



Uponor

Build on Uponor with Smatrix Aqua PLUS

Fully automatic water hygiene control system for highest safety of
your drinking water installation



Legionella notifications in Germany **increasing** continuously¹



3/4 of inspected buildings in Frankfurt have problems with legionella²

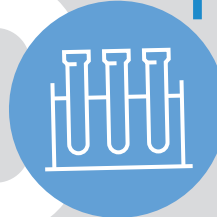
20–30k persons a year have pneumonia because of Legionella infection in Germany³



Operation costs increase if contamination index⁴ **>100CFU/100ml**



On average **6K up to 50K€** costs to get rid of legionella⁵



15–750K€ building or flat owner has to pay to infected person⁷



Sources:

1, 5. Robert-Koch-Institut. (2016). Epidemiologisches Bulletin: Aktuelle Daten und Informationen zu Infektionskrankheiten und Public Health.

2. Gesundheitsamt Frankfurt. (2017). Infektionen, Infektionsprävention und Hygiene, p.148.

3. Lück, C. (2010). Legionellen-Infektionen: Häufigkeit, mikrobiologische Diagnostik, Überwachung und Prävention.

4. Umwelt Bundesamt. (2018). Empfehlung des Umweltbundesamtes Systemische Untersuchungen von Trinkwasserinstallationen auf Legionellen nach Trinkwasserverordnung – Probennahme, Untersuchungsgang und Angabe des Ergebnisses, p 10.

6, 7. Court decisions on recent legal cases.

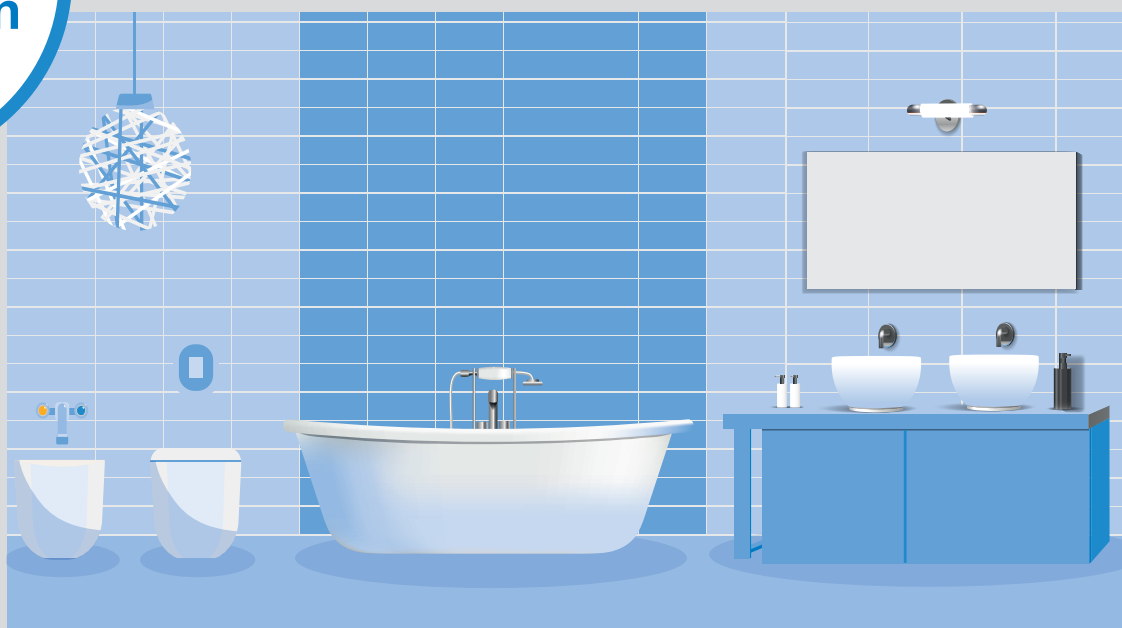


Change of standards for modern housing



BEFORE:

- Bathroom used to be built as a functional and practical room only with the absolutely needed water outlets.
- In total, **maximum 3 water outlets** (toilet, basin and bathtub combined with the shower) have been used.
- All water outlets were **used frequently**.



TODAY:

- Nowadays, bathroom is the place for relaxing and well-being that is designed with more space and higher standards.
- **4–6 water outlets** are used in comparison with traditional installation (separate bathtub and shower, double washbasin, bidet). Modern buildings have an additional guest bathroom.
- Therefore, **not all outlets are used frequently**.

The new logic in drinking water hygiene

Drinking water is the most important element of life. Ensuring it remains hygienically pristine, from the riser line connection to the outlet, is the responsibility of the building management. As a planner and plumber for a building, your opinion is particularly sought after when it comes to the selection of the right materials, the right method of installation and the permanent monitoring of the drinking water's hygiene.

Uponor Smatrix Aqua PLUS – as part of the Uponor Hygiene Logic – is the easiest and most hygienically safe way to fulfil this responsibility over the long term. It is an

automatic hygiene flushing system which ensures exchange of the drinking water in the bathroom installation according to DVGW/VDI 6023 and EN 806-2 and which permanently monitors and regulates the drinking water installation – with remote access to data and measurement results for all your buildings.

At the same time, older buildings can be effortlessly retrofitted* with Smatrix Aqua PLUS. With less time-consuming effort and fewer costs – from the planning phase to operation. (* loop and serial installation required).



After 72 hours of water stagnation, the drinking water is highly exposed to legionella contamination

In particular, it happens in following cases:



Hotel rooms that are not in use day by day or even for months.



Gymnasiums or sport facilities that are not in use due to school holidays.



Not permanently inhabited inhabited flats in a multi-family building, secondary residences or holiday homes.



Nursing homes with outlets not in regular use.



Plan hygienically, install easily, monitor confidently



Exceptional technical characteristics

- Best recommended flow rate of 10 l/min
- Group flush function allows simultaneous flushing of the drinking water installation including riser system
- Noise reduction due to premium EPP Housing
- High quality brass components



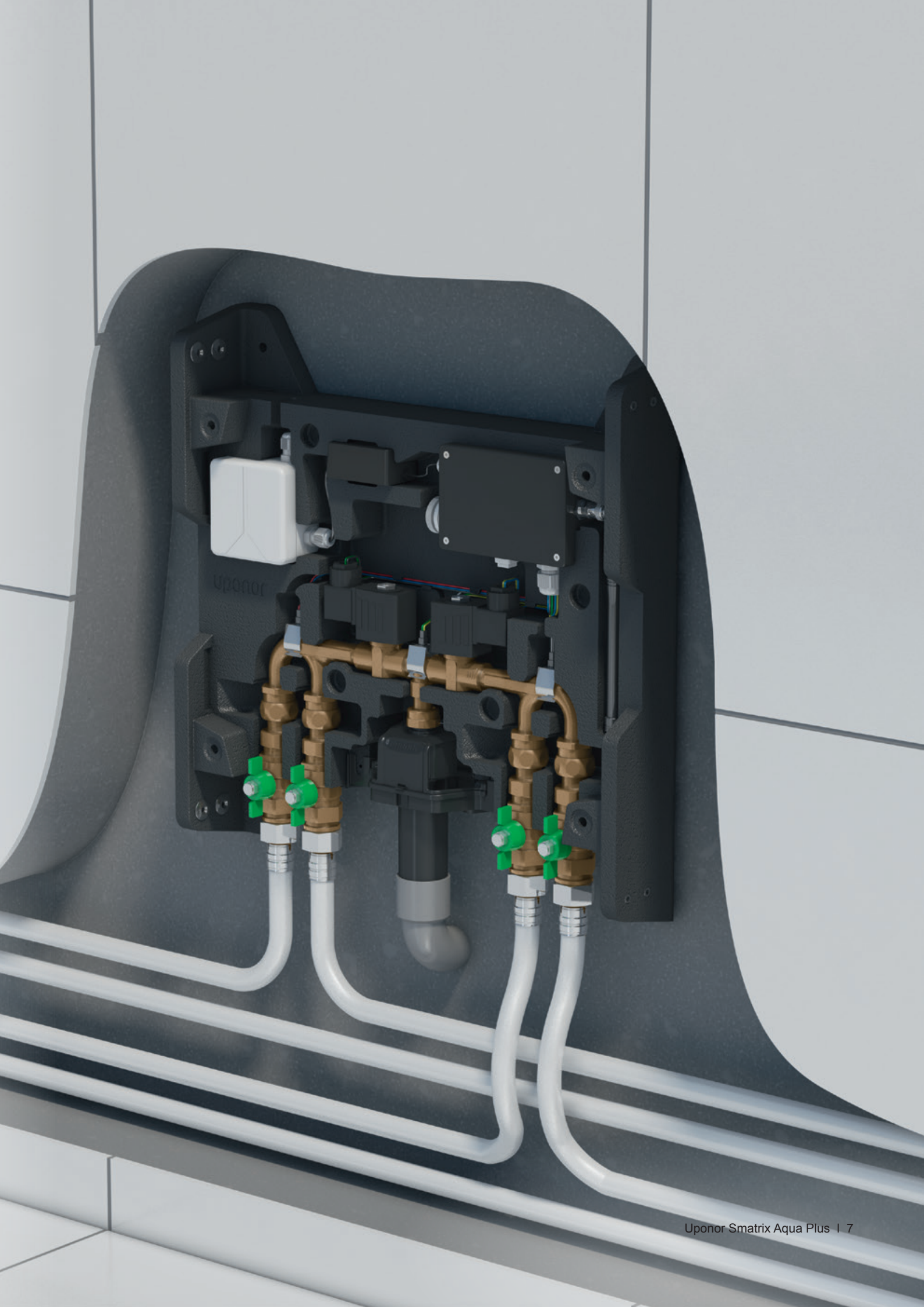
Easy installation

- Plug and play solution: preassembled with necessary components including Uponor Smart Aqua U-tap elbow S-Press PLUS
- No need for additional pipe installation due to unique pipe connection from the bottom
- Compact design
- Only one wastewater drainage needed



Optional monitoring system with individual settings

- **Cloud system (WiFi):** advanced and fully secure monitoring technology with individual settings setup, online tracking, controlling and reporting via internet connection
- **USB Transceiver:** simplified monitoring technology with special application software for real-time monitoring and controlling



Smatrix Aqua PLUS flushing station

Automatically flushing according to individually set configurations in the online portal.

Smatrix Aqua PLUS online portal

Online portal for individual settings, configurations and result tracking of all flushing stations in the building.



water
system with
monitoring
control

Smatrix Aqua PLUS flushing station

Automatically flushing according to individually set configurations in the online portal.

Data Hub

Permanently receives data from the flushing stations and temperature sensors, and transfers data to the Smatrix Aqua PLUS online portal.

Temperature Sensor

Monitors all desired locations of the drinking water system, e.g. the uptake and water heater, and transfers data to the Smatrix Aqua PLUS online portal.

Components



Smatrix Aqua PLUS flushing station

Flushing station ensures automatic flushing according to portal or software settings.

Cloud

USB



Data Hub

- The data hub transmits the configuration from the monitoring portal to the Smatrix Aqua PLUS flushing unit as well as receives data from the flushing unit and the temperature sensors, and transmit them to the monitoring portal.
- Manages up to 128 flushing stations and temperature sensors.



Temperature sensor

- Temperature measuring of sensitive points in the drinking water installation to monitor the temperature profile.
- Sends temperature information to the Data Hub every 60 seconds (power connected) or every 15 mins (battery operated).



Online portal

Full time documentation with possible multi-property monitoring and remote centralised configuration of the flushing station.



USB Transceiver including Software

- Data collection and sending from/to a PC with the associated windows software to configure the flushing unit.
- Software only for real-time monitoring.



Functions



Automatic Flush

Flushing starts automatically after individually defined stagnation time (min 4 and max 168 hours) or reached target temperature. Flushing hour can be set up individually.



Scheduled Flush

Option to configure a flush on selected day of the week without considering stagnation time.



Group Flush

Flushing of all installed units in the building at the same time to make full system clearing.



Temperature Monitoring

With additional temperature sensor to monitor all sensitive points in the drinking water installation.



Email Notifications

System notification via e-mail in case of malfunction.



Individual configurations for any building requirements



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