

# RAQ Series *(with installed pump)*

Wall Recessed or Closet

Vertical Air Handler

**DX Cooling / Hot Water Heating**

**1-1/2 through 3 tons, up to 70,700 BTUH Heating**



## Description :

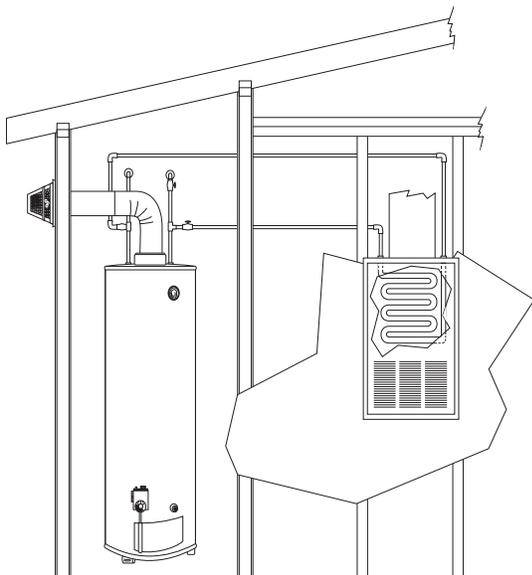
The RAQ series "Aqua Therm" air handler completely eliminates the need for an expensive "equipment closet" by simply recessing into a wall. This product can save over \$200 per unit on installation costs.

Each air handler includes a cooling coil, a separate hot water coil, circulating pump, air purge valve, anti-thermosiphon check valve, flue gas door switch, 120V blower motor, throw away filter, and 24V transformer.

**No special water heater is required!** Contact the factory for assistance in sizing.

When space heating is needed, the wall thermostat energizes the circulating pump which circulates hot water (135-140°F) from the water heater to the hot water coil in the air handler. As the fan motor forces cool return air from the home over the hot water coil, the air absorbs heat from the hot water. This warm air (105-110°F) is then circulated throughout the duct system and into the home. The water leaving the hot water coil is then returned to the water heater to be reheated.

## NEW FEATURE! EASY ACCESS CHECK VALVE

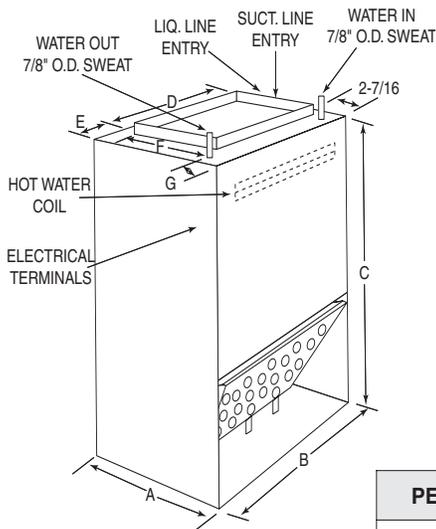


## FEATURES:

(unit shown with wall panel)

1. Built-in **circulating pump, air purge valve**, and anti-thermosiphon **check valve**
2. **Piston-type** metering device on cooling coil
3. Flue gas **door switch** - This will not allow the blower motor to operate without the service door in place. Therefore products of combustion from the water heater flue cannot be delivered through the duct system and into the living space
4. **Copper tube, aluminum fin** heating and cooling coils
5. Compatible with all properly sized gas or oil-fired **water heaters**
6. Compatible with most major brands of **split condensing units**
7. Factory installed **filter**
8. Attractive "Picture Frame" type access panel with baked-on **white finish**
9. Primary and secondary cooling coil **drain connections**
10. Optional **freeze protector** for hot water coil is Part No. **941-1** (brings pump on below 38°F)

# RAQ Series DX COOLING HOT WATER HEATING



PHYSICAL DIMENSIONS										
UNIT MODEL	A	B	C	D	E	F	G	FILTER SIZE	LIQUID LINE	SUCTION LINE
18, 24RAQ	16-1/8	20-1/8	39-1/4	16	1-13/16	11	4-3/16	16 X 20 X 1	3/8" O.D.	5/8" O.D.
19, 25RAQ	18-1/8	22-1/8	41-5/8	16	1-9/16	11	6-3/16	20 X 20 X 1		
30, 31, 36 RAQ	21-1/8	24-1/8	44-1/4	20	1-9/16	16	4-3/16	20 X 24 X 1		
37RAQ	21-1/8	24-1/8	48-1/4	20	1-9/16	16	4-3/16	20 X 24 X 1		

ELECTRICAL DATA					
UNIT MODEL	MOTOR HP (120V)	AMPS		MIN. CIR. AMPACITY	MAX. HACR BREAKER
		MOTOR	PUMP		
18RAQ	1/5	2.8	0.57	5	15
19RAQ	1/5	2.8	0.57	5	15
24RAQ	1/3	6.5	0.57	9	15
25RAQ	1/5	5.1	0.57	6	15
30, 31RAQ	1/3	6.5	0.57	9	15
36, 37RAQ	1/2	8.5	0.57	11	15



PERFORMANCE DATA							BLOWER DATA					
UNIT MODEL	NOMINAL COOLING BTUH	GPM (HEATING)	P.D. (FT. WATER) (COIL ONLY)	(2,3) BTUH (1000) AT ENTERING WATER TEMPERATURE			CFM vs. EXTERNAL STATIC PRESSURE					
				120°F	140°F	180°F (1)	0.05	0.10	0.15	0.20	0.25	0.30
				18RAQ-2	18,000	3	1.7	14.4	20.2	31.7	710	690
18RAQ-3	0.9	18.6	26.0	40.9								
19RAQ-3	0.9	18.6	26.0	40.9								
24RAQ-2	18,000/24,000	3	1.7	16.9	23.6	37.1	890	860	840	820	790	760
24RAQ-3			0.9	20.7	29.0	45.6						
25RAQ-3			0.9	20.7	29.0	45.6						
30RAQ-3	24,000/30,000	1.25	30.7	43.0	67.6	1260	1240	1210	1180	1140	1100	
31RAQ-3	30,000		32.1	45.0	70.7	1400	1370	1330	1300	1270	1230	
36RAQ-3	30,000/36,000											
37RAQ-3	36,000											

- (1) 180°F data is supplied for boiler applications.
- (2) Heating output will not exceed output of water heater.
- (3) Heat BTUH at 70°F entering air temperature.

**NOTES:**

1. Motors are 120V and operate on high speed for both heating and cooling.
2. Condensate drains exit out bottom of drain pan, simplifying installation.
3. Removable bottom panel offers simple, easy access to condensate drains.
4. Blower Data is for 3-row hot water coil units. 2-row units will have slightly higher CFM.
5. Approved for installation with 0" clearance to combustible material.

OPTIONAL ACCESSORIES (Field Installed)			
DESCRIPTION	PART #	USED ON UNIT MODEL	FRAME DIMENSIONS (W X H)
WALL PANEL	961	18, 24RAQ	23-1/2 X 42-1/2
WALL PANEL	959	19, 25RAQ	25-1/2 X 45
WALL PANEL	962	30, 31, 36RAQ	27-1/2 X 47-1/2
WALL PANEL	957	37RAQ	27-1/2 X 51-1/2
HANGER BRACKET (1)	919-2	ALL	26 X 1-1/2

(1) Hanger bracket attaches to closet wall to allow hanging of air handler inside closet. **Not required for wall mounting.**

**NOTES:**

1. Optional wall panel has separate frame that attaches to wall studs.
2. Dimensions of wall panels include frame.
3. Wall panels are off - white in color and paintable.

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](http://www.firstco.com).



(unit shown with wall panel)