

Radiator Heat Emission Table

The following table gives the heat emission of Shaw-Perkins High Convection Radiators in B. t. u. per square foot per hour, under various heating medium temperature, and room temperature conditions.

When Steam is Heating Medium	Temp. of Heating Medium Degrees F.	Temperature of Room in Degrees F.												
		40°	50°	60°	70°	80°	90°	100°	120°	140°	160°	180°	200°	
Vacuum In. Hg.	22.4	150°	162	144	129	114	98	82	67	39	x	x	x	x
	20.3	160°	180	164	147	131	115	100	83	53	x	x	x	x
	17.7	170°	200	183	167	149†	134	118	101	70	40	x	x	x
	14.6	180°	220	203	186	170	152	136	120	87	55	26	x	x
	10.9	190°	240	223	206	189	172	154	138	105	72	41	x	x
	6.5	200°	260	243	227	209	192	174	157	124	90	58	26	x
Pressure Lbs. Gage	.9	215°	292	275	258	240*	224	206	187	153	119	85	52	x
	2.5	220°	304	286	267	251	234	216	198	162	128	94	61	27
	5.0	227°	319	301	283	266	249	231	214	178	142	107	72	40
	7.5	233°	333	315	297	279	262	245	226	190	155	119	85	50
	10.	239°	347	328	310	293	274	257	239	203	166	130	95	61
	15.	250°	373	354	336	317	300	281	264	228	191	154	118	82
	20.	259°	396	378	359	339	321	302	283	247	211	173	136	100
	25.	267°	415	397	377	358	340	321	302	266	229	191	153	116
	30.	274°	434	415	395	377	358	338	319	281	245	207	169	130
	35.	281°	450	432	413	395	375	356	336	298	261	222	184	146
	40.	287°	466	447	429	410	390	370	351	313	275	237	198	159

*Usual Steam Heating Conditions: Above shown heat emission of 240 B.t.u. per square foot per hour applies for the average steam heating conditions of steam temperature 215° and room temperature 70°.

†Usual Hot Water Heating Conditions: Above shown heat emission of 149 B.t.u. per square foot per hour applies for the average water heating conditions of water temperature 170°, and room temperature 70°.

Simple Methods for Figuring Radiation

The several simple methods of calculating radiation requirements which have been commonly used for some time, and which are based upon the above standard of heat emission for radiation, may still be used if desired, to determine the radiation requirements of a job. Shaw-Perkins High Convection Radiators may then be selected and installed at their rated surface as shown on pages 18, 19, 20, 22, 23 and 24.

To Determine Heat Loss of a Room

First: Multiply together the square feet of surface, the coefficient of heat transmission and the greatest expected temperature difference between inside and outside (usually 70° inside and 0° outside, or a difference of 70°) for each type of exposed wall, ceiling, floor, glass, etc.

Second: To the sum of the products found in (1) add the air leakage heat loss found by multiplying together the cubical content of the space, the coefficient for the assumed air change and the temperature difference between inside and outside. The last sum is the heat loss from the room in B.t.u. per hour.

Directions for Ordering—Miscellaneous Information

State whether radiators are to be used for steam or hot water heating. If they are to be used for other purposes, give full particulars. State maximum working pressure. Specify tappings desired. For accuracy, tapping locations should be indicated by numbers in circles on pages 21 and 25 keeping in mind that No. 1 tapping is on supply end of radiator.

Be sure to specify whether legs or brackets are desired and mention style and quantity wanted. All sizes of Model K radiators shown in this catalogue require either two legs or two adjustable wall brackets W per radiator. Model K radiators with numbers ending in 11 to 14 inclusive require three adjustable wall brackets W per radiator when used for water installation upon wall.

All sizes of Model C radiators shown in this catalogue require either four legs or four brackets per radiator. Model C radiators with numbers ending in 11 to 14 inclusive require six C brackets per radiator when used for water installation under ceiling.

All Model K radiators are tapped $1\frac{1}{2}$ inch right hand top and bottom both ends and bushed or plugged as specified. Left hand tapping can be furnished when specified.

All Model C radiators are tapped $1\frac{1}{2}$ inch right hand at both ends and bushed or plugged as specified.

Radiators ordered for steam or hot water heating purposes, and for which no tappings are specified, will be bushed as per list below:

Standard Radiator Tappings

STEAM: One-Pipe Work	STEAM: Two-Pipe Work	WATER: Two-Pipe Work
Up to 24 Sq. Ft. 1"	Up to 48 Sq. Ft. 1" x $\frac{3}{4}$ "	Up to 40 Sq. Ft. 1" x 1"
25 to 60 Sq. Ft. $1\frac{1}{4}$ "	49 to 96 Sq. Ft. $1\frac{1}{4}$ " x 1"	41 to 72 Sq. Ft. $1\frac{1}{4}$ " x $1\frac{1}{4}$ "
Above 60 Sq. Ft. $1\frac{1}{2}$ "	Above 96 Sq. Ft. $1\frac{1}{2}$ " x $1\frac{1}{4}$ "	Above 72 Sq. Ft. $1\frac{1}{2}$ " x $1\frac{1}{2}$ "

Bushed at bottom unless otherwise specified.

All radiators are vented for steam or water. Air valve tappings are $\frac{1}{8}$ inch.

Brackets or legs should be located close to headers or center brace. Legs may be installed, inverted, upon top of radiator to form shelf brackets.

Legs are drilled so they may be attached to floor or shelf if desired.

All radiators, legs and brackets are furnished in gray finish, subject to change without notice.

Shipping weights of radiators crated for domestic shipment are given on other pages. Shipping weight of radiators boxed for foreign shipment is approximately 3 pounds per sq. ft. Shipping weights include either brackets or legs.

Brackets and legs are shipped detached from radiators.

Water content of Model K radiators is about .14 gallon per sq. ft. and of Model C radiators about .12 gallon per sq. ft.

Radiators are tested for 40 pounds maximum working pressure. Radiators for higher working pressures can be furnished on special quantity orders.

Care should be taken to see that all Model K radiators are installed with return side at bottom. The steam air vent is near the return tapping.

All radiators should be pitched to insure tube drainage. Model C radiators should be installed with headers perfectly level.

For Prices See Current Trade Price Sheet