## REVROY Parking Guidance System-RR-PGS-ML360

**The Parking Guidance Solution from REVROY comprises of the following items:**

- A unified unit comprising of an Ultrasonic Sensor and a multi-colour LED array display
- A Node Controller
- A Master Controller
- A hand-held remote for configuring the sensors and setting the LED colour code.
- Parking Guidance Software

**Ultrasonic Sensor**

The Ultrasonic Sensor is an electronic device that emits ultrasonic sound waves that measures the distance of an object from its position. This reflected sound wave is converted into an electrical signal. Ultrasonic sound waves travel faster than audible sound.

Ultrasonic sensors have two main components, the Transmitter (which emits the sound using piezoelectric crystals) and the receiver which encounters the sound after it has travelled to and from the target.

In order to calculate the distance between the sensor and the object, the sensor measures the time it takes between the emission of sound by the transmitter to its return to the receiver.



**LED Red/Green Slot Availability Display**

The Unified Sensor Unit is built-in with an array of Light Emitting Diodes that glow

Red on receiving signal when there is a vehicle in the sensing area (Car Parking Slot). In case of no occupancy of the said area, the LED array glows Green as a standard unless an alternate colour code is chosen to indicate the designated slot for a specific type of vehicle/application. (viz. **Blue** for VIP/Expectant Mothers/Handicap Drivers etc.; **Magenta** for Reserved/ Electric Vehicles etc. as may be desired by the customer)

## Node Controller

The Node Controller receives the data (Slot Occupied/Slot Empty information) from the Ultrasonic Sensor Unit and transmits the information to the Master Controller. The Revroy Node Controller has the capability to connect to 60 Sensors. Therefore, for every 60 Sensors One Node Controller is added to the system.

## Master Controller

The Master Controller receives the data (Slot Occupied/Slot Empty information) from the Node Controller Unit and transmits the information to the S/W. The Revroy Master Controller has the capability to connect to 60 Node Controllers. Therefore, for every 360 One Master Controller is added to the system. A Master Controller doubles up as a Node Controller i.e. it may be connected to 60 Devices on its own.

## REVROY PGS Software Ware

The entire Parking Management solution is controlled by the REVROY PGS S/W. The S/W allows integration, Control, Billing provide Device Status. It additionally also offers the feasibility to integrate a Commercial Parking Management System. The S/W feature allows the possibility to initiate Voice Commands viz. Good Morning/Welcome/ Good Bye etc. Other devices that form a part of the Parking Management/Guidance Solution may also be remotely from the Central/Master Control Room be monitored and controlled. The S/W offers a Graphic User Interface, vividly displaying the entire parking layout in a manner that is clear & pleasing to the eye.

## Display Signage

LED Display Signage may be provided to indicate slot availability. Display Signages are of two types Outdoor & Indoor. Outdoor Signages indicate total slot availability. In case of an MLCP additional information pertaining to slots available on each level can also be provided. Indoor Display Signages are of the following types- Uni Directional, Bi- Directional & Tri-Directional. These signages provide

the following information:
- "0"- "Full" Indicating No slot availability;
- Number of Slots Available
- No. of Handicap Slots Available
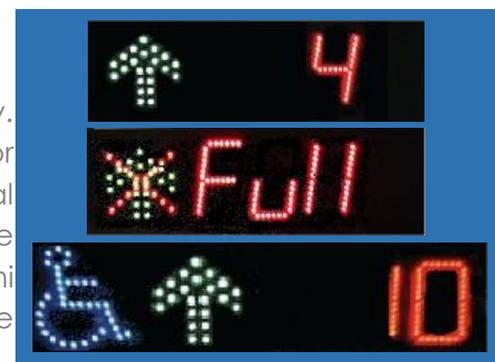
**Composite Elements of the REVROY Parking Guidance Solution**
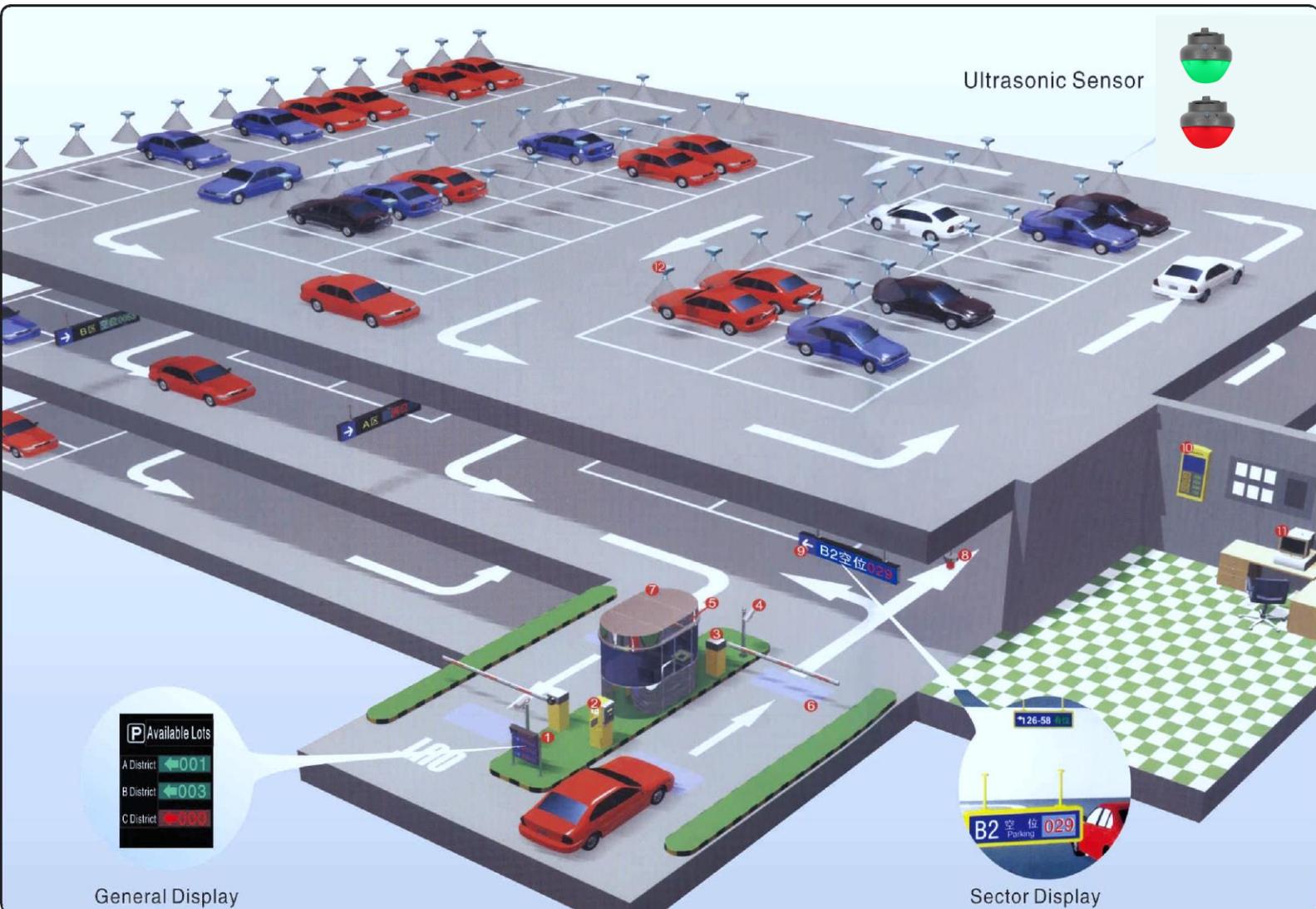
The above visual representation serves better understanding of the various components that go into a PGS Systems Solution.

- Entry Barriers
- Ticketing System-If the installation is in a Paid Parking facility
- Exit Barrier
- Security/Ticketing Booth
- Main display Signage-Representing Slot availability in all the levels of the parking.
- Guidance Signage upon entry-Directing Drivers in the right direction and displaying slot availability
- Installation of Ultrasonic Sensors with built in Led Lights
- Central Control Room
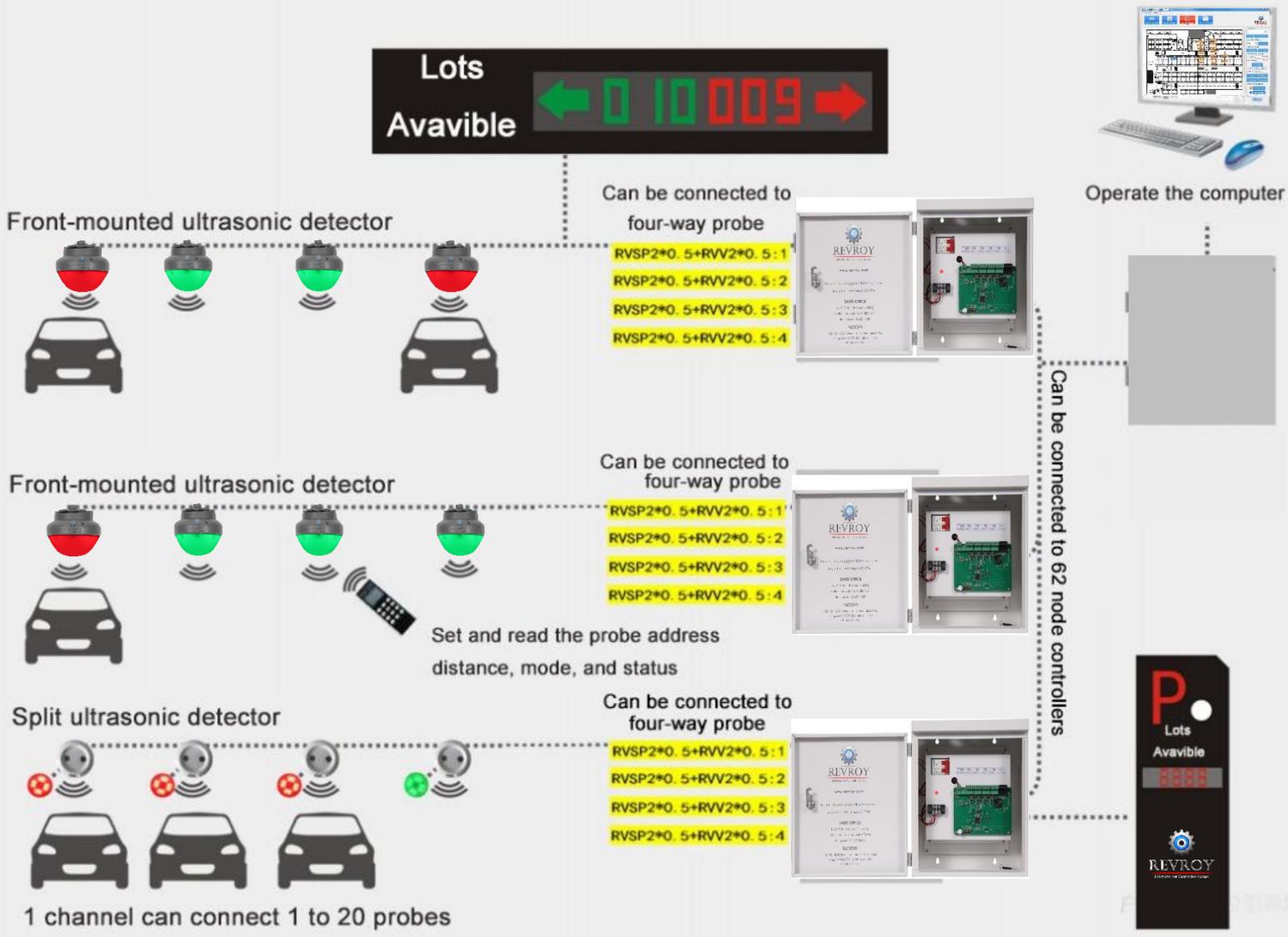
**The Handheld Remote offers the Ease & Flexibility of Set-Up**

❖ **Set & also Read the ultrasonic**
  ➢ Address
  ➢ Distance,
  ➢ Mode and
  ➢ Status
❖ **Communicate**
  ➢ Mode:
  ➢ Sensor
❖ **Detect distance:**
  ➢ 1.5 meters

**REVROY Parking Guidance System Software**
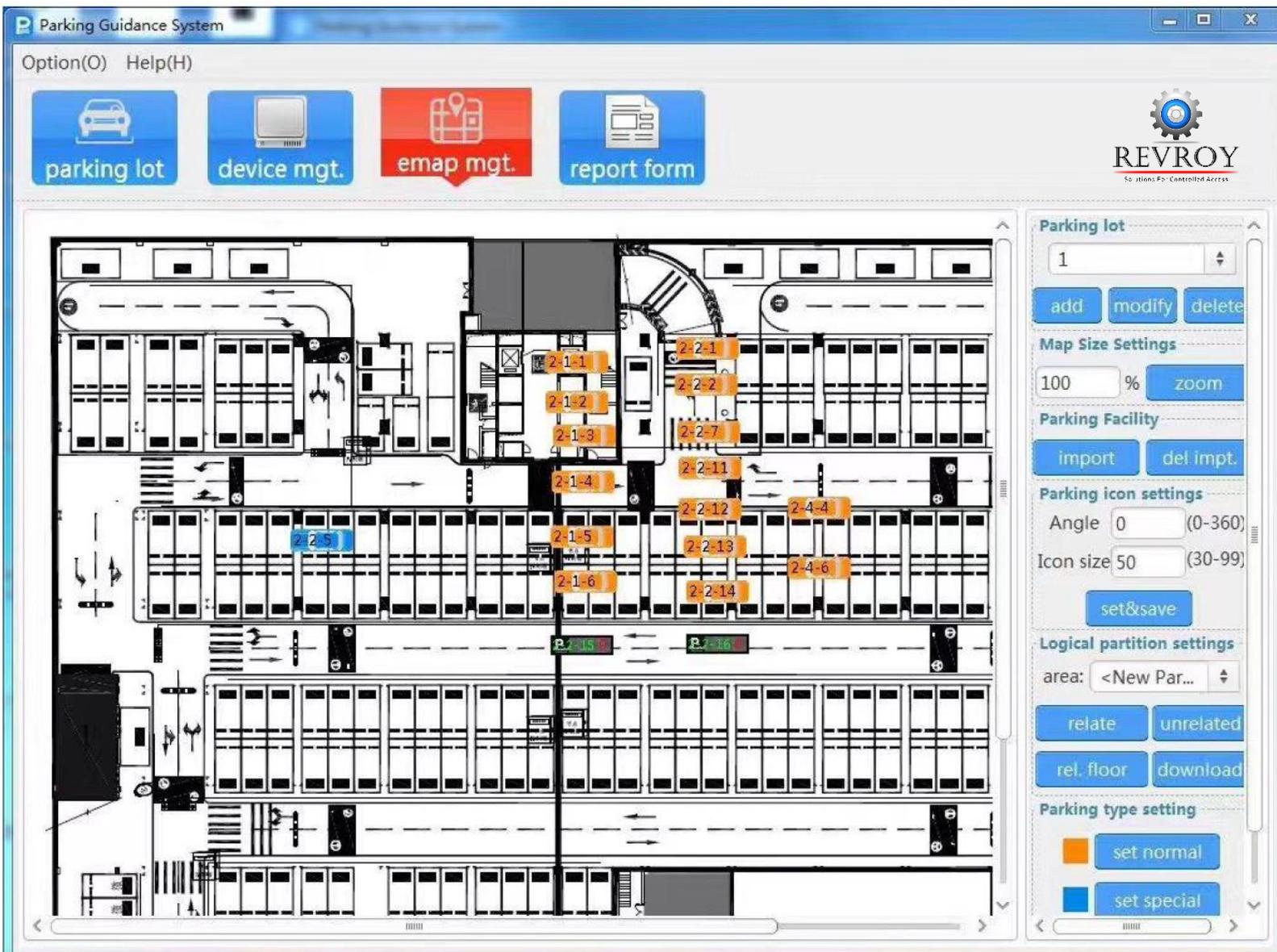


**Features of the REVROY PGS S/W**

- ☼ Parking guidance function
- ☼ Fixed parking space protection function (customizable)
- ☼ Real-time monitoring of parking space status
- ☼ Statistics function
- ☼ Parking time detection function
- ☼ Access control function
- ☼ Language and special functions can be customized

| Node Controller Technical Parameters | |
|---|---|
| Standard sizes | 280×260×100mm |
| Net weight | 3.75Kg |
| Shell material | Gray cold steel paint |
| Operating temperature | -20°C ~ +65°C |
| Communication Method | 1 CAN @ 20kbps<br>4 channels RS485 @ 9600bps |
| Communication Distance | CAN：≤1000m（RVSP 0.75*2 ）<br>RS485：≤150m（RVSP2*0.5） |
| Power consumption | ≤2W(Own power consumption, without detector) |
| Horizontal position | Level 0~1m (recommended 0.3~0.5m) |
| Installation height | Vertical 2 ~ 3m (recommended 2.5m) |
| Operating Voltage | AC 110～240V |
| Node controller capacity | 60pcs ultrasonic |

| Central Controller Technical Parameters | |
|---|---|
| Standard sizes | 280×260×100mm |
| Net weight | 3.36Kg |
| Shell material | Gray cold steel paint |
| Operating temperature | -20°C ~ +65°C |
| Communication method | 1 CAN @ 20kbps<br>1 channel 10/100BaseT Ethernet |
| Communication distance | CAN：≤1000m（RVSP 0.75*2)<br>Ethernet: 100m (super Category 5 network cable) |
| Power consumption | ≤3 W |
| Horizontal position | Level 0 ~ 1m (recommended 0.3 ~ 0.5m) |
| Installation height | Vertical 2 ~ 3m (recommended 2.5m) |
| Operating Voltage | AC 110 ～ 240V |
| Central controller capacity | 60pcs node controller |

## Indoor Display Technical Parameter

| | |
|---|---|
| Operating Voltage | AC 110~240V |
| Operating | RS485 @ 9600bps |
| Power consumption | ≤10W(unidirectional) |
| Communication distance | ≤300m |
| Operating temperature | -20°C ~ +65°C |
| Light source | Red/green LED lamp beads |
| Environment humidity | ≤ 90% RH (No condensation) |
| Case material | Cold steel paint + plexiglass panel |

## Outdoor Display Technical Parameter

| | |
|---|---|
| Operating Voltage | AC 110~240V |
| Operating | RS485 @ 9600bps |
| Power consumption | ≤10W |
| Communication distance | -≤300m |
| Operating temperature | -20°C ~ +65°C |
| Protection level | IP67 |
| Dimension | 2200 **X** 75 **X** 20 mm |
| Case material | Cold steel paint + plexiglass panel |
| Light source | Red/green LED lamp beads |

## Parking Guidance System Construction Wires

| Item | Specification | Unit |
|---|---|---|
| Controller communication shielded wire | RVSP2*1.0 | Meter |
| Controller 220V power supply line | RVV3*1.0 | Meter |
| Ultrasonic detector communication shielded wire | RVSP2*0.5 | Meter |
| Ultrasonic detector 24V power supply line | RVV2*0.5 | Meter |
| Bridge galvanized trough type | 80 mm **X** 50 mm **X** 0.8 | Meter |
| Bridge 90 Degree Elbow | 80 mm **X** 50 mm **X** 0.8 | PCS |
| Bridge Tee | 80 mm **X** 50 mm **X** 0.8 | PCS |
| Bridge screw hanging frame | M8 | SET |
| Auxiliary material | | LOT |
| Metal coated hose | M20 | Meter |
| PVC Conduits / Galvanized Pipe 3 meters | Pipe Diameter 25 mm **X** 1.0 mm Thickness | PCS |

# REVROY

Solutions For Controlled Access

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