Jeweller

WaterStop Jeweller

Remotely controlled water shutoff valve.
It is a component of the automated water leak detection system based on Ajax.

An Ajax hub is required for operation.
The detailed information on the device:

ajax.systems/support/devices/waterstop/

Key features

- Automation scenarios by alarm of the leak detector, security mode change, and schedule
- The stuck prevention is adjustable with maximum interval of 1 week
- RuB valve DN15 (½”), DN20 (¾”), or DN25 (1") provided
- Up to 3 years of operation on pre-installed batteries
- Remote control and configuring via Ajax apps
- Water shut-off is controlled with a button on the electric actuator and a lever on the shutoff valve
- Radio signal range between the device and a hub or radio signal range extender without obstacles
- Mounting lockers to complicate unauthorized disassembly of the electric actuator
- Optional connection of a third-party power supply unit 9–12 V⎓, 2 A
- Pairing with the system via QR code

A part of the water leak detection system

WaterStop was designed for remote control of the water supply at the facility. The device combines a shutoff valve in one of three variations and an electric actuator. WaterStop can be controlled from anywhere where there is an Internet — Ajax apps allow checking the status and changing the position of the valve at any time.

Upon the alarm of LeaksProtect or a third-party leak detector, WaterStop will automatically shut off the water in 7 seconds. All system users receive notifications on the alarm and activation of the scenario. In addition to the scenario by the leak detector alarm, the installer can configure water shut-off by schedule or by security mode change.

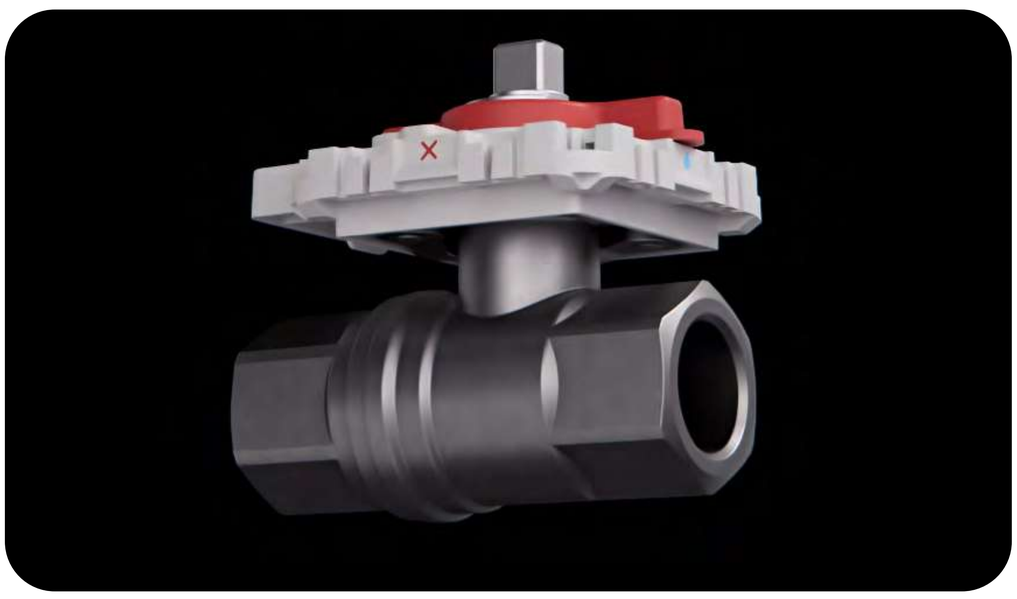
Powerful electric actuator and manual control

WaterStop electric actuator features a maximum torque of 8.5 N•m. This power allows closing a stucked-up shutoff valve without breaking it. And under normal conditions — shut off water 7 seconds after the command.

The water supply can be controlled not only through apps and scenarios but also manually. For this, there is a button on the WaterStop enclosure and a lever on the shutoff valve mount. This is convenient, for example, when replacing an electric actuator or during the plumber's work.

The valve's status can be seen in Ajax apps, defined by the position mark on the WaterStop enclosure or by the position of the lever.

Standard type of shutoff valve



The device is equipped with a RuB valve suitable for hot and cold water. WaterStop is presented in three versions: with a DN15 (½"), DN 20 (¾"), or DN 25 (1") valve.

WaterStop is compatible with shutoff valves manufactured according to the ISO 5211 standard. Therefore, a plumber can install a standardized shutoff valve, and an installer can then add the device to the system.

When moving, an installer can easily dismantle the WaterStop and install another compatible valve at a new location. The electric actuator is removed from the shutoff valve in a few seconds — without any tools.

Automation scenarios

Scenarios allow minimizing the routine actions and automatically shut off the water. Scenarios can be used to control the water supply in the following cases:

- By alarm — in case of an alarm of the LeaksProtect leakage detector.
- By schedule — to shut off the water at a certain time.
- By security mode change — in case of arming and disarming.
- Upon pressing LightSwitch — for example, when the last employee leaves the office premises.
- By pressing Button — for manually shutting off water in the event of an emergency.
- By temperature — to shut off water in the heating pipes for the winter.

Jeweller

communication technology

Jeweller is a radio protocol to provide fast and reliable two-way communication between hubs and connected devices. The protocol provides a wireless radio communication range of up to 1,100 m, which allows using the smart valve not only in a large house but in basements, offices, or warehouses.

Jeweller transmits all necessary information. Users always have access to smart valve control in Ajax apps, regardless of the number of system devices. And also, at any moment, they can check the valve's status — whether it is open or closed.

Anti-sabotage protection

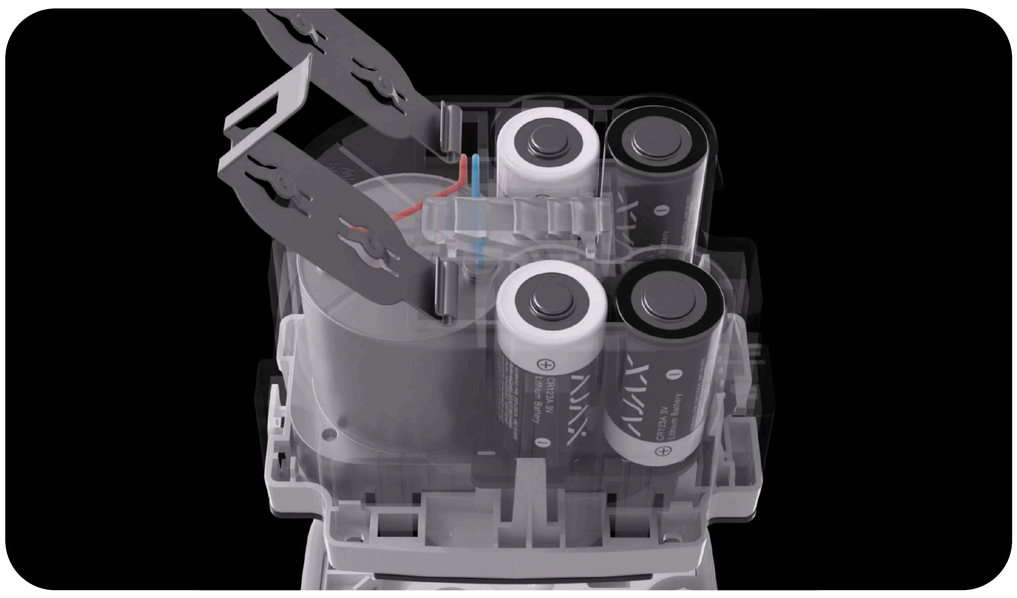
WaterStop can be installed in offices, restaurants, cafés, and other public places. An alternative mounting locker is included to complicate disassembly. This locker is installed instead of the standard one to prevent disassembly of the electric actuator. Unlike a standard locker, it cannot be removed without tools.

The tamper is triggered when the electric actuator is removed from the shutoff valve. The hub regularly (with a specified frequency) checks the status of connected devices and informs about the loss of communication with any of them. All users and the CMS of the security company receive notifications about these events.

Smart design

WaterStop is a wireless device that runs on pre-installed batteries. The installer can connect a third-party power supply 9–12 V⎓, 2 A if necessary.

The electric actuator is mounted on the shutoff valve in four positions. The casing of the electric actuator does not need to be disassembled for installation. It is fixed on the valve with a mounting locker without tools. This way, there is no risk of damaging the electronics.



Easy installation and connection

WaterStop is installed by two specialists: a plumber and an installer. We ensured that both of them were comfortable working with this product.

A plumber can install a standard compatible shutoff valve without an installer. He only needs to know the dimensions of the electric valve. An installer can come on another day, install the electric actuator and integrate it into the Ajax security system.

Pairing the device with the Ajax security system takes less than a minute. An installer needs to open the Ajax app, scan the QR code, and add a detector to a room and group.

Technical specifications

Communication with control panel or range extender	**Jeweller communication technology** **Frequency bands** 866.0–866.5 MHz 868.0–868.6 MHz 868.7–869.2 MHz 905.0–926.5 MHz 915.85–926.5 MHz 921.0–922.0 MHz Depends on the region of sale. **Maximum effective radiated power (ERP)** ≤ 20 mW **Hub communication range** up to 1,100 m Without obstacles. **Polling interval** 12–300 s Adjusted by the PRO or user with admin rights in the Ajax app. **Protection against spoofing** Device authentication
Compatibility	**Hubs** Hub Plus Hub 2 (2G) Hub 2 (4G) Hub 2 Plus Hub Hybrid (2G) Hub Hybrid (4G) **Radio signal range extenders** ReX ReX 2
Operating components	Electric actuator Controls the position of the shutoff valve: opens and closes it. Shutoff valve RuB valve DN15 (½"), DN20 (¾"), or DN25 (1") provided.
Water shut-off	**Scope of application** water supply heating systems **Operating fluid** hot and cold water non-aggressive liquids Shutoff valve material brass

Operating components	**Mount** It is installed between the shutoff valve and the electric actuator. **Mounting lockers** Complete with two lockers. The first one is for quick attachment of the electric actuator to the shutoff valve. The second is installed if you need to protect the device in public places.	Water shut-off	**Thread type** NPT taper (ANSI B.1.20.1) female by female threads For North America region BSP parallel (EN 10226-1, ISO 228) female by female threads For other regions **Thread size** DN15 (1/2“) DN20 (3/4“) DN25 (1“) **Operating pressure** 10 bar **The temperature range of liquids with which the shutoff valve works** from +5°C to +120°C **Flange for connecting the electric actuator** mount Made according to the ISO 5211 standard. **Electric actuator torque** up to 8,5 N•m **Speed of water shut-off** up to 7 seconds May take longer if the shutoff valve is contaminated. **Remote control** **Manual control** • button on electric actuator casing • lever on mount

Anti-sabotage protection	**Protection against spoofing** device authentication **Detection of communication failure** from 36 s The interval for detecting the loss of communication depends on the hub settings. **Tampering alarm** **Alternative mounting locker** Protects against the dismantling of WaterStop. Installed if it is necessary to secure the device in public places.
Water shut-off	Temperature protection up to 60°C at the place of installation
Installation	**Operating temperature range** from 0°C to +60°C **The temperature range of liquids the shutoff valve is suitable for** from +5°C to +120°C **Operating humidity** up to 95%
Power supply	**Battery** 4 × CR123A batteries Pre-installed. **Battery life** up to 3 years **Optional external power supply** 9–12 V⎓, 2 A When external power is connected, the batteries become a backup power supply source.
Enclosure	**Colours** white black **Dimensions** 104 × 140 × 70 mm Full size (shutoff valve DN15 (½") + electric actuator).
Additional features	**Scenarios** • alarm reactions • security mode change reactions • scheduled actions • by pressing Button • by temperature • by pressing LightSwitch

Enclosure	104 × 150 × 70 mm Full size (shutoff valve DN20 (¾") + electric actuator). 104 × 159 × 70 mm Full size (shutoff valve DN25 (1") + electric actuator). 93 × 70 × 95 mm Dimensions of the electric actuator. 75 × 27 mm Dimensions of the DN15 (½”) shutoff valve. 80 × 32 mm Dimensions of the DN20 (¾”) shutoff valve. 90 × 41 mm Dimensions of the DN25 (1") shutoff valve. **Weight** 869 g Total weight (shutoff valve DN15 (½") + electric actuator). 1012 g Total weight (shutoff valve DN20 (¾") + electric actuator). 1336 g Total weight (shutoff valve DN25 (1") + electric actuator). 536 g Electric actuator weight.
Additional features	**Scenarios** • alarm reactions • security mode change reactions • scheduled actions • by pressing Button • by temperature • by pressing LightSwitch **Temperature protection** 60°C at the place of installation **Indication of the shutoff valve status** LED indication The colour of the LED illumination of the Ajax logo indicates the electric actuator status. Lever position The lever position indicates whether water supply is open or shut.

Enclosure	333 g The weight of the DN15 (½”) shutoff valve. 476 g The weight of the DN20 (¾”) shutoff valve. 800 g The weight of the DN25 (1") shutoff valve.	Complete set	WaterStop Jeweller 4 × CR123A battery Pre-installed. DN15 (½”), DN20 (¾”), or DN25 (1") RuB valve Depends on the selected kit 2 lockers for securing the electric actuator Quick Start Guide