

freewatt®

MCHP Water Cooled Heat Rejection System Installation Instructions Kit # 550002037

⚠ WARNING

Kit must be installed by qualified, certified installer or service agency, in accordance with manufacturer's instructions, and all codes and requirements of authority having jurisdiction. Failure to follow these instructions could cause malfunction of system and result in death, serious bodily injury.

NOTICE

Keep this document near system and retain for future reference. These instructions are intended as an aid for qualified and certified **freewatt** PLUS installers and service personnel.

NOTICE

Completely read these instructions before attempting installation or operation.

NOTICE

Cold potable water source should be uninterruptible and available during power outage.

TOOLS REQUIRED FOR INSTALLATION

9/16" Open Box Wrench
Slip Joint Pliers (2)
Wire Strippers
Wire Cutter
Screw Driver
Teflon Tape
Potable Water Sealant
Cable Ties
Copper Fitting Installation Tools
1/2" Copper Tube Clamps (2)

PARTS LIST - SEE FIGURE 5

ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY
1, 2 & 3	240007830	1/2" Brass Nipple, Threaded Both Ends, 1/2" MNPT	3
4	240007831	1/2" x 3/8" NPT Reducing Hex Bushing, 1/2" FNPT x 3/8 MNPT	1
5	240007832	1/2" Sea-Tech Fitting, 3/8" FNPT x 1/2" CTS Female	1
6	240007829	1/2" Brass Ball Valve, FNPT x FNPT	1
7	240007807	1/2" Pressure Regulator, FNPT x FNPT	1
8	240007805	1/2" Electronic Ball Valve, FNPT x FNPT	1
9	240008792	1/2" Flow Regulator, 0.35 gpm, 3/8" FNPT	1
*	464	Grommets	4
*	240007865	Installation Instructions	1

* Not Shown

INSTALLATION INSTRUCTIONS - KIT # 550002037

Installation Procedure:

- Piping system or tubing system must be rated to carry 0.35 gpm of 150° F potable water to drain.
- Use proper thread sealant to ensure leak-free joints.
- Ensure power is **OFF** to **freewatt** PLUS System.
- Locate potable water source. Turn **OFF** water source.
- Install components in correct orientation to ensure proper operation. Arrow marked on side of flow regulator indicates proper direction.
- Connect potable water line to ball valve.
- Install pressure regulator, flow regulator and electronic ball valve downstream of manual ball valve. See Figures 1 and 5.
- Refer to Figures 2, 3 and 4 for appropriate Heat Rejection System to HI Module piping connections.
- Install piping or tubing to carry water to brazed plate heat exchanger in HI module.
- Install piping or tubing to carry water from brazed plate heat exchanger to drain.
- Connect furnished cable (PN 240007825), for warm air **freewatt** PLUS systems, from electronic ball valve to J19 connector in **freewatt** control module. See Figure 6.
- Connect field supplied two conductor cable for hydronic for **freewatt** PLUS systems, from electronic ball valve to ZV+ and ZV- terminals in **freewatt** control module. See Figure 7.

Figure 1 - Water Cooled Heat Rejection System Assembly

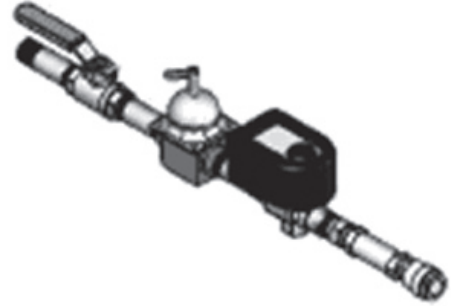


Figure 2 -HDJ Series HI Module Heat Rejection System Connections

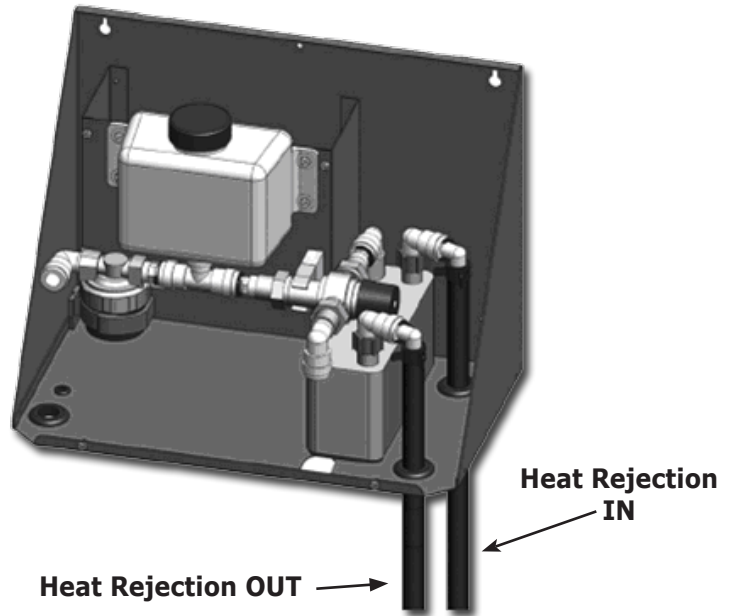


Figure 4 -WDJ Series HI Module (Rear View) Heat Rejection System Connections

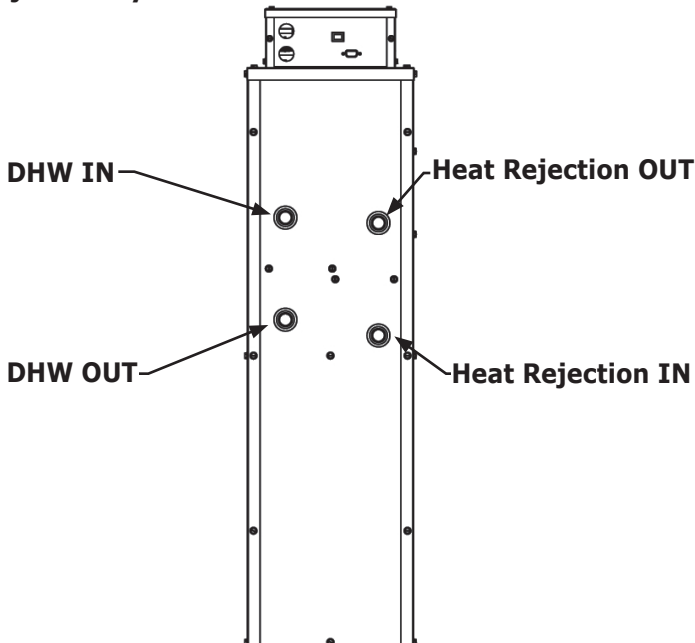
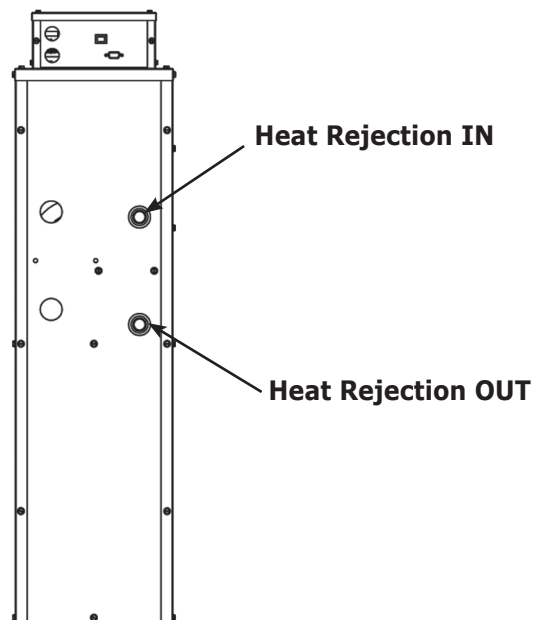


Figure 3 - WAJ Series HI Module (Rear View) Heat Rejection System Connections



INSTALLATION INSTRUCTIONS - KIT # 550002037

Commissioning Procedure:

- Make system operational in MCHP Mode and grid-inter-connected.
- Set Aquastat and all thermostats to ensure heat call will not occur.
- Remove **freewatt** PLUS System from GRID, placing system into Backup Power Mode.
- Wait few minutes while system prepares to place MCHP online.
- Allow system to provide power to loads on APC Universal Transfer Switch.
- Without HEAT call, **freewatt** control module will start MCHP Water Cooled Heat Rejection System.
- Observe operation of MCHP Heat Rejection System.
 - A. Ensure water is flowing through heat exchanger and is being delivered to drain.
 - B. Check GREEN LED is illuminated on electronic ball valve.
 - C. Ensure quietness by reducing pressure reducer's setting to acceptable setting.
 - D. Monitor MCHP's outlet temperature and ensure temperatures remain below 185°F.

Note: If no flow occurs, verify:

1. Valve setting is OPEN.
2. Pressure regulator works properly
3. Electronic ball valve is powered and working
4. Flow regulator is installed in correct orientation and orifice is unblocked.
5. Tubing to drain is unblocked.

Figure 6 - WAJ/WDJ System - Control Module Connection

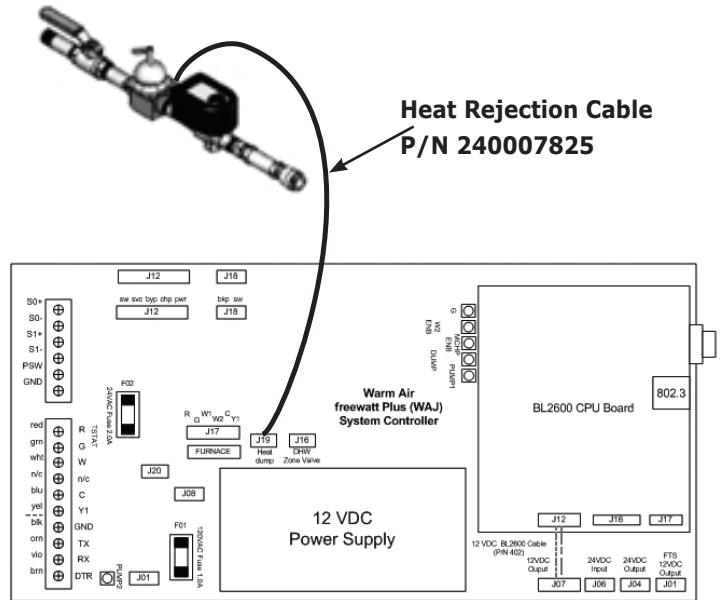


Figure 7 - HDJ System - Control Module Connection

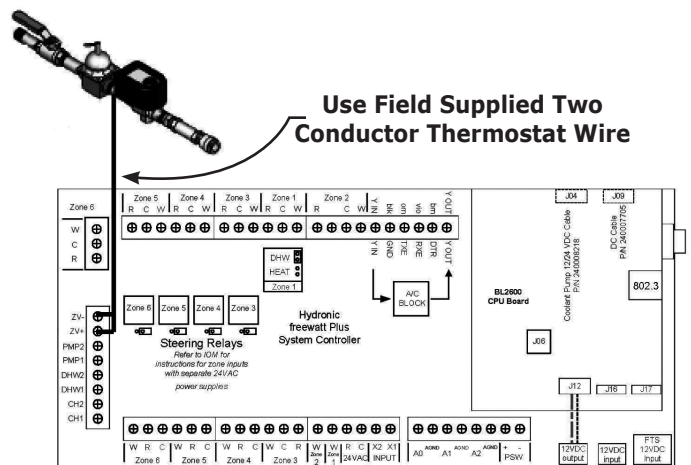
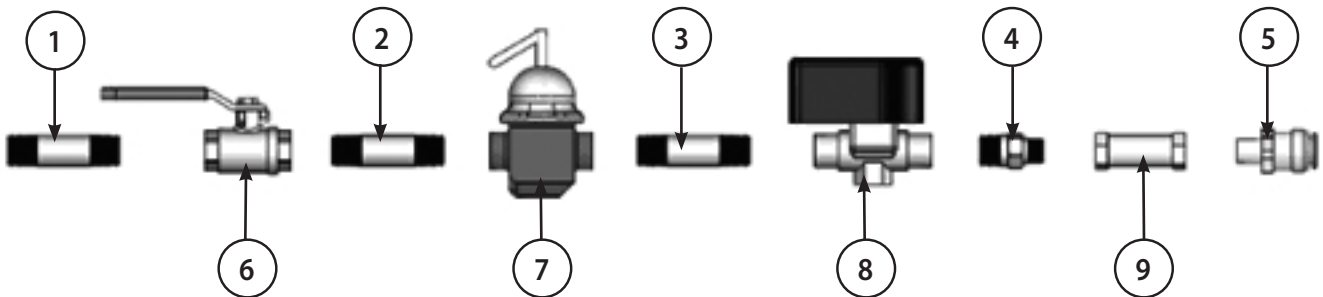


Figure 5 - Water Cooled Assembly - Parts List



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