

Back Pressure Regulator



VBR series

Features

Uni-Lok 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.

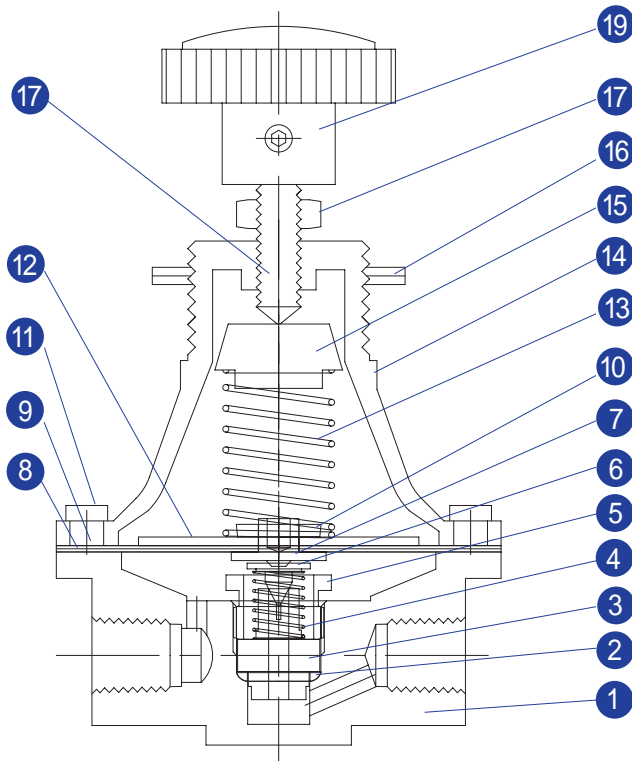
Specification

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	Ribet Plate	Brass
13	Range Spring	302SS
14	Bonnet	Aluminium
15	Spring Plug	Brass
16	Lock Nut	316SS
17	Handle Stem	316SS
18	Lock Nut	316SS
19	Handle	Xenoy

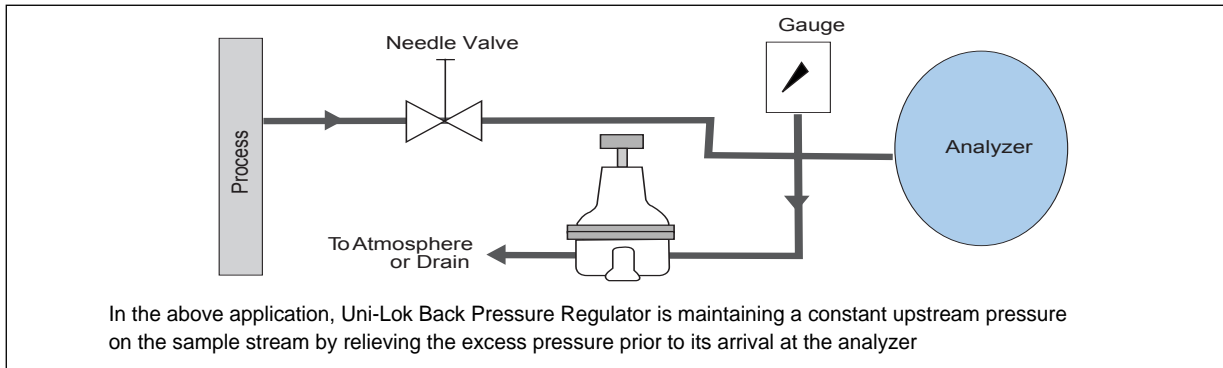
Principle of Operation

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.

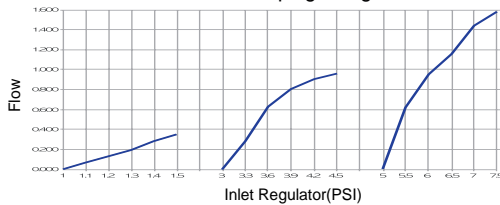
While the back pressure is at or below the set point, the range spring holds the nozzle plug against its seat, shutting off the flow to the exhaust port.

Application

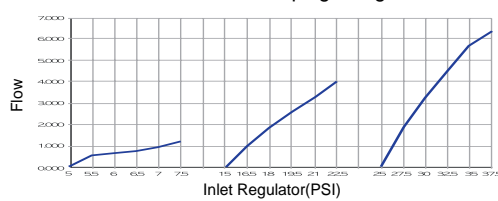


Range Selection

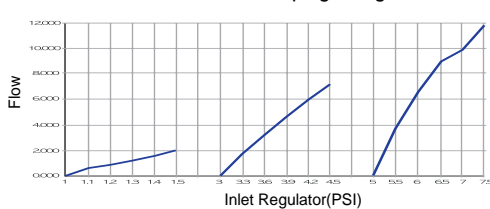
A. Flow Characteristics. 0.5 psig Range



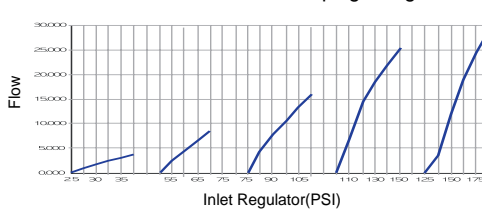
B. Flow Characteristics. 0-25 psig Range



C. Flow Characteristics. 0-50 psig Range



D. Flow Characteristics. 0-125 psig Range



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.

UNILOK (주) 유니락



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본사 및 제1공장

인천광역시 남동구 고잔동 725-13번지
 남동공단 152블럭 12롯데 ☎ 405-822
 전화 : 032-822-6600
 팩스 : 032-822-6604

제2공장

인천광역시 남동구 고잔동 684-7번지
 남동공단 114블럭 8롯데 ☎ 405-818
 전화 : 032-433-6601
 팩스 : 032-441-7600

Headquarters & 1st Factory

152 Block-12 Lot, Namdong Indus-Park, 725-13,
 Gojan-Dong, Namdong-Gu, Incheon, Korea
 Tel : +82-32-821-6673
 Fax : +82-32-822-6604

2nd Factory

114 Block-8 Lot, Namdong Indus-Park, 684-7,
 Gojan-Dong, Namdong-Gu, Incheon, Korea
 Tel : +82-32-433-6601
 Fax : +82-32-441-7600