

## Flap Valves

Flap Valves are put on the end of a flanged pipe or mounted to a flat surface such as a wall to allow the flow of fluids out of the pipe, but prevent anything from flowing back in, such as sticks, leaves or other debris. Under direct pressure the valve will open, and it will close when the pressure from outfall fluid is relieved.

# Standard & Weighted Flap Gate Valves

## Say “No” to Backflow

The simple structure and operation of flap valves can be misleading. Just a disc and a hinge mounted on a flanged pipe, right? Maybe so, but the straightforward nature of the product does not mean that they are all the same!

Consider three of the most common problems that flap valves encounter in the field:

1. Debris gets caught in the flap valve and prevents proper closure
2. Corrosion and rust around the hinge “freezes” the valve in an open or closed position
3. The constant opening and closing of the valve during operation knocks the seal out of alignment

How will your flap valves counteract or mitigate these issues? You won’t have to worry about that with products from Troy!

### • **Precision-Machined Operation**

Each flap gate valve is balanced and designed to swing open when under pressure from .2 ft. or more of differential head from outflow fluid. This low-pressure threshold allows debris in the outflow to be expelled with the fluid instead of getting stuck between the disc and seat.

### • **Corrosion-Free Open & Close Mechanics**

Stainless steel hinges and cotter pins allow our flap valves to swing freely for longer, uninhibited by corrosion and rust that affect other materials.

### • **Durable Design**

While no valve is invincible to wear and tear, Troy Valve makes an exceptional effort against damages with a two-part epoxy coating, a machined bronze-to-bronze seat, and cast iron parts.

Don’t let rising waters and backflow risk be the catalysts that make you think critically about flap gate valves – the time is now!

# Standard Flap Valves

Our standard valves allow discharge to flow out of the pipe, but prevent backflow of debris that could clog the pipe.

## Standard Features

### 1. **Cast Iron Design.**

As opposed to fabricated parts, our cast parts have less potential for failure over time.

### 2. **Machined Bronze to Bronze Seat.**

Our machined seat provides a strong, flat surface for the lid to close against. It can withstand even the harshest conditions. The 30" to 36" flap valves employ resilient to bronze seating.

### 3. **Two Part Epoxy Coating.**

Our flap valves have a coating that gives lasting protection against corrosion.

### 4. **Stainless Steel Hinge & Cotter Pins.**

Our valve pins are made of stainless steel so they won't corrode and bind up the valve.

### 5. **Optional Resilient to Bronze Seating.**

This allows for a softer reseating surface and can offer an improved seal.



## Stainless Steel Flap Valves

We offer 4" and 6" in either cast 304 or 316 stainless steel as well as cast iron. Stainless flap valves are all resilient to stainless seated.



# Weighted Flap Valves

Weighted flap valves give added resistance to the lid, allowing for the valve to be angled downward (or even upside down) and still have the lid be closed. Under direct pressure the valve will open to allow water to flow out, but closes to prevent debris from entering.

## Standard Features

### 1. Adjustable Counterweight.

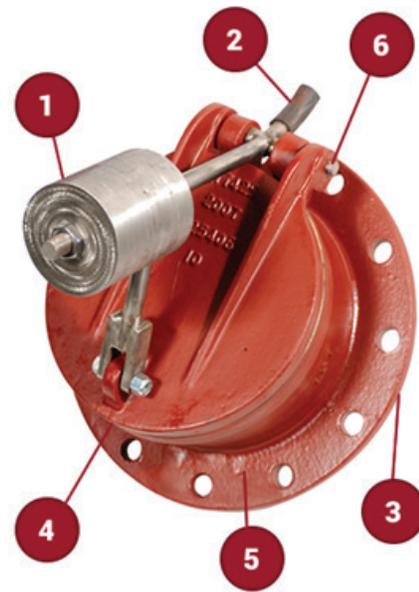
The location of the counterweight on the flap valve can be adjusted for sensitivity in the field.

### 2. Mechanical Stop.

To prevent the lid from over-rotating for pump discharge applications, our weighted flap valves incorporate a mechanical stop.

### 3. Cast Iron Design.

As opposed to fabricated parts, our cast parts have less potential for failure over time.



### 4. Machined Bronze to Bronze.

Our machined seat provides a softer reseating surface because of the extra weight. The 30" to 36" flap valves employ resilient to bronze seating.

### 5. Two Part Epoxy Coating.

Our flap valves have a coating that gives lasting protection against corrosion.

### 6. Stainless Steel Hinge & Cotter Pins.

Our valve pins are made of stainless steel so they won't corrode and bind up the valve.

# Flap Valve Specifications

## 1.0 General Conditions

### 1.1 Scope of Work

A. The contractor shall furnish all labor, materials, equipment and incidentals required for installation of mud valves.

### 1.2 Quality Assurance

A. The manufacturer shall have experience 10 years manufacturing flap valves and shall show evidence of satisfactory operation in at least 5 installations. The company shall be ISO 9001:2008 certified.

### 1.3 Submittals

A. The manufacturer shall submit drawings showing critical dimensions, general construction, and materials used in the valve.

## 2.0 Product

### 2.1 General design for weighted flap valve model A2540

A. The flap valve shall have a cast iron body and cover.

B. The seat and disc ring shall be bronze and the hinge pin and cotter pins shall be stainless steel.

C. The valve shall be constructed with a 10-degree offset from vertical to ensure positive closure

D. The flange shall be drilled using an ANSI 125# template.

E. All iron parts shall be coated in TNEMEC 2-part epoxy with 3-4 mils dry film thickness to prevent rusting or corrosion.

F. The valve shall be machined, assembled, and tested in the USA for quality assurance.

G. The manufacturer shall show proof of ISO 9001:2008 certification.

I. Valve and accessories shall be manufactured by Troy Valve, Model A2540 or approved equal.