

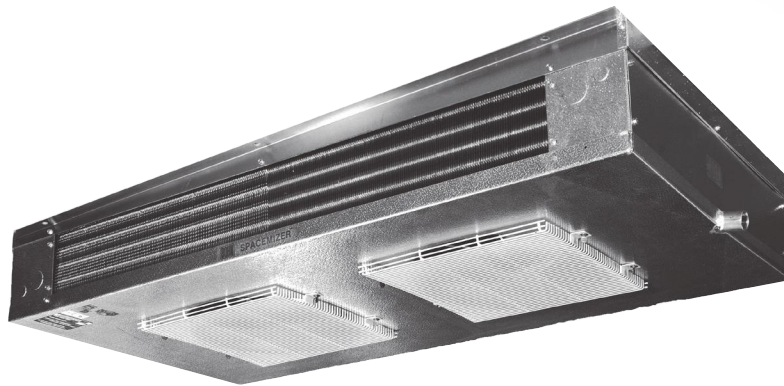


## Center Mount Unit Coolers

### Technical Guide

Models SM | Air Defrost

SME | Electric Defrost



# BOHN

# Table of Contents

Nomenclature.....2

Features & Benefits.....3

Performance Data .....4

Specifications .....5

Physical Data.....6

Dimensional Data .....6

Replacement Parts by InterLink™.....7

Standard Nozzle Selection.....7



Choose the most energy-efficient motor available for evaporators.



The EC motor is an energy sufficient option on Bohn Center Mount evaporators. Available on all new equipment or as an easy-to-install, drop-in replacement aftermarket part from InterLink™ Commercial Refrigeration Parts. Because they are a drop-in replacement for existing shaded pole and PSC motors, installation is quick and easy. It's a high impact, quick payback solution for reducing costs and achieving green initiatives without replacing the entire system.

EC motors by InterLink are up to 75% energy efficient - that's a 51-59% increase over shaded pole motors and a 30-35% increase over permanent-split capacitor (PSC) motors. With all of this added efficiency, you can count on more energy savings and lower operational costs while taking a step in the right direction toward conserving our planet's resources.

## Nomenclature

SM	052	A	G	E
Model Series	Capacity	Electrical Code	Control Option	Design Revision
SM = Bohn Center Mount, air defrost	# BTUH x 100 (R-404A)	A = 115/1/60	G = intelliGen™	
SME = Bohn Center Mount, electric defrost		B = 208-230/1/60		
		AE = 115/1/60 (EC)		
		BE = 208-230/1/60 (EC)		

# Features & Benefits

## Cabinet

- Air moves across the ceiling in both directions providing even air distribution throughout the cooler
- Compact, ceiling mount and center mount design allows for shelving and storage of product around all walls
- Heavy-gauge grained aluminum cabinet cleans easily and looks attractive
- Stainless steel screws prevent rust streaks
- Panels on ends quickly remove for complete access to refrigerant components and electrical terminal block during installation and servicing
- Quick disconnect, waterproof plug and receptacle for each motor in all models
- Wire fan guards with PVC coating for durability

## Coil

- High-efficiency aluminum fins with full collars cover mechanically expanded copper tubes
- Coils are dehydrated and sealed at the factory
- Highest quality tubular heaters provide fast and economical defrost
- Generous coil surface gives proper compressor balance
- Standard adjustable defrost termination fan delay thermostat

## Drain Pan

- Double drain pan eliminates drain pan sweating
- Tapered mounting provides proper slope for condensate drainage to one end of the unit

## Motors

- Motors are life lubricated and thermal overload protected
- EC motors (optional) available factory-installed or as a drop-in replacement through InterLink™ Commercial Refrigeration Parts in 115/1/60, 208-230/1/60 voltages.

## Controls Options

- IntelliGen™ Refrigeration Controller (IRC) units come with factory mounted, tested and calibrated with an electronic expansion valve, pressure transducer, temperature sensors, control board and User Interface. Standard features include Door Sensor, Product Load Input and Alarm Output.
- Optional Field installable IntelliGen Webserver Card (IWC) enables local and remote monitoring on any Phone, Tablet or PC.
- Optional Field installable IntelliGen Integration Card (IIC) enables connectivity to BACnet and Modbus.
- Quick Response Controller units come factory mounted with an electronic expansion valve, pressure transducer, temperature sensors and control board.
- Beacon II™ units come factory mounted with an electronic expansion valve, pressure transducer, temperature sensors and control board.

## Additional Options

- Factory installed mounted components are available in these configurations:
  - Pre-assembled units come with mounted TXV, liquid line solenoid valve and room thermostat
  - Pre-charged units come with mounted TXV, liquid line solenoid valve, room thermostat, and quick connect fittings
  - Mounted TXV
  - Mounted TXV and solenoid valve
  - Mounted room thermostat
- Most models available with glycol circuiting (see glycol product brochure)
- Units available with stainless steel housing and drain pan
- Units available with copper fins. Air defrost units also available with polyester coated fins or various coil coatings options

# PERFORMANCE DATA

## Model SM Air Defrost | 60 Hz

Model	Capacity								Fan Data		
	R-404A				R-407A/C/F, R-448A/R-449A				No.	CFM	m <sup>3</sup> H
	10°F TD 25°F SST	6°C TD 4°C SST	15°F TD 25°F SST	8°C TD 4°C SST	10°F TD 25°F SST	6°C TD 4°C SST	15°F TD 25°F SST	8°C TD 4°C SST			
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
SM052	5,200	1,500	7,800	2,250	6,000	1,800	9,000	2,700	1	610	1,035
SM076	7,600	2,200	11,400	3,300	8,700	2,500	13,050	3,750	2	1,300	2,210
SM090	9,000	2,600	13,500	3,900	10,100	3,000	15,150	4,500	2	1,260	2,140
SM102	10,200	3,000	15,300	4,500	11,800	3,500	17,700	5,250	2	1,220	2,075
SM108	10,800	3,200	16,200	4,800	12,600	3,700	18,900	5,550	3	1,950	3,315
SM134	13,400	3,900	20,100	5,850	15,300	4,500	22,950	6,750	3	1,890	3,210
SM156	15,600	4,600	23,400	6,900	18,100	5,300	27,150	7,950	3	1,830	3,110
SM179	17,900	5,200	26,850	7,800	20,400	6,000	30,600	9,000	4	2,520	4,285
SM208	20,800	6,100	31,200	9,150	24,100	7,100	36,150	10,650	4	2,440	4,145
SM249	24,900	7,300	37,350	10,950	28,900	8,500	43,350	12,750	5	3,050	5,185

## Model SM Air Defrost | 50 Hz<sup>†</sup>

Model	Capacity								Fan Data		
	R-404A				R-407A/C/F, R-448A/R-449A				No.	CFM	m <sup>3</sup> H
	10°F TD 25°F SST	6°C TD -4°C SST	15°F TD 25°F SST	8°C TD -4°C SST	10°F TD 25°F SST	6°C TD -4°C SST	15°F TD 25°F SST	8°C TD 4°C SST			
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
SM052	4,950	1,450	7,410	2,170	5,742	1,700	8,613	2,550	1	550	935
SM076	7,220	2,110	9,880	2,890	8,375	2,500	12,563	3,750	2	1,170	1,990
SM090	8,550	2,500	12,830	3,760	9,918	2,900	14,877	4,350	2	1,135	1,930
SM102	9,690	2,840	14,540	4,260	11,240	3,300	16,861	4,950	2	1,100	1,865
SM108	10,260	3,000	15,390	4,510	11,902	3,500	17,852	5,250	3	1,755	2,985
SM134	12,730	3,730	17,420	5,100	14,767	4,300	22,150	6,450	3	1,700	2,890
SM156	14,820	4,340	22,230	6,510	17,191	5,000	25,787	7,500	3	1,650	2,800
SM179	17,010	7,980	23,290	6,820	19,732	5,800	29,597	8,700	4	2,270	3,855
SM208	19,760	5,790	29,640	8,680	22,922	6,700	34,382	10,050	4	2,200	3,735
SM249	23,660	6,930	32,400	9,490	27,446	8,000	41,168	12,000	5	2,745	4,665

## Model SME Electric Defrost | 60 Hz

Model	Capacity								Fan Data		
	R-404A				R-407A/C/F, R-448A/R-449A				No.	CFM	m <sup>3</sup> H
	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST			
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
SME040	4,000	1,170	4,800	1,410	4,400	1,290	5,280	1,550	1	610	1,035
SME054	5,400	1,580	6,480	1,900	5,900	1,730	7,080	2,080	2	1,300	2,210
SME065	6,500	1,900	7,800	2,280	7,100	2,080	8,520	2,500	2	1,260	2,140
SME090	9,000	2,640	10,800	3,160	9,900	2,900	11,880	3,480	3	1,220	2,075
SME130	13,000	3,810	15,600	4,570	14,300	4,190	17,160	5,030	3	1,950	3,315
SME174	17,400	5,100	20,880	6,120	19,500	5,720	23,400	6,860	4	1,890	3,210

## Model SME Electric Defrost | 50 Hz<sup>†</sup>

Model	Capacity								Fan Data		
	R-404A				R-407A/C/F, R-448A/R-449A				No.	CFM	m <sup>3</sup> H
	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST			
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
SME040	3,800	1,110	4,560	1,340	4,408	1,292	5,290	1,550	1	550	993
SME054	5,130	1,500	6,160	1,890	5,951	1,745	7,141	2,080	2	1,170	1,989
SME065	6,180	1,810	7,410	2,170	7,169	2,080	8,603	2,500	2	1,135	1,928
SME090	8,550	2,500	10,260	3,000	9,918	2,900	11,902	3,480	3	1,755	2,983
SME130	12,350	3,620	14,820	4,340	14,326	4,190	17,191	5,030	3	1,650	2,800
SME174	16,530	4,840	19,840	5,810	19,175	5,720	23,010	6,746	4	2,200	3,733

<sup>†</sup> For EC motors, use 60 Hz capacity and airflow values (Units with EC motors operating at 50 Hz will not see a reduction in performance due to the electronic control of the motor)

# SPECIFICATIONS

## Model SM Air Defrost | 60 Hz

Model	HP	PSC Motor				EC Motor			
		115/1/60		208-230/1/60		115/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
SM052	1/15	0.9	90	0.5	90	0.9	55	0.5	55
SM076	1/15	1.8	180	1.0	180	1.8	110	1.0	110
SM090	1/15	1.8	180	1.0	180	1.8	110	1.0	110
SM102	1/15	1.8	180	1.0	180	1.8	110	1.0	110
SM108	1/15	2.7	270	1.5	270	2.7	165	1.5	165
SM134	1/15	2.7	270	1.5	270	2.7	165	1.5	165
SM156	1/15	2.7	270	1.5	270	2.7	165	1.5	165
SM179	1/15	3.6	360	2.0	360	3.6	220	2.0	220
SM208	1/15	3.6	360	2.0	360	3.6	220	2.0	220
SM249	1/15	4.5	450	2.5	450	4.5	275	2.5	275

## Model SM Air Defrost | 50 Hz<sup>†</sup>

Model	HP	PSC Motor				EC Motor			
		110/1/50		220/1/50		110/1/50		220/1/50	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
SM052	1/15	0.8	80	0.4	80	0.9	55	0.5	55
SM076	1/15	1.7	160	0.8	160	1.8	110	1.0	110
SM090	1/15	1.7	160	0.8	160	1.8	110	1.0	110
SM102	1/15	2.5	240	1.2	240	1.8	110	1.0	110
SM108	1/15	2.5	240	1.2	240	2.7	165	1.5	165
SM134	1/15	2.5	240	1.2	240	2.7	165	1.5	165
SM156	1/15	3.3	320	1.6	320	2.7	165	1.5	165
SM179	1/15	3.3	320	1.6	320	3.6	220	2.0	220
SM208	1/15	3.3	320	1.6	320	3.6	220	2.0	220
SM249	1/15	4.2	400	2.0	400	4.5	275	2.5	275

## Model SME Electric Defrost | 60 Hz

Model	HP	PSC Motor		EC Motor		Heaters	
		208-230/1/60		208-230/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts
SME040	1/15	0.5	90	0.5	55	5.3	1200
SME054	1/15	1.0	180	1.0	110	8.7	2000
SME065	1/15	1.0	180	1.0	110	8.7	2000
SME090	1/15	1.5	270	1.5	165	10.5	2400
SME130	1/15	1.5	270	1.5	165	15.7	3600
SME174	1/15	2.0	360	2.0	220	20.9	4800

## Model SME Electric Defrost | 50 Hz<sup>†</sup>

Model	HP	PSC Motor		EC Motor		Heaters	
		220/1/50		220/1/50		220/1/50	
		Amps	Watts	Amps	Watts	Amps	Watts
SME040	1/15	0.4	80	0.5	55	5.0	1100
SME054	1/15	0.8	160	1.0	110	8.3	1826
SME065	1/15	0.8	160	1.0	110	8.3	1826
SME090	1/15	1.2	240	1.5	165	10.0	2200
SME130	1/15	1.2	240	1.5	165	15.0	3300
SME174	1/15	1.6	320	2.0	220	20.0	4400

# PHYSICAL DATA

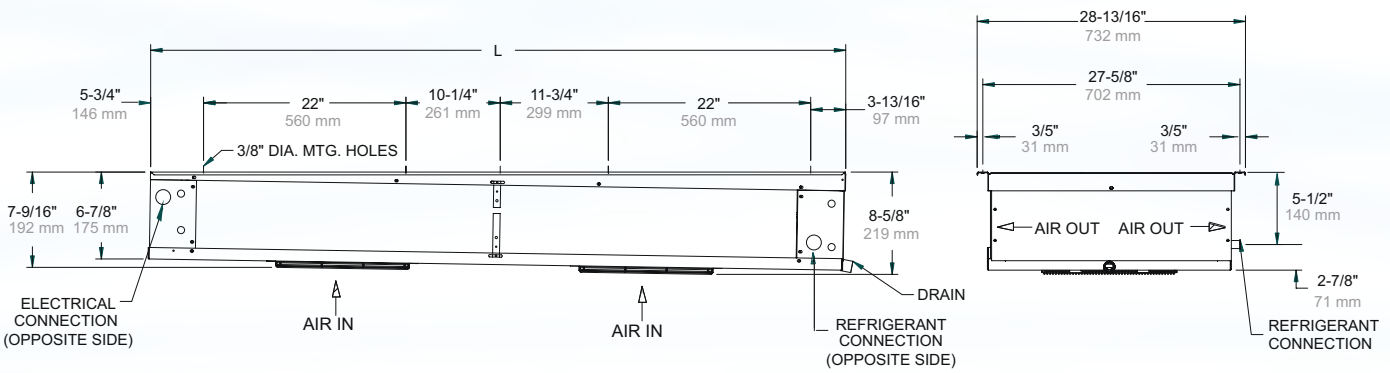
## Model SM Air Defrost

Model	No. of Fans	Connections (in.)		Approx. Net Wt.	
		Inlet OD	Suction OD	lbs.	kg
SM052	1	1/2	7/8	42	19
SM076	2	1/2	7/8	64	29
SM090	2	1/2	7/8	70	32
SM102	2	1/2	7/8	83	38
SM108	3	1/2	7/8	105	48
SM134	3	1/2	7/8	117	53
SM156	3	1/2	7/8	123	56
SM179	4	1/2	7/8	149	68
SM208	4	1/2	1-1/8	164	74
SM249	5	1/2	1-1/8	206	94

## Model SME Electric Defrost

Model	No. of Fans	Connections (in.)		Approx. Net Wt.	
		Inlet OD	Suction OD	lbs.	kg
SME040	1	1/2	7/8	90	41
SME054	2	1/2	7/8	120	54
SME065	2	1/2	7/8	120	54
SME090	3	1/2	7/8	160	73
SME130	3	1/2	7/8	174	79
SME174	4	1/2	1-1/8	218	99

## Dimensional Data



## Model SM Air Defrost

Model	No. of Fans	Dimensions	
		L	
		in.	mm
SM052	1	31-1/2	800
SM076	2	53-1/2	1359
SM090	2	53-1/2	1359
SM102	2	53-1/2	1359
SM108	3	75-1/2	1918
SM134	3	75-1/2	1918
SM156	3	75-1/2	1918
SM179	4	97-1/2	2477
SM208	4	97 1/2	2477
SM249	5	119-1/2	3035

## Model SME Electric Defrost

Model	No. of Fans	Dimensions	
		L	
		in.	mm
SME040	1	31-1/2	800
SME054	2	53-1/2	1359
SME065	2	53-1/2	1359
SME090	3	75-1/2	1918
SME130	3	75-1/2	1918
SME174	4	97-1/2	2477

### Right source. Right parts. Right now.

InterLink™ is your link to a complete line of dependable and certified commercial refrigeration parts, accessories and innovative electronic controls for all Bohn equipment. At InterLink, we provide our wholesalers with a comprehensive selection of product solutions and innovative technologies for the installed customer base. And every product is built to ensure the same high performance standards with which all Heatcraft Refrigeration Products (HRP) brands are built — backed by a dedicated team to serve every customer need, delivering at the best lead times in the industry.

### Dependable. Versatile. Courteous.

Finally, one simple source for all your replacement needs from a name you can trust.

For parts, please contact (800) 686-7278 or visit [heatcraftprd.com](http://heatcraftprd.com).

### Motor/Fan Blade/Fan Guards

Part #	Description	No. Fans
5036NS	Motor 115/1/60/50 PSC	1 - 5
5036PS	Motor 208-230/1/60/50 PSC	1 - 5
25317901	Motor 208-230/1/60 EC Totally Enclosed	1 - 5
25318001	Motor 115/1/60 EC Totally Enclosed	1 - 5
5110E	Fan Blade	1 - 5
5055F	Fan Guard - Wire	1 - 5
40003001	Motor Mount Plate	1 - 5

### Standard Nozzle Selection

#### Model SM Air Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A, R-507A Nozzle	R-407A, R-407F, R-407C Nozzle	R-448A, R-449A Nozzle	R-22 Nozzle*
		OD	Length					
SM052	1	3/16	18	2	L-1/3	L-1/3	L-1/2	L-1/4
SM076	2	3/16	18	2	L-1/2	L-1/2	L-3/4	L-1/3
SM090	2	3/16	18	4	L-3/4	L-3/4	L-1	L-1/2
SM102	2	3/16	18	4	L-3/4	L-3/4	L-1	L-1/2
SM108	3	3/16	18	4	L-3/4	L-3/4	L-1	L-1/2
SM134	3	3/16	18	4	L-1	L-1	L-1-1/2	L-3/4
SM156	3	3/16	18	6	L-1	L-1	L-1-1/2	L-3/4
SM179	4	3/16	18	6	L-1-1/2	L-1-1/2	L-2	L-1
SM208	4	3/16	18	6	L-1-1/2	L-1-1/2	L-2	L-1
SM249	5	3/16	18	6	L-2	L-2	L-2-1/2	L-1-1/2

#### Model SME Electric Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A, R-507A Nozzle	R-407A, R-407F, R-407C Nozzle	R-448A, R-449A Nozzle	R-22 Nozzle*
		OD	Length					
SME040	1	3/16	18	2	L-1/2	L-1/2	L-3/4	L-1/3
SME054	2	3/16	18	2	L-3/4	L-1/2	L-3/4	L-1/2
SME065	2	3/16	18	4	L-3/4	L-3/4	L-1	L-1/2
SME090	3	3/16	18	4	L-1	L-1	L-1-1/2	L-3/4
SME130	3	3/16	18	6	L-1-1/2	L-1-1/2	L-2	L-1
SME174	4	3/16	18	6	L-2	L-2	L-2-1/2	L-1-1/2

**Note:**  
\*R-22 Nozzles for informational purposes only. Not included with stocking evaporators

### Cabinet Components

Part #	Description	No. Fans
C26363A2	Drain Pan - Stucco	1
C26360A2	Drain Pan - Stucco	2
C26361A2	Drain Pan - Stucco	3
C26362A2	Drain Pan - Stucco	4
40820301	Drain Pan - Stucco	5
40820601	Drain Pan - White	1
40820701	Drain Pan - White	2
C26361A4	Drain Pan - White	3
C26362A4	Drain Pan - White	4
D20817A4	Drain Pan - White	5

### Electrical Components

Part #	Description
22512601	Terminal Board
4267W	Defrost Termination / Fan Delay Thermostat
4550G	Filter (optional one per fan)

### Electric Defrost

Part #	Description	Model	No. Fans
4400S	Coil Heater	040	1
4401S	Coil Heater	054, 065	2
4402S	Coil Heater	090	3
4403S	Coil Heater	130	3
4404S	Coil Heater	174	4

**Note:**  
Nozzles sized for 90-100°F liquid temperature at expansion valve. Contact Application Engineering for guidance if:

- Liquid temperature is not 90-100°F
- Evaporator TD is not 10°-15°F (room temperature – saturated suction temperature)
- Electric defrost models with a saturated suction temperature of 10°F or higher

**Caution: Refrigeration system will not perform properly without correct nozzle!**



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For more information on Bohn refrigeration products, contact your Sales Representative or visit us at [heatcraftprd.com](http://heatcraftprd.com).

**BOHN**

Since product improvement is a continuing effort, we reserve the right to make changes in specifications without notice.

BN-CMTB-0818 | Version 001