

# Flexflogulators Regulators





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# Flexflo® Top Entry Regulator Model 900TE



The Model 900TE (Top Entry) Flexflo® Regulator is a self-contained, pilot-operated pressure regulator that may be used in both gas and liquid applications. The 900TE Flexflo® Regulator design features a simple, top-entry design for easy in-line maintenance. The 900TE incorporates a cast steel body with integral flanged end connections. Multiple trim configurations are available to match a variety of applications. The 900TE Flexflo® Regulator is available from 2" (50.8 mm) to 6" (152.4 mm) bore. The 900TE Flexflo® Regulator typically is used with a Flexflo® Pilot for pressure control applications. The environmental-Iv friendly design of the Flexflo® Pilot and Regulator eliminates all atmospheric emissions by maintaining all gas/liquid within the piping system.

#### Features:

- Top entry design provides easy in-line maintenance or inspection
- Top entry design accessible without removal of pilot or plumbing
- Rugged design ideal for demanding pipeline applications
- Pulsation resistant design ideal for power plant type applications
- No hydraulic oil or internal springs required
- · Simple design has only one moving part
- Environmentally friendly design with no emissions
- Reduced capacity trims may be easily exchanged to optimize for flow conditions
- Dual instrument connection ports allow versatile control options/configurations
- Since 1942, the Flexflo® Regulator is the original flexible element regulator
- Can be mounted horizontal, vertical or upside down
- Low noise
- Pressure reducing, pressure relief or flow control applications

#### **Specifications:**

Item: Model 900TE Flexflo® Regulator

**Type:** Pilot Operated Regulator

**Body Materials: WCB** 

Available Sizes: 2 in. (50.8 mm)

3 in. (76.2 mm) 4 in. (101.6 mm) 6 in. (152.4 mm)

**End Connections:** Raised Face Flange

150, 300, 600 ANSI

ASME/ANSI B16.10

Working Temperature: -20°F to +150°F

(-29°C to +66°C) Standard\*

Maximum Differential: 1200 psid\*
Maximum Inlet Pressure: 1480 psig\*
Outlet Pressure Range: 1480 psig\*\*

\* Limited by Flexflo® Tube Selection.

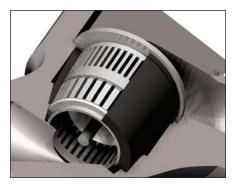
\*\* Limited by Flexflo® Pilot Selection.

#### The Flexflo® Regulator is the original flexible element regulator!

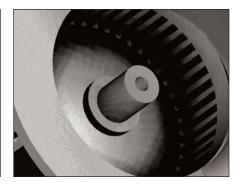
The 900TE Flexflo® Regulator is the ideal regulator for natural gas transmission/distribution systems and power plants. The combined package of the 900TE, filter, and Model 829S1 Pilot shown here provides a reliable and economical regulation package for all your pipeline needs. The 900TE Flexflo® Regulator is capable of regulating both gas and liquids, but is most commonly utilized in natural gas pipelines.



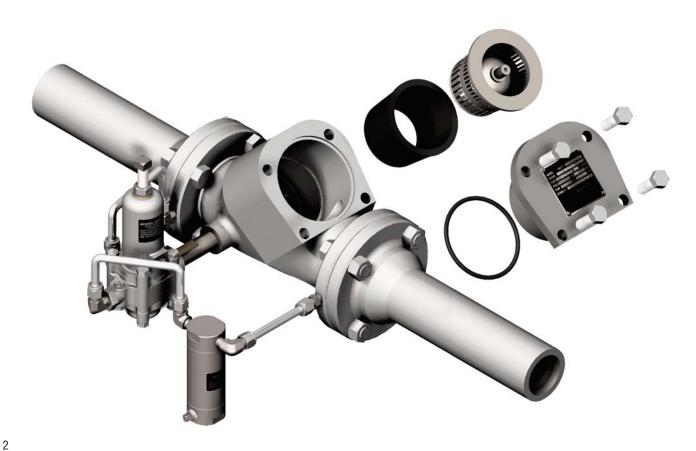
#### The REDQ™ Model 900TE Flexflo® Regulator is Extremely User Friendly to Maintain







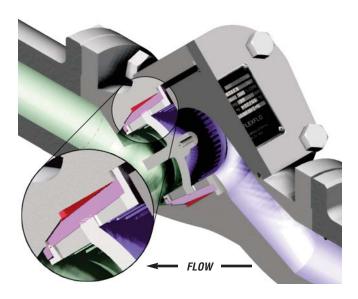
REDQ™ Model 900TE Flexflo® Regulator

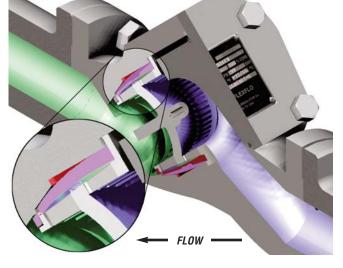


#### **How it Works**

Operation of the 900TE Flexflo® Regulator consists of one moving part, the Tube. This single moving part is a flexible element that controls the flow of gas/liquid through the Core of the regulator. Application of Jacket Pressure to the Tube (tube shown in purple) will regulate the volume of gas/liquid that flows through the regulator.

The 900TE Flexflo® Regulator functions as a "slave" device and requires a "brain" to control the process application. Most commonly, Flexflo® Pilots are utilized as the "brain" to control the process. For information on REDQ™ Flexflo® Pilots and other related Flexflo® accessories, see pages 13 to 15 of this brochure.





#### Model 900TE Flexflo® Regulator at Full Closed Position

As Jacket Pressure is increased the Tube will constrict around the Core reducing the flow volume that passes through the Core of the regulator. If Jacket Pressure is maximized, the Tube will seal around the center sealing surface of the Core and shut off flow. Jacket Pressure is maximized when it is equal to Upstream Pressure.

### Model 900TE Flexflo® Regulator at Full Open Position

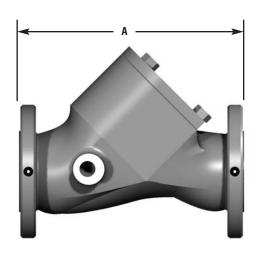
As Jacket Pressure is decreased, the Tube will expand from the Core increasing the flow volume that passes through the regulator. If Jacket Pressure is minimized, the Tube will expand away from the sealing surface of the Core allowing maximum flow. Jacket Pressure is minimized when it is equal to Downstream Pressure.



| Size             | ANSI Class | Face to Face<br>(A) | Flange<br>Diameter | Weight            |
|------------------|------------|---------------------|--------------------|-------------------|
| 2"               | 150        | 10"<br>254 mm       | 6"<br>152 mm       | 40 lbs<br>18 kg   |
| (50.8 mm)        | 300        | 10.5"<br>267 mm     | 6.5"<br>165 mm     | 45 lbs<br>20 kg   |
|                  | 600        | 11.25"<br>286 mm    | 6.5"<br>165 mm     | 49 lbs<br>22 kg   |
| 3"               | 150        | 11.75"<br>298 mm    | 7.5"<br>191 mm     | 96 lbs<br>44 kg   |
| (76.2 mm)        | 300        | 12.5"<br>318 mm     | 8.25"<br>210 mm    | 103 lbs<br>47 kg  |
|                  | 600        | 13.25"<br>337 mm    | 8.25"<br>210 mm    | 119 lbs<br>54 kg  |
|                  | 150        | 13.875"<br>352 mm   | 9"<br>229 mm       | 124 lbs<br>56 kg  |
| 4"<br>(101.6 mm) | 300        | 14.5"<br>368 mm     | 10"<br>254 mm      | 144 lbs<br>65 kg  |
|                  | 600        | 15.5"<br>394 mm     | 10"<br>254 mm      | 164 lbs<br>74 kg  |
| 6.7              | 150        | 17.75"<br>451 mm    | 11"<br>279 mm      | 294lbs<br>133kg   |
| 6"<br>(152.4 mm) | 300        | 18.63"<br>473 mm    | 12.5"<br>318 mm    | 338 lbs<br>153 kg |
|                  | 600        | 20"<br>508 mm       | 14"<br>356 mm      | 373 lbs<br>169 kg |

# Model 900TE Flexflo® Regulator Cv (Flow Coefficient) Data

| Size          | Max C <sub>v</sub><br>(100% Core) | Qmax H <sub>2</sub> 0 |
|---------------|-----------------------------------|-----------------------|
| 2" (50.8 mm)  | 58                                | 300                   |
| 3" (76.2 mm)  | 94                                | 660                   |
| 4" (101.6 mm) | 128.5                             | 1175                  |
| 6" (152.4 mm) | 304                               | 2644                  |

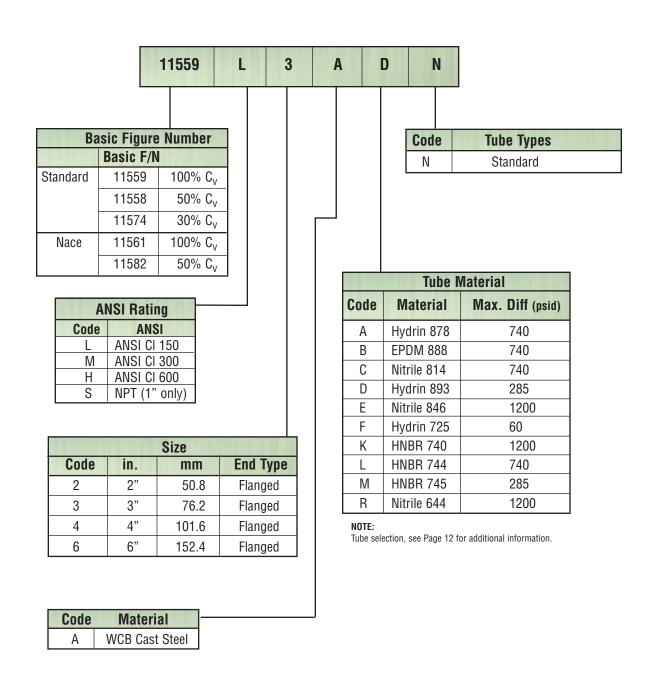


# Regulators

#### Model 900TE Flexflo® Regulator Figure Number Designation

REDQ™ Flexflo® Regulator Model Number Designation Explanation. Every REDQ regulator product can be completely identified by its figure number. Listed below is an example of how figure numbers are derived.

**Example:** 3 in. REDQ™ Model 900TE Regulator, Class 150 ANSI End Connections with Hydrin 893 Tube.



# Flexflo® Regulator Model 83



#### **Description:**

The Flexflo® Model 83 Regulator is a self-contained, pilot-operated pressure regulator that may be used in both gas and liquid applications.

The Model 83 design features a simple wafer design. The wafer design is ideal for compact installations where space is constrained. The Model 83 Regulator features an all stainless steel investment cast body. Multiple trim configurations are available to match a variety of applications. The Model 83 Flexflo® Regulator is available from 1" (25.4 mm) to 6" (152.4 mm) bore. The Model 83 Flexflo® Regulator is typically used with a Flexflo® Pilot for pressure control applications. The environmentally friendly design of the Flexflo® Pilot and Regulator eliminates all atmospheric emissions by maintaining all gas/liquid within the piping system.

#### The Flexflo® Model 83 Regulator Features:

- Compact design requires minimal installation space
- · Ideal regulator when space is limited
- · Stainless steel body
- Rugged design ideal for demanding pipeline applications
- Pulsation resistant design ideal for power plant type applications
- · No hydraulic oil or internal springs required
- Simple design has only one moving part
- · Environmentally friendly design with no emissions
- Reduced capacity trims may be easily exchanged to optimize for flow conditions
- Since 1942, the Flexflo® Regulator is the original flexible element regulator
- Low noise
- Pressure reducing, pressure relief or flow control applications

#### **Specifications:**

Item: Model 83 Flexflo® Regulator

Type: Pilot Operated Regulator

**Body Materials:** Stainless Steel **Available Sizes:** 1 in. (25.4 mm)

1.5 in. (38.1 mm) 2 in. (50.8 mm) 3 in. (76.2 mm) 4 in. (101.6 mm) 6 in. (152.4 mm)

**End Connections:** Screwed End NPT Connection

1.0 in. only

Raised Face Flangeless
1.5 in. to 6 in. sizes

Working Temperature: -20°F to +150°F

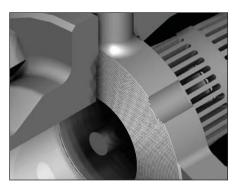
(-29°C to +66°C) Standard \*

Maximum Differential: 1200 psid\*
Maximum Inlet Pressure: 1480 psig\*
Outlet Pressure Range: 1480 psig\*\*

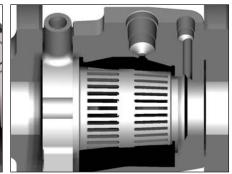
Limited by Flexflo® Tube Selection.

<sup>\*\*</sup> Limited by Flexflo® Pilot Selection.

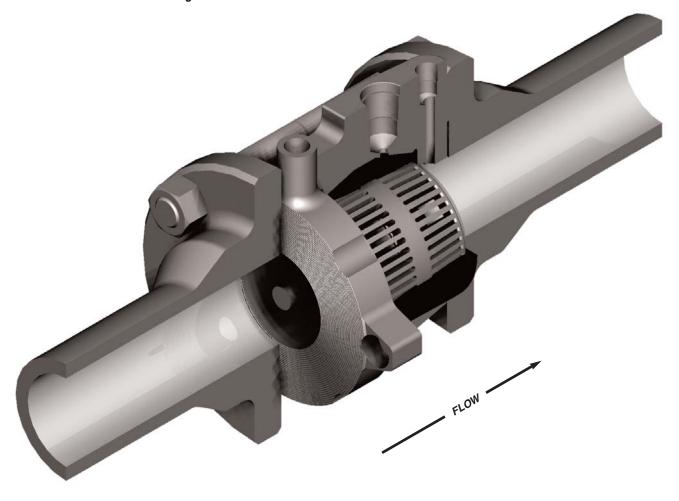
# The REDQ™ Model 83 Flexflo® Regulator Features an all Stainless Steel Body in a Compact Wafer Style Design







REDQ™ Model 83 Flexflo® Regulator

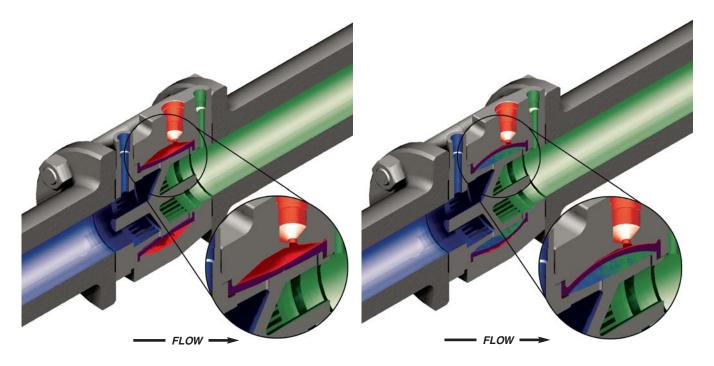


# Flexflo

#### **How it Works**

Operation of the Model 83 Flexflo® Regulator consists of one moving part, the Tube. This single moving part is a flexible element that controls the flow of gas/liquid through the Core of the regulator. Application of Jacket Pressure to the Tube (tube shown in purple) will regulate the volume of gas/liquid that flows through

the regulator. The Model 83 Flexflo® Regulator functions as a "slave" device and requires a "brain" to control the process application. Most commonly, Flexflo® Pilots are utilized as the "brain" to control the process. For information on REDQ™ Flexflo® Pilots and other related Flexflo® accessories, see pages 13 to 15 of this brochure.



#### Model 83 Flexflo® Regulator at Full Closed Position.

As Jacket Pressure is increased the Tube will constrict around the Core reducing the flow volume that passes through the Core of the regulator. If Jacket Pressure is maximized, the Tube will seal around the center sealing surface of the Core and shut off flow. Jacket Pressure is maximized when it is equal to Upstream Pressure.

#### Model 83 Flexflo® Regulator at Full Open Position.

As Jacket Pressure is decreased, the Tube will expand from the Core increasing the flow volume that passes through the regulator. If Jacket Pressure is minimized, the Tube will expand away from the sealing surface of the Core allowing maximum flow. Jacket Pressure is minimized when it is equal to Downstream Pressure.

#### Legend

- Inlet Pressure (Upstream Pressure)
- Jacket Pressure
- Sensing Pressure (Downstream Pressure)
- Tube

#### Simplify Operations of Your Pipeline with the Model 83 Flexflo® Regulator

How It's Built! The Model 83 Flexflo® Regulator features the simplest design of all "flexible element regulators" on the market. The uncomplicated design reduces training time and minimizes required spare parts.

#### The REDQ™ Model 83 "Compact Design" Regulator is Designed for Your Demanding Pipeline Applications



### Parts Identification and Materials of Construction for Model 83 Flexflo® Regulator

| Item | Qty | Description       | Material        |
|------|-----|-------------------|-----------------|
| 1    | 1   | Body              | Stainless Steel |
| 2    | 1   | Tube              | Elastomer       |
| 3    | 1   | Core <sup>1</sup> | Stainless Steel |
| 4    | 2   | Capscrew          | Alloy Steel     |
| 5    | 1   | Nameplate         | Aluminum        |

#### NOTES

### Port Identification for Model 83 Flexflo® Regulator

| Item | Port                                 | Port Size         |
|------|--------------------------------------|-------------------|
| Α    | Inlet Port (Supply)                  | 1/4" FNPT (Qty=1) |
| В    | Outlet Port                          | 1/4" FNPT (Qty=1) |
| С    | Jacket Port (Loading)                | 1/2" FNPT (Qty=1) |
| D    | Upstream Connection <sup>1,2</sup>   | 1" to 6"          |
| Е    | Downstream Connection <sup>1,2</sup> | 1" to 6"          |

#### NOTES:

- <sup>1</sup> Upstream and Downstream Connections for 1" bore Model 83 are screwed end connections.
- <sup>2</sup> Upstream and Downstream Connections for 1-1/2" bore and larger Model 83 are raised face flangeless.

# Regulators

<sup>1.</sup> Core (Item 3) available in reduced capacity configurations.

| Size            | ANSI Class | Face to Face<br>(A) | Flange<br>Diameter | Weight          |
|-----------------|------------|---------------------|--------------------|-----------------|
|                 | 150        | 4.06"<br>103 mm     | 2.75"<br>70 mm     | 5.5 lbs<br>3 kg |
| 1"<br>(25.4 mm) | 300        | 4.06"<br>103 mm     | 2.75"<br>70 mm     | 5.5 lbs<br>3 kg |
|                 | 600        | 4.06"<br>103 mm     | 2.75"<br>70 mm     | 5.5 lbs<br>3 kg |
| 1.5"            | 150        | 3.69"<br>94 mm      | 3.72"<br>94 mm     | 8 lbs<br>4 kg   |
| (38.1 mm)       | 300        | 3.69"<br>94 mm      | 3.72"<br>94 mm     | 8 lbs<br>4 kg   |
|                 | 600        | 3.69"<br>94 mm      | 3.72"<br>94 mm     | 8 lbs<br>4 kg   |
| 2"              | 150        | 4.19"<br>106 mm     | 4.38"<br>111 mm    | 12 lbs<br>5 kg  |
| (50.8 mm)       | 300        | 4.19"<br>106 mm     | 4.38"<br>111 mm    | 12 lbs<br>5 kg  |
|                 | 600        | 4.19"<br>106 mm     | 4.38"<br>111 mm    | 12 lbs<br>5 kg  |
| 3"              | 150        | 4.94"<br>125 mm     | 5.84"<br>148 mm    | 24 lbs<br>11 kg |
| (76.2 mm)       | 300        | 4.94"<br>125 mm     | 5.84"<br>148 mm    | 24 lbs<br>11 kg |
|                 | 600        | 4.94"<br>125 mm     | 5.84"<br>148 mm    | 24 lbs<br>11 kg |
| 4"              | 150        | 5.81"<br>148 mm     | 7.09"<br>180 mm    | 35 lbs<br>16 kg |
| (101.6 mm)      | 300        | 5.81"<br>148 mm     | 7.09"<br>180 mm    | 35 lbs<br>16 kg |
|                 | 600        | 5.81"<br>148 mm     | 7.09"<br>180 mm    | 35 lbs<br>16 kg |
| 6"              | 150        | 7.00"<br>178 mm     | 9.25"<br>235 mm    | 65 lbs<br>29 kg |
| (152.4 mm)      | 300        | 7.00"<br>178 mm     | 9.25"<br>235 mm    | 65 lbs<br>29 kg |
|                 | 600        | 7.00"<br>178 mm     | 9.25"<br>235 mm    | 65 lbs<br>29 kg |

#### Model 83 Flexflo $^{\circ}$ Regulator C<sub>V</sub> (Flow Coefficient Data)

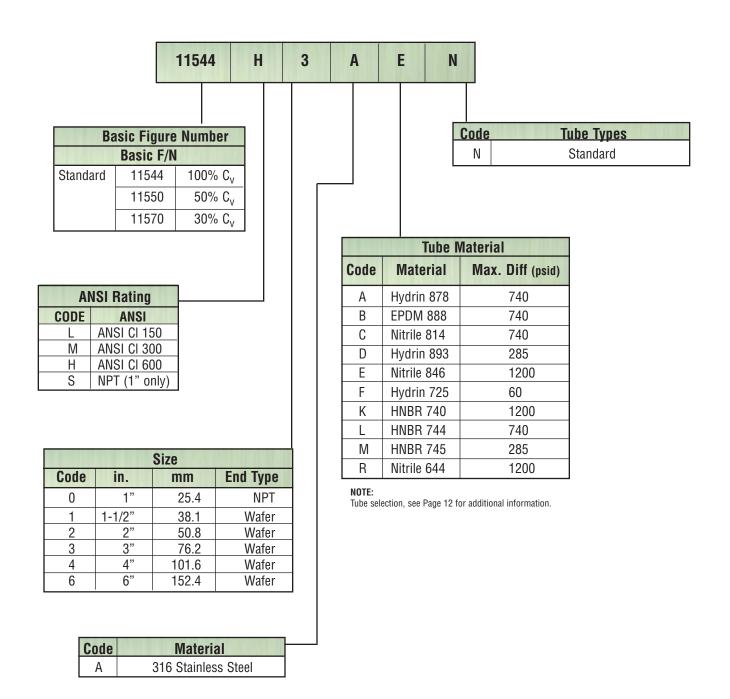
| Size          | Max C <sub>v</sub><br>(100% Core) | Qmax H <sub>2</sub> 0<br>(GPM) |
|---------------|-----------------------------------|--------------------------------|
| 1"(25.4 mm)   | 12                                |                                |
| 1.5"(38.1 mm) | 47                                | 400                            |
| 2" (50.8 mm)  | 77                                | 750                            |
| 3" (76.2 mm)  | 155                               | 1500                           |
| 4" (101.6 mm) | 234                               | 2250                           |
| 6" (152.4 mm) | 390                               | 3800                           |



#### Model 83 Flexflo® Regulator Figure Number Designation

REDQ™ Flexflo® Regulator Model Number Designation Explanation. Every REDQ regulator product can be completely identified by its figure number. Listed below is an example of how figure numbers are derived.

**Example: 3** in. REDQ™ Model 83 Regulator, Class 600 ANSI with Nitrile 846 Tube.



#### REDQ™ Tube material selection table for Flexflo® Regulators

In order to meet the exact demands of each particular Flexflo® Application, REDQ product line has a wide variety of different tube compounds. When selecting a tube for a specific application, its important to take into consideration pressure differential, temperature, as well as the particular flow media. In the table below there are some of the standard tubes that are in the REDQ product line.

#### Standard Flexflo® Tube Materials

| REDQ Material<br>(Code number)        | 814 (C)                                   | 846 (E)                                   | 878 (A)                         | 893 (D)                         | 888 (B)  | 725 (F)             | 745 (M)<br>744 (L)<br>740 (K)  | 644 (R)                                   |
|---------------------------------------|---|---|---------------------------------|---------------------------------|--|---------------------|--|---|
| Base Polymer                          | Nitrile                                   | Nitrile                                   | Hydrin                          | Hydrin                          | EPDM   | Hydrin              | HNBR   | Nitrile                                   |
| Nominal Durometer                     | 65  | 75  | 65                              | 55                              | 70   | 40                  | 65,75,85   | 75  |
| Max. Differential (psid)              | 740                                       | 1200                                      | 740                             | 285                             | 740  | 60                  | 745,744,740<br>285,740,1200  | 1200                                      |
| Temp. Range min/max °F                | 10/150                                    | 10/150                                    | -20/150                         | -40/150                         | -20/175  | -40/120             | 10/212   | -40/150                                   |
| Temp. Range min/max °C                | -12/65                                    | -12/65                                    | -29/65                          | -40/65                          | -29/79   | -40/48              | -12/100  | -40/65                                    |
| Hydrocarbon                           |   |   |                                 |                                 |  |                     |  |   |
| Gaseous                               | OK  | OK  | OK                              | OK                              | NR   | OK                  | OK   | OK  |
| Liquid                                | OK  | OK  | OK                              | OK                              | NR   | OK                  | OK   | OK  |
| % Aromatic content Max                | 20  | 15  | 30                              | 15                              | NR   | 20                  | 40   | NR  |
| Max sulfur % wt                       | 0.5                                       | 0.5                                       | 5                               | 0.5                             | NR   | 5                   | 5  | NR  |
| Fluid Compatibility                   |   |   |                                 |                                 |  |                     |  |   |
| Water                                 | OK  | OK  | NR                              | NR                              | OK   | NR                  | OK   | OK  |
| Nitrogen                              | OK  | OK  | OK                              | OK                              | OK   | OK                  | OK   | OK  |
| Air                                   | OK  | OK  | OK                              | 120°F max                       | OK   | OK                  | OK   | OK  |
| Synthetic Lubes<br>(Phosphate Esters) | NR  | NR  | NR                              | OK                              | NR   | NR                  | NR   | NR  |
| Peroxides<br>(Sour Gasoline)          | NR  | NR  | NR                              | NR                              | NR   | NR                  | OK   | ОК  |
| Ketones/Amines                        | NR  | NR  | NR                              | NR                              | NR   | NR                  | NR   | NR  |
| Max H2S in water %wt                  | 0.5                                       | 0.5                                       | NR                              | NR                              | Unlimited  | NR                  | 1.5  | NR  |
| Methyl. Ethyl Alcohols                | NR  | NR  | NR                              | NR                              | OK   | NR                  |  | NR  |
|                                       | Gen-Hydro-<br>carbon<br>Service,<br>Water | Gen-Hydro-<br>carbon<br>Service,<br>Water | Gen-Hydro-<br>carbon<br>Service | Gen-Hydro-<br>carbon<br>Service | Std. Water<br>Ammonia,<br>CO <sub>2</sub><br>Service | Low ∆P<br>Apps Only | White Petrol<br>Products,<br>Unleaded Gas<br>w/Alcohols<br>(MTBE)<br>Crude Oil | Gen-Hydro-<br>carbon<br>Service,<br>Water |

#### NOTES:

OK Indicates Material is Compatible with Corresponding Fluid.

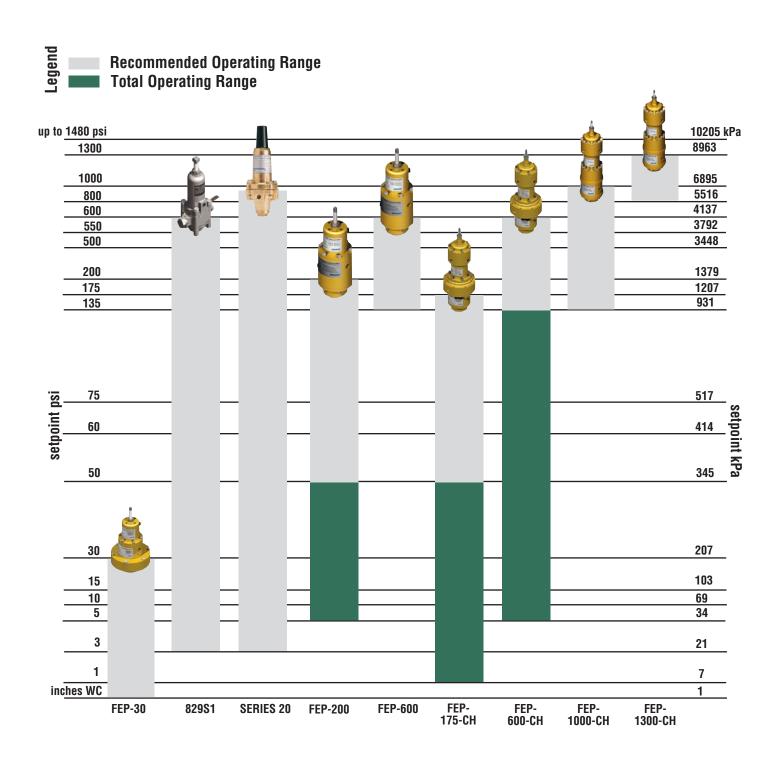
NR Indicates Material Not Recommended for Specific Flexflo® Regulator Model.

Nitrile, Hydrin and HNBR are standard.

Suggestion only: Customer must choose best tube for the application.

Hydrin is a registered trademark of Zeon Chemicals L.P.

#### REDQ™ Regulators Has The Optimum Flexflo® Pilot For Your Regulator Applications





#### Flexflo® Regulator Accessories/Options Realize Optimum Performance of your Flexflo® Regulator with these popular accessories/options!



#### Model 829S1 Flexflo® Pilot (Versatile Regulation)

The Model 829S1 Flexflo® Pilot is a reversible pressure control regulator (seat & nozzle) that is used in conjunction with Flexflo® Regulators to provide pressure control. The Model 829S1 Flexflo® Pilot is the most widely used Flexflo® pilot because it features all Stainless Steel Construction: NACE compliancy, wide setpoint range; simple design; and an economical price. The Model 829S1 may be utilized in both gas and liquid applications. The 829S1 is particularly well suited for use in natural gas regulation. Applications include pressure reduction, monitor regulators, backpressure control, and relief.

4.38" x 2.5' x 7.75" **Control Range:** 3-600 psig (21-4137 kPa) **Dimensions:** 

Available Action: Pressure Reducing (111 mm x 64 mm x 197 mm

Back Pressure/Relief Compatible: 83, 900 TE Flexflo® Regulators

Available Models: High Pressure/low Pressure **Regulators Weight:** 4.25 lbs (1.9 kg)

Control Ranges Flow Media:

Gas & Liquids



#### FEP-30 Becker Pilot (Low Pressure/High Accuracy Applications)

The FEP-30 Pilot is a reversible pressure control pilot (seat & nozzle design) that is used in conjunction with Flexflo® Regulators to provide pressure control. The FEP-30 Pilot is typically utilized in low-pressure natural gas distribution systems. The FEP-30 features accuracy and sensitivity to provide unrivaled control accuracy for setpoints ranging from inches H2O to 30 psig (1.0-207 kPa). The FEP-30 features a large convoluted sensing diaphragm and friction-free design that provides superior sensitivity at critical low-pressure setpoints. Additionally, note that the FEP-30 Series Pilots feature a submersible design that is ideally suited for yault applications that may fill with water.

**Control Range:** in w.c. 30 psig (1.0 - 206 kPa) Compatible

Available Action: Pressure Reducing Regulators: 83, 900 TE Flexflo® Regulators

> Back Pressure/Relief Weight: 6 lbs (2.7 kg)

Available Models: FEP-30 Temp. Range: -20°F to 160°F (-29°C to 71°C) Flow Media: Gas

**Dimensions:** 8.375" x 6' diameter

(213mm x 152mm diameter)





The Series 20™ Flowgrid® pilot is a reversible pressure-control regulator designed primarily for use as a control pilot with unloading-type pilot systems for pressure-reducing (PRV), backpressure (BPV or Relief), and differential-pressure (DPV) applications. The Series 20 pilot is designed for both gas and liquid applications.

**Control Range:** 3-900 psi (21-6206 kPa) Compatible Available Action: Pressure Reducina Regulators: 83, 900 TE Flexflo® Regulators

> Back Pressure/Relief Weight: 6 lbs (2.24 kg)

Available Models: 20, 20H, 20HS Temp. Range: -20°F to 150°F (-29°C to 65°C)

Flow Media: Gas and Liquids **Dimensions:** 8.9" x 3" x 3"

(226mm x 76mm x76mm)

#### Flexflo® Regulator Accessories/Options

#### Realize Optimum Performance of your Flexflo® Regulator with these popular accessories/options!



#### FEP-175/600-CH Becker Pilot Ultimate Performance (Power Plant Applications)

The FEP-175/600-CH Pilot is a reversible pressure control pilot (seat & nozzle design) that is used in conjunction with Flexflo® Regulators to provide pressure control. The FEP-175/600-CH is typically utilized for high performance pressure control applications such as power plants. Applications include: pressure reduction, monitor regulators, backpressure control, and relief valves. The FEP features a friction-free design, sensitive sensing diaphragm, high sensitivity and minimal droop. Additionally, note that the FEP-175/600-Ch Pilot is a submersible design that is ideally suited for vault applications that fill with water.

**Control Range:** 1-600 psig (7-4137 kPa) Compatible

**Available Action:** Pressure Reducing Regulators: 83, 900 TE Flexflo® Regulators

> Back Pressure/Relief Weight: 12 lbs (5.4 kg)

Available Models: FEP-175-CH, FEP-600-CH -20°F to 160°F (-29°C to 71°C) Temp. Range:

Flow Media:

**Dimensions:** 14.625" x 3.75' diameter

(371mm x 95mm diameter



#### FEP-1000/1300-CH Becker Pilot (High Pressure Setpoint Applications)

The FEP-1000-CH and FEP-1300-CH Pilots are reversible pressure control pilots (seat & nozzle design) that are used in conjunction with Flexflo® Regulators to provide pressure control. The FEP-1000/1300-CH Pilots are typically utilized in pipeline pressure control applications for "high pressure" setpoints up to 1300 psig (8963 kPa). Applications include pressure reduction, monitor regulator, backpressure control, and relief valves. The FEP-1000/1300-CH features improved accuracy and droop characteristics over standard issue flexible element pilots. The FEP-1000/1300-CH features a friction-free design that provides excellent sensitivity, minimal droop, and good lockup characteristics. Additionally, note that the FEP-1000/1300-CH Pilots feature a submersible design that is ideally suited for vault applications that may fill with water. The FEP-1000-CH and FEP-1300-CH are easily field reversible and supercede REDQ Pilot Models 820 and 830.

**Control Range:** 500-1300 psig (3448-8963 kPa) Compatible

Available Action: Pressure Reducing Regulators: 83. 900 TE Flexflo® Regulators

> Back Pressure/Relief Weight: 13 lbs (5.9 kg)

Available Models: FEP-1000-CH, FEP-1300-CH Temp. Range: -20°F to 160°F (-29°C to 71°C)

Flow Media:

15.375" x 4.0' diameter **Dimensions:** 

(391mm x 102mm diameter



#### FD-1500 Becker Filter-Dryer

The Model FD-1500 Filter Dryer filters and dehydrates supply gas for use upstream of Flexflo® Pilots and other Flexflo® instrumentation. Designed for use with all pneumatic instrumentation, the FD-1500 Filter Dryer provides superior filtration and dehydration with 110 square iEDes of 10 micron filtering media and 2.0 pounds of silica gel. The FD-1500 incorporates an easy-to-replace "spin on" cartridge made up of a high quality, high capacity nylon and fiberglass filter element reinforced with stainless steel mesh. All FD-1500's are fully hydrotested to 2.5 times the working pressure to ensure the integrity of the pressure vessel. Model FD-1500 Filter-Dryers are PED Compliant (Restrictions apply).

MAOP: 1500 psig (10,340 kPa)\* Inlet/Outlet Port: 1/4" FNPT1.75"

> all units hydrotested to Drain: 1/4" FNPT with plug

2250 psig (15,510 kPa) **Dimensions:** 20" (508 mm) length x 4-1/2"

(44 mm) diameter

10 μ nominal (110 in<sup>2</sup> Mounting: Panel Mount or 2" Pipe Mount

> Weight: 29 lbs. (5.0 kg)

Max. Temp:

Filtration:

filtration media)

200°F (93°C)

**Dehydration:** 2 lbs. (0.9kg) silica gel

water absorption

#### Application Guidelines for Flexflo® Regulators

|  | Model 83          | Model 900TE   |
|--|-------------------|---------------|
| Applications Pressure Control Power Plant Control Monitor Regulator (Overpressure) Relief Service (Overpressure) Flow Control Line Break Protection Backpressure Control On-Off Service Liquid Surge Relief <sup>1</sup> | •                 | • • • • • • • |
| Features In-Line "Top Entry" Maintenance Water-Style Compact Design NACE Compliant All Stainless Steel Construction Optional Reduced Capacity Trims  | •                 | •             |
| Available Configurations 1" (25.4 mm) Bore 1.5" (38.1 mm) Bore 2" (50.8 mm) Bore 3" (76.2 mm) Bore 4" (101.6 mm) Bore 6" (152.4) Bore  | •                 | • •           |
| End Connections Flangeless (Wafer) Raised Face Flanged End Screwed <sup>2</sup>  | •                 | •             |
| Flexflo Regulator Accessories/Opti<br>FEP-30 Becker Pilot<br>Model 829S1 Flexflo® Pilot<br>FEP 200/600 Becker Pilot<br>FEP-175/600-CH Becker Pilot<br>FEP-1000/1300-CH Becker Pilot                                      | on<br>•<br>•<br>• | •             |

#### NOTES:

- Model 83 and 900TE Flexflo® Regulators may be utilized as an economical option for Liquid Relief. Model 887 Flexflo® Surge Relievers are the primary choice for Liquid Surge Relief due to speed of response.
- Screwed End Connections are available only in 1 in (25.4 mm) bore Model 83 Flexflo® Regulators.

NOTE: This information is intended as a guideline for application of REDQ $^{\circ}$  Flexflo $^{\circ}$  Products. We reserve the right to modify product design at any time without notice. We strongly recommend contacting REDQ Regulator Operations prior to application of any products.



# Regulators

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