

SBC 187

Slam shut valves



TECHNICAL BROCHURE

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Who we are

We are a global organization specialized in designing and manufacturing technologically advanced solutions for natural gas treatment, transmission and distribution systems.

We are the ideal partner for operators in the Oil & Gas sector, with a business offer that goes across the whole natural gas chain.

We are in constant evolution to meet our customers' highest expectations in terms of quality and reliability.

Our aim is to be a step ahead of the competition, with customized technologies and an after-sale service program undertaken with the highest grade of professionalism.



Pietro Fiorentini advantages



Localised technical support

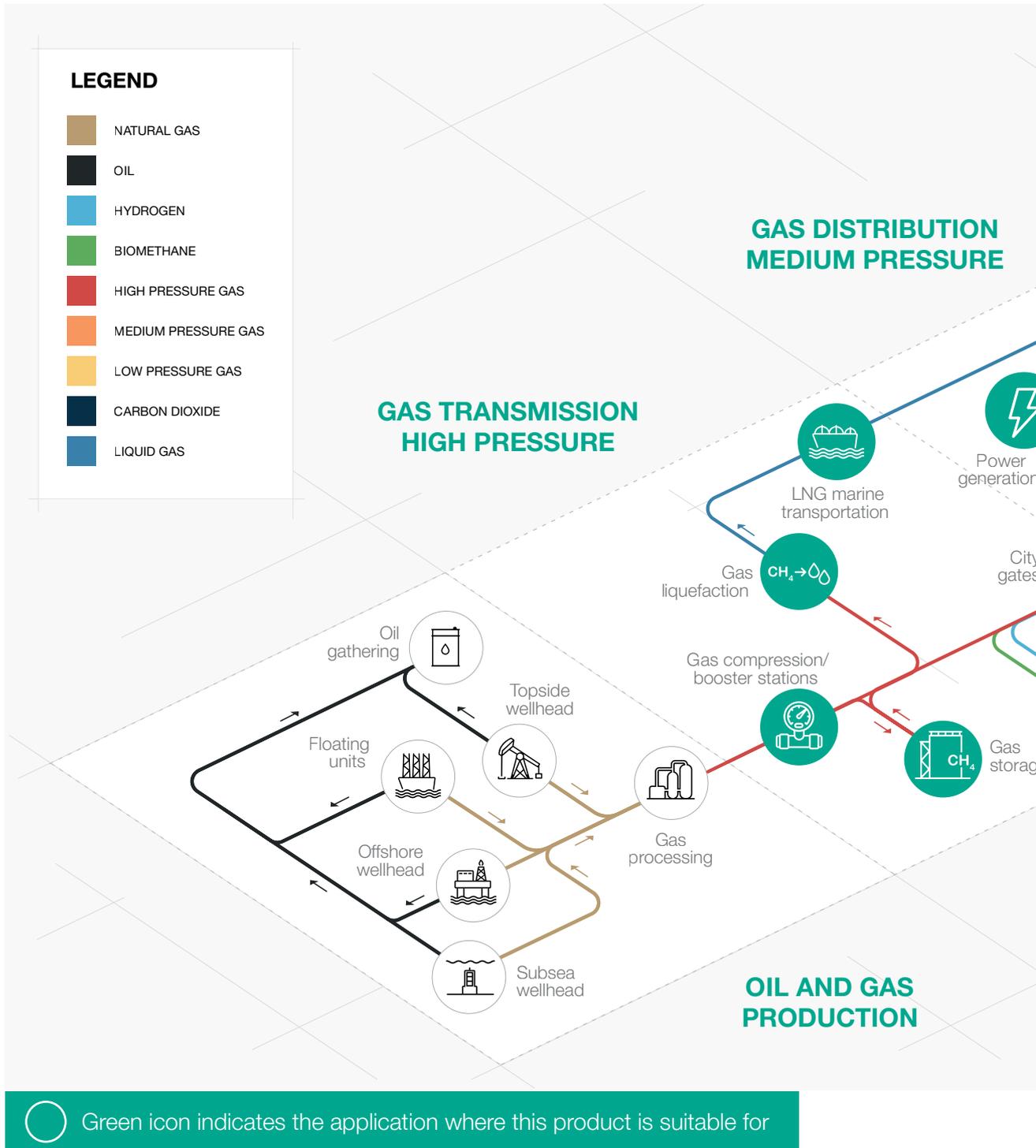


Experience since 1940



We operate in over 100 countries

Area of Application



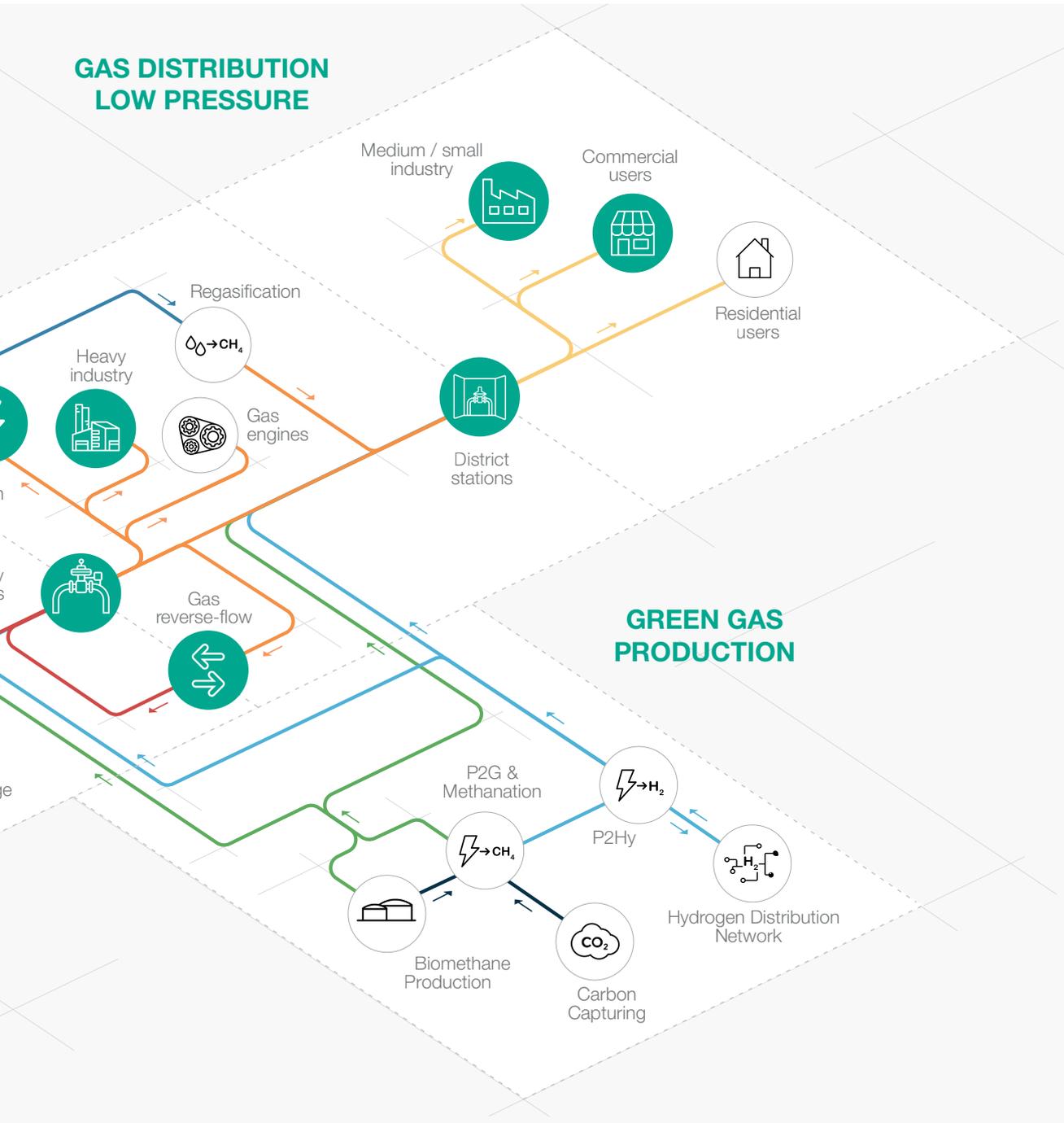


Figure 1 Area of Application Map



Introduction

SBC 187 is a safety device, also called slam shut valve, suitable to quickly interrupt the gas flow when the pressure reaches a calibration set value.

This device is mainly used in high-pressure transmission systems and in medium pressure gas distribution networks.

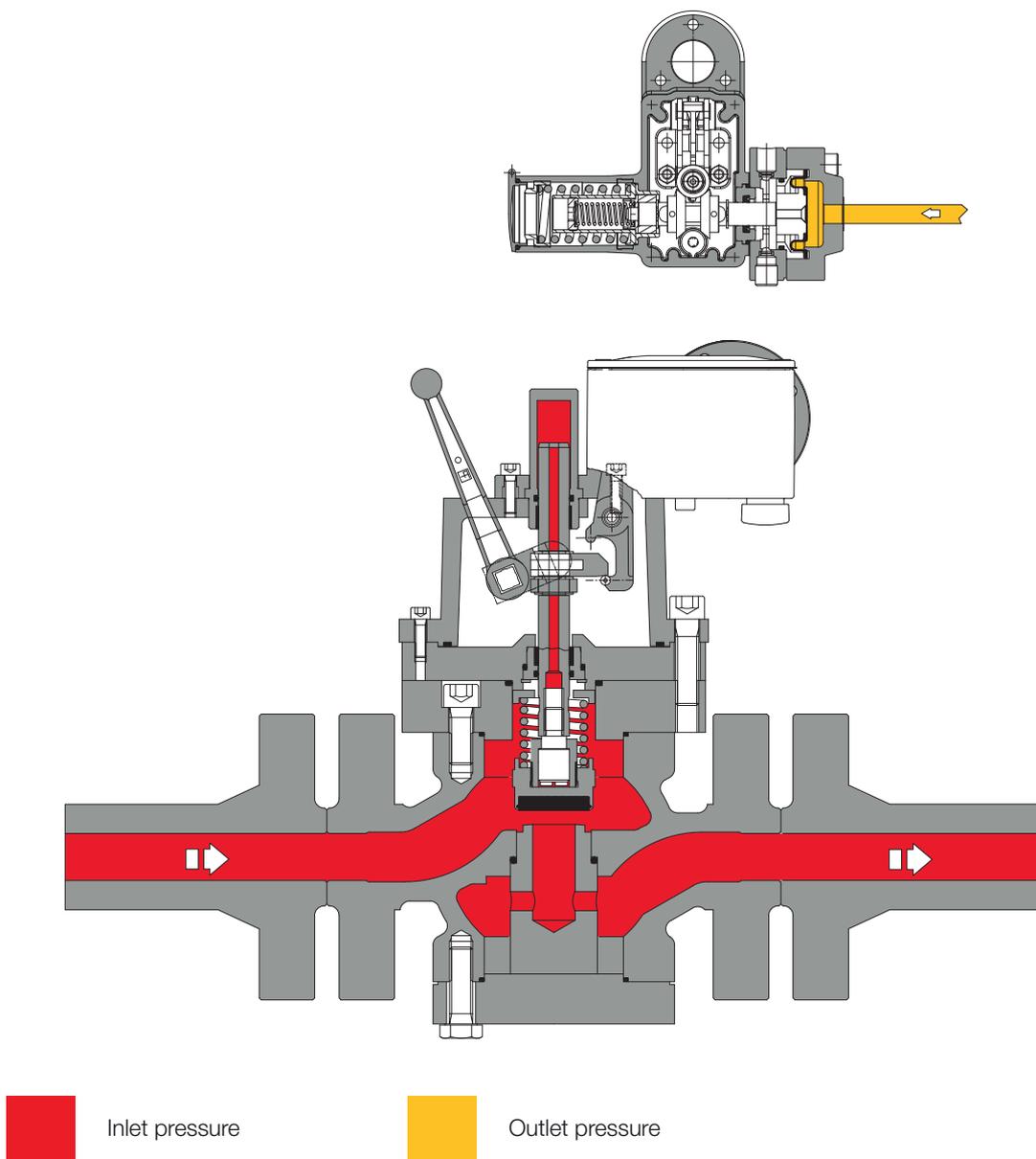


Figure 2 SBC187

Features and Calibration ranges

A key feature of a slam shut valves is to be **extremely fast in response time**, ensuring the tripping within 1 second. Set point adjustment of the slam shut is operated via a pressostatic device which is sensing the downstream pressure.

The tripping of the slam-shut device, besides occurring **automatically** when the predetermined set-point is exceeded.

It can also be enabled locally, by pressing the suitable button available on the pressure switch, or remotely, as a result of the monitoring of the system or network on which the slam-shut device is installed.

As a result of the tripping of the slam-shut valve, the subsequent restoration of the normal operating condition, also called **RESET** operation, is carried out in a **purely manual manner**, after having verified and solved the causes that led to such a tripping.

This slam shut valve is suitable to be used with previously filtered, non corrosive gases, in natural gas transmission, power plants fuel gas skids and distribution networks as well as high load industrial application.

It is a **truly top entry design** which allows an **easy maintenance** of parts directly in the field **without removing the body from the pipework**.

The modular design of SB slam shut valve series allows its retrofitting on existing pressure regulators in the field without piping modifications.

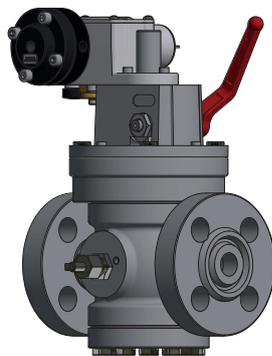


Figure 3 SBC 187

SBC 187 competitive advantages

-  Over Pressure Shut-Off
-  Compact dimensions
-  Under Pressure Shut-Off
-  Easy maintenance
-  Internal by-pass
-  Remote tripping option
-  Push button for tripping test
-  Limit switch option
-  Top Entry
-  Biomethane compatible and available with specific versions for full Hydrogen or blending

Features

| Features | Values |
|-------------------------------------|--|
| Design pressure* | up to 25 MPa up to 250 barg |
| Ambient temperature* | from -20 °C to +60 °C from -4 °F to +140 °F |
| Inlet gas temperature range* | from -20 °C to +60 °C from -4 °F to +140 °F |
| Available Accessories | Limit switch, remote tripping |
| Accuracy class AG | up to 2.5 for OPSO (depending on working conditions) up to 2.5 for UPSO (depending on working conditions) |
| Over pressure setting range (OPSO) | from 0.2 MPa to 9 MPa from 2 barg to 90 barg |
| Under pressure setting range (UPSO) | from 0.02 MPa to 9 MPa from 0.2 barg to 90 barg |
| Nominal dimensions DN | DN 25 / 1"; |
| Connections* | ANSI 1500 according to ASME B16.5 |
| End to end dimensions | according to EN 334, EN 14382 |

(*) NOTE: Different functional features and/or extended temperature ranges available on request. Stated temperature ranges are the maximum for which the equipment's full performance, including accuracy, are fulfilled. Standard product may have a narrower range.

Table 1 Features

Materials and Approvals

| Part | Material |
|----------------------|---|
| Body | Cast steel ASTM A 352 LCC |
| Stem | AISI 416 stainless steel |
| Plug | Stainless steel |
| Valve seat | Stainless steel |
| Sealing ring | Nitril rubber |
| Compression fittings | Zinc-plated carbon steel according to DIN 2353; |

NOTE: The materials indicated above refer to the standard models. Different materials can be provided according to specific needs.

Table 2 Materials

Construction Standards and Approvals

The **SBC 187** slam shut valve is designed according to the European standard EN 14382.

The product is certified according to European Directive 2014/68/EU (PED).

Leakage class: bubble tight, better than VIII according to ANSI/FCI 70-3.



EN 14382



PED-CE



Pressure switch

types and ranges

| Pressure switch types and ranges | | | | | |
|----------------------------------|-------|-----------|------------|----------|--------------------------|
| SSV Type | Model | Operation | Range Wh | | Spring Table web link |
| | | | MPa | barg | |
| SB/187 | 103M | OPSO | 0.2 - 2.2 | 2 - 22 | TT 1331 |
| | | UPSO | 0.02 - 0.8 | 0.2 - 8 | |
| SB/187 | 103MH | OPSO | 0.2 - 2.2 | 2 - 22 | TT 1331 |
| | | UPSO | 0.8 - 1.9 | 8 - 19 | |
| SB/187 | 104M | OPSO | 1.5 - 4.5 | 15 - 45 | TT 1331 |
| | | UPSO | 0.16 - 1.8 | 1.6 - 18 | |
| SB/187 | 104MH | OPSO | 1.5 - 4.5 | 15 - 45 | TT 1331 |
| | | UPSO | 1.8 - 4.1 | 18 - 41 | |
| SB/187 | 105M | OPSO | 3 - 9 | 30 - 90 | TT 1331 |
| | | UPSO | 0.3 - 4.4 | 3 - 44 | |
| SB/187 | 105MH | OPSO | 3 - 9 | 30 - 90 | TT 1331 |
| | | UPSO | 4.4 - 9 | 44 - 90 | |

Table 3 Settings table

General link to the calibration tables: [PRESS HERE](#) or use the QR code:



Accessories

- Limit switches
- Remote tripping

In-line Installation

The following example is provided as a recommendation to get the best performance from the slam shut valves SBC 187.

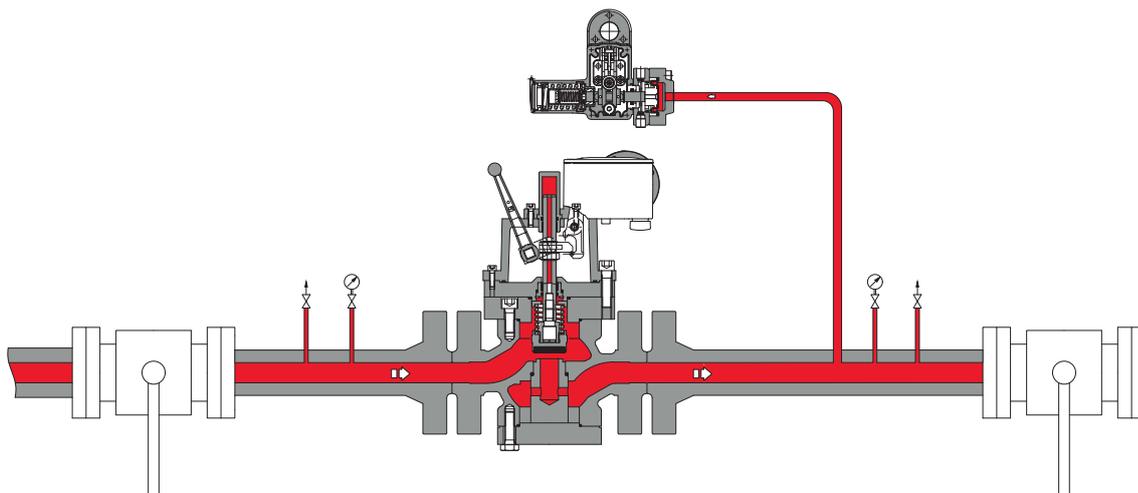


Figure 4 SBC 187 inline installation



Weights and Dimensions

SBC 187

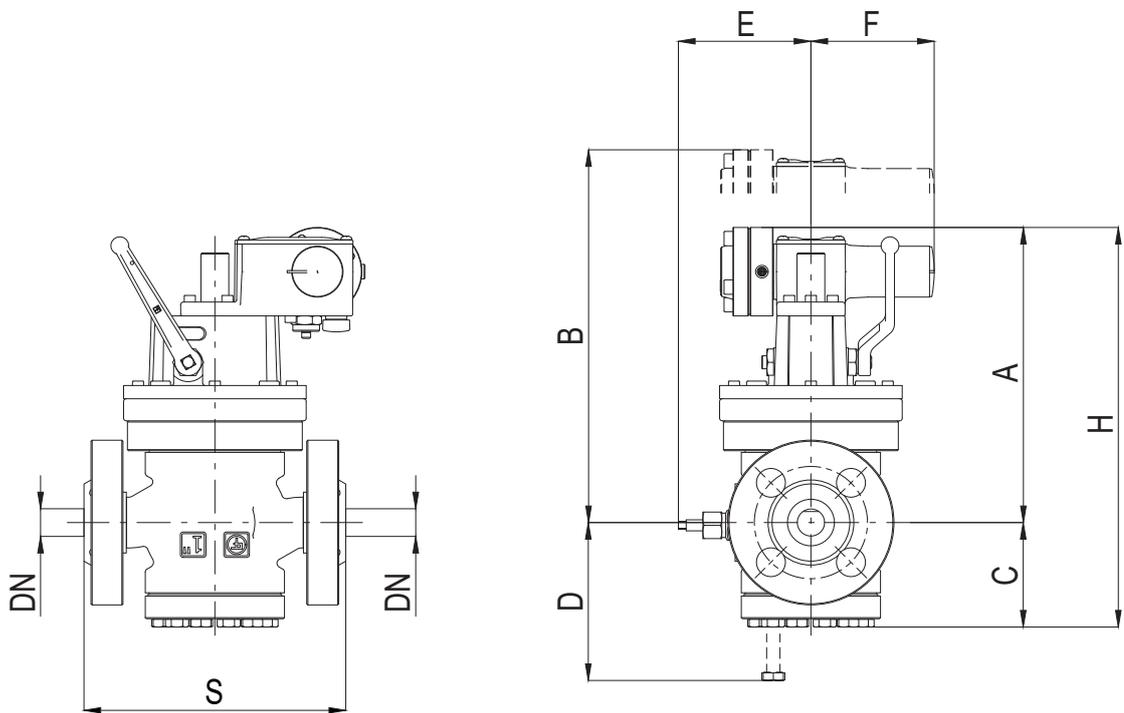


Figure 5 SBC 187 dimensions

| Weights and Dimensions (for other connections please contact your closest Pietro Fiorentini representative) | | | |
|---|---|--|--------|
| Size (DN) - [mm] | 25 | | |
| Size (DN) - inches | 1" | | |
| | [mm] | | inches |
| S - ANSI 1500 | 235 | | 9.25" |
| A | 267 | | 10.51" |
| B | 370 | | 14.57" |
| C | 95 | | 3.74" |
| D | 142 | | 5.59" |
| E | 81 | | 3.19" |
| F | 110 | | 4.33" |
| H | 362 | | 14.25" |
| Tubing Connections | Øe 10 x Øi 8 (on request imperial sizing) | | |
| Weight | Kg | | lbs |
| ANSI 1500 | 38 | | 84 |

Table 4 Weights and dimensions

Sizing and Cg

In general, the choice of a slam-shut valve is made of several factors, but primarily by the differential pressure drop generated downstream and the energy generated by the gas flow on the internal mechanism. For this purpose Pietro Fiorentini has developed a specific online tool for slam-shut valve sizing following the calculation guidelines available from EN14382 standard.

For sizing [PRESS HERE](#) or use the QR code:



Note: In case you do not have the proper credentials to access, feel free to contact your closest Pietro Fiorentini representative.



Customer Centricity

Pietro Fiorentini is one of the main Italian international companies with high focus on product and service quality.

The main strategy is to create a stable long-term oriented relationship, putting the customer's needs first. Lean management and thinking and customer centricity are used to improve and maintain the highest level of customer experience.



Support

One of Pietro Fiorentini's top priorities is to provide support to the client in all phases of project development, during installation, commissioning and operation. Pietro Fiorentini has developed a highly standardized intervention management system, which helps to facilitate the entire process and effectively archive all the interventions carried out, drawing on valuable information to improve the product and service. Many services are available remotely, avoiding long waiting times or expensive interventions.



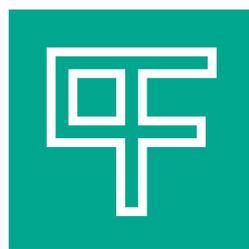
Training

Pietro Fiorentini offers training services available for both experienced operators and new users. The training is composed of the theoretical and the practical parts, and is designed, selected and prepared according to the level of use and the customer's need.



Customer Relation Management (CRM)

The centrality of customer is one of the main missions and vision of Pietro Fiorentini. For this reason, Pietro Fiorentini has enhanced the customer relation management system. This enables to track every opportunity and request from Customer in one single point and make free the information flow.



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