

Pensotti steel panel radiators are available in five different sizes; 12, 16, 20, 24 and 36". Each size consists of multiple lengths as described in the data table below. Standard equipment with each radiator includes bottom supply and return connections with reducers, manual air vent, thermostatic valve with flow setter, white cap, two drain plugs and a set of wall mounting brackets. An assortment of PEX tubing and copper pipe fittings along with valves and accessories are available.

Pensotti Radiators are a perfect match for most hydronic heating applications and operate effectively and efficiently with both low and high temperature systems all the way up to 250° F.

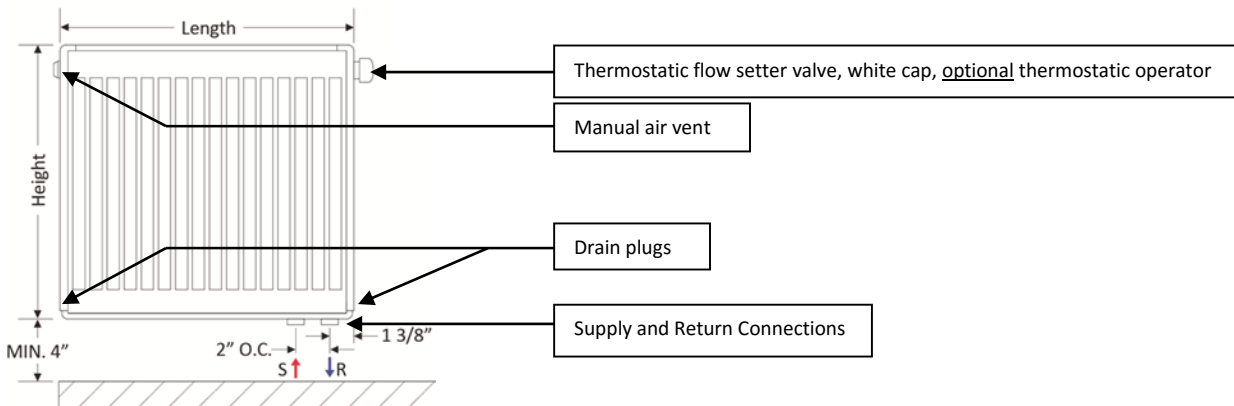
MODEL	HEIGHT	LENGTH	BASEBOARD EQUIVALENT	BTUH OUTPUT		WEIGHT
				180° F	140° F	
DD12X16DBL	12	16	3.33	1934	1068	17
DD12X24DBL	12	24	5.00	2900	1600	24
DD12X32DBL	12	32	6.67	3866	2133	31
DD12X40DBL	12	40	8.33	4831	2661	39
DD12X48DBL	12	48	10.00	5800	3200	46
DD12X56DBL	12	56	11.67	6766	3733	53
DD12X64DBL	12	64	13.33	7732	4265	60
DD16X16DBL	16	16	4.17	2418	1331	23
DD16X20DBL	16	20	5.21	3022	1665	28
DD16X24DBL	16	24	6.25	3626	1999	33
DD16X28DBL	16	28	7.29	4231	2330	38
DD16X32DBL	16	32	8.34	4835	2665	43
DD16X36DBL	16	36	9.38	5440	2996	48
DD16X40DBL	16	40	10.42	6044	3330	52
DD16X44DBL	16	44	11.46	6648	3665	57
DD16X48DBL	16	48	12.51	7253	3995	63
DD20X16DBL	20	16	4.96	2876	1583	28
DD20X20DBL	20	20	6.19	3593	1979	34
DD20X24DBL	20	24	7.44	4313	2375	40
DD20X28DBL	20	28	8.68	5033	2771	46
DD20X32DBL	20	32	9.91	5749	3166	53
DD20X36DBL	20	36	11.15	6469	3562	58
DD20X40DBL	20	40	12.39	7186	3958	64
DD20X44DBL	20	44	13.63	7906	4354	71
DD20X48DBL	20	48	14.87	8626	4746	76
DD24X16DBL	24	16	5.71	3310	1819	31
DD24X20DBL	24	20	7.13	4135	2276	40
DD24X24DBL	24	24	8.56	4964	2730	48
DD24X28DBL	24	28	9.98	5790	3183	56
DD24X32DBL	24	32	11.41	6619	3641	66
DD24X36DBL	24	36	12.84	7445	4094	75
DD24X40DBL	24	40	14.26	8270	4548	81
DD24X44DBL	24	44	15.69	9100	5002	89
DD24X48DBL	24	48	17.11	9926	5459	97
DD24X56DBL	24	56	19.97	11580	6367	114
DD24X64DBL	24	64	22.82	13235	7278	130
DD24X72DBL	24	72	25.67	14890	8190	149
DD36X16DBL	36	16	7.83	4541	2457	48
DD36X20DBL	36	20	9.79	5678	3071	56
DD36X24DBL	36	24	11.75	6814	3685	72
DD36X32DBL	36	32	15.66	9083	4913	88

The BTUH output of each Pensotti Radiator is based on the average water temperature flowing through it, along with a 24° F temperature drop across the radiator. Reduced average water temperature output tables are provided to assist in the design of high efficiency – low temperature, condensing boiler systems.

FITTINGS, VALVES AND ACCESSORIES	
ITEM #	DESCRIPTION
EVKPLUS/12	12" WALL BRACKET SET
EVKPLUS/16	16" WALL BRACKET SET
EVKPLUS/20	20" WALL BRACKET SET
EVKPLUS/24	24" WALL BRACKET SET
EVKPLUS/36	36" WALL BRACKET SET
A31802A	DUAL PIPE ESCUTCHEON
A394-3/8"PEX	3/8" PEX TUBING ADAPTER
A394-1/2"PEX	1/2" PEX TUBING ADAPTER
A394-5/8"PEX	5/8" PEX TUBING ADAPTER
A431-1/2"COPPER	1/2" COPPER PIPE ADAPTER
A55400T	3/4"EK x 1/2" REDUCER
V71110Q	ANGLE ISOLATION VALVE W/BY-PASS
V72111Q	ANGLE ISOLATION VALVE
V71510Q	STRAIGHT ISOLATION VALVE W/BY-PASS
V72510Q	STRAIGHT ISOLATION VALVE
A40400A	THERMOSTATIC OPERATOR
RADSNAP8W	8" WHITE RADSNAP PIPE COVER
RADSNAP8C	8" CHROME RADSNAP PIPE COVER

Piping Connections

Pensotti panel radiators are reversible. As such, the supply and returns connections, which are located on the bottom of the radiator, can be on either the left or right side. The inside connection is always the supply (**the supply and return connections cannot be reversed**). A pair of brass, O-ring seat starting reducers (A55400T) is supplied with each radiator. 3/8", 1/2", and 5/8" pex tubing and 1/2" copper pipe adapters are available and attach to the A55400T reducers. Valves, if installed, fit in between the A55400T reducers and the tubing/pipe adapters. Pipe thread sealant is not required.



REDUCED AVERAGE WATER TEMPERATURE OUTPUT @ 24° DELTA T

MODEL	170°F	160°F	150°F	140°F	130°F	120°F	110°F
DD12X16DBL	1696	1477	1269	1068	874	727	519
DD12X24DBL	2542	2218	1900	1600	1310	1037	781
DD12X32DBL	3392	2958	2535	2133	1747	1382	1041
DD12X40DBL	4237	3695	3170	2661	2184	1726	1300
DD12X48DBL	5087	4436	3804	3200	2620	2074	1559
DD12X56DBL	5933	5175	4439	3733	3057	2419	1819
DD12X64DBL	6783	5913	5074	4265	3494	2763	2081
DD16X16DBL	2119	1849	1583	1331	1092	863	648
DD16X20DBL	2651	2310	1982	1665	1365	1078	812
DD16X24DBL	3180	2771	2378	1999	1638	1293	972
DD16X28DBL	3709	3235	2774	2330	1911	1512	1136
DD16X32DBL	4241	3695	3170	2665	2184	1726	1297
DD16X36DBL	4770	4159	3566	2996	2457	1941	1460
DD16X40DBL	5302	4620	3961	3330	2726	2156	1621
DD16X44DBL	5831	5083	4357	3665	2999	2371	1784
DD16X48DBL	6360	5545	4753	3995	3272	2590	1945
DD20X16DBL	2521	2197	1883	1583	1300	1024	771
DD20X20DBL	3153	2747	2354	1979	1621	1279	962
DD20X24DBL	3780	3295	2825	2375	1945	1535	1153
DD20X28DBL	4412	3845	3296	2771	2269	1791	1347
DD20X32DBL	5043	4392	3767	3166	2593	2047	1539
DD20X36DBL	5670	4942	4238	3562	2914	2303	1733
DD20X40DBL	6302	5490	4709	3958	3238	2559	1924
DD20X44DBL	6933	6040	5179	4354	3562	2815	2115
DD20X48DBL	7561	6590	5650	4746	3886	3071	2310
DD24X16DBL	2900	2528	2167	1819	1488	1177	884
DD24X20DBL	3627	3160	2706	2276	1863	1471	1105
DD24X24DBL	4350	3793	3248	2730	2235	1764	1327
DD24X28DBL	5077	4424	3791	3183	2607	2057	1546
DD24X32DBL	5800	5057	4336	3641	2979	2354	1767
DD24X36DBL	6527	5688	4872	4094	3351	2648	1989
DD24X40DBL	7250	6318	5415	4548	3722	2941	2211
DD24X44DBL	7977	6952	5957	5002	4094	3235	2429
DD24X48DBL	8704	7583	6496	5459	4466	3528	2651
DD24X56DBL	10154	8847	7581	6367	5213	4118	3095
DD24X64DBL	11604	10111	8663	7278	5957	4705	3535
DD24X72DBL	13054	11376	9745	8190	6701	5295	3978
DD36X16DBL	3968	3443	2938	2457	1999	1569	1170
DD36X20DBL	4957	4306	3675	3071	2501	1962	1464
DD36X24DBL	5951	5166	4408	3685	2999	2354	1757
DD36X32DBL	7933	6885	5879	4913	4002	3142	2341

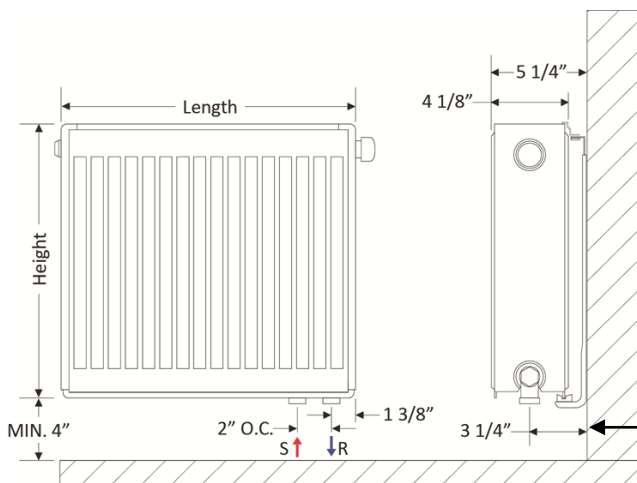
Alternate Water Temperatures

Pensotti panel radiators can be used in all temperature heating systems up to 250° F. The reduced water temperature table above is provided to assist both designers and installers with the proper size selection of radiators at other than the standard average water temperature of 180°F. The BTUH outputs listed are based on the average water temperature with a 24° F drop across the radiator. When designing a system incorporating a condensing boiler, be sure to select a Pensotti radiators' size based on an average water temperature low enough to allow the boiler to condense throughout the heating season.

Water Content

WATER CONTENT	
HEIGHT	(GALS/FT.)
12"	.35
16"	.41
20"	.47
24"	.54
36"	.73

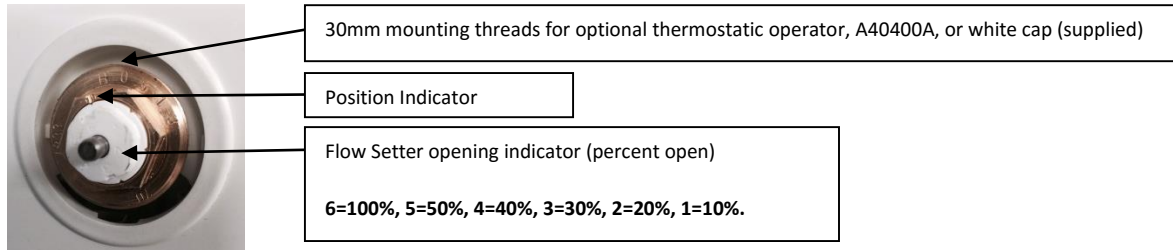
Rough-In Dimensions



A Minimum Space of 4" Must Be Provided Between the Floor and Bottom of the Radiator

Thermostatic Flow Setter Valve

Each radiator is equipped with a thermostatic flow setter valve installed. This valve incorporates two elements; a manually adjustable flow balancing valve and a temperature control. When an optional thermostatic operator is installed (A40400A), the flow rate of the water and therefore the heat output of the radiator will automatically be controlled. If the optional thermostatic operator is not installed the white decorative knob supplied with the radiator must be left loose to provide unrestricted water flow through the radiator. The balancing function can be adjusted by turning the white portion of the valve stem and aligning a number on the scale with the position indicator located on the brass portion of the valve. See percentage scale below.

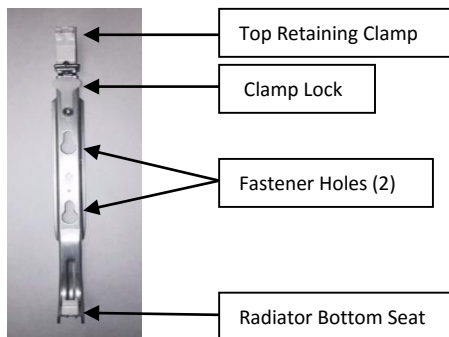


Thermostatic Operator (Provides Automatic Operation of the Thermostatic Valve) A40400A

Number	Approximate Room Temperature
Snowflake	43.7 F
1	51.8 F
2	60.8 F
3	68.0 F
4	75.2 F
5	81.5 F

A thermostatic operator is easily installed on the thermostatic flow setter valve. Simply, turn the setting on the operator to #5, remove the white cap from the thermostatic flow setter valve and screw the operator onto the valve completely. Set the operator to the desired temperature using the table to the left.

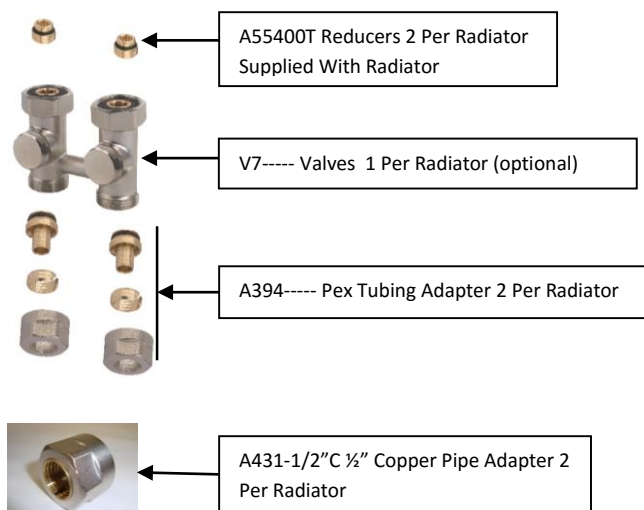
Wall Mounting Bracket (1 Pair per Radiator Is Required, Supplied With Radiator) EVKPLUS/--



Pensotti Snap Grip mounting brackets must be securely fastened to the wall. Frame type construction requires that the brackets be fastened to the wall studs, preferably evenly spaced and toward the ends of the radiator. Each set of mounting brackets includes 2 masonry wall anchors, these are **not** to be used as hollow wall anchors in frame type construction applications.

Install the brackets, aligning the bottom with the desired height of the radiator bottom; a minimum of 4" is required. Plumb the brackets against the wall and mark the hole locations. Drill pilot holes and install the screws, do not tighten, hang the brackets from the screws then tighten completely. Extend the top clamp by pulling the clamp lock away from the bracket slightly and lifting the clamp. Lift the radiator and fit the rear bottom edge into the bottom seats. Tilt the top of the radiator towards the wall, when plumb, push the top retaining clips down into the radiator grill until a click is heard. A screw on the top of the retaining clamp permits minor adjustments if necessary. Additional bracket sets are available if required.

Tubing, Pipe Fitting and Valves



Pensotti panel radiators can be connected directly to a piping system using the available PEX tubing and copper pipe adapters (see Page 1). Two adapters are required per radiator. Isolation and By-pass valves are available and installed between the A55400T reducers and Pex tubing and/or copper pipe adapters.

Insert the A55400T reducers into the supply and return connections of the radiator and tighten with a 12mm allen wrench. Slide the 3 piece Pex adapters onto the proper size tubing, nut first, then compression ring and lastly the O-ring insert. Slide the end of the tubing into the A55400T reducer completely and hold it. Slide the adapter nut and compression ring along the tubing and tighten onto the A54400T reducer. Do not over tighten.

The A431-1/2"C copper pipe adapter is one piece. Install it on the 1/2" copper pipe compression ring end first. Slide the end of the copper pipe into the A55400T reducer completely and hold it. Slide the copper adapter along the pipe and tighten onto the A55400T reducer. Do not over tighten.

All fittings are sealed using integral O-rings. Pipe thread sealant is not required.

Isolation and By-pass Valves



V71510Q Straight Valve w/By-Pass

Straight and 90° angled isolation valves, along with straight and 90° angled isolation/by-pass valves are available.



V72510Q Straight Valve

Isolation valves are designed to simply isolate the radiator from the piping system, allowing quick and easy maintenance.



V71110Q Angled Valve w/By-Pass

Straight valves are designed for through the floor piping and 90° angled valves for through the wall.



V72110Q Angled Valve

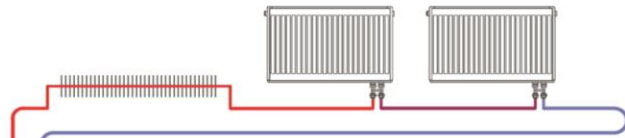
Isolation/By-Pass valves not only isolate the radiator but also allow radiators to be piped using one pipe systems incorporating the optional thermostatic operators. Each valve if factory set at 35% flow through the radiator and 65% through the by-pass. Additional adjustment can be accomplished by adjusting the by-pass screw with a 5mm allen wrench. Turning the adjustment clockwise increases water flow through the radiator. To set the adjustment screw back to the factory setting, turn it clockwise to the fully closed position, then turn it counter-clockwise 1 3/4 turns.

Installation Examples

Pensotti panel radiators can be installed utilizing common system piping practices. Some, such as series circuit systems, are accompanied with strict limitations. Please consult a qualified distributor to assist you in designing an efficient, functional system.

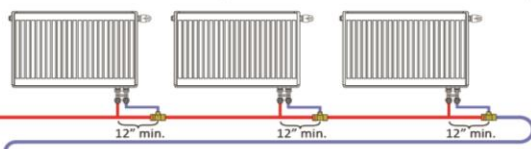
Series Circuit w/By-Pass Valves

- Maximum 2 GPM and/or 4 radiators
- Thermostatic operators should **NOT** be used



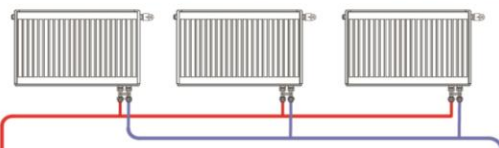
Monoflow w/Thermostatic Operators and Isolation Valves

- Min. 12" spacing between supply tee and monoflow tee
- Thermostatic operators offer individual radiator zoning



Reverse Return w/Thermostatic Operators and Isolation Valves

- Isolation valves are optional
- Thermostatic operators offer individual radiator zoning



Homerun w/Thermostatic Operators and Manifold By-Pass

- Thermostatic operators offer individual radiator zoning

