DAIKIN AC
absolute comfort

DACA-EFWT10-2011

Engineering Data

Daikin Altherma

DAIKIN
altherma

DaikinAC Hydronic Fan Coil Unit

1. EFWT 018-060 – Hydronic Fan Coil Unit

1.1 Features

- Single A-Coil configured for Hydronic Heating and Cooling Operation
- ECM Variable Speed Fan Motor - Designed for efficient, quiet operation, energy savings and most of all to reduce your overall heating and cooling costs
- Flexible Installation with Up-flow, Horizontal L and Horizontal R configuration possible
- Factory Installed Higher efficiency pleated filter (MERV 8) for cleaner indoor air quality
- Minimal Cabinet Dimensions with 1/2" TUF-SKIN Cabinet Insulation
- Optional Electric Heat Integrated (factory installed) Fan Coil Units also available

High efficiency and comfort are delivered and allow your application to blend into the existing environment using the traditional ductwork for Heating and Cooling air distribution.

EFWT__AEVLU and **EFWT__AEVJU** series includes a programmable, high efficiency motor (ECM) Variable Speed Fan Motor - Designed for efficient, quiet operation, energy savings and most of all to reduce your overall heating and cooling costs.

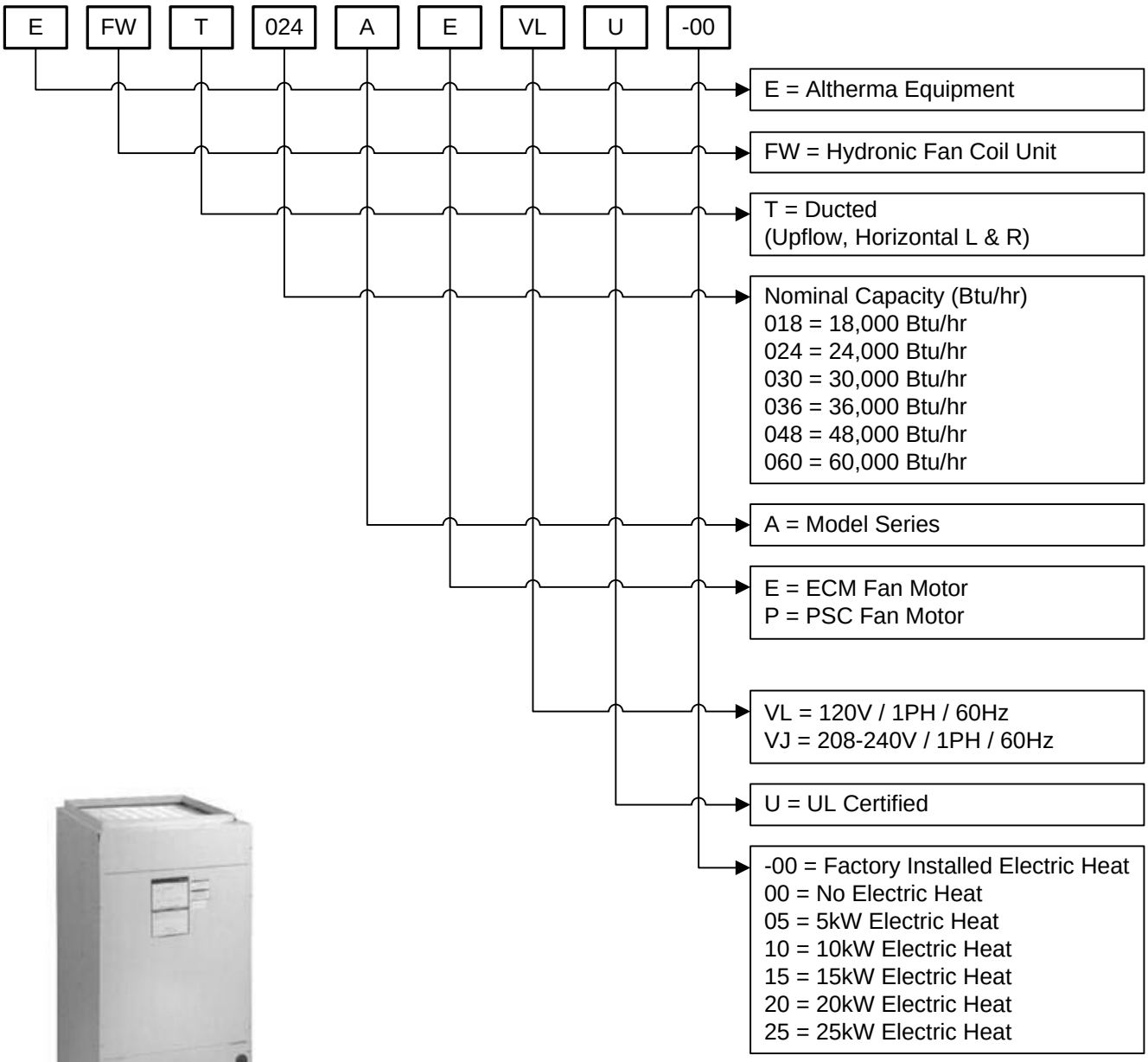
Note: The variable speed unit is compatible with damper duct systems when designed properly. Consult the damper system manufacturer for proper design.

EFWT__APVLU series is designed with standard PSC motor type with internal thermal overload protection for consistent air distribution. Single A-Coil configured for Hydronic Heating and Cooling Operation.
Primary and secondary drain connections on cooling coil. Compatible with most properly sized and installed zone control systems.

The EFWT units are configured for upflow installation but can be field modified for horizontal left or horizontal right installations.

The Hydronic Fan Coil Unit has been engineered to provide an effective solution in combination with the “Low Temperature” characteristic of Daikin Altherma equipment and performance tables are available from 100°F – 125°F EWT (Heating) and 40°F – 50°F EWT (Cooling) at various flow rates.

1.2 Nomenclature breakdown:



2. Specification - Hydronic Fan Coil EFWT

2.1 EFWT_AEVLU: 120V/1PH/60HZ (ECM Motor with no Electric Heat Options)

Capacity		**018**	**024**	**030**	**036**	**048**	**060**
Model Number (No Electric Heat Options)		****EFWT018AEVLU**	**EFWT024AEVLU**	****EFWT030AEVLU**	**EFWT036AEVLU**	**EFWT048AEVLU**	**EFWT060AEVLU**
Cooling Performance:							
Nominal Capacity	Btu/hr	19,100	22,600	28,600	32,000	42,700	52,400
Nominal Sensible Capacity	Btu/hr	14,200	17,700	22,400	25,800	34,700	42,400
EWT Range	°F	42 - 50°F					
Nominal Flow Rate	GPM	4.5	5.0	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	5.5	7.7	4.8	5.5	5.4	7.9
Heating Performance:							
Nominal Capacity	Btu/hr	19,300	25,000	31,900	34,800	50,200	60,900
EWT Range	°F	100 - 125°F					
Nominal Flow Rate	GPM	3.0	4.5	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	2.5	5.5	4.8	5.5	5.4	7.9
Airflow Rate:							
Nominal	CFM	600	800	1050	1200	1600	1825
Total External Static Pressure	WG	0.3" WG Std 0.5" WG Max					
Blower Speed setting		"C" FIELD SETTING	"A" FACTORY SETTING	"B" FIELD SETTING	"A" FACTORY SETTING	"A" FACTORY SETTING	"A" FACTORY SETTING
Motor rating	HP	1/3 HP		1/2 HP		3/4 HP	1 HP
Airflow arrangement		Upflow, Horizontal L, Horizontal R (Possible)					
Electrical Data:							
Power supply		120V / 1 / 60Hz					
Minimum Circuit Amps (MCA)	A	6.0	6.0	10	10	14	15
Max. overcurent protection (MOP)		15	15	15	15	15	15
Physical Data:							
Dimension (H x W x D)	in.	40 x 20 x 20		40 x 23 x 20		48 x 21-1/4 x 28	
Weight	lbs.	115		170		230	290
insulation type / R-Rating		1/2" JM TUF-SKIN					
Installation Clearances		U.L. Listed For Installation With Zero Inches Clearance To Combustible Materials					
Connection type:							
Inlet / Outlet Connections	in.	3/4	3/4	3/4	3/4	1	1
Connection Type		Sweat					
Feature:							
Thermostat Connection		24V					
Air Filter (MERV 8 Throwaway)	in.	18 x 20 x 1		20 x 22 x 1		20 x 25 x 1	

Notes:

1. Cooling Capacity is based on 50°F Entering Water Temp and 80°F DB/67°F WB Entering Air Conditions.
2. Heating Capacity is based on 110°F Entering Water Temp and 70°F DB Entering Air Conditions.
3. Refer to detailed capacity tables for further information pertaining to the entire entering water temperature range and for flow rates and pressure drop.
4. ****** - Models downsized by adjusting air flow rate during installation

2.2 EFWT_AEVJU: 208-240V/1PH/60HZ (ECM Motor with Electric Heat Options)

Capacity		**018**	**024**	**030**	**036**	**048**	**060**
Model Number (With Electric Heat Options)		****EFWT018AEVJU**	**EFWT024AEVJU**	****EFWT030AEVJU**	**EFWT036AEVJU**	**EFWT048AEVJU**	**EFWT060AEVJU**
Cooling Performance:							
Nominal Capacity	Btu/hr	19,100	22,600	28,600	32,000	42,700	52,400
Nominal Sensible Capacity	Btu/hr	14,200	17,700	22,400	25,800	34,700	42,400
EWT Range	°F	42 - 50°F					
Nominal Flow Rate	GPM	4.5	5.0	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	5.5	7.7	4.8	5.5	5.4	7.9
Heating Performance:							
Nominal Capacity	Btu/hr	19,300	25,000	31,900	34,800	50,200	60,900
EWT Range	°F	100 - 125°F					
Nominal Flow Rate	GPM	3.0	4.5	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	2.5	5.5	4.8	5.5	5.4	7.9
Airflow Rate:							
Nominal	CFM	600	800	1050	1200	1600	1825
Total External Static Pressure	WG	0.3" WG Std 0.5" WG Max					
Blower Speed setting		"C" FIELD SETTING	"A" FACTORY SETTING	"B" FIELD SETTING	"A" FACTORY SETTING	"A" FACTORY SETTING	"A" FACTORY SETTING
Motor rating	HP	1/3 HP		1/2 HP		3/4 HP	1 HP
Airflow arrangement		Upflow, Horizontal L, Horizontal R (Possible)					
Electrical Data (With Electric Heat Options):							
Power supply		208-240V/1Ph/60Hz					
Minimum Circuit Amps (MCA)	A	3.0	3.0	4.0	4.0	6.0	9.0
Max. overcurent protection (MOP)	A	15	15	15	15	15	15
Electrical Heater Options 10 to 25kW		5, 10	5, 10	5, 10, 15	5, 10, 15	15, 20, 25	15, 20, 25
Electrical Heat Integral Disconnect		Factory Installed Service Switch Over 10kW (No Disconnect)					
Physical Data:							
Dimension (H x W x D)	in.	40 x 20 x 20		40 x 23 x 20		48 x 21-1/4 x 28	
Weight	lbs.	115		170		230	290
insulation type / R-Rating		1/2" JM TUF-SKIN					
Installation Clearances		U.L. Listed For Installation With Zero Inches Clearance To Combustible Materials					
Connection type:							
Inlet / Outlet Connections	in.	3/4	3/4	3/4	3/4	1	1
Connection Type		Sweat					
Feature:							
Thermostat Connection		24V					
Air Filter (MERV 8 Throwaway)	in.	18 x 20 x 1		20 x 22 x 1		20 x 25 x 1	

Notes:

1. Cooling Capacity is based on 50°F Entering Water Temp and 80°F DB/67°F WB Entering Air Conditions.
2. Heating Capacity is based on 110°F Entering Water Temp and 70°F DB Entering Air Conditions.
3. Refer to detailed capacity tables for further information pertaining to the entire entering water temperature range and for flow rates and pressure drop.
4. Refer to engineering data book for further information on electric heat options.
5. ****** - Models downsized by adjusting air flow rate during installation.

2.3 EFWT_APVLU: 120V/1PH/60HZ (PSC Motor with No Electric Heat options)

Capacity:		**018**	**024**	**030**	**036**	**048**	**060**
Model Number (No Electric Heat Options)		****EFWT018APVLU**	**EFWT024APVLU**	****EFWT030APVLU**	**EFWT036APVLU**	**EFWT048APVLU**	**EFWT060APVLU**
Cooling Performance:							
Nominal Capacity	Btu/hr	19,100	22,600	28,600	32,000	42,700	52,400
Nominal Sensible Capacity	Btu/hr	14,200	17,700	22,400	25,800	34,700	42,400
EWT Range	°F	42 - 50°F					
Nominal Flow Rate	GPM	4.5	5.0	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	5.5	7.7	4.8	5.5	5.4	7.9
Heating Performance:							
Nominal Capacity	Btu/hr	19,300	25,000	31,900	34,800	50,200	60,900
EWT Range	°F	100 - 125°F					
Nominal Flow Rate	GPM	3.0	4.5	6.0	6.0	8.0	10
Nominal Pressure drop	Ft Hd	2.5	5.5	4.8	5.5	5.4	7.9
Airflow Rate:							
Nominal	CFM	610	750	960	1185	1540	2000
Total External Static Pressure	WG	0.3" WG Std 0.5" WG Max					
Blower Speed setting		Med-High Field Setting	High Factory Setting	Med-High Field Setting	High Factory Setting	High Factory Setting	High Factory Setting
Motor rating	HP	1/5 HP		1/3 HP		1/2 HP	3/4 HP
Airflow arrangement		Upflow, Horizontal L, Horizontal R (Possible)					
Electrical Data:							
Power supply		120V / 1 / 60Hz					
Minimum Circuit Amps (MCA)	A	3.8	3.8	7.5	7.5	10.0	13.1
Max. overcurent protection (MOP)		15	15	15	15	15	15
Physical Data:							
Dimension (H x W x D)	in.	40 x 20 x 20		40 x 23 x 20		48 x 21-1/4 x 28	
Weight	lbs.	115		170		230	290
insulation type / R-Rating		1/2" JM TUF-SKIN					
Installation Clearances		U.L. Listed For Installation With Zero Inches Clearance To Combustible Materials					
Connection type:							
Inlet / Outlet Connections	in.	3/4	3/4	3/4	3/4	1	1
Connection Type		Sweat					
Feature:							
Thermostat Connection		24V					
Air Filter (MERV 8 Throwaway)	in.	18 x 20 x 1		20 x 22 x 1		20 x 25 x 1	

Notes:

1. Cooling Capacity is based on 50°F Entering Water Temp and 80°F DB/67°F WB Entering Air Conditions.
2. Heating Capacity is based on 110°F Entering Water Temp and 70°F DB Entering Air Conditions.
3. Refer to detailed capacity tables for further information pertaining to the entire entering water temperature range and for flow rates and pressure drop.

3. Capacity Tables

3.1 Heating Performance Data

UNIT MODEL	Capacity (MBH)	NOM CFM	GPM (HTG)	P.D. (Ft Wt.)	Heating BTUH @ Entering Water Temp.					
					100°F	105°F	110°F	115°F	120°F	125°F
**EFWT018	18.0	600	4	4.4	15.1	17.6	20.1	22.6	25.1	27.6
			3	2.5	14.4	16.8	19.3	21.7	24.1	26.5
			2	1.2	13.5	15.7	17.9	20.2	22.4	24.7
EFWT024	24.0	800	6	9.5	19.5	22.8	26.0	29.3	32.6	35.8
			4.5	5.5	18.8	21.9	25.0	28.2	31.3	34.4
			3	2.5	17.5	20.5	23.4	26.3	29.2	32.2
**EFWT030	30.0	1050	6	4.8	25.1	29.2	33.4	37.0	41.8	45.9
			4.5	3.0	23.9	27.9	31.9	35.9	39.8	43.8
			3	1.5	22.1	25.8	29.5	33.1	36.8	40.5
EFWT036	36.0	1200	6	4.8	27.5	32.0	36.6	41.2	45.8	50.3
			4.5	3.0	26.1	30.5	34.8	39.2	43.5	47.9
			3	1.5	24.0	28.0	32.0	36.0	39.9	43.9
EFWT048	48.0	1600	10	7.9	39.0	45.5	52.0	58.5	65.0	71.5
			8	5.4	37.7	44.4	50.2	56.5	62.8	69.1
			6	3.3	35.8	41.8	47.8	49.2	59.7	65.7
EFWT060	60.0	1825	13	12.5	44.2	51.6	59.0	66.4	73.7	81.1
			10	7.9	42.7	49.8	57.0	64.1	71.2	78.3
			7	4.3	40.2	46.9	53.6	60.3	67.0	73.7

3.2 Cooling Performance Data

UNIT MODEL	Capacity (MBH)	NOM. CFM	GPM	P.D. (FT. WT.)	50°F ENTERING WATER					
					80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR		
					TOTAL MBH	SENS MBH	TEMP RISE	TOTAL MBH	SENS MBH	TEMP RISE
**EFWT018	18.0	600	3	2.5	16.3	13.2	10.8	12.4	11.7	8.3
			4.5	5.5	19.1	14.2	8.5	14.6	12.5	6.5
			6	9.5	20.8	14.9	6.9	15.9	13.0	5.3
EFWT024	24.0	800	3.5	3.4	19.5	16.6	11.2	14.9	14.7	8.5
			5	6.7	22.6	17.7	9.1	17.3	15.6	6.9
			6.5	11	24.6	18.4	7.6	18.8	16.2	5.8
**EFWT030	30.0	1000	4	2.4	24.0	20.7	12.0	18.4	18.4	9.2
			6	4.8	28.6	22.4	9.5	21.8	19.7	7.3
			8	7.9	31.4	23.4	7.9	24.0	20.6	6.0
EFWT036	36.0	1200	4.5	3.5	28.6	24.5	11.4	21.8	21.8	8.7
			6	5.5	32.0	25.8	9.9	24.5	22.8	7.5
			8	7.9	34.5	26.7	8.6	26.4	23.5	6.6
EFWT048	48.0	1600	6	3.3	37.3	32.7	12.4	29.1	29.1	9.7
			8	5.4	42.7	34.7	10.7	32.6	30.6	8.2
			10	7.9	46.6	36.1	9.3	35.6	31.8	7.1
EFWT060	60.0	1825	7	4.3	42.3	36.9	12.1	32.8	32.8	9.4
			10	7.9	49.6	39.5	9.9	37.9	3.9	7.6
			13	12.5	54.2	41.3	8.3	41.4	36.3	6.4

Cooling Performance Data (Con't.)

UNIT MODEL	Capacity (MBH)	NOM. CFM	GPM	P.D. (FT. WTR.)	45°F ENTERING WATER					
					80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR		
					TOTAL MBH	SENS MBH	TEMP RISE	TOTAL MBH	SENS MBH	TEMP RISE
**EFWT018	18.0	600	3	2.5	19.0	13.8	12.7	14.5	12.1	9.7
			4.5	5.5	22.4	15.1	9.9	17.1	13.1	7.6
			6	9.5	24.4	15.9	8.2	18.7	13.7	6.2
EFWT024	24.0	800	3.5	3.4	23.1	17.3	13.2	17.6	15.2	10.1
			5	6.7	26.9	18.7	10.7	20.5	16.3	8.2
			6.5	11	29.2	19.6	9.0	22.3	17.0	6.9
**EFWT030	30.0	1000	4	2.4	28.3	21.6	14.1	21.6	19.0	10.8
			6	4.8	33.9	23.7	11.3	25.9	20.6	8.6
			8	7.9	37.3	25.0	9.3	28.5	21.7	7.1
EFWT036	36.0	1200	4.5	3.5	33.7	25.5	13.5	25.8	22.4	10.3
			6	5.5	38.0	27.1	11.7	29.1	23.7	8.9
			8	7.9	41.0	28.2	10.3	31.3	24.6	7.8
EFWT048	48.0	1600	6	3.3	44.2	34.1	14.7	33.8	30.0	11.3
			8	5.4	51.0	36.6	12.7	38.9	32.0	9.7
			10	7.9	55.7	38.4	11.1	42.5	33.4	8.5
EFWT060	60.0	1825	7	4.3	49.7	39.6	14.2	38.0	35.0	10.8
			10	7.9	58.3	42.8	11.7	44.5	37.5	8.9
			13	12.5	63.8	44.9	9.8	48.7	39.1	7.5

42°F ENTERING WATER										
**EFWT018	18.0	600	3	2.5	20.7	14.4	13.8	15.8	12.6	10.5
			4.5	5.5	24.4	15.9	10.8	18.6	13.7	8.3
			6	9.5	26.6	16.8	8.9	20.3	14.4	6.8
EFWT024	24.0	800	3.5	3.4	25.2	18.1	14.4	19.2	15.8	11.0
			5	6.7	29.3	19.6	11.7	22.4	17.1	8.9
			6.5	11.0	31.8	20.6	9.8	24.3	17.8	7.5
**EFWT030	30.0	1000	4	2.4	30.8	22.5	15.4	23.6	19.7	11.8
			6	4.8	36.9	24.8	12.3	28.2	21.6	9.4
			8	7.9	40.6	26.3	10.2	31.0	22.7	7.8
EFWT036	36.0	1200	4.5	3.5	36.8	26.6	14.7	28.1	23.3	11.3
			6	5.5	41.5	28.4	12.8	31.7	24.7	9.7
			8	7.9	44.7	29.6	11.2	34.1	25.7	8.5
EFWT048	48.0	1600	6	3.3	48.2	35.5	16.1	36.8	31.2	12.3
			8	5.4	55.5	38.3	13.9	42.4	33.4	10.6
			10	7.9	60.7	40.3	12.1	46.3	34.9	9.3
EFWT060	60.0	1825	7	4.3	54.2	41.2	15.5	41.4	36.3	11.8
			10	7.9	63.6	44.8	12.7	48.6	39.1	9.3
			13	12.5	69.5	47.1	10.7	53.1	40.9	7.8

40° F ENTERING WATER										
**EFWT018	18.0	600	3	2.5	22.0	15.4	14.7	16.8	13.4	11.2
			4.5	5.5	25.8	16.8	11.5	19.7	14.5	8.7
			6	9.5	28.1	17.8	9.4	21.5	15.3	7.2
EFWT024	24.0	800	3.5	3.4	26.4	19.1	15.1	20.2	16.7	11.5
			5	6.7	30.6	20.7	12.2	23.4	18.0	9.4
			6.5	11.0	33.3	21.8	10.2	25.4	18.8	7.8
**EFWT030	30.0	1000	4	2.4	32.5	23.8	16.2	24.8	20.9	12.4
			6	4.8	38.7	26.2	12.9	29.5	22.7	9.8
			8	7.9	42.5	27.7	10.6	32.5	23.9	8.1
EFWT036	36.0	1200	4.5	3.5	36.7	27.5	16.3	28.0	24.1	12.5
			6	5.5	43.4	30.0	13.3	32.1	25.7	10.7
			8	7.9	46.7	31.3	11.7	35.7	27.1	8.9
EFWT048	48.0	1600	6	3.3	50.5	37.5	16.8	38.6	32.9	12.9
			8	5.4	57.8	40.3	14.5	44.2	35.1	11.0
			10	7.9	63.1	42.4	12.6	48.2	36.7	9.6
EFWT060	60.0	1825	7	4.3	57.2	42.4	16.3	43.7	37.1	12.5
			10	7.9	67.1	46.1	13.4	51.2	40.1	10.2
			13	12.5	73.4	48.6	11.3	56.0	42.0	8.6

4. Electrical Data

A separate power supply will be required of 120, 208/230 volts, 1 ph, 60 Hz. 2-pipe units are available in 120V/60 or 208-230V/60. 2-pipe with electric heat, are available in 208-230/60 only.

Optional Accessories Available:
Units are available with electric heat from 5-25kW. Electric heat is a factory installed options.

4.1 EFWT_AEVLU: 120V/1PH/60HZ (ECM Motor with no Electric Heat Options)

Model Number	Min. Circuit Amps (MCA)	Max. Overcurrent Protection (MOP)	Fan HP	Full Load Amps (FLA)
**EFWT018AEVLU	6	15	1/3	4.8
EFWT024AEVLU	6	15	1/3	4.8
**EFWT030AEVLU	10	15	1/2	7.3
EFWT036AEVLU	10	15	1/2	7.3
EFWT048AEVLU	14	15	3/4	10.5
EFWT060AEVLU	15	15	1	11.5

4.2 EFWT_AEVJU: 208/230V/1PH/60HZ (ECM Motor with Electric Heat Options)

Model Number	Min. Circuit Amps (MCA)	Max. Overcurrent Protection (MOP)	Fan HP	Full Load Amps (FLA)
**EFWT018AEVJU	3	15	1/3	1.9
EFWT024AEVJU	3	15	1/3	1.9
**EFWT030AEVJU	4	15	1/2	2.8
EFWT036AEVJU	4	15	1/2	2.8
EFWT048AEVJU	6	15	3/4	4.7
EFWT060AEVJU	9	15	1	7.1

4.3 EFWT_APVLU: 120V/1PH/60HZ (PSC Motor with No Electric Heat options)

Model Number	Min. Circuit Amps (MCA)	Max. Overcurrent Protection (MOP)	Fan HP	Full Load Amps (FLA)
**EFWT018APVLU	3.8	15	1/5	3.0
EFWT024APVLU	3.8	15	1/5	3.0
**EFWT030APVLU	7.5	15	1/3	6.0
EFWT036APVLU	7.5	15	1/3	6.0
EFWT048APVLU	10.0	15	1/2	8.0
EFWT060APVLU	13.1	15	3/4	10.5

4.4 Standard Wiring Equipment

Model Number	Power Supply Wiring (Including Ground Wire)		Transmission Wiring Remote Control Wiring
	Field Fuses	Size	Size
**EFWT018 EFWT024	15A	Must Comply with local codes	AWG18-16
**EFWT030 EFWT036			
EFWT048			
EFWT060			

** Models downsized by adjusting air flow rate during installation

4.5 Electric Heat Options (Factory Installed)

Model Number	Factory Installed Electric Heat Options (kW)	Circuit 1 (240/208V)		Circuit 2 (240/208V)		Circuit 3 (240/208V)	
		MCA	MOP	MCA	MOP	MCA	MOP
**EFWT018 EFWT024	0 5 10	3/3 29/25 42/36	15/15 30/25 60/50	--- --- ---	--- --- ---	--- --- ---	--- --- ---
**EFWT030 EFWT036	0 10 15	4/4 56/49 56/49	15/15 60/50 60/50	--- --- 27/23	--- --- 30/25	--- --- ---	--- --- ---
EFWT048	0 15 20 25	6/6 58/50 58/50 58/50	15/15 60/50 60/50 60/50	--- 27/23 53/46 53/46	--- 30/25 60/50 60/50	--- --- --- 27/23	--- --- --- 30/25
EFWT060	0 15 20 25	9/9 59/53 59/53 59/53	15/15 60/50 60/50 60/50	--- 27/23 53/46 53/46	--- 30/25 60/50 60/50	--- --- --- 27/23	--- --- --- 30/25

Notes:
1. 15kW and 20kW models require 2 supply circuits. 25kW models require 3 supply circuits.
2. Units suitable for installation with 0" clearance to combustible material.

5. Air Flow Data

5.1 Blower Speed Selection EFWT_AEVLU, 120V (ECM Motor)

Model	Operating Mode	Control Board Select Tap								Fan Speed Tap Setting
		Cool Tap				Heat Tap				
		A	B	C	D	A	B	C	D	
**EFWT018	Cooling or Heating Thermostat Signal					800	700	**600**	500	Set Cooling & Heating To tap "C"
	Continuous Blower	400	350	300	250					
EFWT024	Cooling or Heating Thermostat Signal					**800**	700	600	500	Set Cooling & Heating To tap "A"
	Continuous Blower	400	350	300	250					
**EFWT030	Cooling or Heating Thermostat Signal					1200	**1050**	900	750	Set Cooling & Heating To tap "B"
	Continuous Blower	600	525	400	375					
EFWT036	Cooling or Heating Thermostat Signal					**1200**	1050	900	750	Set Cooling & Heating To tap "A"
	Continuous Blower	600	525	400	375					
EFWT048	Cooling or Heating Thermostat Signal					**1600**	1400	1200	1000	Set Cooling & Heating To tap "A"
	Continuous Blower	800	700	600	500					
EFWT060	Cooling or Heating Thermostat Signal					**1825**	1700	1600	1400	Set Cooling & Heating To tap "A"
	Continuous Blower	900	850	800	700					

****** Models downsized by adjusting air flow rate during installation

5.2 Blower Speed Selection EFWT_AEVJU, 208-240V (ECM Motor)

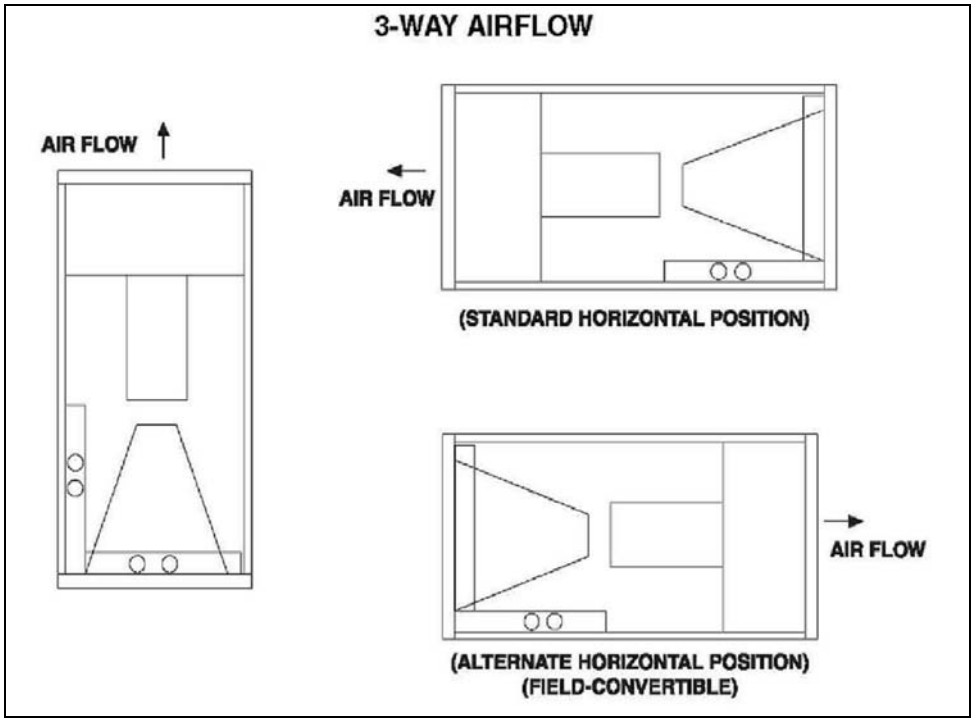
Model	Operating Mode	Control Board Select Tap								Fan Speed Tap Setting
		Cool Tap				Heat Tap				
		A	B	C	D	A	B	C	D	
**EFWT018	Cooling Therm. Signal	800	700	**600**	500					Set Cooling to tap "C" Set Heating to tap "D" Unit with 0-10kW max Electric Heat
	Continuous Blower	400	350	300	250					
	Heating Therm. Signal					790	730	660	**600**	
EFWT024	Cooling Therm. Signal	**800**	700	600	500					Set Cooling to tap "A" Set Heating to tap "A" Unit with 0-10kW max Electric Heat
	Continuous Blower	400	350	300	250					
	Heating Therm. Signal					**790**	730	660	600	
**EFWT030	Cooling Therm. Signal	1200	***1050***	900	750					Set Cooling to tap "B" Set Heating to tap "B" Unit with 0-15kW max Electric Heat
	Continuous Blower	600	525	400	375					
	Heating Therm. Signal					1130	**1000**	875	790	
EFWT036	Cooling Therm. Signal	**1200**	1050	900	750					Set Cooling to tap "A" Set Heating to tap "A" Unit with 0-15kW max Electric Heat
	Continuous Blower	600	525	400	375					
	Heating Therm. Signal					**1130**	1000	875	790	
EFWT048	Cooling Therm. Signal	**1600**	1400	1200	1000					Set Cooling to tap "A" Set Heating to tap "A" Unit with 0-20kW max Electric Heat
	Continuous Blower	800	700	600	500					
	Heating Therm. Signal					**1500**	1360	1190	1060	
EFWT060	Cooling Therm. Signal	**1825**	1700	1600	1400					Set Cooling to tap "A" Set Heating to tap "A" Unit with 0-25kW max Electric Heat
	Continuous Blower	900	850	800	700					
	Heating Therm. Signal					**1825**	1700	1500	1300	

5.3 Blower Speed Selection EFWT_APVLU, 120V (PSC Motor)

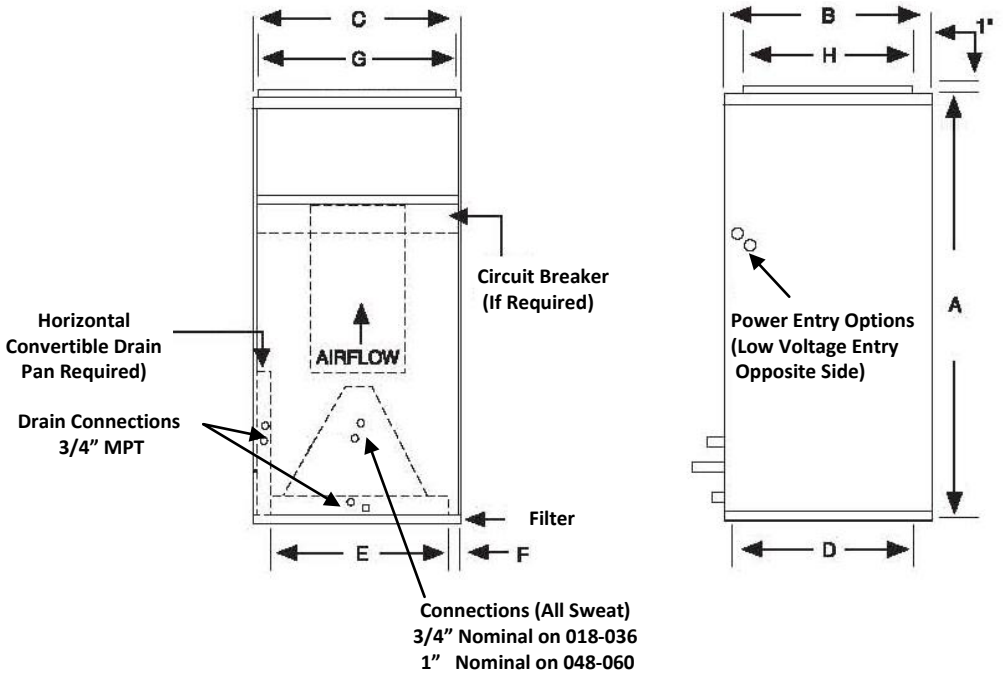
Model	Motor HP-AMP	Motor Speed	CFM vs. External Static Pressure					
			0.05	0.10	0.20	0.30	0.40	0.50
**EFWT018	1/5 – 3.0	High	920	890	825	750	680	580
		Med-Hi	750	730	680	610	540	450
		Med-Low	555	530	480	420	330	- - -
		Low	350	310	240	170	100	- - -
EFWT024	1/5 – 3.0	High	920	890	825	750	680	580
		Med-Hi	750	730	680	610	540	450
		Med-Low	555	530	480	420	330	- - -
		Low	350	310	240	170	100	- - -
**EFWT030	1/3 – 6.0	High	1220	1185	1120	1070	1015	960
		Med-Hi	1085	1060	1010	960	910	865
		Med-Low	935	915	875	830	775	700
		Low	750	730	695	650	605	500
EFWT036	1/3 – 6.0	High	1220	1185	1120	1070	1015	960
		Med-Hi	1085	1060	1010	960	910	865
		Med-Low	935	915	875	830	775	700
		Low	750	730	695	650	605	500
EFWT048	1/2 – 8.0	High	1730	1690	1620	1540	1450	1350
		Med	1580	1550	1490	1430	1360	1270
		Low	1360	1340	1310	1270	1210	1100
EFWT060	3/4 – 10.5	High	2030	2000	1950	1900	1840	1770
		Med	1630	1615	1580	1540	1490	1440
		Low	1280	1270	1240	1210	1180	1140

****** Models downsized by adjusting air flow rate during installation

5.4 Air Flow Arrangements (Field Configurable)



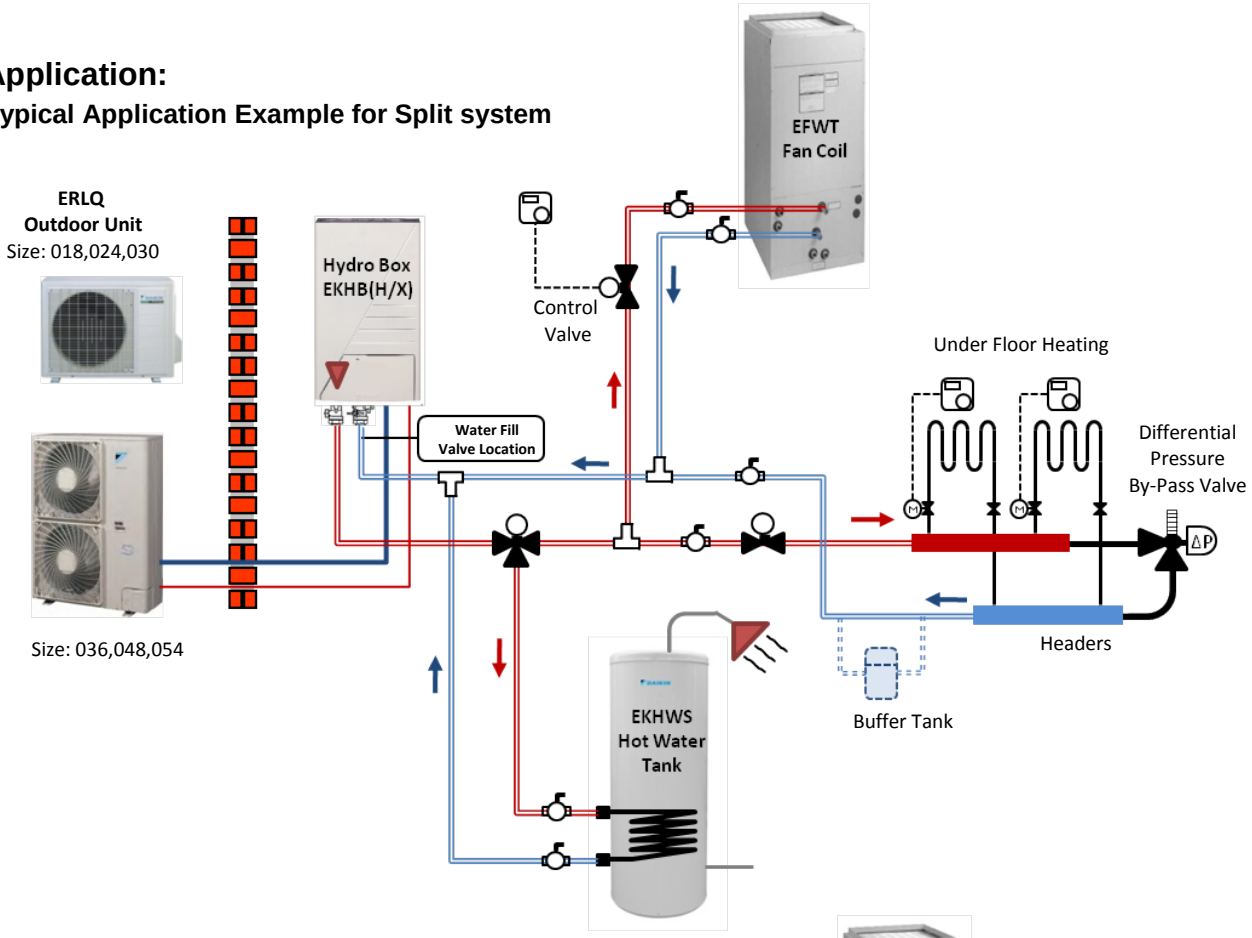
6. Physical Dimensions:



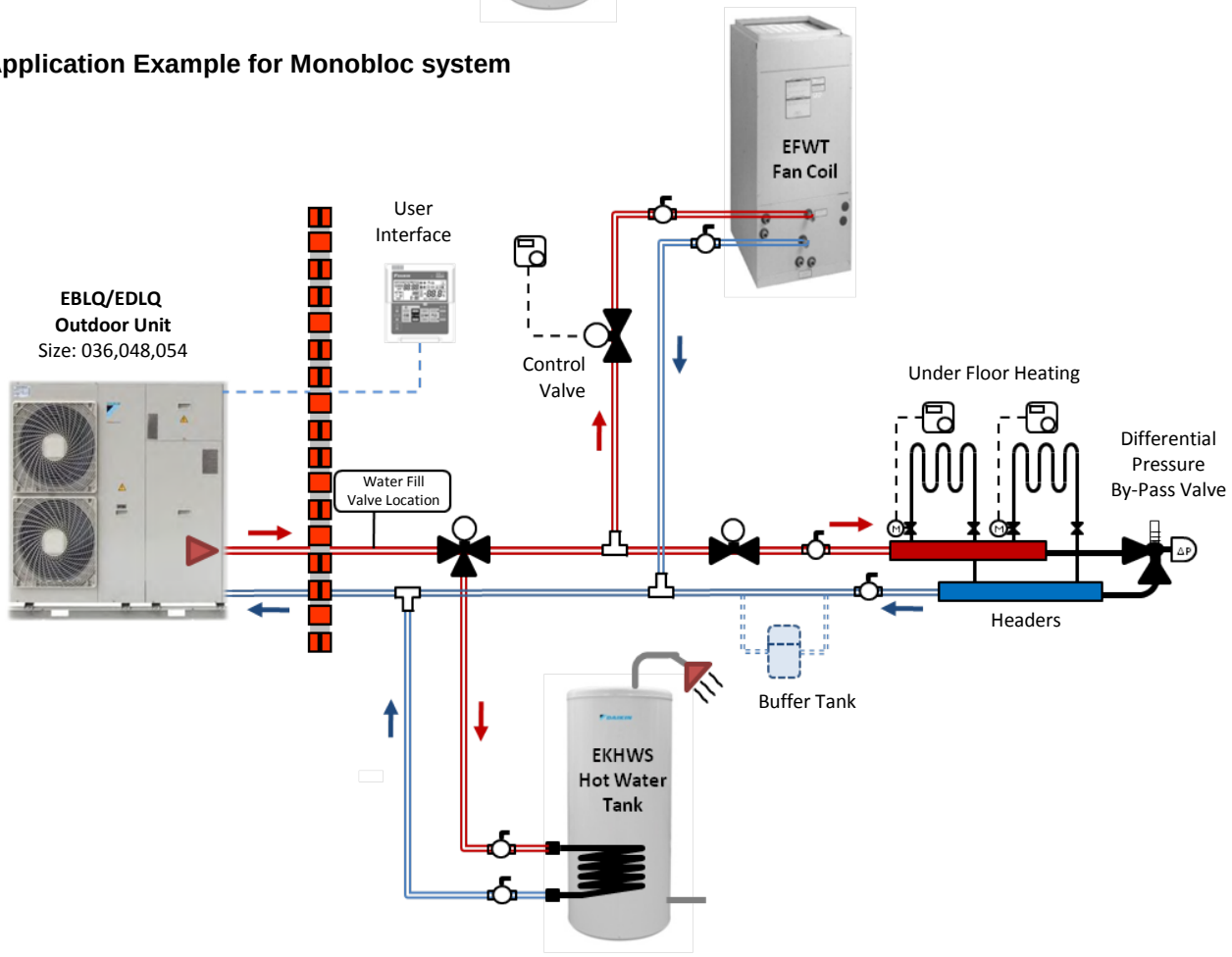
Model Number	A	B	C	D	E	F	G	H	Filter Size
**EFWT018 EFWT024	40	20	20	18-1/2	16	2	18	16	18 x 20 x 1
**EFWT030 EFWT036	42	23	20	21	16	2	18	17	20 x 22 x 1
EFWT048	48	28	21-1/4	26-1/4	17-1/4	2	19-1/4	18	20 x 25 x 1
EFWT060	48	28	21-1/4	26-1/4	17-1/4	2	19-1/4	18	20 x 25 x 1

7. Application:

7.1 Typical Application Example for Split system



7.2 Typical Application Example for Monobloc system



8. Installation: (Reference Installation Manual)

8.1 Reference to installation manual document Numbers by model type

EFWT_AEVLU – Document No. L3778DK 8/11
EFWT_AEVJU – Document No. L2478DK 8/11
EFWT_APVLU – Document No. L1478DK 8/11

8.2 Installation notes:

1. **Safety Consideration** – Please refer to installation manual for the "Safety Considerations for installation".

2. **Before installation** – be sure to read the installation manual before installing the Fan coil unit.

3. **Selecting installation site** – Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

4. **Installation Precautions** – Always review the nameplate on each unit for proper voltage and control configurations. This information is determined from the components and wiring of the unit and may vary from unit to unit.

5. **Water piping work** – Water piping should be tested in accordance with the relevant local, state and national regulation plumbing code. All water piping needs to be insulated due to high water temperature and the risk of condensation leaking.

6. **Drain piping work** – Perform drain work so that the unit is drained thoroughly.

7. **Installing the duct** – Exercise care regarding the following when performing ductwork. Verify that duct work does not exceed the unit's setting range of external static pressure.

8. **Electric wiring work** – all wiring must be performed by an authorized electrician.

9. **Wiring examples** – Precautions when laying power supply wiring. No wiring or other work should be attempted without first ensuring that the fan coil is completely disconnected from the power source and locked out. Always verify that a good ground connection exists prior to energizing any power sources.

10. **Application and blower speed selection** – Select taps are used by the installer to properly configure the system.

11. **Startup and test run**
    a. Make sure the electric component box covers are closed on the indoor and outdoor units. Install air filter
    b. Check that supply voltage matches nameplate data. Ensure that the unit is properly grounded.
    c. With power off, check blower wheel set screw for tightness and ensure that the blower wheel rotates freely and quietly.
    d. Check that the water coil, valves and piping have been leak checked and insulated as required.
    e. Ensure that all air has been vented from the water coils.
    f. Consult Daikin Altherma Install and Operation Manuals for testing of system.
    g. Confirm fan coil unit operation

12. **Troubleshooting motor and controls**

    The **ECM** motor contains two parts: the control module and motor winding section. Do not assume the motor or module is defective if it will not start. Go through the steps described below before replacing control module, Select Control Board or entire motor. The control module is available as a replacement part.

    If Motor turns slowly:
    1. Replace panel and check air filter. Motor may appear to run slowly if access panel or air filter is removed.

2. It is normal operation to run noticeably slower if G terminal is energized without a call for heat or cooling.

If Motor does not run:

1. Check for 24VAC at terminal R and C1. If no voltage is present, check the transformer. Transformer is located in Daikin Altherma control box, Terminals X2M 26, 27.
2. Check all plugs and receptacles for any deformation, which could cause loose connections. Be sure plugs are fully seated.
3. Verify that supply voltage is present at the motor.

Check control signals - Verify low voltage control signals to motor. The motor receives its control signals through the 16-pin wiring harness. The combination of pins energized will determine the motor speed. See table 12-1 for pin number on 16-pin plug which should have voltage when Select Control Board screw terminals have 24VAC.

The Fan coil units contain **PSC** fan motor. Do not assume the motor, relays or controls are defective if it will not start. Go through the steps described below before replacing any parts.

If Motor turns slowly:

1. Check to see motor is not overloaded, dirty air filter, blocked vents, or debris in fan section or squirrel cage.
2. Check to see ductwork is of proper size for airflow capabilities of fan coil unit.
3. Check to see if motor turns freely when squirrel cage is rotated, if not pull blower assembly and see if motor can be lubricated. If the motor has sealed bearings replace motor.
4. Check motor capacitor for bulging or leaking. If these signs are present replace just capacitor first and recheck motor operation and amperage draw against rating plate on motor body.

If Motor does not run:

1. Check for 24VAC at terminal R and C1. If no voltage is present, check the transformer. Transformer is located in Daikin Altherma control box, Terminals X2M 26, 27.
2. Check motor amperage draw against rating plate on motor body. If motor still runs slow see **Motor Winding Section** below.
3. Check all plugs and receptacles for any deformation, which could cause loose connections. Be sure plugs are fully seated.
4. Verify that supply voltage is present at the motor.

Check control signals - Verify low voltage control signals to motor. The motor receives its control signals through the relay which is energized by R and G from the thermostat.

Thermostat:

1. Remove all thermostat wires from Control PCB.
2. Jumper screw terminals on the select control board one at a time: R-G, R-Y1, and R-W1. If motor runs in all cases, thermostat is miss-wired, configured incorrectly, or defective. If motor runs in some cases, but not others, continue to check wiring harness and circuit board.

Verify Motor Winding Section: Before proceeding with motor replacement, check the following to ensure motor windings are functional and intact. With all motor wires disconnected:

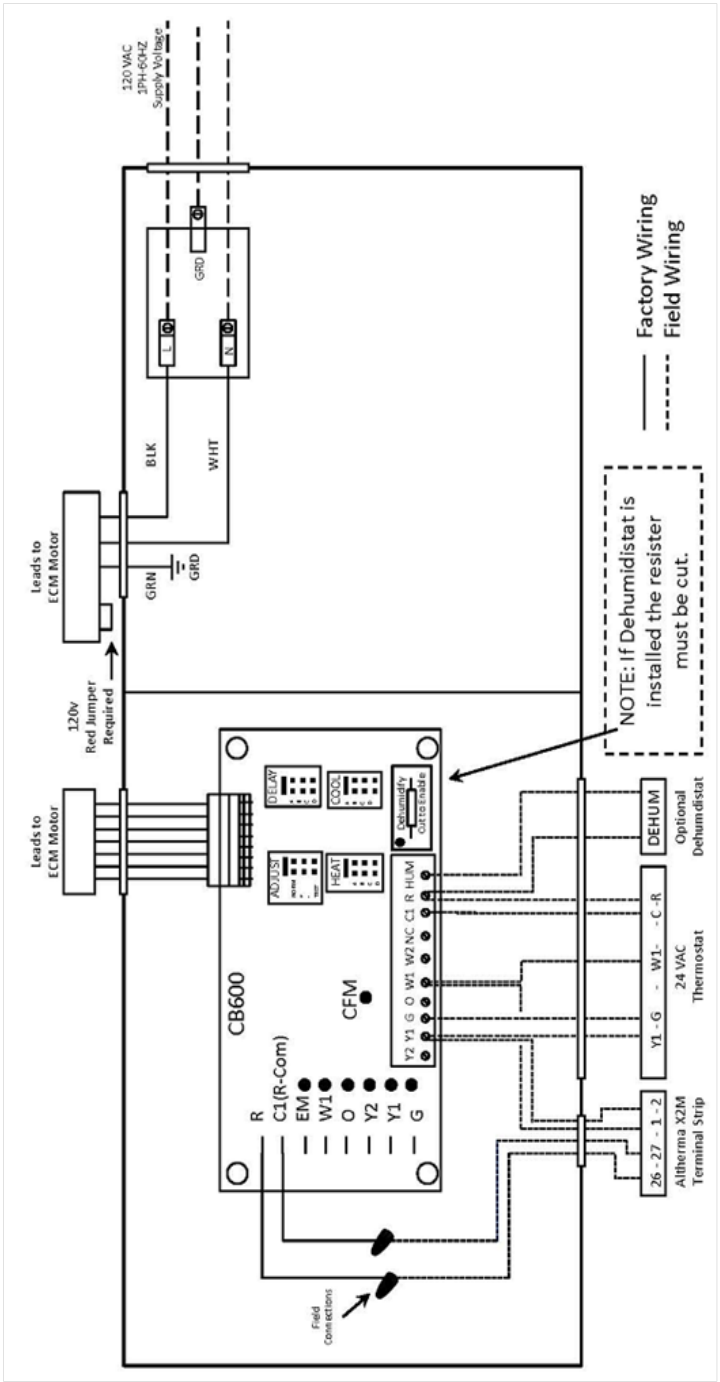
1. The resistance between any 2 motor leads should be similar; each should be within 1 or 2 ohms of each other.
2. If one or more of any 2 motor leads have very low or ohms as compared to each other replace motor.
3. The resistance between any two motor leads shows continuity or open the motor is defective.
4. If motor windings fail one of these tests, it is defective and must be replaced.

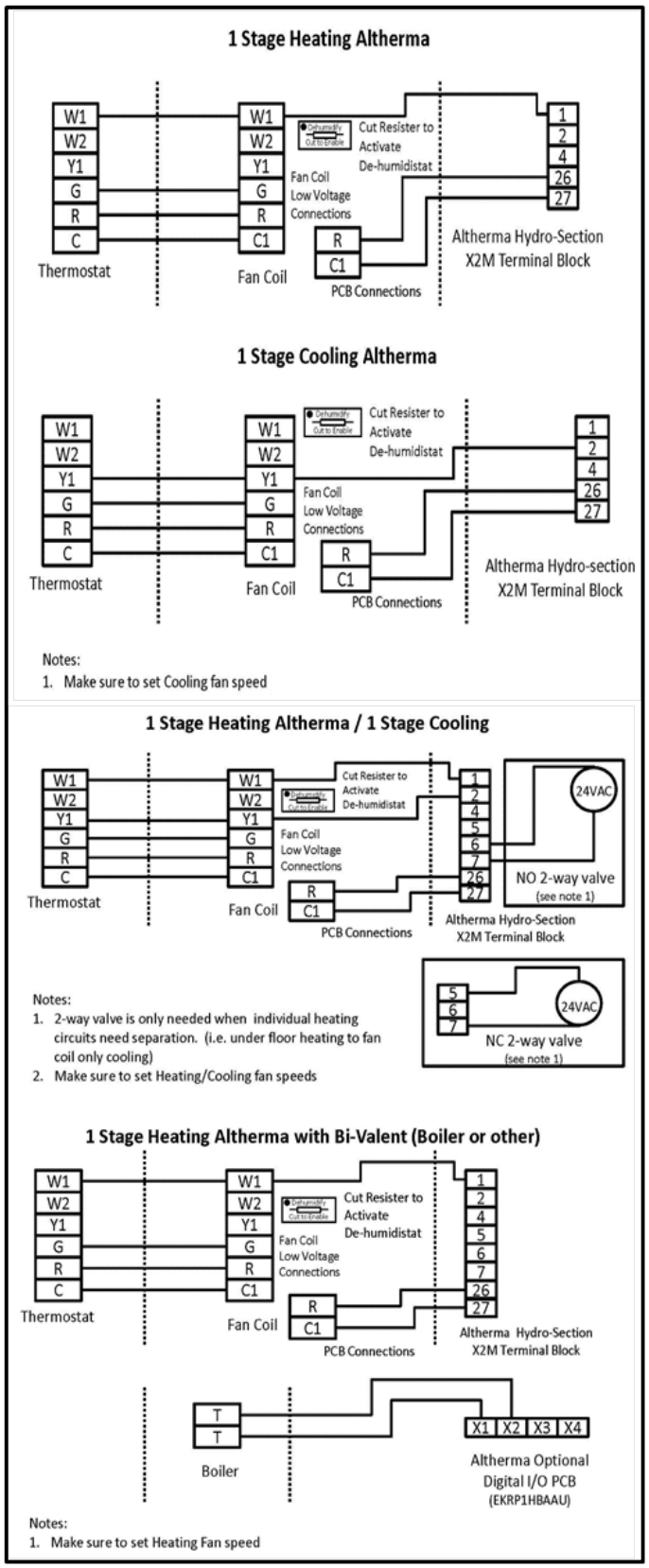
13. **Care and maintenance** – For continuing high performance, and to minimize possible equipment failure, it is essential that periodic maintenance be performed on this equipment

NOTE: In some models, not all speed taps are allowable for certain electric heat applications. Refer to Installation Manual and Ratings plate for minimum speed.

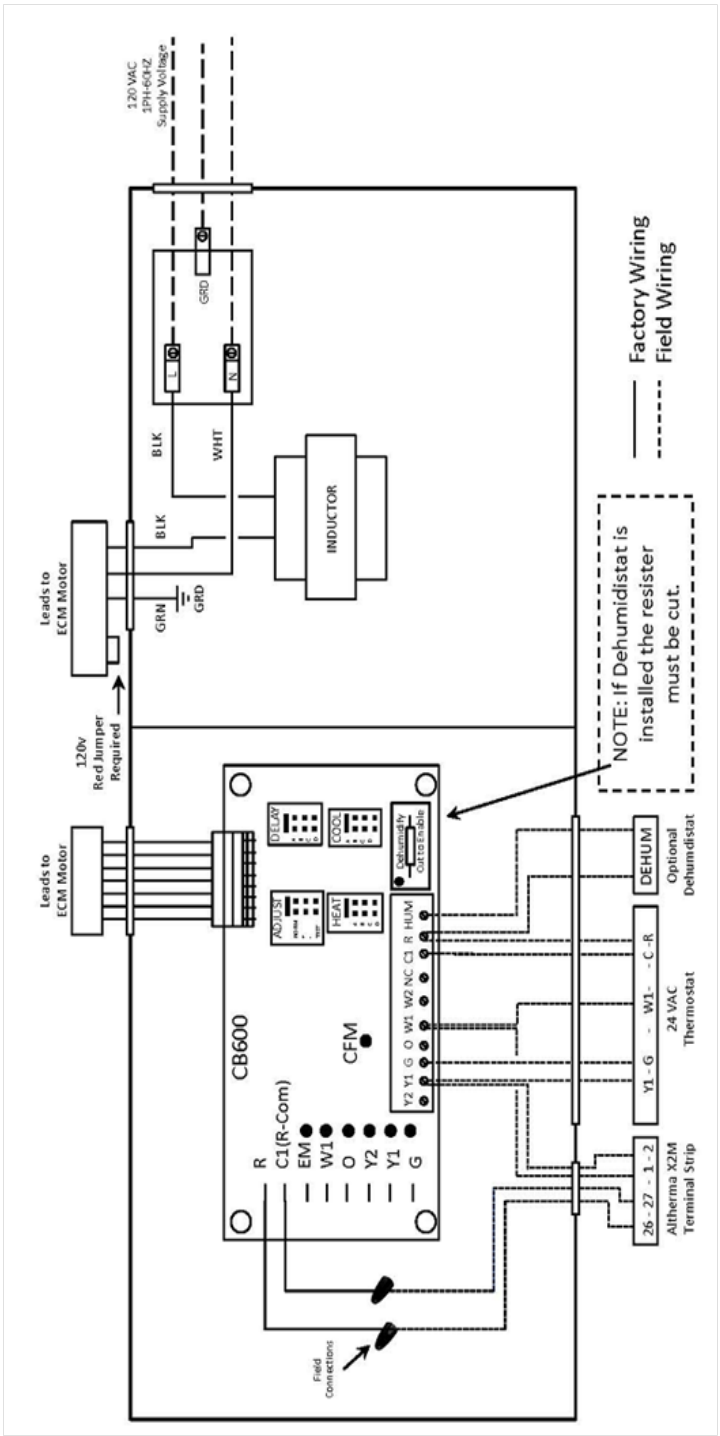
9. Fan Coil Unit Wiring Diagram

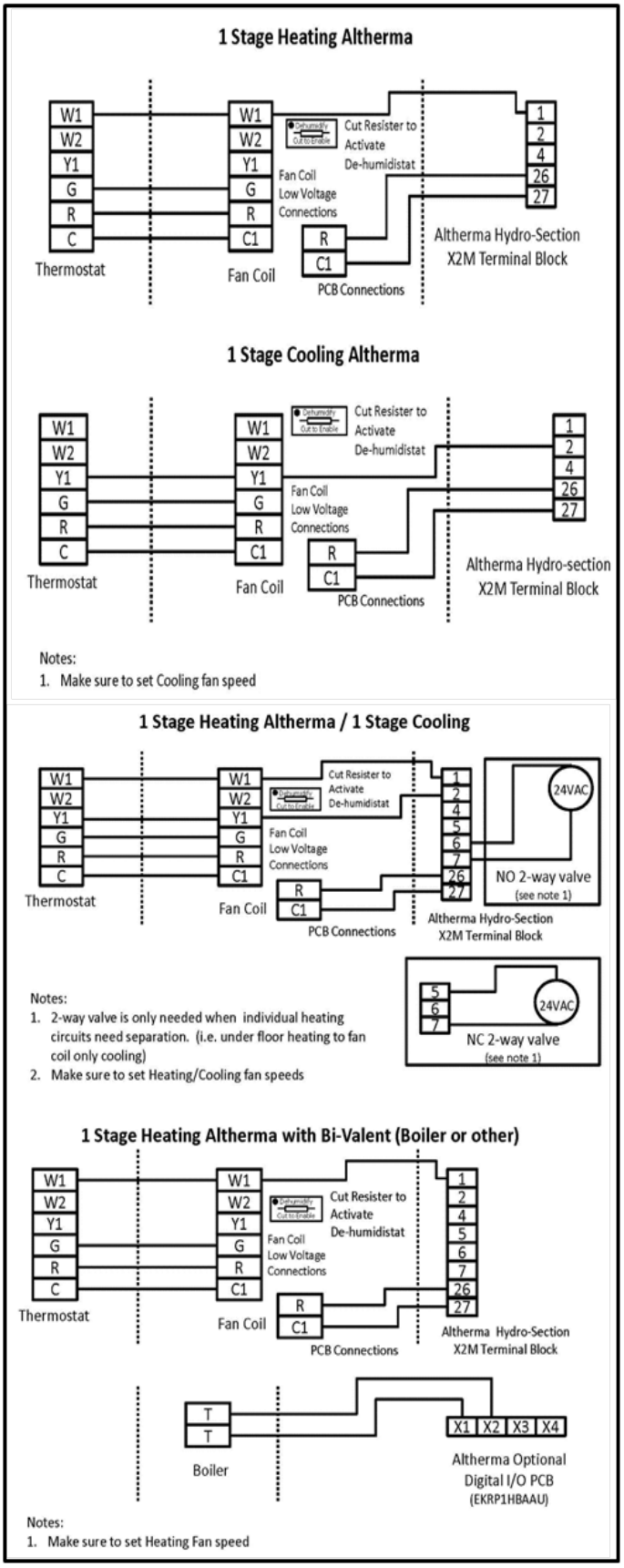
EFWT018~036AEVLU-00 Fan Coil (120v-ECM-No Electric Heat)



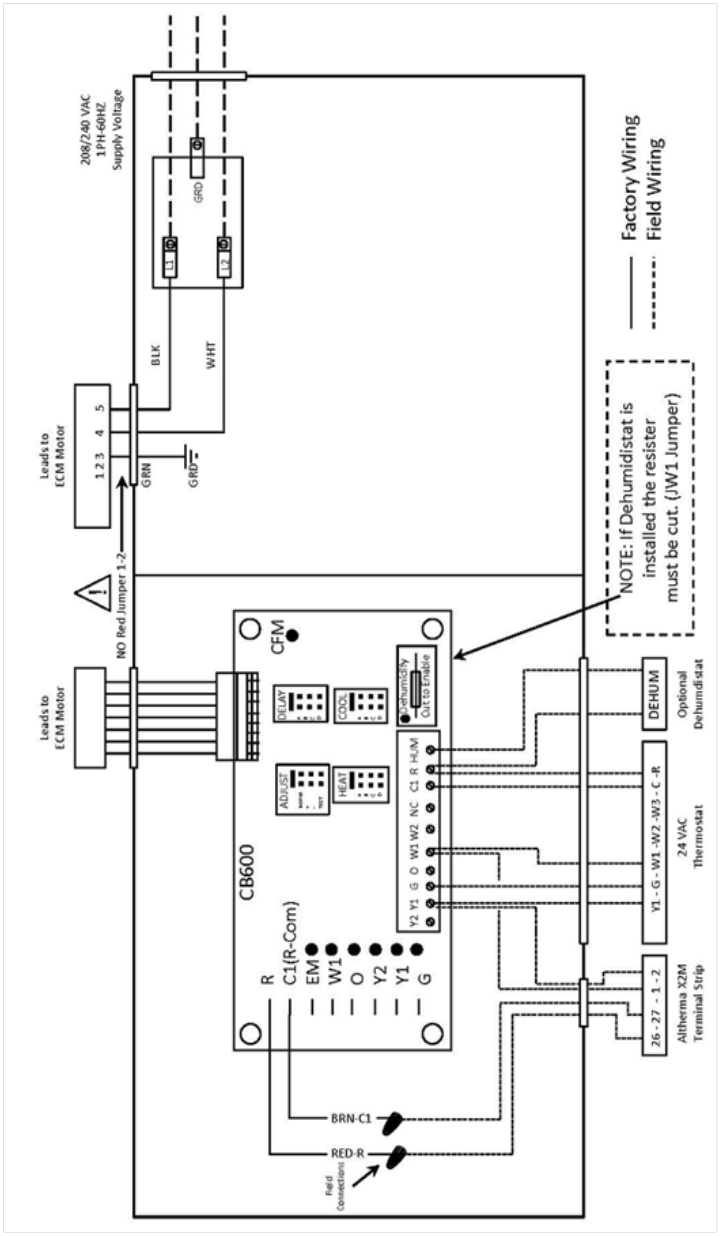


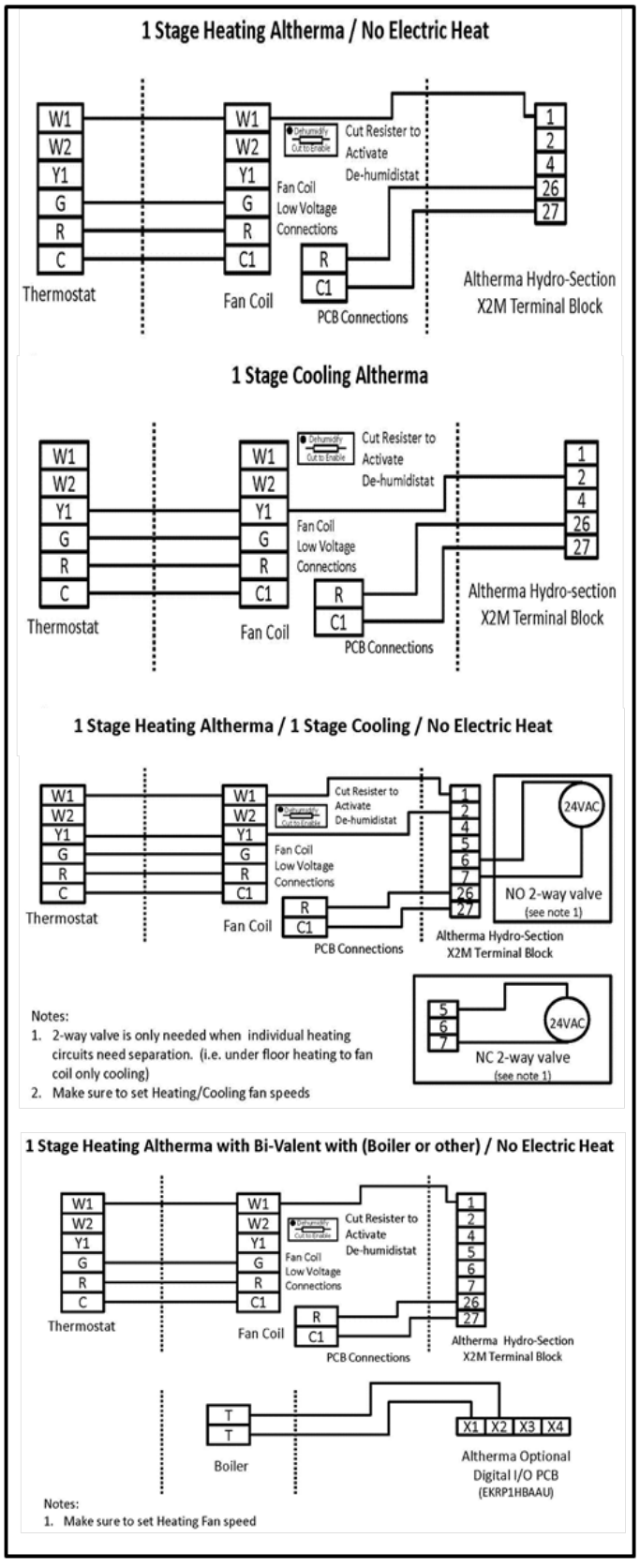
EFWT048~060AEVLU-00 Fan Coil (120v-ECM-No Electric Heat)



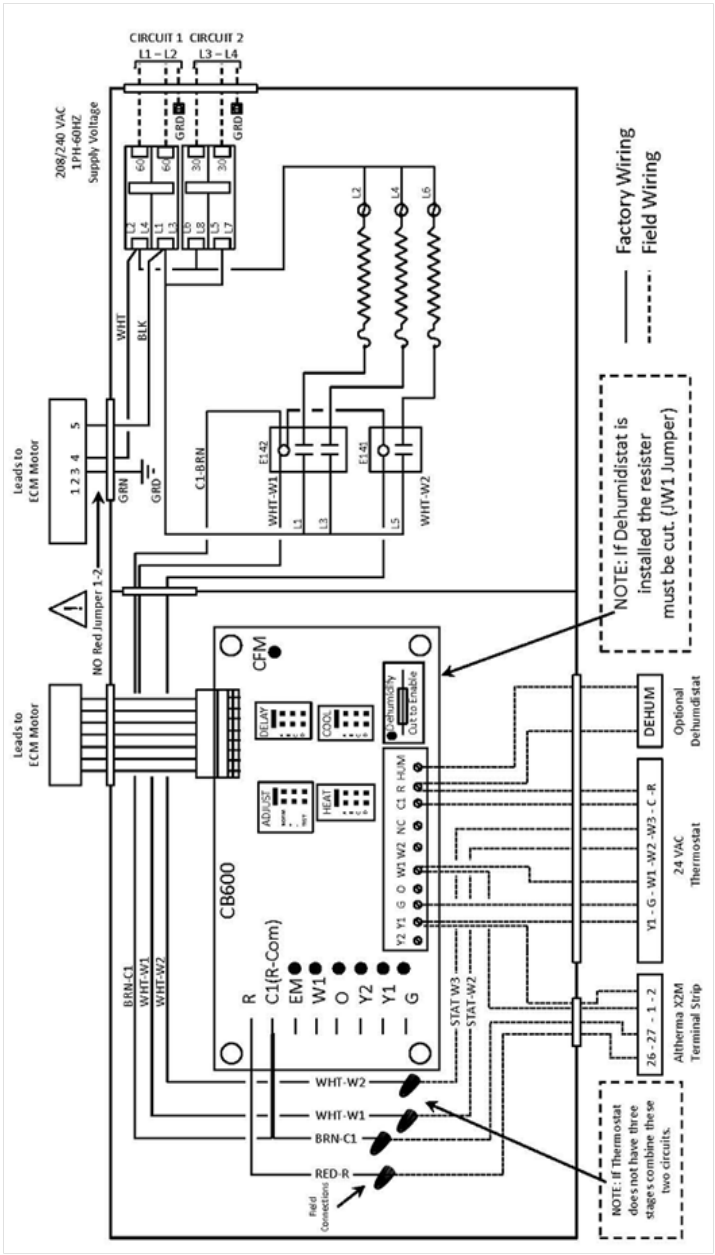


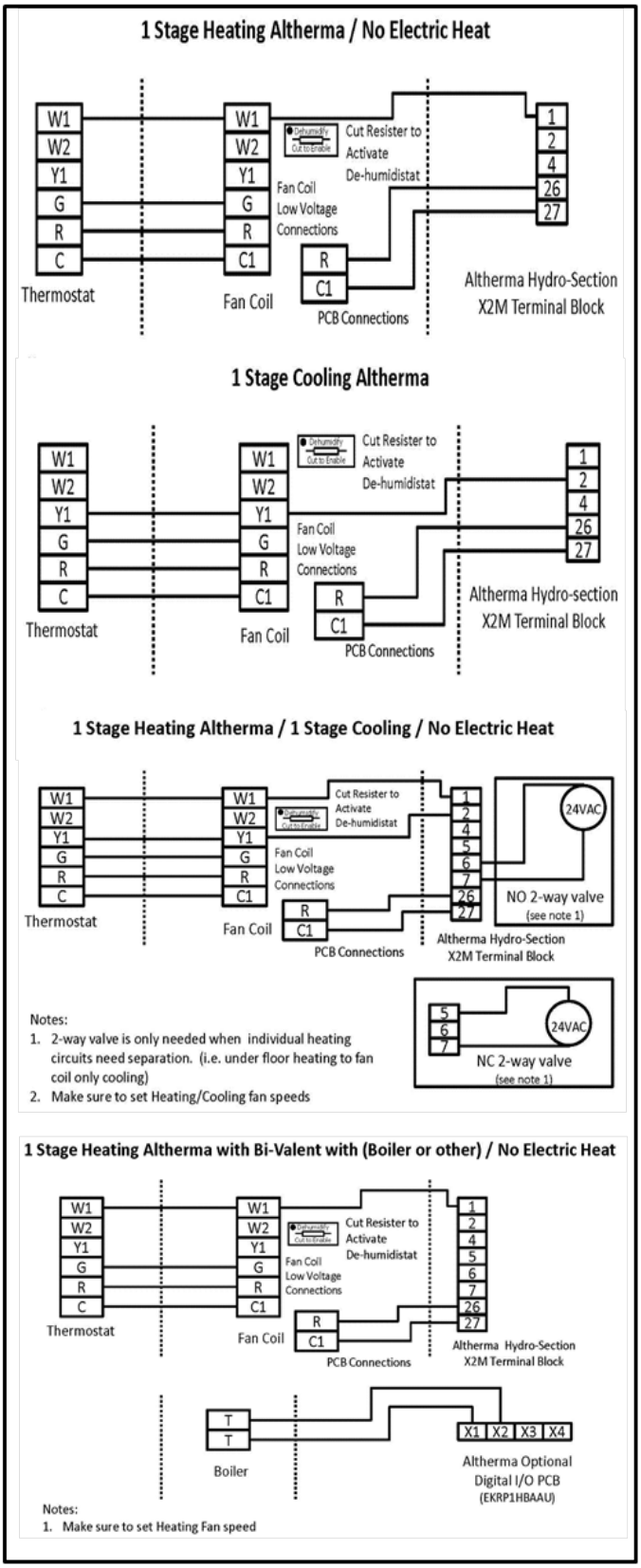
EFWT018~060AEVJU-00 Fan Coil (208-240v-ECM-No Electric Heat)

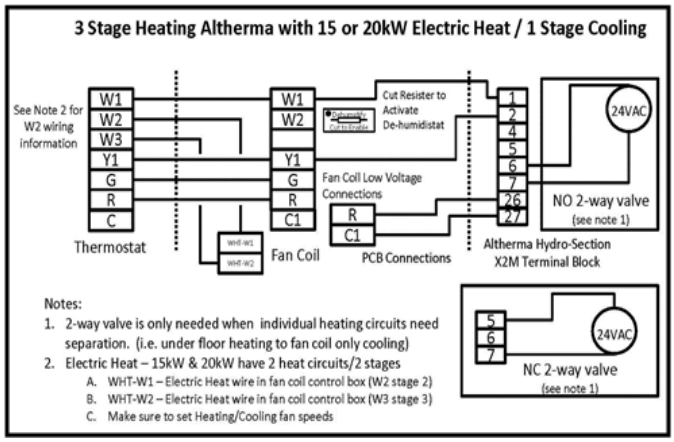




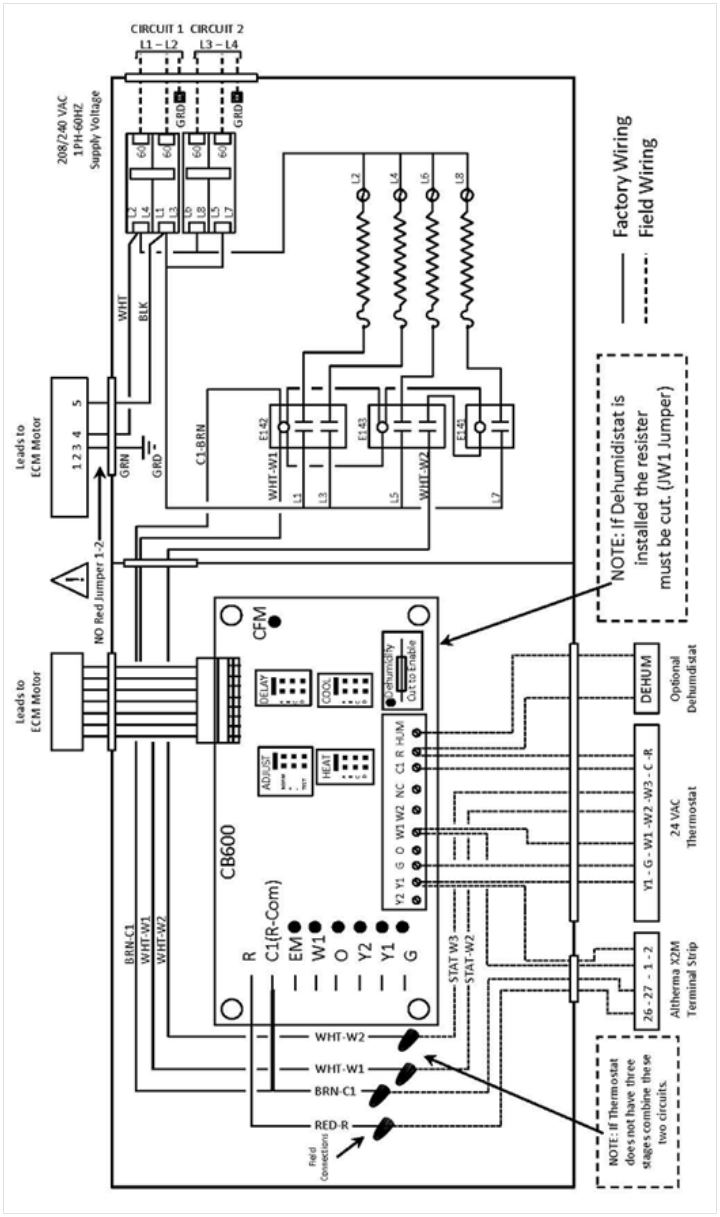
EFWT030~060AEVJU-15 Fan Coil (208-240v-ECM-15kW Electric Heat)

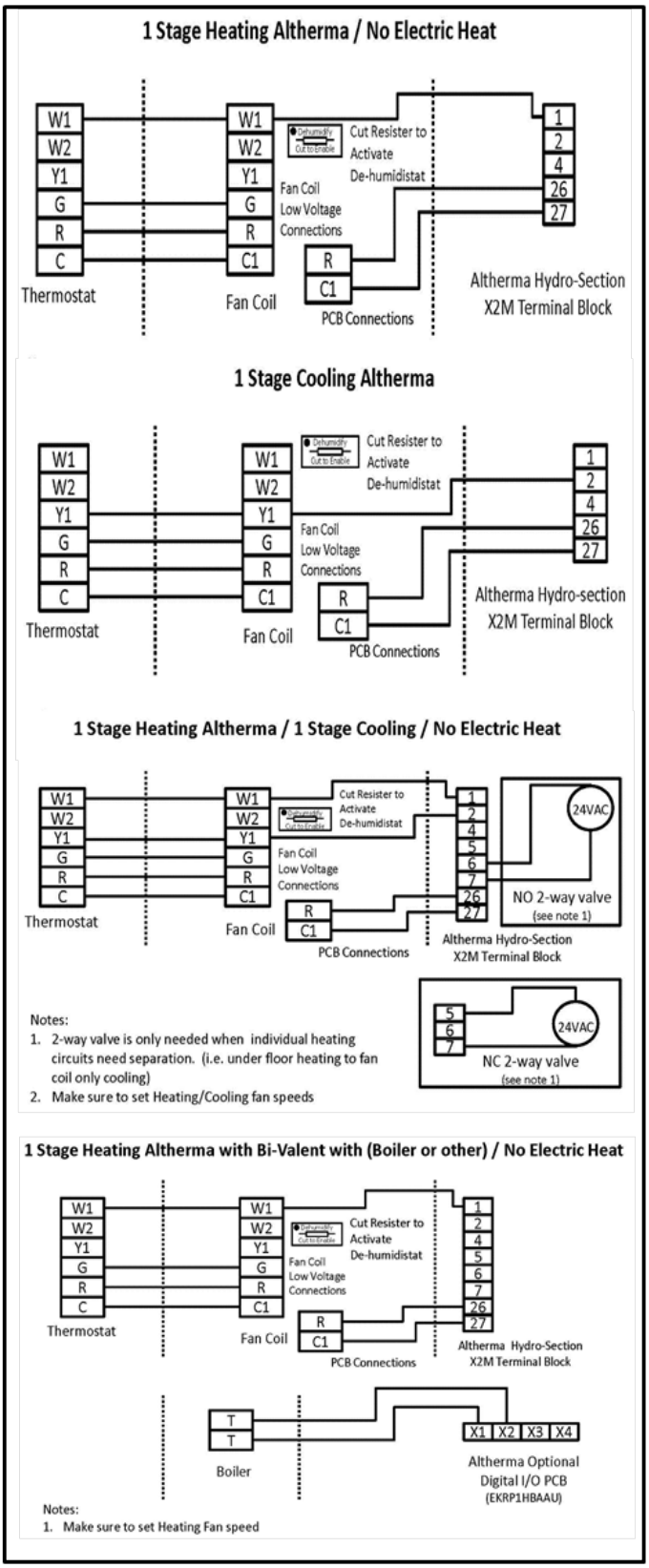


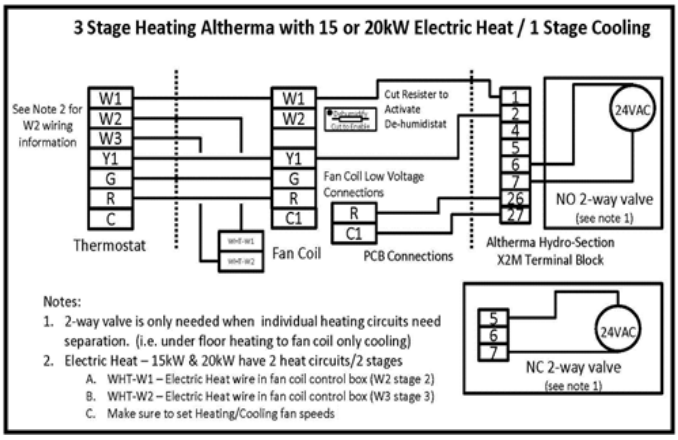




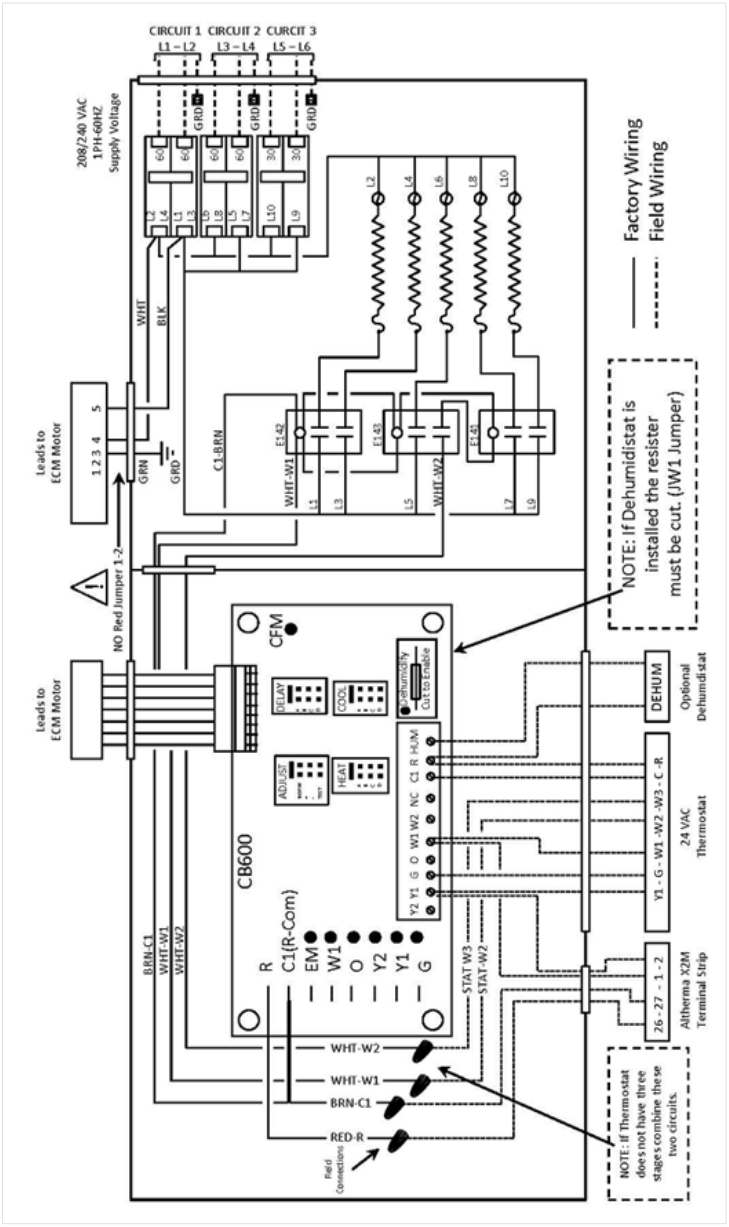
EFWT048~060AEVJU-20 Fan Coil (208-240v-ECM-20kW Electric Heat)



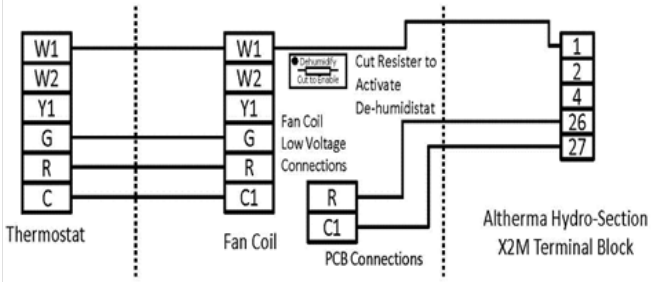




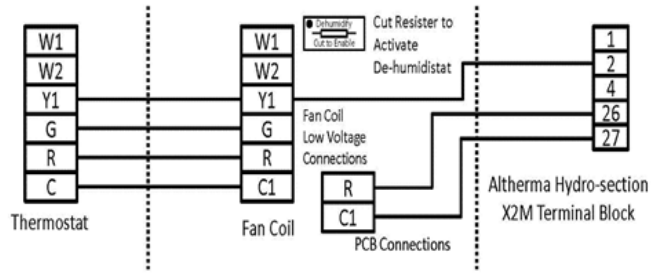
EFWT048~060AEVJU-25 Fan Coil (208-240v-ECM-25kW Electric Heat)



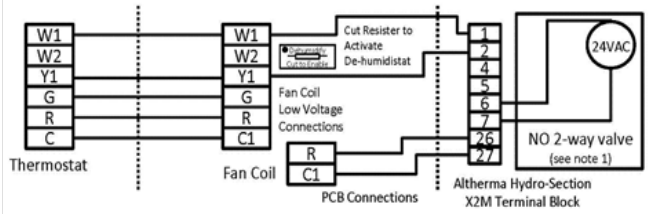
1 Stage Heating Altherma / No Electric Heat



1 Stage Cooling Altherma

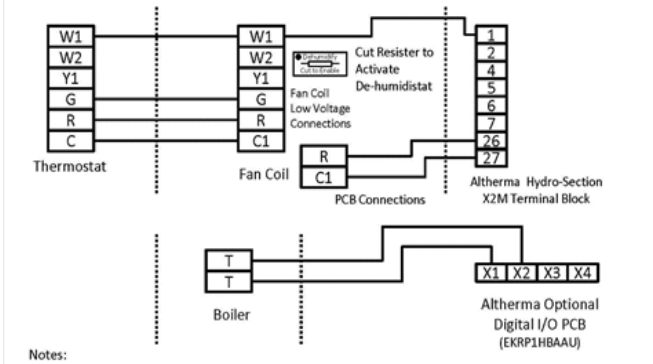


1 Stage Heating Altherma / 1 Stage Cooling / No Electric Heat



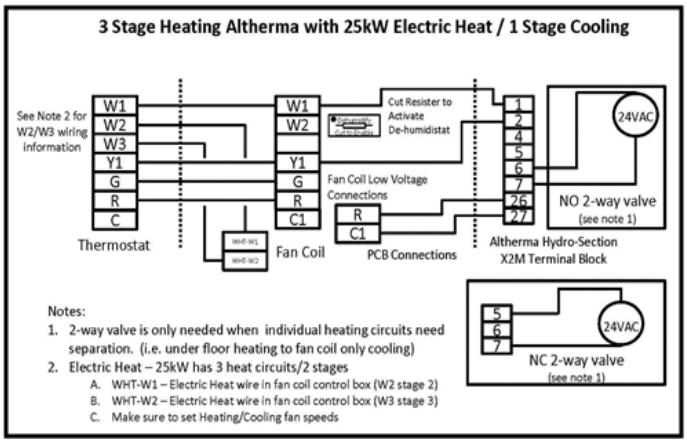
Notes:
1. 2-way valve is only needed when individual heating circuits need separation. (i.e. under floor heating to fan coil only cooling)
2. Make sure to set Heating/Cooling fan speeds

1 Stage Heating Altherma with Bi-Valent with (Boiler or other) / No Electric Heat



Notes:
1. Make sure to set Heating Fan speed

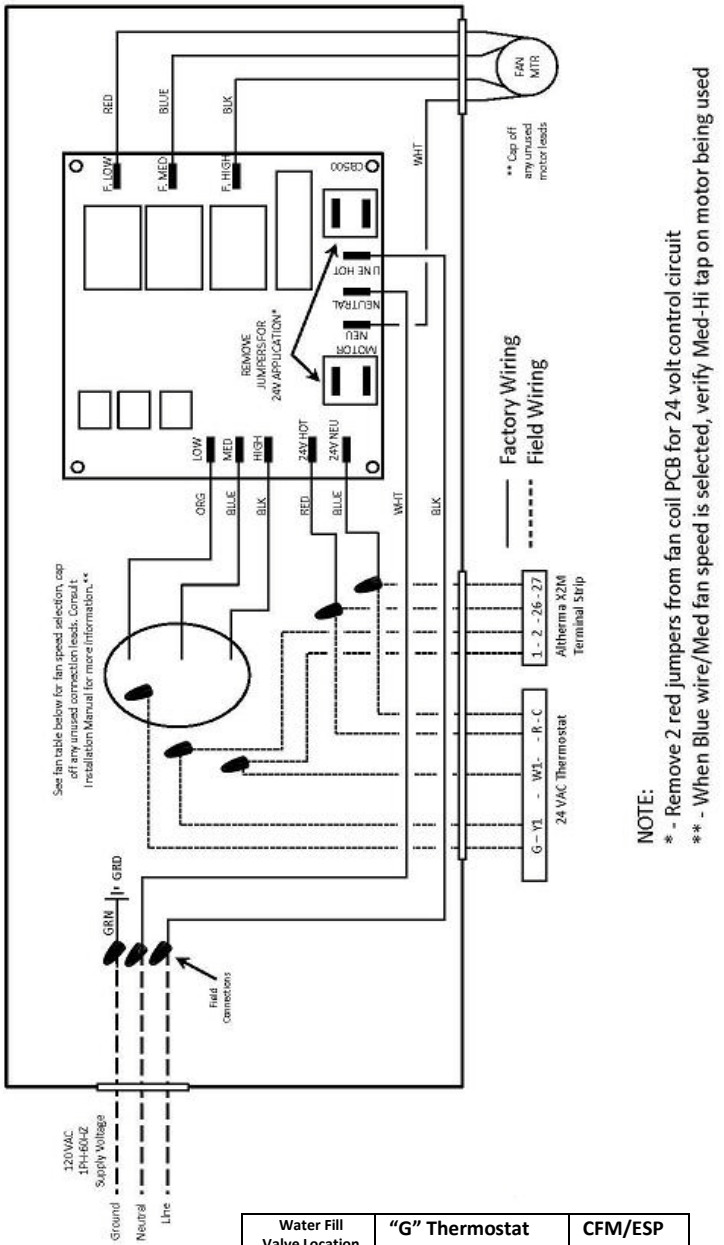
3 Stage Heating Altherma with 25kW Electric Heat / 1 Stage Cooling



Notes:
1. 2-way valve is only needed when individual heating circuits need separation. (i.e. under floor heating to fan coil only cooling)
2. Electric Heat – 25kW has 3 heat circuits/2 stages
   A. WHT-W1 – Electric Heat wire in fan coil control box (W2 stage 2)
   B. WHT-W2 – Electric Heat wire in fan coil control box (W3 stage 3)
   C. Make sure to set Heating/Cooling fan speeds

EFWT_APVLU Fan Coil (120V-PSC)

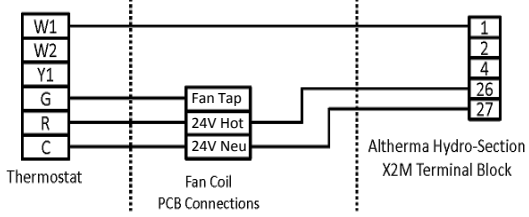
EFWT_APVLU Fan Coil (120V-PSC) / Altherma



NOTE:
* - Remove 2 red jumpers from fan coil PCB for 24 volt control circuit
** - When Blue wire/Med fan speed is selected, verify Med-Hi tap on motor being used

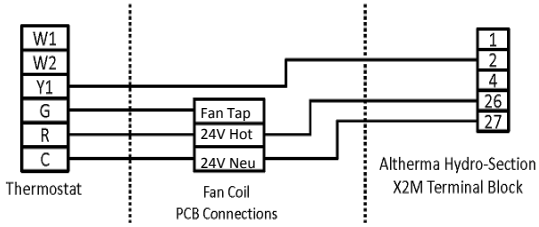
Water Fill Valve Location	"G" Thermostat	CFM/ESP
AIR FLOW		

1 Stage Heating Altherma



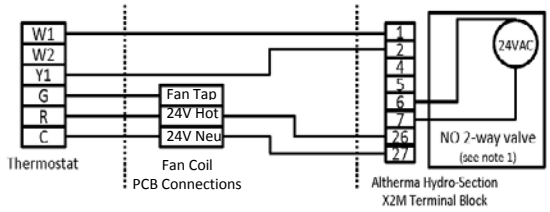
Notes:
1. Make sure to set fan speed (motor tap) (see section 10)
2. Remove 2 red jumpers from fan coil PCB for 24 volt control circuit

1 Stage Cooling Altherma

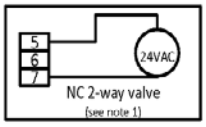


Notes:
1. Make sure to set fan speed (motor tap) (see section 10)
2. Remove 2 red jumpers from fan coil PCB for 24 volt control circuit

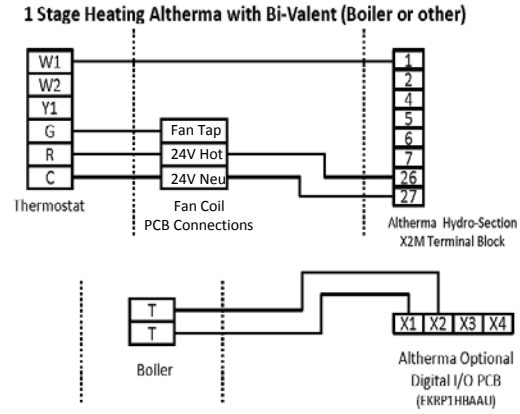
1 Stage Heating Altherma / 1 Stage Cooling



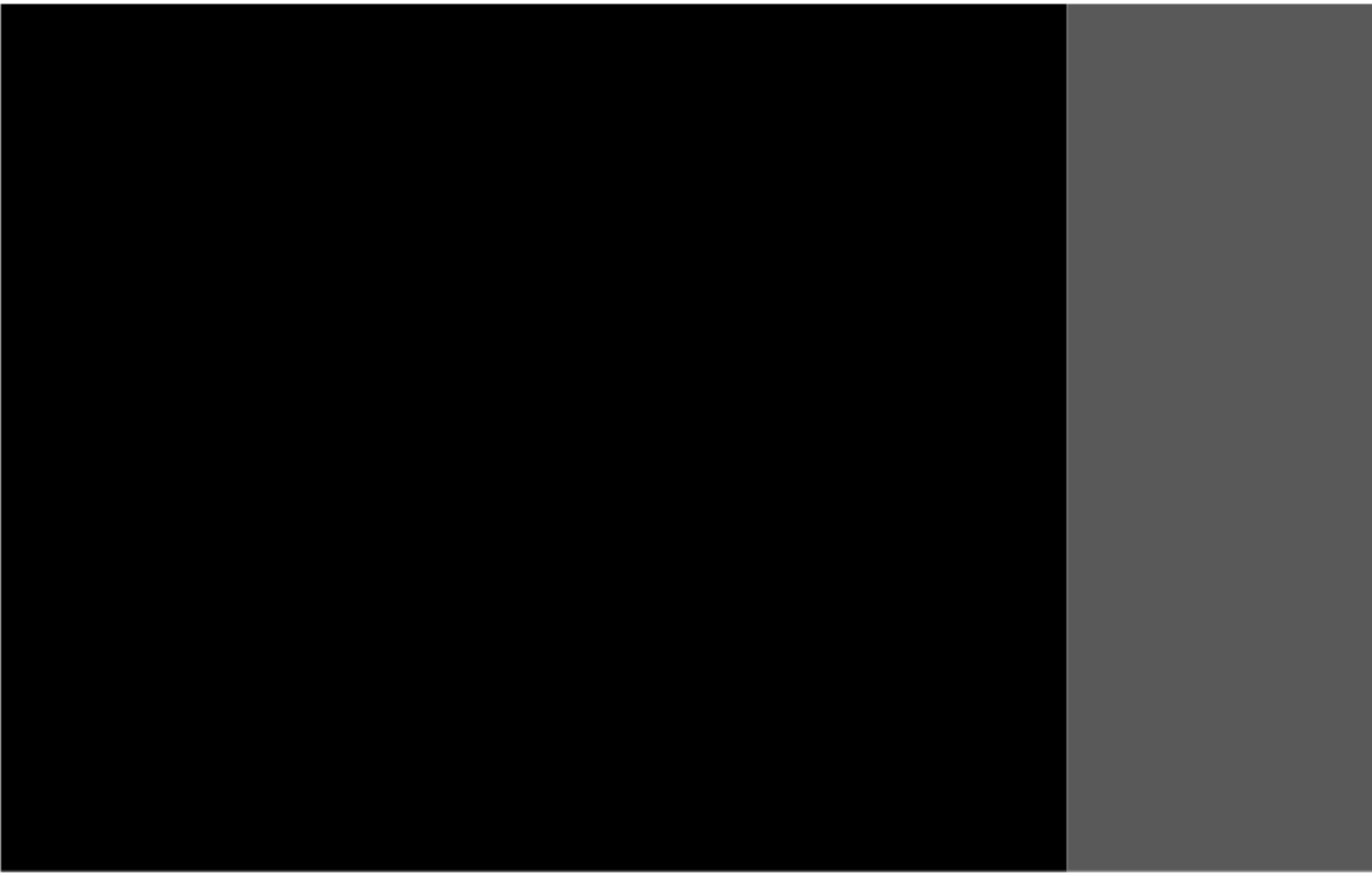
Notes:
1. 2-way valve is only needed when individual heating circuits need separation. (i.e. under floor heating to fan coil only cooling)
2. Make sure to set fan speed (motor tap) (see section 10)
3. Remove 2 red jumpers from fan coil PCB for 24 volt control circuit



1 Stage Heating Altherma with Bi-Valent (Boiler or other)



Notes:
1. Make sure to set fan speed (motor tap) (see section 10)
2. Remove 2 red jumpers from fan coil PCB for 24 volt control circuit



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years, Daikin has had the intention of becoming a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and reduction of waste.

DAIKIN AC (AMERICAS), INC.
1645 Wallace Drive, Suite 110
Carrollton, TX 75006
info@daikinac.com
www.daikinac.com

DAIKIN AC®
absolute comfort

c UL us
LISTED

DACA-EFWT10-2011