



50R-1SB

**50RHR/50RVR/50RDR
HORIZONTAL, VERTICAL
AND DOWNFLOW
WATER SOURCE HEAT PUMPS**

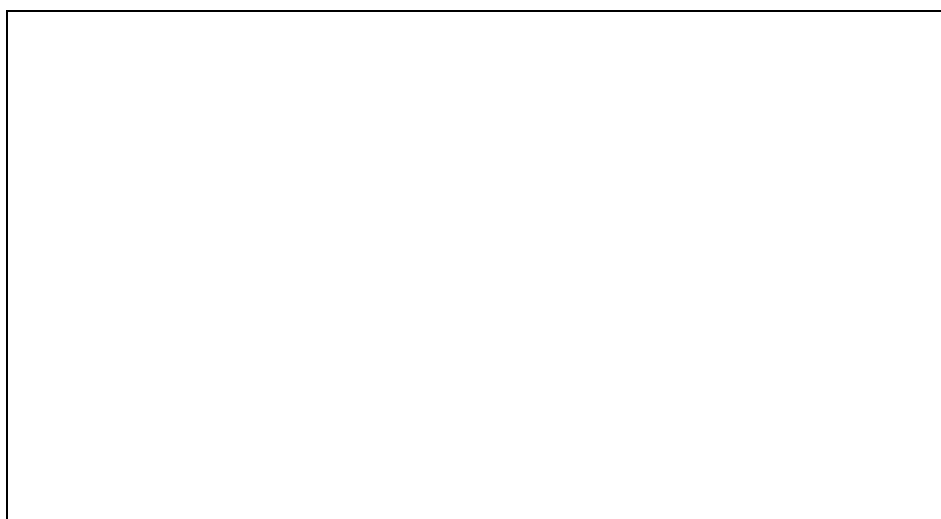


HORIZONTAL — $1\frac{1}{2}$ to 5 NOMINAL TONS

VERTICAL — $\frac{3}{4}$ to 5 NOMINAL TONS

DOWNFLOW — $1\frac{1}{4}$ to 5 NOMINAL TONS

- PERFORMANCE DATA**
- CERTIFIED DIMENSION PRINTS**



Date:	Supersedes:	50RHR/50RVR/50RDR WATER SOURCE HEAT PUMPS	50RHR 50RVR 50RDR	Rev:
JOB NAME:		LOCATION:		
BUYER:		BUYER P.O. #	CARRIER #	
UNIT NUMBER:		MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:				DATE:

DESCRIPTION

The 50RHR, RVR, and RDR Water Source Heat Pumps are single package units that are offered in horizontal, vertical, and down-flow heat pumps with electronic unit controls for commercial applications. Units are factory wired, piped, charged and tested, ready for installation. The horizontal units (50RHR) have field convertible discharge air to 5 tons (side return/side discharge to side return/back discharge) and is also offered in a 1/2 ton size.

STANDARD FEATURES

Standard safety features include: high-pressure switch, freeze protection switches, and loss-of-charge protection.

Each unit is run tested at the factory to ensure proper operation of all components and safety switches.

Anti-short cycle timer provides a minimum of off-time to prevent unit from short cycling.

Fan motors and compressors are sound isolated.

Sealed refrigerant circuit including a water-to-refrigerant heat exchanger has copper inner and steel outer tubing to provide corrosion resistance protection.

Units are offered in 11 horizontal sizes in 5 foot prints, 10 vertical and 8 down-flow sizes in 5 footprints.

Units are ARI (Air Conditioning & Refrigeration Institute) Standard 320-93 certified.

Filter racks permit easy filter replacement.

Convenient large service access panels can be used for on-site testing or refrigerant recovery.

The standard CXM electronic controls provide short cycle protection, random start, remote alarm, and intelligent reset. Self-diagnostic capability includes fault-type indication and memory.

An optional DXM electronic controller offers advanced system control capabilities such as night setback and emergency shutdown.

PERFORMANCE DATA

UNIT

Operating Weight _____ lbs

Shipping Weight _____ lbs

COOLING

Total Capacity _____ Btuh

Sensible Capacity _____ Btuh

Unit CFM _____ at _____ in. wg ESP

Total Heat of Rejection _____ Btuh

Entering Air Temperature _____ °F db _____ °F wb

Entering Water Temperature _____ °F

Leaving Water Temperature _____ °F

GPM _____

Water Pressure Drop _____ ft

Unit Power Input _____ kW

EER (ARI) _____

HEATING

Total Capacity _____ Btuh

Unit CFM _____ at _____ in. wg ESP

Total Heat of Absorption _____ Btuh

Entering Air Temperature _____ °F

Entering Water Temperature _____ °F

Leaving Water Temperature _____ °F

GPM _____

Water Pressure Drop _____ ft

Unit Power Input _____

COP (ARI) _____

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hertz

Compressor RLA _____

Fan FLA _____

Unit Minimum Circuit Amps _____

Maximum Fuse Amps _____

FACTORY-INSTALLED OPTIONS

☐ Cupronickel heat exchangers

☐ High water temperature switch

☐ Sound attenuation package (Mute Package)

☐ Enhanced DXM Control system

☐ Hot water generators

☐ CCN compatible controls

☐ Insulated water circuit for low temperature applications

FIELD-INSTALLED ACCESSORIES

☐ Hose Kit (Stainless steel or galvanized)

☐ Ball Valves (with and without PT [pressure/temperature] ports)

☐ Y Strainers (with plugs and blow down valves)

☐ Solenoid Valves

☐ Thermostats

☐ Loop Controllers

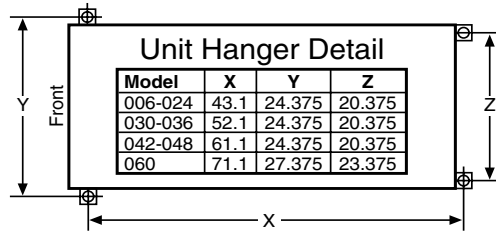
☐ Two-in. Filter Racks

CERTIFIED DIMENSION PRINT

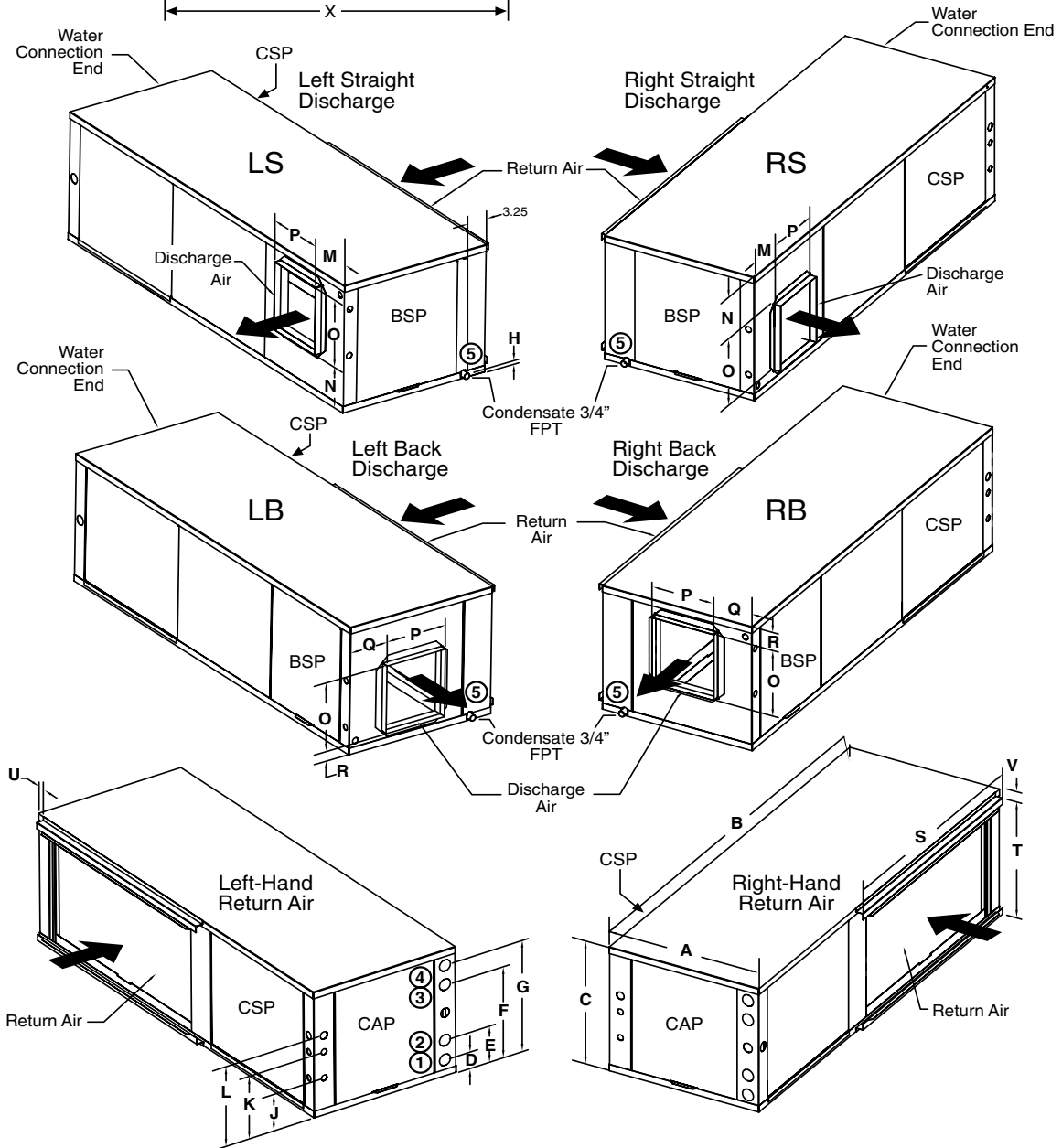
HORIZONTAL DIMENSIONAL DATA

50RHR HORIZ MODEL		OVERALL CABINET			WATER CONNECTIONS*							ELECTRICAL KNOCKOUTS			DISCHARGE CONNECTIONS						RETURN CONNECTION			
		A Width	B Depth	C Height	1 D In	2 E Out	3 F HWG In	4 G HWG Out	5 H Condensate	Loop Water FPT	HWG FPT	J Low Voltage	K	L Power Supply	M	N	O Supply Width	P Supply Depth	Q	R	S Return Depth	T Return Height	U	V
006-012	IN.	22.4	43.1	11.3	2.4	5.4	N/A	N/A	0.6	0.5	0.5	3.5	5.5	8.0	5.8	4.0	5.8	8.0	5.8	1.5	20.0	8.0	1.0	1.0
015-024	IN.	22.4	43.1	17.3	2.4	5.4	11.9	14.9	0.6	0.75	0.5	3.5	7.5	10.0	5.0	5.4	10.4	9.4	5.0	1.5	20.0	14.0	1.0	1.0
030	IN.	22.4	52.1	19.3	2.4	5.4	13.9	16.9	0.6	0.75	0.5	6.0	9.5	12.0	5.0	6.8	10.4	9.4	5.0	2.1	22.1	17.0	2.5	1.0
036	IN.	22.4	52.1	19.3	2.4	5.4	13.9	16.9	0.6	0.75	0.5	6.0	9.5	12.0	2.9	3.8	13.5	13.1	2.9	1.9	22.1	17.0	2.5	1.0
042-048	IN.	22.4	61.1	19.3	2.4	5.4	13.9	16.9	0.6	1.0	0.5	6.0	9.5	12.0	2.9	3.8	13.5	13.1	2.9	1.9	31.1	17.0	3.5	1.0
060	IN.	25.4	71.1	21.3	2.4	5.4	15.9	18.9	0.6	1.0	0.5	8.0	11.5	14.0	5.8	5.0	13.5	13.1	5.8	2.9	36.1	19.0	2.5	1.0

NOTE: *Water connections for HWG (Hot Water Generator) circuit are 1/2 in. FPT.



LEGEND
 BSP — Blower Service Panel
 CAP. — Control Access Panel
 CSP — Compressor Service Panel



CUT ALONG DOTTED LINE

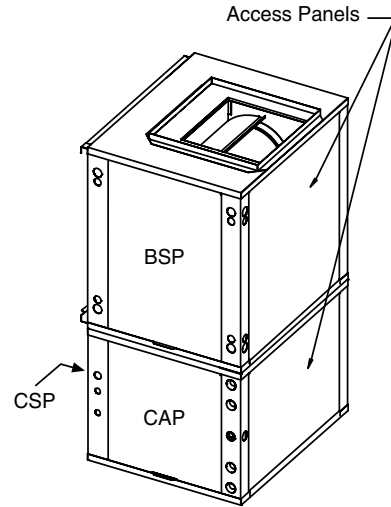
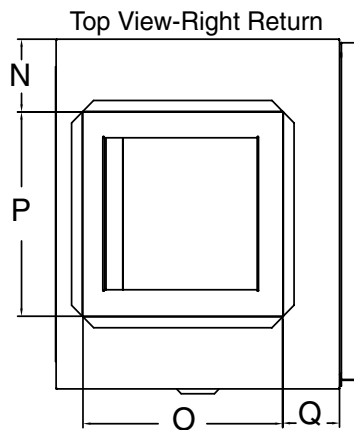
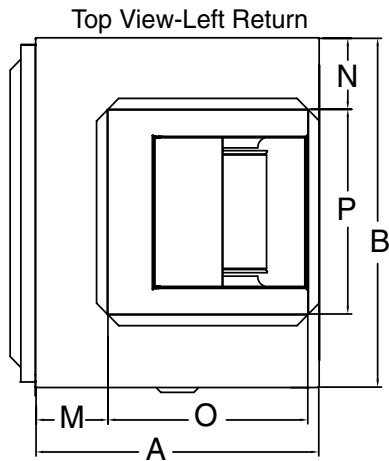
CUT ALONG DOTTED LINE

CERTIFIED DIMENSION PRINT

VERTICAL DIMENSIONAL DATA

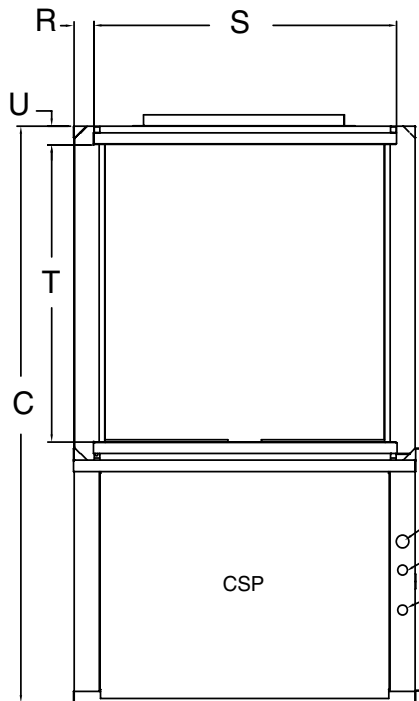
50RVR VERT MODEL	OVERALL CABINET			WATER CONNECTIONS*								ELECTRICAL KNOCKOUTS			DISCHARGE CONNECTIONS						RETURN CONNECTION		
	A Width	B Depth	C Height	1	2	3	4	5	Loop Water FPT	HWG FPT	J Low Voltage	K	L Power Supply	M	N	O Supply Width	P Supply Depth	Q	R	S Return Depth	T Return Height	U	
				D In	E Out	F HWG In	G HWG Out	H Cond- ensate															
009-012	IN.	22.4	21.6	22.6	2.4	5.4	N/A	N/A	7.8	0.5	0.5	3.5	5.5	8.0	10.6	6.8	5.8	8.0	6.0	0.8	20.0	8.0	1.6
015-024	IN.	22.4	21.6	34.6	2.4	4.8	11.9	14.9	8.5	0.75	0.5	3.5	7.5	10.0	7.2	3.8	14.0	14.0	4.3	0.8	20.0	14.0	1.6
030	IN.	22.4	25.6	40.4	2.4	5.4	13.9	16.9	9.8	0.75	0.5	6.0	9.5	12.0	7.2	5.8	14.0	14.0	4.3	1.8	22.3	18.2	1.6
036	IN.	22.4	25.6	40.4	2.4	5.4	13.9	16.9	9.8	0.75	0.5	6.0	9.5	12.0	7.2	5.8	14.0	14.0	4.3	1.8	22.3	18.2	1.6
042-048	IN.	22.4	25.6	48.4	2.4	5.4	13.9	16.9	9.8	1.0	0.5	6.0	9.5	12.0	7.2	5.8	14.0	14.0	4.3	1.8	22.3	26.2	1.6
060	IN.	25.4	30.6	50.4	2.4	5.4	15.9	18.9	10.8	1.0	0.5	8.0	11.5	14.0	6.2	6.3	18.0	18.0	5.1	1.5	27.8	26.2	1.5

NOTE: *Water connections for HWG (Hot Water Generator) circuit are 1/2 in. FPT.



Isometric View

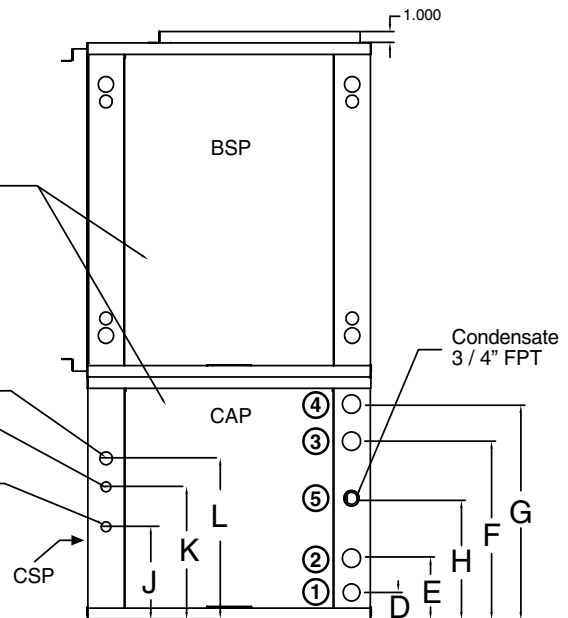
Left View-Filter Rack Dim.



LEGEND
 BSP — Blower Service Panel
 CAP. — Control Access Panel
 CSP — Compressor Service Panel

Access Panels

Power Supply
 3 / 4" HV Knockout
 3 / 4" Knockout
 Low Voltage
 1 / 2" LV Knockout

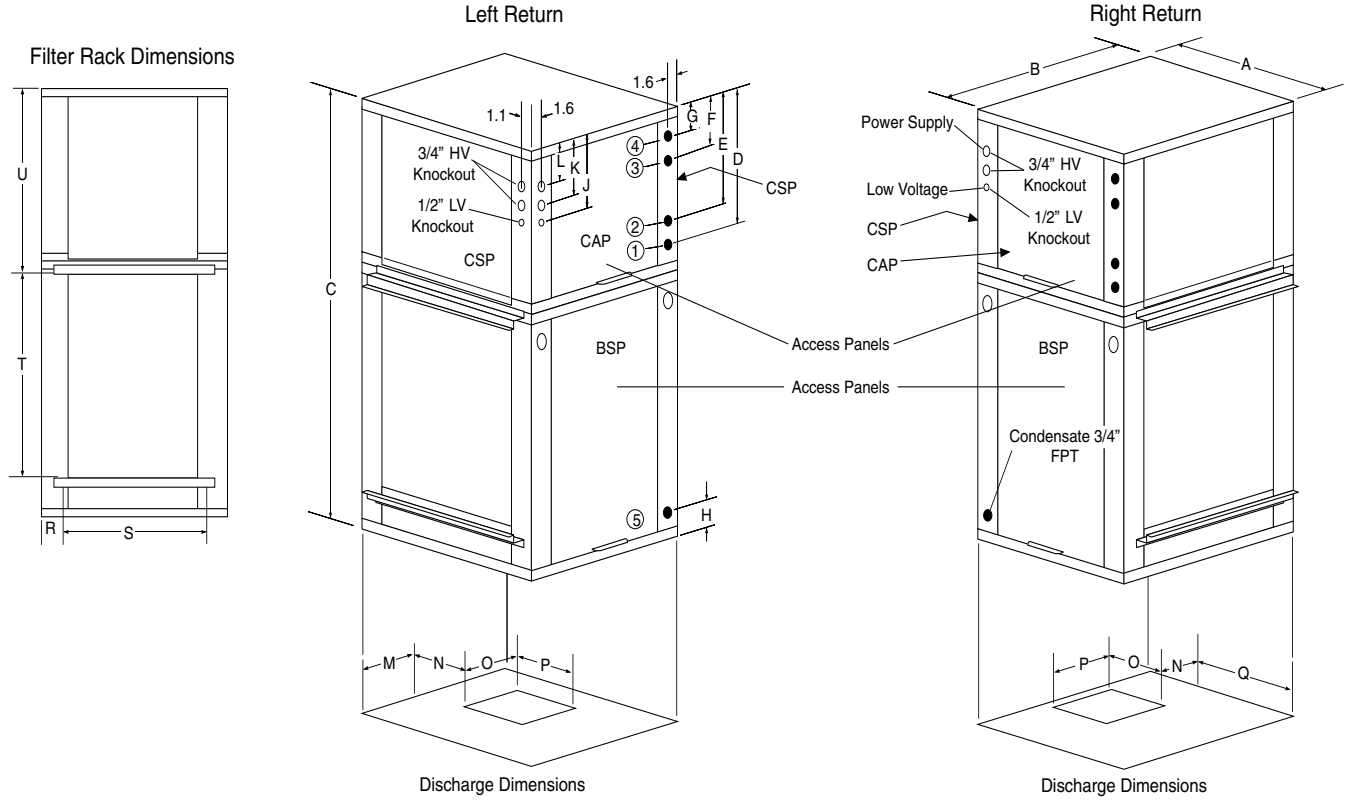


Front-View

Notes:
 Filter rack extends out from cabinet 2.75"

CERTIFIED DIMENSION PRINT

DOWNFLOW DIMENSIONAL DATA



LEGEND

- BSP — Blower Service Panel
- CAP. — Control Access Panel
- CSP — Compressor Service Panel

50RDR DOWNFLOW MODEL		OVERALL CABINET			WATER CONNECTIONS							ELECT. KNOCKOUTS		
		A Width	B Depth	C Height	1 D In	2 E Out	3 F HWG In	4 G HWG Out	5 H Condensate	Loop Water FPT	HWG FPT	J Low Voltage	K	L Power Supply
015-024	in.	22.4	21.6	38.6	15.0	12.5	4.8	2.4	3.6	0.75	0.5	13.7	9.7	7.2
030	in.	22.4	25.6	44.4	17.0	14.0	5.4	2.4	3.6	0.75	0.5	13.7	9.7	7.2
036	in.	22.4	25.6	44.4	17.0	14.0	5.4	2.4	3.6	0.75	0.5	13.7	9.7	7.2
042-048	in.	22.4	25.6	52.4	17.0	14.0	5.4	2.4	3.6	1.0	0.5	13.7	9.7	7.2
060	in.	25.4	30.6	54.4	19.0	16.0	5.4	2.4	3.6	1.0	0.5	13.7	9.7	7.2

50RDR DOWNFLOW MODEL		DISCHARGE CONNECTION					RETURN CONNECTION			
		M	N	O Supply Width	P Supply Depth	Q	R	S Return Depth	T Return Height	U
015-024	in.	6.1	6.1	10.4	9.4	10.9	0.8	20.0	14.0	18.8
030	in.	6.1	8.2	10.4	9.4	10.9	1.8	22.3	18.2	21.1
036	in.	4.4	6.2	11.3	13.3	10.0	1.8	22.3	18.2	21.1
042-048	in.	4.4	6.2	11.3	13.3	10.0	1.8	22.3	26.2	21.1
060	in.	7.4	8.6	13.6	13.3	10.5	1.5	27.8	26.2	23.1

