Enhanced Safety
For Gas Supply Networks
Product Catalog Pipelife Gas-Stop™ 2016
All technical specifications are regarded subject to possible changes to the products for the purpose of technical improvements. Our contract and delivery conditions are valid for contracts.

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After 2 years of development, in 1992 a new safety system for active protection against gas leaks following damage to lines was presented for the first time under the brand name Pipelife Gas-Stop™.

At that time, following extensive and successful applications in practical network operation, mainly for Austrian gas supply companies, the potential of active system protection was quickly recognized and intensive dialog was begun with network operators in Germany and France.

By 1994 the first gas supply lines in Germany had already been fitted with Pipelife Gas-Stop™ as protection element. The nationwide installation in gas supply networks in France followed only a short time later.

In 2016 the Pipelife Gas-Stop™ is one of the most successful export products of Pipelife Austria. By the end of 2015 approx. 8 million Pipelife Gas-Stop™ will be installed in 40 countries inside and outside Europe and ensure enhanced safety in gas supply networks.

For 20 years the term Pipelife Gas-Stop™ has stood for consistent implementation of a strategy that places the technical competence with regard to functionality, quality and service in the foreground. We will also intensively pursue and continuously improve these areas in future.

Throughout the world Pipelife Austria is the first choice as contact partner for products for the active protection against uncontrolled gas leaks following damage to gas lines.

On the one hand we owe this success to the innovative pioneers – and companions – from the gas industry, but also the many engaged partners from the sectors including manufacturers of electrofusion fittings, planners, interest groups of the gas trade, authorities, technical representatives, specialist dealers, users, and last but not least, our suppliers.

Many thanks for your trust.
We look forward to further good collaboration.

Pipelife Austria, Wiener Neudorf, September 2016
Pipelife Gas-Stop™
Excess Flow Valves for Gas Service and Main Lines

Gas leaks following damage or destruction of service- or main lines can lead to accidents with sometimes serious personal injury or property damage. The main causes are civil engineering work, operating errors during the course of ventilation work in buildings, but also natural events, such as e.g. earthquakes or settlement in the ground.
Pipelife Gas-Stop™ valves are installed in gas service lines (SL) since as active protection elements in order to avoid or prevent accidents.

Fig. 1: Excavator damage to service line (SL)

The consequence of the successful application in the area of service lines was the further development of the product range to include excess flow valves for installation in main lines (ML) of larger dimensions. Additional justifications for the installation of active protection using Pipelife Gas-Stop™ in this field of application are

– high operating pressures with, in the event of damage, very large quantities of gas escape, which especially in built-up areas represent a considerable risk of accident
– long journeys to the damage sites
– widespread supply interruptions, if the pressure drop in the respective network reaches a serious level.

Fig. 2: Excavator damage to main line (ML)
In many countries throughout the world Pipelife Gas-Stop™ represents the state of the art and is a fixed component of modern gas distribution systems. The successful use of Pipelife Gas-Stop™ is confirmed by gas network operators with many years of practical experience. According to current estimates, gas leaks following damage to gas lines have been prevented in approx. 35,000 cases (status 12/2015) through the use of Pipelife Gas-Stop™.

The major benefits
- Gas leaks are actively and immediately prevented. The risk of an accident is eliminated until the network operator’s service team arrives.
- To repair gas leaks spectacular operations are often necessary in public. Cases of damage and the operations associated with them on lines protected with Pipelife Gas-Stop™ take place in an unspectacular fashion.

Functional Description

Normal operating situation – Nominal flow (Vn)
The nominal flow (Vn) is the maximum gas flow at the respective operating pressure. The Pipelife Gas-Stop™ is in the open position. Pulses, such as, e.g. when consumer devices are switched on or from the upstream pipe network sections, have no effect on the secured open position.

Fig. 3

Damage event – Shut-off flow (Vs)
When the defined limit for the flow rate (= shut-off flow – Vs) is exceeded the Pipelife Gas-Stop™ closes within fractions of a second (Fig. 4+5). The closed state is ensured by the pipe network pressure acting on the closed Pipelife Gas-Stop™.

Minor damage, where the limit for the flow rate (Vs) is not exceeded, does not lead to the Pipelife Gas-Stop™ shut-off. For the Pipelife Gas-Stop™ that is used in distribution lines, the maximum time frame from the moment of shut-off until complete depressurization in the damaged line section is approx. 10 minutes (dependent on the operating pressure, diameter and length of the section).
Restart of service – automatic re-opening

**Pipelife Gas-Stop™ with overflow device (Code UE)**

Following a shut-off operation the service restarts due to the pressure equalization between the upstream and downstream pipeline sections. A small amount of gas (overflow volume) flows over the closed Pipelife Gas-Stop™ through an exactly defined, constantly open borehole. The admissible overflow volumes are established according to the requirements of national regulations or network operators. As soon as the cause for the shut-off of the Pipelife Gas-Stop™ is eliminated (e.g. by repairing the damage to the pipeline), the pressure balance is established through the overflow volume and the Pipelife Gas-Stop™ opens automatically. Guide values for reopening times are specified in the respective technical data sheets.

**Pipelife Gas-Stop™ without overflow device**

The pressure balance between upstream and downstream side pipeline sections is established by means of a suitable pressure source (e.g. natural gas- or nitrogen bottle). This procedure is normally carried out via the main shut-off valve (MSV).
### Pipelife Gas-Stop™ for Service- and Main Lines

#### Overview of Delivery Program – Types – Product Codes

The table hereafter shows the Pipelife Gas-Stop™ types of the standard range. Information about customized solutions or already available special types is available on request.

<table>
<thead>
<tr>
<th>Operating pressure range</th>
<th>PE pipe dimension</th>
<th>Service Lines (SL) + Main Lines (ML)</th>
<th>Main Lines (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.015–0.1 bar</td>
<td>d20/DN15</td>
<td>GS50/15UE</td>
<td>GS110/1UE/ZV</td>
</tr>
<tr>
<td>0.0015–0.01 MPa</td>
<td>d25/DN20</td>
<td>GSA50/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d32/DN25</td>
<td>GSA50/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d50/DN40</td>
<td>GSA50/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d63/DN50</td>
<td>GSA63/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d90/DN80</td>
<td>GSA63/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d110/DN100</td>
<td>GSA63/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d160/DN150</td>
<td>GSA63/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td>0.25–1.0 bar</td>
<td>d90/DN80</td>
<td>GSA63/15UE</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td>0.025–0.1 MPa</td>
<td>d110/DN100</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d160/DN150</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td>0.35–5.0 bar</td>
<td>d160/DN150</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td>0.035–0.5 MPa</td>
<td>d20/1</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d25/1</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td></td>
<td>d32/1</td>
<td>GSA110/30UE**</td>
<td>GSA110/1UE/ZV</td>
</tr>
<tr>
<td>0.05–0.4 bar</td>
<td>d32/300</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.005–0.04 MPa</td>
<td>d32/300/S</td>
<td>GSA63/300UE/S</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/300/S</td>
<td>GSA63/300UE/S</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.2–5.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.02–0.5 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.5–5.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.05–0.5 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.3–5.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.03–0.5 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>1.0–5.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.1–0.5 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.03–1.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.003–0.1 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.15–10.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.015–1.0 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.3–10.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.03–1.0 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>1.0–10.0 bar</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td>0.1–1.0 MPa</td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
<tr>
<td></td>
<td>d32/1UE</td>
<td>GSA63/300UE</td>
<td>GSA110/300UE</td>
</tr>
</tbody>
</table>

* Available on request, ** Minimum operating pressure = 0.03 bar (0.003 MPa)

**Product code explanation**

<table>
<thead>
<tr>
<th>GS</th>
<th>A</th>
<th>32</th>
<th>200</th>
<th>UE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas-Stop</td>
<td>Adapter Variant</td>
<td>da PE-Pipe</td>
<td>Minimum Operating Pressure</td>
<td>Overflow Device Automatic Reopening</td>
</tr>
</tbody>
</table>
System Installation – Variants

To protect the largest possible length of a gas service line (SL), a Pipelife Gas-Stop™ is installed in a service line as close as possible to the branch of the service line from the main line (ML). The installation of Pipelife Gas-Stop™ in main lines (ML) is in most cases carried out using a special pipe section (adapter – see also Type GSA). Besides the standard installation variants listed, deviating system integrations are also possible on request (e.g. steel adapter or similar).

**Type GS**

For installation in outlets of compatible tapping saddles with suitable inside dimensions or other molded parts. On request we will provide the names of manufacturers of appropriate compatible tapping saddles or other molded parts.
1. Tapping saddle
2. Pipelife Gas-Stop™ type GS
3. Electrofusion coupler
4. PE service line

**Type GSA**

Integrated in a pipe section (adapter) made from PE100/SDR11
1. Tapping saddle
2. Pipelife Gas-Stop™ Type GSA
3. Electrofusion couplers
4. PE service line

**Type GSAE**

Integrated in electrofusion coupler – e.g. FRIASTOPP®
1. Tapping saddle
2. Electrofusion coupler with integrated Pipelife Gas-Stop™
3. PE service line

**Main Dimensions**

### Pipelife Gas-Stop™ Type GS

<table>
<thead>
<tr>
<th>Pipelife Gas-Stop™ Type</th>
<th>L1 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS20..</td>
<td>42.5–43.5*</td>
</tr>
<tr>
<td>GS25..</td>
<td>49.0–50.0*</td>
</tr>
<tr>
<td>GS32..</td>
<td>63.5–64.5*</td>
</tr>
<tr>
<td>GS50..</td>
<td>72.0–73.0*</td>
</tr>
<tr>
<td>GS63..</td>
<td>91.0–95.5*</td>
</tr>
</tbody>
</table>

* Type-dependent tolerance

### Pipelife Gas-Stop™ Type GSA

<table>
<thead>
<tr>
<th>Pipelife Gas-Stop™ Type</th>
<th>da mm</th>
<th>DN mm</th>
<th>L2 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSA20..</td>
<td>20</td>
<td>15</td>
<td>150 +/-1</td>
</tr>
<tr>
<td>GSA25..</td>
<td>25</td>
<td>20</td>
<td>150 +/-1</td>
</tr>
<tr>
<td>GSA32..</td>
<td>32</td>
<td>25</td>
<td>150 +/-1</td>
</tr>
<tr>
<td>GSA50..</td>
<td>50</td>
<td>40</td>
<td>150 +/-1</td>
</tr>
<tr>
<td>GSA63..</td>
<td>63</td>
<td>50</td>
<td>150 +/-1</td>
</tr>
<tr>
<td>GSA110..</td>
<td>110</td>
<td>100</td>
<td>300 +/-1</td>
</tr>
<tr>
<td>GSA110…ZV</td>
<td>110</td>
<td>100</td>
<td>450 +/-1</td>
</tr>
</tbody>
</table>

### Pipelife Gas-Stop™ Type GSAE

The dimension of these types corresponds to the dimension of the commercial electrofusion couplers (long version) type FRIASTOPP™ (manufacturer FRIATEC AG – www.friatec.com).
Materials – Component Overview

The materials used are long-term resistant against all fuel gases and their accompanying substances and have a service life which is at least equal to that of the PE pipe network.

Detailed material data for the individual components is available on request.

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**Pipelife Gas-Stop™ Dim. d20/DN15 to d63/DN50**

1. Shut-off element
   PPS (polyphenylene sulfide)
2. Flow element
   PPS (polyphenylene sulfide)
3. Seals
   NBR (nitrile-butadiene-rubber)
4. Spring
   Stainless steel
5. Housing - Adapter
   PE 100 – SDR11 (polyethylene)

---

**Pipelife Gas-Stop™ Dim. d110/DN100**

1. Shut-off element (not shown)
   POM (polyoxymethylene) or Stainless steel
2. Flow element
   POM (polyoxymethylene) or Stainless steel
3. Seals
   NBR (nitrile-butadiene-rubber)
4. Spring (not shown)
   Stainless steel
5. Housing-Adapter
   PE 100 – SDR11 (polyethylene)
6. Protective screens
   Stainless steel

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Quality Assurance – Factory Inspections

Pipelife Gas-Stop™ are safety products on which the highest demands are placed with regard to service life and operating reliability. Before delivery both the components as well as the final products are therefore subjected. One of the most important test steps is the verification of the function. Shut-off flow and tightness of every individual Pipelife Gas-Stop™ is acquired, recorded and saved with the latest measuring equipment on electronically controlled test stands.

After passing the test every Pipelife Gas-Stop™ is marked with an individual serial number. All functional as well as the component test results are allocated to this serial number, so that full traceability is possible.

In addition to this, all operating conditions of real gas networks can be simulated on a natural gas test stand. The aim of the regular tests under network conditions is to ensure the operating reliability of the Pipelife Gas-Stop™ even under unfavourable conditions.

Regular additional tests, so-called trend tests, that are performed on Pipelife’s own natural gas test stand ensure, that the practical requirements on the reliability of the function in normal operation as well as for shut-off are fulfilled.

This test stand is also used to define influences (e.g. pulses) from upstream and/or downstream regulating and consumer appliances or from pipe network sections on the Pipelife Gas-Stop™ and to take them into account in the features of the product or function.

During the course of further development or specific adaptation of the products, customer-related requirements are also simulated in a practical manner.

Certifications

According to the respective network-specific requirements, there are national approvals as well as various international certifications for the various product lines.

![Certifications Logos](image)

On request we will send you corresponding documents or information about present or also other certifications or certification possibilities.
Technical Information about the Product
Data Sheets

Flow specifications

All flow specifications for the nominal flow (Vn) and shut-off flow (Vs) in the tables of the product data sheets refer to natural gas H₂/n = 0.74 kg/m³ under standard conditions (1013.25 mbar, 0 °C).

Nominal flow (Vn)

The nominal flow (Vn) of the Pipelife Gas-Stop™ is dependent on the operating pressure (p) in the pipe network. Therefore to simplify the application the choice of Pipelife Gas-Stop™ is to be based on the minimum operating pressure in the pipe network.

Example:
A service line d32/DN25 is to be built for an output of 500 kW (ca. 50 m³/h). The minimum operating pressure in the pipe network is 2.0 bar. The nominal flow of the Pipelife Gas-Stop™ Type GS32/200 at an operating pressure of 2.0 bar is 56 m³/h.

The GS32/200 is therefore suitable for this case of application (see also the following diagram).

Shut-off flow (Vs)

The respective shut-off flows specified in the tables correspond with the respective technical rules and regulations of the certification bodies in the respective countries.

Example:
The Pipelife Gas-Stop™ GS32/200 closes at an operating pressure of 2.0 bar and a flow of 92 m³/h (see also the following diagram). If, for example, damage to the extent of approx. 8.5 mm would occur on the service line within 10 meters of the Pipelife Gas-Stop™, the Pipelife Gas-Stop™ shuts off.

The GS32/200 is therefore suitable for this case of application (see also the following diagram).
All specifications for tightness or overflow volume in the product data sheets refer to natural gas $H_\rho(n) = 0.74 \text{ kg/m}^3$ under standard conditions (1013.25 mbar, 0° C).

The Pipelife Gas-Stop™ with overflow device opens automatically, as soon as the cause for the gas leak is eliminated and the pressure balance between the pipe sections upstream and downstream of the Pipelife Gas-Stop™ is established.

The reopening times specified in the tables refer to a pipe length of 1 m (PE SDR 11) between Pipelife Gas-Stop™ and a downstream shut-off valve.

If not otherwise indicated the flow date indicated in the product data sheets refer to all installation positions.

Pipelife Gas-Stop™ can be used for other types of gas in the gas phase without any further modifications. By using the corresponding correction factor, nominal flow ($V_n$) and shut-off flow ($V_s$) can be calculated for other types of gas as follows:

Flow value ($V_n$ or $V_s$) for natural gas according to the flow tables of the respective technical data sheets $\times$ correction factor = flow value of other gas type

$$f = \sqrt{\frac{0.74}{\rho_n}}$$

$f$ = correction factor

$\rho_n$ = standard density of the other gas type in kg/m³ at 1013.25 mbar, 0° C

$V_n = 10 \text{ m}^3/\text{h natural gas H}; \ ? = \text{flow value for propane} - \rho(n) = 2.01 \text{ kg/m}^3$

$$10 \times \sqrt{\frac{0.74}{2.01}} = 6.06 \text{ m}^3/\text{h propane}$$

$V_n = 10 \text{ m}^3/\text{h natural gas H}; \ ? = \text{flow value for natural gas L} - \rho(n) = 0.83 \text{ kg/m}^3$

$$10 \times \sqrt{\frac{0.74}{0.83}} = 9.4 \text{ m}^3/\text{h natural gas L}$$
The guide values for the protectable pipe length specified in the respective technical data sheets define that pipeline section within which a Pipelife Gas-Stop™ closes at a certain magnitude of damage. The protectable pipe length is dependent on the factors of line dimension, operating pressure, magnitude of damage, escape coefficient as well as pipe roughness.

The factors of magnitude of damage and escape coefficient have been determined statistically in the framework of a scientific study on pipelines actually damaged in practice during excavation work. The statistical evaluation predominantly produced magnitudes of damage of 70 % of the pipe cross-section and average escape values of 0.6.

If nothing else is specified, the specifications of the protectable pipe length refer to the pipe section from the discharge of the Pipelife Gas-Stop™ up to the damage location.

The escape value is determined by the condition of the damage. Smooth edges produce higher escape coefficients; deformation and rough edges produce lower escape coefficients. Calculations or specifications of guide values for the maximum protectable pipe length are performed with the average relative escape coefficient in practice of 0.6 for a damage magnitude of 70 %.

For the calculation of the guide values for the maximum protectable pipe length for main lines, the escape coefficient 0.6 is used. For the damage magnitudes, for pipelines ≤da63/DN50 damage of 30 mm is used in the calculation and for pipelines >da63/DN50 damage of 50 mm.

The pipe roughness is defined with $k = 0.05 \text{ mm}$.

For main lines (ML) an integral pipe roughness of $k = 0.3 \text{ mm}$ has been defined. This value takes into account an average number of fittings.

The guide values for the protectable pipe length of DVGW-certified Pipelife Gas-Stop™ products are calculated according to the technical testing specification DVGW G 5305-2, Annex B. The fundamental resistance coefficients (ζ) correspond to Table B1 of this testing specification.

According to the definition of DVGW G 5305-2, the specification or calculation of the protectable pipe length is carried out from the discharge of the Pipelife Gas-Stop™ up to the discharge of the main shut-off valve (MSV), whereby the opening of the full cross-section of the MSV or house connection combination serves as a basis.
Note:
Protectable pipe lengths can differ significantly in practice due to different brand-dependent $\zeta$-values, e.g. for tapping saddles or house connection combinations.

The value specified in the data sheets for the pressure drop at $V_n$ always refers to the pressure drop caused by the Pipelife Gas-Stop™ at maximum nominal flow. If the respective current flow is less than the nominal flow, this also means a lower drop in pressure.

Example:
Pipelife Gas-Stop™ Type GS32/200
$V_n$ at 1.0 bar = 46 m³/h
Pressure drop for $V_n$ acc. data sheet = 10 mbar

I.e., at a flow rate of 46 m³/h a 10 mbar drop in pressure occurs. At a lower flow rate of, e.g. 25 m³/h at 1.0 bar the pressure drop falls to approx. 6 mbar.

Abbreviations and Definitions:

- **$V_n$**: Nominal flow
- **$V_s$**: Shut-off flow
- **$m^3/h$**: Flow specification under standard conditions (barometric pressure 1013.25 mbar, gas temperature 0° C)
- **$p_e$**: Operating pressure
- **UE**: Overflow device
- **$\mu$**: Escape value
- **$\zeta$**: Coefficient of resistance

**Conversion factors**

- **Volume**
  
  $1 \text{ m}^3/\text{h} = 35.31 \text{ cfh}$

- **Pressure**
  
  $1 \text{ bar} = 0.1 \text{ MPa} = 1000 \text{ hPa} = 14.50 \text{ psi}$
  
  $1 \text{ psi} = 0.068 \text{ bar}$

- **Weight**
  
  $1 \text{ kg} = 2.20 \text{ lb}$
  
  $1 \text{ lb} = 0.45 \text{ kg}$

- **Length**
  
  $1 \text{ cm} = 0.032 \text{ ft} = 0.39 \text{ in}$
  
  $1 \text{ ft} = 12 \text{ inches} = 30.48 \text{ cm}$
  
  $1 \text{ inch} = 2.54 \text{ cm}$
To simplify the choice of Pipelife Gas-Stop™ for service lines, one always bases this on the minimum operating pressure.

**Example:**

**Max. operating pressure in the pipe network = 1 bar**
**Min. operating pressure = 0.5 bar**

Planned connection dimensions d32/DN25, d63/DN50 and d110/DN100

For the planned dimensions, according to the list of types (see “Overview of the Delivery Program – Types/Product Codes”) Pipelife Gas-Stop™ are available in the operating pressure range:

- 0.025–1.0 bar – colour code BLUE and
- 0.2–5.0 bar – colour code RED

The respective nominal flows at 0.5 are:

**Operating pressure range 0.025–1.0 bar – BLUE**

<table>
<thead>
<tr>
<th>Type</th>
<th>Line dimension</th>
<th>Nominal flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS32/25UE</td>
<td>d32/DN25</td>
<td>12 m³/h</td>
</tr>
<tr>
<td>GS63/25UE</td>
<td>d63/DN50</td>
<td>48 m³/h</td>
</tr>
<tr>
<td>GS110/30UE</td>
<td>d110/DN100</td>
<td>144.5 m³/h</td>
</tr>
</tbody>
</table>

**Operating pressure range 0.2–5.0 bar – RED**

<table>
<thead>
<tr>
<th>Type</th>
<th>Line dimension</th>
<th>Nominal flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS32/200</td>
<td>d32/DN25</td>
<td>40 m³/h</td>
</tr>
<tr>
<td>GS63/200</td>
<td>d63/DN50</td>
<td>200 m³/h</td>
</tr>
<tr>
<td>GS110/200</td>
<td>d110/DN100</td>
<td>565 m³/h</td>
</tr>
</tbody>
</table>

According to the required maximum nominal flows, the type series BLUE or RED can now be selected.

Now the appropriate Pipelife Gas-Stop™ type for the individual service line dimension is exactly defined. At the same time the maximum nominal flow for all newly projected service lines is determined.
Pipelife Gas-Stop™ for Main Lines – ML
Technical Application Details and Special Product Features

At the planned place of installation of the Pipelife Gas-Stop™ in the main line, the minimum operating pressure and the required maximum flow must be known. One selects the appropriate Pipelife Gas-Stop™ from the technical data sheets with these values.

Example:
PE pipe dimension da110, SDR17.6

Minimum operating pressure at the place of installation = 3.0 bar
Maximum required flow at the place of installation = 950 m³/h

The suitable Pipelife Gas-Stop™ is the type GSA110/300UE (see technical data sheet).

The nominal flow (Vn) of this type is 1018.5 m³/h at 3.0 bar.
The protectable pipe length with a leak of approx. Ø 50 mm is 2100 m.

Pipelife Gas-Stop™ for main lines are designed so that they can also be installed in intermeshed pipe networks. The flow is possible in both directions under almost identical conditions.

Note:
Pipelife Gas-Stop™ for main lines are always equipped with an overflow device. To avoid extremely long waiting times until automatic reset, the Pipelife Gas-Stop™ should always be installed together with a manually operable shut-off valve connected directly upstream or downstream. Due to the short pipe section between Pipelife Gas-Stop™ and the shut-off valve, the pressure balance is established very quickly via the overflow opening (-volume) and the GS opens.

On Pipelife Gas-Stop™ for main lines, contamination protections (screens) are already integrated. Particles (sand, small stones or similar) with a size of

<2 mm – for the dimension d63/DN50 or
<9 mm – for the dimension d110/DN100

are transported through the Pipelife Gas-Stop™ without leaving any residue.
The penetration of particles of dirt

≥2 mm – for the dimension d63/DN50 or
≥9 mm – for the dimension d110/DN100

is prevented by specially designed screens fitted at the input side, made from stainless steel with an appropriate mesh width.
Installation- and Operating Instructions
Pipelife Gas-Stop™

General

These types of Pipelife Gas-Stop™ can be inserted into the outlet of compatible tapping saddles (Fig. 19). Here it is to be observed, that the insertion process must be carried out without twisting and without deviation from the horizontal position. The use of mechanical tools is not permitted without prior consultation with Pipelife. To make insertion easier – up to the stop, the outer seal (lip ring) can be moistened with water.

Two identical stickers are attached to every Pipelife Gas-Stop™ type GS (tear off possibility). On these stickers is the serial number as well as other important information for the identification of the Pipelife Gas-Stop™. To have this data available at any time until the moment of installation in the pipeline system, the tear-off section should be fixed at a suitable place on the tapping saddle. On request we will provide the names of manufacturers of compatible tapping saddles.

The Pipelife Gas-Stop™ is already integrated in a certified pipe section (adapter made from PE100/SDR11) (Fig. 20). The stickers with the serial number and other information for the identification of the Pipelife Gas-Stop™ are located both on the adapter as well as on the integrated Pipelife Gas-Stop™ itself (no tear-off possibility, separate type label is enclosed).

The Pipelife Gas-Stop™ is already integrated in an electrofusion coupler (Fig. 21). The stickers with the serial number and other information for the identification of the Pipelife Gas-Stop™ are located both on the electrofusion coupler as well as on the integrated Pipelife Gas-Stop™ itself (no tear-off possibility, separate type label is enclosed).

Note:
A three-piece, self-adhesive type label and a cable strap is also enclosed with every packaging unit of the types GSA and GSAE. The label indicates – the type-specific technical data, – the serial- or batch number of the product, – a separate detachable information part, that draws attention to the presence of a Pipelife Gas-Stop™ in the service line and can be attached at a suitable place inside the building.

Before Installation

Check, whether the colour of the sticker with the serial number matches the planned operating pressure range. The various operating pressure ranges of the Pipelife Gas-Stop™ are identified with colour codes. The color of the sticker with the serial number corresponds in each case to a particular
operating pressure range. The nominal flows and $\Delta p$-values are either visible on the sticker or specified in the respective product data sheets. If applicable please observe the admissible installation position.

<table>
<thead>
<tr>
<th>Color code</th>
<th>Operating pressure range</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN</td>
<td>0.015 – 0.1</td>
<td>bar</td>
</tr>
<tr>
<td></td>
<td>0.0015 – 0.01</td>
<td>MPa</td>
</tr>
<tr>
<td>BLUE</td>
<td>0.025 – 1.0</td>
<td>DVGW type AD</td>
</tr>
<tr>
<td>VIOLET</td>
<td>0.035 – 5.0</td>
<td>0.0035 – 0.5</td>
</tr>
<tr>
<td>RED</td>
<td>0.2 – 5.0</td>
<td>0.02 – 0.5</td>
</tr>
<tr>
<td>YELLOW</td>
<td>1.0 – 5.0</td>
<td>0.1 – 0.5</td>
</tr>
<tr>
<td>GRAY</td>
<td>0.05 – 0.4</td>
<td>0.005 – 0.04</td>
</tr>
<tr>
<td>ORANGE</td>
<td>0.5 – 5.0</td>
<td>0.05 – 0.5</td>
</tr>
<tr>
<td>WHITE</td>
<td>0.3 – 5.0</td>
<td>0.03 – 0.5</td>
</tr>
<tr>
<td>RED</td>
<td>0.15 – 10.0</td>
<td>Installation point SL</td>
</tr>
<tr>
<td>WHITE</td>
<td>0.3 – 10.0</td>
<td>Installation point ML</td>
</tr>
<tr>
<td>WHITE</td>
<td>1.0 – 10.0</td>
<td>Installation point ML</td>
</tr>
<tr>
<td>BLUE</td>
<td>0.03 – 1.0</td>
<td>Installation point SL+ML</td>
</tr>
</tbody>
</table>

Note/Documentation:
To ensure exact identification of the respective Pipelife Gas-Stop™ installed in the distribution network, we recommend documenting the serial number or batch number of the Pipelife Gas-Stop™ in the layout report or on the layout plan.

Installation

Pipelife Gas-Stop™ in the Tapping Saddle – Type GS
Normally the Pipelife Gas-Stop™ is already fitted in the outlet by the manufacturer of the tapping saddle. If this is not the case, please observe the section “General / Type Series GS” above. To prevent contamination, the protective cap on the outlet part of the tapping saddle should first be removed directly before the start of welding to the service line. For the remaining steps, please follow the working instructions of the respective manufacturer of the tapping saddle.

Pipelife Gas-Stop™ in the PE Adapter – Type GSA
The installation in the pipeline system is carried out – under consideration of the gas flow direction – using commercial electrofusion couplers. The weld ends of the adapter made from PE100 are to be machined. When doing this, make sure that no chips get inside the Pipelife Gas-Stop™. The rest of the work is carried out according to common technical welding guidelines.

Pipelife Gas-Stop™ in Electrofusion Coupler – Type GSAE
The installation in the pipeline system is carried out – under consideration of the gas flow direction – according to the installation instructions of the electrofusion coupler manufacturer.

Special Notes about Pipelife Gas-Stop™ for Main Lines (ML) d110/DN100:
Pipes or pipe sections of the pipe series SDR 11 as well as SDR 17.6 can be welded. Due to the own weight of the Pipelife Gas-Stop™ a holding fixture (holding clamp) must be used during the welding operation. Pipelife Gas-Stop™ GSA110 may only be installed horizontally. Deviations of $\pm 5\degree$ are permitted.
Commissioning

Pipelife Gas-Stop™ in the Service Line (SL) with Overflow Device (UE)

- Gradually open main shut-off valve (MSV) for venting, i.e. actuate with small valve opening. If necessary fit a venting hose on the MSV and route it to the open air for the non-hazardous discharge of the gas.
- If the Pipelife Gas-Stop™ shuts-off, an excessive MSV opening was the cause. Close the MSV – the Pipelife Gas-Stop™ opens automatically depending on the length and diameter of the service line. Details on the reopening times can be found in the product data sheets.
- With pressure measuring equipment connected the operating state of the Pipelife Gas-Stop™ (open/closed) can be checked via the operating pressure. If the operating pressure before and after the Pipelife Gas-Stop™ is the same, then it is/has open/opened.
- Repeat venting procedure with smaller MSV opening.
- After complete venting – close MSV.

Note:
Before the repair the overflow volume (see technical data sheets) escapes at the damage site. Due to very small possibly existing leaks in the pipeline section after the Pipelife Gas-Stop™ some or all of the overflow volume can escape. This can lead to a considerable delay in reopening or even prevent reopening.

Reopening time examples
GS32/200UE (product data sheet on page 38)
Pipe section d32/DN25
Length of the service line = 12 m
Operating pressure = 0,5 bar
Reopening time = ca. 660 sec. = 11 min. 00 sec.

GS63/35UE (product data sheet on page 34)
Pipe section d63/DN50
Length of the service line = 20 m
Operating pressure = 0.05 bar
Reopening time = ca. 1040 sec. = 17 min. 20 sec.

Pipelife Gas-Stop™ in the Service Line (SL) without Overflow Device

- Gradually open main shut-off valve (MSV) for venting, i.e. actuate with small valve opening. If necessary fit a venting hose on the MSV and route it to the open air for the non-hazardous discharge of the gas.
- If the Pipelife Gas-Stop™ closes, an excessive MSV opening was the cause. Close the MSV. By means of a suitable pressure source, e.g. nitrogen or natural gas bottle, counterpressure must now be applied up to network pressure, in order to reopen the Pipelife Gas-Stop™.
- With pressure measuring equipment connected the operating state of the Pipelife Gas-Stop™ (open/closed) can be checked via the operating pressure. If the operating pressure before and after the Pipelife Gas-Stop™ is the same, then it is/has open/opened.
- Repeat venting procedure with smaller MSV opening.
- After complete venting – close MSV.

Note:
As an alternative to dosed manual actuation of the MSV for venting, e.g. a flange with a plug-on coupling and a suitably small dimensioned venting hose can also be fitted. With this method of procedure the MSV can be actuated fully open, without the Pipelife Gas-Stop™ closing.
Pipelife Gas-Stop™ in the Main Line (ML) with Overflow Device (UE)

- Shut-off valve (preferably sleeve valve) before or after the Pipelife Gas-Stop™ is already closed. Fill the pipeline section with natural gas through gradual opening of the shut-off valve allocated to the Pipelife Gas-Stop™.

**Note:**
Opening the shut-off valve too quickly can lead to closure of the Pipelife Gas-Stop™. If this happens, perform a restart (see Recommissioning). If a ball valve is used as a shut-off device, this is to be opened particularly slowly and gradually. In the initial phase open the ball valve max. 2–3°.

After the pressure balance is established open the shut-off valve fully. The Pipelife Gas-Stop™ is now in operation.

**Reopening time examples**
- GSA110/30UE (product data sheet on page 29)
  - Pipeline section d110/DN100, SDR 17,6
  - Length between Pipelife Gas-Stop™ and the shut-off valve = 2 m
  - Operating pressure = 0,05 bar
  - **Reopening time = ca. 108 sec. = 1 min. 48 sec.**

- GSA63/300UE/S (product data sheet on page 50)
  - Pipeline section d63/DN50
  - Length between Pipelife Gas-Stop™ and the shut-off valve = 3 m
  - Operating pressure = 2 bar
  - **Reopening time = ca. 219 sec. = 3 min. 39 sec.**

**Recommissioning**

**Pipelife Gas-Stop™ in the service line (SL)**
After damage to a service line and corresponding leak size, the Pipelife Gas-Stop™ closes. Please note that the overflow volumes or leak rates escape at the damage site. The repair of the service line should be carried out under observation of the respective required safety regulations. After completion the commissioning can be performed according to the familiar work operations.

**Pipelife Gas-Stop™ in the main line (ML)**
After damage to a distribution line within the protected area and corresponding leak size the Pipelife Gas-Stop™ closes. Before starting the repair the shut-off valve allocated to the Pipelife Gas-Stop™ – may be installed before or after the Pipelife Gas-Stop™ – is to be closed. The repair is to be carried out under observation of the respective required safety precautions. The recommissioning (filling) of the pipeline section can now be performed by means of gradual opening of the allocated shut-off valve.
Installation with Reduction

Pipelife Gas-Stop™ in the service line (SL)

In the operating pressure range >0.1 bar it is possible by using appropriate reductions, to also use the Pipelife Gas-Stop™ for the next smaller dimension (Fig. 22+23).

When using Pipelife Gas-Stop™ for pipelines of the next larger pipe dimension and electrofusion reductions, an intermediate pipe section must be used, to exclude axial movement of the Pipelife Gas-Stop™ or the installation unit (Fig. 24).

On request we can send you detailed specifications about all other reduction possibilities.

![Fig. 22](image)
1. Tapping saddle
2. Pipelife Gas-Stop™ type GS
3. Electrofusion reduction
4. PE service line

![Fig. 23](image)
1 Tapping saddle
2. Pipelife Gas-Stop™ type GSA
3. Electrofusion reduction
4. PE service line

![Fig. 24](image)
1. Tapping saddle
2. Pipelife Gas-Stop™ type GS
3. Electrofusion sleeve
4. Intermediate pipe section
5. Electrofusion reduction

Pipelife Gas-Stop™ in the main line (ML)

When using Pipelife Gas-Stop™ for pipelines of the next larger pipe dimension and electrofusion reductions, an intermediate pipe section must be used, to exclude axial movement of the Pipelife Gas-Stop™ (Fig. 25).

![Fig. 25](image)
1. PE pipeline da110 or intermediate pipe section
2. Electrofusion coupler d110
3. Pipelife Gas-Stop™ GSA110
4. Electrofusion coupler d110/d160
Installation Examples

Pipelife Gas-Stop™ in the distribution line (VL)

Pipelife Gas-Stop™
Installation with shut-off valve

1. PE pipeline da110
2. Electrofusion coupler da110
3. Pipelife Gas-Stop™ GSA110
4. Shut-off valve DN100

Pipelife Gas-Stop™
Installation with reduction and shut-off valve

1. PE pipeline da90
2. Electrofusion coupler d90/d110
3. Pipelife Gas-Stop™ GSA110
4. Shut-off valve DN90
5. Electrofusion coupler da90

Pipelife Gas-Stop™
Installation in pipeline da160 with shut-off valve DN100

1. PE pipeline da160
2. Electrofusion coupler d160/d110
3. Pipelife Gas-Stop™ GSA110
4. Shut-off valve DN100
5. Electrofusion coupler d110

Pipelife Gas-Stop™
Installation in pipeline da160 without shut-off valve

1. PE pipeline da160
2. Electrofusion coupler d160/d110
3. Pipelife Gas-Stop™ GSA110
4. Electrofusion coupler d110
5. Intermediate pipe section da110

A shut-off valve DN150 can be fitted at the output side.
Protectable Pipe Lengths, Examples

Pipelife Gas-Stop™ in the main line (ML)

**Pipelife Gas-Stop™ Code:**
GSA110/150UE  
(data sheet on page 51)
**Pipeline PE da110/SDR 17.6**  
**pe = 1 bar**

1. PE pipeline da110  
2. Pipelife Gas-Stop™  
   GSA110/150UE  
3. Shut-off valve DN100

**Pipelife Gas-Stop™ Code:**
GSA110/300UE  
(data sheet on page 52)
**Pipeline PE da110/SDR 11**  
**pe = 3 bar**

1. PE pipeline da110  
2. Pipelife Gas-Stop™  
   GSA110/300UE  
3. Shut-off valve DN100

**Pipelife Gas-Stop™ Code:**
GSA110/300UE/S  
(data sheet on page 53)
**Ring main PE da110/SDR 11**  
**pe = 6 bar**

1. PE pipeline da110  
2. Pipelife Gas-Stop™  
   GSA110/300UE/S  
3. Shut-off valve DN100

**Pipelife Gas-Stop™ Code:**
GSA110/150UE  
(data sheet on page 51)
**Branch PE da110/SDR 11**  
**pe = 4 bar**

1. PE pipeline da110  
2. Pipelife Gas-Stop™  
   GSA110/150UE  
3. Shut-off valve DN100

---

![Diagram](image-url)
### Pipelife Gas-Stop™ for service- and distribution lines (SL + ML)

<table>
<thead>
<tr>
<th>Operating pressure range</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.015–0.1 bar</td>
<td>24–25</td>
</tr>
<tr>
<td>0.0015–0.01 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: GREEN</td>
<td></td>
</tr>
<tr>
<td>0.025–1.0 bar</td>
<td>26–28</td>
</tr>
<tr>
<td>0.0025–0.1 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: BLUE</td>
<td></td>
</tr>
<tr>
<td>0.035–5.0 bar</td>
<td>31–33</td>
</tr>
<tr>
<td>0.0035–0.5 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: VIOLET</td>
<td></td>
</tr>
<tr>
<td>0.05–0.4 bar</td>
<td>34–35</td>
</tr>
<tr>
<td>0.005–0.04 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: GRAY</td>
<td></td>
</tr>
<tr>
<td>0.2–5.0 bar</td>
<td>36–41</td>
</tr>
<tr>
<td>0.02–0.5 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: RED</td>
<td></td>
</tr>
<tr>
<td>0.5–5.0 bar</td>
<td>42–45</td>
</tr>
<tr>
<td>0.05–0.5 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: ORANGE</td>
<td></td>
</tr>
<tr>
<td>0.3–10.0 bar</td>
<td>49–50</td>
</tr>
<tr>
<td>0.03–1.0 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: WHITE</td>
<td></td>
</tr>
<tr>
<td>1.0–5.0 bar</td>
<td>46–48</td>
</tr>
<tr>
<td>0.1–0.5 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: YELLOW</td>
<td></td>
</tr>
<tr>
<td>0.03–1.0 bar</td>
<td>29–30</td>
</tr>
<tr>
<td>0.003–0.1 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: BLUE</td>
<td></td>
</tr>
<tr>
<td>0.15–10.0 bar</td>
<td>51</td>
</tr>
<tr>
<td>0.015–1.0 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: RED</td>
<td></td>
</tr>
<tr>
<td>0.3–10.0 bar</td>
<td>52–53</td>
</tr>
<tr>
<td>0.03–1.0 MPa</td>
<td></td>
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<tr>
<td>1.0–10.0 bar</td>
<td>54–55</td>
</tr>
<tr>
<td>0.1–1.0 MPa</td>
<td></td>
</tr>
<tr>
<td>Color code: WHITE</td>
<td></td>
</tr>
</tbody>
</table>
Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at \( 0^\circ \text{ C}, 1013.25 \text{ mbar} \).

**Pressure drop at Vn:**
1.0 mbar

**Installation position:**
Deviation of ±30° from the horizontal position permitted.

**Overflow volume:**
GS50/15UE = 38 l/h at 0.1 bar

**Protectable pipe length:**
Guide values acc. DVGW G 5305-2, Annex B

**Correction factor for other gases:**
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

Where:
- \( f \) = correction factor
- \( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, \( 0^\circ \text{ C} \)

**Certifications/Testing specification:**
EU-AT ÖVGW QS-G 494

**Remark:**
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.

### Technical Data

<table>
<thead>
<tr>
<th>Operating pressure pe mbar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>16.0</td>
<td>30.5</td>
<td>65</td>
<td>4</td>
</tr>
<tr>
<td>50</td>
<td>16.0</td>
<td>31.0</td>
<td>97</td>
<td>11</td>
</tr>
<tr>
<td>75</td>
<td>16.0</td>
<td>31.5</td>
<td>&gt;100</td>
<td>14</td>
</tr>
<tr>
<td>100</td>
<td>16.0</td>
<td>32.0</td>
<td>&gt;100</td>
<td>16</td>
</tr>
</tbody>
</table>

### Graphs

**Nominal flow Vn, Shut-off flow Vs**

- **Shut-off flow Vs**
- **Nominal flow Vn**

**Protectable pipe length**

- **Operating pressure mbar**
- **m**
Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, $\rho_n = 0.74 \text{ kg/m}^3$ at 0° C, 1013.25 mbar.

Pressure drop at Vn:
1.0 mbar

Installation position:
Deviation of ±30° from the horizontal position permitted.

Overflow volume:
GS63/15UE = 38 l/h at 0.1 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
$$ f = \sqrt{\frac{0.74}{\rho_n}} $$

f = correction factor
$\rho_n = $ standard density of the other gas types
in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \, \text{kg/m}^3 \) at \( 0^\circ \text{C}, 1013.25 \, \text{mbar} \).

Pressure drop at Vn: 2.5 mbar

Installation position:
Deviation of \(-30^\circ \) to \(+90^\circ \) from the horizontal position permitted.

Overflow volume:
GS32/25UE = 38 l/h at 0.1 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

\( \rho_n \) = standard density of the other gas types in kg/m\(^3\) at 1013.25 mbar, \( 0^\circ \text{C} \)

Certifications/Testing specification:
EU-DE DVGW G 5302-2 (0.025–1.0 bar)
EU-AT ÖVGW QS-G 494 (0.025–0.1 bar)

Anmerkung:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar.

**Pressure drop at Vn:** 2.5 mbar

**Installation position:**
Deviation of –30° to +90° from the horizontal position permitted.

**Overflow volume:**
GS50/25UE = 38 l/h at 0.1 bar

**Protectable pipe length:**
Guide values acc. DVGW G 5305-2, Annex B

**Correction factor for other gases:**
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

- \( f \) = correction factor
- \( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

**Certifications/Testing specification:**
EU-DE DVGW G 5302-2 (0.025–1.0 bar)
EU-AT ÖVGW QS-G 494 (0.025–0.1 bar)

**Anmerkung:**
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, $\rho_n = 0.74$ kg/m³ at 0° C, 1013.25 mbar.

Pressure drop at Vn: 2.5 mbar

Installation position:
Deviation of ~30° to +90° from the horizontal position permitted.

Overflow volume:
GS63/25UE =38 l/h at 0.1 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
$$ f = \sqrt{\frac{0.74}{\rho_n}} $$
$$ f \quad \text{correction factor} $$
$$ \rho_n \quad \text{standard density of the other gas types} $$
$$ \text{in kg/m}^3 \text{ at 1013.25 mbar, 0° C} $$

Certifications/Testing specification:
EU-DE DVGW G 5302-2 (0.025–1.0 bar)
EU-AT ÖVGW QS-G 494 (0.025–0.1 bar)

Anmerkung:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS110/30UE
Excess Flow Valve for Service Lines (SL) and Main Lines (ML) d110/DN100

Operating pressure: 0.03–1.0 bar (0.003–0.1 MPa)
Color code: BLUE

Product Code

<table>
<thead>
<tr>
<th>Automatic reopening</th>
<th>Integrated in PE100 adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSA110/30UE</td>
<td></td>
</tr>
</tbody>
</table>

Technical Data

<table>
<thead>
<tr>
<th>Operating pressure bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length SDR 17.6 m</th>
<th>Reopening time sec/m</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar.
Tolerance for shut-off flow +/–5 %.

Pressure drop at Vn: 3.5 mbar
Installation position:
Deviation of ±10° from the horizontal position permitted.

Overflow volume:
GSA110/30UE = 38 l/h at 0.1 bar

Protectable pipe length (SL):
Guide values acc. DVGW G 5305-2, Annex B;
Pipe roughness \( k = 0.05 \text{ mm} \), but leak size Ø 50 mm (ML values on request)
Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
\( f = \) correction factor
\( \rho_n = \) standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-DE DVGW G 5302-2 (0.03–1.0 bar)
EU-AT ÖVGW QS-G 494 (0.03–0.1 bar)

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS110/30UE/ZV
Excess Flow Valve for Service Lines (SL)
and Main Lines (ML) d110/DN100

Flow values:
All specifications for nominal- or shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas \( H \), \( \rho n = 0.74 \) kg/m\(^3\) at 0° C, 1013.25 mbar.
Tolerance for shut-off flow +/–5 %.

Pressure drop at Vn: 3.0 mbar/140 m\(^3\)/h

Installation position: Deviation of ±10° from the horizontal position permitted.

Overflow volume:
GSA110/30UE/ZV =38 l/h at 0.1 bar

Protectable pipe length (SL):
Guide values acc. DVGW G 5305-2, Annex B;
Pipe roughness \( k = 0.05 \) mm, but leak size \( \varnothing 50 \) mm (ML values on request)

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho n}} \]
\( f \) = correction factor
\( \rho n \) = standard density of the other gas types in kg/m\(^3\) at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-DE DVGW G 5302-2 (0.03–1.0 bar)*
EU-AT ÖVGW QS-G 494 (0.03–0.1 bar)

Remark:
* \( V_{\text{max}} = 120.0–166.5 \) m\(^3\)/h (\( \Delta p 2.0 \) mbar)
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.

Operating pressure: 0.03–1.0 bar (0.003–0.1 MPa)
Color code: BLUE

Product Code

<table>
<thead>
<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m(^3)/h</th>
<th>Shut-off flow Vs m(^3)/h</th>
<th>Protectable pipe length SDR 17.6 m</th>
<th>Reopening time sec/m</th>
</tr>
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<td>196.0</td>
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<td>387</td>
</tr>
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</table>

Nominal flow Vn, Shut-off flow Vs

Protectable pipe length
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \text{ at } 0^\circ \text{C}, 1013.25 \text{ mbar} \).

Pressure drop at Vn: 3.0 mbar
Installation position: Deviation of –30° to +90° from the horizontal position permitted.

Leak rate, overflow volume (UE type):
- GS32/35        max. 3.8 l/h
- GS32/35UE     38 l/h at 1.0 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
\[ f = \text{correction factor} \]
\[ \rho_n = \text{standard density of the other gas types} \]
\[ \text{in kg/m}^3 \text{ at } 1013.25 \text{ mbar, } 0^\circ \text{C} \]

Certifications:
- EU-DE DVGW G 5302-2
- EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Operating pressure: 0.035–5.0 bar (0.0035–0.5 MPa)
Color code: VIOLET

Product Codes

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<th>Separate component</th>
<th>Integrated in PE100/SDR11 adapter</th>
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Technical Data

<table>
<thead>
<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar.

Pressure drop at Vn: 2.5 mbar

Installation position: Deviation of –30° to +90° from the horizontal position permitted.

Leak rate, overflow volume (UE type):
GS50/35 max. 3.8 l/h
GS50/35UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:

\[
 f = \sqrt{0.74 / \rho_n}
\]

\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications:
EU-DE DVGW G 5302-2
EU-AT ÖVGW GS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/35
Excess Flow Valve for Service Lines (SL) d63/DN50

Operating pressure: 0.035–5.0 bar (0.0035–0.5 MPa)
Color code: VIOLET

Product Codes

<table>
<thead>
<tr>
<th>Automatic reopening</th>
<th>Separate component</th>
<th>Integrated in PE100/SDR11 adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS63/35</td>
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<tr>
<td>GSA63/35</td>
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Technical Data

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<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
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</thead>
<tbody>
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</tbody>
</table>

Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, ρn = 0.74 kg/m³ at 0°C, 1013.25 mbar.

Pressure drop at Vn: 2.0 mbar
Installation position: Deviation of –30° to +90° from the horizontal position permitted.

Leak rate, overflow volume (UE type):
GS63/35 max. 3.8 l/h
GS63/35UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:

\[ f = \sqrt{\frac{0.74}{\rho_n}} \]

\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications:
EU-DE DVGW G 5302-2
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, ρn = 0.74 kg/m³ at 0°C, 1013.25 mbar.

Pressure drop at Vn: 3.0 mbar

Installation position:
Deviation of +45° to –45° from the horizontal position permitted.

Overflow volume:
GS32/50UE = 80 l/h at 0.4 bar

Protectable pipe length:
Guide values for a leak size of 70% of the pipe cross-section, pipe roughness k = 0.05 mm, Escape value μ = 0.6

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
f = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/50UE
Excess Flow Valve for Service Lines (SL) d63/DN50

Operating pressure: 0.05–0.4 bar (0.005–0.04 MPa)
Color code: GRAY

Product Codes

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<thead>
<tr>
<th></th>
<th>Automatic reopening</th>
<th>Separate component</th>
<th>Integrated in PE100/SDR11 adapter</th>
</tr>
</thead>
<tbody>
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Technical Data

<table>
<thead>
<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
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</tbody>
</table>

Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for the overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar.

Pressure drop at Vn: 2.0 mbar

Installation position:
Deviation of +45° to –45° from the horizontal position permitted.

Overflow volume:
GS63/50UE =80 l/h at 0.4 bar

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H,
\[ \rho_n = 0.74 \text{ kg/m}^3 \text{ at } 0^\circ \text{ C, } 1013.25 \text{ mbar}. \]

Pressure drop at Vn: 15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS25/200 max. 3.8 l/h
GS25/200UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm}, \)
Escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]

\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0 °C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS32/200
Excess Flow Valve for Service Lines (SL) d32/DN25

Operating pressure: 0.2–5.0 bar (0.02–0.5 MPa)
Color code: RED

Product Codes

<table>
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<tr>
<th>Automatic reopening</th>
<th>Separate component</th>
<th>Integrated in PE100/SDR11 adapter</th>
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</thead>
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Technical Data

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<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \text{ at 0° C, 1013.25 mbar.} \)

Pressure drop at Vn: 12.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS32/200 max. 3.8 l/h
GS32/200UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-DE DVGW G 5302-2
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar.

Pressure drop at Vn:
15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS50/200 max. 3.8 l/h
GS50/200UE \( \leq 38 \text{ l/h at 1.0 bar} \)

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-DE DVGW G 5302-2
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/200
Excess Flow Valve for Service Lines (SL) d63/DN50

Operating pressure: 0.2–5.0 bar (0.02–0.5 MPa)
Color code: RED

Product Codes

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Technical Data

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<th>Shut-off flow (Vs) m³/h</th>
<th>Protectable pipe length (m)</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar.

Pressure drop at Vn:
15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS63/200 max. 3.8 l/h
GS63/200UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values acc. DVGW G 5305-2, Annex B

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-DE DVGW G 5302-2
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak-rate and overflow volume are applicable for natural gas H, ρn = 0.74 kg/m³ at 0° C, 1013.25 mbar.

Pressure drop at Vn:
5.0 mbar

Installation position:
All installation positions are permitted.

Overflow volume:
GS63/200UE/100 =80 l/h at 0.4 bar

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness k = 0.05 mm, Escape value μ = 0.6

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
f = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG

gasNatural fenosa

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H₂, ρₙ = 0.74 kg/m³ at 0°C, 1013.25 mbar. Tolerance for shut-off flow +/- 5%.

Pressure drop at Vn: 25.0 mbar

Installation position: Deviations of ±10° from the horizontal position are permitted.

Leak rate, overflow volume (UE type):
GS110/200 max. 3.8 l/h
GS110/200UE / H11349 38 l/h at 1.0 bar

Protectable pipe length (SL):
Guide values acc. DVGW G 5305-2, Annex B; pipe roughness k = 0.05 mm, but leak size of Ø 50 mm (ML values on request)

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
\[ f = \text{correction factor} \]
\[ \rho_n = \text{standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C} \]

Certifications/Testing specification:
EU-DE DVGW G 5302-2
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on
Pipelife Gas-Stop™ GS20/500UE
Excess Flow Valve for Service Lines (SL) d20/DN15

Operating pressure: 0.5–5.0 bar (0.05–0.5 MPa)
Color code: ORANGE

Product Code

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<th>Product Code</th>
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Technical Data

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<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H₂, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar.

Pressure drop at Vn: 35.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS20/500 max. 3.8 l/h
GS20/500UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), Escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
 f = \sqrt{\frac{0.74}{\rho_n}} \\
 f = \text{ correction factor} \\
\rho_n = \text{ standard density of the other gas types in kg/m}^3 \text{ at } 1013.25 \text{ mbar, } 0^\circ \text{ C}
\]

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG

gasNatural fenosa

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS25/500
Excess Flow Valve for Service Lines (SL) d25/DN20

Operating pressure: 0.5–5.0 bar (0.05–0.5 MPa)
Color code: ORANGE

Product Codes

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Technical Data

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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \text{ at } 0^\circ \text{ C}, 1013.25 \text{ mbar} \).

Pressure drop at Vn:
15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS25/500 max. 3.8 l/h
GS25/500UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values for a leak size of 70% of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), Escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, \( 0^\circ \text{ C} \)

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( n = 0.74 \text{ kg/m}^3 \text{ at } 0^\circ \text{C}, 1013.25 \text{ mbar} \).

Pressure drop at Vn: 65.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS32/500 max. 3.8 l/h
GS32/500UE \( \leq 38 \text{ l/h at } 1.0 \text{ bar} \)

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho n}}
\]
\( f \) = correction factor
\( \rho n \) = standard density of the other gas types in kg/m\(^3\) at 1013.25 mbar, \( 0^\circ \) C

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG

gasNatural fenosa

Remark:
For further information refer to “Explanations for the product data sheets”.
Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/500
Excess Flow Valve for Service Lines (SL) d63/DN50

Operating pressure: 0.5–5.0 bar (0.05–0.5 MPa)
Color code: ORANGE

Product Codes

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<th>Integrated in PE100/SDR11 adapter</th>
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Technical Data

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<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
<th>Reopening time sec/m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar.

Pressure drop at Vn: 15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS63/500 max. 3.8 l/h
GS63/500UE ≤3 l/h at 1.0 bar

Protectable pipe length:
Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), Escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-E GNF ES.00212.GN-DG
gasNatunenosesa

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values: All specifications for nominal- or shut-off flow (Vn, Vs) as well as leak rate and overflow volume are applicable for natural gas H, \(\rho_n = 0.74 \text{ kg/m}^3\) at 0° C, 1013.25 mbar.

Pressure drop at Vn: 60.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
- GS20/1: max. 3.8 l/h*
- GS20/1UE: 38 l/h at 1.0 bar

Protectable pipe length: Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \(k = 0.05 \text{ mm}\), Escape value \(\mu = 0.6\)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
- \(f\) = correction factor
- \(\rho_n\) = standard density of the other gas types
- in kg/m\(^3\) at 1013.25 mbar, 0° C

Certifications/Testing specification:
- EU-AT ÖVGW QS-G 494
- EU-F Règlement NF 136 SAPE 102-NF (Vn\(_{\text{max}}\) 25 m\(^3\)/h)
- EU-F Certigaz APE H001-00

Remark:
* EU-F certification for Pipelife Gas-Stop™ integrated in tapping saddles; admissible leak rate ≤0.15 l/h.
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Flow values: All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \text{ at } 0\,\text{°C}, 1013.25 \text{ mbar} \).

Pressure drop at Vn: 40.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS32/1         max. 3.8 l/h*
GS32/1UE     38 l/h at 1.0 bar

Protectable pipe length: Guide values for a leak size of 70 % of the pipe cross-section, pipe roughness \( k = 0.05 \text{ mm} \), Escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494
EU-F Règlement NF 136 SAPE 102 (Vn max 100 m³/h)
EU-F Certigaz APE H002-00

Remark:
* EU-F certification for Pipelife Gas-Stop™ integrated in tapping saddles; admissible leak rate ≤0.15 l/h.

For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Operating pressure: 1.0–5.0 bar (0.1–0.5 MPa)
Color code: YELLOW

Product Codes

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<th>Automatic reopening</th>
<th>Separate component</th>
<th>Integrated in PE100/SDR11 adapter</th>
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Technical Data

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<tr>
<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
<th>Protectable pipe length m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \(\rho_n = 0.74\) kg/m³ at 0° C, 1013.25 mbar.

Pressure drop at Vn: 15.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GS63/1 max. 3.8 l/h
GS63/1UE ≤38 l/h at 1.0 bar

Protectable pipe length:
Guide values for a leak size of 70% of the pipe cross-section, pipe roughness \(k = 0.05\) mm, Escape value \(\mu = 0.6\)

Correction factor for other gases:
\[ f = \sqrt{\frac{0.74}{\rho_n}} \]
\(f\) = correction factor
\(\rho_n\) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Details for the installation in service lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/300
Excess Flow Valve for Service Lines (SL) and Main Lines (ML) d63/DN50

Operating pressure: 0.3–10.0 bar (0.03–1.0 MPa)
Color code: WHITE

Product Codes

<table>
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<tr>
<th>Automatic reopening</th>
<th>Separate component</th>
<th>Integrated in PE100 adapter</th>
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<tbody>
<tr>
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<tr>
<td>GSA63/300UE</td>
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Technical Data

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<th>Shut-off flow Vs (m³/h)</th>
<th>Protectable pipe length AL + VL SDR11 / m</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 20.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GSA63/300 max. 3.8 l/h at \( \rho_{max} \) 5.0 bar
GSA63/300UE \( \leq 550 \text{ l/h at } 5.0 \text{ bar} \)
\( \leq 1.000 \text{ l/h at } 10.0 \text{ bar} \)

Protectable pipe length:
Guide values for a leak size of Ø 30 m, pipe roughness k = 0.3 mm, escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
\( f = \) correction factor
\( \rho_n = \) standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark: For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details about this as well as information for the installation in lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS63/300S
Excess Flow Valve for Service Lines (SL) and Main Lines (ML) d63/DN50

Operating pressure: 0.3–10.0 bar (0.03–1.0 MPa)
Color code: WHITE

Product Codes

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Technical Data

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<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as leak rate and overflow volume are applicable for natural gas H, n = 0.74 kg/m³ at 0° C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 25.0 mbar

Installation position:
All installation positions are permitted.

Leak rate, overflow volume (UE type):
GSA63/300S max. 3.8 l/h at p_max. 5.0 bar
GSA63/300UE/S ≈550 l/h at 5.0 bar
≈1.000 l/h at 10.0 bar

Protectable pipe length:
Guide values for a leak size of Ø 30 m, pipe roughness k = 0.3 mm, escape value μ = 0.6

Correction factor for other gases:

\[ f = \sqrt{\frac{0.74}{\rho n}} \]

f = correction factor
\( \rho n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark: For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details about this as well as information for the installation in lines of other dimensions can be obtained on request.
Operating pressure: 0.15–10.0 bar (0.015–1.0 MPa)

Color code: RED

Product Code

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Technical Data

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<th>Shut-off flow Vs m³/h</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, ρn = 0.74 kg/m³ at 0° C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 25.0 mbar

Installation position:
Deviations of ±5° from the horizontal position are permitted.

Leak rate, overflow volume (UE type):
GSA110/150UE 550 l/h at 5.0 bar
=1.000 l/h at 10.0 bar

Protectable pipe length:
Guide values for leak size Ø 50 mm; pipe roughness k = 0.3 mm, escape value μ = 0.6

Correction factor for other gases:

\[ f = \sqrt{\frac{0.74}{\rho_n}} \]

\[ f = \text{correction factor} \]

\[ \rho_n = \text{standard density of the other gas types} \]

in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark: For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details for this as well as information for the installation in lines of other dimensions can be obtained on request.
Operating pressure: 0.3–10.0 bar (0.03–1.0 MPa)
Color code: WHITE

Product Codes

| GSA110/300 | –     |
| GSA110/300UE | ●     |

Automatic reopening
Integrated in PE100 adapter

Technical Data

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<th>Nominal flow Vn m³/h</th>
<th>Shut-off flow Vs m³/h</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, $\rho_n = 0.74 \text{ kg/m}^3$ at 0° C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 30.0 mbar

Installation position: Deviations of ±5° from the horizontal position are permitted.

Leak rate, overflow volume (UE type):
GSA110/300 max. 3.8 l/h at $p_{\text{max}}$. 5.0 bar
GSA110/300UE ≥550 l/h at 5.0 bar
  ≥1,000 l/h at 10.0 bar

Protectable pipe length:
Guide values for leak size Ø 50 mm; pipe roughness $k = 0.3 \text{ mm}$, escape value $\mu = 0.6$

Correction factor for other gases:
$f = \sqrt{\frac{0.74}{\rho_n}}$
$f$ = correction factor
$\rho_n$ = standard density of the other gas types
  in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details for this as well as information for the installation in lines of other dimensions can be obtained on request.
Pipelife Gas-Stop™ GS110/300S
Excess Flow Valve for Service Lines (SL) and Main Lines (ML) d110/DN100

Operating pressure: 0.3–10.0 bar (0.03–1.0 MPa)
Color code: WHITE

Product Codes

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<td>GSA110/300UE/S</td>
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Technical Data

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<th>Operating pressure pe bar</th>
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<th>Shut-off flow Vs m³/h</th>
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Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 45.0 mbar

Installation position: Deviations of ±5° from the horizontal position are permitted.

Leak rate, overflow volume (UE type):
- GSA110/300S \( \leq 3.8 \text{ l/h at } p_{\text{max}} \leq 5.0 \text{ bar} \)
- GSA110/300UE/S \( \leq 550 \text{ l/h at } 5.0 \text{ bar} \)
\( \leq 1,000 \text{ l/h at } 10.0 \text{ bar} \)

Protectable pipe length:
Guide values for leak size Ø 50 mm; pipe roughness k = 0.3 mm, escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho n}}
\]

\( f \) = correction factor
\( \rho n \) = standard density of the other gas types
in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details for this as well as information for the installation in lines of other dimensions can be obtained on request.
Operating pressure: 1.0–10.0 bar (0.1–1.0 MPa)
Color code: WHITE

Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho_n = 0.74 \text{ kg/m}^3 \) at 0° C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 85.0 mbar

Installation position: Deviations of ±5° from the horizontal position are permitted.

Leak rate, overflow volume (UE type):
GSA110/1 max. 3.8 l/h at \( p_{\text{max}} \) 5.0 bar
GSA110/1UE ≤550 l/h at 5.0 bar
≤1.000 l/h at 10.0 bar

Protectable pipe length:
Guide values for leak size Ø 50 mm; pipe roughness k = 0.3 mm, escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho_n}}
\]
\( f \) = correction factor
\( \rho_n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0° C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details for this as well as information for the installation in lines of other dimensions can be obtained on request.
Operating pressure: 1.0–10.0 bar (0.1–1.0 MPa)
Color code: WHITE

Product Code

Automatic reopening
Integrated in PE100 adapter

GSA110/1UE/ZV

Technical Data

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<th>Operating pressure pe bar</th>
<th>Nominal flow Vn m³/h</th>
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<th>Protectable pipe length m PE d160 SDR 11</th>
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<td>5996.0</td>
<td>4000 (4000)</td>
<td>–</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Flow values:
All specifications for nominal- and shut-off flow (Vn, Vs) as well as for leak rate and overflow volume are applicable for natural gas H, \( \rho n = 0.74 \text{ kg/m}^3 \) at 0°C, 1013.25 mbar. Tolerance for shut-off flow ±5%.

Pressure drop at Vn: 65.0 mbar
Installation position: Max. ±5° from the horizontal installation position.

Leak rate, overflow volume (UE type):
GSA110/1UE/ZV ≤550 l/h at 5.0 bar
≤1.000 l/h at 10.0 bar

Protectable pipe length:
Guide values for leak size Ø 60 mm; pipe roughness \( k = 0.05 \) or 0.3 mm, escape value \( \mu = 0.6 \)

Correction factor for other gases:
\[
f = \sqrt{\frac{0.74}{\rho n}}
\]

\( f \) = correction factor
\( \rho n \) = standard density of the other gas types in kg/m³ at 1013.25 mbar, 0°C

Certifications/Testing specification:
EU-AT ÖVGW QS-G 494

Remark:
For further information refer to “Explanations for the product data sheets”. Greater protectable pipeline lengths are possible depending on the respective pipeline configuration. Details for this as well as information for the installation in lines of other dimensions can be obtained on request.