

ATEX Conformant Valves

Instructions for Use in a Potentially Explosive Atmosphere



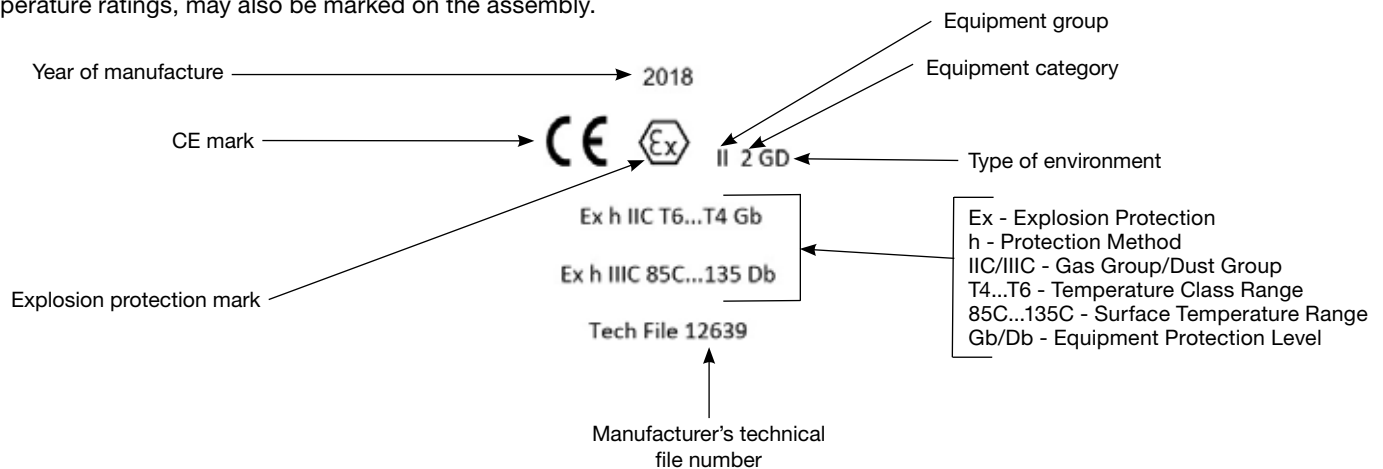
This instruction is provided according to the EU Directive 2014/34/EU (ATEX Directive). The assembly this accompanies consists of an actuated valve assembly. This instruction applies to the mechanical (nonelectrical) components of the assembly. Some components of the assembly, including actuators, sensors, solenoids, or switches, may be independently conformant to the ATEX Directive. Refer to the respective device manufacturer for instructions for these components.

Safe Product Use

Follow any enclosed instructions and refer to the product catalog for detailed product information. When using a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user. **Improper selection and misuse of product may result in serious personal injury or property damage.**

Description of Marking

The following information is marked on each piece of the assembly. The location of the marking may vary, depending on the product. For some products, the marking may be on a separate, attached tag. Other information, such as pressure and temperature ratings, may also be marked on the assembly.



Note:

1. The specific marking will vary based on the product series and the rating of the product. For example, valve assemblies rated for Gas Environment only will be marked “G”, not “GD”, and the 4th line (starting with “Ex h IIC” will not be marked on the product as it applies to Dust Environment only.
2. A Temperature Class range is marked on the valve assemblies because the actual maximum surface temperature depends on the operating conditions of the product, including the process fluid temperature, and whether the valve is continuously cycled. See Maximum External Surface Temperature section for guidance.

Installation and Maintenance

⚠ WARNING

Before servicing any installed valve, you must

- depressurize system
- cycle valve
- purge the valve

⚠ WARNING

Residual material may be left in the valve and system.

⚠ WARNING

Do not operate pneumatic actuators with system fluids that are within their explosive range.

⚠ WARNING

Do not perform maintenance or repair of a valve while a potentially explosive atmosphere is present.

Follow manufacturer's instructions for all installation and maintenance. Check local regulations for any special requirements for potentially explosive atmospheres.

System Grounding

⚠ The metal-to-metal contact of the valve end connections provide electrical continuity between the valve and system.

System grounding is the responsibility of the user or system designer. Check local regulations for requirements for system grounding.

Grounding Spring

⚠ WARNING

If the valve is disassembled, make sure electrical continuity is maintained upon reassembly, including ensuring that the grounding spring contacts both the valve body and the actuator coupling after assembly.

The following products are provided with a grounding spring between the valve body and actuator coupling: 40, 60, 83, AFS, SK, and N series. The grounding spring bonds the stem to the body of the valve.

60 series valves include a second grounding spring between the coupling and the actuator. This grounding spring bonds the coupling to the actuator.

GB series valves include a grounding spring between the coupling and the coupling sleeve. This spring bonds the stem and coupling to the valve body and actuator.

Operation

⚠ WARNING

The outside surface temperature of the valve will be affected by the process fluid temperature.

⚠ WARNING

Increases in external temperature due to rapid pressure changes, particularly gases, must be considered by the system designer and user.

⚠ WARNING

Keep the valve clean of dust that may insulate the valve or ignite.

⚠ WARNING

Isolate the valve from vibrations and/or pressure spikes.

Follow all manufacturers' instructions for operation. Check local regulations for any special requirements for potentially explosive atmospheres.

Maximum External Surface Temperature

For applications without continuous cycling, the Maximum External Surface Temperature of the valve will be the same as the temperature of the process fluid.

⚠ WARNING

Surface heat buildup may occur if the valve is continuously cycled at a fast rate for a long period of time. To prevent surface heat buildup, do not cycle the valve continuously.

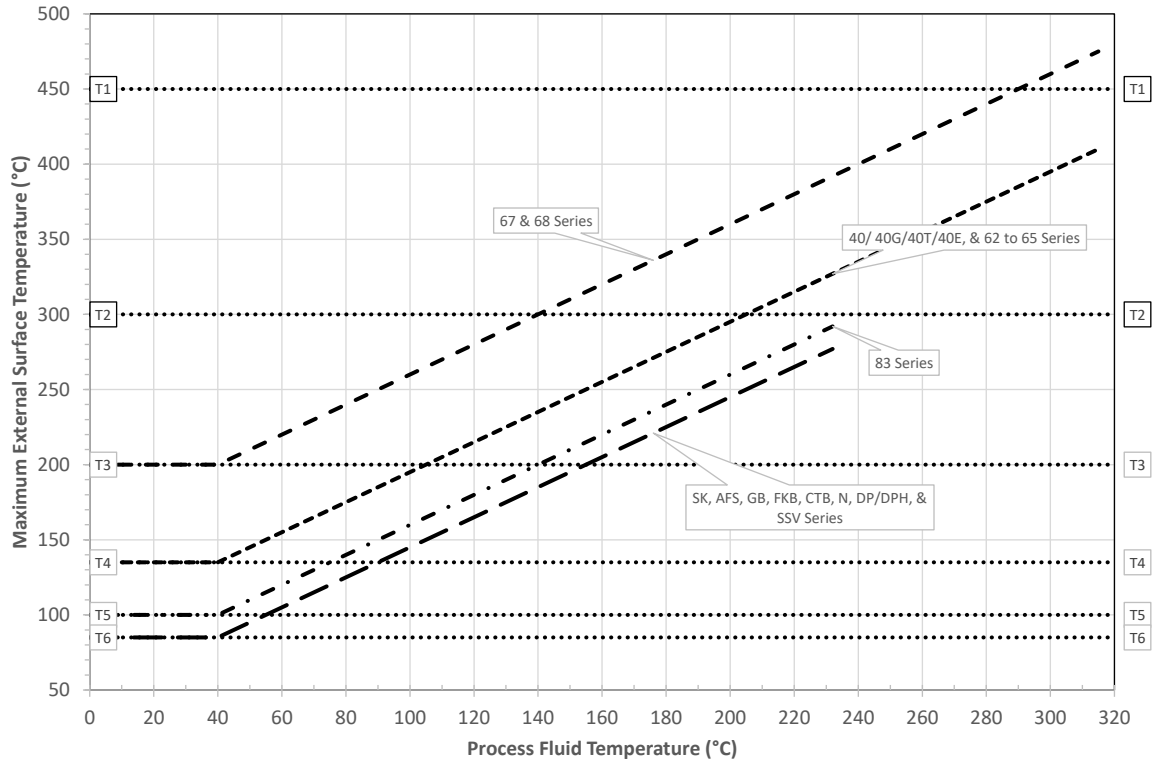
For applications that require continuous valve cycling, do not continuously cycle the valve faster than the speeds listed in the following table.

Valve Series	Maximum Continuous Cycle Speed, cycles/minute
40/40G/40T/40E	6
60	
83	
AFS	
GB	
SK	
FKB, CTB	
N	
SSV	30
DP, low pressure	120
DPH, high pressure	30

Use the following graph to determine the maximum external temperature or temperature class of the valve during continuous cycling. Select the appropriate line for the product series. Use this line with the process fluid temperature of the application from the x-axis to determine the maximum external temperature of the valve assembly.

Note: The process fluid temperature must not exceed the maximum temperature rating of the assembly. Check the product marking and/or product literature to determine the specific ratings.

**Maximum External Surface Temperature vs.
Process Fluid Temperature During Continuous Cycling**



For additional product information and available language translations, visit swagelok.com.