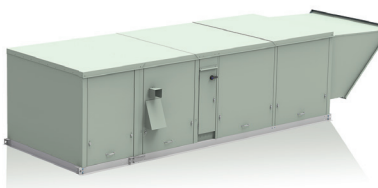
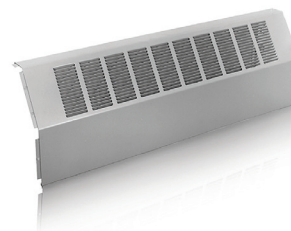




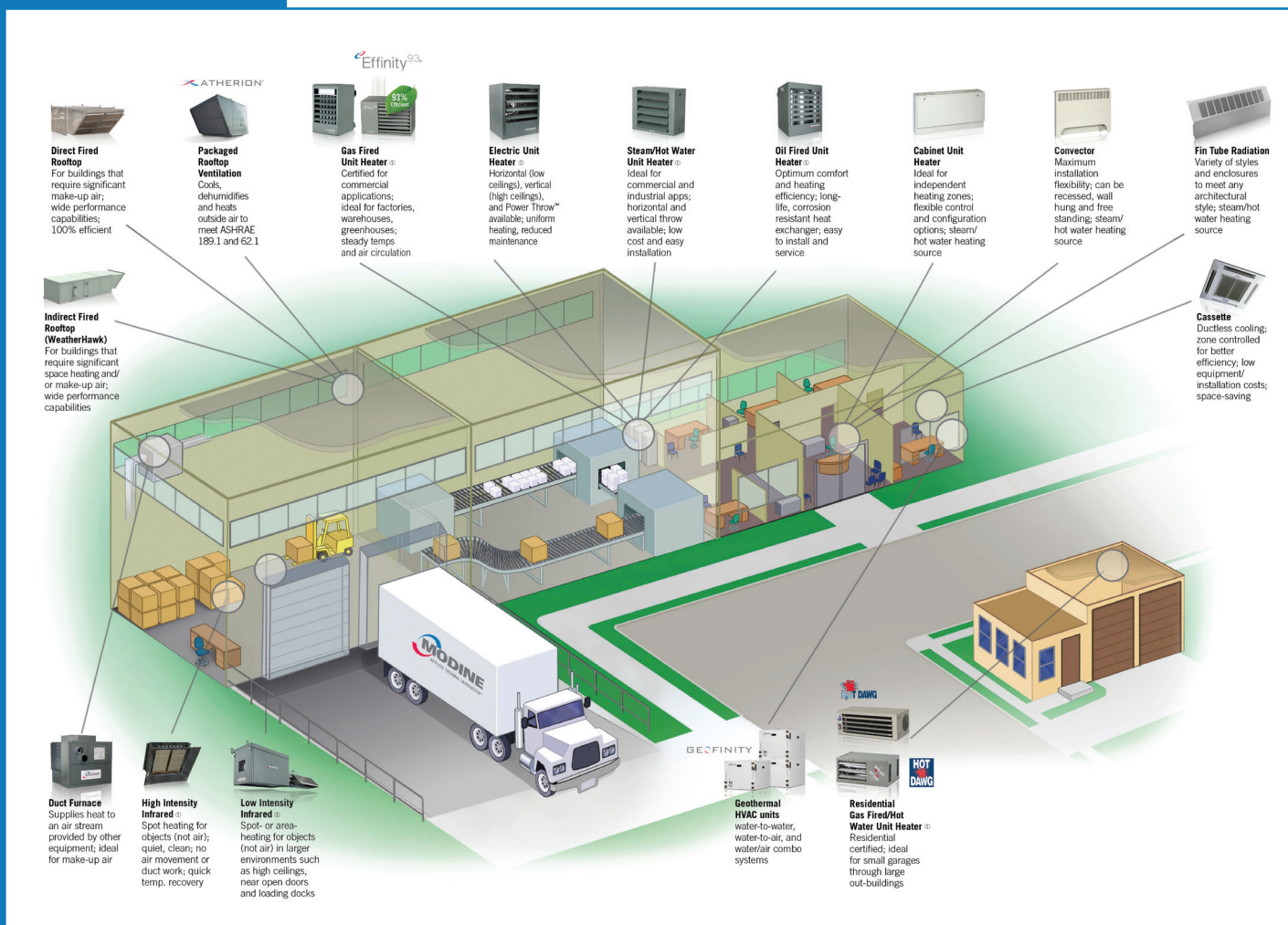
## COMMERCIAL & INDUSTRIAL APPLIED PRODUCTS

HEATING  
VENTILATING  
COOLING  
MAKE-UP AIR



With Modine, we can solve your commercial and industrial heating, ventilating, and air conditioning application needs with duct furnaces and direct- or indirect-fired heating & make-up air systems, with heating capacities up to 7,425,000 Btu/hr and air-handling capacities as high as 60,000 CFM. Modine also offers a comprehensive line of steam/hot water cabinet unit heaters, fin tube radiation, and convectors that feature attractive styling to satisfy your architectural needs.

Modine sales representatives are experienced specialists in the engineering, selection and application of Modine commercial and industrial heating and ventilating equipment. Located near you, these representatives can help you satisfy your comfort needs and indoor-air quality requirements. Contact your Modine product source for assistance in providing top-quality, high-efficiency Indoor Air Solutions.



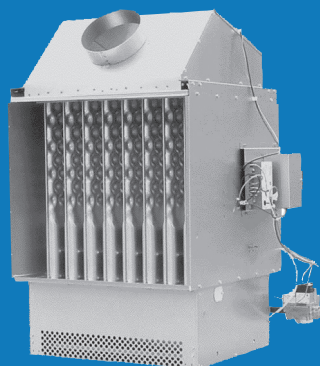
Ⓢ Products as noted can be found in the latest revision of 75-136, Commercial & Industrial Unitary Heating Products



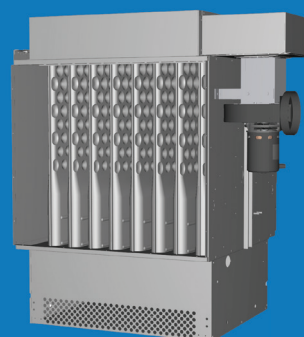
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# GAS-FIRED, GRAVITY AND POWER-VENTED DUCT FURNACES

- Low Initial Cost • Applications Cover Heating and/or Make-Up Air • 75,000 to 400,000 Btu/Hr Input Capacity
- 80% Minimum Thermal Efficiency • Low Maintenance • Easy to Service



**MODEL DFG  
GRAVITY VENTED**



**MODEL DFP  
POWER VENTED**



**MODEL DFS  
SEPARATED  
COMBUSTION**

Modine offers three types of indoor indirect gas fired duct furnaces to cover a wide range of heating applications in building heating and make-up air systems.

## Gravity Vented

Model DFG duct furnaces are an economical choice for superior quality and dependability in most applications. These units feature the following:

- Available in 11 model sizes from 75,000 to 400,000 Btu/hr, all 80% thermally efficient for fuel savings.
- Aluminized steel heat exchanger (409 stainless steel optional).
- Uses natural or propane gas (field convertible from natural to propane gas).
- Certified for location either upstream or downstream from cooling coils and has a drain pan that allows connection to a condensate drain line.
- Certified to 3.0" W.C. external static pressure for high static applications.
- A wide range of controls, options, and accessories for unit customization.
- Because the unit relies on a natural draft to vent properly, power vented units should be considered if the vent system is horizontal or if the space in which the unit is located is generally under a negative pressure.

## Power Vented

Model DFP includes the items featured for Model DFG, but adds an integral power exhaust fan for:

- Vertical or horizontal venting with the smallest diameter vent pipe possible.
- The ability to overcome reasonable negative pressures seen in buildings with inadequate make up air.
- Improved building efficiency through the reduction of off-cycle vent losses.

## Separated Combustion

Model DFS builds upon the advantages of the Power Vented Model DFP, but is specifically designed for buildings with hostile environments, such as dirty or high humidity applications. This model features:

- Separate electrical and gas control access with fully gasketed doors to seal components from the environment.
- Combustion air that is drawn from outside to ensure the unit has plenty of fresh, clean air.
- Since combustion air is introduced from outside, off-cycle vent losses are essentially eliminated, further improving building efficiency.
- Horizontal or vertical two-pipe or concentric venting options.

## Performance Data <sup>① ② ③</sup>

Model Size	Btu/Hr		Without Air Baffle (DFG/DFP) <sup>②</sup> or Low Air Temperature Rise (DFS)		With Air Baffle (DFG/DFP) <sup>②</sup> or High Air Temperature Rise (DFS)	
	Input	Output	Temperature Rise Range (°F)	CFM Range	Temperature Rise Range (°F)	CFM Range
75	75,000	60,000	20 - 60	926 - 2,778	20 - 100	556 - 2,778
100	100,000	80,000	20 - 60	1,235 - 3,704	20 - 100	741 - 3,704
125	125,000	100,000	20 - 60	1,543 - 4,630	20 - 100	926 - 4,630
150	150,000	120,000	20 - 60	1,852 - 5,556	20 - 100	1,111 - 5,556
175	175,000	140,000	20 - 60	2,160 - 6,481	20 - 100	1,296 - 6,481
200	200,000	160,000	20 - 60	2,469 - 7,407	20 - 100	1,481 - 7,407
225	225,000	180,000	20 - 60	2,778 - 8,333	20 - 100	1,667 - 8,333
250	250,000	200,000	20 - 60	3,086 - 9,259	20 - 100	1,852 - 9,259
300	300,000	240,000	20 - 60	3,704 - 11,111	20 - 100	2,222 - 11,111
350	350,000	280,000	20 - 60	4,321 - 12,963	23 - 100	2,593 - 11,111
400	400,000	320,000	20 - 60	4,938 - 14,815	27 - 100	2,963 - 11,111

<sup>①</sup> Ratings are shown for elevations up to 2,000 feet.

<sup>②</sup> For DFG or DFP models in high CFM applications, the air distribution baffle may be removed to reduce the pressure drop through the duct furnace. DFS units are ordered specifically designed for either low air temperature rise or high air temperature rise.

<sup>③</sup> DFP and DFS are approved for use in California by CEC.

**DO NOT LOCATE ANY GAS-FIRED UNIT IN AREAS WITH CHLORINATED, HALOGENATED OR ACIDIC VAPORS IN ATMOSPHERE.**



Request Catalog 5-174 For Complete Technical Information and Specifications.



# INDOOR GAS-FIRED HEATING, COOLING, VENTILATING, AND MAKE-UP AIR UNITS

- 75,000 to 1,200,000 Btu/Hr Input Capacity • Gravity, Power, or Separated Combustion Venting
- Large Selection of Blower Fan/Drive and Motor Combination Available
- Easy to Service • Variable Frequency Drive for Variable Air Volume Applications

The Modine indoor duct furnace with blower and/or cooling sections was designed for use with a building's heating, heating/ventilating/cooling and make-up air systems. Available in 17 model sizes, these units cover a wide variety of applications. They have input ranges from 75,000 to 1,200,000 Btu/Hr and can operate on either natural or propane gas. The airflow ranges from 556 to 14,500 CFM and right or left hand control access can be specified when ordering the unit. They can be provided with a cooling coil section with either a factory installed DX or chilled water cooling coil or the coil can be provided by others.

## Standard Features:

- 18 gauge insulated aluminized steel blower cabinet with a baked-on polyester powder paint finish on exterior casing parts
- Blower performance up to 3.0" W.C. external static pressure
- Blower and motor vibration isolation
- Gravity and power vented units are specifically designed for low cost installations
- Separated combustion units are specifically designed for buildings with hostile atmospheric conditions, such as high humidity or negative pressures.

## Optional Features:

- DX or chilled water section with factory installed cooling coil
- Double wall construction for blower and/or cooling cabinet
- Dead-front disconnect switches
- Two position, modulating, building pressure sensing, three position, building management (0 - 10 Vdc or 4 - 20 mA input) damper actuators
- Variable frequency drive for variable air volume applications

## Performance Data <sup>① ②</sup>

	Model Size	Btu/Hr Input	Btu/Hr Output	Temperature Rise Range (°F)	CFM Range	Total Static Pressure Range (Inches w.c.)
DCG/DCP/DCS	75	75,000	60,000	20 - 100	556 - 2,778	0 - 3.0
	100	100,000	80,000	20 - 100	741 - 3,704	0 - 3.0
	125	125,000	100,000	20 - 100	926 - 4,630	0 - 3.0
	150	150,000	120,000	20 - 100	1,111 - 5,556	0 - 3.0
	175	175,000	140,000	23 - 100	1,296 - 5,556	0 - 3.0
	200	200,000	160,000	23 - 100	1,481 - 6,500	0 - 3.0
	225	225,000	180,000	26 - 100	1,667 - 6,500	0 - 3.0
	250	250,000	200,000	20 - 100	1,852 - 9,259	0 - 3.0
	300	300,000	240,000	20 - 100	2,222 - 11,111	0 - 3.0
	350	350,000	280,000	22 - 100	2,593 - 12,000	0 - 3.0
DBG/DBP/DBS	400	400,000	320,000	25 - 100	2,963 - 12,000	0 - 3.0
	500	500,000	400,000	40 - 120	3,086 - 9,259	0 - 3.0
	600	600,000	480,000	40 - 120	3,704 - 11,111	0 - 3.0
	700	700,000	560,000	40 - 120	4,321 - 12,963	0 - 3.0
	800	800,000	640,000	41 - 120	4,938 - 14,500	0 - 3.0
	840	1,050,000	840,000	60 - 120	6,481 - 12,963	0 - 3.0
	900	1,200,000	960,000	63 - 120	7,407 - 14,500	0 - 3.0

① Ratings are shown for elevations up to 2000 feet.

② Power vented and separated combustion units approved for use in California by CEC.

## Cooling Coil Performance Data

Model Size	Cooling Coil		
	Maximum CFM	Maximum Cooling Tons <sup>②</sup>	
		DX Coil <sup>③</sup>	Chilled Water Coil <sup>③</sup>
75	1,891	9.38	10.56
100/125	2,206	11.43	12.62
150/175	2,521	13.42	14.77
200/225	3,352	18.12	19.28
250/300	3,724	20.24	21.33
350/400	5,214	27.26	29.25

② 1 Ton = 12,000 Btu/Hr

③ Based on 95°F entering dry bulb, 75°F entering wet bulb

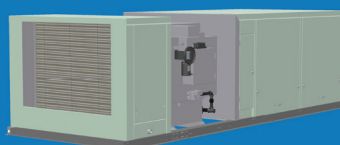
Request Catalog 5-173 For Complete Technical Information and Specifications.



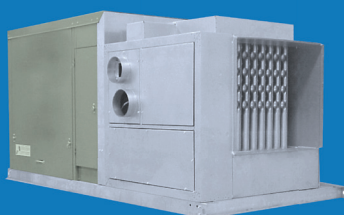
MODEL DBG



MODEL DBP



MODEL DCP



MODEL DBS



MODEL DCS



# WEATHERHAWK® WEATHERPROOF GAS-FIRED DUCT-FURNACE

- Low Initial Cost • Applications Cover Heating and/or Make-Up Air • 75,000 to 400,000 Btu/Hr Input Capacity
- Low Maintenance • Easy to Service



**MODEL HFP**

The Modine WeatherHawk® weatherproof duct furnace was designed for use with a building's heating, heating/cooling and make-up air systems. Available in 11 power vented model sizes, the unit covers a wide variety of applications. They have input ranges from 75,000 to 400,000 Btu/Hr and can operate on either natural or propane gas. Right or left hand control access can be specified when ordering the unit. The duct furnace is certified for location either upstream or downstream from cooling coils and has holes to drain any condensate that may form onto the roof.



## Standard Features:

- All units a minimum of 80% thermal efficient
- 18 gauge aluminized steel cabinet with a baked-on polyester powder paint finish on exterior casing parts
- Certified to 3.0" W.C. external static pressure

## Optional Features:

- 409 stainless steel heat exchanger and burner
- 409 stainless steel drip pan
- Two-stage and electronic modulation controls for either natural or propane gas
- Building management compatible modulating gas controls for 0 - 10 Vdc or 4 - 20 mA input
- High and/or low gas pressure switches

## Performance Data <sup>① ②</sup>

Model No.	Btu/Hr		Low Temperature		High Temperature	
	Input	Output	Temperature Rise Range (°F)	CFM Range	Temperature Rise Range (°F)	CFM Range
HFP75	75,000	60,000	20 - 60	926 - 2,778	20 - 100	556 - 2,778
HFP100	100,000	80,000	20 - 60	1,235 - 3,704	20 - 100	741 - 3,704
HFP125	125,000	100,000	20 - 60	1,543 - 4,630	20 - 100	926 - 4,630
HFP150	150,000	120,000	20 - 60	1,852 - 5,556	20 - 100	1,111 - 5,556
HFP175	175,000	140,000	20 - 60	2,160 - 6,481	20 - 100	1,296 - 6,481
HFP200	200,000	160,000	20 - 60	2,469 - 7,407	20 - 100	1,481 - 7,407
HFP225	225,000	180,000	20 - 60	2,778 - 8,333	20 - 100	1,667 - 8,333
HFP250	250,000	200,000	20 - 60	3,086 - 9,259	20 - 100	1,852 - 9,259
HFP300	300,000	240,000	20 - 60	3,704 - 11,111	20 - 100	2,222 - 11,111
HFP350	350,000	280,000	20 - 60	4,321 - 12,963	23 - 100	2,593 - 11,111
HFP400	400,000	320,000	20 - 60	4,938 - 14,815	27 - 100	2,963 - 11,111

<sup>①</sup> Ratings are shown for elevations up to 2,000 feet.

<sup>②</sup> Units approved for use in California by CEC.



Request Catalog 5-173 For Complete Technical Information and Specifications.



**MODEL HBP**



**MODEL HDP**

The Modine weatherproof duct furnace with blower, cooling, and/or downturn plenum sections was designed for use with a building's heating, heating/ventilating/cooling and make-up air systems. Available in 17 power vented model sizes, the unit covers a wide variety of applications. They have input ranges from 75,000 to 1,200,000 Btu/Hr and can operate on either natural or propane gas. The airflow ranges from 556 to 14,500 CFM and right or left hand control access can be specified when ordering the unit. The unit can be provided with a cooling coil section with either a factory installed DX or chilled water cooling coil or the coil can be provided by others.



## Standard Features:

- 18 gauge insulated aluminized steel cabinet with a baked-on polyester powder paint finish on exterior casing parts
- Blower performance up to 3.0" W.C. external static pressure
- Blower and motor vibration isolation
- Side or bottom (through a roof curb) gas and electrical connection access

## Optional Features:

- DX or chilled water section with factory installed cooling coil
- Double wall construction for blower, cooling cabinet, and/or downturn plenum sections
- Dead-front disconnect switches
- Two position, modulating, building pressure sensing, three position, building management (0 - 10 Vdc or 4 - 20 mA input) damper actuators
- Variable frequency drive for variable air volume applications

## Performance Data <sup>① ②</sup>

Model	Model Size	Btu/Hr Input	Btu/Hr Output	Temperature Rise Range (°F)	CFM Range	Total Static Pressure Range (Inches w.c.)
HBP/HCP/HDP/HPP	75	75,000	60,000	20 - 100	556 - 2,778	0 - 3.0
	100	100,000	80,000	20 - 100	741 - 3,704	
	125	125,000	100,000	20 - 100	926 - 4,630	
	150	150,000	120,000	20 - 100	1,111 - 4,630	
	175	175,000	140,000	23 - 100	1,296 - 5,556	
	200	200,000	160,000	23 - 100	1,481 - 6,500	
	225	225,000	180,000	26 - 100	1,667 - 6,500	
	250	250,000	200,000	20 - 100	1,852 - 9,259	
	300	300,000	240,000	20 - 100	2,222 - 11,111	
	350	350,000	280,000	22 - 100	2,593 - 12,000	
HBP/HDP	400	400,000	320,000	25 - 100	2,963 - 12,000	
	500	500,000	400,000	40 - 120	3,086 - 9,259	
	600	600,000	480,000	40 - 120	3,704 - 11,111	
	700	700,000	560,000	40 - 120	4,321 - 12,963	
	800	800,000	640,000	41 - 120	4,938 - 14,500	
	840	1,050,000	840,000	60 - 120	6,481 - 12,963	
	960	1,200,000	960,000	63 - 120	7,401 - 14,500	

① Ratings are shown for elevations up to 2,000 feet.

② Units approved for use in California by CEC.

## Cooling Coil and Evaporative Cooling Performance Data

Model Size	Cooling Coil			Evaporative Cooling		
	Maximum CFM	Max. Cooling Tons <sup>③</sup>		Maximum CFM	Btu/Hr	
		DX Coil <sup>④</sup>	Chilled Water Coil <sup>④</sup>		Min.	Max.
75	1,891	9.38	10.56	2,750	9,968	52,272
100/125	2,206	11.43	12.62	4,000	13,125	54,432
150/175	2,521	13.42	14.77	5,200	19,198	70,762
200/225	3,352	18.12	19.28	6,000	24,952	81,648
250/300	3,724	20.24	21.33	10,400	37,916	141,523
350/400	5,214	27.26	29.25	11,050	44,247	150,368

③ 1 Ton = 12,000 Btu/Hr

④ Based on 95°F entering dry bulb, 75°F entering wet bulb

Request Catalog 5-173 For Complete Technical Information and Specifications.



# DIRECT GAS-FIRED INDOOR AND OUTDOOR HEATING AND MAKE-UP AIR UNITS

- ETL Certified • Btu/Hr Outputs from 42,000 to 7,425,000 • CFM Ranges from 1,600 to 60,000
- 100% Make-Up Air and Recirculating Configurations • 100% Thermal Efficiency
- Designed for Indoor or Outdoor Mounting • Factory-Assembled Natural or Propane Gas Manifolds

Modine direct-fired, make-up-air units - the MDB (Single Speed and Variable Frequency Drive Two Speed/Multi Speed Make-Up Air) and MRB (Fresh and Return Air), are designed to provide an economical and efficient means of supplying tempered make-up air to a space or building. Available in eight airflow configurations, the units cover a wide variety of applications.

## Standard Features:

- 100% thermal efficiency (92% sensible) results in lower fuel bills
- Units are designed for indoor or outdoor mounting, providing flexibility in applications
- Natural or propane gas manifolds are factory-assembled to provide flexible fuel options and to reduce field-installation, start-up costs and problems
- Factory-wired electrical panel with numbered terminals significantly reduces start-up delays
- 100% factory flame-testing eliminates field start-up problems caused by defective controls
- Weatherproof roof with drip ledge provides protection from water being drawn into the unit
- 18-gauge galvanized steel casing provides high corrosion protection for long life
- Adjustable motor sheaves through 10 HP simplify air balancing
- Four access doors provide maximum access for easy adjustments and service
- High firing rate turndown for optimum temperature control

## Optional Features:

- V-bank filter section
- Inlet hood
- Inlet damper
- Discharge damper
- Evaporative cooling
- IRI and FM manifold arrangements
- Discharge air temperature control, space temperature control, or building management (0-10 Vdc or 4-20 mA input) control
- High and low gas pressure switches
- Internal blower and motor vibration isolation
- Painted casing

## Performance Data

Model No.	CFM Range SCFM ①	Maximum Output (Btu/Hr) ①	Natural Gas Maximum Temperature Rise (F) ①	Total Static Pressure Range (" W.C.)	Horsepower Range
MDB/MRB110	1,600-3,300	432,400	115	0-2.8"	3/4-3
MDB/MRB112	2,000-4,700	615,800	115	0-3.0"	3/4-5
MDB/MRB115	3,000-6,500	851,700	115	0-2.6"	1-5
MDB/MRB118	3,500-10,000	1,310,300	115	0-3.0"	1 1/2-10
MDB/MRB120	6,000-13,500	1,769,000	115	0-3.0"	2-15
MDB/MRB122	8,000-16,500	2,162,100	115	0-3.0"	3-20
MDB124 ②	10,000-21,500	2,200,000	115	0-3.0"	3-20
MDB/MRB125	10,000-21,500	2,817,300	115	0-3.0"	3-20
MDB/MRB130	14,000-30,000	3,931,100	115	0-2.7"	5-25
MDB/MRB220	18,000-27,000	3,538,000	115	0-3.0"	7 1/2-25
MDB/MRB222	25,000-33,000	4,324,200	115	0-3.0"	15-30
MDB/MRB225	30,000-46,000	6,027,700	115	0-3.0"	15-40
MDB/MRB230	44,000-60,000	7,425,000	115	0-2.7"	20-50

① CFM, Btu/Hr capacities & Temperature Rise vary depending on unit configuration and certification.  
The Maximum Temperature Rise for propane gas is 100°F.

② Model Size 124 is available only as Model MDB for 100% outside air applications.

**Request Catalog 7-150 For Complete Technical Information and Specifications.**

Model MDB units are ETL Certified for use in the U.S. and Canada.

Model MRB units are ETL Certified for use in the U.S. only.



**MODEL MDB/MRB**







The Modine Cassette units effectively make each area served an independent controlled temperature zone. Through thermostatic control of operations, conditions can be varied to suit diverse requirements or activities. Optional fresh air intakes are available to provide for ventilation and recirculation of room air.

Modine Cassettes are available in a choice of three models – DX cooling or heat pumps in five model sizes and chilled water cooling with six model sizes – to properly match units to job requirements. Optional heating can be provided by factory installed electric heat or hot water modules, depending on model. This versatility eliminates compromising architecture or design. Important cost savings are often realized during building modernizations, as existing piping and/or wiring can frequently be reused.

Design techniques are incorporated in every Modine Cassette to reduce noise levels to an absolute minimum. These techniques include low blower speeds, rigid panel and cabinet construction, and sound-absorbent cabinet insulation.

For individual comfort, Modine Cassettes are available with electro-mechanical or micro-processor based controls. The micro-processor controller includes infrared transmitter which enables room conditions to be maintained at a user defined set point. Modine Cassettes are also available with Carel microprocessor controls and network cards to allow units to be connected to a Building Management System.

## Direct Expansion (DX) Air Conditioning and Heat Pump Models

Model No.	Total Cooling (BTU/h) ①	Heat Pump (BTU/h) ②	SEER	HSPF	Hot Water Heat (BTU/h) ③	Electric Heat (kW)	Dimensions - H x W x D (inches)		Weight (lbs)
							Chassis	Fascia	
SSD/SSH 18	21,500	16,400	13	7.7	38,746	3.0	11 5/8 x 32 5/16 x 32 3/8	2 5/8 x 37 x 37	84
SSD/SSH 24	25,400	21,400	13	7.7	41,993	3.0	11 5/8 x 32 5/16 x 32 3/8	2 5/8 x 37 x 37	84
SSD/SSH 30	34,800	27,400	13	7.7	56,609	5.0	11 1/2 x 44 7/16 x 32 3/8	2 5/8 x 49 3/16 x 37	118
SSD/SSH 36	41,800	32,400	13	7.7	59,600	5.0	11 1/2 x 44 7/16 x 32 3/8	2 5/8 x 49 3/16 x 37	118
SSD/SSH 42	45,500	37,000	13	7.7	64,268	5.0	11 1/2 x 44 7/16 x 32 3/8	2 5/8 x 49 3/16 x 37	118

① Cooling capacities based on 80/67°F DB/WB Indoor and 82/65°F DB/WB Outdoor Ambient.

② Heating capacities based on 70/60°F DB/WB Indoor and 47/43°F DB/WB Outdoor Ambient.

③ Nominal hot water heating capacity based on air 70°F & 180°F inlet / 160°F outlet water temperatures.

## Chilled Water Cooling Models

Model No.	Total Cooling (BTU/h) ①	Hot Water Heat (BTU/h) ②	Electric Heat (kW)	Dimensions - H x W x D (inches)		Weight (lbs)
				Chassis	Fascia	
SCW 08	7,026	13,799	1.5	10 11/16 x 22 1/2 x 22 1/2	2 5/8 x 25 3/16 x 25 3/16	45
SCW 12	11,236	N/A	1.5	10 11/16 x 22 1/2 x 22 1/2	2 5/8 x 25 3/16 x 25 3/16	45
SCW 18	18,432	29,258	3.0	9 1/2 x 32 5/16 x 32 3/8	2 5/8 x 37 x 37	82
SCW 20	19,971	30,946	3.0	9 1/2 x 32 5/16 x 32 3/8	2 5/8 x 37 x 37	82
SCW 33	30,595	46,555	5.0	11 1/2 x 44 7/16 x 32 3/8	2 5/8 x 49 3/16 x 37	118
SCW 36	35,934	51,600	5.0	11 1/2 x 44 7/16 x 32 3/8	2 5/8 x 49 3/16 x 37	118

① Nominal chilled water cooling capacity based on air 80/67°F Dry/Wet Bulb & 45°F inlet / 55°F outlet water temperature.

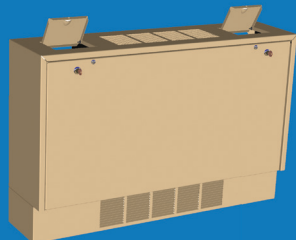
② Nominal hot water heating capacity based on air 70°F & 180°F inlet / 160°F outlet water temperatures.



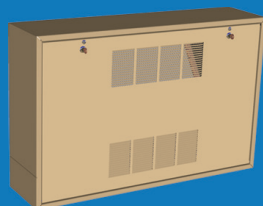
Request Catalog 8-105 For Complete Technical Information and Specifications.

# STEAM/HOT WATER CABINET UNIT HEATERS

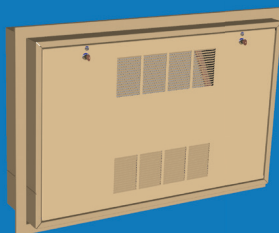
- One- or Two-Row, Copper Tube - Aluminum Fin Coil • Motor with Built-In Thermal Overload Protection, 115v/60/1 $\phi$
- Forward-Curved Aluminum Blower Wheels • Unit-Mounted, Solid-State Speed Control • Permanent, Cleanable Air Filter
- Sound-Dampening Insulation on Front Panels • Stamped Louvers



**MODEL C**  
Exposed  
Floor Mounted  
Unit



**MODEL CW**  
Exposed Wall or  
Ceiling Mounted  
Unit



**MODEL CW**  
Recessed  
(Full or Partial)  
Wall or Ceiling  
Mounted Unit  
Shown with Optional  
Perma-Lap® Frame



Modine cabinet unit heaters effectively make each area served an independent heating zone. Through thermostatic control of heater operations, conditions can be varied to suit diverse requirements or activities. Optional controls and outside and return-air dampers are available to provide for ventilation and recirculation of room air.

Modine cabinet unit heaters are available in a choice of two models and eight sizes to properly match units to job requirements. This versatility eliminates compromising architecture or design. Important cost savings are often realized during building modernizations, as existing piping and/or wiring can frequently be reused.

Design techniques are incorporated in every cabinet unit heater to reduce noise levels to an absolute minimum. These techniques include low blower speeds, rigid panel and cabinet construction, and sound-absorbent cabinet insulation.

Clean, uncluttered designs and compact dimensions allow Modine cabinet unit heaters to blend into any environment and minimize installation space. The standard cabinet finish is a light-tan baked polyester powder coat paint, and optional factory-applied decorative colors are also available.

## Performance Data

Unit Size	Hot Water (200°F in 180°F out, 60°F Ent. Air)								Steam (2lb. Steam, 60°F Ent. Air)			
	Standard Coil				High Capacity Coil				Standard Coil			
	Btu/Hr	GPM	CFM	Final Air Temp. (°F)	Btu/Hr	GPM	CFM	Final Air Temp. (°F)	Btu/Hr	GPM	CFM	Final Air Temp. (°F)
2	12,400	1.28	250	106	23,200	2.4	250	146	19,800	250	21	133
3	21,100	2.23	330	121	33,400	3.6	325	155	28,300	330	29	133
4	28,100	2.87	450	117	45,800	4.7	440	156	42,500	450	44	147
6	44,300	4.43	620	126	59,700	6.0	615	150	52,100	620	54	137
8	48,800	5.00	840	113	71,900	7.4	835	139	67,700	840	70	134
10	55,700	5.70	1050	108	84,600	8.7	1040	135	76,000	1050	79	126
12	72,300	7.40	1240	113	105,600	10.8	1220	140	95,400	1240	99	130
14	79,200	8.10	1430	111	118,300	12.1	1410	137	102,600	1430	106	126

Request Catalog 11-160 For Complete Technical Information and Specifications.

## STEAM/HOT WATER COMMERCIAL FIN TUBE RADIATION

- Enclosures Fasten Together with a Slip Joint • Knob or Tamperproof Dampers Available
  - Easy Installation with Hanger Strip and Enclosure Support

Fin tube radiation heaters from Modine are designed with a variety of enclosure styles to meet most any application or architectural style. Heating elements are copper tubes with aluminum fins. The aluminum fins are mechanically bonded to the copper tube to provide maximum heat transfer. A choice of fin spacings permits the selection of elements to meet your design requirements.

Modine's fin tube radiation heaters can be supplied in two- to eight-foot lengths and in a variety of colors to match most decors. A full compliment of accessories to match enclosure styles provides flexibility in design and installation.



**Model SP**  
Trimfin®



**Model TA**  
Top Outlet  
with Aluminum Grille



**Model S**  
Slope Top



**Model F**  
Front Outlet



**Model R**  
Front and Top Outlet



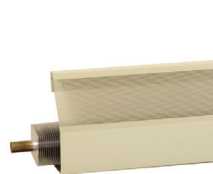
**Model RF**  
Front and Top Outlet  
Floor Mounted



**Model SF**  
Slope Top  
Floor Mounted



**Model T**  
Top Outlet



**Model PS**  
Slope Top Security



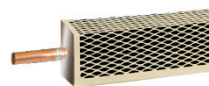
**Model P**  
Pedestal Mounted



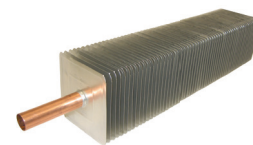
**Model PA**  
Pedestal Mounted  
Aluminum Grille



**Model FT**  
Flat Top  
Protective Metal Cover



**Model EM**  
Expanded Metal



Copper Tube with Aluminum  
Fin Heating Element

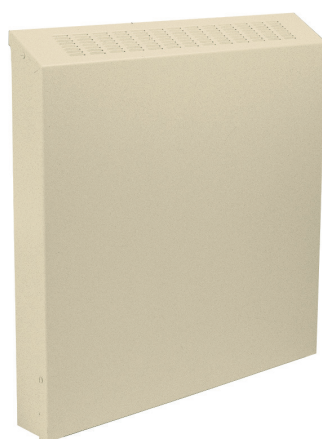
Request Catalog 12-135 For Complete Technical Information and Specifications.

## STEAM/HOT WATER CONVECTORS

- Easy Installation • Louvered Air Outlet and/or Inlet Grilles • Copper-Tube Aluminum Fin Heating Element for Use with Steam or Hot Water • Opposite-End Heating Element Piping Connections

Modine convectors provide maximum installation flexibility for a variety of heating applications. They come in a variety of models, allowing convectors to be partially recessed, wall hung, and free standing. The heating elements can be used for hot water or steam. The standard header is copper with top and bottom tapings. Tubes are mechanically expanded into aluminum fins to form a durable bond for maximum heat transfer.

Modine offers convectors in 24 - 64 inch lengths and 4 different heights, ranging from 18 - 32 inches depending on model. A variety of optional colors are offered. A complete line of options and accessories provides flexibility in design and installation.



**Model SL**  
Slope-Top Wall Mounted



**Model FL**  
Flat-Top Floor Mounted



**Model SF**  
Slope-Top Floor Mounted



**Model PL**  
Fully-Recessed Wall Mounted

Request Catalog 13-111 For Complete Technical Information and Specifications.

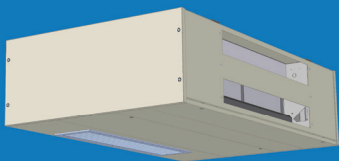


# VALEDICTORIAN® UNIT VENTILATOR

- Heavy-Duty Construction • Flexible Modular Design • Copper Tube-Aluminum Highmix® Fin Water Coils
- Modulating Valve or Face & Bypass Temperature Control • Floor and Ceiling Mounted Configurations



MODELS VFV & VFF



MODEL VFC

The Valedictorian vertical unit ventilator is the perfect solution for both new construction and replacement of existing units in schools that want to improve the indoor air quality of their classrooms. Designed to be tough, dependable, aesthetically pleasing, quiet and easy to install, the Valedictorian® keeps an established product up-to-date with an impressive list of features and options.

The Valedictorian has heavy-duty construction with 14 gauge exterior panels, tamper-proof cabinet locks, and pencil-proof aluminum supply air bar grills. Electrostatically applied, baked-on polyester powder coat paint ensures a long-lasting, durable finish. A variety of available sub-bases, utility compartments, filler sections, side end-panels, and adapter backs allow for existing systems to easily be upgraded. Available as floor or ceiling mounted, the Valedictorian® can be utilized in any new or existing construction condition.

Available in four sizes, the unit incorporates a draw-through design with 2, 3, or 4-row coils for chilled water only, chilled water/hot water 2-pipe or 4-pipe installation, DX cooling coil, and steam heating coil. Optional 1 or 2-row hot water coils are available for 4-pipe systems and can be positioned for either preheat or reheat applications. A variety of ventilation configurations are available that utilize fully modulating outside air and return air dampers allowing for any mixture of outside air and return air to be drawn through the unit.

Discharge air temperature is controlled using either a face-and-bypass damper or a modulating control valve. An optional factory installed microcontroller is available or the units may be configured as DDC ready or set-up for field installed controls. Piping components can be ordered individually or configured as a pre-assembled piping package for easy on-site installation.

## Chilled Water Cooling Performance (Btu/Hr) ① ② ③

Unit Size	Rows of Coil					
	2		3		4	
	Total	Sensible	Total	Sensible	Total	Sensible
VFF/VFV/VFC 750	18,500	49,800	59,650	70,100	70,100	70,100
VFF/VFV/VFC 1000	24,250	62,400	77,550	92,600	92,600	92,600
VFF/VFV/VFC 1250	26,250	72,400	88,400	103,600	103,600	103,600
VFF/VFV/VFC 1500	61,150	81,100	99,200	108,950	108,950	108,950

① Rated in accordance with ARI Standard 840.

② Water temperature rise is 10°F, with entering water temperature of 45°F.

③ Entering air temperature is 80°F dry bulb, 67°F wet bulb.

## Hot Water Heating Performance (Btu/Hr) ① ②

Unit Size	Rows of Coil			
	1	2	3	4
VFF/VFV/VFC 750	38,400	49,800	59,650	70,100
VFF/VFV/VFC 1000	50,100	62,400	77,550	92,600
VFF/VFV/VFC 1250	57,200	72,400	88,400	103,600
VFF/VFV/VFC 1500	61,150	81,100	99,200	108,950

① Water temperature is 160°F, with water flow rate of 6 gpm.

② Entering air temperature is 60°F.



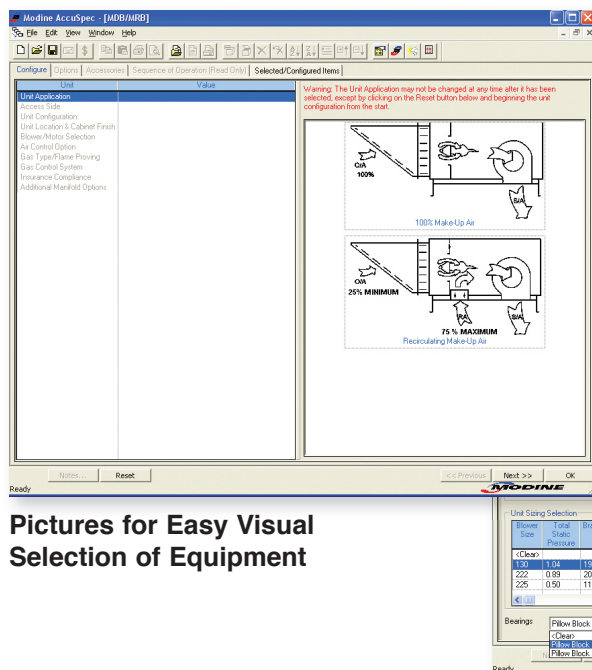
Request Catalog 14-100 For Complete Technical Information and Specifications.

# MODINE BREEZE® ACCUSPEC SIZING AND SELECTION PROGRAM

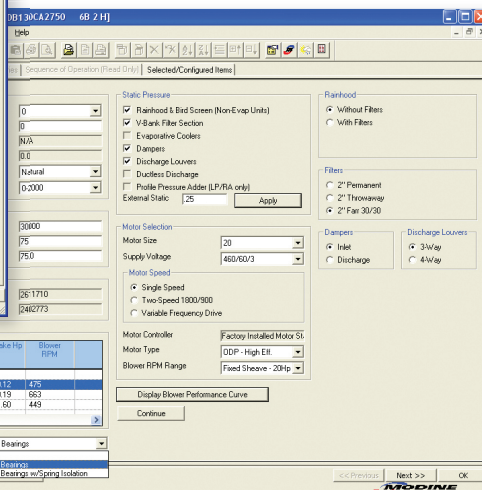
- With the Modine AccuSpec Program, Equipment Selection is a Breeze®



The Modine Breeze AccuSpec is the fastest way to generate performance data based on actual job conditions. The Breeze AccuSpec program is a Web-based sizing and selection program. The program provides a series on step-by-step questions that allow for the easy configuration of Modine products. After a model has been configured, the program can generate Submittal Schedules, Performance Data, Dimensional Drawings, and Specifications.

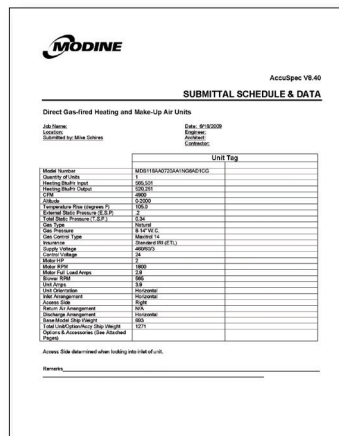


## Calculates Equipment Capacities and Capabilities

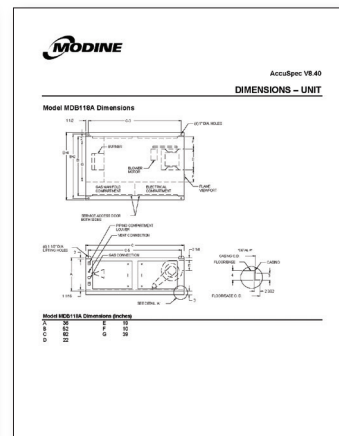


## Pictures for Easy Visual Selection of Equipment

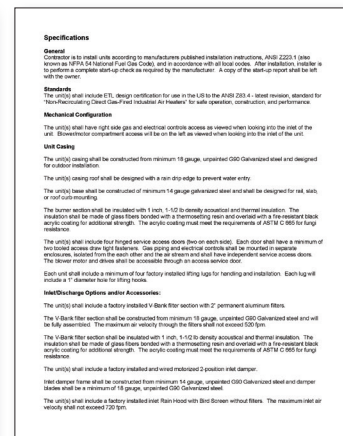
### Submittal Schedules



### Dimensional Drawings



### Specifications





## HISTORY

A.B. Modine founded Modine Manufacturing Company in 1916 as a one-room office adjacent to a small workshop in Racine, WI. Today, Modine is an integral part of the world marketplace with sales approaching \$1.5 billion. It specializes in products used in industrial heating, ventilation and air conditioning equipment, light, medium and heavy-duty vehicles, off-highway and industrial equipment and refrigeration systems.

From the beginning, Modine has applied innovative thermal technology to meet its customers' needs, with breakthroughs yielding state-of-the-art customized heating and cooling solutions.

1916 - 1929

Modine is founded by A.B. Modine in 1916



A.B. Modine invents the unit heater by combining an automotive radiator, a fan and steam pipes



The Spirex radiator is patented and Modine's influence in the transportation industry grows

Ford makes the Turbotube radiator standard on all Model Ts. Modine becomes a publicly held company

1930 - 1949

Modine moves to current site in Racine, WI

Vehicular wind tunnel built in 1941



Modine begins manufacturing aftercoolers for the P-51 Mustang fighter plane



1950 - 1969

Company introduces "Airditioner" a/c unit for residential and non-residential applications

Began producing all-aluminum, brazed a/c coils for cars and trucks

Heating division introduces a line of electric unit heaters

Modine begins manufacturing rooftop a/c and unit ventilators

Buena Vista, VA, home of the Atherion, manufacturing plant opens



1970 - 1989

Weatherproof duct furnaces are introduced

Modine introduces the PF™ (parallel flow) condenser



West Kingston, RI, plant acquired and production begins on unitary products



1990 - present

Modine acquires Langerer & Reich and forms Modine Europe

New multi-million dollar Tech Center opens in Racine, WI

Modine acquires Airedale, an international leader in a/c products



The Effinity<sup>63</sup>™ launches, the most efficient gas-fired unit heater in North America



Modine introduces the Atherion® and Geofinity



Products from Modine are designed to provide indoor air-comfort and ventilation solutions for residential, commercial, institutional and industrial applications. Whatever your heating, ventilating and air conditioning requirements, Modine has the product to satisfy your needs, including:

#### **HVAC**

- Unit Heaters:
  - Gas
  - Hydronic
  - Electric
  - Oil
- Ceiling Cassettes
- Duct Furnaces
- Hydronic Cabinet Unit Heaters, Fin Tube, Convectors
- Infrared Heaters
- Make-up Air Systems
- Unit Ventilators

#### **Ventilation**

- Packaged Rooftop Ventilation

#### **School Products**

- Vertical Packaged Classroom HVAC:
  - DX Cooling/Heat Pump
  - Water/Ground Source Heat Pump
  - Horizontal/Vertical Unit Ventilators

#### **Geothermal**

- Water-to-Water
- Water-to-Air
- Combination

Specific catalogs are available for each product. Catalogs 75-136 and 75-137 provide details on all Modine HVAC equipment.



#### ***Modine Manufacturing Company***

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