



## **PANEL RADIATOR INSTALLATION, OPERATION & MAINTENANCE MANUAL**



**ATTENTION: READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR SERVICE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

**INSPECT THE SHIPMENT IMMEDIATELY WHEN RECEIVED TO DETERMINE IF ANY DAMAGE HAS OCCURRED DURING SHIPMENT.**



260 NORTH ELM STREET, WESTFIELD, MASSACHUSETTS 01085  
7555 TRANMERE DRIVE, MISSISSAUGA, ONTARIO L5S 1L4 CANADA

## Section 1: General Information

### Important Information

Inspect Panel Radiator and all contents for damage prior to installation. There will be 2 boxes. One contains the panel radiator and one contains necessary mounting hardware and radiator accessories. If additional accessories were ordered, they will arrive in a 3rd box check your packing slip for more information.

### Accessory Box Contents

- **Insert Pack containing: 1 Valve insert, 1 valve insert cover, 1 drain cover (see Fig. 1)**
- **Type 11 only - L Bracket Installation Kit containing: 2 brackets, 4 wall anchors, 4 bolts, 1 air vent, 1 drain cover, 2 locking clips, 4 plastic U inserts (see Fig. 2)**
- **Type 21/22/33 only – J Bracket Installation Kit containing: 2 J Brackets, 4 wall anchors, 4 bolts, 1 air vent, 1 drain cover (see Fig. 3)**

**PLEASE NOTE:** Any 70" (1800 mm) panel radiator will require the installation of a 3rd bracket in the center of the unit. These units will come with 2 brackets kits. Only 1 bracket needs to be used from the 2nd kit.

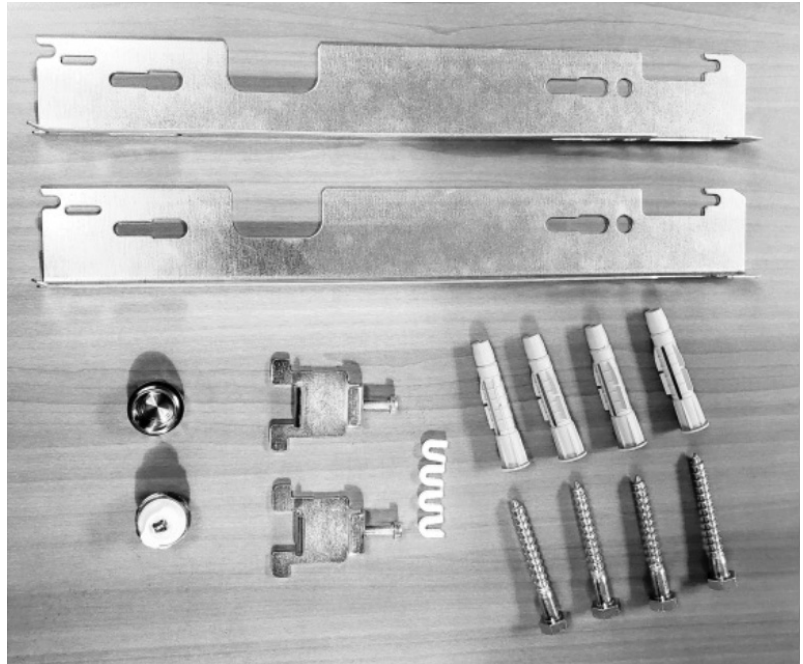


Figure 2 – L Bracket Kit



Figure 1 – Insert Pack Contents

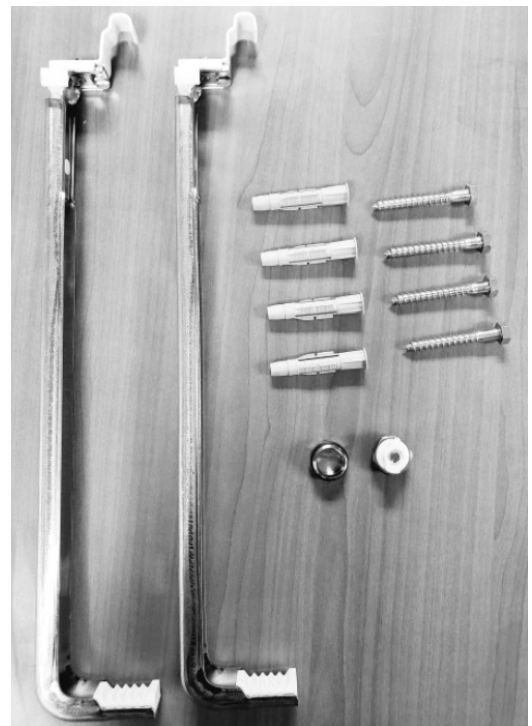


Figure 3 – J Bracket Kit

## Section 2: Specifications and Ratings

Type	Part Number	Depth	Dimensions (HxL)		Output (BTU) @120°F	Output (BTU) @140°F	Output (BTU) @160°F	Output (BTU) @180°F	Weight (lbs)	Water Content (gal)	Equivalent Baseboard @180°F (ft)
			In.	mm							
11	5136U1150040100	2-3/4	19 11/16 x 15 3/4	500 x 400	506	810	1,139	1,472	13	0.29	3
	5136U1150060100		19 11/16 x 23 5/8	500 x 600	758	1,215	1,708	2,207	18	0.44	4
	5136U1150070100		19 11/16 x 27 9/16	500 x 700	887	1,419	1,991	2,575	22	0.5	5
	5136U1150090100		19 11/16 x 35 7/16	500 x 900	1,140	1,824	2,560	3,311	26	0.66	6
	5136U1150100100		19 11/16 x 39 3/8	500 x 1000	1,268	2,024	2,847	3,678	29	0.73	7
	5136U1160060100		23 5/8 x 23 5/8	600 x 600	922	1,490	2,093	2,731	22	0.52	5
	5136U1160070100		23 5/8 x 27 9/16	600 x 700	1,081	1,737	2,444	3,189	24	0.6	6
	5136U1160090100		23 5/8 x 35 7/16	600 x 900	1,389	2,237	3,145	4,104	31	0.76	8
21	5136U2640040000	2-7/8	15 3/4 x 15 3/4	400 x 400	583	927	1,280	1,654	15	0.47	3
	5136U2640060000		15 3/4 x 23 5/8	400 x 600	875	1,391	1,921	2,484	22	0.71	5
	5136U2640070000		15 3/4 x 27 9/16	400 x 700	1,019	1,622	2,239	2,895	26	0.84	5
	5136U2640090000		15 3/4 x 35 7/16	400 x 900	1,311	2,083	2,879	3,726	33	1.08	7
	5136U2640100000		15 3/4 x 39 3/8	400 x 1000	1,454	2,313	3,197	4,138	37	1.18	8
	5136U2640120000		15 3/4 x 47 1/4	400 x 1200	1,749	2,778	3,841	4,968	44	1.42	9
	5136U2640140000		15 3/4 x 55 1/8	400 x 1400	2,038	3,239	4,477	5,775	51	1.66	10
	5136U2640180000		15 3/4 x 70 7/8	400 x 1800	2,621	4,166	5,755	7,448	64	2.16	13
	5136U2650040000	2-7/8	19 11/16 x 15 3/4	500 x 400	699	1,114	1,558	2,002	20	0.58	4
	5136U2650060000		19 11/16 x 23 5/8	500 x 600	1,047	1,674	2,340	3,009	29	0.87	6
	5136U2650070000		19 11/16 x 27 9/16	500 x 700	1,223	1,951	2,730	3,507	33	1.03	7
	5136U2650090000		19 11/16 x 35 7/16	500 x 900	1,570	2,507	3,508	4,511	41	1.32	8
	5136U2650100000		19 11/16 x 39 3/8	500 x 1000	1,762	2,814	3,935	5,013	46	1.45	9
	5136U2650140000		19 11/16 x 55 1/8	500 x 1400	2,468	3,935	5,508	6,980	53	1.58	13
	5136U2650180000		19 11/16 x 70 7/8	500 x 1800	3,173	5,064	7,085	9,022	82	2.61	16
	5136U2660040000		23 5/8 x 15 3/4	600 x 400	817	1,303	1,826	2,322	24	0.68	5
	5136U2660060000		23 5/8 x 23 5/8	600 x 600	1,226	1,955	2,734	3,533	33	1.03	7
	5136U2660070000		23 5/8 x 27 9/16	600 x 700	1,431	2,280	3,192	4,120	40	1.21	8
	5136U2660090000		23 5/8 x 35 7/16	600 x 900	1,840	2,935	4,106	5,302	49	1.55	10
	5136U2660100000		23 5/8 x 39 3/8	600 x 1000	2,043	3,257	4,559	5,887	55	1.71	11
22	5136U2230060000	4-1/8	11 13/16 x 23 5/8	300 x 600	825	1,309	1,824	2,358	20	0.55	5
	5136U2230070000		11 13/16 x 27 9/16	300 x 700	962	1,526	2,130	2,750	24	0.66	5
	5136U2230090000		11 13/16 x 35 7/16	300 x 900	1,237	1,966	2,739	3,542	29	0.84	7
	5136U2230100000		11 13/16 x 39 3/8	300 x 1000	1,375	2,182	3,042	3,934	33	0.95	7
	5136U2230120000		11 13/16 x 47 1/4	300 x 1200	1,649	2,619	3,651	4,719	37	1.13	9
	5136U2230130000		11 13/16 x 51 3/16	300 x 1300	1,787	2,839	3,958	5,115	42	1.24	9
	5136U2230140000		11 13/16 x 55 1/8	300 x 1400	1,924	3,056	4,260	5,491	48	1.37	10
	5136U2230180000		11 13/16 x 70 7/8	300 x 1800	2,474	3,932	5,478	7,084	57	1.69	13
	5136U2240040000		15 3/4 x 15 3/4	400 x 400	712	1,132	1,583	2,013	18	0.47	4
	5136U2240060000		15 3/4 x 23 5/8	400 x 600	1,065	1,696	2,374	3,016	26	0.71	6
	5136U2240070000		15 3/4 x 27 9/16	400 x 700	1,242	1,978	2,767	3,518	31	0.84	7
	5136U2240090000		15 3/4 x 35 7/16	400 x 900	1,595	2,546	3,559	4,524	40	1.08	8
	5136U2240100000		15 3/4 x 39 3/8	400 x 1000	1,777	2,828	3,957	5,026	42	1.18	9
	5136U2240120000		15 3/4 x 47 1/4	400 x 1200	2,130	3,396	4,744	6,029	51	1.42	11
	5136U2240140000		15 3/4 x 55 1/8	400 x 1400	2,484	3,960	5,539	7,006	60	1.67	13
	5136U2240180000		15 3/4 x 70 7/8	400 x 1800	3,195	5,096	7,122	9,049	75	2.16	16
	5136U2250040000		19 11/16 x 15 3/4	500 x 400	911	1,458	2,038	2,620	22	0.58	5
	5136U2250060000		19 11/16 x 23 5/8	500 x 600	1,365	2,182	3,053	3,925	33	0.87	7
	5136U2250070000		19 11/16 x 27 9/16	500 x 700	1,593	2,545	3,560	4,580	37	1.03	8
	5136U2250090000		19 11/16 x 35 7/16	500 x 900	2,048	3,274	4,579	5,889	49	1.32	11
	5136U2250100000		19 11/16 x 39 3/8	500 x 1000	2,279	3,636	5,090	6,545	53	1.45	12
	5136U2260040000		23 5/8 x 15 3/4	600 x 400	1,088	1,744	2,448	3,184	26	0.68	6
	5136U2260060000		23 5/8 x 23 5/8	600 x 600	1,633	2,615	3,673	4,781	40	1.03	9
	5136U2260070000		23 5/8 x 27 9/16	600 x 700	1,904	3,050	4,285	5,575	46	1.21	10
	5136U2260090000		23 5/8 x 35 7/16	600 x 900	2,449	3,991	5,605	7,172	57	1.55	13
	5136U2260100000		23 5/8 x 39 3/8	600 x 1000	2,766	4,434	6,228	7,965	64	1.71	14
	5136U2260120000		23 5/8 x 47 1/4	600 x 1200	3,319	5,323	7,474	9,562	75	2.06	17
	5136U2260140000		23 5/8 x 55 1/8	600 x 1400	3,868	6,208	8,719	11,083	86	2.41	20
	5136U2260180000		23 5/8 x 70 7/8	600 x 1800	4,976	7,979	11,206	14,335	112	3.09	25
33	5136U3350060000	6-1/2	19 11/16 x 23 5/8	500 x 600	1,743	2,767	3,929	5,132	49	1.32	9
	5136U3350070000		19 11/16 x 27 9/16	500 x 700	2,035	3,226	4,587	5,988	57	1.53	11
	5136U3350090000		19 11/16 x 35 7/16	500 x 900	2,615	4,146	5,893	7,694	73	1.98	14
	5136U3350100000		19 11/16 x 39 3/8	500 x 1000	2,903	4,608	6,548	8,551	79	2.19	15
	5136U3360060000		23 5/8 x 23 5/8	600 x 600	2,147	3,424	4,785	6,117	60	1.55	11
	5136U3360090000		23 5/8 x 35 7/16	600 x 900	3,221	5,138	7,184	9,177	86	2.32	16
	5136U3360100000		23 5/8 x 39 3/8	600 x 1000	3,577	5,705	7,979	10,199	95	2.58	18
	5136U3360120000		23 5/8 x 47 1/4	600 x 1200	4,293	6,847	9,577	12,237	115	3.09	22
	5136U3360140000		23 5/8 x 55 1/8	600 x 1400	5,011	7,990	11,172	14,213	135	3.60	25
	5136U3360180000		23 5/8 x 70 7/8	600 x 1800	6,441	10,271	14,363	18,355	170	4.64	32

## Section 3: Bracket Installation Instructions

### Type 11 – L Bracket Installation

Step 1: L Brackets can be installed using either side of the bracket depending upon installation requirements. Units should be mounted at least 4" above the floor. Measure required distance for bracket installation using the brackets on the back side of the panel radiator as a guide. The brackets should be installed at least 1 1/8" away from the inside of the bracket on the back of the panel radiator to allow clearance for locking clip installation (see Fig. 4). The brackets are identical, no left or right. The U notches on the brackets should be facing up, these notches are where the brackets on the back of the panel radiator will rest.

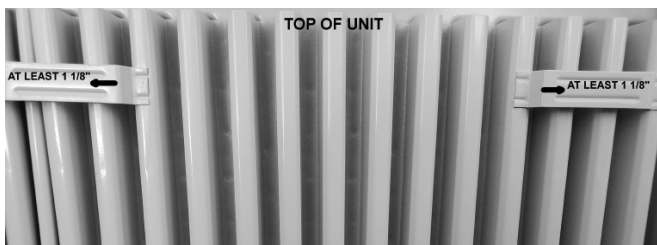


Figure 4 – Bracket measurement to allow for clearance of locking clips



Figure 5 – U Insert Installation

Step 2: Install brackets using wall anchors and bolts supplied with the unit. Whenever possible, install on wood studs.

Step 3: Install plastic “U” anti-vibration insert at the top and bottom of the bracket where the unit will be resting. (Refer to Fig 5).

Step 4: Place the brackets on the back of the panel radiator into the notches on the wall bracket containing the “U” insert.

Step 5: Attach locking clip with screw to the top bracket on the panel radiator to lock the unit in place. The locking clips need to be installed to the inside of the wall brackets. One locking clip will be installed on the outside of the wall bracket, but towards the inside of the unit (See Figure 6 & right side of figure 8). The other clip will be installed to the inside of the wall bracket and towards the inside of the unit (see Figure 7 & left side of figure 8). Tighten down the screws to hold the clips in place. See Figure 8 for final assembly photo.



Figure 6 – Locking Clip installed on outside of wall bracket



Figure 7 – Locking clip installed towards inside of wall bracket



Figure 8 – Final Assembly for illustration purposes not installed on wall



## Types 21, 22 & 33 J Bracket Installation Instructions

Step 1: Wall brackets should be installed on wall joists whenever possible. Mount the brackets on the wall using the bolts and wall anchors provided. The unit should be mounted at least 4" off the floor. The brackets should be installed 4 3/4" in from the edge of the unit on each side. For units over 70" a 3rd bracket is required to be installed. The 3rd bracket should be installed in the center of the unit.

Step 2: Set the unit on the brackets. The bracket height adjustments can be made by pushing in the tab on the plastic slide adjuster (see Figure 9). To adjust the depth of the bracket (adjusts from 1 5/16" to 2 1/8"), loosen the screw at the top of the bracket to slide the hanger forward or back (see Figure 10). Be sure to set the edge of the back panel into one of the notches in the bottom of the bracket to insure the unit is stable. Tighten the screw at the top of the bracket to secure the unit in place (See Figure 11).



Figure 9 – Height Adjustment



Figure 10 – Depth adjustment

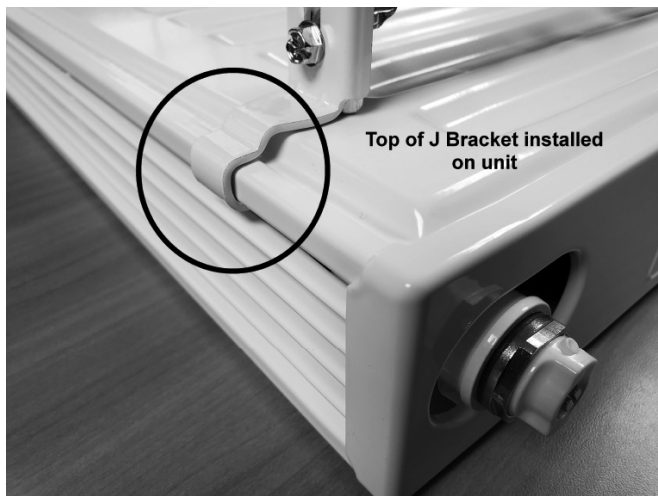


Figure 11 – J Bracket installation



Figure 12 – J Bracket Bottom Notch installation

## Section 4: Piping

Check that the unit is firmly in place. Piping to the unit can be done using copper or pex pipe.

Choose a piping arrangement that is suitable for the job. The unit has 6 possible connection points. Two on each side and a bottom connection that can be installed on either the left hand or right hand side as the units are reversible (for all units except the Type 11). If piping from the bottom, remove the metal covers and the o-rings (see fig 13). Failure to remove the o-ring will prohibit proper installation of accessories and may cause leaking.

For a bottom piping arrangement, the supply is to the inside of the unit, and the return to the outside (see fig 14). Should the unit get installed with the incorrect piping arrangement, valves (part # 1016362) are available to reverse the piping with little disruption.

The unit was supplied with 2 blind stops (drain plugs), an air vent, and a thermostatic valve insert and cover.

For bottom piping arrangements, remove the temporary plugs from the left and right hand side lower ports and install the chrome drain plugs. The thermostatic valve and insert must be installed on the same side as the supply and return port located at the bottom of the unit. If piping is on the bottom left hand side, the thermostatic valve and insert must be installed on the top left hand port. Failure to install correctly will result in noise. Once the insert is installed, a thermostatic head may be installed. If a thermostatic head will not be installed, cover the insert with the white plastic cover supplied with unit. The air

vent should be installed on the upper corner opposite the valve insert. See figure 15 for recommended placement of accessories for bottom piped units.

Once all the connections have been made, the air must be purged from the system. This can be accomplished using the coin air vent that was supplied with the unit.

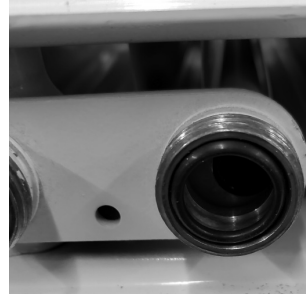


Figure 13 – O-ring

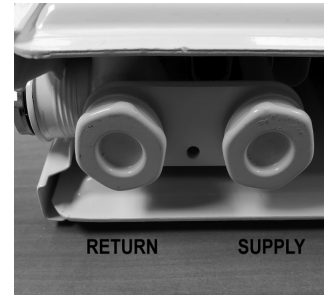


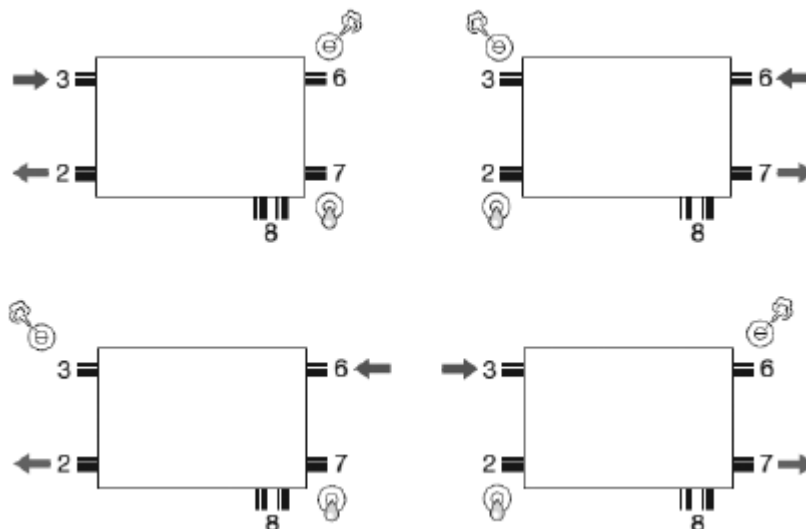
Figure 14 – Supply / Return connections



Figure 15 – Accessory placement

























### Alternative Piping Arrangements

Below are the recommended alternative piping connections when not piping from the bottom. For alternative piping arrangements not shown, please consult the factory.



## Section 5: Accessories

Below is a listing of accessories available through Beacon Morris. It is recommended that these accessories be installed with the Beacon Morris Panel Radiator units to insure proper operation.

	Description	Part Number
	Straight H Valve for Isolation and bypass 3/4"F x 3/4"M (connection pieces included)*	551015943
	Angled H Valve for Isolation and bypass 3/4"F x 3/4"M (connection pieces included)*	551015944
	Straight reverse connection H valve 3/4"F x 3/4"M (connection pieces included)*	551016362
	Angled reverse connection H valve 3/4"F x 3/4"M (connection pieces included)*	551016462
	Compression fitting, set of 2, for 1/2" copper	551016844
	Compression fitting, set of 2, for 3/8" PEX/PEX-AI-PEX	551646849
	Compression fitting, set of 2, for 1/2" PEX/PEX-AI-PEX	551646850
	Compression fitting, set of 2, for 5/8" PEX/PEX-AI-PEX	551646851
	"Vindo TH" non-electric thermostat	551013066
	"Uni-LH" non-electric thermostat	551011365
	"Uni LHB" non-electric thermostat with vandal resistant design	551011410
	Manual valve handle	551012565
	Electromotive actuator for 2-pt, 3-pt, and 0-10V control	551012705
	Electromotive actuator for 0-10V control with position feedback signal	551012706
	Electrothermal actuator for 2-pt control, normally closed	551012416
	Rosette cover for pipe entry	551016674
	Single entry radiator valve with horizontal insertion tube, with bypass	551183561
	Single entry radiator valve with vertical insertion tube, with bypass	551183571
	Right angle adapter M30 x 1.5	551011450
	Angle radiator balancing and shut off valve 1/2" NPT	551091082
	Straight radiator balancing and shut off valve 1/2" NPT	551091182
	Angle radiator valve 1/2" NPT	551889004
	Straight radiator valve 1/2" NPT	551889104
	Reverse angle radiator valve 1/2" NPT	551889204


\*For H valves purchased through Beacon Morris (part #s 1015943/44 1016362/6462) included in the valve are the connection pieces. These rings must be installed with the valve to prevent leaking.

## Thermostatic Valve Settings

The thermostats purchased through Beacon Morris have multiple settings. Refer to the chart below for set points in relation to the number on the valve. The snowflake setting is a low flow / non-freeze setting. This will allow a small amount of water flow to prevent the unit from freezing. If the thermostat is set at 0, no water will flow and the unit will be off. Refer to figure 16 for the temperature ratings.



*"Uni-LH" non-electric thermostat  
Part # 1011465 shown*

Code	Temperature
0	OFF
1	54°F
2	61°F
3	68°F
4	75°F
5	80°F
	Non-freeze/ Low flow

**Figure 16 – Tstat Temperature Ratings**

## Section 8: Cleaning the Unit

The unit may be cleaned using a vacuum or long handled brush.

Never use abrasive cleaners or cleaning products with chemicals as this may compromise the integrity of the finish. The outside of the units can be cleaned with a non-abrasive cloth or sponge and soap. Thoroughly dry the unit with a soft cloth.



Beacon Morris

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