

Filter and reducing station



The ARCA filter and reducing station is designed for an exact control of pressures at high air quantities (up to 34 m³/h), especially for the application at pneumatic positioners and control units as well as for similar critical cases.

This proven compact station has the following excellent features:

- high flow capacity
- exact pressure control
- quick response
- simple installation
- reliable oil and water separation
- reusable filter

Function:

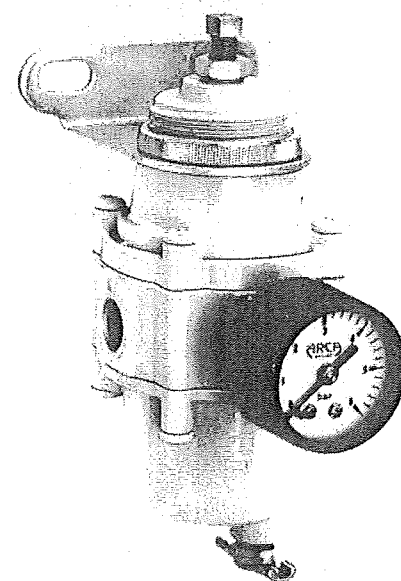
The filter and reducing station is a diaphragm-controlled pressure reducing valve. The desired output pressure is adjustable via the adjustment screw. The initial tension of the spring caused thereby produces the pressure at the diaphragm unit.

This force is equalized by the output pressure at the bottom side of the diaphragm combination. An increase of the spring force opens the main valve via the diaphragm unit. Now the output pressure increases until the equalization of force is achieved at the diaphragm unit. In the contrary case the decrease of the spring force lifts the diaphragm unit, the vent valve opens and the overpressure is released through the ventilation hole of the controller into the atmosphere until the forces at the diaphragm are equalized again.

The reducing station is provided with a filter-water collecting system which separates remainders of condensate, oil, pollutions such as rust, dust and oxide to avoid damages to the high-quality control units.

In case of frequent pollutions an additional prefilter with automatic outlet has to be installed.

By loosening the body screws the mounted 40µ nylon filter and the seat fitting behind it can be cleaned and reused without dismounting the station.



Installation:

The unit disposes of 4 connections 1/4" NPT. The air input "IN" can be mounted at the left or right side. The air output "OUT" is then at the opposite side right resp. left. In the right angle to these connections there are 2 connections "Gauge" which are internally connected with the air output. Alternatively, according to place and position of installation, a gauge can be mounted.

By means of the mounting bracket the filter and reducing station can be mounted at a wall. But also the mounting into a front panel is possible by using two flat nuts.

Technical data and dimensions

Technical Data:

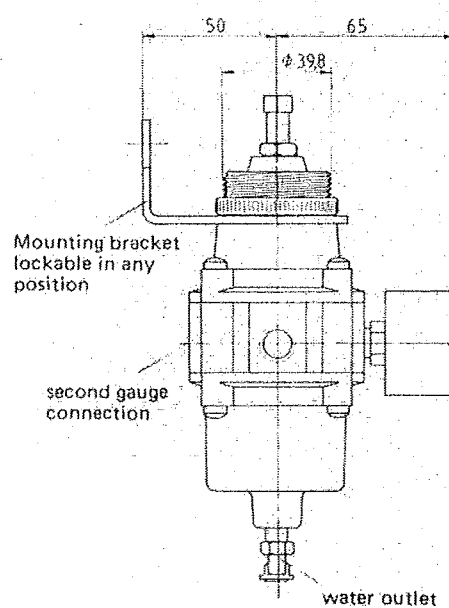
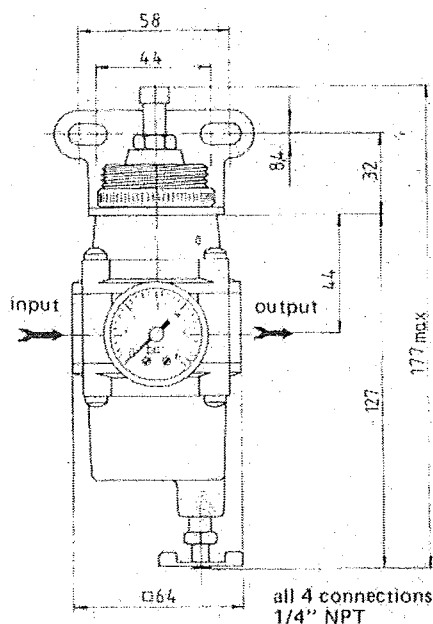
Adjustment range	0 - 6 bar
Flow capacity (at 7 bar initial pressure and 1,4 bar control pressure)	34 m ³ /h*
Discharge capacity (control pressure 0,35 bar above set-value)	0,85 m ³ /h*
Adjustment accuracy	2,0 mbar
Sensitivity	< 0,5 mbar
Temperature range	0 - 50 degrees C
Upstream pressure	18 bar
Proper air consumption at 1,4 bar control pressure	max. 8 l/h*
Connections	1/4 NPT
Weight	0,6 kg
Filter material	nylon web
Mounting	tube, panel or bracket
Material	body: aluminium alloy trim: stainless steel, synthetic material diaphragm: BUNA-N

* (in standard condition)

The ARCA filter and reducing station is supplied with mounting bracket as standard.

- 1 adjustment screw
- 2 counter nut for adjustment
- 3 hex. flat nut
- 4 body screws
- 5 spring casing
- 6 spring plate
- 7 setpoint spring
- 8 *diaphragm complete
- 9 casing, pivot bearing
- 10 *cone
- 11 *cone spring
- 12 spring bracket
- 13 *O-ring
- 14 connecting block
- 15 *O-ring
- 16 *filter
- 17 filter casing
- 18 drainage screw

*These parts are only available as repair set



Technical data are subject to change without notice.