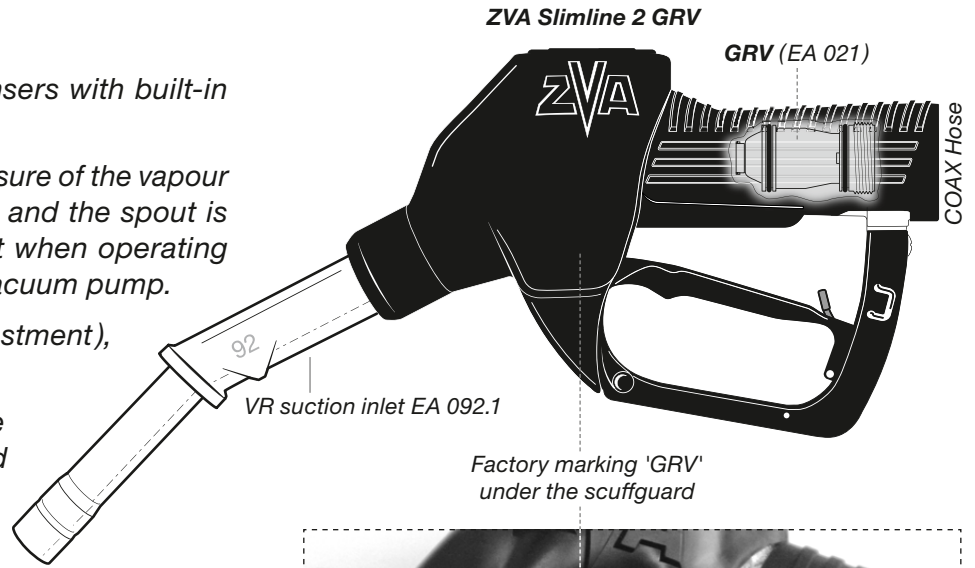


### ZVA Slimline 2 GRV with fully integrated 'ON/OFF' vapour valve:

- Suitable for all modern dispensers with built-in vapour recovery control.
- ON/OFF – function: Secure closure of the vapour line when there is no fuel flow and the spout is pointing upwards. - Important when operating two or more hoses with one vacuum pump.
- Simple dry test (A/L ratio adjustment), see overleaf.
- The valve adds only 60g to the nozzle compared to a standard ZVA Slimline 2 GR.



### MODIFICATION OF ZVA SLIMLINE 2 GR:

If you want to modify an existing ZVA Slimline 2 GR to type GRV:

Remove the strainer from the nozzle and unscrew the vapour valve insert (EK 096) with the tool EW 19-22. After greasing the O-Rings EO 048, screw in the GRV valve (EA 021) into the nozzle body. Fit strainer ES 102.4 before connecting to the COAX hose.

Before use check that the fuel area is tight (no dripping from the vapour spout). Leaks may be caused by dirt during assembly or damaged O-rings.

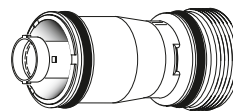
This work should be done in a suitable workshop facility and not in the field.

Please also note Information 8.08 for correct nozzle marking.

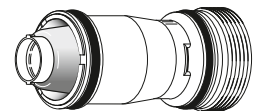


The GRV (EA 021) replaces the standard vapour valve insert EK 096, see left hand side.

Vapour Valve Insert (EK 096)



GRV (EA 021)



EO 048

### COMMISSIONING / PUTTING INTO USE:

ZVA Slimline 2 GRV is supplied ready for use and can be directly connected to COAX VR hoses.

### TÜV STAGE II CERTIFICATES:

ZVA Slimline 2 GRV is approved by the TÜV Süd – All previous approval certificates for ZVA 200 GRV3 remain valid also for ZVA Slimline 2 GRV, by using the supplementary certificate TÜV Süd No. 85-2.xxx.

The GRV (EA 021) is supplied ready for installation, pre-adjusted and tested for vapour tightness.

Only the O-rings are supplied as spare parts. In the case of a malfunction the whole GRV unit is to be replaced.

## **DRY TEST WITH ZVA SLIMLINE 2 GRV:**

Please observe valid regulations and manufacturer's instructions.

Open dispenser to gain access to the vapour recovery control. [fig.1]

Please check relevant setting data for the measurements (e.g. pulsing rate of the fuel dispenser and correction factor).

Take the ZVA Slimline 2 GRVP from the nozzle boot. The vacuum pump may start, depending on the dispenser type.

Connect the handheld control to the vapour recovery control of the fuel dispenser.

Tightly connect the Elaflex universal connector UMAX 2 onto the vapour spout and connect its hose to the gas meter.

Connect the signal cable of the gas meter to the handheld control. Switch on handheld control. Enter the pulsing rate of the fuel dispenser and the correction factor of the vapour recovery system (see relevant TÜV certificate).

The handheld control is set to simulate the max. volumetric flow authorized for the vapour recovery system (see certificate). After checking the connections to the gas meter and the UMAX 2 connector (visual inspection of the sealing surfaces), the simulation of the petrol flow is started on the handheld control.

To open the GRV valve, let the nozzle hang down vertically and make a vertical impact downwards [fig.2]. The valve opens due to gravity. In this position the dry test (setting of the vapour recovery rate) is effected.

**Correction factor 'K':** As ambient air is sucked in during the dry test, the calculated air volumetric flow must be divided by the correction factor. If this is not already done automatically by the handheld control, the vapour recovery rate is calculated using the following equation:

$$R = \frac{\dot{V}_g}{\dot{V}_k \cdot K} \cdot 100$$

**R** vapour recovery rate, in %

$\dot{V}_g$  calculated air volumetric flow during the measurement (average value), in l/min

$\dot{V}_k$  volumetric flow simulated by the handheld control, in l/min

**K** correction factor (as specified in the certificate)

Usually, the vapour recovery rate is automatically calculated by the handheld control and can be read out with no need for calculations.

For further details please refer to:  
VDI 4205 Part 1-3:2003 (German / English)  
VdTÜV-Merkblatt Tankanlagen 908 Part 2

