

fuelling & petroleum metric

Global performance. Personal touch.



QUALITY SYSTEM
REGISTERED TO
ISO 9001



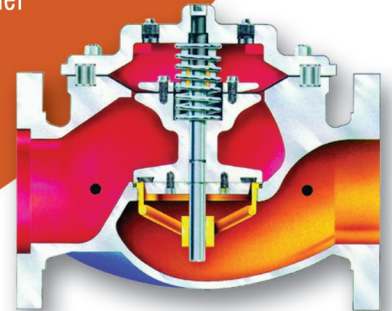
OCV has a long history in providing control valves for aviation fueling and petroleum handling systems. The valve models presented here address the typical hydraulic issues encountered in such systems. The OCV control valve is designed for and can be readily adapted to perform numerous control functions, and is therefore not limited to these models. Feel free to contact us to discuss your particular requirements.

Committed to the work they do, our employees average over 15 years of service. This wealth of knowledge allows us to provide quality engineering, expert support, exacting control and the know-how to create valves known for their long life.

Being ISO 9001 certified means we are committed to a quality assurance program. Our policy is to supply each customer with consistent quality products and ensure that the process is right every time.

Our valves meet and exceed industry standards around the world.

Visit www.controlvalves.com/VMFuels2 to use our online sizing and specification program.



Pump Discharge Control

The primary purpose of pump discharge control is to minimize pump start-up surges by opening slowly and to eliminate back flow by closing quickly on pump shut-down.

Model 120-6

- Opens slowly on pump start
- Limits flow rate to keep pump on its curve
- Closes quickly on pump shut-down

Model 94-1QC (shown)

- Opens slowly on pump start
- Closes quickly on pump shut-down



Fuel Filtration Control

Installed on a filter separator, the following products work together to ensure the primary purpose of the separator itself: the removal of water from the fuel.

Model 119

- Closes to stop fuel discharge when water is present
- Available with reverse flow check feature (Model 119-1)

Model 119-5 (shown)

- Limits flow to the rated capacity of the filter separator
- Closes to stop fuel discharge when water is present
- Available with reverse flow check feature (Model 119-15)

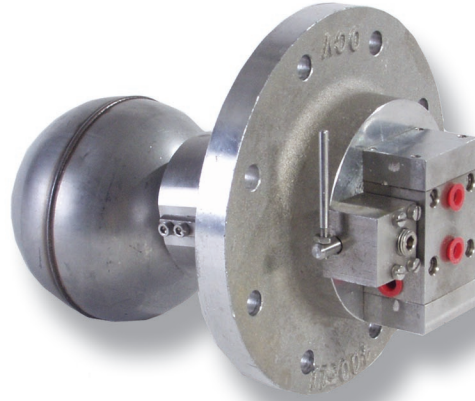


Fuel Filtration Control

Continued...

Float Pilot Model 800D - MTW (shown)

- Side-mounted on filter separator sump
- Float rides the interface between water and fuel
- Provides hydraulic signals to operate Series 119 valve
- Ballasted manual tester
- Stainless Steel Pilot Block



Float Pilot Model 800B

- Bottom-mounted on filter separator sump
- Float rides the interface between water and fuel
- Provides hydraulic signals to operate Series 119 valve
- Manual tester
- Ballasted tester available (Model 800B-MTW)
- Stainless Steel Pilot Block

Pressure Relief/ Backpressure Control

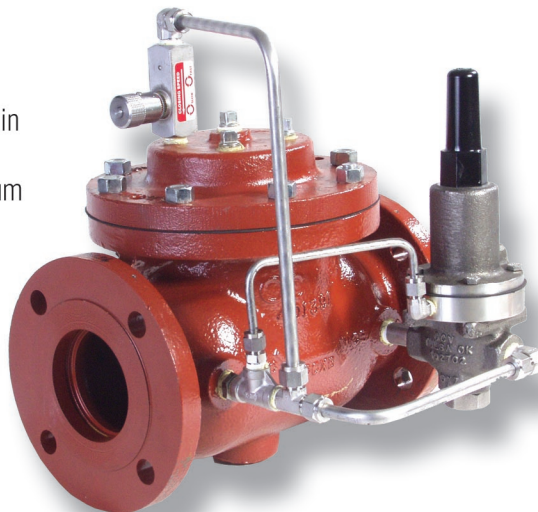
Sensing pressure at the valve inlet, pressure relief/backpressure valves serve to maintain or limit the main line pressure.

Model 108-2 (shown)

- Installed on bypass line, limits pressure in main line by relieving excess to storage
- Installed in main line, sustains a minimum line pressure

Model 108-34

- Installed in main line, functions as backpressure control valve in hydrant fueling systems
- Solenoid shut-off feature
- Reverse flow check feature



Model 108-34X2F

- Functions as defuel/flush valve in hydrant fueling systems
- Dual solenoid for defuel and flush operations
- Reverse flow check feature

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CONTROL VALVES

Truck/Rail Car Loading

Opened and closed via electrical signals, these valves control fuel flow into tanker trucks or railroad tank cars. All are designed to interface with preset meters.

Model 115-2

- Single stage, open/close operation
- Can be used as electric deadman valve

Model 120-7

- Opens on signal from preset meter
- Limits flow rate to meter capacity (adjustable)
- Closes in two stages
- Two stage opening available

Model 115-3 (shown)

- Dual solenoid operation
- Multiple stage opening and closing



Aircraft Fueling

The following valves are designed for direct fueling of aircraft, closely controlling pressure into the aircraft and limiting pressure buildup in the event of sudden aircraft tank valve closure. Valve opening and closing is controlled by a deadman device.

Model 114-1

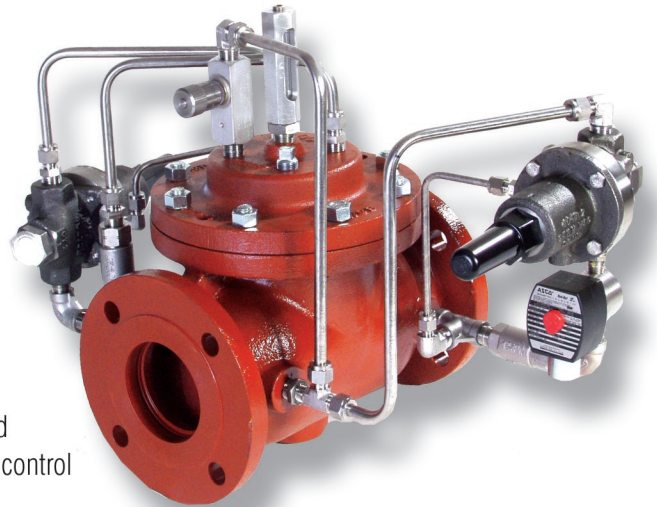
- Pneumatic deadman controlled
- Pressure reducing and surge control
- Typical on hydrant refueling systems

Model 114-1E (shown)

- Electrical deadman controlled
- Pressure reducing and surge control

Model 114-3

- Hydraulic deadman controlled
- Pressure reducing and surge control
- Typical on pantograph refueling systems



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Fuel Storage

The following valves are designed to protect the fuel storage tank on either tank fill or fuel discharge operation.

Model 8106 (shown)

- Tank fill valve
- On/off operation; closes on high level
- External float chamber for floating pan tanks
- Manual tester
- Available w/ reverse flow check (Model 8106-6)

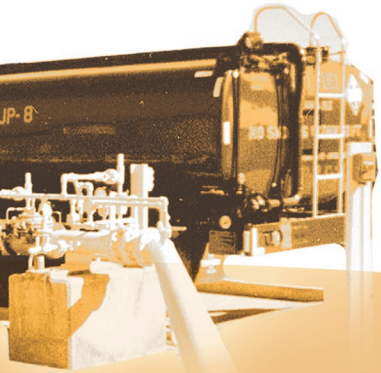
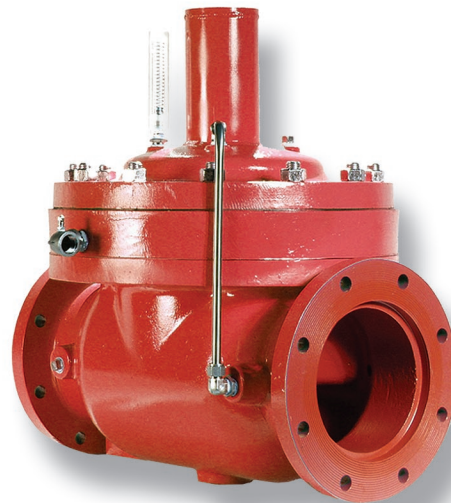


Model 8104

- Tank fill valve
- On/off operation; closes on high level
- Float pilot mounted inside tank
- Available w/ manual tester
- Available w/ reverse flow check (Model 8104-6)

Model 66TS (shown)

- Open/close control of tank discharge
- Installed on pump suction line
- Opens on pump discharge pressure
- Closes on pump shutdown
- Closes on loss of pressure due to line rupture
- Prevents siphoning
- Built-in thermal relief
- Manual override provided
- Available with solenoid control (Model 66TS-1) for multiple tank, single pump applications



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OCV CONTROL VALVES

Specifications

VALVE BODY & BONNET	DUCTILE IRON		CARBON STEEL		CARBON STEEL		STAINLESS STEEL		ALUMINUM
Flange Standard (also available in metric)	ANSI B16.42		ANSI B16.5		ANSI B16.5		ANSI B16.5		ANSI B16.5
Flange Class	150#	300#	150#	300#	150#	300#	150#	300#	150#
Flange Face	Flat	Raised	Raised	Raised	Raised	Raised	Raised	Raised	Flat
Maximum Working Pressure at 37.78°C	17.2 bar	44.1 bar	19.7 bar	51.0 bar	18.4 bar	48.0 bar	19.0 bar	51.0 bar	19.7 bar
Fluid Temperature for Max. WP	-29°C to 38°C								
INTERNALS									
Stem	Stainless Steel standard				Monel® optional				
Spring	Stainless Steel standard								
Spool	Ductile Iron						Stainless Steel	Aluminum	
Seat Disc Retainer	Ductile Iron (Stainless Steel 4" & smaller)						Stainless Steel	Aluminum	
Diaphragm Plate	Ductile Iron						Stainless Steel	Aluminum	
Seat Ring (Trim)	Stainless Steel								
Stem Bushings	20% Glass-Filled Teflon								
ELASTOMER PARTS									
Diaphragm	Nylon-Reinforced Buna -N standard		Nylon-Reinforced Viton® optional		Fluorosilicone optional		EPDM optional		
Fluid Operating Temperature	-28.9°C to 82.2°C		-6.7°C to 110°C		-40°C to 65.6°C		-17.8°C to 110°C		
Seat Disc and O-rings	Buna-N standard		Viton® optional		Fluorosilicone optional		EPDM optional		
Fluid Operating Temperature	-28.9°C to 82.2°C		-6.7°C to 110°C		-40°C to 65.6°C		-17.8°C to 110°C		
COATINGS									
	Fuel-resistant epoxy standard		Electroless nickel plating optional			None		Anodized	
ELECTRICAL SOLENOIDS									
Bodies	Stainless Steel								
Seals	Buna-N standard				Viton® optional				
Enclosures	Explosion-Proof (Class 1, Div 1) NEMA 3, 4, 4X, 6, 6P, 7, 9								
Voltage	AC, 60 Hz: 24, 120, 240, 480 volts			AC, 50 Hz: 110, 220/230 volts			DC: 12, 24, 125 volts		
Operation	Normally Closed (Energize-to-Open)				Normally Open (Energize-to-Close)				
CONTROL PILOTS									
Bodies	Stainless Steel								
Internals	Stainless Steel								
Diaphragms & Seats	Buna-N standard				Viton® optional				
CONTROL CIRCUITS									
Tubing	Stainless Steel								
Fittings	Stainless Steel								

VITON® and TEFLON® are registered trademarks of DuPont Dow Elastomers. MONEL® is a registered trademark of Special Metals Corporation.

CE Markings

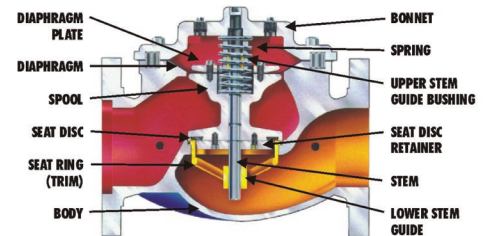
Applies to fuel valves installed in the European Union in accordance with the Pressure Equipment Directive, 97/23/EC. CE-marked valves are available in LCB steel and CF8M stainless steel only.

OCV is registered to the PED through Det Norske Veritas.

The following valves will be CE-marked:

- 6" (DN150) and larger valves, 150# and 300# Classes, liquid fuel only
- 2" (DN50) thru 4" (DN100) valves, 300# class, liquid fuel
- 1 1/4" (DN32) thru 4" (DN100) valves, 300# class, LPG or Butane service

4" (DN100) and smaller valves in Class 150# (liquids) are furnished under SEP with no CE-mark



Globe Flanged Sizes

1.25"	1.5"	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"*	20"*	24"
32mm	40mm	50mm	65mm	80mm	100mm	150mm	200mm	250mm	300mm	350mm	400mm	450mm*	500mm*	600mm

*CONSULT FACTORY

Angle Flanged Sizes

1.25"	1.5"	2"	2.5"	3"	4"	6"	8"	10"	12"	16"
32mm	40mm	50mm	65mm	80mm	100mm	150mm	200mm	250mm	300mm	400mm

Globe/Angle Screwed Sizes

1.25"	1.5"	2"	2.5"	3"
32mm	40mm	50mm	65mm	80mm



Globe/Angle Grooved Sizes

1.5"	2"	2.5"	3"	4"	6"
32mm	50mm	65mm	80mm	100mm	150mm

Dimensions

OCV CONTROL VALVES

U.S. DIMENSIONS - INCHES

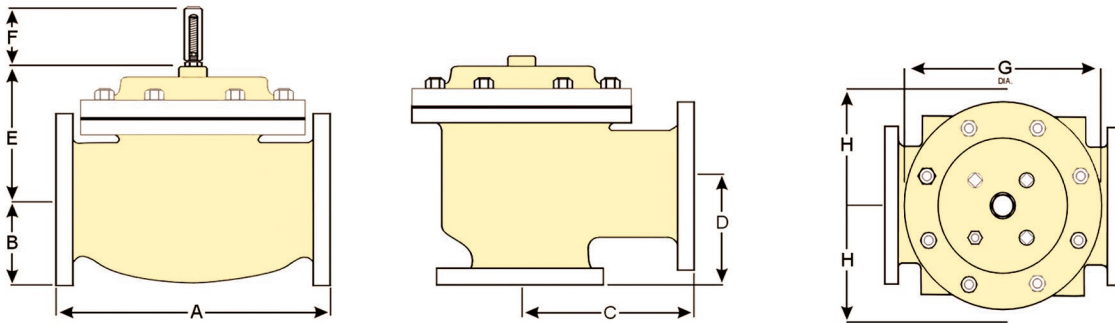
DIM	END CONN.	1 1/4-1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	24
A	SCREWED	8 3/4	9 7/8	10 1/2	13	--	--	--	--	--	--	--	--
	GROOVED	8 3/4	9 7/8	10 1/2	13	15 1/4	20	--	--	--	--	--	--
	150# FLGD	8 1/2	9 3/8	10 1/2	12	15	17 3/4	25 3/8	29 3/4	34	39	40 3/8	62
	300# FLGD	8 3/4	9 7/8	11 1/8	12 3/4	15 5/8	18 5/8	26 3/8	31 1/8	35 1/2	40 1/2	42	63 3/4
B	SCREWED	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	3 5/16	--	--	--	--	--	--
	150# FLGD	2 5/16-2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8	9 1/2	10 5/8	11 3/4	16
	300# FLGD	2 5/8-3 1/16	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4	10 1/4	11 1/2	12 3/4	18
C ANGLE	SCREWED	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	14 7/8	17	--	20 13/16	--
	300# FLGD	4 3/8	5	6 3/8	6 3/8	7 13/16	10 1/2	13 3/16	15 9/16	17 3/4	--	21 5/8	--
D ANGLE	SCREWED	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	11 3/8	11	--	15 11/16	--
	300# FLGD	3 1/8	4 1/8	4 3/8	4 3/8	5 13/16	6 1/2	8 1/2	12 1/16	11 3/4	--	16 1/2	--
E	ALL	6	6	7	6 1/2	8	10	11 7/8	15 3/8	17	18	19	27
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4	14	21	24 1/2	28	31 1/4	34 1/2	52
H	ALL	10	11	11	11	12	13	14	17	18	20	20	28 1/2

*GROOVED END NOT AVAILABLE IN 1 1/4"

METRIC DIMENSIONS - M.M.

DIM	END CONN.	DN32-DN40	DN50	DN65	DN80	DN100	DN150	DN200	DN250	DN300	DN350	DN400	DN600
A	SCREWED	222	251	267	330	--	--	--	--	--	--	--	--
	GROOVED	222	251	267	330	387	508	--	--	--	--	--	--
	150# FLGD	216	238	267	305	381	451	645	756	864	991	1026	1575
	300# FLGD	222	251	283	324	397	473	670	791	902	1029	1067	1619
B	SCREWED	37	43	48	57	--	--	--	--	--	--	--	--
	GROOVED	25*	30	37	44	57	84	--	--	--	--	--	--
	150# FLGD	59-64	76	89	95	114	140	171	203	241	270	298	406
	300# FLGD	67-78	83	95	105	127	159	191	222	260	292	324	457
C ANGLE	SCREWED	111	121	152	165	--	--	--	--	--	--	--	--
	GROOVED	111*	121	152	165	194	--	--	--	--	--	--	--
	150# FLGD	108	121	152	152	191	254	322	378	432	--	529	--
	300# FLGD	111	127	162	162	198	267	335	395	451	--	549	--
D ANGLE	SCREWED	79	98	102	114	--	--	--	--	--	--	--	--
	GROOVED	79*	98	102	114	143	--	--	--	--	--	--	--
	150# FLGD	76	98	102	102	140	152	203	289	279	--	398	--
	300# FLGD	79	105	111	111	148	165	216	306	298	--	419	--
E	ALL	152	152	178	165	203	254	302	391	432	457	483	686
F	ALL	98	98	98	98	98	98	162	162	162	162	162	203
G	ALL	152	171	195	222	298	356	533	622	711	794	876	1321
H	ALL	254	279	279	279	305	330	356	432	457	508	508	724

*GROOVED END NOT AVAILABLE IN DN32



For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 8" and larger valves, or any valves with a limit switch, in positions other than described. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ 1-918-627-1942 for parts and service.

How to order your valve

When ordering please provide: - Series Number - Valve Size - Globe or Angle - Pressure Class - Screwed, Flanged, Grooved - Trim Material - Adjustment Range - Pilot Options - Special Needs / or Installation Requirements.

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