

# Pilot HON 625



PRODUCT INFORMATION

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## Pilot HON 625

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Application, characteristics

### Application

- Pilot for the gas pressure regulator HON 402
- Pilot for outlet pressure control
- Suitable for non-aggressive gases, other gases on enquiry

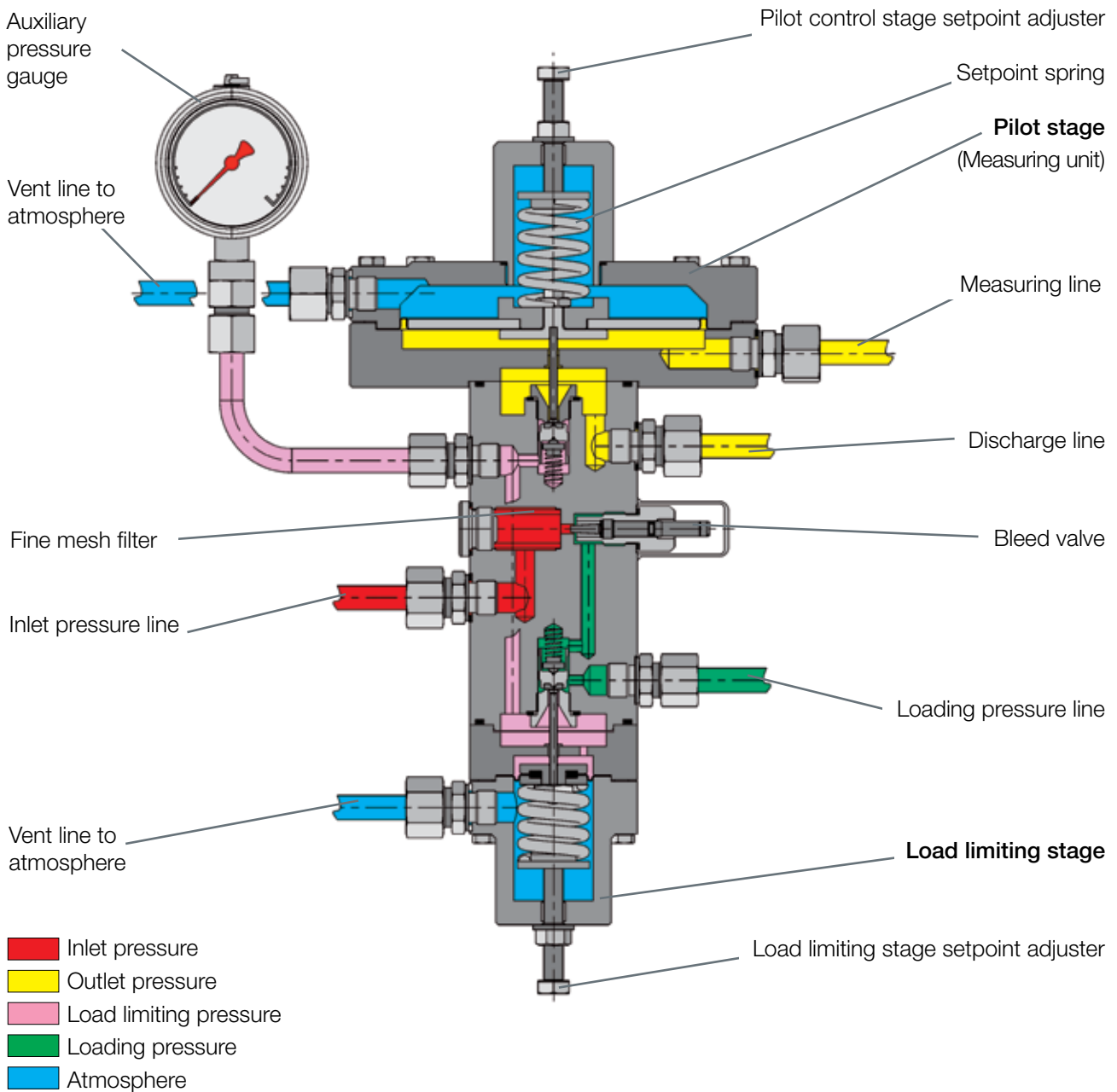
### Characteristics

- External, two-stage pilot
- Compact design
- Integrated load limiting stage with loading pressure gauge
- Integrated fine mesh filter
- Easy installation, maintenance and accessibility thanks to external arrangement of the pilot
- Easy setpoint spring replacement
- Very easy to maintain, few wear parts
- Adaptability to various operating conditions and existing network structure thanks to adjustable throttle
- High regulating accuracy due to upstream load limiting stage
- Large setting range
- Low closing pressure

Technical data					
Version		with integral overpressure protection (IS)			
Max. permissible pressure PS		25 bar			
Max. inlet pressure $p_{U\ max}$		25 bar			
<b>Setpoint spring</b>					
Measuring unit		Spring no.	Wire Ø (mm)	Colour coding	Specific setting range $W_{ds}$
Version	LP measuring unit	1	2.5	cream white	0.02 bar to 0.06 bar
		2	3.5	green	0.04 bar to 0.18 bar
		3	4	red	0.07 bar to 0.35 bar
		4	5	blue	0.3 bar to 0.5 bar
	HP measuring unit	5	4	red	0.3 bar to 1 bar
		6	5	blue	0.5 bar to 2 bar
		7	5.5	no colour	1 bar to 3.5 bar
		8	6	silver	2 bar to 5 bar
Accuracy class AC and closing pressure group SG		Output pressure range $pd$		AC	SG
		0.02 bar to 0.03 bar		10	30
		> 0.03 bar to 2.5 bar		5	10
		> 2.5 bar to 5 bar		1	10
Class of closing pressure zone SZ		SZ 2.5			
Material		Body parts		Aluminium alloy	
		Diaphragms, sealing rings		NBR	
		Internal parts		Steel, Al alloy	
Ambient and operating temperature range (DIN EN 334)		Class 2: -20° C to +60° C			
Strength – leak tightness – functionality		In accordance with DIN EN 334			
CE mark in accordance with PED					
Type approval test according to		<ul style="list-style-type: none"> <li>• PED (DGRL)</li> <li>• GAD (GGRL) as a component for gas consumption devices</li> </ul> In combination with the gas pressure regulating device HON 402 pending. According to DIN EN 334, the pilot is a component of this device.			
Explosion protection		All mechanical components of this device are without potential ignition sources and/or hot faces. They are not subject to ATEX 95 (94/9/EC). All electronic accessories, on the other hand, meet ATEX requirements.			

## Pilot HON 625

### Design and operation



The pilot HON 625, together with the main valve (e.g. HON 402), has the task of keeping the outlet pressure at a constant level within predefined limits – regardless of changes in gas consumption and changes in the inlet pressure.

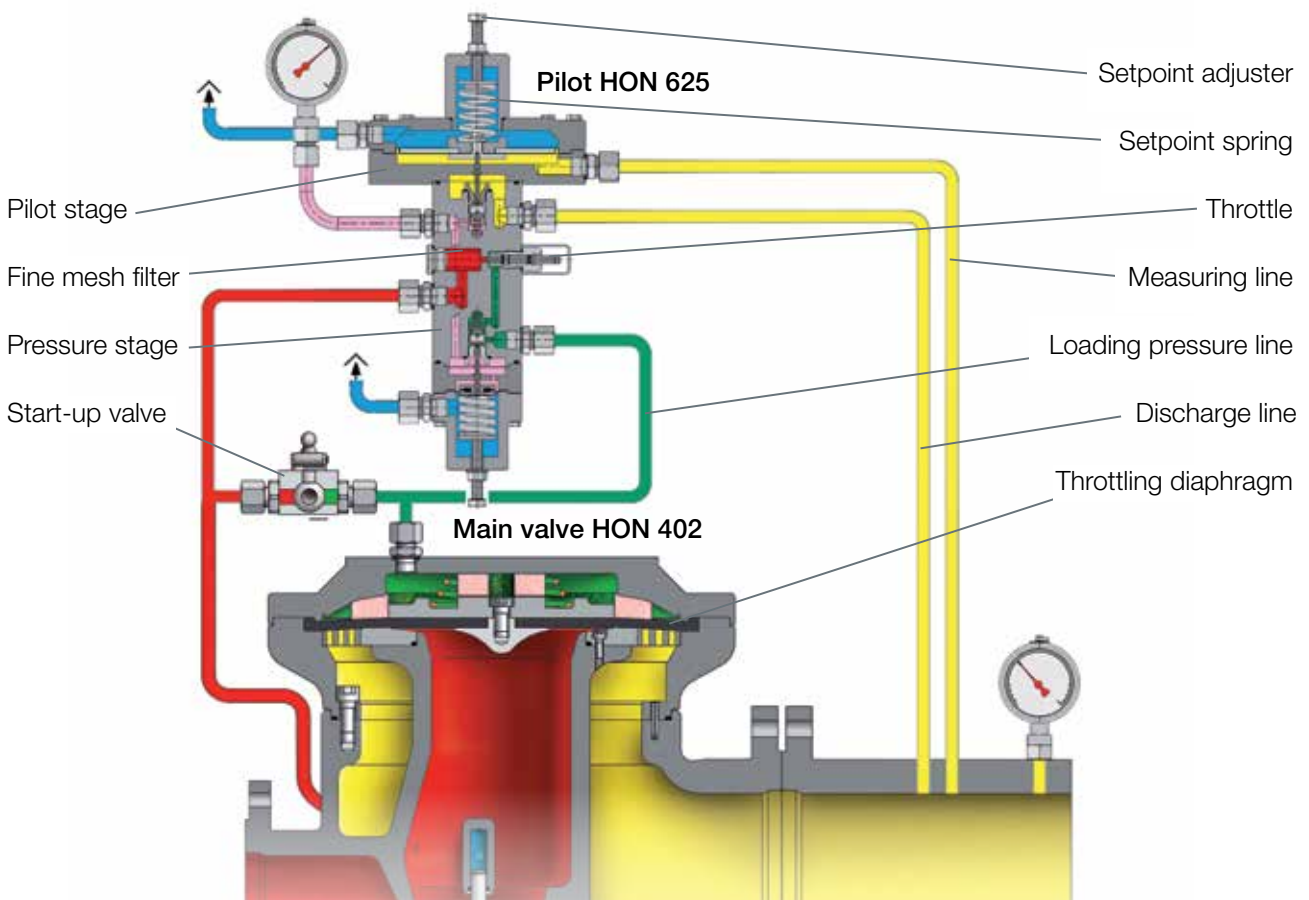
Depending on the setting range, the pilot HON 625 is provided in a High Pressure (HP) or Low Pressure (LP) design. In this connection, only the measuring units of the pilot control stages differ in their sizes/dimensions; the (general) layout, however, is the same. The pilot is comprised of a pilot control stage, the load limiting stage and a fine mesh filter unit for protection against dirt from the input pressure. All components are integrated in the compact pilot.

The outlet pressure to be regulated is guided over the measuring line to the pilot control stage and compared with the setpoint value specified as a force acting on the setpoint spring. Every regulation deviation is followed by a corresponding change of the distance between the nozzle and baffle plate and thus a proportional change of the load limiting pressure as well as the downstream loading pressure. With the throttling diaphragm, the valve opening of the main valve is changed relative to the comparison of the outlet pressure to the setpoint. The load limiting stage provides a constant load limiting pressure for the amplification of the regulating pulse. It compensates for significant inlet pressure fluctuations in comparison to the pilot control stage. With the adjustable load limiting pressure and the adjustable throttle, the pilot can be adapted to the conditions of the regulating line.

The construction and mode of operation of the load limiting stage correspond to the pilot control stage.

At zero drop the amplifying valves of the pilot control stage and load limiting stage remain closed. The loading pressure corresponds to the inlet pressure, and the main valve, e.g. HON 402, remains closed (closing pressure). For the opening process, the loading pressure is increased by the amplifying valves of the load limiting stage and pilot control stage and flows into the outlet pressure chamber.

**Application example: HON 402 with outlet expansion and HON 625**

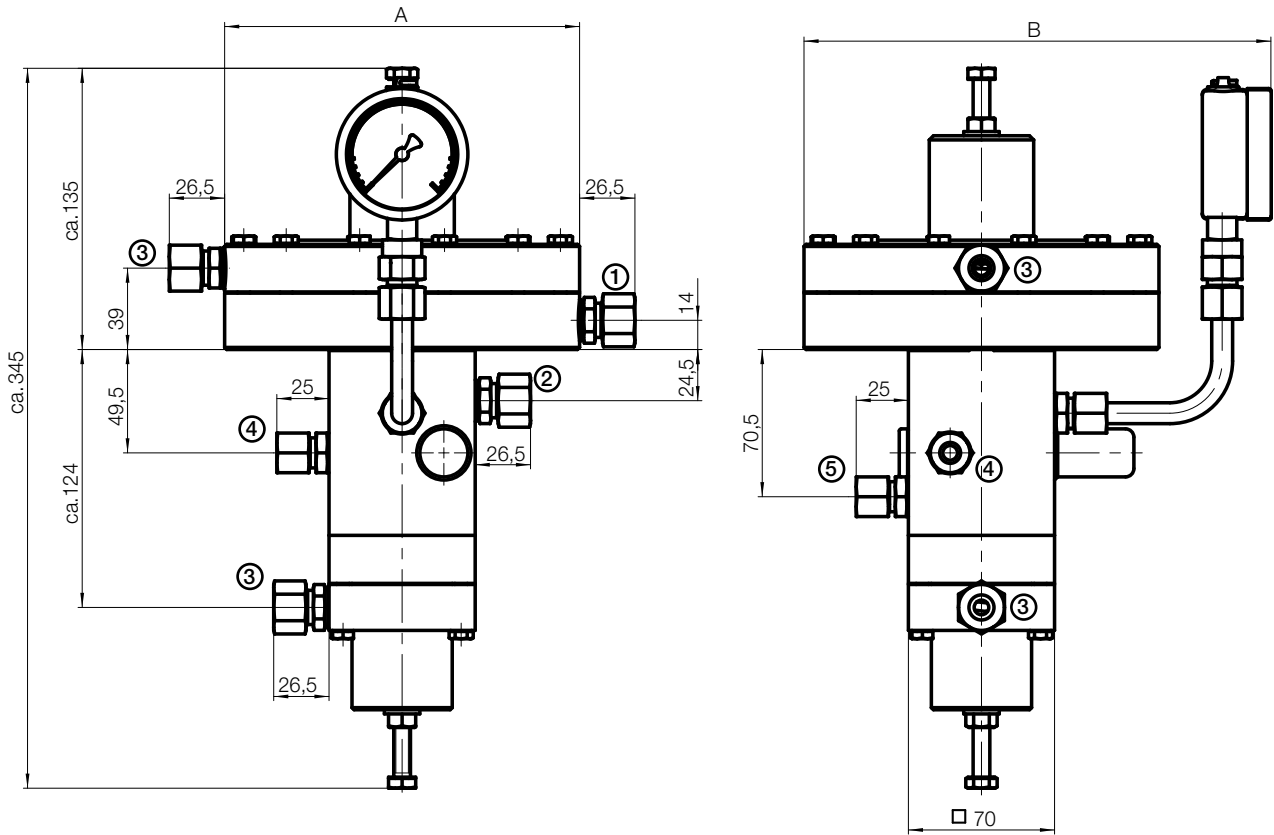


**HON 402 with HON 625 flow diagram**

- Inlet pressure
- Outlet pressure
- Load limiting pressure
- Loading pressure
- Atmosphere

## Pilot HON 625

### Dimensions, weights and connections



#### Dimensions and weights

Version	Dimensions in mm		Weight in kg
	A	B	
LP measuring unit	Ø 170	Approx. 206	Approx. 5.3
HP measuring unit	Ø 115	Approx. 178	Approx. 4.2

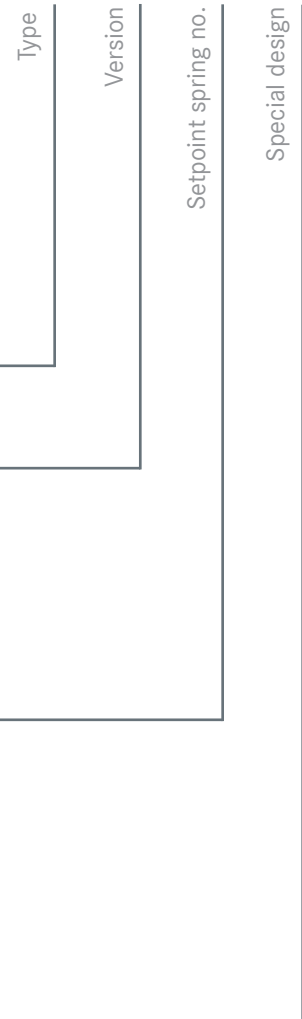
#### Connections

Item	Description	Line	Pipe connection according to DIN EN ISO 8434-1 (DIN 2353) for pipe sizes
①	Connection to Measuring line	at outlet pressure $p_d$	Ø 12, M 14 x 1.5
②	Connection to Discharge line	at outlet pressure $p_d$	Ø 12, M 14 x 1.5
③	Connection to Vent line	to atmosphere	Ø 12, M 14 x 1.5
④	Connection to Inlet pressure line	at inlet pressure $p_U$	Ø 10, M 14 x 1.5
⑤	Connection to Loading pressure line	at main valve	Ø 10, M 14 x 1.5

HON 625 - LP - 3 - So

Example:

Type of pilot			
Type of pilot		HON 625	
Version			
Low Pressure		LP	
High Pressure		HP	
Setpoint adjusting screw of the control stage			
		Specific setting range $W_{ds}$ in bar	Setpoint spring no.
Version	LP measuring unit	0.02 bar to 0.06 bar	1
		0.04 bar to 0.18 bar	2
		0.07 bar to 0.35 bar	3
		0.3 bar to 0.5 bar	4
	HP measuring unit	0.3 bar to 1 bar	5
		0.5 bar to 2 bar	6
		1 bar to 3.5 bar	7
		2 bar to 5 bar	8
Special design			
Special design (must be explained in more detail)		So	



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your Honeywell account manager

**GERMANY****Honeywell Process Solutions**

Honeywell Gas Technologies GmbH  
Osterholzstrasse 45  
34123 Kassel, Deutschland  
Tel: +49 (0)561 5007-0  
Fax: +49 (0)561 5007-107

HON 625.00  
2017-01  
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