

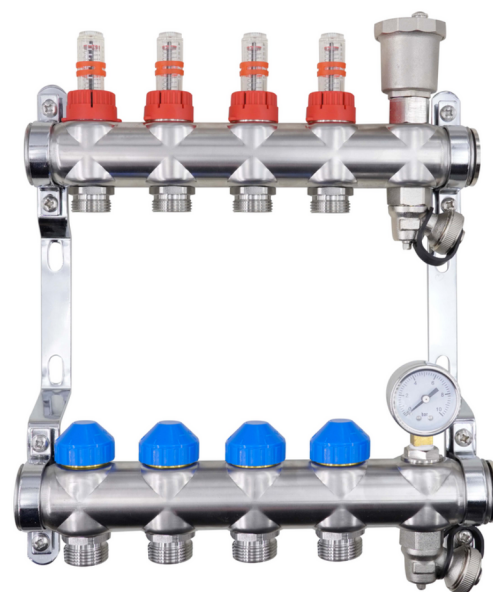
# Calda SmartFlow Manifold



The Calda SmartFlow manifold redefines efficiency and precision in water flow management for heating and cooling systems. Crafted from premium 304 stainless steel, this state-of-the-art manifold ensures exceptional durability and reliable, long-lasting performance.

Designed to accommodate 2 to 12 circuits, the SmartFlow offers advanced dynamic flow balancing and independent circuit adjustments, delivering optimal water distribution for both radiator and underfloor heating applications. Integrated dynamic balancing valves and flow meters provide effortless regulation, while compatibility with thermoelectric actuators enables automated flow control for maximum efficiency.

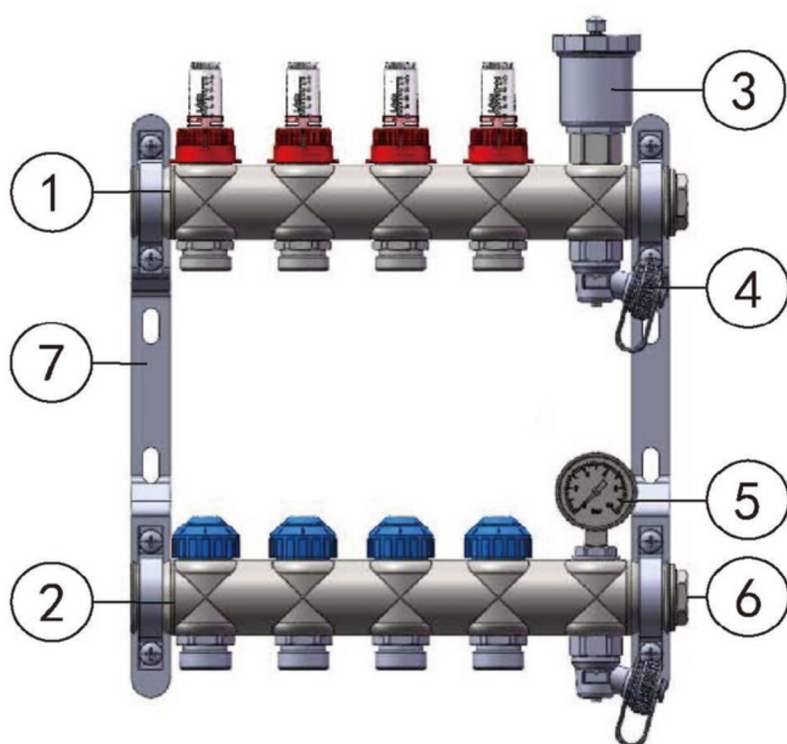
With its pre-assembled design, the Calda SmartFlow streamlines installation and maintenance, making it the ideal solution for modern HVAC systems. Whether for residential or commercial applications, this cutting-edge manifold sets a new benchmark for precision, efficiency, and reliability in heating and cooling solutions.



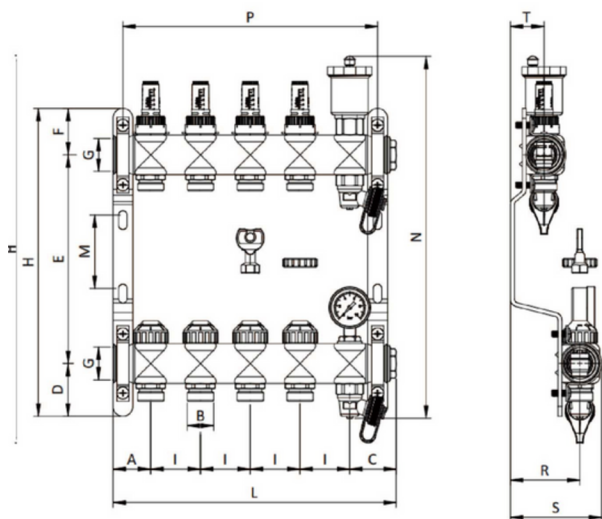
## Key Features

- **High-Quality Stainless Steel Construction:** Crafted from 304 stainless steel for exceptional durability, corrosion resistance, and reliable performance over time.
- **Dynamic Flow Balancing:** Integrated balancing valves on the return manifold provide precise and automated flow adjustments, ensuring optimal system efficiency.
- **Independent Circuit Adjustment:** Each circuit can be individually fine-tuned, allowing for precise distribution of water flow in heating or cooling systems.
- **Premium EPDM O-Ring Gaskets:** Long-lasting, high-performance gaskets ensure smooth operation and leak-free connections.
- **Versatile Connections:** Features 1" MT flat-sealing connections to the heat source and 3/4" Euro cone connections for clamp ring screw fittings, ensuring compatibility with various systems.
- **Comprehensive End Set:** Includes a 3/4" swivel connection with integrated shut-off, filling, draining, and flushing capabilities for easy system management.
- **Pre-Mounted for Convenience:** Delivered pre-assembled on sturdy metal brackets with low-noise pipe clamps, compliant with DIN 4109 noise standards.
- **Replaceable Flow Meters:** Simplifies maintenance and commissioning, allowing for hassle-free operation and long-term reliability.
- **Accurate Pressure Monitoring:** Integrated pressure gauge ensures precise and easy system monitoring at all times.
- **10-Year Warranty:** Backed by Calda's guarantee of quality, providing peace of mind and dependable performance.

# Calda Smart-Flow Manifold



Number	Component
1	Stainless Steel Body Equipped with Flow Meter
2	Return Flow with Dynamic Balancing Valves
3	Automatic Air Vent
4	Drain Valve
5	Pressure Gauge
6	Plug
7	Mounting Brackets



Circuits	Manifold L (mm)	Manifold With Pump L (mm)	Circuits	Manifold L (mm)	Manifold With Pump L (mm)
3	235	285	8	485	535
4	285	335	9	535	585
5	335	385	10	585	635
6	385	435	11	635	685
7	435	485	12	685	735

# Calda Smart-Flow Manifold

## Dynamic Flow Cartridge

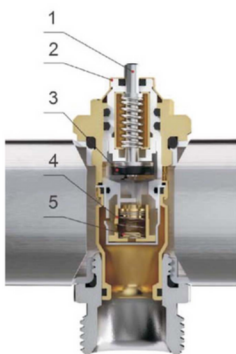
The Calda SmartFlow manifold is designed to deliver precise control over the flow rate in each individual circuit, ensuring optimal performance across the system. It maintains a consistent flow rate within a defined range of differential pressure, independent of the operating conditions in other circuits.

When combined with thermoelectric actuators, the manifold offers advanced functionality, including:

- **Flow Rate Regulation:** The dynamic design adjusts automatically to pressure changes caused by the opening or closing of other circuits. The spring in the bonnet cartridge deforms to alter the cross-section of the fluid passage, ensuring the flow rate remains at the preset value. This functionality supports high differential pressures, up to 150 kPa for the Flow version.
- **Accurate Flow Presetting:** Each individual circuit's maximum design flow rate can be preset and consistently maintained, allowing for reliable and precise operation.
- **Room Temperature Optimisation:** When paired with thermoelectric actuators and thermostats, the manifold enables efficient and effective temperature regulation across multiple rooms, ensuring comfort and energy savings.

Primarily used in radiant heating and cooling systems, the Calda SmartFlow ensures balanced flow rates across all circuits, regardless of fluctuations in system demand. As illustrated in typical installation diagrams, the manifold's dynamic flow balancing maintains consistent and optimal system performance, delivering superior efficiency and reliability for modern HVAC applications.

This advanced functionality makes the Calda SmartFlow a critical component for radiant systems and multi-zone installations, providing unparalleled precision and control.



Number	Component
1	Command Stem
2	Indicator Ring
3	Stopper
4	Regulator Sleeves
5	Spring Control

### Performance Range

- Supports glycol solutions (up to 30% glycol).
- Operating temperature range of 5°C to 70°C.
- Maximum working pressure of 6 bar (10 bar for system testing).
- Flow rate adjustment range of 0–400 l/h for individual circuits.
- Differential pressure range of 30/40–150 kPa.
- Maximum differential pressure with thermoelectric actuators installed: 1.5 bar.