

### VAREC BIOGAS 430 Series THERMAL OPERATED SHUT-OFF VALVE

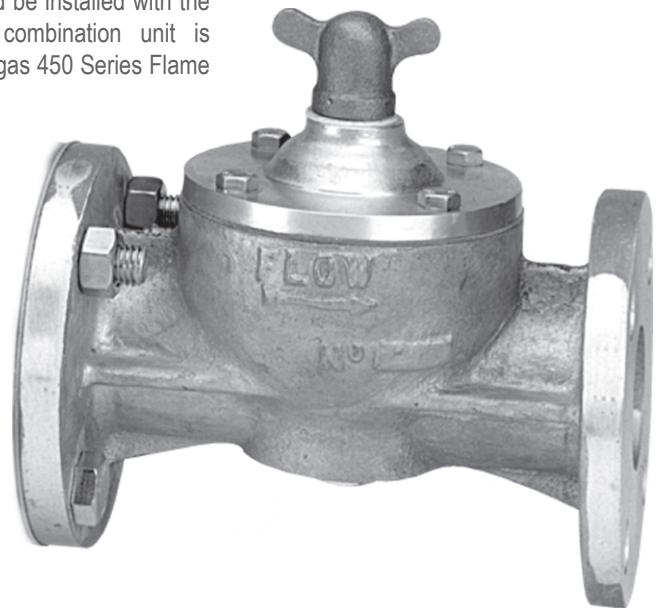
The 430 Series is designed to work in conjunction with a flame arrester for maximum protection from a flame front caused by flashbacks in the waste gas systems.

#### Introduction

The Varec Biogas 430 Series Thermal Operated Shut-off Valve is designed to work in conjunction with a flame arrester in protecting low pressure waste gas systems by shutting off the gas flow if a fire is burning in the piping. Once gas is no longer supplied at the source of combustion, the fire is extinguished.

The 430 Series Thermal Valve is typically installed in lines leading to boilers, blowers, compressors, or other possible sources of combustion. The valve may be installed in either horizontal or vertical piping and is suitable for working pressures up to 5 psig (34.5 kPa). For higher pressure ratings, consult factory.

For maximum protection from flame fronts caused by flashbacks in the waste gas piping, a Varec Biogas Model 5000/5010 Flame Arresters should be installed with the thermal valve. This combination unit is specified as Varec Biogas 450 Series Flame Trap Assembly.



#### Features

The Model 430 Valve is a fusible element released, spring operated pallet type shut-off valve. During normal operation, the pallet is positioned above the valve seat. The pallet is connected to a rod which sits atop a fusible element. In this position, the valve is open, permitting a constant flow of gas through the piping system.

Should the valve be subjected to flashback temperatures, the fusible element in the valve will melt within 15 seconds upon reaching 260°F (127°C) for valves, sizes 2" - 4" and within 22 - 45 seconds for valves, sizes 6" - 12". The valve compression spring immediately forces the pallet down against the valve seat, closing the valve, thereby shutting off the gas flow.

The thermal valve is designed for ease of operation and maintenance. A sight glass is located beneath the winged inspection cap and an indicator rod is connected to the pallet. The pallet position may be determined simply by viewing the indicator rod through the sight glass, without having to remove the valve from service. This allows the operator to quickly determine whether the valve is open or closed without having to use a manometer or pressure gauge when trying to locate a line blockage. The gas tight fuse plug allows the fusible element to easily be replaced without having to remove the valve cover or disassemble the valve.

#### Design Features

- Fusible Element and Spring Provide Quick Shut-Off
- Sight Glass with Indicator Rod for Valve Position
- Gas Tight Fuse Plug Allows Replacement without Disassembling Valve

## Specifications

### Materials

Valve Body & Cover  
356 T6 Cast Aluminum

### Pallet

Low Copper Aluminum

### Compression Spring

304 Stainless Steel

### Sight Glass Indicator

Acrylic Isolated by BUNA-N Gaskets

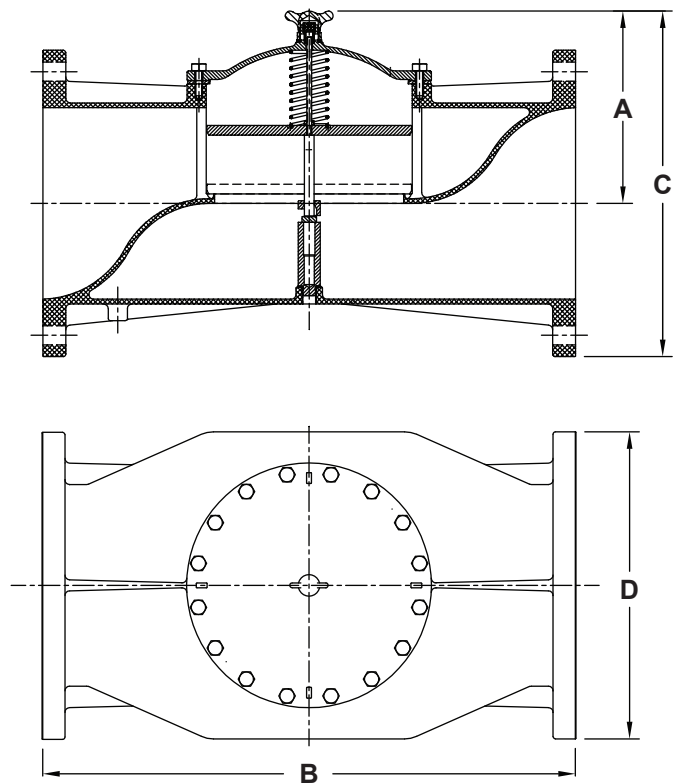
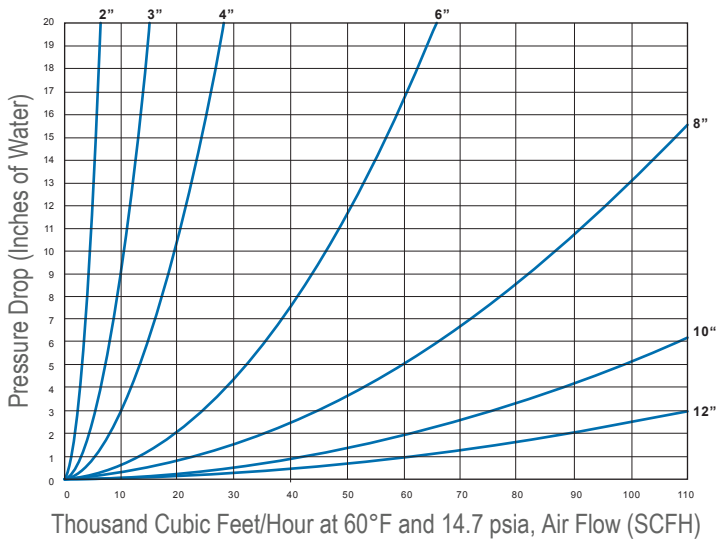
### Inlet & Outlet Connections

ANSI 125 / 150 Pattern

### Dimensions and Weights, inches [mm] and lbs. (kg)

Size Code	2	3	4	6	8	0	1
Nominal Pipe Size	2	3	4	6	8	10	12
	[50]	[75]	[100]	[150]	[200]	[250]	[300]
<b>A</b>	5 <sup>3</sup> / <sub>8</sub> [137]	6 <sup>5</sup> / <sub>8</sub> [168]	7 <sup>5</sup> / <sub>8</sub> [194]	8 <sup>7</sup> / <sub>16</sub> [214]	8 <sup>5</sup> / <sub>8</sub> [219]	9 <sup>7</sup> / <sub>8</sub> [251]	11 <sup>1</sup> / <sub>4</sub> [287]
<b>B</b>	8 <sup>3</sup> / <sub>4</sub> [222]	10 [254]	11 <sup>3</sup> / <sub>8</sub> [289]	15 [381]	22 <sup>1</sup> / <sub>4</sub> [565]	27 <sup>3</sup> / <sub>4</sub> [705]	33 [838]
<b>C</b>	8 <sup>3</sup> / <sub>8</sub> [213]	10 <sup>3</sup> / <sub>8</sub> [264]	12 <sup>1</sup> / <sub>8</sub> [308]	14 [355]	15 <sup>3</sup> / <sub>8</sub> [391]	18 [457]	20 <sup>3</sup> / <sub>4</sub> [528]
<b>D</b>	6 [125]	7 <sup>1</sup> / <sub>2</sub> [190]	9 [229]	11 [279]	13 <sup>1</sup> / <sub>2</sub> [343]	16 [406]	19 [483]
Shipping Weight	15 (7)	20 (9)	30 (14)	35 (16)	60 (28)	90 (42)	125 (57)

NOTE: Flow states SCFH, air can be corrected for gas at other specific gravities and temperatures. (See Technical Section)



## Ordering Information

### Model

430

### Description

Thermal Operated Shut-Off Valve

### Code

2  
3  
4  
6  
8  
0  
1

### Size

2"  
3"  
4"  
6"  
8"  
10"  
12"

### Code

1

### Material of Construction

Aluminum

430

6

1

(Example)

Example: 6" Thermal Operated Shut-Off Valve.