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STEAM GENERATORS

Product Overview

The direct fired steam generator incorporates a mixer-burner with a tough, refractory lined combustion chamber which ensures safety, efficiency and many other improvements over current steam generating systems. This new system drives air into the mixer-burner, combining it with fuel where the mixture is ignited as it enters the combustion chamber. Combustion is 100% completed. Water is then sprayed into the hot gases exiting the chamber, thereby creating INSTANT STEAM. It also capitalizes on non-condensable stack gases which represent a useful supply of energy when combined with the steam rather than being vented directly, creating maximum efficiency.



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|  <p>CARBON MONOXIDE OUTPUT LEVELS BELOW 10PPM</p> |  <p>FUEL SAVINGS UP TO 50%</p> |
|  <p>STEAM IN 15 SECONDS</p> |  <p>STEAM PRESSURES UP TO 8 PSIG</p> |
|  <p>PRE-ASSEMBLED FOR EASE OF INSTALLATION</p> |  <p>NO STATIONARY ENGINEER REQUIRED</p> |
|  <p>NO CHEMICALS REQUIRED</p> |  <p>NO STACK OR BOILER ROOM REQUIRED</p> |

Benefits

An immediate benefit of the STEAM ENGINEERING Steam Generator is that steam is available on demand. Within 30 seconds of switching on the machine, steam is generated. When steam is no longer required, the unit is switched off for cooling and blowdown of manifolds. The major benefit of this unit is its ENERGY SAVINGS features. Due to its high efficiency, it produces saturated or superheated steam with only the adjustment of water flow rates. Also, because of its unique ability to produce instant steam, it only consumes fuel when steam is required. It is not maintaining a mass of water at a high temperature when steam is not required. The unit is packaged, pre-assembled and easy to install wherever the steam is required. Steam is produced at atmospheric pressure and using a high pressure blower to push through material or heat exchangers up to a resistance pressure of 6 PSIG. As pressure does not exceed 15 PSIG, no special boiler room, no stationary engineer or high insurance rates are required.



ST102 - Steam Generator

| DESCRIPTION | SPECIFICATIONS |
|---------------------------|---|
| STEAM OUTPUT PRESSURE | 0.1 PSIG - 6 PSIG ⁽⁶⁾ |
| GAS FIRED (OPTION 1) | Maximum 1000 Cubic Ft/Hr Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| PROPANE FIRED (OPTION 2) | Maximum 9 Gallons/Hr Vaporized Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| OIL FIRED (OPTION 3) | Maximum 6.1 Gallons/Hr Flow Rate |
| WATER | Maximum 1.2 Gallons/Min Flow Rate @ 40 PSIG |
| ELECTRICAL ⁽⁵⁾ | 13A 460V / 11A 575V 3PH/60/50Hz |
| STEAM MANIFOLD | 4" Piping Initial Connection |
| FIRING RATE (LOW) | 400,000 BTU/Hr |
| FIRING RATE (HIGH) | 800,000 BTU/Hr ⁽²⁾⁽³⁾ |
| FIRING RATE (MAX) | 1,000,000 BTU/Hr ⁽¹⁾ |
| DIMENSIONS | 72 Inch Length x 56 Inch Width x 68 Inch Height |
| STANDARD WEIGHT | 3150 LBS |

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1. Unit capacity listed. Steam Generator will not fire continuously at this rate listed.
 2. Continuous Duty rated capacity.
 3. Output Capacity can be de-rated to customer's specifications where required.
 4. Where required, reduced gas pressures of 5 PSIG may be used after review by Steam Engineering.
 5. When containerized, electrical input for 460VAC and 575VAC units are 100 amp service.
 6. Steam Pressure is not correlated to traditional steam tables for temperature, but is directly correlated to the downstream piping size and material resistances the blower pushes against. Pressures greater than specified will result in an emergency stop of the appliance.



ST302 - Steam Generator

| DESCRIPTION | SPECIFICATIONS |
|---------------------------|--|
| STEAM PRESSURE | 0.1 PSIG - 6 PSIG ⁽⁶⁾ |
| GAS FIRED (OPTION 1) | Maximum 3000 Cubic Ft/Hr Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| PROPANE FIRED (OPTION 2) | Maximum 27 Gallons/Hr Vaporized Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| OIL FIRED (OPTION 3) | Maximum 18.3 Gallons/Hr Flow Rate |
| WATER | Maximum 3.6 Gallons/Min Flow Rate @ 40 PSIG |
| ELECTRICAL ⁽⁵⁾ | 32A 460V / 30A 575V 3PH/60/50Hz |
| STEAM MANIFOLD | 6" Piping Initial Connection |
| FIRING RATE (LOW) | 1,200,000 BTU/Hr |
| FIRING RATE (HIGH) | 2,400,000 BTU/Hr ⁽²⁾⁽³⁾ |
| FIRING RATE (MAX) | 3,000,000 BTU/Hr ⁽¹⁾ |
| DIMENSIONS | 83 Inch Length x 67.5 Inch Width x 68.46 Inch Height |
| STANDARD WEIGHT | 3844 LBS |

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1. Unit capacity listed. Steam Generator will not fire continuously at this rate listed.
 2. Continuous Duty rated capacity.
 3. Output Capacity can be de-rated to customer's specifications where required.
 4. Where required, reduced gas pressures of 5 PSIG may be used after review by Steam Engineering.
 5. When containerized, electrical input for 460VAC and 575VAC units are 100 amp service.
 6. Steam Pressure is not correlated to traditional steam tables for temperature, but is directly correlated to the downstream piping size and material resistances the blower pushes against. Pressures greater than specified will result in an emergency stop of the appliance.



ST502 - Steam Generator

| DESCRIPTION | SPECIFICATIONS |
|---------------------------|--|
| STEAM PRESSURE | 0.1 PSIG - 6 PSIG ⁽⁶⁾ |
| GAS FIRED (OPTION 1) | Maximum 5000 Cubic Ft/Hr Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| PROPANE FIRED (OPTION 2) | Maximum 44 Gallons/Hr Vaporized Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| OIL FIRED (OPTION 3) | Maximum 30.5 Gallons/Hr Flow Rate |
| WATER | Maximum 5.8 Gallons/Min Flow Rate @ 40 PSIG |
| ELECTRICAL ⁽⁵⁾ | 46A 460V / 42A 575V 3PH/60/50Hz |
| STEAM MANIFOLD | 8" Piping Initial Connection |
| FIRING RATE (LOW) | 2,000,000 BTU/Hr |
| FIRING RATE (HIGH) | 4,000,000 BTU/Hr ⁽²⁾⁽³⁾ |
| FIRING RATE (MAX) | 5,000,000 BTU/Hr ⁽¹⁾ |
| DIMENSIONS | 89.75 Inch Length x 67.50 Inch Width x 79.13 Inch Height |
| STANDARD WEIGHT | 5250 LBS |

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1. Unit capacity listed. Steam Generator will not fire continuously at this rate listed.
 2. Continuous Duty rated capacity.
 3. Output Capacity can be de-rated to customer's specifications where required.
 4. Where required, reduced gas pressures of 5 PSIG may be used after review by Steam Engineering.
 5. When containerized, electrical input for 460VAC and 575VAC units are 100 amp service.
 6. Steam Pressure is not correlated to traditional steam tables for temperature, but is directly correlated to the downstream piping size and material resistances the blower pushes against. Pressures greater than specified will result in an emergency stop of the appliance.



ST602 - Steam Generator

| DESCRIPTION | SPECIFICATIONS |
|---------------------------|--|
| STEAM PRESSURE | 0.1 PSIG - 6 PSIG ⁽⁶⁾ |
| GAS FIRED (OPTION 1) | Maximum 6000 Cubic Ft/Hr Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| PROPANE FIRED (OPTION 2) | Maximum 52.8 Gallons/Hr Vaporized Flow Rate @ 7-14 PSIG ⁽⁴⁾ |
| WATER | Maximum 6.7 Gallons/Min Flow Rate @ 40 PSIG |
| ELECTRICAL ⁽⁵⁾ | 52A 460V / 42A 575V 3PH/60/50Hz |
| STEAM MANIFOLD | 8" Piping Initial Connection |
| FIRING RATE (LOW) | 2,400,000 BTU/Hr |
| FIRING RATE (HIGH) | 6,000,000 BTU/Hr ⁽²⁾⁽³⁾ |
| FIRING RATE (MAX) | 6,000,000 BTU/Hr ⁽¹⁾ |
| DIMENSIONS | 120 Inch Length x 74 Inch Width x 86 Inch Height |
| STANDARD WEIGHT | 7640 LBS |

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1. Unit capacity listed. Steam Generator will not fire continuously at this rate listed.
 2. Continuous Duty rated capacity.
 3. Output Capacity can be de-rated to customer's specifications where required.
 4. Where required, reduced gas pressures of 5 PSIG may be used after review by Steam Engineering.
 5. When containerized, electrical input for 460VAC and 575VAC units are 100 amp service.
 6. Steam Pressure is not correlated to traditional steam tables for temperature, but is directly correlated to the downstream piping size and material resistances the blower pushes against. Pressures greater than specified will result in an emergency stop of the appliance.