

NORITZ Tankless Water Heater, Model GQH-22H2FFAAI

22kW Gas Combination Boiler, Dual Servo Control

Rated heat input
22 kW

Minimum start-up flow
2.5 L/min

Rated heat output
20 kW

Hot water flow ($\Delta T = 25^{\circ}\text{C}$)
12 L/min

Noritz 22 kW gas combination boilers use dual hot-and-cold water servo control to keep water temperature very stable, up to $\pm 0.2^{\circ}\text{C}$. That stability is easier to notice when several outlets are used at once, because the temperature stays consistent. Thanks to their variable-frequency fan, operation remains quiet, making it suitable for small to mid-size homes with higher expectations for heating and shower comfort.

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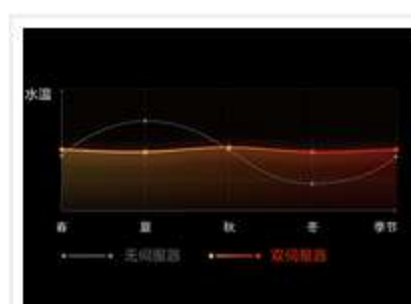
Product Highlights



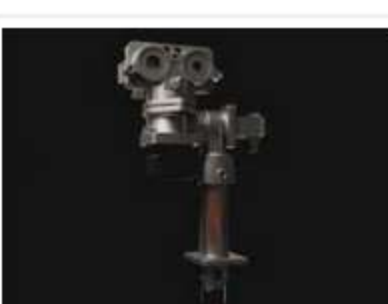
PRO-Control dual hot-and-cold servo control keeps hot water temperature very stable, up to $\pm 0.2^{\circ}\text{C}$, helping solve common issues seen in traditional wall-hung boilers



Multi-point use without disruption: multiple kitchen and bathroom taps can be used at the same time with less temperature fluctuation



More comfortable showers year-round: less risk of "too hot" water in summer, and warmer water in winter



Water and gas work together: a stepper motor and gas proportional valve adjust output continuously to keep temperature under control



Fast response: quick calculations and real-time inlet flow adjustment help stabilize temperature sooner



Smart mixing: If water supply is interrupted and then returns, the gas boiler prevents a sudden rush of overly hot leftover water, helping reduce scalding risk

- PRO-The comparison images are based on Noritz internal testing and are for reference only. Actual performance may vary.
- Data is taken from a test report issued by Zhejiang Fangyuan Testing and Certification Group (Report No.: 2411305892).
- Some data is sourced from the Noritz laboratory

Technical Specifications

Model	GQH-22H2FFAAI
Rated heat input	22 kW
Rated heat output	20 kW
Minimum heating output	6.6 kW
Minimum DHW heat output	1 kW
Minimum start-up flow rate	2.5 L/min
Thermal efficiency	$\geq 89\%$
DHW flow rate ($\Delta T = 25^{\circ}\text{C}$)	12 L/min
Dimensions (H $\times$ W $\times$ D)	740 $\times$ 440 $\times$ 310 mm
Weight	32.5 kg
Water flow servo motors	2
Staged combustion	No
Circulation pump	1
0.5°C temperature step control	Yes (35–48°C)
Heating temperature range	30–80°C
Hot water temperature range	35–60°C
Noise level (sound power / sound pressure)	≤ 53 / ≤ 39 dB
Wi-Fi	Yes

Component Overview



Variable-Speed Fan
Fan speed adjusts based on demand, which helps keep operation steady while reducing energy use and noise across different working conditions.



Electronic Control Unit
The electronic control unit supports accurate temperature control and efficient operation. Safety protections and built-in fault diagnostics make status checks and troubleshooting easier.



Sealed Combustion Chamber
Insulation and sound-damping materials are used on the side panels to help reduce heat loss and noise, while also helping limit vibration and wear during operation.



Noritz Water Pump
Designed for quiet running to improve comfort in daily use. Self-protection functions help reduce the risk of faults.



Dual Water-Flow Servo System
Controls both inlet and outlet water flow with high precision by coordinating the two flow paths. In real time, it helps keep temperature steadier during multi-point hot water use.



Five-Pass Heat Exchanger Design
A five-pass heat exchanger keeps the unit compact while improving heat transfer. Larger main tubes and a longer flow path help absorb more heat.



Italian SIT Proportional Valve
Regulates gas flow and pressure with fast response and high control accuracy. This supports efficient combustion and helps reduce energy use.



Expansion Tank
Helps absorb pressure changes in the water system as temperature varies. It also helps buffer water hammer, protect key components, and support stable operation over time.

Component Overview

Installation Dimensions

Features

- PRO-Control dual hot-and-cold servo control supports stable hot water temperature, up to $\pm 0.2^{\circ}\text{C}$
- Wide heating range (30–80°C) for flexible heating across different room scenarios
- Japanese-style dry underfloor heating can be used as well, giving faster warm-up and a more comfortable floor-heating experience
- Operating noise can be reduced to as low as 42 dB(A) through multiple noise-control measures
- Wi-Fi remote control helps users check operating status and adjust settings more easily
- 7,000 flow-adjustment points with fast response time (0.01 s) for 24/7 dual hot-and-cold water control

Advantages



30–80°C heating range



Floor warms up in about 30 min*



Multi-point hot water without interference



Hot water stays within $\pm 0.2^{\circ}\text{C}$



PRO-Control dual servo control



Large touchscreen



Compatible with Japanese-style underfloor heating



Wi-Fi smart control



Quiet operation, down to 42 dB(A)



Dual anti-freeze protection



Wide heating range

- The "Floor heating ready in 30 minutes" claim is based on Noritz lab testing. Results may vary depending on real use.
- Test data is from Zhejiang Fangyuan Testing and Certification Group, report No. 2411305892.

Applications

Noritz H Series gas boilers combine space heating and domestic hot water in one system for everyday use across different areas of the home, such as the kitchen, bedrooms, and bathrooms. They can also be paired with Japanese-style dry underfloor heating for quicker warm-up, while supporting a more consistent hot water temperature for a smoother whole-home experience.



NORITZ: From Japan, Serving Customers Worldwide

Noritz is a Japan-based brand trusted by partners worldwide. Noritz focuses on real customer needs and builds competitive residential heating solutions around dual water-flow servo technology. Along with standard models, Noritz also supports more customized requirements, helping partners handle demanding projects with more confidence.

Inquiry Form

Energy-saving heating equipment continues to be developed to help reduce environmental impact risks, with the goal of supporting a comfortable warm-water lifestyle for users worldwide.



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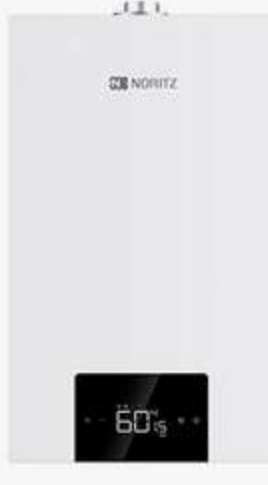
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Reliable Hot Water & Space Heating



22kW Basic Gas Combination Boiler

30kW Gas Combination Boiler (Wi-Fi)

20kW Staged-Combustion Gas Combination Boiler (Wi-Fi)

27kW Staged-Combustion Gas Combination Boiler (Wi-Fi)