

INSTRUMENT

Back Pressure Regulator VBR



Features

UNILOK Back Pressure Regulator is used to maintain a constant upstream pressure of gas, vapor or liquid. Designed for accurate regulation under low flow conditions, these units are widely used for protection of analysis instrumentation or as a relief valve in supply pressure lines to control valves.

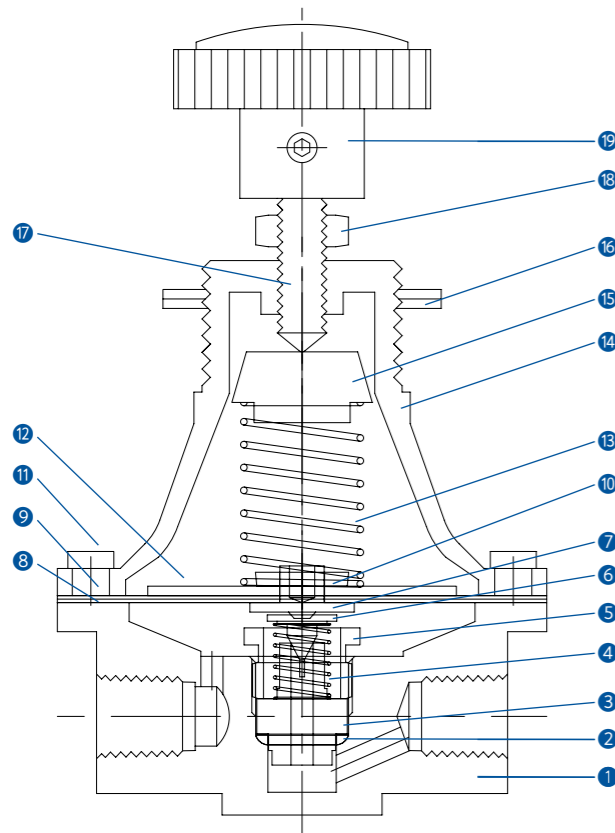
Specification

Connection : 1/4 Female NPT
 Operating Temperature : -29°C(-20°F) ~ 66°C(150°F)
 Sensitivity : 0.05psi
 Regulated Back Pressure Ranges : 0~125psig as standard



Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Body Seat	PTFE
3	Nozzle	316SS
4	Plug Spring	304SS
5	Nozzle Retaining Nut	316SS
6	Plug	316SS
7	Rivet	316SS
8	Packing Plate	PTFE
9	Rubber Seat	Rubber
10	Rivet Gland	316SS
11	Bolt	304SS
12	Rivet Plate	Brass
13	Range Spring	302SS
14	Bonnet	Aluminum
15	Spring Plug	Brass
16	Panel Nut	316SS
17	Handle Stem	316SS
18	Lock Nut	316SS
19	Handle	Xenoy



Principle of Operation

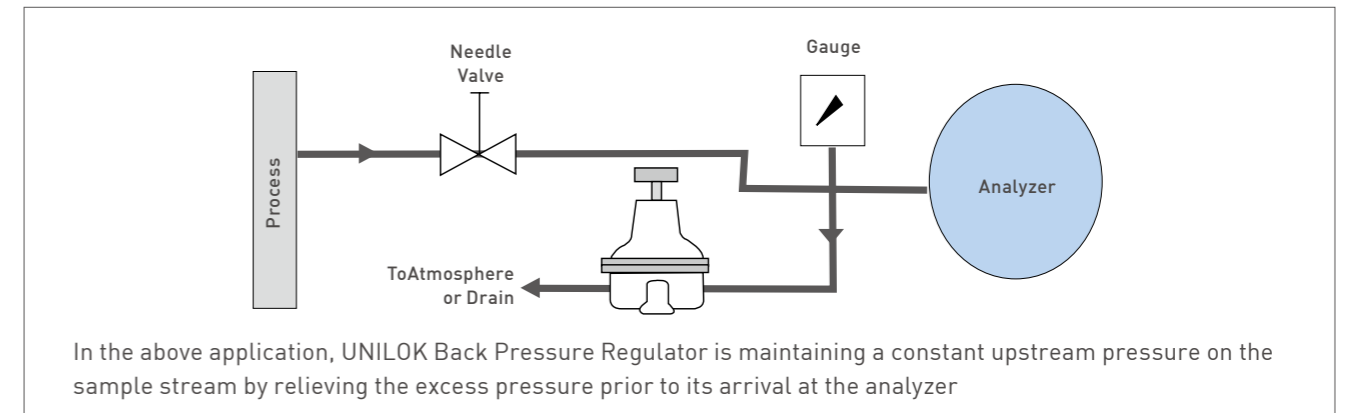
Turning the hand wheel changes the force exerted by the range spring on the diaphragm assembly. In equilibrium, the force exerted by the range spring is balanced by the force from back pressure acting underneath the diaphragm assembly.

If the back pressure rises above the set pressure, the diaphragm seat is lifted allowing the nozzle plug to open.

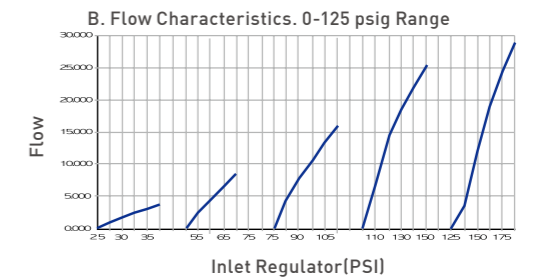
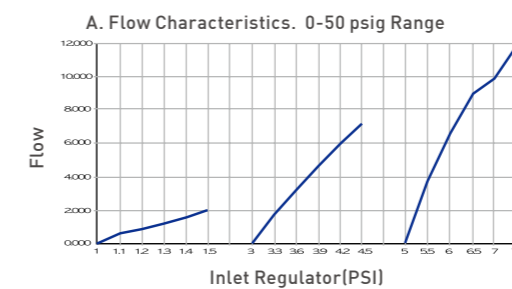
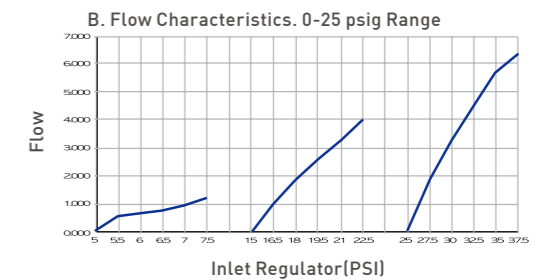
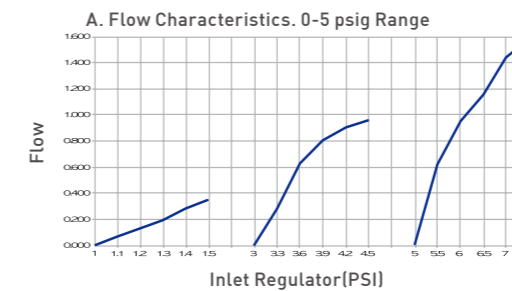
The excess pressure flows through the exhaust port until the back pressure is reduced to the set point.

While the back pressure is at or below the set point, the range spring holds the nozzle plug against its seat, shutting off the flow to the exhaust port.

Application



Range Selection



Important Notification

Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.