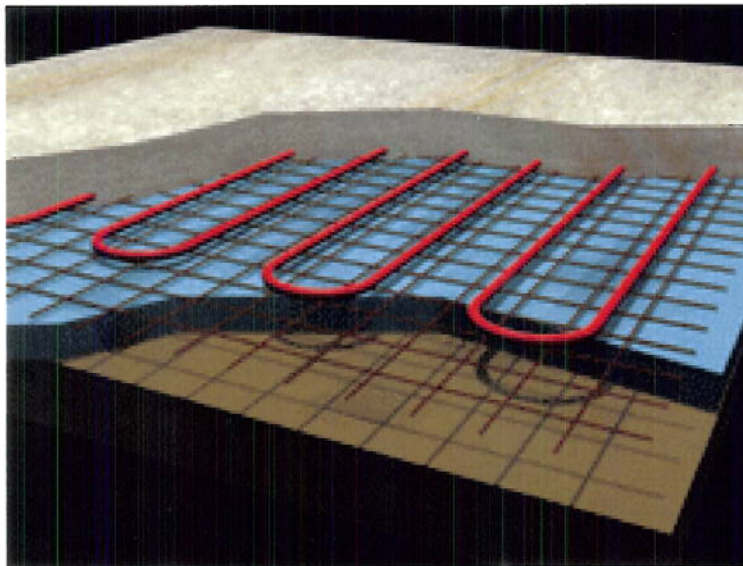


Radiant Floor Heating Systems Braze Plate Heat Exchanger Selections



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Radiant Floor Heating Selections

There are two heat source options when installing a Radiant Floor Heating Systems; the first is a boiler and the second is a hot water heater. Either is easily accomplished using a SWEP heat exchanger to isolate the domestic hot water loop from the radiant floor loop.

Option 1.) Boiler to Radiant Floor

To select a Heat Exchanger for a Boiler to Radiant Floor application:

- A) Select the appropriate Radiant Floor temperature range.
- B) Select the BTUh capacity required
- C) From the table, select the Heat Exchanger model shown.
- D) Select your pump(s) based on the minimum recommended flow rates shown on the table.

Connected to Boiler: 180°F Supply, 150°F Return

Model	# Plates	Radiant Floor 80°F return, 100°F supply			Radiant Floor 100°F return, 120°F supply			Radiant Floor 120°F return, 140°F supply		
		BTUh	Side A (gpm)	Side B (gpm)	BTUh	Side A (gpm)	Side B (gpm)	BTUh	Side A (gpm)	Side B (gpm)
B5	10	24,000	1.6	2.4	24,000	1.6	2.4	24,000	1.6	2.4
B5	10	36,000	2.5	3.6	36,000	2.5	3.6	36,000	2.5	3.6
B5	10	48,000	3.3	4.8	46,000	3.1	4.6	45,500	3.1	4.6
B5	16	60,000	4.1	6.0	60,000	4.1	6.1	60,000	4.1	6.1
B5	16	72,000	4.9	7.2	72,000	4.9	7.3	72,000	4.9	7.3
B5	16	84,000	5.7	8.4	77,000	5.2	7.8	77,800	5.3	7.9
B5	20	96,000	6.5	9.7	96,000	6.5	9.7	96,000	6.5	9.7
B5	30	110,000	7.5	11.1	110,000	7.5	11.1	110,000	7.5	11.2
B5	30	124,000	8.4	12.5	124,000	8.4	12.5	124,000	8.4	12.6
B5	30	138,000	9.4	13.9	137,000	9.3	13.8	138,000	9.4	14.0
B5	40	152,000	10.4	15.3	152,000	10.4	15.3	152,000	10.4	15.4
B5	40	166,000	11.3	16.7	166,000	11.3	16.8	166,000	11.3	16.8
B10T	30	180,000	12.3	18.1	180,000	12.3	18.2	180,000	12.3	18.2
B10T	30	194,000	13.2	19.5	194,000	13.2	19.6	194,000	13.2	19.7
B10T	30	220,000	15.0	22.1	208,000	14.2	21.0	208,000	14.2	21.1
B10T	40	240,000	16.3	24.1	240,000	16.3	24.2	240,000	16.3	24.3
B10T	40	280,000	19.1	28.2	268,000	18.3	27.1	270,000	18.4	27.4
B10T	50	320,000	21.8	32.2	320,000	21.8	32.3	320,000	21.8	32.4
B12MT	30	360,000	24.5	36.2	360,000	24.5	36.3	360,000	24.5	36.5
B12MT	30	400,000	27.2	40.2	380,000	25.9	38.4	383,000	26.1	38.8
B12MT	40	480,000	32.7	48.3	480,000	32.7	48.5	480,000	32.7	48.7
B12MT	50	560,000	38.1	56.3	560,000	38.1	56.5	560,000	38.1	56.8
B12MT	60	640,000	43.6	64.4	640,000	43.6	64.6	640,000	43.6	64.9
B35	50	720,000	49.0	72.4	720,000	49.0	72.7	720,000	49.0	73.0
B35	50	800,000	54.5	80.5	780,000	53.1	78.7	788,000	53.7	79.9
B35	60	880,000	59.9	88.5	880,000	59.9	88.8	880,000	59.9	89.2
B35	70	960,000	65.4	96.6	960,000	65.4	96.9	960,000	65.4	97.3
B50L	60	1,140,000	77.7	114.7	1,080,000	73.6	109.0	1,094,000	74.5	110.9
B50L	70	1,220,000	83.1	122.7	1,220,000	83.1	123.2	1,220,000	83.1	123.7
B50L	70	1,300,000	88.6	130.7	1,250,000	85.2	126.2	1,260,000	85.8	127.7
B50L	90	1,600,000	109.0	160.9	1,560,000	106.3	157.5	1,580,000	107.6	160.2
B50L	120	1,920,000	130.8	193.1	1,920,000	130.8	193.8	1,920,000	130.8	194.6

*Maximum water pressure drop is 5.5 psi.

Radiant Floor Heating Selections

Option 2.) Domestic Hot Water Heater to Radiant Floor

To select a Heat Exchanger for a Domestic Hot Water Heater to Radiant Floor application:

- A) Select the appropriate Radiant Floor temperature range.
- B) Select the BTUH capacity required.
- C) From the table, select the heater exchanger model shown.
- D) Select your pump(s) based on the minimum recommended flow rates show on the table.

Connected to a Hot Water Heater: 130°F Supply, 110°F Return

Model	# Plates	Radiant Floor 80°F return, 100°F supply			Radiant Floor 100°F return, 120°F supply		
		BTUh	Side A (gpm)	Side B (gpm)	BTUh	Side A (gpm)	Side B (gpm)
B5	10	12,000	1.2	1.2	2500	0.3	0.3
B5	10	24,000	2.4	2.4	2500	0.3	0.3
B5	10	36,000	3.6	3.6	2500	0.3	0.3
B5	16	44,000	4.5	4.4	5000	0.5	0.5
B5	16	50,000	5.1	5.0	5000	0.5	0.5
B5	16	60,000	6.1	6.0	5000	0.5	0.5
B5	16	72,000	7.3	7.2	5000	0.5	0.5
B5	20	84,000	8.5	8.4	7000	0.7	0.7
B5	30	110,000	11.1	11.1	11000	1.1	1.1
B5	30	134,000	13.6	13.5	11000	1.1	1.1
B5	40	170,000	17.2	17.1	16000	1.6	1.6
B10T	30	207,000	20.9	20.8	66000	6.7	6.7
B10T	40	232,000	23.5	23.3	95000	9.6	9.6
B10T	50	293,000	29.6	29.5	120000	12.1	12.1
B10T	60	354,000	35.8	35.6	150000	15.2	15.1
B35	30	415,000	42.0	41.7	150000	15.2	15.1
B35	30	476,000	48.1	47.9	150000	15.2	15.1

*Maximum water pressure drop is 5.5 psi.

For conditions other than those shown please contact your local SWEP representative.

Domestic Water Heating Selections

To select a Heat Exchanger for a Domestic Hot Water heating applications:

- A) Select the BTUH capacity required.
- B) Select the Heat Exchanger model shown.
- C) Select your pumps based on the minimum recommended flow rates and the pressure drops shown on the table.

For Domestic Water Applications 50°F In - 140°F Out Connected to Boiler 200°F Supply - 150°F Return

Model	# Plates	BTUh	Boiler		Domestic Hot Water	
			GPM	WPD (psi)	GPM	WPD (psi)
B5	10	20,000	1.4	0.3	0.4	0.1
B5	10	30,000	2.0	0.7	0.7	0.1
B5	10	40,000	2.7	1.2	0.9	0.2
B5	10	50,000	3.4	1.8	1.1	0.3
B5	10	60,000	4.1	2.5	1.3	0.5
B5	10	70,000	4.8	3.4	1.6	0.6
B5	16	80,000	5.4	1.9	1.8	0.3
B5	16	90,000	6.1	2.4	2.0	0.4
B5	16	100,000	6.8	2.9	2.2	0.5
B5	16	125,000	8.5	4.4	2.8	0.7
B5	20	150,000	10.2	4.4	3.4	0.7
B5	30	175,000	11.9	3.2	3.9	0.4
B5	30	200,000	13.6	4.2	4.5	0.6
B5	40	250,000	17.0	4.6	5.6	0.6
B10T	30	300,000	20.4	4.0	6.7	0.6
B10T	30	350,000	23.8	5.5	7.8	0.8
B10T	40	400,000	27.2	4.5	8.9	0.6
B10T	40	450,000	30.7	5.6	10.1	0.8
B10T	50	500,000	34.1	5.1	11.2	0.7
B12MT	30	600,000	40.9	5.2	13.4	0.8
B12MT	40	700,000	47.7	4.4	15.7	0.6
B12MT	40	800,000	54.5	5.7	17.9	0.8
B12MT	50	900,000	61.3	5.2	20.1	0.7
B12MT	60	1,000,000	68.1	5.0	22.4	0.7
B35	50	1,250,000	85.2	5.7	28.0	0.7
B35	70	1,500,000	102.2	5.3	33.6	0.6
B50L	60	1,750,000	119.2	5.7	39.1	0.8
B50L	70	2,000,000	136.2	5.7	44.7	0.8
B50L	80	2,250,000	153.3	5.7	50.3	0.8
B50L	90	2,500,000	170.3	5.8	55.9	0.8

For conditions other than those shown please contact your local SWEP representative.

Snow Melt Selections

Snow Melt Systems typically use Boiler Water to heat a Propylene Glycol (10% to 40% typical). The concentration of Propylene Glycol is dependent of location and weather conditions. The heat exchanger in this application provides isolation of the glycol loop from the boiler water.

To select a Heat Exchanger for a Snow Melt application:

**For Snow Melt Application 100°F In - 130°F Out (40% P.G.)
Connected to Boiler 180°F Supply - 150°F Return**

- 1.) Determine the Total BTUH required (using guidance from your Radiant Tube supplier) for the Snow Melt system
- 2.) Select the appropriate Heat Exchanger from the table, based on the Total BTUH required.
- 3.) Check the total GPM required. If the GPM requirement of the snow melt system is greater than the GPM listed in the selection table, select a larger model Heat Exchanger to match the GPM of your Snow Melt System, or install a bypass balancing valve. This will allow full flow and optimum pressure drop for the pump. This applies to the GPM (s) on both Boiler and Glycol sides.

For Example: For a snow melt system requiring a 122,000 BTUH, from the Table, Model B5x20 would be selected. If the GPM requirement of the Snow Melt System is greater than 9.0 GPM use the next larger model to match the pump requirement.

Model	# Plates	BTU	Side A Boiler		Side B Snow Melt Circuit	
			GPM	PD (psi)	GPM	PD (psi)
B5	10	20,000	1.4	0.5	1.4	0.4
B5	10	30,000	2.0	1.0	2.2	0.9
B5	10	40,000	2.7	1.7	2.9	1.5
B5	16	50,000	3.4	1.0	3.6	1.0
B5	16	60,000	4.1	1.4	4.3	1.4
B5	16	70,000	4.8	1.8	5.0	1.9
B5	16	80,000	5.4	2.4	5.7	2.5
B5	16	90,000	6.1	3.0	6.5	3.1
B5	20	100,000	6.8	2.4	7.2	2.6
B5	20	125,000	8.5	3.7	9.0	4.0
B5	30	150,000	10.2	2.6	10.8	3.1
B5	30	175,000	11.9	3.6	12.6	4.1
B5	40	200,000	13.6	3.1	14.4	3.7
B5	40	225,000	15.3	4.0	16.2	4.7
B10T	30	250,000	17.0	3.2	18.0	3.9
B10T	30	275,000	18.7	3.8	19.8	4.7
B10T	40	300,000	20.4	2.8	21.6	3.5
B10T	40	350,000	23.8	3.7	25.2	4.7
B10T	50	400,000	27.2	3.5	28.7	4.4
B12MT	30	450,000	30.7	3.4	32.3	4.1
B12MT	40	500,000	34.1	2.5	35.9	3.1
B12MT	40	600,000	40.9	3.6	43.1	4.4
B12MT	50	700,000	47.7	3.4	50.3	4.2
B12MT	60	800,000	54.5	3.4	57.5	4.2
B35	50	900,000	61.3	3.2	64.7	3.8
B35	50	1,000,000	68.1	3.9	71.9	4.7

For conditions other than those shown please contact your local SWEP representative.