

**Operating instructions**

Pressure controlled valves of the series:

2/974 (analog Type 22)  
2/975 (analog Type 26)  
2/976 (analog Type 60)  
2/977 (analog Type 63)  
2/979 (analog Type 78)  
2/980 (analog Type 79)

Archive number: PTB 04 ATEX D042  
Explosion protection identifier:  
II 2 G Ex h IIC (T4 / T3)\* Gb X  
II 2 D Ex h IIIC (T130°C / T195°C)\* Db  
X

**General hazard warnings**

The instructions in this additional operating manual apply only to valves used in potentially explosive atmospheres. At the same time, the instructions in the general operating instructions for valves apply. If explosion-proof pilot solenoids are used to control the valves, the instructions in their operating manual are also binding for safe operation.

Failure to follow the instructions in the manuals can lead to explosion!

**Specific use**

The suitability of the pressure-controlled valves for the potentially explosive atmosphere is only valid within the valve specification assured by us. Operation outside the permissible parameters is not permitted.

**Special conditions (X)**

Control pressure: max. 10bar

Control medium: oil-free, clean compressed air  
(max. +50°C)

Ambient temperature: -10°C to +60°C

The maximum possible medium temperature is limited

by the sealing material, as follows:

NBR / FKM +80°C T4\*

EPDM +130°C Medium <130°C T4

PTFE +200°C Medium <130°C T4 else T3\*

The maximum surface temperature of the valve depends directly on the medium temperature.

**User information**

This user information is part of the product and must be included in the operating instructions of the system or machine description.

**Commissioning**

For all work on the valve, the surrounding work area should be made free of explosive atmosphere.

Pressure-controlled valves with visible transport damage or valves with leaks after assembly, repair or maintenance must not be put into operation!

Only original spare parts are permitted for repairs to the valves. Improper interventions or repairs to the valve are not permitted and endanger safety.

The maximum permissible medium and ambient temperature for the pilot valves used in the Ex area can be found in the operating instructions for the Ex solenoids used.

When working on the valve, make absolutely sure that no sparks are produced. (Use special tools if necessary)

Permanent magnets are installed in the valves with limit switches to determine the position. Valves with damaged permanent magnets after maintenance or repair must not be put back into operation under any circumstances. (Danger of sparking due to friction!) Work on the permanent magnets must not be carried out in potentially explosive atmospheres because sparks can occur when they collide.

**Maintenance**

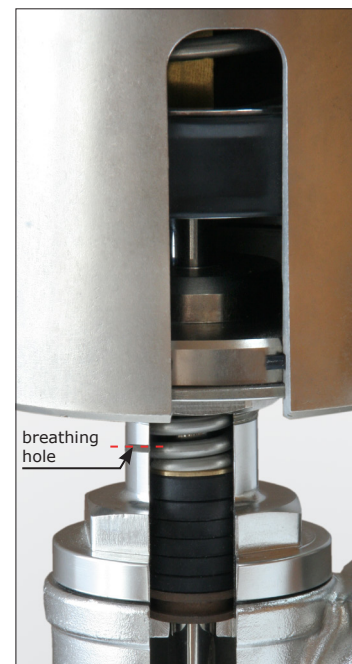
Any rust that may occur on the valve or pressure cylinder must be removed and further rusting prevented by applying a suitable protective coating.

To further reduce the rare risk of sparking due to spring breakage, the springs should be checked approx. every 12 months and replaced after 500,000 switching cycles for safety's sake.

At regular intervals, but at least every 6 months, the valve should be checked for leaks to the outside. Checking the breathing hole (Fig. 1)

on the seal packing every 100,000 switching cycles is particularly important.

If explosive medium leaks out, the valve must be shut down immediately and should be sent to our service department for professional inspection. To maintain the functionality of the valve, it must be operated at regular intervals.



Manufacturer:  
GSR Ventiltechnik GmbH & Co. KG  
Im Meisenfeld 1  
D-32602 Vlotho-Exter  
<https://www.ventiltechnik.de>



Distribution:  
Buschjost Solenoid Valves  
GmbH & Co. KG  
Im Meisenfeld 5  
D-32602 Vlotho-Exter  
Tel. 49 (0) 57 31-79 82 00  
Fax. 49 (0) 57 31-79 82 11  
e-mail: [post@buschjostventile.de](mailto:post@buschjostventile.de)  
<https://www.buschjostventile.de/>



**Konformitätserklärung**

Im Sinne der EG-Richtlinie 94/9/EG (ATEX)

Hiermit erklären wir in alleiniger Verantwortung, dass nachfolgend aufgeführte Elektromagnete in Übereinstimmung mit den einschlägigen Sicherheitsnormen entwickelt und gefertigt sind.

**Declaration of Conformity**

In compliance with EC directive 94/9/EC (ATEX)

We herewith declare for our own responsibility, that the solenoids mentioned below comply with the relevant safety requirements.

**Bezeichnung / name of product:**Druckgesteuerte Ventile der Baureihen / pressure controlled valve Type:  
2/974, 2/975, 2/976, 2/977, 2/978, 2/979, 2/980**Kennzeichnung Zündschutz / marking ignition prevention:**

ATEX

II 2G Ex h IIC (T4 / T3)\* Gb

II 2D Ex h IIIC (T130°C / T195°C)\* Db

\*Abhängig vom eingesetzten Dichtwerkstoff und der zulässigen Medientemperatur

\*Dependent on sealing material and max possible medium temperature

**Benannte Stelle für die Aufbewahrung der technischen Unterlagen /  
notified body for retaining the technical documentation:**

PTB (Physikalisch-Technische Bundesanstalt) Kennzeichen 0102

**PTB-Archivierungsnummer / PTB-archive no.:**

PTB 04 ATEX D042 X

**Angewandte Richtlinien und Normen:**

EN ISO 80079-36:2016	Nicht-elektrische Geräte für den Einsatz in explosionsgefährdeten Bereichen Grundlagen und Anforderungen
EN ISO 80079-37: 2016	Nicht-elektrische Geräte für den Einsatz in explosionsgefährdeten Bereichen Schutz durch konstruktive Sicherheit „c“
DIN EN 1127-1:2019	Explosionsfähige Atmosphären – Explosionsschutz – Teil 1: Grundlagen und Methodik
DIN IEC 60079-0:2019	Betriebsmittel Allgemeine Anforderungen Teil 0.
Richtlinie 2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen

**Applied directives and standards:**

EN ISO 80079-36:2016	Non-electrical equipment for use in potentially explosive atmospheres Basic method and requirements
EN ISO 80079-37:2016	Explosive atmospheres Part 37: Non-electrical equipment for explosive atmospheres Non electrical type of protection constructional safety "c"
DIN EN 1127-1:2019	Explosive atmospheres – Explosion prevention and protection – Part 1: Basic concepts and methodology
DIN IEC 60079-0:2019 Directive 2014/34/EU	Explosive atmospheres—Part 0: Equipment –General requirements Equipment and protective systems intended for use in potentially explosive atmospheres

**Ort und Datum / place and date**

Vlotho-Exter, 26.02.2022

**Name der befugten Person / name of authorized person**Marc Langejürgen, managing director  
Buschjost Magnetventile GmbH & Co. KG 32602 Vlotho