

Texas

The logo for aico, featuring the lowercase letters 'aico' in white on an orange square background, followed by a white icon of a house with a flame and a water drop.

aico

Floor-standing
Condensing storage water heater

99 · 230

Floor-standing Condensing storage water heater

Texas is a condensing water heater with integrated storage of 500 litres and an output range from 99 and 230 kW. Manufactured from duplex grade stainless steel, the Texas water heater is defined by its patented Helical Fire Tube heat exchanger, offering low pressure

drop and large surface area for maximum heat transfer. The Texas water heater is the perfect product selection when a significant peak demand and continuous flow of DHW is a major requirement.

Texas

Floor-standing
Condensing storage water heater

99 · 230 kW

DHW production
ΔT 30°C up to

6,900 l/h

Chloride
up to

2,000 mg/l

Wide
modulation ratio

6:1

The original design of the exchanger, comprised of a large number of helical flue pipes totally immersed in DHW water, this guarantees outstanding performance of DHW delivery. This method of heat transfer reduces mechanical stress to the water heater and promotes durability.

Key features & benefits

Helical Fire Tube heat exchanger in duplex stainless steel

High production of peak and continuous DHW

100% condensing

High resistance to corrosion

Fast recovery times

No need for protection anode

Compact dimensions



Design



The quality of the material chosen removes the requirement for an anode, typically installed to protect the water heater from risk of corrosion, reducing maintenance requirements.

Consideration was taken when designing the Texas to ensure as small a footprint as possible, allowing easy installation in plantrooms with space constraints. All models in the Texas range have a width that allows an easy passage through a standard 90 cm wide doorway, ensuring easy access to the plantroom and occupy only 0.92 m² floor space once installed.



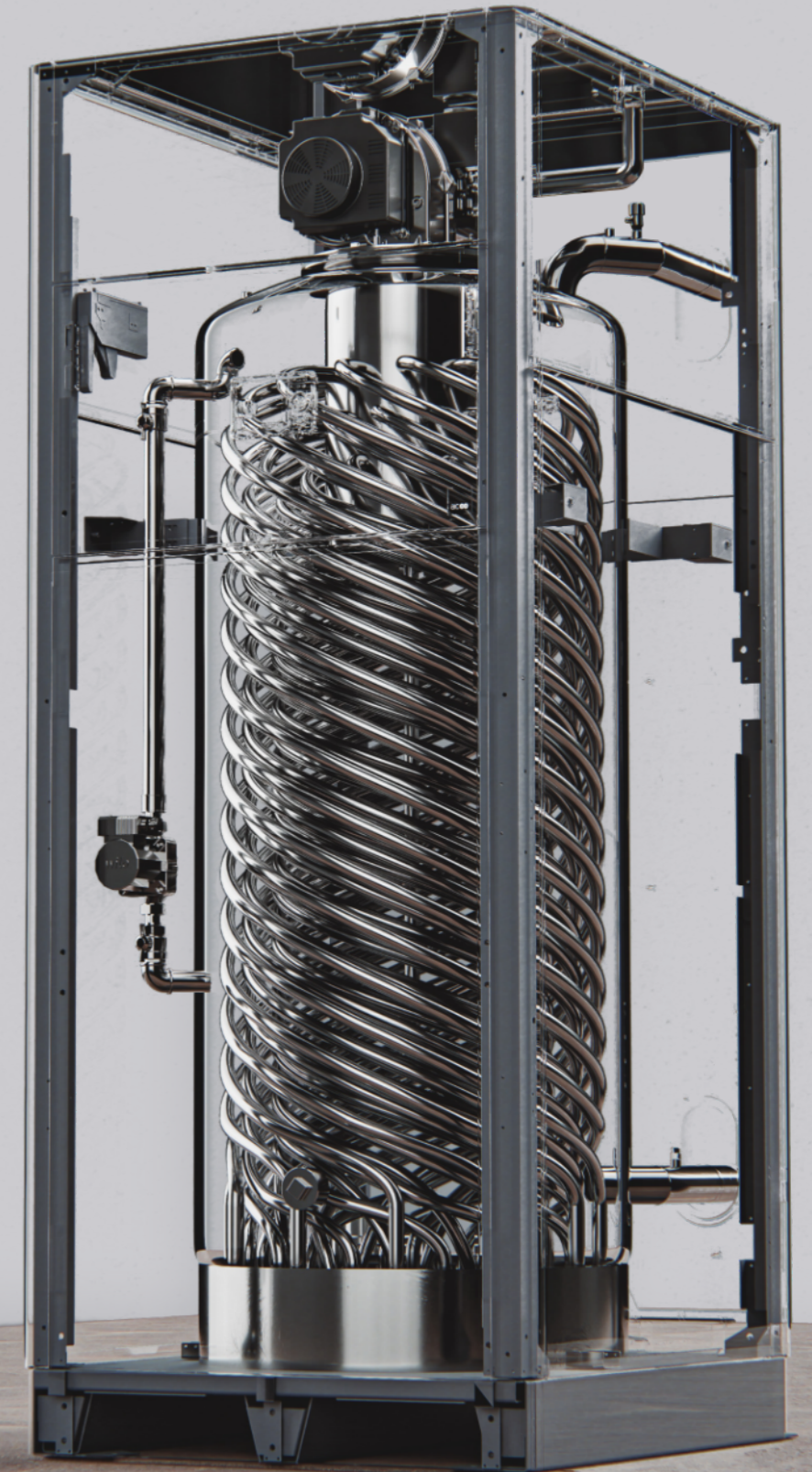
Heat engine

Domestic hot water always in condensation

Texas water heater fully condenses thanks to the specific geometry of its exchanger that allows the cold water supply to cool the flue gasses and condensing them at the bottom part of the unit. The water then travels up, against the flow of the flue gasses, significantly increasing the heat exchange, thermal efficiency and performance. The integrated optimising pump maximises the uniformity of temperature inside the storage and eliminates the risk of legionella.

Integrated de-stratification pump


For greater stability and uniformity of temperature inside of the tank, Texas is equipped with an integrated de-stratification pump which has the task of “forcing” the circulation of water up around the helicoidal flue pipes, consistently delivering high performance and efficiency. The turbulence created within the exchanger also minimises the risk of legionella.



Highly efficient



Load profile
4XL

DHW


Texas water heater offers an exceptional and unique design, crafted to deliver high volume continuous hot water. The burner chamber sits within the 500 litres DHW cylinder. Coiled tubes are welded from the housing of the chamber, traveling downwards to the bottom of the cylinder, flue gasses flow down through these tubes, heating the water which is flowing upwards through the DHW cylinder.

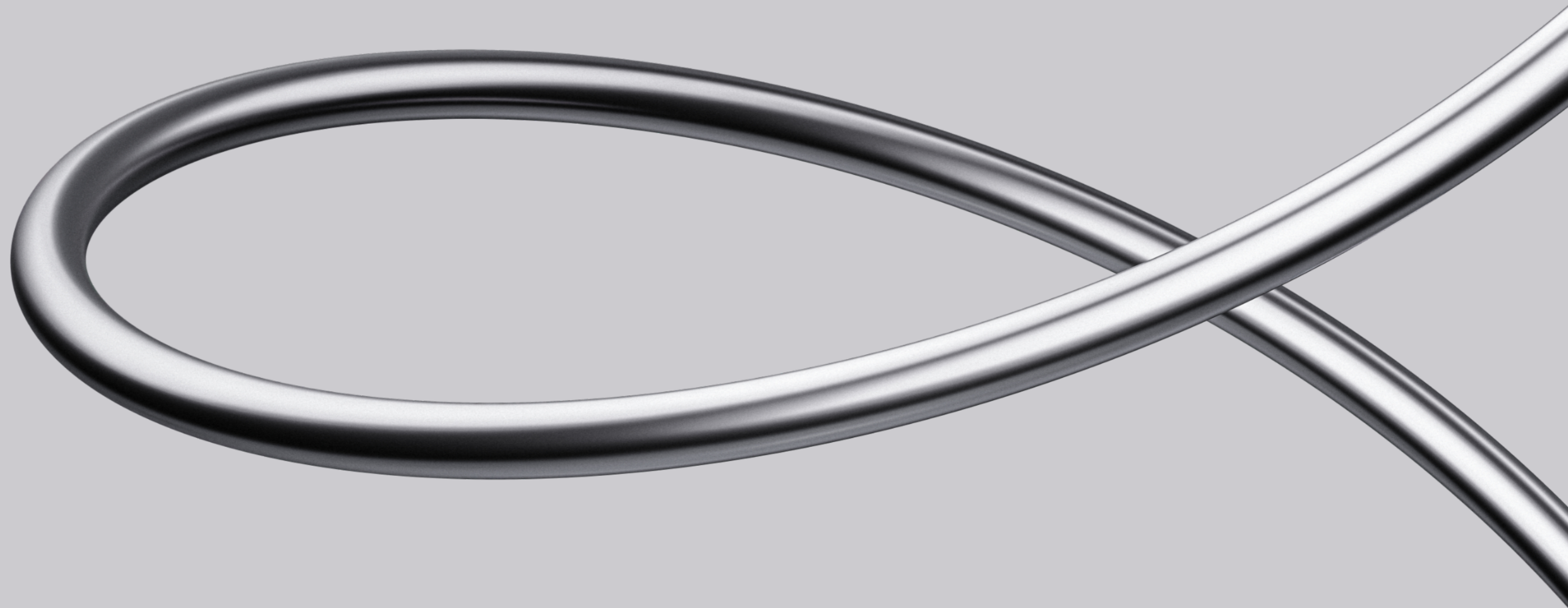
This highly efficient, continuously condensing design enables the Texas to provide reliable high volumes of hot water. Not only is this crucial for many industrial processes, it will also meet the demanding needs of hotels and sports centres, and any application where there are periods of either high peak or continuous demand.

Leanduplex

32101

Duplex LDX

2101

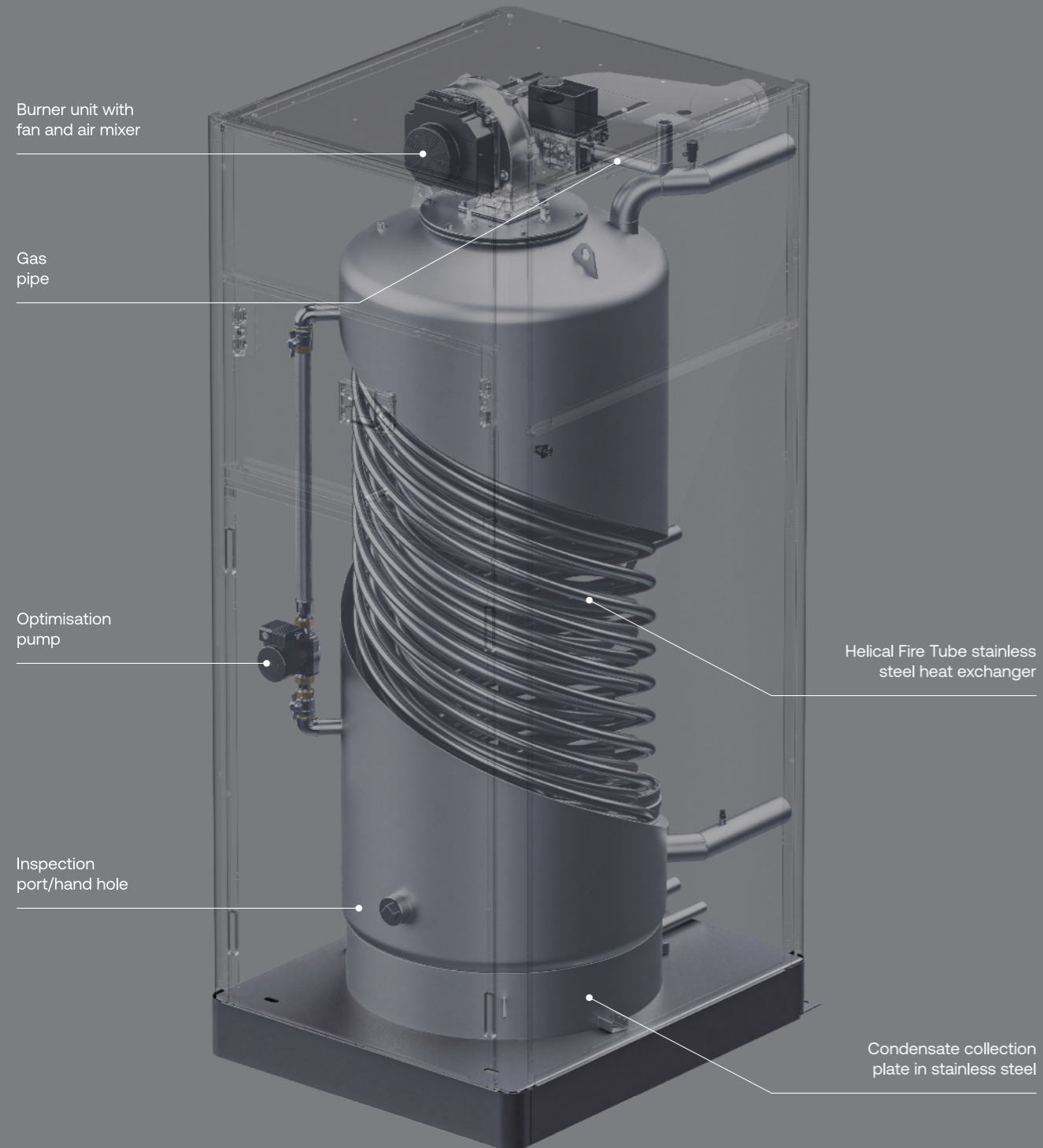


Duplex steel

The main material used to build Texas is Duplex stainless steel, blending the best properties of both austenitic and ferritic stainless steel. This choice is considered the industry standard where hygiene and public health safety are paramount to any installation.

The nature of Duplex stainless steel and its corrosion resistant properties make it the perfect choice for installations where the water may be particularly rich in chlorides, such as sports centres, swimming pools, campsites, hotels, spas, etc.

Technical specification

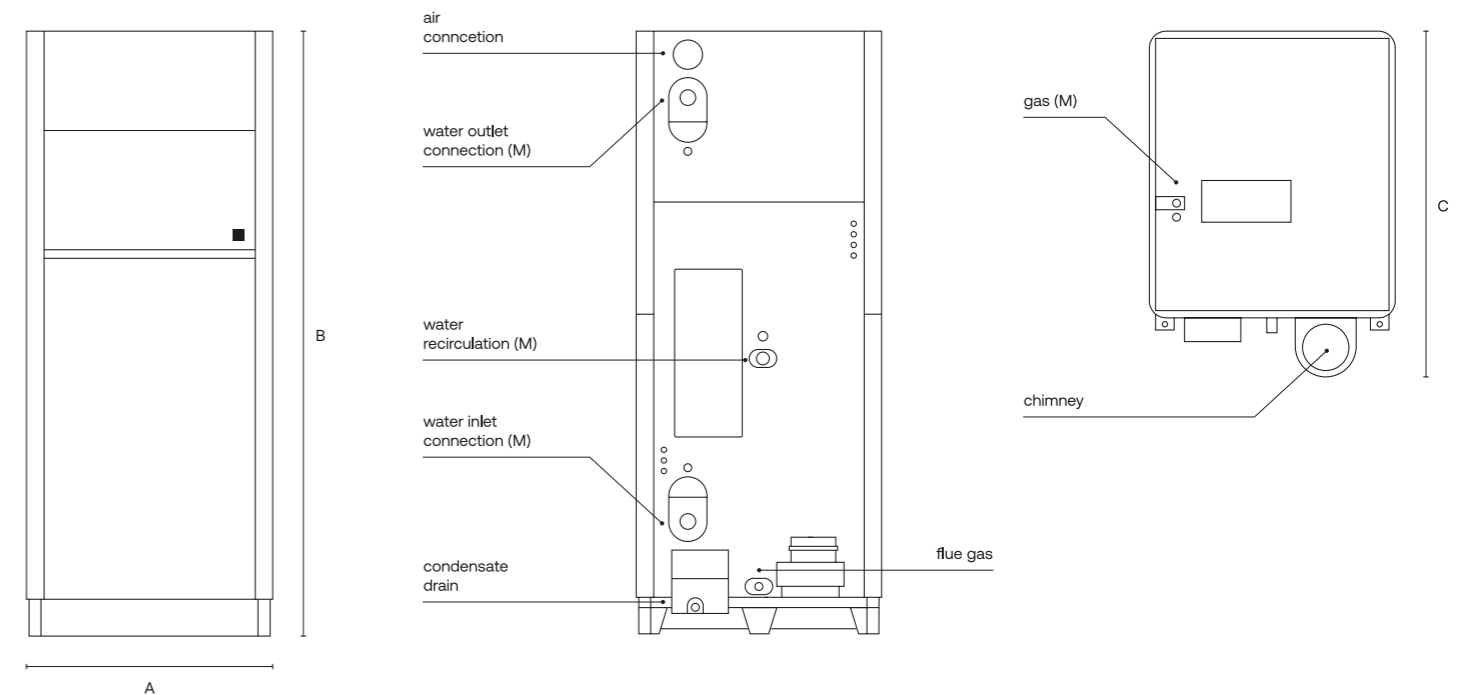


Water heater connections

		Tx 99	Tx 230
Gas (M)	in.	3/4"	1 1/4"
Condensate drain ø	mm	26.7	26.7
Flue gas	mm	150	150
Air connection ø	mm	100	100

Dimensions

Width (A)	mm	880	880
Height (B)	mm	2,174	2,174
Depth (C)	mm	1,233	1,233
Empty weight	kg	415	432.5



Performance and efficiency			Tx 99	Tx 230
Nominal heat input (Q)	G20	kW	18.3–99	37–230
	G31	kW	24–99	54.4–230
Nominal useful output (P)	G20	kW	105.1	246.8
	G31	kW	105.2	239.5
Efficiency (expressed in terms of NCV) for continuous at constant dT (η_u)	G20	%	106.2	107.3
	G31	%	106.3	104.2

General			Tx 99	Tx 230
Power consumption		W	169	290
Supply voltage/Frequency/Current		V/Hz/A	230/50/6	230/50/6
Protection class		IP	X4D	X4D
Water content (V)		l	500	500
Minimum water pressure °C		bar	0.8	0.8
Maximum water pressure		bar	10	10
Maximum DHW temperature		°C	80	80
Gas type(s)	G20–G25–G25.1–G25.3–G31			
Gas categories	I2E(S), I2E, I2H, I2ELL, I2HS, I2N, I2EK, I3P, I2E(R), II2E3P, II2E(S)3P, II2EK3P, II2H3P, II2L3P, II2E+3P, II2E(R)3P, II2Esi3P, II2Er3P			
CO emission	G20	mg/kWh	4.3	9.67
	G31	mg/kWh	10.74	20.41
NOx level			37.6	37.5
Mass flow rate of flue gases		g/s	8–42	16–96.6
Maximum flue gas temperature		°C	60	71

DHW flow rates		Tx 99	Tx 230
Peak flow at 40°C first 10 min	l/10'	1,418	1,749
Peak flow at 40°C first hour	l/60'	3,926	7,573
Continuous flow rate at 40°C	l/h	3,010	6,989
Peak flow at 60°C first 10 min	l/10'	846	1,040
Peak flow at 60°C first hour	l/60'	2,305	4,435
Continuous flow rate at 60°C	l/h	1,754	4,075

Operating conditions:

Cold water inlet: 10°C

Texas storage temperature: 80°C

Advanced Industrial Components

AIC was founded in 2001 and rapidly became an internationally recognised reliable specialist in the design, engineering and manufacture of stainless steel and titanium heat exchangers. We believe in continuous investment in people and processes. Due to that, we are at the forefront of advanced heat transfer solutions. Thanks to proven design products without compromise on quality and our technologically advanced automated production processes, we can carry out the most complex and technologically advanced heat transfer projects. In 2018 AIC Europe was established with

headquarters in Weert in the Netherlands. By creating a network of subsidiaries throughout Europe, we can now deliver our advanced range of stainless steel gas fired condensing boilers and high-powered water heaters to the market, providing innovative heating solutions with a first class service. The AIC products and technological solutions are the results of continuous investment and research aimed at achieving our objectives of a maximum reduction in polluting emissions with increased energy savings, guaranteeing the user high eco-comfort performance in heating and domestic hot water.

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