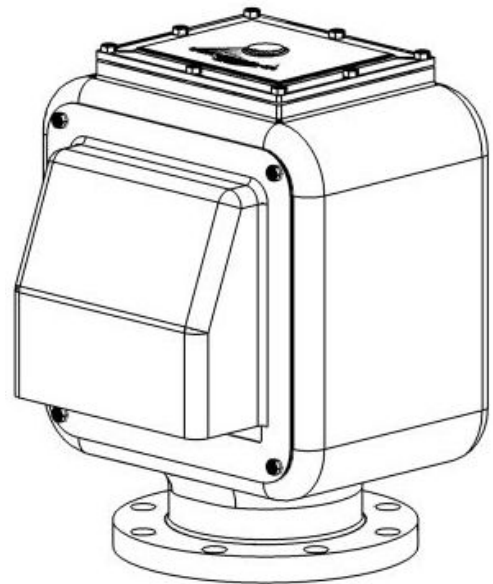
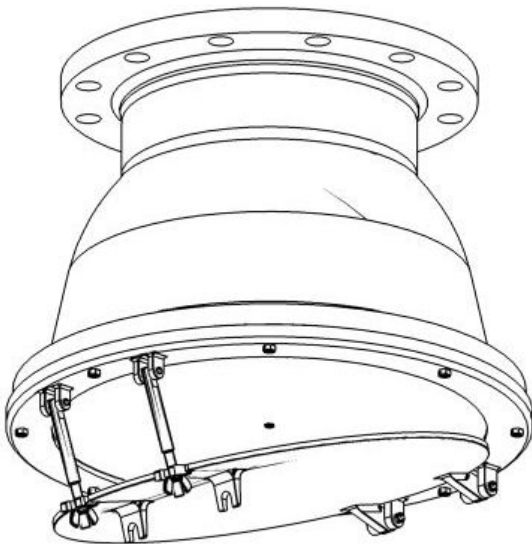




ROBERT H. WAGER COMPANY

Installation, Operation and Maintenance Guide



Models
1500/1500-MC
1700/1750

MODELS 1500/1500-MC/1700/1750

Installation, Operation and Maintenance Guide

Robert H. Wager Company, Inc.
570 Montroyal Road • Forum Pkwy
Rural Hall, NC 27045
Phone 336.969.6909 • Fax 336.969-6375

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Replacement of Spare Parts

Cleaning

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MODEL 1500

MODEL 1500-MC

MODEL 1700 (FULL FLOAT – SIZES 1.5”-4”)

MODEL 1700 (HALF FLOAT – SIZES 5”-12”)

MODEL 1750 (FULL FLOAT – SIZES 1.5”-4”)

MODEL 1750 (HALF FLOAT – SIZES 5”-12”)

ADDITIONAL PRODUCTS

Installation

Mounting (1500/1500-MC)

The 1500 and 1500-MC Series Vent Outlet Closing Devices are designed to be installed (mounted) in the vertical position.

Model 1500-MC will be shipped in the closed position. THE CLOSING DEVICE MUST BE IN THE OPEN POSITION FOR INTENDED VENTING OPERATION. (See “Operation” section of this manual for details)

Installing Flanged Connections – Vent Closing Devices come standard with an ANSI B16.5, 150 lb. slip-on type, raised face flanges (or Equivalent). All mounting hardware should be suitable for use per industry standards for 150 lb. piping systems. It is recommended the bolts be inserted from the bottom of the mating flange because of the limited area between the valve flange and the bottom of the housing. (Mating Flange, Mounting Bolts, Nuts, and Gaskets NOT INCLUDED)

Installing Butt weld Connections – Vent Closing Devices can be purchased with butt weld end connections as an alternative option. ANSI B16.25 welding procedures or industry acceptable standards should be followed. Butt weld end connections are consistent with schedule 40 specifications.

Installing Threaded Connections – Vent Closing Devices can also be supplied with a threaded connection. All threaded connections are Internal NPT (ANSI/ASME B1.20.1-1983, R1992). All thread sealants should be suitable for use per industry standards (NOT INCLUDED).

Special Instructions

During the installation, make sure that there are no obstructions blocking the cover or the accessibility or range of operation of the Manual Closing Device. (1500-MC)

If the Vent Outlet Closing Devices are to be painted after installation, make sure not to paint any part of the Flame/Bug Screen or the Valve Stem on the Manual Closing Assembly (1500-MC). Painting over these areas will prevent proper operation and venting capacity of the Vent Outlet Closing Device.

Mounting (1700/1750)

The 1700 and 1750 Series Vent Outlet Closing Devices are designed to be installed (mounted) in the Inverted position. (On a “Gooseneck”)

Model 1750 will be shipped in the closed position. **THE CLOSING DEVICE MUST BE IN THE OPEN POSITION FOR INTENDED VENTING OPERATION.** (See “Operation” section of this manual for details)

Installing Flanged Connections – Carbon/Galvanized/Stainless Steel Vent Closing Devices come standard with ANSI B16.5, 150 lb. slip-on type, raised face flanges. Bronze and Aluminum Vent Closing Devices are machined to a flat face, 150 lb. equivalent. All mounting hardware should be suitable for use per industry standards for 150 lb. piping systems. It is recommended the bolts be inserted from the top of the mating flange because of the limited area between the valve flange and the bottom of the housing. (Mating Flange, Mounting Bolts, Nuts, and Gaskets **NOT INCLUDED**)

Installing Buttweld Connections – Vent Closing Devices can be purchased with buttweld end connections as an alternative option. ANSI B16.25 welding procedures or industry acceptable standards should be followed. Buttweld end connections are consistent with schedule 40 specifications.

Installing Threaded Connections – Vent Closing Devices can also be supplied with a threaded connection. All threaded connections are Internal NPT (ANSI/ASME B1.20.1-1983, R1992). All thread sealants should be suitable for use per industry standards (**NOT INCLUDED**).

Special Instructions

During the installation, make sure that there are no obstructions blocking the cover or the accessibility or range of operation of the Manual Closing Device (Model 1750).

If the Vent Outlet Closing Devices are to be painted after installation, make sure not to paint any part of the Flame/Bug Screen or the Toggle Bolt Assembly on the Manual Closing Device (1750). Painting over these areas will prevent proper operation and venting capacity of the Vent Outlet Closing Device.

Operation

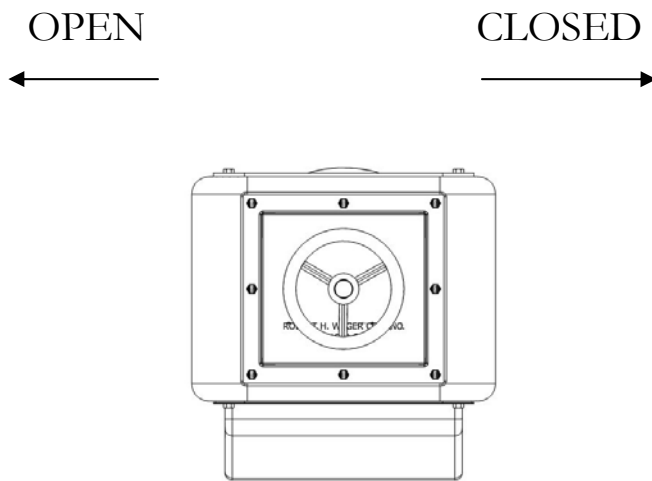
All series of Vent Outlet Closing Devices are designed to prevent the ingress of liquid into the vented area or system. These vents are normally open, and close automatically when liquid levels reach the float, in turn, sealing the vent outlet. However, the 1500-MC and the 1750 Series Vent Outlet Closing Devices are designed to be closed manually when required.

Opening and Closing Manually (1500-MC)

The Series 1500-MC Vent Closing Devices are shipped in the **CLOSED** position. For proper ventilation during its working cycles, the valve must remain in the **OPEN** position. (Note: These valves are design to be watertight while in the closed position)

Opening the Valve – The 1500-MC Vent Closing Device is opened and closed by means of a jackscrew with a hand-wheel actuator. To open the valve, turn the hand-wheel counter-clockwise until it ceases. This should require between 10-20 turns depending on the valve size. (Note: Because of the float design, the Manual Closing Assembly must be fully open so as not to obstruct the operating range of motion of the float disc. Not opening the valve fully could prevent the valve from sealing or venting properly).

Closing the Valve – The 1500-MC Vent Closing Device is closed by turning the hand-wheel in the clockwise direction until it cease or becomes difficult to turn. (Note: the 1500-MC closing device is design so that the base of the hand-wheel is approximately 1/8 to 1/4 inch from the cap plate when in the closed position) This should require between 10-20 turns depending on the valve size.



Opening and Closing Manually (1750)

The Series 1750 Vent Closing Devices are shipped in the **CLOSED** position. For proper ventilation during its working cycles, the valve must remain in the **OPEN** position. (Note: These valves are designed to be spray resistant in the closed position.)

Opening the Valve – The 1750 Vent Closing Device is opened and closed by means of a toggle bolt and wing-nut actuator.

To open the valve, loosen the wing-nut(s) and swing the toggle bolt(s) out of its seating groove on the face of the cover.

Next, lower the cover and swing the toggle bolt(s) into its seating groove on the edge of the cover.

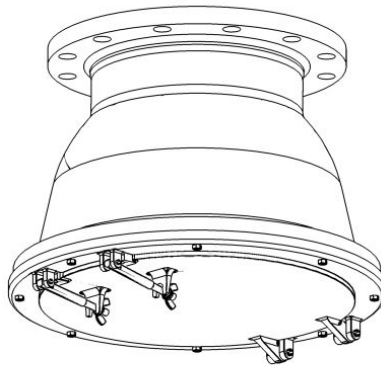
Lastly, tighten the wing-nut(s). A light tap with a wrench or hammer to further tighten the wing-nut(s) is recommended, but may not be necessary.

Closing the Valve – To close the valve, loosen the wing-nut(s) and swing the toggle bolt(s) out of the seating groove on the edge of the cover.

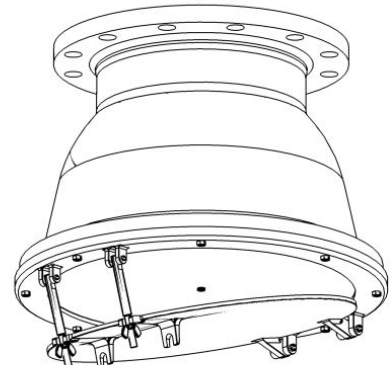
Next, lift the cover until it is flush with the cover frame and swing the toggle bolt(s) into the seating grooves on the face of the cover.

Lastly, tighten the toggle bolt(s).

(Note: Sizes 1.5”-4” have one (1) toggle bolt actuator and sizes 5”-12” have two (2) toggle bolt actuators).



CLOSED



OPEN

Maintenance

Replacement of Spare Parts and Cleaning **(1500/1500-MC)**

(Uninstalling the Vent Outlet Closing Devices prior to the replacement of spare parts is optional)

Accessing Seat and Inner Housing – To access the Seat and clean the inner housing, loosen the Cap Bolts and remove the Cap Plate. (Remove the manual Closing Device Assembly on the 1500-MC model) The Seat is a grommet style insert that can be removed simply by pulling it from the inner housing. (The Seat lies directly below the Cap Plate or Manual Closing Device Assembly) Remove any debris or media that have accumulated between the inner and outer housing.

Accessing the Float and Guide Rod Only – To access the Float and Guide Rod only, remove four (4) mounting bolts on the Cover Plate. (Secure plate with hand before removing the last bolt) The Float and Guide Rod can be removed by unscrewing the Guide Rod from its base. To re-install, place the float on the Guide Rod prior to screwing the Guide Rod into the base.

Accessing the Cover and Flame/Bug Screen – To access the Cover and Flame/Bug Screen, remove four (4) mounting bolts from the Cover. (Secure Cover with Hand before removing the last bolt) Cover and Screen will fall once bolts are removed. (The Float and the Guide Rod can also be accessed by removing the Cover and Flame/Bug Screen.)

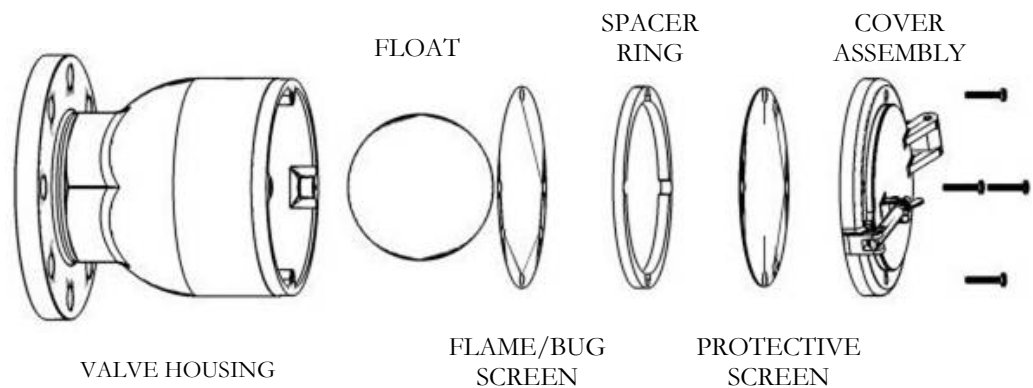
It is recommended that All Vent Outlet Closing Assemblies be cleaned and inspected every six months, although this is not required by the manufacturer. Upon inspection, all spare parts that are damaged or worn should be replaced to ensure proper valve function. (Replacement parts are defined as any part excluding the Closing Device Housing) See page 7.



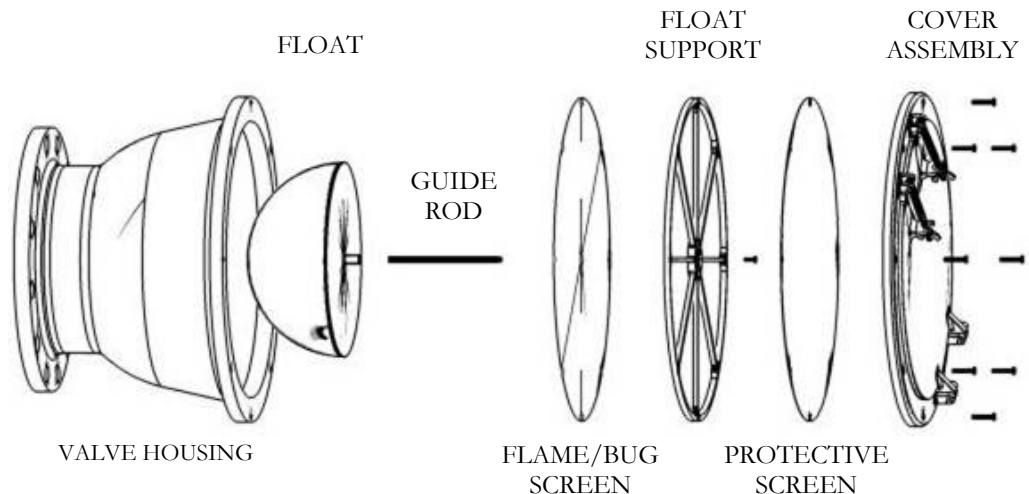
Replacement of Spare Parts and cleaning **(1700/1750)**

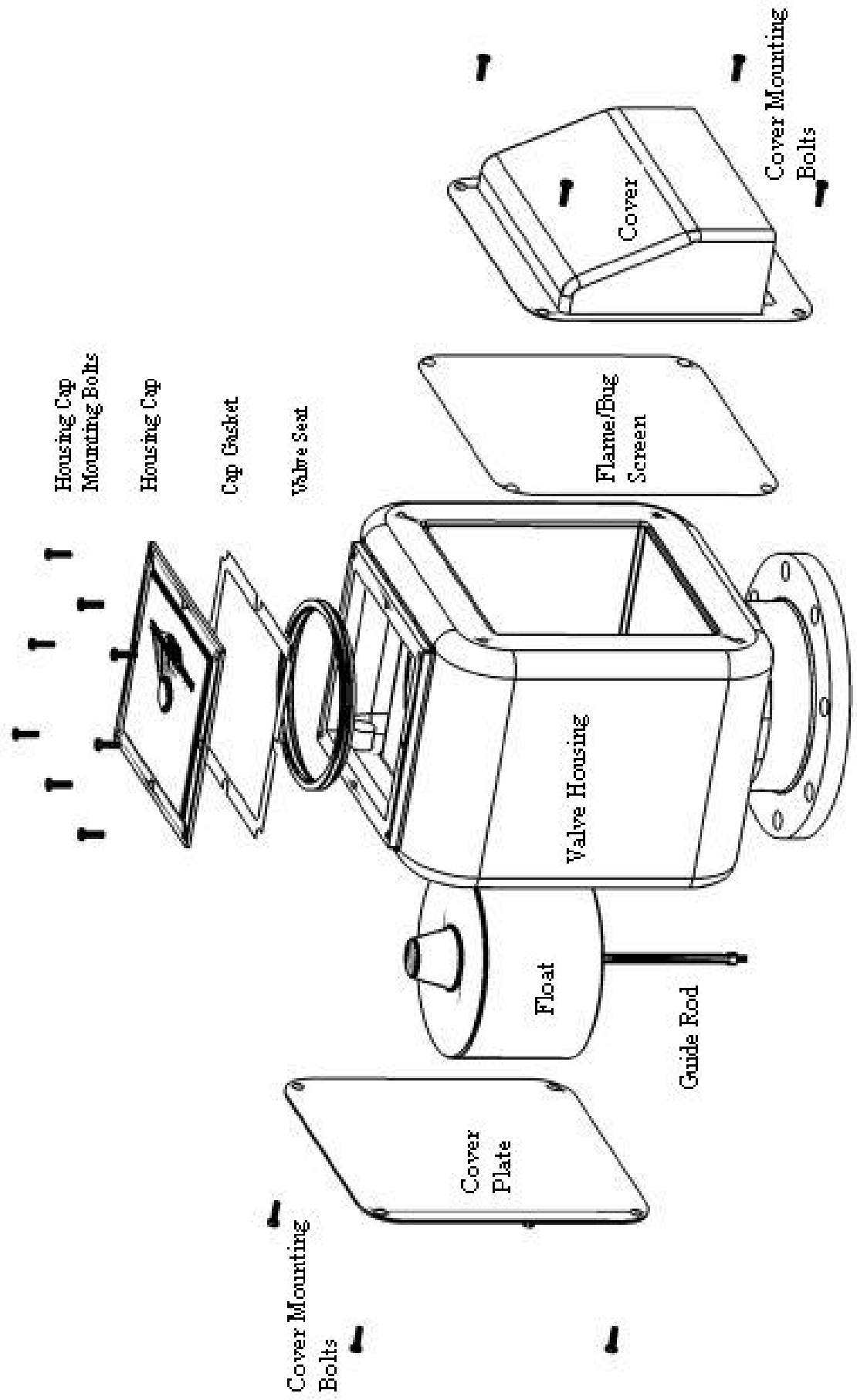
(Uninstalling the Vent Outlet Closing Devices prior to the replacement of spare parts is recommended)

Accessing Components for Sizes 1.5" thru 4" – To access all components of the 1700/1750 Vent Outlet Closing Device, loosen the Cap Screws and remove the Cap/Cover Assembly. (All components will fall once these bolts are removed if the Valve remains installed) The below illustration shows the order in which the components are to be reassembled.



Accessing Components for Sizes 5" thru 12" – To access all components of the 1700/1750 Vent Outlet Closing Device, loosen the Cap Screws and remove the Cap/Cover Assembly. (All components will fall once these bolts are removed if the Valve remains installed) There is a Float Support sub-assembly which may need to be disassembled to replace certain components. The below illustration shows the order in which the components are to be reassembled. (Guide Rod Mounting Bolt pictured but not labeled)





MODELS 1500/1500-MC/1700/1750

References

Technical Drawings



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570 Montroyal Road
Rural Hall, NC 27045
Ph: 800-562-7024
Fx: 336-969-6375
www.wagerusa.com

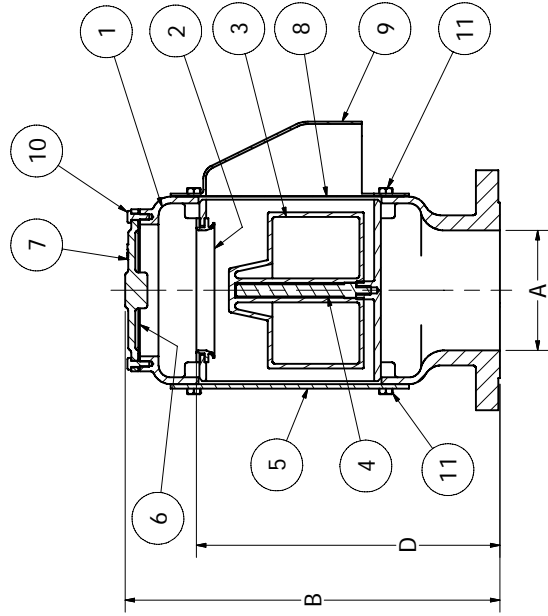
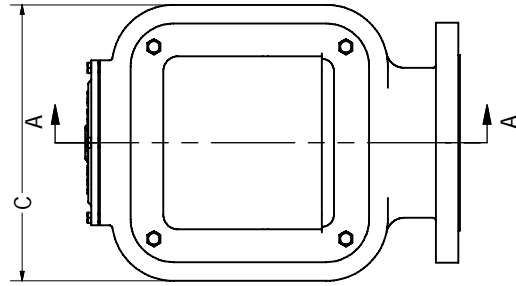
WAGER
C O M P A N Y

1500 Series - Vent Outlet Closing Device

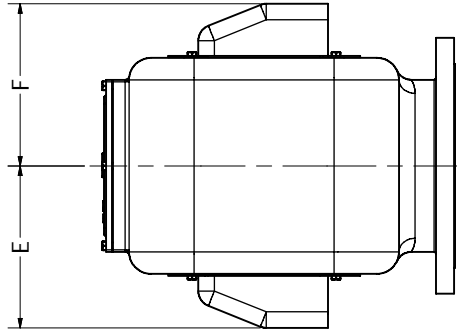
When Ordering, Please Specify:
Body Material and Connection

Body Materials:
Galvanized Steel (1020)
Stainless Steel (316)

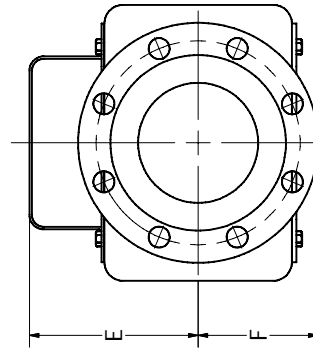
Connections:
Flanged
Buttweld (1.5"-6" Only)
Threaded (1.5"- 6" Only)



SECTION A-A



1500-10 (DOUBLE COVER)



Weight Listed in Lbs.

Parts List		
ITEM	NAME OF PART	QTY
1	Valve Housing	1
2	Seat	1
3	Float Disc	1
4	Guide Rod	1
5	Cover Plate	1
6	Cap Gasket	1
7	Valve Cap	1
8	Flame/Bug Screen	1
9	Cover	1
10	Cap Bolt	8
11	Cover Bolt	8

Sizing Chart									
A	B	C	D	E	F	WEIGHT			
1.5	11	7	9	4 1/8	2 7/8	28			
2	11	7	9	4 1/8	3	30			
2.5	11	7	9	4 1/8	3 1/2	32			
3	13 5/8	9 1/2	11 1/4	5 5/8	3 3/4	56			
4	13 5/8	9 1/2	11 1/4	5 5/8	4 1/2	60			
5	15 5/8	11 1/2	12 5/8	7	5	83			
6	18 1/2	14	15 1/8	8 1/4	5 1/2	125			
8	22 1/4	17	18 1/2	10 5/8	6 3/4	190			
10	22	21 3/8	16 3/4	10 1/8	10 1/8	235			

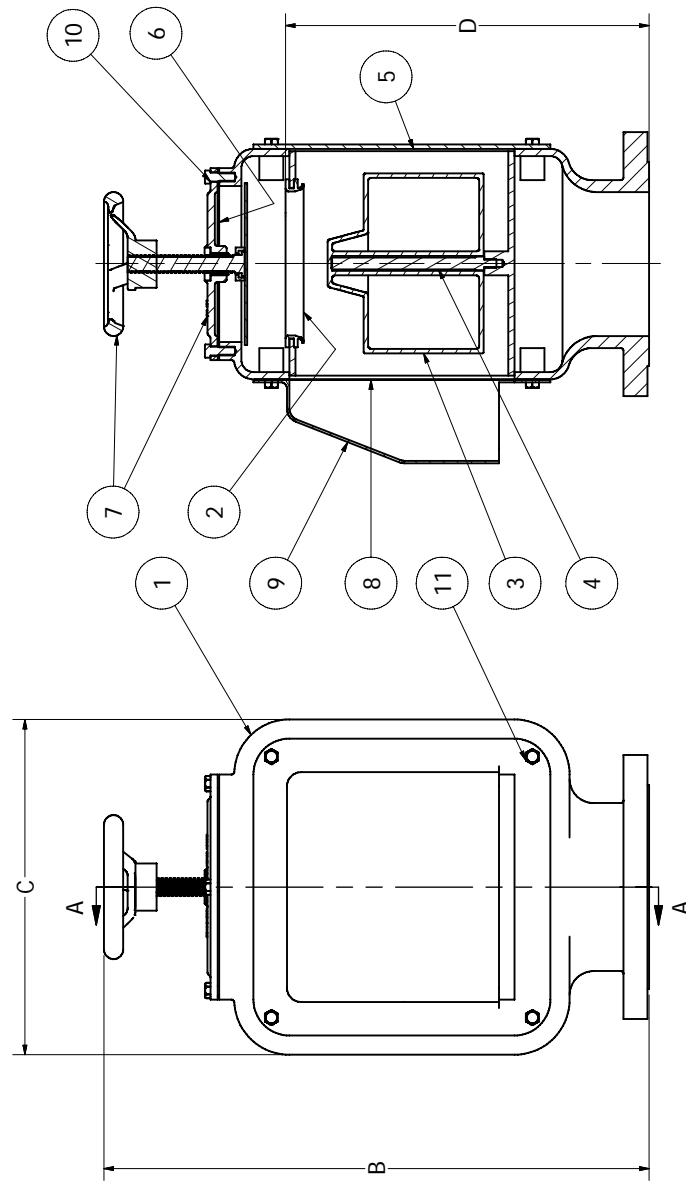
For Reference Only
Do Not Use For Engineering Puposes

1500-MC Series - Vent Outlet Closing Device

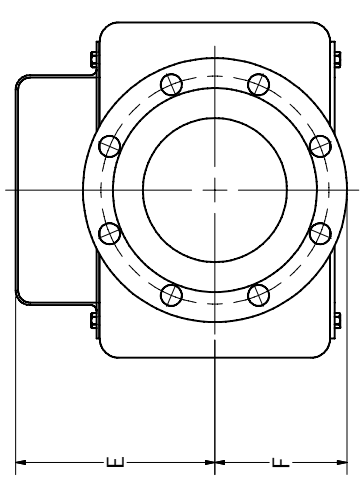
When Ordering, Please Specify:
Body Material and Connection

Body Materials:
 Galvanized Steel (1020)
 Stainless Steel (316)

Connections:
 Flanged
 Butt weld (1.5"-6" Only)
 Threaded (1.5"- 6" Only)



SECTION A-A



WEIGHT LISTED IN LBS. FOR FLANGED CONNECTION

SIZING CHART									
A	B	C	D	E	F	WEIGHT			
1.5	13 1/4	7	9	4 1/8	2 7/8	34			
2	13 1/4	7	9	4 1/8	3	36			
2.5	13 1/4	7	9	4 1/8	3 1/2	38			
3	17	9 1/2	11 1/4	5 5/8	3 3/4	60			
4	17	9 1/2	11 1/4	5 5/8	4 1/2	65			
5	19 1/4	11 1/2	12 5/8	7	5	87			
6	22 3/4	14	15 1/8	8 1/4	5 1/2	129			
8	26 3/4	17	18 1/2	10 5/8	6 3/4	195			
10	27 1/2	21 3/8	16 3/4	10 5/8	10 1/8	240			

Parts List		
ITEM	NAME OF PART	QTY
1	Valve Housing	1
2	Valve Seat	1
3	Float Disc	1
4	Guide Rod	1
5	Cover Plate	1
6	Cap Gasket	1
7	Manual Closing Assy.	1
8	Flame/Bug Screen	1
9	Cover	1
10	Cap Bolt	8
11	Mounting Bolt	8

Robert H Wager Co., Inc.

570 Montroyal Road
Rural Hall, NC 27045
Ph: 800-562-7024
Fx: 336-969-6375
www.wagerusa.com

1700 Series (w/ full float)

When Ordering, Please Specify:
Body Material, Connection, and Float Material

Body Materials:

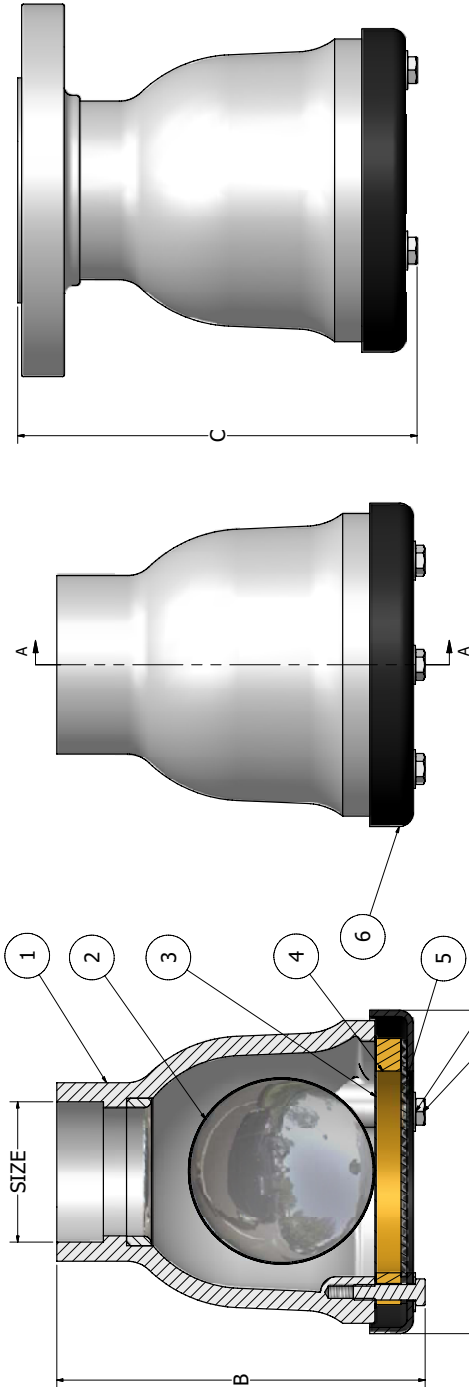
- 1020 Galvanized Steel
- Bronze (ASTM-B62)
- Cast Iron , Galvanized (ASTM-A-48)
- Anodized Aluminum (356-T6)
- Stainless Steel (316)

Float Materials:

- 316 Stainless Steel (Standard)
- Copper
- High Density Polyethylene (Plastic)
- Monel

Connections:

- Threaded
- Butt weld (Steels Only)
- Socket weld (Steels and Aluminum Only)
- Flanged
- Sil-Brazed (Bronze Only)



Parts List		
ITEM	QTY	NAME OF PART
1	1	BODY
2	1	FLOAT
3	1	FLAME SCREEN
4	1	SPACER RING
5	1	PROTECTIVE SCREEN
6	1	RETAINER CAP
7	3*	CAP WASHERS
8	3*	CAP MOUNTING BOLTS

SIZE CHART					
SIZE	A	B	C	W/ FLANGE	# OF HOLES
1.5	4.500	4.875	5.250	8 (LB)	4
2	5.375	5.937	6.437	8	4
2.5	6.250	6.375	7.000	10	4
3	7.125	7.250	7.937	15	4
4	7.813	8.750	9.5625	20	8

* 4" HAS (4) MOUNTING BOLTS AND WASHERS

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1700 Series (w/ Half Float)

When Ordering, Please Specify:
Body Material, Connection, and Float Material

Body Materials:

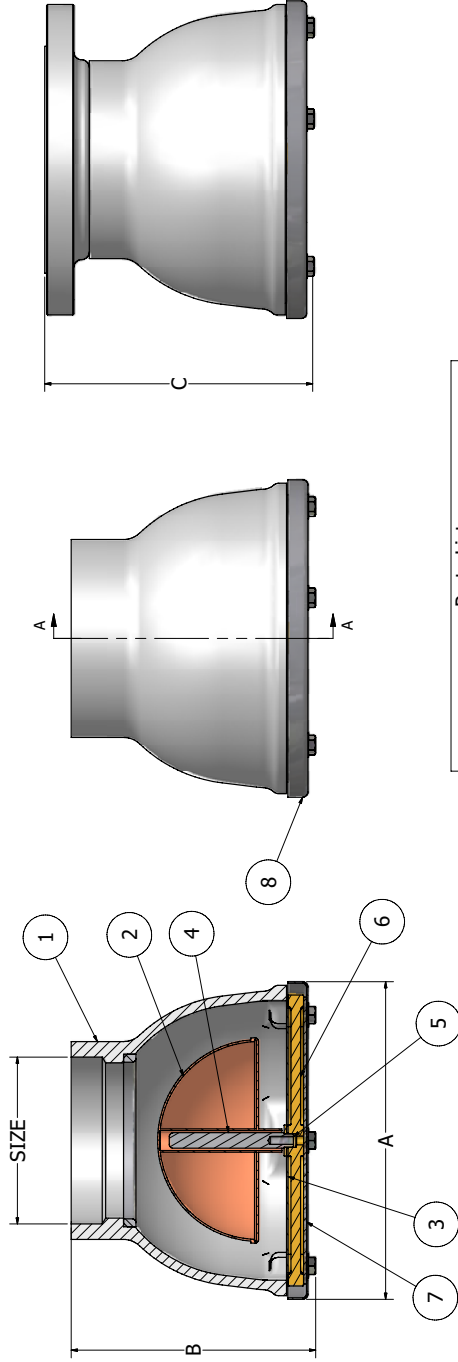
- 1020 Galvanized Steel
- Bronze (ASTM-B62)
- Cast Iron, Galvanized (ASTM-A-48)
- Stainless Steel (316)

Float Materials:

- 316 Stainless Steel
- Copper (Standard)
- High Density Polyethylene (Plastic)
- Monel

Connections:

- Threaded
- Buttweld (Steel & Stainless Only)
- Socketweld (Steel, Stainless, & Alum. Only)
- Flanged
- Sil-Brazed (Bronze Only)



Parts List		NAME OF PART	
ITEM	QTY		
1	1	BODY	
2	1	FLOAT	
3	1	FLAME SCREEN	
4	1	GUIDE ROD	
5	1	G.R. MOUNTING BOLT	
6	1	FLOAT SUPPORT	
7	1	PROTECTIVE SCREEN	
8	1	RETAINER CAP	
9	5*	MOUNTING BOLT WASHER	
10	5*	CAP MOUNTING BOLT	

* 6" HAS (6) MOUNTING BOLTS AND WASHERS
8" THRU 16" HAS (8) MOUNTING BOLTS AND WASHERS

Parts List							
SIZE	A	B	C	WEIGHT	W/ FLNG	HOLES	HOLE SIZE
5	10.250	7.750	8.625	27 (LB.)	42 (LB.)	8	.875
6	11.500	8.750	9.750	35	54	8	.875
8	14.500	9.750	10.875	62	88	8	.875
10	17.125	12.750	14.000	88	130	12	1.000
12	23.750	15.250	16.875	195	260	12	1.000
14	30.500	18.500	20.125	285	370	12	1.125
16	30.500	18.500	20.375	265	360	16	1.125

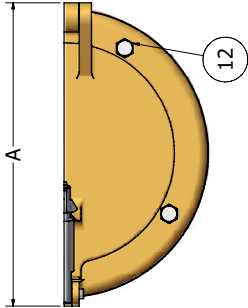
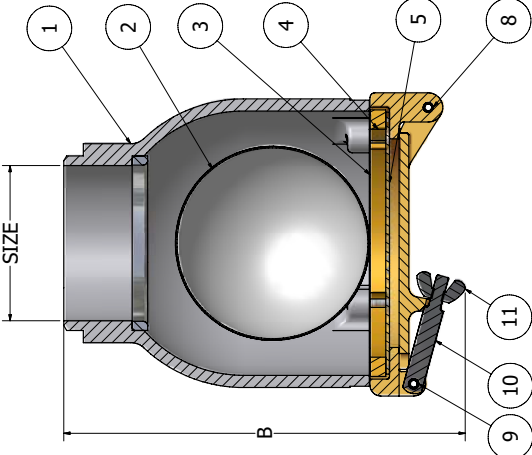
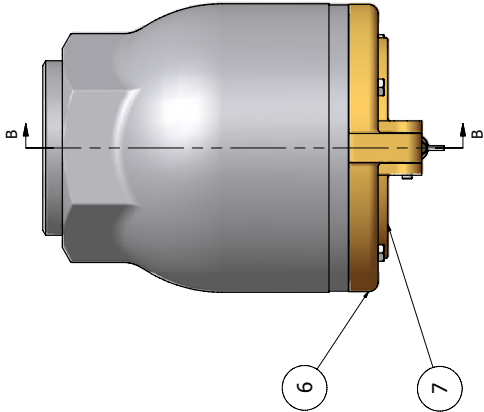
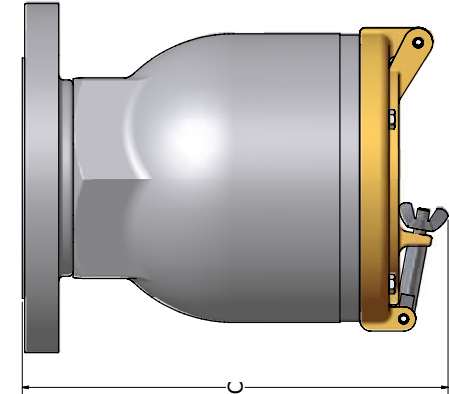
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1750 Series (w/ full float)

When Ordering, Please Specify:
Body Material, Connection, and Float Material

- Body Materials:
- 1020 Galvanized Steel
 - Bronze (ASTM-B62)
 - Cast Iron , Galvanized (ASTM-A-48)
 - Anodized Aluminum (356-T6)
 - Stainless Steel (316)
- Float Materials:
- 316 Stainless Steel (Standard)
 - Copper
 - High Density Polyethylene (Plastic)
 - Monel
- Connections:
- Threaded
 - Buttweld (Steel & Stainless Only)
 - Socketweld (Steel, Stainless and Aluminum Only)
 - Flanged
 - Sil-Brazed (Bronze Only)



Parts List			Parts List		
ITEM	QTY	NAME OF PART	ITEM	QTY	NAME OF PART
1	1	BODY	7	1	COVER
2	1	FLOAT	8	1	COVER HINGE PIN
3	1	FLAME SCREEN	9	1	TOGGLE BOLT PIN
4	1	SPACER RING	10	1	TOGGLE BOLT
5	1	PROTECTIVE SCREEN	11	1	TOGGLE BOLT WING NUT
6	1	COVER FRAME	12	3*	CAP MOUNTING BOLTS

SIZE CHART						
SIZE	A	B	C	WEIGHT	W/ FLANGE	HOLE SIZE
1.5	4.500	6.375	6.750	7 (LB)	10 (LB)	4
2	5.375	7.438	7.938	10	16	4
2.5	6.250	7.875	8.500	13	21	4
3	7.125	8.750	9.438	20	28	4
4	7.813	10.250	11.063	25	36	8

* 4" HAS (4) MOUNTING BOLTS

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Rural Hall, NC 27045
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1750 Series (w/ Half Float)

When Ordering, Please Specify:
Body Material, Connection, and Float Material

Body Materials:

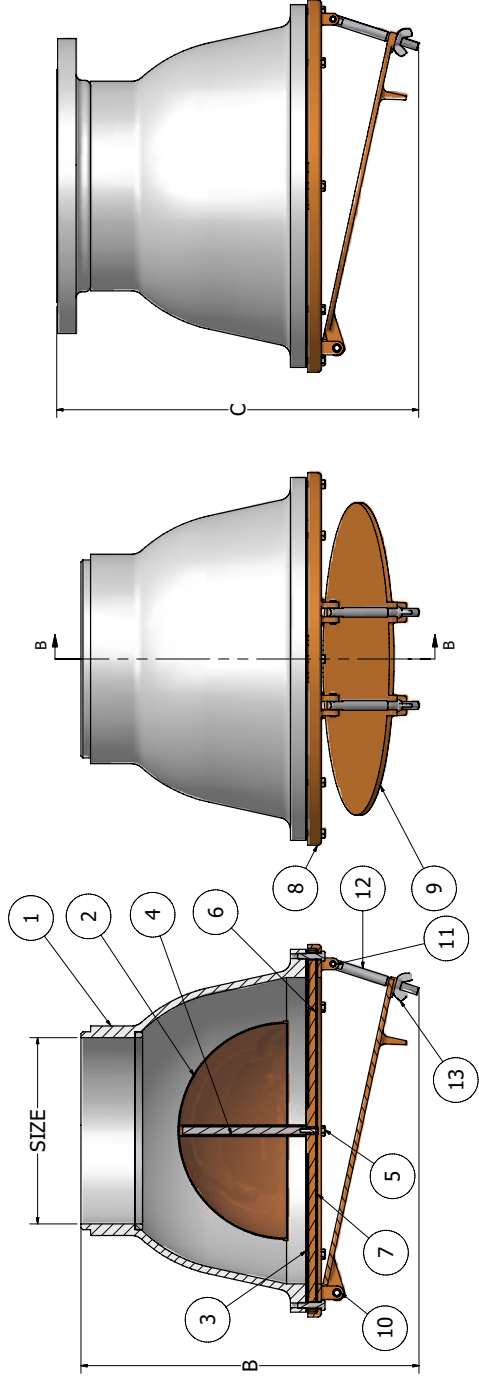
- 1020 Galvanized Steel
- Bronze (ASTM-B62)
- Cast Iron, Galvanized (ASTM-A-48)
- Stainless Steel (316)

Float Materials:

- 316 Stainless Steel
- Copper (Standard)
- High Density Polyethylene (Plastic)
- Monel

Connections:

- Threaded
- Buttweld (Steel & Stainless Only)
- Socketweld (Steel, Stainless, & Alum. Only)
- Flanged
- Sil-Brazed (Bronze Only)




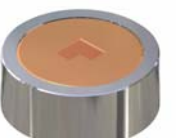

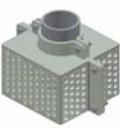
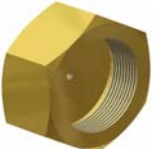





Parts List	
ITEM	QTY
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	2
11	2
12	2
13	2
14	*

Parts List						
SIZE	A	B	C	WEIGHT	W/ FLNG	HOLES
5	10.000	12.000	12.750	38 (LB.)	52 (LB.)	8
6	11.250	13.500	14.375	55	74	8
8	14.250	14.250	15.375	85	117	8
10	16.875	18.250	19.500	120	167	12
12	23.750	21.750	23.25	248	313	12
14	N/A	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A

* 5" HAS (5) MOUNTING BOLTS
6" HAS (6) MOUNTING BOLTS
8" THRU 16" HAS (8) MOUNTING BOLTS

	Series Sizes Connections Materials	1300 - Inline Valve 1.5" / 2" / 2.5" / 3" Flanged - Threaded - Sil-Brazed - Butt weld Bronze - Aluminum - Galvanized Steel - Stainless Steel
	Series Sizes Connections Materials	1350 - Horizontal Inline Valve Non Stocked - Customize To Order Flanged - Butt weld Galvanized Steel - Stainless Steel
	Series Sizes Connections Materials	1500-1 - Vertical Vent Check Valve - New Style (Cast) 1.5" / 2" / 2.5" / 3" / 4" / 5" / 6" / 8" / 10" Flanged - Butt weld - Threaded Galvanized Steel - Stainless Steel
	Series Sizes Connections Materials	1600 - Tank Air Escape Valve 1.5" / 2" / 2.5" / 3" / 4" / 5" / 6" / 8" / 10" / 12" / 14" / 16" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	1660 - Tank Air Escape Valve, With Cover 1.5" / 2" / 2.5" / 3" / 4" / 5" / 6" / 8" / 10" / 12" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	1700 - Inverted Vent Check Valve - Full Float 1.5" / 2" / 2.5" / 3" / 4" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	1750 - Inverted Vent Check Valve, With Cover - Full Float 1.5" / 2" / 2.5" / 3" / 4" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	1700 - Inverted Vent Check Valve - Half Float 5" / 6" / 8" / 10" / 12" / 14" / 16" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	1750 - Inverted Vent Check Valve, With Cover - Half Float 5" / 6" / 8" / 10" / 12" Flanged - Threaded - Sil-Brazed - Butt weld - Socket weld Bronze - Aluminum - Galvanized steel - Stainless steel
	Series Sizes Connections Materials	134 - Deck Drains - Standard 1.5" / 2" / 2.5" / 3" / 4" / 6" Butt weld - Socket weld - Threaded Galvanized Steel - Stainless Steel - Aluminum

	Series Sizes Connections Materials	134HW - Deck Drain - Heavy wall 1.5" / 2" / 2.5" / 3" Butt weld - Socket weld - Threaded Galvanized Steel - Stainless Steel - Aluminum - Bronze		
	Series Sizes Connections Materials	134HWA - Deck Drain - Angled Heavy wall 1.5" / 2" Butt weld - Socket weld - Threaded Galvanized Steel - Stainless Steel - Aluminum - Bronze		
	Series Sizes Connections Materials	136 - Deck Drain - 2:1 Ratio 2" / 3" / 4" Butt weld - Socket weld - Threaded Galvanized Steel - Stainless Steel		
	Series Sizes Connections Materials	133 - Sounding Tube 1.5" / 2" / 2.5" / 3" Butt weld - Socket weld Stainless Steel (Bronze Plug) - Aluminum (Stainless Plug)		
	Name Sizes Connections Materials	Dewatering Plug 4" Buttweld Carbon Steel (Bronze Plug)		
	Name Sizes Connections Materials	Suction Rosebox Strainer 2" / 2.5" / 3" / 4" / 5" / 6" / 8" Clamps to O.D. of Suction Pipe Galvanized Steel		
	Name P/N Connections Materials	Pipe Cap - With Chain CAP-2B 2" NPT Bronze (CDA932)		
	Name P/N Connections Materials	Anti-Syphonic Valve .75-AS 3/4" NPT (female) Polyvinyl Chloride (Body)		
	Name P/N Connections Materials	Air Check Valve 1352-SS-O / 000162NAVY 3/8" NPT 316 Stainless Steel	Meets the requirements of USN and USCG on air scavenger lines to soot blower steam piping on water-tube boilers.	
	Boiler Viewport Approved for installation aboard USN and USCG vessels for oil drip detection on boilers P/N-1477			Boiler Inspection Light P/N-1469 