

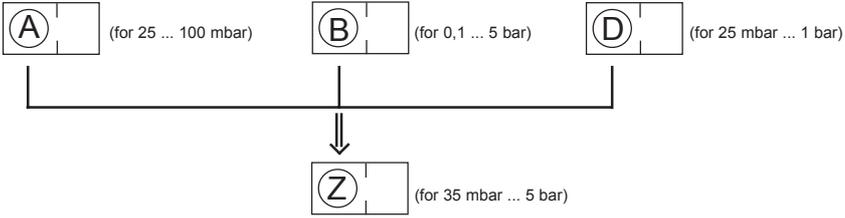


SENTRY GS

Excess Flow Valves (EFV) for Underground Gas Service Lines

Questions and Answers

Question	Answer
1. In what fittings are SENTRY GS excess flow valves available?	- Mertik Maxitrol offers excess flow valves in standard PE-Fittings, e.g. electro fusion couplers and reducers.
2. What diameters are available?	- EFV are available in diameters DN20*, DN25, DN32, DN40, DN50 (*not all electro fusion couplers are available in DN20).
3. What pressure ranges are available?	- According to German VP 305-2: GS type A: 25 - 100 mbar GS type B: 0,1 - 5 bar GS type D: 25 mbar - 1 bar Mertik Maxitrol offers a standard type with overflow orifice as per type C: GS type Z: 35 mbar - 5 bar
4. What closing flow rates are available?	- See nominal flow rate and closing flow rate tables and diagrams for the relationship line pressure has on them. Tables are available on request.
5. What is the pressure drop? (especially for low pressure types)	- The pressure drop is influenced by the diameter, flow rates and line pressure. For low pressure GS type Z it is approximately 5 mbar. Tables are available on request.
6. What has to be considered while filling or purging the gas service line?	- Filling or purging of the gas service line must be done slowly in order to avoid a simultaneous closing of the SENTRY GS. For purging it is recommended to use a small diameter ventilation hose or a ventilation hose with a reducer, nozzle or aperture.
7. Do you have to dig up the pipe connection to re-open a SENTRY GS?	- No.
8. How do you re-open a closed SENTRY GS?	- All SENTRY GS EFVs can be re-opened by applying back pressure from downstream. SENTRY GS with by-pass orifice re-open automatically.
9. How long does it take to re-open?	- Re-opening time is influenced by the diameter of the line, the length from the main line to the building and the line pressures. Tables of approximate re-opening times are available on request.
10. What are the possible effects of having PE-shavings in the SENTRY GS?	- Long PE-shavings can stick across the sealing section and prevent the valve from closing completely.
11. Do contaminants in the gas line affect the function of the SENTRY GS EFV?	- The function of the GS is rarely affected by contaminants in the gas line, such as dust particles, steel or PE shavings and dirt. - When the GS is in an open position, the orifice is shielded from contaminants.
12. What materials are used?	- Corrosion-resistant metals for better functional stability over time; O-ring: NBR
13. What is the product life of a SENTRY GS ?	- The product life is approximately the same as that of a PE80 branch line.
14. How does the SENTRY GS perform over time?	- The materials used have been proven in gas components over several decades. SENTRY GS have successfully passed corrosion and contamination tests conducted by the GWI in Essen, Germany, and by Gaz de France; field tests have been conducted since 1994.
15. What stainless steel alloy is used in the springs?	- For standard type Z: material number 2.4610 (higher corrosion resistance than V4A-steel types).
16. What effect does electrochemical corrosion have on SENTRY GS EFVs?	- Functional performance has been verified by tests conducted per DIN 50017 of electrochemical corrosion and climate change; equivalent tests conducted by Gaz de France also yielded positive results.

Question	Answer
17. Is it necessary to test the function of SENTRY GS, and if so, in what time intervals?	- Current German standards do not require regular functional tests.
18. How does the mounting position affect the performance of a SENTRY GS?	- The GS is suitable for multipoise mounting; however, a horizontal position is recommended. Mounting other than horizontal will change the closing flow rate. The maximum closing flow rate will not be exceeded in a vertical position (upward flow direction).
19. How high must the pressure be for re-opening?	- Gradually increase to operating pressure (see installation instructions)
20. What is the maximum operating pressure of the SENTRY GS?	- According to VP 305-2 maximum test pressure is 10 bar. A closed GS should not be subjected to pressures over 6 bar.
21. Can a GS be used with LPG?	- The GS can be used for propane and butane in gas form.
22. What maximum force can be applied to an integrated SENTRY GS EFV / electro fusion coupler without dislodging the GS from the coupler?	- The electro fusion coupler manufacturer's installation instruction define the distance the pipe ends may be inserted into the coupler. If the installation follows these instructions, the GS will not be dislodged from the socket. The force of the pipe ends pushing against the GS securing ring could cause a minimal axial movement of the GS subassembly. However, this will not affect the function of the GS.
23. What effect does a change in the line pressure from below 100 mbar to over 100 mbar have on SENTRY GS?	- If a type A EFV (25 mbar - 100 mbar) is installed, it must be replaced with Mertik's type Z (35 mbar to 5 bar) or type B (100 mbar - 5 bar). Only type Z, however, may be used for line pressures below 100 mbar and up to 5 bar.
24. How is the mounting direction of the electro fusion coupler labeled?	- There is an explicit directional arrow on the product label.
25. What EFV symbols are used in product documentations such as pipeline plans, for example?	<p>- In general, gas utilities (in Germany) use the following symbols:</p> 
26. How is the traceability of a SENTRY GS provided?	<p>- Traceable by the lot number printed on the product label - calendar week / year</p> <p>- Traceability-code on the PE fitting</p>