



COOLING HEATING SYSTEMS



Typical "HRYR" Rooftop Model



Typical Air Cooled
Condensing Unit (Optional upon Request)

ANY RATIO OF HEATING TO COOLING

80% Efficient Duct Furnaces
(Indoor Models Available with Separated Combustion)

INDOOR/OUTDOOR

MODELS

IHYR – ISHYR – HRYR

"Year-Round"

Cooling/Heating

Indirect Gas-Fired

Make-up Air Systems



MAKE UP AIR with room thermostat and discharge air control. An electronic modulating gas valve maintains constant discharge air control, with roomstat override.

Modulating Control
Systems – Down to 30% of
Rated input

MODELS

IHCH – ISHCH – HRCH

Cooling/Heating

Indirect Gas-Fired

Return or Mixed Air

Packaged Systems



HEATING &
VENTILATING with room
Thermostat. Generally used
where customer requires both
outdoor and recirculated air.
Modulating Control Systems –
Down to 30% of Rated input are
available.



Intertek

E.T.L.

**All Models
Design Certified**

“YEAR-ROUND” MAKE-UP AIR SYSTEMS

The need to replace air exhausted from buildings with 100% outside air is a year around requirement. Outside air must be heated in the winter and, in many applications, cooled in the summer.

Model IHYR-ISHYR-HRYR “year-round” make-up air systems incorporate cooling with the traditional Hastings 100% outside air indirect gas-fired units. The same concept of modulated discharge air temperature control found in Hastings IHRMU and HRMU units is applied to the all season or “year-round” systems. As an added feature, IHYR-ISHYR-HRYR systems include space over-riding heating and cooling temperature controls like those with Hastings

Operating Sequence

The “On” position of the “On-Off” system switch energizes the unit and provides continuous blower. The summer-winter automatic change-over controller monitors the temperature of the entering outdoor air to provide fully automatic operation.

With the summer-winter automatic change-over controller in the winter mode, the unit operates as an IHRHV or HRHV heating and ventilating system. On call for additional heat in the space, the room thermostat opens the electronic modulating gas valve to provide full gas input to the burner. If room thermostat is satisfied, the modulating gas valve maintains a constant discharge air temperature.

Equipment Selection – Air Handling and Heating Section

1. Check the exhaust specifications or equipment to determine the total SCFM of fresh air required.
2. Increase the total SCFM by approximately 10% if building needs to be slightly pressurized.
3. Determine air temperature rise, usually 70°F minus winter outside design temperature.
4. Select model and motor size to deliver desired air temperature rise and SCFM against required TSP. Total Static Pressure (TSP) is the sum of all system components pressure drops external of the MB blower including plenums, intake hood, dampers, filters, DX coil, transitions, furnaces, system duct-work and registers. See Bulletin IHRDV-1 for pressure drops thru duct furnaces.

IHRHV and HRHV heating and ventilating units.

Conventional equipment is limited in the choice of heat-to-cool ratios and control systems. Standard cooling/heating units are designed for comfort air conditioning with a minimum of outside air. They are unable to provide comfortable discharge air conditions with the temperature extremes of 100% outside air entering the units.

IHYR-ISHYR-HRYR “year-round” make-up air systems are available in a wide range of cooling and heating combinations to meet any climatic condition and application.

When the summer-winter automatic change-over controller switches to the summer position, the air cooled condensing unit is energized and the liquid line solenoid valve opens allowing refrigerant to flow to the DX cooling coil. The furnace(s) remain in operation and the discharge air controller maintains a constant leaving air temperature.

If the thermostat in the space calls for additional cooling, the reheat function is shut-off. This allows the cooler air directly off the DX coil to discharge into the space. When the summer-winter sequencer switches out of the summer position, the liquid line solenoid valve closes and the condensing unit pumps down, shutting off on low head pressure.

Blower Table – Indoor/Outdoor Models														
Model (Nominal Tonage)	Air Delivery SCFM	Blower Used	A				B				C			
			MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP
IHCH-7 HRCH-7	3000	MB-114A	210	49	.83 1.24	3/4 1	-				-			
IHCH-10 HRCH-10	4000	MB-114A	210	37	1.04 1.62	1 1/2 2	320B	56	1.04 1.62	1 1/2 2	-			
IHCH-15 HRCH-15	6000	MB-114B	300	35	1.25 2.63	3 5	500B	59	1.25 2.63	3 5	-			
IHCH-20 HRCH-20	8000	MB-114B	500B	44	- 2.22	7 1/2	600B	53	- 2.22	7 1/2	750C	66	- 2.22	7 1/2
IHCH-25 HRCH-25	10000	MB-214	400	30	1.99 -	7 1/2	800B	60	1.99 -	7 1/2	-			

Blower Table – Indoor/Outdoor Models														
Model (Nominal Tonage)	Air Delivery SCFM	Blower Used	D				E				F			
			MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP
IHCH-7 HRCH-7	3000	MB-114A	320B	75	.83 1.24	3/4 1	-				420B	99	.83 1.24	3/4 1
IHCH-10 HRCH-10	4000	MB-114A	420B	74	1.04 1.62	1 1/2 2	-				-			
IHCH-15 HRCH-15	6000	MB-114B	600B	70	1.25 2.63	3 5	750C	88	1.25 2.63	3 5	-			
IHCH-20 HRCH-20	8000	MB-114B	900C	79	2.22 -	7 1/2	-				-			
IHCH-25 HRCH-25	10000	MB-214	-				1200C	89	1.99 -	7 1/2	-			

Blower Table – Indoor/Outdoor Models														
Model (Nominal Tonage)	Air Delivery SCFM	Blower Used	A				B				C			
			MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP
IHYR-2.5 HRYR-2.5	2500	MB-114A	160	45	1.1 1.6	3/4 1	210	59	1.1 1.6	3/4 1	-			
IHYR-3 HRYR-3	3000	MB-114A	210	49	.83 1.24	3/4 1	-				-			
IHYR-4 HRYR-4	4000	MB-114A	-				320B	56	1.04 1.61	1 1/2 2	-			
IHYR-4X HRYR-4X	4000	MB-114B	250	44	1.3 1.79	1 1/2 2	300	53	1.3 1.79	1 1/2 2	-			
IHYR-5 HRYR-5	5000	MB-114B	300	42	1.18 1.98	2 3	-				-			
IHYR-6 HRYR-6	6000	MB-114B	-				500B	59	1.25 2.63	3 5	-			
IHYR-7 HRYR-7	7000	MB-114B	-				500B	50	1.77 -	5	600B	60	1.77 -	5
IHYR-7X HRYR-7X	7000	MB-214	400	42	.64 .91	2 3	-				-			
IHYR-8 HRYR-8	8000	MB-114B	500B	44	2.22 -	7 1/2	600B	53	2.22 -	7 1/2	750C	66	2.22 -	7 1/2
IHYR-8X HRYR-8X	8000	MB-214	400	37	1.99 -	7 1/2	-				-			
IHYR-9 HRYR-9	9000	MB-214	400	33	1.99 -	7 1/2	-				800B	66	1.41 2.51	5 7 1/2
IHYR-10 HRYR-10	10000	MB-214	400	30	1.99 -	7 1/2	800B	60	1.99 -	7 1/2	-			

Blower Table – Indoor/Outdoor Models														
Model (Nominal Tonage)	Air Delivery SCFM	Blower Used	D				E				F			
			MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP	MBH	TR ° F	Max TSP	HP
IHYR-2.5 HRYR-2.5	2500	MB-114A	-				-				320B	90	1.11 1.6	3/4 1
IHYR-3 HRYR-3	3000	MB-114A	320B	75	.83 1.24	3/4 1	-				420B	99	.83 1.24	3/4 1
IHYR-4 HRYR-4	4000	MB-114A	420B	74	1.04 1.61	1 1/2 2	-				-			
IHYR-4X HRYR-4X	4000	MB-114B	-				500B	88	1.3 1.79	1 1/2 2	-			
IHYR-5 HRYR-5	5000	MB-114B	500B	70	1.18 1.98	2 3	600B	84	1.18 1.98	2 3	-			
IHYR-6 HRYR-6	6000	MB-114B	600B	70	1.25 2.63	3 5	750C	88	1.25 2.63	3 5	-			
IHYR-7 HRYR-7	7000	MB-114B	750C	75	1.77 -	5	-				900C	90	1.77 -	5
IHYR-7X HRYR-7X	7000	MB-214	-				800B	84	.91 1.75	3 5	-			
IHYR-8 HRYR-8	8000	MB-114B	900C	79	2.22 -	7 1/2	-				-			
IHYR-8X HRYR-8X	8000	MB-214	800B	74	.81 1.96	3 5	-				1200C	(*) 103	.81 1.96	3 5
IHYR-9 HRYR-9	9000	MB-214	-				-				1200C	99	1.41 2.51	5 7 1/2
IHYR-10 HRYR-10	10000	MB-214	-				1200C	88	1.99 -	7 1/2	-			

NOTES: (*) Furnaces derated. Heating shown as MBH input. Maximum total static pressure listed in inches of water at the given motor HP.

Contact Hastings representative for larger sizes or combinations not shown above.

IHYR-ISHYR-HRYR COOLING CAPACITIES

Refrigerant 410A

Entering Air Temperature: 95°F. DB, 78°F. WB

IHYR ISHYR HRYR Model	Air Delivery SCFM	SB Coil Section	MB Blower	Coil Face Area Sq. Ft	Coil Face Velocity FPM	Entering Air Temp. 95/78					Entering Air Temp. 95/78				
						3-Row DX Coil					4-Row DX Coil				
						No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc	No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc
								DB	WB				DB	WB	
2.5	2500	115	114A	5.1	492	1	117.0	69.8	66.4	.33	1	138.5	66.0	63.9	.44
3	3000	115	114A	6.7	450	1	148.5	68.8	65.6	.29	2	182.3	64.1	62.2	.38
4	4000	115	114A	6.7	600	1	169.9	71.5	67.6	.46	2	200.1	67.9	65.5	.62
4X	4000	215	114B	8.2	488.5	2	191.6	69.5	66.1	.33	2	232.4	65.1	63.1	.44
5	5000	215	114B	10.9	458	2	247.6	68.9	65.6	.29	2	291.2	64.9	63.0	.39
6	6000	215	114B	10.9	549.6	2	270.2	70.6	66.9	.40	2	320.8	66.7	64.5	.53
7	7000	215	114B	13.6	513	2	326.9	69.9	66.4	.36	2	405.5	65.2	63.1	.47
7X	7000	218	214	16.2	439.5	2	358.3	68.3	65.2	.27	2	424.5	64.1	62.3	.37
8	8000	215	114B	13.6	586	2	347.9	71.2	67.3	.45	2	408.2	67.6	65.2	.59
8X	8000	218	214	16.2	502	2	382.5	69.6	66.1	.34	2	456.3	65.5	63.4	.46
9	9000	218	214	16.2	565	2	404.3	70.7	66.9	.42	2	485.2	66.6	64.4	.56
10	10000	218	214	16.2	628	2	424.1	71.6	67.6	.50	2	511.6	67.6	65.2	.67

Refrigerant 410A

Entering Air Temperature: 90°F. DB, 75°F. WB

IHYR ISHYR HRYR Model	Air Delivery SCFM	SB Coil Section	MB Blower	Coil Face Area Sq. Ft	Coil Face Velocity FPM	Entering Air Temp. 90/75					Entering Air Temp. 90/75				
						3-Row DX Coil					4-Row DX Coil				
						No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc	No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc
								DB	WB				DB	WB	
2.5	2500	115	114A	5.1	492	1	100.8	67.5	64.4	.33	1	124.2	63.4	61.5	.44
3	3000	115	114A	6.7	450	1	128.0	66.6	63.7	.29	1	153.2	62.8	61.1	.38
4	4000	115	114A	6.7	600	1	146.8	69.0	65.5	.46	1	177.8	65.3	63.2	.62
4X	4000	215	114B	8.2	488.5	1	165.3	67.2	64.1	.33	2	205.6	62.8	61.0	.44
5	5000	215	114B	10.9	458	2	213.0	66.6	63.7	.29	2	261.6	62.4	60.7	.39
6	6000	215	114B	10.9	549.6	2	232.8	68.2	64.9	.40	2	288.7	64.0	62.0	.53
7	7000	215	114B	13.6	513	2	282.4	67.6	64.4	.36	2	350.2	63.3	61.4	.47
7X	7000	218	214	16.2	439.5	2	309.1	66.1	63.3	.27	2	386.0	61.4	59.8	.37
8	8000	215	114B	13.6	586	2	299.8	68.7	65.2	.45	2	375.3	64.5	62.4	.59
8X	8000	218	214	16.2	502	2	329.9	67.2	64.1	.34	2	415.1	62.7	60.8	.46
9	9000	218	214	16.2	565	2	348.8	68.2	64.9	.42	2	417.2	64.7	62.6	.56
10	10000	218	214	16.2	628	2	366.0	69.1	65.5	.50	2	440.6	65.5	63.3	.67

Note: Contact your local Hastings sales representative for DX coil/condensing unit (optional) combinations to match other capacity requirements.
Coil selections based on 43° suction.

IHCH-ISHCH-HRCH COOLING CAPACITIES

Refrigerant 410A

Entering Air Temperature: 80°F. DB, 67°F. WB

IHCH ISHCH HRCH Model	Air Delivery SCFM	SB Coil Section	MB Blower	Coil Face Area Sq. Ft	Coil Face Velocity FPM	4-Row DX Coil					6-Row DX Coil				
						No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc	No. of Circuits	Total Capacity MBH	Leaving Air Temp. F°		Air Press. Drop In. wc
								DB	WB				DB	WB	
7	3000	115	114A	6.7	450	1	103.2	57.8	56.2	.38	1	131.2	53.5	52.8	.57
10	4000	115	114A	6.7	600	1	119.1	59.8	57.8	.62	1	151.4	55.9	55.0	.93
15	6000	215	114B	10.9	546	2	188.9	59.1	57.2	.53	2	241.1	54.9	54.1	.80
20	8000	215	114B	13.6	586	2	243.7	59.5	57.6	.59	2	312.8	55.4	54.5	.89
25	10000	218	214	16.2	628	2	298.1	59.9	57.8	.67	2	386.3	55.6	54.7	1.0

Note: Contact your local Hastings sales representative for DX coil/condensing unit (optional) combinations to match other capacity requirements.
Coil selections based on 43° suction.

IHCH-ISHCH-HRCH COOLING/HEATING SYSTEMS

IHCH-ISHCH-HRCH Indirect gas-fired cooling and heating systems are a logical alternative to the conventional rooftop package units or expensive field built systems. The standard rooftop package offers a limited choice of cooling and heating combinations and is available only for outdoor installation.

IHCH-ISHCH-HRCH systems are available with a broad range of heating selections for each cooling capacity.

IHCH-ISHCH-HRCH systems feature low gas furnace air resistance which permits high air volumes without by-pass duct work or dampers.

IHCH-ISHCH-HRCH systems offer air handling and heating sections for ceiling suspended, floor mounted or rooftop installation.

IHCH-ISHCH-HRCH systems have the flexibility to satisfy special damper, filter, cooling coil or control requirements

Operating Sequence

The "On" position of the "On-Auto" fan switch located in the cooling/heating subbase provides continuous blower. The "auto" leg allows blower operation whenever the room thermostat calls for cooling or heating.

The "Cool" position of the "Cool-Off-Heat" system switch in the subbase energizes the air cooled condensing unit (optional) and opens the liquid line solenoid valve, allowing

refrigerant to flow to the DX cooling coil.

When the room thermostat indicates that the space is too cool, the liquid line solenoid closes and the condensing unit (optional) is pumped down, shutting off on low head pressure

The gas furnace(s) is turned on in the "Heat" position of the system switch and, in turn, is controlled by the room thermostat.

Equipment Selection

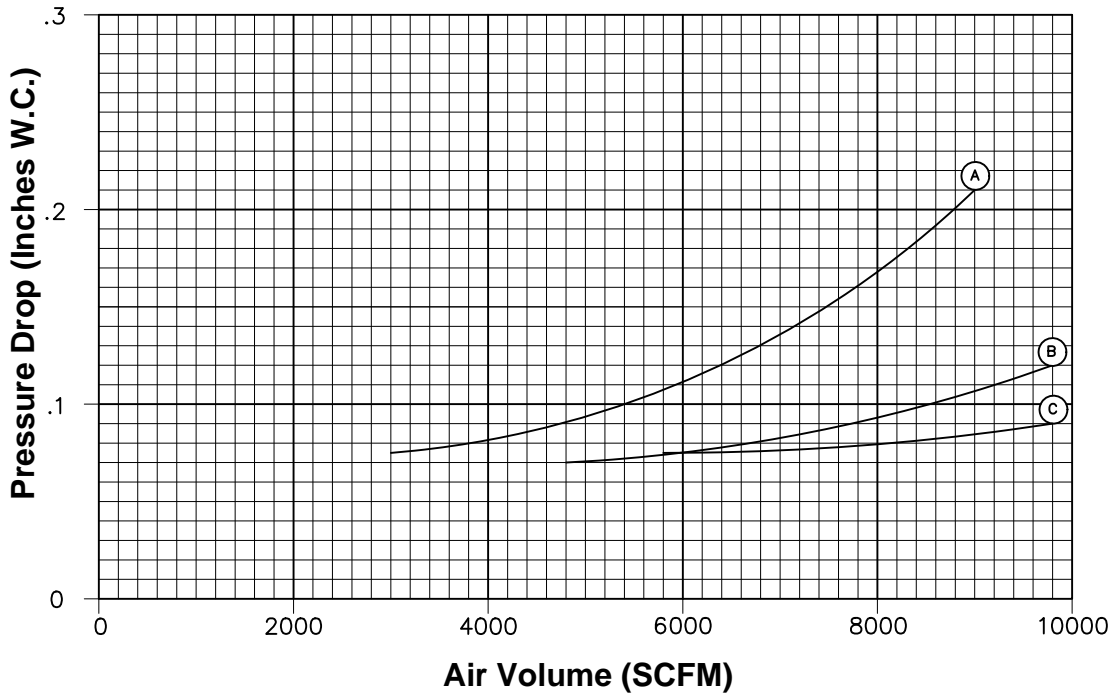
1. Determine the total system cooling and heating loads, either from job specifications or by conventional calculations.
2. Select the IHCH-ISHCH-HRCH model number in the performance tables under the nominal tonnage column and opposite the required heating MBH input.
3. Total Static Pressure (TSP) is the sum of all system component pressure drops external of the MB blower including plenums, intake hood, dampers, filters, DX coil, transitions, furnaces, system ductwork and registers. See Bulletin HRDV-1 or IHRDV-1 for pressure drops thru duct furnaces.
4. IHCH-ISHCH-HRCH cooling capacities and air cooled condensing unit performance data are found on page 4. The total cooling MBH and leaving air dry bulb and wet bulb temperatures of standard 4-row DX coils for each IHCH-ISHCH-HRCH model are listed matched with equivalent air cooled condensing units (optional). 6-row cooling coil capacities are also shown with comparable condensing units (optional). Computer matched components are available for other cooling requirements.

Standard Equipment & Optional Items

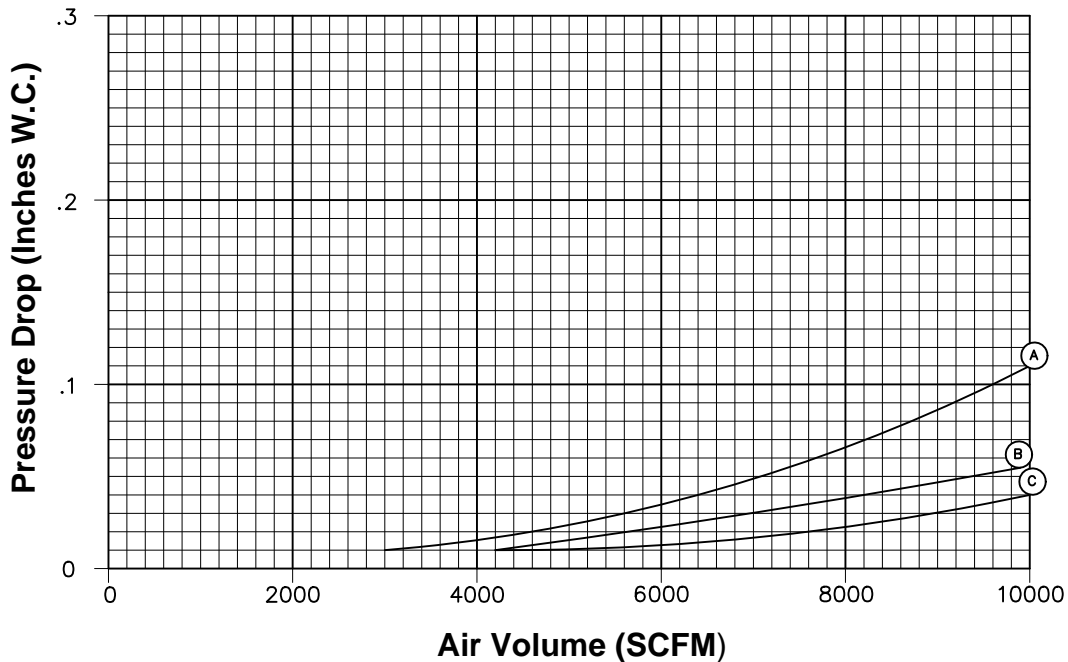
Description	IHYR ISHYR HRYR	IHCH ISHCH HRCH
Blower Section with variable drive (thru 10 H.P.)	Std.	Std.
Motor starter (priced separately)	Std.	Std.
Insulation of blower section	Std.	Std.
Natural (6" to 14") or propane (11" to 14") gas duct furnace(s). Available with:		
type 409 stainless steel burners	Std.	Std.
type 409 stainless steel heat exchanger.	Std.	Std.
Electric ignition, intermittent pilot, N.G. models with non-100% shut-off	Std.	Std.
L.P. gas models with 100% shut-off	Opt.	Opt.
Natural gas models with 100% shut-off	Opt.	Opt.
Two stage gas valve(s) (Electric ignition only)	NA	Opt.
MS-3 electronic modulating gas valve.	Std.	Opt.
Economizer control package	NA	Opt.
Separated Combustion (Indoor only)	Opt.	Opt.
Factory assembly and wiring	Std.	Std.
Fan and system switch in subbase	NA	Std.
Cooling/Heating thermostat	Std.	Std.
Remote control station with operating switches and indicating lights	Std.	Opt.
Fan time delay relay (furnace)	NA	Std.
Filters - 2" throwaway or extended surface	Opt.	Opt.
Filters – 2" cleanable	Opt.	Opt.
Fresh air intake hood with birdscreen	Opt.	Opt.
Fresh air shut-off damper with 2 position motor linkage and end switch	Opt.	NA
Mixing dampers with modulating motor and temperature controller	Opt.	Opt.
Discharge louver assembly	Opt.	Opt.
Vibration isolators (rubber-in-shear or spring)	Opt.	Opt.
Fused disconnect switch – air handling unit	Opt.	Opt.
Step down transformer	Std.	Std.
Two speed motor – 1800/1200 or 1800/900 RPM (10 HP and below)	Opt.	Opt.
High gas pressure regulator – ½ PSIG & over	Opt.	Opt.
Roof curb and discharge plenum (outdoor only)	Opt.	Opt.
Air cooled condensing unit package (priced separately on request)	Opt.	Opt.
Control transformer – condensing unit	Opt.	Opt.
Liquid line solenoid valve	Opt.	Opt.
Liquid line drier and sight glass	Opt.	Opt.
Hot gas by-pass regulator	Opt.	Opt.
Painted cabinet – condensing unit	Opt.	Opt.
Fused disconnect switch – condensing unit	Opt.	Opt.
Condensing unit gauges	Opt.	Opt.
Compressor 3 minutes off timer	Opt.	Opt.
Evaporative coil	Std.	Std.
Expansion valve	Std.	Std.

Note: Electric ignition non 100% shut-off standard on all models.

Accessory Equipment Air Resistance
Plenums - Allow .10 in WC- Each
Allow up to .25 in. WC drop for dirty filters
Throwaway Filters/Extended Surface



Cleanable Filters

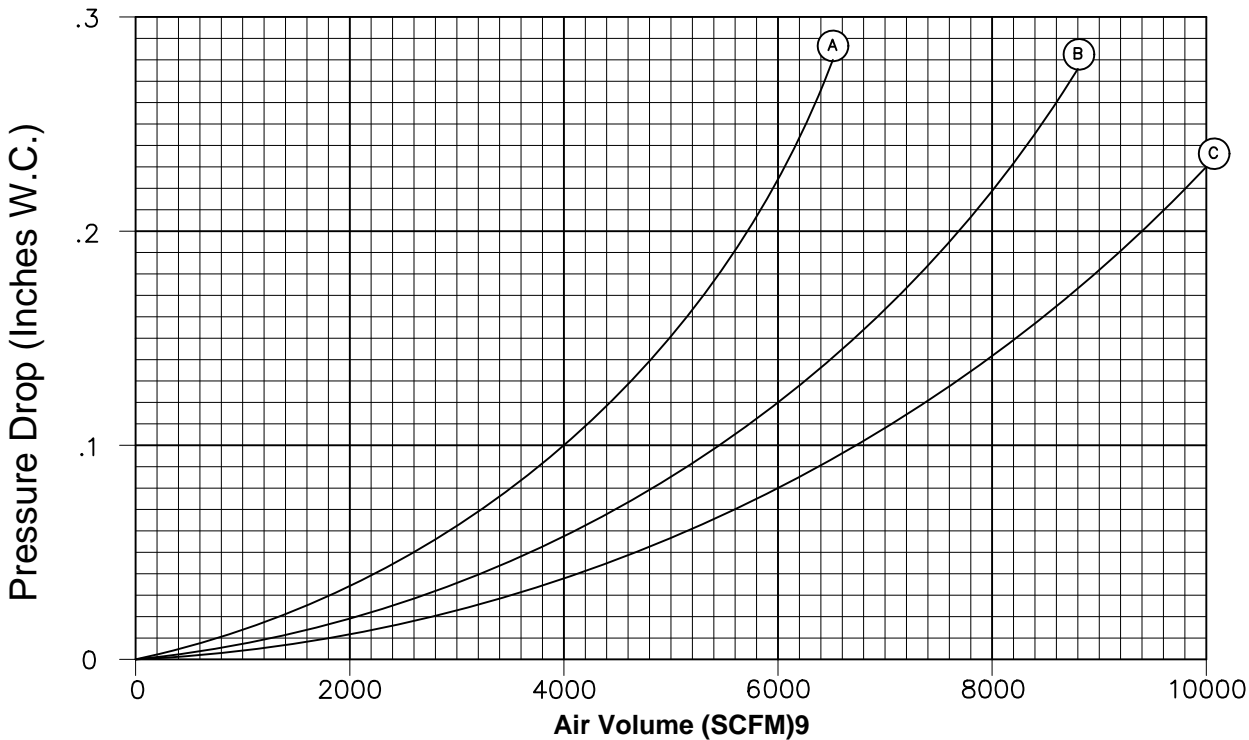


Filter Sections and Filter Sizes Used

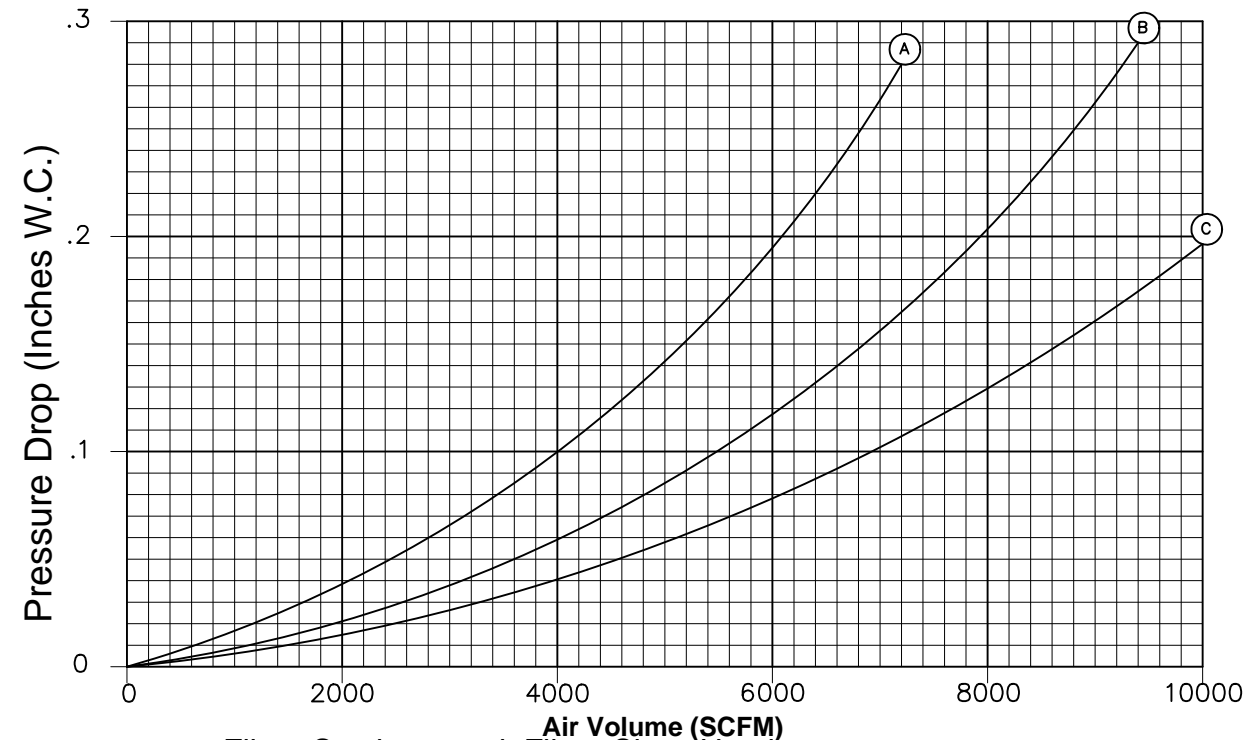
(A) SB-115 (8) 20x20x2 *(22 FT ²)	(B) SB-215 (12) 20x20x2 *(33 FT ²)	(C) SB-218 (12) 20x25x2 *(41.5 FT ²)
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*Approximate Total Filter Area (FT²)

Fresh Air Shut-Off or Mixing Damper



Intake Hood with Birdscreen



Filter Sections and Filter Sizes Used

SB-115 (8) 20x20x2

SB-215 (12) 20x20x2

SB-218 (12) 20x25x2

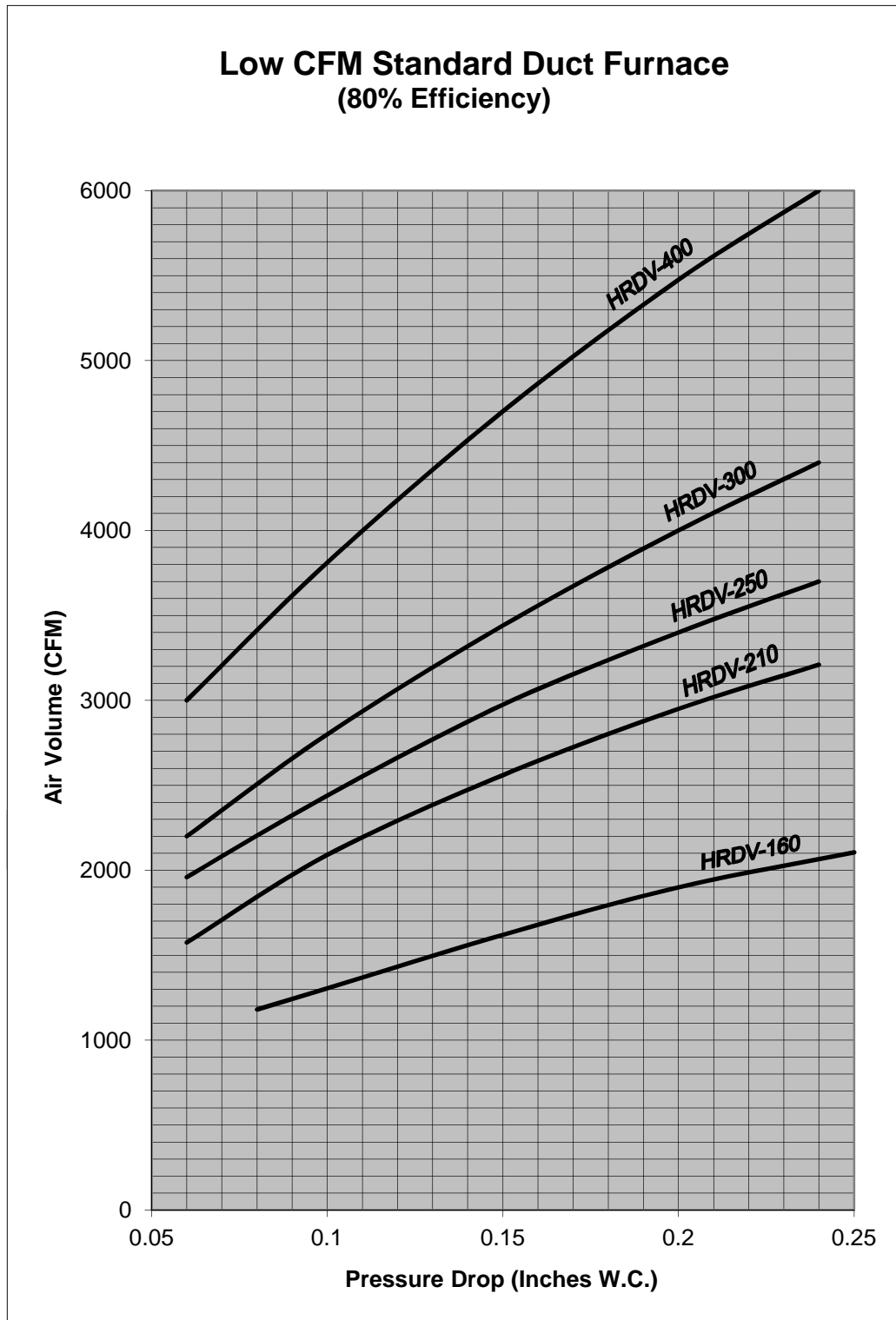
*(22 FT²)

*(33 FT²)

*(41.5 FT²)

*Approximate Total Filter Area (FT²)

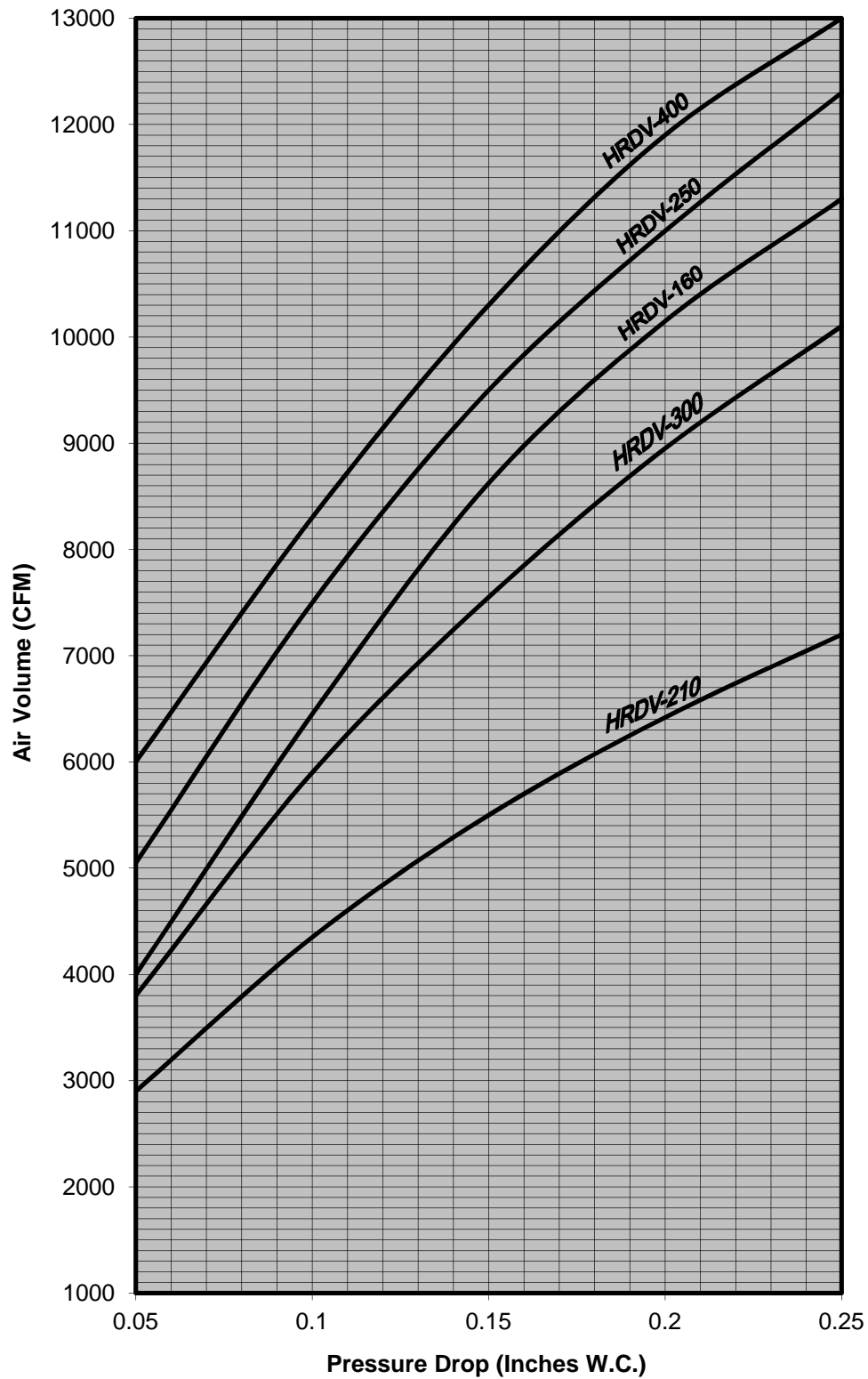
DUCT FURNACE AIR RESISTANCE (80% EFFICIENT)



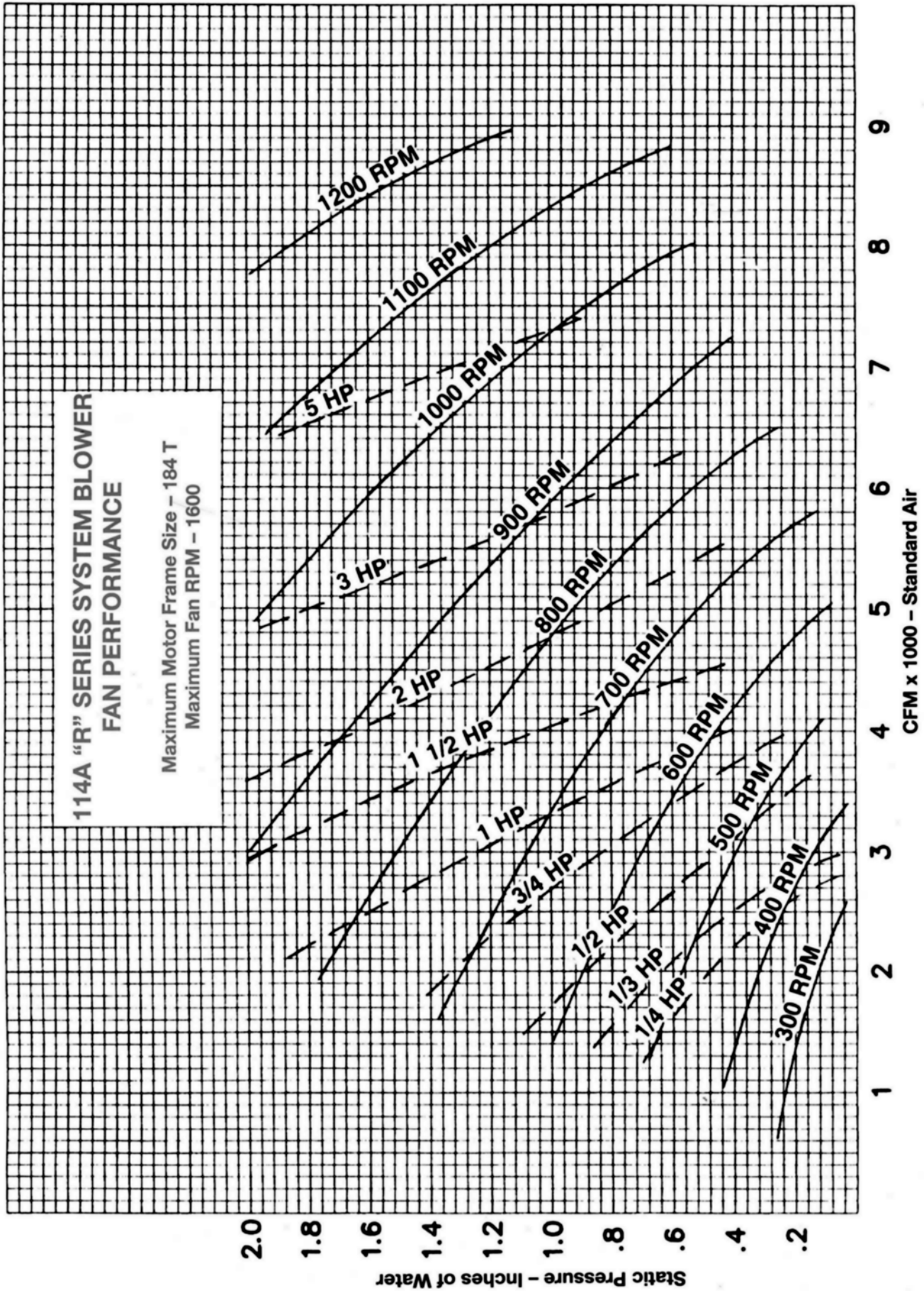
Note: Standard Low CFM furnaces used with single bank "A" units having higher than 40° temperature rise. Resistance Chart applies to all 80% Efficient models.

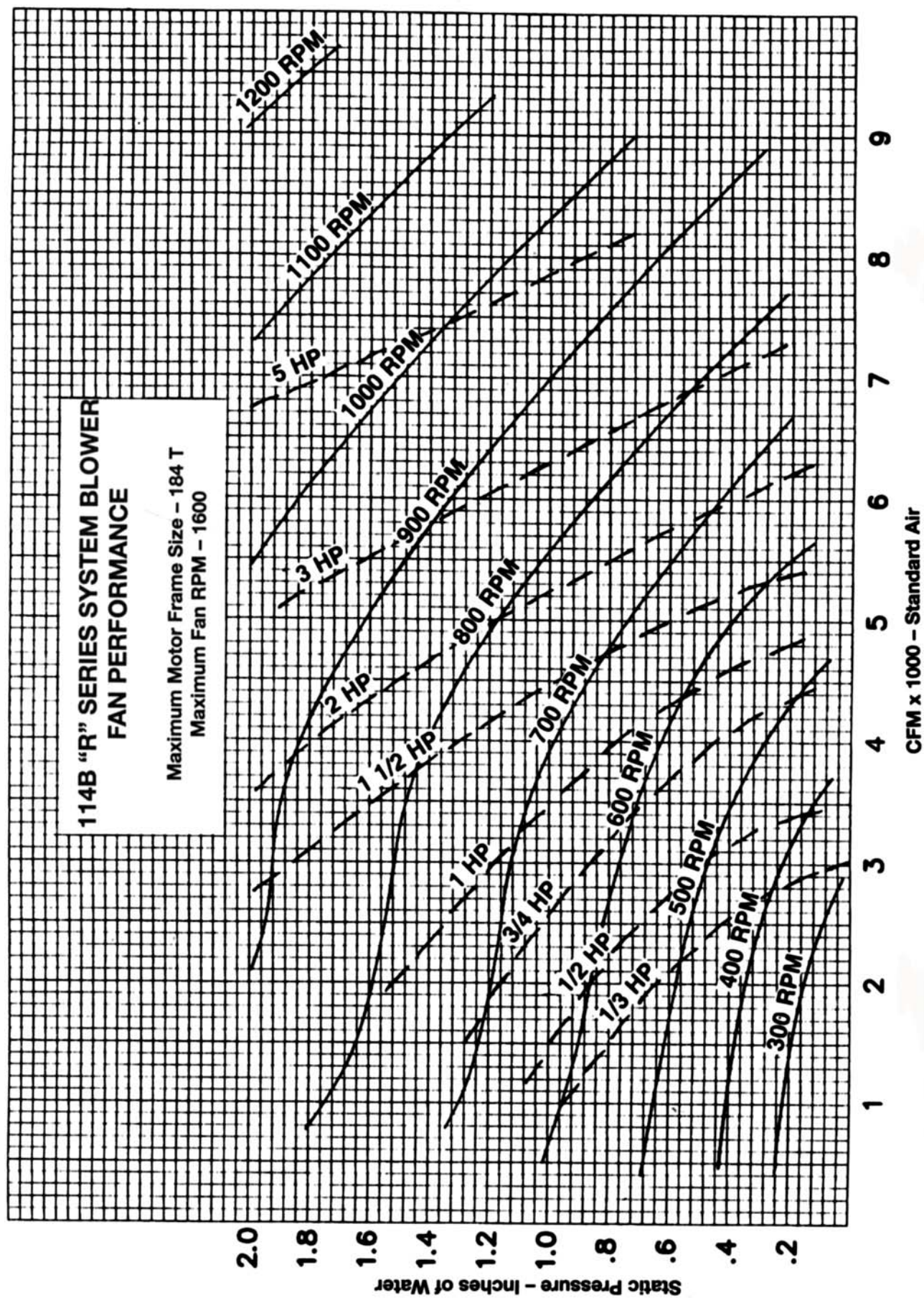
DUCT FURNACE AIR RESISTANCE (80% EFFICIENT)

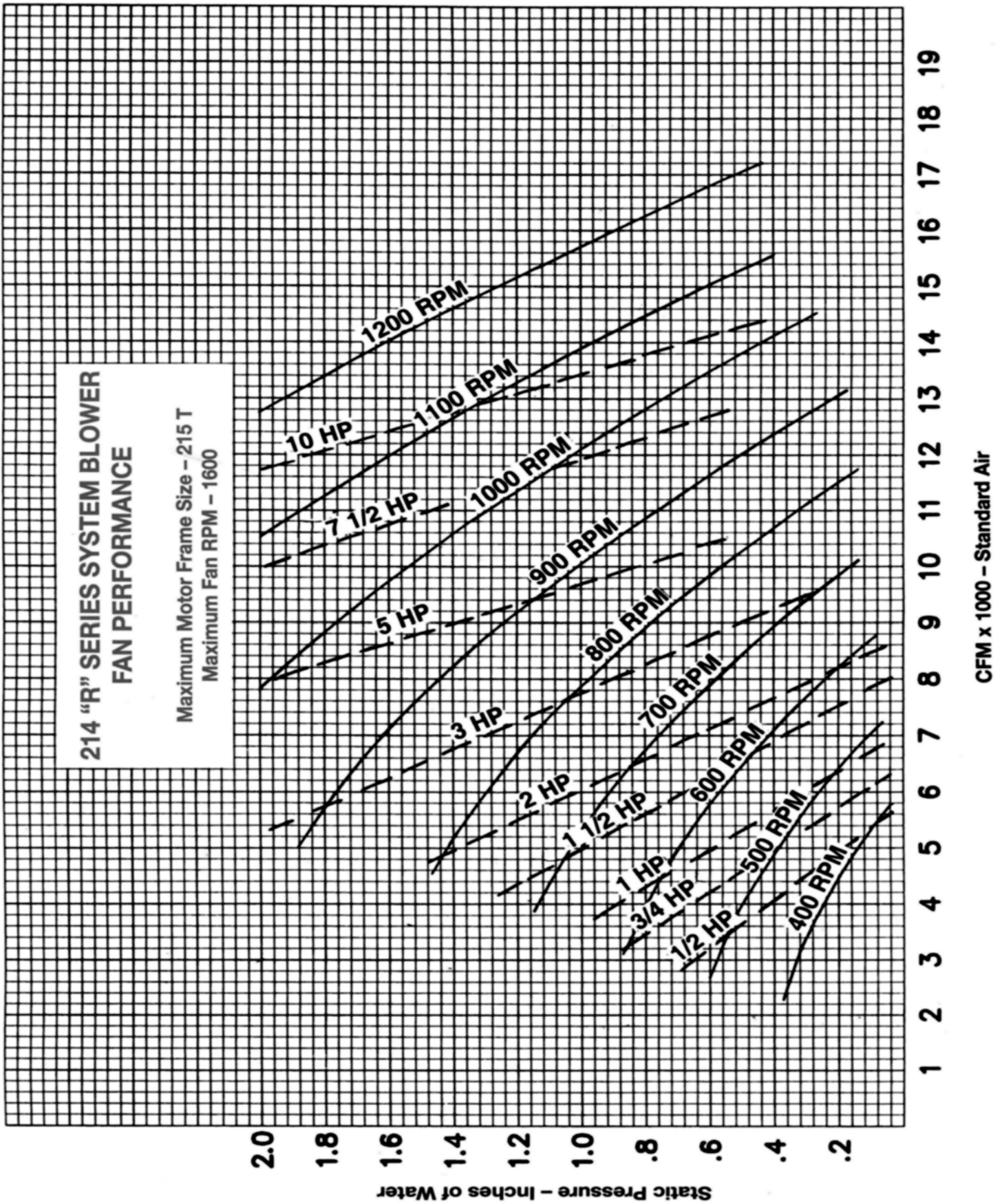
Type "H" High CFM Duct Furnace (80% Eff.)

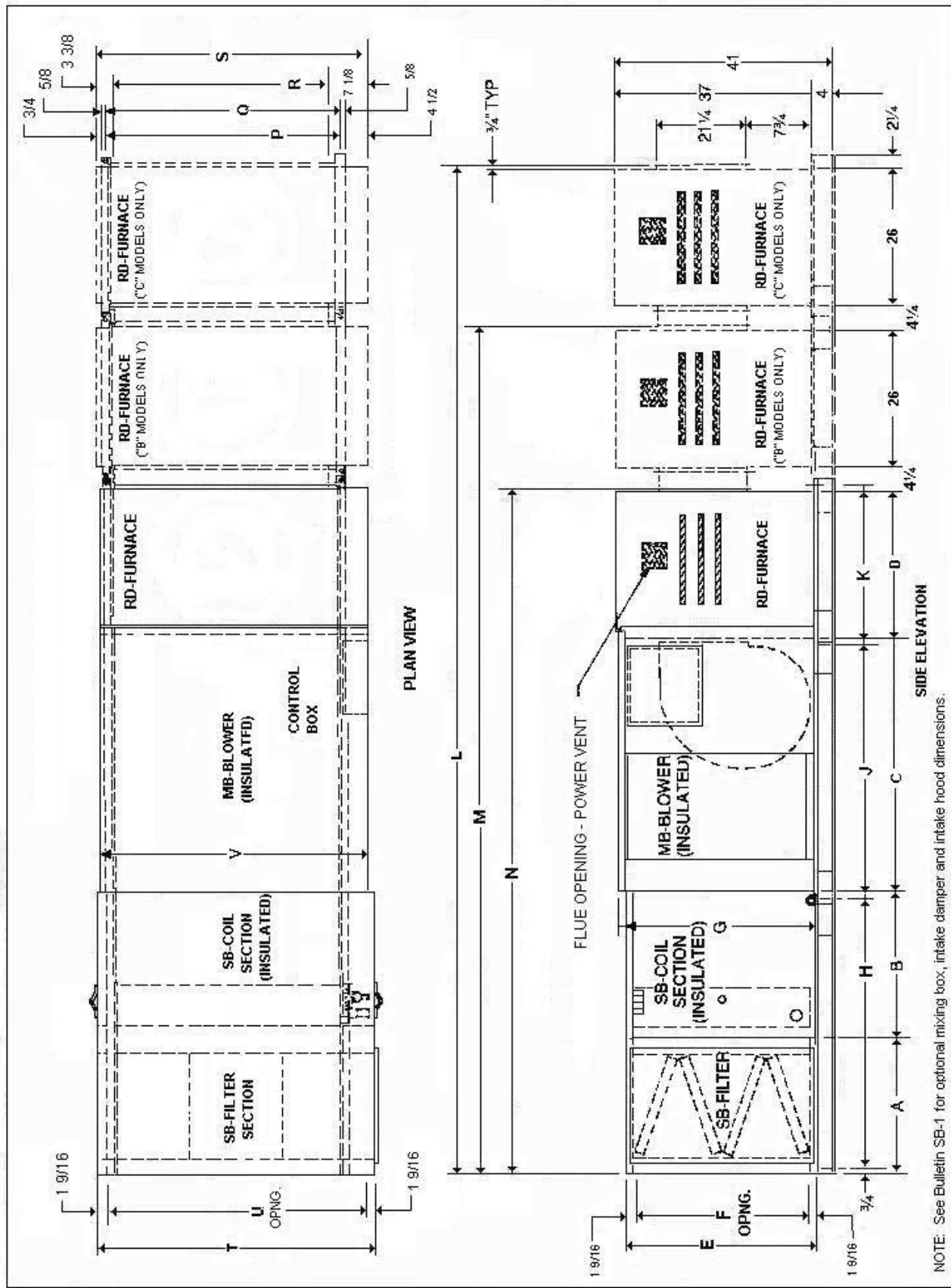


Note: High CFM Type "H" furnaces used with double bank "B" units having 60° or less and single bank "A" units having 50° or less air temperature rise . Resistance Chart applies to all 80% efficient models.









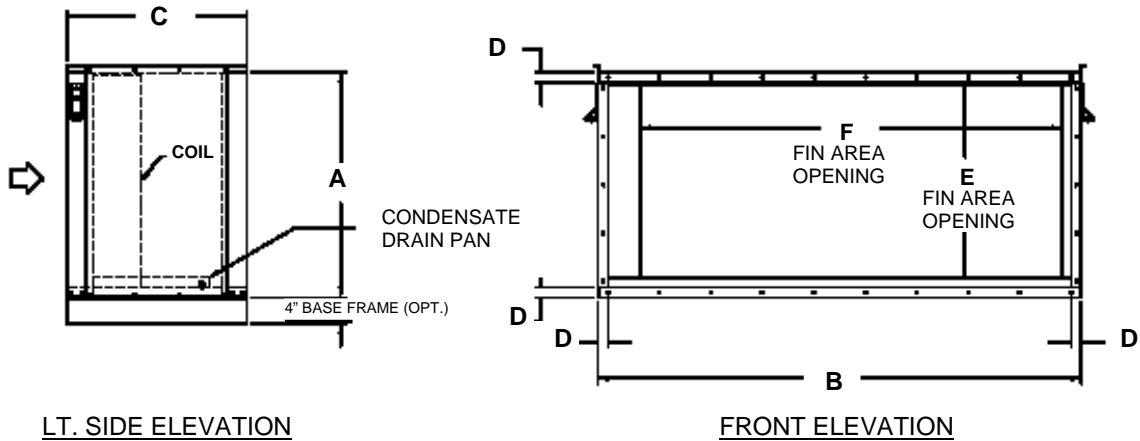
IHYR-ISHYR-HRYR-IHCH-ISHCH-HRCH Dimension Table

FILTER & COIL SECTION	BLOWER	GAS FURNACE(S)	DIMENSIONS ARE IN INCHES										
			A	B	C	D	E	F	G	H	J	K	L
SB-115	MB-114A	RD-160	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-210	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-320B	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-420B	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
SB-215	MB-114B	RD-250B	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-300	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-500B	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-600B	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	-
		RD-750C (3-250)	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	191
		RD-900C (3-300)	26	28	47 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	48	30 5/8	191
SB-218	MB-214	R-400	26	28	50 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	51	30 5/8	-
		RD-800B	26	28	50 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	51	30 5/8	-
		RD-1200C (3-400)	26	28	50 3/4	27 5/8	35	31 7/8	36 1/4	51 5/8	51	30 5/8	194

FILTER & COIL SECTION	BLOWER	GAS FURNACE(S)	DIMENSIONS ARE IN INCHES								
			M	N	P	Q	R	S	T	U	V
SB-115	MB-114A	RD-160	-	130 1/8	34	32 7/8	28 3/4	39 1/4	40	36 7/8	39 1/2
		RD-210	-	130 1/8	34	32 7/8	28 3/4	39 1/4	40	36 7/8	39 1/2
		RD-320B	160 5/8	-	34	32 7/8	28 3/4	39 1/4	40	36 7/8	39 1/2
		RD-420B	160 5/8	-	34	32 7/8	28 3/4	39 1/4	40	36 7/8	39 1/2
SB-215	MB-114B	RD-250B	-	130 1/8	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
		RD-300	-	130 1/8	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
		RD-500B	160 5/8	-	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
		RD-600B	160 5/8	-	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
		RD-750C (3-250)	-	-	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
		RD-900C (3-300)	-	-	44 3/4	43 1/2	39 1/2	50	75 1/8	72	50 1/4
SB-218	MB-214	R-400	-	133 1/8	58 1/8	56 7/8	53	63 1/2	79 1/8	76	63 3/4
		RD-800B	163 5/8	-	58 1/8	56 7/8	53	63 1/2	79 1/8	76	63 3/4
		RD-1200C (3-400)	-	-	58 1/8	56 7/8	53	63 1/2	79 1/8	76	63 3/4

COIL DIMENSIONS

SB COIL SELECTION	COIL FACE AREA	DX COIL	CHILLED WATER COIL
SB-115	5.1	24(E) x 30.5(F)	24(E) x 30.5(F)
	6.7	30(E) x 32(F)	30(E) x 32(F)
SB-215	8.2	18(E) x 65.5(F)	18(E) x 65.5(F)
	10.9	24(E) x 65.5(F)	24(E) x 65.5(F)
	13.6	30(E) x 65.5(F)	30(E) x 65.5(F)
SB-218	16.2	33(E) x 69.5(F)	33(E) x 70.5(F)



*See dimension table above for "E" and "F"

MODEL	A	B	C	D
SB-115	35	40	28	1 ⁹ / ₁₆
SB-215	35	75 ¹ / ₈	28	1 ⁹ / ₁₆
SB-218	39	79 ¹ / ₈	28	1 ⁹ / ₁₆

Engineers Specifications

Furnish and install the following Hastings ("year-round" make-up air system) (cooling/heating system).

Model No.	SCFM	Total ESP	Blower Motor HP	Voltage Phase	Heating		Cooling	
					Ent. Air Temp.	MBH Input	Ent. Air Temp.	Total MBH

General – the air handling, heating, cooling and filter sections shall be furnished as a factory assembled and wired system for (rooftop) (indoor suspended) (indoor platform) mounting with (natural) (propane) gas-fired furnace(s).

Air Handling Section – shall have 16 gauge aluminized steel cabinet and 12 gauge aluminized steel base frame channels, fiberglass insulated, with primed and enamel finish. Blower wheels shall be forward curved, double width, double inlet class 1 with greaseable 200,000 hour ball bearings and adjustable V-belt drive. See Bulletin IRHS-1 for detailed blower section specifications.

Heating Section – shall include one or more E.T.L. design certified duct furnace with type 409 stainless steel heat exchangers and 18 gauge stainless steel burners having type 430 stainless steel ribbon inserts. See Bulletin IHRDV-1 for detailed duct furnace specifications.

Duct furnaces shall be furnished with an intermittent pilot electronic spark ignition system and a slide out tray for easy maintenance. Systems shall be power venter model furnaces. Indoor duct furnaces shall be furnished with a hinged access panel for easy maintenance.

Options and Accessories – furnish the following items (select from page 7 of this bulletin).

Cooling Section – shall include a high performance, energy efficient, aluminum fin, copper tube evaporator coil, with thermal expansion valve and hot gas by pass fitting, sized to match the specified air cooled

condensing unit (optional). Condensate pan and drain connection shall be furnished with the coil section. (single circuit)

Filter Section – shall have V-bank frames less filters.

Control System – shall be 24 volt with control transformer.

IHYR-ISHYR-HRYR systems shall include automatic seasonal change-over control, "year-round" discharge air temperature control and space over-riding cooling and heating temperature control complete with remote control station with operating switches and indicating lights.

IHCH-ISHCH-HRCH systems shall include space cooling and heating temperature control with fan and system switches.

Air Cooled Condensing Unit (optional) – as scheduled, shall be mounted outdoors and field connected to the evaporator coil and thermal expansion valve and charged with R-410A refrigerant. All condensing units shall be furnished with standard operating and safety controls. (single circuit)

IHYR-ISHYR-HRYR system condensing units (optional) shall be furnished with control transformer, liquid line solenoid valve, liquid line drier and sight glass and hot gas by-pass regulator.

IHCH-ISHCH-HRCH system condensing units (optional) shall be furnished with control transformer and liquid line solenoid valve. (single circuit)

In order to maintain our policy of continuous product improvement, we reserve the right to change prices, specifications, ratings or dimensions without notice or obligation.



3606 Yost Avenue • Hastings, Nebraska 68901-1966
Phone (402) 463-9821 • Fax (402) 462-8006
www.hastingshvac.com
E-mail: sales@hastingshvac.com

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