



HCXW (PSC)

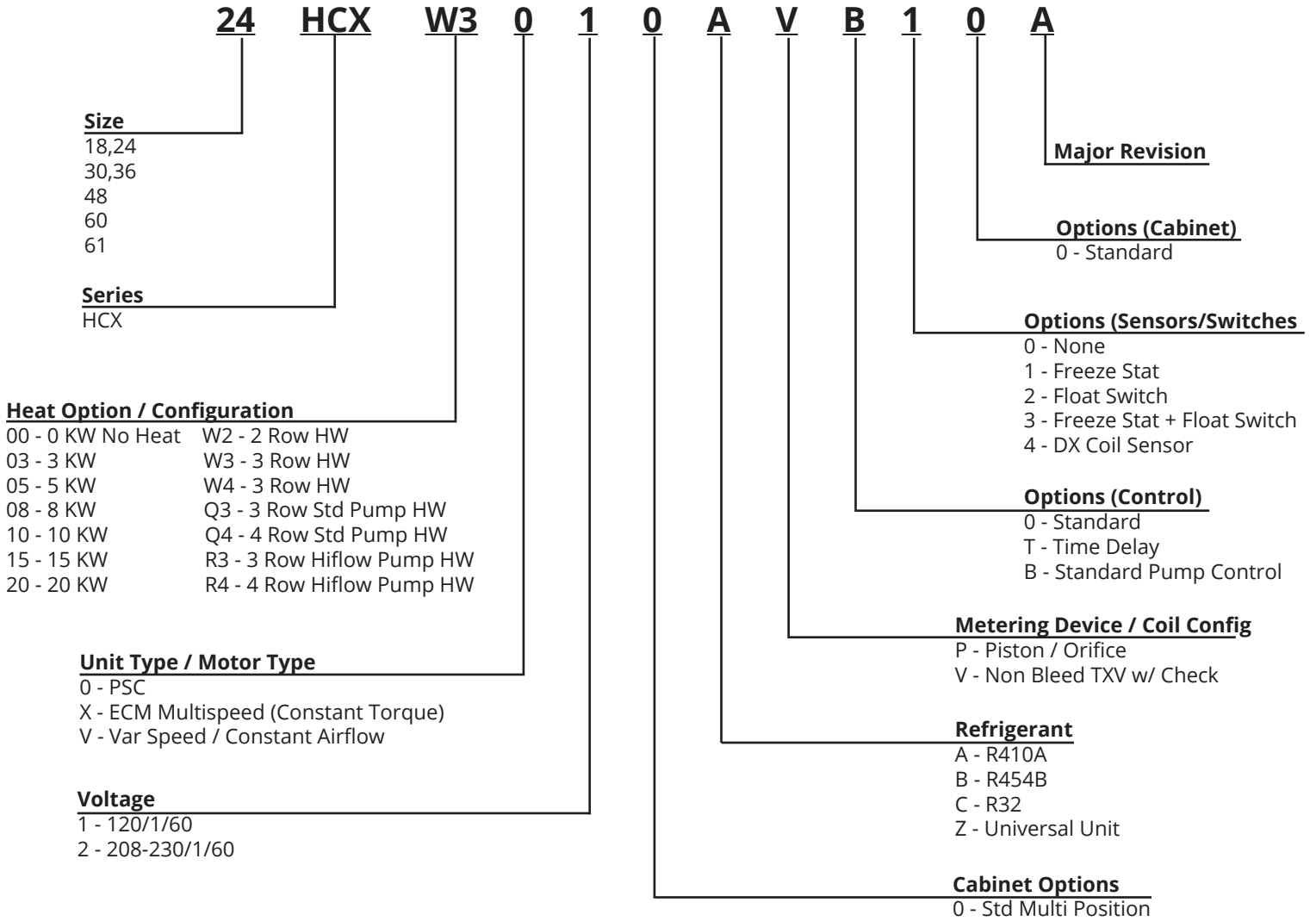
Air Handler



Cooling or Heat Pump / HW Heat
1.5 - 5 Tons
Up to 131,700 BTUH Heating



Nomenclature



HCXW (PSC)

The **HCXW (PSC)** air handler is designed for use with today's high efficiency split-system condensing units, heat pumps, hot water boilers, and Tankless Water Heaters.

Boiler applications: The **HCXW (PSC)** can be directly wired to a boiler without adding additional relays or related controls. Multiple air handlers can be connected to a single boiler to provide comfortable, efficient, whole house hydronic space heating.

Tankless Water Heater applications: For Tankless Water Heater applications, install the appropriate pump for the pressure drop.

Cooling efficiencies up to 15 SEER2, depending on the outdoor condensing unit or heat pump model.

These fan coils are compatible with any source of hot water that doesn't exceed 180° and is NSF/ANSI certified for use with domestic water.

STANDARD FEATURES

• **Multi-function micro-processor circuit board** with these standard features:

- **Blower start relay** - Eliminates field installed boiler relay, allowing direct wiring from the boiler to the air handler

- **Blower-on fan delay** - (heating mode) - preheats the HW coil for 45 seconds.

- **Blower-off fan delay** - (heating and cooling models) - blower continues to operate for 45 seconds after thermostat is satisfied, for increased efficiency

- **120V or 24V zone valve control** - The micro-processor powers either 120V or 24V field supplied motorized zone valves

- Factory or field installed R-410A TXV (cooling or heat pump operation) (non-bleed type)

- Manual Air Vent on hot water coil

- Blower door shut-off switch (except 60/61HCXW (PSC))

- Slide out hot water coil for easier service

- Copper tube heating and cooling coils

- Compatible with all major brands of split condensing units and heat pumps

- Attractive baked-on powder coated cabinet

- Primary and secondary condensate drain connections

- Easily accessible 1" filter

- Cabinet air leakage is no more than 2% when tested in accordance with ASHRAE 193

OPTIONAL ACCESSORIES

- Freeze Protector - Reduces the possibility of the water coil freezing by switching the unit to the heating mode if the water temperature is nearing freezing conditions.

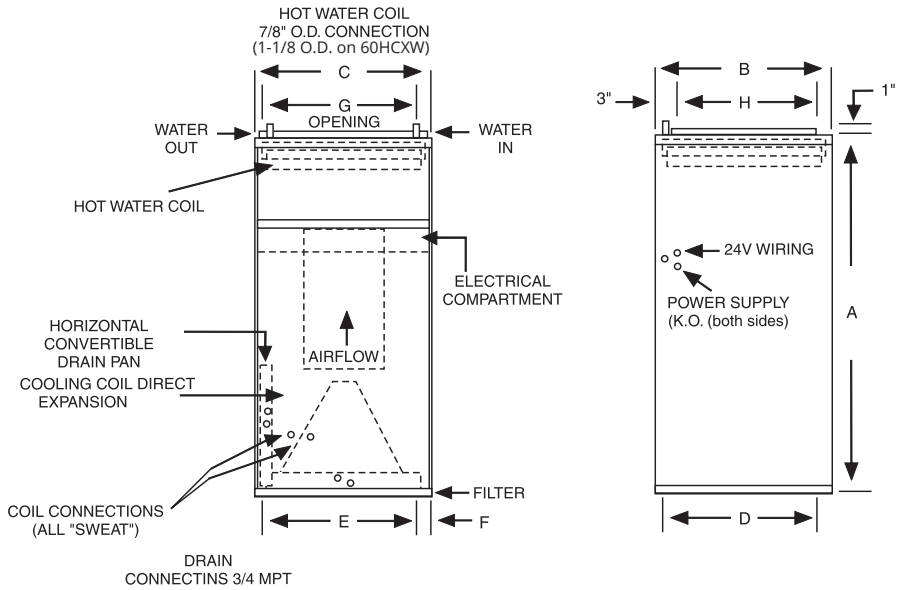
- High capacity Flow Control Module for Tankless Water Heater applications (**#940-2CV**)

First Co's customer is ultimately responsible for confirming which fan coil models are compatible with selected outdoor unit(s) and which expansion valves (if any) are required. To determine certified indoor/outdoor combinations, go to www.ahridirectory.org

HCXW (PSC)

DX COOLING

HW HEATING



(See P.4 for Model Numbers)

UNIT MODEL	BLOWER DATA				UPFLOW / HORIZONTAL ONLY					
	MOTOR HP-AMPS (120V)	MIN. CKT. AMPACITY	MAX. CKT. PROTECTION	MOTOR SPEED CONN.	CFM vs. EXTERNAL STATIC PRESSURE					
					0.05	0.10	0.20	0.30	0.40	0.50
18HCXW*0	1/5 - 2.8	3.5	15	HIGH	810	780	715	650	580	500
				MED.	680	655	600	545	490	420
				LOW	530	505	460	415	360	295
				LOW	350	325	270	220	160	---
24HCXW*0	1/5 - 5.1	6.38	15	HIGH	950	920	855	790	720	645
				MED.	860	835	785	720	650	580
				LOW	780	755	705	650	590	510
				LOW	1120	1095	1045	995	940	880
30HCXW*0	1/5 - 5.1	6.38	15	HIGH	1120	1095	1045	995	940	880
				MED.	850	840	810	780	740	690
				LOW	680	670	655	625	585	510
				LOW	1340	1310	1250	1190	1120	1050
36HCXW*0	1/2 - 8.5	10.63	15	HIGH	1340	1310	1250	1190	1120	1050
				MED.	1290	1260	1200	1140	1080	1000
				LOW	1200	1170	1120	1070	1010	940
				LOW	1810	1780	1720	1660	1590	1530
48HCXW*0	3/4 - 10.7	13.38	15	HIGH	1810	1780	1720	1660	1590	1530
				MED.	1570	1550	1510	1460	1400	1340
				LOW	1280	1260	1220	1180	1130	1050
				LOW	2160	2125	2055	1980	1895	1810
60HCXW*0	1 - 11.5	14.38	15	HIGH	2160	2125	2055	1980	1895	1810
				MED.	1865	1840	1785	1710	1620	1525
				LOW	1560	1540	1490	1435	1365	1260
				LOW	2180	2145	2075	2000	1915	1830
61HCXW*0	1-11.5	14.38	15	HIGH	2180	2145	2075	2000	1915	1830
				MED.	1885	1860	1805	1725	1635	1540
				LOW	1575	1555	1505	1450	1380	1275

NOTES:

- All models are approved for installation with 0" clearance to combustible materials.
- Use 48HCXW*0 for 3.5 ton applications and field-convert fan motor to medium speed.

PHYSICAL DIMENSIONS									
UNIT MODEL	A	B	C	D	E	F	G	H	FILTER SIZE
18HCXW*0 24HCXW*0	40	20	20	18-1/2	16	2	18	16	18 X 20 X 1
30HCXW*0 36HCXW*0	42	23	20	21-1/2	16	2	18	19	20 X 22 X 1
48HCXW*0	48	28	21-1/4	26-1/4	17-1/4	2	18	24	20 X 25 X 1
60HCXW*0	52	28	25-1/4	26-1/2	21-1/4	2	22	24	14 X 24 X 1 (2 required)
61HCXW*0	58	28	25-1/4	26-1/2	21-1/4	2	22	24	14 X 24 X 1 (2 required)

COIL CONNECTIONS		
UNIT SIZE	LIQUID	SUCTION
18/24	3/8	5/8
30/36	3/8	3/4
48/60/61	1/2	7/8

ACCESSORIES (field installed)

FLOW CONTROL MODULE	
PART NUMBER	FOR
940-2CV	18-60HCXW*0

NOTE:
Flow Control Module is required when connecting to individual Tankless Water Heaters. Contact factory for assistance.

EXPANSION VALVE KITS (Field installed) (cooling only or heat pump)	
PART NUMBER	FITS
R22	
9EVR22-4	18/24HCXW*0
9EVR22-5	30/36HCXW*0
9EVR22-6	42/48/60HCXW*0
R-410A	
9EVR410-3	18/24HCXW*0
9EVR410-4	30/36HCXW*0
9EVR410-5	42/48/60HCXW*0

NOTES:

- Above expansion valve kits are approved for both cooling only (non heat pump) and heat pump applications.
- Valves are non-bleed type. Field added. Hard start kit may be required.
- Valves have screw-on connections.

FREEZE PROTECTOR	
KIT NUMBER	FOR
941-1	18 - 60HCXW*0



Data is subject to change. Please verify current information at www.firstco.com.

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MODEL NUMBERS

MODEL SIZE (BTU)	MODEL (PISTON)	FACTORY INSTALLED TXV
		MODEL (R-410A TXV)
18,000	18HCXW*0	18HCXW*0 R410 TXV
24,000	24HCXW*0	24HCXW*0 R410 TXV
30,000	30HCXW*0	30HCXW*0 R410 TXV
36,000	36HCXW*0	36HCXW*0 R410 TXV
48,000	48HCXW*0	48HCXW*0 R410 TXV
60,000	60/61HCXW*0	60/61HCXW*0 R410 TXV

All TXV's are approved for cooling only or heat pump operation (non-bleed type).

NOTE:
Expansion valve requirement depends on the selected outdoor unit. Go to: www.firstco.com or contact the factory for assistance.

PERFORMANCE DATA												
UNIT MODEL	NOM. COOLING BTUH	MOTOR SPEED CONN.	CFM @ .3 ESP	P.D. (FT. WTR.)	BTUH (1000) AT ENTERING WATER TEMPERATURE							
					120°F		140°F		160°F		180°F	
					GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
18HCXW*0	18,000	HIGH	650	2.0 1.1 0.5	18.0	1.8	25.2	2.5	32.4	3.2	39.6	4.0
					17.2	1.7	24.1	2.4	31.0	3.1	37.9	3.8
					15.9	1.6	22.3	2.2	28.7	2.9	35.1	3.5
		MED.	550	2.0 1.1 0.5	16.3	1.6	22.9	2.3	29.4	2.9	35.9	3.6
					15.7	1.6	22.0	2.2	28.2	2.8	34.5	3.5
					14.6	1.5	20.5	2.1	26.3	2.6	32.2	3.2
		MED. LOW	420	2.0 1.1 0.5	14.0	1.4	19.6	2.0	25.2	2.5	30.8	3.1
					13.5	1.4	18.9	1.9	24.3	2.4	29.7	3.0
					12.7	1.3	17.8	1.8	22.9	2.3	27.9	2.8
24HCXW*0	24,000	HIGH	800	2.0 1.1 0.5	20.3	2.0	28.5	2.9	36.6	3.7	44.7	4.5
					19.4	1.9	27.1	2.7	34.9	3.5	42.7	4.3
					17.9	1.8	25.0	2.5	32.2	3.2	39.3	3.9
		MED.	725	2.0 1.1 0.5	19.2	1.9	26.9	2.7	34.6	3.5	42.3	4.2
					18.4	1.8	25.7	2.6	33.1	3.3	40.4	4.0
					17.0	1.7	23.8	2.4	30.6	3.1	37.4	3.7
		LOW	650	2.0 1.1 0.5	18.0	1.8	25.2	2.5	32.4	3.2	39.6	4.0
					17.2	1.7	24.1	2.4	31.0	3.1	37.9	3.8
					15.9	1.6	22.3	2.2	28.7	2.9	35.1	3.5
30HCXW*0	30,000	HIGH	1000	7.5 3.6 1.0	25.9	2.6	36.3	3.6	46.7	4.7	57.0	5.7
					24.4	2.4	34.2	3.4	44.0	4.4	53.8	5.4
					21.1	2.1	29.6	3.0	38.0	3.8	46.5	4.7
		MED.	780	7.5 3.6 1.0	22.4	2.2	31.3	3.1	40.3	4.0	49.2	4.9
					21.2	2.1	29.7	3.0	38.2	3.8	46.6	4.7
					18.5	1.9	26.0	2.6	33.4	3.3	40.8	4.1
		LOW	625	7.5 3.6 1.0	19.6	2.0	27.5	2.8	35.3	3.5	43.1	4.3
					18.7	1.9	26.2	2.6	33.7	3.4	41.1	4.1
					16.6	1.7	23.3	2.3	29.9	3.0	36.5	3.7
36HCXW*0	36,000	HIGH	1200	7.5 3.6 1.0	28.8	2.9	40.3	4.0	51.8	5.2	63.3	6.3
					27.0	2.7	37.9	3.8	48.7	4.9	59.5	6.0
					23.2	2.3	32.4	3.2	41.7	4.2	50.9	5.1
		MED.	1140	7.5 3.6 1.0	28.0	2.8	39.2	3.9	50.4	5.0	61.5	6.2
					26.3	2.6	36.9	3.7	47.4	4.7	57.9	5.8
					22.6	2.3	31.7	3.2	40.8	4.1	49.8	5.0
		LOW	1070	7.5 3.6 1.0	27.0	2.7	37.8	3.8	48.6	4.9	59.4	5.9
					25.5	2.6	35.7	3.6	45.8	4.6	56.0	5.6
					22.0	2.2	30.8	3.1	39.6	4.0	48.4	4.8
48HCXW*0	48,000	HIGH	1660	3.8 2.1 0.8	48.2	4.8	67.5	6.8	86.8	8.7	106.1	10.6
					45.5	4.6	63.7	6.4	81.9	8.2	100.1	10.0
					40.7	4.1	57.1	5.7	73.4	7.3	89.7	9.0
		MED.	1460	3.8 2.1 0.8	44.7	4.5	62.6	6.3	80.5	8.1	98.3	9.8
					42.3	4.2	59.2	5.9	76.1	7.6	93.0	9.3
					38.0	3.8	59.3	5.9	68.5	6.9	83.7	8.4
		LOW	1180	3.8 2.1 0.8	39.1	3.9	54.8	5.5	70.4	7.0	86.1	8.6
					37.1	3.7	52.0	5.2	66.9	6.7	81.7	8.2
					33.7	3.4	47.2	4.7	60.7	6.1	74.2	7.4
60HCXW*0 61HCXW*0	60,000	HIGH	1980	5.1 3.3 1.9	58.5	5.9	81.9	8.2	105.3	10.5	128.6	12.9
					56.1	5.6	78.5	7.9	100.9	10.1	123.4	12.3
					52.5	5.3	73.5	7.4	94.5	9.5	115.5	11.6
		MED.	1710	5.1 3.3 1.9	53.6	5.4	75.1	7.5	96.5	9.7	117.9	11.8
					51.6	5.1	72.2	7.2	92.8	9.3	113.5	11.4
					48.5	4.9	68.0	6.8	87.4	7.4	106.8	10.7
		LOW	1430	5.1 3.3 1.9	47.9	4.8	67.0	6.7	86.2	8.6	105.3	10.5
					46.1	4.6	64.6	6.5	83.1	8.3	101.5	10.2
					43.6	4.4	61.0	6.1	78.5	7.9	95.9	9.6

- NOTES:
 (1) Heat BTU is at 65° Entering Air Temperature.
 (2) Based on 20°F Delta-T. Velocity not to exceed 4ft./sec.
 (3) Units are shipped with motors connected to high speed for cooling and medium speed for heating.

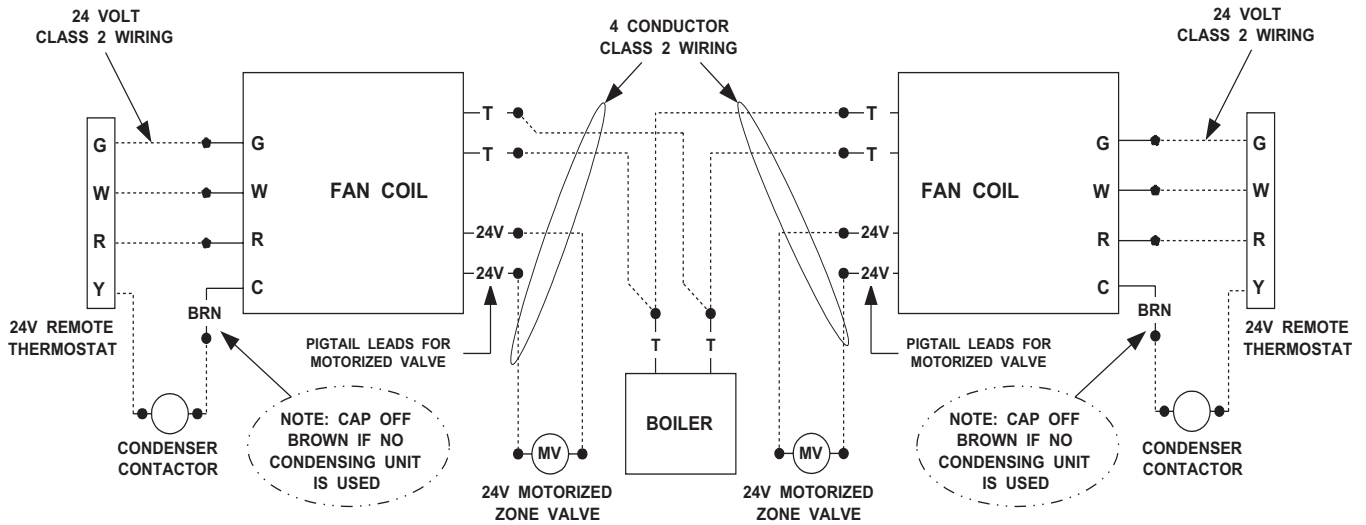
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APPLICATION GUIDELINES (FOR BOILERS)

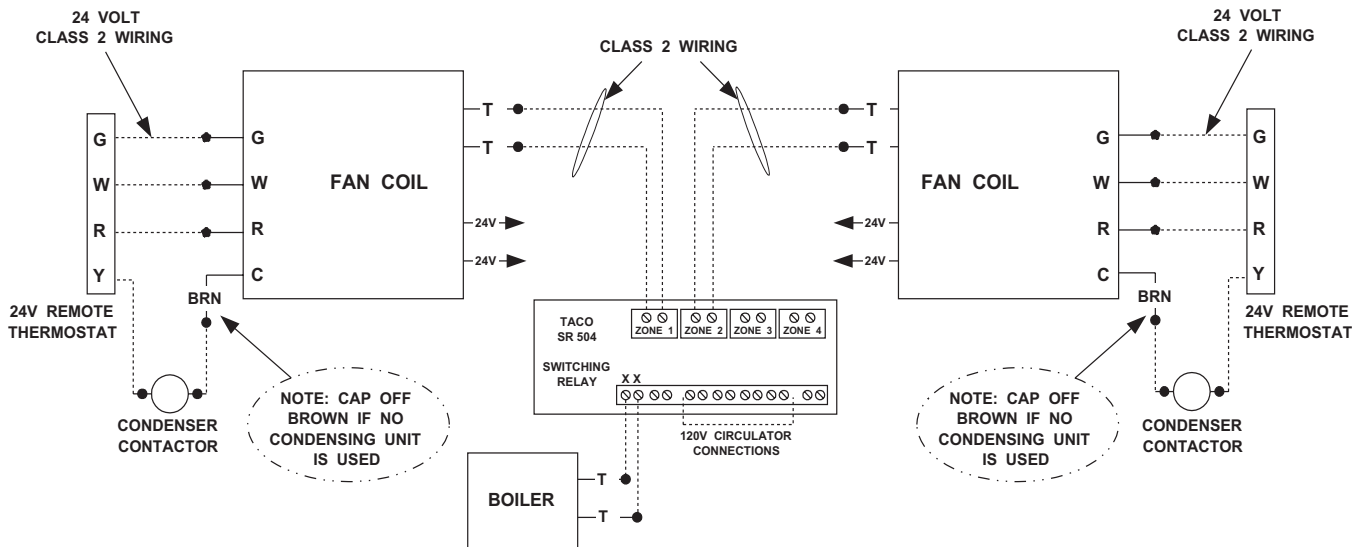
ZONE VALVES

Install a motorized valve with each air handler to control flow to that zone as required.

TYPICAL WIRING SCHEMATIC
FOR MULTIPLE ZONE CONNECTIONS WITH ZONE VALVES



TYPICAL WIRING SCHEMATIC
FOR MULTIPLE ZONE CONNECTIONS TO TACO SR-504/506 SWITCHING RELAY





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JUNE 2024