



FIRST CO.
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WCB Series



WCB Series

Recessed Wall Console

Fan Coil

300- 1200 CFM



• *Front Supply and Return Air • Decorative Wall Panel • Dependable Lead Times • Competitively Priced • Easily Serviced • Quiet Operation • Compact Design • Durable Construction • ECM Motor Available*

WCB Series

First Co.'s "WCB" series Recessed wall consoles are slim and extremely attractive. Their pleasing appearance allows them to blend with any decor. These products are engineered to be quiet and designed to be easy to install and service. These units are ideal for perimeter heating and cooling in hotels, apartments, hospitals, public office buildings, offices, corridors, and other multi-room buildings. They are available in 6 sizes with airflow from 300 through 1200 CFM to supply just the right amount of air. Available coils include 3 and 4 rows for 2-pipe systems, and 31, 41 (300-800 CFM only) split coils for 4-pipe systems.

FEATURES / BENEFITS

Cabinets

All units are constructed of heavy gauge galvanized steel to resist corrosion.

Decorative Wall Panel

Each unit is shipped with a decorative wall panel. The wall panel is fabricated of heavy gauge embossed galvanized steel and powder coated with a baked-on off-white finish. If desired, the wall panel can be fieldpainted to match an existing color. Service access to the WCB unit is from the front after removing the wall panel. The wall panel includes both right and left hand thermostat access doors with tamperproof screws. In addition, each panel includes a removable return air grille to allow access to the permanent filter without removal of the entire wall panel.

Coils

Coils are available in standard and high capacity configuration and all include manual air vents. Optional water heating coils are available for 4-pipe systems. Coils are constructed of seamless copper tubing expanded to high efficiency aluminum fins to assure maximum heat transfer. Each coil is factory tested to 350 psig.

Drain Pans

The primary drain pan is constructed of galvanized steel and coated with insulation to resist corrosion. This pan extends under the entire coil and coil headers. An injection molded secondary drain pan provides complete condensate drainage from the primary pan and is located under the valve package (if provided). Secondary drain pan can be rotated 180 degrees to allow field piping to enter the unit from different locations.

Motors

Standard motors are 120V, 240V or 277V three speed, PSC or ECM type with internal thermal overload protection. Motors have permanently lubricated sleeve bearings for long life. All motors are resiliently mounted with rubber bushings to assure quiet, vibration-free operation and are easily removed.

Blower Assemblies

All blower wheels are centrifugal, forward curved, and dynamically balanced for smooth, quiet operation. Blower assemblies can be easily removed for service.

Filters

A 1/2 inch permanent filter is provided as standard on all units. The filter is easily removed from the front of the unit.

Single Power Location

All electrical components are factory wired to a single electrical compartment on each unit. All field wiring connections are made at this electrical compartment.

Options

A wide variety of two and four-pipe control systems are available with unit mounted or remote thermostats. Standard options include valve cycle control systems and a factory installed service switch. Other options include three speed switches, various motor voltages, and manual or motorized fresh air damper. See "Model Number Nomenclature" on Page 2 for unit options and Page 3 for control options. Fresh air wall box is fabricated of aluminum with drain holes and a double set of louvers in series to prevent moisture draw through.

MOTOR / BLOWER PERFORMANCE

Air Volume Capacity / WCB with PSC Motor

UNIT		CFM @ 0.0 P.S.C. FOR FAN SPEED INDICATED			HIGH SPEED CFM @ E.S.P. INDICATED			
MODEL	SIZE	HIGH	MED	LOW	0.05	0.10	0.15	0.20
WCB	3	280	245	210	255	230	205	175
	4	400	320	220	370	330	290	230
	6	600	430	320	570	540	510	480
	8	800	680	580	760	730	700	660
	10	1000	880	670	970	920	880	830
	12	1220	1030	780	1170	1120	1070	1020

NOTES:

1. Values are standard CFM at sea level, 70 degree EAT. with dry coil.
2. E.S.P. - inches water.
3. Values include filter and / or grille where applicable.

Air Volume Capacity / WCB with ECM Motor

MODEL	HP	AMPS / 120V	SPEED TAPS	External Static Pressure (inches of water)				
				0.0	0.05	0.10	0.15	0.20
3WCBX	1/20	0.66	HIGH	280	260	250	240	230
		0.49	MEDIUM	240	230	220	200	190
		0.37	LOW	210	190	170	150	140
4WCBX	1/10	0.8	HIGH	400	370	350	330	310
		0.4	MEDIUM	320	290	250	230	200
		0.2	LOW	220	180	150	110	90
6WCBX	1/10	1.4	HIGH	600	570	550	530	510
		0.6	MEDIUM	430	410	390	370	340
		0.4	LOW	320	300	270	220	190
8WCBX	1/4	2.5	HIGH	800	780	750	730	710
		1.7	MEDIUM	680	660	630	600	580
		1.1	LOW	580	560	530	500	480
10WCBX	1/7 (2)	2.9	HIGH	1000	980	950	920	900
		2.1	MEDIUM	880	850	820	780	750
		1.1	LOW	670	630	590	550	500
12WCBX	1/7 (2)	4.2	HIGH	1210	1200	1190	1170	1150
		2.9	MEDIUM	1050	1050	1020	1000	980
		1.6	LOW	810	790	750	710	670

Notes:

1. Values are standard CFM at sea level, 70 degree EAT. with dry coil.
2. E.S.P. - inches water.
3. Values include filter and / or grille where applicable.

MOTOR / BLOWER PERFORMANCE

Motor Data / WCBX ECM

MOTOR SPEED	UNIT SIZE											
	3		4		6		8		10		12	
	NOMINAL HP 1/20		NOMINAL HP 1/10		NOMINAL HP 1/10		NOMINAL HP 1/4		NOMINAL HP 1/7 (2)		NOMINAL HP 1/7 (2)	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS

120V 1PH 60 Hz EC MOTOR

HIGH	0.66	43	0.8	63	1.4	105	2.5	200	2.9	234	4.2	360
MEDIUM	0.49	30	0.4	33	0.6	95	1.7	126	2.1	166	2.9	243
LOW	0.37	22	0.2	14	0.4	90	1.1	82	1.1	85	1.6	122

Notes:

* Total unit motor amps and watts shown for 2 motors. (Unit size 10 and 12)

Motor Data / WCB PSC

MOTOR SPEED	UNIT SIZE											
	3		4		6		8		10*		12*	
	NOMINAL HP 1/20		NOMINAL HP 1/12		NOMINAL HP 1/8		NOMINAL HP 1/6		NOMINAL HP 1/8 (2)		NOMINAL HP 1/6 (2)	
	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts

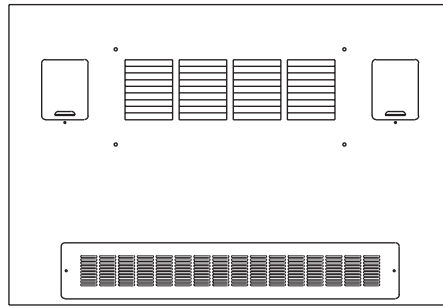
120 VOLT - 1 PH - 60 Hz PSC MOTOR

HIGH	.80	95	1.0	105	1.8	200	2.2	250	3.0	350	4.6	520
MEDIUM	.45	60	.60	70	1.1	140	2.0	210	2.4	275	3.0	330
LOW	.40	50	.45	55	.80	90	1.6	170	1.8	210	2.1	230

NOTES:

* Total unit motor amps and watts shown for 2 motors. (Unit size 10 and 12)

WCB SERIES



Wall Panels for WCB		
	HEIGHT	WIDTH
9PWC03L	30"	44"
9PWC04L	30"	52"
9PWC06L	30"	60"
9PWC08L	30"	68"
9PWC10L	30"	76"
9PWC12L	30"	84"

Shipping Weights

Approximate shipping weights (lbs.)

UNIT TYPE	UNIT SIZE					
	3	4	6	8	10	12
WCB	85	97	110	125	145	165

Note:

1. Approximate shipping weights do not include valve packages, hot water coils, electric heaters, or other options.

ARI STANDARD RATINGS

Cooling Coil Ratings

Standard Coil - Water Cooling Capacity Ratings - **3 row**

UNIT SIZE	COOLING CAPACITY		GPM	WATER P.D. (Ft. Wtr.)
	TOTAL BTUH	SENSIBLE BTUH		
3	8,000	6,100	1.6	4.5
4	12,000	9,000	2.4	9.3
6	17,000	12,900	3.4	8.3
8	21,900	16,800	4.4	8.6
10	27,600	22,500	5.5	9.3
12	34,500	27,500	6.9	15.1

High Capacity Coil - Water Cooling Capacity Ratings - **4 row**

UNIT SIZE	COOLING CAPACITY		GPM	WATER P.D. (Ft. Wtr.)
	TOTAL BTUH	SENSIBLE BTUH		
3	9,200	6,700	1.8	5.4
4	13,900	9,900	2.8	14.9
6	19,000	14,000	3.8	11.8
8	25,400	18,700	5.1	13.8
10	30,400	23,700	6.1	9.5
12	38,200	29,100	7.6	14.1

Notes:

1. Rated in accordance with ARI Standard 440. Cooling capacities based on 80 deg. DB / 67 deg. WB entering air, 45 deg. entering water, 10 deg. water temperature rise and high fan speed with standard 120V/1PH/60Hz motor.
2. For cooling coil capacities at conditions other than listed, refer to application guide or consult your First Co. Representative.

Heating Coil Ratings

Standard Coil - Water Heating Capacity Ratings - **3 row**

UNIT SIZE	HEATING CAPACITY BTUH	GPM	WATER P.D. (Ft. Wtr.)
3	23,500	1.6	4.5
4	34,200	2.3	8.6
6	49,400	3.3	7.8
8	64,500	4.3	8.2
10	87,000	5.8	10.4
12	106,300	7.1	15.9

High Capacity Coil - Water Heating Capacity Ratings - **4 row**

UNIT SIZE	HEATING CAPACITY BTUH	GPM	WATER P.D. (Ft. Wtr.)
3	25,200	1.7	4.8
4	36,600	2.4	11.3
6	52,500	3.5	10.2
8	69,500	4.6	11.5
10	92,200	6.1	9.5
12	113,000	7.5	13.7

1-Row Coil - Water Heating Capacity Ratings

UNIT SIZE	HEATING CAPACITY BTUH	GPM	WATER P.D. (Ft. Wtr.)
3	12,400	0.8	2.4
4	18,200	1.2	6.1
6	26,000	1.7	12.7
8	33,700	2.2	22.7
10	33,600	2.2	5.9
12	41,200	2.7	8.8

Notes:

1. Heating coils rated at 70 deg. DB entering air, 180 deg. entering water, 30 deg. water temperature drop and high fan speed with standard 120V/1PH/60Hz motor.
2. For heating capacities at conditions other than listed, consult your First Co. Representative or the factory.

In keeping with its policy of continuous progress and product improvement, First Operations reserves the right to make changes without notice. Maintenance for all First Co. products is available under "Product Maintenance" at www.firstco.com.

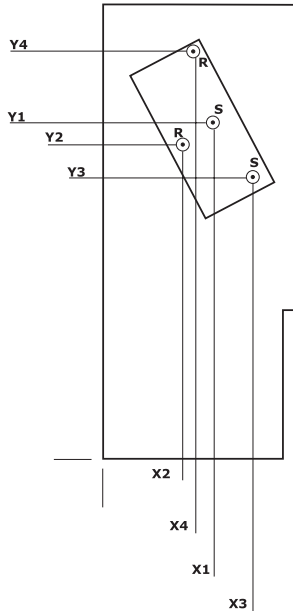
FRESH AIR INTAKE

NOTES:

- 1) ALL DIMENSIONS IN INCHES.
- 2) COIL CONNECTION TOLERANCE $\pm 1/4"$
- 3) HAND OF UNIT DETERMINED BY COOLING COIL CONNECTION WHEN FACING THE FRONT OF UNIT.



GENERAL DIMENSION						COIL CONN SIZE	
MODEL	A	C	D	E	COOLING	HEATING	
3 WCB	27-1/2	25-1/2	26-1/2	23-3/4			5/8 O.D. SWEAT
4 WCB	35-1/2	33-1/2	34-1/2	31-3/4			
6 WCB	43-1/2	41-1/2	42-1/2	39-3/4			
8 WCB	51-1/2	49-1/2	50-1/2	47-3/4			
10 WCB	59-1/2	57-1/2	58-1/2	55-3/4			
12 WCB	67-1/2	65-1/2	66-1/2	63-3/4			



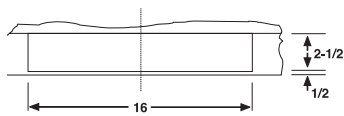
← (LEFT HAND UNIT SHOWN)

WCB HEADER LOCATIONS								
LEFT HAND	X1	Y1	X2	Y2	X3	Y3	X4	Y4
3 ROW	4.75	18.13	3.00	17.50	---	---	---	---
4 ROW	5.50	18.50	3.00	17.50	---	---	---	---
3/1 ROW	4.63	18.13	3.13	17.50	7.00	15.13	4.13	21.50
3/2 ROW	4.63	18.13	3.13	17.50	7.00	15.13	4.88	21.88
4/1 ROW	5.50	18.50	3.13	17.50	7.63	16.00	4.63	22.25
3 ROW	5.25	18.13	3.25	17.25	---	---	---	---
4 ROW	6.25	18.50	3.25	17.25	---	---	---	---
3/1 ROW	5.38	18.13	3.25	17.25	7.63	15.50	5.00	21.13

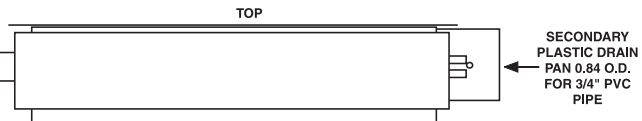
3-8V
10-12V

WCB HEADER LOCATIONS								
RIGHT HAND	X1	Y1	X2	Y2	X3	Y3	X4	Y4
3 ROW	4.75	18.13	3.00	17.50	---	---	---	---
4 ROW	5.50	18.50	3.00	17.50	---	---	---	---
3/1 ROW	4.63	18.13	3.13	17.50	6.88	15.50	3.88	21.50
3/2 ROW	4.75	18.13	3.13	17.50	7.63	15.88	3.88	21.88
4/1 ROW	5.50	15.50	3.13	17.50	7.75	15.50	4.88	21.88
3 ROW	5.25	18.13	3.25	17.25	---	---	---	---
4 ROW	6.25	15.50	3.25	17.25	---	---	---	---
3/1 ROW	5.25	18.13	3.25	17.25	7.38	16.00	4.75	21.75

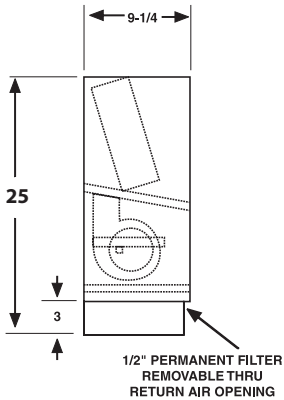
3-8V
10-12V



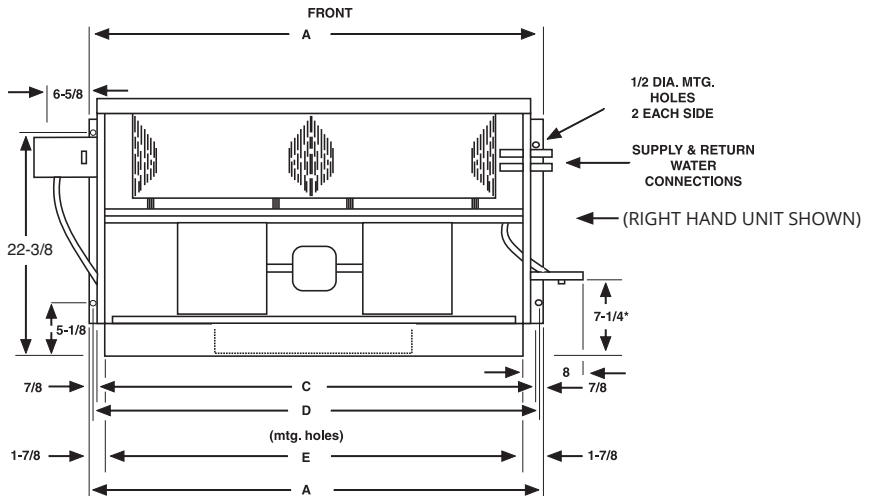
UNIT SIZES 10 & 12
Have two openings 2" apart
centered on center line.



NOTE: Outside fresh air must be tempered before entering the unit if freezing conditions are expected.



1/2" PERMANENT FILTER
REMOVABLE THRU
RETURN AIR OPENING



* DIMENSIONS VARY FOR UNITS WITH NON-STANDARD VALVE PACKAGES.

Thermostat Options For Available Electric Valve Packages

THERMOSTAT OPTIONS FOR ELECTRIC VALVE PACKAGES					
2 Pipe - Valve Cycle					
SYSTEM	THERMOSTAT CONTROLS	CONTROL VALVE TYPE	CHANGEOVER CONTROL and LOCATION	THERMOSTAT TYPE	ORDER OPTION NUMBER
Heating and Cooling	Heat-Off-Cool Constant Fan Hi-Med-Low	Motorized 2-way or 3-way Normally closed.	Manual Heat-Cool Switch on Thermostat	Unit Mount Wall Mount Unit Tamper-proof	A1 A2 A3
	On-Off Constant Fan Hi-Med-Low	Motorized 3-way Normally closed.	Automatic (1) Aquatat - Factory Mounted on Supply Line	Unit Mount Wall Mount Unit Tamper-proof	B1 (2) B2 B3
		Motorized 2-way or 3-way Normally closed.	Manual Summer - Winter Switch (switch must be field supplied)	Unit Mount Wall Mount Unit Tamper-proof	C1 C2 C3
Cooling Only	On-Off Constant Fan Hi-Med-Low	Motorized 2-way or 3-way Normally closed.	None	Unit Mount Wall Mount Unit Tamper-proof	D1 D2 D3
Heating Only	On-Off Constant Fan Hi-Med-Low	Motorized 2-way or 3-way Normally closed.	None	Unit Mount Wall Mount Unit Tamper-proof	E1 E2 E3
4 Pipe - Valve Cycle					
SYSTEM	THERMOSTAT CONTROLS	CONTROL VALVE TYPE	CHANGEOVER CONTROL and LOCATION	THERMOSTAT TYPE	ORDER OPTION NUMBER
Heating and Cooling	Heat-Off-Cool Constant Fan Hi-Med-Low	Motorized 2-way or 3-way Normally closed.	Manual Heat-Cool Switch on Thermostat	Unit Mount Wall Mount Unit Tamper-proof	M1 M2 M3
	On-Off Constant Fan Hi-Med-Low	Motorized 2-way or 3-way Normally closed.	Automatic 4 deg. Neutral Dead Band for sequenced heating & cooling, DPDT	Unit Mount Wall Mount Unit Tamper-proof	N1 N2 N3
3-SPEED FAN SWITCH ONLY (no thermostat)					
				SWITCH TYPE	ORDER OPTION NUMBER
				Unit Mount Wall Mount Unit Tamper-proof	L1 L2 L3

NOTES:

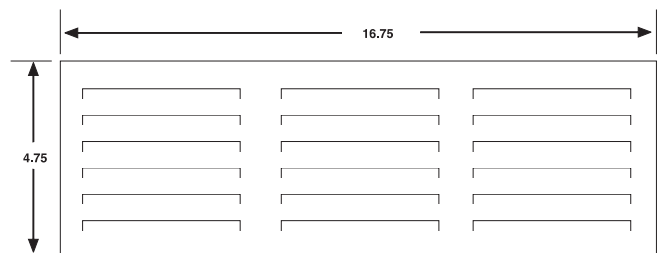
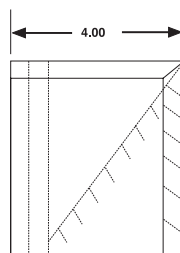
1. B1 option includes factory installed aquastat.
2. If valve package is desired with "B" options, select valve package number "3D".
3. Use "NC" for no controls.
4. Contact factory for other valve package options.

Fresh Air Wall Box

UNIT SIZES 10 & 12

Require two fresh air wall boxes.

NOTE: Outside fresh air must be tempered before entering the unit if freezing conditions are expected.



GUIDE SPECIFICATIONS - RECESSED WALL CONSOLE

Furnish and install First Co. recessed wall consoles as indicated on the plans and specifications. Types, sizes, and performance shall be as indicated in the schedule. Each unit shall be ARI certified and consist of and comply with the following:

General

Series WCB cabinet shall be fabricated of heavy gauge galvanized steel. Supply air and return air shall both be through a decorative wall panel attached to the front of the unit. Unit cabinet shall be stud mounted into a sealed space to ensure that all return air comes from the conditioned area through the wall panel. Service is to be preformed from the front of the unit after removal of the wall panel.

Decorative Wall Panel

Each unit shall have a factory supplied decorative wall panel. The wall panel shall be fabricated of heavy gauge embossed galvanized steel and coated with a baked-on off-white finish. If desired, the wall panel can be field-painted to match an existing color. Service access to the WCB unit shall be accomplished by removal of the wall panel. Each wall panel shall include both right and left hand thermostat access doors with tamperproof screws. Each panel shall include a removable return air grille to allow access to the permanent filter without removal of the entire wall panel.

Electrical Box

Unit shall have an electrical box providing a single location for all field wiring connections and a factory installed service switch.

Coils

Coils shall have high efficiency aluminum fins with mechanically expanded copper tubes. All water coils shall have a manual air vent. Coil performance shall be as indicated in the schedule.

Fan Assembly

Fans shall be centrifugal, forward curved, and dynamically balanced for smooth, quiet operation. Fan housing shall be fabricated of heavy gauge galvanized steel and be easily removed, thus allowing complete service access to the fans and motors.

Motors

All units shall have (120/1/60) (208-230/1/60) (227/1/60) three speed PSC or ECM motors with permanently lubricated sleeve bearings, inherent thermal overload protection with automatic reset, and resilient rubber motor mounts.

Speed Control (optional)

Units shall have a (unit) (wall) mounted three speed switch with integral on/off switch which shall provide high / medium / low fan speed control.

Drain Pan

Primary drain pan shall be constructed of galvanized steel and coated to resist corrosion. Secondary drain pan shall be constructed of injection molded plastic. Secondary drain pan shall be capable of rotating 180 degrees to allow field piping to enter the unit from different locations.

Insulation

Cabinet insulation shall be 1/2" multi-density glass fiber.

Filter

Filter shall be permanent type and cleanable.

Options

Valve Packages - Valve packages shall consist of various combinations of 2-way or 3-way motorized valves and/or combination balance/shut-off valves on the supply and return piping. Fresh Air Kit - A manual or motorized fresh air damper shall be provided by the manufacturer for field installation. Tamperproof Access Door - Units shall be provided with tamperproof access door on the thermostat/fan control compartment.

Model Number Nomenclature

12 WC B 0 - 126 - 31 R - 2B - N1

Thermostat Options (see Page 3)

NC = No Controls

2 pipe

- NV - No valves
- BV - Ball valves (two)
- 2 - 2 Way valve (volt) - no ball valves
- 2B - 2 Way valve (volt) - (2) ball valves

- 3 - 3 Way valve (volt) - no ball valves
- 3B - 3 Way valve (volt)- (2) ball valves
- 3C - 3 Way valve (volt)- (1) ball & (1) circuit setter
- 3D - 3 Way valve (volt)- (2) ball valve & aquastat

4 pipe

- NV - No valves
- BV - ball valves (four)
- 2 - (2) 2 Way valves (volt) - no ball valves
- 2B - (2) 2 Way valves (volt) - (4) ball valves

- 3 - (2) 3 Way valves (volt) - no ball valves
- 3B - (2) 3 Way valves (volt) - (4) ball valves
- 3C - (2) 3 Way valves (volt) - (2) ball valves -
(2) circuit setters

- 7B - (1) 3 Way valve (volt) cooling coil -
(2) ball valves
- (1) 2 Way valve (volt) steam coil -
(2) ball valves

CFM (100'S)

3,4,6,8,10,12

Unit Style

WC - Recessed wall console

WCX - Recessed wall console with ECM motor

Vintage

B

Unit Voltage

126 - 120V-1PH-60Hz

246 - 208/230V-1PH-60Hz

225 - 220V-1PH-50Hz

276 - 277V-1PH-60Hz

Coil Type

3 - 3 row

4 - 4 row

31 - 3 row cool, 1 row heat

41 - 4 row cool, 1 row heat (available on 300-800 CFM only)

Coil Connection

R - Right Hand (Facing Unit Front)

L - Left Hand

Valve Package

(Contact factory for options)





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