

TEXAS



Condensing Instantaneous Water
Heater with Integrated Storage

99 · 230

The Texas water heater excels in hot water performance with its unique design. Constructed using Duplex stainless steel and a patented Helical Fire Tube heat exchanger, it ensures efficient heat transfer and durability. Operating in condensing mode, it optimizes thermal efficiency while maintaining temperature uniformity and safety through an integrated circulation pump. The Texas water heater offers a reliable and sustainable solution for constant hot water supply in industrial and commercial applications.

Texas

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99 · 230

7,573 ltr/h

Maximum DHW
production at 40°ΔC

6:1

Maximum
modulation ratio

1 m²

Small
footprint

The Texas water heater is a condensing unit with a storage capacity of 500 litres and a power output ranging from 99 to 230 kW. It features a unique design that includes a large number of helical flue pipes immersed in the domestic hot water (DHW), resulting in exceptional hot water performance. This design reduces mechanical stress on the water heater, ensuring durability. The Texas water heater is constructed using Duplex stainless steel, and it is equipped with a patented Helical Fire Tube heat exchanger, which offers a large surface area for maximum heat transfer and minimal pressure drop.

Key Features & Benefits

Helical Fire Tube heat exchanger in Duplex stainless steel

High production of peak and continuous DHW

Large heat transfer surface area

Self-cleaning flue gas tubes

High resistance to corrosion

Fast recovery times

Built in destratification pump

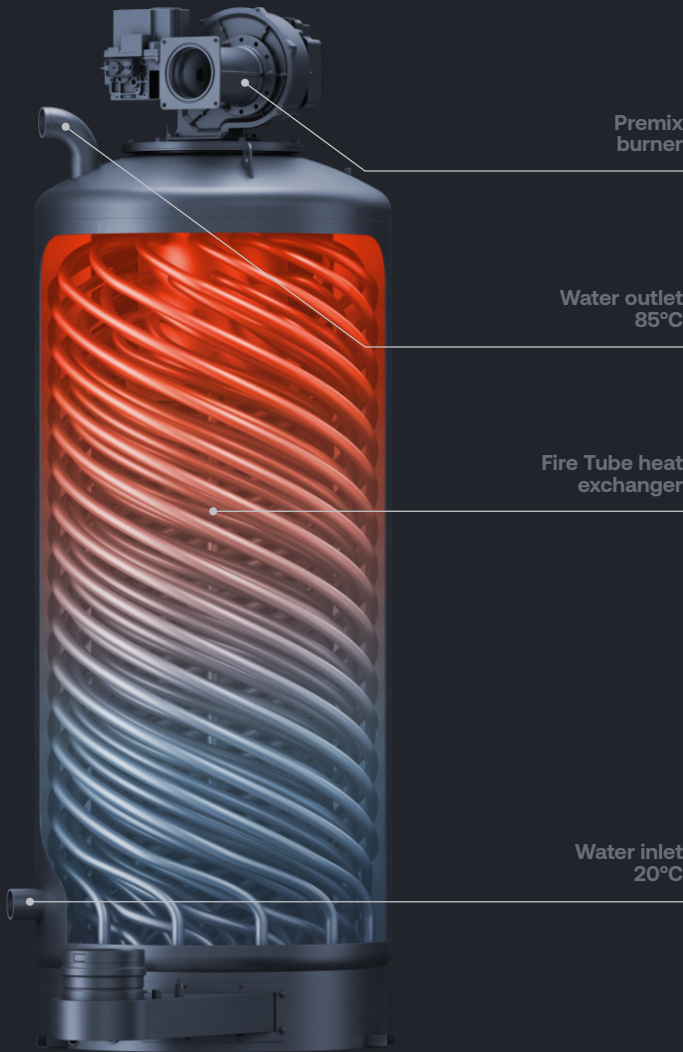


Helical Fire Tube

The Texas water heater boasts an exceptional and distinctive design meticulously engineered to deliver a substantial and uninterrupted supply of hot water.

At the core of this system lies the Helical Fire Tube exchanger – a defining feature of the Texas water heater. This exchanger exhibits an original design comprising a multitude of fully immersed helical fire tubes, which ensures outstanding performance in hot water production. Furthermore, this design minimises mechanical strain, thereby extending the lifespan of the manufacturer's product.

Domestic hot water always in condensing mode:
The Texas water heater ensures a consistent state of condensation for domestic hot water production. This achievement is made possible through the ingenious geometry of the Helical heat exchanger, which facilitates the process by exposing the cold-water supply to the cooled flue gases, thus condensing them in the lower section of the unit. Subsequently, the water ascends in a countercurrent manner to the flow of the flue gases, enhancing the heat transfer, thermal efficiency, and overall performance.



To further aid operation, an integrated circulation pump is employed, which optimises the uniformity of temperature within the storage tank. This pump plays a crucial role in mitigating the risk of legionella, a harmful bacteria commonly associated with water systems.

Max. Operating pressure

6 bar

Energy class

A

Anti-legionella

Parameters

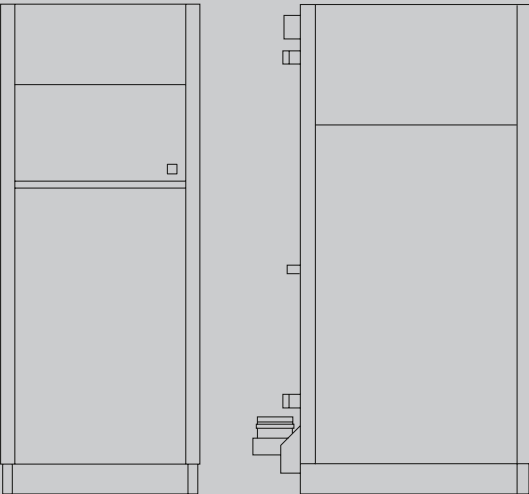
Resistance to corrosion and oxidisation
Self-cleaning flue ways
Internal circuit piping in welded stainless steel
Low pressure drop
Reduced maintenance

DHW flow rates		TX 99	TX 230
Peak flow at 40°C first 10 minutes	ltr/10'	1418	1749
Peak flow at 40°C first hour	ltr/60'	3926	7573
Continuous flow rate at 40°C	ltr/h	3010	6989
Recovery time	min	20	11

Design

The Texas water heater was thoughtfully designed to address the challenges of space-constrained plantrooms. Its compact footprint allows for easy installation, even in tight spaces, while its width enables effortless passage through a 90 cm doorway. Once installed, it occupies a mere 1 m² of floor space, optimising spatial efficiency.

The water heater operates quietly, thanks to innovative engineering and soundproofing materials, ensuring minimal operational noise. Every design detail has been carefully considered, from the selection of high-quality materials to the precision engineering, guaranteeing durability and reliability. Sustainability is prioritised with the use of recyclable stainless steel, aligning with eco-conscious practices.



Characteristics

- Small footprint
- Adaptable to various applications
- Sleek design
- Stainless steel heat exchanger
- Compact dimensions



Duplex
Steel



Small
Footprint

1m²

Years Warranty
Product*

2

*Subject to
conditions

Applications

The Texas water heater provides a practical solution to fulfil the increasing need for hot water due to the expansion of multi-purpose facilities and the use of water-intensive amenities.

With its autonomous condensing technology and dependable performance, it is suitable for a wide range of industrial and commercial uses. Additionally, the use of Duplex stainless steel ensures durability and corrosion resistance, making it a good choice for installations with water containing high levels of chloride.

99–230 kW

Hotels	Restaurants
Hospitals	SPAs
Nursing homes (RSA)	Industrial changing rooms
Canteens	Industrial applications
School buildings	Food processing applications





Integrated optimisation pump

For greater stability and uniformity of temperature inside of the tank, Texas is equipped with an integrated optimizing pump which has the task of “forcing” the circulation of water up through the helicoidal flue pipes, consistently delivering high performance and efficiency. The integrated optimizing pump maximizes the uniformity of temperature inside the storage and eliminates the risk of Legionella.

Parameters

- Greater stability and uniformity of temperature
- Forcing the circulation of water up through the pipes
- Delivering high performance and efficiency
- High durability of materials
- Easy service access

Duplex steel

The Texas water heater, engineered for high-volume hot water delivery in hygiene critical facilities, is crafted with longevity and dependability in mind.

AIC's choice of Duplex stainless steel ensures maximum resistance to corrosion and chlorides. With twice the mechanical strength of other austenitic steels, it withstands high chloride concentrations (up to 2,000 mg/l). This makes it ideal for applications with significant water demands and peak draw-off, as well as continuous usage. Its corrosion-resistant properties suit installations with high chloride levels found in sports centres, swimming pools, campsites, hotels, and spas. Notably, the quality of the chosen material eliminates the need for an anode, reducing maintenance requirements.



Characteristics

- Leanduplex 32101 & Duplex LDX 2101
- Very high mechanical strength
- Maximum resistance to corrosion
- Withstands high chloride concentrations
- Reducing maintenance requirement

DHW condensing


Anti-Lagionella


Load profile
4XL

Continuous condensation with fast recovery times

The Texas water heater consistently operates in a condensing mode, ensuring continuous condensation and rapid recovery times for hot water production. This steadfast commitment to condensation guarantees exceptional performance in delivering domestic hot water (DHW), meeting the demand for a constant and reliable supply.

Domestic hot water performance ⁽¹⁾			TX 99 FS	TX 230 FS
Load profile			3XL	4XL
Peak flow at 40 °C first 10 minutes	I/10'		1148	1749
Peak flow at 40 °C first hour	I/60'		3926	7573
Continuous flow rate 40 °C (ΔT = 30 K)	I/h		3010	6989
Peak flow at 50 °C first 10 minutes	I/10'		1061	1308
Peak flow at 50 °C first hour	I/60'		2924	5635
Continuous flow rate 50 °C (ΔT = 40 K)	I/h		2235	5192
Peak flow at 60 °C first 10 minutes	I/10'		846	1040
Peak flow at 60 °C first hour	I/60'		2308	4435
Continuous flow rate 60 °C (ΔT = 50 K)	I/h		1754	4075
Recovery time (10 °C - 55 °C)	min		16	6
Efficiency for continuous draw-off at constant ΔT (η _u)	G20	%	106,2	107,3
	G31	%	106,3	104,2

(1) Operating conditions: DHW set point T = 80 °C, cold water inlet T = 10 °C.



Construction



Specification

Performance			TX 99 FS	TX 230 FS
Nominal heat input (Q)	G20 / G20Y20 ⁽¹⁾	kW	18,3-99,0	37,0-230,0
	G25	kW	19,0-99,0	37,0-230,0
	G31	kW	24,0-99,0	54,4-230,0
	G30	kW	-	54,4-230,0
Nominal useful output (P)	G20 / G20Y20 ⁽¹⁾	kW	105,1	246,8
	G25	kW	107,4	249,3
	G31	kW	105,2	239,5

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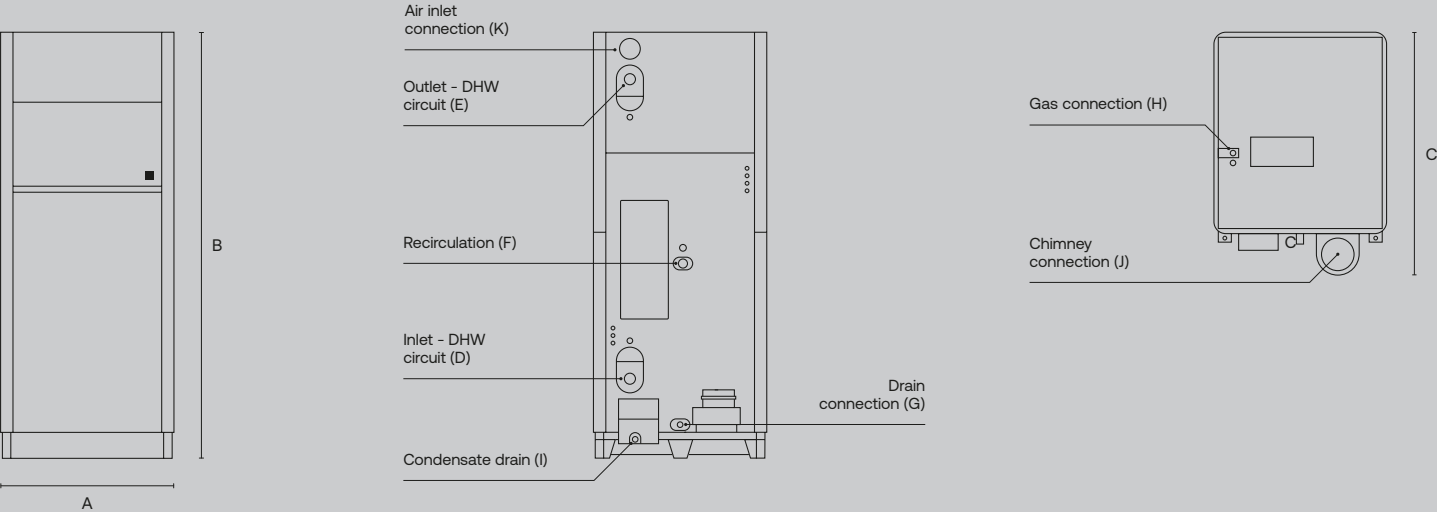
(1) Up to 20 vol.% hydrogen.
(2) Operating conditions: DHW set point T = 80 °C, cold water inlet T = 10 °C.
(3) 15 °C, 1.013,25 mbar, dry gas.

General			TX 99 FS	TX 230 FS
Energy consumption		W	169	290
Supply voltage / frequency		V/Hz	230 / 50	230 / 50
Protection class		IP	X4D	X4D
Capacity		l	500	500
Min operating pressure		bar	1,2	1,2
Max operating pressure		bar	8,0	8,0
Max pressure		bar	10,0	10,0
Max DHW operating temperature		°C	80	80
Gas type		G20, G25, G25.1, G25.3, G31, G20Y20 ⁽¹⁾	G20, G25, G25.1, G25.3, G30, G31, G20Y20 ⁽¹⁾	
Gas appliance category		I2E(S), I2E, I2H, I2E(R), I2ELL, I2HS, I2N, I2EK, I3P, I3B, I3B/P, II2E3P, II2E3B/P, II2E(S)3P, II2E(S)3B/P, II2EK3P, II2EK3B/P, II2H3P, II2H3B/P, II2L3P, II2L3B/P, II2E+3P, II2E(R)3P, II2E+3B/P, II2E(R)3B/P, II2Esi3P, II2Er3P, II2Esi3B/P, II2Er3B/P		
Chimney type(s)			B23, B23P, C43, C53, C63, C83	
CO emission		mg/kWh	4,3	9,7
Gas flow rate	G20 ⁽³⁾	m³/h	2,0-10,0	3,9-22,8
	G25 ⁽³⁾	m³/h	2,4-11,8	4,4-26,4
	G20Y20 ^{(1),(3)}	m³/h	2,2-12,1	4,5-27,0
	G30 ⁽³⁾	m³/h	-	1,8-7,0
	G31 ⁽³⁾	m³/h	0,9-3,9	2,2-8,9
NOx class			6	6
NOx emission		mg/kWh	37,6	37,5
Mass flow rate of flue gases (min-max)		g/s	8,0-42,0	16,0-96,6
Max flue gas temperature		°C	60	71

(1) Up to 20 vol.% hydrogen.
(2) Operating conditions: DHW set point T = 80 °C, cold water inlet T = 10 °C.
(3) 15 °C, 1.013,25 mbar, dry gas.

Dimensions		TX 99 FS	TX 230 FS
Width (A)	mm	880	880
Height (B)	mm	2174	2174
Depth (C)	mm	1050	1050
Empty weight	kg	402,5	432,5
Full of water	kg	902,5	932,5

Connections		TX 99 FS	TX 230 FS
Inlet - DHW circuit (D)	inch	G 2	G 2
Outlet - DHW circuit (E)	inch	G 2	G 2
Recirculation (F)	inch	G 1	G 1
Drain connection (G)	inch	G 1	G 1
Gas connection (H)	inch	G 3/4	G 1 1/4
Condensate drain (I)	mm	26,7	26,7
Chimney connection (J)	mm	150	150
Air inlet connection (K)	mm	100	100



Advanced Industrial Components

AIC, founded in 2001, is a renowned specialist in designing and manufacturing stainless steel and titanium heat exchangers. With top-quality products and advanced production processes, we excel in complex heat transfer projects. AIC Europe, established in 2018, delivers innovative heating solutions and exceptional service through its subsidiaries across Europe. Our continuous investment and research focus on reducing emissions, maximizing energy savings, and providing high eco-comfort performance in heating and hot water.

1000 Employees

35% Planning and Management
65% Production and Logistics

33.900 m²

Production facilities
in Poland

14

Commercial branches in Europe,
North America and Asia

