



APPLICATION BRIEF

BOILER FEED MAKE UP WATER

May 9, 2025

Measuring boiler feed make-up water with a flow meter is crucial for several reasons:

Efficiency and Performance: Accurate flow measurement helps maintain optimal boiler performance by adding the right amount of water to the system. This prevents overfilling or underfilling, which can lead to inefficiencies in steam generation and potential damage to the boiler system.

Steam Production Calculation: Accurate makeup water measurement contributes to precise steam production rate calculations.

Water Quality Management: Flow meters help monitor the amount of make-up water added, essential for maintaining water quality within the boiler system. Proper water quality is critical to prevent scaling, corrosion, and other issues that can reduce boiler lifespan.

Chemical Treatment Dosing: Precise measurement of makeup water flow enables accurate dosing of water treatment chemicals, optimizing chemical usage and costs.

Leak Detection and Water Conservation: Facilities can detect leaks and other losses in the system by accurately measuring the flow of make-up water. This helps conserve water and reduce unnecessary make-up water additions.

Compliance and Cost Management: Accurate flow measurements are necessary for calculating water consumption and costs. This data is essential for managing operational expenses and ensuring compliance with water usage regulations.

System Reliability: Proper flow measurement ensures the boiler system operates reliably by maintaining the correct water levels and preventing issues like dry firing or overheating.

Leak Detection: Unexpected changes in makeup water flow can indicate leaks in the system, allowing for early detection and prevention of potential equipment damage.

Prevent Dry Running: Flow meters ensure that boiler feed pumps always have sufficient water, preventing dry running and potential pump damage.

Environmental Reporting: Accurate measurement of water consumption is often required for environmental compliance and reporting purposes.

Predictive Maintenance: Flow data can be used to predict when maintenance is needed, such as descaling or cleaning of the boiler system.

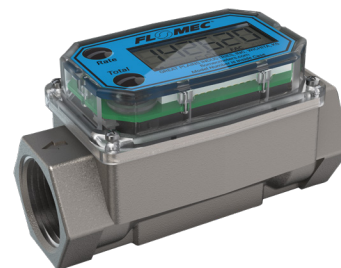
PROJECT OVERVIEW

Boiler feed makeup water is essential for steam generation systems, ensuring proper operation and compensating for water losses. It replenishes the water lost due to blowdown, leaks, or steam consumption and is treated to prevent scaling, corrosion, and impurities that could damage the boiler. Chemicals are added to the makeup water to adjust pH and prevent scaling or corrosion. Boiler blowdown removes high TDS (total dissolved solids) water from the boiler to maintain water quality.

PRODUCT SPECIFICATIONS

Stainless Steel G2 flow meters:

- Temperature requirements 140°F to 250°F
- Steel Pipes
- For temperature requirements above 140°F a High-Temperature riser (up to 180°F) and remote-mounted displays (up to 250°F) are available
- Optional 4-20mA and scaled Pulse available



PVC TM flow meters:

- Temperature below 140°F
- Plastic Pipes
- Optional 4-20mA and scaled Pulse available
- Remote-mounted display is an option



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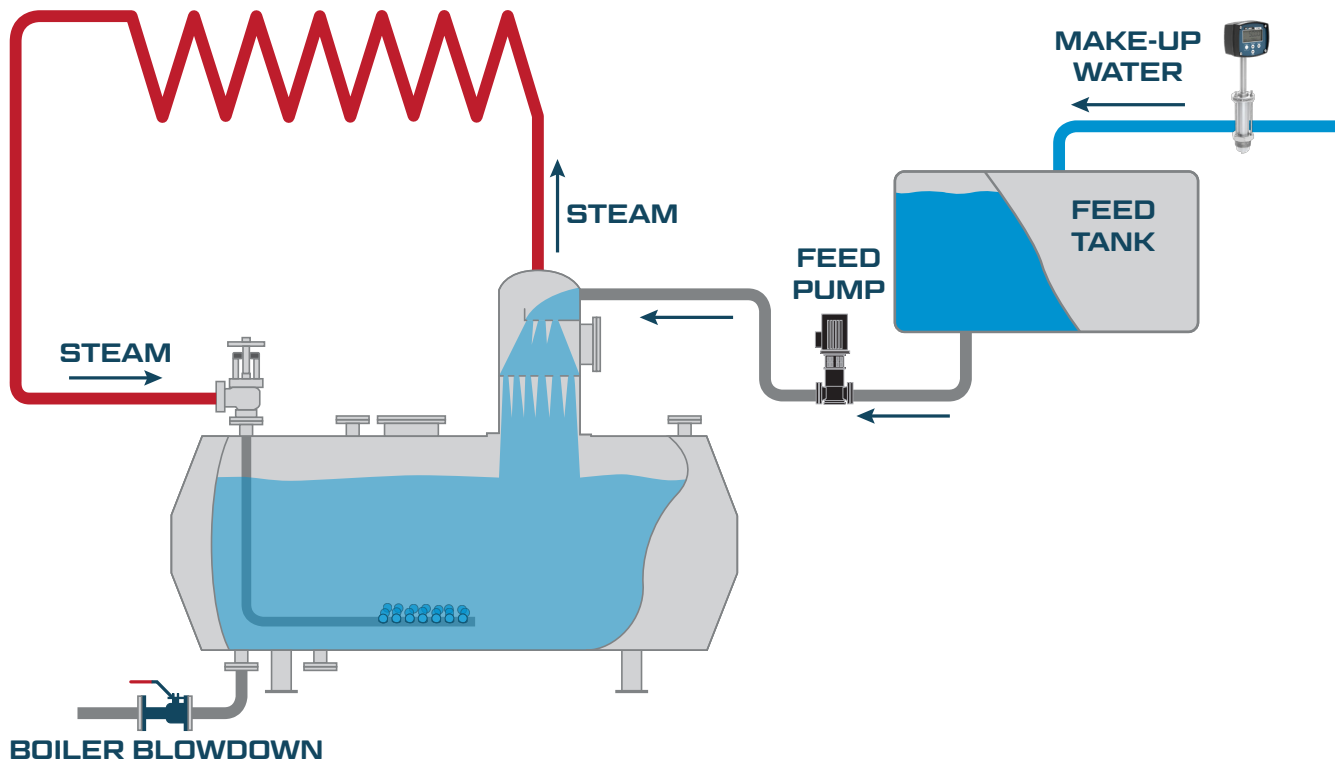
PRODUCT SPECIFICATIONS - CONT.

DP flow meters:

- Temperature up to 300°F
- Plastic and Steel Pipes up to 100"
- Optional 4-20mA and scaled Pulse available
- Remote-mounted display is an option



BOILER FEED WITH FLOW METER FOR ACCURATE MAKE-UP WATER READINGS



Flow meters provide accurate, real-time data on makeup water flow, which is crucial to ensure safe, efficient, and cost-effective operation of boiler systems.

PRODUCT SOLUTION

FLOMEC's flow meters are excellent choices for many Boiler feed water applications, with solutions for steel and plastic pipes. They all have remote display mounting options and pulse and 4-20mA output options for transmitting signals to building automation systems or other control devices.

The G2 flow meter is an accurate choice for steel pipes and higher temperature requirements from ½" to 2"

- For temperature requirements from 140°F to 180°F, a High-Temperature riser option is available.
- For temperature requirements from 180°F to 250°F a remote-mounted display is available.
- The remote-mounted display is an excellent choice for High-Temperature applications requiring an output.

The TM flow meter is an excellent choice for plastic pipes with temperatures below 140°F from ½" to 4".

DP flow meters are for larger pipes up to 100" and temperatures up to 300°F and for applications where the user wants to avoid cutting through the pipe for installation.