

129FC

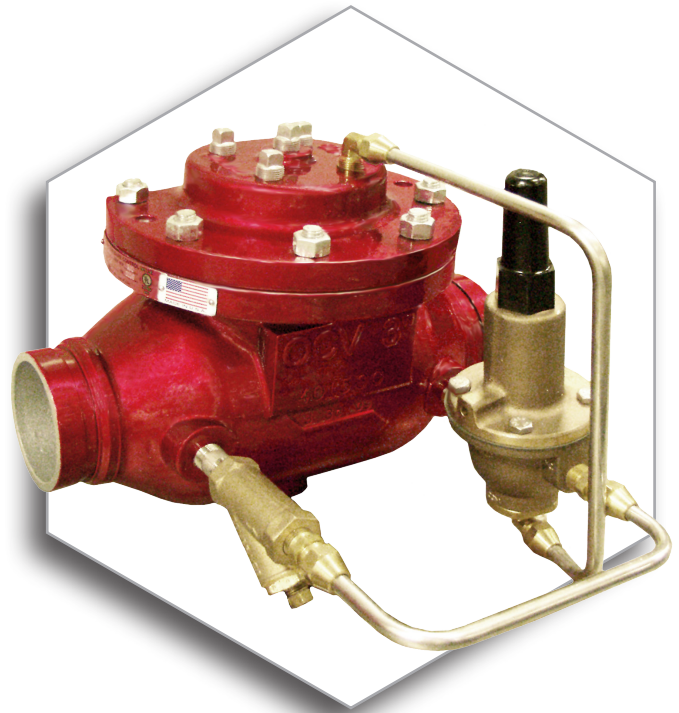
Pressure Reducing Valve

An automatic, pilot controlled, pressure reducing valve, actuated by the pipeline pressure. The valve regulates to a steady, preset downstream pressure, regardless of upstream pressure or flow rate fluctuations. In case of excessive downstream pressure, the valve closes drip tight.

CERTIFICATION & COMPLIANCE



- ANSI FCI 70-2 Class VI seat leakage class
- UL listed under VLMT category



* General representation of valve

FEATURES & BENEFITS

- Maintains constant discharge pressure regardless of upstream pressure or flow rate fluctuations
- Easily cleaned, repaired & adjusted without removal from the line
- Easily adjusted for discharge pressures ranging from 50-165psi
- Applicable for water, seawater & foam
- Out of box fully assembled & tested valves
- Factory trimmed for vertical & horizontal installations without modification
- Extensive valve & trim materials selection and corrosion protection coating

TYPICAL APPLICATIONS



Pump & Water Tanks



Fire Suppression Systems



Petrochemical, Oil & Gas Installations



Tunnels



Power Generation, Transformer & Transmission Plants



Onshore / Offshore



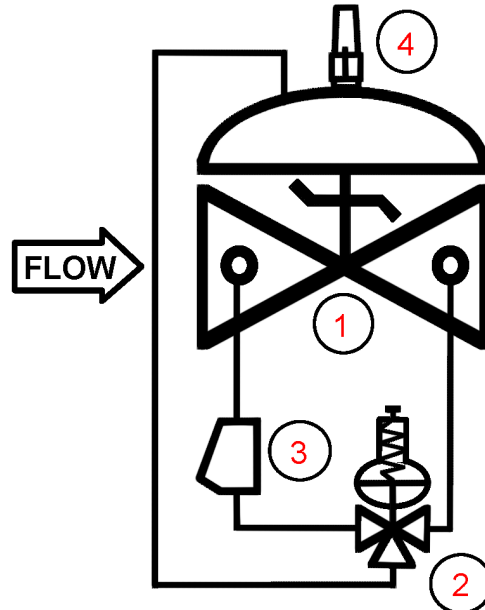
Mining

OPERATION

The normally open, spring loaded pilot, sensing downstream pressure, responds to changes in pressure and causes the main valve to do the same. The net result is a constant modulating action of the pilot and main valve to hold the downstream pressure constant.

The Model 129FC consists of the following components, arranged as shown on the schematic diagram:

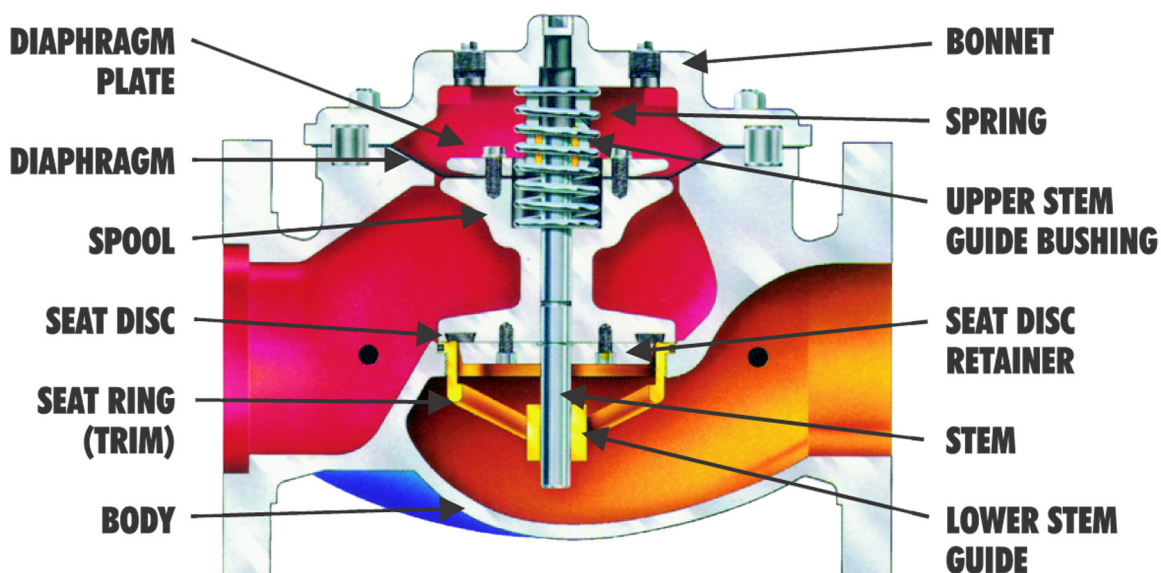
- [1] **Model 65 Basic Control Valve**, a hydraulically operated, diaphragm actuated, globe or angle valve which closes with an elastomer-on-metal seal.
- [2] **Model 1390 Pilot**, a 3-way, normally-open pilot valve which senses downstream pressure under its diaphragm and balances it against an adjustable spring load. An increase in downstream pressure tends to make the pilot close.
- [3] **Model 159 Y-Strainer**, protects the pilot system from solid contaminants in the line fluid.
- [4] **Model 155 Visual Indicator Assembly**, (optional) provides indication of the valve position at a glance.



Resetting, maintenance and periodic testing instructions must be followed as described in detail in the applicable OCV IOM (Installation, Operation & Maintenance) Manual.

TYPICAL MATERIALS

Description	Standard	Optional
Valve Body	Ductile Iron	Cast Steel, Stainless Steel, NAB, Duplex Stainless Steel
Seat Ring	Bronze	Stainless Steel, NAB
Stem	Stainless Steel	Monel
Spring	Stainless Steel	Elgiloy/MP35N
Diaphragm	Buna-N	EPDM
Seat Disc	Buna-N	EPDM
Pressure Reducing Pilot	Bronze	Stainless Steel, NAB, Duplex Stainless Steel
Tubing / Fittings	Copper, Bronze/Brass	Stainless Steel, Monel



* General representation of valve

GENERAL ARRANGEMENT & DIMENSIONS

U.S. DIMENSIONS - INCHES

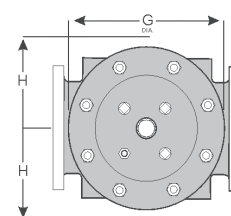
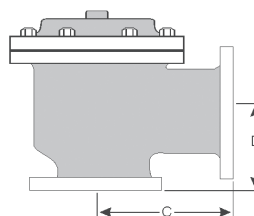
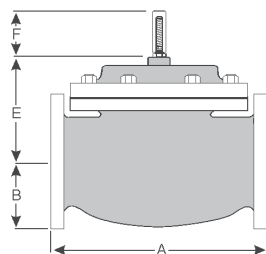
DIM	END CONN.	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
A	THREADED	8 3/4	9 7/8	10 1/2	13	--	--	--
	GROOVED	8 3/4	9 7/8	10 1/2	13	15 1/4	20	--
	150# FLGD	8 1/2	9 3/8	10 1/2	12	15	17 3/4	25 3/8
	300# FLGD	8 3/4	9 7/8	11 1/8	12 3/4	15 5/8	18 5/8	26 3/8
B	THREADED	1 7/16	1 11/16	1 7/8	2 1/4	--	--	--
	GROOVED	1*	1 3/16	1 7/16	1 3/4	2 1/4	--	--
	150# FLGD	2 5/16 - 2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4
	300# FLGD	2 5/8 - 3 1/16	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2
C	THREADED	4 3/8	4 3/4	6	6 1/2	--	--	--
	GROOVED	4 3/8*	4 3/4	6	6 1/2	7 5/8	--	--
	150# FLGD	4 1/4	4 3/4	6	6	7 1/2	10	12 11/16
	300# FLGD	4 3/8	5	6 3/8	6 3/8	7 3/16	10 1/2	13 3/16
D	THREADED	3 1/8	3 7/8	4	4 1/2	--	--	--
	GROOVED	3 1/8*	3 7/8	4	4 1/2	5 5/8	--	--
	150# FLGD	3	3 7/8	4	4	5 1/2	6	8
	300# FLGD	3 1/8	4 1/8	4 3/8	4 3/8	5 13/16	6 1/2	8 1/2
E	ALL	6 3/4	6 3/4	7 7/8	7 3/4	9 3/4	11 1/2	14 1/2
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4	14	21
H	ALL	10	11	11	11	12	13	14

*Grooved end not available in 1/4"
Approximate dimensions

METRIC DIMENSIONS - M.M.

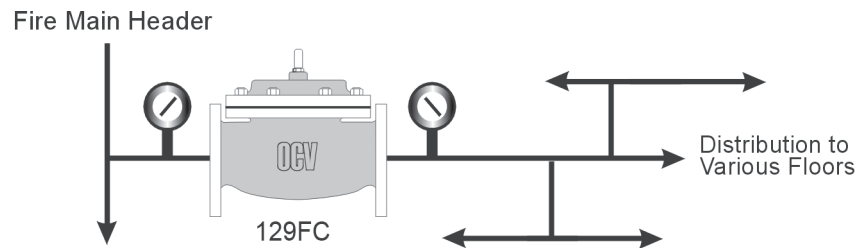
DIM	END CONN.	DN40	DN50	DN65	DN80	DN100	DN150	DN200
A	THREADED	222	251	267	330	--	--	--
	GROOVED	222	251	267	330	387	508	--
	150# FLGD	216	238	267	305	381	451	645
	300# FLGD	222	251	283	324	397	437	670
B	THREADED	37	43	48	57	--	--	--
	GROOVED	25*	30	37	44	57	--	--
	150# FLGD	59-64	76	89	95	114	140	171
	300# FLGD	67-78	83	95	105	127	159	191
C	THREADED	111	121	152	165	--	--	--
	GROOVED	111*	121	152	165	194	--	--
	150# FLGD	108	121	152	152	191	254	322
	300# FLGD	111	127	162	162	198	267	335
D	THREADED	79	98	114	114	--	--	--
	GROOVED	79*	98	114	114	143	--	--
	150# FLGD	76	98	102	102	140	152	203
	300# FLGD	79	105	111	111	148	165	216
E	ALL	171	171	197	197	248	292	368
F	ALL	98	98	98	98	98	98	162
G	ALL	152	171	222	222	298	356	533
H	ALL	254	279	279	279	305	330	356

*Grooved end not available in 1/4"
Approximate dimensions



* General representation of valve

TYPICAL INSTALLATION



FLOW CHARACTERISTICS

The 129FC may experience a wide range of flow rates. The flow rate is minimal when the system is not used or when flow is required by a single sprinkler. At the full system demand, flow rate is at its highest. Therefore, proper sizing is important. Choose the smallest available valve size that is consistent with the maximum flow demand listed in the chart.

For more detailed sizing information, refer to OCV Fluid Solutions' "PRV Sizing Guide" or the Performance Charts in the OCV Fluid Solutions catalog.

STANDARD

Valve Size	Max. Flow, GPM
1.5"	115
2"	210
2.5"	300
3"	460
4"	800
6"	1800
8"	3100

METRIC

Valve Size	Max. Flow, M ³ /HR
1.5" (DN40)	26
2" (DN50)	48
2.5" (DN65)	68
3" (DN80)	105
4" (DN100)	182
6" (DN150)	409
8" (DN200)	704

* Not all items pictured reflect products sold by OCV

TECHNICAL DATA**Temperature:**

- Buna-N 0°C to 82.22°C (32°F to 180°F)
- EPDM 0°C to 110°C (32°F to 230°F)

Sizes:

- Globe or Angle: 1.5", 2", 2.5", 3", 4", 6", 8"

End Connections:

- Flanged: ANSI 150# & 300#: 1.5" - 8"
- Threaded: 1.5" - 3"
- Grooved: 1.5" - 6"

Pressure Rating (Ductile Iron at 100°F):

- 1.5" - 3" Threaded End: 300psi
- 1.5" - 6" Grooved End: 300psi
- 1.5" - 8" 150# ANSI: 250psi
- 1.5" - 8" 300# ANSI: 300psi

Body and Cover Material:

- Ductile Iron
- Cast Steel
- Stainless Steel
- NAB
- Duplex Stainless Steel

Trim Material:

- Bronze - Copper
- Stainless Steel
- Monel

Optional Components:

- Visual Indicator
- Pressure Switch
- Pressure Gauge

Items to Specify:

- Electrical features other than standard
- If explosion proof accessories are required, please define classification
- Control trim material other than standard
- Required standards, certifications and approvals
- Series Number
- Valve Size
- Globe or Angle
- Flanged ANSI 150#, 300# Threaded or Grooved Ends
- Special needs or Installation Requirements

ENGINEERING SPECIFICATIONS

The pressure control valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot-controlled globe or angle valve. The valve shall seal by means of a corrosion-resistant seat and resilient, rectangular seat disc. Maintenance, disassembly and reassembly of all the valve's components shall be made possible on-site and in-line, without the need to remove the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The valve shall be fully trimmed, hydrostatically and operationally tested at the factory and set to a fixed pressure. Change of factory preset pressure setting can always be performed in-line following simple IOM instructions, without special tools or system down time. The main valve body and bonnet shall be ductile iron (other materials available upon request). All internal ferrous surfaces shall be coated with epoxy. External surfaces shall be coated with epoxy and fire red paint. The main valve seat ring shall be bronze (other materials available upon request). Elastomers (diaphragms, resilient seats, and O-rings) shall be Buna-N or E.P.D.M. Control pilot shall be bronze or stainless steel (other materials available upon request). The control line tubing shall be copper (other materials available upon request). Additional coatings and special materials are available upon request. The pressure control valve shall be a Model 129FC (globe) or 129FCA (angle), UL Listed under VLMT category, as manufactured by OCV Fluid Solutions, Tulsa, OK, USA.

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