

D10 Turbo SMART - Steel Rack

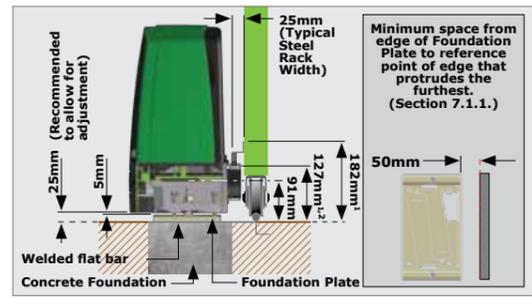


FIGURE 10

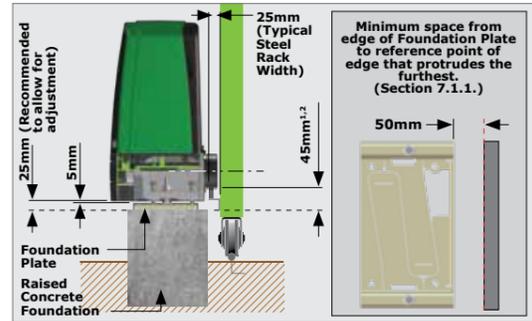


FIGURE 11

1. Includes 3mm clearance required between rack and pinion
2. Distance between bottom of the Foundation Plate and bottom edge of the Rack Tooth

The principles of installation on a Steel Rack is to position it in the middle of the output pinion with the operator fully forward on the slots.

D20 SMART - Steel Rack

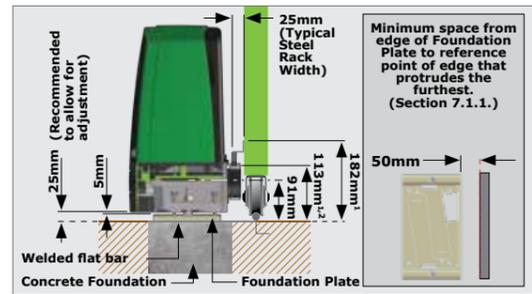


FIGURE 12

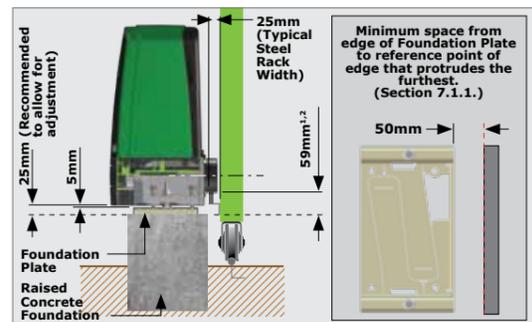


FIGURE 13

1. Includes 3mm clearance required between rack and pinion
2. Distance between bottom of the Foundation Plate and bottom edge of the Rack Tooth

The principles of installation on a Steel Rack is to position it in the middle of the output pinion with the operator fully forward on the slots.

The Pinion Guard needs to be rotated 180 degrees if the rack below the pinion is desired for **ONLY** the D10 SMART and D20 SMART, and not the D10 Turbo SMART.

10.1 Foundation plate installation

The foundation plate can either be set into a concrete foundation or bolted down onto an existing or new concrete plinth.

Check that the M10 half-nuts are tightened to 20Nm on the mounting bolts.

1. Using a pair of pliers, gently bend the two tabs of the foundation plate down to a 90° angle.
2. Again, using a pair of pliers, gently bend the two legs on each tab to an angle of 90° in opposite directions.

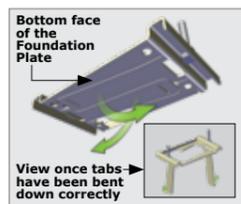


FIGURE 14

Lay the cabling conduit so that it routes the cables to the back of the Foundation Plate. Ensure that 30mm of conduit protrudes above the concrete.

Using medium-strength concrete (25MPa), cast the plinth according to the dimensions as shown in Figure 13.

When using a concrete foundation, it is recommended that the Foundation Plate is welded to the rail/track of the gate using a short length of flat bar, as shown in Figure 14. This makes it possible to complete the whole mechanical and electrical installation without having to wait for the concrete to set. After completing the installation, the concrete can be poured and the operator left in Manual Mode until the concrete has set. Do not operate the motor until the concrete has completely set.

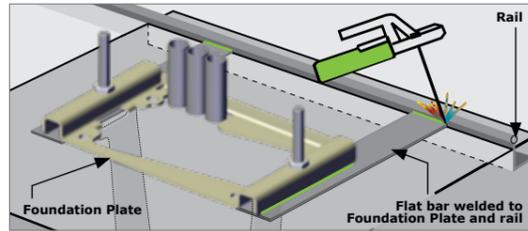


FIGURE 15

10.2 Existing concrete plinth

If bolting onto an existing concrete plinth, place the Foundation Plate down in the correct position and use the plate as a template for marking the Expansion Stud holes.

Check that the M10 half-nuts are tightened to 20Nm on the mounting bolts.

Ensure that the Expansion Studs do not protrude more than 23mm above the Foundation Plate.

Rerouting of existing cables may be necessary.

10.3 Conduit and Cable Length

Route the cables as determined in Section 8 - "Cabling Requirements".

Make sure that the conduits protrude above the concrete foundation. The mains cables should protrude 450mm above the concrete foundation, and all signal cables (i.e. beams, etc.) 600mm above the concrete foundation, as shown in Figure 16.

11. Preparing the Operator for Installation

Open the Camlock Cover, and insert the Operator Key into the Camlock. Unlock it by turning the key anti-clockwise.

There is no need to open the Release Handle to remove the cover of the D10 SMART / D10 Turbo SMART / D20 SMART.

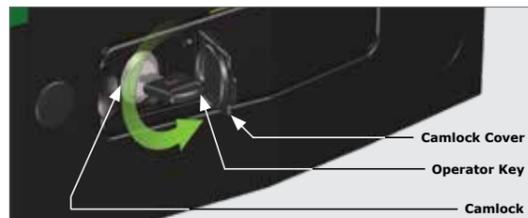


FIGURE 16

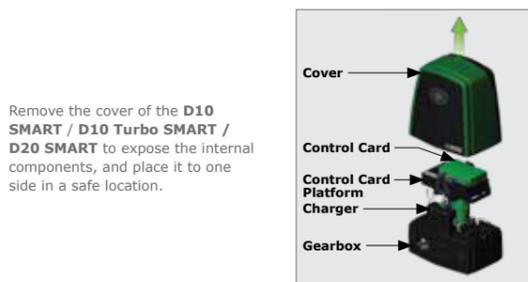


FIGURE 17

Remove the cover of the D10 SMART / D10 Turbo SMART / D20 SMART to expose the internal components, and place it to one side in a safe location.

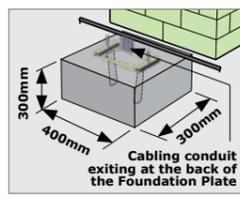


FIGURE 18

11.1 Removing the Charger

Disconnect the Charger from the D10 SMART / D10 Turbo SMART / D20 SMART Control Card at either Point "A" or Point "B".

If the disconnection is made at Point "A", note that there are two connector blocks that need to be disconnected from the Control Card.

Disconnect the Earth Harness from the Charger at Point "C", and store it in a safe place.

Remove the Charger from the lower battery tray by gently pushing the Charger slightly down whilst pulling it towards the front of the D10 SMART / D10 Turbo SMART / D20 SMART. It should slide forward and off with ease.

12. Operator Installation

12.1. Mounting the Gearbox

To remove the Gearbox Trim with the battery tray, firstly ensure that the Camlock is in the "unlocked" position. Open the Manual Override Lever so that it is in the 90° position. Remove the Camlock Key, and keep it in a safe place. Hold the gearbox trim on both sides firmly and pull the entire assembly forward with a slight tug towards the front of the D10 SMART / D10 Turbo SMART / D20 SMART. It will unclip from the rear of the gearbox. Manoeuvre it over the Manual Override Lever to remove it completely off the gearbox.

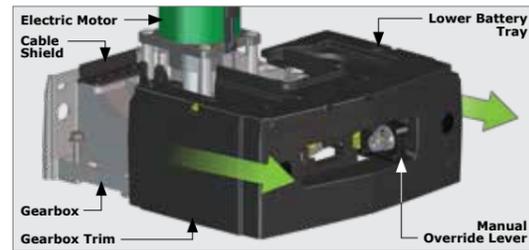


FIGURE 19

The Cable Shield needs to be removed before mounting the D10 SMART / D10 Turbo SMART / D20 SMART onto its Foundation Plate. This is done by lifting the Cable Shield up and away from the gearbox.

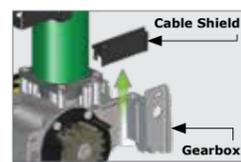


FIGURE 20

Once the Cable Shield has been removed, place the D10 SMART / D10 Turbo SMART / D20 SMART into position over the two Mounting Bolts, aligning them with the two slots at the bottom of the gearbox and rest the D10 SMART / D10 Turbo SMART / D20 SMART onto the Foundation Plate.

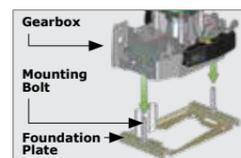


FIGURE 21

Once the Gearbox is resting on top of the Foundation Plate, slide the D10 SMART / D10 Turbo SMART / D20 SMART as far as possible towards the gate to allow for later adjustment.



FIGURE 22

12.2. Routing the Cables

Route cables as determined in Section 8 - "Cabling Requirements".

POINT A is the entry point for cables with the conduit installed at the back of the unit as shown in Figure 25.

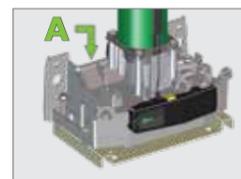


FIGURE 23

12.3. Height Adjustment

The D10 SMART / D10 Turbo SMART / D20 SMART's unique Height Adjustment System adjusts from the top of the gearbox. This adds further security to the system, as it is not possible to access the Height Adjustment Bolts from the outside of the gearbox.

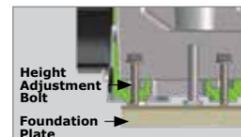


FIGURE 24

Using a ratchet and a 12mm socket, turn the Height Adjustment Bolt clockwise to lift the Operator, or turn it anti-clockwise, to lower the Operator.

12.4. Mounting the Rack

The rack must be securely mounted to the side of the gate. It must be parallel with the gate rail and there must be a 2-3mm gap between the rack teeth and the teeth of the pinion.

The D10 SMART is supplied with the Pinion Spyder, which greatly enhances the accuracy and speed of achieving the 2-3mm gap between the pinion and the gate's rack.

1. Ensure that the D10 SMART Gearbox is in Manual Override.
2. Start with the gate either fully open or fully closed.
3. Slide the D10 SMART back towards the gate where the Pinion will sit just under where the rack will be fixed to the gate.
4. Rest the rack directly onto the Pinion Spyder while welding / bolting the rack into position.
5. Level the other end and fix that end to the side of the gate.

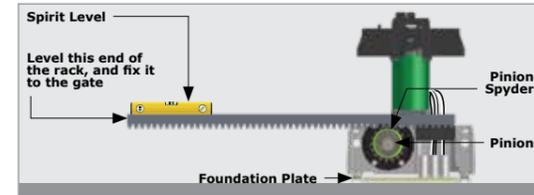


FIGURE 25

Before fully fixing each section of rack, slide the gate backwards and forwards along the section, checking that the rack is only resting on the Pinion Spyder, and not pressing down onto it.

12.5. Fitting Steel Rack to the Gate

Fix the Steel Rack with the steel angle brackets. The brackets must be spaced no more than 300mm apart.

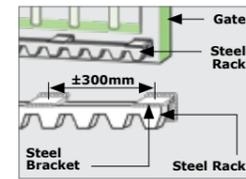


FIGURE 26

When joining different lengths of Steel Rack, a simple way of ensuring that the correct pitch spacing is achieved, is to clamp a small off-cut between the two pieces.

Do not weld the off-cut to the gate or the join.

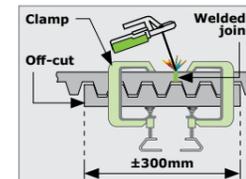


FIGURE 27

12.6. Installing the Origin Sensor and Marker

The Origin Sensor and Marker is an optional extra for the D10 SMART, but is mandatory to use for the D10 Turbo SMART, and the D20 SMART as a safety precaution.

Place the Origin Sensor into its dedicated slot found just above the Pinion on the Lower Battery Tray.

Note the orientation of the Origin Sensor.

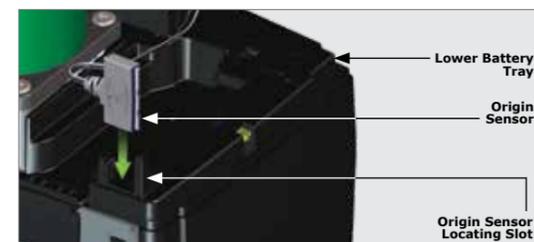


FIGURE 28

Route the Harness around the electric motor to the front of the operator, and through the cable retainers found in front of the Control Card.

Connect the Harness to the white "Origin" Terminal found on the Control Card.

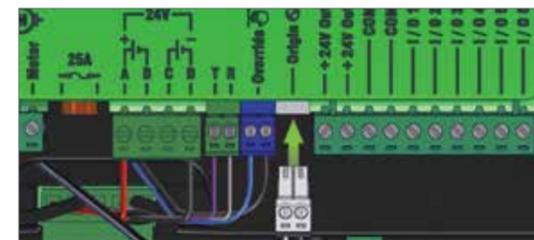


FIGURE 29

Mounting the Origin Marker

Firstly, fully close the gate.

Mount the Origin Marker to the rack a minimum of 500mm from the origin sensor.

It is possible to make the distance between the marker and the sensor much greater than 500mm. However, if using the pedestrian opening facility, although the position of the marker will not affect the width of the pedestrian opening, it is preferable to have the marker mounted inside of the pedestrian opening point.

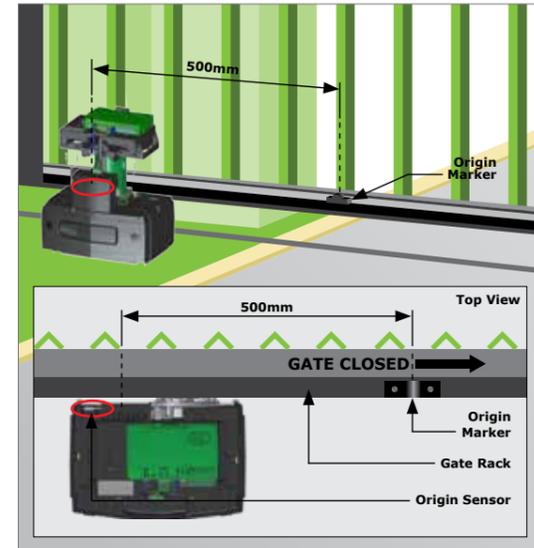


FIGURE 30

Note the orientation of the Origin Marker.

Manually slide the gate open until the origin marker is in line with the origin sensor.

Ensure the distance between the face of the marker and front face of the sensor is between 10 and 20mm.

Adjust distance by sliding the Origin Marker along the slotted mounting holes until the specified distance is achieved.

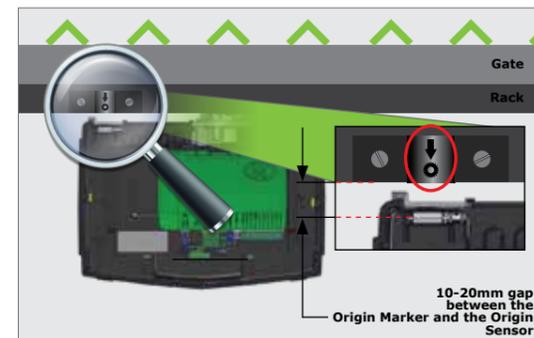


FIGURE 31

13. Commissioning the System

1. Scan the QR Code in Figure 35.
2. Select the App Store applicable to the operating system being used, either either Apple App Store, Android Google Play Store or the Huawei App Gallery.
3. Download and install the application.



FIGURE 32

Alternatively, go directly to the app store of the operating system being used, and search for the app "MyCentsys Pro". Download and install the application onto the smartphone.

1. Once installed, open the application.
2. From the list of operators, select the operator that is applicable to this installation.
3. Connect to the relevant operator.
4. Use the app by following the prompts to configure the D10 SMART / D10 Turbo SMART / D20 SMART.

