



**APPLICATIONS:**

As oil or water valve for emulsion treaters, water knockouts and gunbarrels. Can be used for pressure, atmospheric, or vacuum operation. Ideal for discharging salt water to disposal systems.

**FEATURES:**

- Single soft seat for tight shut off
- Balanced against upstream pressure
- Balanced against downstream pressure or vacuum
- Standard weight and lever holds approx. 4' liquid head
- Weights may be added to increase liquid head
- Can be manually opened and closed
- Sample tap on inlet connection
- Rotary stuffing box with leakless, low friction TEFLON packing
- All interior parts can be removed without taking valve out of line
- Prevents air from entering salt water disposal system piping

**OPERATION:**

The inlet of the valve is connected to the water siphon leg or oil discharge line from an emulsion treater or water knockout. Vessel Gas Pressure (Red) is connected to the UPPER HOUSING to balance the Gas Pressure under the MAIN DIAPHRAGM.





The effective area of the BALANCING DIAPHRAGM is the same as the effective area of the SEAT. Pressure or vacuum acting on either side of the BALANCING DIAPHRAGM will cancel the pressure or vacuum acting on the SEAT. This balancing feature prevents the slamming open and closed prevalent in unbalanced single seat construction.

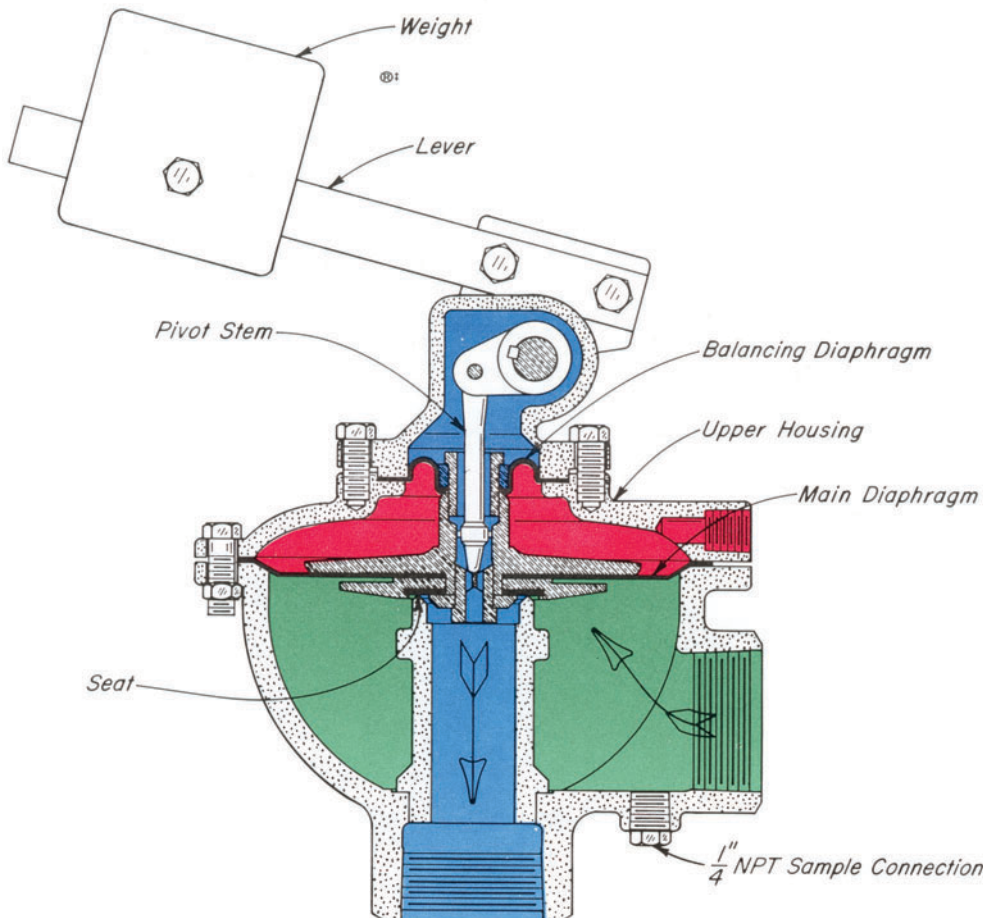
The Vessel Gas Pressure (Red) with the UPPER HOUSING acts upwardly on the BALANCING DIAPHRAGM to cancel the downward pressure on the single SEAT. Downstream Pressure Vacuum (Blue) acting on the SEAT is communicated to the top side of BALANCING DIAPHRAGM. This cancels any downstream pressure or vacuum effect on the valve operation.

The force to hold the SEAT closed is applied by a WEIGHT and LEVER through a rotary TEFLON packed stuffing box to a PIVOT STEM which pushes down on the Diaphragm Assembly.

When the liquid rises in the discharge piping of the vessel above the set level, it lifts the Diaphragm Assembly against the WEIGHT load to open the valve. As liquid is discharged to lower the level, the WEIGHT closes the valve.

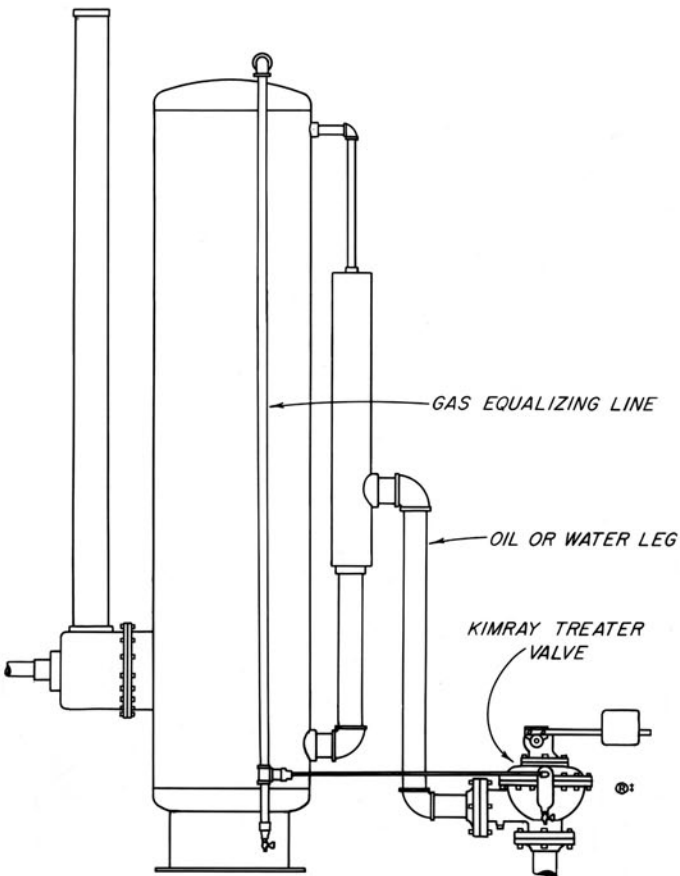
Liquid level may be adjusted up to approximately four feet by moving the WEIGHT on the LEVER. Additional weights may be added if a higher level is desired.

-  Diaphragm Assembly
-  Vessel Gas Pressure
-  Downstream Pressure or Vacuum
-  Gas Pressure Plus Liquid Head



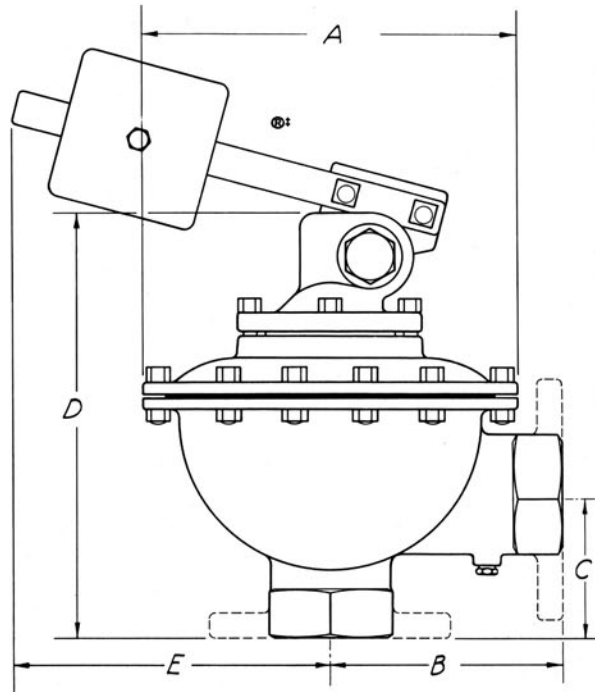
**TREATER VALVE  
INSTALLATION AND DIMENSIONS**

**INSTALLATION**



NOTE: Do not connect gas equalizing line to gas vent line, burner manifold, or downstream of mist extractor.

**DIMENSIONS**



**CAPACITY - Bbls. Water/ Day, Steady Flow**

Press. Drop Across Valve	Valve Size - Inches			
	2	3	4	6
1	1,250	3,200	5,950	12,750
2	1,800	4,500	8,450	18,000
3	2,200	5,500	10,300	22,000
4	2,500	6,400	11,900	25,500
5	2,800	7,350	13,300	27,500
10	4,000	10,100	18,900	40,500
15	4,900	12,400	23,100	49,500
20	5,700	14,300	26,800	57,000
30	6,950	17,600	32,800	81,000
50	8,900	22,600	42,200	90,500
60	9,850	24,800	46,200	99,000
75	11,900	—	56,000	—

**DIMENSIONS - INCHES**

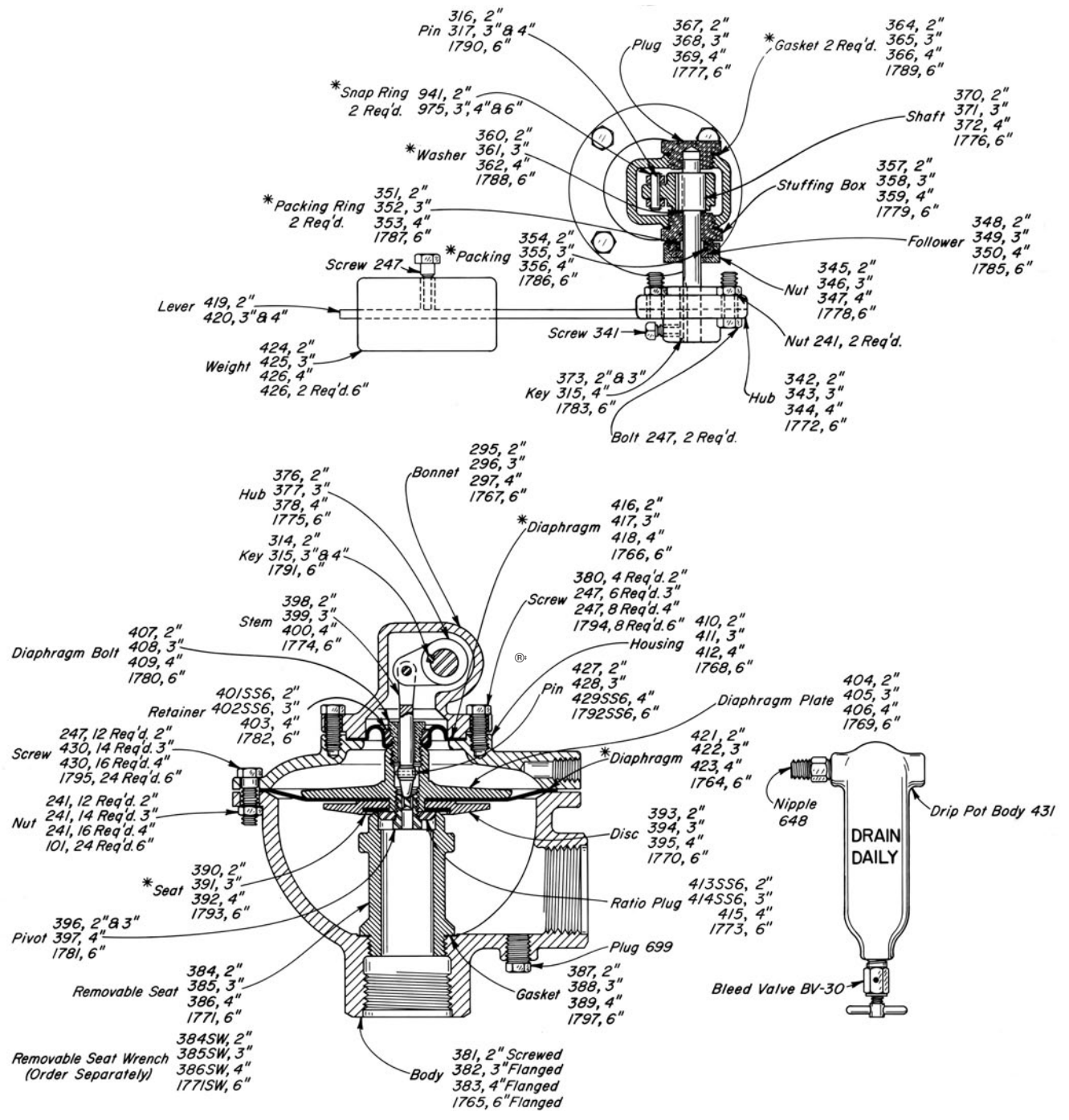
Valve No.	A	B	C	D	E
26 SWA	9 <sup>3</sup> / <sub>8</sub>	4 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	10 <sup>5</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>
27 FWA-D	9 <sup>3</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	10 <sup>5</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>
27 FWA-S	9 <sup>3</sup> / <sub>8</sub>	6 <sup>3</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	10 <sup>5</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>
36 FWA	11 <sup>3</sup> / <sub>4</sub>	8	4 <sup>1</sup> / <sub>4</sub>	13 <sup>1</sup> / <sub>2</sub>	13
37 FWA-D	11 <sup>3</sup> / <sub>4</sub>	8	4 <sup>1</sup> / <sub>4</sub>	13 <sup>1</sup> / <sub>2</sub>	13
46 FWA	13	9	4 <sup>3</sup> / <sub>4</sub>	14 <sup>5</sup> / <sub>8</sub>	13
47 FWA-D	13	9	4 <sup>3</sup> / <sub>4</sub>	14 <sup>5</sup> / <sub>8</sub>	13
47 FWA-S	13	9	4 <sup>3</sup> / <sub>4</sub>	14 <sup>5</sup> / <sub>8</sub>	13
66 FWA	18 <sup>5</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>	21 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>

For gravity correction multiply values obtained from chart by  $\sqrt{\frac{1}{G}}$ . Where "G" is specific gravity of flowing liquid.



# OIL AND WATER VALVES

## TREATER VALVE CAST IRON



### ANGLE VALVES AVAILABLE:

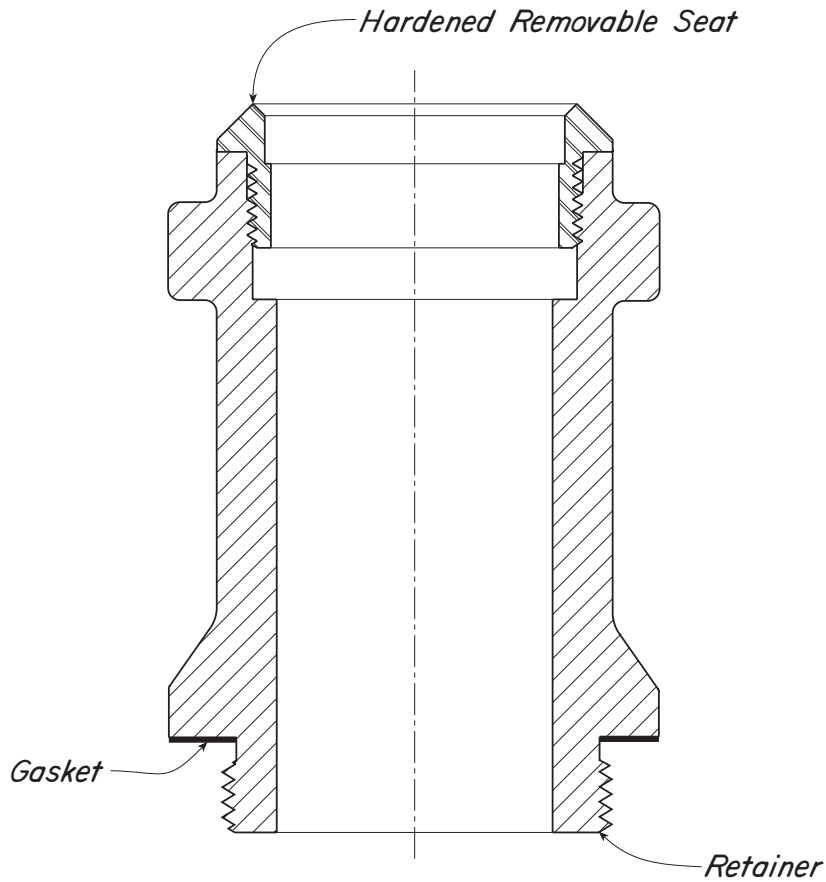
CAT. NO.	SIZE TYPE	VALVE	MAX W.P.	KIT
DAA	2" SCRD.	26 SWA	125	REL
DAC	3" FLGD.**	36 FWA	60	REM
DAD	4" FLGD.**	46 FWA	60	REN
DAE	6" FLGD.**	66 FWA	60	REP

\*\*Companion flanges, nuts, bolts and gaskets are furnished, at extra cost only when specified.

### NOTES:

\*These are recommended spare parts and are stocked as repair kits.

Lever Bars for higher liquid head are available 419L and 420L.



**SEATS AVAILABLE:**

LINE SIZE	SEAT	RETAINER	GASKET
2"	384HA	384HB	387
3"	385HA	385HB	388
3"	385PH	385HB	388