BOHN

THE COLD STANDARD

BN-LOPTB
April 2008

Replaces BN-LOPTB, August 2004

LOW PROFILE UNIT COOLERS

Technical Guide

Models ADT | Air Defrost • LET/LLE | Electric Defrost • HGT | Hot Gas Defrost

www.thecoldstandard.com

Performance Data

Model ADT Air Defrost | 60 Hz

Model	Capacity		Fan Data		
	10°F TD 25°F SST	6°C TD -4°C SST	No.	CFM	m^3H
	BTUH	Watts			
ADT040	**4,000**	1,170	1	**730**	1,240
ADT052	**5,200**	1,520	1	**700**	1,189
ADT065	**6,500**	1,900	1	**650**	1,104
ADT070	**7,000**	2,050	2	**1,460**	2,481
ADT090	**9,000**	2,640	2	**1,400**	2,379
ADT104	**10,400**	3,050	2	**1,400**	2,379
ADT120	**12,000**	3,500	2	**1,300**	2,209
ADT130	**13,000**	3,810	2	**1,300**	2,209
ADT140	**14,000**	4,100	3	**2,100**	3,568
ADT156	**15,600**	4,570	3	**2,100**	3,568
ADT180	**18,000**	5,270	3	**1,950**	3,313
ADT208	**20,800**	6,100	4	**2,800**	4,758
ADT260	**26,000**	7,620	5	**3,250**	5,522
ADT312	**31,200**	9,140	6	**3,900**	6,627
ADT370	**37,000**	10,840	6	**3,900**	6,627

Model ADT Air Defrost | 50 Hz †

Model	Capacity		Fan Data		
	10°F TD 25°F SST	6°C TD -4°C SST	No.	CFM	m^3H
	BTUH	Watts			
ADT040	**3,800**	1,112	1	**670**	1,117
ADT052	**4,940**	1,445	1	**630**	1,070
ADT065	**6,175**	1,807	1	**586**	995
ADT070	**6,650**	1,946	2	**1,315**	2,234
ADT090	**8,550**	2,502	2	**1,260**	2,142
ADT104	**9,880**	2,891	2	**1,260**	2,142
ADT120	**11,400**	3,335	2	**1,170**	1,989
ADT130	**12,350**	3,613	2	**1,170**	1,989
ADT140	**13,300**	3,891	3	**1,891**	3,213
ADT156	**14,820**	4,336	3	**1,891**	3,213
ADT180	**17,100**	5,003	3	**1,756**	2,984
ADT208	**19,760**	5,781	4	**2,521**	4,284
ADT260	**24,700**	7,226	5	**2,927**	4,973
ADT312	**29,640**	8,672	6	**3,512**	5,967
ADT370	**35,150**	10,284	6	**3,512**	5,967

† *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)*

Walk-in Evaporators – Low Profiles (Coolers and Freezers)

Nomenclature Example:

ADT	040	A	K
Model Family	**Capacity**	**Electric Code**	**Vintage Revision**
	x 100 = BTUH (10°F TD)	A = 115/1/60 B = 208-230/1/60 M = 460/1/60	

FAMILY **ADT**

c UL us

ALSO CLASSIFIED AS A COMPONENT IN ACCORDANCE WITH NSF 7 - 1999

- Design features easy front access to both electrical and refrigeration components
- Textured aluminum cabinets
- Design optimizes space for easier installation and servicing
- Beacon II™ compatible
- Liquid-line solenoid wiring harness comes standard on unit
- Drain pan features large drain line fitting (3/4" MPT) for better drainage, located on back of the unit
- Schrader valve on suction header
- UL-listed, UL-listed for Canada, and meets NSF standards

For ordering information see page 25.

High and/or Medium Temperature Low Profile Walk-in Unit Coolers with Air Defrost (6 FPI)

Model	List Price ($US)	Voltage	Net Dimensions (in.)			Approx. Ship Wt. (lbs.)
			Height	Depth	Length	
ADT040AK*	1,148	115/1/60	15	15	29.5	36
ADT040BK	1,240	208-230/1/60	15	15	29.5	36
ADT040MK	1,390	460/1/60	15	15	29.5	36
ADT052AK*	1,234	115/1/60	15	15	29.5	36
ADT052BK	1,253	208-230/1/60	15	15	29.5	36
ADT052MK	1,403	460/1/60	15	15	29.5	36
ADT065AK*	1,444	115/1/60	15	15	29.5	40
ADT065BK	1,555	208-230/1/60	15	15	29.5	40
ADT065MK	1,705	460/1/60	15	15	29.5	40
ADT070AK*	1,616	115/1/60	15	15	45.5	52
ADT070BK	1,744	208-230/1/60	15	15	45.5	52
ADT070MK	2,045	460/1/60	15	15	45.5	52
ADT090AK*	1,908	115/1/60	15	15	45.5	56
ADT090BK	1,938	208-230/1/60	15	15	45.5	56
ADT090MK	2,240	460/1/60	15	15	45.5	56
ADT104AK*	2,058	115/1/60	15	15	45.5	58
ADT104BK	2,090	208-230/1/60	15	15	45.5	58
ADT104MK	2,390	460/1/60	15	15	45.5	58
ADT120AK*	2,224	115/1/60	15	15	45.5	60
ADT120BK	2,255	208-230/1/60	15	15	45.5	60
ADT120MK	2,554	460/1/60	15	15	45.5	60
ADT130AK*	2,401	115/1/60	15	15	45.5	62
ADT130BK	2,435	208-230/1/60	15	15	45.5	62
ADT130MK	2,737	460/1/60	15	15	45.5	62
ADT140AK*	2,630	115/1/60	15	15	61.5	72
ADT140BK	2,667	208-230/1/60	15	15	61.5	72
ADT140MK	3,117	460/1/60	15	15	61.5	72
ADT156AK*	2,926	115/1/60	15	15	61.5	76
ADT156BK	2,973	208-230/1/60	15	15	61.5	76
ADT156MK	3,424	460/1/60	15	15	61.5	76
ADT180AK*	3,382	115/1/60	15	15	61.5	82
ADT180BK	3,428	208-230/1/60	15	15	61.5	82
ADT180MK	3,878	460/1/60	15	15	61.5	82
ADT208AK*	3,777	115/1/60	15	15	77.5	94
ADT208BK	4,077	208-230/1/60	15	15	77.5	94
ADT208MK	4,679	460/1/60	15	15	77.5	94
ADT260AK*	4,694	115/1/60	15	15	93.5	204
ADT260BK	5,069	208-230/1/60	15	15	93.5	204
ADT260MK	5,818	460/1/60	15	15	93.5	204
ADT312AK*	5,331	115/1/60	15	15	109.5	234
ADT312BK	5,756	208-230/1/60	15	15	109.5	234
ADT312MK	6,658	460/1/60	15	15	109.5	234
ADT370AK*	6,237	115/1/60	15	15	109.5	234
ADT370BK	6,628	208-230/1/60	15	15	109.5	234
ADT370MK	7,531	460/1/60	15	15	109.5	234

*** Model numbers are normally in stock.**

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Energy Solutions

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 Low Profile 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**.

Nomenclature

ADT	120	A	K
Model Series	**Capacity**	**Electrical Code**	**Design Revision**
ADT = Air defrost LET = Electric defrost, 6 FPI LLE = Electric defrost, 4 FPI HGT = Hot gas defrost	# x 100 = BTUH	A = 115/1/60 B = 208-230/1/60 C = 208-230/3/60 M = 460/1/60 AH = 115/1/60 (PSC) BH = 208-230/1/60 (PSC) AE = 115/1/60 (EC) BE = 208-230/1/60 (EC) CE = 208-230/3/60 (EC)	

Features & Benefits

Cabinet

- Minimal height of the low profile series makes it ideal for low ceiling coolers
- Cabinet design features front access panels on each side for easy access to electrical and refrigeration components
- All electrical components factory wired to terminal board and identified, making it easy to field wire the unit
- Sweat connections to reduce potential for leaks
- Internal panels are isolated for quiet operation
- Liquid line solenoid wire harness is factory-installed for quick installation
- Pre-drilled holes on the back of the unit for room thermostat

Coil

- Internally enhanced tubing and fin design for higher efficiency
- Coil heater slots have been enlarged for easier installation and replacement
- Reduced heater wattages
- Hot gas loop on bottom of coil for easier access is standard for hot gas defrost models
- Fixed defrost termination for electric, adjustable defrost termination for hot gas

Drain Pan

- Large diameter drain hole (3/4" ID) is located on the back of the unit
- Extended drain pan heaters for more uniform defrost throughout the drain pan and additional heat in end compartments
- On 4-6 fan models, drain pan has a lanyard for easy and safe access

Motors

- Motors plug into wiring harness for easier servicing
- EC motors available factory-installed or as a drop-in replacement through InterLink™ Commercial Refrigeration Parts in 115/1/60, 208-230/1/60 and 208-230/3/60 unit voltages
- PSC and PSC (Totally Enclosed) motors for 115/1/60, 208-230/1/60 and 460/1/60 unit voltages
- PSC motors or EC motors 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. Available in a master liquid line configuration
  - Pre-charged units come with mounted TXV, liquid line solenoid valve, room thermostat and quick connect fittings
  - Various room thermostat variations including rear mount and front access versions
  - 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
- Units available with insulated drain pan

Specifications

Model ADT Air Defrost | 60 Hz

Model	HP	Shaded Pole Motor				PSC, PSC-TE Motor						EC Motor			
		115/1/60		208-230/1/60		115/1/60		208-230/1/60		460/1/60		115/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ADT040	1/15	**1.8**	116	**1.0**	122	**1.0**	82	**0.5**	91	**0.4**	117	**0.9**	57	**0.5**	59
ADT052	1/15	**1.8**	116	**1.0**	122	**1.0**	82	**0.5**	91	**0.4**	117	**0.9**	57	**0.5**	59
ADT065	1/15	**1.8**	116	**1.0**	122	**1.0**	82	**0.5**	91	**0.4**	117	**0.9**	57	**0.5**	59
ADT070	1/15	**3.6**	232	**2.0**	244	**2.0**	164	**1.0**	182	**0.8**	234	**1.8**	114	**1.0**	118
ADT090	1/15	**3.6**	232	**2.0**	244	**2.0**	164	**1.0**	182	**0.8**	234	**1.8**	114	**1.0**	118
ADT104	1/15	**3.6**	232	**2.0**	244	**2.0**	164	**1.0**	182	**0.8**	234	**1.8**	114	**1.0**	118
ADT120	1/15	**3.6**	232	**2.0**	244	**2.0**	164	**1.0**	182	**0.8**	234	**1.8**	114	**1.0**	118
ADT130	1/15	**3.6**	232	**2.0**	244	**2.0**	164	**1.0**	182	**0.8**	234	**1.8**	114	**1.0**	118
ADT140	1/15	**5.4**	348	**3.0**	366	**3.0**	246	**1.5**	273	**1.2**	351	**2.7**	171	**1.5**	177
ADT156	1/15	**5.4**	348	**3.0**	366	**3.0**	246	**1.5**	273	**1.2**	351	**2.7**	171	**1.5**	177
ADT180	1/15	**5.4**	348	**3.0**	366	**3.0**	246	**1.5**	273	**1.2**	351	**2.7**	171	**1.5**	177
ADT208	1/15	**7.2**	464	**4.0**	488	**4.0**	328	**2.0**	364	**1.6**	468	**3.6**	228	**2.0**	236
ADT260	1/15	**9.0**	580	**5.0**	610	**5.0**	410	**2.5**	455	**2.0**	585	**4.5**	285	**2.5**	295
ADT312	1/15	**10.8**	696	**6.0**	732	**6.0**	492	**3.0**	546	**2.4**	702	**5.4**	342	**3.0**	354
ADT370	1/15	**10.8**	696	**6.0**	732	**6.0**	492	**3.0**	546	**2.4**	702	**5.4**	342	**3.0**	354

Model ADT Air Defrost | 50 Hz

Model	HP	PSC Motor						EC Motor			
		110/1/50		220/1/50		380/1/50		110/1/50		220/1/50	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ADT040	1/15	**1.0**	68	**0.5**	65	**0.4**	82	**0.9**	57	**0.5**	59
ADT052	1/15	**1.0**	68	**0.5**	65	**0.4**	82	**0.9**	57	**0.5**	59
ADT065	1/15	**1.0**	68	**0.5**	65	**0.4**	82	**0.9**	57	**0.5**	59
ADT070	1/15	**2.0**	136	**1.0**	130	**0.8**	164	**1.8**	114	**1.0**	118
ADT090	1/15	**2.0**	136	**1.0**	130	**0.8**	164	**1.8**	114	**1.0**	118
ADT104	1/15	**2.0**	136	**1.0**	130	**0.8**	164	**1.8**	114	**1.0**	118
ADT120	1/15	**2.0**	136	**1.0**	130	**0.8**	164	**1.8**	114	**1.0**	118
ADT130	1/15	**2.0**	136	**1.0**	130	**0.8**	164	**1.8**	114	**1.0**	118
ADT140	1/15	**3.0**	204	**1.5**	195	**1.2**	246	**2.7**	171	**1.5**	177
ADT156	1/15	**3.0**	204	**1.5**	195	**1.2**	246	**2.7**	171	**1.5**	177
ADT180	1/15	**3.0**	204	**1.5**	195	**1.2**	246	**2.7**	171	**1.5**	177
ADT208	1/15	**4.0**	272	**2.0**	260	**1.6**	328	**3.6**	228	**2.0**	236
ADT260	1/15	**5.0**	340	**2.5**	325	**2.0**	410	**4.5**	285	**2.5**	295
ADT312	1/15	**6.0**	408	**3.0**	390	**2.4**	492	**5.4**	342	**3.0**	354
ADT370	1/15	**6.0**	408	**3.0**	390	**2.4**	492	**5.4**	342	**3.0**	354

Physical Data

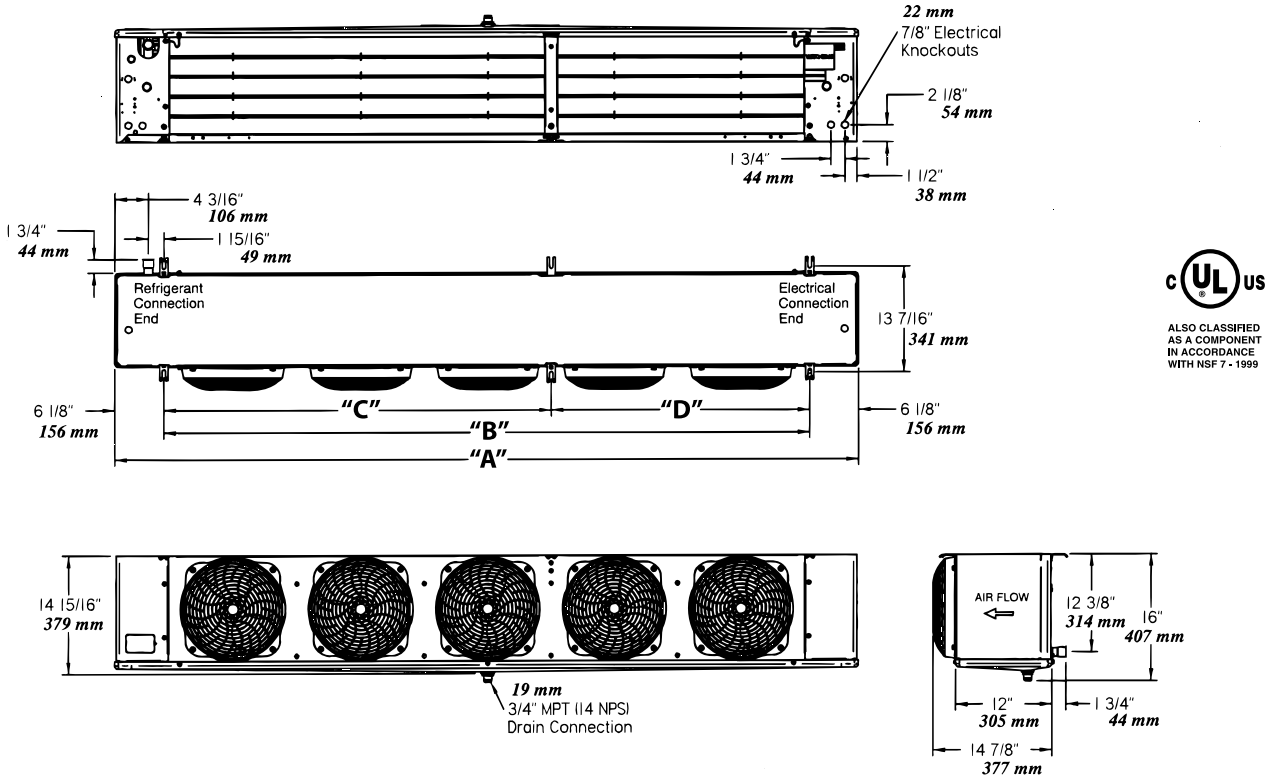
Model ADT Air Defrost

Model	No. of Fans	Connections (in.)				Approx. Net Wt.	
		Coil Inlet OD	Suction ID	External Equalizer OD	Drain MPT	lbs.	kg
ADT040	1	1/2	5/8	1/4	3/4	**28**	13
ADT052	1	1/2	5/8	1/4	3/4	**31**	15
ADT065	1	1/2	7/8	1/4	3/4	**34**	16
ADT070	2	1/2	7/8	1/4	3/4	**45**	21
ADT090	2	1/2	7/8	1/4	3/4	**48**	22
ADT104	2	1/2	7/8	1/4	3/4	**49**	23
ADT120	2	1/2	7/8	1/4	3/4	**51**	24
ADT130	2	1/2	7/8	1/4	3/4	**53**	25
ADT140	3	1/2	7/8	1/4	3/4	**63**	29
ADT156	3	1/2	7/8	1/4	3/4	**67**	31
ADT180	3	1/2	7/8	1/4	3/4	**69**	32
ADT208	4	1/2	1-1/8	1/4	3/4	**82**	38
ADT260	5	1/2	1-1/8	1/4	3/4	**103**	47
ADT312	6	1/2	1-1/8	1/4	3/4	**124**	57
ADT370	6	1/2	1-3/8	1/4	3/4	**127**	58

Model LET/LLE Electric Defrost

	Model	No. of Fans	Connections (in.)				Approx. Net Wt.	
			Coil Inlet OD	Suction ID	External Equalizer OD	Drain MPT	lbs.	kg
6 Fins Per Inch	LET035	1	1/2	5/8	1/4	3/4	**24**	11
	LET040	1	1/2	5/8	1/4	3/4	**26**	12
	LET047	1	1/2	5/8	1/4	3/4	**29**	14
	LET065	2	1/2	5/8	1/4	3/4	**43**	20
	LET075	2	1/2	5/8	1/4	3/4	**45**	21
	LET090	2	1/2	7/8	1/4	3/4	**48**	22
	LET120	3	1/2	7/8	1/4	3/4	**60**	28
	LET140	3	1/2	7/8	1/4	3/4	**62**	29
	LET160	4	1/2	1-1/8	1/4	3/4	**81**	37
	LET180	4	1/2	1-1/8	1/4	3/4	**84**	39
	LET200	5	1/2	1-1/8	1/4	3/4	**101**	46
	LET240	6	1/2	1-1/8	1/4	3/4	**121**	55
	LET280	6	1/2	1-1/8	1/4	3/4	**124**	57
4 Fins Per Inch	LLE041	1	1/2	5/8	1/4	3/4	**28**	13
	LLE068	2	1/2	7/8	1/4	3/4	**44**	21
	LLE080	2	1/2	7/8	1/4	3/4	**47**	22
	LLE102	3	1/2	7/8	1/4	3/4	**59**	27
	LLE136	4	1/2	1-1/8	1/4	3/4	**80**	37
	LLE170	5	1/2	1-1/8	1/4	3/4	**100**	46
	LLE204	6	1/2	1-1/8	1/4	3/4	**120**	55
	LLE235	6	1/2	1-1/8	1/4	3/4	**123**	56

Dimensional Data



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Dimensional Data For All Models

Air Defrost Model	Electric and Hot Gas Defrost Model		No. of Fans	Dimensions							
				A		B		C		D	
6 FPI	6 FPI	4 FPI		in.	mm	in.	mm	in.	mm	in.	mm
040	035	-	1	**29.50**	749.3	**17.25**	438.1	-	-	-	-
052	040	-	1	**29.50**	749.3	**17.25**	438.1	-	-	-	-
065	047	041	1	**29.50**	749.3	**17.25**	438.1	-	-	-	-
070	-	-	2	**45.50**	1,155.7	**33.25**	845	-	-	-	-
090	065	-	2	**45.50**	1,155.7	**33.25**	845	-	-	-	-
104	-	-	2	**45.50**	1,155.7	**33.25**	845	-	-	-	-
120	075	068	2	**45.50**	1,155.7	**33.25**	845	-	-	-	-
130	090	080	2	**45.50**	1,155.7	**33.25**	845	-	-	-	-
140	120	102	3	**61.50**	1,562.1	**49.25**	1,251	-	-	-	-
156	-	-	3	**61.50**	1,562.1	**49.25**	1,251	-	-	-	-
180	140	-	3	**61.50**	1,562.1	**49.25**	1,251	-	-	-	-
208	160	-	4	**77.50**	1,968.5	**65.25**	1,657	-	-	-	-
-	180	136	4	**77.50**	1,968.5	**65.25**	1,657	-	-	-	-
260	200	170	5	**93.50**	2,374.9	**81.25**	2,064	**48.63**	1,235.1	**32.63**	828.7
312	240	204	6	**109.50**	2,781.3	**97.25**	2,470	**48.63**	1,235.1	**48.63**	1,235.1
370	280	235	6	**109.50**	2,781.3	**97.25**	2,470	**48.63**	1,235.1	**48.63**	1,235.1

NOTE: *Hanger brackets will accept 3/8" / 9.5 mm hanger rods.*