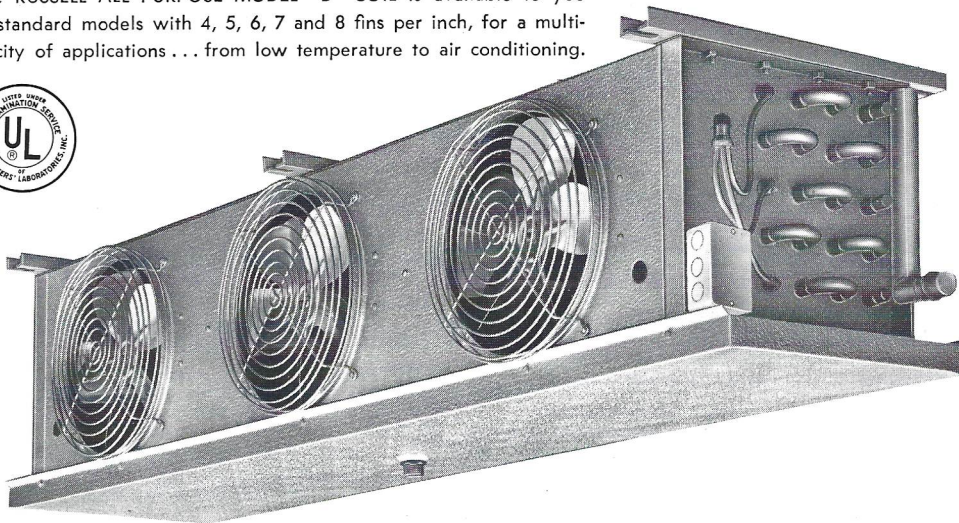


RUSSELL

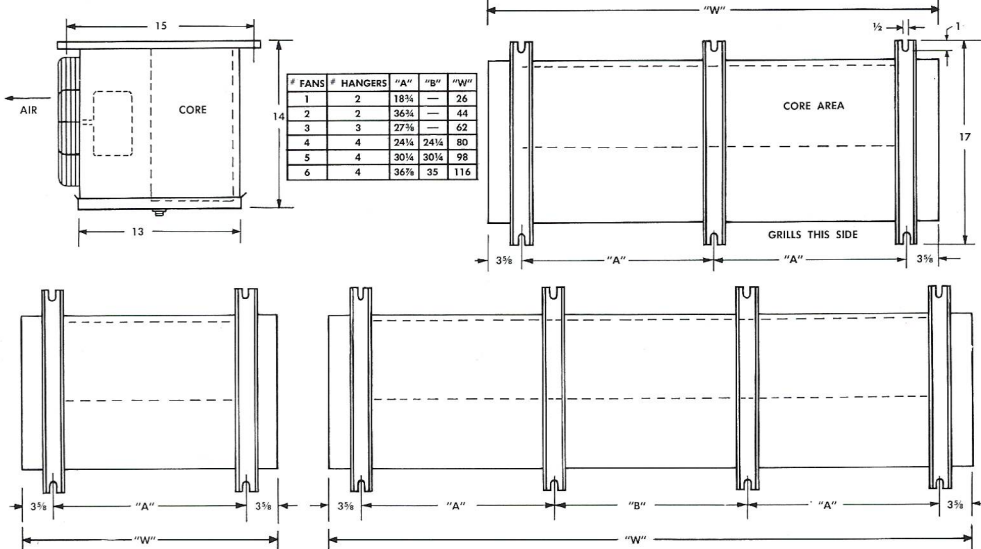
COIL COMPANY

RUSSELL LOW-PROFILE "B" MODEL COIL

The RUSSELL ALL PURPOSE MODEL "B" COIL is available to you in standard models with 4, 5, 6, 7 and 8 fins per inch, for a multiplicity of applications... from low temperature to air conditioning.



MOUNTING DIMENSIONS FOR RUSSELL MODEL "B" COIL UNITS



SERVICE FEATURES

1. Open-end design on above 34° coils makes TX valve readily accessible and enables service engineer to make visual or thermo-couple check of coil operation at each return bend. Closed-end of low-temp coils have readily removable panels for same accessibility.
2. Junction boxes provided for easy electrical wiring of motors and electric-defrost elements.
3. Electric-defrost units have easily replaceable stainless steel sheathed, long life elements. Failure of one would not require emergency replacement.
4. On multi-fan units, divided plenum chambers eliminate the need for emergency service should one motor fail. Motors are easily replaced.

OUTSTANDING FEATURES

- YOUR MOST PROFITABLE COIL TO MERCHANDISE. Note low cost per BTU produced.
- APPLICATIONS ALMOST UNIVERSAL. Above 34 degree Storage; Beverage Coolers; Meat Rooms; Meat Cutting Rooms; Produce Storage; Motel Rooms and Office Air Conditioning, Plus a multitude of other uses.
- COMPACT DESIGN. 15" high by 14" front to back.
- NO-RUST CONSTRUCTION. Stucco Aluminum housing and Aluminum channel hangers.
- HEAVY .012 FINS and .022 wall copper tubes.
- ELECTRIC DEFROST available for ANY FIN SPACING.
- RE-EVAPORATOR or REVERSE-CYCLE circuiting available for Hot-Gas Defrost applications.
- LOW, NO-BLAST AIR VELOCITY and low noise level.
- ALL "B" MODEL MOTORS are 115 or 230 volt, 60 cycle G.E. 16 Watt (1/47 HP) stocked by refrigeration wholesalers everywhere. Fans are 10", one-piece, 5 blade.

RUSSELL MODEL "B" COIL SPECIFICATIONS

Model	BTU 10° TD	BTU 15° TD	CFM	Fans & Motors	Sq. Ft. Surface	* Circuits	Liquid Conn.	Suction Conn.	**230V Electric Defrost Heater Element Data	
									Watts	Amps.
4 FINS PER INCH — STANDARD CIRCUITING FOR - 10° SUCTION R12										
B4- 34	* 3400	* 5100	625	1	95	1	1/2" OD	5/8" OD	1560	6.8 ***
68	6800	10200	1250	2	190	2	5/8" OD	7/8" OD	3100	13.4 ***
102	10200	15300	1875	3	285	3	5/8" OD	1 1/8" OD	4380	19.0 ***
136	13600	20400	2500	4	380	3	5/8" OD	1 1/8" OD	5960	18.3 ****
170	17000	25500	3125	5	475	3	5/8" OD	1 1/8" OD	7460	24.0 ****
204	20400	30600	3750	6	570	4	7/8" OD	1 3/8" OD	8900	28.0 ****
5 FINS PER INCH — STANDARD CIRCUITING FOR 0° SUCTION R12										
B5- 41	* 4100	* 6150	615	1	117	1	1/2" OD	5/8" OD	1560	6.8 ***
82	8200	12300	1230	2	234	2	5/8" OD	7/8" OD	3100	13.4 ***
123	12300	18450	1845	3	351	3	5/8" OD	1 1/8" OD	4380	19.0 ***
164	16400	24600	2460	4	468	3	5/8" OD	1 1/8" OD	5960	18.3 ****
205	20500	30750	3078	5	585	4	7/8" OD	1 3/8" OD	7460	24.0 ****
246	24600	36900	3700	6	702	4	7/8" OD	1 3/8" OD	8900	28.0 ****
6 FINS PER INCH — STANDARD CIRCUITING FOR + 25° SUCTION R12										
B6- 46	* 4600	* 6900	600	1	139	1	1/2" OD	5/8" OD	1560	6.8 ***
92	9200	13800	1200	2	278	2	5/8" OD	7/8" OD	3100	13.4 ***
139	13900	20850	1800	3	417	3	5/8" OD	1 1/8" OD	4380	19.0 ***
185	18500	27750	2400	4	556	3	5/8" OD	1 1/8" OD	5960	18.3 ****
230	23000	34500	3000	5	695	4	7/8" OD	1 3/8" OD	7460	24.0 ****
276	27600	41400	3600	6	834	4	7/8" OD	1 3/8" OD	8900	28.0 ****
7 FINS PER INCH — STANDARD CIRCUITING FOR + 25° SUCTION R12										
B7 49	* 4900	* 7350	590	1	161	1	1/2" OD	5/8" OD	7 & 8 FINS PER INCH NOT RECOMMENDED FOR APPLICATIONS BELOW 38°	
98	9800	14700	1180	2	322	2	5/8" OD	7/8" OD		
147	14700	22050	1770	3	483	3	5/8" OD	1 1/8" OD		
196	19600	29400	2360	4	644	3	5/8" OD	1 1/8" OD		
245	24500	36750	2950	5	805	3	5/8" OD	1 1/8" OD		
294	29400	44100	3540	6	966	4	7/8" OD	1 3/8" OD		
8 FINS PER INCH FOR CUTTING ROOMS AND AIR CONDITIONING										
B8- 52	* 5200	* 7800	580	1	183	1	1/2" OD	5/8" OD	7 & 8 FINS PER INCH NOT RECOMMENDED FOR APPLICATIONS BELOW 38°	
104	10400	15600	1160	2	366	2	5/8" OD	7/8" OD		
156	15600	23400	1740	3	550	3	5/8" OD	1 1/8" OD		
208	20800	31200	2320	4	733	3	5/8" OD	1 1/8" OD		
260	26000	39000	2900	5	916	3	5/8" OD	1 1/8" OD		
312	31200	46800	3480	6	1100	4	7/8" OD	1 3/8" OD		

*Uses internally equalized TX Valve. All other models require externally equalized TX Valves

**115 V. Heater Element Available on Special Order.

N.B. All drain connections 3/4 MPT.

***Heater elements and fan motors factory wired for 1 φ.

****Heater elements factory wired for 3 φ. Fan motors 1 φ.

GENERAL DATA

Unless specified otherwise, all coils factory circuited for R12 at above suction temperatures. If other suction temperatures desired, please specify when ordering. When for use with R22, R502, etc., specify refrigerant type and desired suction temperature when ordering.

The B coil was developed by us to assist the engineer and contractor to select the proper coil for varying applications and capacities, but with the same height dimension. This coil is readily available with 4, 5, 6, 7 and 8 fins per inch — as indicated by the Model number. Model B-4 has 4 fins per inch . . . Model B-5 has 5 fins per inch, etc.

ELECTRIC DEFROST COILS: Not included in coil prices are Klixon Controls or Time Clocks (see price sheet). **STARTERS REQUIRED ON ALL 3 φ WIRED UNITS.** Starters readily available through your wholesaler.

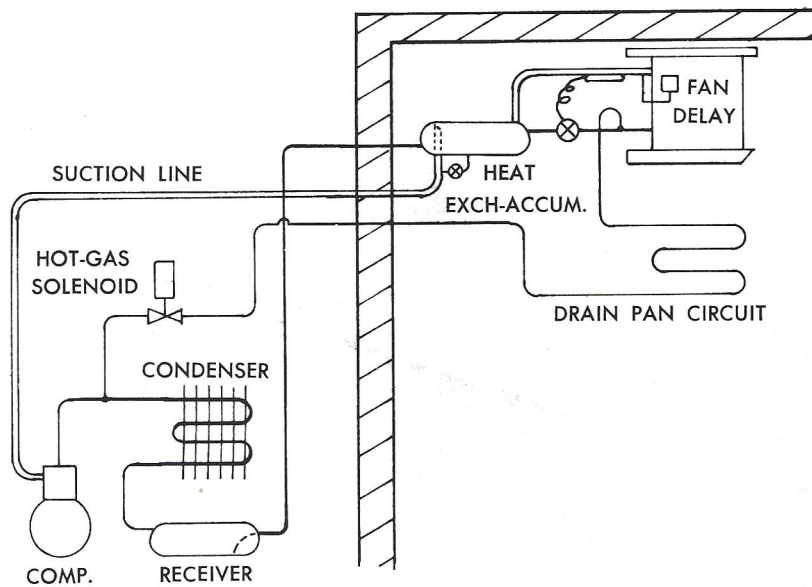
HOT-GAS DEFROST COILS: THESE COILS NORMALLY CIRCUITED FOR RUSSELL HEAT EXCHANGER-ACCUMULATOR APPLICATION. (RE-EVAP). If reverse cycle circuiting is desired, please specify when ordering.

ALL ELECTRIC DEFROST AND HOT-GAS DEFROST COILS should be equipped either with a reverse-acting low pressure fan motor control, or a temperature cut-out control to allow the coil to get back to temperature after defrost period before fans are turned on.

All specifications subject to change without notice.

SCHEMATIC DIAGRAM

**FOR
RUSSELL HOT-GAS
DEFROST COILS
(RE-EVAP)**



Russell coils for Hot-Gas Defrosting can be circuited for any specific type of defrost application. Basically, there are two types: Reverse Cycle with 4 Way Valve (Heat Pump) and the type using method of re-evaporation in the suction line, such as the Russell Heat Exchanger-Accumulator. The type of defrost should be specified at time of ordering coil.

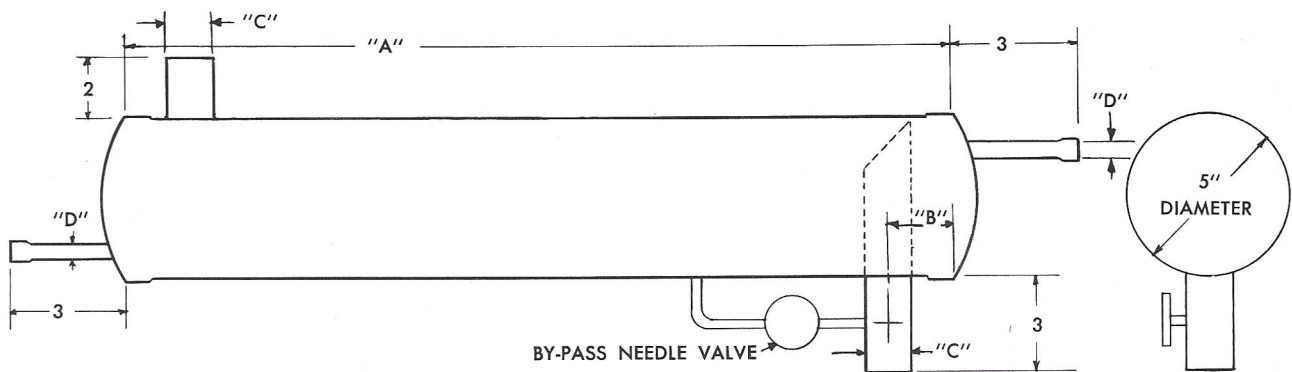
The Russell Heat Exchanger-Accumulator is an uncomplicated mechanism which performs the function of a standard Heat Interchanger and Accumulator, with provision for a small, manually controlled by-pass to the suction line. This by-pass provides heat for de-

frosting, as well as a constant oil return from the Accumulator.

As the small needle by-pass valve must be manually adjusted after installation, the degree of the opening of this valve is determined by observation of the defrosting operation. It is necessary that an adequate amount of liquid be by-passed into the suction line to provide heat for proper defrosting of the coil.

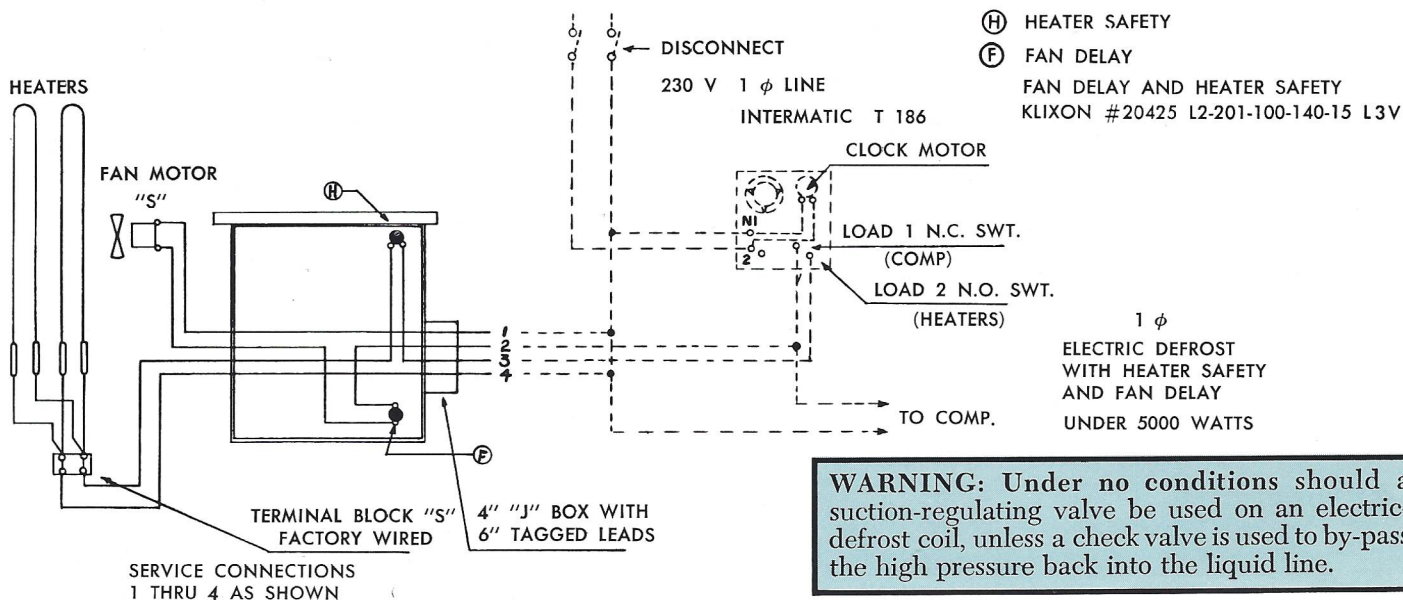
The natural tendency is to open this valve too wide, whereas under normal conditions, *THE VALVE BARELY OPENED WILL PROVIDE PROPER DEFROSTING HEAT.*

RUSSELL HEAT EXCHANGER-ACCUMULATOR

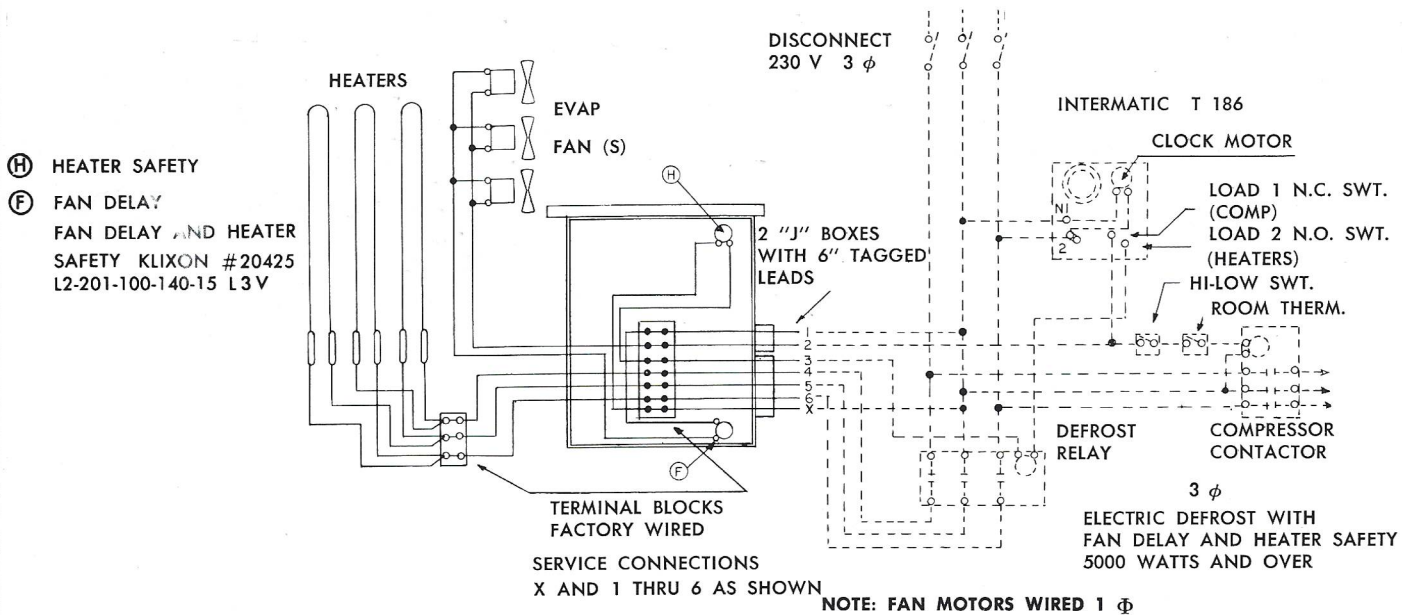


Model	Evap. Cap. — BTU/HR	"A"	"B"	"C"	"D"
HEA-1	3500 to 5500	8"	1½"	7⁄8"	3⁄8"
HEA-2	5600 to 12000	14"	2"	1 1⁄8"	1⁄2"
HEA-3	13000 to 24000	26"	2¼"	1 3⁄8"	1⁄2"
HEA-4	25000 to 36000	36"	2¼"	1 5⁄8"	5⁄8"
HEA-5	37000 to 60000	40"	2½"	2 1⁄8"	7⁄8"
HEA-6	61000 to 72000	50"	3"	2 5⁄8"	7⁄8"

TYPICAL WIRING DIAGRAM FOR 230 V 1 Φ



TYPICAL WIRING DIAGRAM FOR 230 V 3 Φ



N.B. APPLICABLE WIRING DIAGRAM SHIPPED WITH EACH ELECTRIC DEFROST UNIT

The operation of the Russell Electric Defrost Coils is extremely simple. Each of the clock switch details (upper right-hand corners of wiring diagrams) show position of the contacts when the system is on the cooling cycle. The Compressor and Fan Motors (load No. 1) are operating. Contacts in both Klaxons "F" (Fan circ.) and "H" (Heater circ.) are closed. Note that Klaxons "F" and "H" open at approximately 40°F. and close at approximately 25°F. During the cooling cycle, the contact on the clock to load No. 2 circuit to the heaters is open.

The time required for the defrost operation is controlled 100% by the clock. Because of varying defrosting conditions, the defrost period must be determined by observation, after which the pins in the clock should be set accordingly.

After the pre-determined cooling time, the contacts in the clock are reversed, opening the circuit to the fan motors

and compressor. Simultaneously, the circuit to load No. 2 is closed, directing current to the heaters through the closed Klaxon "H" circuit. The sole function of Klaxon "H" is simply that of a safety control in the heater circuit.

When the defrost period terminates and the clock switches again are reversed, the circuit to the heaters opens and the circuit to the compressor and fan motors closes. This puts the compressor into immediate operation; however, because the coil temperature is approximately 40°F. at the start of the cooling cycle, the contact in Klaxon "F" remains open until its temperature is reduced to approximately 25°F. by the pull-down. At this point, the contacts close, putting the fans back into operation. This fan-delay feature allows water to drain off coil, helps prevent overloading the compressor on start-up and eliminates warm air being circulated into the cold room, warding off possible warm-up of the product and fog conditions within the cold room area.