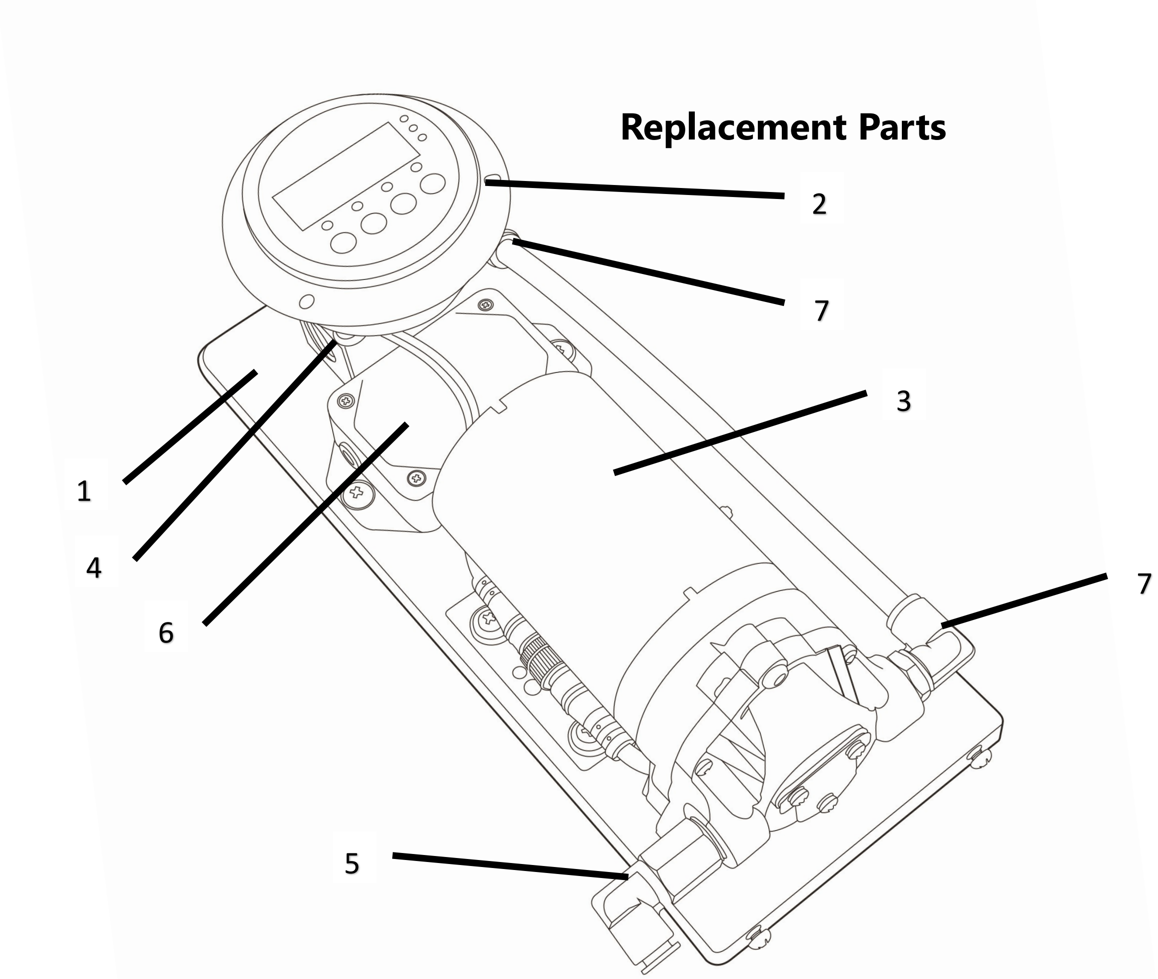
Replacement Parts



Item #	Part #	Quantity	Description
1	BB60-BASE	1	1/2" HDPE base platform
2	BB60-DC	1	Digital controller pressure switch
3	BB60-PM	1	12VDC pump assembly
4	BB60-MN	1	Aluminum manifold block/outlet port
5	BB60-EME38	1	3/8" male X 3/8" (ID) extended inlet elbow
6	BB60-EE	1	Electrical enclosure with cover and connectors
7	BB60-23PF	2	3/8" male X 3/8" (OD) right angle push fitting

Troubleshooting

The BB60 has a digital display that can indicate error messages if present.

Error Codes	Problem & Solution
E- - H	Problem: Over pressure. Solution: Ensure BB60 isolation valve is open between system and BB60.
E- - 1	Problem: Automatic Shut-Off timer engaged. Solution: Check the fluid level in reservoir and refill if necessary.

Note: If reservoir runs out of fluid, the BB60 can not self prime it' self when system is already pressurized. The best way to correct issue is to close isolation valve between BB60 and system, then relieve pressure with bleeder valve. Once the BB60 has primed it' self, close the bleeder valve and return the isolation valve to the open position.

Neutrasafe LLC
421 Page St., Suite 1
Stoughton, MA 02072

neutrasafe
CONDENSATE NEUTRALIZERS
a Swan Group Company

neutrasafe
CONDENSATE NEUTRALIZERS

MODEL # BB60 Booster Box
Installation, Operation and Maintenance Instructions

MOUNTING

The BB60 should be mounted vertically on a flat surface or wall. Loosen the 4 screws attaching cover, remove the cover and set aside until piping is completed. Use appropriate hardware and mount BB60 to wall stud or other suitable surface to support the weight of unit, (Fig # 1).

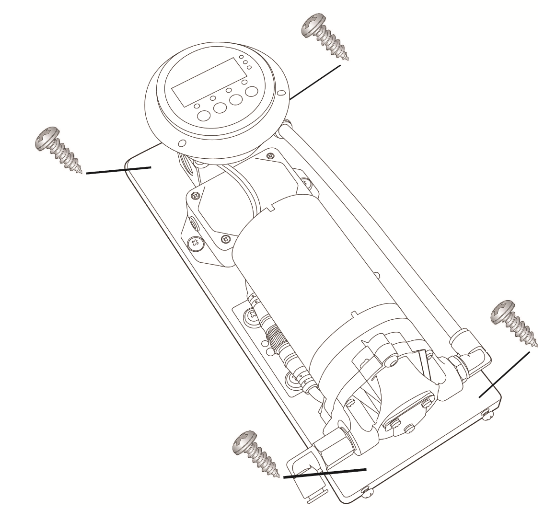


Fig # 1 Mounting of unit.

PIPING CONNECTIONS

1. Using the appropriate pipe or tubing, connect the 1/2" NPT outlet of BB60 to the system; include an isolation valve plus bleeder valve. Use an approved thread sealant and do not over tighten connection.
2. If possible, the BB60 should be connected to the system at the point of no pressure change. (Where the expansion tank is connected to the system, Fig # 2.) **DO NOT install a check valve, pressure reducing valve or a back flow preventer between the BB60 and the system**. If using a bladder style expansion tank, be sure to inflate the tank to the same pressure as the cold static pressure desired in the system before filling system (zero pressure in the system).

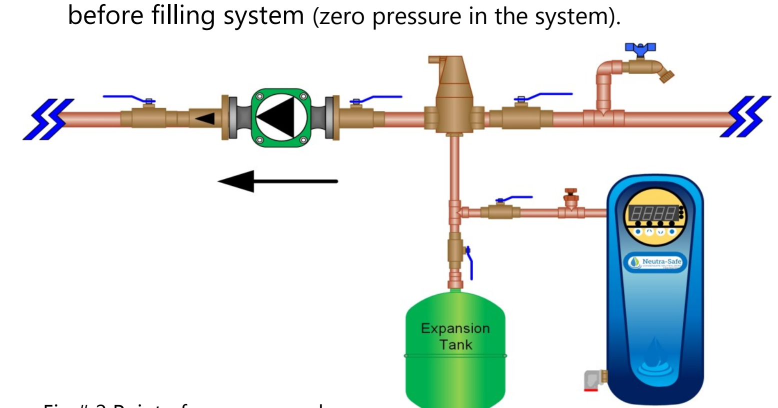


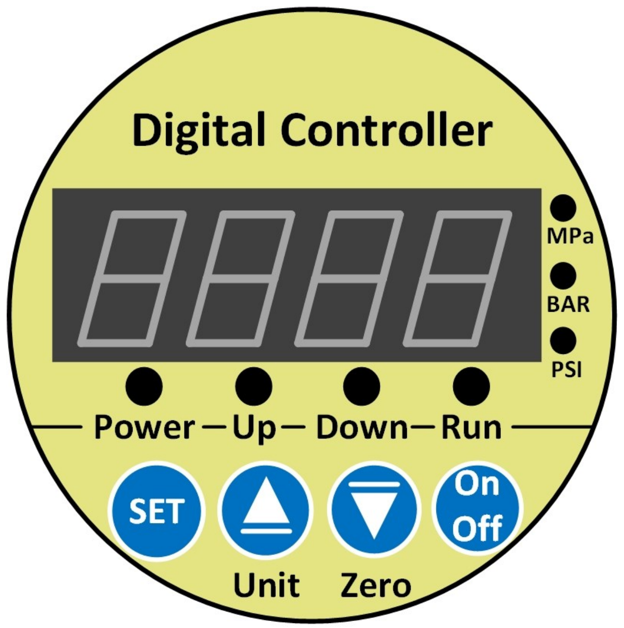
Fig # 2 Point of no pressure change.

3. Install field supplied 3/8"(ID) suction tubing between the field supplied reservoir and BB60. Cut the tubing to length, deburr ends, install filter and insert the other end into quick connect suction inlet fitting on BB60, (Fig # 3).
4. After piping connections between the BB60 and the system have been completed, the BB60 can be filled with fluid (water and glycol mixtures up to 50% concentration). No priming is required, the BB60 is self priming when system has zero pressure. Isolate and bleed off pressure if reservoir becomes empty, requiring priming.

Fig # 3 Typical Installation; using a 5 gallon container.

ELECTRICAL CONNECTIONS

1. Connect the power adapter to the electrical module attached to base on the BB60. This electrical connection is made in the smaller port below the main outlet connection on manifold block. The cover can be reinstalled on the base and screws tightened.
2. Plug the AC end of the power adapter into a standard 120-volt outlet. Check digital controller for activation. The faceplate will illuminate with current pressure in defaulted PSI units.



DIGITAL CONTROLLER SETTINGS

The digital controller pressure switch includes a digital display, 4 buttons and 7 LED indicators.

When power is first applied to the BB60 it will default to standby - the green LED on the power adapter will light together with the following red LEDs on the pressure switch - Power, PSI and Run ("Run" will flash until system pressure matches Cut-out setting). The digital readout will also show a reading close to zero.

ADJUSTING CUT-IN AND CUT-OUT

1. The BB60 is factory set with a 15 PSI cut-in (turn-on) pressure and a 16 PSI cut-out (turn-off) pressure. **DO NOT SET CUT-OUT PRESSURE ABOVE 50 PSI**.
2. To adjust these settings, the pressure switch should be in the "Off" position ("Run" LED OFF).
   a. Push "Set" button and the "Down" LED will come on. The numbers will flash. Use up and down arrows to set the cut in pressure. Press set to save the desired cut in pressure.
   b. After pressing the set button to lock cut in pressure, the Up LED will come on and the numbers will again flash. Use up and down arrows to set cut out pressure. **DO NOT SET ABOVE 50 PSI.** Press "Set" button to lock in cut out pressure.

START-UP

1. Press the On/Off button. The pump will come on and start pumping fluid into the system. The "Run" LED will flash while the pump is running and will be solid when the pump stops. The "Up" LED will light when the system reaches pressure, and the pump stops. The "Down" LED will light while the pump is running.
2. The pump may cycle on and off until the system pressure settles - this is normal. Cycling may continue until all of the air is eliminated from the system.
3. If the fluid level in the feed tank continues to drop for an undue amount of time, check for leaks.

SETTING PRESSURE UNITS

The pressure switch is factory set to display "PSI".
To change this setting:

1. Press "Off"
2. Press "Up" to scroll through pressure units.
3. Press "Set" to save setting.

SETTING AUTOMATIC SHUT- OFF TIMER (SL-1)

If the pressure does not reach the high-limit value after the set time, the pump will shut off, will read "E--1".

1. A short push of any button will clear the timer and restart the pump. The default setting is 999 seconds (16.5 minutes). Consult the factory if default setting would need to be shortened.

Button	Name	Description
SET	Setting Button	Short press to set low and high limit values.
▲	Increase Button (Up)	In standby state; press to switch the pressure units. In setting state; press to increase the value.
▼	Decrease Button (Down)	In standby state; long press to zero. In setting state; press to decrease the value.
On Off	Run Button	Press to switch between working and standby states. Also, short press to exit any programming modes.

Indicator Light	Description
Power	Light on indicates power supply is connected and energized.
Up	In working state; light on indicates pressure is higher than light-limit setting.
Down	In working state; light on indicates pressure is lower than low-limit setting.
Run	Light on indicates working state. Light off indicates standby state.
Units	Light on indicates current pressure unit.

Examples of BB60 used to fill and purge a system with no connection to water supply.

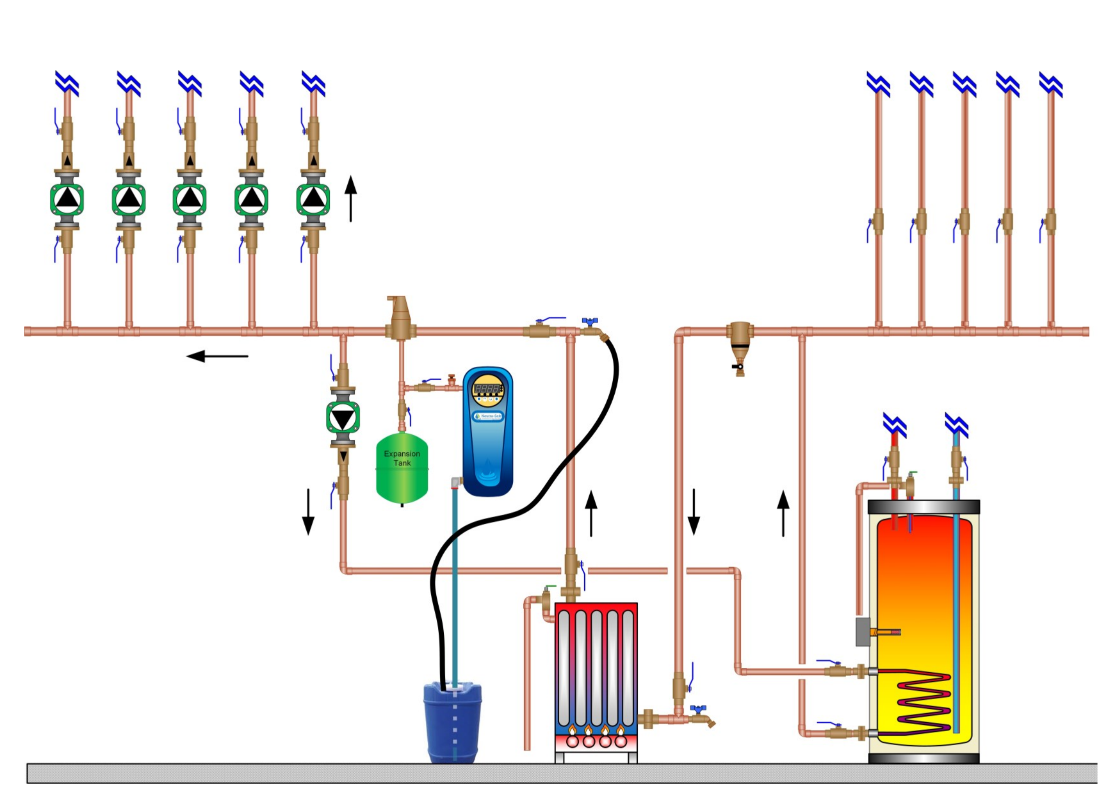


Fig #4 Common purge location

Filling system and purging with common location.

1. Fill reservoir with appropriate fluid to be used in system.
2. Energize BB60 and let it fill system to set pressure.
3. If required, add additional fluid to reservoir to fill system.
4. Attach one end of purge hose to common purge valve and other end insert into reservoir.
5. Close ball valve upstream of purge valve and open purge valve.
6. Open and close one zone at a time to purge air from zone.
7. Open all zones and purge air from main header.
8. Turn on system and run all zone individually and together to ensure all air is removed from system.
9. If required, add additional fluid to reservoir.

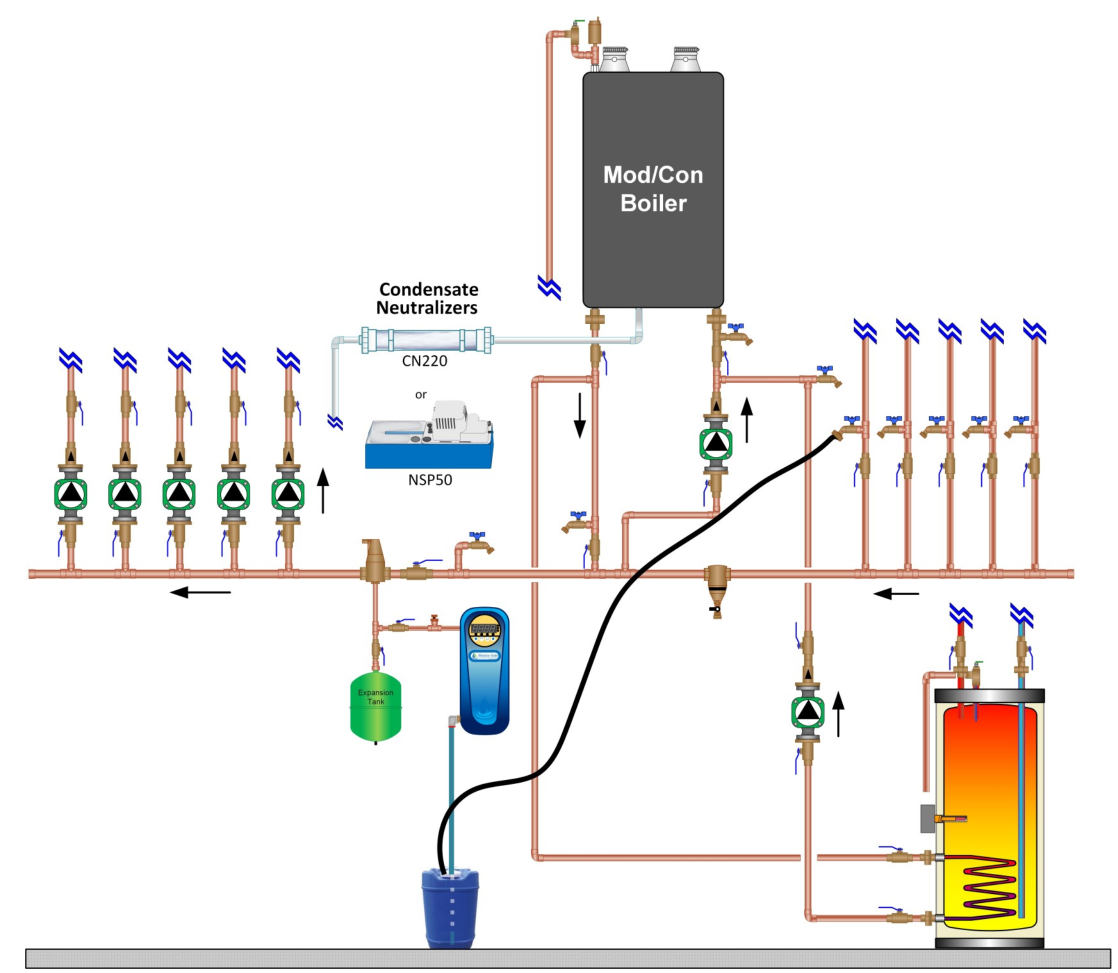


Fig #5 Multiple purge locations

Filling system and purging with individual purge valves.

1. Fill reservoir with appropriate fluid to be used in system.
2. Energize BB60 and let it fill system to set pressure.
3. If required, add additional fluid to reservoir to fill system.
4. Attach one end of purge hose to zone purge valve and other end insert into reservoir.
5. Close all return isolation valves.
6. Open one zone at a time to purge air from zone, then return it to closed position. Move purge hose to next zone to be purged.
7. Continue purging air from all purge locations.
8. Open all zones and purge air from main header.
9. Turn on system and run all zone individually and together to ensure all air is removed from system.
10. If required, add additional fluid to reservoir.