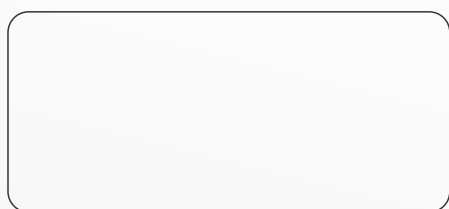


Steammaster

Power for life



GENERAL CATALOG

2020 Line

STEAM GENERATION | POWER GENERATION



TRADITION AND SAFETY

Leader on Boiler Manufacturing in Latin America

Independent at all stages of your production process ensures speed and efficiency.

Full mastery of technology, provides unparalleled condition in the development of the best boiler.

Stress Relief Furnaces, X-ray Bunker, 100-ton overhead crane, are some of the items that make up the 16.000 m² factory park.

Certified and mature quality policy at all stages of manufacturing.

Half a century into the market, Steammaster has already consolidated its purpose of seriousness and business ethics.

ASME CERTIFICATE



Steammaster holds certification from the American Society of Mechanical Engineers for the use of the ASME symbol in the manufacture and assembly of boilers from the National Board 'NB'.

This guarantees credibility to the company, which is authorized to validate its production by the activities agreed in the code rules.



AUTOMATION

Steammaster Total Digital Management



Control
Systems

HARMONIOUS OPERATION

A consolidated system

Steammaster uses dedicated UL and CE certified combustion and boiler management controllers.

This control is able to connect to any computer or smartphone, inside or outside the factory, fine combustion adjustments made by precision servomotors up to 0.1 °, our controllers are the best in technology available on the market.



We have a wide range of products and services to best serve you and your business

Steammaster has been designing, manufacturing, installing and supporting combustion and control systems in applications around the world for 50 years.

Internationally certified automation, guaranteed availability, reliability and maximum security.

Touchscreen HMI enables real-time monitoring, fault diagnostics and status with remote access via SCADA, PC, Tablet or Smartphone.

Fully integrated control system incorporates precise management, security, interconnectivity and communications in one package.

Everything is at hand and easy to adjust, always getting the best performance.



SM
Service

SM SERVICE

Maximum availability with minimum total operating cost

PARTS AND MAINTENANCE

Our service for Steammaster products can optimize your investment and maximize your productivity. Our superior quality original parts and highly skilled technicians reduce your cost of ownership over the life of the equipment.

MAXIMIZE RESOURCES WITH A SERVICE PLAN

Preventive Maintenance Plan for optimal boiler availability.

Complete boiler care with our Total Responsibility Plan.



LIST OF SERVICES AND BENEFITS

The most quiet and safe production:

- Services and Startup
- Commissioning
- Commissioning Supervision
- Installation
- Installation Supervision
- Support and Training
- Troubleshooting
- Monitoring Service
- Condition Inspection
- Condition Monitoring
- Inspection and Performance Documentation
- Upgrades
- Power increment
- Replacement and Retrofit
- Maintenance Services
- Calibration
- Preventive Maintenance
- Reconditioning
- Remote support
- NR-13 Inspection

OIL AND GAS LINE

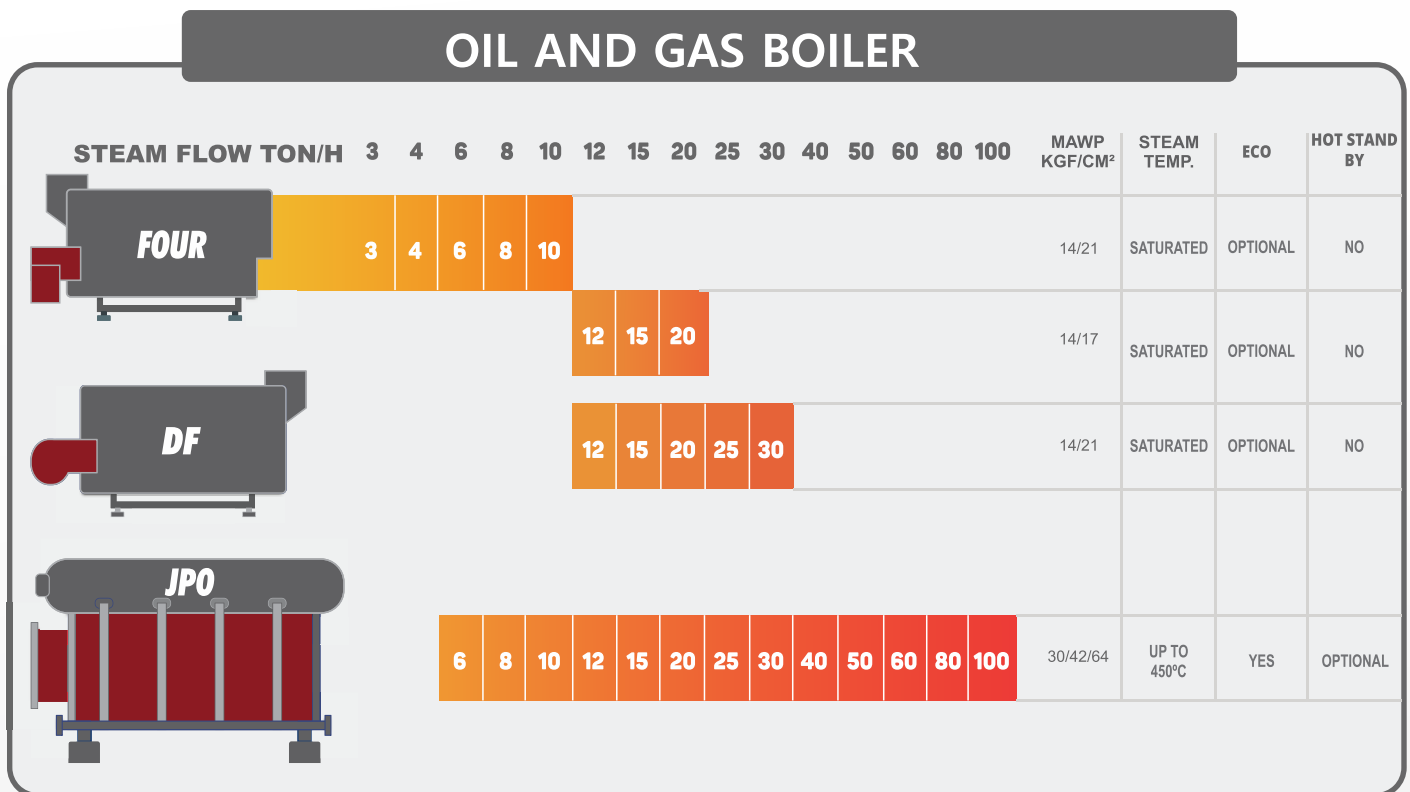
One-step further, nothing compares to a Steammaster Boiler



Oil and Gas
Boiler

TOTAL COMPANY INTEGRATION BY STEAMMASTER TECHNOLOGY

Only Steammaster offers fully integrated single source solutions for all aspects of boiler system designs, from fuel inlet to chimney, tailor-made to meet your needs.



For JPO boiler, steam production considering feed water at 105°C. Other models 20°C

Steammaster is the only manufacturer to offer refractory free all-fuel and full capacity boilers.



DF

High efficiency, low emissions and long lifespan

Dual Fire - DF boilers offer high efficiency and ultra low NOx emissions. They are designed by Steammaster to deliver primarily low cost throughout the life cycle, proven by our history of reliability and maximum safety.



Boilers Oil and Gas

FOUR

Companies with a Steammaster know that the FOUR burner design includes the latest advances in combustion technology. Boiler and burner were designed together to provide a unique solution package and superior results. In 2019 the burner received a number of improvements that made it even more ahead of all others.

There is no more efficient set option than an **original Steammaster.**

Low cost over the years;
Maximum security;

High efficiency guaranteed in contract;
Nox emissions below 10 ppm available;

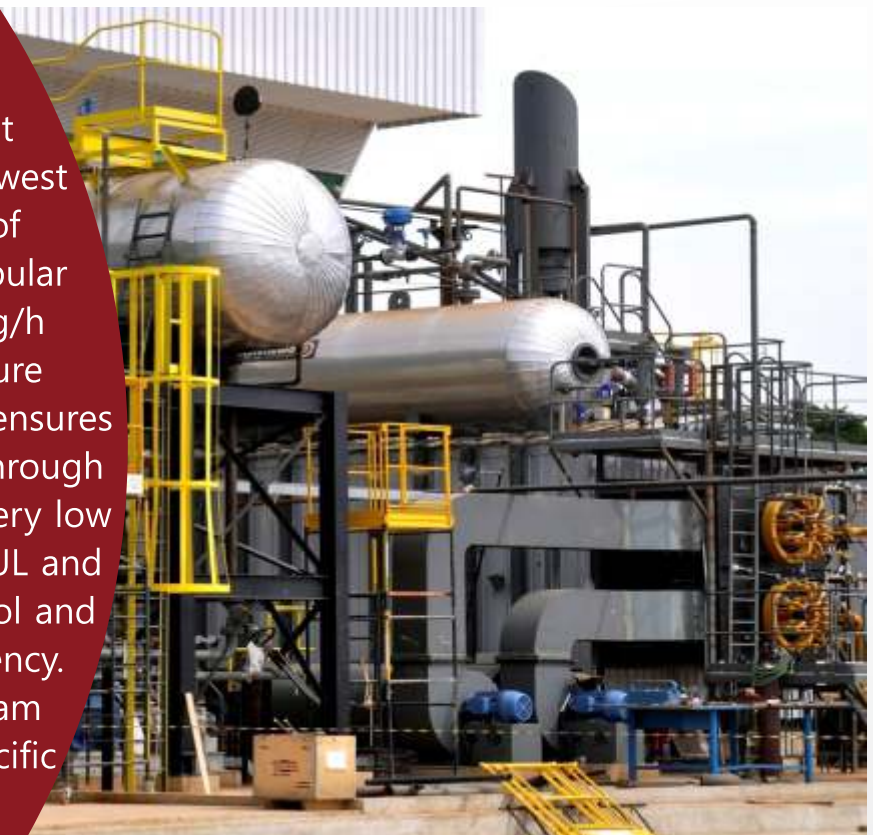
JPO High- efficiency type D watertube boiler



Oil and Gas
Boiler

The model JPO boiler offers high efficiency and low emissions always ultralow NOx. They are designed by Steammaster to primarily provide low cost throughout the life cycle. Several facilities in Brazil's major petrochemical industries confirm the superiority of Steammaster's JPO project.

All Steammaster experience and Knowledge used to ensure that each JPO watertube boiler that we manufacture is the best and highest quality in the industry and offer the lowest possible operating costs for this style of equipment. Extensive range of aquatubular products providing 6,000 to 100,000 kg/h of steam. Its robust design tube structure coupled with large external collectors ensures a perfect natural circulation of water through the boiler, ensuring long service life. Very low NOx factory burner, combined with a UL and CE certified controller, online O2 control and economizer guarantee over 96% efficiency. Capable of producing superheated steam up to 450 °C at high pressures for specific applications or electricity generation.



Single and double stage convective superheaters are available;

Option to use natural gas, heavy oil, alternative fuels or even combination;

Available for emissions <7 ppm of NOx;

Membrane wall constructions are 100% refractory free (Steammaster Exclusivity);

Water-cooled furnaces and burner throat are refractory-free to optimize performance and longevity of emissions while reducing maintenance.

Full automation;
Extreme durability;








Biomass
Boilers

BIOMASS LINE




Take a further step, nothing compares to a Steammaster

Steammaster offers the most extensive line of biomass boilers in the world: There are hundreds of combinations that cover all types of biomass, particle size, humidity, density (among others), allowing the ideal arrangement for each specific situation.

WOOD BOILERS																		
STEAM FLOW TON/H	4	6	8	10	12	15	20	25	30	MAWP KGF/CM²	STEAM	MOISTURE%	GRATE	AIR PREHEATER	FAN		BIOMASS FEEDER	ASH EXTRACTION
															UNDERFIRE	OVERFIRE		
 VMI - L	4	6	8							14/21	SATURATED	<37	FLAT	NO	NO	NO	MANUAL	MANUAL
 VMI - LC	4	6	8							14/21	SATURATED	<37	FLAT	NO	NO	NO	WOOD LOG FEEDER	MANUAL
 VMC		6	8	10	12	15	20			14/21	SATURATED	<45	FLAT	YES	YES	NO	WOOD LOG FEEDER	MANUAL
 VMFI								25	30	14/21	SATURATED	<45	TILTED WITH JET CLEAN	YES	YES	YES	DOUBLE WOOD LOG FEEDER	REDLER ON THE END OF GRATE
 VMFI - G								25	30	14/21	SATURATED	<45	TILTED WITH JET CLEAN	YES	YES	YES	BIG 25M WOOD LOG FEEDER	REDLER ON THE END OF GRATE

Saturated steam production considering feed water at 20°C

Steammaster is the only manufacturer to offer biomass boilers **refractory-free** to all capacities.





BIOMASS BOILERS																				
STEAM FLOW TON/H	4	6	8	10	12	15	20	25	30	40	MAWP KGF/CM ²	STEAM	MOISTURE%	GRATE	AIR PREHEATER	ECO	FAN		BIOMASS FEEDER	ASH EXTRACTION
																	UNDERFIRE	OVERFIRE		
 VMIC-R6				10	12	15	20				14/21	SATURATED	<55	RECIPROCATING	YES	NO	YES	YES	SILLO WITH THREAD SEAL DOSING VALVE	REDLER ON THE END OF GRATE
 VME-RG								25	30	40	21/30	UP TO 320	<55	RECIPROCATING	YES	YES	YES	YES	SILLO WITH THREAD AND SEAL DOSING VALVE	WET REDLER TYPE ALONG ALL THE BOILER
 JPD				8	10		15	20		30	40	30/42	UP TO 420	RECIPROCATING	YES	YES	YES	YES	SILLO WITH THREAD AND SEAL DOSING VALVE	WET REDLER TYPE ALONG ALL THE BOILER

Saturated steam production considering feed water at 20°C. Pressure up to 21 KGF / CM². All models with air preheater

Reduces greenhouse gas emissions and generates profits for your business, saving you money on energy costs.

- Steam generation from 1 to 40 t / h;
- Power generation and cogeneration plants up to 6.5 MW;
- Fast responses to variations in steam demand;
- Floor level installation avoiding costly civil works, facilitating maintenance and operation;
- High thermal efficiency and low emissions, ensuring stability in combustion;
- Option for fuels with high humidity and grain size variations;
- Automatic soot blower;



BIO DUAL BOILERS																			
STEAM FLOW TON/H	4	6	8	10	12	15	20	25	30	MAWP KGF/CM²	STEAM	MOISTURE%	GRATE	AIR PREHEATER	ECO	FAN		BIOMASS FEEDER	ASH EXTRACTION
																UNDERFIRE	OVERFIRE		
 VMU	4	6	8							14/21	SATURATED	<45	U GRATE	YES	NO	YES	NO	MANUAL WOOD AND CHIPS AUTOMATIC FEEDER	MANUAL
 VMU - C	4	6	8							14/21	SATURATED	<45	U GRATE	YES	NO	YES	NO	WOOD LOG AND CHIP FEEDER	MANUAL
 VMFI - D				10	12	15	20	25	30	14/21	SATURATED	<45	TILTED WITH JET CLEAN	YES	NO	YES	YES	WOOD LOG FEEDER AND CHIPS SPRINKLER	REDLER ON THE END OF GRATE
 VMFI- G				10	12	15	20	25	30	14/21	SATURATED	<45	TILTED WITH JET CLEAN	YES	NO	YES	YES	WOOD LOG FEEDER AND CHIPS SPRINKLER	REDLER ON THE END OF GRATE

Saturated steam production considering feed water at 20°C. Pressure up to 21 KGF / CM². All models with air preheater



WOOD



WOOD
CHIPS



BAGASSE
CANE



COCONUT
SHELL



RICE
BARK



CORN
STRAW



CORN
COB



PALM
WASTE



Biomass
Boilers

Our industrial biomass boilers line offer proven efficient and durable solutions, were designed by Steammaster to provide primarily a low cost over the entire life cycle and we really have a history of reliability and maximum safety.

Boilers Biomass

Steammaster biomass boilers have grates specific to each type of fuel. Perfect burning with minimal ash generation and unburned biomass can only be achieved with the proper combustion system for your application. We have solutions for burning the most varied types of biomass, ensuring low particulate emissions. There is no more efficient set option than an **original Steammaster**



WOOD

- VMI-L
- VMI-LC
- VMIC
- VMFI
- VMFI-G

BIO DUAL

- VMU
- VMU-C
- VMFI-D
- VMFI-DG

BIOMASS

- VMIC-RG
- VME-RG
- JPD

FROM PROCESS STEAM TO POWER GENERATION

Biomass boilers for industrial and/or power generation

The VME-RG boiler has a semi ellipsoidal head on firetube body and watertube furnace, JPD has a watertube furnace type, both with special water circulation design and traditional dimensions for power generation equipment.

With half a century of existence

Steammaster can ensure that every power generation boiler we manufacture is of the best and highest quality in the industry and offers the lowest possible operating costs for this style of boiler. Extensive range of watertube and hybrid boilers providing 10000-40000 kg / h of steam. Its tubular structure, with robust design coupled to large external water tubes, ensures a perfect natural circulation of water through the boiler, ensuring long service life. Grate system of high reliability and efficiency, made of special material and design that allows even distribution of combustion air, resulting in a combustion clean and low emission of pollutants.

All solutions adopted are compatible with saturated steam application, power generation and cogeneration. The economizer ensures that efficiency is superior to 86% for various fuels conditions.

It can produce superheated steam up to 450 °C at high pressures for special applications or power generation.



Single and double stage convective super heaters are available;
Furnace walls on membrane type construction;
Exclusive advanced water circulation.

WOOD LOGS

Ecological and economic fuel



VMI-L: Mixed boiler with watertube furnace and firetube body . With 3 gas pass and grate made in finned tubes, cooled by the boiler water itself. Large area of radiation heating in the furnace, with no refractories, providing greater absorption of radiated heat, which combined with the size and distribution of the convection area, makes the boiler more economical and durable. ASME international certification, water level control, pressure switches and industrial quality safety valve ensure the safety of this boiler.

Combustion gas exhaust fan that is modulated by frequency inverter.

VMI-LC: Offers the same specifications as the VMI-L boiler and is equipped with a pneumatic guillotine door and a wood log feeder, which ensures fast power supply, thus eliminating energy loss from cold

air entrance and radiation. Door interlock, which only opens with guaranteed negative pressure in the furnace.

VMIC: Firetube body and watertube furnace boiler with combustion air preheater integrated to the boiler body, resulting in higher fuel economy and very low unburn rates. It has combustion air blower that inject the air in the preheater that follows to grate at the ideal pressure and temperature. Fan speed control by intelligent steam pressure control logic, has 02 pressure transmitters, one for steam and one for furnace.

VMFI: Offers the same standards as the VMIC boiler and is equipped with a unique Steammaster furnace suitable for burning large quantities of wood more efficiently, equipped with automatic ash removal. It has an air injection system in the flame (overfire), which improves combustion and reduces the emission of pollutants.

It features a 10-meter wood log feeder, which ensures fast feeding, thus eliminating energy loss from cold air entrance and radiation.

VMFI-G: The traditional VMFI boiler combined with a 25-meter long hydraulic wood feeder and elevating



DUAL BIOMASS

Flexibility of choice for an operation
ecological and economic



Biomass
Boilers



conveyor that allows for ditchless installation. The 25-meter wood log feeder has a maximum load autonomy of up to 36 hours of operation.

VMU: Three gas pass mixed firetube body and watertube furnace boiler. Equipped with combustion air preheater and the excellent U Steammaster grate for burning biomass chips and wood logs. The wood is fed manually by doors in front of the easy-to-open furnace. To burn biomass chips a screw feeder is used, which introduces the fuel into the furnace, the speed of this feeder is varied according to the steam pressure.

VMU-C: Offers the same standards as the VMU boiler plus pneumatic door type and 6-meters wood log feeder.

VMFI-D: Has the same characteristics as the VMFI boiler. Equipped with a biomass spread stoker type feeder, which introduces the fuel into the furnace evenly by varying the spreading site. This feeder guarantees the use of the full capacity of the grate. Excellent result in burning wood chips and other chopped biomass.

VMFI-DG: Has the same characteristics as the VMFI-D boiler combined with a 25-meter long hydraulic wood feeder and elevating conveyor that allows for ditchless installation. The 25-meter wood log feeder has a maximum load autonomy of up to 36 hours of operation.



VMIC-RG: Modular boiler, with firetube body and watertube furnace Steammaster boiler, manufactured in 2 modules: the watertube furnace and firetube body. This modular configuration speeds up the field assembly process, ensuring resource savings. It has an integrated air preheater as the fourth gas pass, which increases efficiency and improves combustion due to the injection of hot air into the grate. It has air injection in the flame (overfire) to improve combustion and reduce emissions.

The high chromium reciprocating type mobile grate combustion system capable of accepting a high variety of biomass.

Reciprocal motion is adjustable in frequency and speed, which ensures complete burning even in high moisture fuels.





Biomass
Boilers

POWER GENERATION FROM BIOMASS

Ecological and economical fuel





JPD: Modular high pressure and high temperature watertube boiler capable of producing superheated steam for special applications or power generation.

It is manufactured in 3 easy-to-transport modules that accelerate field assemble, ensuring resource savings. It has a convection-shaped bank for convection heat exchange and a special high temperature horizontal steel superheater, automatic ash removal on the grate and filters. After exiting the gases, the boiler project still has two more heat exchangers for full heat utilization:

The economizer, which recovers heat by heating the water inlet in the boiler.

Air preheater recovers heat by heating combustion air injected into the grate, improving combustion of even wetter fuels.

It has air injection in the flame (overfire) to improve combustion and reduce emissions.

Its reciprocating type mobile grate made of high chrome cast steel is capable of accepting a wide variety of biomasses.

The frequency and speed of movement is adjustable, ensuring complete burning even in high humidity fuels.

VME-RG: Modular firetube body and watertube furnace boiler capable of generating superheated steam at high pressures for power generation and other applications.

It is manufactured in 3 easy-to-transport modules that accelerate field assemble, ensuring resource savings.

The boiler has a firetube body for convection heat exchange, aquatubular furnace designed in a specific profile to ensure complete combustion of gases and a special vertical steel superheater for high temperatures.

This model also features economizer and air preheater, recovering as much energy as possible and ensuring the highest efficiency.

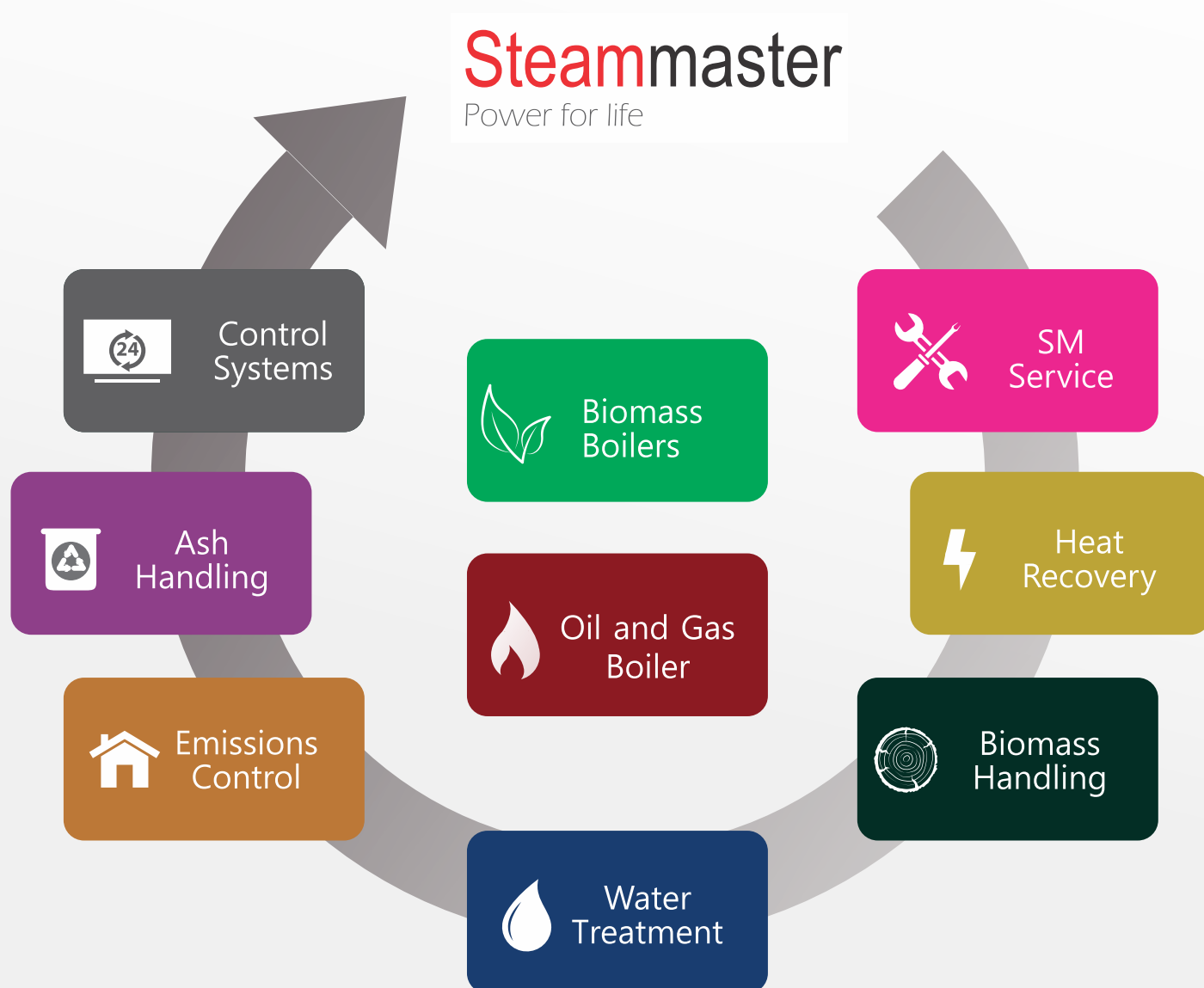
Like JPD, it has a mobile reciprocating grate for burning the most varied types of fuels in different humidity. Overfire combustion system for improved combustion, automatic ash removal that unifies grate and filters ashes at a single point.

TOTAL INTEGRATION BEYOND BOILERS

Dedicated since 1974 to boiler development, design, manufacture, installation and maintenance, Steammaster has built a reputation for innovation and soundness.

During our history we have developed complete solutions for your boiler house. From fuel inlet to steam outlet, Steammaster delivers high-tech products while maintaining robustness and durability.

We have a wide range of products and services to best serve you and your business.



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