



DIRECT-FIRED GAS AIR MAKE-UP UNITS

Models FCBT & BIBT

Built to ANSI Z83.4 & Z83.18 Standards



Introduction

What is make-up air?

Make-up air is outside air tempered and introduced into a building to eliminate negative pressure and provide a positive operating pressure within a facility.

Why do you need make-up air?

Fans and blowers used in spray booths, hoods, ovens, dust collectors, ventilators, and other plant equipment exhaust air to the outside. Without a controlled introduction of “make-up” air an air-starved environment will result.

When do you know you need make-up air?

Make-up air is required when:

- Gravity stacks from unit heaters and processes back-vent.
- Exhaust systems do not perform at rated volume leading to poor control of contaminants.
- The perimeter of the building is cold due to a high infiltration rate.
- There are several indrafts at exterior doors, windows, and building openings.
- Exterior doors are hard to open.
- Heating systems are not able to maintain uniform comfort conditions throughout the building. The outer core area is cold due to infiltration while the center core is overheated.

How much does make-up air cost?

Make-up air doesn't cost money. It actually saves money by:

- Extending the life of heat exchangers on combustion equipment.
- Providing more uniform temperatures throughout the building, reducing overheated areas and cold drafty areas.
- Allowing exhaust systems to operate at designed

capacity, reducing the need for additional equipment.

- Minimizing the damage to materials from contaminants which may exist in the the local atmosphere.
- Reducing employee turnover and absenteeism because of better health conditions and plant cleanliness.
- Improving products with fewer rejects because furnaces operate at designed conditions.

How much make-up air do you need?

The recommended procedure to determine the amount of make-up air needed is to total the CFM capacity of all the exhaust fans and blowers in the plant and add 10% to create a positive pressure situation.

If the data is not available, the following equations can be used as a means of determining how much make-up air is required.

Paint Spray Booth: 125 to 175 CFM per square foot of face opening.

Oven Exhaust: One air change per minute of oven volume in cubic feet.

Fume Exhaust: $CFM = \text{area of discharge pipe in square feet} \times \text{velocity (3,000 fpm average)}$.

Roof Ventilator: $CFM = \text{area of discharge pipe in square feet} \times \text{velocity (3,000 fpm average)}$.

Dust Collector: Area of discharge pipe in square feet \times velocity (4,000 fpm average).

Canopy Hoods: 100 to 300 CFM per square foot of hood open area.

Combustion Air For Furnaces: $CFM = \text{fuel consumed in Btu per hour} \div 6,000$.

Drying, Baking, or Curing Ovens: 100 CFM per square foot of both cross sections.

Pickling or Cleaning Tanks: 150 CFM per square foot of door opening or 200 CFM per square foot of hood face opening.

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Application Considerations

Air Balance

Exhaust fans cannot work properly without an adequate supply of air. If provision for air supply is not made, the vacuum created reduces the effectiveness of mechanical ventilation. Negative pressure also causes excessive infiltration, making it difficult to heat properly. These conditions can be corrected by replacing the exhausted air with clean, fresh, pretreated air. The primary purpose of make-up air is to temper outside air and supply it in sufficient quantities to bring about the condition of balanced ventilation.

Depending upon the quantity of make-up air in relation to the exhaust, the heating system will shut down during the working day allowing the make-up air system to handle the entire load. The heating system then functions only to maintain satisfactory temperatures at nighttime and other plant shutdown periods.

When you add an air make-up system to an existing plant it is necessary to make a detailed analysis of the overall situation in order to determine what the relationship might be between the heat added by make-up air and that supplied from the plant heating system. Where exhaust systems already exist, the installation of make-up air usually will not increase the heating load and can bring about a reduction of overall heating costs. This may be understood by considering that infiltrated air, warmed at least partially by the plant heating system, is ultimately mixed with room air and exhausted through the ventilating fans. Infiltration of unheated air results in a decline of heating efficiency. Most heating systems are not adequately rated to cope with infiltration when appreciable negative pressures exist. Air make-up units provide a systematic method of heating

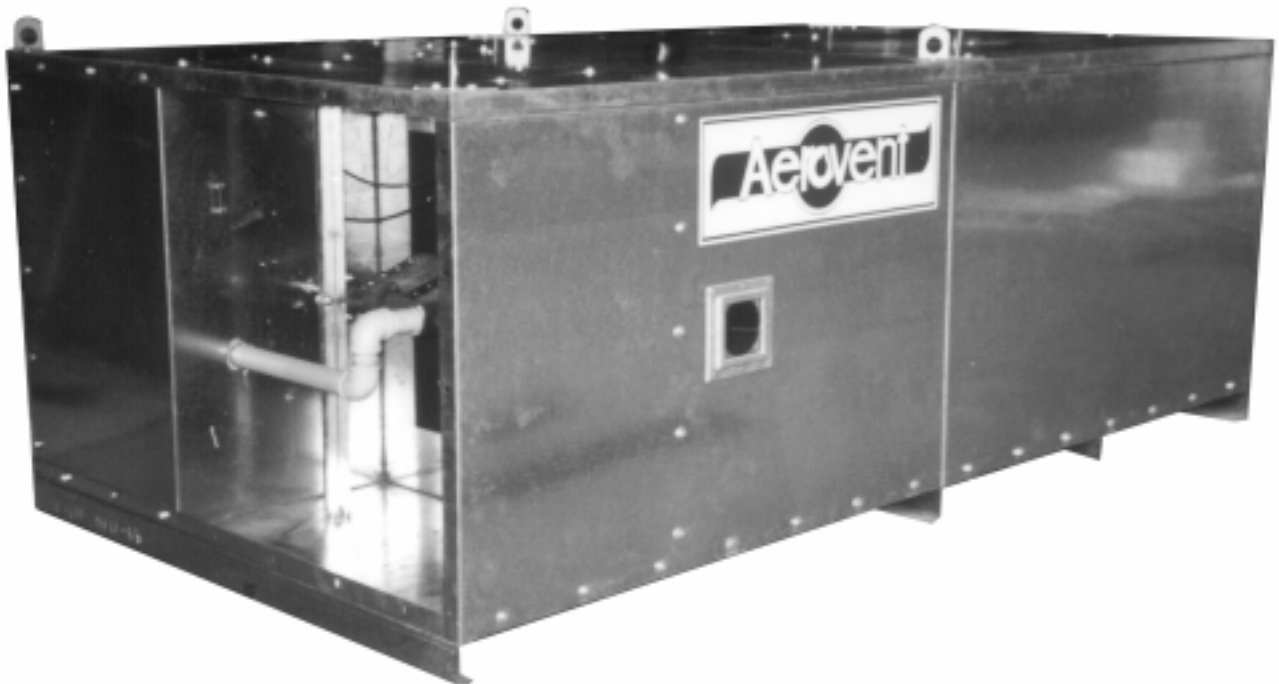
entering air and supplying it in controlled quantity. With the proper balance of supply and exhaust, infiltration is eliminated and negative pressures are equalized. By properly tempering supply air, the heating system is relieved of this abnormal load. The results are uniform space heating, effective ventilation, and improved comfort.

Heating

Experience with fresh air heating systems has shown that it is practical and economically sound to heat industrial plants and even warehouses with fresh air. The question of whether to use 100% fresh air or recirculate some portion is debatable, and engineers are using both methods in their applications.

When direct-fired systems were first used some authorities felt that positive exhaust was necessary to assure a balance and prevent the possibility of products of combustion buildup. It is now generally recognized that air can be supplied into most buildings having no mechanical exhaust and in quantities sufficient to heat them without building up a positive pressure of more than a few hundredths of an inch water gauge. It is the reverse of infiltration and this principle can be used to design fresh air plant heating.

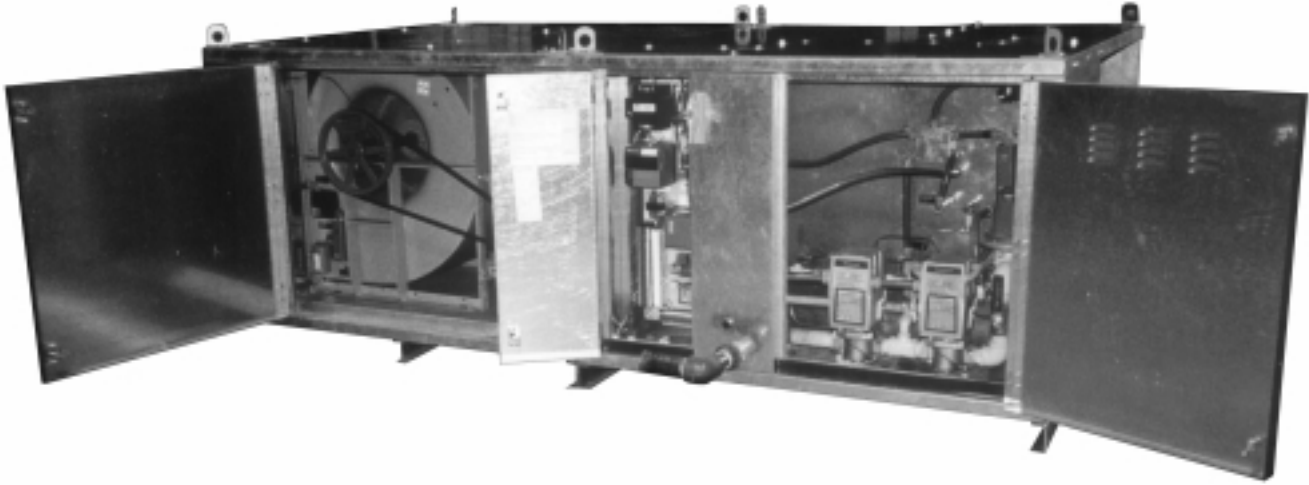
The standard air make-up unit is used for industrial space heating with 100% outside air or with a fixed percentage of recirculation, and in some designs with a combination of these. Your Aerovent representative can assist you in determining application requirements for general air make-up and for fresh air heating. They can supply detailed information as it may apply to specific conditions.



Construction Features

The BT series direct-fired gas air make-up unit is a complete air supply system in a self-contained package with fan, burner, and controls. The unit is ready for connection to the gas line and power source.

These systems are for use in industrial or commercial applications where supplying tempered outside air is required.



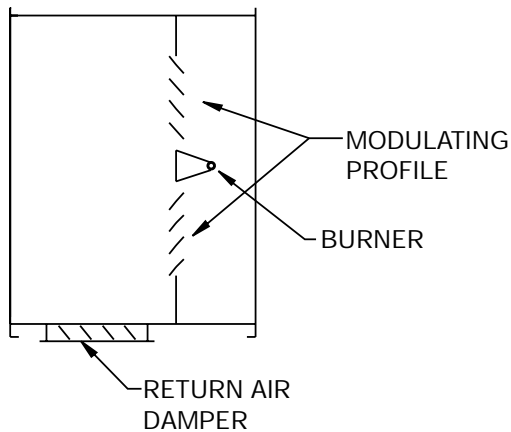
Standard Features

- Heavy duty forward curved or backward inclined DWDI centrifugal blower with pillow block bearings
- ANSI and FM approved gas manifold design
- Heavy duty 16 gauge galvanized steel housing
- Large access door for internal accessibility
- Lifting eyes for ease of unit installation
- Venturi monitored airflow supervision
- 0 to 92 degree temperature rise
- 120 volt fused control circuit with 230/460 to 120 volt control transformer
- Number-coded wires and terminal strips
- Dual fuel burner (Maxon)
- Factory assembled and tested
- Weatherproof control enclosure
- Remote operating station
- Unit support/mounting channels
- Maxitrol Series 14 temperature control
- Honeywell series 7800 flame safeguard protection
- Ultraviolet detection system
- Safety shutoff valves
- Discharge temperature sensor
- Drives rated for 150% of motor nameplate rating
- High temperature limit
- Single point gas and electrical connections
- Non-recycle system with low fire start protection with main flame supervision
- 25:1 temperature control modulation
- Pilot gas pressure regulator
- High and low gas pressure switch

Accessories

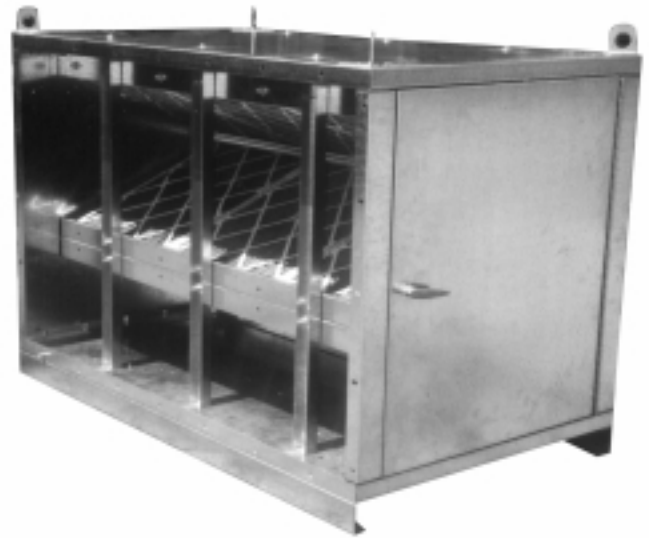
80/20 Recirculating

The 80/20 recirculating system allows 80% recirculation and is designed to insure that a minimum of 20% of the designed performance is outside air. Recirculated air is not allowed to flow across the burner. Manual setpoint is standard. Room pressure control available as an option.



V-Bank Filter Section

The standard filter is a 2" Farr 30/30 disposable type with washable as an option.



Additional Options

- V-bank filter section
- Intake hood with bird screen
- 90 degree discharge elbow
- Roof curb
- Curb mount construction
- Inlet bird screen
- Modulating room temperature control (Maxitrol Series 44)
- Digital temperature controls (Maxitrol Series 94)
- IRI pipe train manifolds
- Directional discharge grille, single and double deflection
- Circuit analyzer
- Insulated construction
- Vertical support stand
- Two speed operation
- Mild weather thermostat
- Service platform
- Main gas regulator
- Vibration isolators (unit mount)
- Tamper proof remote station
- Reset module
- Disconnect switch
- OSHA Belt guard
- Motor operated damper (inlet or discharge)
- Freeze protection thermostat
- Door switch interlock
- Painted unit and accessories
- Extended grease lines

Standard Temperature Controls

Two standard systems for temperature control are available offering a choice of functions for the regulation of air temperature. The outlet temperature control (OTC) system senses only the discharge air temperature at the unit. The sensing device is located in the airstream. It averages the temperature and sends a signal to the servomechanism in the modulating regulator.



Tamper-proof control system

The regulator in turn modulates the gas pressure in the burner manifold, and the gas flow is varied to maintain the air temperature constant at the sensor. The OTC system is used where the volume of air supplied is relatively small compared to the volume of the building, which usually means that it is not intended for the air make-up unit to pick up an appreciable part of the building heating.

In most installations, room temperature control is desirable. Two controllers are available for this operation. The simplest and least expensive control is a thermostat added to the OTC system (OTC-RO) and located to sense the room temperature. The contacts close on a call for heat and cause an increase in the discharge air temperature. The air make-up unit delivers air at the higher temperature until the room thermostat is satisfied; full control is then returned to the discharge sensor. The limited amount of temperature increase eliminates excessive discharge air temperature. The temperature setting is usually 5° below the outlet temperature set point.

The modulating room temperature control (MRTC) is slightly more sophisticated. Instead of a thermostat, a

thermistor is used to sense the room temperature. The signal actuates the modulating regulator to provide an incremental increase or decrease of the discharge temperature, providing closer control and preventing an abrupt change in the temperature of the air at the outlet of the unit or outlets of a distribution system. In the room temperature control system the discharge air temperature sensor performs a limiting function so that the discharge air cannot exceed a reasonable temperature. The discharge air temperature can be set to suit the individual requirements at the time of installation.

The air temperature controllers are combined with the operation selector switch and indicator lights—all mounted in a remote operating station. The OTC unit can be mounted in any convenient location and contains a summer-off-winter selector switch and indicator lamps showing that power is on, the fan is running, and there is a flame on the burner. There is also a knob for setting the discharge temperature of the air make-up unit.

The OTC-RO control station contains all of these controls and indicators in addition to a room temperature thermostat. The MRTC remote operating station has a thermistor on top instead of the on-off thermostat. The OTC-RO or MRTC remote operating stations should be mounted in a location where the desired room temperature is best sensed. This will be a matter of judgment, made at the time of installation.

The circuit design can include an optional mild weather thermostat. This thermostat senses the outside temperature and, at a predetermined setting, will cause the burner to be shut off completely while allowing the fan to run. This makes it possible to have year-round operation with the selector switch set to the winter position and the mild weather thermostat set to a desirable “heat off” temperature (65°F). When the outside temperature is above 65° the heat will be off. When it is below 65° the burner will be in operation and the temperature regulated according to the modulating control.



Outlet Temperature Control (OTC)



Modulating Room Temperature Control (MRTC)

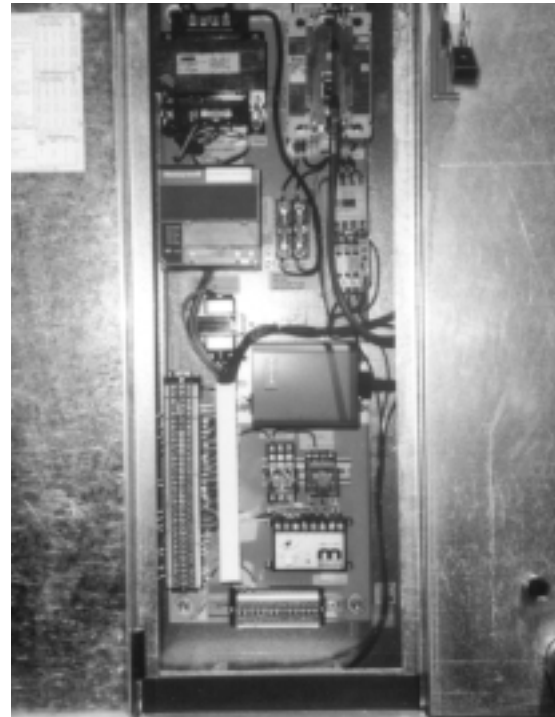
Control Panel

The main control panel is designed with the service technician in mind. The panel is licensed to carry the UL label under the 508 listing. The panel meets all standards of the National Electric Code and includes as standard:

- Step-down control transformer
- Motor starter with overloads
- Ignition transformer
- Honeywell 7800 series primary flame safe-guard system
- Maxitrol temperature controller
- Purge and reset timers

The incorporation of the Honeywell series 7800 flame relay offers the customer the following options:

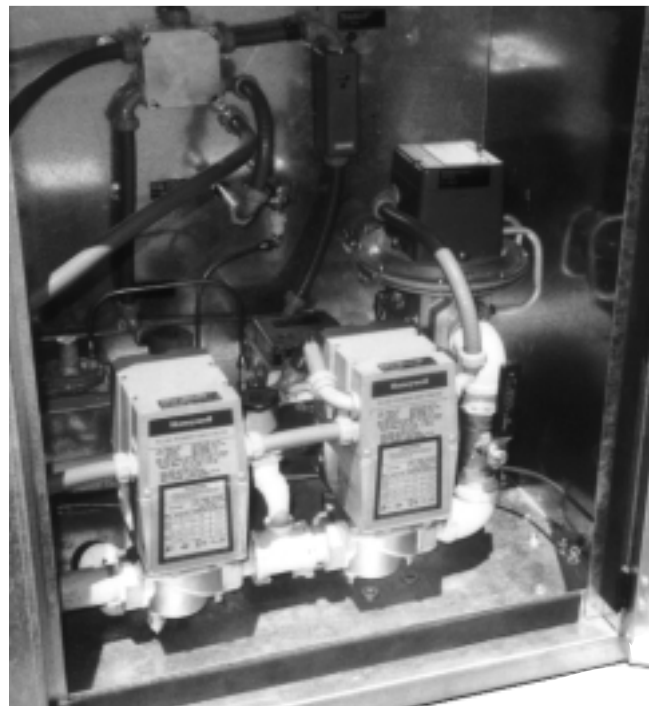
- Remote relay reset (reset lockout from remote panel)
- Communications capability (provides local and remote troubleshooting with 386 CPU)
- Fault history (readout of six most recent faults from LED readout for troubleshooting flame failures)



Pipetrain

Liquid-tight conduit is used for all interconnecting wiring. Piping is in accordance with ANSI standard along with IRI and FM.

- Motorized safety shutoff valve
- Blocking valve
- Pilot solenoid
- High/Low gas pressure switch
- Pilot regulator
- Manual pilot shutoff valve
- Maxitrol MR 212 modulating valve
- Vent valve as required by IRI
- Adjustable pilot orifice



Typical Specifications

Models FCBT forward curved and Models BIBT backward inclined direct-fired gas centrifugal DW air make-up units shall be manufactured by Aerovent, Minneapolis, Minnesota and shall be of the size and capacity as indicated on drawings and schedules.

WHEEL — Wheels shall be double width with forward curved blades or backward inclined blades. The forward curved wheels feature die-formed blades assembled in heavy end rings and center plate. Wheels shall be statically and dynamically balanced and furnished with straight bore hubs.

HOUSING — Housings shall be of 16 gauge galvanized steel, of modular construction where sections are mechanically fastened. Housings shall be equipped with a visual burner inspection port, access door, lifting eyes, and unit support frame for mounting.

GAS PIPETRAIN — Pipetrain shall consist of SSOV valve, pilot valve, vent valve (IRI only), blocking valve, high-low gas pressure switches with manual resets, heavy duty plug cocks, pressure gauge and modulating regulator out of the airstream. Piping shall conform to FM or IRI standards. Please specify when ordering.

CONTROL CABINET — A control cabinet shall house the fan motor magnetic starter with manual reset overload relays, control transformer, Honeywell solid-state flame sensing relay, non-recycle timer, fuse and terminal strips. Unit shall include a remote control station with summer-winter-off selection switch, power on, fan on, burner on lights, and discharge temperature selector. The temperature control system shall be of solid-state design manufactured by the Maxitrol Company to modulate the burner in accordance with the remote control station setting. All controls on the unit are to be wired to the respective points in the cabinet with liquid-tight conduit and in accordance with the National Electric Code. The unit shall also include high temperature limit, airflow switch, and positive low fire start.

FLAME DETECTOR — A UV flame detector shall be incorporated into the unit to supervise both the pilot and main burner flame.

BURNER — The burner is a Maxon with 25:1 turndown ratio. The manifold body is heavy duty cast iron, fully treated for rust resistance. The mixing plates are type 430 stainless steel.

UNITS SHALL COME COMPLETE WITH:

- | | | |
|---|---|---|
| <input type="checkbox"/> V-Bank Filter Cabinet | <input type="checkbox"/> Roof Curb | <input type="checkbox"/> Digital Temperature Controls |
| <input type="checkbox"/> Inlet Hood with Vanes | <input type="checkbox"/> Mild Weather Control | <input type="checkbox"/> Door Switch Interlock |
| <input type="checkbox"/> Inlet Hood less Vanes | <input type="checkbox"/> Freeze Protection Thermostat | <input type="checkbox"/> Vertical Support Stand |
| <input type="checkbox"/> 90 Degree Discharge Elbow | <input type="checkbox"/> Inlet Bird Screen | <input type="checkbox"/> Two Speed Operation |
| <input type="checkbox"/> Filtered Inlet Hood | <input type="checkbox"/> Circuit Analyzer | <input type="checkbox"/> Main Gas Regulator |
| <input type="checkbox"/> Directional Discharge Grille | <input type="checkbox"/> OSHA Belt Guard | <input type="checkbox"/> Disconnect Switch |
| <input type="checkbox"/> Vibration Isolators | <input type="checkbox"/> Reset Module | <input type="checkbox"/> Extended Grease Lines |
| <input type="checkbox"/> Tamperproof Control Station | <input type="checkbox"/> Service Platform | <input type="checkbox"/> Modulating Room Temperature Controls |
| <input type="checkbox"/> Push-to-Test Lights | <input type="checkbox"/> Insulated Construction | |
| <input type="checkbox"/> Curb Mounting | <input type="checkbox"/> UV Flame Detection | |

TESTING — Unit(s) shall be guaranteed by the manufacturer to deliver at the rated performance levels. Unit(s) shall be completely packaged and test fired at the factory before shipment.

Performance Data

Model FCBT Forward Curved Centrifugal DW Direct-Fired Gas Air Make-Up Units

Catalog Numbering System

Assign catalog number by using the numbering system outlined in the example at right. Fan type, fan size, RPM, and HP are found in the rating tables.

Definitions

Btu/Hr is sensible heat release. To determine cfh gas input, divide Btu by the net heat value of the fuel.

CFM is net volume at discharge at 70°F.

External Static Pressure is pressure available for addition of ducts.

FCBT - 118 - 943 - 7¹/₂

Forward Curved
DW Air Make-Up

Fan Size

Fan RPM

Motor HP

CFM	CAT. NO.	OUT-LET VEL.	BTU/HR	EXTERNAL STATIC PRESSURE															
				1/4"		1/2"		3/4"		1"		1 1/8"		1 1/2"		1 3/4"		2"	
				RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5,000	FCBT-115	2487	500,000	743	1.83	807	2.08	867	2.33	924	2.58	977	2.84	1029	3.11	1079	3.38	1129	3.67
6,000	FCBT-115	2985	600,000	778	1.77	837	2.89	893	3.17	948	3.47	998	3.76	1048	4.06	1096	4.37	1140	4.68
7,500	FCBT-118	2613	750,000	659	2.38	713	3.57	764	3.98	811	4.40	857	4.81	901	5.23	943	5.66	984	6.09
10,000	FCBT-120	2557	1,000,000	581	3.90	625	4.61	667	5.09	707	5.57	745	6.06	782	6.55	817	7.05	1015	9.39
12,500	FCBT-122	2450	1,250,000	533	3.76	570	5.86	605	6.49	639	7.13	673	7.80	705	8.49	737	9.20	769	9.94
15,000	FCBT-127	2384	1,500,000	401	4.23	432	5.94	461	6.65	489	7.39	516	8.16	543	8.96	569	9.77	595	10.62
17,500	FCBT-127	2782	1,750,000	423	5.16	451	7.84	478	8.63	504	9.43	529	10.26	553	11.11	577	11.99	600	12.87
20,000	FCBT-130-A	2754	2,000,000	380	5.54	408	8.97	434	9.96	460	10.98	485	12.03	509	13.11	532	14.21	554	15.31
22,500	FCBT-130-A	2419	2,225,000	360	6.55	388	8.80	416	9.90	443	11.03	470	12.21	495	13.42	520	14.71	540	15.15
25,000	FCBT-130-B	2688	2,500,000	371	7.79	398	10.63	424	11.76	450	12.94	474	14.16	498	15.43	522	16.75	545	18.12
30,000	FCBT-130-B	3225	3,000,000	397	13.87	422	15.16	445	16.47	468	17.76	490	19.13	512	20.51	533	21.92	553	23.34
35,000	FCBT-136	2734	3,500,000	340	15.50	358	16.47	378	17.90	397	19.40	416	20.92	434	22.39	456	24.33	470	25.58
40,000	FCBT-136	3125	4,000,000	368	19.50	382	21.20	397	23.50	415	25.20	432	26.76	449	28.46	465	30.06	481	31.74
25,000	FCBT-222	2450	2,500,000	533	10.49	570	11.72	604	12.95	639	14.27	672	15.58	705	16.99	737	18.39	769	19.90
30,000	FCBT-222	2941	3,000,000	576	15.37	608	16.73	641	18.18	671	19.60	701	21.10	729	22.58	758	24.16	786	25.72
35,000	FCBT-225	2608	3,500,000	454	13.80	487	15.42	518	17.09	548	18.82	577	20.62	606	22.43	634	24.39	662	26.36
40,000	FCBT-227	2478	4,000,000	397	14.31	427	16.01	456	17.75	485	19.57	513	21.50	540	23.54	567	25.70	590	28.12
45,000	FCBT-227	2788	4,500,000	414	18.20	442	20.05	469	21.91	495	23.83	520	25.81	545	27.87	570	30.03	595	32.28
50,000	FCBT-230	2688	5,000,000	371	19.04	398	21.25	424	23.53	450	25.88	474	28.33	498	30.87	522	33.50	545	36.23
55,000	FCBT-230	2956	5,500,000	384	23.08	409	25.47	434	27.89	458	30.38	481	32.94	504	35.57	526	38.28	548	41.08
60,000	FCBT-233	2489	6,000,000	341	23.60	365	26.18	388	28.81	411	31.51	433	34.31	455	37.20	476	40.20	498	43.34
65,000	FCBT-233	2697	6,500,000	351	27.80	374	30.60	396	33.41	418	36.25	439	39.16	459	42.15	480	45.23	500	48.41
70,000	FCBT-236	2734	7,000,000	336	29.90	357	32.86	377	35.77	396	38.71	415	41.71	434	44.80	452	47.99	470	51.27
75,000	FCBT-236	2929	7,500,000	346	34.69	366	37.82	386	40.93	405	44.11	422	47.19	440	50.46	457	53.67	475	57.11

Performance ratings of the base units include the effects of appurtenances in the airstream (i.e. burner section).

Performance ratings do not include the effects of optional accessories in the airstream (i.e. filter cabinet). See pages 24-27 for pressure losses.

Power rating (bhp) does not include drive losses.

Performance ratings are based on units with ducted discharge.

Performance Data

Model BIBT Backward Inclined Centrifugal DW Direct-Fired Gas Air Make-Up Units

Catalog Numbering System

Assign catalog number by using the numbering system outlined in the example at right. Fan type, fan size, RPM, and HP are found in the rating tables.

BIBT - 116 - 2179 - 5

Backward Inclined
DW Air Make-Up

Fan Size

Fan RPM

Motor HP

Definitions

Btu/Hr is sensible heat release. To determine cfh gas input, divide Btu by the net heat value of the fuel.

CFM is net volume at discharge at 70°F.

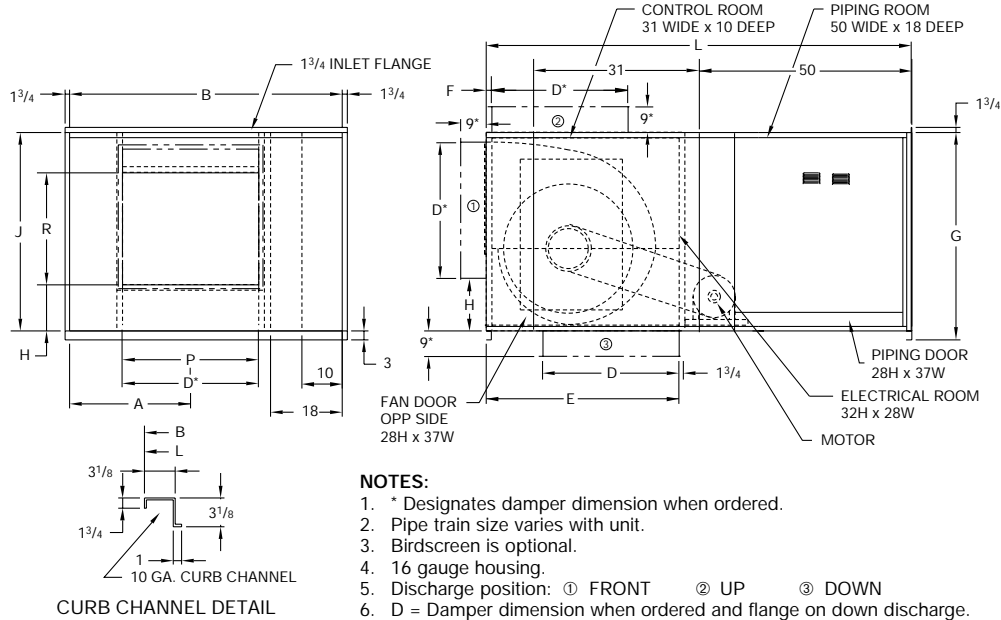
External Static Pressure is pressure available for addition of ducts.

CFM	CAT. NO.	OUT-LET VEL.	BTU/HR	EXTERNAL STATIC PRESSURE									
				1/2"		1"		1 1/2"		2"		3"	
				RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5,000	BIBT-116	1805	500,000	1648	1.98	1761	2.41	1870	2.87	1975	3.36	2174	4.38
6,000	BIBT-116	2166	600,000	1850	2.75	1947	3.26	2042	3.77	2136	4.30	2315	5.42
7,500	BIBT-116	2708	750,000	2179	4.31	2259	4.93	2337	5.56	2414	6.20	2567	7.49
10,000	BIBT-122	1818	1,000,000	1181	3.88	1265	4.72	1334	5.58	1416	6.48	1550	8.36
13,000	BIBT-122	2364	1,300,000	1406	6.26	1468	7.34	1531	8.45	1596	9.55	1722	11.77
15,000	BIBT-125	2171	1,500,000	1170	6.74	1223	7.93	1275	9.13	1326	10.34	1426	12.83
18,000	BIBT-125	2605	1,800,000	1345	9.82	1390	11.21	1434	12.61	1478	14.04	1564	16.94
19,500	BIBT-128	2247	1,950,000	1056	8.97	1102	10.50	1147	12.06	1192	13.65	1279	16.86
22,000	BIBT-128	2535	2,200,000	1158	11.50	1199	13.19	1240	14.93	1280	16.69	1359	20.25
25,000	BIBT-132	2294	2,500,000	944	11.62	984	13.57	1024	15.58	1063	17.59	1140	21.72
29,500	BIBT-132	2706	2,950,000	1072	16.38	1107	18.65	1142	20.98	1176	23.32	1243	28.08
34,000	BIBT-135	2458	3,400,000	893	16.92	928	19.53	962	22.18	997	24.96	1068	30.76
40,000	BIBT-135	2892	4,000,000	1017	24.20	1047	27.17	1076	30.15	1105	33.22	1164	39.65

Performance ratings of the base units include the effects of appurtenances in the airstream (i.e. burner section). Performance ratings do not include the effects of optional accessories in the airstream (i.e. filter cabinet). See pages 24-27 for pressure losses. Power rating (bhp) does not include drive losses. Performance ratings are based on units with ducted discharge.

Single Fan Model FCBT – Size 110-122 Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 100% Outside Air

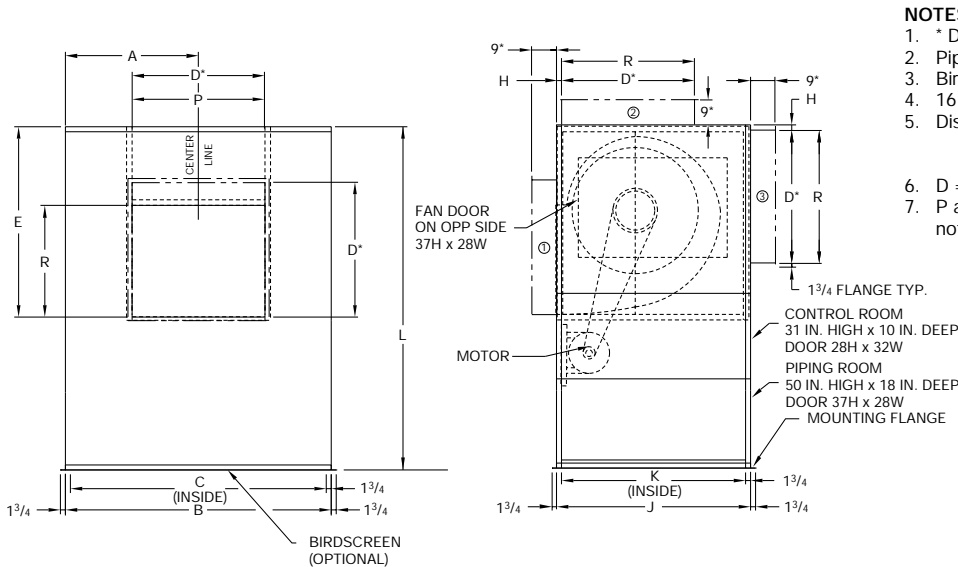


SIZE	A	B	D	E	F	G	H	J	L	P	R	APPROX. WTS. (LB)
FCBT-110	24.25	58.50	24.00	18.93	1.25	39.00	6.25	36.00	81.00	13.62	11.38	1,067
FCBT-115	24.25	58.50	24.00	25.81	1.25	39.00	8.62	36.00	81.00	18.62	15.88	1,148
FCBT-118	24.25	58.50	24.00	30.75	1.25	39.00	8.62	36.00	81.00	21.88	18.68	1,148
FCBT-120	36.75	73.50	30.00	37.31	1.25	51.00	11.25	48.00	108.00	22.75	24.75	1,595
FCBT-122	36.75	73.50	30.00	40.81	1.25	51.00	12.25	48.00	108.00	27.25	27.25	1,620

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27610A

Vertical Configuration - 100% Outside Air



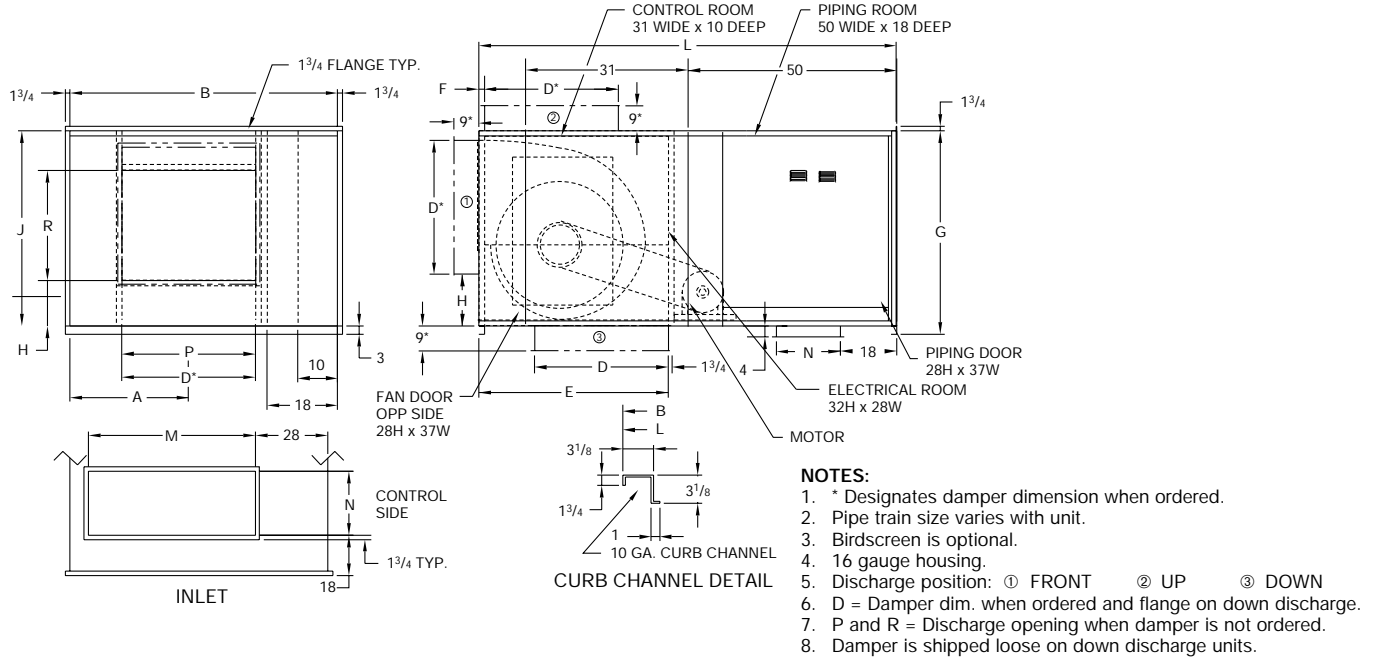
SIZE	A	B	C	D	E	F	G	H	J	K	L	P	R	APPROX. WTS. (LB)
FCBT-110	24.25	58.50	56.00	24.00	18.93	2.25	39.00	1.25	36.00	33.50	81.00	13.62	11.38	1,067
FCBT-115	24.25	58.50	56.00	24.00	25.81	2.25	39.00	1.25	36.00	33.50	81.00	18.62	15.88	1,148
FCBT-118	24.25	58.50	56.00	24.00	30.75	2.25	39.00	1.25	36.00	33.50	81.00	21.88	18.68	1,148
FCBT-120	36.75	73.50	71.00	30.00	37.31	3.25	51.00	1.25	48.00	45.50	108.00	22.75	24.75	1,595
FCBT-122	36.75	73.50	71.00	30.00	40.81	3.25	51.00	1.25	48.00	45.50	108.00	27.25	27.25	1,620

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27608

Single Fan Model FCBT – Size 110-122 Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 80/20 Recirculation

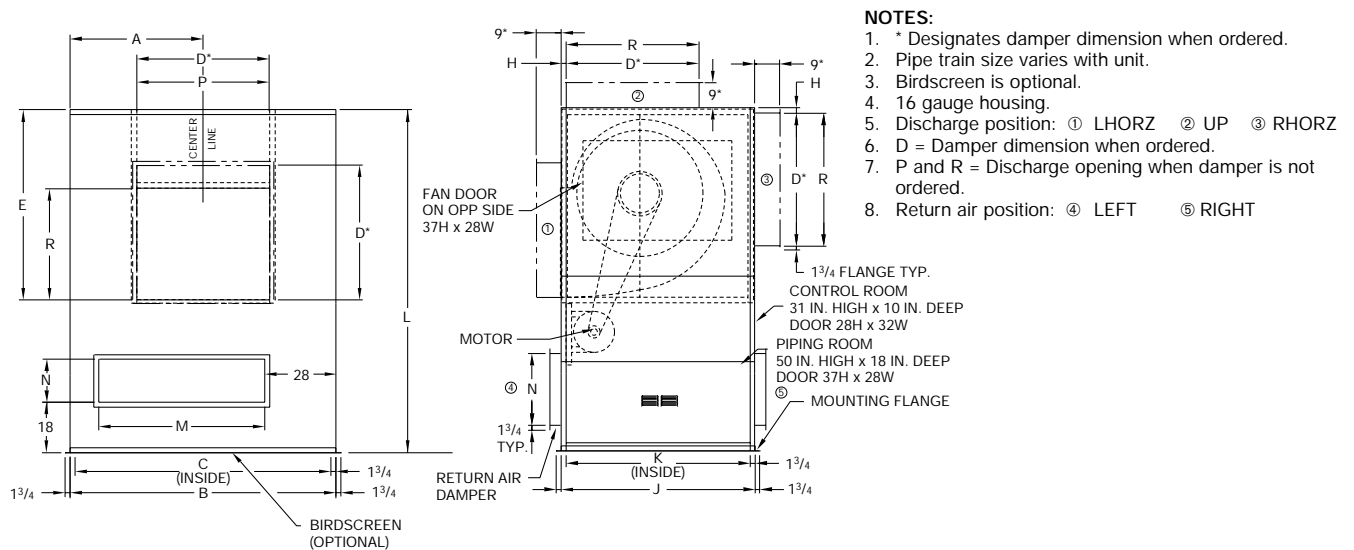


SIZE	A	B	D	E	F	G	H	J	L	M	N	P	R	APPROX. WTS. (LB)
FCBT-110	24.25	58.50	24.00	18.93	1.25	39.00	6.25	36.00	81.00	24.00	12.00	13.62	11.38	1,067
FCBT-115	24.25	58.50	24.00	25.81	1.25	39.00	8.62	36.00	81.00	24.00	12.00	18.62	15.88	1,148
FCBT-118	24.25	58.50	24.00	30.75	1.25	39.00	8.62	36.00	81.00	24.00	12.00	21.88	18.68	1,148
FCBT-120	36.75	73.50	30.00	37.31	1.25	51.00	11.25	48.00	108.00	36.00	18.00	22.75	24.75	1,595
FCBT-122	36.75	73.50	30.00	40.81	1.25	51.00	12.25	48.00	108.00	36.00	18.00	27.25	27.25	1,620

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27611

Vertical Configuration - 80/20 Recirculation



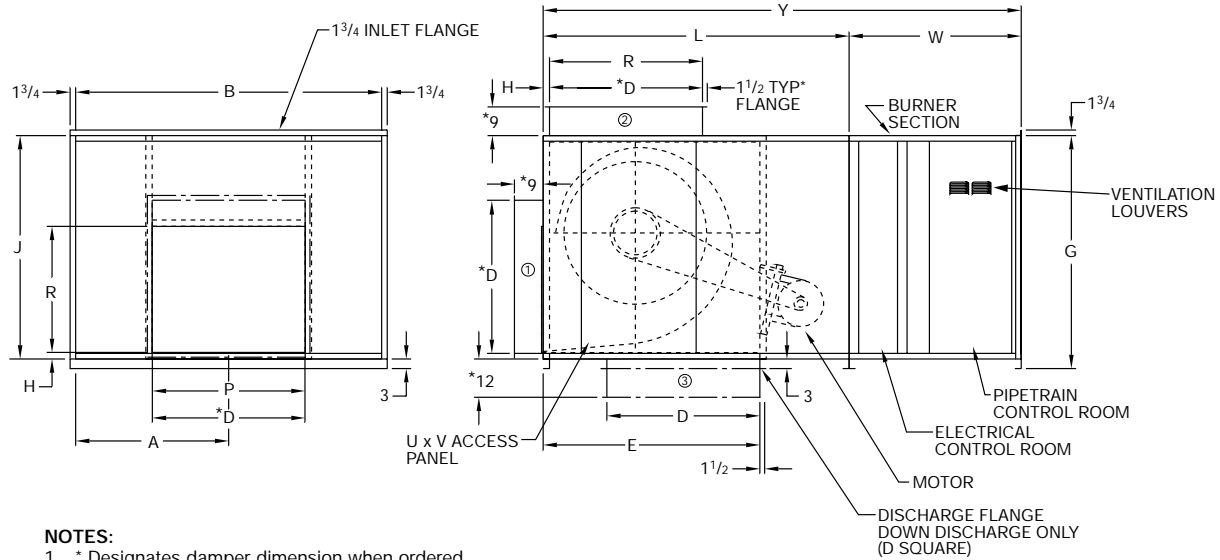
SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	APPROX. WTS. (LB)
FCBT-110	24.25	58.50	56.00	24.00	18.93	2.25	39.00	1.25	36.00	33.50	81.00	24.00	12.00	13.62	11.38	1,067
FCBT-115	24.25	58.50	56.00	24.00	25.81	2.25	39.00	1.25	36.00	33.50	81.00	24.00	12.00	18.62	15.88	1,148
FCBT-118	24.25	58.50	56.00	24.00	30.75	2.25	39.00	1.25	36.00	33.50	81.00	24.00	12.00	21.88	18.68	1,148
FCBT-120	36.75	73.50	71.00	30.00	37.31	3.25	51.00	1.25	48.00	45.50	108.00	36.00	18.00	22.75	24.75	1,595
FCBT-122	36.75	73.50	71.00	30.00	40.81	3.25	51.00	1.25	48.00	45.50	108.00	36.00	18.00	27.25	27.25	1,620

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27609

Single Fan Model FCBT – Size 127-136 Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 100% Outside Air



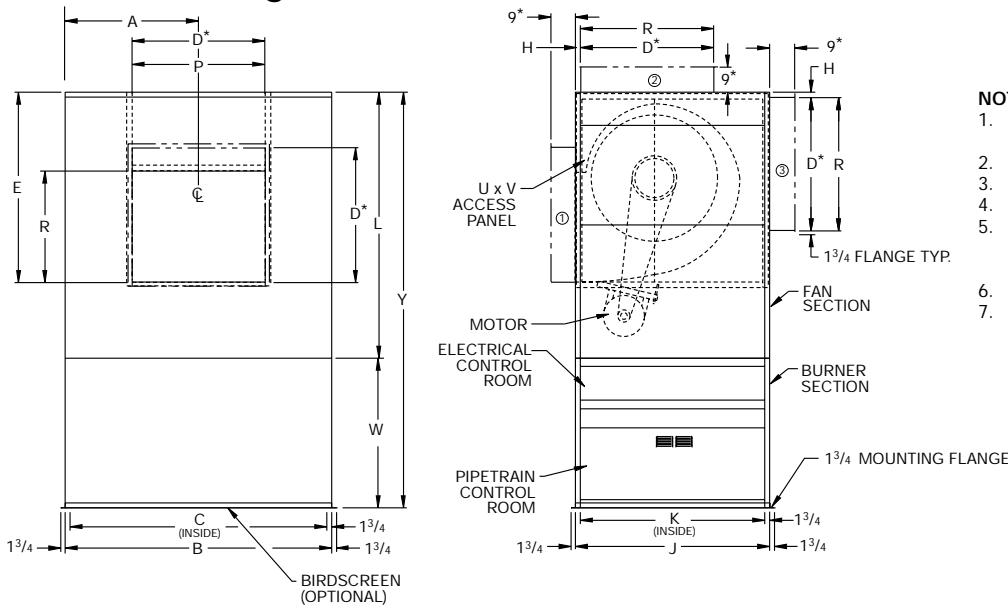
- NOTES:**
- * Designates damper dimension when ordered.
 - Discharge position: ① FRONT ② UP ③ DOWN
 - Damper is shipped loose on down discharge units.

SIZE	A	B	D	E		G	H	J	L	P	R	U	V	W	Y	APPROX. WTS. (LB)
				UP/DN	HORZ											
FCBT-127	36.75	73.50	36.00	50.75	40.94	63.13	2.00	60.13	84.00	26.75	34.25	40.00	40.00	60.00	144.00	2,500
FCBT-130-A	36.75	73.50	42.00	54.75	44.12	63.13	2.00	60.13	84.00	28.75	36.75	40.00	40.00	60.00	144.00	2,550
FCBT-130-B	48.75	97.50	42.00	54.75	44.12	63.13	2.00	60.13	84.00	36.75	36.75	40.00	40.00	60.00	144.00	2,600
FCBT-136	48.75	97.50	48.00	59.00	50.50	63.13	2.00	60.13	96.00	42.75	42.94	40.00	40.00	60.00	156.00	2,950

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27224H

Vertical Configuration - 100% Outside Air



- NOTES:**
- * Designates damper dimension when ordered.
 - Pipe train size varies with unit.
 - Birdscreen is optional.
 - 16 gauge housing.
 - Discharge position: ① LHORZ ② UP ③ RHORZ
 - D = Damper dimension when ordered.
 - P and R = Discharge opening when damper is not ordered.

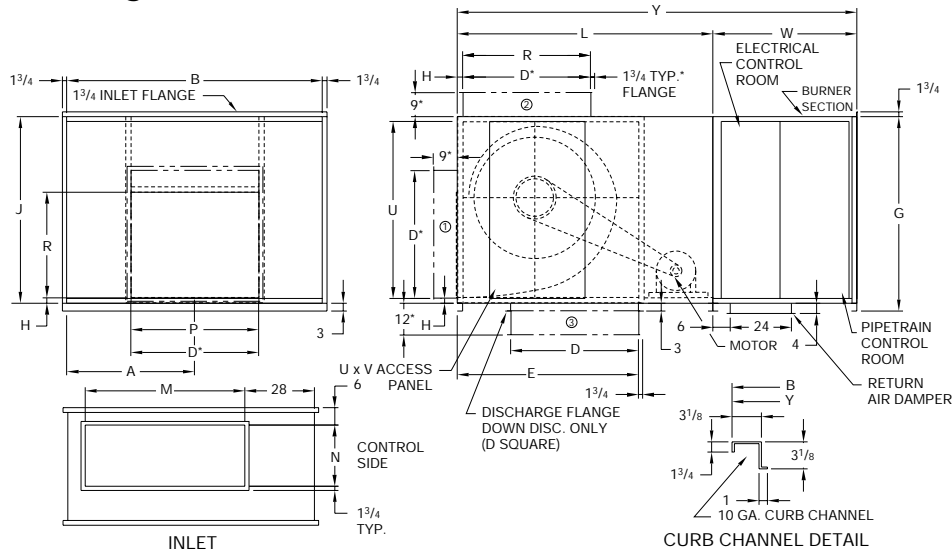
SIZE	A	B	C	D	E	H	J	K	L	P	R	U	V	W	Y	APPROX. WTS. (LB)
FCBT-127	36.75	73.50	70.00	36.00	50.75	2.00	60.13	56.63	84.00	26.75	34.25	40.00	40.00	60.00	144.00	2,500
FCBT-130-A	36.75	73.50	70.00	42.00	54.75	2.00	60.13	56.63	84.00	28.75	36.75	40.00	40.00	60.00	144.00	2,550
FCBT-130-B	48.75	97.50	94.00	42.00	54.75	2.00	60.13	56.63	84.00	36.75	36.75	40.00	40.00	60.00	144.00	2,600
FCBT-136	48.75	97.50	94.00	48.00	59.00	2.00	60.13	56.63	96.00	42.75	42.94	40.00	40.00	60.00	156.00	2,950

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27305H

Single Fan Model FCBT – Size 127-136 Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 80/20 Recirculation



NOTES:

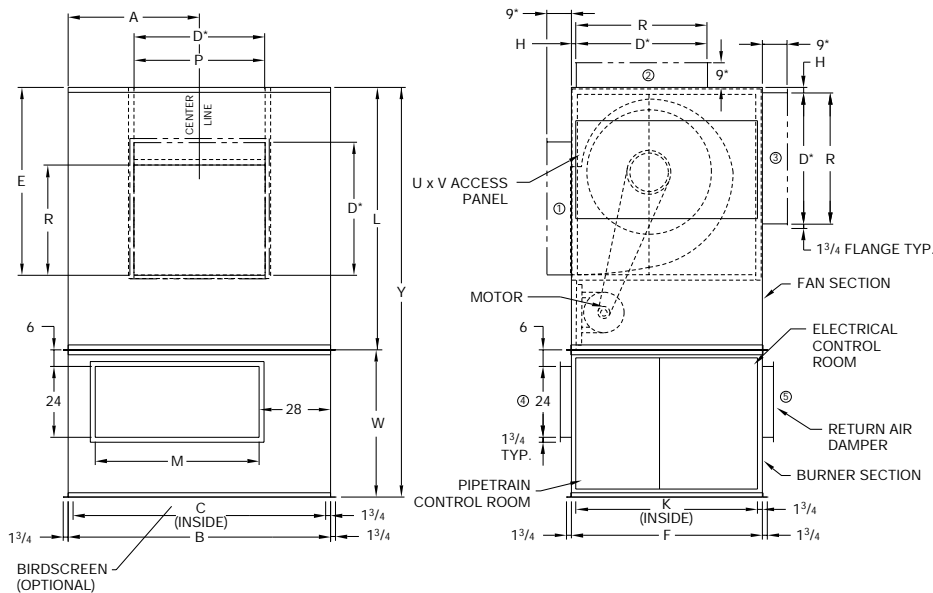
1. * Designates damper dimension when ordered.
2. Pipe train size varies with unit.
3. Birdscreen is optional.
4. 16 gauge housing.
5. Discharge position: ① FRONT ② UP ③ DOWN
6. D = Damper dim. when ordered and flange on down discharge.
7. P and R = Discharge opening when damper is not ordered.
8. Damper is shipped loose on down discharge units.
9. Unit built as one piece.

SIZE	A	B	D	E		G	H	J	L	M	N	P	R	U	V	W	Y	APPROX. WTS. (LB)
				UP/DN	HORZ													
FCBT-127	36.75	73.50	36.00	50.75	40.94	63.13	2.00	60.13	84.00	36.00	24.00	26.75	34.25	40.00	40.00	60.00	144.00	2,600
FCBT-130-A	36.75	73.50	42.00	54.75	44.12	63.13	2.00	60.13	84.00	36.00	24.00	28.75	36.75	40.00	40.00	60.00	144.00	2,650
FCBT-130-B	48.75	97.50	42.00	54.75	44.12	63.13	2.00	60.13	84.00	60.00	24.00	36.75	36.75	40.00	40.00	60.00	144.00	2,700
FCBT-136	48.75	97.50	48.00	59.00	50.50	63.13	2.00	60.13	96.00	60.00	24.00	42.75	42.94	40.00	40.00	60.00	156.00	3,100

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27315G

Vertical Configuration - 80/20 Recirculation



NOTES:

1. * Designates damper dimension when ordered.
2. Pipe train size varies with unit.
3. Birdscreen is optional.
4. 16 gauge housing.
5. Discharge position: ① LHORZ ② UP ③ RHORZ
6. D = Damper dimension when ordered.
7. P and R = Discharge opening when damper is not ordered.
8. Return air position: ④ LEFT ⑤ RIGHT
9. Fan and burner sections split for shipping.

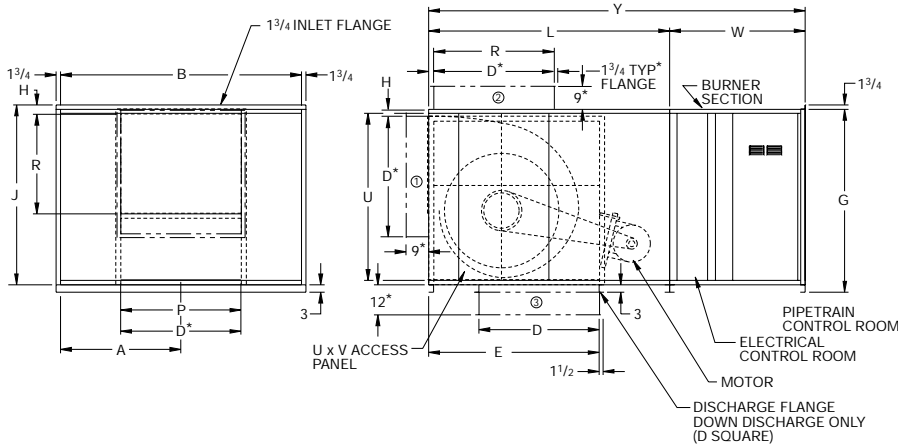
SIZE	A	B	C	D	E	H	J	K	L	M	N	P	R	U	V	W	Y	APPROX. WTS. (LB)
FCBT-130-A	36.75	73.50	70.00	42.00	54.75	2.00	60.12	56.63	84.00	36.00	24.00	28.75	36.25	40.00	40.00	60.00	144.00	2,475
FCBT-130-B	48.75	97.50	94.00	42.00	54.75	2.00	60.12	56.63	84.00	60.00	24.00	36.75	36.75	40.00	40.00	60.00	144.00	2,550
FCBT-136	48.75	97.50	94.00	48.00	59.00	2.00	60.12	56.63	96.00	60.00	24.00	42.75	42.94	40.00	40.00	60.00	156.00	2,987

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27317H

Single Fan Model BIBT Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 100% Outside Air



NOTES:

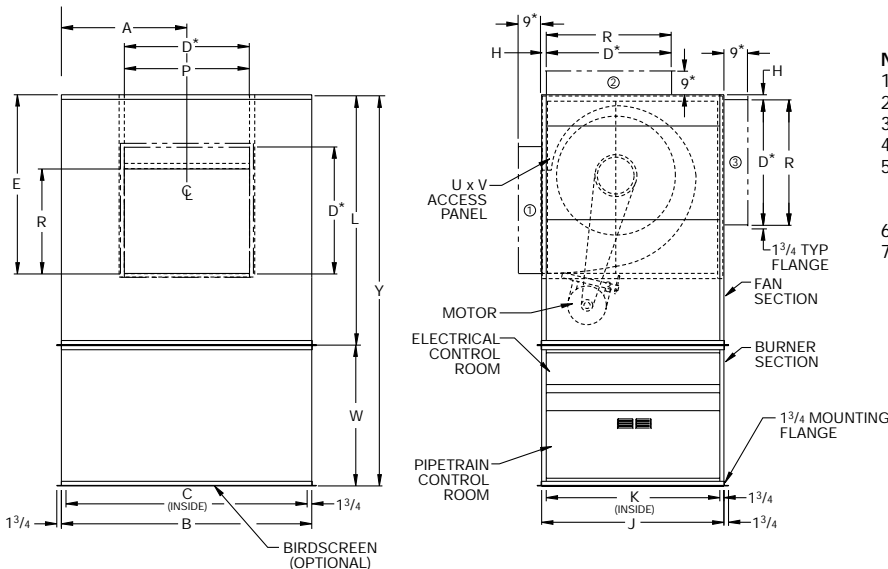
- * Designates damper dimension when ordered.
- Pipe train size varies with unit.
- Birdscreen is optional.
- 16 gauge housing.
- Discharge position: ① FRONT
② UP
③ DOWN
- D = Damper dimension when ordered and flange on down discharge.
- P and R = Discharge opening when damper is not ordered.
- Damper is shipped loose on down discharge units.

SIZE	A	B	D	E	G	H	J	L	P	R	U	V	W	Y	APPROX. WTS. (LB)
BIBT-116	29.25	58.50	24.00	31.88	39.00	5.38	36.00	—	20.00	20.00	30.00	30.00	—	81.00	1,275
BIBT-122	36.75	73.50	30.00	43.44	51.00	5.81	48.00	—	28.19	28.19	40.00	40.00	—	108.00	1,850
BIBT-125	36.75	73.50	36.00	48.18	63.13	9.06	60.13	84.00	31.56	31.56	40.00	40.00	60.00	144.00	2,500
BIBT-128	48.75	97.50	42.00	54.19	63.13	3.06	60.13	84.00	35.38	35.38	40.00	40.00	60.00	144.00	2,550
BIBT-132	48.75	97.50	42.00	59.38	63.13	2.00	60.13	96.00	40.00	39.69	40.00	40.00	60.00	156.00	2,675
BIBT-135	48.75	97.50	48.00	66.12	71.00	5.13	68.00	96.00	44.81	44.50	40.00	40.00	60.00	156.00	3,100

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27225D

Vertical Configuration - 100% Outside Air



NOTES:

- * Designates damper dimension when ordered.
- Pipe train size varies with unit.
- Birdscreen is optional.
- 16 gauge housing.
- Discharge position: ① LHORZ
② UP
③ RHORZ
- D = Damper dimension when ordered.
- P and R = Discharge opening when damper is not ordered.

SIZE	A	B	C	D	E	H	J	K	L	P	R	U	V	W	Y	APPROX. WTS. (LB)
BIBT-116	29.25	58.50	55.00	24.00	30.63	2.00	36.00	33.50	—	20.00	20.00	30.00	30.00	—	81.00	1,275
BIBT-122	36.75	73.50	70.00	30.00	42.19	2.00	48.00	45.50	—	28.19	28.19	40.00	40.00	—	108.00	1,850
BIBT-125	36.75	73.50	70.00	36.00	46.94	2.00	60.13	57.63	84.00	31.56	31.56	40.00	40.00	60.00	144.00	2,500
BIBT-128	36.75	97.50	94.00	42.00	52.94	2.00	60.13	57.63	84.00	35.38	35.38	40.00	40.00	60.00	144.00	2,550
BIBT-132	48.75	97.50	94.00	42.00	58.13	2.00	60.13	57.63	96.00	40.00	39.69	40.00	40.00	60.00	156.00	2,675
BIBT-135	48.75	97.50	94.00	48.00	64.88	2.00	68.00	65.50	96.00	44.81	44.50	40.00	40.00	60.00	156.00	3,100

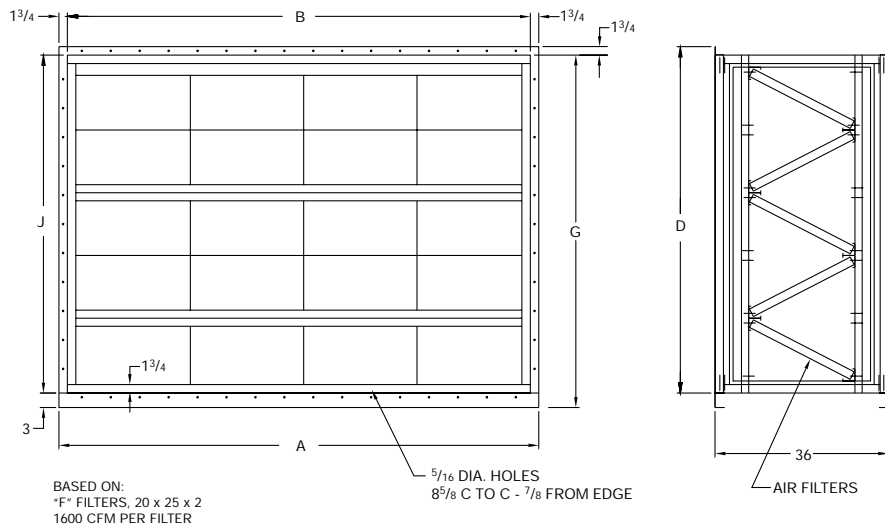
DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27306C

Accessories – Single Fan Assemblies

V-Bank Filter Cabinet

Standard filter is a disposable type with washable as an option.

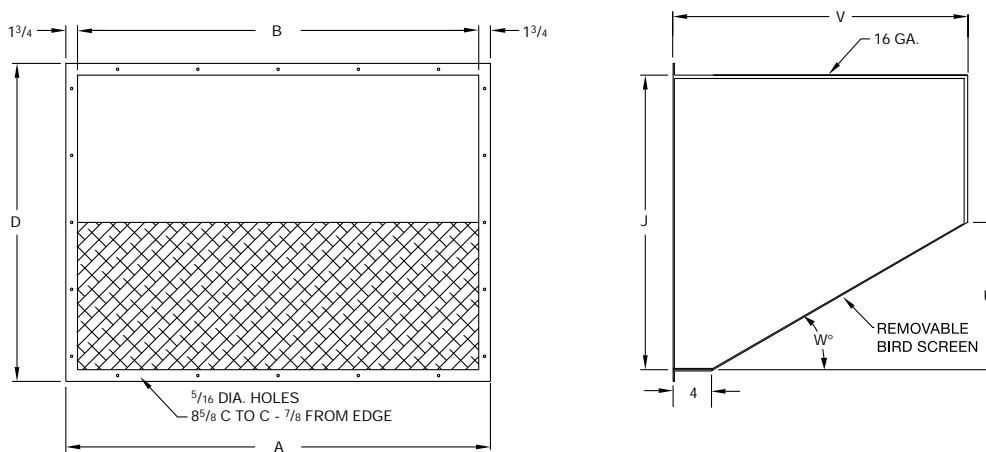


SIZE	A	B	D	F	G	J	APPROX. WTS. (LB)
115, 116 & 118	62.00	58.50	37.75	6	39.00	36.00	225
120, 122 FC & 122 BI	77.00	73.50	49.75	9	51.00	48.00	325
125, 127, 130A	77.00	73.50	57.75	15	63.13	60.13	350
128, 130B	101.00	97.50	61.88	25	63.13	60.13	400
132 & 136	101.00	97.50	61.88	25	63.13	60.13	400
135	101.00	97.50	69.75	25	71.00	68.00	425

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27228E

Inlet Hood with Removable Bird Screen



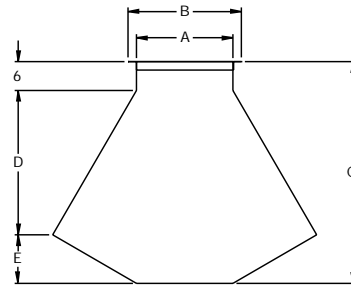
SIZE	A	B	D	J	U	V	W°	APPROX. WTS. (LB)
115, 116, 118	62.00	58.50	39.50	36.00	18.00	35.00	30	180
120, 122 FC, 122 BI	77.00	73.50	51.50	48.00	24.00	45.50	30	265
125, 127, 130A	77.00	73.50	63.63	60.13	30.06	56.00	30	300
128, 130B	101.00	97.50	63.63	60.13	30.06	56.00	30	350
132 & 136	101.00	97.50	63.63	60.13	30.06	56.00	30	350
135	101.00	97.50	71.50	68.00	34.00	62.88	45	400

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27226E

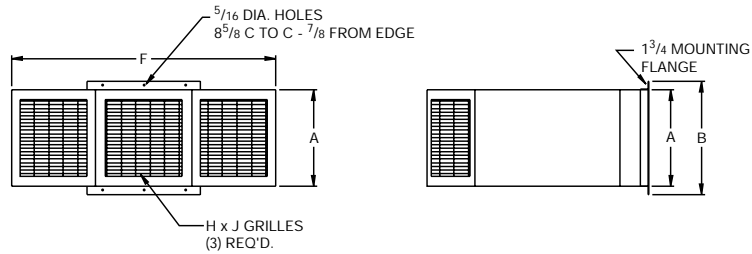
Accessories – Single Fan Assemblies

Directional Discharge Grille



NOTES:

1. Grilles are single or double deflection per order.
2. Assembly requires support from the top or bottom.
3. Single deflection grilles are 80% open area.
4. Double deflection grilles are 65% open area.

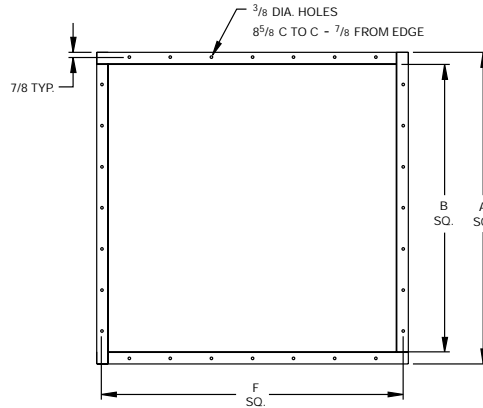
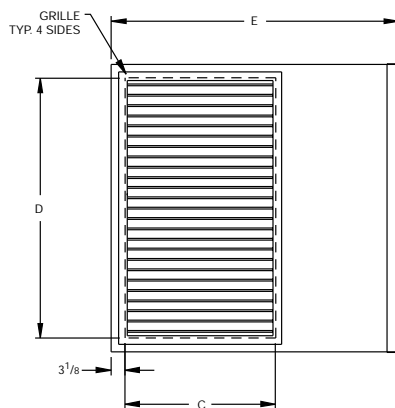


SIZE	A	B	C	D	E	F	H	J	APPROX. WTS. (LB)
115, 116, 118	24.00	27.50	48.00	36.00	12.00	65.56	21.00	21.00	280
120, 122 FC, 122 BI	30.00	33.50	60.00	45.00	15.00	81.97	27.00	27.00	305
125, 127	36.00	39.50	64.00	48.00	16.00	87.44	33.00	29.00	280
128, 130A, 130B, 132	42.00	45.50	64.00	48.00	16.00	87.44	39.00	29.00	305
135, 136	48.00	51.50	96.00	72.00	24.00	131.13	45.00	45.00	459

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27310C

Air Distributor



NOTES:

1. Grilles are single or double deflection per order.
2. Single deflection grilles are 80% open area.
3. Double deflection grilles are 65% open area.

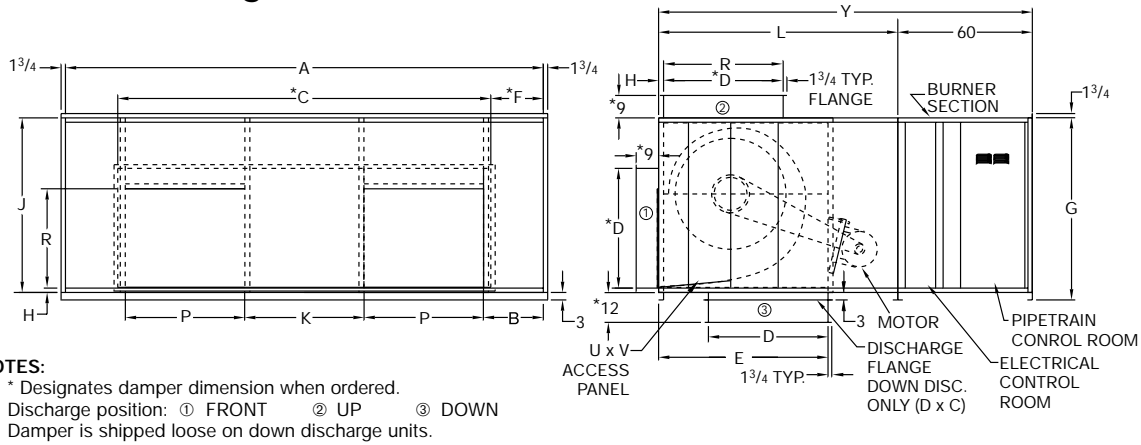
SIZE	NOMINAL SIZE	A	B	C	D	E	F	APPROX. WTS. (LB)
115, 116, 118	21 x 21	27.50	24.00	20.50	20.50	36.00	26.00	88
120, 122 FC, 122 BI	27 x 27	33.50	30.00	26.50	26.50	36.00	32.00	114
125, 127	33 x 29	39.50	36.00	28.50	32.50	46.00	38.00	142
128, 130A, 130B, 132	39 x 29	45.50	42.00	28.50	38.50	46.00	44.00	197
135, 136	45 x 45	51.50	48.00	44.50	44.50	56.00	50.00	243

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27312C

Twin Fan Model FCBT-DW Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 100% Outside Air

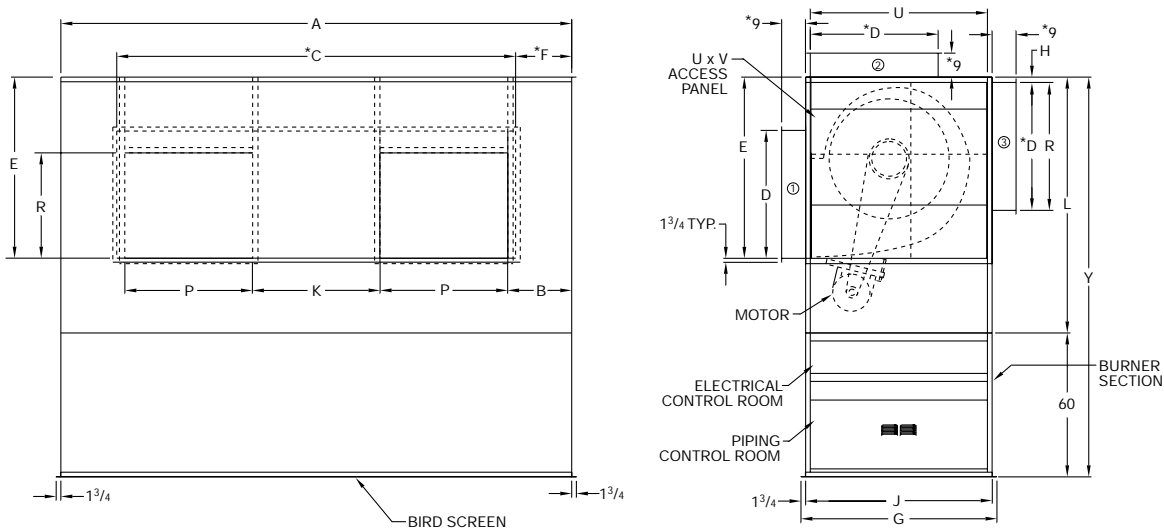


SIZE	A	B	C	D	E		F	G	H	J	K	L	P	R	U	V	Y	APPROX. WTS. (LB)
					HORIZ	UP/DN												
FCBT-222	136.50	30.00	78.00	30.00	33.88	40.88	29.25	51.00	2.12	48.00	22.00	84.00	27.25	27.25	40.00	40.00	144.00	2,900
FCBT-225	136.50	24.50	96.00	36.00	38.00	46.13	20.25	59.00	2.12	48.00	25.00	84.00	31.25	31.25	40.00	40.00	144.00	3,365
FCBT-227	156.00	30.25	108.00	36.00	42.31	50.88	24.00	63.13	2.12	60.13	27.00	84.00	34.25	34.25	40.00	40.00	144.00	4,063
FCBT-230	156.00	26.25	108.00	42.00	45.56	54.94	24.00	63.13	2.19	60.13	30.00	84.00	36.75	36.75	40.00	40.00	144.00	4,586
FCBT-233	171.50	29.50	120.00	48.00	52.13	59.19	25.75	63.13	2.19	60.13	33.00	96.00	39.75	42.94	40.00	40.00	156.00	5,134
FCBT-236	171.50	25.00	132.00	48.00	52.13	59.19	19.75	63.13	2.19	60.13	36.00	96.00	42.75	42.94	40.00	40.00	156.00	5,773

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27300G

Vertical Configuration - 100% Outside Air



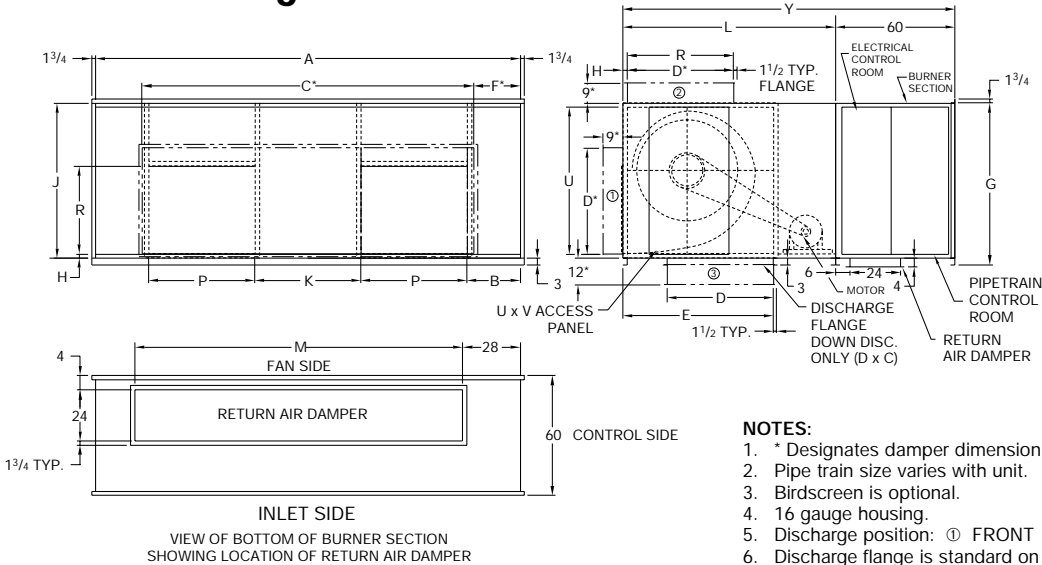
SIZE	A	B	C	D	E	F	G	H	J	K	L	P	R	U	V	Y	APPROX. WTS. (LB)
FCBT-225	136.50	24.50	96.00	36.00	46.19	20.25	51.50	2.12	48.00	25.00	84.00	31.25	31.25	40.00	40.00	144.00	3,365
FCBT-227	156.00	30.25	108.00	36.00	50.94	24.00	63.63	2.12	60.13	27.00	84.00	34.25	34.25	40.00	40.00	144.00	4,063
FCBT-230	156.00	26.25	108.00	42.00	54.94	24.00	63.63	2.12	60.13	30.00	84.00	36.75	36.75	40.00	40.00	144.00	4,586
FCBT-233	171.50	29.50	120.00	48.00	55.00	25.75	63.63	2.19	60.13	33.00	96.00	39.75	42.94	40.00	40.00	156.00	5,134
FCBT-236	171.50	25.00	132.00	48.00	59.25	19.75	63.63	2.19	60.13	36.00	96.00	42.75	42.94	40.00	40.00	156.00	5,773

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27307J

Twin Fan Model FCBT-DW Direct-Fired Gas Air Make-up Unit

Horizontal Configuration - 80/20 Recirculation

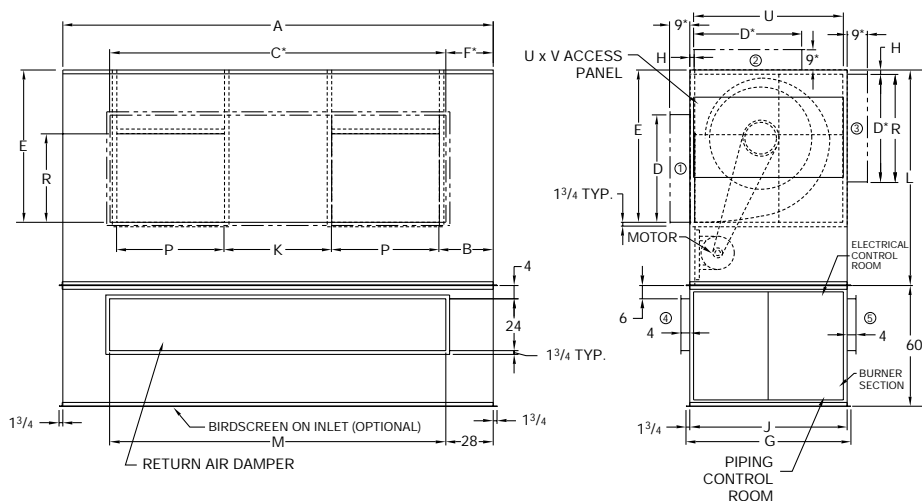


SIZE	A	B	C	D	E		F	G	H	J	K	L	M	P	R	U	V	Y	APPROX. WTS. (LB)
					HORZ	UP/DN													
FCBT-222	136.50	30.00	78.00	30.00	33.88	40.88	29.25	51.00	2.12	48.00	22.00	84.00	78.00	27.25	27.25	40.00	40.00	144.00	2,639
FCBT-225	136.50	24.50	96.00	36.00	38.00	46.13	20.25	51.00	2.12	48.00	25.00	84.00	78.00	31.25	31.25	40.00	40.00	144.00	3,059
FCBT-227	156.00	30.25	108.00	36.00	42.31	50.88	24.00	63.13	2.12	60.13	27.00	84.00	108.00	34.25	34.25	40.00	40.00	144.00	3,694
FCBT-230	156.00	26.25	108.00	42.00	45.56	54.94	24.00	63.13	2.19	60.13	30.00	84.00	108.00	36.75	36.75	40.00	40.00	144.00	4,169
FCBT-233	171.50	29.50	120.00	48.00	52.13	59.19	25.75	63.13	2.19	60.13	33.00	96.00	132.00	39.75	42.94	40.00	40.00	156.00	4,668
FCBT-236	171.50	25.00	132.00	48.00	52.13	59.19	19.75	63.13	2.19	60.13	36.00	96.00	132.00	42.75	42.94	40.00	40.00	156.00	5,249

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27314F

Vertical Configuration - 80/20 Recirculation



SIZE	A	B	C	D	E	F	G	H	J	K	L	M	P	R	U	V	Y	APPROX. WTS. (LB)
FCBT-225	136.50	24.50	96.00	36.00	46.13	20.25	51.50	2.12	48.00	25.00	84.00	78.00	31.25	31.25	40.00	40.00	144.00	3,059
FCBT-227	156.00	30.25	108.00	36.00	50.88	24.00	63.63	2.12	60.13	27.00	84.00	108.00	34.25	34.25	40.00	40.00	144.00	3,694
FCBT-230	156.00	26.25	108.00	42.00	54.94	24.00	63.63	2.19	60.13	30.00	84.00	108.00	36.75	36.75	40.00	40.00	144.00	4,169
FCBT-233	171.50	29.50	120.00	48.00	59.19	25.75	63.63	2.19	60.13	33.00	96.00	132.00	39.75	42.94	40.00	40.00	156.00	4,668
FCBT-236	171.50	25.00	132.00	48.00	59.19	19.75	63.63	2.19	60.13	36.00	96.00	132.00	42.75	42.94	40.00	40.00	156.00	5,249

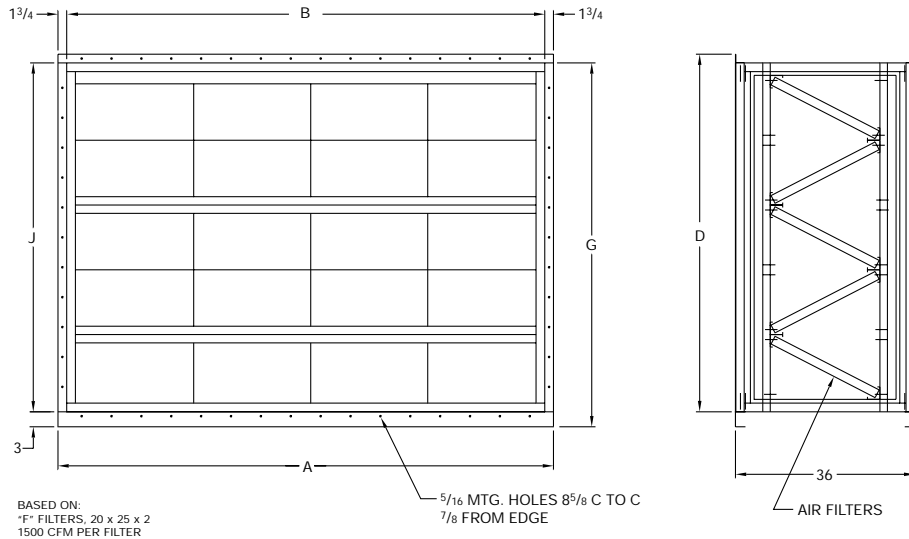
DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27316F

Accessories – Twin Fan Assemblies

V-Bank Filter Cabinet

Standard filter is a disposable type with washable as an option.

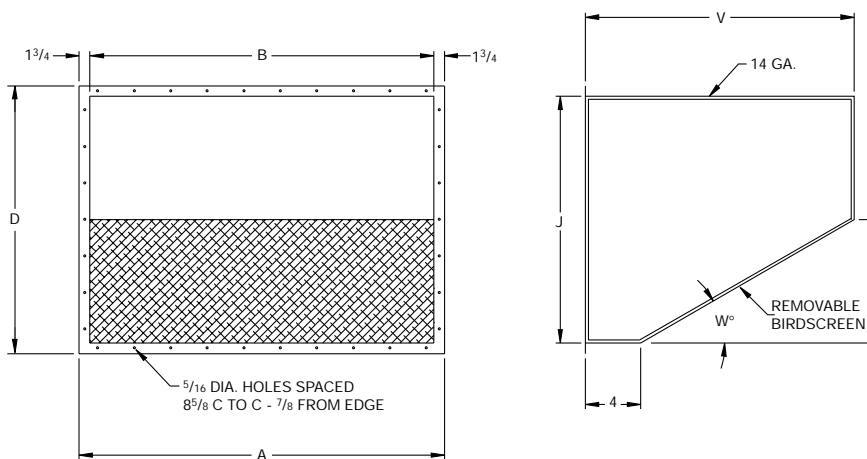


SIZE	A	B	D	F	G	J	APPROX. WTS. (LB)
FCBT-222	140.00	136.50	49.75	28	52.75	48.00	618
FCBT-225	140.00	136.50	49.75	28	52.75	48.00	618
FCBT-227	159.50	156.00	61.88	40	64.88	60.13	727
FCBT-230	159.50	156.00	61.88	40	64.88	60.13	727
FCBT-233	175.00	171.50	61.88	49	64.88	60.13	795
FCBT-236	175.00	171.50	61.88	49	64.88	60.13	795

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27304E

Inlet Hood with Removable Bird Screen



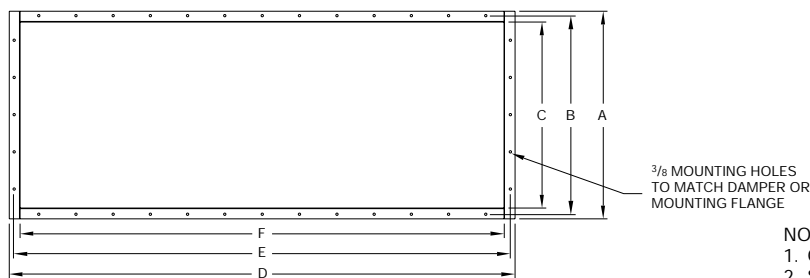
SIZE	A	B	D	J	U	V	W°	APPROX. WTS. (LB)
FCBT-222	140.00	136.50	51.50	48.00	24.00	45.50	30	375
FCBT-225	140.00	136.50	51.50	48.00	24.00	45.50	30	375
FCBT-227	159.50	156.00	63.63	60.13	30.06	56.00	30	425
FCBT-230	159.50	156.00	63.63	60.13	30.06	56.00	30	425
FCBT-233	175.00	171.50	63.63	60.13	30.06	56.00	30	560
FCBT-236	175.00	171.50	63.63	60.13	30.06	56.00	30	560

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27303F

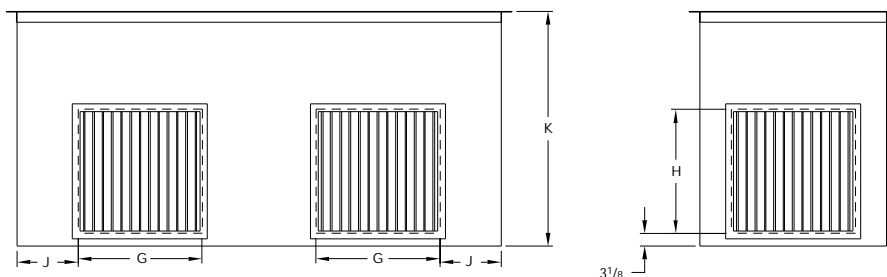
Accessories – Twin Fan Assemblies

Air Distributor



NOTES:

1. Grilles are available as single or double deflection.
2. Single deflection grilles are 80% open area.
3. Double deflection grilles are 65% open area.

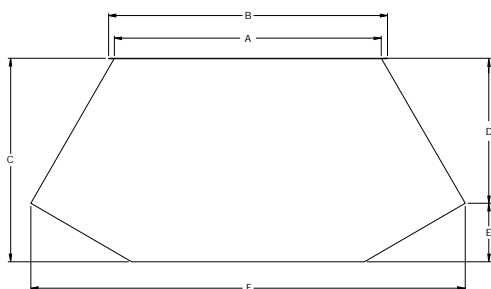


SIZE	NOMINAL SIZE	A	B	C	D	E	F	G	H	J	K	APPROX. WTS. (LB)
222	27 x 23	33.50	32.00	30.00	81.50	80.00	78.00	22.50	26.50	8.25	44.00	298
225	33 x 29	39.50	38.00	36.00	99.50	98.00	96.00	28.50	32.50	9.75	44.00	380
227	33 x 33	39.50	38.00	36.00	111.50	110.00	108.00	32.50	32.50	9.75	44.00	418
230	39 x 33	45.50	44.00	42.00	111.50	110.00	108.00	32.50	38.50	10.75	58.00	553
233	45 x 37	51.50	50.00	48.00	123.50	122.00	120.00	36.50	44.50	11.75	58.00	637
236	45 x 41	51.50	50.00	48.00	135.50	134.00	132.00	40.50	44.50	12.75	58.00	686

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

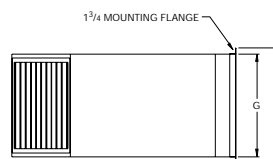
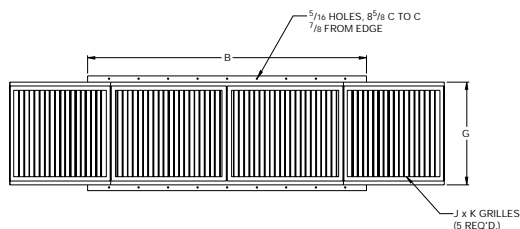
R27313B

Directional Discharge Grille



NOTES:

1. Grilles are single or double deflection per order.
2. Assembly requires support from the top or bottom.
3. Single deflection grilles are 80% open area.
3. Double deflection grilles are 65% open area.



SIZE	A	B	C	D	E	F	G	H	J	K	APPROX. WTS. (LB)
222	78.00	81.50	52.00	39.00	13.00	123.00	30.00	33.50	27.00	23.00	604
225	96.00	99.50	64.00	48.00	16.00	151.44	36.00	39.50	33.00	29.00	517
227	108.00	111.50	72.00	54.00	18.00	170.38	36.00	39.50	33.00	33.00	758
230	108.00	111.50	72.00	54.00	18.00	170.38	42.00	45.50	39.00	33.00	801
233	120.00	123.50	80.00	60.00	20.00	189.25	48.00	51.50	45.00	37.00	971
236	132.00	135.50	88.00	66.00	22.00	208.25	48.00	51.50	45.00	41.00	1,138

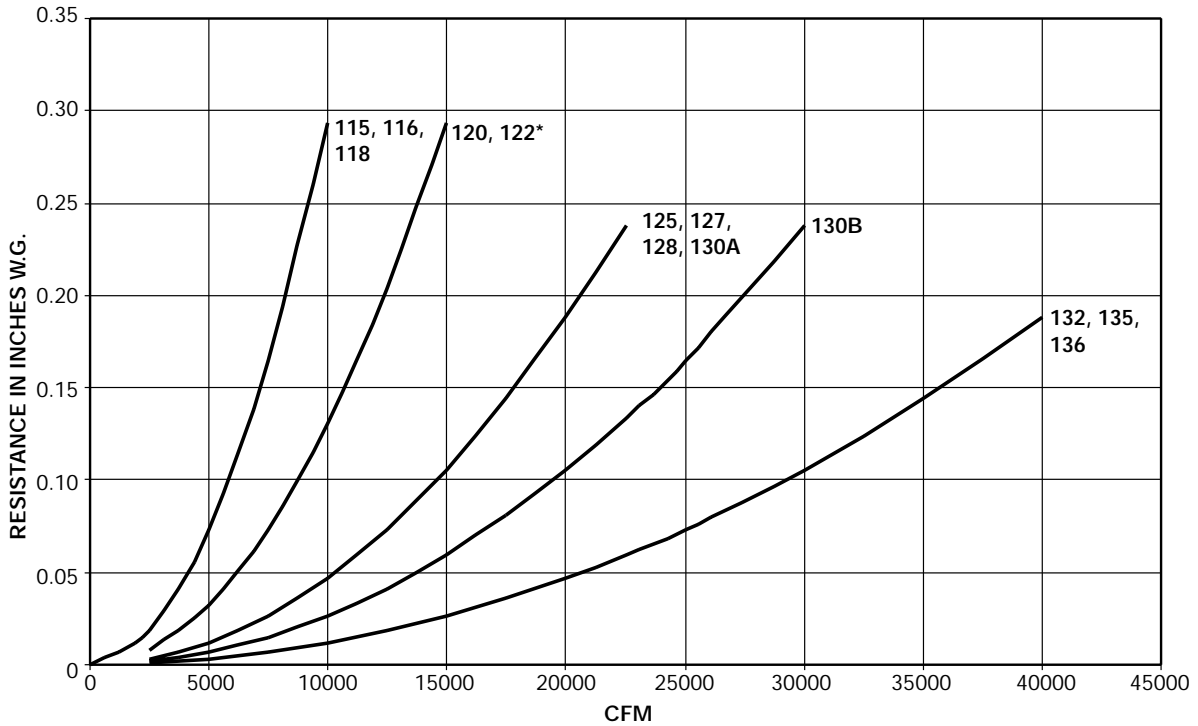
DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION.

R27311B

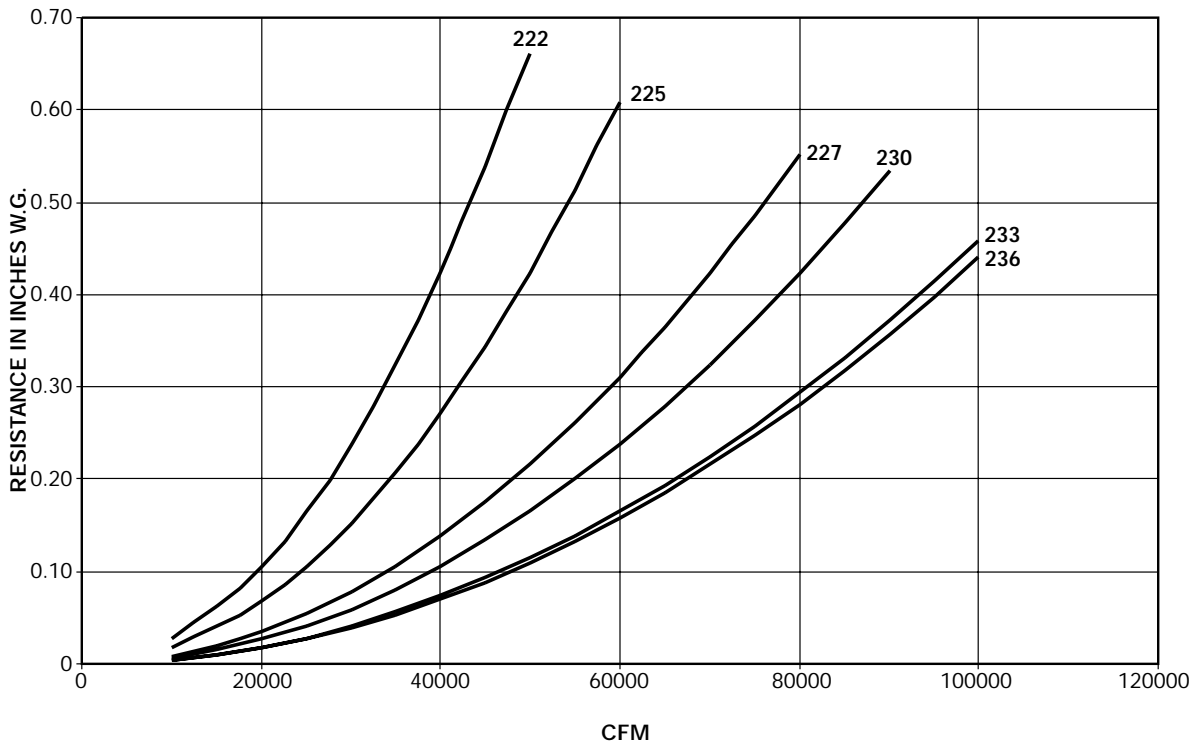
Pressure Drop Curves for Accessories

V-Bank Filter Cabinet

Single Fan



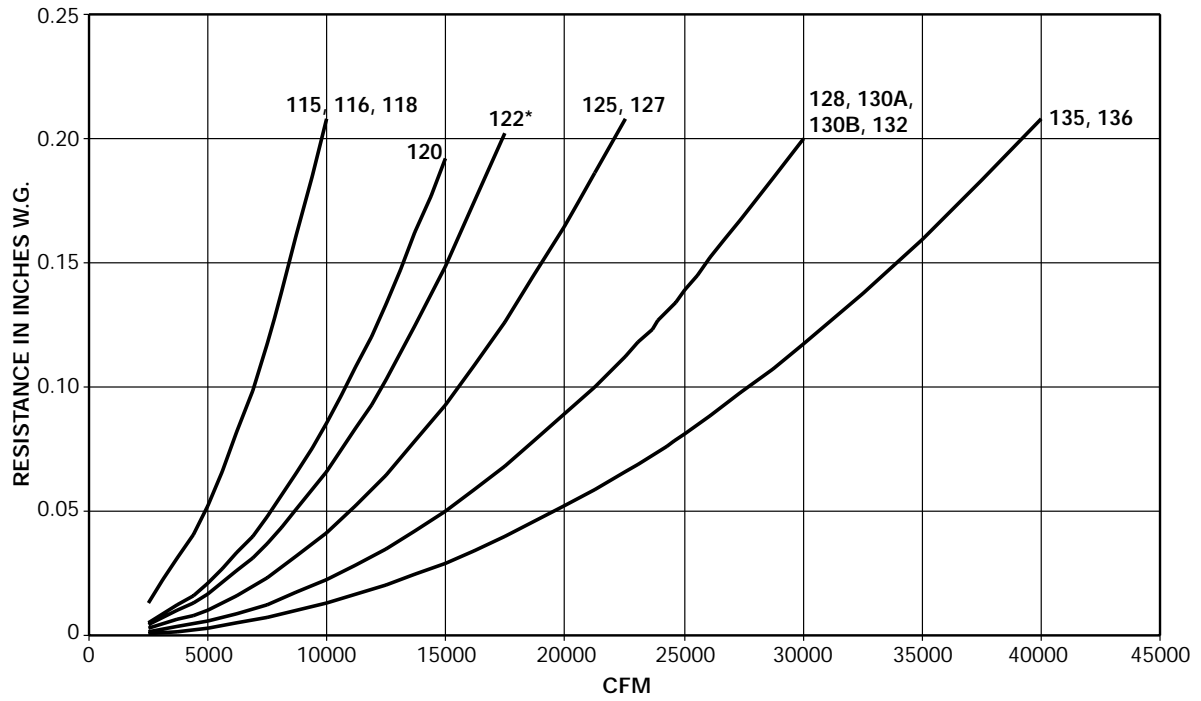
Twin Fan



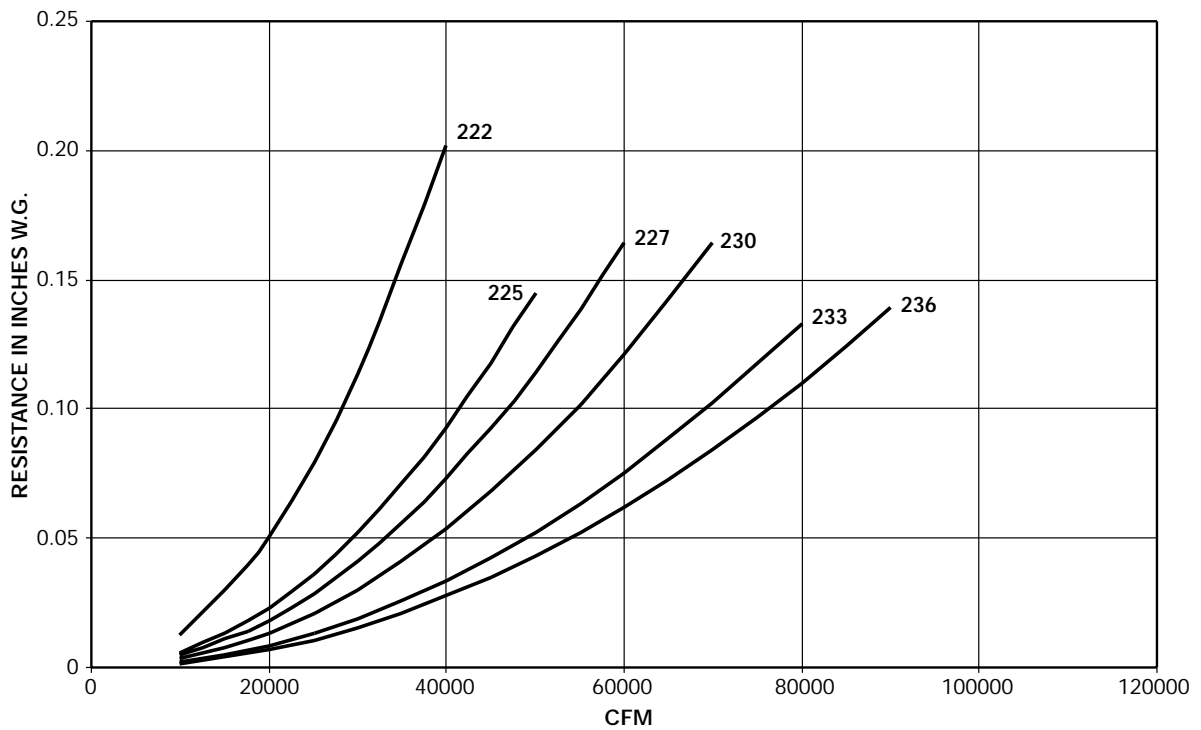
Pressure Drop Curves for Accessories

Parallel Blade Discharge Damper

Single Fan



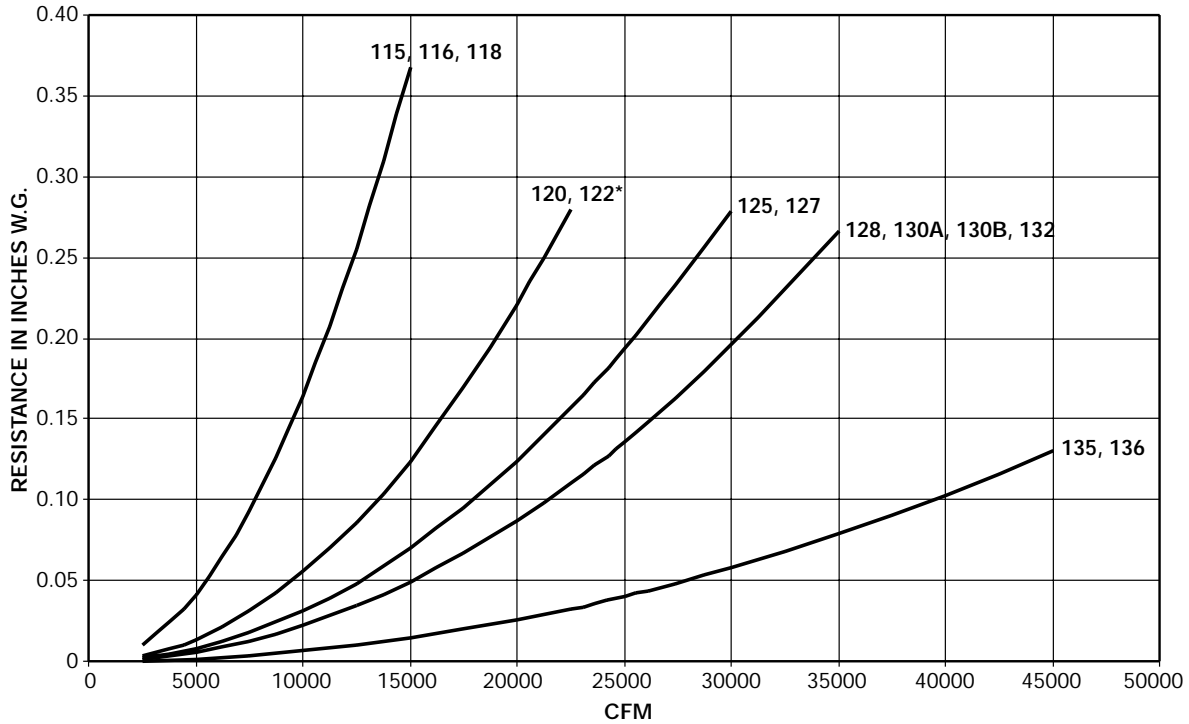
Twin Fan



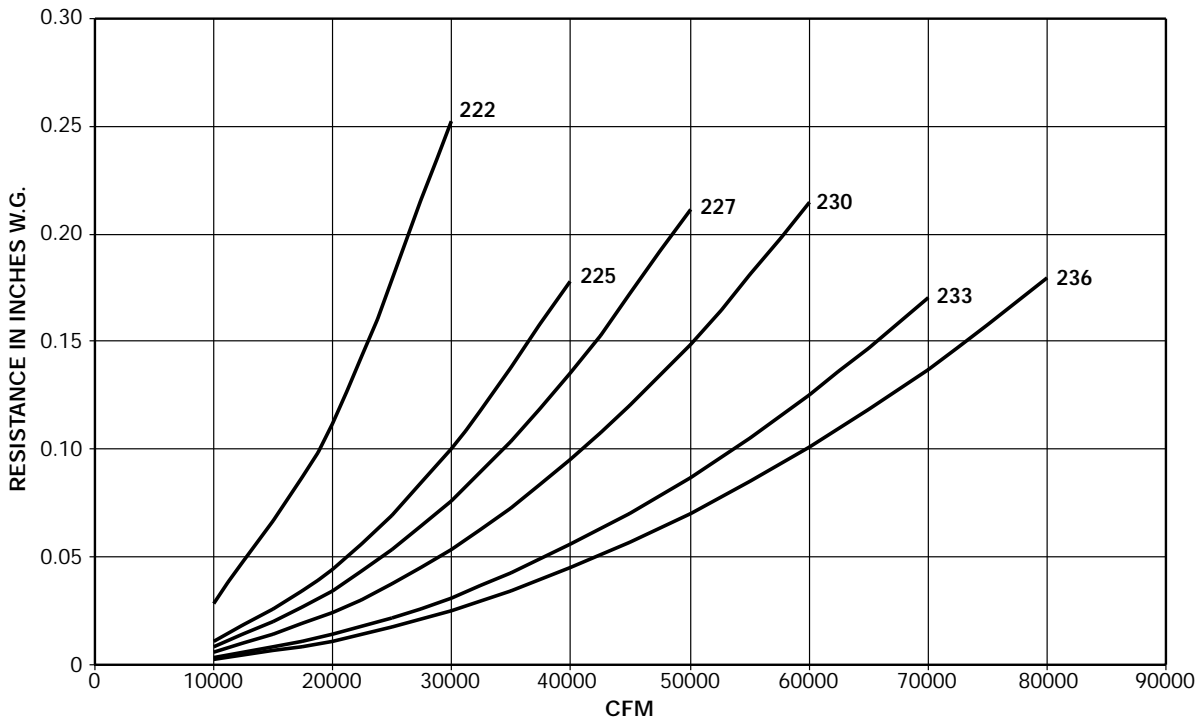
Pressure Drop Curves for Accessories

Directional Discharge Grille

Single Fan



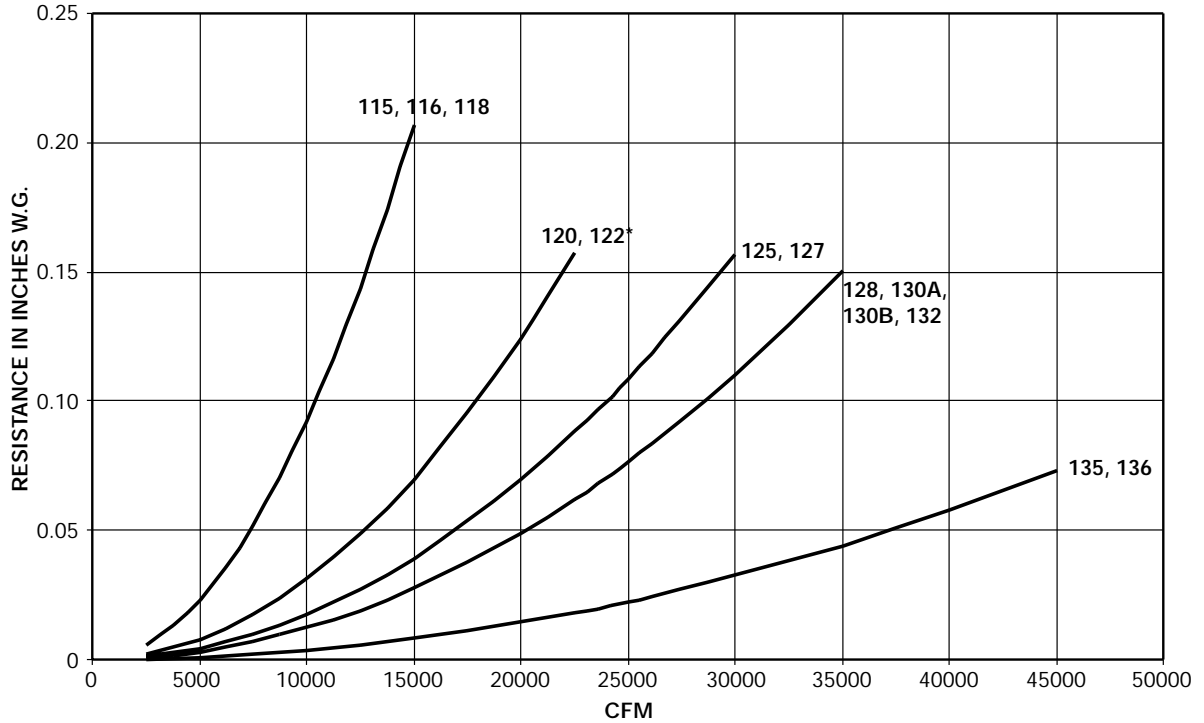
Twin Fan



Pressure Drop Curves for Accessories

Air Distributor

Single Fan



Twin Fan

