

**MODEL**

**RC/RR**

## GENERAL DESCRIPTION

The ORBINOX model RC and RR Flap Gates are designed for discharge lines such as levees, sewer lines and drainage conduits. The flap stays closed preventing water back-flow, and it opens automatically when the unseating water head is higher than the seating water head. From sizes 150mm x 150mm to 2000mm x 2000mm the RC square Flap Gate and the RR round Flap Gate have a unique seal design, resulting in a substantially watertight performance. ORBINOX can also design and manufacture the RC and RR models in larger sizes. For more information, please contact an ORBINOX representative.



RC Square Flap Gate

## CONSTRUCTION DESIGN

The ORBINOX RR and RC models are designed in general accordance to DIN 19569-4. It can be also be designed in general accordance to other standards, such as BS 7775.

The standard RR and RC models are manufactured in stainless steel which has a higher corrosion resistance in many applications which results in a longer life cycle with little or no maintenance. Other materials of construction are available upon request, such as AISI 904L, Duplex stainless, etc.



RR Round Flap Gate

## DESIGN FEATURES

- Stainless steel fabricated design (corrosion resistance).
- Double jointed pivot arm design ensures a perfect seating for optimum sealing performance.
- Self adjusting "lip" type seal design ensures a substantially watertight performance even with low seating water heads.
- The flap opens with low unseating heads (50mm to 300mm depending on the size). If the water head on both sides of the flap gate is equal, the flap closes automatically.
- Option of Wall Mount, Wall Thimble Mount or Standard Flange mounting.
- ORBINOX Flap Gates are completely factory assembled and tested eliminating the need for on site adjustment.

### Seat Design Head:

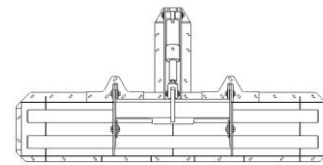
The RC and RR models are designed to withstand 5 m.w.c.M of seating water head. For higher water head service conditions please contact an ORBINOX representative.

### Seal design:

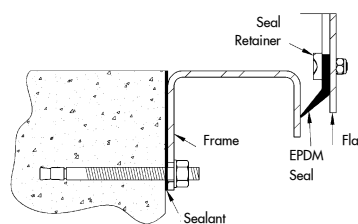
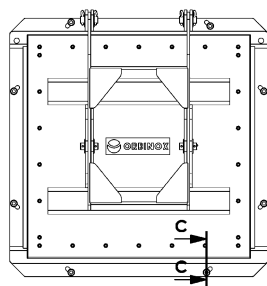
The RC and RR models have a unique seal design. The selfadjusting "lip-design" seals ensure a substantially watertight performance, even in low seating water head conditions. The leakage rate on the models RR and RC is lower than the maximum allowable defined by DIN 19569-4 (class 3).

### Special Designs:

In certain applications, such as storm tanks, fast opening Flap Gates are required. The Flap Gate can be designed to open rapidly with the help of an hydraulic actuator in order to effectively flush the bottom of the storm tanks. Typically 2 to 3 seconds are required to fully open the flap, and it generates a wave having a powerful flushing action. For more detailed information, please contact an ORBINOX representative.

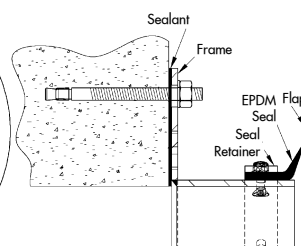
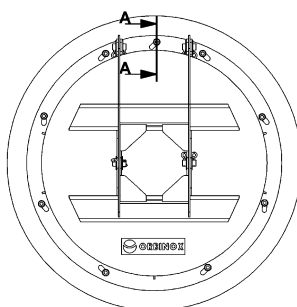


## SEAL DESIGN: RC Square Flap Gate



Detail view of Section C-C

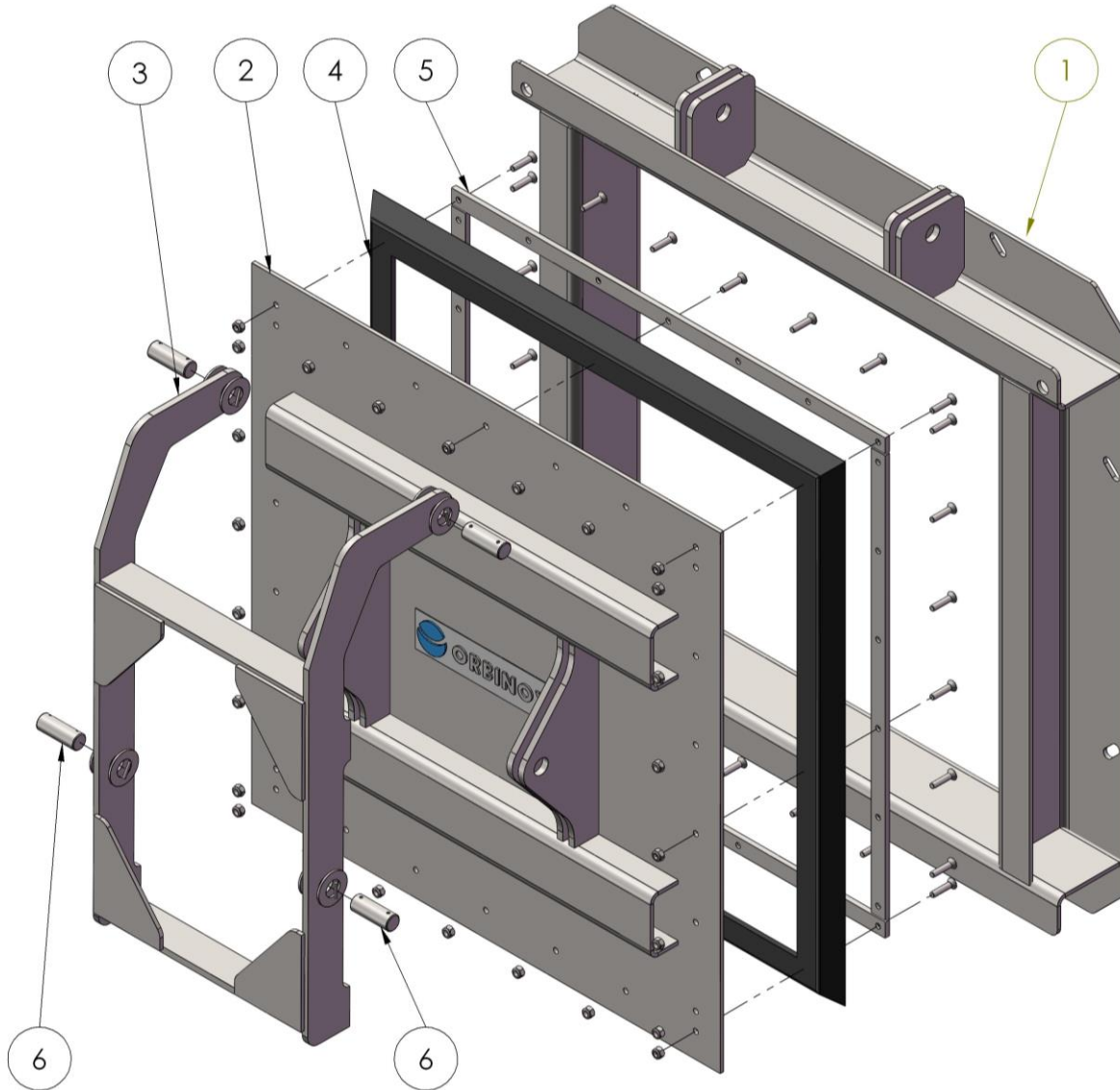
## SEAL DESIGN: RR Round Flap Gate



Detail view of Section A-A

## STANDARD MATERIALS OF CONSTRUCTION

### RC Square Flap Gate

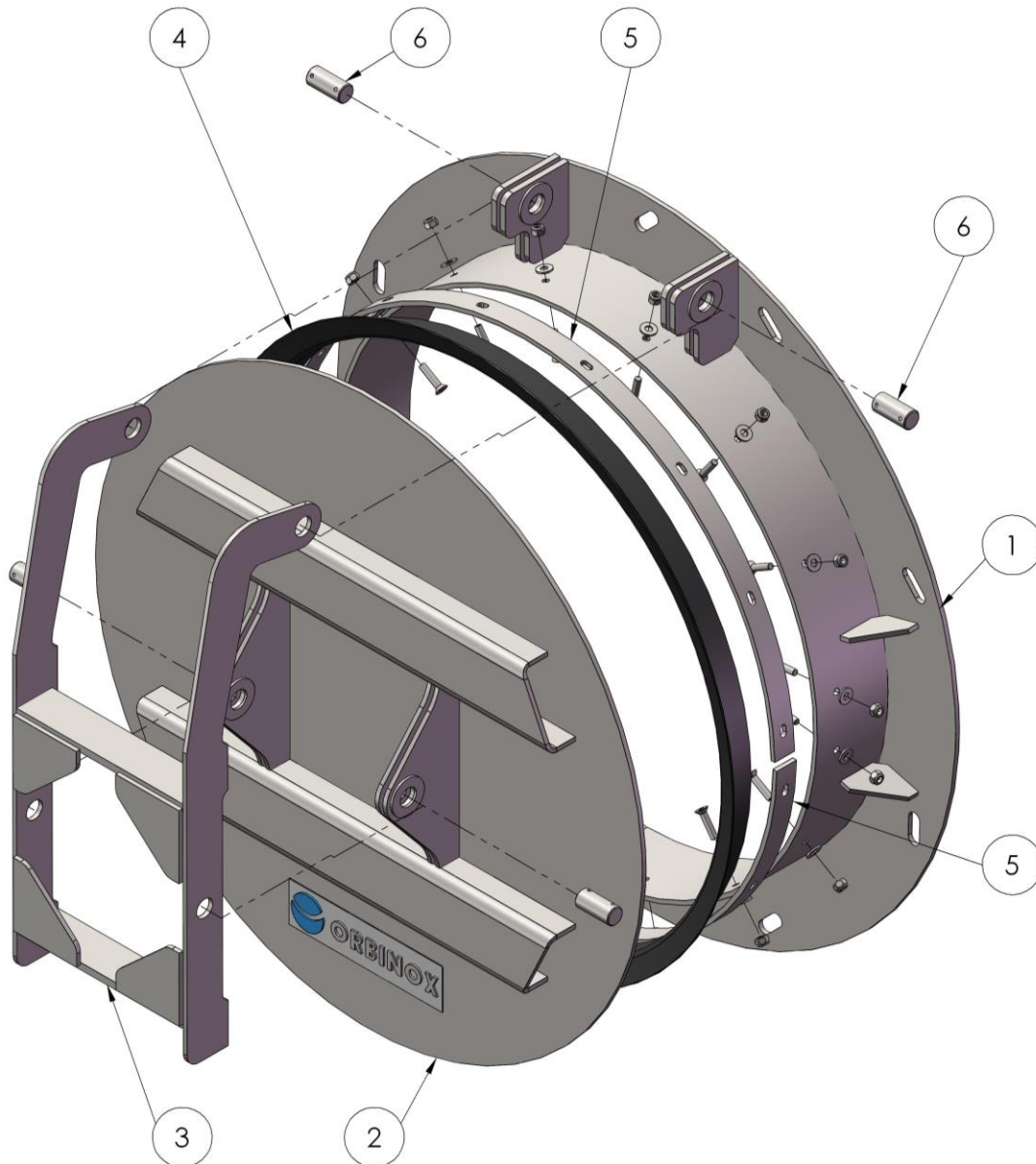


ITEM	DESCRIPTION	MATERIAL
1	Frame	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
2	Flap	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
3	Pivot Arm	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
4	Seal	EPDM
5	Seal Retainer	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
6	Hinge Pin	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)

Note: For materials other than the above, please consult an ORBINOX representative.

## STANDARD MATERIALS OF CONSTRUCTION

### RR Round Flap Gate



ITEM	DESCRIPTION	MATERIAL
1	Frame	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
2	Flap	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
3	Pivot Arm	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
4	Seal	EPDM
5	Seal Retainer	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)
6	Hinge Pin	Stainless Steel Type 304L or 316L (1.4306 or 1.4404)

Note: For materials other than the above, please consult an ORBINOX representative.

**MODEL**

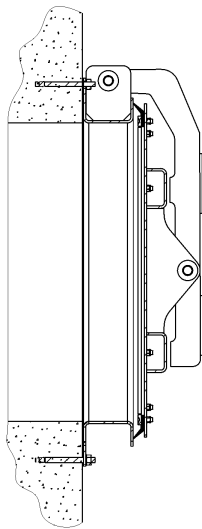
**RC/RR**

## MOUNTING OPTIONS

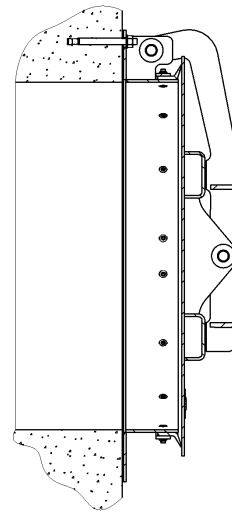
The following drawings show the most common mounting options for RC and RR Flap Gates. For other mounting options please contact an ORBINOX representative.

### WALL MOUNTED

**Model: RC**

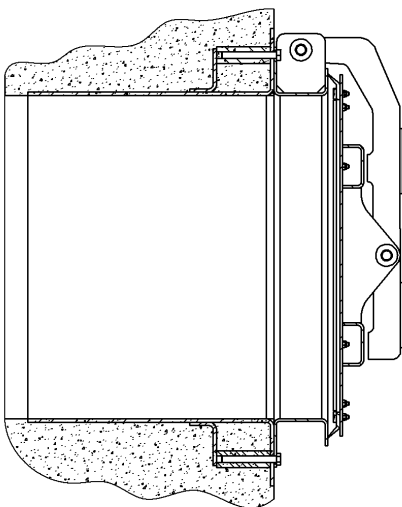


**Model: RR**



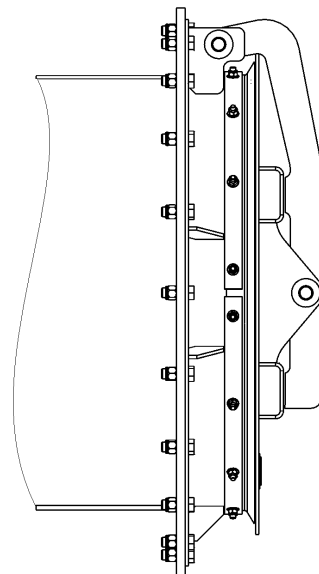
### ON A WALL THIMBLE

**Model: RC**



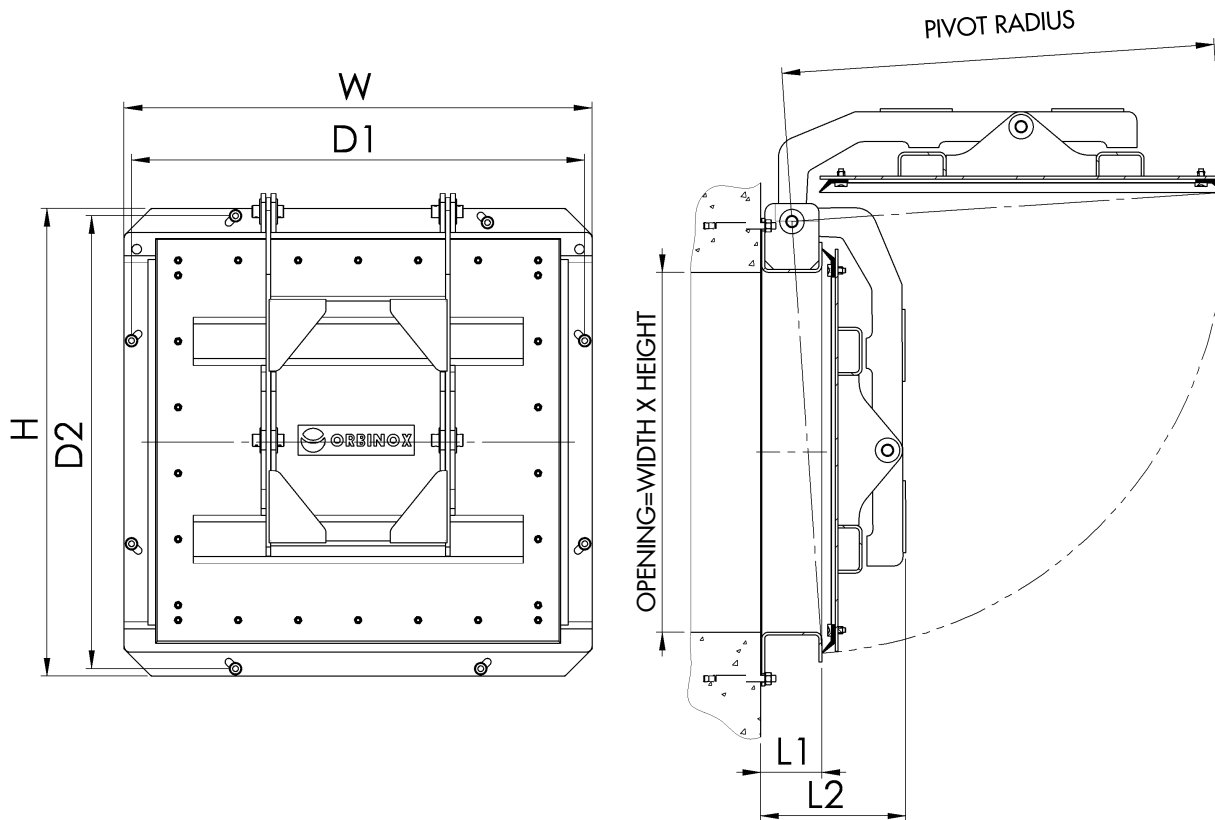
### ON A STANDARD FLANGE

**Model: RR**



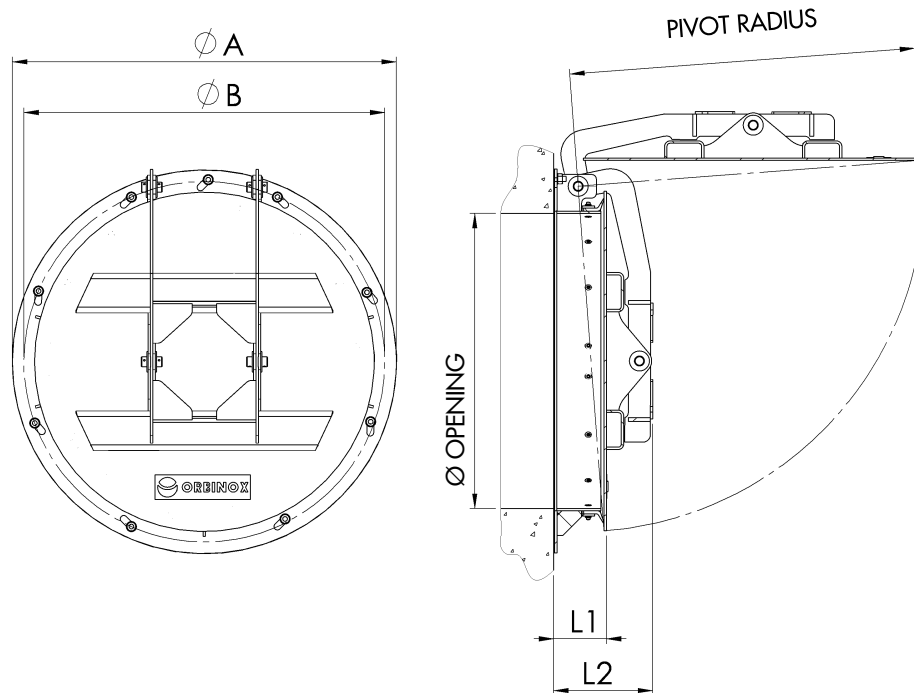
**MODEL****RC/RR****RC · DIMENSIONS**

The following drawings show the most common mounting options, as well as the respective dimensional charts.



SIZE(mm) (Opening Width)	SIZE(mm) (opening Height)	W	H	D1	D2	L1	L2	PIVOT RADIUS
150	150	330	330	300	300	100	153	267
200	200	380	380	350	350	100	153	316
300	300	480	480	450	450	100	153	415
400	400	580	580	550	550	100	153	514
500	500	680	680	650	650	100	153	614
600	600	780	780	770	770	100	153	714
700	700	880	880	870	870	100	226	814
800	800	980	980	970	970	100	226	913
900	900	1080	1080	1070	1070	100	226	1013
1000	1000	1200	1200	1170	1170	100	226	1113
1100	1100	1300	1300	1270	1270	100	231	1213
1200	1200	1400	1400	1370	1370	100	231	1313
1300	1300	1500	1500	1470	1470	100	231	1413
1400	1400	1600	1600	1570	1570	100	231	1513
1500	1500	1700	1700	1670	1670	100	288	1613
2000	2000	2200	2200	2170	2170	100	288	2113

These dimensions are for information only. Do not use for installation or submittal purposes.

**MODEL****RC/RR****RR · DIMENSIONS**

SIZE(mm) (Opening Diameter)	A	B	L1	L2	PIVOT RADIUS
150	285	235	105	158	267
200	340	290	105	158	316
300	445	395	105	158	415
400	565	515	106	158	514
500	670	620	106	158	614
600	780	730	106	184	714
700	895	845	106	184	814
800	1015	965	106	184	913
900	1115	1065	106	212	1013
1000	1215	1165	106	212	1113
1100	1315	1265	106	212	1213
1200	1455	1405	117	212	1313
1300	1560	1510	123	212	1413
1400	1625	1625	148	288	1513
1500	1815	1760	148	288	1625
2000	2325	2230	220	398	2185

Note: For dimensions other than the above, please consult an ORBINOX representative.  
 These dimensions are for information only. Do not use for installation or submittal purposes.

**MODEL**

**RC/RR**



**RR AND RC FLAP GATE SELECTION FORM**

Customer: \_\_\_\_\_ Tag No.: \_\_\_\_\_ Date: \_\_\_\_\_  
Order Number: \_\_\_\_\_ Qty.: \_\_\_\_\_

**FLAP GATE DESIGN**

Units: mm  inch

RR: Round Flap Gate

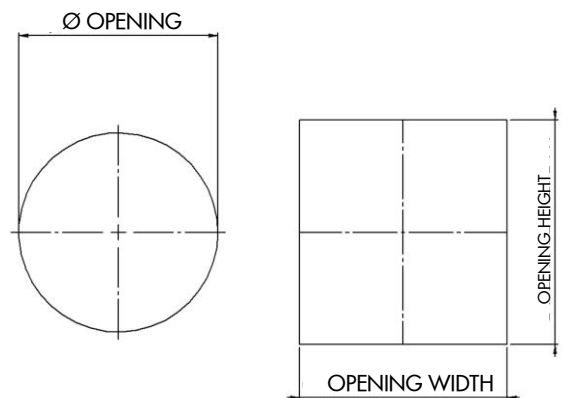
Opening diameter: \_\_\_\_\_

RC: Square Flap Gate

Opening Width: \_\_\_\_\_

Opening Height: \_\_\_\_\_

Seating Water Head: \_\_\_\_\_

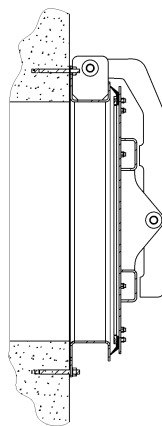


**MOUNTING OPTIONS**

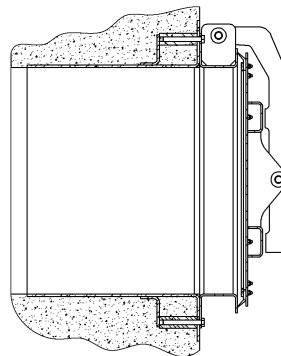
- Wall Mounted (a)
- Wall Thimble Mounted (b)
- Std. Flange Mounted (c)

Flange Type: \_\_\_\_\_

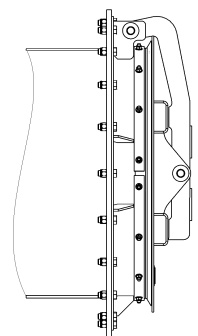
Other:



(a)



(b)



(c)

**MATERIALS**

Frame & Flap  304L SS  316L SS Other: \_\_\_\_\_  
Seal  EPDM  Other: \_\_\_\_\_

**REMARKS**

Name: \_\_\_\_\_ Signature: \_\_\_\_\_