

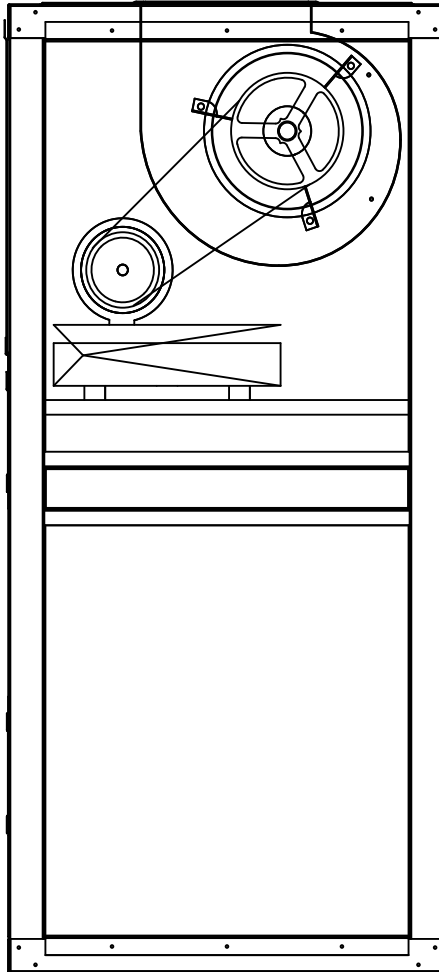


**COMMERCIAL
AIRE PRODUCTS™**

VERTICAL DOUBLE WALL BELT DRIVE AIR HANDLER

DX OR CHILLED WATER COOLING

HOT WATER OR ELECTRIC HEAT



SIZES FROM 600 TO 4000 CFM

All Technical Specifications Subject to Change Without Notice.

For more information contact Customer Service

Phone (817) 624.0820 Fax (817) 624.8581
www.commercialaire.com



STANDARD FEATURES

CONSTRUCTION

- Double wall post and panel construction from heavy gauge galvanized steel.
- 1" or (2" for roof mount) Insulation sandwiched between double wall galvanized panels.
- IAQ drain pan positively sloped 3-ways.
- Drain pans made from 304 stainless steel.
- Integral auxiliary drain pan.
- Both sides of cabinet include gasketed, service access panels.
- Factory installed mounting rails provided for unit suspension system.
- All cabinet parts are assembled with stainless steel hardware.
- All access panels can be removed while unit is suspended without affecting the unit's structure.

BLOWER ASSEMBLY

- Blower sections feature base mounted motors and adjustable motor bases for ease of service mounted on RIS isolators for quiet vibration free operation.
- All blowers are mounted to 12-gauge support channels on rubber isolators.
- Blower exits cabinet through a flexible rubber isolator..
- A discharge duct flange is provided.

FILTER SECTION

- 2" TA flat filters are standard.
- No tools are required to remove filter access doors.

COIL SECTION

- 3/8" O.D. seamless copper tube on sizes 24 and 36.
- 1/2" O.D. seamless copper tube on sizes 48 and 60.
- 5/8" O.D. seamless copper tube on sizes 90-240.
- Coil and drain pan assembly slides into cabinet from either side of unit for left hand or right hand piping and electrical connections.
- Units can accept up to 10 rows of coil without modification.
- Manual air vents are accessible through a separate drain pan access panel.

STANDARD MOTORS

- ODP Motor is mounted to a 12 gauge adjustable base attached to the unit floor with rubber isolators.
- 115/230v 1ph, 277v 1ph, 208/230/460v 3ph.
- All units are ETL listed.

OPTIONAL FEATURES

CONSTRUCTION

- 1" or (2" for roof mount) double wall with perforated panels.
- Liner options include stainless steel, aluminum, e-coated, or anti-microbial coatings.
- Stainless steel integral overflow pan.
- Powder coated cabinets.
- Cabinet corrosion protection by E-DuraCoat™ a Epoxy-Convection cured coating.

FILTER SECTION

- Double wall filter section accepts 2" or 4" flat filters.
- Filter access can be from the top, bottom or from either side (24-60).
- Filter access for (90-240) from sides only.
- 2" pleated (30%), 4" pleated (65%, 85%, 95%).
- V-bank filter sections.
- Mixing boxes.
- Air blenders.
- Economizers (roof mount)

ELECTRIC HEAT SECTION

- Field mounted preheat or reheat configurations.
- Single point power connection.
- Custom staging and controls.
- Available voltages: Single phase (115 v, 230 v, 277v) Three phase (208v, 230v, 460v).

COIL SECTION

- 2,4,6, 8 or 10 row coil options.
- Heating coils are factory installed in preheat or reheat positions.
- Steam coils, standard and non-freeze.
- Optional tube diameters.
- Optional copper fin.
- Optional stainless steel end plates.
- E-DuraCoat™ coated coils.
- Face split, row split, intertwined circuiting available.
- Face and bypass dampers.
- Automatic air vents.

MOTOR OPTIONS

- TEFC.
- High Efficient.
- 2-speed 2-winding.



GUIDE SPECIFICATIONS

Model Series: H,M,R and V

CFM Range: 600 to 9,000

Unit Description:

Horizontal, belt drive with optional chilled water, hot water, steam or DX coils. Galvanized cabinet can be double wall or single wall construction. Unit designed to be installed in above ceiling space. Units have full service access to both sides of cabinet.

Quality Assurance:

Coils are tested under water at 500 psig for operating pressures to 400 psig. Insulation and adhesive shall meet NFPA-90A standards for smoke and flame spread.

Deliver, Handling and Storage:

Units to be stored and handled in accordance with equipment manufacturer's recommendations.

PRODUCTS

Equipment:

- A. Factory assembled, horizontal, draw-thru blower coil units for installation above the ceiling. Unit shall be complete with water coils, steam coils, or DX coils, fan(s), motor, belt and drives, drain pan, and filter rack to accept 2" or 4" TA filters.

Cabinet: Single Wall:

- B. Post and panel construction shall be from heavy-gauge galvanized steel, lined with 1"-1.5lb density fiberglass thermal acoustical insulation. Unit sizes 24 thru 60 include a factory mounted suspension rail mounted to the bottom of unit. Capped knockouts to be provided for units 3000 CFM and larger to accommodate threaded rods to pass through unit corners. Supply and return duct flanges to be 1" long. Large removable side access panels shall be on both sides of unit.

Cabinet: Double Wall:

- C. Post and panel construction shall be from heavy-gauge galvanized steel on both inner and outer panels, lined with 1"-1.5lb density fiberglass thermal acoustical insulation. Unit sizes 24 thru 60 include a factory mounted suspension rail mounted to the bottom of unit. Capped knockouts to be provided for units 3000 CFM and larger to accommodate threaded rods to pass through unit corners. Supply and return duct flanges to be 1" long. Large removable side access panels shall be on both sides of unit. Units shall be assembled using stainless steel screws.

Drain Pan:

- D. The primary drain pan shall be stainless steel and include a built-in overflow pan with a 1" MPT secondary and a 1" FPT primary drain connection. Secondary drain pan shall be stainless steel or galvanized steel to prevent corrosion should an overflow occur.

Coil Selection:

- E. Entire coil section shall be double wall lined with smooth galvanized, or stainless steel for ease of cleaning and coil removal.

Blowers:

- F. Belt drive DWDI (double width, double inlet) fan wheel shall have forward curved blades and be factory statically and dynamically balanced. Blower's drives shall consist of cast iron variable pitch motor pulley and V-belt. Blowers and scrolls shall be manufactured from galvanized steel.

Coils:

- G. Coil tube diameters shall be .375, .50 or .625in. copper tubes, aluminum fins bonded to the tubes by mechanical expansion and have a working pressure of 250 psig at 200F. Each water coil shall have manual air vents and sweat connections, which are accessible from the exterior of cabinet. Coils shall be circuited so they can be switched from right hand to left hand piping access while maintaining counter-flow water circuiting.

Motors:

- H. Motors shall be open type, drip-proof, single or 2-speed, 60Hz, 1750 RPM, 1 or 3-phase, suitable for continuous duty at 130F. Single-phase motors are capacitor start, include automatic reset thermal overload protection and are available in 115, 208, 230, or 277 volts, (60Hz). Three-phase motors are available in 208, 230, or 460 volts, (60Hz). Motors shall be resilient base mounted (except 3hp and larger which are rigid base mounted).

Electric Heat:

- I. Electric heat shall be designed to mount at the discharge or entering air openings of unit. Heater shall include a de-energizing magnetic control contactor per stage of each 48-amp circuit and include a secondary over-temperature switch. Heaters shall include fan-interlocking, power and control terminal boards with grounding lugs. An automatic limit switch shall provide primary over-temperature protection, and a manual reset limit switch shall provide secondary over-temperature protection.

Filters:

- J. Standard filter racks shall include 2" TA filters with options for 2" and 4" pleated filters. Filter racks shall include access from either side with options for top or bottom access.



**COMMERCIAL
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BELT DRIVE UNIT NOMENCLATURE

H W H D 120 260 L 0 0

UNIT CONFIGURATION

H-HORIZONTAL
V-VERTICAL
M-MODULAR
R-ROOF-MOUNT

COOLING TYPE

W-CHILLED WATER
X-DIRECT EXPANSION
0-NO COOLING

HEATING TYPE

H-HOT WATER
S-STEAM
E-ELECTRIC
0-NO HEAT

CABINET TYPE

S-SINGLEWALL
D-DOUBLEWALL
P-PERFORATED

**COOLING
CAPACITY**

24
36
48
60
90
120
180
240

(BTUH)
(X 1,000)

SPECIAL OPTIONS

FACTORY USE

SPECIAL OPTIONS

FACTORY USE

CONNECTIONS

L-LEFT HAND
R-RIGHT HAND

COIL & ROW POSITION

1ST. DIGIT PRE-HEAT ROWS
2ND. DIGIT COOLING ROWS
3RD. DIGIT RE-HEAT ROWS

NOTE:

AVAILABLE COIL ROWS
1-1 ROW 4-4 ROW 8-8 ROW
2-2 ROW 6-6 ROW 0-0 NO COIL
MAXIMUM 10 ROWS IN
ANY COMBINATION

ACCESSORIES NOMENCLATURE

H FBD

UNIT CONFIGURATION

H-HORIZONTAL
V-VERTICAL
M-MODULAR
R-ROOF-MOUNT

OPTION

FBD - FACE AND BY-PASS DAMPERS
MBS - MIXING BOX SINGLE WALL
MBD - MIXINGBOX DOUBLEWALL
F2 - 2" FLAT FILTER RACK SINGLE WALL
FD4 - 2" TO 4" FLAT FILTER RACK DOUBLEWALL
VS - V BANK FILTER SINGLEWALL
VD - V BANK DOUBLEWALL

COIL DATA

MODEL	FIN BLOCK H X W	Coil Type	FACE AREA	ROWS	FPI	WATER CONN. HEADER OD	DX CONN.	
							SUCT	LIQ.
24-H	14 X 20	HW	1.94	1	10	5/8	N/A	N/A
	14 X 20	HW	1.94	2			N/A	N/A
	(2) 12 X 16	CW/DX	2.66	4		7/8	7/8	3/8
36-H	14 X 20	HW	1.94	1		7/8	N/A	N/A
	14 X 20	HW	1.94	2			N/A	N/A
	(2) 12 X 18	CW/DX	3.00	4		7/8	7/8	3/8
48-H	18 X 20	HW	2.50	1		7/8	N/A	N/A
	18 X 20	HW	2.50	2			N/A	N/A
	(2) 15 X 18	CW/DX	3.75	4		7/8	7/8	1/2
60-H	22.5 X 20	HW	3.47	1		1-1/8	N/A	N/A
	22.5 X 20	HW	3.47	2	N/A		N/A	
	(2) 15 X 23	CW/DX	4.79	4	7/8	7/8	1/2	
90-H	39 X 22	HW	5.95	2	1-3/8	N/A	N/A	
	(2) 15 X 33	CW/DX	6.88	4		1-1/8	1-3/8	5/8
120-H	43.5 X 22	HW	6.65	2	1-3/8	N/A	N/A	
	(2) 15 X 45	CW/DX	9.38	4		1-1/8	1-5/8	5/8

CONTACT THE FACTORY FOR ADDITIONAL COIL INFORMATION

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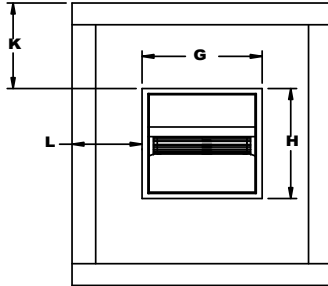
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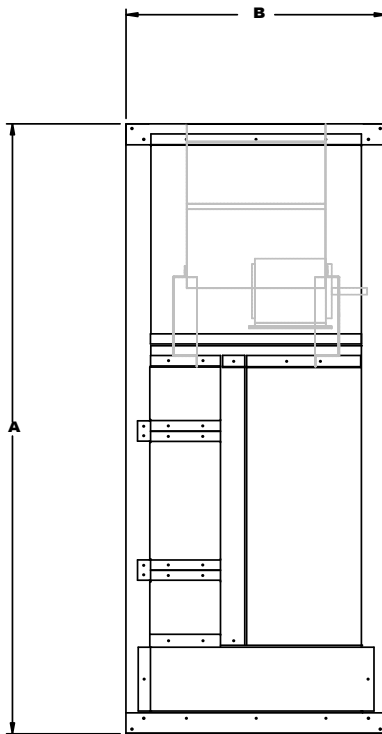
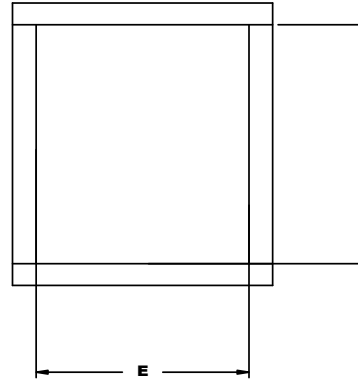


VERTICAL BELT DRIVE

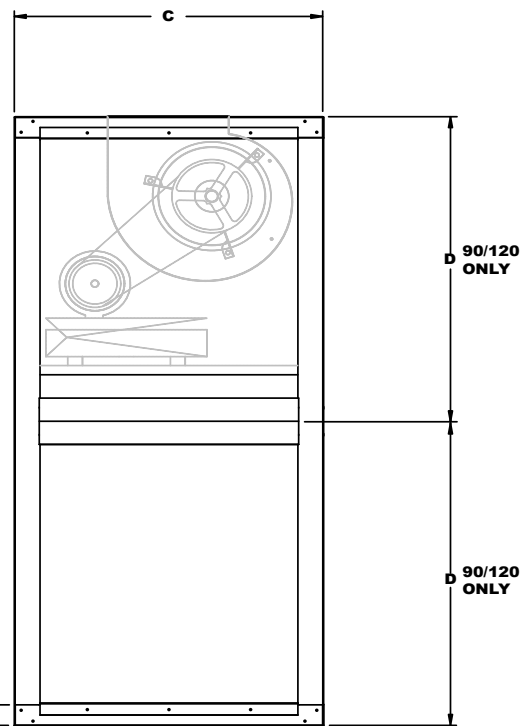
TOP VIEW



BOTTOM VIEW



FRONT VIEW



SIDE VIEW

DIMENSIONS

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	L
24	56.00	22.00	26.00	N/A	18.00	22.00	9.13	11.13	6.75	7.88	5.88
36	56.00	22.00	26.00	N/A	18.00	22.00	12.69	11.13	6.75	7.88	5.88
48	64.00	30.00	26.00	N/A	26.00	22.00	14.00	12.25	7.44	7.50	9.50
60	64.00	30.00	26.00	N/A	26.00	22.00	16.50	14.50	7.75	5.50	7.50
90-120	75.00	52.00	30.00	37.00	48.00	26.00	19.50	16.75	10.13	7.00	18.00

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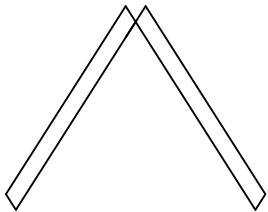
VERTICAL BELT DRIVE

FILTER ARRANGEMENTS

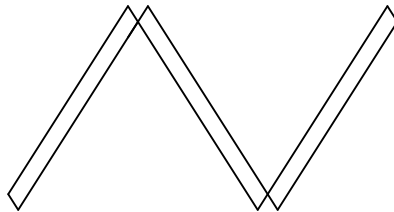
SIZE 24 & 36 (2) 24X12X2

SIZE 48 & 60 (3) 24X12X2

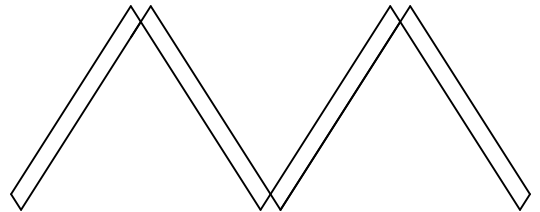
SIZE 90 & 120 (4) 20X25X2



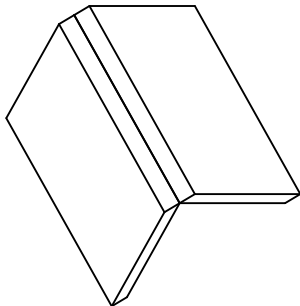
SIZE 24 & 36



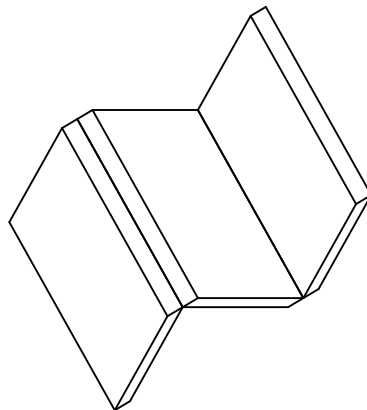
SIZE 48 & 60



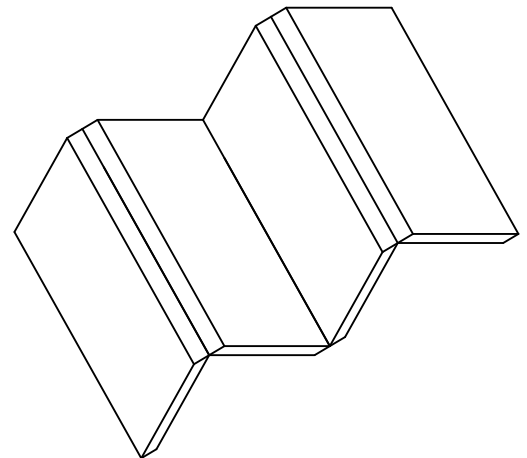
SIZE 90 & 120



SIZE 24 & 36



SIZE 48 & 60



SIZE 90 & 120

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VW*D

CHILLED WATER COOLING CAPACITIES

CHILLED WATER 10°F WATER TEMPERATURE RISE 45°F EWT/55° LWT

24-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
600	4.9	2.4	27.8	17.0	57.6	55.8	3.6	2.0	20.8	14.6	56.8	54.9	2.7	1.2	14.0	11.9	56.2	54.3
800	5.7	2.6	32.8	20.8	59.9	57.8	4.3	1.7	24.7	18.0	58.5	56.3	3.2	1.6	16.7	14.8	57.4	55.2
1000	6.4	3.1	36.9	24.2	61.7	59.2	4.8	2.0	27.9	21.0	59.9	57.4	3.6	2.0	20.7	18.1	57.8	55.3

36-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
900	6.9	3.8	39.9	24.1	59.1	57.0	5.1	2.4	28.8	20.6	58.1	55.9	3.8	2.3	19.5	17.0	57.1	54.9
1200	8.0	4.9	45.5	29.3	61.4	58.8	6.0	3.1	33.8	25.2	59.9	57.3	4.4	1.9	25.0	21.7	57.9	55.2
1500	8.9	6.2	50.0	33.6	63.4	60.4	6.7	3.7	38.0	29.3	61.3	58.3	5.1	2.4	28.6	25.5	58.9	55.9

48-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
1400	11.6	5.2	59.5	38.0	58.8	57.2	8.6	3.1	44.5	32.8	57.6	56.0	6.3	1.6	32.6	28.1	56.0	54.3
1600	12.6	6.0	64.7	42.0	59.7	58.0	9.4	3.6	48.6	36.4	58.2	56.5	6.9	1.9	35.6	31.3	56.5	54.7
1800	13.6	6.9	69.6	46.0	60.4	58.6	10.2	4.2	52.5	40.0	58.8	56.9	7.5	2.1	38.5	34.4	56.9	55.0

60-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
1800	14.4	8.5	78.5	49.6	58.4	56.8	10.7	5.1	59.1	42.8	57.3	55.6	7.9	2.7	43.3	36.6	55.7	54.0
2000	15.4	7.0	83.8	53.6	59.1	57.4	11.5	5.8	63.3	46.5	57.8	56.0	8.4	3.4	46.2	39.8	56.1	54.4
2200	16.3	7.7	89.1	57.7	59.7	57.9	12.2	6.4	67.1	50.0	58.3	56.5	9.0	3.8	49.4	43.0	56.5	54.6

90-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
2500	20.8	19.5	115.7	72.4	57.0	55.9	15.6	11.6	87.8	67.7	56.0	54.8	11.4	11.7	64.3	53.6	54.7	53.4
3000	23.3	23.9	129.9	83.3	58.2	56.9	17.5	14.3	98.3	72.3	57.0	55.6	12.9	14.7	72.5	62.2	55.4	54.0
3500	25.7	19.7	142.7	93.6	59.2	57.8	19.3	17.0	108.3	81.6	57.7	56.3	14.3	17.8	80.0	70.4	56.0	54.5

120-VW-4 ROW Chilled Water Cooling																		
CFM	85.0°F DB/71.0°F WB						80.0°F DB/67.0°F WB						75.0°F DB/63.0°F WB					
	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB	GPM	WPD	TMBH	SMBH	LDB	LWB
3000	25.4	22.7	149.5	91.1	55.7	54.5	19.0	18.8	113.7	78.6	54.9	53.7	13.9	18.3	83.4	67.0	53.9	52.6
4000	30.5	30.5	180.3	113.7	57.6	56.3	22.9	26.1	136.9	98.6	56.4	55.1	16.8	15.1	100.8	84.3	55.0	53.6
5000	34.9	39.1	206.8	134.5	59.0	57.6	26.3	24.1	157.4	117.3	57.6	56.1	19.4	19.5	116.2	101.0	55.9	54.3

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Cooling Capacity VX*D- 24, 36, 48

2 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	85 °F EDB / 71 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
600	35 °F	0.13	225	42520	23280	47.6	48.0
	40 °F			37560	20860	51.4	49.5
	45 °F			32070	18500	55.2	53.2
	50 °F			26140	16210	58.9	56.8
800	35 °F	0.21	300	51010	28080	51.1	49.0
	40 °F			45720	25650	54.1	51.7
	45 °F			38880	22810	57.5	55.0
	50 °F			31270	19960	60.9	58.4
1000	35 °F	0.30	375	57850	32130	54.0	51.4
	40 °F			51620	29410	56.6	53.9
	45 °F			44540	26580	59.3	56.5
	50 °F			35560	23290	62.5	59.6

2 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	80 °F EDB / 67 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
600	35 °F	0.13	225	36111	21220	46.2	44.5
	40 °F			31100	18700	50.2	48.2
	45 °F			25650	16310	54.0	51.9
	50 °F			20990	14460	57.0	54.8
800	35 °F	0.21	300	44010	25990	48.9	46.8
	40 °F			37710	22970	52.5	50.1
	45 °F			30910	20080	56.0	53.5
	50 °F			23460	17220	59.4	56.9
1000	35 °F	0.30	375	49640	29630	51.7	49.1
	40 °F			43250	26710	54.5	51.7
	45 °F			35320	23420	57.6	54.7
	50 °F			26700	20170	60.7	57.8

2 Ton W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	77 °F EDB / 64 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
600	35 °F	0.13	225	31240	19630	45.6	43.8
	40 °F			27720	18020	48.4	46.4
	45 °F			22170	15470	52.5	50.2
	50 °F			16960	13340	55.9	53.6
800	35 °F	0.21	300	37370	24000	48.5	46.1
	40 °F			32060	21430	51.5	49.0
	45 °F			26780	19110	54.3	51.6
	50 °F			19490	16210	57.7	55.1
1000	35 °F	0.30	375	41910	27360	51.0	48.2
	40 °F			35690	24490	53.7	50.7
	45 °F			30650	22350	55.7	52.7
	50 °F			22230	19050	58.9	55.8

3 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	85 °F EDB / 71 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
900	35 °F	0.21	300	55720	30790	52.0	49.8
	40 °F			49550	28040	54.9	52.5
	45 °F			43790	25680	57.5	55.0
	50 °F			36770	23020	60.3	57.8
1200	35 °F	0.34	400	68990	37980	54.9	52.2
	40 °F			59520	34180	57.5	54.6
	45 °F			52800	31520	59.7	56.7
	50 °F			42280	27660	62.8	59.7
1500	35 °F	0.50	500	76900	43860	58.5	55.2
	40 °F			69090	40700	60.5	57.0
	45 °F			59470	37060	62.6	59.1
	50 °F			49490	33530	64.8	61.2

3 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	80 °F EDB / 67 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
900	35 °F	0.21	300	48740	28950	49.2	47.1
	40 °F			42980	26100	52.3	49.9
	45 °F			35370	22830	55.7	53.2
	50 °F			27050	19620	59.2	56.6
1200	35 °F	0.34	400	47170	34330	52.6	49.9
	40 °F			50180	31190	55.1	52.2
	45 °F			41930	27790	57.9	54.8
	50 °F			31910	24020	60.9	57.8
1500	35 °F	0.50	500	64390	39230	55.0	51.8
	40 °F			55860	35550	57.3	54.0
	45 °F			47480	32210	59.5	56.0
	50 °F			35930	27930	62.2	58.7

3 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	77 °F EDB / 64 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
900	35 °F	0.21	300	43650	27840	47.6	45.4
	40 °F			36620	24360	51.3	48.7
	45 °F			29000	21030	54.8	52.1
	50 °F			22400	18420	57.5	54.9
1200	35 °F	0.34	400	50650	32910	50.9	48.1
	40 °F			43520	29580	53.6	50.5
	45 °F			34350	25690	56.6	53.5
	50 °F			24110	21760	59.8	56.6
1500	35 °F	0.50	500	56400	37360	53.3	50.0
	40 °F			48360	33760	55.6	52.1
	45 °F			38830	29840	58.1	54.5
	50 °F			27130	25410	60.9	57.3

4 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	85 °F EDB / 71 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
1200	35 °F	0.27	350	84340	46360	47.7	46.2
	40 °F			74510	41810	51.4	49.7
	45 °F			63870	37390	54.9	53.3
	50 °F			50220	32270	59.0	57.5
1600	35 °F	0.44	400	102310	56810	50.7	48.9
	40 °F			90250	51560	53.9	52.0
	45 °F			78230	46770	56.8	54.9
	50 °F			61490	40660	60.5	58.6
2000	35 °F	0.65	450	118830	66680	52.8	50.8
	40 °F			105210	60960	55.6	53.5
	45 °F			87980	54320	58.8	56.7
	50 °F			70990	48290	61.7	59.6

4 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	80 °F EDB / 67 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
1200	35 °F	0.27	350	71750	42380	46.2	44.7
	40 °F			62300	37640	49.8	48.1
	45 °F			49730	32490	54.1	52.4
	50 °F			36130	27330	58.2	56.6
1600	35 °F	0.44	400	87000	52010	48.9	47.1
	40 °F			74650	46420	52.3	50.3
	45 °F			60980	40820	55.6	53.7
	50 °F			44220	34580	59.3	57.5
2000	35 °F	0.65	450	101660	61390	50.6	48.6
	40 °F			85880	54490	53.9	51.8
	45 °F			70580	48390	56.9	54.7
	50 °F			51830	41410	60.2	58.1

4 TON W/4 Row DX Coil							
CFM	Suction Temp.	APD FV	77 °F EDB / 64 °F EWB		Leaving Air Temp.		
			Total Capacity	Sensible Capacity	DB °F	Wb °F	
1200	35 °F	0.27	350	62680	40050	45.3	43.7
	40 °F			52250	34950	49.3	47.5
	45 °F			39960	29660	53.5	51.7
	50 °F			28660	25290	57.0	55.2
1600	35 °F	0.44	400	77140	49860	47.5	45.5
	40 °F			64200	43780	51.0	48.9
	45 °F			48350	37150	54.9	52.9
	50 °F			35610	32310	57.8	55.8
2000	35 °F	0.65	450	87540	57690	49.6	47.4
	40 °F			72710	51030	52.7	50.5
	45 °F			56130	44270	56.0	53.7
	50 °F			41830	38900	58.5	56.3



Cooling Capacity VX*D-60, 90, 120

5 TON W/4 Row DX Coil						
85 °F EDB / 71 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
1500	35 °F	0.26	103400	59970	48.3	46.8
	40 °F		92060	51810	51.7	50.0
	45 °F		79140	46480	55.1	53.4
2000	35 °F	0.43	126820	70550	51.0	49.7
	40 °F		111680	64010	54.1	52.2
	45 °F		96530	58020	57.0	55.1
2500	35 °F	0.62	148040	83170	52.9	50.9
	40 °F		130710	75930	55.7	53.6
	45 °F		108690	67490	58.9	56.9
	50 °F	430	87020	59840	61.9	59.9

5 TON W/4 Row DX Coil						
80 °F EDB / 67 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
1500	35 °F	0.26	89640	52960	46.2	44.7
	40 °F		77790	47250	49.9	48.2
	45 °F		66240	42290	53.0	51.3
2000	35 °F	0.43	107740	64560	49.1	47.3
	40 °F		93970	58340	52.1	50.2
	45 °F		78280	51870	55.2	53.3
2500	35 °F	0.62	124600	75650	51.1	49.0
	40 °F		109450	69040	53.6	51.5
	45 °F		89570	61070	56.6	54.5
	50 °F	430	95810	53630	59.5	57.4

5 TON W/4 Row DX Coil						
77 °F EDB / 64 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
1500	35 °F	0.26	78860	50350	45.1	43.5
	40 °F		68830	44410	48.8	47.1
	45 °F		53980	38760	52.4	50.6
2000	35 °F	0.43	94840	61570	47.7	45.8
	40 °F		82420	55730	50.5	48.5
	45 °F		68230	48810	53.8	51.8
2500	35 °F	0.62	110250	72550	49.4	47.3
	40 °F		94280	65440	52.1	49.9
	45 °F		74020	56920	55.4	53.1
	50 °F	430	53680	49190	58.3	56.1

7.5 TON W/4 Row DX Coil						
85 °F EDB / 71 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
2500	35 °F	0.42	190740	104420	44.7	43.5
	40 °F		172780	95710	48.1	46.7
	45 °F		149670	85600	52.0	50.6
3000	35 °F	0.55	217510	119610	46.5	45.2
	40 °F		192920	108250	50.2	48.8
	45 °F		120210	98740	53.2	51.9
3500	35 °F	0.69	246480	132300	51.3	49.8
	40 °F		186820	110180	54.6	53.2
	50 °F		161130	100480	57.3	55.9

7.5 TON W/4 Row DX Coil						
80 °F EDB / 67 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
2500	35 °F	0.42	161450	95000	43.7	42.5
	40 °F		140280	84630	47.7	46.3
	45 °F		120960	75980	50.9	49.6
3000	35 °F	0.55	177570	106630	46.3	45.0
	40 °F		161080	97880	48.8	47.4
	45 °F		135710	86950	52.3	50.9
3500	35 °F	0.69	208240	123560	46.2	44.8
	40 °F		180800	110700	49.8	48.2
	45 °F		125300	88100	55.9	54.5
	50 °F	462	88250	74780	59.6	58.3

7.5 TON W/4 Row DX Coil						
77 °F EDB / 64 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
2500	35 °F	0.42	148550	82700	41.7	40.7
	40 °F		127640	82730	45.5	44.2
	45 °F		75190	59840	54.2	52.9
3000	35 °F	0.55	161130	103110	44.3	43.0
	40 °F		137480	91500	48.0	46.5
	45 °F		115530	81810	51.1	49.6
3500	35 °F	0.69	173500	112710	46.4	44.9
	40 °F		154690	103830	48.8	47.2
	45 °F		126700	91680	52.1	50.5
	50 °F	462	98520	80470	55.1	53.7

10 TON W/4 Row DX Coil						
85 °F EDB / 71 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
3000	35 °F	0.36	237190	104720	43.8	42.9
	40 °F		212010	92410	47.7	46.6
	45 °F		187750	81780	51.1	50.0
4000	35 °F	0.53	296160	129770	46.2	45.2
	40 °F		262900	114390	49.8	48.7
	45 °F		232090	101460	52.9	51.8
5000	35 °F	0.74	307900	134050	51.5	50.4
	40 °F		264600	116590	54.8	53.8
	45 °F		223550	101330	57.7	56.8

10 TON W/4 Row DX Coil						
80 °F EDB / 67 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
3000	35 °F	0.36	205640	120540	41.6	40.6
	40 °F		183860	109020	45.3	44.0
	45 °F		151180	93910	50.1	48.8
4000	35 °F	0.53	253370	149270	44.3	43.1
	40 °F		221450	133610	48.1	46.7
	45 °F		151070	104190	55.1	53.8
5000	35 °F	0.74	292360	17390	46.7	45.3
	40 °F		253210	155750	50.2	48.7
	45 °F		179010	126670	56.0	54.5
	50 °F	484	126580	106800	59.6	58.3

10 TON W/4 Row DX Coil						
77 °F EDB / 64 °F EWB						
CFM	Suction Temp.	APD FV	Total Capacity	Sensible Capacity	Leaving Air Temp. DB °F	Wb °F
3000	35 °F	0.36	182440	115090	40.5	39.6
	40 °F		158530	101080	45.0	43.7
	45 °F		93280	73330	53.8	52.5
4000	35 °F	0.53	204590	132290	45.6	44.2
	40 °F		182680	121780	48.1	46.6
	45 °F		151700	108160	51.3	49.8
5000	35 °F	0.74	247410	160680	46.4	44.9
	40 °F		219480	147480	49.0	47.4
	45 °F		151860	119060	54.4	52.8
	50 °F	484	139400	113870	55.3	53.8



VWHD/VXHD

HOTWATER HEATING CAPACITIES

HOT WATER 20°F WATER TEMPERATURE DROP 180°F EWT/160° LWT

24-V*H-2 ROW Hot Water Heating

24-V*H-1 ROW Hot Water Heating

CFM	50.0°F EDB				60.0°F EDB				CFM	50.0°F EDB				60.0°F EDB			
	GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB		GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB
600	3.8	2.4	37.0	105.7	3.4	1.9	33.0	110.7	600	1.9	0.6	18.9	78.5	1.7	0.5	16.7	85.6
800	4.6	1.4	44.5	100.3	4.1	1.1	39.8	105.8	800	2.3	0.9	22.2	75.0	2.0	0.7	19.6	82.5
1000	5.2	1.9	51.1	96.2	4.7	1.5	45.6	102.0	1000	2.6	1.1	24.9	72.5	2.3	0.8	22.0	80.3

36-V*H-2 ROW Hot Water Heating

36-V*H-1 ROW Hot Water Heating

CFM	50.0°F EDB				60.0°F EDB				CFM	50.0°F EDB				60.0°F EDB			
	GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB		GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB
900	4.9	1.6	47.9	98.1	4.4	1.3	42.8	103.8	900	2.4	1.0	23.6	73.7	2.1	0.8	20.8	89.3
1200	5.8	2.3	56.9	92.9	5.2	1.8	50.8	99.0	1200	2.8	1.3	27.4	70.6	2.5	1.0	24.2	78.5
1500	6.6	3.0	64.6	88.9	5.9	2.4	57.7	95.4	1500	3.1	1.6	30.5	68.4	2.8	1.3	26.9	76.5

48-V*H-2 ROW Hot Water Heating

48-V*H-1 ROW Hot Water Heating

CFM	50.0°F EDB				60.0°F EDB				CFM	50.0°F EDB				60.0°F EDB			
	GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB		GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB
1400	7.3	3.4	70.8	95.7	6.4	2.7	62.9	101.4	1400	3.3	1.8	32.5	71.0	2.9	1.4	28.4	78.7
1600	7.8	3.9	76.5	93.2	7.0	3.1	67.9	99.1	1600	3.6	2.1	34.7	69.6	3.1	1.6	30.2	77.4
1800	8.4	1.2	81.8	91.0	7.4	3.5	72.6	97.1	1800	3.8	2.3	36.6	68.4	3.3	1.7	31.9	76.3

60-V*H-2 ROW Hot Water Heating

60-V*H-1 ROW Hot Water Heating

CFM	50.0°F EDB				60.0°F EDB				CFM	50.0°F EDB				60.0°F EDB			
	GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB		GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB
1800	9.3	1.3	91.0	95.7	8.3	1.0	80.8	101.4	1800	4.3	1.0	41.8	71.0	3.7	2.1	36.5	78.7
2000	9.9	1.4	96.8	93.7	8.8	1.1	85.9	99.6	2000	4.5	1.2	44.0	69.9	3.9	2.3	38.4	77.7
2200	10.5	1.6	102.2	92.0	9.3	1.3	90.7	98.0	2200	4.7	1.3	46.0	68.9	4.1	1.0	40.1	76.8

90-V*H-2 ROW Hot Water Heating

120-V*H-2 ROW Hot Water Heating

CFM	50.0°F EDB				60.0°F EDB				CFM	50.0°F EDB				60.0°F EDB			
	GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB		GPM	WPD	TMBH	LDB	GPM	WPD	TMBH	LDB
2500	15.7	2.1	152.7	105.2	13.9	4.1	135.2	109.8	3000	18.2	2.7	177.7	103.5	16.1	2.1	157.4	108.3
3000	17.4	2.6	169.5	101.0	15.4	2.0	150.0	106.1	4000	21.4	3.7	208.4	97.1	18.9	2.9	184.4	102.5
3500	18.9	3.0	184.4	97.6	16.7	2.4	163.2	103.0	5000	24.0	4.7	253.7	92.2	21.2	3.7	206.1	98.1

NOTE: LEAVING AIR SHOULD NOT EXCEED 130°F DB

All Technical Specifications Subject to Change Without Notice.
For more information contact Customer Service
Phone (817) 624.0820 Fax (817) 624.8581
www.commercialaire.com



INTERNAL STATIC PRESSURES, DX COIL, CW COIL, HW COIL, FILTERS

SIZE	CFM	COIL FV	2" TA	TOTAL OF 10 ROWS MAXIMUM				Total ISP
				1 ROW HW ISP	2 ROW HW ISP	4 ROW CW ISP	4 ROW DX ISP	
24	600	225	0.051	0.03	0.06	0.13	0.13	
	800	300	0.068	0.05	0.10	0.21	0.21	
	1000	375	0.085	0.07	0.15	0.30	0.30	
36	900	300	0.077	0.06	0.12	0.21	0.21	
	1200	400	0.102	0.10	0.20	0.34	0.34	
	1500	500	0.128	0.15	0.30	0.49	0.50	
48	1400	350	0.079	0.12	0.23	0.35	0.27	
	1600	400	0.091	0.19	0.38	0.44	0.44	
	1800	450	0.102	0.28	0.55	0.54	0.65	
60	1800	352	1.800	0.11	0.22	0.36	0.26	
	2000	391	0.200	0.18	0.36	0.43	0.43	
	2200	430	0.220	0.21	0.42	0.50	0.62	
90	2500	330	0.062	N/A	0.19	0.48	0.48	
	3000	396	0.074		0.26	0.63	0.54	
	3500	462	0.086		0.33	0.77	0.67	
120	3000	291	0.074		0.21	0.40	0.36	
	4000	387	0.099		0.38	0.61	0.53	
	5000	484	0.123		0.51	0.82	0.74	

Internal Static Calculation

Select a unit and approximate CFM from the two left columns.

Select total number of rows and filter.

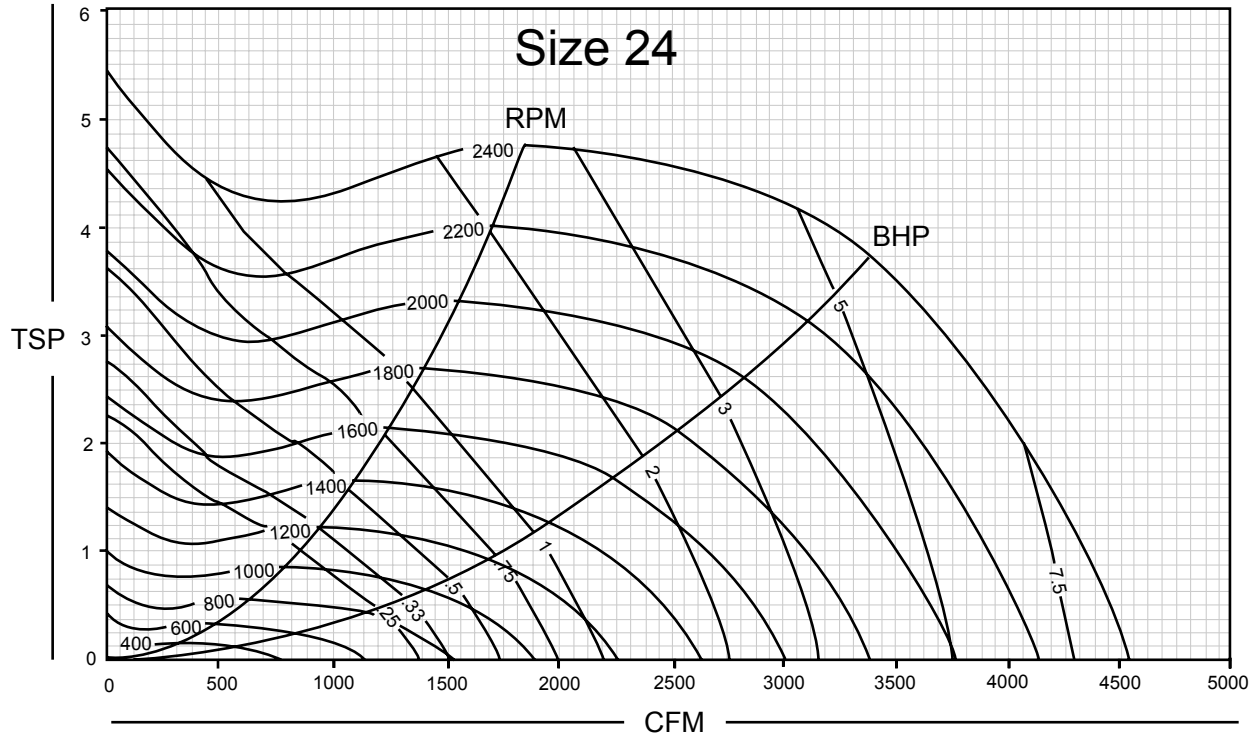
Add filter to coil static pressure to obtain total ISP (internal static pressure).

Add total internal static pressure to external static pressure for system TSP (total static pressure).

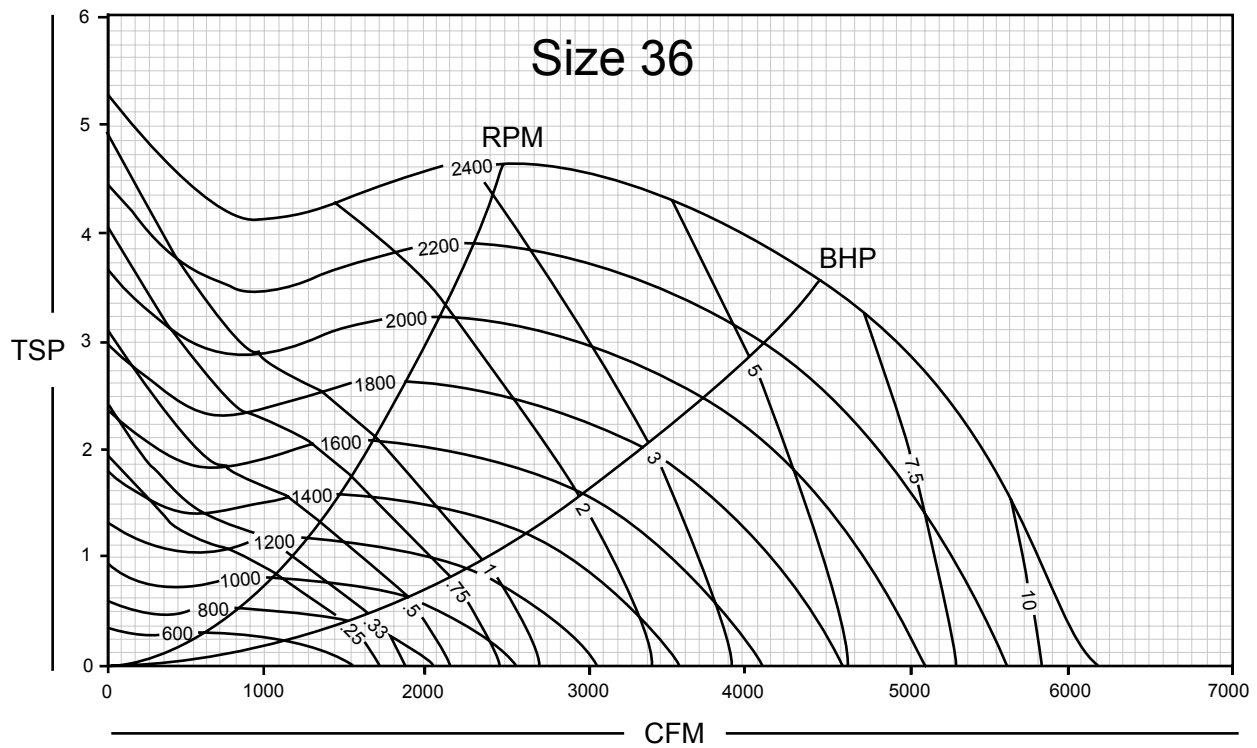
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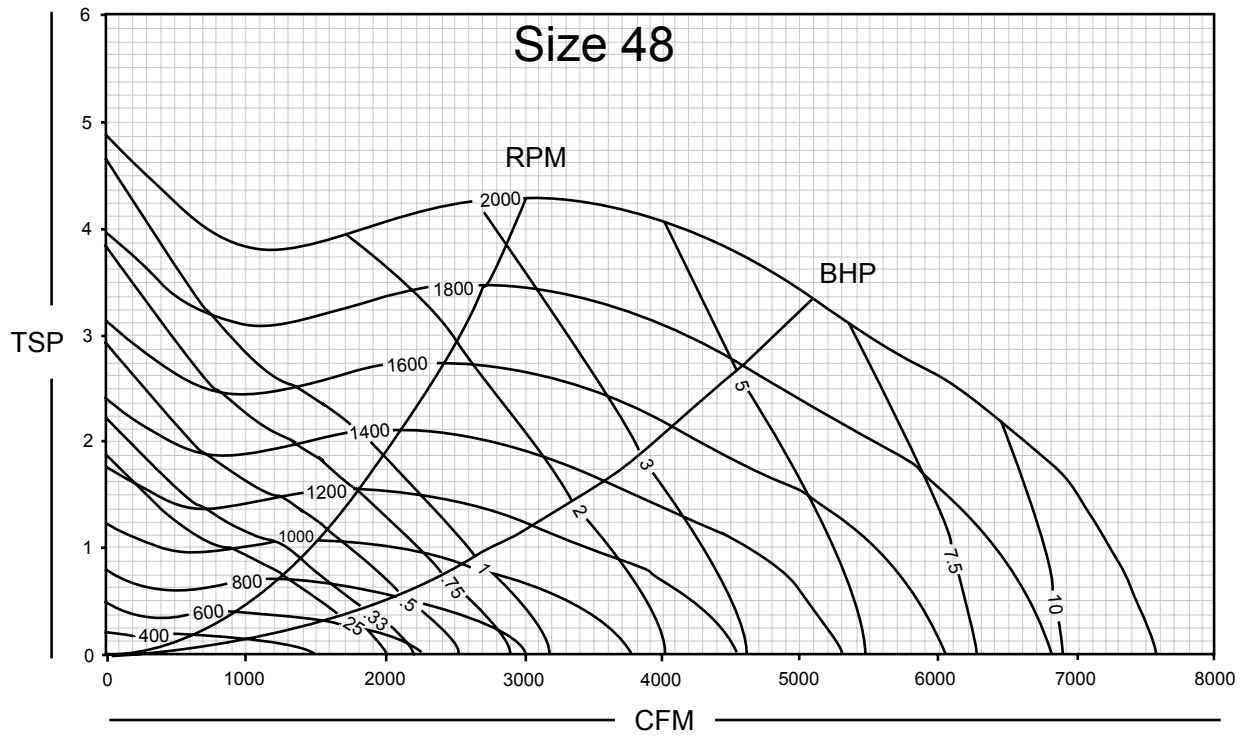
SIZE 24 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
600	1000	1400	0.5



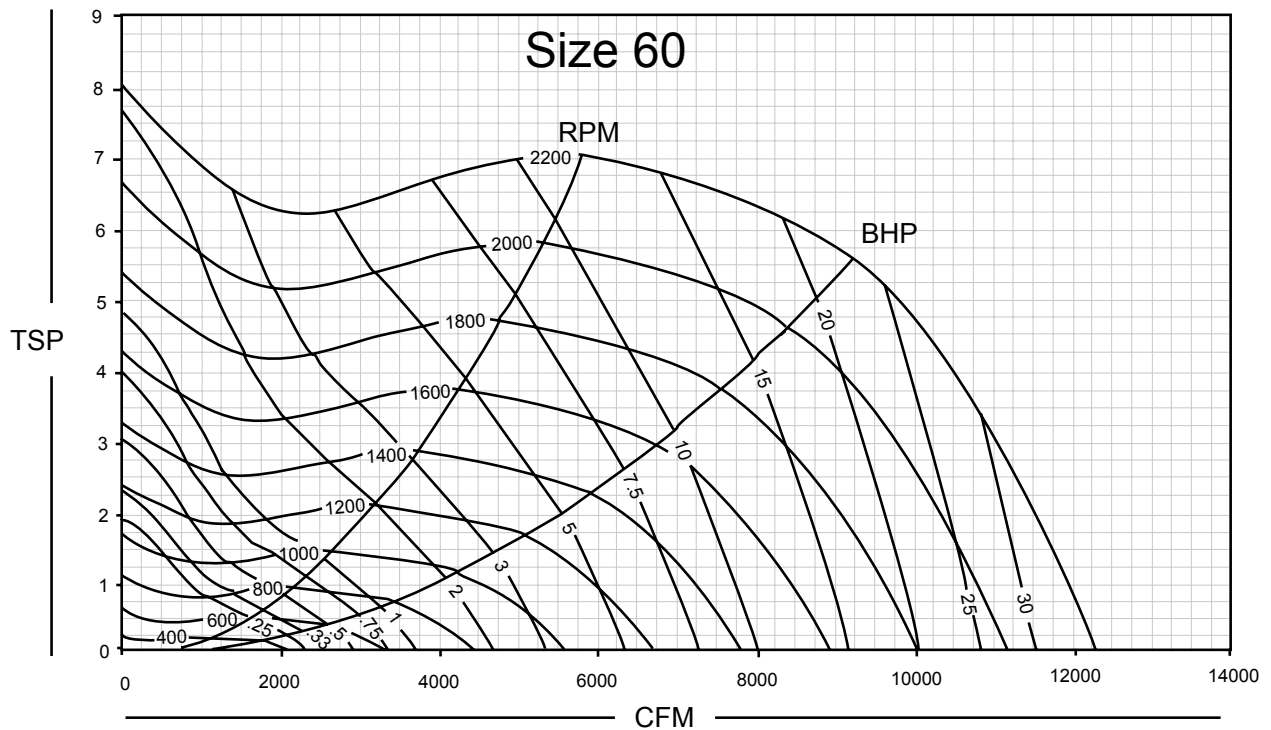
SIZE 36 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
900	1500	1325	0.5



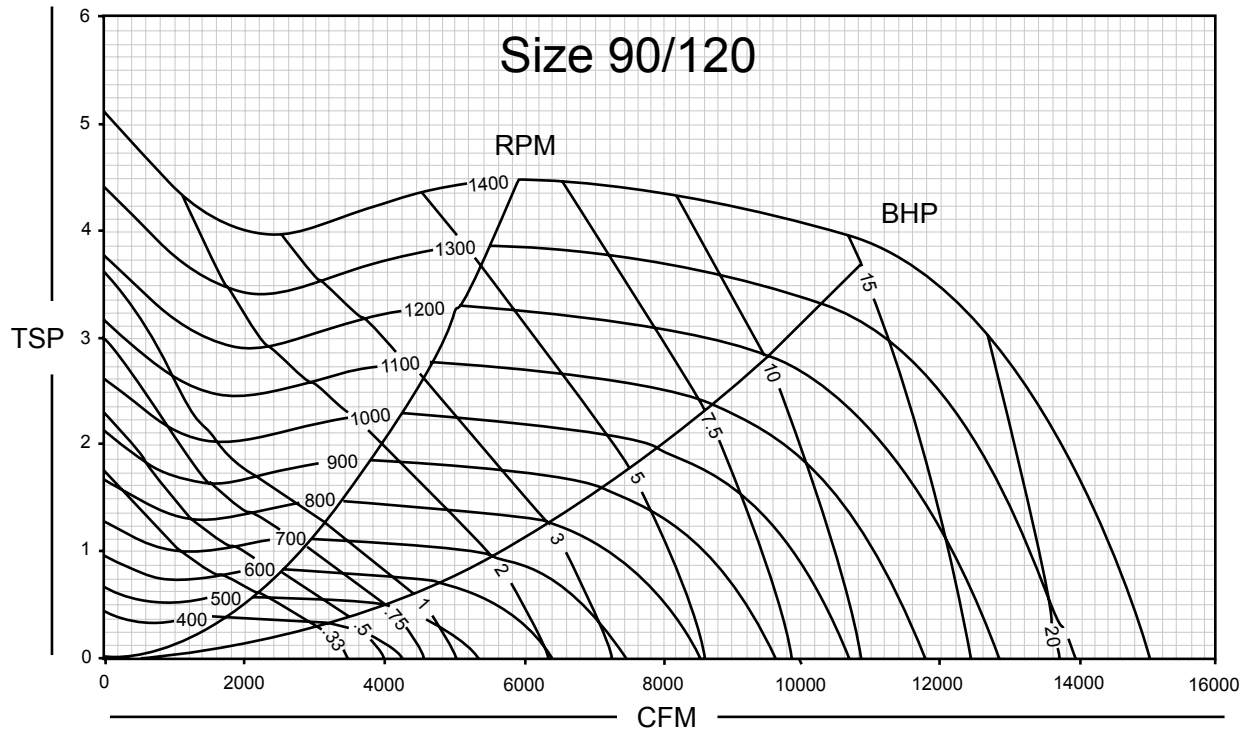
**COMMERCIAL
AIRE PRODUCTS™**



SIZE 48 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
1200	2000	1600	1.5



SIZE 60 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
1500	2500	1200	1.5



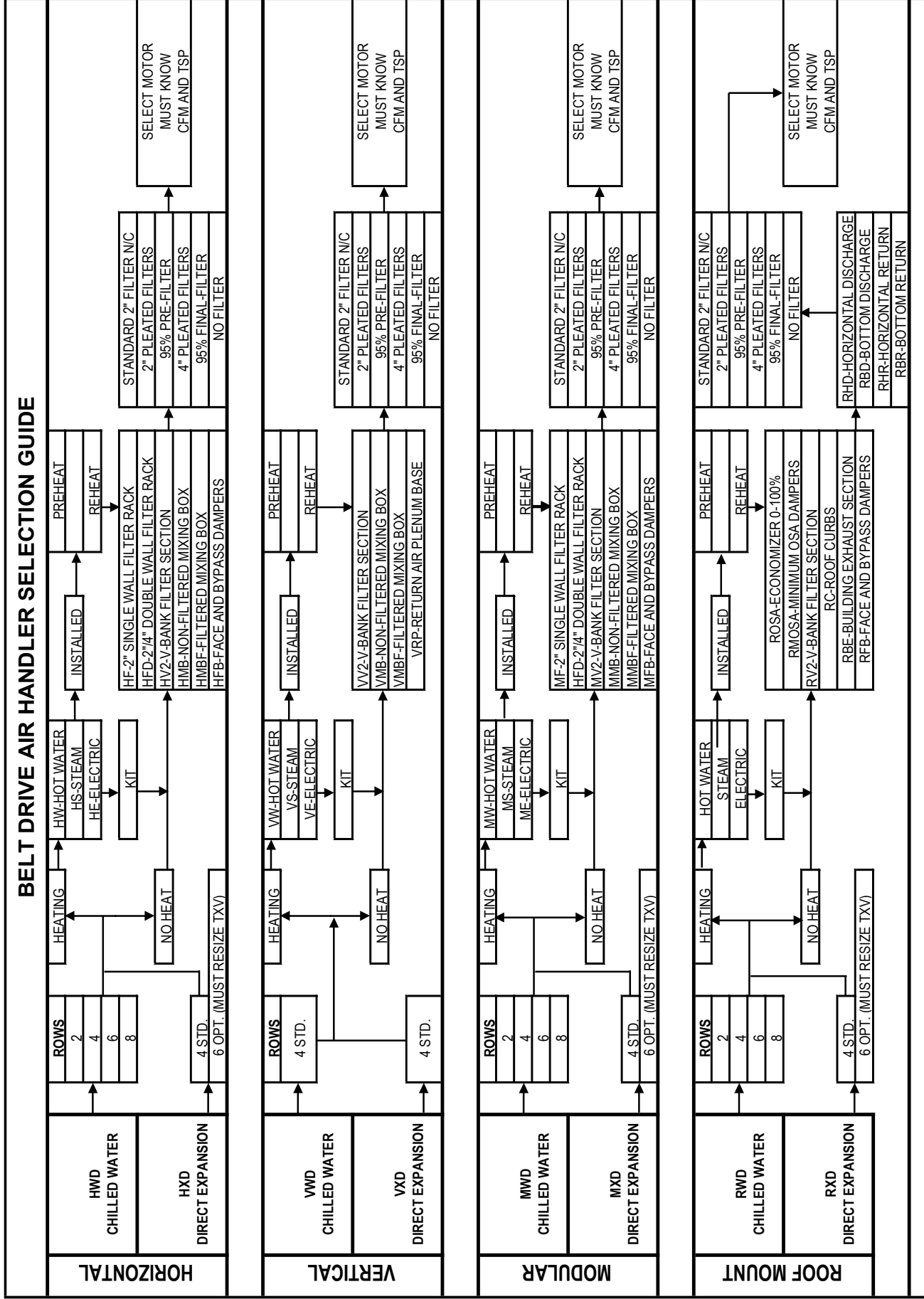
SIZE 90 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
2250	3750	1300	3.0

SIZE 120 PERFORMANCE GUIDELINES			
MIN. CFM	MAX. CFM	MAX. RPM	MAX. HP
3000	5000	1300	5.0



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BELT DRIVE AIR HANDLER SELECTION GUIDE



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