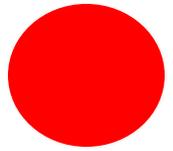


# Superior Aqua-Aire



## Parts Breakdown & Assemblies



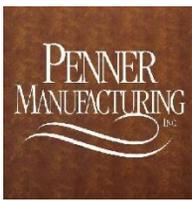
**Model # 350010-1, 350010-X, 350010-1SB, 350010-XSB**

350748 Revision F 8/16/16

**Penner Patient Care 101 Grant Street Aurora, NE 68818**

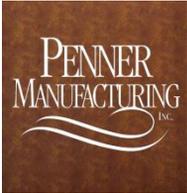
**For Service Please Call 1-800-732-0717 or 1-866-736-6377**

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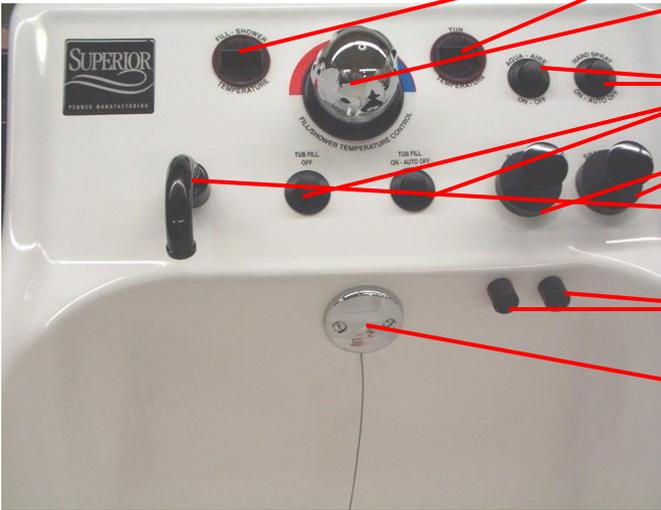


## **Index**

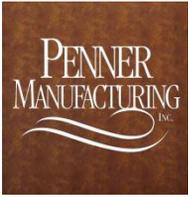
<b>2</b>	<b>Index</b>
<b>3</b>	<b>Superior Controls</b>
<b>4</b>	<b>Superior Controls (Side View) and Drain View</b>
<b>5</b>	<b>Mixing Rada 320 Valve Breakdown</b>
<b>6</b>	<b>Mixing Rada 320 Valve Adjustments</b>
<b>7</b>	<b>Minnesota Mixing Rada 222 Valve Breakdown &amp; Adjustment</b>
<b>8</b>	<b>Jet Assembly</b>
<b>9</b>	<b>Blower and Filter Assembly</b>
<b>10</b>	<b>Overflow and Drain Assembly</b>
<b>11</b>	<b>Solenoids and Manifold Assembly</b>
<b>12</b>	<b>Breakdown of Solenoid Valve with Coil</b>
<b>12</b>	<b>Orientation of the Components of the Injector</b>
<b>13</b>	<b>Electrical Kit and Timer Adjustment</b>
<b>14</b>	<b>Instructions for Dilution and Disinfection</b>
<b>15</b>	<b>Vacuum Breaker and Check Valve Assembly</b>
<b>16</b>	<b>Access Doors and Locks</b>
<b>17</b>	<b>Installation Kit</b>



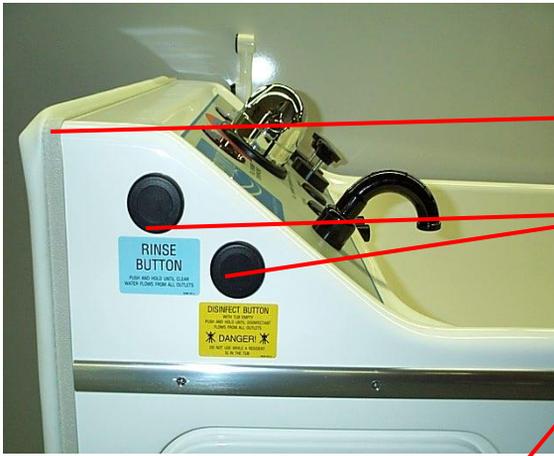
## Superior Aqua-Aire Deck View - Controls



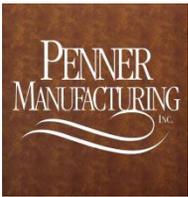
- 350535M-SER THERMOMETER DISPLAY
- 350151 RADA 320 VALVE 3/4" NPT
- 350495 AIR TRANSMITTER – BLACK
- 350200 DISPENSER PUMP COMPLETE
- 350240 SPIGOT – 6300
- 350220 DISPENSER SPOUT - OIL & SOAP
- 350172 ESCUTCHEON, CHROME
- 140106CHT HAND SHOWER W/POSITIVETRIGGER  
NOTE: DOES REPLACE OLDER WHITE SPRAYER (140106) THAT HAD SEPARATE ELBOW (140104) AND SHOWER SPRAYER MOUNT (350160).
- 140104 SHOWER SPRAY HOLDER  
IS STILL SAME NUMBER BUT WITH SWIVEL MOUNT CHROME. DIRECT REPLACEMENT
- 1404785 SHOWER BACKFLOW PREVENTER
- 350190CH SHOWER HOSE 69"



## Superior Aqua-Aire View Deck Side

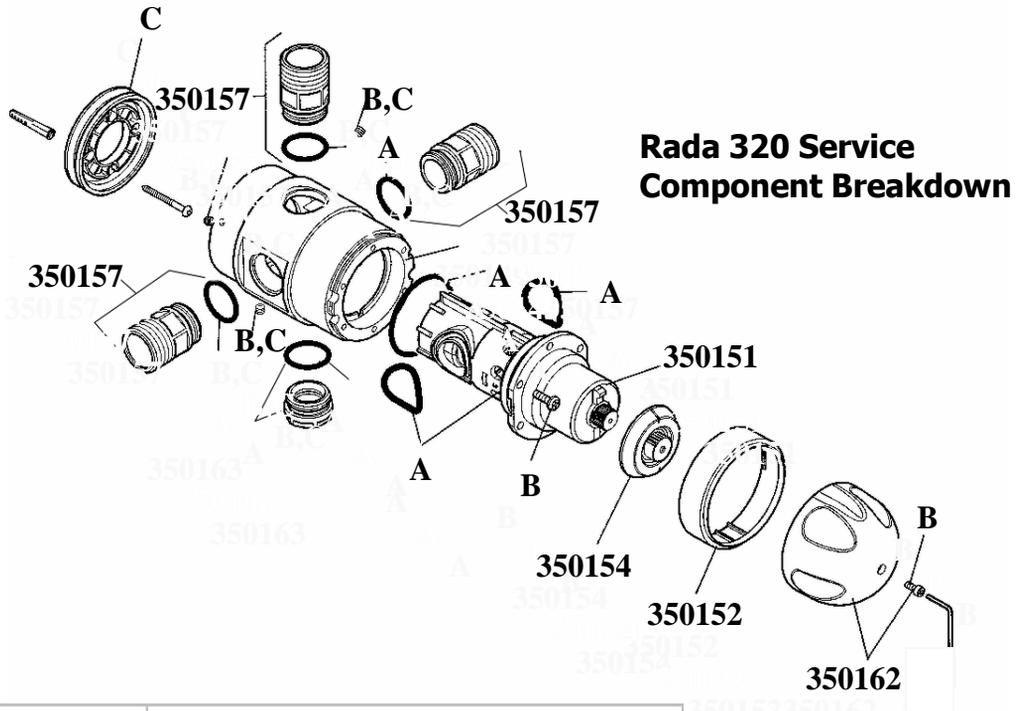


- 81110004  
TRIM 3/16 - 5/8 BULB WHITE
- 350495  
AIR TRANSMITTER – BLACK
- 350177  
DRAIN PLUG WITH CABLE
- 1050345  
WASHER  
1 7/8" x 2 1/8" x 1/16"  
RUBBER  
(On drain plug)
- 350391  
DRAIN SCREEN (CROSS HAIR)
- 1050401  
BASE SHOE BASKET (BRASS)
- 350133  
JET BRASS SPRING ROUND  
7/8" WHT  
(See page 8 for exploded view  
of Air Jet.)
- 360630  
ADAPTER - TEMP PROBE



# Superior Rada 320 Valve

## Rada Service Component Breakdown

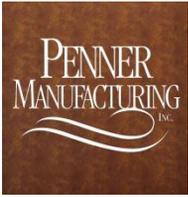


**Rada 320 Service Component Breakdown**

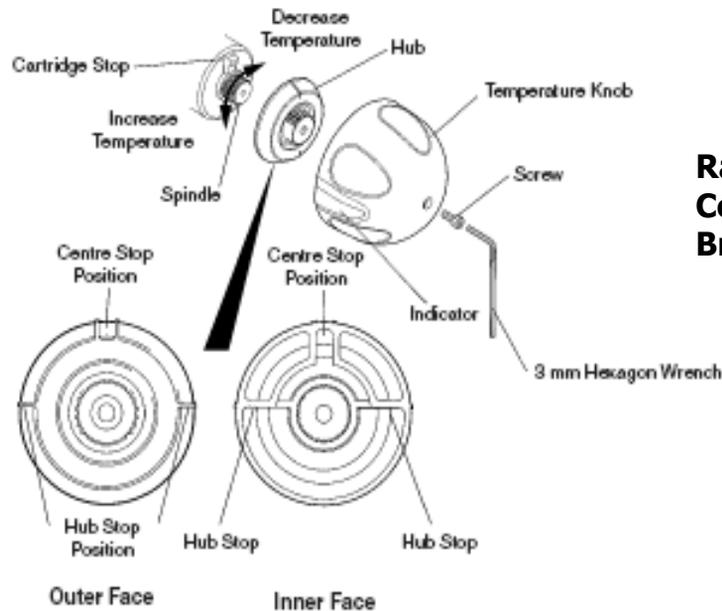
Part No.	Description
350149	Body, Rada 320 (less connector)
350150	Temperature Indicating Ring
350151	Cartridge Assembly
350154	Hub Pack
350157	Inlet/Outlet Adapter, 3/4 Female "
350158	Seal Pack -Includes A" Components "
350159	Screw Pack -Includes B" Components "
350161	Backplate Kit -Includes C" Components "
350162	Knob Pack
350163	Blanking Cap

Rada Valve Website

<http://www.armstrong-intl.com/products/lynnwood/pdf/installation/ALIB-320.pdf>



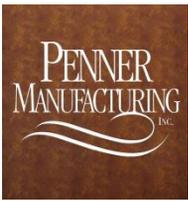
## Rada 320 Mixing Valve Adjustment



### Rada 320 Service Component Breakdown

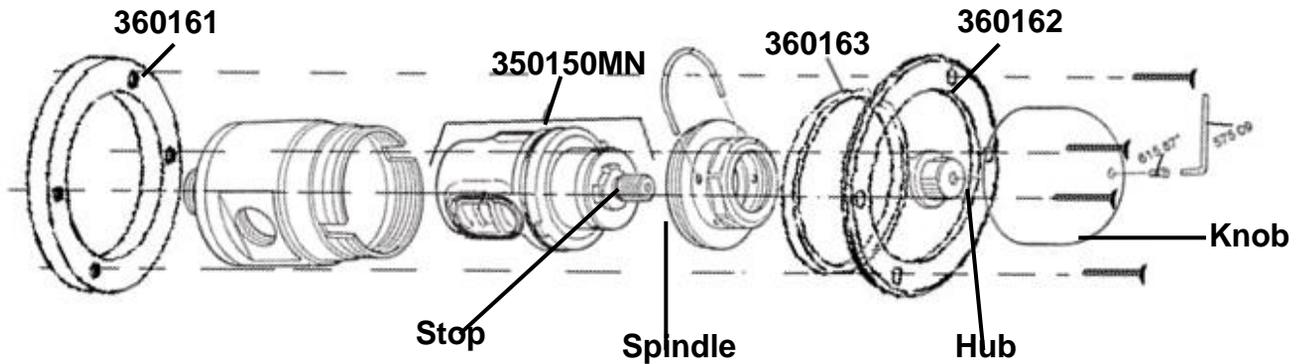
#### For Adjustable Temperature

1. Remove the temperature knob screw using a 3 mm hexagonal wrench (supplied). Remove the temperature knob.
2. Pull off the black polymer hub assembly which may inadvertently remain attached to the inside of the temperature control handle. This is a "push fit" and can be "levered" out using a thin blade screwdriver or pliers.
3. Rotate the spindle until required maximum blend temperature is obtained at outlet point (clockwise = decrease temperature, counterclockwise = increase temperature). When resistance is felt do not use force to turn any further, as this can damage the internal parts.
4. Once the desired maximum blend temperature is achieved, re-fit the hub without disturbing the spindle: Position the hub so that the hub stop comes up against the cartridge stop (figure above) preventing any further rotation in a counterclockwise direction. Check that blend temperature has not altered.
5. Refit the temperature knob. Make sure that the indicator points to 9 o'clock.



# Mixing Valve Adjustment Rada 222 Currently applicable only in Minnesota

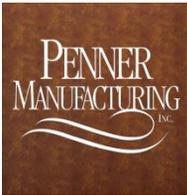
Figure 1



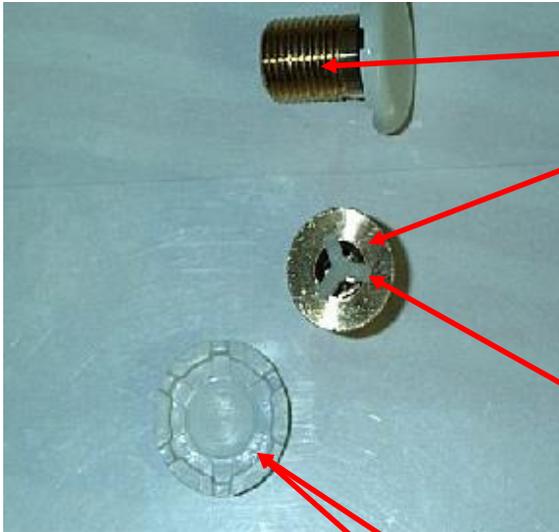
## Rada 222 Breakdown

### To Adjust the Temperature:

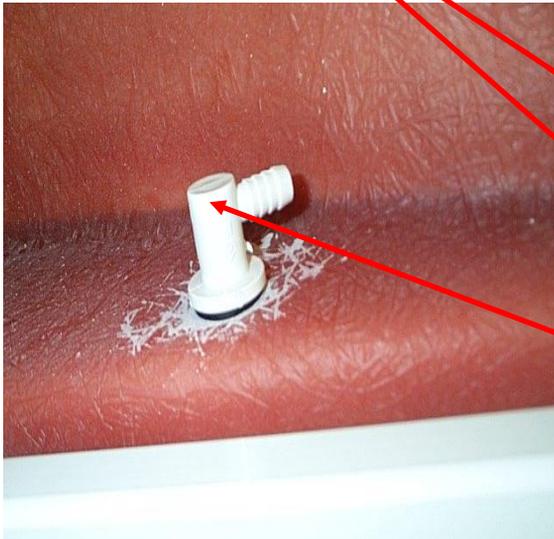
1. Remove the temperature knob assembly or locking cap using 3mm wrench (see above).
2. Pull off the temperature hub.
3. Rotate the spindle until required maximum blend temperature is obtained at discharge point (clockwise = decrease temperature). When resistance is felt do not use force to turn any further, as this can damage the internal parts.
4. Once the desired maximum blend temperature has been achieved, refit the hub without disturbing the spindle, positioning the hub such that the lug is against the side of the stop on the cartridge face, thus preventing anticlockwise rotation which could damage the internal mechanism (see above). Check that blend temperature has not altered.
5. Refit temperature knob so that the indicator on the metal knob is aligned to the left of the red markings (approximately in the 9 O'clock position) see above - Locked Temperature Setting Maximum Temperature Setting 3 mm.



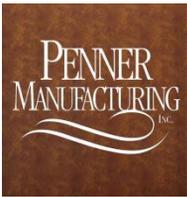
## Superior Aqua-Aire Air Jet Assembly



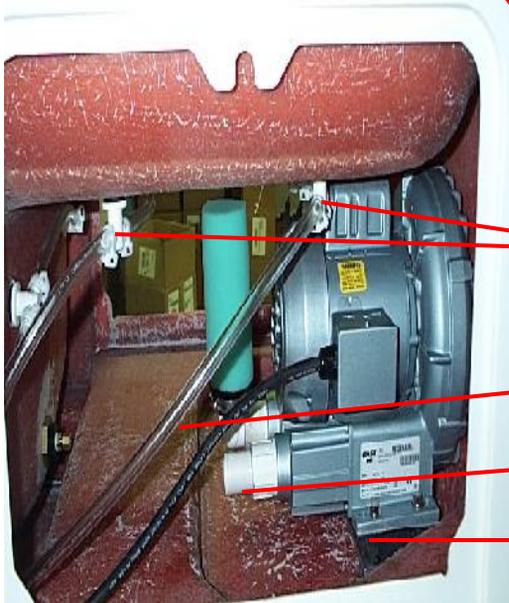
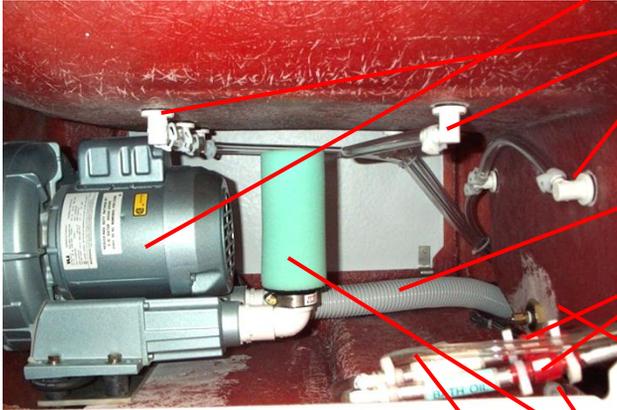
- 350133  
JET BRASS SPRING (complete Assembly)
- Shown with cap removed. Inside Spring can be easily removed and cleaned



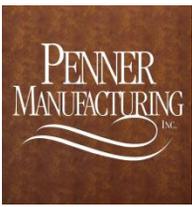
- 360646  
CAP – JET, WHITE REPLACEMENT
- 360644  
CAP – JET, BLACK REPLACEMENT  
ON ALL COLORED TUBS
- 360655  
ELBOW - AIR JET  
(WASHER INCLUDED)



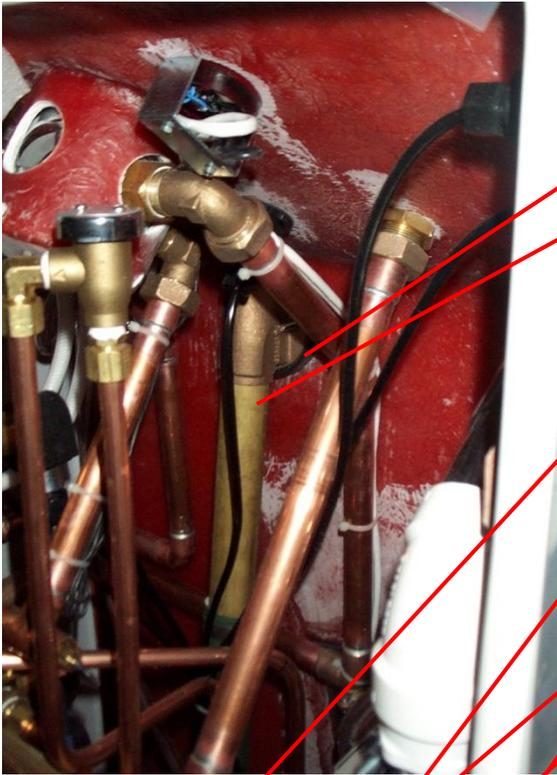
## Superior Aqua-Aire View of Air Blower and Filter



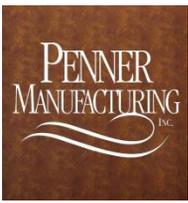
- 350602  
BLOWER AIR
- 360655  
ELBOW - AIR JET  
(Total of 12. Five elbows and 7 Tee type (Includes Washer))
- 390409  
HOSE VAC 1-1/4 ID (5 FEET)
- 350235  
CHECK VALVES -3/8" Barb X Barb  
( Two each on soap and bath oil hoses)
- 360630  
ADAPTER - TEMP PROBE  
(Also shown on page 3)
- 350601  
FILTER AIR
- 140489  
FOOT STRAINER  
(At end of disinfection hose )
- 140261  
HOSE 1/4" HEAVY WALL CLEAR
- 360650  
TEE - AIR JET  
(Total of seven)
- 350276  
CLEAR TUBING 9/16" OD X 3/8"ID
- Connection point of Grey Flex Hose part number 390409)
- 360680  
VIBRATION MOUNT  
(Total of four each)



## Superior Aqua-Aire Back view of Overflow



- 350173  
BEVELED WASHER
- 350174  
OVERFLOW & TUBE  
9" X 17 GA  
(All one piece)
- 360187  
GREEN PIPE  
1 1/2" ID FLEX 16"
- 360400  
ADAPTER - 2" SPIG X 1 1/2 OD.  
(Not shown, it is inside the green  
hose)
- 1050481  
NUT 2 IN SLIP JOINT (PLASTIC)
- 1050501  
WASHER 2 IN. RUBBER SLIP  
JOINT  
(inside both nuts)
- 360403  
DRAIN ASSY SHOE & BASKET
- 108550  
WASHER RUBBER
- 1050461  
TEE - DRAIN NEW PLASTIC

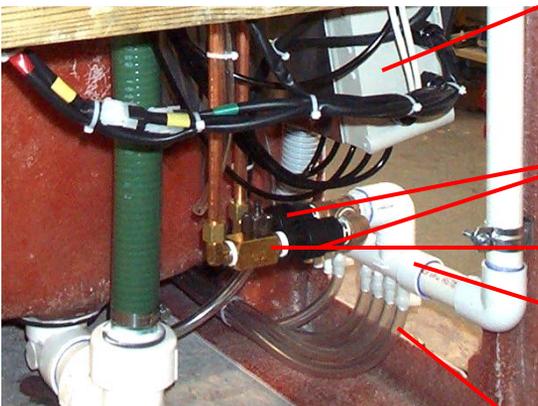


# Superior Aqua-Aire Solenoids, and Screens.



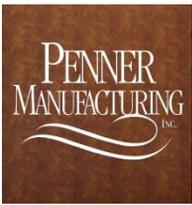
## SOLENOID IDENTIFICATION COLOR

TUB FILL GREEN
TUB SHOWER RED
TUB DISINFECT YELLOW
TUN RINSE BLUE

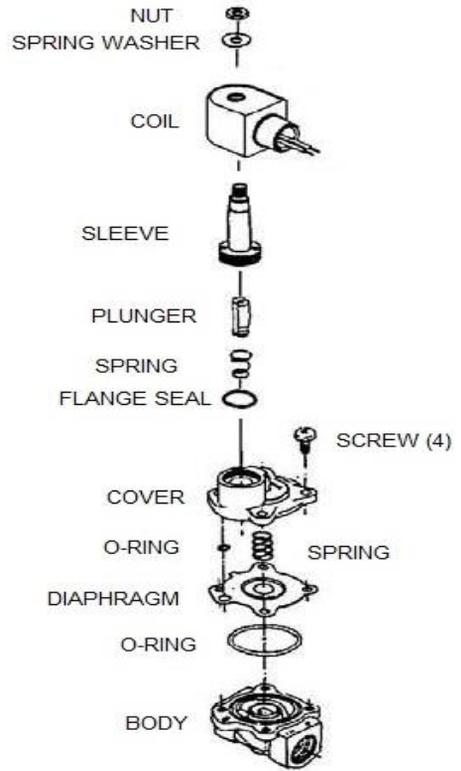


\*Note: See Page 13 for Orifice Selection and Dilution Instructions

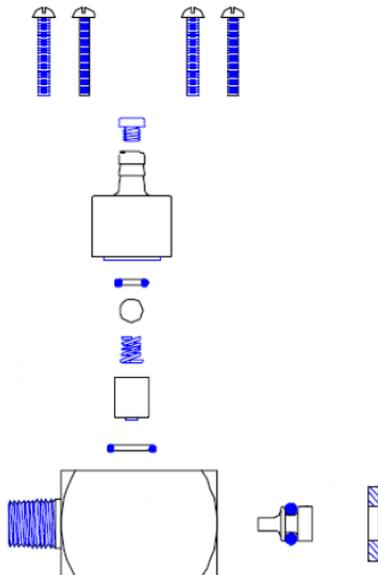
- 140124  
SOLENOID VALVE W/PLUG-IN BRASS (Rinse)
- 140124  
SOLENOID VALVE W/PLUGIN BRASS (Shower)
- 140124  
SOLENOID VALVE W/PLUGIN BRASS (Disinfectant)
- 140474  
BLACK CHECK VALVE-FP 685- 8F8F-B (Replaced the 350320 Bronze 09/01/09)
- 350315  
**SCREEN 1/2" 40 MESH IN-LINE**
- 350316  
**SCREEN REPLACEMENT INTERNAL**
- 140124  
SOLENOID VALVE W/PLUGIN BRASS (Fill) (NOT VISIBLE)
- 360599  
ELECTRICAL KIT - AIR TUB (See page 10 for component breakdown of Electrical Kit)
- 140474  
BLACK CHECK VALVE
- 1404804  
\*INJECTOR – DEMA
- 360605  
PVC MAINFOLD (When ordering Manifold All applicable PVC pipe and fittings will be included)
- 350276  
CLEAR TUBING 9/16" OD X 3/8"ID



## Breakdown of solenoid valve with coil

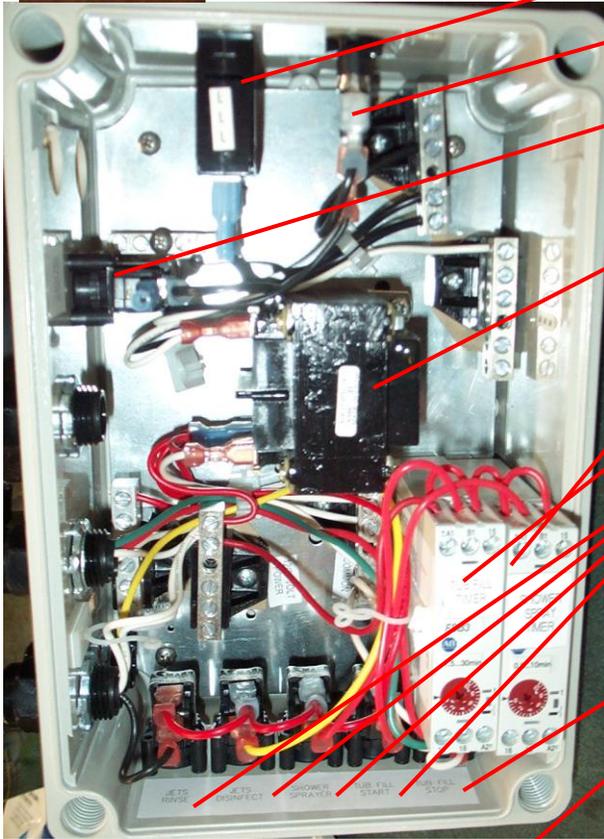


## Orientation of the Components of the Injector

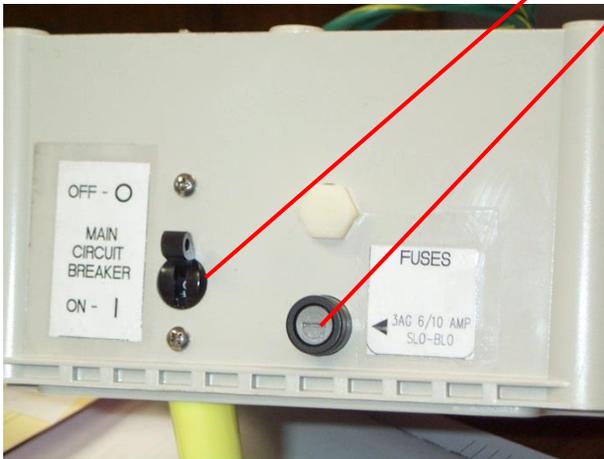


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## Superior Aqua-Aire Electrical Kit



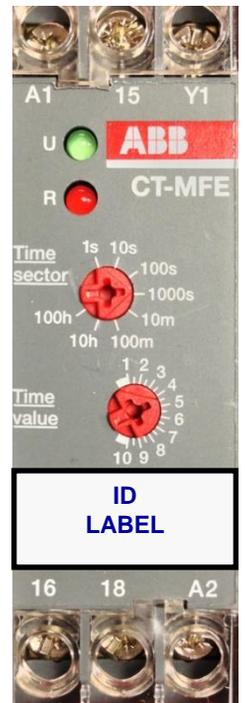
- 350525  
CIRCUIT BREAKER 20 AMP
- 350530  
FUSE HOLDER
- 350510  
FILL, BLOWER  
AIR SWITCH TBS 310
- 140951  
TRANSFORMER 115/230V
- \*350550  
TIMER - OFF-DELAY
- \*350545 -  
TIMER - 30MIN TUB FILL
- 350505  
RINSE, DISINFECT, SHOWER  
SPRAYER, TUB FILL START  
SWITCH TBS 304  
(Two each)
- 370505 TUB FILL STOP
- 350525  
CIRCUIT BREAKER 20 AMP
- 350532  
FUSE -  
3AG 6/10 AMP SLOBLO

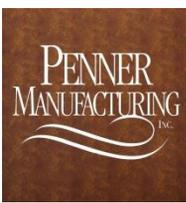


**U:** green LED - Control supply  
voltage applied  
**R:** red LED - Output relay  
energized

The time sector dial to the right  
is normally set at 1000s for the  
fill timers (as the arrow  
indicates) and 100s for hand  
sprayer timers.

The time value to the right is  
the percentage of the sector  
value. The dial to the right is  
set at 4.5  
Which would be 45% of 1000s =  
450s divided by 60s = 7.5  
minutes



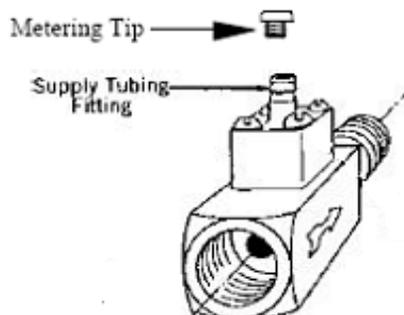


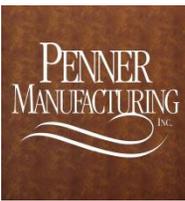
## CHECKING FOR THE CORRECT DILUTION OF DISINFECTION

1. Check to see if a container of disinfectant has been installed. Assure that the disinfectant tube is inserted into the container and connected to the Injector with black metering tip. See the drawing of the square injector (204C) below for location of the metering tip.
2. Visually check if disinfectant is in the hose all the way to the injector. If not, the disinfectant can be brought to the injector pushing the disinfect button on the tub until disinfectant fills the hose all the way to the injector.
3. With the drain open, push the fill button on the tub to check the water temperature. Adjust the temperature control to read 60 degrees to 65 degrees (F). When the temperature remains in the above range, turn off the fill button.
4. Allow the water to drain from the tub.
5. Close the tub drain, push and hold the disinfect button long enough to bring the disinfectant mixture into the tub then release the disinfect button.
6. Test the solution in the foot-well of the tub with the Dilution Check Kit (140481). A dispenser of test paper (part number 219201) is included in this kit.
7. Tear off a strip of test paper from the dispenser and immerse in the solution for at least (10)seconds. Compare the color that the test paper turns with the chart on the dispenser. If the test paper matches the green in the range of 600-800, the disinfecting solution is the correct strength.
8. If the color of the test paper matches a color on the dispenser chart in the 800-1000 range, install the next smaller metering tip. See metering tip chart for color reference. The injector is furnished with a black metering tip installed (part number 1404824). The Metering tips listed below are included in the Dilution check kit, (Part number 140481).
9. If the color of the test paper matches a color on the dispenser chart in the 0-400 range, install a metering of the next larger size and re-test.

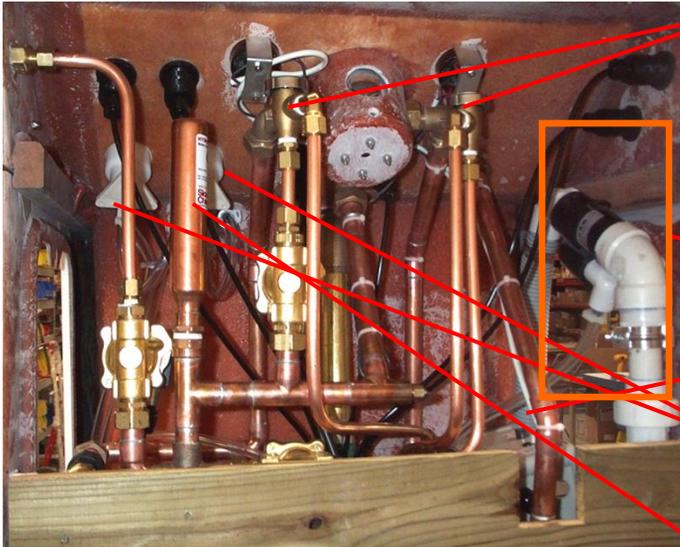
### METERING TIP CHART APPLICABLE TO THE AQUA-AIR JET DISINFECTION INJECTOR

<b><u>Color</u></b>	<b><u>Part Number</u></b>	<b><u>Metering Tip Size</u></b>	<b><u>Solution Strength</u></b>
Black	1404824	Large	Preferred Strength
Blue	1404822	Medium	Less Strength



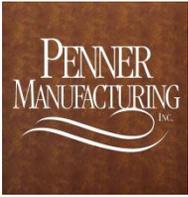


# Superior Aqua-Aire View of Check Valve and Vacuum Breaker Effective Serial Number 12050951504

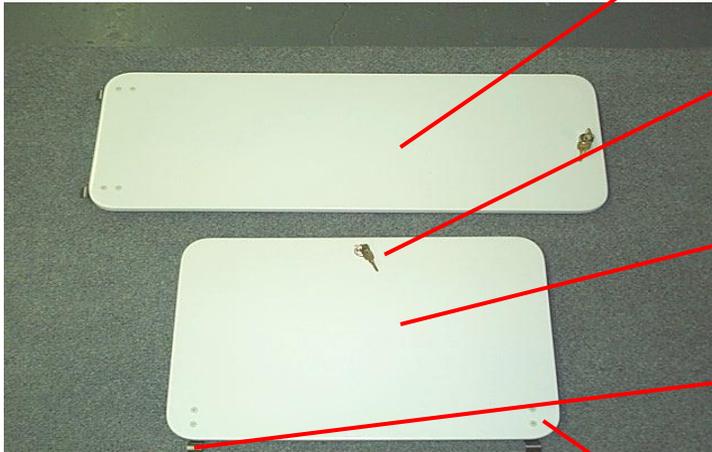


CHECK VALVE ASSEMBLY  
SERVICE REPAACEMENT  
350112

- 144105  
\* VACUUM BREAKER WATTS  
288A-3/8  
(Two each)
- \* 144110  
SERVICE KIT FOR VACUUM  
BREAKER
- 350112  
CHECK VALVE ASSEMBLY  
SUPERIOR (SHOWN BELOW)
- 390409  
HOSE VAC 1-1/4 ID
- 350200  
DISPENSER PUMP COMPLETE  
WITH MOUNTING PARTS  
( Two each)
- 350444  
HYDRA-RESTER  
(After 11/01/09)
- 360135-  
ELL 1" SLIP X SPIG PVC
- 360110 -  
VALVE CHECK-1 1/2"
- 360633 -  
ADAPTER 1 1/2" SPIG X 1" SLIP
- 360112 -  
ELL 90 SLIP X SLIP 1 1/2"PVC
- 390222 -  
ADAPTER - 1 1/4 BARB X 1" FTG
- 360116 -  
ELL 90 SLIP X SLIP 1/2" PVC
- 360114 -  
1/2" FTG X 3/8" BARB
- 360633 -  
ADAPTER 1 1/2" SPIG X 1" SLIP
- 140596 -  
PVC PIPE 1 IN SCH 40
- 360677 -  
1" PVC UNION SOC BUNA  
SCH40



## Superior Aqua-Aire View of Access Doors



▪ 350876-1

DOOR 11X30 WHT  
(Two each)

▪ 350895

DOOR LOCK -  
1 1/4"(One each door)

▪ 350881-1

DOOR 13X20 WHT

▪ 1400191

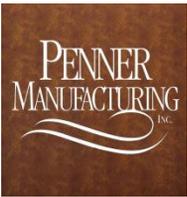
BRACKET - TUB DOOR  
SPRING PMI  
(Two each door)

### Superior Note:

To order Door Color, specify with the  
above part number and your color.

▪ 140018

RIVET - 3/16  
REMOVEABLE  
(Four each door)



## Superior Aqua-Aire View of Installation Kit



- 350750  
SAFE OPERATION  
MANUAL

- 350745  
INSTALLATION MANUAL

- 350748  
PARTS & ASSEMBLIES  
MANUAL

- 350185  
HOSE ASSEMBLY -  
36" N (WASHERS  
INCLUDED)

(Two each)

- Shown is connector to  
Penner Lift included in Kit

- 140625

5/16 X 2 WEJ-IT ANCHOR  
(Three each)

- 390301

NIPPLE-3/4" CLOSE BRS  
MODIFIED

- 350889

DOOR KEYS (Three sets  
comes with unit)

**Your Penner Distributor and his personnel are trained to provide in-service instruction and maintenance on your Superior Bath System. If you have any questions about the operation or maintenance of your Superior Bath System, please contact your Penner Distributor. For your nearest Penner distributor, contact Penner Patient Care, Inc. at**

**1-866-736-6377 OR 1-800-732-0717**