

# HL2024 Constant Flow Solutions

Optimal flow control for (drinking) water systems



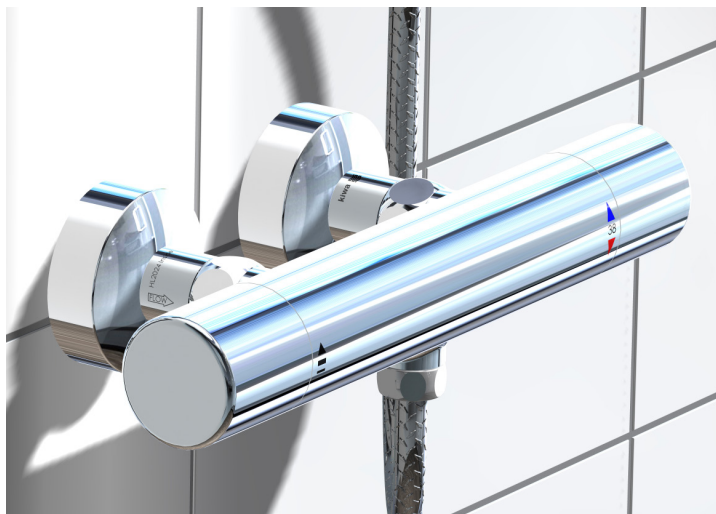
## HL2024 reduces temperature fluctuations in mixers

Temperature fluctuations in (thermostatic) mixers are a common complaint; often inconvenient and sometimes even dangerous. These fluctuations are mostly caused by pressure fluctuations in the system. HL2024 pressure independent flow controllers on the inlets of the mixer, keep the outgoing flow temperature much steadier.



Top: HL2024 Connect with integrated HL2024 Flow Controller.

Right: HL2024 Connect installed at both mixer inlets.



**kiwa**

## How does it work?

The patented HL2024 technology is at the heart of every HL2024 product. HL2024 ensures a genuinely constant flow despite the pressure and despite pressure fluctuations in the system.

With HL2024 fitted on both mixer inlets (hot and cold), pressure fluctuations in the system have significantly less effect on the mixer. Thermostatic mixers can then function optimally, making the outgoing flow temperature much more constant. In addition, the outgoing flow from normal mixers can be kept at a steadier temperature too.

For this application the following HL2024 products can be used:

**HL2024 Connect-S** (replaces an S-connector)

**HL2024 Connect** (see images)

## HL2024 characteristics

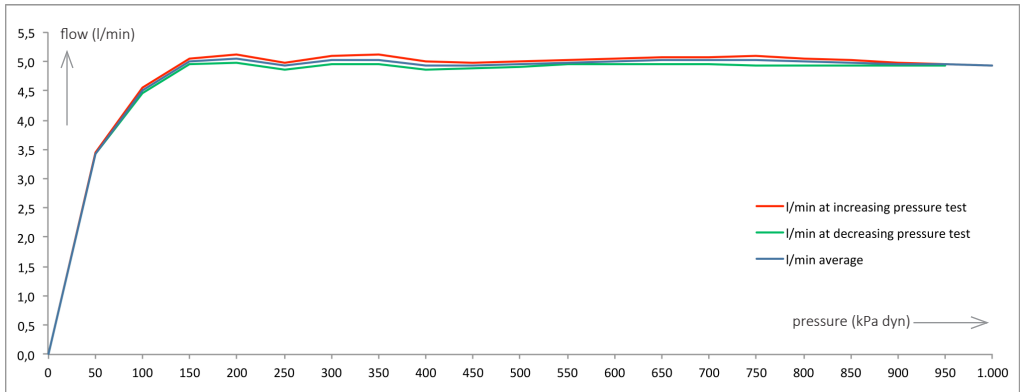
- Pressure independent (deviation < 2%)
- Only flow controller KIWA-certified for pressure independence (BRL K635)
- Always constant flow rate regardless of up- or downward pressure fluctuations
- Responds quickly and accurately; important for a constant outflow temperature
- Meets legal requirements for use of materials (Kiwa Water Mark)
- Meets primary European drinking water certifications
- Functions within a wide temperature range
- Caps draw-off at draw-off points
- Works immediately; no fine-tuning required

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## HL2024: Pressure independent flow control



Graph: operation of the HL2024 pressure independent flow controller (version: 5.0 l/min)

HL2024 is unique because it really keeps the flow constant at both increasing and decreasing dynamic pressure. In this way, HL2024 meets a primary KIWA requirement for pressure independence. HL2024 barely limits the flow before the flow rate reaches the effective pressure. This is important to comfort at low pressure (left part of the graph).

## Pressure fluctuations $\neq$ temperature fluctuations

The ST-35 study by TVVL / UNETO-VNI (both Dutch organisations) shows that pressure fluctuations (even small and short-term) in the system lead to noticeable temperature variations at thermostatic mixers. When these pressure fluctuations occur, pressure independent flow controllers at the inlets of the thermostatic mixer lead to significantly reduced temperature variations. The shower then becomes more comfortable and safer.

This is because pressure independent flow controllers (HL2024) significantly reduce the effects of pressure fluctuations in the system, so the thermostatic mixer can operate optimally.



HL2024 Flow Controller (skeleton-view)



## Contact us

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