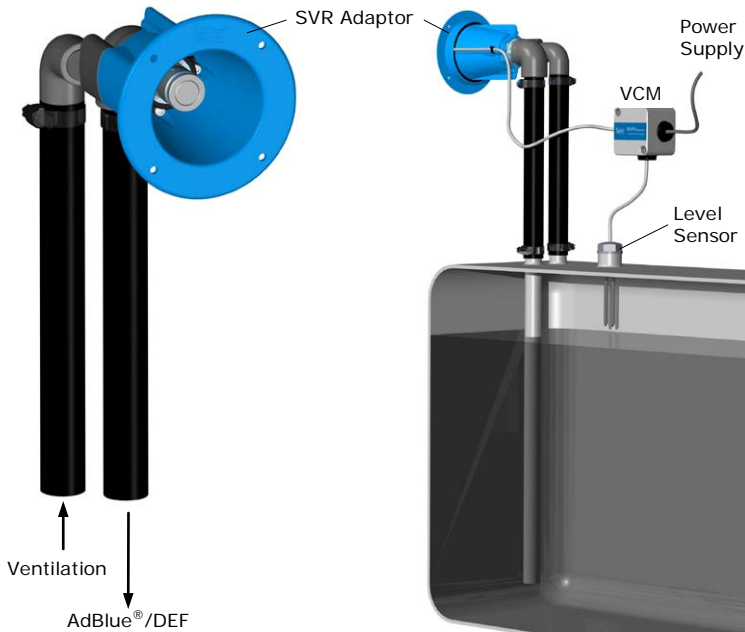


AdBlue®/DEF Spill-free Vehicle Refilling (SVR) System for Buses



Features

- Fully sealed refilling system
- Unique interface ensures that only AdBlue®/DEF can be refilled
- Prevents contamination
- Enables the vehicle refilling inlet to be located at a distance from the AdBlue®/DEF vehicle tank
- Existing vehicles can be retro-fitted with the Identic system

System Description

Identic's Spill-free Vehicle Refilling (SVR) system for AdBlue®/DEF is developed to offer quick and safe refilling of AdBlue®/DEF on vehicles. AdBlue®/DEF contains urea and has specific characteristics which require it to be handled carefully. The chemical becomes crystalline very quickly when exposed to air and has a corrosive effect which could cause large problems.

The fully sealed system features a spill-free coupling which drastically reduces the risk of damage and corrosion that can result from spilling AdBlue®/DEF. The unique coupling ensures that only AdBlue®/DEF can be refilled. This means that the vehicle's AdBlue®/DEF tank and the SCR system are protected from contamination or misuse caused by refilling of incorrect fluids.

Refilling of fuels and chemicals on buses often require customised solutions in order to offer quick and simple refilling procedures. Bus design limitations could mean that the optimal locations for the AdBlue®/DEF tank and the refilling point are far apart. Conventional refilling solutions with open refilling nozzles are not suitable for this need, but Identic's spill-free technology offers a perfect solution.



Example of the spill-free AdBlue®/DEF coupling mounted on a bus next to a spill-free coupling for diesel.

Identic's spill-free solution includes a level sensor mounted in the vehicle tank which ensures that AdBlue®/DEF is filled to an optimal level every time, thus avoiding overfills. The level sensor is connected to a Vehicle Control Module (VCM) which communicates wirelessly with the dispenser equipment to control pump operation. All components are made of specially selected materials which are compatible with AdBlue®/DEF.

The components presented here are developed specifically for bus applications where the refilling interface is mounted on the body of the bus. For solutions for other types of vehicles please contact Identic for more information.



Vehicle Components

SVR Adaptor

This SVR adaptor is intended for mounting on the vehicle body/coachwork. The connection adaptor is equipped with a spill-free coupling specially developed for use with AdBlue[®]/DEF. It is also equipped with a built-in RFID antenna which senses when a nozzle is connected to the vehicle. The RFID antenna is connected to a Vehicle Control Module, VCM, which is mounted in the vehicle (see below). An integrated ventilation system provides evacuation of overpressure in the tank during refilling.



The SVR adaptor is delivered with a cable for connection to the VCM.

Vehicle Control Module (VCM)

The VCM is one part of the advanced wireless communication system which ensures that the AdBlue[®]/DEF tank is filled to the correct and optimal level.

The VCM is connected to a level sensor which is placed in the vehicle tank. The VCM communicates wirelessly with the Pump Control Unit, PCU. The PCU is a device controlling the refilling pump unit and ensures that the correct pump is started/stopped.



The VCM measures 52 x 50 x 45 mm, and is delivered with a cable for connection to power supply.

Level Sensor

The level sensor which is mounted in the vehicle tank is delivered with a cable for connection to the VCM, and should be mounted as close as possible to the VCM. Connection to the tank is G½ (M).

The level sensor can be supplied in different lengths depending on the shape of the tank.



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