



**GAS-FIRED HEAT PUMPS**

**TECHNICAL SPECIFICATIONS**  
**15 TON COMBINATION MULTI TYPE**

**ETL** MODEL - AWGP180E1NHS



		Unit of Measure	Value or Description	
<b>Capacity</b>	Rated Cooling	BTU/h (Ton)	180,000 (15)	
	Rated Heating	BTU/h (Ton)	205,000 (17)	
<b>External Dimensions</b>	Height	inch (mm)	81.8 (2077)	
	Width	inch (mm)	65.4 (1660)	
	Depth	inch (mm)	34.6 (880)	
<b>Mass</b>		lbs (kg)	1,670 (758)	
<b>Exterior color (Munsell No.)</b>			DIC546 1/2	
<b>Electric Characteristics</b>	Power Supply	V	Single-phase 230 or 208	
	Starting Current	A	20	
	Power Consumption	kW	Cooling	1.32
	Power Consumption	kW	Heating	1.24
	Operating Current	A	Cooling	5.5
	Operating Current	A	Heating	5.2
	Power Factor	%	Cooling	67
	Power Factor	%	Heating	67
<b>Fuel Gas Consumption</b>		BTU/h	Cooling	186,000
		BTU/h	Heating	179,000
<b>Engine</b>	Type		Water-cooled Straight 4-cycle OHV	
	Displacement	L	1.998	
	Rated Output	kW	15.7	
	Starting System		AC/DC Conversion DC Starter	
	Speed Range	rpm	Cooling	600 ~ 2000
	Speed Range	rpm	Heating	600 ~ 2125
	Lubricant: Type		AISIN Gas Engine Oil - L 10000G	
	Exhaust Port Position		On the Top	
<b>Engine Coolant</b>	Type		AISIN Coolant S	
	Amount	gal (L)	6.87 (26)	
	Concentration	Vol %	50	
	Freezing Temperature	°F (°C)	-4 (-20)	
	Pump: Type		DC Brushless Canned Pump	
	Pump: Motor Output	kW	0.13	
<b>Compressor</b>	Type x Number of Unit		Scroll Type x 2 Units	
	Displacement	inch <sup>3</sup> /rev (cm <sup>3</sup> /rev)	5.26 x 2 (86 x 2)	
	Speed Range	rpm	Cooling	1170 ~ 3900
	Speed Range	rpm	Heating	1170 ~ 3802
	Specified Refrigerant Oil		NL10	
	Amount of Refrigerant Oil	gal (L)	1.06 (4)	
	Power Transmission System		1 Poly V-Belt	

October 2017

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		Unit of Measure	Value or Description
<b>Refrigerant</b>	Type		R410A
	Amount	lbs (kg)	25.4 (11.5)
<b>Heat Exchanger</b>	Outdoor Heat Exchanger		Slit Fin
	Exhaust Air Heat Exchanger		Multi-tube Heat Exchanger
	Engine Radiator		Louver Fin
<b>Air Intake</b>			Front / Back / Side
<b>Air Discharge</b>			On the Top
<b>Exhaust Heat Recovery System</b>			Plate Heat Exchanger (Refrigerant Heating)
<b>Defrosting System</b>			Refrigerant Reverse Cycle
<b>Fan</b>	Type x Number of Unit		Propeller Fan x 2
	Rated Air Volume	cfm (m <sup>3</sup> /min)	13,700 (388)
	Motor: Type		Brushless DC Motor (8P)
	Motor: Rated Output	W	600 x 2
<b>Piping Size</b>	Refrigerant Line: Liquid Line	inch (mm)	5/8 (15.9)
	Refrigerant Line: Vapor Line	inch (mm)	1-1/8 (28.6)
	Fuel Gas Pipe		NTP 3/4
	Exhaust Port	inch (mm)	3-7/8 (100)
	Exhaust Air Drain Pipe	inch (mm)	5/8 (15)
<b>Permissible Piping Length</b>	Equivalent Length / Actual Length	ft (m)	623/541 (190/165)
<b>Permissible Height Difference Between Indoor and Outdoor Units</b>	Outdoor Unit Installed Above Indoor Units	ft (m)	164 (50)
	Outdoor Unit Installed Below Indoor Units	ft (m)	131 (40)
<b>Permissible Vertical Distance Among Indoor Units</b>		ft (m)	49 (15)
<b>Connectable Indoor Units</b>	Number of Units		2 ~ 33

**NOTE 1)** Capacity and electric characteristics values were measured in accordance with AISIN standard under JIS-B8627 condition.

**NOTE 2)** The noise level is measured in an anechoic room conforming to JIS standard. Actual noise level may be louder than measured value due to ambient noise and/or reverberation.

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