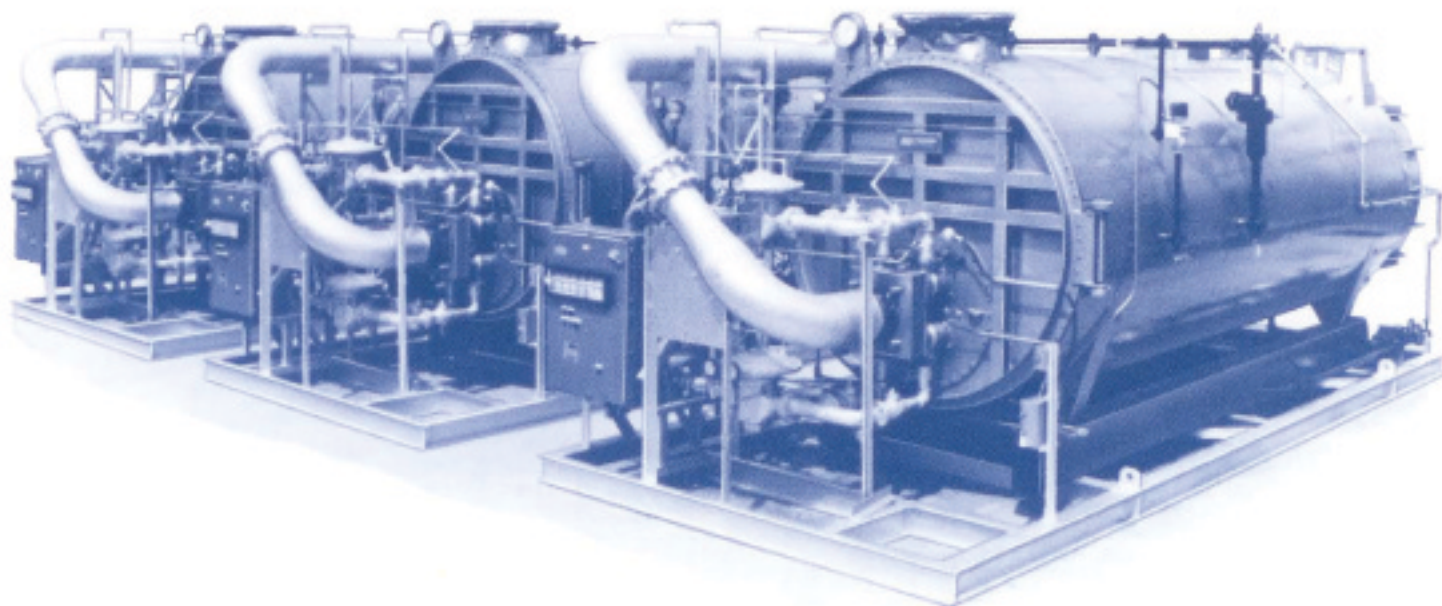


Inert Atmosphere Generators

Heat Recovery Model XHS



Gas Atmospheres Model XHS Inert Gas Generators are uniquely practical in design. The combination of a Scotch Marine type boiler with our combustion system, plus many **Gas Atmospheres** advances, provides automatic, continuous system operation.

The Model XHS generator efficiently recovers 80% of BTU input as steam or hot water. To do this, the standard water cooled combustion chamber is replaced with a commercially available fire-tube boiler. This economical heat recovery cuts the cost of generating inert atmosphere as much as 50%.

Boiler design pressures are available in 15 to 300 PSIG—all ASME code stamped.

Cooling water is reduced by more than 50% and considerable floor space can be saved by utilizing our heat recovery unit.

The "PACKAGED" concept offers easy access to all components. Safety controls protect the operator, as well as the process and automatically shutdown the unit in event of utility failure.

Gas Atmospheres provides efficient, single-source responsibility. ALL engineering and assembly is performed at the **Gas Atmospheres** plant, under direct supervision of experienced personnel.

Gas Atmospheres Model XHS generators can be incorporated into your existing steam or hot water systems ... or operated independently, for heating process tanks, for space heating, or for operation of steam turbines and pumps. Standard features of the packaged boiler include:

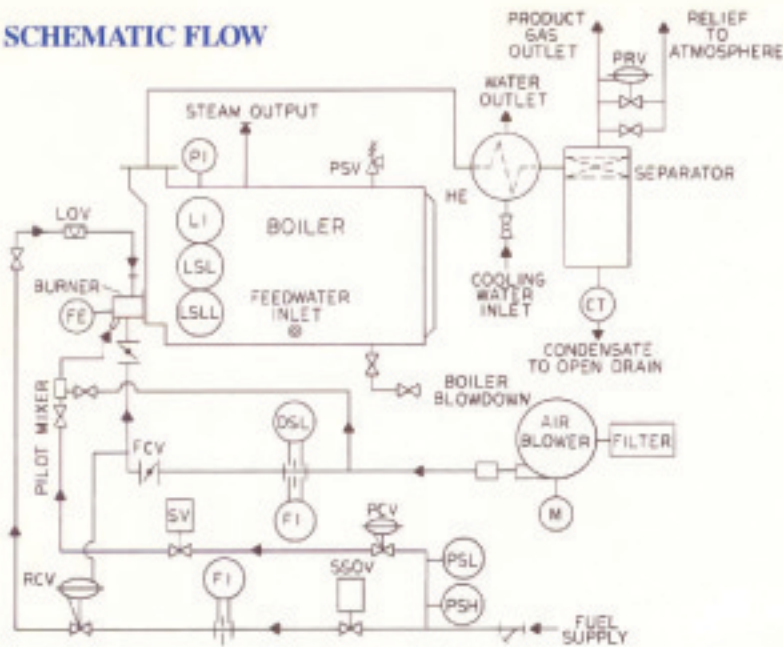
- ASME Code safety relief valve
- Complete water column control
- High pressure limit switch

- One quick and one slow-opening blowdown valves
- UV flame detector
- Cooling water flow switch
- Fuel pressure switches
- Steam pressure gauge
- Low water level cut-off
- Surface blowoff dip tube
- Fused disconnect interlocked to panel door

In addition to the standard features, the following auxiliary equipment is available:

- Boiler feedwater conditioning equipment
- Carbon Dioxide, Oxygen and Combustibles Analyzers
- Local and remote annunciators
- High pressure compressors
- Catalyst purifiers to reduce oxygen or combustibles
- Feedwater regulation and control

SCHEMATIC FLOW



- CT - Condensate Trap
- DSL - Differential Switch Low
- FCV - Flow Control Valve
- FE - Flame Element
- FI - Flow Indicator
- HE - Heat Exchanger
- LI - Level Indicator
- LOV - Limiting Orifice Valve
- LSL - Level Switch Low
- LSLL - Level Switch Low-Low
- M - Motor
- PCV - Pressure Control Valve
- PI - Pressure Indicator
- PRV - Pressure Relief Valve
- PSH - Pressure Switch High
- PSL - Pressure Switch Low
- PSV - Pressure Safety Valve
- RCV - Ratio Control Valve
- SSOV - Safety Shut-Off Valve
- SV - Solenoid Valve

STANDARD SIZES

Model No.	Inert Gas SCFH	Steam Produced PPH ₁	Fuel CFH ₂	Boiler Feedwater GPH ₁	Fresh Water	Power KWH	Dimensions			
							Length	Width	Height	Weight
XHS-600	6,000	550	696	66	12	2.5	11'5"	5'4"	6'4"	5,500#
XHS-800	8,000	736	930	88	16	4.1	11'5"	5'4"	6'4"	6,500#
XHS-1000	10,000	918	1160	110	18	5.7	11'5"	5'4"	7'0"	7,500#
XHS-1200	12,000	1100	1392	132	20	6.6	11'8"	5'4"	7'0"	9,000#
XHS-1500	15,000	1377	1740	165	23	7.5	12'0"	6'0"	7'6"	10,000#
XHS-2000	20,000	1836	2320	220	30	7.5	12'0"	6'0"	7'6"	15,000#
XHS-2500	25,000	2294	2900	275	37	12.0	15'3"	6'0"	7'6"	17,000#
XHS-3000	30,000	2754	3480	330	44	12.0	15'3"	6'0"	7'6"	18,500#
XHS-4000	40,000	3680	4651	441	60	15.0	20'0"	8'0"	8'6"	21,000#
XHS-5000	50,000	4600	5814	550	75	15.0	22'0"	8'0"	8'6"	23,000#
XHS-6000	60,000	5520	6976	660	90	20.0	22'0"	9'0"	9'6"	25,000#
XHS-7000	70,000	6437	8120	770	105	30.0	25'0"	9'0"	9'6"	27,000#
XHS-8000	80,000	7360	9302	880	120	30.0	25'0"	9'0"	9'6"	29,000#
XHS-9000	90,000	8608	10440	990	135	40.0	26'0"	10'0"	10'0"	33,000#
XHS-10000	100,000	9200	11628	1100	150	40.0	26'0"	10'0"	10'0"	35,000#

¹ Based on 212°F Feedwater & 100 PSIG Steam

³ Assuming no condensate return & 100% makeup

² Based on 1,000 BTU natural gas

GAS ANALYSIS (Adjustable)

Based on natural gas

Gas	Volume Percentage
Carbon Dioxide	11.8
Carbon Monoxide	0.01 to 3.0
Hydrogen	0.01 to 3.0
Oxygen	0.2 to 0.01
Methane	0.0 to 0.2
Nitrogen	Balance
Delivered Pressure	14" W.C.
Delivered Dewpoint	+ 100°F

ANALYSIS depends on fuel used. OPTIONAL equipment available to improve gas purity.

gas ATMOSPHERES
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Gas Atmospheres – the originators of the packaged concept in gas generating systems