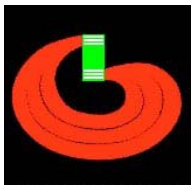

AR Series ™

D Series ™

FF Series ™

80/20 PR Series ™

The Total SOLUTION™

Johnson Air-Rotation® Systems

The Total Solution ™

Johnson Air-Rotation® systems announces a major addition to its product line, completing its line of high efficiency, HVAC equipment for warehouses, distribution centers, manufacturing facilities and other large, open buildings.

For over 80 years, Johnson has been providing HVAC solutions for warehouses, distribution centers, manufacturing facilities and other large buildings. This experience has led to tremendous cost savings for building owners through major advances in design and application of Johnson's products.

- In 1960 Johnson patented the Air-Rotation® method of heating buildings more efficiently than ever before
- In 1970, Johnson assisted large national and international companies ranging from General Motors, IBM, General Foods, U. S. Steel and others to create warehouses, distribution centers and manufacturing facilities with even temperature and humidity conditions from wall to wall and floor to ceiling. Johnson has been called the father of the large, open buildings used by American industry to speed the manufacture and distribution of products throughout the world
- In the 1980's, Johnson designed its equipment to provide 4 season heating and ventilating of large, open buildings, using condensation and humidity control systems and other custom applications important for its steel , food, bakery, plastics, paper, computer, aerospace, beverage, government, and other customers
- In the 1990's the addition of air conditioning into Air-Rotation® units provided a more efficient way to cool large buildings and the manufacturing processes for which they are used
- In 1998 complete customization packages were offered – expanding the applications where Air-Rotation® is utilized. Such customization include humidification, process make-up air, special filtration, food-grade units and others
- Now Johnson's product line is more complete then ever with custom and semi-custom direct- fired heating and cooling units for large open buildings:

  The D Series™ – A low volume, direct-fired space heater
  The FF Series™* – A high volume, make-up air unit
  The 80/20 PR Series™* – A high efficiency 80/20 Pressurization/Re-Circulation unit

  * Available with optional cooling coils or evaporative cooling media

All potential projects are reviewed by Johnson's engineers to see if they meet the criteria for an Air-Rotation® solution. Johnson engineers the most efficient solution available using the widest variety of equipment from any single source. This means that our customers are assured of meeting or exceeding their expectations for a reliable effective HVAC system, whether the primary objective is a low first cost of equipment, cost, and ease of installation or low operating costs.

If you have a big building HVAC application and want the best solution, we will do the application engineering for you and provide the TOTAL SOLUTION ™. Contact your Johnson Air-Rotation® local representative to see if the Air Rotation® method can work for you.

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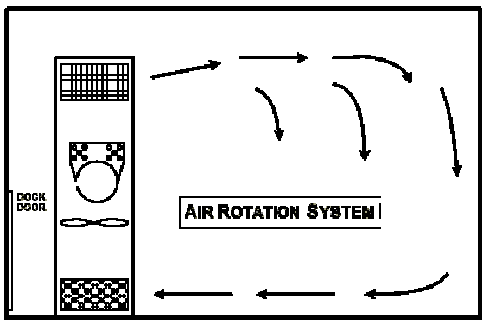
Johnson Air-Rotation® Systems

Building Heating

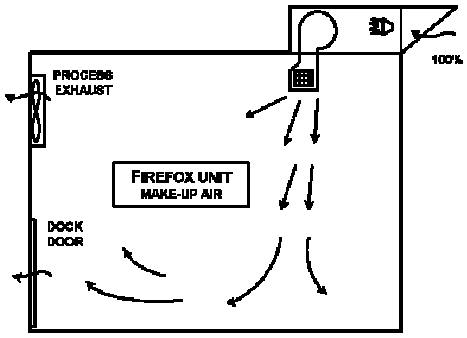
AR Series ™



Air-Rotation® System

High volume, low velocity, continuous circulation of air distributes heat more evenly and efficiently than any other system. Solves big building condensation problems or concerns and reduces operating costs.

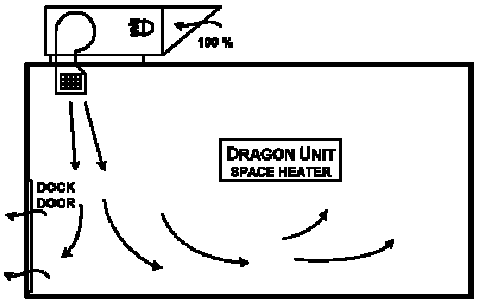
FF Series ™



FireFox System

Provides the most efficient method of replacing process-exhaust with fresh air and solves negative pressure building problems.

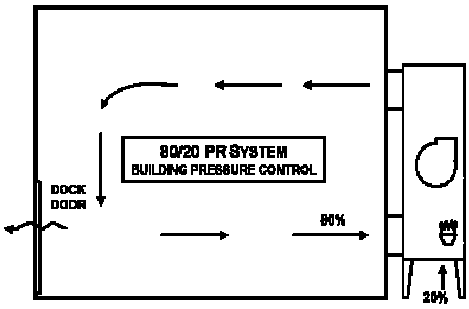
D Series ™



Dragon System

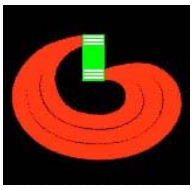
A low air-volume system that reduces the amount of outside air required to heat a building with a direct-fired heater. Most effective as a large space heater located on the roof above dock doors.

80/20 PR Series ™



Air Pressurization/Re-Circulation System

Positive-pressure, building heating system ensures elimination of cold spots due to infiltration. Make-up air volume increases as doors open, maintaining positive pressure in the building.



AR Series ™

D Series ™

FF Series ™

80/20 PR Series ™

The Total SOLUTION™

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Johnson Air-Rotation®

AR Series ™

The "PureAIR" Series make-up air unit provides the clean air demanded by many of our customers by using indirect –fired heat. Capable of recirculating up to 100% return air, the "PureAIR" Series also reduces fuel costs.

The Total SOLUTION™

Johnson Air-Rotation® Systems AR Series ™

Indirect Fired Air-Rotation® Product

Johnson Air-Rotation® Systems specializes in high-quality HVAC equipment. Our AR series ™ unit is best suited for large, open buildings such as warehouses, distribution centers and manufacturing facilities. Air-Rotation® units are used in applications where low operating costs, even temperature distribution (+/- 3⁰F) and other product or process considerations are most important. The AR Series ™ works by rotating large volumes of air at low velocities throughout the building and saving 50% or more on electricity and fuel bills. Quite simply, this is the most efficient way to condition a large open building. This product is very versatile with optional heating elements, cooling coils, humidity control modules and many other options.

"The Big Green Box" In a Typical Retail Application

Air-Rotation® Benefits

- Most Cost Effective and Energy Efficient System Available
- Uniform Temperature Distribution Throughout the Building – Eliminates Drafts, Cold or Hot Spots, Stratification and Moisture or Condensation Problems
- Simple, Much Lower Maintenance Cost and 30-50 year Product Life
- Heating Can Be Fueled by Natural Gas, Propane Gas, Oil, Hot Water, Steam or Electricity
- Much Lower Installation Cost with Fewer Number of Units Required
- Easy to Install, No Ductwork Required – Eliminates Dirt Buildup in Duct
- Low Noise Levels; Indoor or Outdoor Application
- Highest Quality, Environmentally Friendly, and Most Durable System Available
- UL Listed to Ensure Highest Safety Standards

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Johnson Air-Rotation® Systems AR Series ™

Indirect Fired Air-Rotation® Product

Standard Features

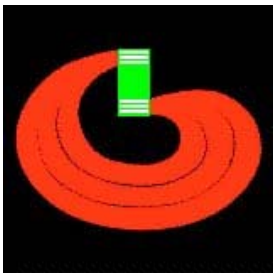
- Heating Capacities up to 6,250,000 BTU's
- Air Volumes up to 150,000 CFM
- Heavy-Gauge, Painted Galvanized Structural Steel Frame Construction
- High Efficiency, Carbon and Stainless Steel Heat Exchanger
- Wired and Piped at Factory – Except Main Regulator and Main Gas Valve
- Hi Temperature Limit Switch; Heat On/Off Switch
- Flame Failure Alarm Horn (Gas or Oil Only)
- Control Circuit and Power Fusing; U. V. Flame Detection
- Low Fire Start; Occupied Thermostat
- Rear Fan Failure Light – Double Fan Units Only
- Non-Fused Motor Disconnect Switch; Motor Starter and Overload Protection
- Main Electrical Panel (NEMA 1)
- Long Lasting Paint Finish; Hinged Access Door
- UL Listed; 1 Year Parts Warranty; Factory Tested

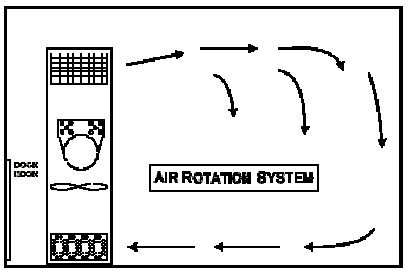
Available Optional Features

- Double Wall Cabinet Construction; Insulated Cabinet; Outdoor Construction
- Cooling is Available with Direct Expansion or Chilled Water Coils with Stainless Steel Drain Pan
- Heating is Available with Steam, Hot Water or Electric Coils
- Evaporative Cooling Systems
- Sound Reduction Package; Seismic Options
- Customized Condensation Control Packages
- Make-Up Air Assemblies; Make-Up Air On/Off Switch
- Make-Up Air Indicator Light; 24-Hour, 7-Day Clock
- Make-Up Air Damper Potentiometer; Motorized Inlet Dampers
- Unoccupied Thermostat; Smoke Detectors
- FM or IRI Manifolds; Heat Outlet Extensions
- Discharge Diffusers with Single or Double Deflection for Air Distribution Control
- Variety of Filtering Options; Access Platforms
- Field Start-up by Factory Technician
- UL Listed Flue System
- Chillers, Condensing Units
- Rigging and Installation Supervision

Johnson Air-Rotation®

AR Series ™





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Johnson Air-Rotation®

D Series ™

The "PureAIR" Series make-up air unit provides the clean air demanded by many of our customers by using indirect –fired heat. Capable of recirculating up to 100% return air, the "PureAIR" Series also reduces fuel costs.

The Total SOLUTION™

Johnson Air-Rotation® Systems D Series ™

100% Direct-Fired Space Heating Product

Johnson Air-Rotation® Systems, long considered an expert in the application, design, and manufacture of high quality HVAC Systems for large, open buildings offers a high capacity, space heating product with a low first-dollar equipment cost for our contractor and developer customers. Our "Dragon" Series is a 100% make-up air direct-fired space heater designed to capture cold air at its source and prevent it from migrating into the building. This unit is primarily installed above dock doors or at the source of building infiltration.

Dragon Benefits

- Low First Cost Solution
- Low Installed Cost Heating System
- High Temperature, Low Volume Air Concept Great at Keeping Dock Door Areas Toasty Warm
- Long equipment life
- Easy to maintain – Low maintenance cost
- 99.9% efficient burner
- ETL Certified product that meets ANSI Z83.4A-2001 standard
- Fresh Outside Air Ventilation Good for the building's occupants
- Perimeter-installed and easily mobile units make them a perfect solution for the developer or contractor

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Johnson Air-Rotation® Systems D Series ™

100% Direct-Fired Space Heating Product

Standard Features

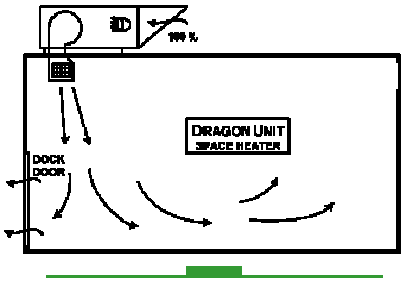
- Heating Capacities up to 2,800,000 BTUH
- Air Volume Capacities up to 17,000 CFM
- Thick Gauge Exterior, Aluminum Constructed Frame, Light Weight Units
- Weather Resistant Units with 2-Coat Paint Prime and Finish
- NEMA 5 Remote Control Panel; NEMA 3R Main Electrical Panel
- Variety of Unit Configurations in Both Horizontal or Vertical, Indoor or Outdoor
- Variety of Discharge Configurations
- 30:1 Burner Turndown Capability; Hi & Low Temperature Limit Switches
- Remote Burner Flame Safeguard Controls with Flame Reset Switch
- U.V. Flame Detection; Automatic Gas Modulation; Low Fire Start; Low Airflow Switch
- Non-Fused Motor Disconnect Switch; Control Circuit Fusing
- Motor Starter and Overload Protection
- Fan Bearings Rated to a Minimum of 100,000 Hours (L-10 Life)
- 2-Year Parts Warranty; Piped, Wired and Fully Tested at Factory

Available Optional Features

- Double Wall Construction; Insulated Unit
- Inlet Plenum or Hoods for Horizontal Models; Cabinet Plenums or Legs for Vertical Models
- Motorized Inlet or Supply Dampers; FM or IRI Manifolds
- Fused Motor Disconnect Switch; Motor Belt Guards
- Maxitrol Series 44 Space Temperature Controls with Remote Thermostat
- DFM Space Temperature Controls with Digital Display and Build-in Time Clock
- Two, Three or Four-Way Discharge Diffusers With Single or Double Deflection
- Flat or Pitched, Full or Duct Curb
- Heating is Available with Gas or Propane Only

Johnson Air-Rotation®

D Series ™



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Johnson Air-Rotation®

FF Series ™

The "PureAIR" Series make-up air unit provides the clean air demanded by many of our customers by using indirect –fired heat. Capable of recirculating up to 100% return air, the "PureAIR" Series also reduces fuel costs.

The Total SOLUTION™

Johnson Air-Rotation® Systems FF Series ™

100% Direct Fired Make-Up Air Heating System For Process Exhaust Applications

Johnson Air-Rotation® Systems, long considered an expert in the application, design, and manufacture of high quality HVAC Systems, offers a product solution to negative building pressure problems and make-up air needs for manufacturing and industrial buildings with process exhaust applications. Our new "FireFox" series is a high quality, direct-fired make-up heating system designed for applications in need of large amounts of make-up air.

FireFox Benefits

- Low First Cost Solution
- Low Installation Cost
- Highest Quality Make-up Air Heating & Cooling System
- Lower Break Motor Horsepower vs. Competition—Significant Fuel Savings to End User
- Long Equipment Life – Low Cost to Maintain
- 99.9% Efficient Burner, Lower Gas Operating Costs
- Great Product Use for Summer-Time Ventilation Purposes
- Large Variety of Vertical & Horizontal Unit Arrangements to Choose From
- ETL Certified Product that Meets ANSI Z83.4A-2001 Standard
- Indoor and Outdoor Applications

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Johnson Air-Rotation® Systems FF Series ™

100% Direct Fired Make-Up Air Heating System For Process Exhaust Applications

Standard Features

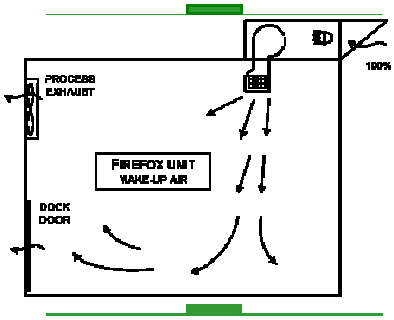
- Heating Capacities up to 18,200,000 BTUH
- Air Volumes From up to 130,000 CFM
- Thick Gauge Exterior, Aluminum Constructed Frame, Light Weight Units
- Weather Resistant Units with 2-Coat Paint Prime and Finish
- NEMA 5 Remote Control Panel; NEMA 3R Main Electrical Panel
- Variety of Unit Configurations: Horizontal Roof or Thru Wall-Mount, Outdoor Vertical-Mount, Indoor Suspended, Horizontal Mezzanine, etc.
- Variety of Discharge Configurations
- 30:1 Burner Turndown Capability; Hi and Low Temperature Limit Switches
- Remote Burner Flame Safeguard Controls with Flame Reset Switch
- U. V. Flame Detection ; Automatic Gas Modulation; Low Fire Start; Low Airflow Switch
- Non-Fused Motor Disconnect Switch; Motor Starter and Overload Protection; Control Circuit Fusing
- Fan Bearings Rated to a Minimum of 100,000 Hours (L-10 Life)
- Piped, Wired and Factory Tested
- 2 Year Parts Warranty

Available Optional Features

- Double Wall Cabinet Construction; Insulated Unit
- Inlet Plenum or Hoods for Horizontal Models
- Cabinet Plenums or Legs for Vertical Models
- Motorized Inlet or Supply Dampers; FM or IRI Manifolds
- Internal or External Vibration Isolation; Motor Belt Guards
- Fused Motor Disconnect Switch
- Maxitrol Series 14 Discharge Temperature Controls with Remote Temperature Dial (Available in Most Models)
- Maxitrol Series 44 Space Temperature Controls with Remote Thermostat
- DFM Space Temperature Controls with Digital Display and Built-in Time Clock
- Two, Three or Four-Way Discharge Diffusers with Single or Double Deflection
- Variety of Filtering Options; Spray and Bake Paint Finishing Configurations
- Flat or Pitched, Full or Duct Curb
- DX, Chilled Water, or Evaporative Cooling Coils/Media
- Heating is Available with Gas, Propane, Steam, Hot Water or Electric Coils

Johnson Air-Rotation®

FF Series ™



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Johnson Air-Rotation®

PR Series ™

The "PureAIR" Series make-up air unit provides the clean air demanded by many of our customers by using indirect –fired heat. Capable of recirculating up to 100% return air, the "PureAIR" Series also reduces fuel costs.

The Total SOLUTION™

Johnson Air-Rotation® Systems PR Series ™

80/20 Pressurizing/Re-Circulating Direct-Fired Heating and Cooling Products

Johnson Air-Rotation® Systems, long considered an expert in the application, design, and manufacture of high quality HVAC Systems for warehouses, distribution centers and manufacturing facilities, offers a heating and/or cooling system that combines the benefits of building pressurization control and air re-circulating capabilities all in one unit. Our PR Series ™ Pressurization/Re-Circulation product, available in a fixed or modulating control operation, can re-circulate between 0 and 80% of the inside conditioned air in a building space while pressure-controlling the space and providing between 20 and 100% fresh, outside air. By combining building pressurization and air re-circulation in one product, Johnson's PR Series ™ heating and/or cooling product prevents both unconditioned outside air from migrating into the space while continuously re-circulating the inside conditioned air to provide maximum comfort and higher efficiency then 100% make-up air alternatives.

Pressurization/Re-Circulation Benefits

- Low First Cost Solution
- Low Installed Cost Heating or Cooling System
- Highest Quality 80/20 Direct-Fired Make-up Air Heating & Cooling System
- Lower Brake Motor Horse Power vs. Competition - Significant Fuel Savings to End User
- An Excellent Pressurization Building Control HVAC Product that Prevents Unwanted Unconditioned Outside Air
- Long Equipment Life; Easy to Maintain—Low Maintenance Cost
- 99.9% Efficient Burner—Tremendous Fuel Savings Compared to Other Direct-Fired Space Heating Systems
- ETL Certified Product that Meets ANSI Z83.18A-2001 Standard
- Good Product Use for Summer-Time Ventilation Purposes
- Large Variety of Vertical and Horizontal Unit Arrangements to Choose From
- Indoor and Outdoor Applications

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Johnson Air-Rotation® Systems PR Series ™

Pressurization/Re-Circulating Direct-Fired Heating Product

Standard Features

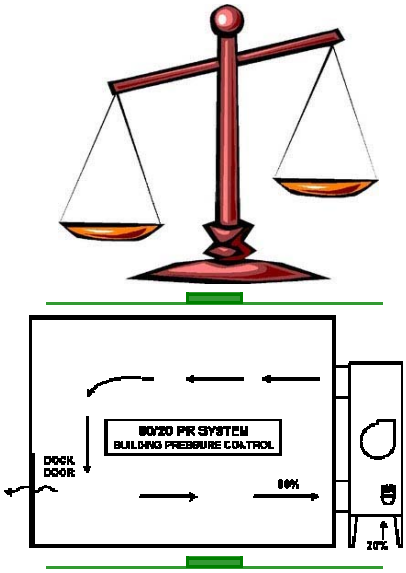
- Heating Capacities up to 16,800,000 BTU's
- Air Volumes up to 120,000 CFM
- Thick Gauge, Aluminum Constructed Frame, Light Weight Units
- Weather Resistant Units with 2-Coat Paint Prime and Finish
- NEMA 5 Remote Control Panel; NEMA 3R Main Electrical Panel
- Variety of Unit Configurations in Both Horizontal or Vertical , Indoor or Outdoor
- Variety of Discharge Configurations
- 30:1 Burner Turndown Capability; Hi and Low Temperature Limit Switches; Control Circuit Fusing
- Remote Burner Flame Safeguard Controls with Flame Reset Switch
- U. V. Flame Detection ; Automatic Gas Modulation; Low Fire Start; Low Airflow Switch
- Non-Fused Motor Disconnect Switch; Motor Starter and Overload Protection
- Fan Bearings Rated to a Minimum of 100,000 Hours (L-10 Life)
- Piped, Wired and Factory Tested
- 2-Year Parts Warranty

Available Optional Features

- 80/20 Modulating, Fixed or Two Position Return Air Models
- Double Wall Cabinet Construction; Insulated Unit
- Inlet Plenum or Hoods for Horizontal Models
- Cabinet Plenums or Legs for Vertical Models
- Motorized Inlet or Supply Dampers; FM or IRI Manifolds
- Motor Belt Guards; Fused Motor Disconnect Switch
- Maxitrol Series 44 Space Temperature Controls with Remote Thermostat
- Maxitrol Series 14 Discharge Temperature Controls with Remote Temperature Dial
- (Available in Most Models)
- DFM Space Temperature Controls with Digital Display and Built-in Time Clock
- Two, Three or Four-Way Discharge Diffusers with Single or Double Deflection
- Cooling is Available with Direct Expansion or Chilled Water Coils
- Heating is Available with Gas or Propane
- Evaporative Cooling Systems
- Internal or External Vibration Isolation
- Variety of Filtering Options; Spray and Bake Paint Finishing Configurations
- Flat or Pitched, Full or Duct Curb; Access Platforms

Johnson Air-Rotation®

PR Series ™



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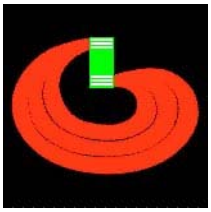
Air Condition-



AR Series ™

FF Series ™

80/20 PR Series ™

The Total SOLUTION™

Johnson Air-Rotation® Air Conditioning Systems

Cooling with Indirect and Direct Fired Products

Chilled water coils, direct expansion coils and evaporative cooling media, for air conditioning large, open buildings is an option on all Johnson heating and make-up air systems.

AR Series ™

Indirect Fired Air-Rotation® Systems are the most economical way to air condition a large, open building—lowest first cost and lowest operating cost. This system can reduce typical loads up to 25% with each unit's capacity up to 500 Tons. Used by many customers ranging from General Motors to Gallo Wines.

80/20 PR Series ™

In applications using Pressurization/ Re-Circulating Direct-Fired Systems, air conditioning is also available. Humidity and temperature control is accomplished in one package.

FF Series ™

In 100% Direct Fired Make-Up Air Systems, removing humidity before it reaches the building is very important for moisture control.

Contact Johnson Air-Rotation® Systems for more information on air conditioning options and how we can apply it for your building.

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D Series - Product Selection Guide

D Series

An HVAC System that adequately balances the desired make-up air conditions in a large, ope building application for warehouses, distribution centers or manufacturing facilities, and also re-circulates air to provide lower operating costs than 100% make-up air alternatives.

UNIT CFM	Max MBH		MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN											
	Nat. Gas	LP Gas		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"	
				FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP
2,000	289	221	D30	9-7	1.09	9-7	1.18	9-7	1.25	9-7	1.38	10-5	2.40	10-5	2.65
2,500	361	277		10	1.10	10	1.25	10	1.41	9-7	2.15	9-7	2.26	9-7	2.51
3,000	375	330		10	1.50	10	1.70	10	1.85	10	2.10	10	2.29	CF	
3,500	375	330		10	2.10	10	2.30	10	2.50	10	2.70	CF		CF	
3,500	450	375	D100	12	1.4	10	2.3	10	2.5	10	2.7	10	2.9	10 HD	3.5
4,500	450	375		12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	450	375		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
4,500	651	499	D200	12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	796	610		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
6,500	940	720		15	3.6	15	4.0	15	4.3	15	4.7	15-10	5.8	15-10	6.2
6,000	868	665	D300	15	3.0	15	3.4	15	3.7	15-10	4.5	15-10	4.8	CF	
8,000	1,125	887		18	3.5	18	3.8	15 HD	6.5	15HD	6.9	15 HD	7.4	15 HD	8.4
9,000	1,125	998		18	4.8	18 HD	5.4	18 HD	5.8	18 HD	6.2	18 HD	6.6	18 HD	7.5
10,000	1,447	1,109	D400	20	4.0	20	4.5	20	5.1	20	5.6	18	7.3	18	8.3
12,000	1,737	1,331		20	5.9	20	6.4	20	6.9	20	7.5	20	8.2	18	11.8
14,000	2,025	1,550		20	8.4	20	9.0	20	9.5	20	10.3	20	11.0	20	12.2
13,000	1,882	1,442	D500	22	5.6	22	6.1	22	6.7	22	7.3	22	8.1	20	10.8
15,000	2,171	1,663		22	7.4	22	8.2	22	8.9	22	9.5	22	10.4	22	11.8
17,000	2,461	1,885		22	9.8	22	10.8	22	11.5	22	12.3	22	13.0	22	14.6
20,000	2,800	2,215		22	14.3	22	15.6	22	16.5	22	17.2	22	18.2	22	20.0

Maximum MBH Listed is limited to the lesser of the MBH shown or temperature rise of 140°F for natural gas and 100°F for propane (LP) gas.

Capacity based on -10°F entering air temperature and 750 foot elevation.

Above table is subject to change without notice. Consult factory (CF) for specific applications and as noted

Static Pressure Drops for Unit and Options	*Static*
Description	in. w.c.
Base Unit (Cabinet, Burner)	0.90
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Alum. Mesh Filters, CLEAN)	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single Deflection Diffuser (Horizontal Blades)	0.25
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.35
4-Way Single Deflection Diffuser (Horizontal Blades)	0.20
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.25
Side Access Filter Section - 1" Aluminum Mesh (CLEAN)	0.10

Filters should be changed at 0.60" w.c.

Add any external static losses from ductwork or other factors must be added to determine Total Static Pressure.

Manifold Sizing			
Gas Manifold Size	Maximum Capacity	Min. Pres. Required at Max. Capacity	Max. Inlet Gas Pressure
Diameter	MBH	in. w.c.	
1/2"	235	8	14 in.
3/4"	550	9	14 in.
1"	1,200	13	1 PSI.
1-1/4"	2,100	14	5 PSI.
1-1/2"	2,700	17	5 PSI.
2"	6,000	22	5 PSI.

Note: Above noted for standard manifolds. Low pressure options are available, please consult factory.

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FF Series Product Selection Guide

FF Series

An HVAC System that adequately balances the desired make-up air conditions in a large, ope building application for warehouses, distribution centers or manufacturing facilities, and also re-circulates air to provide lower operating costs than 100% make-up air

STANDARD UNIT WITH FORWARD CURVE DWDI FAN

UNIT CFM	Max MBH		MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN											
	Nat. Gas	LP Gas		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"	
				FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP
800	109	85	FF17	10-5	0.25	10-5	0.32	10-5	0.35	CF		CF		CF	
1,250	170	133		10-5	0.68	10-5	0.75	10-5	0.82	10-5	0.87	10-5	1.00	10-5	1.05
1,750	235	185		9-7	0.75	9-7	0.86	10-5	1.53	10-5	1.63	10-5	1.91	10-5	1.89
2,000	273	212	FF30	9-7	1.09	9-7	1.18	9-7	1.25	9-7	1.38	10-5	2.40	10-5	2.65
2,500	341	265		10	1.10	10	1.25	10	1.41	9-7	2.15	9-7	2.26	9-7	2.51
3,000	375	319		10	1.50	10	1.70	10	1.85	10	2.10	10	2.29	CF	
3,500	375	330		10	2.10	10	2.30	10	2.50	10	2.70	CF		CF	
3,500	450	372	FF100	12	1.4	10	2.3	10	2.5	10	2.7	10	2.9	10 HD	3.5
4,500	450	375		12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	450	375		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
4,500	615	478	FF200	12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	752	584		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
6,500	888	691		15	3.6	15	4.0	15	4.3	15	4.7	15-10	5.8	15-10	6.2
6,000	820	638	FF300	15	3.0	15	3.4	15	3.7	15-10	4.5	15-10	4.8	CF	
8,000	1,094	856		18	3.5	18	3.8	15 HD	6.5	15HD	6.9	15 HD	7.4	15 HD	8.4
9,000	1,125	950		18	4.8	18 HD	5.4	18 HD	5.8	18 HD	6.2	18 HD	6.6	18 HD	7.5
10,000	1,367	1,063	FF400	20	4.0	20	4.5	20	5.1	20	5.6	18	7.3	18	8.3
12,000	1,641	1,270		20	5.9	20	6.4	20	6.9	20	7.5	20	8.2	18	11.8
14,000	1,914	1,488		20	8.4	20	9.0	20	9.5	20	10.3	20	11.0	20	12.2
13,000	1,777	1,381	FF500	22	5.6	22	6.1	22	6.7	22	7.3	22	8.1	20	10.8
15,000	2,051	1,594		22	7.4	22	8.2	22	8.9	22	9.5	22	10.4	22	11.8
17,000	2,324	1,807		22	9.8	22	10.8	22	11.5	22	12.3	22	13.0	22	14.6
20,000	2,735	2,125		22	14.3	22	15.6	22	16.5	22	17.2	22	18.2	22	20.0
18,000	2,462	1,914	FF600	25	7.7	25	8.6	25	9.5	25	10.5	25	11.5	25	13.4
21,000	2,871	2,232		25	10.8	25	11.7	25	12.7	25	13.6	25	14.7	25	17.1
23,000	3,145	2,445		25	13.2	25	14.2	25	15.4	25	16.3	25	17.6	25	19.8
25,000	3,418	2,659		25	16.2	25	17.3	25	18.3	25	19.2	25	20.7	25	23.1
26,000	3,555	2,763	FF700	30	10.6	30	11.9	30	13.1	30	14.2	30	15.7	30.0	18.2
30,000	4,102	3,189		30	14.1	30	15.7	30	17.1	30	18.4	30	19.8	30	22.8
35,000	4,786	3,725		30	19.6	30	21.4	30	23.0	30	24.7	30	26.4	30	29.8
34,000	4,649	3,614	FF800	33	16.2	33	17.7	33	19.3	33	21.1	30	25.0	30	28.3
37,000	5,059	3,933		33	19.5	33	21.3	33	23.0	33	24.5	30	29.5	30	33.4
40,000	5,970	4,252		33	23.3	33	25.4	33	27.1	33	28.7	33	31.3	30	38.8
45,000	6,000	4,784		33	30.6	33	32.9	33	35.0	33	36.5	33	39.0	30	48.1
50,000	6,000	5,300		33	38.9	33	41.7	33	44.3	33	46.7	33	48.9	CF	

Maximum MBH is limited to the lesser of the MBH shown or temp rise of 130°F for natural gas and 95°F for propane (LP) gas.

Capacity is based on -10°F entering air temperatire and 750 feet elecation.

Above table is subject to change without notice. Consult factory (CF) for specific applications and as noted

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FF Series Product Selection Guide

PREMIUM UNIT WITH AIRFOIL PLENUM FAN

UNIT CFM	Max MBH	MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN															
			1.25"		1.50"		1.75"		2.00"		2.50"		3.00"		3.50"		4.00"	
			HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP
4,000	531	FF18-3	2	1.4	2	1.6	2	1.8	3	2.0	3	2.5	3	2.9	5	3.4	5	3.9
6,000	795		3	2.7	3	3.0	5	3.3	5	3.6	5	4.2	5	4.8	7.5	5.4	7.5	6.1
6,000	795	FF20-3	3	2.4	3	2.7	3	3.0	5	3.3	5	3.9	5	4.5	7.5	5.2	7.5	5.8
8,000	1,061		5	4.0	5	4.4	5	4.8	7.5	5.1	7.5	5.9	7.5	6.7	7.5	7.5	10	8.4
7,000	928	FF27-3 FF27-4	2	2.0	3	2.4	3	2.8	5	3.2	N/A		N/A		N/A		N/A	
10,000	1,326		5	3.3	5	3.8	5	4.2	5	4.7	7.5	5.7	7.5	6.7	10	7.8	10	8.9
13,000	1,724		7.5	5.1	7.5	5.7	7.5	6.3	7.5	6.9	10	8.1	10	9.3	15	10.5	15	11.8
13,000	1,724	FF30-3 FF30-4	5	4.4	5	5.0	7.5	5.6	7.5	6.2	7.5	7.5	10	8.8	15	10.1	15	11.5
15,000	1,984		7.5	5.6	7.5	6.3	7.5	6.9	10	7.6	10	9.0	15	10.5	15	11.9	15	13.4
17,000	2,254		7.5	7.0	10	7.8	10	8.5	10	9.3	15	10.8	15	12.4	15	14.0	20	15.6
17,000	2,254	FF36-3 FF36-4	7.5	5.5	7.5	6.3	7.5	7.1	10	7.9	10	9.6	15	11.4	15	13.2	20	15.1
19,500	2,586		7.5	7.0	10	7.8	10	8.6	10	9.5	15	11.3	15	13.3	20	15.3	20	17.3
22,000	2,918		10	8.7	10	9.6	15	10.5	15	11.5	15	13.5	20	15.5	20	17.6	20	19.8
22,000	2,918	FF40-3 FF40-4	8	7.4	10	8.4	10	9.4	15	10.4	15	12.5	15	14.8	20	17.0	20	19.4
26,000	3,448		10	10.0	15	11.1	15	12.2	15	13.3	20	15.7	20	18.1	25	20.6	25	23.3
30,000	3,979		15	13.4	15	14.6	20	15.7	20	17.0	20	19.5	25	22.2	25	25.0	30	27.8
30,000	3,979	FF44-3 FF44-4	15	10.9	15	12.2	15	13.5	15	14.9	20	17.6	25	20.5	25	23.5	30	26.6
32,500	4,310		15	12.8	15	14.1	20	15.4	20	16.9	20	19.8	25	22.8	30	25.9	30	29.2
35,000	4,642		15	14.8	20	16.2	20	17.6	20	19.1	25	22.1	30	25.2	30	28.6	40	31.9
35,000	4,642	FF49-3 FF49-4	15	12.4	15	13.9	20	15.4	20	17.0	25	20.2	25	23.7	30	27.3	40	31.0
37,500	4,973		15	14.0	20	15.6	20	17.2	20	18.9	25	22.3	30	25.8	30	29.5	40	33.4
40,000	5,305		20	16.0	20	17.5	20	19.2	25	20.9	25	24.5	30	28.2	40	32.0	40	36.0
40,000	5,305	FF54-3 FF54-4	15	13.4	20	15.2	20	17.0	20	18.8	25	22.7	30	26.7	40	30.9	40	35.3
45,000	5,968		20	16.5	20	18.4	25	20.3	25	22.3	30	26.5	40	30.7	40	35.3	40	39.9
50,000	6,631		25	20.3	25	22.2	25	24.3	30	26.5	40	30.9	40	35.5	50	40.1	50	45.1
50,000	6,631	FF60-3 FF60-4	20	17.0	20	19.2	25	21.4	25	23.7	30	28.4	40	33.5	40	38.7	50	44.1
55,000	7,295		25	20.1	25	22.4	25	24.8	30	27.3	40	32.3	40	37.5	50	43.1	50	48.7
60,000	7,958		25	23.9	30	26.2	30	28.7	40	31.3	40	36.6	50	42.2	50	47.8	60	53.8
60,000	7,958	FF66-3 FF66-4	25	20.2	25	22.8	30	25.5	30	28.3	40	34.0	50	40.1	50	46.4	60	52.9
65,000	8,621		25	23.4	30	26.0	30	28.9	40	31.8	40	37.8	50	44.1	60	50.7	60	57.9
70,000	9,284		30	26.8	30	29.6	40	32.6	40	35.7	50	42.0	50	48.5	60	55.3	75	62.4
75,000	9,947		40	30.8	40	33.6	40	36.8	40	40.0	50	46.5	60	53.4	75	60.3	75	67.7
75,000	9,947	FF73-3 FF73-4	30	25.6	30	28.9	40	32.2	40	35.7	50	42.7	60	50.3	60	58.0	75	66.0
80,000	10,610		30	28.8	40	32.2	40	35.6	40	39.2	50	46.6	60	54.3	75	62.4	75	70.7
85,000	11,274		40	32.2	40	35.7	40	39.4	50	43.1	60	50.8	60	58.6	75	67.0	100	75.6
85,000	11,274	FF80-3 FF80-4	30	27.5	40	31.3	40	35.2	40	39.1	50	47.7	60	56.4	75	65.5	75	74.9
92,500	12,268		40	31.8	40	35.8	40	39.9	50	44.1	60	52.8	75	62.0	75	71.6	100	81.4
105,000	13,926		50	40.3	50	44.4	50	48.9	60	53.5	75	62.9	75	72.8	100	82.9	100	93.5
95,000	12,600	FF89-3 FF89-4	30	29.3	40	33.7	40	38.1	50	42.8	60	52.6	75	62.7	75	73.7	100	84.3
110,000	14,590		40	37.2	50	41.9	50	46.9	60	51.9	75	62.4	75	73.5	100	84.9	100	96.7
130,000	17,247		60	50.7	60	55.8	75	61.3	75	67.0	100	78.6	100	90.7	125	103.1	125	116.1

N/A = Not Available Underlined selections require a Class II fan All units rated at 100% outside air.

Model Designation: *-3 includes a welded casing, *-4 includes upgraded frame construction.

Capacity shown is based on -10°F entering air temperature and 750 feet elevation.

The Maximum MBH shown is for Natural Gas. Temperature rise is limited to 125°F for natural gas and 95° for LP.

Above table is subject to change without notice. Consult factory for specific applications .

FF Series

An HVAC System that adequately balances the desired make-up air conditions in a large, ope building application for warehouses, distribution centers or manufacturing facilities, and also re-circulates air to provide lower operating costs than 100% make-up air

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FF Series Product Selection Guide

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The Total SOLUTION™

STANDARD UNIT WITH FORWARD CURVE DWDI FAN	
Static Pressure Drops for Unit and Options	in. w.c.
Base Unit (Cabinet, Burner)	0.90
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Alum. Mesh Filters, CLEAN)	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single Deflection Diffuser (Horizontal Blades)	0.25
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.35
4-Way Single Deflection Diffuser (Horizontal Blades)	0.20
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.25
Side Access Filter Section - 1" Aluminum Mesh (CLEAN)	0.10
Filter-Mix Box - 2" 30% Pleated (CLEAN)	0.20
Filter-Mix Box - 1" Aluminum Mesh (CLEAN)	0.05
Filter-Mix Box - 2" Aluminum Mesh (CLEAN)	0.10
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
Typical CW or DX Coil Box (Estimate)	0.60 - 0.90
Typical Steam or HW Coil Box (Estimate)	0.30 - 0.40

PREMIUM UNIT WITH AIRFOIL PLENUM FAN (FF*-3 & 4)	
Static Pressure Drops for Base Cabinets	in. w.c.
Horizontal 100% OA	0.90
Vertical 100% OA	0.95
Static Pressure Drops for Filters	in. w.c.
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.30
Side Access Filter Section - 2" Aluminum Mesh (CLEAN)	0.15
Side Access Filter Section - 1-1/2" Dust-Lock (CLEAN)	0.20
Filter Mix-Box - 2" 30% Pleated (CLEAN)	0.30
Filter Mix-Box - 2" Aluminum Mesh (CLEAN)	0.15
Filter Mix-Box - 1-1/2" Dust-Lock (CLEAN)	0.20
Static Pressure Drops for Options	in. w.c.
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 2" Alum. Mesh Filters, CLEAN)	0.15
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.20
3-Way Single Deflection Diffuser (Horizontal Blades)	0.20
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
4-Way Single Deflection Diffuser (Horizontal Blades)	0.10
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.15
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
CW or DX Coil Box (Estimate)	0.60 - 0.90
Steam or HW Coil Box (Estimate)	0.30 - 0.40
Static Pressure Drops for Discharge Configurations	in. w.c.
Axial Discharge w/ 3'-0" of Straight Duct (Minimum)	0.15
Axial Discharge w/o 3'-0" of Duct or a Plenum	0.20
Radial Discharge w/ 3'-0" of Duct or a Plenum (Minimum)	0.00
Radial Discharge w/o 3'-0" of Duct or a Plenum	0.10

Filters should be changed at 0.60" w.c.

Any external static losses from ductwork or other factors must be added to determine Total Static Pressure

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PR Series Product Selection Guide

PR Series ™

An HVAC System that adequately balances the desired make-up air conditions in a large, ope building application for warehouses, distribution centers or manufacturing facilities, and also re-circulates air to provide lower operating costs than 100% make-up air alternatives.

STANDARD UNIT WITH FORWARD CURVE DWDI FAN

UNIT CFM	Max MBH		MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN											
	Nat. Gas	LP Gas		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"	
				FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP
2,000	221	212	PR30	9-7	1.09	9-7	1.18	9-7	1.25	9-7	1.38	10-5	2.40	10-5	2.65
2,500	277	265		10	1.10	10	1.25	10	1.41	9-7	2.15	9-7	2.26	9-7	2.51
3,000	330	315		10	1.50	10	1.70	10	1.85	10	2.10	10	2.29	CF	
3,500	330	315		10	2.10	10	2.30	10	2.50	10	2.70	CF		CF	
3,500	375	355	PR100	12	1.4	10	2.3	10	2.5	10	2.7	10	2.9	10 HD	3.5
4,500	375	355		12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	375	355		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
4,500	499	478	PR200	12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	610	584		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
6,500	720	690		15	3.6	15	4.0	15	4.3	15	4.7	15-10	5.8	15-10	6.2
6,000	665	638	PR300	15	3.0	15	3.4	15	3.7	15-10	4.5	15-10	4.8	CF	
8,000	887	850		18	3.5	18	3.8	15 HD	6.5	15HD	6.9	15 HD	7.4	15 HD	8.4
9,000	998	957		18	4.8	18 HD	5.4	18 HD	5.8	18 HD	6.2	18 HD	6.6	18 HD	7.5
10,000	1,109	1,063	PR400	20	4.0	20	4.5	20	5.1	20	5.6	18	7.3	18	8.3
12,000	1,331	1,276		20	5.9	20	6.4	20	6.9	20	7.5	20	8.2	18	11.8
14,000	1,550	1,485		20	8.4	20	9.0	20	9.5	20	10.3	20	11.0	20	12.2
13,000	1,442	1,382	PR500	22	5.6	22	6.1	22	6.7	22	7.3	22	8.1	20	10.8
15,000	1,660	1,595		22	7.4	22	8.2	22	8.9	22	9.5	22	10.4	22	11.8
17,000	1,885	1,807		22	9.8	22	10.8	22	11.5	22	12.3	22	13.0	22	14.6
20,000	2,215	2,125		22	14.3	22	15.6	22	16.5	22	17.2	22	18.2	22	20.0
18,000	1,996	1,914	PR600	25	7.7	25	8.6	25	9.5	25	10.5	25	11.5	25	13.4
21,000	2,329	2,233		25	10.8	25	11.7	25	12.7	25	13.6	25	14.7	25	17.1
23,000	2,550	2,446		25	13.2	25	14.2	25	15.4	25	16.3	25	17.6	25	19.8
25,000	2,770	2,655		25	16.2	25	17.3	25	18.3	25	19.2	25	20.7	25	23.1
26,000	2,883	2,765	PR700	30	10.6	30	11.9	30	13.1	30	14.2	30	15.7	30.0	18.2
30,000	3,327	3,190		30	14.1	30	15.7	30	17.1	30	18.4	30	19.8	30	22.8
35,000	3,880	3,720		30	19.6	30	21.4	30	23.0	30	24.7	30	26.4	30	29.8
34,000	3,770	3,615	PR800	33	16.2	33	17.7	33	19.3	33	21.1	30	25.0	30	28.3
37,000	4,104	3,935		33	19.5	33	21.3	33	23.0	33	24.5	30	29.5	30	33.4
40,000	4,436	4,254		33	23.3	33	25.4	33	27.1	33	28.7	33	31.3	30	38.8
45,000	4,991	4,875		33	30.6	33	32.9	33	35.0	33	36.5	33	39.0	30	48.1

Maximum MBH on recirculating units limited to the lesser of the MBH shown or temperature rise of 100°F for natural gas and 95°F for propane (LP) gas.

Capacity is based on -10°F entering air temperature and 750 feet elevation.

Above table is subject to change without notice. Concult factory (CF) for specific applications and as noted.

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PR Series Product Selection Guide

PREMIUM UNIT WITH AIRFOIL PLENUM FAN

UNIT CFM	Max MBH 80/20	MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN															
			1.25"		1.50"		1.75"		2.00"		2.50"		3.00"		3.50"		4.00"	
			HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP
4,000	443	PR18-3	2	1.4	2	1.6	2	1.8	3	2.0	3	2.5	3	2.9	5	3.4	5	3.9
6,000	665		3	2.7	3	3.0	5	3.3	5	3.6	5	4.2	5	4.8	7.5	5.4	7.5	6.1
6,000	665	PR20-3	3	2.4	3	2.7	3	3.0	5	3.3	5	3.9	5	4.5	7.5	5.2	7.5	5.8
8,000	887		5	4.0	5	4.4	5	4.8	7.5	5.1	7.5	5.9	7.5	6.7	7.5	7.5	10	8.4
7,000	776	PR27-3 PR27-4	2	2.0	3	2.4	3	2.8	5	3.2	N/A		N/A		N/A		N/A	
10,000	1,109		5	3.3	5	3.8	5	4.2	5	4.7	7.5	5.7	7.5	6.7	10	7.8	10	8.9
13,000	1,442		7.5	5.1	7.5	5.7	7.5	6.3	7.5	6.9	10	8.1	10	9.3	15	10.5	15	11.8
13,000	1,442	PR30-3 PR30-4	5	4.4	5	5.0	7.5	5.6	7.5	6.2	7.5	7.5	10	8.8	15	10.1	15	11.5
15,000	1,663		7.5	5.6	7.5	6.3	7.5	6.9	10	7.6	10	9.0	15	10.5	15	11.9	15	13.4
17,000	1,885		7.5	7.0	10	7.8	10	8.5	10	9.3	15	10.8	15	12.4	15	14.0	20	15.6
17,000	1,885	PR36-3 PR36-4	7.5	5.5	7.5	6.3	7.5	7.1	10	7.9	10	9.6	15	11.4	15	13.2	20	15.1
19,500	2,163		7.5	7.0	10	7.8	10	8.6	10	9.5	15	11.3	15	13.3	20	15.3	20	17.3
22,000	2,440		10	8.7	10	9.6	15	10.5	15	11.5	15	13.5	20	15.5	20	17.6	20	19.8
22,000	2,440	PR40-3 PR40-4	8	7.4	10	8.4	10	9.4	15	10.4	15	12.5	15	14.8	20	17.0	20	19.4
26,000	2,884		10	10.0	15	11.1	15	12.2	15	13.3	20	15.7	20	18.1	25	20.6	25	23.3
30,000	3,327		15	13.4	15	14.6	20	15.7	20	17.0	20	19.5	25	22.2	25	25.0	30	27.8
30,000	3,327	PR44-3 PR44-4	15	10.9	15	12.2	15	13.5	15	14.9	20	17.6	25	20.5	25	23.5	30	26.6
32,500	3,605		15	12.8	15	14.1	20	15.4	20	16.9	20	19.8	25	22.8	30	25.9	30	29.2
35,000	3,882		15	14.8	20	16.2	20	17.6	20	19.1	25	22.1	30	25.2	30	28.6	40	31.9
35,000	3,882	PR49-3 PR49-4	15	12.4	15	13.9	20	15.4	20	17.0	25	20.2	25	23.7	30	27.3	40	31.0
37,500	4,159		15	14.0	20	15.6	20	17.2	20	18.9	25	22.3	30	25.8	30	29.5	40	33.4
40,000	4,437		20	16.0	20	17.5	20	19.2	25	20.9	25	24.5	30	28.2	40	32.0	40	36.0
40,000	4,437	PR54-3 PR54-4	15	13.4	20	15.2	20	17.0	20	18.8	25	22.7	30	26.7	40	30.9	40	35.3
45,000	4,991		20	16.5	20	18.4	25	20.3	25	22.3	30	26.5	40	30.7	40	35.3	40	39.9
50,000	5,546		25	20.3	25	22.2	25	24.3	30	26.5	40	30.9	40	35.5	50	40.1	50	45.1
50,000	5,546	PR60-3 PR60-4	20	17.0	20	19.2	25	21.4	25	23.7	30	28.4	40	33.5	40	38.7	50	44.1
55,000	6,161		25	20.1	25	22.4	25	24.8	30	27.3	40	32.3	40	37.5	50	43.1	50	48.7
60,000	6,655		25	23.9	30	26.2	30	28.7	40	31.3	40	36.6	50	42.2	50	47.8	60	53.8
60,000	6,655	PR66-3 PR66-4	25	20.2	25	22.8	30	25.5	30	28.3	40	34.0	50	40.1	50	46.4	60	52.9
65,000	7,210		25	23.4	30	26.0	30	28.9	40	31.8	40	37.8	50	44.1	60	50.7	60	57.9
70,000	7,765		30	26.8	30	29.6	40	32.6	40	35.7	50	42.0	50	48.5	60	55.3	75	62.4
75,000	8,319		40	30.8	40	33.6	40	36.8	40	40.0	50	46.5	60	53.4	75	60.3	75	67.7
75,000	8,319	PR73-3 PR73-4	30	25.6	30	28.9	40	32.2	40	35.7	50	42.7	60	50.3	60	58.0	75	66.0
80,000	8,874		30	28.8	40	32.2	40	35.6	40	39.2	50	46.6	60	54.3	75	62.4	75	70.7
85,000	9,429		40	32.2	40	35.7	40	39.4	50	43.1	60	50.8	60	58.6	75	67.0	100	75.6
85,000	9,429	PR80-3 PR80-4	30	27.5	40	31.3	40	35.2	40	39.1	50	47.7	60	56.4	75	65.5	75	74.9
92,500	10,261		40	31.8	40	35.8	40	39.9	50	44.1	60	52.8	75	62.0	75	71.6	100	81.4
100,000	11,093		40	36.6	50	40.8	50	45.1	50	49.5	60	58.7	75	68.2	100	78.2	100	88.5
95,000	10,538	PR89-3 PR89-4	30	29.3	40	33.7	40	38.1	50	42.8	60	52.6	75	62.7	75	73.7	100	84.3
110,000	12,202		40	37.2	50	41.9	50	46.9	60	51.9	75	62.4	75	73.5	100	84.9	100	96.7
120,000	13,311		50	43.4	50	48.4	60	53.7	60	59.0	75	70.1	100	81.5	100	93.6	125	106.0

N/A = Not Available Underlined selections require a Class II fan

Model Designation: *-3 includes a welded casing, *-4 includes upgraded frame construction

Capacity shown is based on -10°F entering air temperature and 750 feet elevation.

The Maximum MBH shown is for Natural Gas. Temperature rise is limited to 100°F for natural gas and 90° for LP.

Above table is subject to change without notice. Consult factory for specific applications

PR Series ™

An HVAC System that adequately balances the desired make-up air conditions in a large, ope building application for warehouses, distribution centers or manufacturing facilities, and also re-circulates air to provide lower operating costs than 100% make-up air alternatives.

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STANDARD UNIT WITH FORWARD CURVE DWDI FAN	
Static Pressure Drops for Unit and Options	in. w.c.
Base 80/20 Unit (Cabinet, Burner)	1.05
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Alum. Mesh Filters, CLEAN)	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single Deflection Diffuser (Horizontal Blades)	0.25
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.35
4-Way Single Deflection Diffuser (Horizontal Blades)	0.20
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.25
Side Access Filter Section - 1" Aluminum Mesh (CLEAN)	0.10
Filter-Mix Box - 2" 30% Pleated (CLEAN)	0.20
Filter-Mix Box - 1" Aluminum Mesh (CLEAN)	0.05
Filter-Mix Box - 2" Aluminum Mesh (CLEAN)	0.10
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
Typical CW or DX Coil Box (Estimate)	0.60 - 0.90
Typical Steam or HW Coil Box (Estimate)	0.30 - 0.40

PREMIUM UNIT WITH AIRFOIL PLENUM FAN (PR*-3 & 4)	
Static Pressure Drops for Base Cabinets	in. w.c.
Horizontal 80/20 Modulating	1.05
Vertical 80/20 Modulating	1.10
Static Pressure Drops for Filters	in. w.c.
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.30
Side Access Filter Section - 2" Aluminum Mesh (CLEAN)	0.15
Side Access Filter Section - 1-1/2" Dust-Lock (CLEAN)	0.20
Filter Mix-Box - 2" 30% Pleated (CLEAN)	0.30
Filter Mix-Box - 2" Aluminum Mesh (CLEAN)	0.15
Filter Mix-Box - 1-1/2" Dust-Lock (CLEAN)	0.20
Static Pressure Drops for Options	in. w.c.
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 2" Alum. Mesh Filters, CLEAN)	0.15
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.20
3-Way Single Deflection Diffuser (Horizontal Blades)	0.20
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
4-Way Single Deflection Diffuser (Horizontal Blades)	0.10
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.15
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
CW or DX Coil Box (Estimate)	0.60 - 0.90
Steam or HW Coil Box (Estimate)	0.30 - 0.40
Static Pressure Drops for Discharge Configurations	in. w.c.
Axial Discharge w/ 3'-0" of Straight Duct (Minimum)	0.15
Axial Discharge w/o 3'-0" of Duct or a Plenum	0.20
Radial Discharge w/ 3'-0" of Duct or a Plenum (Minimum)	0.00
Radial Discharge w/o 3'-0" of Duct or a Plenum	0.10

Filters should be changed at 0.60" w.c.

Any external static losses from ductwork or other factors must be added to determine Total Static Pressure

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