

T6 Radiator Series Installation Guide



Revised 6/12





| | |
|-------------------------------------|-------|
| Before You Begin | 3 |
| Bottom Center Connections | 4-5 |
| Side Connections | 6-7 |
| Optional Piping Arrangements | 8 |
| Wall Bracket Installation | 9-11 |
| Diverter Valve Installation | 12 |
| “H” Valve Specifications | 13-14 |
| System Start-Up & Maintenance | 15 |

Myson, Inc. Limited Warranty

Myson, Inc warrants the following products against defects in material and workmanship to the original owner for the duration listed from date of installation or three months after date of shipment, whichever comes first.

The remedy in all cases shall be to repair or replace the product at Myson’s discretion upon verification of a factory defect. If replacement is required, and an exact replacement product is no longer available, Myson reserves the right to furnish a similar product of equal value.

NO REMOVAL, SHIPPING OR INSTALLATION EXPENSES ARE REIMBURSIBLE

The original purchaser is responsible for determining the suitability of the Myson product for their installation. Installation and troubleshooting should be performed by a competent technician with knowledge of hydronic heating and/or basic electricity.

Damages occurring during shipment, transit, storage or handling, abuse, neglect, accident, misapplication, improper water source or connection, fire, flood or other Acts of God are not covered. Freight damage claims **MUST** be made within 10 days of receipt from Myson.

No Exceptions.

STEEL PANEL RADIATORS — SELECT, T6, DÉCOR, COLUMN AND BENCH The duration of warranty for steel panel radiators is 5 Years.

What is covered:

- Painted finishes will not peel or flake from the surface of the radiator.
- The body of the radiator and its welded joints will not leak when the product is properly installed and maintained according to Myson’s instructions.

What is not covered:

- Rust occurring from improperly sealed threaded connections or oxygen corrosion.
- Electrolytic corrosion caused by failure to flush the system properly after initial installation.

T6 Radiator Series

Before You Begin



INSPECT FOR DAMAGE

NOTE: Inspect for concealed shipping damage. Damage claims **MUST** be reported within 10 days of receipt. **NO EXCEPTIONS.** Call 1-800-698-9690.

INSPECT FOR COMPLETENESS

Unpack the T6 carefully to avoid damage or loss of parts.

The T6 radiator includes:

Wall Brackets (2) for 16" through 63" width radiators, (3) for 70" and 78" width radiators

(2) Adapters for ½" copper compression (standard) or ½" PEX (optional)

The following are factory installed:

(2) Solid Plugs

(1) Air Vent

(1) Valve insert (Thermostatic Control optional)

APPLICATION

Myson T6 radiators must only be used in a pumped, closed loop hydronic heating system. **DO NOT INSTALL ON A STEAM OR GRAVITY HOT WATER SYSTEM.** T6 radiators are designed and constructed for a maximum working pressure of 145 PSI and no more than 230 degrees F water temperature.

Please consult national and local codes for specific restrictions that may be imposed on your installation.

Position radiators away from the circulating pump to avoid either excess pressure that could force water out the air vent or suction which could draw air into the system. The preferred positioning for the T6 radiator is below a window where it can minimize downdrafts from glazed areas.

Panel radiators may be hot to the touch. Generally, the surface temperature is 10 to 12 degrees Fahrenheit below the system water temperature. Care must be taken to consider the room occupant's ability to sense or understand that radiators may be hot. Should radiator surface or system water temperature be an issue, please contact Myson at 1-800-698-9690 for information on the Myson LST radiators. LST (Low Surface Temperature) Radiators can be a viable solution where temperature is a safety concern.

CONNECTIONS

There are two very different connection options for the T6 radiators, and the instructions are separated in the booklet.

Bottom Center Connections: These connections must be used for the internal thermostatic valve to work. The inlet must be the left hand connection as you face the front of the radiator. For series connection (maximum 2 GPM), HV-A or HV-S bypass valves may be used.

Side Tappings: The T6 may be connected like a conventional panel radiator. This arrangement negates the effectiveness of the internal thermostatic valve. It will be necessary to cap the bottom center connections with brass caps. The TRV insert should be removed and replaced with one of the plugs furnished with the radiator.

PIPING CONSIDERATIONS

T6 radiators are to be connected to one of the following piping systems: Home Run, Two Pipe Reverse Return, or Monoflo. See page 8 for basic illustrations.

A limited number of T6 radiators may be connected in series using “H” Series By-Pass Valves. The circuit must be limited to 2 GPM Maximum. See page 12.

Installation Using Center Connections

Center connections **MUST** be used in order for the built-in thermostatic valve to function.

The supply **MUST** be on the left hand side as you face the front of the radiator.

Each pipe center is one inch (1”) either side of the centerline of the radiator and 2 5/8” from the finished wall.

Remove the two plastic paint caps from the center connections and connect either ½” copper pipe using the compression adapters (p/n 101-68-44) or ½” PEX using the optional PEX adapters (p/n 164-68-50).

The thermostatic valve insert is located in the right hand upper tapping of the radiator, and the air vent is located in the left hand upper tapping. Each may be moved to the opposite side if desired.

Thermostatic room control may be achieved by using the optional Herz TS head available from Myson, or any Danfoss RA series control (by others).

Thermostatic Valve Inserts are color coded according to factory presets, which correspond to radiator size. Presetting helps with system balance by limiting the maximum flow to the radiator according to BTUH output.

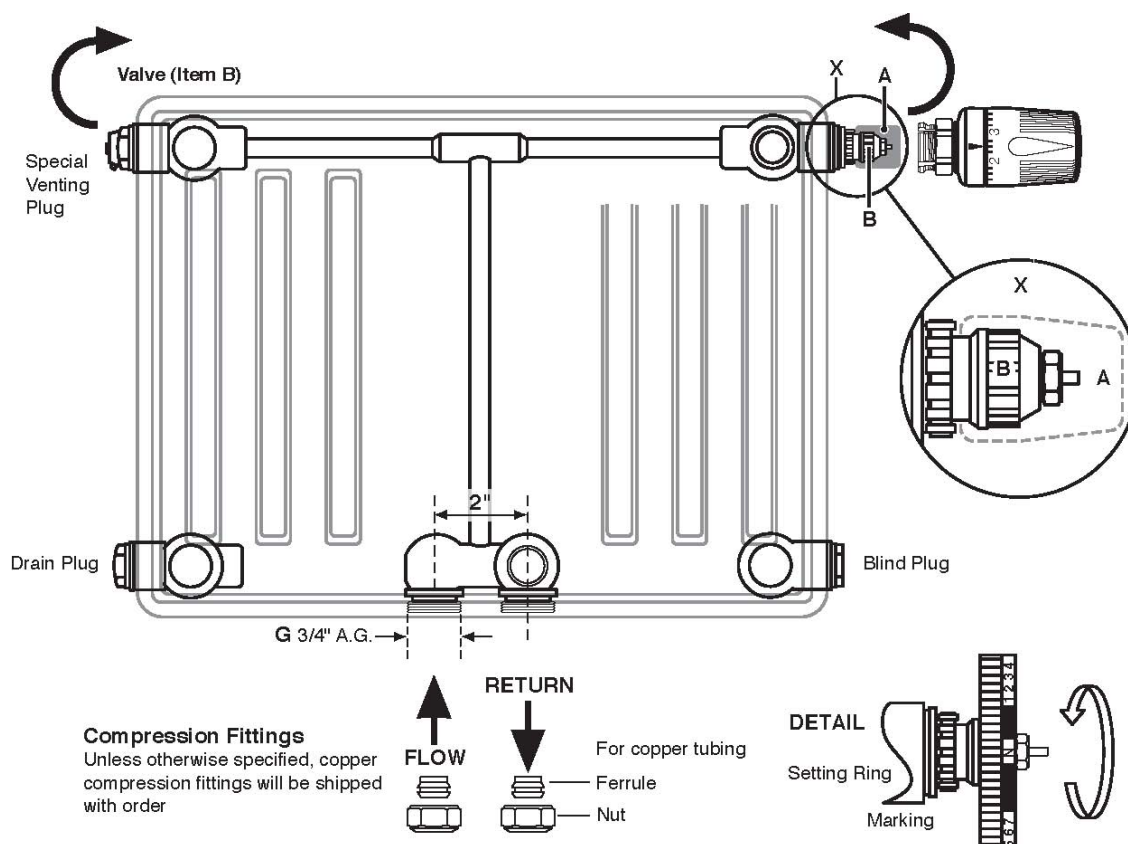
Insert settings are based on 158 degree F. inlet water with a 30 degree temperature drop across the radiator, and may be adjusted for less or more flow.

| Color of Insert | Preset | Setting | BTUH |
|-----------------|--------|---------|-------|
| White | 1.1 | 1 | 1,700 |
| Black | 3.9 | 2 | 2,700 |
| Green | 5.2 | 3 | 3,400 |
| Blue | 6.5 | 4 | 4,100 |
| Red | N | 5 | 5,500 |
| | | 6 | 6,850 |
| | | 7 | 8,200 |



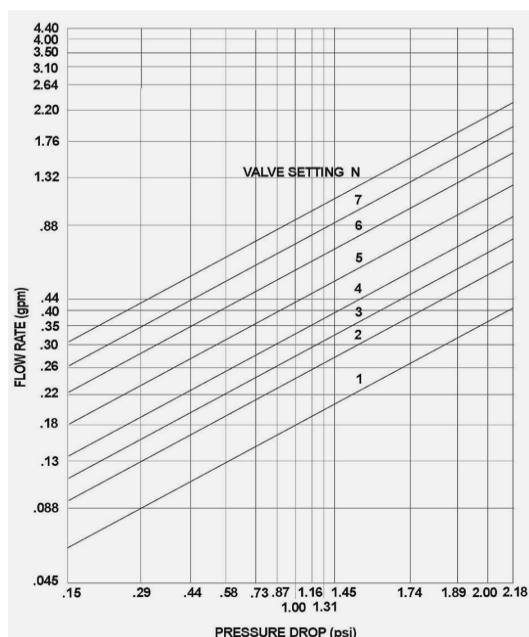
Swapping the right-hand side built-in valve to the left-hand side is no problem at all at any time.

Radiators are delivered with protective caps. After removing the protective cap (pos. A) the following thermostat heads can be fitted directly to the built-in valve (pos. B): “RA 2000”, “RAW” by Danfoss, “VK” by Heimeier, “D” by Herz, “thera DA” by MNG and “UNI XD” by Oventrop.



Setting Information

- Bottom center connections must be used for internal valve function.
- Remove Site Cap or Probe Element.
- Turn the Setting Ring counter-clockwise to the desired presetting—the setting value (1, 2, ... 7, N) must be positioned above the mark.
- Presetting can be selected in grades of 0.5 between 1 and 7. Presetting is released in the setting “N”.



Installation Using Side Connections

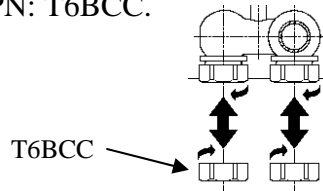
Note:

Center connections MUST be used in order for the internal distribution tubing and the built-in thermostatic valve to function.

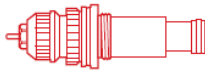
The T6 IVC Radiator is designed to be connected using the bottom connections. If necessary the radiator may be installed using the side tappings although a better alternative is to use Myson's Select Series Radiators. For more information please contact Myson at 800-698-9690.

Preparing the T6 Radiator for side connections.

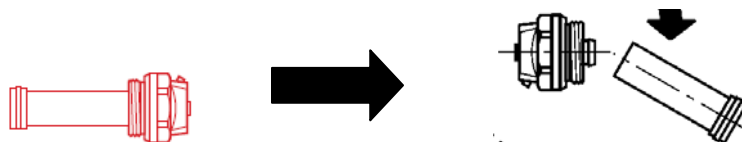
- Remove the two plastic caps from the bottom center connections and discard.
- Replace with nickel plated brass caps, PN: T6BCC.



- Remove one of the blanking plugs from one of the lower side tappings.
- Remove the thermostatic valve insert.



- Replace with the blanking plug removed from one of the lower side tappings.
- Remove the air vent assembly, separate and discard the black extension piece.



- Replace the modified air vent in the top tapping. (Air vents should always be positioned on the return side of the radiator.)
- Make sure all tappings are clean and free of debris before proceeding with valve installation shown on page 7.



Applies to installation using side tappings.

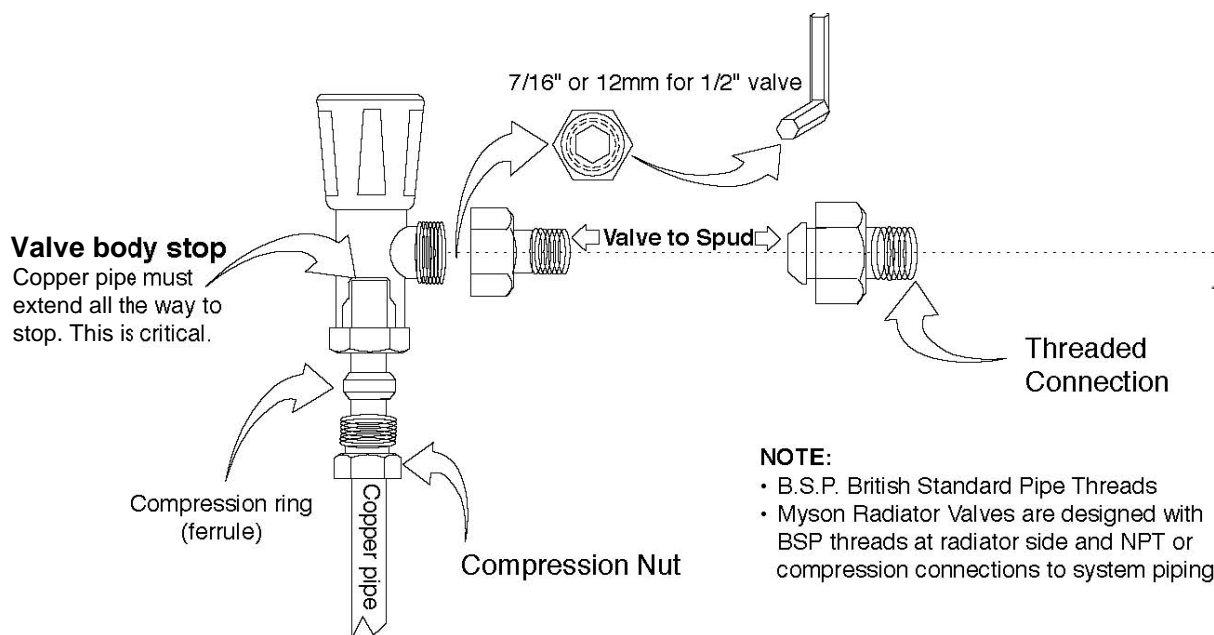
Myson products are designed to be installed by professional trades people. Myson instructions are meant to be thorough; however it is assumed that the installer has the appropriate technical knowledge related to building codes, standard trade practices, and proper use of the tools of the trade. Should a homeowner without such knowledge or skill take it upon him/herself to attempt the installation, Myson will not be responsible for any damages, injuries or unsatisfactory performance of the Myson product used.

NOTE: MYSON products have **BSP** male and female threads. BSP threads are a **straight running thread NOT tapered like NPT**. Myson Radiator Valves are designed with BSP threads at radiator side and NPT or compression connections to system piping.

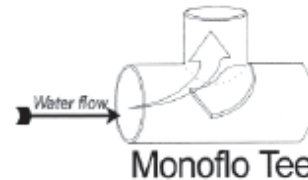
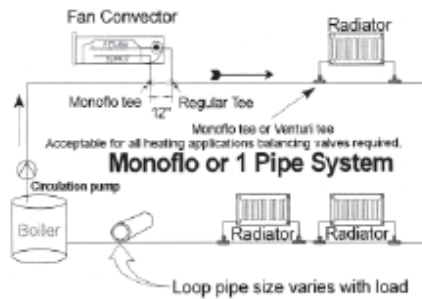
Step 1 Clean all threaded surfaces (both external and internal).

Step 2 Apply teflon tape or pipe dope to the male threads, leaving the first thread exposed. If using pipe dope, also apply to the female threads of the radiator. Common practice to seal BSP threads is to use heavy duty teflon tape, such as is used to seal gas pipe fittings, or anaerobic pipe dope.

Step 3 Using accepted trade practices assemble and wrench tighten fittings until proper alignment is obtained.

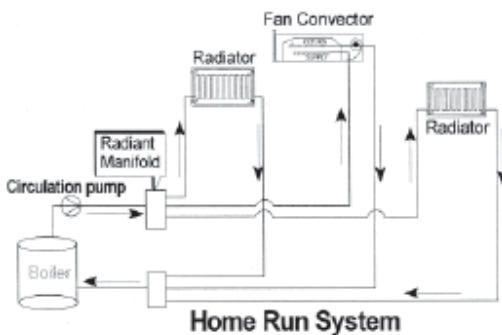
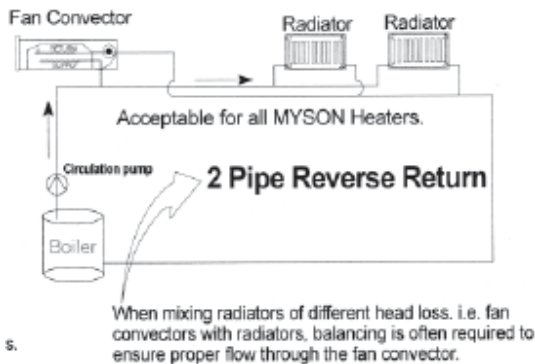


The following drawings are general examples. They are diagrammatic only. Consult a certified heating professional for your specific application.



General information on the use of Monoflo tees:

- Scoop type is placed on the supply
- Venturi type on the return
- If heating unit is below main or more than 4 feet horizontally from the main, use two monoflo tees facing each other

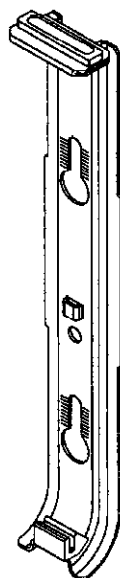


The T6 radiator is designed to be connected using the 2"cc bottom center connections. These connections utilize the efficient use of special internal piping and the included internal Thermostatic Radiator Valve. The **"Home Run System"** piping with a modulating circulator is the most efficient installation method. The bottom center connections also work well with the "Monoflo (1 Pipe) System". If connected in series ("Series Loop") an "H" style by-pass valve must be used and the circuit must be **limited to 2 gpm**. This method is not recommended.

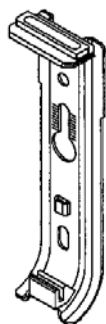
The T6 radiator may also be installed using the alternate end panel tapplings, however this will render the internal piping and TRV non-operational and is not recommended.

FASTENING SET FOR T6 RADIATORS

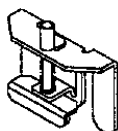
- with integrated lift out protection



**TK2-5&6
WALL RAIL**



**TK2-3
WALL RAIL**

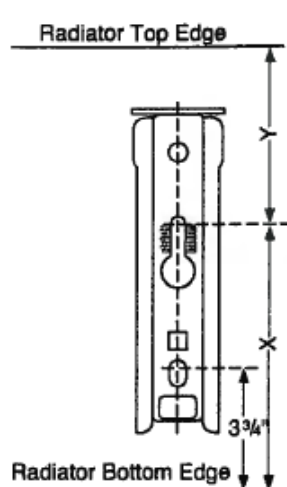


**CLAMPING
CLIP**

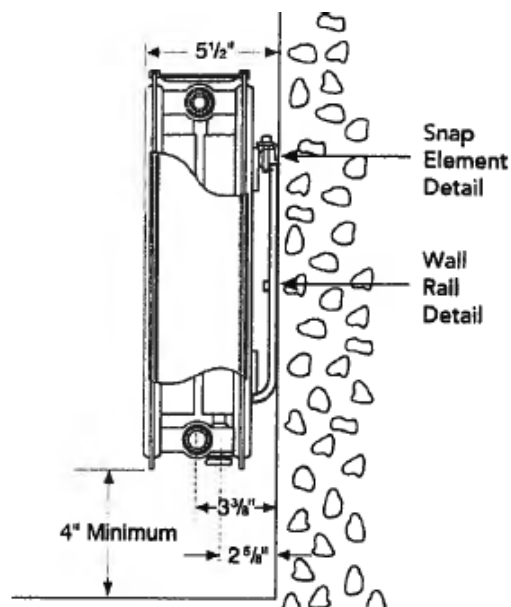
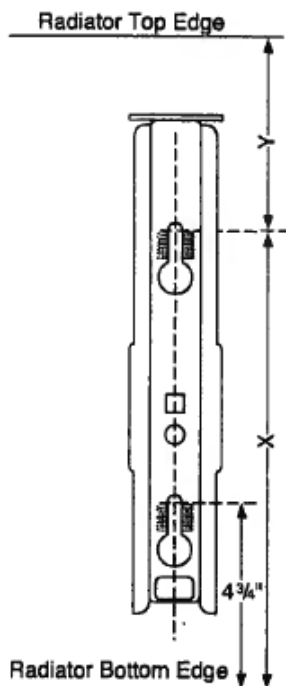
ATTENTION: For the correct installation of radiators it is essential that the fixing of the radiator is carried out in such a way that it is suitable for intended use AND predictable misuse. A number of elements need to be taken into consideration including the fixing method used to secure the radiator to the wall, the type And condition of the wall itself, and any additional potential forces or weights, prior to finalizing the installation.

Wall Rail Details

Wall Rail for Height TK2-3



Wall Rail for Height TK2-5&6



| Radiator Height | X | Y |
|-----------------|----------|----------|
| TK2-3 | 6-7/8" | 4-15/16" |
| TK2-5 | 14-5/8" | 5-1/16" |
| TK2-6 | 18-9/16" | 5-1/16" |

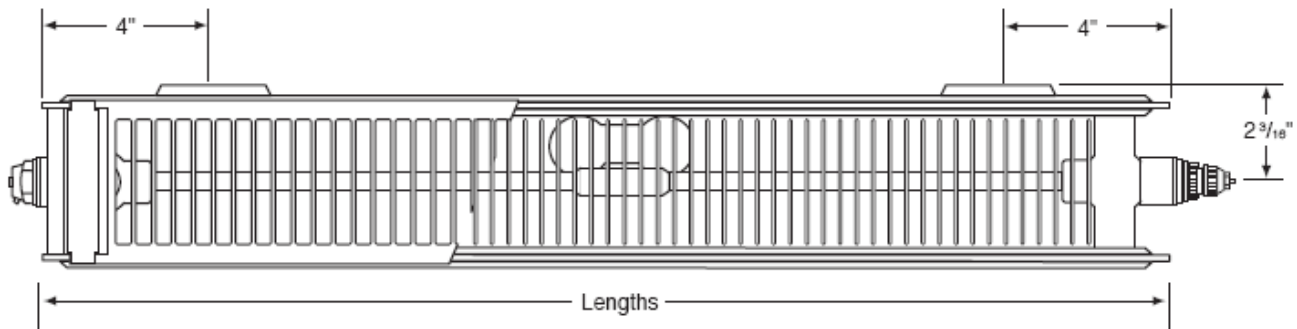
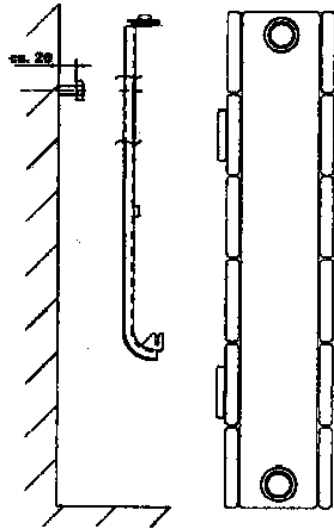


Figure 1

INSTALLING THE WALL RAILS



Drill the installation holes, insert the plastic anchors and screw in the lag screw with lock washers. Leave approximately $\frac{3}{4}$ " of the screw exposed to mount the wall rails. **(Figure 1).**

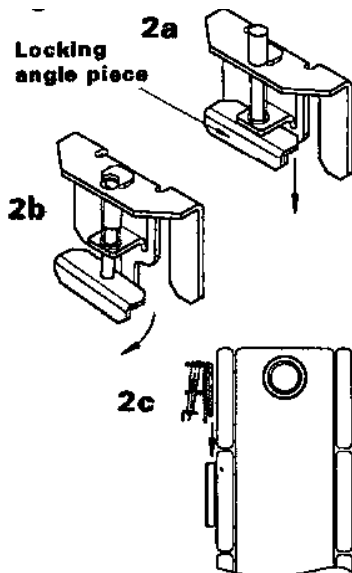
Hang the wall rails on the screws, align them horizontally and vertically, then tighten. Make sure that the lock washer is between the wall rail and the screw head.

NOTE:

Make certain that the wall is sufficiently strong enough to hold the radiator. For sheetrock walls it will be necessary to install blocking material or use other suitable support anchors or wall reinforcement methods.

Figure 2

INSTALLING THE CLAMPING CLIPS



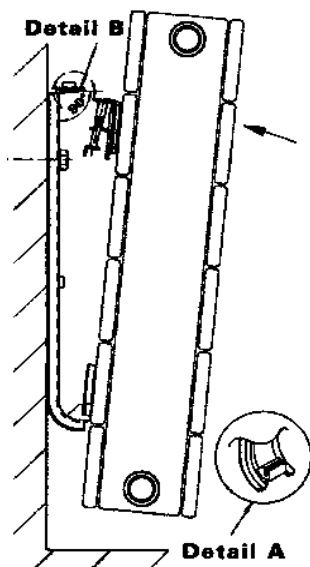
Pre-tighten the pins.

(Figures 2a and 2b)

Pull the locking angle piece down in the direction of the arrow. The pin and the spring are now pre-tightened.

Place the clamping clip onto the top hanging bracket.
(Figure 2c)

Figure 3



INSTALLING THE RADIATOR

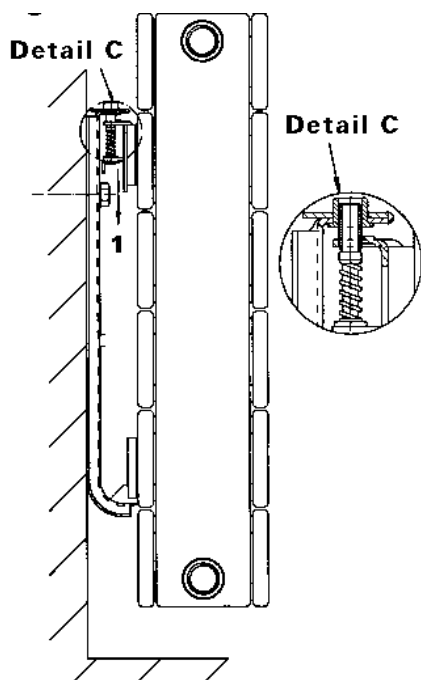
Before installing the radiator, make certain that the top supports for the pins are not bent. **(Figure 3 Detail B)**. Hang the radiator by the placing the lower hanging brackets on the back of the radiator in the lower plastic supports in the wall rail and press the radiator against the top of the wall rail. **(Figure 3)**.

NOTE:

For safety reasons it is essential to check that the pins snap into the supports. **(Figure 4 Detail C)**.

If necessary, sliding the radiator slightly in the horizontal direction can help the pins to snap automatically onto place.

Figure 4



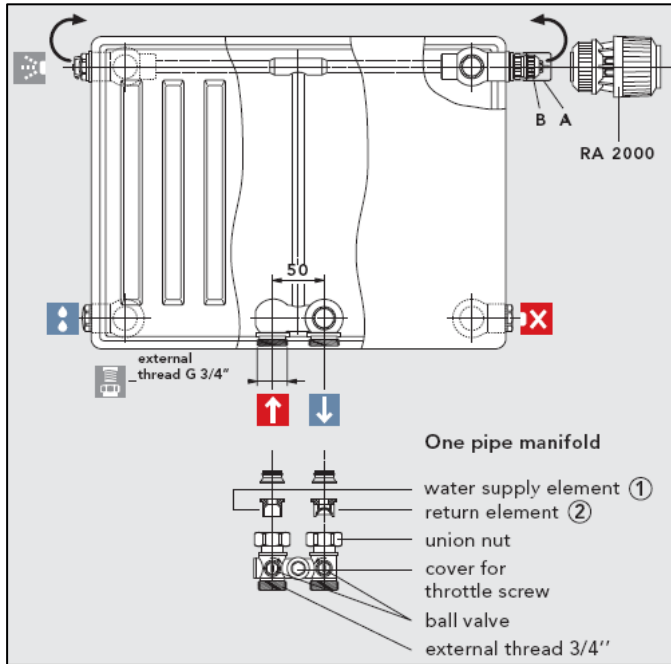
REMOVING THE RADIATOR

Press the locking angle piece down with a screw driver or other suitable tool until the pins snap out of the openings of the wall rails. **(Figure 4)**.

NOTE:

Once the pins have snapped out of the openings, the radiator must be secured against falling.

Now the radiator can be lifted out of the wall rails.



MYSON T6 DIVERTER VALVE SYSTEM

When using “H” style diverter valves to connect multiple radiators in series, it is necessary to size the downstream radiators based on the lower inlet water temperature at each radiator caused by the mixing of return water.

The following is an example of how to properly size each radiator.

| | | | | | |
|---|---------------------------|---|----------|-----------|----------------|
| 1 | Rooms in order of flow | Bedroom 2 | Bathroom | Bedroom 3 | Master Bedroom |
| 2 | Heat Loss In BTUH | 4,200 | 3,000 | 5,400 | 8,600 |
| 3 | Available Wall Space (ft) | 3 | 2 | 3 | 7 |
| 4 | Max Height (inches) | 16 | 24 | 16 | 24 |
| 5 | Select Δ T for system | Δ T 30°F | | | |
| | Maximum supply temp | 180°F | | | |
| 6 | Total Heat Load | Q = 21,200 BTUH | | | |
| 7 | Total Loop GPM* | GPM = Q/(500 Δ T) = 21,200/500X30 = 1.41 GPM | | | |
| 8 | Supply Temp Per Room | 180°F | 174°F | 170°F | 162°F |

Line 6. Sum of all heat loads in **Line 2**.

Line 7. Use formula to calculate GPM

NOTE: Flow rate cannot exceed 2 GPM on a diverter valve system.

Using a larger ΔT lowers the GPM requirement.

Line 8. Calculate the supply temperature of each room according to the following examples.

Supply Water Temperature **Bedroom 2** = 180°F.

Supply Water Temperature **Bathroom** = 180°F minus 4200 / (500 x 1.41) = 174° F.

Supply Water Temperature **Bedroom 3** = 174°F minus 3000 / (500 x 1.41) = 170° F.

Supply Water Temperature **Master BR** = 170°F minus 5400 / (500 x 1.41) = 162° F.

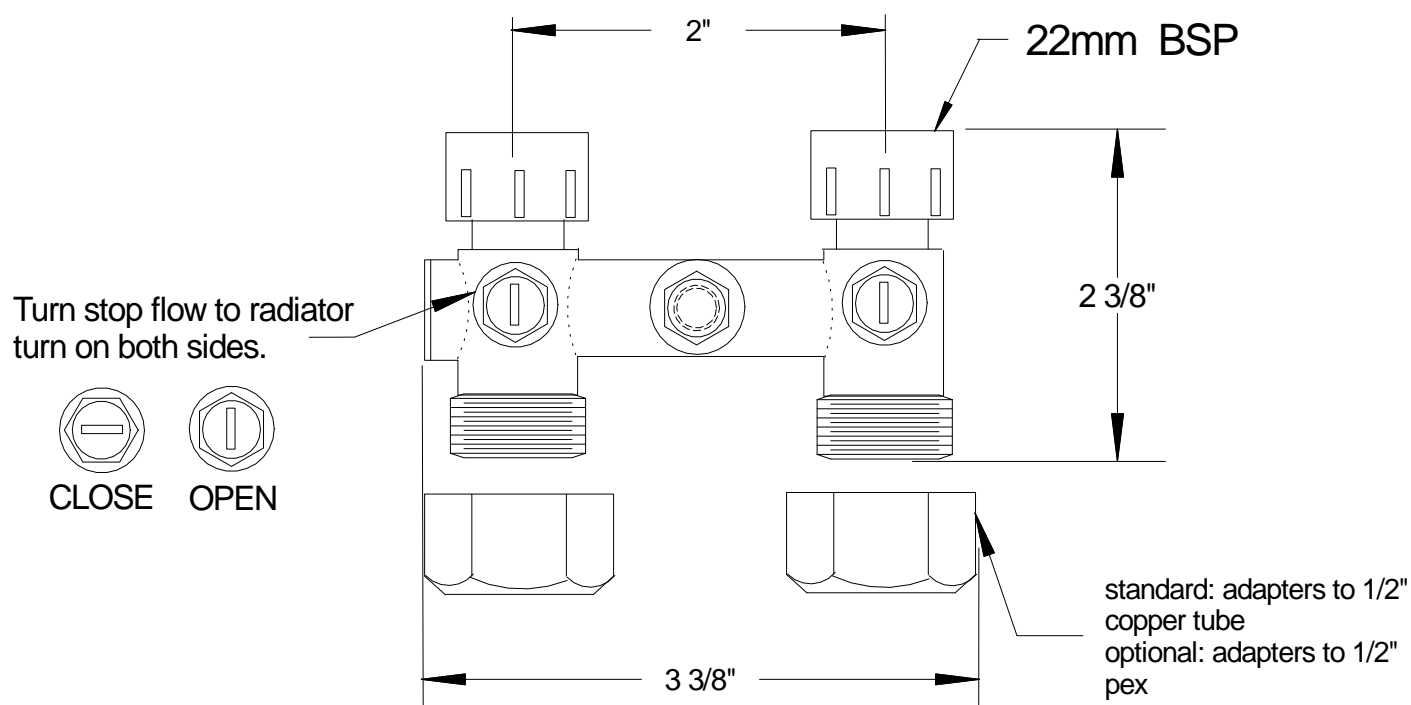
T-6 Radiator Series

H -Valve Dimensions

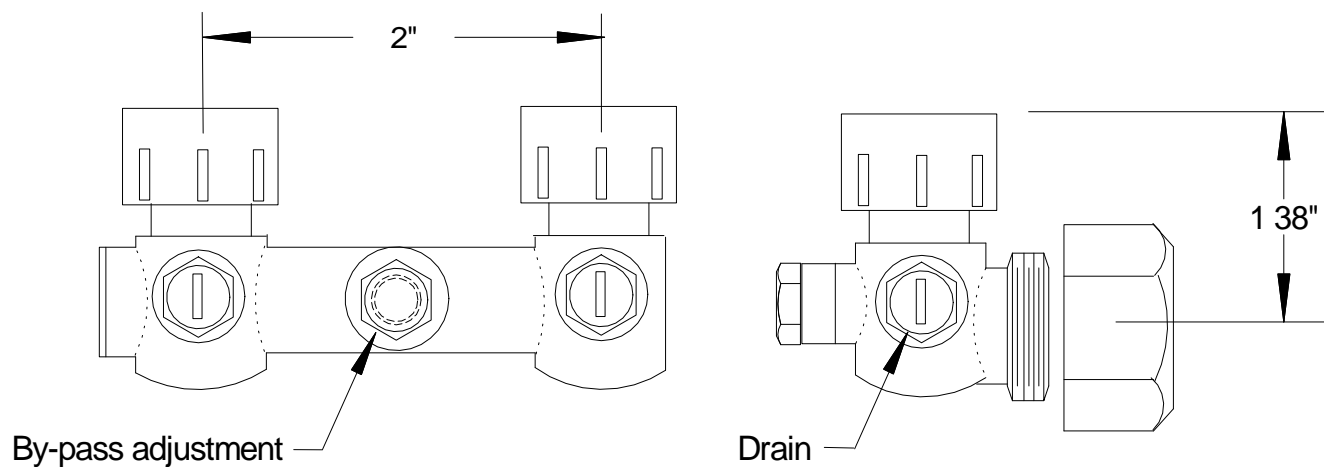


MYSON

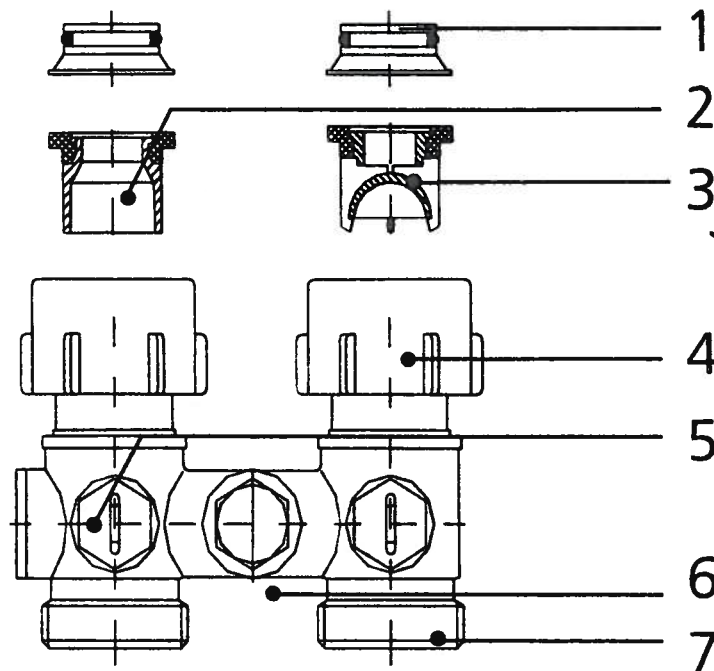
HV-S Twin Entry By-Pass valve - Straight



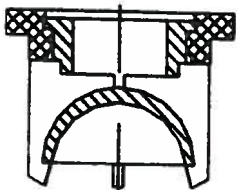
HV-A Twin Entry By-Pass valve - Angle



HV Twin Entry By-Pass Valve



- 1 Tapered Cone (insert in radiator connections)
- 2 Supply Insert
- 3 Return Insert*
- 4 Captive Union Nut
- 5 ¼ Turn Shutoff
- 6 By-Pass Flow Adjustment (Hex Head Below)
- 7 ¾ Union Fitting (Attach Adapters Here)



* IMPORTANT!

Please note that the return insert must be placed in the return side of the HV By-Pass Valve.

T6 Radiator Series

System Start-Up & Maintenance



Failure to flush system of debris and flux may cause premature radiator failure, which can result in leaks and property damage NOT covered under the Myson Warranty.



SYSTEM START-UP

Step 1 Fill and vent the system.

Step 2 Run the system for two (2) hours at full temperature with all radiator valves in the open position.

Step 3 Shut off and drain the system while the water is still hot.

Step 4 Refill the system.

Step 5 Reheat, vent, and balance the system.

Step 6 Once the Radiator is filled with water the system should be left filled.

Step 7 System should be checked for leaks on seasonal start-ups. Leaks must be repaired as automatic system fill valves allow fresh water/oxygen into the system attacking radiators internally.



MAINTENANCE & CLEANING

1 Once operating, avoid the introduction of fresh water and oxygen to the system to prevent corrosion.

2 An occasional wiping with a damp cloth using a non abrasive detergent can protect the finish of your Myson Panel Radiator.

3 The use of abrasive cleaners will damage the surface of your radiator, and void the manufacturer's warranty.



ADDITIVES

Treatment of the primary water is not usually required in a properly designed system. Treatment may be necessary if either:

1 Local waters are known for their content of corrosive material or if high bacterial levels are present.

2 If there is a possibility that the system may be idle during a prolonged period of freezing temperatures, system should be either drained or protected with antifreeze. If either corrosion inhibitors or anti-freeze is to be used, it should be added AFTER the system has been flushed in the final stages. Use only anti-freeze suitable for potable water.



Do not put heating system into operation without checking for leaks with the system up to full operating temperature. Leaks can appear in a heated system that were not noticeable with a cold system or air pressure check.



MYSON

Myson T6 Radiator

Installation Manual 6/2012

MYSON INC. 948 Hercules Drive, Suite 5, Colchester, VT 05446 T 800.698.9690 F 802.654.7022

www.mysoninc.com