

Installation instructions, operating and maintenance instructions

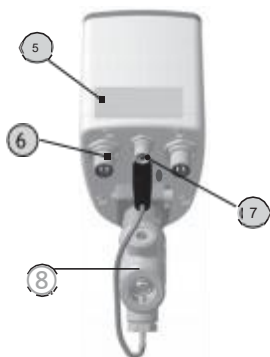
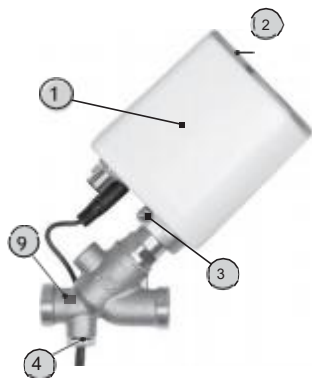
Hycleen Automation System JRG LegioTherm 2T

Electrically Operated Water Valve

JRG Code 9910.0xx



Components



- 1 Controller / Actuator
- 2 Light ring
- 3 Controller fastening screw (Allen key)
- 4 PT1000 temperature sensor
- 5 Labels with serial number (removable)
- 6 M12 socket for serial wiring (Master / valve)
- 7 M8 socket for connecting external sensor
- 8 Plug for PT1000
- 9 Flow arrow
- 10 Insulation

Function

The JRG LegioTherm 2T circulation valve is used wherever a controlled thermal disinfection of a hot water system is required in addition to its function as a Controller (such as in nursing homes, hospitals, etc.).

The JRG LegioTherm 2T circulation valve allows for two calibration temperatures (normal operation / thermal disinfection).

The JRG LegioTherm 2T circulation valve regulates the flow rate by permanently reading the water temperature with the help of an immersed temperature sensor. The measured values are processed by the Controller. If a deviation from nominal temperature is detected, the circulation valve regulates the flow rate by opening or closing the valve until the set-point temperature is reached. This is done by means of an actuator.



JRG LegioTherm 2T Circulation valve with controller, PN 10

- Temperature: max. 90°C
- Material: gunmetal, stainless steel, EPDM
- Factory setting: 57°C (adjustable 0 - 90°C) thermal disinfection 70°C (adjustable 60 - 90°C)
- Connection: male thread (for union connection with flat gasket)

DN (mm)	JRG Code	GF Weight Code (kg)
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15	9910.015	351.110.550	0.820
20	9910.020	351.110.590	1.050
25	9910.025	351.110.630	1.400

DN d1 G d2 G d3 Rp l1 l2 l3 l4 b h1 h2 .

(mm) (inch) (inch) (inch) (mm) (mm) (mm) (mm) (mm) (mm) (mm)

15	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	75	6	24	173	90	162	50	6
20		$\frac{3}{4}$	$\frac{1}{4}$	87		24	206	92	169	54	6
25	$1 \frac{1}{4}$	1	$\frac{1}{4}$	99	8	24	233	100	179	56	6

Installation

Wiring Master and valves



The **connection** cables contain four wires, two for power supply and two for signal transmission. Both cable ends are equipped with the same female connectors and feature an anti-twist design. The M12 knurled coupling nuts provide a reliable grip even in harsh environments.

Note:

Unapproved components may cause malfunctions!

All components must be connected in series (one after the other, with each other).

A parallel or star-shaped wiring of the components leads to malfunctions in the BUS communication. Components and cables must not be modified. Never disconnect the cable from electricity under power.

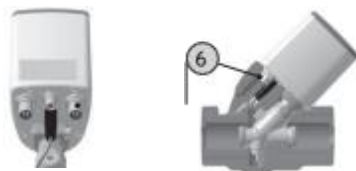
Connecting the Master



Connect one of the plugs (11) of the connection cable to one of the two M12 sockets (12) on the Master and screw on the knurled coupling nut. Both connections of the Master can be used at the same time.



Connecting the valve



Connect the other plug (11) of the connection cable with one of the two M12 sockets (6) of the valve and secure with the knurled coupling nut. It does not matter which M12 socket is used.

Connecting further valves:

Connect one of the plugs of the next connection cable to the second M12 socket (6) on the valve and secure with knurled coupling nut, etc.

Note:

Risk of malfunctions due to faulty installation!

If the knurled coupling nut is not tightened properly, the plug connection may get loose over time. This may lead to a loss of functionality!

Make sure that all knurled coupling nuts of the connection cables are tightened!

Laying the cables:

The cables may be mounted directly on the circulation line or if need be on the outside of the insulation. Use temperature-resistant cable ties (up to 90 °C).



Hycleen Automation power supply and communication cable

- Description: For serial connection of Hycleen Automation System components (master, controller), incl. 2xM12 plugs, ROHS

L	Voltage	JRG	GF	Weight	d	d1
(m)		Code	Code	(kg)	(mm)	(mm)
1.5	36V	9940.001	351 110 581	0.110	14.5	6.8
	36V	9940.005	351 110 582	0.300	14.5	6.8
10	36V	9940.010	351 110 583	0.630	14.5	6.8
20	36V	9940.020	351 110 584	1.240	14.5	6.8
50	36V	9940.050	351 110 585	3.200	14.5	6.8



Hycleen Automation Coupling

- Description: Coupling between 2 Hycleen Automation power supply and communication cable

JRG Code	Weight (kg)	GF Code	l (mm)	h (mm)
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9941.000	0.100	351 110 586	58	14
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Installing a Powerbox

For cable lengths over 300 m, a Powerbox (14) must be installed between two connection cables.



Installing a JRG LegioTherm 2T

The JRG LegioTherm 2T can be mounted in any position. The valve must be accessible for inspections and revisions. We recommend to install shut-off valves JRG Code 8339 before and after the Controller. To prevent the JRG LegioTherm 2T circulation valve from being flowed against the desired flow direction, it is advisable to install suitable check valves. We recommend using JRG LegioTherm insulation to reduce heat emission.

Note:

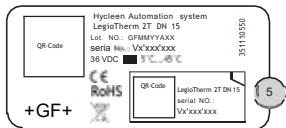
For revision purposes there must be a clearance of 3 cm between the Controller and the nearest surface.

Note:

After installation, remove the label (5) with the valve serial number from the valve and stick it to the installation diagram.

In doing so, the valve can be easily located later on. The serial number is also displayed in the Master.

An individual designation can be additionally defined in the Master.



Flushing

Before installing the JRG LegioTherm 2T circulation valve, all pipes have to be flushed thoroughly.

Gaskets

Only AFM 34 gaskets are to be used. AFM 34 gaskets must not be oiled or greased.

Soldering

When using soldered joints, the JRG LegioTherm 2T valve must not be installed during soldering (possible damage due to overheating).

Specifications

Material:	Gunmetal
Casing:	Stainless steel
Follower / spring / seat:	Gunmetal
Valve cone:	The device is responsible for the equal and consistent distribution of water flows and temperatures across the building. Furthermore, it is essential to reduce energy consumption and increase comfort.
Function:	EPDM
Gaskets:	Type 1 action
Feature of automatic action:	2
Pollution degree:	Medium drinking water
Use:	DN 15/20/25
Dimensions:	Meets DVGWVP 554 (2003.04)
Standards:	1 - 90 °C
Water temperature:	< ± 1 °C
Control accuracy:	90°C
Maximum operating temperature:	10 bar
Maximum operating pressure:	5 - 45 °C
Ambient temperature:	T45
Temp. limits of the mounting surface:	Class F
Winding insulation:	Nb. Of Automatic cycles A for each cycles automatic action
Nb. Of Automatic cycles A for each cycles automatic action:	6000
Power supply:	36 V DC
Actuator:	Minimum stroke 5 mm
Duty cycle:	1 min ON/1min OFF
Operating voltage:	24 V DC
Power consumption open/close:	6 W
IP code (degree of protection):	IP 44
BLE Working Frequency:	2402-2480MHz
BLE Maximum Power:	2.2dBm
Supply Connection:	M12 socket

Light ring legend:

If a valve is connected to the circuit, the light ring lights up. The frequency or light colour provide the following visual information:

Purple	constant	valvesetat leakage rate (lowest flow rate)
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EN

	flashes	valve not set at leakage rate (highest flow rate)
Yellow	constant	initialization / valve update (software)
Blue	flashes	bluetooth connection with smartphone / tablet
Orange	flashes	communication error

Maintenance

The JRG LegioTherm 2T valve is largely maintenance-free.

Customer service hotline: +41 61 975 23 77, tkd.jrg.ps@georgfischer.com

Inspections

The sealing points on the JRG LegioTherm valve are to be checked once a year.

Disposal

System parts of the JRG LegioTherm 2T valve can be disposed of in accordance with local regulations.

Remarks:

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation

- Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try to correct the interference by one or more of following measures:

- Reorient or relocate the receiving antenna.
- Increase separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for Help.

- This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence exempt RSS(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

EN

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio

exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;

(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

EC DECLARATION OF CONFORMITY

CE Declaration of Incorporation for Council Radio Equipment Directive 2014/53/

Manufacturer:

Georg Fischer JRG AG, Hauptstrasse 130, 4450 Sissach/Switzerland

Person authorized to compile technical documentation: Arnaud Andreolli Georg Fischer JRG, Product Manager, Hauptstrasse 130, 4450 Sissach/Switzerland UK

UK Importer:

GEORG FISCHER Ltd

Paradise Way, Coventry CV2 2ST, United Kingdom

JRG LegioTherm 2T circulation valve with temperature sensor and actuator for Installation in a hot water / cold water circulation JRG Code 9910.0XX

is conform to the requirements of Council Radio Equipment Directive 2014/53/EU, as far as the scope of delivery allows. We further declare that the special technical documentation has been compiled in accordance with Directive 2014/53/EU.

We shall forward this, if requested, to the competent authorities via the before mentioned authorized person.

Commissioning is prohibited until it has been established that the entire machine, into which the aforementioned incomplete machine is to be incorporated, meets the provisions of Council Radio Equipment Directive 2014/53/EU

based on the following standards,

EN 61000-3-2:2019+A1, EN 61000-3-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4

EN 61000-4-5, EN 61000-4-6, IEC6100-4-8, EN 61000-11

EN 55032:2015 class B, EN 61000-6-3:2021

EN 60730-1:2016+A1+A2, EN 300 328 V2.2.2:2019, EN 301 489-1 V2.2.3:2019, EN 301 489-17 V3.2.4:2020, EN 62479:2012

Georg Fischer JRG AG Name: David Harsch

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JRG

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Einbaudatum:

Date de montage:

Data d'installazione:

Built-in date:

Fecha de instalación:

Inbouwdatum:

Ihr Installateur:

Votre installateur:

Il vostro installatore:

Your plumber:

Su instalador:

Uw installateur: