

# Low Profile Unit Cooler



Air Defrost - 3,900 to 39,000 BTUH Electric Defrost - 3,600 to 28,000 BTUH Hot Gas Defrost - 3,600 to 28,000 BTUH Small to Medium Walk - Ins

**Coolers & Freezer Applications** 



### **Features**

Witt Super-Flo Low Profile Unit Coolers feature an air draw-through design and are available in air, electric and hot gas defrost models.

#### **SIZES**

There are 35 sizes available with 3,700 to 39,000 BTUH at a 10° TD ranging from 740 to 4,980 cfm. One through six fan models are available.

#### HOUSING

Rust-free, heavy gauge, textured Aluminum casing is light weight yet durable. Each fan section is baffled to prevent short cycling of the air. The unit is designed to mount flush to the ceiling and meets all NSF requirements. Slotted hangers are provided for easy installation. Drain fittings are installed in the horizontal position to gain more usable headroom in low ceiling applications. The end panels now are hinged to open up out for easy access to both the piping and electrical ends. Optional expansion valves can be conveniently installed inside the cabinet.

### COIL

Seamless copper tubes are staggered and mechanically expanded into corrugated aluminum fins and heavy gauge tube sheets to achieve maximum heat transfer and strength. Die-formed fin collars provide even fin spacing. Fin spacings available are 4, 6, and 8 fins per inch. Sweat connections are standard on all models and optional field installed flare connection kits are available at no extra charge.

#### **MOTORS**

High efficiency single-speed and dual-speed Electronically Commutated (EC) motors are available in 115V and 208/230V. The dual-speed EC motors are compliant with California Title 24 regulations. Single-speed PSC motors are available in 115V, 208/230V and 460V. All motors include thermal overload protection.

### CONFIGURATIONS

Units are available with Standard Configuration (no mounted accessories) or Pre-assembled with the most requested options installed for your convenience.

Pre-assembly Code:

- Blank = Standard Configuration
- T = Factory mounted TXV
- L = Factory mounted TXV, Liq. Line Solenoid (LLS) and Mechanical T-Stat
- M = Master Configuration with mountedTXV, T-Stat, LLS and copperTee

#### **FANS**

Heavy duty 12" Aluminum fans are balanced to provide vibration-free operation. Our low throw black plastic fan guards provide anmoptimal air pattern Availalbe optional epoxy resin high throw fan guard moves air up to 50 feet.

#### **AIR DEFROST**

All models with the prefix "SA" are designed for use in coolers of 35°F and warmer. Complete air defrost systems for off-cycle or timed air defrost are available.

#### **ELECTRICAL**

Available in 115V, 208/230V, and 460V (see pages 4 & 5). All components are factory wired to convenient screw-type terminal strips. A large compartment is supplied internal to the unit for all electrical components and is easily accessible by opening the hinged end panel. All models are UL & cUL listed.

### **ELECTRIC DEFROST**

Available on all models with the prefix "SE". These units are designed for use where electric heat is used to defrost the coil. Placement of the heaters internal to the coil allows for an extremely rapid and efficient defrost. This arrangement enables the heat to be conducted through the fins from the center out for an even defrost pattern. All heaters are wired to a terminal strip to allow a quick field change-over from single phase to three phase, 230V to 460V and vice versa. A lower heater is installed close to the drain pan for fast, reliable drainage. A defrost termination thermostat (DT) terminates the defrost cycle when the temperature is satisfied. A heater safety thermostat is installed to prevent heaters from overheating above 75° in case of DT failure. All heaters are flexible and can be easily replaced within 12 inches of the end of the units. A fan delay thermostat is supplied to allow the warm coil to cool after a defrost cycle prior to the fans turning on. Complete electric defrost refrigeration systems are available from Witt.

#### **HOT GAS DEFROST**

Two types available - reverse cycle with the prefix "SG" and 3 pipe defrost models with the prefix "SH". All models include a fixed DTFD factory wired and a hot gas drain pan circuit to defrost the drain pan. On all Hot Gas models, the drain fitting is located on the left-hand rear of the unit when facing the fan guards.

### **Optional Features**

- Coated Aluminum fins or Copper Fins
- Baked white enamel housing
- Epoxy resin high throw guards for up to 50 ft.
- Reheat kits (not UL listed)
- Adjustable termination/ fan delay control
- Insulated drain pan

# Low Profile Unit Cooler

Electronically commutated motors bring the benefits inherent to unit bearing motor design to the refrigeration Unit Cooler market.

- Large oil resevoir
- Totally enclosed construction
- Journal bearing machined into the cast iron endbell
- · Spiral grooved shaft pump guarantees positive oil circulation
- Threaded shaft uses hubless fan blade
- Available in single or dual speed configurations

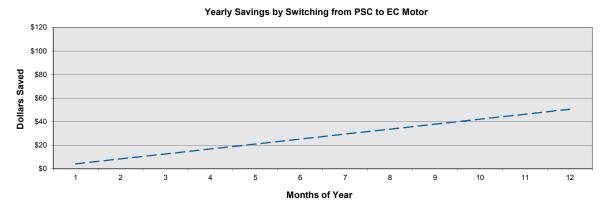
### **Energy Savings per Motor**

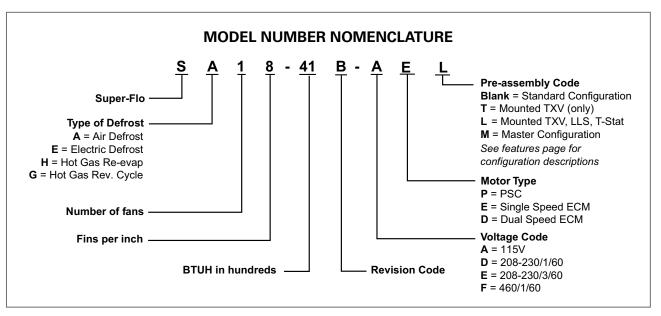
By changing to more efficient unit cooler motors (based on Energy Cost of \$0.10 per kWh)

Motor Change	Std Motor Power Watts/ Mtr	Change to Motor Power Watts/Mtr	Reduced Power Watts/ Mtr	Run Time Hrs/ Day	Motor Energy Savings kWh/Yr	Motor Energy Savings \$/Yr	Reduced Box Load MBTU/Yr	Cond. Unit Energy Savings \$/Yr	Yearly Saving \$ Per MTR	Pay back in Yrs
PSC to EC	85	47	38	22	305	31	1041	20	51	2.0

Subtract 6% from total savings for medium temperature air defrost units that run 24 hours per day. PSC = 1/20 HP PSC motor

EC = 50 Watt Electronically Commutated motor





### Performance and Electrical Data - Air Defrost Models

	Bar Jal	ВТ	UH			Total Fan Motor Al	MPS - 1 Pha	ase	
	Model Number	Capacity (	@ 25°F S.T.	CFM	Single and Dual <sup>^</sup>	Speed EC Motors†	Single S	Speed PSC	Motors
	Nullibel	10°TD	12°TD		115V	208-230V	115V	208-230V	460V
	SA18-41B	4,100	4,900	800	0.9	0.45	1.0	0.5	0.4
	SA18-53B	5,300	6,400	770	0.9	0.45	1.0	0.5	0.4
	SA18-66B	6,600	7,900	740	0.9	0.45	1.0	0.5	0.4
	SA28-76B	7,600	9,100	1,460	1.8	0.9	2.0	1.0	0.8
	SA28-97B	9,700	11,600	1,420	1.8	0.9	2.0	1.0	0.8
	SA28-106B	10,600	12,700	1,540	1.8	0.9	2.0	1.0	0.8
0	SA28-122B	12,200	14,600	1,380	1.8	0.9	2.0	1.0	0.8
8 FPI	SA28-134B	13,400	16,100	1,480	1.8	0.9	2.0	1.0	0.8
	SA38-160B	16,000	19,200	2,310	2.7	1.35	3.0	1.5	0.8
	SA38-195B	19,500	23,400	2,220	2.7	1.35	3.0	1.5	1.2
	SA48-212B	21,200	25,400	3,080	3.6	1.8	4.0	2.0	1.6
	SA48-264B	26,400	31,700	2,960	3.6	1.8	4.0	2.0	1.6
	SA58-275B	27,500	33,000	3,850	4.5	2.25	5.0	2.5	2.0
	SA68-318B	31,800	38,200	4,620	5.4	2.7	6.0	3.0	2.4
	SA68-390B	39,000	46,800	4,440	5.4	2.7	6.0	3.0	2.4
	SA16-39B	3,900	4,700	830	0.9	0.45	1.0	0.5	0.4
	SA16-48B	4,800	5,800	800	0.9	0.45	1.0	0.5	0.4
	SA16-58B	5,800	7,000	780	0.9	0.45	1.0	0.5	0.4
	SA26-70B	7,000	8,400	1,540	1.8	0.9	2.0	1.0	0.8
	SA26-87B	8,700	10,400	1,500	1.8	0.9	2.0	1.0	0.8
6	SA26-115B	11,500	13,800	1,560	1.8	0.9	2.0	1.0	0.8
FPI	SA36-145B	14,500	17,400	2,400	2.7	1.35	3.0	1.5	1.2
	SA36-170B	17,000	20,400	2,340	2.7	1.35	3.0	1.5	1.2
	SA46-192B	19,200	23,000	3,200	3.6	1.8	4.0	2.0	1.6
	SA46-230B	23,000	27,600	3,120	3.6	1.8	4.0	2.0	1.6
	SA56-245B	24,500	29,400	4,000	4.5	2.25	5.0	2.5	2.0
	SA66-295B	29,500	35,400	4,800	5.4	2.7	6.0	3.0	2.4
	SA66-345B	34,500	41,400	4,680	5.4	2.7	6.0	3.0	2.4
	SA14-42B	4,200	5,000	830	0.9	0.45	1.0	0.5	0.4
	SA24-84B	8,400	10,100	1,660	1.8	0.9	2.0	1.0	0.8
4	SA24-105B	10,500	12,600	1,620	1.8	0.9	2.0	1.0	0.8
FPI	SA34-130B	13,000	15,600	2,490	2.7	1.35	3.0	1.5	1.2
	SA44-170B	17,000	20,400	3,320	3.6	1.8	4.0	2.0	1.6
	SA54-215B	21,500	25,800	4,150	4.5	2.25	5.0	2.5	2.0
	SA64-255B	25,500	30,600	4,980	5.4	2.7	6.0	3.0	2.4

Use EC motors for 50 Hz operation.

### **Ordering Information Required**

It is vital that the information listed below is given with each evaporator order. Orders without this information may be delayed. Evaporators with options such as solenoid and expansion valves can not be processed until all the required information is given.

- 1. Model number
- 2. Type of motor
- 3. Voltage, frequency and phase of motors and heaters (when applicable)
- 4. Refrigerant type
- 5. Evaporator temperature
- 6. Evaporator T.D.
- 7. Pre-assembly code

<sup>†</sup>These Electronically Commutated (EC) Motors are not available in 460V or 575V.

<sup>^</sup> Dual-speed EC motors are compliant with California Title 24 regulations.

# Low Profile Unit Cooler

### Performance and Electrical Data - Electric Defrost Models

							Motor	Amps <sup>1</sup>		He	ater Am	ps²	
	Model Number			ity @ 10° Tempera		CFM	Single and Dual^ Speed EC Motors†		Speed /lotors	23	0V	460V	Watts
		-30°F	-20°F	-10°F	+20°		230V	230V	460V	1 PH	3 PH	1 PH	
	SE16-36B	3,400	3,600	3,700	3,900	830	0.45	0.5	0.4	4.4	3.8	2.2	1,000
	SE16-41B	3,900	4,100	4,300	4,800	800	0.45	0.5	0.4	4.4	3.8	2.2	1,000
	SE16-46B	4,400	4,600	4,800	5,800	780	0.45	0.5	0.4	4.4	3.8	2.2	1,000
	SE26-60B	5,700	6,000	6,200	7,000	1,540	0.9	1.0	0.8	7.0	6.0	3.5	1,600
	SE26-75B	7,100	7,500	7,800	8,700	1,500	0.9	1.0	0.8	7.0	6.0	3.5	1,600
	SE26-92B	8,700	9,200	9,600	11,500	1,560	0.9	1.0	0.8	8.7	7.5	4.4	2,000
6 FPI	SE36-120B	11,400	12,000	12,500	14,500	2,400	1.35	1.5	1.2	13.0	11.3	6.4	3,000
	SE36-140B	13,300	14,000	14,600	17,000	2,340	1.35	1.5	1.2	13.0	11.3	6.4	3,000
	SE46-164B	15,000	16,400	17,100	19,200	3,200	1.8	2.0	1.6	17.4	15.1	8.7	4,000
	SE46-185B	17,600	18,500	19,200	23,000	3,120	1.8	2.0	1.6	17.4	15.1	8.7	4,000
	SE56-210B	20,000	21,000	21,800	24,500	4,000	2.25	2.5	2.0	21.7	18.8	10.9	5,000
	SE66-245B	23,300	24,500	25,500	29,500	4,800	2.7	3.0	2.4	25.0	21.7	12.5	5,750
	SE66-280B	26,600	28,000	29,100	34,500	4,680	2.7	3.0	2.4	25.0	21.7	12.5	5,750
	SE14-37B	3,500	3,700	3,800	4,200	830	0.45	0.5	0.4	4.4	3.8	2.2	1,000
	SE24-72B	6,800	7,200	7,500	8,400	1,660	0.9	1.0	0.8	8.7	7.5	4.4	2,000
4	SE24-85B	8,100	8,500	8,800	10,500	1,620	0.9	1.0	0.8	8.7	7.5	4.4	2,000
FPI	SE34-105B	10,000	10,500	10,900	13,000	2,490	1.35	1.5	1.2	13.0	11.3	6.4	3,000
	SE44-140B	13,300	14,000	14,600	17,000	3,320	1.8	2.0	1.6	17.4	15.1	8.7	4,000
	SE54-180B	17,100	18,000	18,700	21,500	4,150	2.25	2.5	2.0	21.7	18.8	10.9	5,000
	SE64-215B	20,400	21,500	22,400	25,500	4,980	2.7	3.0	2.0	25.0	21.7	12.5	5,750

- †These Electronically Commutated (EC) Motors are not available in 460V or 575V.
- ^ Dual-speed EC motors are compliant with California Title 24 regulations.
- 1. All fan motors are wired for single phase.
- 2. For 208/230V models: On 1 through 4 fan models heaters are standard wired for single phase. On 5 and 6 fan models, heaters are standard wired for three phase. The 460V models are only available in single phase and are compatible with all three phase systems.

Use EC motors for 50 Hz operation.



### Performance and Electrical Data - Hot Gas Defrost Models

	BTUH Capacity @ 10°T.D.						Heat						
	Model Number		Evaporator Temperature			CFM	Single at Speed EC	nd Dual^ Motors†		e Speed Motors		Exchange Field	
			-30°F	0°F -20°F -10°F +20°			115V	230V	115V	230V	460V	Installed	
	SG16-36B	SH16-36B	3,400	3,600	3,700	3,900	830	0.9	0.45	1.0	0.5	0.4	HX-25
	SG16-41B	SH16-41B	3,900	4,100	4,300	4,800	800	0.9	0.45	1.0	0.5	0.4	HX-25
	SG16-46B	SH16-46B	4,400	4,600	4,800	5,800	780	0.9	0.45	1.0	0.5	0.4	HX-25
	SG26-60B	SH26-60B	5,700	6,000	6,200	7,000	1,540	1.8	0.9	2.0	1.0	0.8	HX-25
	SG26-75B	SH26-75B	7,100	7,500	7,800	8,700	1,500	1.8	0.9	2.0	1.0	0.8	HX-50
6	SG26-92B	SH26-92B	8,700	9,200	9,600	11,500	1,560	1.8	0.9	2.0	1.0	0.8	HX-50
6 FPI	SG36-120B	SH36-120B	11,400	12,000	12,500	14,500	2,400	2.7	1.35	3.0	1.5	1.2	HX-50
	SG36-140B	SH36-140B	13,300	14,000	14,600	17,000	2,340	2.7	1.35	3.0	1.5	1.2	HX-75
	SG46-164B	SH46-164B	15,000	16,400	17,100	19,200	3,200	3.6	1.8	4.0	2.0	1.6	HX-75
	SG46-185B	SH46-185B	17,600	18,500	19,200	23,000	3,120	3.6	1.8	4.0	2.0	1.6	HX-75
	SG56-210B	SH56-210B	20,000	21,000	21,800	24,500	4,000	4.5	2.25	5.0	2.5	2.0	HX-75
	SG66-245B	SH66-245B	23,300	24,500	25,500	29,500	4,800	5.4	2.7	6.0	3.0	2.4	HX-100
	SG66-280B	SH66-280B	26,600	28,000	29,100	34,500	4,680	5.4	2.7	6.0	3.0	2.4	HX-100
	SG14-37B	SH14-37B	3,500	3,700	3,800	4,200	830	0.9	0.45	1.0	0.5	0.4	HX-25
	SG24-72B	SH24-72B	6,800	7,200	7,500	8,400	1,660	1.8	0.9	2.0	1.0	0.8	HX-50
А	SG24-85B	SH24-85B	8,100	8,500	8,800	10,500	1,620	1.8	0.9	2.0	1.0	0.8	HX-50
FPI	SG34-105B	SH34-105B	10,000	10,500	10,900	13,000	2,490	2.7	1.35	3.0	1.5	1.2	HX-50
	SG44-140B	SH44-140B	13,300	14,000	14,600	17,000	3,320	3.6	1.8	4.0	2.0	1.6	HX-75
		SH54-180B	,	18,000			4,150	4.5	2.25	5.0	2.5	2.0	HX-75
	SG64-215B	SH64-215B	20,400	21,500	22,400	25,500	4,980	5.4	2.7	6.0	3.0	2.4	HX-100

- †These Electronically Commutated (EC) Motors are not available in 460V or 575V.
- ^ Dual-speed EC motors are compliant with California Title 24 regulations.
- 1. All fan motors are wired for single phase.

Hot Gas reverse cycle includes a fixed defrost termination control and a fixed fan delay control (factory wired) and a check valve between the hot gas drain pan circuit and the coil.

Use EC motors for 50 Hz operation.



# Low Profile Unit Cooler

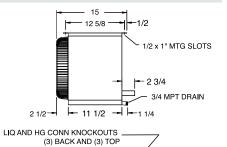
## **Physical Data**

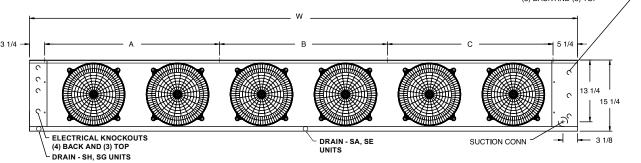
MC	DDELS	TXV	REF		CONNECTIO	ONS	NO. OF			ISIONS		APPROX.
		TYPE*	All	SA	SE/SG/SH	HG	HANGERS			hes)		SHIP WT.
SA	SE/SG/SH			SUCTION	SUCTION			Α	В	С	W	(LBS.)
18-41B	_	EXT	1/2 ODS	5/8 ODS	_	_	2	19	_	_	27-1/2	33
18-53B	_	EXT	1/2	5/8	_	-	2	19	-	_	27-1/2	34
18-66B	_	EXT	1/2	5/8	_	_	2	19	_	_	27-1/2	36
28-76B	_	EXT	1/2	5/8	_	_	2	33	_	_	41-1/2	48
28-97B	_	EXT	1/2	7/8	_	_	2	33	_	_	41-1/2	51
28-106B	_	EXT	1/2	7/8	_	_	2	37	_		45-1/2	58
28-122B	_	EXT	1/2	7/8	_	_	2	33	–	_	41-1/2	60
28-134B	_	EXT	1/2	7/8	_	_	2	37	-	_	45-1/2	63
38-160B	_	EXT	1/2	1-1/8	_	_	2	55	_	_	63-1/2	79
38-195B	_	EXT	1/2	1-1/8	_	_	2	55	_	_	63-1/2	84
48-212B	_	EXT	1/2	1-1/8	_	_	3	36-1/2		_	81-1/2	127
48-264B	_	EXT	1/2	1-1/8	_	_	3		36-1/2	_	81-1/2	151
58-275B	_	EXT	1/2	1-1/8	_	_	3	54-1/2	36-1/2	_	99-1/2	197
68-318B	_	EXT	1/2	1-1/8	_	–	4	36-1/2	36	36-1/2	117-1/2	243
68-390B	_	EXT	1/2	1-1/8	_	_	4	36-1/2	36	36-1/2	117-1/2	267
16-39B	16-36B	EXT	1/2 ODS	5/8 ODS	5/8 ODS	5/8 ODS	2	19	_	_	27-1/2	41
16-48B	16-41B	EXT	1/2	5/8	5/8	5/8	2	19	_	_	27-1/2	44
16-58B	16-46B	EXT	1/2	5/8	5/8	5/8	2	19	_	_	27-1/2	47
26-70B	26-60B	EXT	1/2	5/8	7/8	5/8	2	33	–	_	41-1/2	54
26-87B	26-75B	EXT	1/2	7/8	7/8	5/8	2	33	–	_	41-1/2	55
26-115B	26-92B	EXT	1/2	7/8	7/8	5/8	2	37	_	_	45-1/2	62
36-145B	36-120B	EXT	1/2	7/8	7/8	5/8	2	55	_	_	63-1/2	78
36-170B	36-140B	EXT	1/2	1-1/8	1-1/8	5/8	2	55	_	_	63-1/2	85
46-192B	46-164B	EXT	1/2	1-1/8	1-1/8	5/8	3	36-1/2	36-1/2	_	81-1/2	124
46-230B	46-185B	EXT	1/2	1-1/8	1-1/8	5/8	3	36-1/2	36-1/2	_	81-1/2	147
56-245B	56-210B	EXT	1/2	1-1/8	1-1/8	5/8	3	54-1/2	36-1/2	_	99-1/2	195
66-295B	66-245B	EXT	1/2	1-1/8	1-1/8	5/8	4	36-1/2	36	36-1/2	117-1/2	238
66-345B	66-280B	EXT	1/2	1-1/8	1-1/8	5/8	4	36-1/2	36	36-1/2	117-1/2	262
14-42B	14-37B	EXT	1/2 ODS	5/8 ODS	5/8 ODS	5/8 ODS	2	19		_	27-1/2	42
24-84B	24-72B	EXT	1/2	7/8	7/8	5/8	2	37	-	_	45-1/2	49
24-105B	24-85B	EXT	1/2	7/8	7/8	5/8	2	37		-	45-1/2	55
34-130B	34-105B	EXT	1/2	7/8	7/8	5/8	2	55		_	63-1/2	79
44-170B	44-140B	EXT	1/2	7/8	1-1/8	5/8	3	36-1/2	36-1/2	_	81-1/2	144
54-215B	54-180B	EXT	1/2	1-1/8	1-1/8	5/8	3	54-1/2	36-1/2	_	99-1/2	191
64-255B	64-215B	EXT	1/2	1-1/8	1-1/8	5/8	4	36-1/2	36	36-1/2	117-1/2	257

<sup>\*</sup> External equalized type † Sweat connection

### **Installation Notes:**

- (1) Install 12" away from back wall.
- (2) Drain connection on SA and SE units are centered on drain pan; and on the left end (facing air discharge) on SG and SH units.
- (3) For long air throw requirements, specify high throw fan guard.
- (4) Unit height at drain end of hot gas models is as follows: 1,2, and 3 fan models = 15-7/8, 4,5, and 6 fan models = 16-1/4."





### **Flectric Defrost Kits**

MODEL	1 UNIT COOLE	R PER SYSTEM	2 UNIT COOLER	RS PER SYSTEM	<b>3 UNIT COOLER</b>	RS PER SYSTEM
NUMBER	230V	460V	230V	460V	230V	460V
SE16-36B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE16-41B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE16-46B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE26-60B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE26-75B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE26-92B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE36-120B	ED-5	ED-17	ED-20*	ED-22	ED-33	ED-32
SE36-140B	ED-5	ED-17	ED-20*	ED-22	ED-33	ED-32
SE46-164B	ED-6	ED-17	ED-23*	ED-22	ED-35	ED-32
SE46-185B	ED-6	ED-17	ED-23*	ED-22	ED-35	ED-32
SE56-210B	ED-7	ED-17	ED-23*	ED-22	ED-35	ED-34
SE66-245B	ED-7	ED-17	ED-23*	ED-22	ED-35	ED-34
SE66-280B	ED-7	ED-17	ED-23*	ED-22	ED-35	ED-34
SE14-37B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE24-72B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE24-85B	ED-5	ED-17	ED-20*	ED-22	ED-30	ED-32
SE34-105B	ED-5	ED-17	ED-20*	ED-22	ED-33	ED-32
SE44-140B	ED-6	ED-17	ED-23*	ED-22	ED-35	ED-32
SE54-180B	ED-7	ED-17	ED-23*	ED-22	ED-35	ED-34
SE64-215B	ED-7	ED-17	ED-23*	ED-22	ED-35	ED-34

KIT NO.	TIMER	AUXILIARY SWITCH	BLOCK-OUT RELAY	DEFROST CONTACTOR	FAN CONTACTOR	SEQUENCING RELAY
ED5-230/1	1	_	1-15A	_	_	_
ED5-230/3	1	_	1-15A	_	_	_
ED6-230/1	1	_	1-20A	_	_	_
ED6-230/3	1		1-20A			_
ED7-230/1	1	_	1-25A	_	_	_
ED7-230/3	1		1-25A		_	_
ED10-230/1	1	_	1-30A	_	_	_
ED11-230/3	1	1	_	1-30A	_	_
ED17-460/3	1	1	—	1-15A	1-15A	_
ED18-460/3	1	1	–	1-20A	1-20A	_
ED12-460/3	1	1	_	1-30A	1-25A	_
<sup>1</sup> ED210-230/1	1	_	1-30A	_	_	_
<sup>1</sup> ED213-230/1	1	1	_	1-50A	_	_
<sup>1</sup> ED213-230/3	1	1	_	1-50A	_	_
ED20-230/1	1	_	1-30A	_	_	2
ED22-460/3	1	1	_	2-15A	1-25A	2 2 2
ED23-230/1	1	1	_	2-25A	1	2
ED23-230/3	1	1	_	2-25A	_	2
ED30-230/1	1	_	1-30A	_	_	3
ED32-460/3	1	1	–	3-10A	1-25A	3
ED33-230/1	1	1		3-16A	_	3 3 3 3 3
ED34-460/3	1	1	_	3-16A	1-25A	3
ED35-230/1	1	1	_	3-33A	_	3
ED35-230/3	1	1	_	3-33A	_	3

<sup>&</sup>lt;sup>1</sup> For use with 2 evaporators , 1/2 through 3 HP R-series systems ONLY!

Electric defrost kits consist of components that are necessary to control the defrost cycle. The optional kits are available as a factory installed option when ordered with a condensing unit. Not all Ed-Kits are available for all condensing unit models. The contents of each kit is described below, along with the function of each component.

\* - 1/2 through 3 HP condensing units require ED-210 or ED-213.

Timer: Initiates the defrost cycle. Also used as a override protection for defrost termination.

Auxiliary Switch: Is mounted on the compressor contactor and prevents the defrost contactor from operating whenever the compressor is energized.

Block-Out Relay: Serves the same function as auxiliary switch. Used when defrost contactor is not required (lower wattage single phase only).

Defrost Contactor: Carries amperage load for heaters.

Fan Contactor: Used with 460V motors or when 230V motors are wired 3 phase.

Sequencing Relays: Provides interconnection of multiple unit coolers on a single system so that each unit cooler is allowed to individually terminate defrost on temperature.





DEFROST CONTACTOR FAN CONTACTOR





AUXILIARY SWITCH

Due to continuing product development, specifications are subject to change without notice.



RELAY