



Instrument

Filter, Regulator

VF In-Line & Tee Filter 231

RE Regulator 237

VBR Back Pressure Regulator 243

INSTRUMENT

In-Line & Tee Filter VF



In-Line & Tee Filter VF

CONTENTS

| | | | |
|---------------------------------|-----|------------------------------|-----|
| Features | 232 | Important Notification | 233 |
| Materials of Construction | 232 | How To Order | 233 |
| Definitions | 233 | VFI series | 234 |
| Cleaning | 233 | VFT series | 235 |
| Testing | 233 | Flow Data | 236 |

Features

Traps undesirable materials for protection of system components from fluid particles as well as contaminants

Replaceable sintered 316SS filter element with micron filtering ranges - 0.5, 2, 7, 15, 60 & 90 microns

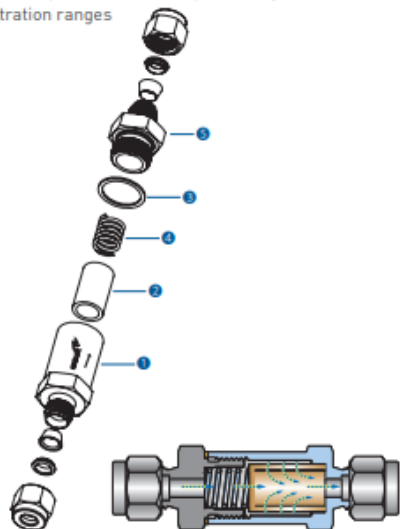
Compact body design

Wide choices of port sizes and end connections

VFI series In-line Filters

Maximum working pressure up to 3000psig (206bar) at 100°F(37°C)

For limited space and when filter element don't have to be replaced often Compact design with broaden filtration ranges



Materials of Construction

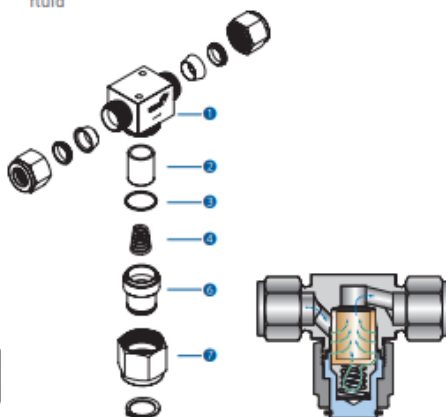
| No. | Description | Materials | |
|-----|-----------------|--------------------------|--------------|
| | | FT- T | FI - In-line |
| 1 | Body | 316SS | |
| 2 | Sintered Filter | 316SS | |
| 3 | Gasket | 316SS plated with silver | |
| 4 | Spring | 302SS | |
| 5 | Outlet Body | - | 316SS |
| 6 | Bonnet | 316SS | - |
| 7 | Nut | 316SS | - |

VFT series T Filters

Maximum working pressure up to 6000psig (413bar) at 100°F(37°C)

Easy replacement of filter element on-line
Union bonnet design for safe high pressure application

Bypass option for sampling or purging of process fluid



Definitions

Filter Element

Made of sintered stainless steel, porous with lots of tiny holes

Traps media contamination which is bigger than the porous in the filter element

Cleaning

UNILOK filters are free from machine oils, loose particles and grease throughout the close cleaning process.

The special cleaning for high purity application is available upon request.

Testing

Every VF series filter is 100% factory tested with air and nitrogen at 1000psig (69bar) to a requirement of no detectable leakage.

How To order

UNILOK VF series filters are ordered by part number as shown below.

Example: The following part number, **VFT3U-08T-SS-60-B02N** is designated for FT series filter with both 1/2 UNILOK tube fittings, 316SS, 60 micron filter element, 1/8 Female NPT by-pass option.

U

FT3

U

-

08T

-

SS

-

60

-

B02N

UNILOK
Filter

Fiber Type

Connection
Type

Connection
Size

Body
Materials

Filtration
Ranges

By-pass
Option

Thread Type Designation

| | |
|----|----------------|
| FI | In-line Filter |
| FT | T Filter |

Connection Type

| | |
|---|---------------------------|
| U | UNILOK Tube Fitting |
| F | Female NPT or ISO7/1(P/T) |
| M | Male NPT or ISO7/1(P/T) |

Body Materials

| | |
|----|-------|
| SS | 316SS |
| BS | Brass |

Connection Size

Fractional(Inch) Tube O.D. Designation

| | | | | | |
|------------|------|------|------|------|-------|
| Tube O.D. | inch | 1/8 | 1/4 | 3/8 | 1/2 |
| | mm | 3.17 | 6.35 | 9.52 | 12.70 |
| Designator | | 02T | 04T | 06T | 08T |

Metric Tube O.D. Designation

| | | | | | | |
|------------|----|------|------|------|------|------|
| Tube O.D. | mm | 3 | 6 | 8 | 10 | 12 |
| Designator | | M03T | M06T | M08T | M10T | M12T |

Pipe Size Designation [NPT or ISO7/1-PT]

| | | | | |
|------------|-------|-------|-------|-------|
| Pipe Size | 1/8 | 1/4 | 3/8 | 1/2 |
| Designator | 02N/R | 04N/R | 06N/R | 08N/R |

Filtration Ranges

| Designator | Normal Micron |
|------------|---------------|
| 05 | 0.5 |
| 2 | 2 |
| 7 | 7 |
| 15 | 15 |
| 60 | 60 |
| 90 | 90 |

By-pass Option

| | |
|------|-----------------------------|
| None | None |
| B02N | By-pass with Female 1/8"NPT |
| B04N | By-pass with Female 1/4"NPT |

Filtration Area

Actual surface area of the filter element to trap media contamination

Micron

Pore diameter of filter element or particle diameter of media contamination 1 micron = 0.001mm or 0.00004 inch

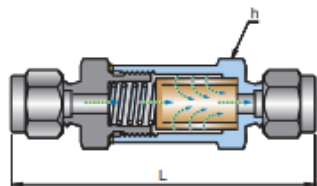
Important Notification

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

When undesirable contaminants are trapped by filter element, the system pressure build up occurs. It comes earlier when the flow volume is high and the media is not clean. In this case, the filter elements need to be replaced and clean metal components when replacement for minimal pressure drop as well as system purity.

VFI series

(In-line Filters)



Maximum working pressure up to 3000psig [206bar]
at 100°F[37°C]
For limited space and when filter element don't have
to be replaced often
Compact design with broaden filtration ranges

Ordering Information & Dimensions

| Part Number | End Connection | | Orifice (mm) | Dimensions (mm) | |
|-------------|----------------|-----------------|--------------|-----------------|------|
| | Inlet | Outlet | | L | h |
| VFI1 | U-02T- | 1/8" UNILOK | 2.4 | 59.7 | 14.3 |
| | U-M03T- | 3mm UNILOK | | 60.5 | |
| | F-02N- | 1/8" Female NPT | | 54.9 | |
| VFI2 | U-04T- | 1/4" UNILOK | 4.7 | 74.9 | 19.0 |
| | U-M06T- | 6mm UNILOK | | 75.2 | |
| | F-04N- | 1/4" Female NPT | | 72.9 | |
| | M-04N- | 1/4" Male NPT | | 68.3 | |
| VFI3 | U-06T- | 3/8" UNILOK | 7.1 | 81.8 | 25.4 |
| | F-06N- | 3/8" Female NPT | | 77.2 | |
| | M-06N- | 3/8" Male NPT | | 71.6 | |
| VFI4 | U-08T- | 1/2" UNILOK | 10.3 | 86.9 | |
| | U-M10T- | 10mm UNILOK | | 82.2 | |

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VFI series filters. Add "R" as a suffix instead of "N"

Effective Filtration Area

| Series | Effective Filtration Area | |
|------------|---------------------------|-----------|
| | sq. inch | sq. meter |
| VFI1 | 0.55 | 0.00035 |
| VFI2 | 1.30 | 0.00083 |
| VFI3, VFI4 | 2.00 | 0.00128 |

Filter Elements & Ordering Designator

The elements can trap 95% of undesirable particles larger than the nominal pore size.

| Ordering Designator | Nominal Pore Size(μm) | Pore Size Range(μm) |
|---------------------|-----------------------|---------------------|
| 05 | 0.5 | 0.5 ~ 2 |
| 2 | 2 | 1 ~ 4 |
| 7 | 7 | 5 ~ 10 |
| 15 | 15 | 11 ~ 25 |
| 60 | 60 | 50 ~ 75 |
| 90 | 90 | 75 ~ 100 |

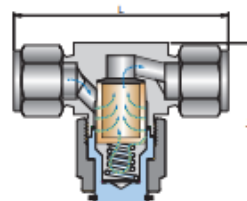
Technical Data

| Series | Max Working Pressure at 100°F[37°C] | | | | Working Temperature Rating | |
|------------|-------------------------------------|-----|-------|-----|----------------------------|----------------------------|
| | 316SS | | Brass | | 316SS | Brass |
| | psig | bar | psig | bar | | |
| VFI1 | 3000 | 206 | 3000 | 206 | -20 ~ 900°F -28 ~ 482°C | -20 ~ 300°F -28 ~ 148°C |
| VFI2 | 3000 | 206 | 3000 | 206 | | |
| VFI3, VFI4 | 2500 | 172 | 2000 | 137 | | |

Dimensions are for reference only and are subject to change without prior notice.

VFT series

(T Filters)



Maximum working pressure up to 6000psig [413bar]
at 100°F[37°C]
Easy replacement of filter element on-line
Union bonnet design for safe high pressure application
Bypass option for sampling or purging of process fluid

Ordering Information & Dimensions

| Part Number | End Connection | | Orifice (mm) | Dimensions (mm) | |
|-------------|----------------|-----------------|--------------|-----------------|----------------|
| | Inlet | Outlet | | L | L ₁ |
| VFI1 | U-02T- | 1/8" UNILOK | 2.4 | 57.7 | 47.5 |
| | U-04T- | 1/4" UNILOK | | 62.7 | |
| | U-M06T- | 6mm UNILOK | | 62.5 | |
| | F-02N- | 1/8" Female NPT | | 50.8 | |
| | F-04N- | 1/4" Female NPT | | 54.1 | |
| VFI2 | M-02N- | 1/4" Male NPT | 4.4 | 54.1 | |
| | U-06T- | 3/8" UNILOK | | 72.1 | |
| VFI3 | M-08N- | 8mm UNILOK | 5.4 | 72.1 | 56.0 |
| | U-08T- | 1/2" UNILOK | | 77.2 | |
| | U-M10T- | 10mm UNILOK | | 72.6 | |
| | U-M12T- | 12mm UNILOK | | 77.2 | |
| | M-06N- | 3/8" Male NPT | | 60.5 | |
| | M-08N- | 1/2" Male NPT | | 69.9 | |

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VFT series filters. Add "R" as a suffix instead of "N".

Filter Elements & Ordering Designator

The elements can trap 95% of undesirable particles larger than the nominal pore size.

| Ordering Designator | Nominal Pore Size(μm) | Pore Size Range(μm) |
|---------------------|-----------------------|---------------------|
| 05 | 0.5 | 0.5 ~ 2 |
| 2 | 2 | 1 ~ 4 |
| 7 | 7 | 5 ~ 10 |
| 15 | 15 | 11 ~ 25 |
| 60 | 60 | 50 ~ 75 |
| 90 | 90 | 75 ~ 100 |

Technical Data

| Series | Max Working Pressure at 100°F[37°C] | | | | Working Temperature Rating | |
|------------|-------------------------------------|-----|-------|-----|----------------------------|----------------------------|
| | 316SS | | Brass | | 316SS | Brass |
| | psig | bar | psig | bar | | |
| VFT1, VFT2 | 6000 | 413 | 2000 | 137 | -20 ~ 900°F -28 ~ 482°C | -20 ~ 300°F -28 ~ 148°C |
| VFI3 | | | | | | |

Dimensions are for reference only and are subject to change without prior notice.

Flow Data at 70°F(21°C)

VFI series In-line Filters

| Normal Element Pore Size (µm) | Inlet Pressure psig/bar | | | | | | | | | Pressure Drop psig/bar | | | | | | | | |
|--|-------------------------|------------|--------------------|----------------|------------|--------------------|----------------|------------|--------------------|------------------------|------------|--------------------|----------------|------------|--------------------|-----------------|------------|--------------------|
| | 5psig/0.34bar | | | 10psig/0.68bar | | | 15psig/1.00bar | | | 10psig/0.68bar | | | 50psig/3.40bar | | | 100psig/6.80bar | | |
| | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm |
| | Air Flow, L/min | | | | | | | | | Water Flow, L/min | | | | | | | | |
| 0.5 | 1.1 | 3.4 | 10 | 1.7 | 7.3 | 24 | 3.4 | 13 | 45 | 0.03 | 0.15 | 0.34 | 0.15 | 0.64 | 1.5 | 0.45 | 1.0 | 2.8 |
| 2 | 5.6 | 17 | 39 | 11 | 39 | 79 | 17 | 65 | 110 | 0.30 | 0.90 | 0.98 | 0.91 | 3.2 | 4.1 | 1.5 | 4.9 | 6.0 |
| 7 | 14 | 39 | 51 | 25 | 82 | 119 | 34 | 130 | 190 | 0.37 | 1.5 | 2.4 | 1.1 | 4.9 | 8.3 | 1.8 | 7.5 | 13 |
| 15 | 22 | 34 | 51 | 36 | 82 | 130 | 42 | 130 | 220 | 0.45 | 1.8 | 3.1 | 1.3 | 4.9 | 9.8 | 2.1 | 7.9 | 15 |
| 60 | 48 | 87 | 140 | 62 | 160 | 280 | 68 | 240 | 420 | 0.56 | 3.4 | 7.5 | 1.8 | 12 | 25 | 2.6 | 17 | 37 |
| 90 | 51 | 110 | 170 | 62 | 210 | 310 | 73 | 280 | 450 | 0.75 | 4.5 | 8.7 | 1.8 | 15 | 28 | 2.2 | 23 | 41 |

VFT series T Filters

| Normal Element Pore Size (µm) | Inlet Pressure psig/bar | | | | | | | | | Pressure Drop psig/bar | | | | | | | | |
|--|-------------------------|------------|--------------------|----------------|------------|--------------------|----------------|------------|--------------------|------------------------|------------|--------------------|----------------|------------|--------------------|-----------------|------------|--------------------|
| | 5psig/0.34bar | | | 10psig/0.68bar | | | 15psig/1.00bar | | | 10psig/0.68bar | | | 50psig/3.40bar | | | 100psig/6.80bar | | |
| | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm | 1/8 3mm | 1/4 6mm | 3/8,1/2 10,12mm |
| | Air Flow, L/min | | | | | | | | | Water Flow, L/min | | | | | | | | |
| 0.5 | 1.1 | 3.4 | 10 | 1.7 | 7.3 | 24 | 3.4 | 13 | 45 | 0.15 | 0.15 | 0.34 | 0.64 | 0.64 | 1.5 | 1.0 | 1.0 | 2.8 |
| 2 | 5.6 | 17 | 39 | 11 | 39 | 79 | 17 | 65 | 110 | 0.30 | 0.90 | 0.98 | 0.90 | 3.2 | 4.1 | 1.5 | 4.9 | 6.0 |
| 7 | 14 | 39 | 51 | 25 | 82 | 119 | 34 | 130 | 190 | 0.37 | 1.5 | 2.4 | 1.1 | 4.9 | 8.3 | 1.8 | 7.5 | 13 |
| 15 | 22 | 34 | 51 | 36 | 82 | 130 | 42 | 130 | 220 | 0.45 | 1.8 | 3.1 | 1.3 | 4.9 | 9.8 | 2.1 | 7.9 | 15 |
| 60 | 48 | 87 | 140 | 62 | 160 | 280 | 68 | 240 | 420 | 0.56 | 3.0 | 5.6 | 1.8 | 10 | 18 | 2.6 | 14 | 25 |
| 90 | 51 | 110 | 170 | 62 | 210 | 310 | 73 | 280 | 450 | 0.75 | 4.1 | 6.4 | 1.8 | 12 | 20 | 2.2 | 18 | 28 |

INSTRUMENT

Regulator RE



RE01 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

| | |
|-----------------------|---|
| Max. Inlet Pressure | 3500 or 500 psig (241 or 34.5 bar) |
| Outlet Pressure Range | 25, 50, 100, 250 and 500 psig (1.7, 3.5, 6.9, 17.3 and 34.5 bar) |
| Design Proof Pressure | 150% of maximum rated |

Operating Temperature

| | |
|--------------|-----------------------------|
| PCTFE Seat | -40 ~ 60°C (-40°F ~ 140°F) |
| Vespel® Seat | -40 ~ 177°C (-40°F ~ 350°F) |

Flow Capacity

| | |
|---------------------|-----------|
| 3500 psig / 241 bar | Cv = 0.06 |
| 500 psig / 34.5 bar | Cv = 0.2 |

Helium Leak Test

| | |
|-------------------|-------------------------------|
| Inboard Leak Rate | 2x10 ⁻⁶ atm cc/sec |
|-------------------|-------------------------------|

Media Contact Materials

| | |
|------------------|------------------------------------|
| Body | 316L Stainless Steel |
| Diaphragm | 316L Stainless Steel or Hastelloy® |
| Seat | PCTFE (Optional Vespel®) |
| Spring | 316 Stainless Steel or Hastelloy® |
| Poppet, Retainer | 316L Stainless Steel |

Cleaning

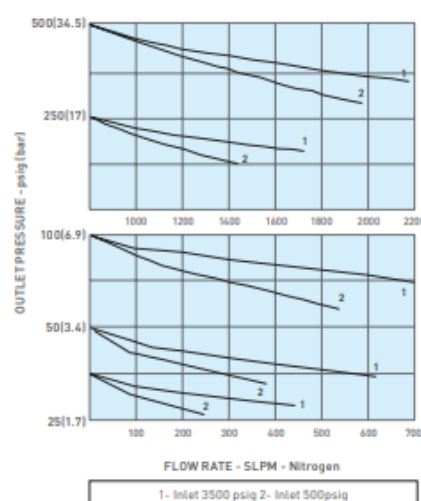
UNILOK Regulators are free from machine oils, loose particles and grease throughout the close cleaning process.



Features

- The RE01 series provides excellent stability of set pressure with accuracy, sensitivity.
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- Low internal volume
- Adjustable stop to limit outlet pressure

Flow Chart

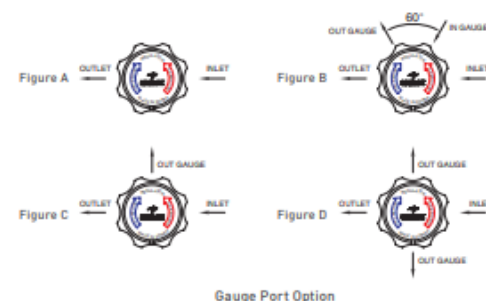
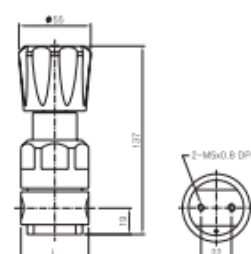


How To order

| | | | | | | | |
|----------------|---------------|-----------------|-----------------|------------------------|-------------------|----------|--------------------|
| RE01 | S | F | - 04N | 12 | 0 | - | E |
| Regulator Type | Body Material | Connection Type | Connection Size | Inlet /Outlet Pressure | Gauge Port Option | | Diaphragm Material |

| Regulator Type | | Connection Size | | Gauge Port Option | |
|-----------------|---------------------|------------------------|-----------------------------|--------------------|--------------------------|
| RE01 | RE01 Series | 04 | 1/4" | 0 | None [Fig. A] |
| | | | | 1 | 1/4" Female NPT [Fig. B] |
| | | | | 2 | 1/4" Female NPT [Fig. C] |
| | | | | 3 | 1/4" Female NPT [Fig. D] |
| Body Material | | Maximum Inlet Pressure | | Diaphragm Material | |
| S | 316L SS | 1 | 3500 psig / 241bar | None | 316L SS |
| B | BRASS | 2 | 500 psig / 34.5 bar | E | Elgiloy |
| | | | | H | Hastelloy® |
| Connection Type | | Outlet Pressure Range | | | |
| F-*N | Female NPT | 0 | 1 ~ 25 psig / 1 ~ 1.7 bar | | |
| U-*T | UNILOK Tube Fitting | 1 | 1 ~ 50 psig / 1 ~ 3.5 bar | | |
| | | 2 | 1 ~ 100 psig / 1 ~ 6.9 bar | | |
| | | 3 | 1 ~ 250 psig / 1 ~ 17.3 bar | | |
| | | 4 | 1 ~ 500 psig / 1 ~ 34.5 bar | | |

Ordering Information & Dimensions



| Part No. | End Connection | | Dimensions(mm) |
|----------|----------------|--------------------------|----------------|
| | Inlet | Outlet | L ± 1 |
| RE01* | F-04N | 1/4" Female NPT | 49 |
| | U-04T | 1/4" UNILOK Tube Fitting | 95 |

Dimensions are for reference only and are subject to change without prior notice.

| | |
|-----------------------|---|
| Max. Inlet Pressure | 3500 or 500 psig [241 or 34.5 bar] |
| Outlet Pressure Range | 25, 50, 100, 250 and 500 psig (1.7, 3.5, 6.9, 17.3 and 34.5 bar) |
| Design Proof Pressure | 150% of maximum rated |

| | |
|--------------|-----------------------------|
| PCTFE Seat | -40 ~ 60°C (-40°F ~ 140°F) |
| Vespel® Seat | -40 ~ 177°C (-40°F ~ 350°F) |

| | |
|---------------|-------------|
| Flow Capacity | $C_v = 1.0$ |
|---------------|-------------|

| | |
|-------------------|-------------------------------|
| Inboard Leak Rate | 2×10^{-4} atm cc/sec |
|-------------------|-------------------------------|

| | |
|------------------|------------------------------------|
| Body | 316L Stainless Steel |
| Diaphragm | 316L Stainless Steel or Hastelloy® |
| Seat | PCTFE (Optional Vespel®) |
| Spring | 316 Stainless Steel or Hastelloy® |
| Poppet, Retainer | 316L Stainless Steel |

- The RE02 series provides excellent stability of set pressure with accuracy, sensitivity.
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- Low internal volume
- Adjustable stop to limit outlet pressure

1- Inlet 3500 psig 2- Inlet 500psig

| | | | | | | | | |
|----------------|---------------|-----------------|----------|-----------------|-----------------------|-------------------|----------|--------------------|
| RE02 | S | F | - | 08N | 12 | 0 | - | E |
| Regulator Type | Body Material | Connection Type | | Connection Size | Inlet/Outlet Pressure | Gauge Port Option | | Diaphragm Material |

| Regulator Type | |
|----------------|-------------|
| RE02 | RE02 Series |

| Connection Size | |
|-----------------|---------------------|
| F-*N | Female NPT |
| U-*T | UNILOK Tube Fitting |

| Gauge Port Option | |
|-------------------|--------------------------|
| 0 | None [Fig. A] |
| 1 | 1/4" Female NPT [Fig. B] |
| 2 | 1/4" Female NPT [Fig. C] |
| 3 | 1/4" Female NPT [Fig. D] |

| Body Material | |
|---------------|---------|
| S | 316L SS |
| B | BRASS |

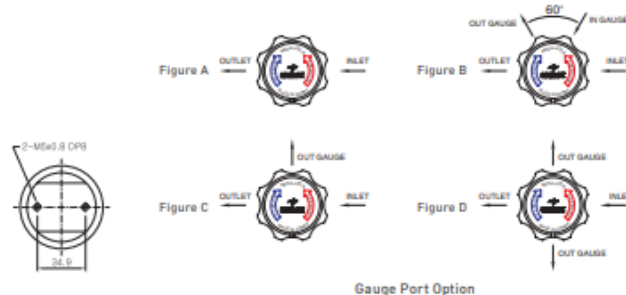
| Maximum Inlet Pressure | |
|------------------------|---------------------|
| 1 | 3500 psig / 241bar |
| 2 | 500 psig / 34.5 bar |

| Diaphragm Material | |
|--------------------|------------|
| None | 316L SS |
| E | Elgiloy |
| H | Hastelloy® |

| Connection Type | |
|-----------------|------|
| 06 | 3/8" |
| 08 | 1/2" |

| Outlet Pressure Range | |
|-----------------------|-----------------------------|
| 0 | 1 ~ 25 psig / 1 ~ 1.7 bar |
| 1 | 1 ~ 50 psig / 1 ~ 3.5 bar |
| 2 | 1 ~ 100 psig / 1 ~ 6.9 bar |
| 3 | 1 ~ 250 psig / 1 ~ 17.3 bar |
| 4 | 1 ~ 500 psig / 1 ~ 34.5 bar |

Technical drawing of a mechanical part, showing a cross-section with dimensions: 1.62 and 1.10.



| Part No. | | End Connection | | Dimensions(mm) |
|----------|-------|--------------------------|--------|----------------|
| | | Inlet | Outlet | L ± 1 |
| RE02* | F-08N | 1/2" Female NPT | | 60.0 |
| | U-06T | 3/8" UNILOK Tube Fitting | | 116.4 |
| | U-08T | 1/2" UNILOK Tube Fitting | | 116.4 |

240 | 241

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)

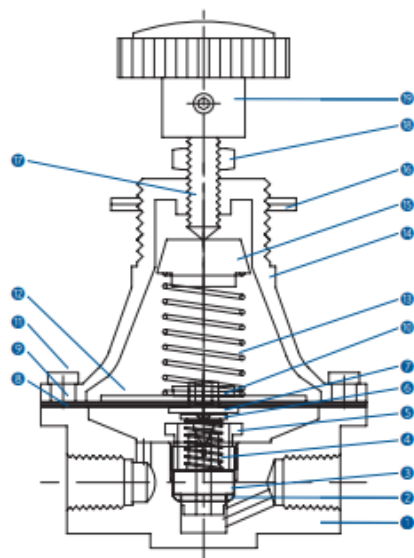
Sensitivity : 0.05psi

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

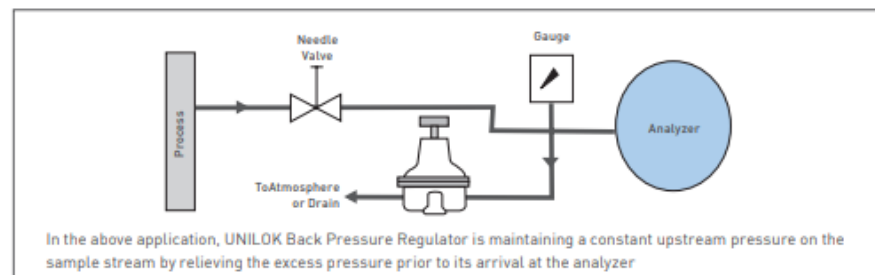
Turning the hand wheel changes the force exerted by the range spring on the diaphragm assembly. In equilibrium, the force exerted by the range spring is balanced by the force from back pressure acting underneath the diaphragm assembly.

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

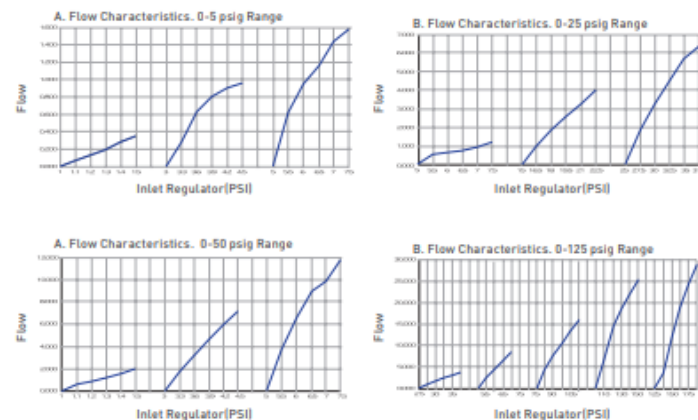
The excess pressure flows through the exhaust port until the back pressure is reduced to the set point.

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.