



# AGRICULTURAL WATER CONTROL PRODUCTS

PRODUCTS AT-A-GLANCE



**WATER DISTRIBUTION & CONTROL / DRAINAGE CONTROL / IRRIGATION**





Model C-10 (12" size shown)



Model C-20



Model C-10 Flat plate  
square bottom cover



Model C-10-SB

## CAST IRON CANAL GATES—C-10 & C-20 "RED TOP" SERIES

Waterman Canal Gates offer reliable water control on canal and pipeline systems which operate at low and medium heads. They are designed for years of reliable service and incorporate best-in-class construction available only from Waterman.

### TYPICAL APPLICATIONS:

Canal water control, farm turnouts, industrial and food processing, waste, drainage control.

### WATERMAN EXCLUSIVES:

- Gray iron with a minimum ¼" thickness. Computer analyzed for stress and deflection using finite element analysis.
- Handwheel operation with a heavy cast-bronze lift nut and acme thread stem.
- Bolted steel frame. Choice of economical standard painted steel, upgraded galvanized steel, or 304 stainless steel.
- Adjustable cast iron wedge blocks have two machine bolts for most dependable seating and high degree of water tightness.
- Precision machined seating surfaces.
- Machine-threaded stem provides ease of operation and extended life.

### OPTIONS:

- Bronze seats (C-20 only); stainless steel structural frame, guide rails and bolts; stainless steel or brass stems; epoxy, coal tar or ASTM galvanized coatings.
- Extended stems, custom pitch and thread rotation, stem guides, limit nuts.
- Flatback flanges with 25# or 125# ANSI standard drilling available on special order. (C-20)
- Waterman Rising-Stem Extensions are factory installed to the height required, providing a rising stem and handwheel, keeping threads and lifts above the water level and allowing the amount of gate opening to be readily determined.
- Non-Rising Stem Extensions position the gate handwheel at convenient static operating elevations, eliminating hardware which might otherwise rise into traffic areas.

### CONFIGURATIONS:

**F** = Flatback for headwall mounting.

**SB** = Spigotback for spiral corrugated pipe.

**CIP** = For solvent cement mounting over plastic pipe.

**C** = With galvanized steel tapered setting collar for concrete or AC pipe.

**TYPE 4** = For mounting in plastic pipe utilizing special two part epoxy.



AC-31-F



AC-31-Type 6 for HDPE



FC-10

## ALUMINUM CANAL GATES—AC-31 SERIES

Best in class design for corrosion-resistant, rust-proof installations. Heavy-duty, yet labor-saving, lightweight installation. Eliminates electrolysis when using cast iron gates with aluminum pipe.

### WATERMAN EXCLUSIVES:

- Tight closure with tapered wedge seating, low friction opening.
- Nearly drip-tight performance. Rugged, replaceable J-bulb seal.
- UHMW Polyethylene guide inserts. Stainless steel stem, bronze lift nut.

### CONFIGURATIONS:

**F** = Flatback for headwall mounting

**FF** = Flange or thimble mount

**SB** = Spigotback for spiral corrugated pipe.

**TYPE 4** = For mounting in plastic pipe utilizing special two part epoxy.

**TYPE 6** = For HDPE pipe

## COMBINATION DRAINAGE & CANAL GATES—FC-10 SERIES

The FC-10 combines a C-10 canal gate and the F-10 drainage flap gate in a single unit. When the unit is closed, the flap functions as an automatic drainage gate. The gate can be raised to permit backflow when desired.

See C-10 canal gate for specifications and options.

### WATERMAN CANAL GATES SELECTION GUIDE

GATE DIAMETER	MODEL C-10 CAST IRON MAXIMUM HEAD (FEET)		MODEL C-20 CAST IRON MAXIMUM HEAD (FEET)		MODEL AC-31 ALUMINUM MAXIMUM HEAD (FEET)	
	SEATING	UNSEATING	SEATING	UNSEATING	SEATING	UNSEATING
6	23	0	35	10		
8	23	0	35	10		
10	23	0	35	10		
12	23	0	35	10	30	20
14	23	0	32	10		
15	23	0	32	10	30	20
16	23	0	32	10		
18	23	0	32	10	30	20
20	23	0	26	10		
21	23	0	26	10		
24	23	0	26	10	30	20
30	11	0	20	10	30	20
36	11	0	20	10	20	20
42	9	0	20	10	20	20
48	9	0	20	10	15	15
54	6	0			15	15
60	6	0			15	15
66	6	0			10	10
72	6	0			10	10
84					10	10



*P-30*

## **PRESSURE SLIDE GATES—P-30 "RED TOP" SERIES**

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Used for medium duty water control in small reservoirs, distribution boxes, ponding areas and pumping stations. Not for use with continuous throttling. Holds pressure in both directions. Center-point, wedge-action closure. Typically mounted to head walls or pipe stands. Flange back models (P-30-FF) for direct installation on pipe flanges with 125# ANSI straddle center drilling standard. Size range: 6" to 24".

### **KEY FEATURES:**

- Seat faces are iron (bronze optional). Guide rails on 6"-14" are cast iron. Guide rails on 16" and larger are stainless steel.
- For 60 foot seating (face) pressure and 10 foot unseating (back) pressure
- Non-Rising bronze stem standard. Sizes up to 14" have tee-handle, larger sizes have hand wheel.



*H-30*

## **LINE GATES—H-30 "RED TOP" SERIES**

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Our line gates are for direct installation into pipelines and are designed for longevity. The heavy-cast iron construction is complimented by a non-rising stainless steel screw and bronze nut with double lead Acme threads. A cast iron packing gland with a bronze packing nut which eliminates "freezing" due to rust or corrosion.

### **KEY FEATURES:**

- Precision-machined iron seating surface (bronze seats optional)
- Each gate is hydrostatically tested
- 60 feet maximum seating (face) pressure
- 10 feet maximum unseating (back) pressure
- Non-rising stainless steel stem, with bronze nut and precision machined double lead Acme threads
- Bronze packing gland nut and lift nut
- Hand wheel standard; 2" square operating nut optional

### **OPTIONS:**

- V-notch opening for metering
- Waterman M-1 operating pedestal with sliding valve position indicator pointer.



*H-30 with V-notch opening*



C-9



AC-9



C-8



C-8E

## SLIDE GATES - GALVANIZED STEEL OR ALUMINUM C-9 (STEEL) & AC-9 (ALUMINUM) SERIES

Our slide gates are applied where an economical light duty gate is needed for seating heads up to 10 feet. They are often used where an old-fashioned jack-lift type gate is specified. The C-9 and AC-9 incorporate a threaded bronze lift nut with a 10" diameter hand wheel with a threaded low alloy steel stem. Sizes 8" through 30".

### KEY FEATURES:

- Galvanized steel (C-9) and aluminum (AC-9) models.
- AC-9 has stainless steel stem
- Models for concrete, corrugated steel, PVC, CIP and HDPE mounting

## SLIDE DITCH GATES - GALVANIZED STEEL - C-8 & C-8E SERIES

These economical gates are used on ditch turnouts and similar low head operations. They feature a positive one-quarter-turn cam lock for positive seating and easy regulation of flow. Models for concrete, corrugated steel, PVC, CIP and HDPE mounting. Sizes 4" through 24".

- C-8 models have a long-life neoprene composition gasket within a press-formed recess in the cover. This allows tight sealing with minimum drag during opening and closing.
- C-8E models have steel seats.



C8E HDPE Mounting



Detail showing seat C-8



F-10

## CAST IRON FLAP GATES—F-10 "RED TOP" SERIES

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Flap gates permit the free outflow of water from a pipe or structure while preventing and sealing against backflow. They are applied in reservoirs, tidal basins, ponding basins, waste lines, pump stands and storm drain systems. It is rated for a seating head of up to 10 feet. Sizes 6" – 72".

### KEY FEATURES:

- Frame and cover of heavy-duty cast iron.
- Galvanized steel angle links balance pivoted on bronze bushings. Stainless steel optional.
- Built-in "Safety Bar" prevents sticking.
- 5 degree seat on sizes to 24", 2.5 degree seat on larger sizes allows for closure and compensates for piping irregularities.
- Mounting options: flatback, spogot back or tapered setting collar for concrete pipe.



AF-41

## FLAP GATES—AF-41 SERIES (ALUMINUM) SSF-41 SERIES (STAINLESS STEEL)

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Our AF-41 gates are inherently corrosion-resistant and rust-proof automatic drainage gates. They are commonly used with aluminum corrugated pipe, plastic or HDPE. Models are also available for flange and wall mounting. This design prevents electrolysis associated with cast iron gates to aluminum pipe connections. The rugged J-bulb neoprene adjustable seats provide excellent sealing against return flow. Sizes 8"– 84". Available in aluminum, 304 stainless steel and 316 stainless steel. Square and rectangular versions also available (AF-43 Series)



SSF-41

## PUMP DISCHARGE FLAP VALVE—PF-25 SERIES

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Available with an aluminum or cast iron flap cover, this valve features a positive 7.5 degree seating seal and a choice of neoprene, iron or bronze seats. Choose compression style pipe connection for 4"– 14" diameter or flange style mount in 4"– 24" diameter.



PF-25 compression



PF-25 flanged 125#



*Red Top*



*Sunshine*

## OVERFLOW RISER VALVES

Waterman overflow riser valves provide regulation and shut-off of flow from pipelines to furrows or checks.

### TO ORDER A RISER VALVE

**SELECT THE COVER STYLE** the traditional "Red Top" concave design features high-strength ribs. The smooth convex (domed) "Sunshine" design is preferred in some areas. The "Pasture" design features a flush, key operated, self-cleaning stem, for use in areas where livestock are present.

**SELECT THE THREAD PATTERN** our popular high strength National Standard (vee) thread for is standard on "Red Top". Acme threads are available on all models, and are standard on 6" and larger Sunshine and Pasture.

**SELECT YOUR PIPE STYLE** Models are available for use with concrete, PVC and plastic (PIP/IPS) irrigation pipe.

### KEY FEATURES:

- High Strength, close-grained grey iron frame and cover
- Stainless steel screws with fully machined threads for less corrosion and reduced vandalism
- Continuous ring synthetic rubber cover seal and a friction-resistant synthetic washer seal
- Field replaceable bronze frame nut.



*Pasture  
Acme Thread Standard*



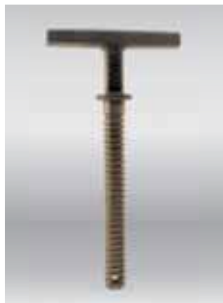
*Concrete*



*Type 4  
(Plastic Pipe, Epoxy Fit)*



*Solvent Weld (IPS/PIP)*



*Exclusive  
stainless steel stem*





*Alfalfa*



*Hydrant*



*Orchard*

## **ALFALFA RISER VALVES & UNIVERSAL HYDRANT**

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Alfalfa Valves are commonly used with the Waterman Universal Hydrant for connection of portable surface pipe. They are also applied where an extra heavy duty riser valve is desired. A fully machined outer rim is provided to fit and make a watertight seal with our hydrant. The larger diameter screw and brass nut is designed to provide resistance to higher flow. Frame and nut are field replaceable.

### **OPTIONS:**

- Red top or sunshine cover
- Acme thread screw standard; National standard thread optional
- Solid arch or removable arch
- Web frame, quick setting frame, steel pipe mount, plastic pipe mount, solvent-weld
- Standard stainless screw, bronze screw optional

### **UNIVERSAL HYDRANT**

- Pierce-style connection
- Quick connect or standard connection to alfalfa riser valve

## **ORCHARD-STYLE RISER VALVES**

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A variant of Waterman's popular riser valves, the orchard series valves have a wider base and frame to make a 12" standard concrete riser to an 8" valve.

- Stainless steel acme thread is standard





AV-150



CR-101



High Pressure Model



AVP



CRP-8

## AIR VENTS – STANDARD

Waterman air vents protect irrigation and piping systems by releasing entrapped air as pipelines fill and providing vacuum relief when lines drain. Installation of proper air relief is essential to the proper operation and longevity of piping systems and the proper functioning of system pumps.

### Installation of proper Waterman air vents can help prevent these issues:

- Impedance of flow due to air obstruction, head losses. Inadequate flow to crops.
- Water hammer and vacuum damage.
- Corrosion and cavitation.
- Danger to operators from air-blown parts

**SERIES AV-150 ALUMINUM BODY AIR VENT** uses a hard, precision ground, inert solid plastic float ball which prevents “sticking” in the closed position. The float ball seats against a precision o-ring providing a tight seal at very low pressures where other vents often leak. Rated to 150 psi on the 1.5" and 2" and 100 psi on the 3" and 4". The aerodynamic “air-flow” design of a high strength alloy aluminum body and full baffle assures maximum vent capacity without premature closing.

**SERIES CR-101 ALUMINUM BODY CONTINUOUS ACTING AIR VENT AND VACUUM RELIEF VALVE** continually provides high-volume air and vacuum protection, insures full line capacity, and conserves pump horsepower. It seals at pressures as low as 2 psi. It has a high strength aluminum alloy body, baffle, and rubber bonded poppet and a specially designed cylindrical float. The guide rod and assembly hardware are stainless steel. Cast iron is used for the threaded base to provide easy installation and removal without the thread damage which can occur with aluminum threads. 2", 3" and 4" sizes rated to 100PSI.

**SERIES CR-101-HP ALUMINUM BODY CONTINUOUS ACTING HIGH PRESSURE AIR VENT AND VACUUM RELIEF** is a higher-pressure air vent for areas with extreme elevations and where extra protection is required. It seals at pressures as low as 2 psi. It has a high strength aluminum alloy body, baffle, and hard anodized aluminum poppet and a specially designed cylindrical float. The guide rod and assembly hardware are stainless steel. High strength aluminum is used for the threaded base. 2", 3" and 4" sizes rated to 250PSI.

**SERIES AVP-1 PVC AIR VENT** is available in 1" and 2" sizes and is rated to 110PSI. Preferred for use on drip systems.

**SERIES CRP-8 PVC CONTINUOUS ACTING AIR VENTS** are available in 1", 2" and 3" sizes, rated to 100PSI.

**SERIES CRP-9 CONTINUOUS ACTING, COMBINATION AIR VENT AND VACUUM RELIEF VALVES** are designed for use on both high and low head irrigation systems. The Model CRP-9 is especially suited for drip, fogger, and other low volume installations due to its high sensitivity, even at low pressures.

## PRESSURE RELIEF VALVES

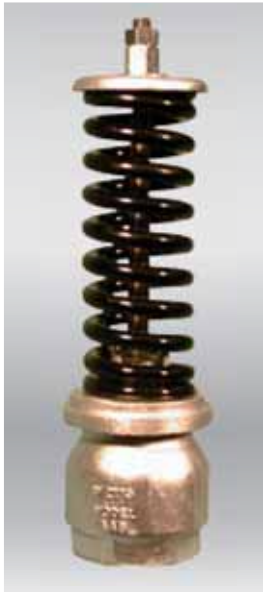
Our pressure relief valves provide reliable surge protection for irrigation systems. With a dependable spring-loaded design, these units provide reliable performance year-after-year. All models are available either factory pre-set or with field-adjustable pressure setting. Options include a protective cover (C) and a directional-flush protective cover (DC) which can be connected to a discharge pipe. All models include a pressure gauge port.

AA-6, sizes 2" and 2.5", settings to 120PSI, aluminum body and stainless spring

AA-6, sizes 3" and 4", settings to 120PSI, aluminum body and stainless spring

AA-9, 6" size, settings to 120PSI, cast iron body and stainless spring, high volume discharge

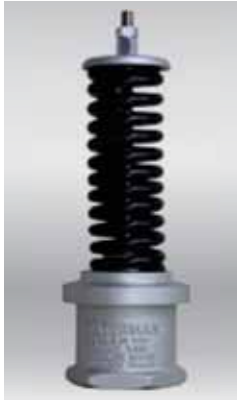
AA-96, sizes 3" and 4", settings to 150PSI, cast iron body and stainless spring



AA6



AA9C



AA96



AA96C



AA60D



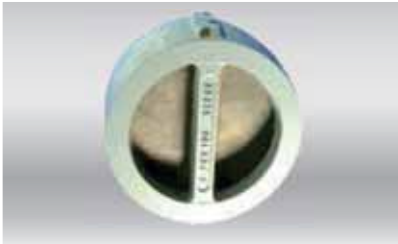


*PC-30*

## CHECK VALVES

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**PC-30 IN-LINE SWING CHECK VALVE** is constructed with a high strength cast-aluminum body and features a tight-sealing, nitrile rubber seat. Hinge pins are stainless steel and operate in non-metallic hinge bushings with lubrication fittings. Available in sizes 4" -10". Compression connection standard, flanged version optional. Model CPC-30 for chemical injection.



*PC-150*

**PC-150 SPLIT DISC WAFER CHECK VALVE** is rated for working pressures to 150 psi. It complements the Waterman check valve line by adding a higher pressure valve to existing models.



*Lever*

## BUTTERFLY VALVES

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**EPOXY-COATED BUTTERFLY VALVES** are available with lever operator or geared handwheel. They feature a corrosion resistant stainless steel seat disc with Buna-N liner. Bubble-tight rated to 150PSI. Sizes 4" to 12"



*Geared Handwheel*