



SO TOUGH,
WE GUARANTEE IT.



RBV Sales Guide

FAN COIL UNITS FLOOR-MOUNTED, VERTICAL



- /// RBVS
- /// RBVR
- /// RBVC

RBV Series:

**LOW POWER CONSUMPTION,
ACCESSIBLE AND FLEXIBLE**

Owners

Owners can choose between a standard or elevated height (RBV) vertical floor-mounted fan coil unit. Both are AHRI certified to ensure exact performance. Either unit utilizes a 3-speed, direct-drive motor to optimize cabinet airflow and sound performance. Enhanced sound levels are achieved through an electronic fan-speed controller (SCR) which allows further motor-speed tuning. Vertical floor mounted concealed model fan-coil units are constructed of galvanized steel, surpassing the ASTM 125-hour, salt-spray test for corrosion and rust. Exposed-cabinet models RBVC and RBVS feature durable, powder-coated, galvanealed steel that resists fading, scratches and fingerprints.

Concerned about Indoor Air Quality? Sloped drain pans are standard on all vertical floor mounted units, and are easily removed to provide access to the coils for cleaning. Optional stainless-steel drain pans and coil casings are available. Elastomeric closed-cell-foam insulation is used to promote IAQ.

Designers

The vertical floor mounted unit's impressive list of standard features provides unparalleled design flexibility. With the variable aspect ratio's the standard cabinet size can be increased in width or height up to 12" (RBVC & RBVS only). The return air space on exposed cabinet models, RBVC & RBVS, is provided with a stamped-louver or grille having same powder coat finish as the cabinet. Outside air can be introduced with manual or motorized dampers, or a wall-box assembly (RBV only).

Available with chilled-water or DX cooling coils, and hot water, or electric heat coils, vertical floor mounted units produce the ultimate comfort and flexibility.

Contractors

Vertical floor mounted fan coil units provide maximum performance while reducing installed cost to the contractor. Motor wiring is brought to a junction box on the inside of the unit end pocket, reducing electrical hook-up time. Single point-power connection is standard on all vertical floor mounted fan coil units. Motor connections are shipped with quick connectors for ease of replacement.

For fast-track jobs, the vertical floor mounted Quick Ship unit is available in 5, 10 or 15 days with an impressive list of unit options and controls.

Low Power Consumption

The RBV fan coil has raised the bar by lowering the power consumption required. This industry leading low power consuming units are equipped with permanent split capacitor (PSC) motors, but can be supplied with an electronically commuted. See Airflow and Power Data table.

Airflow & Power Data				
Model	Size	Airflow (SCFW)	Cooling Capacity Total TMBH	Power Consumption at High Speed (Watts)
RBV	02	233	7.3	45
	03	318	8.0	60
	04	452	12.3	70
	06	566	16.7	80
	08	628	19.0	114
	10	830	26.6	132
	12	970	30.3	142

All Cooling performance with 0" ESP, 80 db /67 wb entering air, 45°F, PSC motors



Factory-Mounted Control Packages

A wide variety of control options and unit mounted thermostats are offered on vertical floor mounted fan coil units. Factory-mounting and wiring of DDC controls by others is also available. Wireless factory supplied control options can be provided to minimize retrofit costs and provide BAS communication to the front end.

Optional thermostats can maximize up to 30% energy savings in high-energy usage light commercial buildings, such as schools and hotels during occupied times by using additional standby set-points.

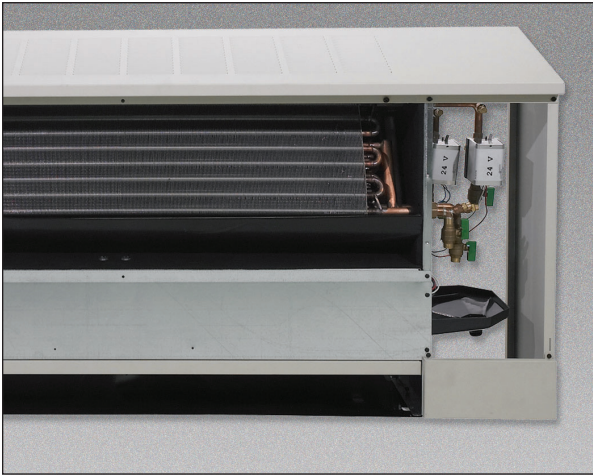
Factory-Furnished Valve Packages

Valve packages provided by the factory ensure proper fit, operation and performance. Factory supplied actuators are shipped with quick connects to allow fast and accurate connection.

Optional factory installed piping packages arrive at the job site installed, tested and ready for startup.



RBV Series: RBVC / RBVS / RBVR ACCESSIBILITY FEATURES



End Pockets

The 7.5" end pockets allow for accessibility and service of optional factory piping packages and controls. End panels are removable to allow for even greater access.



Coils

All fan coils are available in 2 or 4 pipe configurations. The heating coil is standard in the reheat position. Heating and cooling coils are available with the same or opposite end connections. Access for cleaning on the entering air side is available when the drain pan is removed. Coils are removable for service.



Fan Deck

The fan/drain pan assembly is easily removable for service access to motors and blowers at, or away from, the unit from the front.

Drain Pan

The sloped insulated primary drain pan is available in stainless steel construction. Standard drain pan is externally insulated, single wall galvanized steel. The RBV Series fan/drain pan assembly is easily removable for cleaning.



Filter

The filter is easily replaceable through the return air toe space without requiring removal of the front panel.

Powder Coated Painted Surface

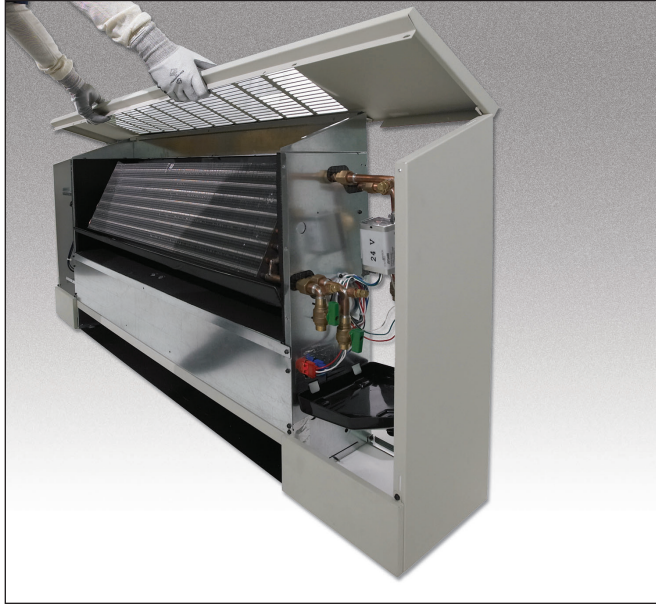
Exposed cabinet Models RBVC and RBVS, as well as supply and return air grilles and the RBVR wall recessing panel, feature a powder coat finish that resists scuffing, scratching, fading, and fingerprints.



RBV Series:

RBVC / RBVS / RBVR CONSTRUCTION FEATURES

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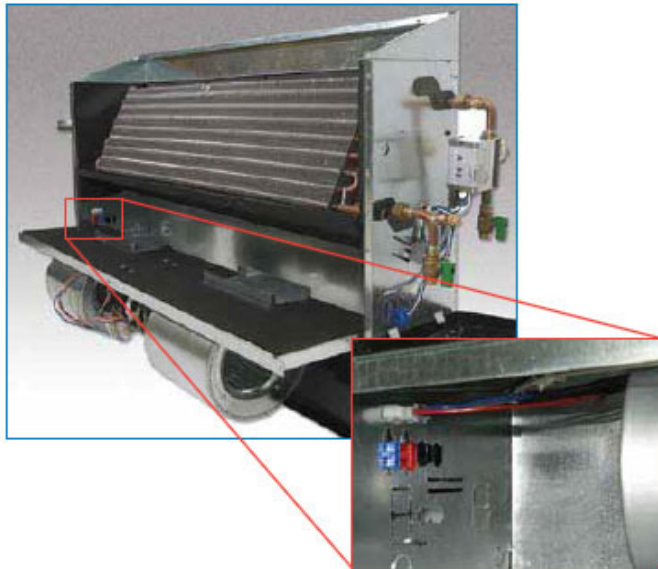
Lid Removal

Top panel is removable from fan coil without the need to disconnect piping or electrical wires.



Control Enclosure

The RBV control enclosure provides adequate space for the unit controller and fan coil relay. The fan coil relay is designed to limit diagnostic problems, while allowing for multi-voltage fan power input. The board is designed for factory installed, color coded, plug and play connections designed to ensure accurate wiring.



Fan Deck Removal

RBV units allow for a single technician to service the fan/motor by keeping the fan deck to less than 44". Motors are supplied with quick connectors to allow electric service without the need for tools.

RBV Series:

PIPING PACKAGES FACTORY INSTALLED RETROFITTING MADE EASY

Factory installed piping packages come equipped with components specific to the project. Actuators ship with color coded plug and play connections for quick, accurate installations.

Factory installed valve packs can ship factory installed on the unit reducing job site labor and project time.

Factory installed valve packs ship wired, and tested.

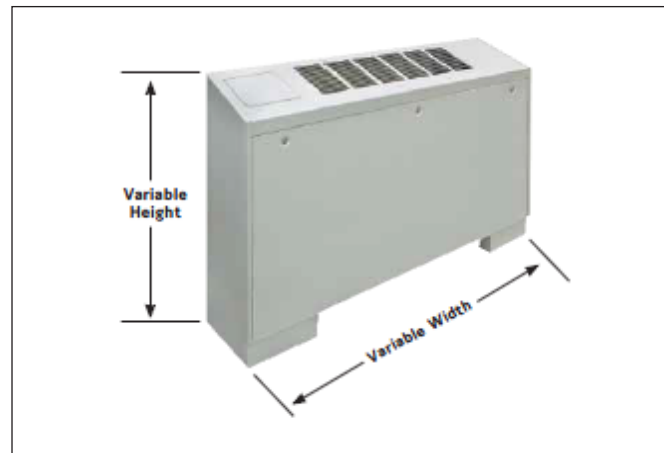
Valve packs come standard with unions and manual ball valves which can be used to separate the coil from the water loop allowing the coil to be serviced or replaced without the need to cut or braze the piping



Parametrically Designed Cabinets

RBVC (Exposed) and RBVS (Sloped) are designed to accommodate existing architectural features. Parametric cabinets permit extending the cabinet heights and widths in 1" increments up to 12", such as when additional height is needed to reach a window sill without the use of a sub-base. Thanks to parametric cabinet design, unattractive sub-bases are no longer required.

Parametric designed cabinet will enable the extension of end pockets. Parametric cabinets give designers a greater degree of flexibility.

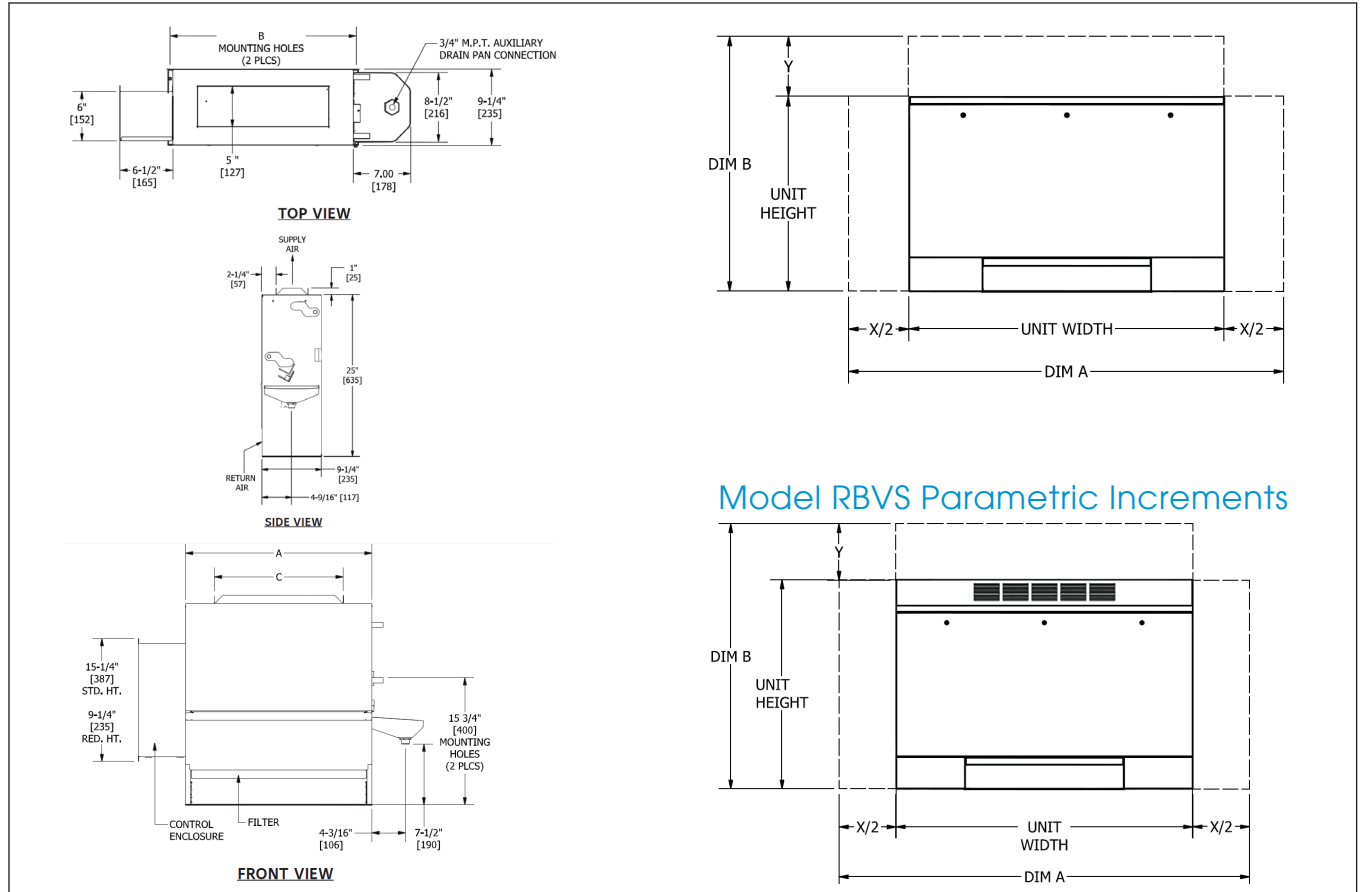


RBV Series:

CONCEALED, EXPOSED OR PARAMETIC CABINET OPTIONS

Model RBVR Concealed Dimensional Data Model RBVC Parametric Increments

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Unit Size	Dimensions		
	A	B	C
02	23 ³ / ₁₆ " [589]	22 ³ / ₄ " [578]	16" [406]
03	27 ⁷ / ₁₆ " [691]	26 ³ / ₄ " [679]	20" [508]
04	33 ³ / ₁₆ " [843]	32 ³ / ₄ " [832]	26" [660]
06	43 ³ / ₁₆ " [1097]	42 ³ / ₄ " [1086]	36" [914]
08	45 ³ / ₁₆ " [1148]	44 ³ / ₄ " [1137]	38" [965]
10	59 ³ / ₁₆ " [1503]	58 ³ / ₄ " [1492]	52" [1320]
12	67 ³ / ₁₆ " [1707]	66 ³ / ₄ " [1695]	60" [1524]

RBVC & RBVS	Dimensions A (inches)												
	Size	X=0	X=1	X=2	X=3	X=4	X=5	X=6	X=7	X=8	X=9	X=10	X=11
02	40	-	42	43	44	45	46	47	48	49	50	51	52
03	44	-	46	47	48	49	50	51	52	53	54	55	56
04	50	-	52	53	54	55	56	57	58	59	60	61	62
06	60	-	62	63	64	65	66	67	68	69	70	71	72
08	62	-	64	65	66	67	68	69	70	71	72	73	74
10	76	-	78	79	80	81	82	83	84	85	86	87	88
12	84	-	86	87	88	89	90	91	92	93	94	N/A	N/A

RBVC	Dimensions B													
	All Sizes	Y=0	Y=1	Y=2	Y=3	Y=4	Y=5	Y=6	Y=7	Y=8	Y=9	Y=10	Y=11	Y=12
		25 1/4	-	27 1/4	28 1/4	29 1/4	30 1/4	31 1/4	32 1/4	33 1/4	34 1/4	35 1/4	36 1/4	37 1/4

Notes:

- All dimensions are inches [mm] and are +/- 1/4" [6mm]. Metric values are soft conversions.
- Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
- Right-hand unit shown, left-hand unit similar, but opposite
- Auxiliary drain pan ships loose for field installation
- Standard RBVC and RBVS cabinet finish is "British White"

RBVC & RBVS	Dimensions A (millimeters)												
	Size	X=0	X=25	X=51	X=76	X=102	X=127	X=152	X=178	X=203	X=229	X=254	X=279
02	1016	-	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028
03	1118	-	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130
04	1270	-	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282
06	1524	-	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536
08	1575	-	1577	1578	1579	1580	1581	1582	1583	1584	1585	1586	1587
10	1930	-	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
12	2134	-	2136	2137	2138	2139	2140	2141	2142	2143	2144	N/A	N/A

RBVC	Dimensions B (millimeters)													
	All Sizes	Y=0	Y=1	Y=2	Y=3	Y=4	Y=5	Y=6	Y=7	Y=8	Y=9	Y=10	Y=11	Y=12
		641	-	692	718	743	768	794	819	845	870	895	921	946

Notes: Internal chassis and air openings remain the same. External cabinet can increase in height and width in 1" (25.4mm) increments up to 12" (305mm).

Note: All data and dimensions are subject to change without notice.

Contact your Superior Rex representative for current submittal drawings and other unit arrangements, including Model RBVS Sloped Top.

RBV Series: FAN COIL UNIT FEATURES

Standard Features:

Construction

All Units

- » AHRI Standard 440-certified and labeled
- » Galvanized-steel construction
- » Insulation, RBV: elastomeric closed cell foam
- » Integral filter rack with 1" throwaway filter

Concealed Units

- » Top supply with duct collar

Exposed Units

- » Top stamped louver supply grille
- » Durable powder coat paint
- » End pockets with removable panels
- » 18 gauge exterior panel construction
- » Flat top
- » Sloped top

Coils

- » Cooling: 3 or 4-row chilled water or DX, heat-pump compatible
- » Heating: 1 or 2-row hot water - reheat or preheat position
- » 6 total rows of cooling and heating coils maximum
- » ½" O.D. seamless copper tubes
- » 0.016" tube wall thickness
- » High-efficiency, aluminum fin surface for optimizing heat transfer, pressure drop and carryover
- » Left-hand or right-hand, same or opposite end connections
- » Access to entering and leaving air sides for cleaning
- » Removable for service
- » Manual air vents

Drain Pans

- » Single-wall, galvanized-steel, externally insulated
- » Positively sloped to drain connection
- » ¾" M.P.T. auxiliary drain pan connection
- » Double wall plastic auxiliary drip pan

Fan Assemblies

- » Forward-curved, DWDI, centrifugal type
- » 115-volt, single-phase, three speed PSC motors
- » Quick disconnect motor connections
- » Removable for service

Electrical

- » cETL-Listed for safety compliance
- » Electrical junction box for field wiring terminations
- » Terminal block for field connections

Electrical Heat

- » Finned tubular element on all floor mounted units protects against electrical shock
- » ETL-Listed as an assembly for safety compliance
- » Integral electric heat assembly with removable elements for easy service
- » Automatic reset primary and back-up secondary thermal limits
- » Single point power connection

Optional Features:

Construction

All Units

- » Manual and motorized outside air dampers
- » Spare 1" throwaway filters
- » 1" pleated filters (MERV 8)
- » Wall boxes
- » Leveling legs

Concealed Units

- » Wall recessing panels

Exposed Units

- » Linear bar discharge grille, powder coated
- » 16 gauge front panel
- » Return air louver grille
- » 2" - 8" falsebacks
- » Extended end pockets
- » Tamper proof fasteners

Coils

- » Automatic air vents
- » Stainless steel coil casings

Drain Pans

- » Stainless steel construction with external insulation
- » Double wall plastic auxiliary drain pan -- extended length
- » Stainless steel auxiliary drain pan -- extended length

Fan Assemblies

- » 208-230 & 277 volt, 60 Hz and 220 volt, 50 Hz motors
- » 115, 208-230 & 277 volt ECM motor

RBV Series: FAN COIL UNIT FEATURES

Electrical

- » SCR fan speed controller (High Speed Only)
- » Fan relay packages
- » Silent solid state fan relays
- » Toggle disconnect switch
- » Condensate overflow switch (auxiliary drain pan)
- » Main fusing
- » Unit and remote mounted three speed fan switches

Electric Heat

- » Door interlocking disconnect switches
- » Main fusing
- » Silent relay/contactors

Piping Packages

- » Factory-assembled - shipped loose for field installation
- » ½" and ¾", 2-way and 3-way, normally closed, two-position electric motorized valves
- » Isolation ball valves with memory stop
- » 4-pipe with 3-way valve
- » Fixed and adjustable-flow control devices
- » Unions and P/T ports
- » Modulating control valves
- » High-pressure, close-off actuators (½" = 50 PSIG; ¾" = 25 PSIG)

Thermostats

- » Analog, digital display, or programmable
- » Unit and remote mounted, with integral three-speed, fan switch
- » 2-pipe and 4-pipe control sequences
- » Automatic and manual changeover



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RBV Series: NOTES



RBV Series:

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