



The Q-TEC Series self contained packaged water-to-air heat pump is designed to be installed inside a building structure against an exterior exposed wall when ventilation option is selected. When no ventilation option is used, the QWS Series units can be installed in any interior space accessible to water supply system and condensate drain.

Q-TEC's "quiet technology" provides extremely low indoor sound levels by using special components and materials in the construction of the unit. By using special motors and sound insulation we have built a heat pump system that is significantly quieter than competitive product available today.

The Q-TEC Series unique design allows all maintenance and service to be performed inside the building to facilitate multi-story installations. Access to air filters and controls is accomplished through a hinged front panel for easy accessibility. All Q-TEC Series models are built on heavy duty permanent rollers for easy installation and removal.

Step Capacity Compressor:

Reduced Sound Level:

R-410A Refrigerant:

Liquid Line Filter Drier:

Standard on all models.

Phase Rotation Monitor:

Indoor Blower System:

All models feature a variable speed (ECM) motor providing super high efficiency, low sound levels and soft start capabilities. The motor is self adjusting to provide the proper airflow rate at high static pressure for ducted installations without user adjustment or wiring changes. Dual blower and 30-second ramp up and ramp-down on motor used for quiet operation.

High Efficiency Coaxial Water Coil:

Fully insulated to minimize sweating. Copper or cupro-nickel coils available. Copper coils approved for Ground Loop and Closed Loop Boiler / Tower only.

Fluid Flow Switch:

Provided for coaxial coil to protect against loss of water flow.

Double O-Ring Water Connections (Optional):

Positive water-tight connections with built-in union. 1" female NPT fittings also available.

Pumping System:

Unit can be connected to central piping/pumping system from well field, boiler/tower or optional pump module can be installed inside unit for individual earth loop applications.

Copper Tube/Aluminum Fin Evaporator Coil:

Grooved copper tubing and enhanced aluminum fins provide maximum heat transfer and high energy efficiency. Evaporator coil constructed with hydrophilic fin stock that seals fin surface against aluminum oxide formation, is resistant to mold and mildew growth (tested to ASTM D3273, no growth) and reduces beading of condensate on the fin surface.

Cabinet:

Constructed of 20 gauge pre-painted or vinyl laminated galvanized steel. Choice of either two tone vinyl finish with "slate" front panels and "platinum" cabinet for designer appearance, or painted steel. Vinyl finish is very resistant to scratching and marring and is very easy to clean. Tamper resistant fasteners are provided for access panels. Unit includes built-in rollers for easy installation into wall sleeve and removal for service if necessary. Hinged, lockable front panel for filter service and access to primary functional electrical controls.

Insulation:

Cabinet is fully insulated with foil covered, high density fiberglass insulation with sealed edge treatment and special sound deadening insulation in the compressor section. All insulation is designed to resist mold and mildew growth and facilitate ease of cleaning.



Are easily accessible for routine inspection and maintenance through front service panels. Circuit breaker standard on all 208/230V models and rotary disconnect standard on all 460V models. Circuit breaker/rotary disconnect access is through lockable access panel. Lock and key provided as standard equipment.

Hot Water Coil:

A plenum mounted hot water coil is available for both duct-free and ducted applications.

Air Filter:

Two-inch pleated MERV 8 filter is standard.

Compressor Control Module:

Built-in off-delay timer adjustable from 30 seconds to 5 minutes. Two-minute on-delay if power interrupt. 120-second bypass for low pressure control, and both soft and manual lockouts for high and low pressure controls.

High Pressure Switch:

High Pressure Switch:
Protects refrigerant circuit against excessively high pressure.

Low Pressure Switch:

Provides loss of charge protection plus protects against freeze-up of coaxial coil during heating mode due to water flow or temperature problems. Two switches are installed, and the factory wired switch is for fresh water applications.

Diagnostic Light:

System service - indicates high or low pressure switch operation for compressor protection. Located inside control panel.

Stainless Steel Drain Pan:

Stainless Steel Drain Pan:
Provides extended life of the evaporator drain pan for maximum corrosion resistance.

Side Trim Piece Extension – Optional:

Trim kits available for covering the space between unit and wall for spaces from 4" to 12".

Optional Ventilation Packages:

Optional energy recovery ventilator can provide up to 450 cfm of outside air and exhaust through the unit while maintaining indoor comfort and humidity levels. Other available options include commercial room ventilator with exhaust, and barometric damper without exhaust. Outside wall and ventilation sleeve are required for installations with ventilation option.

Optional Ventilation Wall Sleeve:

Required for ventilation options only. Constructed of 16 gauge galvanized steel, coated with epoxy primer and a baked on polyester enamel paint, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03. Ordered separately.

Flow Centers & Individual Pumps w/Double O-Ring Connections (See Pump Ratings Below)

Pump Option	Pump Model	No. of Pumps	Description	Installation Method
1	DORFC-1	1	Loop Flow Center w/Insulated Cabinet, 230V-60Hz-1Ph, Double O-ring Fittings, UP26-99F Pump, Brass Isolation & Flush Valves Built-In	Can be factory or field installed
2	DORFC-2	2	Loop Flow Center w/Insulated Cabinet, 230V-60Hz-1Ph, Double O-ring Fittings, UP26-99F Pump, Brass Isolation & Flush Valves Built-In	
3	UPS15-42F	1	Pump with Isolation Valves, 230V-60Hz-1Ph, Piped to Rear of Cabinet, Double O-ring Connections	Factory installed only
4	UP26-64F	1	Pump with Isolation Valves, 230V-60Hz-1Ph, Piped to Rear of Cabinet, Double O-ring Connections	
5	UPS26-99FC	1	Pump with Isolation Valves, 230V-60Hz-1Ph, Piped to Rear of Cabinet, Double O-ring Connections	



DORFC-2



UPS26

Flow Center and Individual Pump Accessories

Bard Part Number	Required Quantity	Description	Used With
QWRK	1	Consists of control relay, two 3A circuit breakers, all wiring and all installation parts	Included with factory installed DORFC Flow Centers and UPS Pumps. Order only if field installing any flow center or pump.
QWHK	1	Consists of two 1" x 33" 200 PSIG hoses with SS braided sheathing and fitted with straight double o-ring fittings one end and 90° elbow double o-ring fittings with P/T ports installed on opposite end.	Included with units for factory installed DORFC's. Order only if field installing DORFC.

① This is factory installed if flow center or pump is factory installed.

Loop Pump Modules and Individual Pump Capacities ① ②

For Use with QWS Models ③	Pump Option	Pump Model	No. of Pumps	No. of Speeds	Speed	WATER FLOW in GPM											
						5	6	7	8	9	10	11	12	13	14	15	16
ALL	1	DORFC-1	1	1	Single	29.5	29	28.5	28	27.5	26.5	25.5	24.5	23	22.5	22	21
ALL	2	DORFC-2	2	1	Single	59	58	57	56	55	53	51	49	46	45	44	42
QW2 - 3S	3	UPS15-42F	1	3	High	12.1	11.5	10.7	9.7	8.8	8	—	—	—	—	—	—
					Medium	6.8	5.7	4.5	—	—	—	—	—	—	—	—	—
					Low	—	—	—	—	—	—	—	—	—	—	—	—
QW2 - 3S	4	UP26-64F	1	1	Single	21.5	21	20	19	18	17	16.5	16	15	14	13	12.5
QW3 - 5S	5	UPS26-99FC	1	3	High	29.5	29	28.5	28	27.5	26.5	25.5	24.5	23	22.5	22	21
					Medium	23.5	22.2	21.5	20.3	19.5	18.5	17.8	16.5	15.3	14.3	13.3	12.4
					Low	15.3	13.8	12.4	10.9	9.8	8.4	—	—	—	—	—	—

① Pump output shown in feet head @ GPM at top of columns.

② Refer to Water Coil Pressure Drop table (Page 8) for feet head allowances for basic QW*S complete system. Additional feet head allowance from basic unit to main piping loop must be included and determined by others.

③ Pump options shown can be factory installed in models as shown. Suitability of each must be determined by others based on QWS requirements, plus the loop design requirements designed by others.

Ground Loop Service Accessories for Installations with DORFC Flow Centers

Heat Pump Model	Bard Part Number	Required Quantity	Description
	DORCL1-90	Each	(2) 90° double o-ring quick-connect cam-lever male fittings for flush attachment to loop flow center
	CLB1-S	Each	(2) 1" straight barbed quick-connect cam-lever female fittings to connect to DORCL1-90 fittings above
	GGK-1	Each	(1) Geo-Gooser w/shut-off valve, 0-100 PSI gauge, garden hose connection, P/T fitting 1/8" probe
	DORGHMT	Each	(2) Double o-ring x male garden hose adapter fitting for loop flow center (to burp/boost loop)



**1" Cam Lever Male X Double O-ring
DORCL1-90**



CLB1-S



**Garden Hose Male X O-ring
(single) Adapter
DORGHMT**



GGK-1