LBFoster

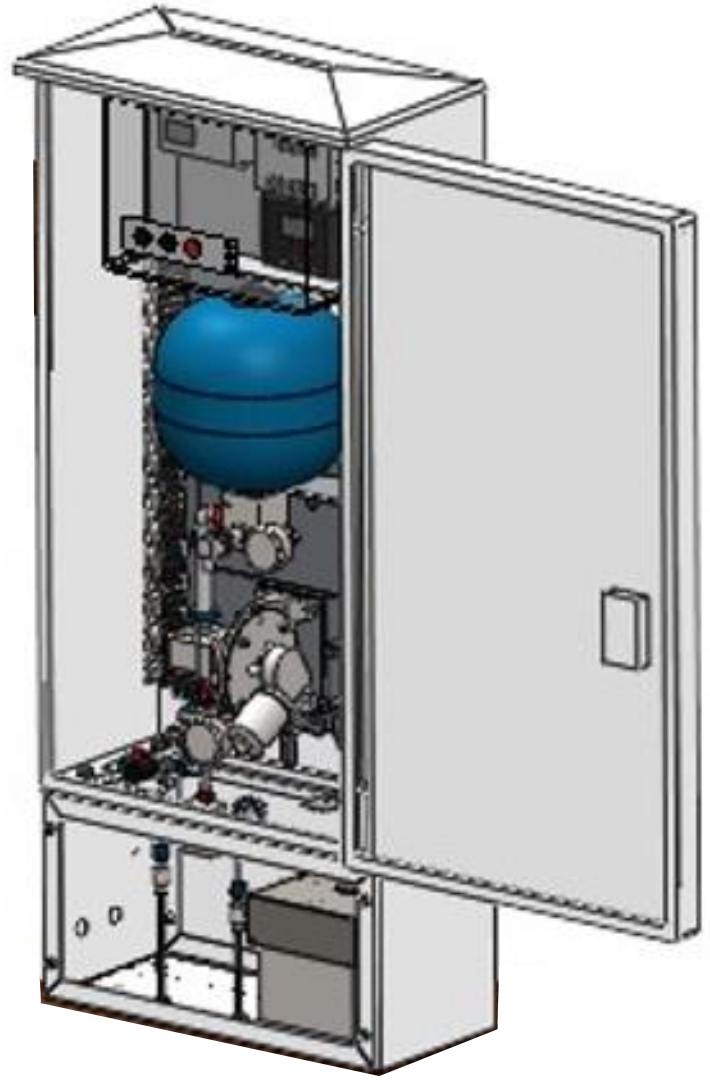
ESA - lubricator

Overview of the ESA electric lubricator

ESA overview

The ESA electric lubricator is optimised for:

- Urban environments
- Embedded rail/tram rail with drilled rail, compatible with applicator bars
- Locations were applicator bars are up to 100m away from the ESA cabinet, due to space or other constraints.
- One system can be used to supply more than one track
- Clean hands filling, with resealable canisters



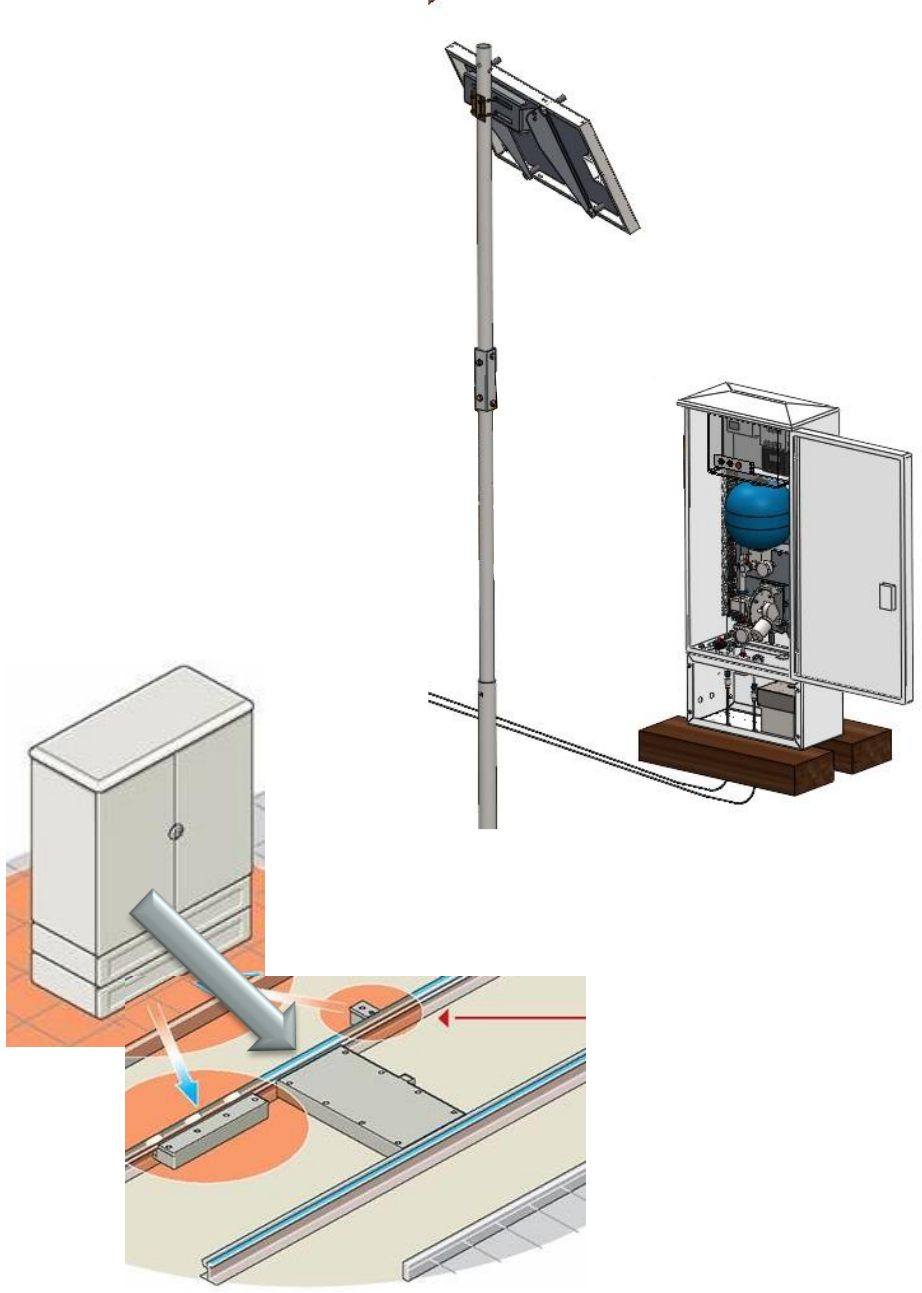
ESA Options

Power options

- Mains powered (110-220Vac)
- Solar powered with battery

Open vs Closed systems

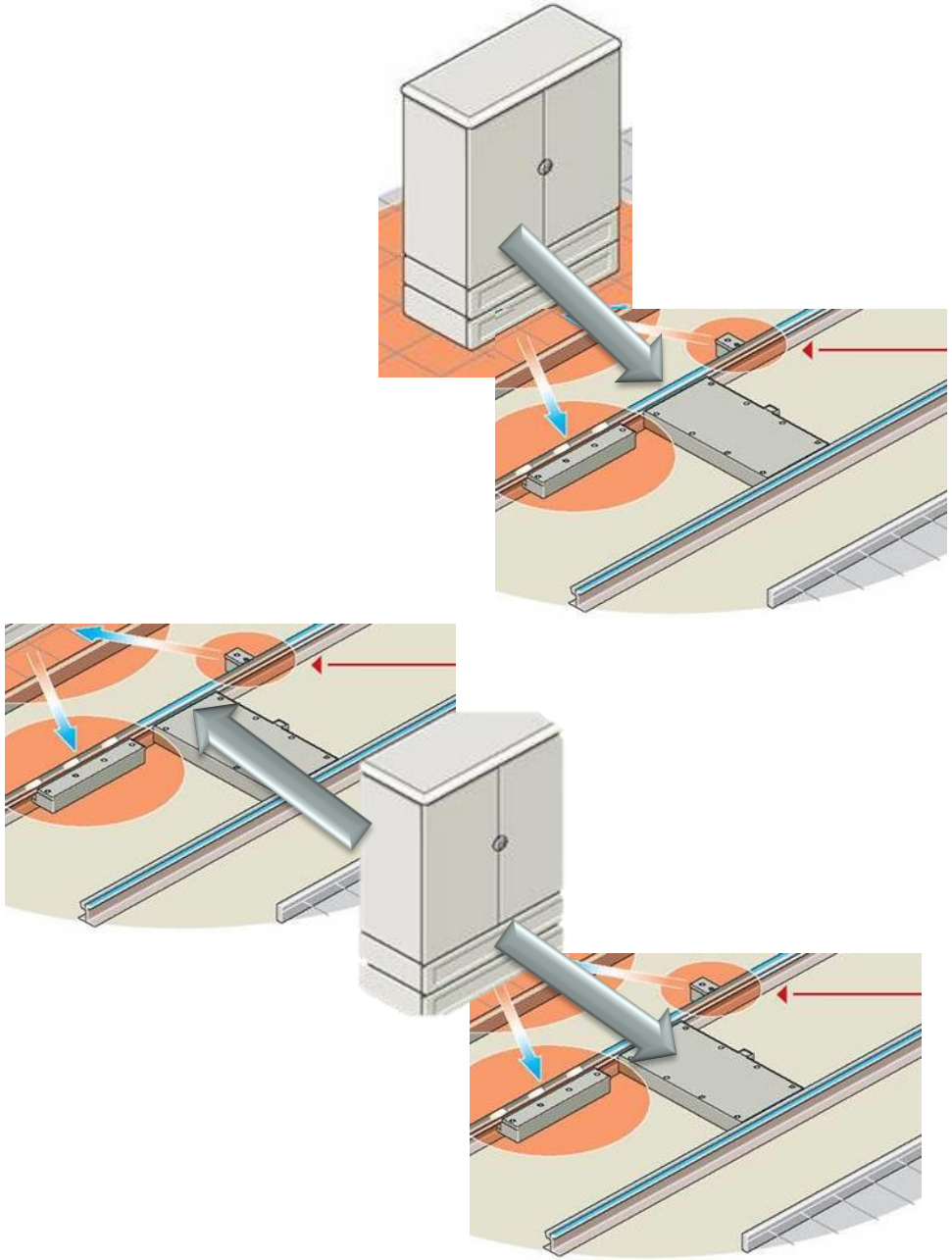
- Open system - up to 10-15m between cabinet and application point on the rails
- Closed system – up to 100m between cabinet and application point on the rails



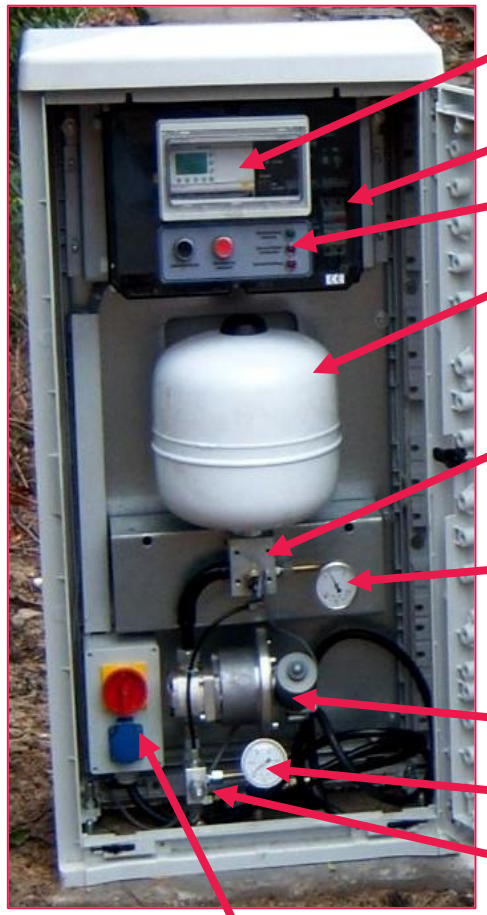
ESA Options

One track or two track options

- One trackside cabinet can be used to control and distribute grease to one or two tracks.
- The two tracks solution saves space, capital costs and has the convenience of only having fill one unit



Main components in ESA system



PLC - Programmable logic controller

Relays

Indicator lights

Reservoir

Reservoir mount, with built in non-return valve and pressure sensors

Pressure gauge (indicates amount of grease in reservoir)

Pump

Pressure gauge

Pressure relief valve

Power isolation switch and electrical socket

ESA Control principles

ESA 10S 1Track Open System

System operating principle

1. Sensor detects wheel passing
2. System counts the number of wheels
3. When the wheel count reaches set limit
4. Then pump runs for set period of time

ESA 10S 1Track Closed System

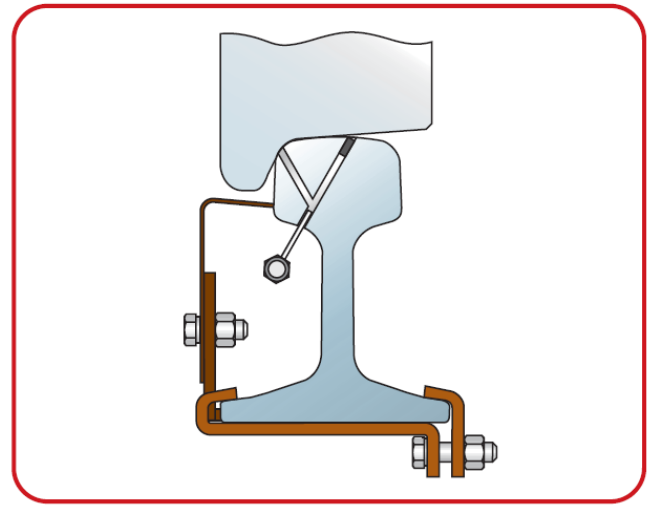
System operating principle

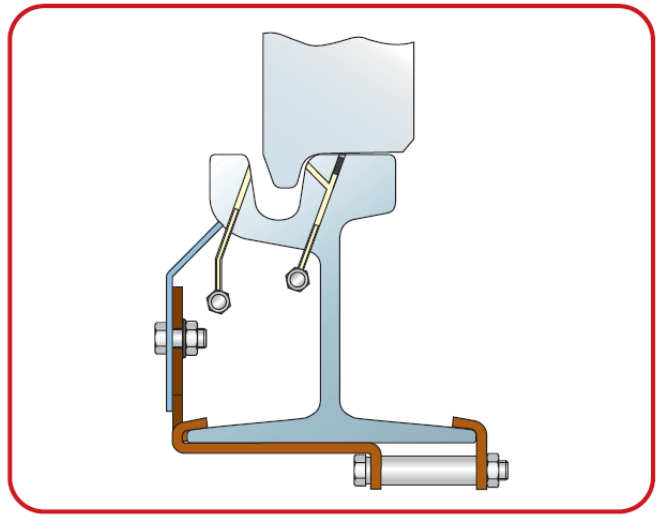
1. Sensor detects wheel passing
2. System counts the number of wheels
3. When the wheel count reaches set limit
4. Then valve opens for set period of time
5. Pump runs until pressure at application point reaches set pressure

Drilled rail application

By drilling the rail

- Grease is delivered to the correct area of the gauge face of the rail or guard rail depending on the rail profile
- Reduces wastage of product – the correct amount is applied every time.





Vehicle detection

Application is triggered either by a:

- Inductive proximity sensor (used primarily for vignole rail where the sensor can detect the wheel flange)
- Vibration sensor (used primarily in embedded rail)

Induction sensor

Vibration sensor