

STELLAR 2000™

SINGLE PIECE AIR HANDLERS

FOR USE WITH SPLIT-SYSTEM
HEAT PUMP

MODELS F*RP018 THRU F*RP042
F*FP018 THRU F*FP042

DESCRIPTION

This fan coil unit provides the flexibility for installation in any upflow or horizontal application. These versatile models may be used for split-system heat pump operation. Compact cabinets along with return air options in both the upflow and horizontal positions allow this unit to fit into tight spaces such as attics, crawl spaces, and closets.

FEATURES

CABINET -The compact and sturdy cabinet is protected with a durable, attractive finish to prevent rust. The cabinet is also insulated to prevent cabinet sweating. F*RP models have 1/2 inch fiber glass insulation and F*FP models have 1 inch insulation (R value = 4.2).

BLOWERS - Blowers are sized to circulate air both quietly and efficiently. The direct-drive, 3-speed motors provide a selection of air volume to match any application. Motor speeds may be selected via quick connect terminal at the motor. Slide-out blower/motor assemblies provide for easy servicing.

COILS - Using the latest in heat transfer technology, the rifled tube coil/aluminum fin coils produce high performance ratings and provide long lasting quality. The coils are capable of bottom return air in the upflow position, and right or left end return air in the horizontal position.

ELECTRIC HEATERS - Models providing up to 25kw of heat are available. Heaters can be field or factory installed.

EASY INSTALLATION - These fan coil units are designed to provide the lowest total installation cost. Accessible color coded control wiring, top and side power wiring knockouts, easy to install drain connections and electric heaters all combine to minimize installed cost on every job.

CONTROL BOARD - The control board is equipped with low voltage terminal strips for easy installation. The control board is also equipped with plug-in recepticals for the auxiliary heaters.

ACCESSORIES

Refer to Price Manual for specific model numbers.

SUSPENSION KIT - The suspension kit is designed to be used with all sizes of blowers whenever the application requires horizontal or vertical suspension of the unit.

ELECTRIC HEATERS - Models shown under Electrical Data include sequencers and temperature dual limit switches for safe, efficient operation. Circuit breakers are provided where shown.

BOLT-ON THERMAL EXPANSION VALVE - TXV kits are available for enhanced efficiency.

HORIZONTAL DRAIN PAN - The drain pan kit is designed for field conversion to Horizontal left or right applications. Also available as factory installed option (horizontal right only).



COOLING CAPACITY

OUTDOOR MODEL	AIR HANDLER			COIL MODEL	COOLING						ORIFICE #
	MODEL	ELECT. HT. KW	W		RATED CFM	NET MBH		KW	SEER	SEER/TXV ²	
						TOTAL	SENS.				
E1FB COMBINATIONS											
E1FB012	F1RP018	2.5, 5, 7.5	18	-	450	13.0	9.50	1.30	10.3	-	53
E1FB018				-	640	18.2	13.45	1.77	10.2	-	53
E1FB042	F1RP042	5, 7.5, 10, 15	21.5	-	1410	42.2	31.20	4.19	10.4	-	78
E1FD COMBINATIONS											
E1FD018	F1RP018	2.5, 5, 7.5	18	-	TO COME						
E1FD018	F1RP024	5, 7.5, 10	18	-	TO COME						
E1FD024				-	830	22.5	17.40	2.40	10.2	10.8	61
E1FD024	F1RP030	5, 7.5, 10	18	-	830	22.8	17.60	2.38	10.5	-	61
E1FD030				-	1045	28.5	22.00	2.98	10.5	10.8	67
E1FD030	F1RP036	5, 7.5, 10, 15	21.5	-	TO COME						
E1FD036				-	1235	34.2	25.20	3.87	10.0	-	75
E1FD036	F1RP042	5, 7.5, 10, 15	21.5	-	1235	35.1	26.00	3.87	10.2	-	75
E1FD042				-	TO COME						
E1FC COMBINATIONS											
E1FC018	F1RP018	2.5, 5, 7.5	18	-	TO COME						
E1FC018	F1RP024	5, 7.5, 10	18	-							
E1FC024				-							
E1FC024	F1RP030	5, 7.5, 10	18	-							
E1FC030				-							
E1FC030	F1RP036	5, 7.5, 10, 15	21.5	-							
E1FC036				-							
E1FC036	F1RP042	5, 7.5, 10, 15	21.5	-							
E1FC042				-							
E2 / E1FH COMBINATIONS											
E2FH018	F1RP018	2.5, 5, 7.5	18	-	TO COME						
E2FH018	F1RP024	5, 7.5, 10	18	-	640	19.5	14.00	1.88	-	12.5	-
E1FH024				-	830	23.0	17.30	2.10	-	12.0	-
E1FH024	F1RP030	5, 7.5, 10	18	-	TO COME						
E1FH030				-	1045	29.0	21.50	2.60	-	12.2	-
E1FH030	F1RP036	5, 7.5, 10, 15	21.5	-	TO COME						
E1FH036				-	1235	34.7	25.50	3.30	-	12.0	-
E2FH036	F1RP042	5, 7.5, 10, 15	21.5	-	1235	34.7	26.0	3.29	-	12.1	-
E2FH036				-	TO COME						
E1FH042	F1RP042	5, 7.5, 10, 15	21.5	-	1410	40.5	30.40	3.70	-	12.0	-
AC CONDENSER COMBINATIONS											
H1DB024	F1RP024	5, 7.5, 10	18	-	800	24.0	17.2	2.58	10.2	-	61
H1DB024	F1RP030		18	-	800	24.3	17.5	2.55	10.4	-	65
H1DB042	F1RP042		21.5	-	1410	39.5	30.8	4.44	10.0	-	81
H1DE024	F1RP030		18	-	800	24.3	17.5	2.35	-	11.5	-

APPLICATION FACTORS - Rated CFM vs. Actual CFM

% OF RATED AIR FLOW	80 %	90 %	RATED CFM	110 %	120 %
CAPACITY FACTOR	0.96	0.98	1.00	1.02	1.03

HEATING PERFORMANCE

O.D. MODEL	F1RP MODEL	ARI HEATING ²					OUTDOOR TEMP ³																														
		47°F		17°F		HSPF	-3°F		7°F		17°F		27°F		37°F		47°F		57°F																		
		MBH	COP	MBH	COP	STD	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW																	
E1FB COMBINATIONS																																					
E1FB012	018	13.0																13.0																			
E1FB018		18.0	3.0	9.9	2.0	7.1					9.9							18.0																			
E1FB042		38.0	3.0																38.0																		
E1FD COMBINATIONS																																					
E1FD018	018																																				
E1FD018	024																																				
E1FD024		22.5	3.1	12.5	2.0	7.0					12.5							22.5																			
E1FD024	030	22.8	3.2	12.8	2.1	7.4				12.8								22.8																			
E1FD030		28.4	3.8	17.5	2.3	7.5				17.5								28.4																			
E1FD030	036																																				
E1FD036		34.5	3.1	20.0	2.1	7.3				20.0								34.5																			
E1FD036	042	35.0	3.2	20.0	2.1	7.4				20.0								35.0																			
E1FD042																																					
E1FC COMBINATIONS																																					
E1FC018	018	TO COME																																			
E1FC018	024																																				
E1FC024	030																																				
E1FC030																																					
E1FC030	036																																				
E1FC036																																					
E1FC036	042																																				
E1FC042																																					
E1FH COMBINATIONS																																					
E2FH018	018																																				
E2FH018	024	19.5	3.2	11.3	2.1	7.5				11.3	2.1						19.5	3.2																			
E1FH024		23.0	3.00	13.4	2.0	7.2				13.4	2.0							23.0	3.0																		
E1FH024	030																																				
E1FH030		28.0	3.1	17.8	2.3	8				17.8	2.3							28.0	3.1																		
E1FH030	036																																				
E1FH036		34.0	3.1	21.2	2.2	7.6				21.2	2.2							34.0	3.1																		
E2FH036	042	36.0				8												36.0																			
E2FH036																																					
E1FH042		40.0	3.1	24.4	2.3	8				24.4	2.3							40.0	3.1																		

¹ Rated CFM same as for cooling.

² Heating performance and efficiency is the same for TXV application. Heating MBH based on 70° DB entering indoor air, 72% RH outdoor air with 25 feet of interconnecting piping and no supplemental electric heat operation.

³ Integrated heating capacities include the effect of defrost cycles in the temperature range where they occur.

COP equals MBH output divided by (total KW input x 3.412).

HSPF (Heating Seasonal Performance Factor) is the total heating output during a normal annual usage period for heating divided by the total electric power input during the same period.

PHYSICAL AND ELECTRICAL DATA

MODEL F*RP / F*FP...		018	024	030	036	042
Blower - Diameter x Width		9 x 6	10 x 6	10 x 8	10 x 8	10 x 8
Motor	HP	1/4	1/4	1/3	1/2	3/4
	Norminal RPM	1075	1075	1075	1075	1130
Voltage		208/230				
Amps	Full Load	1.6 / 1.4	1.6 / 1.4	2.5 / 2.2	3.3 / 2.9	4.4 / 3.8
	Locked Rotor	3.3 / 2.9	3.3 / 2.9	6.2 / 5.5	7.4 / 6.5	11.9 / 10.3
Filter ¹	Type	DISPOSABLE or PERMANENT				
	Size	16 x 20	16 x 20	16 x 20	20 x 20	20 x 20
Shipping / Operating Weight (lbs.)		87/92	93/98	100/105	109/115	115/121

¹Field Supplied

ELECTRICAL DATA - (Continued on page 5)

F*RP / F*FP Model	Heater Model	Total Heat ¹				KW Staging				Factory Installed O.C.P. 2
		KW		MBH		1st		2nd		
		208	240	208	240	208	240	208	240	
018N06	2HK06500206A	1.9	2.5	6.5	8.5	1.9	2.5	-	-	NONE
	2HK16500206A	1.9	2.5	6.5	8.5	1.9	2.5	-	-	BREAKER
	2HK06500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	NONE
	2HK16500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	BREAKER
	2HK06500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	NONE
	2HK16500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	BREAKER
024N06	2HK06500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	NONE
	2HK16500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	BREAKER
	2HK06500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	NONE
	2HK16500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	BREAKER
	2HK06501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	NONE
	2HK16501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	BREAKER
030N06	2HK06500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	NONE
	2HK16500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	BREAKER
	2HK06500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	NONE
	2HK16500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	BREAKER
	2HK06501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	NONE
	2HK16501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	BREAKER
036N06	2HK16501506A	11.3	15.0	38.6	51.2	7.6	10.0	3.8	5.0	BREAKER
	2HK06500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	NONE
	2HK16500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	BREAKER
	2HK06500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	NONE
	2HK16500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	BREAKER
	2HK06501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	NONE
042N06	2HK16501006A	7.5	10.0	25.6	34.1	3.8	5.0	3.8	5.0	BREAKER
	2HK06501506A	11.3	15.0	38.6	51.2	7.6	10.0	3.8	5.0	BREAKER
	2HK06500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	NONE
	2HK16500506A	3.8	5.0	13.0	17.1	3.8	5.0	-	-	BREAKER
	2HK06500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	NONE
	2HK16500806A	5.6	7.5	19.1	25.6	3.8	5.0	1.9	2.5	BREAKER

¹ See Conversion Table below:

² O.C.P. = Over-Current Protection

KW & MBH CONVERSIONS - FOR TOTAL POWER INPUT REQUIREMENT

FOR	208V	OPERATION, MULTIPLY	240V	TABULATED KW & MBH BY	.751
			230V		

LIMITATIONS

These units must be wired and installed in accordance with all national and local safety codes.

Voltage limits are as follows:

Normal Operating Voltage Range*	187 - 253
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* Utilization range "A" in accordance with ARI Std. 110.

Air flow must be within the minimum and maximum limits approved for electric heat, evaporator coils and outdoor units.

Entering Air Temperature Limits			
Wet Bulb Temp. °F		Dry Bulb Temp. °F	
Min.	Max.	Min.	Max.
57	72	65	95

ELECTRICAL DATA

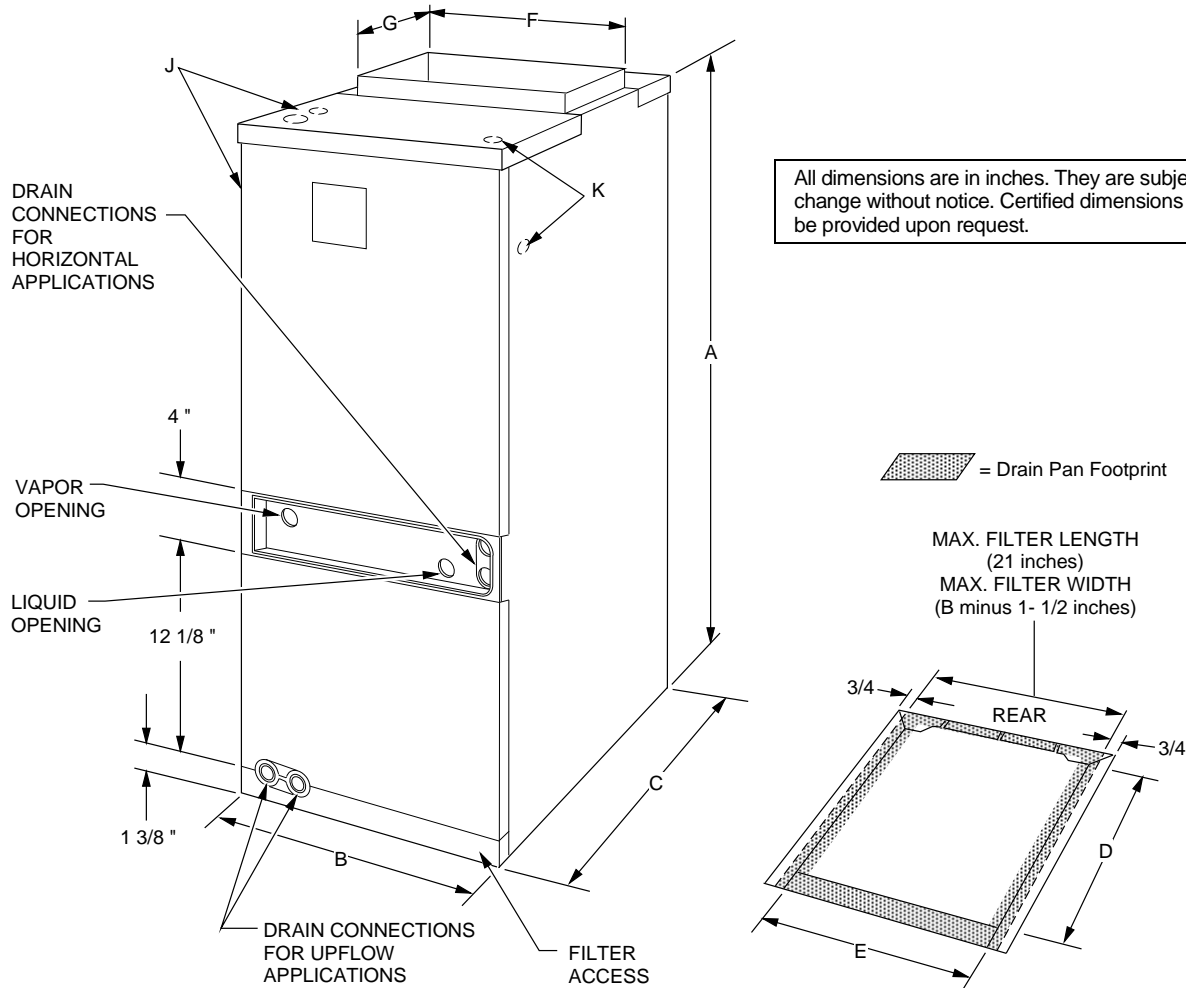
F*RP / F*FP Model	Heater Model	Field Wiring					
		Min. Circuit Ampacity		Max. O.C.P. ² Amps/Type		Wire Size - AWG	
		208V	240V	208V	240V	75°C	
018N06	2HK06500206A	13.4	14.8	15	15	14	14
	2HK16500206A	13.4	14.8	15	15	14	14
	2HK06500506A	24.9	27.8	25	30	10	10
	2HK16500506A	24.9	27.8	25	30	10	10
	2HK06500806A	35.7	40.8	40	45	8	8
024N06	2HK16500806A	35.7	40.8	40	45	8	8
	2HK06500506A	24.9	27.8	25	30	10	10
	2HK16500506A	24.9	27.8	25	30	10	10
	2HK06500806A	35.7	40.8	40	45	8	8
	2HK16500806A	35.7	40.8	40	45	8	8
030N06	2HK06501006A	47.1	53.8	50	60	8	6
	2HK16501006A	47.1	53.8	50	60	8	6
	2HK06500506A	26.0	28.8	30	30	10	10
	2HK16500506A	26.0	28.8	30	30	10	10
	2HK06500806A	36.8	41.8	40	45	8	8
036N06	2HK16500806A	36.8	41.8	40	45	8	8
	2HK06501006A	48.2	54.8	50	60	8	6
	2HK16501006A	48.2	54.8	50	60	8	6
	2HK16501506A	71.1	80.9	80	90	4	3
	2HK06500506A	27.0	29.7	30	30	10	10
042N06	2HK16500506A	27.0	29.7	30	30	10	10
	2HK06500806A	37.8	42.7	40	45	8	8
	2HK16500806A	37.8	42.7	40	45	8	8
	2HK06501006A	49.3	55.7	50	60	8	6
	2HK16501006A	49.3	55.7	50	60	8	6
042N06	2HK16501506A	72.1	81.8	80	90	4	3
	2HK06500506A	28.3	30.8	30	35	10	8
	2HK16500506A	28.3	30.8	30	35	10	8
	2HK06500806A	39.1	43.8	40	45	8	8
	2HK16500806A	39.1	43.8	40	45	8	8
042N06	2HK06501006A	50.6	56.8	60	60	6	6
	2HK16501006A	50.6	56.8	60	60	6	6
	2HK16501506A	73.4	82.9	80	90	4	3

² O.C.P. = Over-Current Protection

COIL DATA

COIL USED WITH F*RP / F*FP.	STD. ORIFICE SIZE	FACE AREA (SQ. FT.)	ROWS DEEP	FINS PER INCH	EXPANSION DEVICE
018	53	2.43	2	14	ORIFICE
024	61	3.40	2	14	ORIFICE
030	65	3.89	2	14	ORIFICE
036	75	3.40	3	14	ORIFICE
042	78	3.89	3	14	ORIFICE

DIMENSIONS



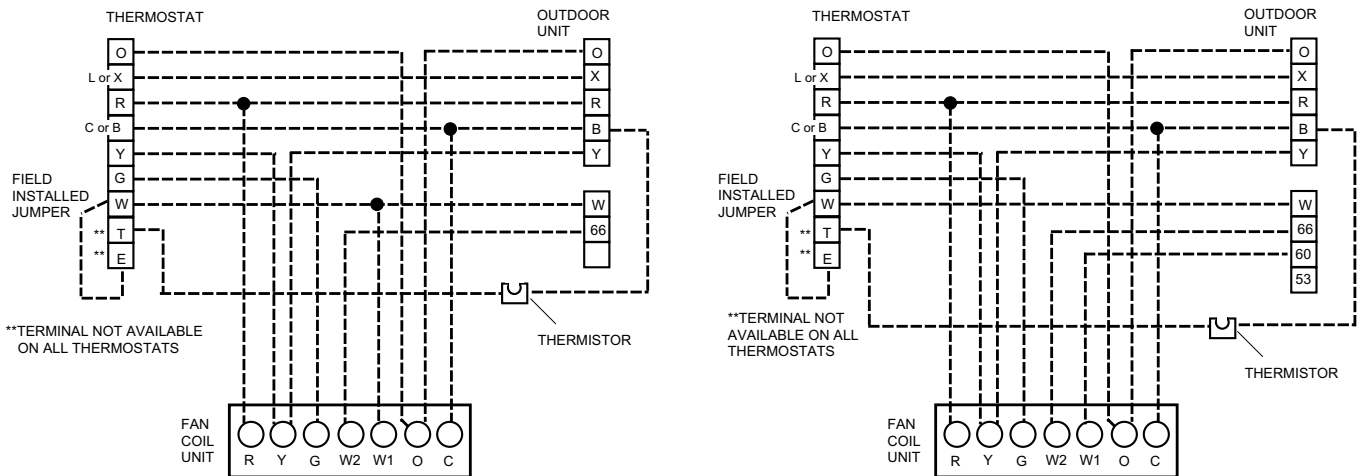
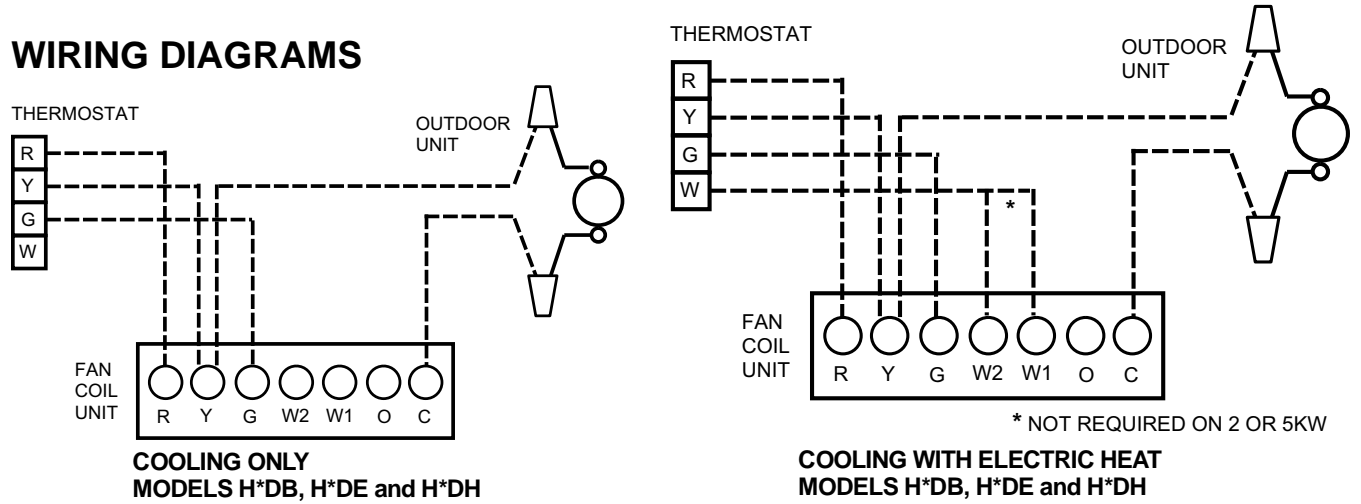
F*RP / F*FP MODEL	Dimensions							Wiring K.O.'s*		Refrigerant Connections	
	A	B	C	D	E	F	G	J	K	Line Size	
	Height	Width	Depth					Power	Control	Liquid	Vapor
018	40	18	22	18-3/8	14-7/8	16-1/2	10-3/8	7/8	7/8	3/8	5/8
024	40	18			14-7/8	16-1/2					5/8
030	40	18			14-7/8	16-1/2					3/4
036	40	21-1/2			18-3/8	20					3/4
042	40	21-1/2			18-3/8	20					7/8

NOTE: For all electric heat applications, ducts must be sized to match unit discharge air opening.

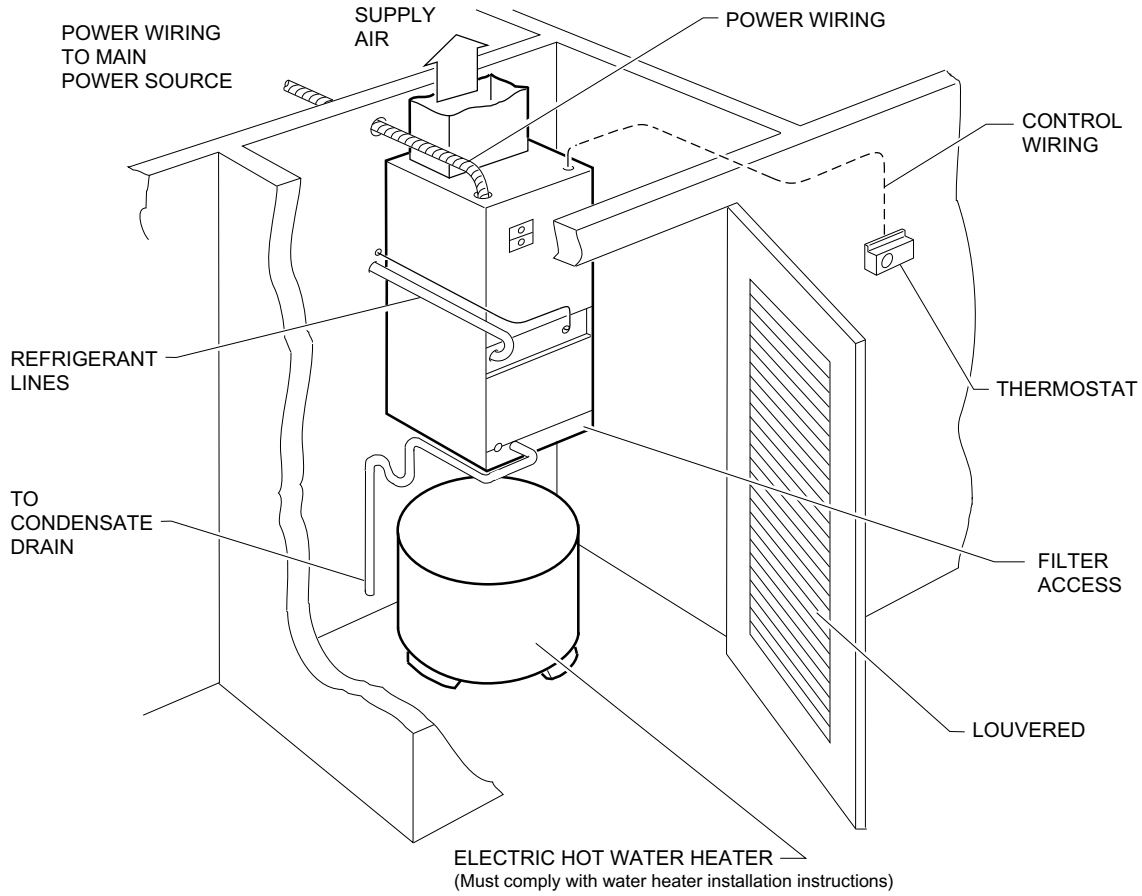
AIR FLOW DATA (RETURN AIR FILTER AND LARGEST ELECTRIC HEATER INCLUDED)

F*RP / F*FP MODEL	BLOWER MOTOR SPEED	230 VOLT					208 VOLT				
		CFM @ External Static Pressure - IWG									
		0.10	0.20	0.30	0.40	0.50	0.10	0.20	0.30	0.40	0.50
018	High	855	810	765	710	650	770	729	689	639	585
	Med.	765	730	695	650	590	689	657	626	585	531
	Low	645	620	590	555	505	581	558	531	500	455
024	High	950	910	865	835	775	855	819	779	752	698
	Med.	845	815	785	745	705	760	733	706	670	634
	Low	650	630	605	575	540	585	567	545	518	486
030	High	1,270	1,210	1,150	1,085	1,015	1,143	1,089	1,035	977	914
	Med	1,050	1,040	995	930	855	941	936	895	837	770
	Low	855	820	780	735	680	770	738	702	662	612
036	High	1,280	1,225	1,165	1,105	1,040	1,152	1,103	1,049	995	936
	Med	1,185	1,140	1,090	1,035	970	1,067	1,026	981	935	873
	Low	1,060	1,015	970	925	860	954	914	873	833	774
042	High	1,480	1,425	1,370	1,310	1,240	1,332	1,283	1,233	1,179	1,116
	Med	1,350	1,295	1,245	1,180	1,115	1,215	1,166	1,121	1,062	1,004
	Low	1,250	1,200	1,155	1,100	1,050	1,125	1,080	1,040	990	945

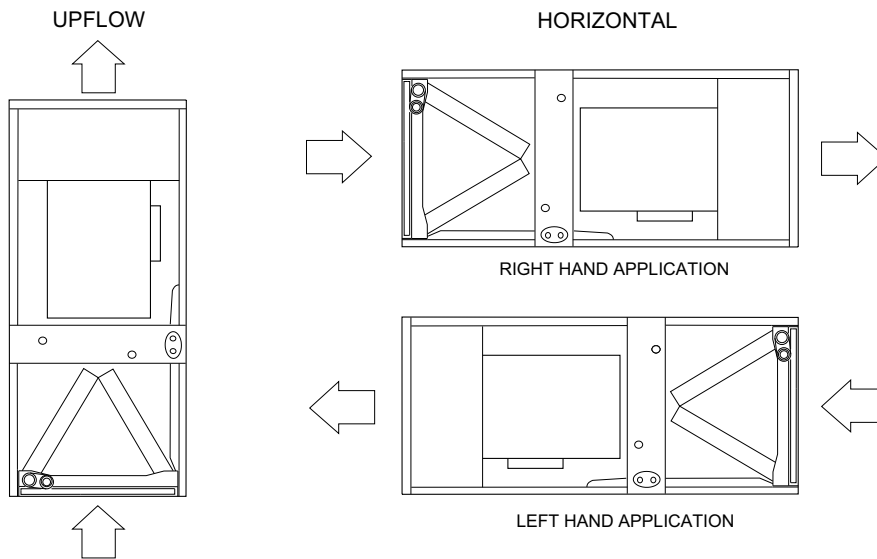
WIRING DIAGRAMS



TYPICAL INSTALLATION



TYPICAL APPLICATIONS



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