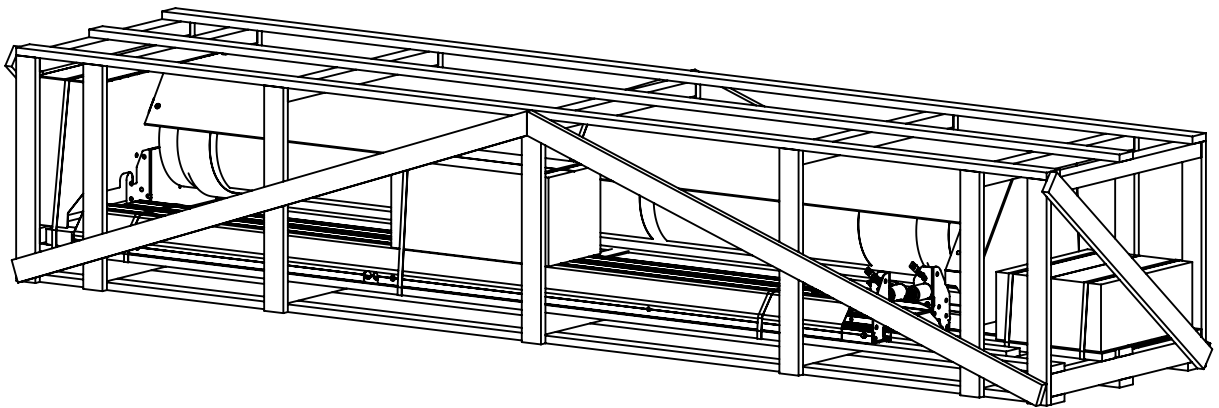
4.2 Pre-Installation Inspection

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5 INSTALLATION

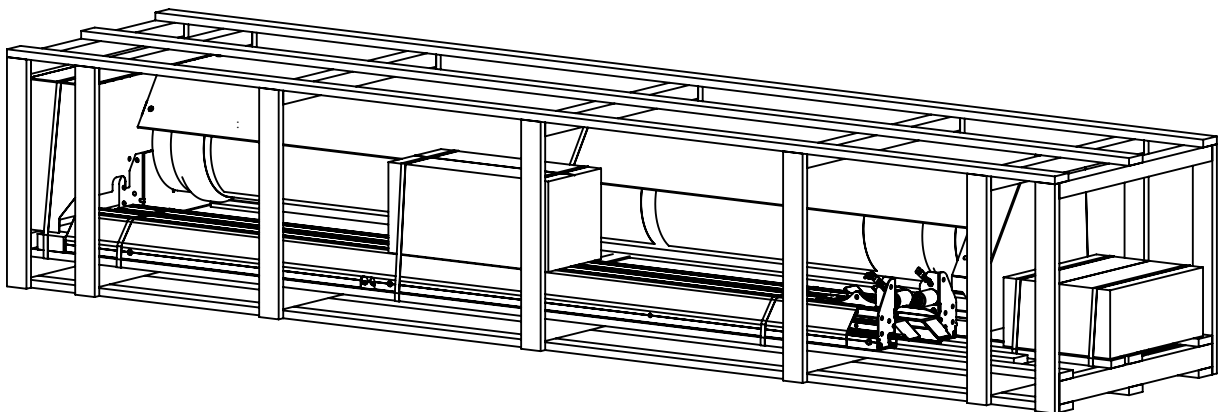
5.1 Removing Covers and Connecting Leg Assemblies

AS DELIVERED



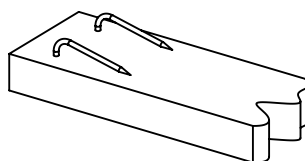
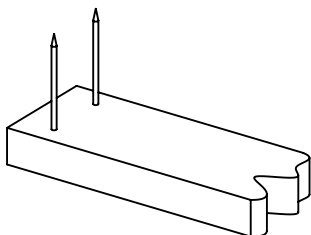
STEP 1

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



CAUTION:

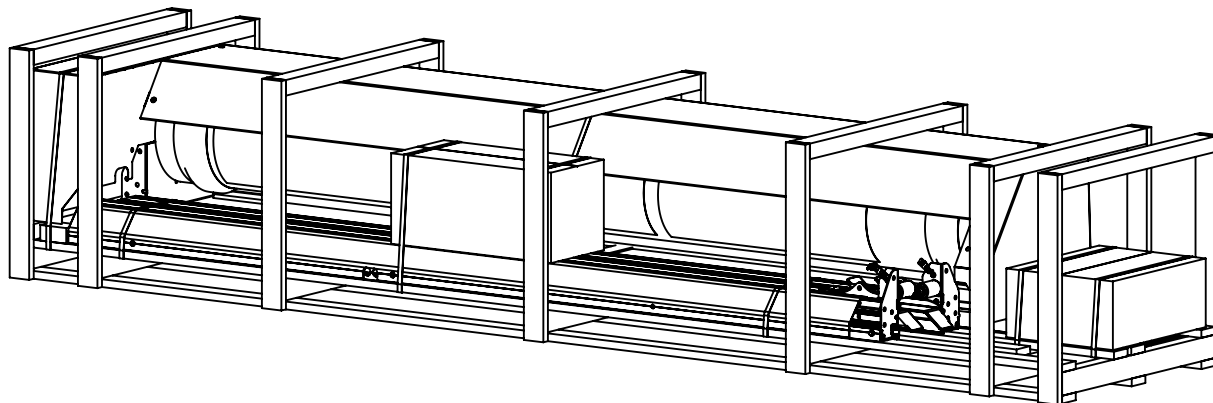
Do not leave nails protruding. Either
remove nails or bend down.



5 INSTALLATION

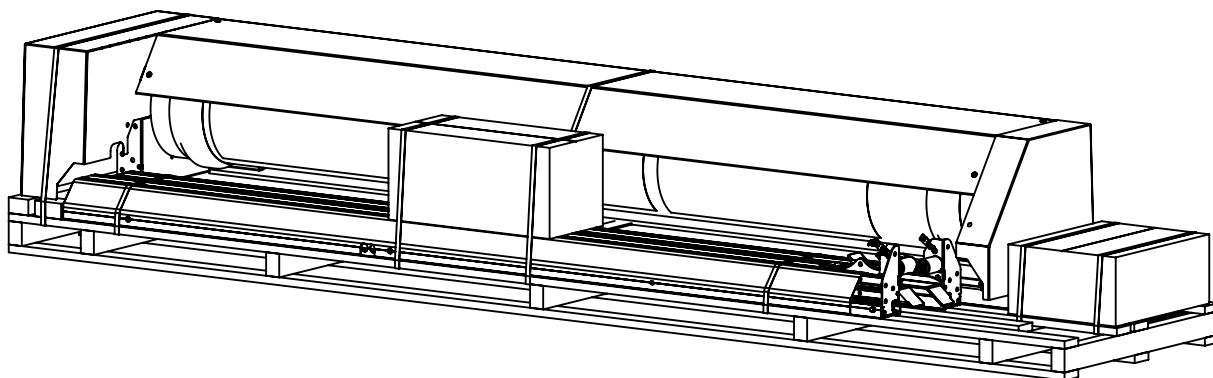
STEP 2

Remove tops from pallet



STEP 3

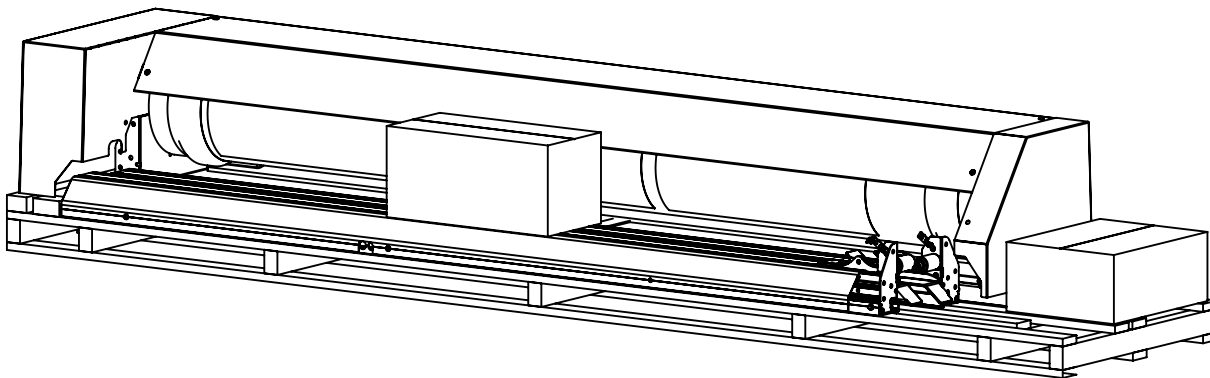
Remove ribs from pallet



5 INSTALLATION

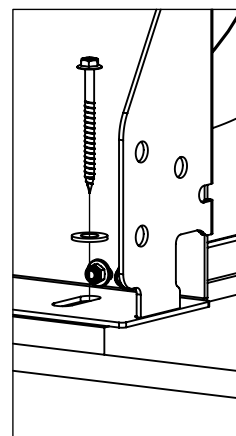
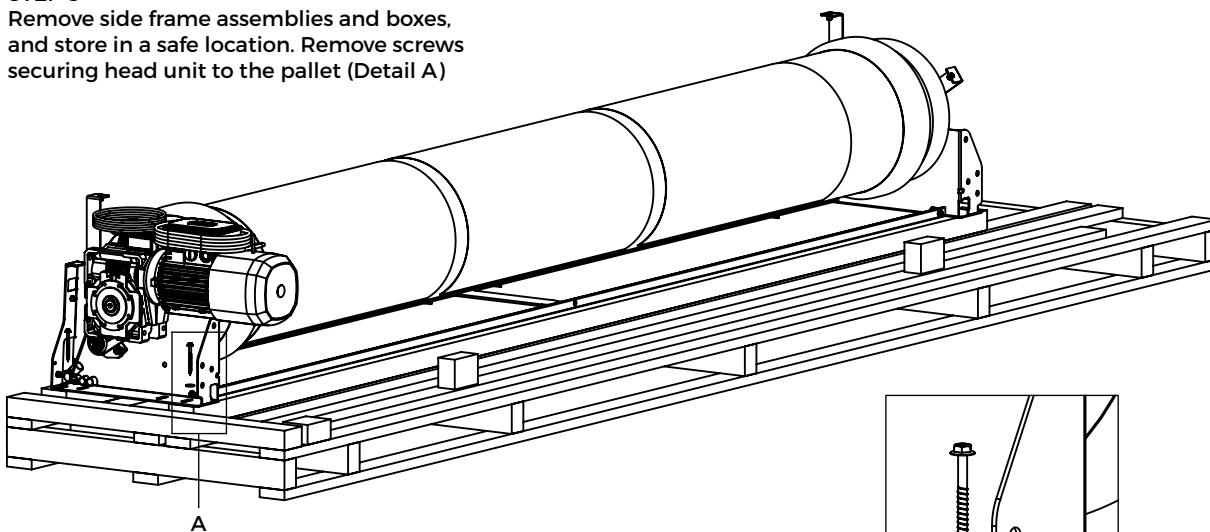
STEP 4

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)



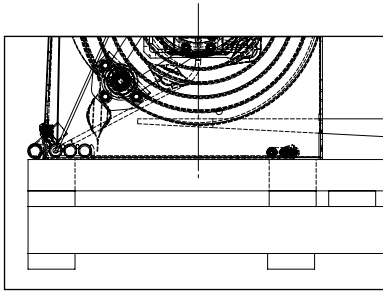
DETAIL A

5 INSTALLATION

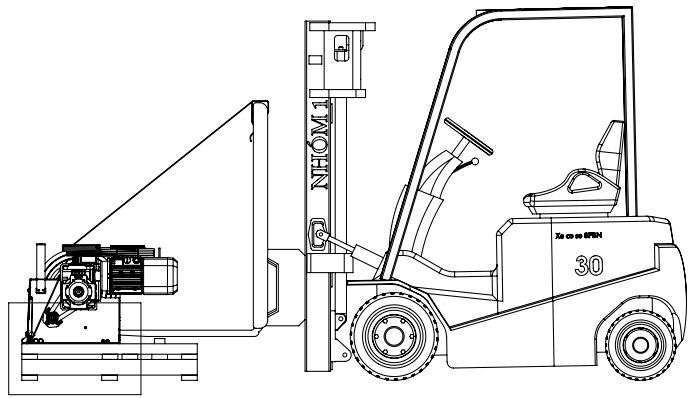
5.1 Removing Covers and Connecting Leg Assemblies

STEP 6

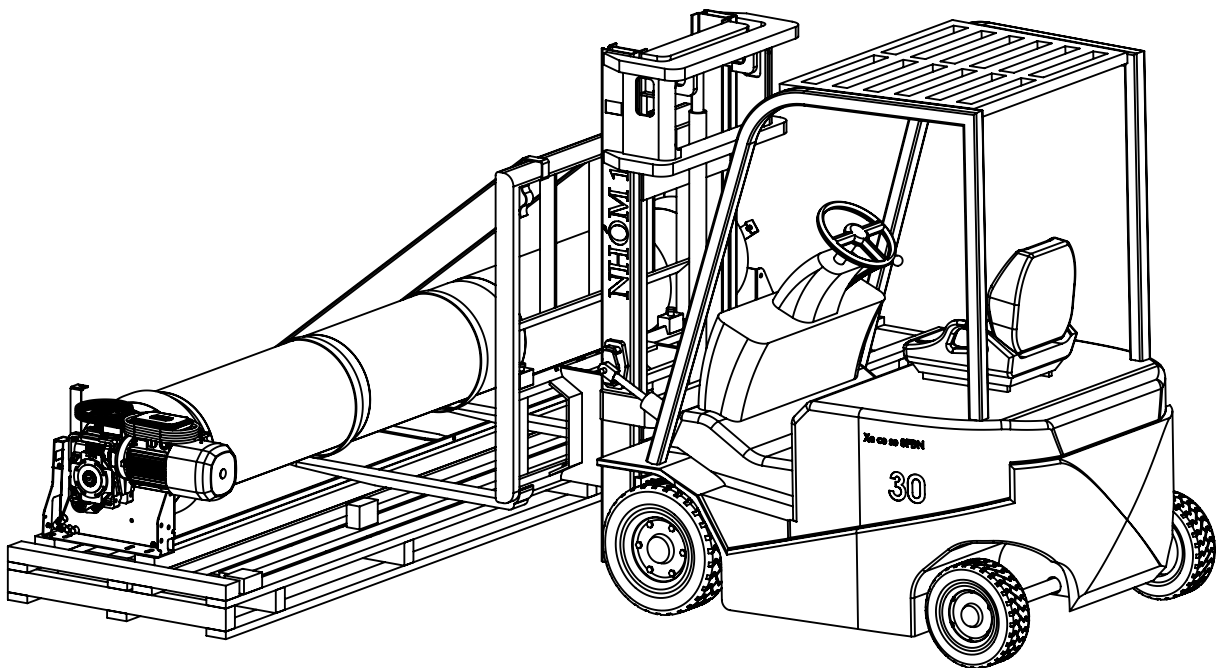
Wrap bubble wrap around forklift tines and drive in under curtain roll (note: the forks will need to be positioned slightly off-center towards the motor end to account for the weight balance). Ensure forks are roughly halfway between the roll center and the back hood channel as per detail A. Once forks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



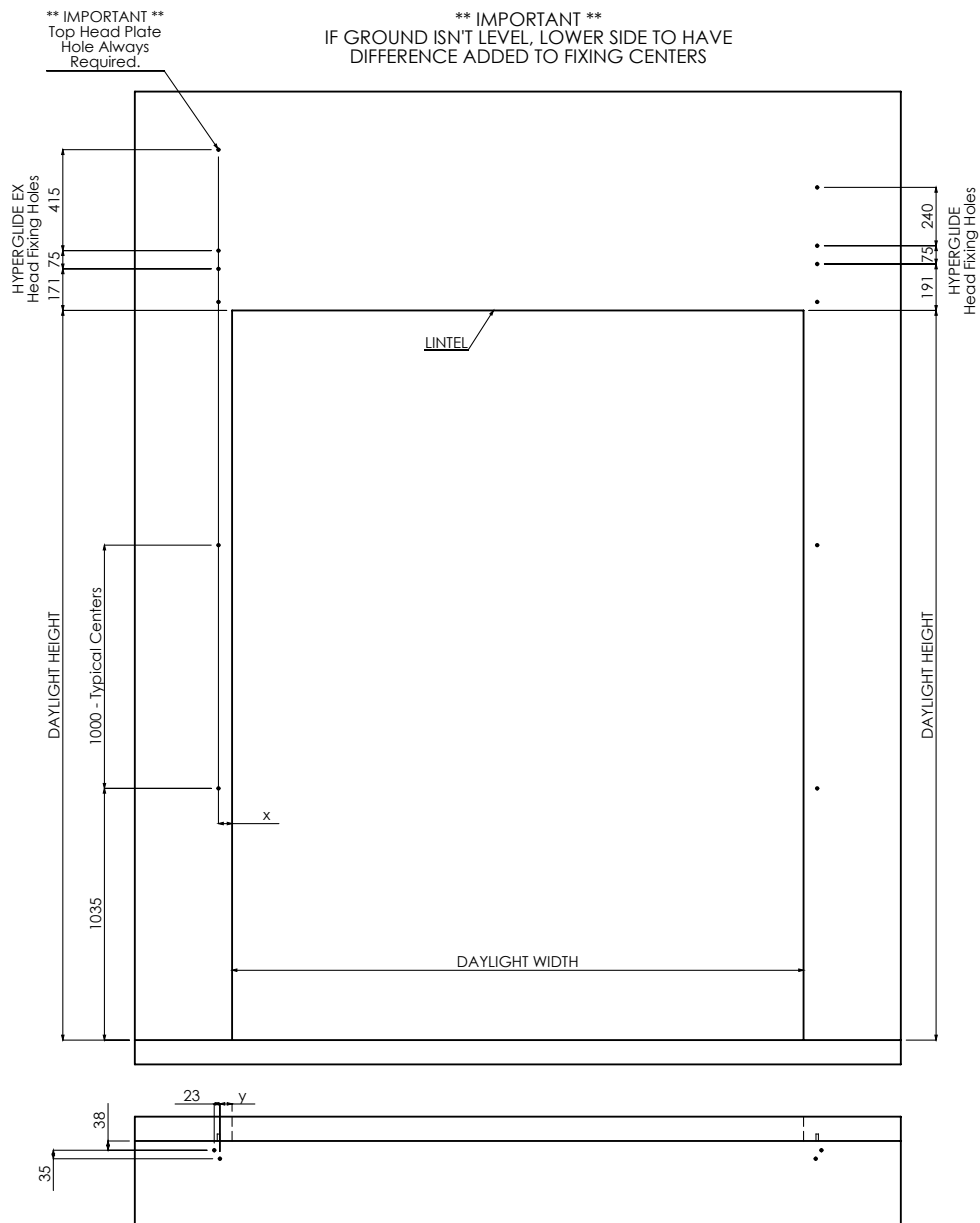
DETAIL A



A



5 INSTALLATION



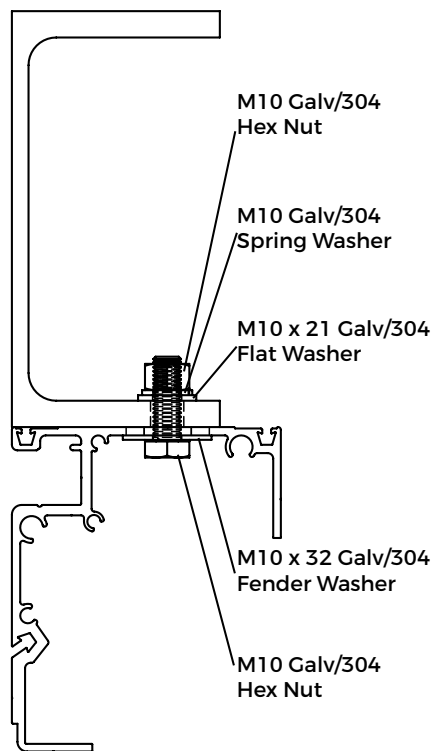
Clearance Variables		
Variable	Dimension	Condition
X	56	Standard Guides Flush
	122	

5 STANDARD FIXING DETAILS

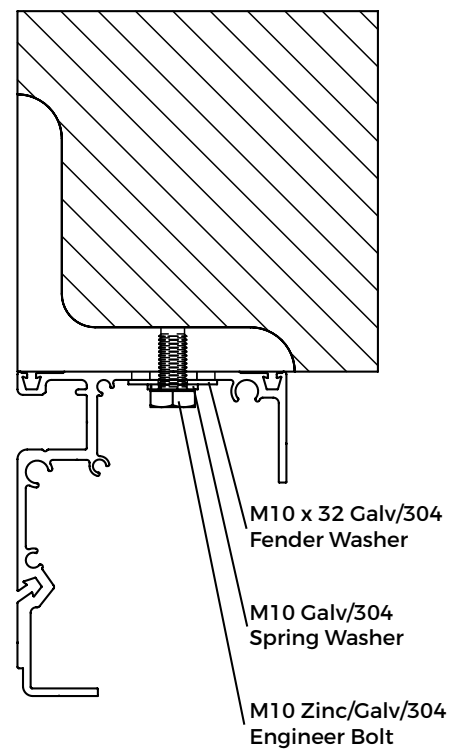
Notes:

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

Bolt Through Steel

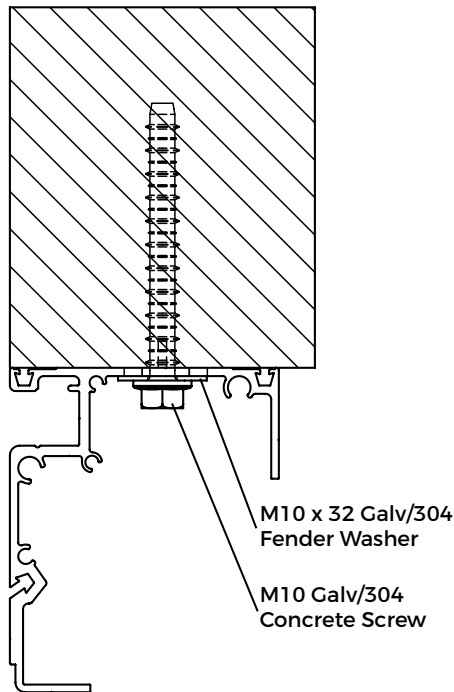


Tapped Steel

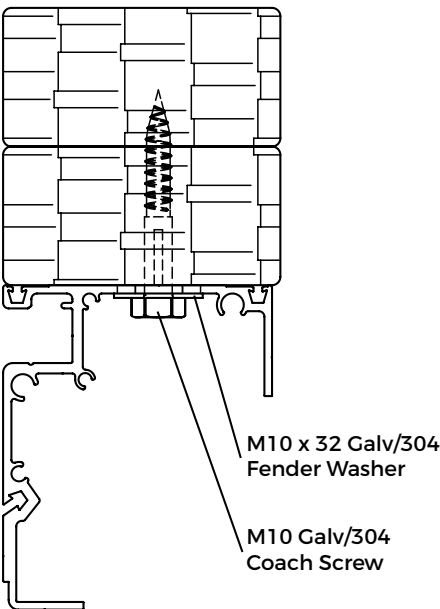


5 STANDARD FIXING DETAILS

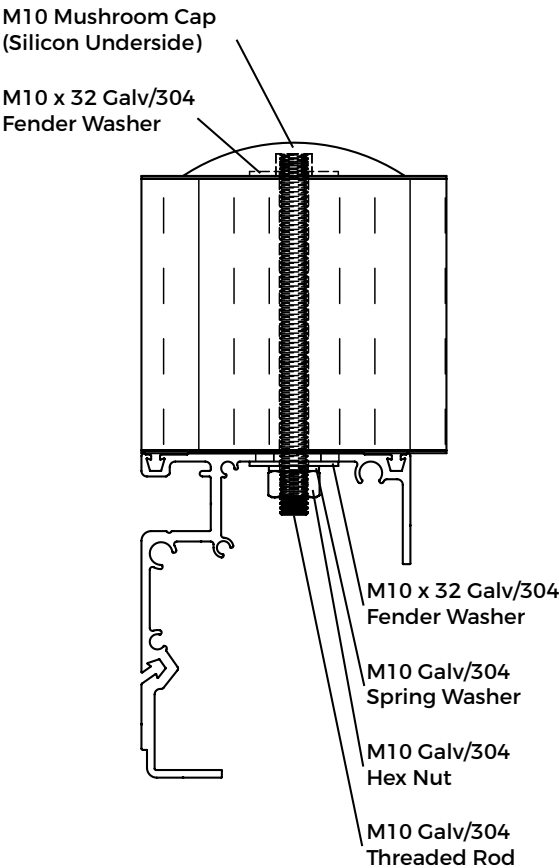
Concrete



Timber



Bolt Through Steel

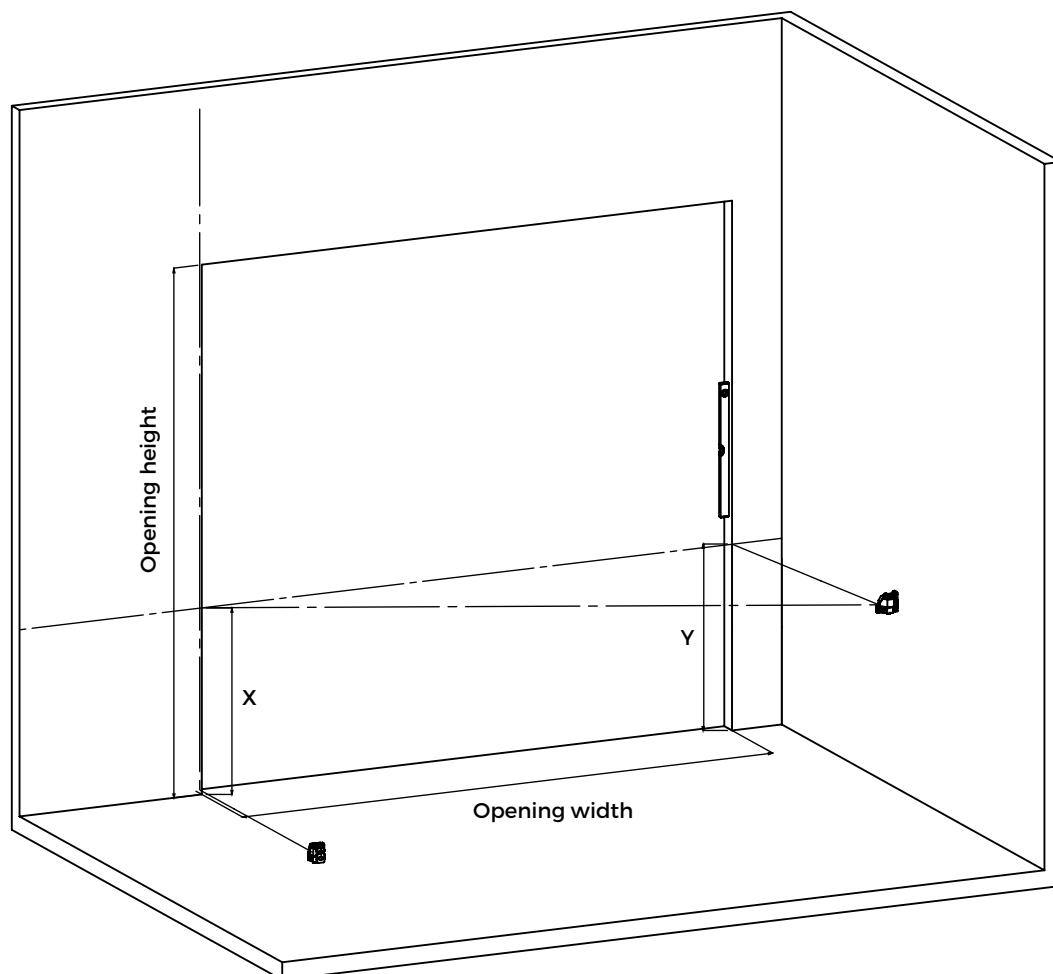


5 INSTALLATION

Checking The Opening

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

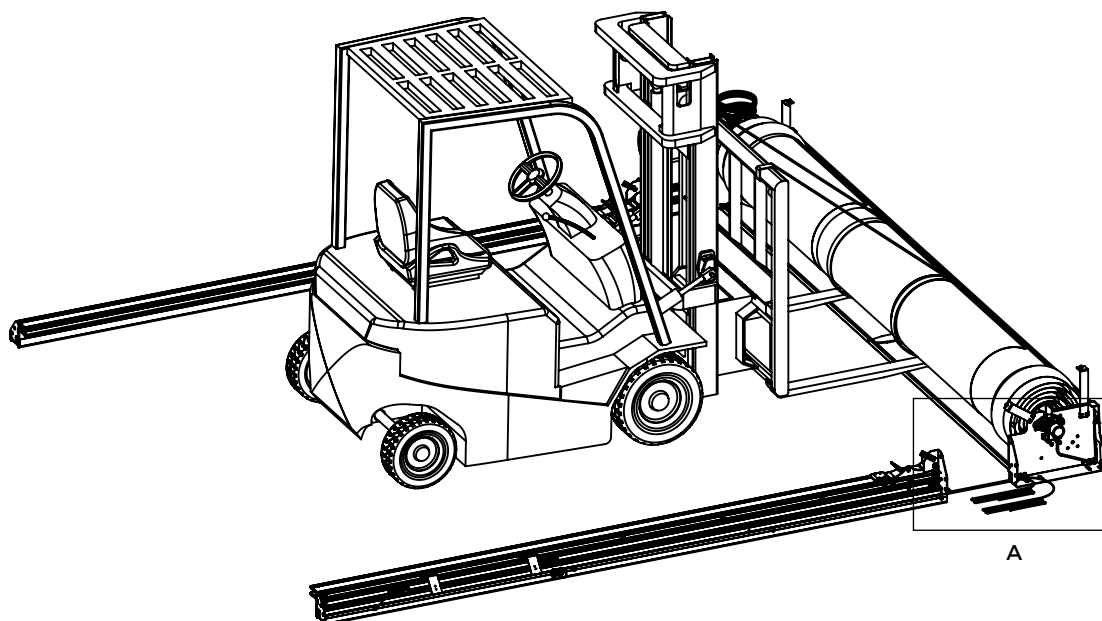
- Check the opening height against the order acknowledgement
- Check the opening width against the order acknowledgement and confirm if door guides step inside, or are flush with the door opening
- Check clearance dimensions against order acknowledgement incase of obstructions above and around the opening
- 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

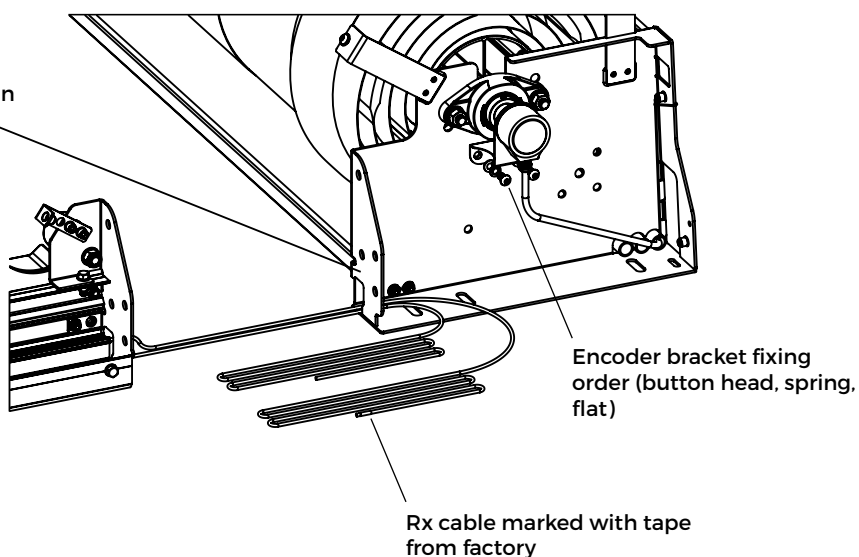
STEP 7

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

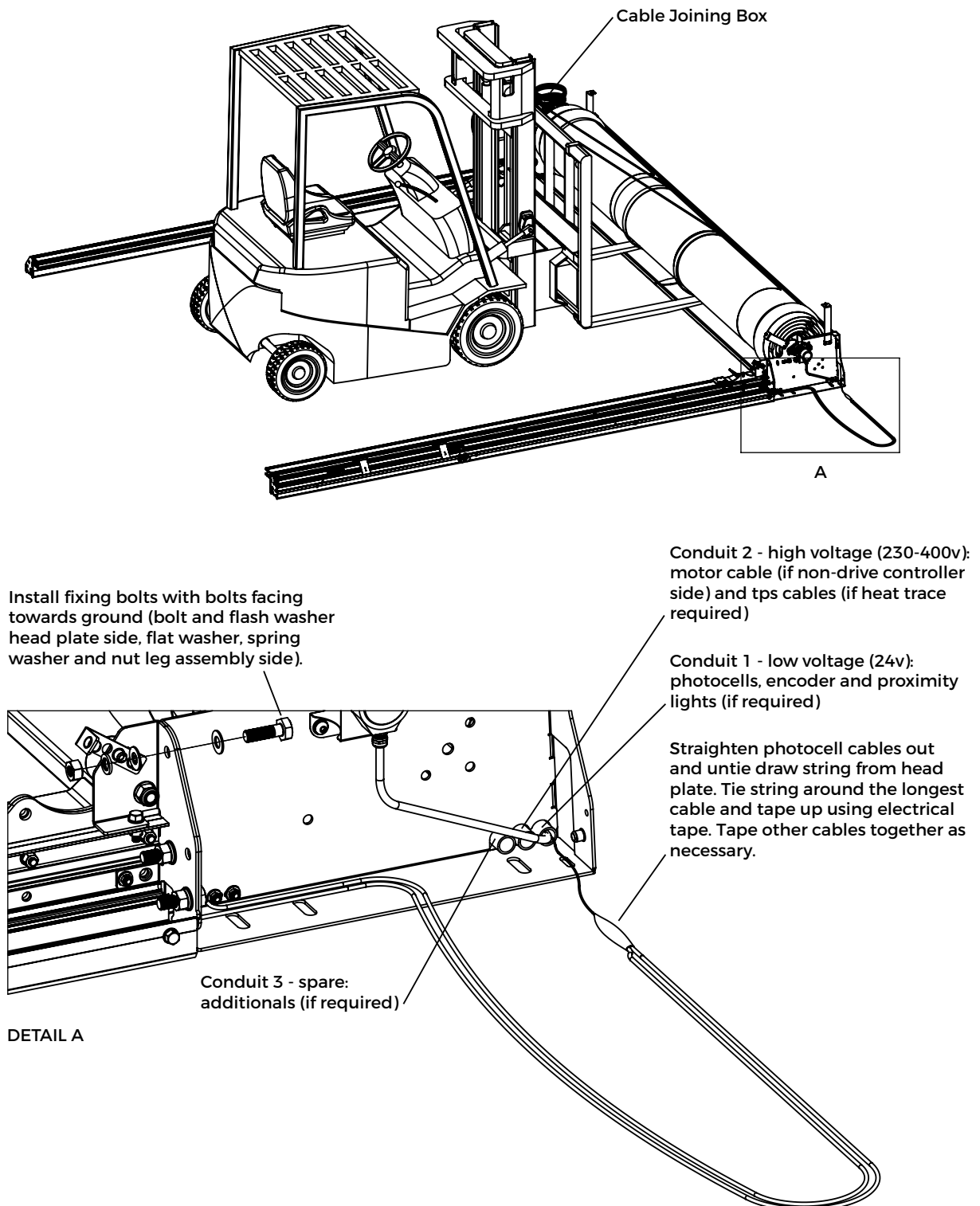
Photocell cables pulled through top leg plate and through cable hole in head plate (both sides)



5 INSTALLATION

STEP 8

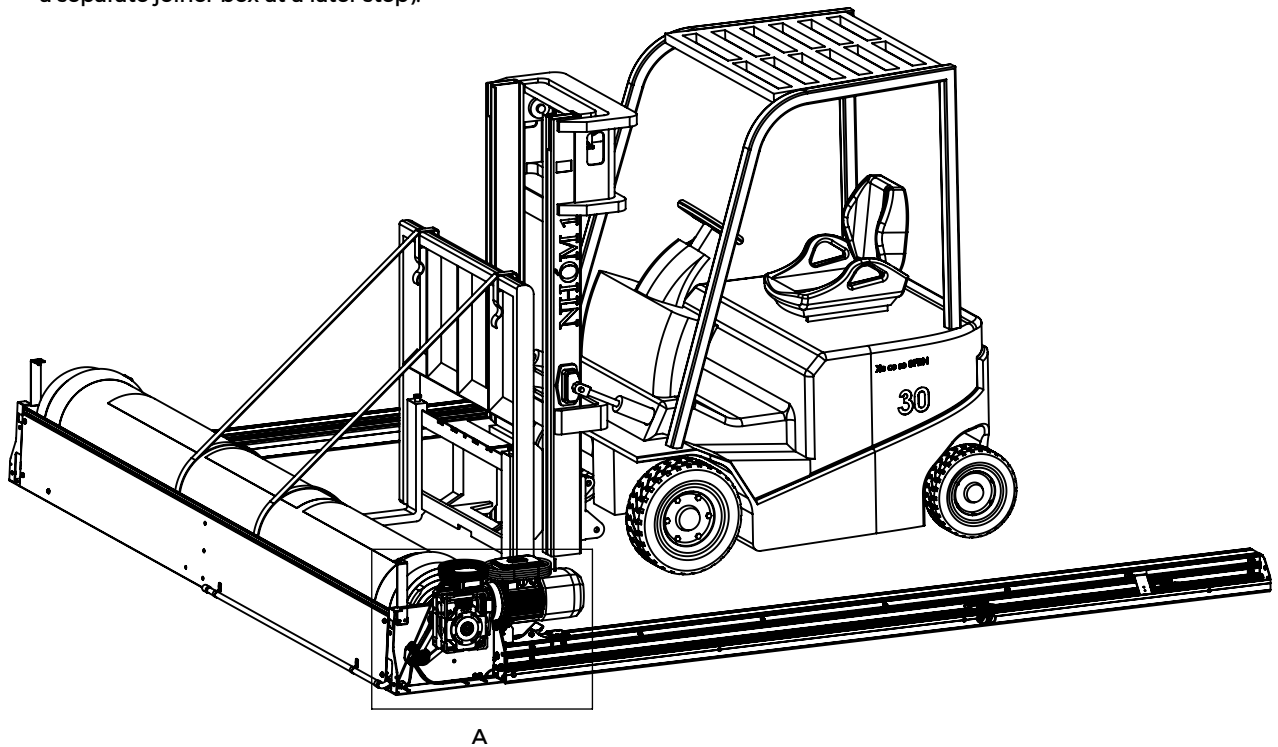
Once cables have been drawn through head plate, bring the leg assemblies hard against the head plates. Fix in place with fixing positions as outlined in detail A. Tighten using 18mm spanner and socket. Pull remaining cable slack through head plates. Draw the cables on the opposite side of the cable joining 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.



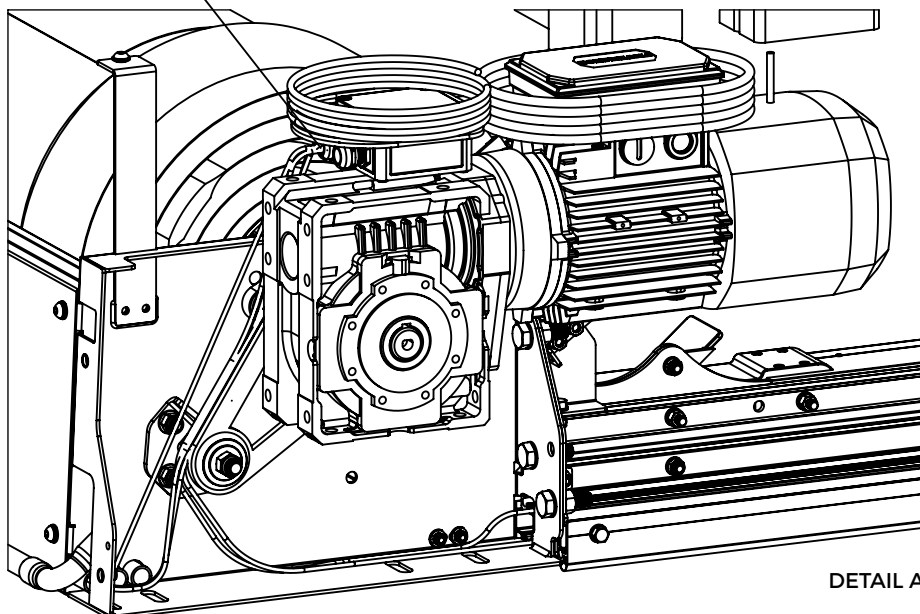
5 INSTALLATION

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).



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.

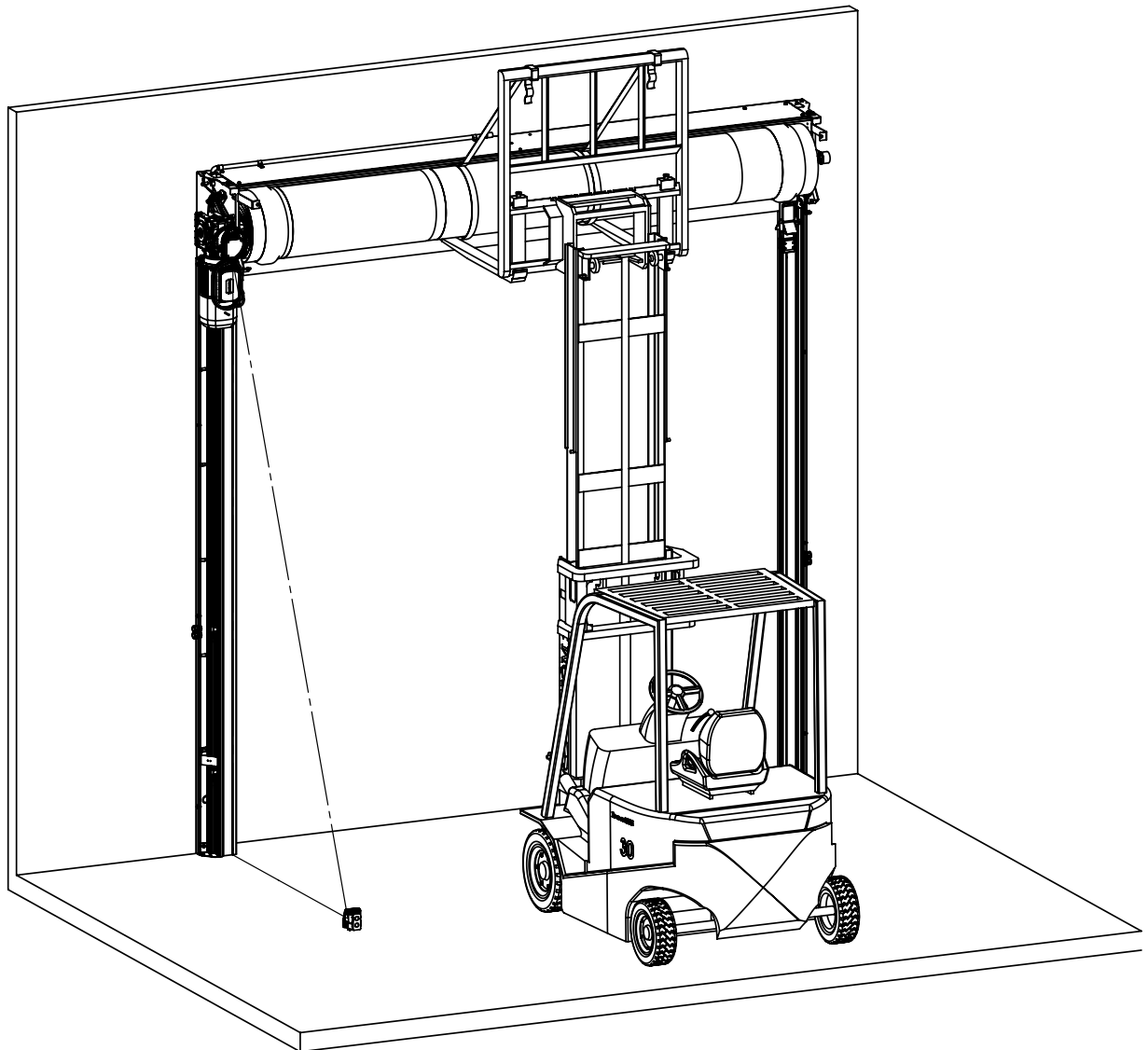


Cable tie photocell cables and encoder cable in group along torque arm.

5 INSTALLATION

STEP 11

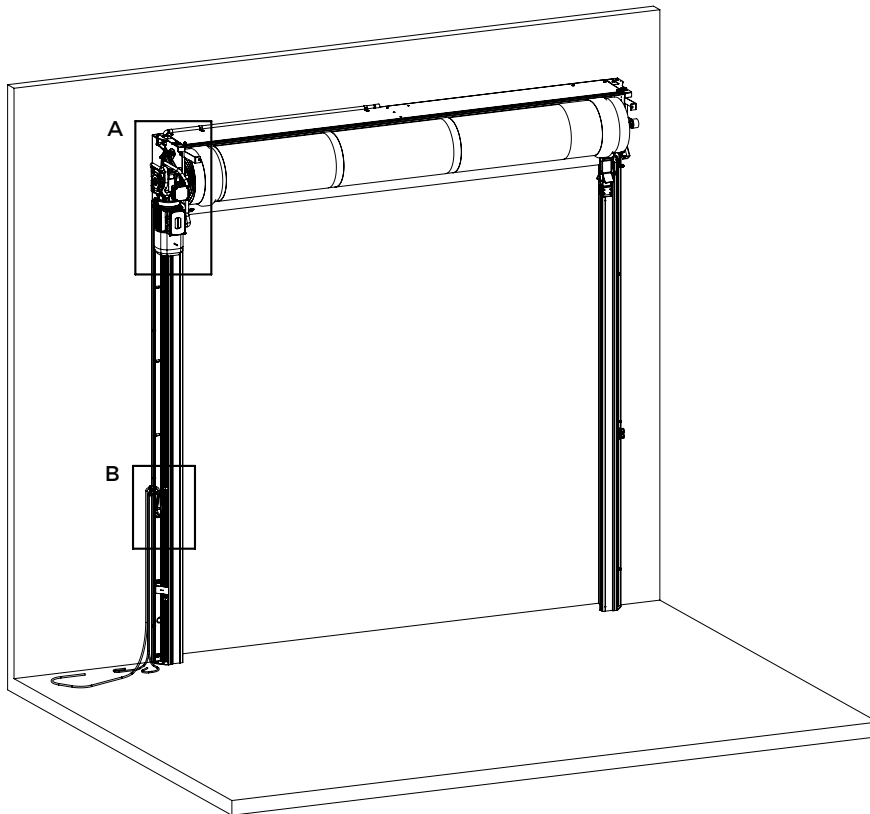
Pre-drill fixing holes in wall as per fixing layout plan, allowing for any discrepancies in opening dimensions. Install floor packers (if necessary) to allow for unevenness of floor. Lift door into place and loosely fix to opening using the correct fixings (refer to fixing layout plan). Level both side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

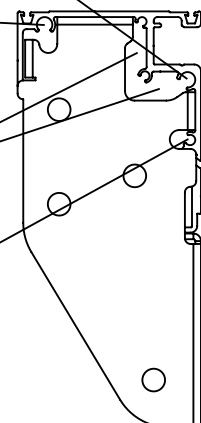


Control cable or encoder cable
(large) slot

Control cable or encoder cable
(large) slot

Motor cable & remaining cables
cavity

Encoder cable (small) slot



5 INSTALLATION

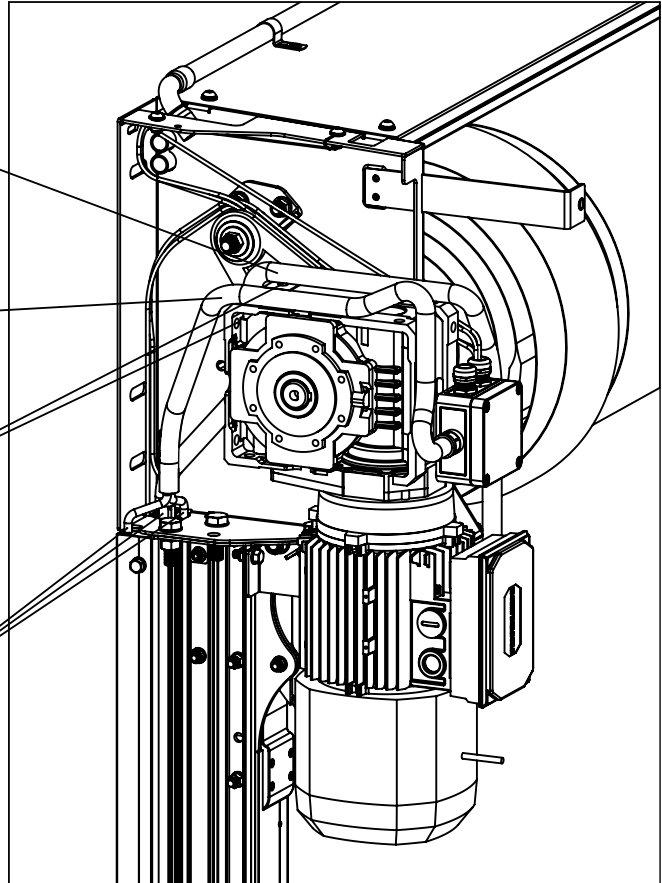
DETAIL A

Motor cable (and heat trace TPS cable if present) fed through separate gland to separate high and low voltage cables

Control and encoder cable fed through conduit to leg plate

Use gearbox holes to cable tie conduit in place

Cables fed through cutouts in head and leg plates & run down side frames.

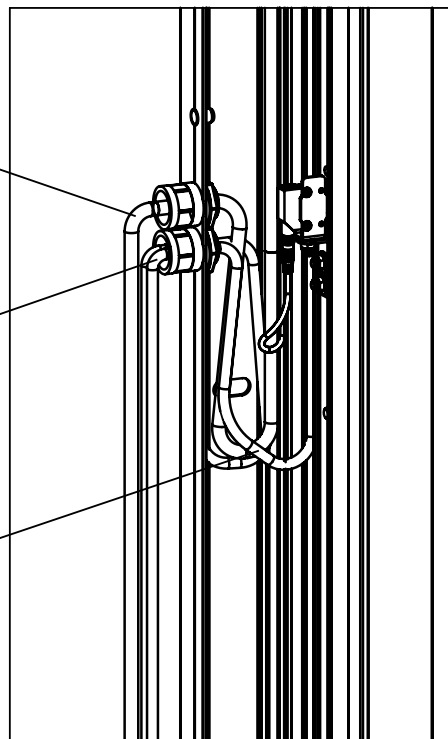


DETAIL B

Motor cable (and heat trace TPS cable if present) fed through separate gland to separate high and low voltage cables

Encoder cable and control cable (and proximity light cable if present) fed through remaining gland

Cables Looped Approx. 150mm Before Being Fed Through Cable Glands.

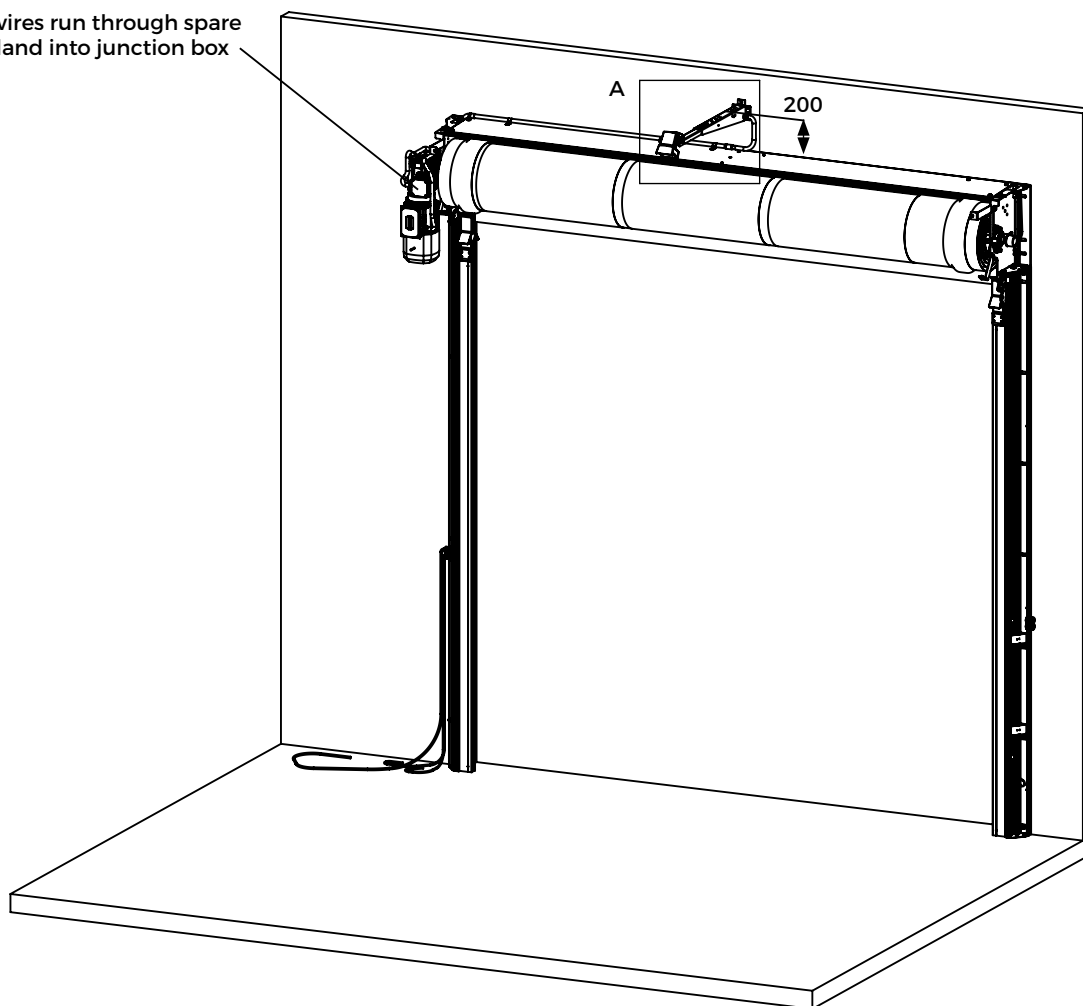


5 INSTALLATION

STEP 13 (If Radars Required)

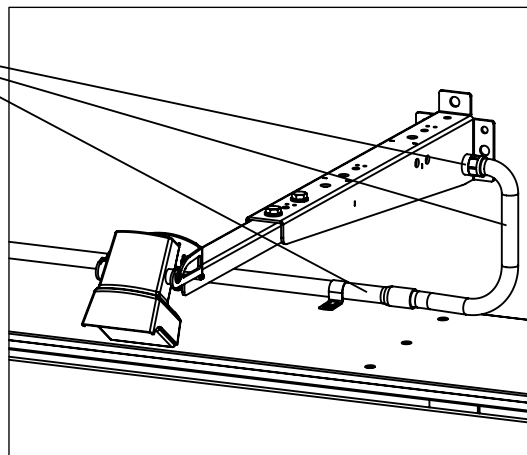
Fix radar bracket above door approx. 200mm and center in door opening. If fixing to polypanel, at least 1x mushroom head fixing is required (top center hole is recommended). If radars are required both sides of door opening, drill a hole through the wall approx. 75mm below the top center hole. Bring 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.

Radar wires run through spare cable gland into junction box



Radar wires run through conduit gland, through flexi conduit, and through pre-installed conduit on back hood back to the junction box.

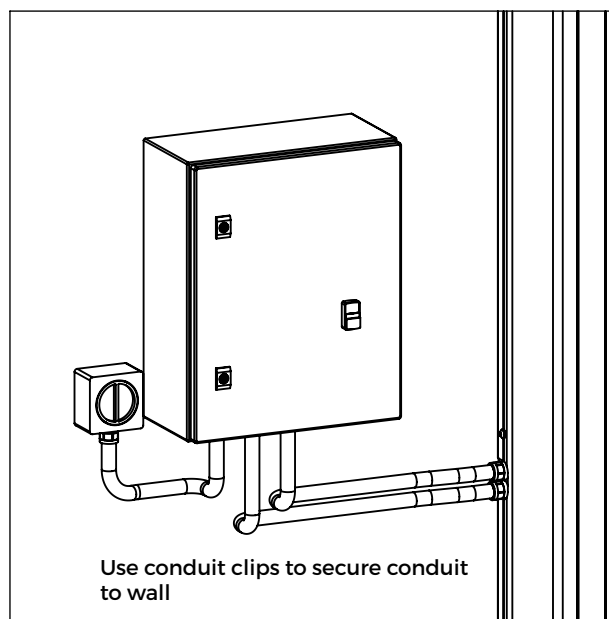
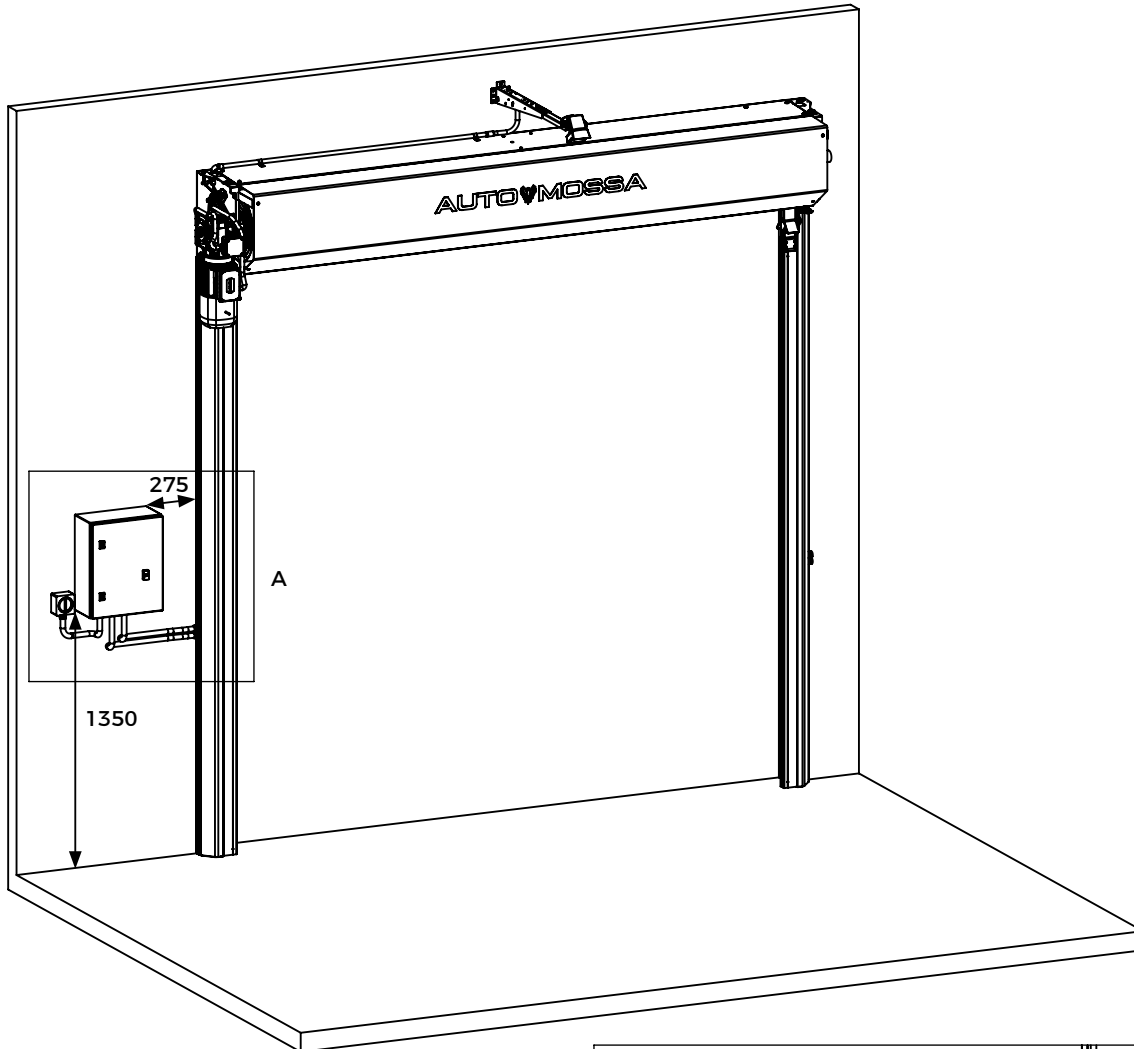
DETAIL A



5 INSTALLATION

STEP 14

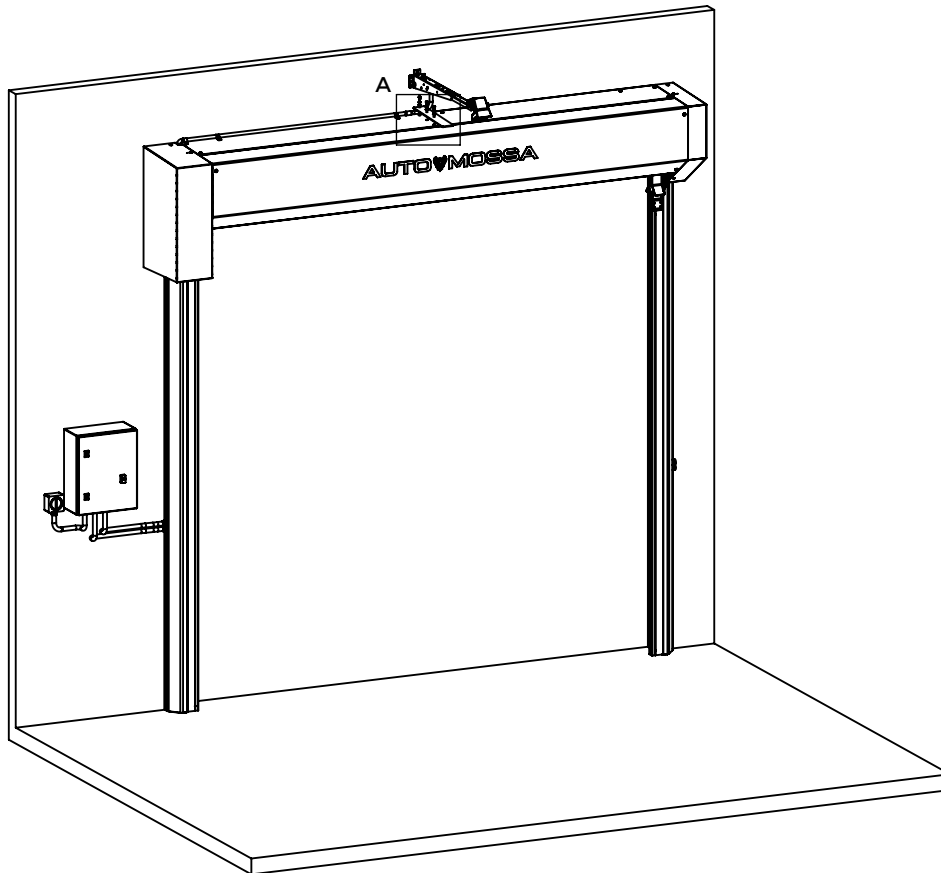
Fixing controller to wall using suitable fixings. Dimensions shown are for the standard mounting position. Run cables protruding from side frame cable glands through conduit into control box. Wire controller according to wiring diagram. Install side frame covers and front hood cover.



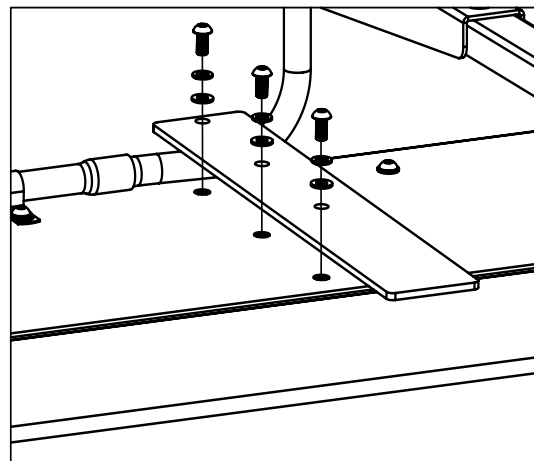
5 INSTALLATION

STEP 15

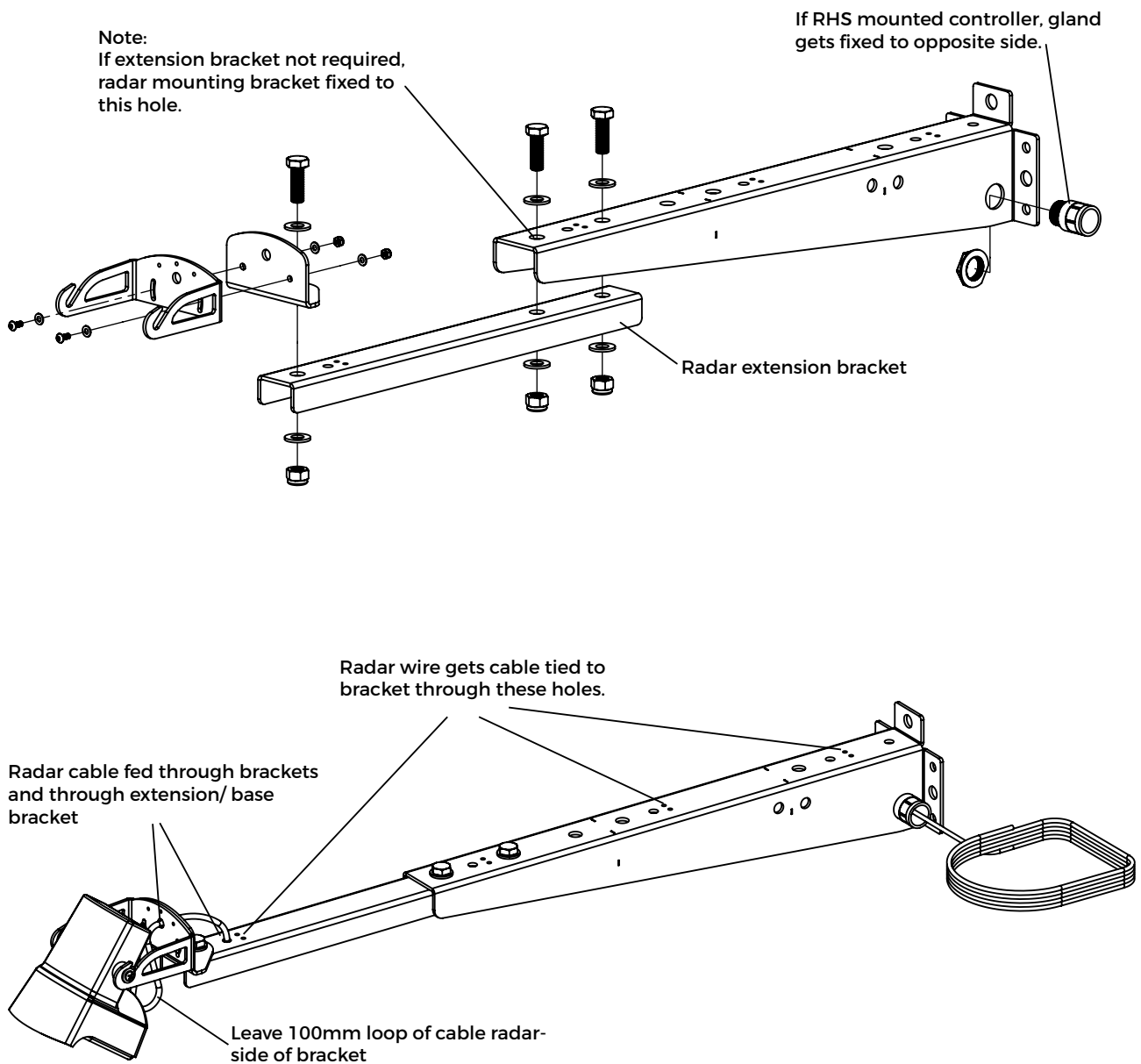
Install drive and non-drive covers. Install front hood stiffeners (if required). Procedure: remove center fixing from back hood, then fasten stiffener plate (loosely) horizontally to center hole. Remove front and back fixings, then spin plate straight. Install front and back fixings and tighten all fasteners.



DETAIL A



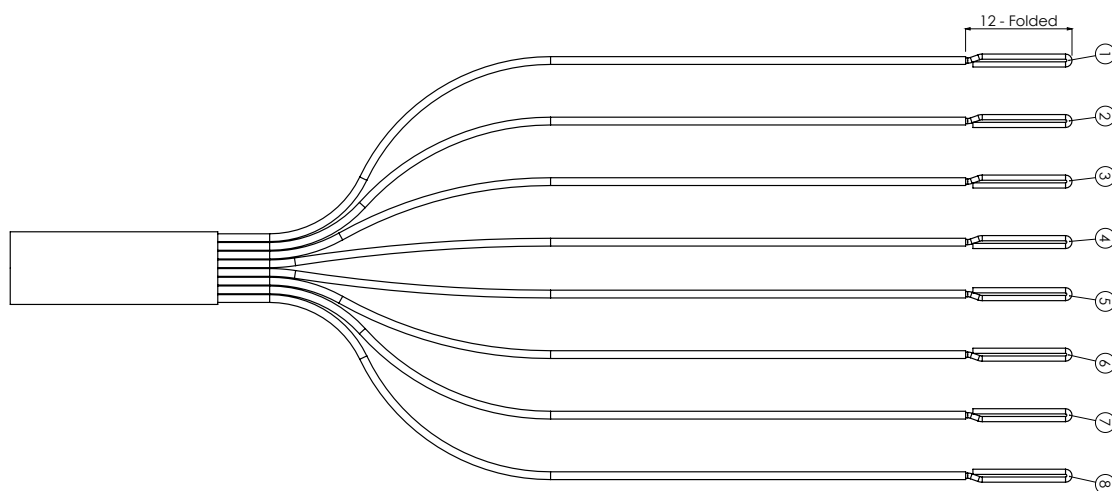
5 INSTALLATION



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	+ 24V
2	Brown	+24V	+24V
3	Green	0V	0V
4	Yellow	Top Photocell Set	SIG 1
5	Purple	Bottom Photocell Set	SIG 2
6	Blue	Activation	PB1 or PB2
7	White	Safety 1	Tape Up - Unused
8	Black	Safety 2	GND (Tape Up If Unused)

**** NOTE ****

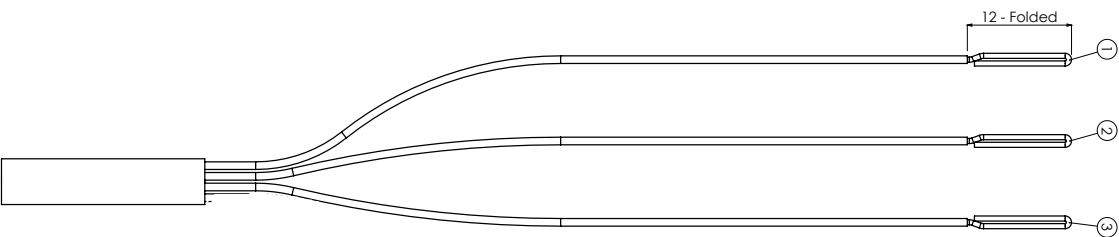
If Safety 1 Or Safety 2 Are Not Used, Tape Up White & Black Wires.

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

6 ELECTRICAL

6.2 Motor Cable

MOTOR CABLE

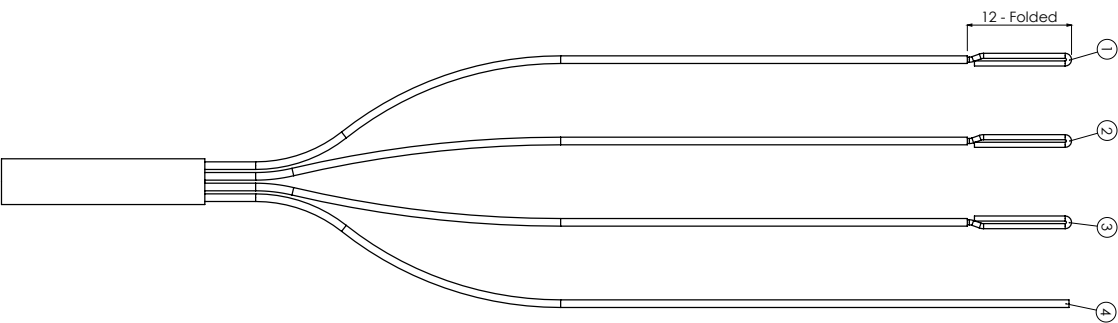


Item	Wire No./Colour	Control Box Connection
1	Black	Phase
2	Green	Ground
3	White	Neutral

6 ELECTRICAL

6.5 Traffic Lights

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



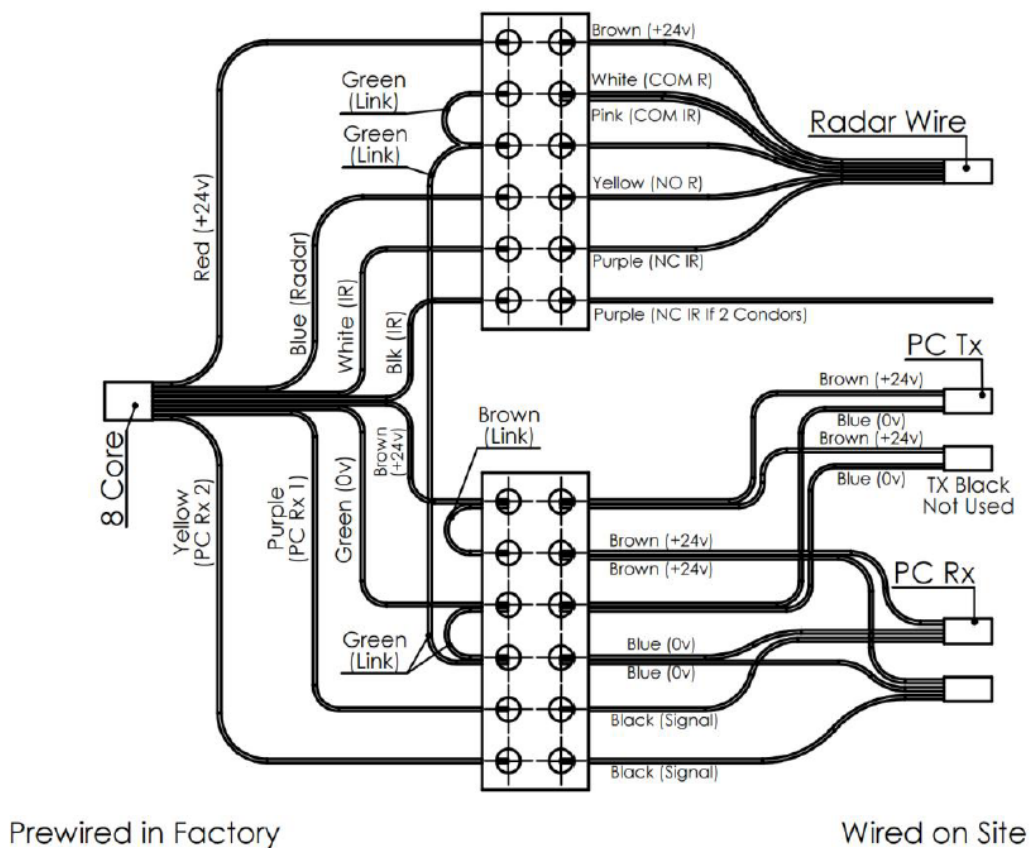
Wire	Wire No./Colour	Control Box Connection	Terminal Number
1	Blue	0V	GND
2	Brown	Traffic Light RED	N01
3	Black	Traffic Light GREEN	NC1
4	White	N/A	N/A

*Extra power supply required if using radars

6 ELECTRICAL

6.7 Radar and Photo-beam Connections

Control Cable Connections for Radar and Photo-beams



Rev. B
13.07.18

7 COMMISSIONING

Controller Setup Procedure: Hyperglide SE & Hyperchill SE

7.1 Commissioning Mode:

Step 1 - Follow SETUP commissioning instructions on controller screen.

Step 2 - Hold UP arrow and red STOP button for 5 seconds until the password screen shows. Enter in 11113 as password using arrows to change value and red STOP button to select number.

Step 3 - Set up photocells using arrows and red STOP button for the following steps: Main Menu -> Option 2 Safety Devices -> Options 1 for SAFETY SIG 1 -> Option 4 Photocell -> Option 1 Untested -> Option 1 Down -> Option 1 Full Reverse -> CONFIRM.

Repeat process for Option 2 for SAFETY SIG 2

Exit to main menu by scrolling down using DOWN arrow and select back using red STOP button.

Step 4 - Set up photocell blanking position using the following steps: Main Menu -> Option 4 Door-Positions -> Option 5 Blank Lightbarrier -> SAFETY SIG 1 & 2 -> Enable -> Set Position -> CONFIRM
Repeat process for Option 2 for SAFETY SIG 2

Step 5 - Set up radar using the following steps: Main Menu -> Option 6 Inputs / Outputs -> Option 2 Inputs -> Input GPIO PB1 -> Option 3 Open -> CONFIRM
Repeat process for Option 2 for PB2 if 2 radars

Step 6 - Set up door speed inside Option 1. Recommended up-speed 2000, recommended down speed - 700

Step 7 - Set up Hold-Open Time: Go to Option 3 Automatic Close -> Option 1 Timed Close -> Option 1 Enable -> Set Automatic Close after "X" seconds -> CONFIRM

Step 8 - Set Door Mode to Automatic: Main Menu -> Option 5 Operation Mode -> Option 2 Automatic Up / Down -> CONFIRM