



FIRST CO.
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FIRST-PAK[®]

GAS



SINGLE PACKAGE VERTICAL GAS UNIT (FPGN8)

80% AFUE

12,000 through 30,000 BTUH Cooling
Capacity

Up to 60,000 BTUH Heating Capacity



Features and benefits



FEATURES

- Self-contained packaged units with gas-fired heating and electric cooling
- Pre-wired and pre-charged from factory
- Eliminates the need for outdoor condensing section units, line-sets and separate ventilation
- All FPG series units are compatible with Magic-Pak, Comfort-Pack and Condo-Pack

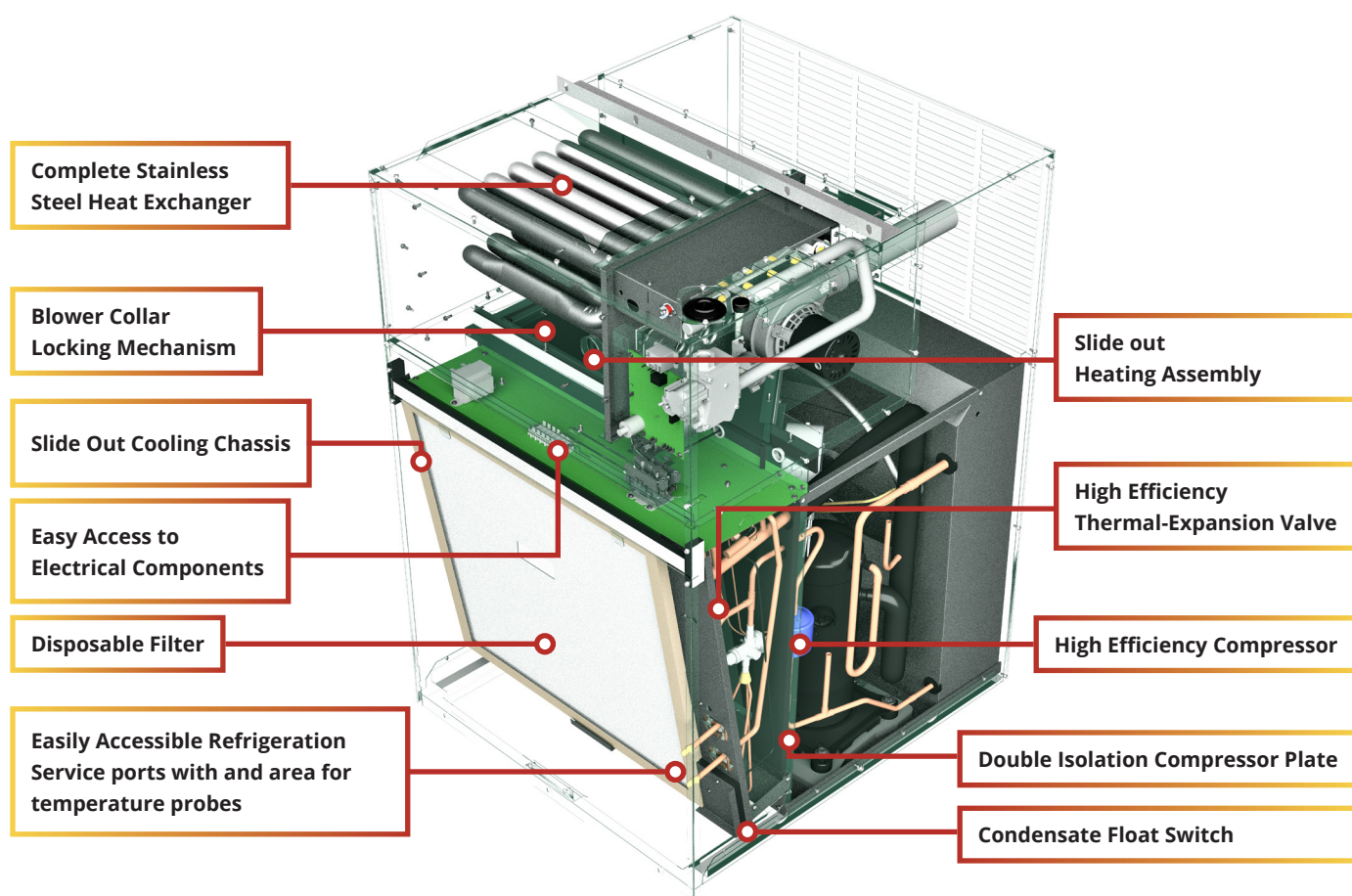
PRODUCT FEATURES

- High efficiency scroll and rotary compressors
- Easily accessible refrigeration service ports with an area for temperature probes
- Factory installed condensate float switch
- Architectural louvers available
- Larger air coil with low face velocity for improved cooling performance
- 80% AFUE gas heat rating for all FPGN8 series models
- Stainless steel heat exchanger for corrosion resistance
- High efficiency ECM indoor blower with multiple speed taps for precise airflow selection
- High efficiency ECM condenser fan motor to improve system efficiency
- Insulation inside of cooling compartment to improve cooling performance and reduce noise
- Dual inlet indoor blower to lower fan rpm's, improve efficiency and reduce noise
- Double isolated compressor mount to lower compressor noise and vibration
- Blower collar locking mechanism to improve seal between cooling chassis and cabinet
- Warranty: 20 year for heat exchanger and 5 year for parts / compressor
- 2.5T models come standard with dual stage scroll compressors

Features and Benefits

SERVICEABILITY FEATURES

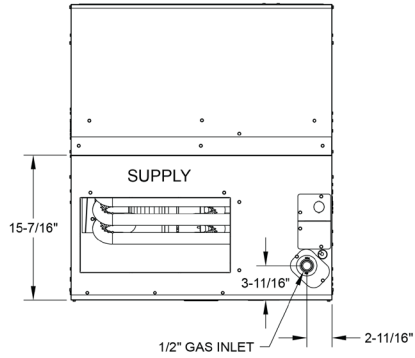
- Slide out cooling chassis for ease of service
- Slide out heating assembly that allows for easy access to all gas heat components
- High efficiency TXV on all models to allow for field adjustments, if required
- See through sight glass that allows for viewing the control board status codes and main burner function
- All electrical components are serviceable from front of the unit
- Compressor capacitor, compressor contactor, and indoor fan control located on panel at the front of the unit
- Additional cooling chassis can be stocked and switched out to limit down time of the occupant
- Refrigerant service ports are located on the outside the cooling chassis.



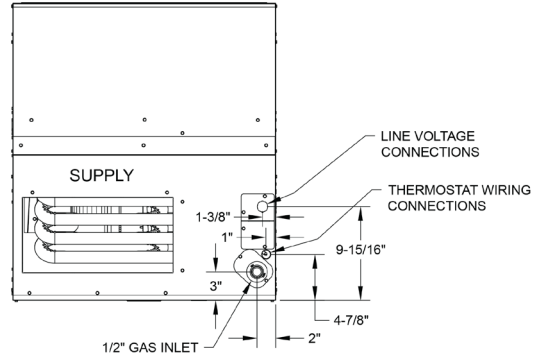
Physical Data

UNIT DIMENSIONS

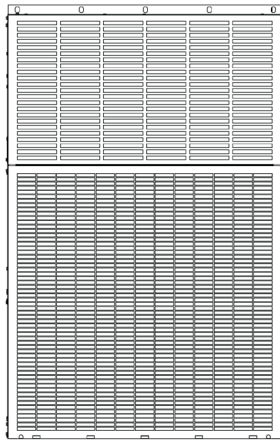
TOP VIEW:
2-5 BURNER



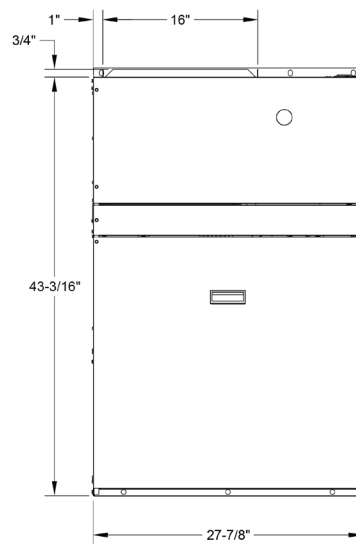
TOP VIEW:
6 BURNER



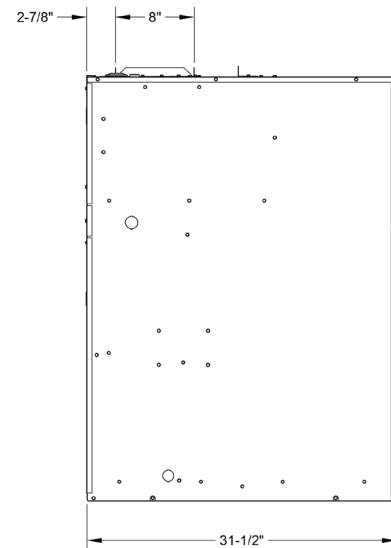
REAR VIEW



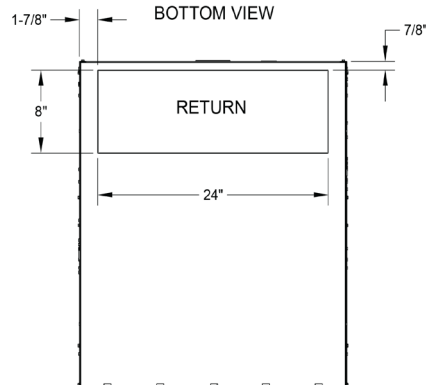
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



Physical Data (continued)

FIRST-PAK 12 AND 18								
	FPG20N8C12C	FPG30N8C12C	FPG40N8C12C	FPG20N8C18C	FPG30N8C18C	FPG40N8C18C	FPG50N8C18C	FPG60N8C18C
Unit Information								
Quantity / Type	Rotary (1)	Rotary (1)	Rotary (1)	Rotary (1)	Rotary (1)	Rotary (1)	Rotary (1)	Rotary (1)
Factory Charge (R410A) lbs. [kg]	3.75 [1.70]	3.75 [1.70]	3.75 [1.70]	4.8 [2.18]	4.8 [2.18]	4.8 [2.18]	4.8 [2.18]	4.8 [2.18]
Compressor Capacitor	40MFD/370V	40MFD/370V	40MFD/370V	35MFD/370V	35MFD/ 370V	35MFD/ 370V	35MFD/ 370V	35MFD/ 370V
Condenser Fan HP [kW]	1/5 [.15]	1/5 [.15]	1/5 [.15]	1/5 [.15]	1/5 [.15]	1/5 [.15]	1/5 [.15]	1/5 [.15]
Indoor Fan HP [kW]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]
Blower Size (D X W) in. [mm]	10 x 6 [25.4 x 15.24]							
Condenser Dimension (H x W) in. [mm]	26.5 x 22.25 [67.3 x 56.5]							
Evaporator Dimension (H x W) in. [mm]	23.1 x 22.25 [58.7 x 56.5]							
Filter Size (H x W) [mm]	24 x 24 [60.96 x 60.96]							
Input BTU/h [kW]	20000 [5.9]	30000 [8.8]	40000 [11.7]	20000 [5.9]	30000 [8.8]	40000 [11.7]	50000 [14.7]	60000 [17.6]
Output BTU/h [kW]	16200 [4.7]	24300 [7.1]	32400 [9.5]	16200 [4.7]	24300 [7.1]	32400 [9.5]	40500 [11.9]	48600 [14.2]
AFUE	81	81	81	81	81	81	81	81
No. of Burners	2	3	4	2	3	4	5	6
Orifice Size (Natural Gas) in. [mm]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]
Max. Outlet Air Temp. °F [°C]	155 [68]	160 [71]	160 [71]	155 [68]	160 [71]	160 [71]	165 [74]	165 [74]
Max. Static Pressure IWC [pa]	.5" [125]							
Gas Piping Connection in. [mm]	1/2" [1.27]							
Operating Weight lb. [kg]	264 [120]	266 [121]	268 [122]	288 [131]	290 [132]	297 [135]	299 [136]	301 [137]
Shipping Weight lb. [kg]	291 [132]	293 [133]	295 [134]	315 [143]	317 [144]	324 [147]	326 [148]	328 [149]

Physical Data (continued)

FIRST-PAK 24 AND 30							
	FPG30N8C24C	FPG40N8C24C	FPG50N8C24C	FPG60N8C24C	FPG40N8C30C	FPG50N8C30C	FPG60N8C30C
Unit Information							
Quantity / Type	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)
Factory Charge (R410A) lbs. [kg]	4.9 [2.21]	4.9 [2.21]	4.9 [2.21]	4.9 [2.21]	5.0 [2.27]	5.0 [2.27]	5.0 [2.27]
Compressor Capacitor	35MFD/ 370V	35MFD/ 370V	35MFD/370V	30MFD/370V	30MFD/ 370V	30MFD/370V	30MFD/370V
Condenser Fan HP [kW]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/3 [.25]
Indoor Fan HP [kW]	1/3 [.25]	1/3 [.25]	1/3 [.25]	1/2 [.37]	1/2 [.37]	1/2 [.37]	1/2 [.37]
Blower Size (D X W) in. [mm]	10 x 6 [25.4 x 15.24]						
Condenser Dimension (H x W) in. [mm]	26.5 x 22.25 [67.3 x 56.5]						
Evaporator Dimension (H x W) in. [mm]	23.1 x 22.25 [58.7 x 56.5]						
Filter Size (H x W) [mm]	24 x 24 [60.96 x 60.96]						
Input BTU/h [kW]	30000 [8.8]	40000 [11.7]	50000 [14.7]	60000 [17.6]	40000 [11.7]	50000 [14.7]	60000 [17.6]
Output BTU/h [kW]	24300 [7.1]	32400 [9.5]	40500 [11.9]	48600 [14.2]	32400 [9.5]	40500 [11.9]	48600 [14.2]
AFUE	81	81	81	81	81	81	81
No. of Burners	3	4	5	6	4	5	6
Orifice Size (Natural Gas) in. [mm]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]	.061 [1.55]
Max. Outlet Air Temp. °F [°C]	160 [71]	160 [71]	165 [74]	165 [74]	160 [71]	165 [74]	165 [74]
Max. Static Pressure IWC [pa]	0.5" [125]						
Gas Piping Connection in. [mm]	1/2" [1.27]						
Operating Weight lb. [kg]	315 [143]	317 [144]	319 [145]	321 [146]	331 [150]	333 [151]	335 [152]
Shipping Weight lb. [kg]	342 [155]	344 [156]	346 [157]	348 [158]	358 [163]	360 [164]	362 [165]

Fan Air Flow Performance

FPG Airflow Performance													
MODEL	Motor Speed	Mid Rise °F	Rise Range °F	SCFM @ External Static Pressure (in.w.c)									
				0.10		0.20		0.30		0.40		0.50	
				SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F
FPG20N8C12C	T1	40.0	25-55	270	56	240	-	210	-	170	-	130	-
	T2 ^H		25-55	380	39	350	43	320	47	280	53	240	-
	T3		25-55	470	32	440	34	400	37	370	40	330	45
	T4 ^C		25-55	500	30	470	32	430	35	400	37	360	42
	T5		25-55	650	23	620	24	590	25	560	27	520	29
FPG30N8C12C	T1	45.0	30-60	270	-	240	-	210	-	170	-	130	-
	T2 ^H		30-60	500	45	470	48	430	52	400	56	360	-
	T3		30-60	610	37	580	39	550	41	510	44	470	48
	T4 ^C		30-60	500	45	470	48	430	52	400	56	360	-
	T5		30-60	650	34	620	36	590	38	560	40	520	43
FPG40N8C12C	T1	45.0	30-60	270	-	240	-	210	-	170	-	130	-
	T2 ^H		30-60	650	46	620	48	590	51	560	54	520	58
	T3		30-60	790	38	760	39	730	41	700	43	660	46
	T4 ^C		30-60	500	-	470	-	430	-	400	-	360	-
	T5		30-60	650	46	620	48	590	51	560	54	520	58
FPG20N8C18C	T1	40.0	25-55	420	36	390	39	360	42	320	46	280	53
	T2 ^H		25-55	380	39	350	43	320	47	280	53	240	-
	T3		25-55	470	32	440	34	400	37	370	40	330	45
	T4 ^C		25-55	660	23	630	24	600	25	570	26	530	28
	T5		25-55	790	19	760	20	730	21	700	21	660	23
FPG30N8C18C	T1	45.0	30-60	420	54	390	58	360	-	320	-	280	-
	T2 ^H		30-60	500	45	470	48	430	52	400	56	360	-
	T3		30-60	610	37	580	39	550	41	510	44	470	48
	T4 ^C		30-60	660	34	630	36	600	38	570	40	530	43
	T5		30-60	980	23	950	24	920	25	880	25	840	27
FPG40N8C18C	T1	45.0	30-60	420	-	370	-	330	-	310	-	270	-
	T2 ^H		30-60	670	45	620	48	580	51	560	53	520	57
	T3		30-60	810	37	760	40	720	42	700	43	660	45
	T4 ^C		30-60	680	44	630	48	590	51	570	52	530	56
	T5		30-60	970	31	920	33	880	34	860	35	820	36
FPG50N8C18C	T1	50.0	35-65	430	-	380	-	340	-	320	-	280	-
	T2 ^H		35-65	760	49	710	53	680	56	660	57	620	61
	T3		35-65	890	42	840	44	810	47	790	48	750	50
	T4 ^C		35-65	700	54	650	58	610	61	590	64	550	-
	T5		35-65	970	39	920	41	880	42	860	43	820	45
FPG60N8C18C	T1	50.0	35-65	420	-	370	-	350	-	320	-	280	-
	T2 ^H		35-65	920	49	870	52	850	53	820	55	770	58
	T3		35-65	990	45	940	48	920	49	890	51	840	53
	T4 ^C		35-65	680	-	630	-	610	-	580	-	530	-
	T5		35-65	990	45	940	48	920	49	890	51	840	53

N/A - *Do not operate this unit at static ranges out side of the temperature rise range.

Airflow shown tested at 70° DB at dry coil conditions

^H denotes default heating tap

^C denotes default cooling tap

Fan Air Flow Performance (continued)

FPG Airflow Performance													
MODEL	Motor Speed	Mid Rise °F	Rise Range °F	SCFM @ External Static Pressure (in.w.c)									
				0.10		0.20		0.30		0.40		0.50	
				SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F	SCFM	Temp Rise °F
FPG30N8C24C	T1	45.0	30-60	420	54	390	58	360	-	320	-	280	-
	T2 ^H		30-60	500	45	470	48	430	52	400	56	360	-
	T3		30-60	640	35	610	37	570	39	540	42	500	45
	T4 ^C		30-60	820	27	790	28	760	30	730	31	690	33
	T5		30-60	980	23	950	24	920	25	880	25	840	27
FPG40N8C24C	T1	45.0	30-60	420	-	370	-	330	-	310	-	270	-
	T2 ^H		30-60	670	45	620	48	580	51	560	53	520	57
	T3		30-60	810	37	760	40	720	42	700	43	660	45
	T4 ^C		30-60	830	36	790	38	750	40	730	41	690	44
	T5		30-60	970	31	920	33	880	34	860	35	820	36
FPG50N8C24C	T1	50.0	35-65	420	-	370	-	330	-	310	-	270	-
	T2 ^H		35-65	760	49	710	53	680	56	660	57	620	61
	T3		35-65	890	42	840	44	810	47	790	48	750	50
	T4 ^C		35-65	850	44	800	47	760	49	740	51	700	54
	T5		35-65	970	39	920	41	880	42	860	43	820	45
FPG60N8C24C	T1	50.0	35-65	420	-	380	-	340	-	320	-	280	-
	T2 ^H		35-65	910	49	870	52	840	54	810	55	780	58
	T3		35-65	1020	44	980	46	940	48	920	49	880	51
	T4 ^C		35-65	840	54	800	56	760	59	740	61	710	64
	T5		35-65	970	46	930	48	900	50	870	52	840	54
FPG40N8C30C	T1	45.0	30-60	540	55	500	60	460	-	420	-	370	-
	T2 ^H		30-60	660	45	620	48	580	52	530	56	490	-
	T3		30-60	850	35	810	37	760	39	720	42	670	45
	T4 ^{Clow}		30-60	730	41	690	44	640	47	600	50	560	54
	T5 ^{Chigh}		30-60	980	31	940	32	890	34	850	35	810	37
FPG50N8C30C	T1	50.0	35-65	560	-	510	-	470	-	420	-	380	-
	T2 ^H		35-65	840	45	790	47	750	50	710	53	660	56
	T3		35-65	990	38	940	40	900	42	860	44	810	46
	T4 ^{Clow}		35-65	740	50	700	54	650	57	610	61	570	-
	T5 ^{Chigh}		35-65	990	38	940	40	900	42	860	44	810	46
FPG60N8C30C	T1	50.0	35-65	560	-	510	-	470	-	420	-	380	-
	T2 ^H		35-65	950	47	900	50	860	52	820	55	780	58
	T3		35-65	1070	42	1020	44	980	46	940	48	890	50
	T4 ^{Clow}		35-65	740	60	700	65	650	-	610	-	570	-
	T5 ^{Chigh}		35-65	990	45	940	48	900	50	860	52	810	55

N/A - *Do not operate this unit at static ranges out side of the temperature rise range.

Airflow shown tested at 70° DB at dry coil conditions

^H denotes default heating tap

^C denotes default cooling tap

The FPG**N8C30C models have two cooling taps. T4^{Clow} is low speed cooling (Y1). T4^{Chigh} is high speed cooling (Y2)

Electrical and Performance Data

ELECTRICAL DATA											
MODEL NUMBER	VOLTAGE PH-HZ	COMPRESSOR		CONDENSOR MOTOR		INDOOR MOTOR		MIN. CIRCUIT AMPACITY	MAX. CIRCUIT PROTECTION	MIN. VOLTAGE	MAX. VOLTAGE
		RLA	LRA	FLA	HP	FLA	HP				
FPG20N8C12C	208/230-1-60	5.5	26	1.9	1/5	2.8	1/3	12	15	187	252
FPG30N8C12C	208/230-1-60	5.5	26	1.9	1/5	2.8	1/3	12	15	187	252
FPG40N8C12C	208/230-1-60	5.5	26	1.9	1/5	2.8	1/3	12	15	187	252
FPG20N8C18C	208/230-1-60	7.2	38	1.9	1/5	2.8	1/3	14	20	187	252
FPG30N8C18C	208/230-1-60	7.2	38	1.9	1/5	2.8	1/3	14	20	187	252
FPG40N8C18C	208/230-1-60	7.2	38	1.9	1/5	2.8	1/3	14	20	187	252
FPG50N8C18C	208/230-1-60	7.2	38	1.9	1/5	2.8	1/3	14	20	187	252
FPG60N8C18C	208/230-1-60	7.2	38	1.9	1/5	2.8	1/3	14	20	187	252
FPG30N8C24C	208/230-1-60	10.7	55	2.8	1/3	2.8	1/3	19	30	187	252
FPG40N8C24C	208/230-1-60	10.7	55	2.8	1/3	2.8	1/3	19	30	187	252
FPG50N8C24C	208/230-1-60	10.7	55	2.8	1/3	2.8	1/3	19	30	187	252
FPG60N8C24C	208/230-1-60	10.7	55	2.8	1/3	2.8	1/3	19	30	187	252
FPG40N8C30C	208/230-1-60	13.5	87	2.8	1/3	4.1	1/2	24	35	187	252
FPG50N8C30C	208/230-1-60	13.5	87	2.8	1/3	4.1	1/2	24	35	187	252
FPG60N8C30C	208/230-1-60	13.5	87	2.8	1/3	4.1	1/2	24	35	187	252

FPG AHRI Data											
Model	Cooling						Heating				
	Btuh	EER	SEER2	S/T	Full Load CFM	Part Load CFM	Heat CFM	Input Btu/hr	Output Btu/hr	AFUE	Temp. Rise Range °F
FPG20N8C12C	12500	10.5	11.7	0.75	450	-	375	20000	16200	81	25-55
FPG30N8C12C							500	30000	24300		30-60
FPG40N8C12C							670	40000	32400		30-60
FPG20N8C18C	17000	10.0	11.7	0.78	630	-	375	20000	16200		25-55
FPG30N8C18C							500	30000	24300		30-60
FPG40N8C18C							670	40000	32400		30-60
FPG50N8C18C							750	50000	40500		35-65
FPG60N8C18C							900	60000	48600		35-65
FPG30N8C24C	22500	10.0	11.7	0.74	780	-	500	30000	24300		30-60
FPG40N8C24C							670	40000	32400		30-60
FPG50N8C24C							750	50000	40500		35-65
FPG60N8C24C							900	60000	48600		35-65
FPG40N8C30C*	26500	9.0	11.7	0.74	920	620	670	40000	32400		30-60
FPG50N8C30C*							750	50000	40500		35-65
FPG60N8C30C*							900	60000	48600		35-65

All units tested to AHRI 210/240 2020 (SEER2)

All FPG**N8C30C models tested with dual stage scroll compressors

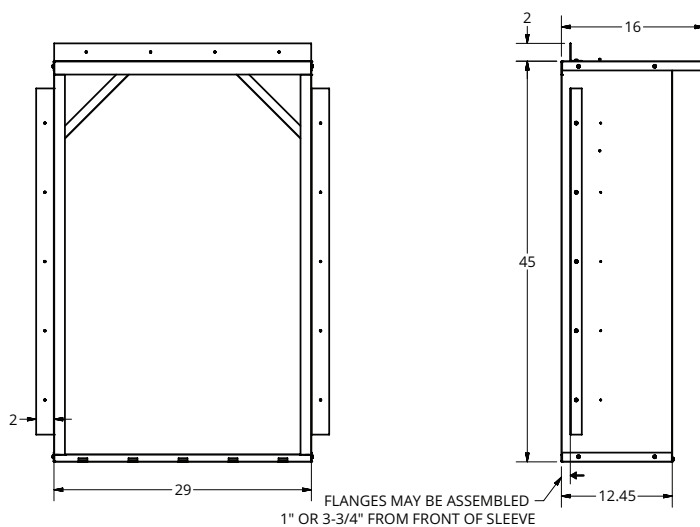
Extended Performance Data

FPG Gas																
Model	Indoor Temp DB/WB	Outdoor Temperature °F														
		65.0			85.0			95.0			105.0			115.0		
		MBH	S/T	kW	MBH	S/T	kW	MBH	S/T	kW	MBH	S/T	kW	MBH	S/T	kW
FPG**N8C12C	75/57	13.2	1.0	0.9	12.1	1.0	1.1	12.1	1.0	1.2	11.0	1.0	1.3	10.4	1.0	1.4
	75/63	14.2	0.8	0.9	12.9	0.8	1.1	12.9	0.8	1.2	11.5	0.9	1.3	10.8	0.9	1.5
	80/67	15.2	0.8	0.9	13.8	0.8	1.1	13.8	0.8	1.2	12.3	0.9	1.3	11.6	0.9	1.5
	85/72	16.4	0.7	0.9	14.9	0.7	1.1	14.9	0.7	1.2	13.4	0.8	1.4	12.6	0.8	1.5
FPG**N8C18C	75/57	18.4	1.0	1.2	16.8	1.0	1.4	15.9	1.0	1.5	15.0	1.0	1.6	14.1	1.0	1.8
	75/63	19.6	0.8	1.3	17.6	0.8	1.4	16.5	0.8	1.5	15.4	0.8	1.6	14.0	0.8	1.8
	80/67	20.7	0.7	1.3	18.6	0.8	1.4	17.5	0.8	1.6	16.2	0.8	1.7	14.2	1.0	1.8
	85/72	22.2	0.7	1.3	20.0	0.7	1.5	19.0	0.8	1.6	17.3	0.7	1.7	15.6	0.7	1.8
FPG**N8C24C	75/57	23.9	1.0	1.7	21.4	1.0	2.0	20.4	1.0	2.2	19.3	1.0	2.4	18.3	1.0	2.7
	75/63	25.7	0.8	1.7	23.2	0.8	2.0	21.9	0.8	2.2	20.7	0.8	2.4	19.4	0.9	2.7
	80/67	27.5	0.7	1.7	24.8	0.8	2.0	23.5	0.8	2.2	22.2	0.8	2.5	20.8	0.8	2.7
	85/72	29.7	0.7	1.7	26.9	0.7	2.0	25.5	0.7	2.3	24.1	0.7	2.5	22.6	0.8	2.7
FPG**N8C30C	75/57	27.5	1.0	2.2	25.2	1.0	2.5	24.0	1.0	2.8	22.7	1.0	3.0	21.5	1.0	3.3
	75/63	30.1	0.7	2.2	27.1	0.8	2.5	25.6	0.8	2.8	24.0	0.8	3.0	22.5	0.8	3.3
	80/67	31.6	0.7	2.2	28.4	0.8	2.5	26.9	0.8	2.8	25.2	0.8	3.1	23.6	0.9	3.4
	85/72	33.9	0.7	2.2	30.6	0.7	2.6	28.9	0.7	2.8	26.8	0.7	3.1	25.8	0.8	3.4

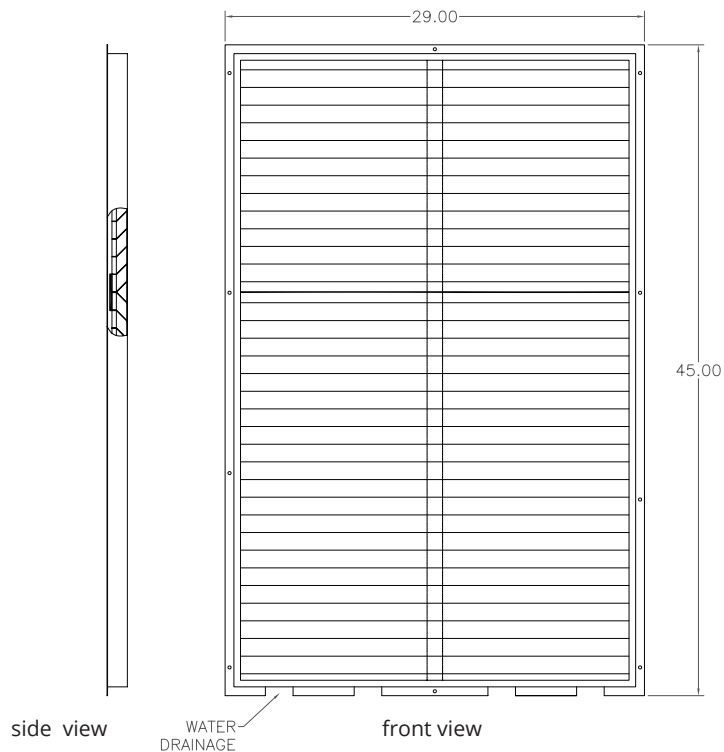
IMPORTANT: These extended capacities are based on the rated values of the combination as input by the user. These are reference values only. This information does not constitute a rating or a guarantee that the installed system will perform as indicated.

Accessories Page

High altitude kit : Part number 9KHiAlt01 for any application over 4,500 feet

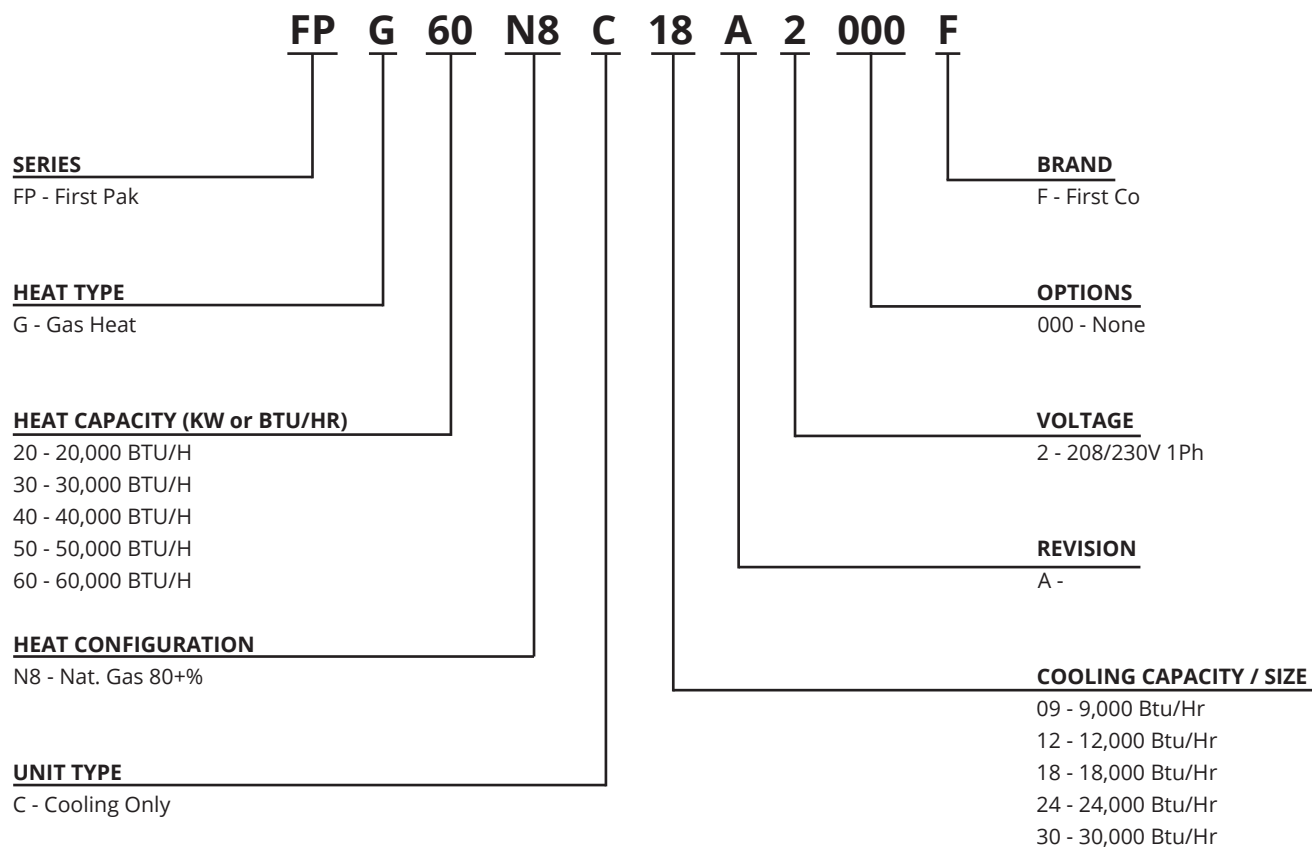


Part number 929-10 - First-Pak Sleeve. Ships unassembled in carton.



Part number G230A - First-Pak Architectural Louvered Grill. (Anodized Aluminum)
Part number G230S - First-Pak Architectural Louvered Grill. (Custom Color Painted)

Nomenclature



In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice. Maintenance for all First Co. products is available under "Product Maintenance" at www.firstco.com.

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