



<p>Operation and Maintenance Instructions Stainless Steel Pressure Regulator, Filter Regulator and Filter</p>	E
<p>Read carefully the information contained in this manual before using the product. Make sure that it is always available where the equipment is located and operates and that all the personnel working with it in any way knows its content.</p>	

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Declarations

The product is pressure-tested and is subject to a function test before the selling in accordance with internal operation instructions according to the quality system ISO 9001 and Dir. 2014/68/EU PED.

The product is compatible to be used with the neutral gases indicated in section "Technical data".

The product falls within the scope of Art. 4 §3 in compliance with the Dir. 2014/68/EU PED, therefore it does not require any EU Declaration of Conformity.

If in doubt, contact the supplier and do not put the equipment into operation. RIEGLER & Co. KG declines all responsibility in the event that the suggestions and precautions listed here have not been respected.

General Instructions

The operating instructions contain important information.

- Carefully read the instructions and follow the safety instructions.
- Keep the instructions so that they are available for every user.
- Liability and warranty lapse, if the operating instructions in the manual are not observed and the product is not operated in the specified conditions of use.

Means of Presentation

Risks are presented depending on severity and probability using a pictogram and a signal word.



DANGER: Immediate danger! Severe or fatal injuries.

WARNING: Possible risk! Severe or fatal injuries.

ATTENTION: Danger! Moderately severe or slight injuries.

NOTE: Warns of property damage

Target Group

Installation, commissioning, use and service must only be carried out from appropriately qualified persons. The operating instructions are intended for persons that are trusted with the installation planning, installation, commissioning or service/maintenance and have the corresponding qualifications for their tasks and functions, i.e., are able to evaluate the work assigned to them and can recognize possible hazards, based on their technical training, knowledge and experience as well as their knowledge of the relevant standards. Also included the knowledge of relevant accident prevention regulations, general recognized safety regulations, EC directives and country-specific standards and regulations.

Intended Use

Regulator

Pressure regulators for compressed air and neutral gases for reducing to a back pressure independent of the flow rate. Pressure regulators cannot be used as flow rate regulating elements or as stop valves. They are compact spring-forced pressure regulators.

Filter regulator

Filter regulators for compressed air and neutral gases, for filtering the medium and to reduce to a back pressure independent of the flow rate. Filter regulators cannot be used as flow control element or as a shut-off valve. The stainless steel filter regulators include the function of a spring-forced pressure regulator. In addition to pressure control, filter regulators are equipped with a filtration function.

Filter

Filters for compressed air and neutral gases for filtering the medium.

General Warnings



ATTENTION! Failure to respect these instructions can cause potential danger and causes the immediate expiry of the warranty.

The warranty has a term of 24 months from the date of the delivery document and covers the original defects. The warranty does not operate in case of failed respect of this instruction, in case of carelessness or negligence in using and maintaining the device. The equipment is factory tested according to quality criteria and in accordance with the legislation in force, however, if you find non-conformities in the supply, please return the equipment indicating the found defect.

Safety Warnings

The equipment works with pressured neutral gas, it is therefore very important that the ones who operate with the device know the risks of handling gases. For this purpose, always ask the safety sheets that the gas supplier must provide with the gaseous product. These sheets indicate mainly the toxicological features, the risks of handling, the individual protection devices to be used and other important information for the safety of the operators. If you need any clarifications or in case of doubts about this operation instruction please contact the gas supplier or RIEGLER & Co. KG.

Preliminary Warnings



- The correct and safe operation of the product is ensured only if it is used in accordance with what is indicated in this manual and, in general, in the relevant accompanying documentation.
- It is recommended to carefully read and keep all the relevant documentation.



- Do not use the product for other purposes than the ones, which are indicated in this manual and the relevant product documentation, in particular those, which are indicated in the Technical Data section.
- It is always required to make sure that all the operators have fully understood all the operation rules; any injury to people or damage to things due to improper use is not the company's responsibility.
- Do not remove or damage labels, notices or warnings placed on the product.
- Any modification on the product must be previously authorized by RIEGLER & Co. KG.
- Appropriate fire-protection devices are the user's responsibility.
- The dimensioning and choice of the appropriate model with respect to the plant in which it must be installed and to which it must provide a service, are responsibility of the plant's user or designer.
- The use, maintenance and correct set-up of the parameters are responsibility of the relevant machine's user or supervisor.
- Only trained technical specialists must carry out installation and maintenance work.
- Comply with the general rules of technology.
- Install the device according to the valid regulations in your country.



It is strictly forbidden to tamper or damage the product with unoriginal spare parts, as that will entail the non-compliance with the rules and legislation in force, as well as the product warranty will expire.

Data and Technical Features

General technical data		
Process fluids*	HNBR	Compressed air, neutral gases
Temperature range	HNBR	-40°C / +80°C
Connections	1/4"; 3/8"; 1/2"; 3/4"; 1" Other connections are available upon request.	
Gauge socket	G 1/4	
Relief socket	M6	

* the fluid and the temperature depend on the type of gasket applied, other types of gaskets are available upon request, for such models check the technical data which are described in the relevant technical sheet of the product.

Directives	
Dir. 2014/68/EU PED	Art. 4.3

Series G 1/4 – G 3/4		
Flow rate (at $P_1 = 10$ bar, $P_2 = 6.3$ bar and pressure drop $\Delta p = 1$ bar)	Pressure and Filter regulator	Filter
	210 m ³ /h, 3500 l/min	240 m ³ /h, 4000 l/min
Maximum pressure	Inlet	60 Bar *
	Outlet	0.5-8 / 1-17 bar

*Optional version inlet pressure 70 bar

Series G 1/2 – G 3/4		
Flow rate (at $P_1 = 10$ bar, $P_2 = 6.3$ bar and pressure drop $\Delta p = 1$ bar)	Pressure and Filter regulator	Filter
	320 m ³ /h, 5330 l/min	360 m ³ /h, 6000 l/min
Maximum pressure	Inlet	60 Bar *
	Outlet	0.5-8 / 1-17 bar

*Optional version inlet pressure 70 bar

Series G 1		
Flow rate (at $P_1 = 10$ bar, $P_2 = 6.3$ bar and pressure drop $\Delta p = 1$ bar)	Pressure and Filter regulator	Filter
	550 m ³ /h, 9170 l/min	600 m ³ /h, 10000 l/min
Maximum pressure	Inlet	60 Bar *
	Outlet	0.5-8 / 1-17 bar



WARNING! Use the device only with the fluid for which it was purchased.

Installation



The installation must be carried out by making sure to preserve the degree of cleanliness.

Fixing to Wall



The product can be wall mounted through a specific kit, which is supplied as an optional.

Connection and Operation

The regulators, filter regulators and filters were developed and tested exclusively for operation with clean, dry, and chemical additives and unladen compressed air. Operating with media or additives other than those specified by the manufacturer is not permissible and requires the agreement of the manufacturer.

Before the installation make sure that the pipes are cleaned. Connect the equipment to the system taking account of the correct flow (see stamped arrow). Once it is connected, the inlet pressure can be gradually opened.

Regulator

Once regulator is pressurized at the inlet and the spring is unloaded (adjusting screw off), make sure that no pressure flows downstream. If there is the manometer (optional) check, that the indication is 0 bar of pressure.

Operate clockwise on the adjusting screw A in order to increase the outlet pressure and check the required pressure on the manometer, if present. Make sure that the set pressure remains stable and does not increase during the operation.

If the downstream pressure must be decreased, operate counter-clockwise on the adjusting screw (A). If the regulator is provided with a relieving system, the downstream overpressure will be discharged in the atmosphere even while the plant is not operating through the bonnet of the relieving system (B); if there is no relieving system, the pressure will gradually decrease during the operation of the plant.

Filter regulator

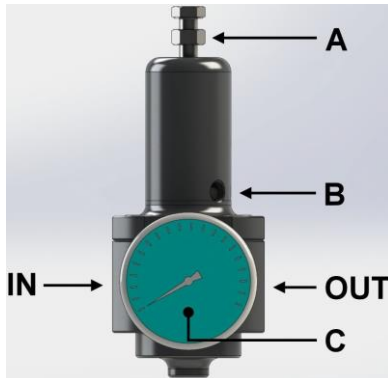
The operation is identical to the regulator with the addition of the following remarks:

Periodically deplete the condensation through appropriate manual discharge system (D). It is recommended to perform the procedure in absence of pressure. In case of dangerous gases or liquids, it is forbidden to perform such procedure during the operation.

Filter

Check that there are no leaks from the connections.

Periodically deplete the condensation through appropriate manual discharge system (D). It is recommended to perform the procedure in absence of pressure. In case of dangerous gases or liquids, it is forbidden to perform such procedure during the operation.



- For a longer duration of the product, carefully and gently handle the supply valves.
- The spring bonnet is not perfectly sealed and the neutral gas could flow through the adjusting screw (A).
- Suitable safety valves for the protection of the regulator shall be installed upstream and downstream against possible pressure increases.

Maintenance

Maintenance and servicing may only be carried out by trained specialist personnel! In case of normal use, it is recommended to carry out an inspection every 6 months, during which the device is inspected externally for damage and checked for function. In the case of unusually heavy use, shorter maintenance intervals may be required.

Diagnostics and Troubleshooting

Problem	Solution
The product leaks outside.	Check all the connections.
The product does not reach the outlet pressure (R-FR).	<ol style="list-style-type: none"> 1. The inlet pressure is too low. 2. The flow rate required by the plant is too high. 3. There are some leaks from the connections or the relieving system.
The outlet pressure increases (R-FR).	Leakage from the obturator. Check the integrity of the obturator or the presence of dirt. Impurities or small particles may damage the obturator seal (extraordinary maintenance).
Pressure drop too high between inlet and outlet.	<ol style="list-style-type: none"> 1. The flow rate required by the plant is too high. 2. Dirty and clogged filter (remove and clean) 3. The obturator group is dirty, damaged or seized. Insufficient opening of the obturator group.
Flow rate performances too low.	See previous point.
Leaks from the bonnet vent hole.	<ol style="list-style-type: none"> 1. Relieving system in operation, check the plant pressures and the ones, which were set in the regulator. 2. Membrane failure



For all the problems not indicated in the previous table, please contact the supplier without handling the product.

Useful Contacts and Addresses

If you need any clarification or in case of doubts about this operation instruction, please contact RIEGLER & Co. KG to the following addresses:

RIEGLER & Co. KG
Schützenstraße 27 | 72574 Bad Urach
Tel +49 7125 9497-642
technik@riegler.de

Stainless steel regulator with secondary venting (reversible), stainless steel pressure gauge

Artikel No.	Type No.
136412	DRES.G14R.05-8B.T
136413	DRES.G14R.1-17B.T
136414	DRES.G38R.05-8B.T
136415	DRES.G38R.1-17B.T
136416	DRES.G12R.05-8B.T
136417	DRES.G12R.1-17B.T
136418	DRES.G34R.05-8B.T
136419	DRES.G34R.1-17B.T
136420	DRES.G1R.05-8B.T
136421	DRES.G1R.1-17B.T

Stainless steel pressure regulator, without secondary venting (non-reversible), stainless steel pressure gauge

Artikel No.	Type No.
136422	DRES.G14NR.05-8B.T
136423	DRES.G14NR.1-17B.T
136424	DRES.G38NR.05-8B.T
136425	DRES.G38NR.1-17B.T
136426	DRES.G12NR.05-8B.T
136427	DRES.G12NR.1-17B.T
136428	DRES.G34NR.05-8B.T
136429	DRES.G34NR.1-17B.T
136430	DRES.G1NR.05-8B.T
136431	DRES.G1NR.1-17B.T

Stainless steel filter regulator with secondary venting (reversible), manual drain valve, stainless steel pressure gauge

Artikel No.	Type No.
136432	FRES.G14R.05-8B.T
136433	FRES.G14R.1-17B.T
136584	FRES.G38R.05-8B.T
136595	FRES.G38R.1-17B.T
136610	FRES.G12R.05-8B.T
136613	FRES.G12R.1-17B.T
136614	FRES.G34R.05-8B.T
136625	FRES.G34R.1-17B.T
136634	FRES.G1R.05-8B.T
136637	FRES.G1R.1-17B.T

Stainless steel filter

Artikel No.	Type No.
134411	FES.G1450.T
134498	FES.G3850.T
134664	FES.G1250.T
134671	FES.G3450.T
134941	FES.G150.T