



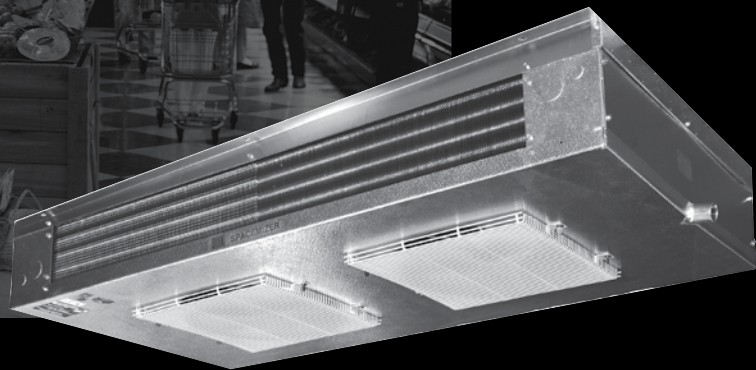
BN-CMTB  
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# CENTER MOUNT UNIT COOLERS

## Technical Guide

Models SM | Air Defrost • SME | Electric Defrost



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We have made a commitment to customer needs, innovation and environmental stewardship and have dedicated ourselves to delivering energy-efficient choices. PSC and EC motors will reduce costs, improve the bottom line and enhance equipment performance and service life.

## Choose the most energy-efficient motor available for evaporators.



The EC motor is an Energy Solutions® option on new 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're 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% 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.

To learn more about EC motors, visit [www.interlinkparts.com/ec](http://www.interlinkparts.com/ec).

## Nomenclature

SM	052	A	E
Model Series	Capacity	Electrical Code	Design Revision
SM = Bohn Center Mount, air defrost SME = Bohn Center Mount, electric defrost	# BTUH x 100	A = 115/1/60 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
- PSC motors are optional for 115/1/60, 208-230/1/60 voltages
- PSC motors or EC motors are required for 50 Hz operation

### Options

- Unit Configurations: mounted components, pre-assembled, pre-charged and Beacon II™
  - Units available with mounted TXV and mounted TXV / solenoid valve
  - 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 room thermostat
  - Beacon II units come with electronic expansion valves, pressure transducer, temperature sensors and Beacon control board
- 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

**All Bohn Center Mount units are UL listed for US and Canada and meet NSF standards**

## Performance Data

### Model SM Air Defrost | 60 Hz

Model	Capacity				Fan Data		
	10°F TD 25°F SST	6°C TD -4°C SST	15°F TD 25°F SST	8°C TD -4°C SST	No.	CFM	m³H
	BTUH	Watts	BTUH	Watts			
SM052	5,200	1,520	7,800	2,280	1	610	1,035
SM076	7,600	2,230	11,400	3,340	2	1,300	2,210
SM090	9,000	2,640	13,500	3,950	2	1,260	2,140
SM102	10,200	2,990	15,300	4,480	2	1,220	2,075
SM108	10,800	3,160	16,200	4,750	3	1,950	3,315
SM134	13,400	3,920	20,100	5,890	3	1,890	3,210
SM156	15,600	4,570	23,400	6,850	3	1,830	3,110
SM179	17,900	5,240	26,850	7,860	4	2,520	4,285
SM208	20,800	6,100	31,200	9,140	4	2,440	4,145
SM249	24,900	7,290	37,350	10,940	5	3,050	5,185

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

Model	Capacity				Fan Data		
	10°F TD 25°F SST	6°C TD -4°C SST	15°F TD 25°F SST	8°C TD -4°C SST	No.	CFM	m³H
	BTUH	Watts	BTUH	Watts			
SM052	4,950	1,450	7,410	2,170	1	550	935
SM076	7,220	2,110	9,880	2,890	2	1,170	1,990
SM090	8,550	2,500	12,830	3,760	2	1,135	1,930
SM102	9,690	2,840	14,540	4,260	2	1,100	1,865
SM108	10,260	3,000	15,390	4,510	3	1,755	2,985
SM134	12,730	3,730	17,420	5,100	3	1,700	2,890
SM156	14,820	4,340	22,230	6,510	3	1,650	2,800
SM179	17,010	7,980	23,290	6,820	4	2,270	3,855
SM208	19,760	5,790	29,640	8,680	4	2,200	3,735
SM249	23,660	6,930	32,400	9,490	5	2,745	4,665

### Model SME Electric Defrost | 60 Hz

Model	Capacity				Fan Data		
	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST	No.	CFM	m³H
	BTUH	Watts	BTUH	Watts			
SME040	4,000	1,170	4,800	1,410	1	610	1,037
SME054	5,400	1,580	6,480	1,900	2	1,300	2,210
SME065	6,500	1,900	7,800	2,280	2	1,260	2,142
SME090	9,000	2,640	10,800	3,160	3	1,950	3,315
SME130	13,000	3,810	15,600	4,570	3	1,830	3,111
SME174	17,400	5,100	20,880	6,120	4	2,440	4,148

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

Model	Capacity				Fan Data		
	10°F TD -20°F SST	6°C TD -29°C SST	12°F TD -20°F SST	7°C TD -29°C SST	No.	CFM	m³H
	BTUH	Watts	BTUH	Watts			
SME040	3,800	1,110	4,560	1,335	1	550	993
SME054	5,130	1,500	6,160	1,890	2	1,170	1,989
SME065	6,180	1,810	7,410	2,170	2	1,135	1,928
SME090	8,550	2,500	10,260	3,000	3	1,755	2,983
SME130	12,350	3,620	14,820	4,340	3	1,650	2,800
SME174	16,530	4,840	19,840	5,810	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	Shaded Pole				PSC Motor				EC Motor			
		115/1/60		208-230/1/60		115/1/60		208-230/1/60		115/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
SM052	1/15	2.1	135	1.1	135	0.9	90	0.5	90	0.9	55	0.5	55
SM076	1/15	4.2	270	2.2	270	1.8	180	1.0	180	1.8	110	1.0	110
SM090	1/15	4.2	270	2.2	270	1.8	180	1.0	180	1.8	110	1.0	110
SM102	1/15	4.2	270	2.2	270	1.8	180	1.0	180	1.8	110	1.0	110
SM108	1/15	6.3	405	3.3	405	2.7	270	1.5	270	2.7	165	1.5	165
SM134	1/15	6.3	405	3.3	405	2.7	270	1.5	270	2.7	165	1.5	165
SM156	1/15	6.3	405	3.3	405	2.7	270	1.5	270	2.7	165	1.5	165
SM179	1/15	8.4	540	4.4	540	3.6	360	2.0	360	3.6	220	2.0	220
SM208	1/15	8.4	540	4.4	540	3.6	360	2.0	360	3.6	220	2.0	220
SM249	1/15	10.5	675	5.5	675	4.5	450	2.5	450	4.5	275	2.5	275

## Model SM Air Defrost | 50 Hz

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	Shaded Pole Motor		PSC Motor		EC Motor		Heaters
		208-230/1/60		208-230/1/60		208-230/1/60		208-230/1/60
		Amps	Watts	Amps	Watts	Amps	Watts	Watts
SME040	1/15	1.1	135	0.5	90	0.5	55	5.3
SME054	1/15	2.2	270	1.0	180	1.0	110	8.7
SME065	1/15	2.2	270	1.0	180	1.0	110	8.7
SME090	1/15	3.3	405	1.5	270	1.5	165	10.5
SME130	1/15	3.3	405	1.5	270	1.5	165	15.7
SME174	1/15	4.4	540	2.0	360	2.0	220	20.9

## Model SME Electric Defrost | 50 Hz

Model	HP	PSC Motor		EC Motor		Heaters
		220/1/50		220/1/50		220/1/50
		Amps	Watts	Amps	Watts	Watts
SME040	1/15	0.4	80	0.5	55	5.3
SME054	1/15	0.8	160	1.0	110	8.7
SME065	1/15	0.8	160	1.0	110	8.7
SME090	1/15	1.2	240	1.5	165	10.5
SME130	1/15	1.2	240	1.5	165	15.7
SME174	1/15	1.6	320	2.0	220	20.9

**NOTE:** Shaded pole motors are standard for all 60 Hz units and PSC motors are standard for all 50 Hz units

# Physical Data

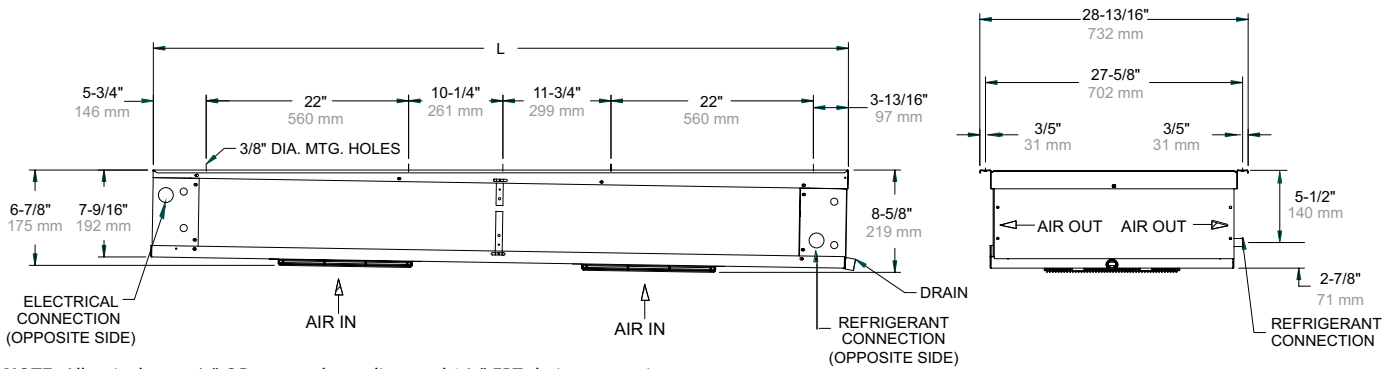
## Model SM Air Defrost

Model	No. of Fans	Connections (in.)		Approx. Net Wt.	
		Inlet OD	Suction OD	lbs.	kg
SM052	1	1/2	7/8	<b>42</b>	19
SM076	2	1/2	7/8	<b>64</b>	29
SM090	2	1/2	7/8	<b>70</b>	32
SM102	3	1/2	7/8	<b>83</b>	38
SM108	3	1/2	7/8	<b>105</b>	48
SM134	3	1/2	7/8	<b>117</b>	53
SM156	4	1/2	7/8	<b>123</b>	56
SM179	4	1/2	7/8	<b>149</b>	68
SM208	4	1/2	1-1/8	<b>164</b>	74
SM249	5	1/2	1-1/8	<b>206</b>	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	<b>90</b>	41
SME054	2	1/2	7/8	<b>120</b>	54
SME065	2	1/2	7/8	<b>120</b>	54
SME090	3	1/2	7/8	<b>160</b>	73
SME130	3	1/2	7/8	<b>174</b>	79
SME174	4	1/2	1-1/8	<b>218</b>	99

# Dimensional Data



## Model SM Air Defrost

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

## Model SME Electric Defrost

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

# Replacement Parts



## 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 [www.interlinkparts.com](http://www.interlinkparts.com).

## Motor/Fan Blade/Fan Guards

Part #	Description	No. Fans
5036SS	Motor 115/1/60 Shaded Pole	1 - 5
5036TS	Motor 208-230/1/60 Shaded Pole	1 - 5
5036NS	Motor 115/1/60/50 PSC	1 - 5
5036PS	Motor 208-230/1/60/50 PSC	1 - 5
25305901	Motor 460/1/60	1 - 5
25317901	Motor 208-230/1/60 EC	1 - 5
25318001	Motor 115/1/60 EC	1 - 5
5110E	Fan Blade	1 - 5
5055F	Fan Guard - Wire	1 - 5
40003001	Motor Mount Plate	1 - 5

## 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

# Standard Nozzle Selection

## Model SM Air Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A	R22
		OD	Length			
SM052	1	3/16	18	2	L-1/2	L-1/4
SM076	2	3/16	18	2	L-3/4	L-1/3
SM090	2	3/16	18	4	L-3/4	L-1/2
SM102	3	3/16	18	4	L-1	L-1/2
SM108	3	3/16	18	4	L-1	L-1/2
SM134	3	3/16	18	4	L-1-1/2	L-3/4
SM156	4	3/16	18	6	L-1-1/2	L-3/4
SM179	4	3/16	18	6	L-2	L-3/4
SM208	4	3/16	18	6	L-2	L-1
SM249	5	3/16	18	6	L-2-1/2	L-1

## Model SME Electric Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A	R22
		OD	Length			
SME040	1	3/16	18	2	L-1/2	L-1/4
SME054	2	3/16	18	2	L-3/4	L-1/3
SME065	2	3/16	18	4	L-3/4	L-1/2
SME090	3	3/16	18	4	L-1	L-3/4
SME130	3	3/16	18	6	L-1-1/2	L-1
SME174	4	3/16	18	6	L-2	L-1-1/2



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



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

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