



AUTOMATIC NOZZLE GZD VR WITH ACTIVE VAPOR RECOVERY SYSTEM

IEP22ATEX1082U INSTALLATION-APPLICATION INSTRUCTIONS AND WARRANTY DOCUMENT





The GZD VR nozzle is designed to distribute liquid fuel (gasoline) from a fuel dispenser at a maximum rate of 45 l/min. It automatically shuts off the liquid fuel (gasoline) supply and features an active vapor recovery system.

It operates at a pressure of up to 3.5 bar.

The weight of the GZD VR nozzle is approximately 970 grams.

It operates within a temperature range of -20° C to $+40^{\circ}$ C and can be delivered with a working range of -55° C to $+55^{\circ}$ C upon customer request.

It can be supplied independently or with the detachable swivel coupling GZD VR300 TIP 2.

INSTALLATION OF GZD VR NOZZLE TO THE DISPENSER

Before installing the GZD VR nozzle to the dispenser, the following steps should be taken:

- -Check if the thread on the connection part of the GZD VR nozzle matches with the thread on the coaxial hose connection of the GZD VR nozzle,
- Place the gasket between the GZD VR nozzle and the coaxial fuel hose,
- Attach the GZD VR nozzle to the coaxial fuel hose manually,
- Securely fasten the GZD VR nozzle to the coaxial fuel hose using an appropriate tool (only "Swedish pliers" should be used, no other inadequate tools are allowed)
- Verify the correct positioning of the GZD VR nozzle to the dispenser,
- Open the pump and check for any leaks in the connection between the GZD VR nozzle and the coaxial fuel hose,
- Tilt the GZD VR nozzle downwards (towards the prepared container) and slowly pull the handle (1) to allow the air to be discharged from the coaxial hose,
- Check the functionality of the automatic release mechanism of the prepared container GZD VR nozzle,
- Verify if the vapor recovery complies with the standard,



- Check if the "CLOSED-OPEN" valve operates correctly,
- Additional instructions for the use of the installed vapor recovery system should be followed to adjust and verify the vapor recovery function.

THE PRINCIPLE OF AUTOMATIC FUEL CUT-OFF IN THE GZD VR NOZZLE

By pulling the lever (1), the piston assembly (2) and the diffuser piston (3) move axially, allowing fuel to flow out of the GZD VR nozzle. The fuel flow from the GZD VR nozzle creates a vacuum and draws in ambient air through a capillary tube (4), which then mixes with the fuel through a membrane assembly (5) and specialized channels within the body of the nozzle. As the fuel reaches the inlet of the capillary tube (4) with higher suction resistance, it creates a negative pressure on the membrane assembly (5), pulling it and releasing the outer part of the piston assembly (2). The outer part of the piston assembly (2) moves the diffuser piston (3) until the fuel flow is completely stopped. The constructive solution of the diffuser, which includes a chamber (6) inside, enables the automatic cutoff of fuel flow, resulting in a significantly smaller hydrostatic shock, thereby extending the service life of the pump's hydraulics and electronics (Figure 3).

MAINTENANCE OF GZD VR NOZZLE DURING OPERATION

The structure of the GZD VR nozzle does not require any specific maintenance or lubrication, as all sliding parts are immersed in the fuel, allowing for self-lubrication and cleaning.

Periodically, it is necessary to check the tightness of the screws on the trigger guard plastic and tighten them if necessary using an appropriate wrench.

INSTRUCTIONS FOR PROPER USE OF GZD VR NOZZLE WHILE FILLING THE VEHICLE TANK WITH FUEL

Due to the different constructions of vehicle tank inlets, it is crucial to properly position the GZD VR nozzle when refueling.

Figure 1 illustrates the correct positioning of the GZD VR nozzle during fuel filling into the vehicle tank.

Figure 2 demonstrates the incorrect positioning of the GZD VR nozzle, which should not be activated for refueling the tank due to safety reasons.

If fuel is sprayed from the vehicle tank inlet and the nozzle is automatically disabled, it is necessary to reduce the fuel filling speed. The GZD VR nozzle offers two levels of fuel filling speed:

II - Maximum flow rate

I - 50% of maximum flow rate

Even at low flow rates, the GZD VR nozzle automatically cuts off the flow according to the EN 13012 standard while manually refilling the vehicle tank.



Figure 3

The GZD VR nozzle, in its standard version, is equipped with a valve (7) attached to the fuel delivery pipe, which prevents any fuel leakage after filling the vehicle tank (Figure 3).

The built-in valve, commonly referred to as "DRIP-STOP" (7), ensures that the fuel does not leak uncontrollably, thereby preventing the vehicle from being soiled by the fuel. This feature reduces environmental pollution and, most importantly, minimizes the risk of fire and explosion.

Any remaining fuel in the GZD VR nozzle is delivered to the next customer, ensuring satisfaction for both the customer and the fuel dispenser.



WARRANTY

The warranty period for the proper functioning of the GZD VR nozzle is 24 months from the date of delivery. If the exact delivery date cannot be determined, the production time stamped on the nozzle is considered as the start of the warranty period.

The warranty for the GZD VR nozzle covers internal components of the nozzle and damage to the external parts, excluding any damage caused by non-professional use of the nozzle or the use of liquids not intended for the nozzle's purpose.

Warranty costs do not cover installation and shipping expenses for replacing or repairing the GZD VR nozzle. Additionally, they do not include compensation for any personal or property damages resulting from the use of the GZD VR nozzle.



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