

Additional information for use in the potentially explosive area Category 2, mechanical (Zones 1 and 21)

If Bürkert devices have the code:

- PX51: EPS 18 ATEX 2008 X / IECEx EPS 18.0007 X mech. Ex h IIC T4...T2 Gb / Ex h IIIC T135°C...T300°C Db, the respective operating instructions and this additional information must be observed to ensure fulfillment of the requirements, relevant to potentially explosive atmospheres, for use of the device in potentially explosive atmospheres (see following page).



DANGER!

Danger of explosion!

- ▶ Installation, operation and maintenance may be performed by qualified technicians only and with the appropriate tools.
 - ▶ The device may be operated only when in perfect condition and in consideration of the operating instructions.
 - ▶ Observe the applicable safety regulations (also national safety regulations) as well as the general regulations of technology concerning installation and operation.
- ▶ Do not repair the device yourself, but replace it with an equivalent device. Repairs may be performed by the manufacturer only.
 - ▶ Do not put any loads on the device (e.g. by placing objects on it or standing on it).
 - ▶ Do not expose the device to mechanical and/or thermal stresses/influences which exceed the limits described in the operating instructions.

Notes on operation in potentially explosive atmospheres

The valve actuator is suitable for use as a Category 2 device for Zone 1/21 and Zone 2/22, non-electrical production equipment (constructively safe).

When using the device in potentially explosive atmospheres, observe the following:



DANGER!

Risk of explosion due to electrostatic charge!

In the event of a sudden discharge from electrostatically charged devices or individuals, there is a risk of explosion in the potentially explosive atmospheres.

- ▶ Take suitable measures to ensure that no electrostatic charges can build up in potentially explosive atmospheres.
- ▶ Clean the device surface by gently wiping it with a damp or anti-static cloth only.
- ▶ Earth the actuator and valve body.
- ▶ If plastic valve bodies are used, ground the actuator separately.
- ▶ The user must ensure that the device is used in zone 1/21 or 2/22 only.

In the case of diaphragm valves, electrostatic charges may build up on the valve diaphragm and on bodies, which are made of plastic, depending on the conductivity of the medium. To prevent electrostatic charges in the fluidics, observe the following information (according to IEC 60079-32-1):

- ▶ 1. Media with a conductivity ≤ 100 pS/m may be used only if there are no flow rates > 1 m/s or if the pipe system is prevented from running dry by specific monitoring.
- ▶ 2. Media with a conductivity > 100 pS/m and ≤ 1000 pS/m may be used only for liquids without particles, water vapor or clean gases/vapors or if the previous note (1.) on use is observed.
- ▶ 3. Media with a conductivity > 1000 pS/m are not subject to any restrictions.

Temperature class	T2	T3	T4
Permitted surface temperature	300 °C	200°C	135°C
Ambient temperature	-40°C...130°C	-40°C...130°C	-40°C...100°C
Max. medium temperature	285°C	185°C	125°C



Note: The ambient and medium temperature range may be limited by non-ex-relevant specifications.

Observe the Operating Instructions.

Control system in potentially explosive atmospheres



The control system can restrict use in potentially explosive atmospheres. Observe the operating instructions for the control system.

Cleaning in potentially explosive atmospheres



DANGER!

Risk of explosion due to cleaning agents

- ▶ Only use cleaning agents that have been approved for cleaning in an explosive atmosphere.

Identification for potentially explosive atmospheres



EPS 18 ATEX 2 008 X
II 2G Ex h IIC T4...T2 Gb / II 2D Ex h IIIC T135°C...T300°C Db
IECEX EPS 18.0007 X
Ex h IIC T4...T2 Gb / Ex h IIIC T135°C...T300°C Db



WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS
Do not open actuator. Spring loaded over.

Fig. 1: Identification for potentially explosive atmospheres



The identification for potentially explosive atmospheres is invalid if devices are added which are not authorized for use in potentially explosive atmospheres.

Media in the potentially explosive atmospheres



If explosive media are used this can cause additional explosion risks!

Special conditions in potentially explosive atmospheres

Grounding the device:

- ▶ 1. Ground the valve body.
To establish the potential equalization, ground the valve body to the pipe system using an electrically conductive connection.
- ▶ 2. Exposed metal components that are not integrated into the potential equalisation (PA) of the valve must be included into the PA by customers via additional PA connections (available on components)
- ▶ 3. Ground electrically conductive device parts.
Electrically conductive parts must be grounded separately. To do this, install the ground strap clamp or ground terminal as shown in Fig. 2 (if not supplied already pre-installed) and ground via the grounding point.

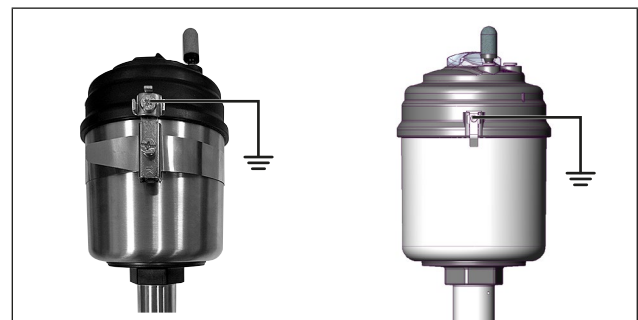


Fig. 2: Ground strap clamp and ground terminal



Observe the hazard warnings on "Risk of explosion due to electrostatic charge"!