Specifications

	Pd ≥ 50 mbar	Pd < 50 mbar	Unit
Standard values			
Accuracy class AC (EN 334)	2,5	5	%
Closing pressure group SG (EN 334)	5	10	%
Hysteresis	< 0,4	< 1	%
Closing pressure zone SZ	< 1	< 1	%
Drift at Qmax with variable inlet pressure from 8 to 1,5 bar	+ 0,5	+ 1	%
Start time from zero consumption			
DN50	< 0,2	< 0,2	s
DN80-DN100	< 0,4	< 0,4	s
Valve opening time from 0 - 100% valve stroke			
DN50	< 2	< 2	s
DN80-DN100	< 3	< 3	s
Valve closing time from 100 - 0% valve stroke	**< 1**	**< 1**	**s**
DN50	< 1	< 1	s
DN80-DN100	< 2	< 2	s
Overshoot at opening travel of 100-0% within the closing time	< 10	< 20	%
Undershoot with opening travel of 0-100% in 10 s within the opening time	< 10	< 20	%
Output speed	< 150	< 150	m/s
AG Overpressure with safety shut-off valve	2,5	10	%
AG negative pressure with safety shut-off valve	10	20	%

Additional specifications Version RS350S AF

Closing time from 100-0% opening travel			
DN50	< 0,5	< 0,5	s
DN80 - DN100	< 1	< 1	s
Excess at opening travel of 100-0% within the closing time	< 10	< 10	%

To ensure correct operation in the event of a rapid change in the gas volume (Q) flowing through the regulator, the dynamic control behaviour of the regulator must be considered. The RS350S AF has been specially designed for use in delivery stations where minimal overshoot and fast closing of the regulator is required.

Capacity range

Nominal size	Control valve (mm)	K_G-coefficient for natural gas*	Overall length Tolerance ±2 mm	Overall length with fill ring (mm)
DN 50	17,5	185	230	254
	22,5	440	230	254
	27,5	640	230	254
	37,5	1000	230	254
	42,5	1250	230	254
DN80	52,5	2270	298	310
DN100	65	3640	351	n.v.t.

** at 15° C and 1,01325 bar*

Ordering matrix

The product number consists of a combination of eight letters and numbers.

Type Group
D4 = PN16
D5 = PN10

A = Application
1. RS350S - delivery station (AF*)
2. RS350S - distribution station
3. RS350S - supply station without SAV (AF*)
4. RS350S - distribution station without SAV

B = Valve size
1. DN50 V17,5
2. DN50 V22,5
3. DN50 V27,5
4. DN50 V37,5
5. DN50 V42,5
6. DN80 V52,5
7. DN100 V65

C = Outlet pressure
1. 25 to 50 mbar (distribution networks)
2. 50 to 100 mbar (distribution networks)
3. 100 to 200 mbar (distribution networks/delivery)
4. 200 to 400 mbar (distribution networks/delivery)
5. 0.4 to 0.8 bar (distribution networks/delivery)
6. 0.8 to 1.6 bar (distribution networks/delivery)
7. 1.6 to 3.2 bar (distribution networks/delivery)
8. 3.2 to 6.4 bar (distribution networks/delivery)
9. 25 to 100 mbar (delivery)

D = Max SSV
1. 20 to 52 mbar (distribution networks)
2. 35 to 110 mbar (distribution networks/delivery)
3. 65 to 220 mbar (distribution networks/delivery)
4. 195 to 440 mbar (distribution networks/delivery)
5. 395 to 700 mbar (distribution networks/delivery)
6. 755 to 2350 mbar (distribution networks/delivery)
7. 1630 to 4200 mbar (distribution networks/delivery)
8. 3660 to 7500 mbar (distribution networks/delivery)

E= Min SSV
1. none
2. 5 to 15 mbar (LP)
3. 20 to 250 mbar (MD and HD)

F = Pilot Position
1. right
2. left
3. other

G = Language
00 = NL
10 = DE
20 = EN

Group	A	B	C	D	E	F	G = Your product number
D4	2	4	2	3	0	2	00

(Example: Product number D424230210 is a RS350S regulator for a distribution station, DN50 V37.5, 50-100 mbar, Max SSV 65 to 220 mbar, Min SSV None, Left, German)

Wigersma & Sikkema
Since 1921

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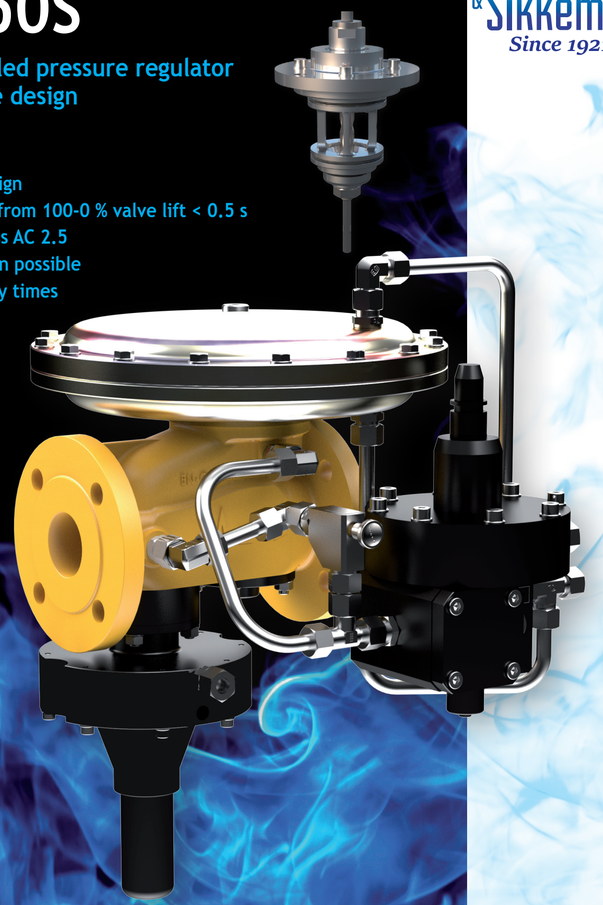
DDD320BRNL-Rev A1

RS350S

Gas controlled pressure regulator with unique design

- Patented design
- Closing time from 100-0 % valve lift < 0.5 s
- Accuracy class AC 2.5
- Quick revision possible
- Short delivery times



Low TCO | Easy installation | Fast and accurate | Corrosion proof | Low noise level | Circular | Plug & play | SAFE Fail to close

Wigersma & Sikkema
Since 1921

Pilot operated gas pressure regulator with unique design

Plug & play

The unique design of the new gas pressure regulator results in a regulator with fast response times, higher accuracy and stability over a wide flow and pressure range. The pilot has an integrated inlet pressure regulator with fixed setting and filter, which makes the regulator inlet pressure independent, which means it keeps the outlet pressure stable even with fluctuating inlet pressures. Due to its excellent dynamic properties, the RS350S can be used in distribution networks as well as in delivery stations. Production in the Netherlands and the modular design ensure short delivery times. The RS350S is supplied from the factory with a safety shut-off valve (SSV), which can be equipped with an SSV position indicator. The regulator is supplied "plug & play" with customised settings.

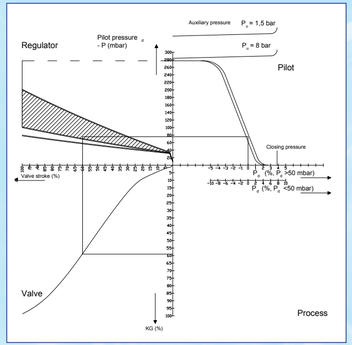
Fast and accurate

Low noise level

Distribution and delivery version

The RS350S is available in a distribution version and a delivery version. Because the pilot is designed in such a way that it regulates very quickly to about 10 % of the set value and then regulates smoothly and precisely to 2.5 %, this gas pressure regulator is very fast and precise. The dynamic control behaviour is asymmetrical. The regulator reacts very quickly to lower flow, which means that it requires less volume downstream of the regulator without triggering the safety shut-off valves in case of an emergency stop. The opening speed is intentionally slower, which improves the improves stability. The valve design is designed in such a way that the closing area is very small. This ensures that the regulator provides stable control even at minimum flow rates.

Quadrant diagram



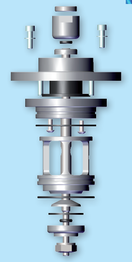
RS350S

Easy installation

Circular

Innovative Insert

The patented Insert integrates valve, valve seat and rolling membrane into one easily replaceable module. This has the great advantage that a valve change can be done very quickly and easily. With the DN50 regulator there are 5 different valve sizes, so that the Kg value can also be changed very quickly from 185 to 1250. The accuracy of the alignment is guaranteed, even with separate Inserts, which are easy and quick to remove. This ensures that when the valve is changed, the gas supply only must be interrupted for a very short time. The DN80 (K_G 2270) and DN100 (K_G 3640) are equipped with conventional screwed valve seats. The Insert can be returned to Wigersma & Sikkema for reworking. Afterwards, the Insert can be used again (circular).



Fast and accurate

Corrosion proof

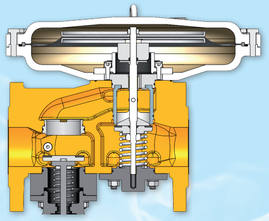
SAFE
Fail to close

High quality and long service life

Due to very low static friction in all moving parts (e.g., no O-rings to seal the valve guide, and special bearings that do not require lubrication), low-frequency vibrations ("sighing") and static deviation from the controlled pressure are prevented. Since the valves of the pilot are isolated from the forces of the sensing diaphragm, the setting of the pilot will not change. In applications where the gas flow is frequently shut off, this method offers a considerable advantage over spring-loaded regulators. The incise in of the control valve during closing is prevented, thereby significantly increasing its service life. The RS305S regulator is fail safe; if the main diaphragm of the regulator ruptures, a closing spring closes the valve. We recommend overhauling the regulator every 10 years.

Low TCO

Plug & play



Integrated SSV and easy settings

The safety shut-off valve is integrated into the regulator and can be adjusted to engage at both minimum and maximum pressure. All regulators are supplied from the factory with customer's settings. All regulators are tested with our unique PLEXOR® inspection system. This guarantees that each regulator is delivered to the customer with exactly the right settings and can be used immediately.

Low noise level

Various options available: silencer, shut-off signal, SSV position indicator

Since the regulator is designed so that the expansion takes place inside the regulator housing, the regulator is both safe and quiet. Optionally, the regulator can be equipped with an internal silencer. This enables a noise reduction of approx. 8 db. The regulator can also be equipped with an SSV position indicator. It is also possible to accurately measure the flow through the regulator with a valve position sensor. Accuracy valve position < 1%, accuracy K_G value < 5%.

Technical data

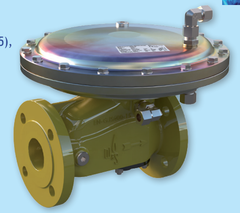
Fast and accurate

Corrosion proof

SAFE
Fail to close

Regulator

- DN50/80 regulator body: nodular cast iron GGG 40 (EN_GJS400_15), with 40 µm epoxy primer and 40 µm final protective coating
- DN100 regulator housing: nodular cast iron GGG 40 (EN-GSJ-400-18 LT), with 40 µm epoxy primer and 40 µm final protective layer
- Diaphragm housing: coated steel
- Valve shaft: stainless steel
- Valve material, seals and diaphragms: NBR
- Mounting and measuring line: stainless steel
- Flanges according to: EN 1092-2, PN16 or ANSI 150



Pilot

- Housing: anodised aluminium
- Mounting and measuring line: stainless steel
- Cutting ring couplings: Zinc-nickel coated steel
- Valve material, seals and diaphragm: NBR
- Built-in filter element: 10 µm stainless steel

Safety shut-off valve (SSV)

- Housing: anodised aluminium
- Cutting ring couplings: Zinc-nickel coated steel
- Valve material, seals and diaphragms: NBR

Calculation configurator

To select the gas pressure regulator, please use our calculation configurator.

Application area

- Inlet pressure: from 0.5 to 16 bar
- Outlet pressure: from 0.02 to 6.4 bar
- Inlet pressure pilot: 300 mbar above outlet pressure
- Minimum pressure difference inlet and outlet pressure: 0.5 bar
- Temperature range from -20 to + 60°C