JRG

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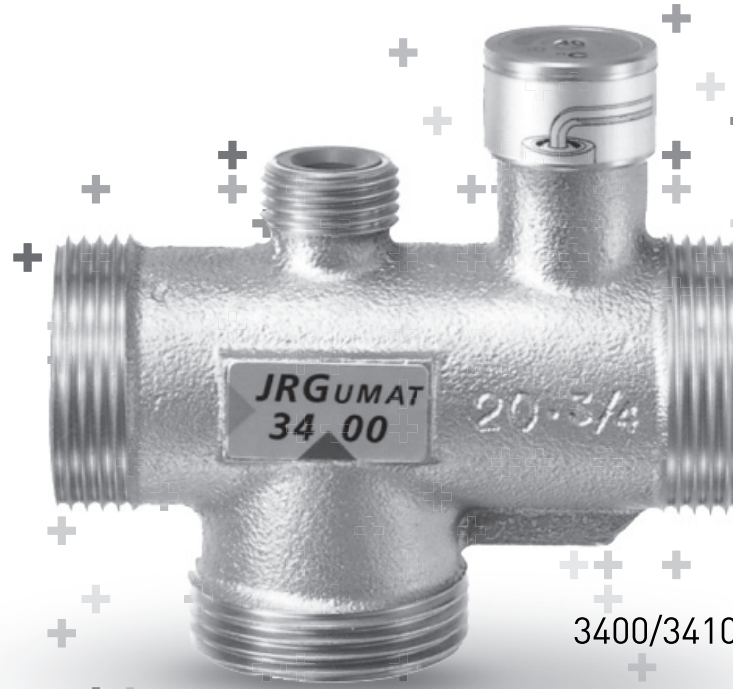
Installation and operation instructions

JRGUMAT

Thermoblending valve E 43 – 55



3400/3410

Installation and operating instructions

Please read these installation and operating instructions carefully. The symbols used have the following meanings:

Danger
This symbol indicates a serious risk of personal injury. Please follow the safety pointers given.

Warning
This symbol refers to information that can result in serious material damage if not followed. Please follow the safety pointers given.

Note
This symbol refers to information that contains important data relating to usage. Failure to comply can lead to malfunctions.

The installation and operating instructions must be given to the building owner when the installation is commissioned.

The company reserves the right to amend product specifications at any time.

Field of application/Function

JRGUMAT thermoblending valves are tried-and-tested thermostatic mixing valves that are used wherever a constant water temperature of high controllable accuracy is required. For example, as central mixing valves in family homes and apartment buildings, hospitals, old-age and nursing homes, hotels, barracks, showering facilities at sports grounds, on commercial and industrial premises. JRGUMAT thermoblending valves can also be used to protect against excess temperatures in alternative energy installations such as solar-heating installations, log heating systems, wood-chip heating systems, wood pellet stoves and furnaces, etc. Thanks to their high controllability, JRGUMAT thermoblending valves are also used for special applications such as, for example, maintaining high temperatures as regulating units.

JRGUMAT thermoblending valves are proportionally regulating, open architecture, three-way mixing valves. JRGUMAT thermoblending valves cannot be used as check valves or stop valves nor can they be used to regulate flow rates. The appropriate valves must be installed as shown in the layout drawings.

Installation instructions

JRGUMAT thermoblending valves will operate in any position. The installation regulations relating to the water heater circulation as well as local standards must be complied with. Only the non-return valves prescribed in the diagrams may be used. The only stop valves permissible are low pressure-loss valves, such as slanted seat valves, gate valves and ball valves.
All pipes must be flushed thoroughly before JRGUMAT thermoblending valves are installed. In order to prevent a JRGUMAT mixing valve from malfunctioning due to radiated heat, the valve should be located at least one metre away from the heater. If a minimum separation cannot be guaranteed, a thermosiphon must be installed.

Return-flow prevention

When connecting JRGUMAT thermoblending valves, only JRG type 1610-1615 low pressure-loss check valves, JRG type 1682 swing check valves and JRG type 5262-5284 closable non-return valves may be used.

Soldering unions

When carrying out soldering work, it is essential to remove a JRGUMAT thermo-blending valve from the unions as the thermostat and the seals would otherwise be damaged.

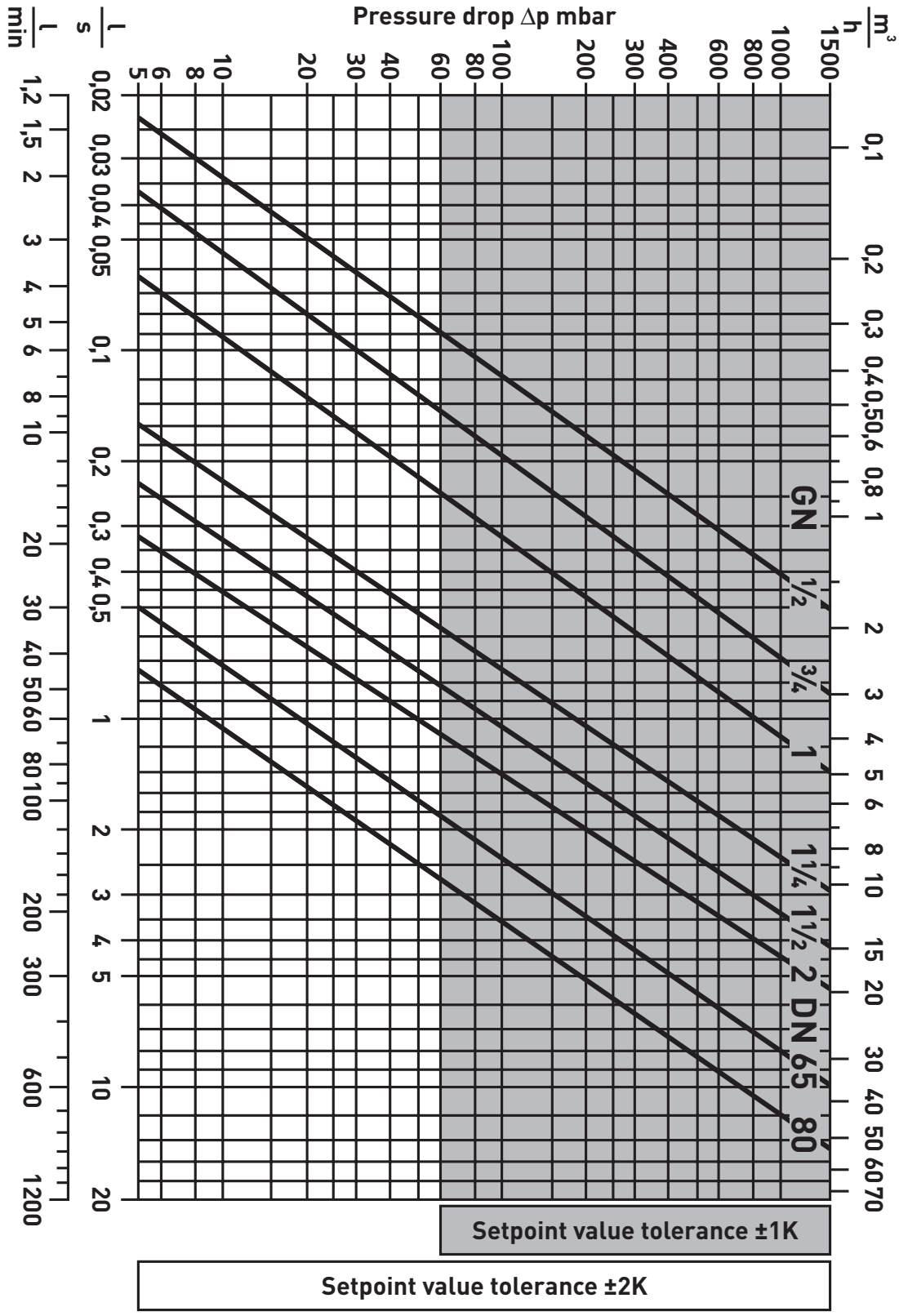
Hot water temperature

To ensure that your JRGUMAT thermo-blending valves operate correctly, the warm water temperature must be at least 5 K above the desired blended water temperature. Identical hydraulic conditions are essential at the hot and cold water feeds. This is ensured by installing the mixing valves in the water heater circuit as shown in our installation drawings.

Repairs

No attempts should be made to repair JRGUMAT thermoblending valves.

Nomogram


Pressure drop Δp mbar
Volume flow V̇
m³/h
l/s
l/min
GN
½
¾
1
1¼
1½
2
DN
65
80
Setpoint value tolerance ±1K
Setpoint value tolerance ±2K

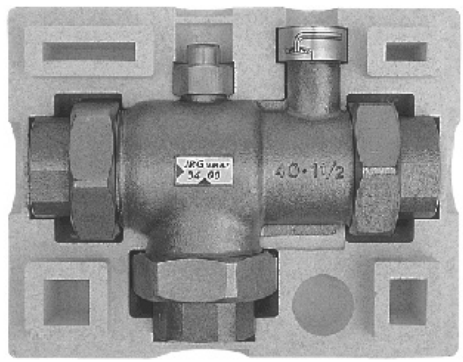
Nomogram

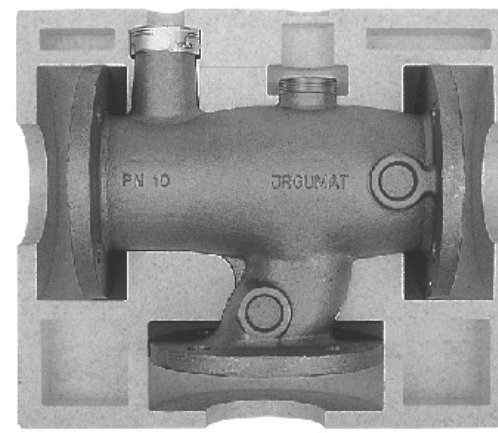
The size of piping used is considered the nominal value DN for a JRGUMAT thermoblending valve. The relationships between flow rate, nominal size and pressure loss are given in the nomogram. Optimum operating conditions are to be found in the hatched area.

Noise behaviour

Dimension	GN ½ DN 15	GN ¾-1¼ DN 20-32
Valve group	I	II

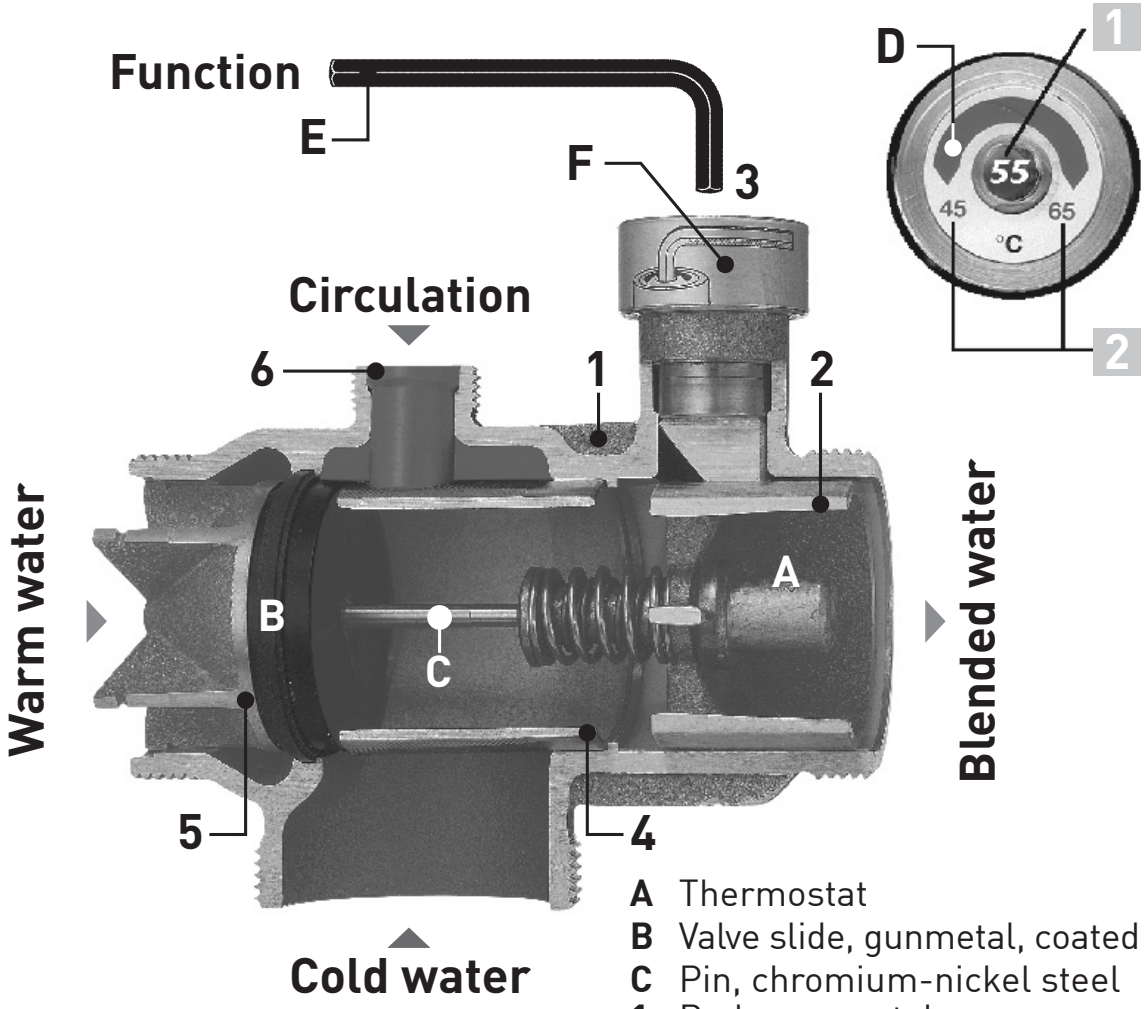
Transport packaging = Thermal insulation





The transport packaging of every JRGUMAT thermoblending valve is used as thermal insulation following installation and adjustment.

E



A Thermostat
B Valve slide, gunmetal, coated
C Pin, chromium-nickel steel
1 Body, gunmetal
2 Regulating gate, gunmetal
3 Adjusting screw, brass
4 Cold water seat, stainless steel
5 Hot water seat, gunmetal
6 Circulation sleeve, plastic

1 Standard-temperature °C	2 Ranges of adjustment °C	Change in the blended water temperature with 1 full key turn		
		GN ½-1 DN 15-25	GN 1¼-2 DN 32-50	DN 65/80
25	20-30	ca. 6 K	ca. 4 K	ca. 2 K
40	30-45			
48	36-53			
55	45-65			

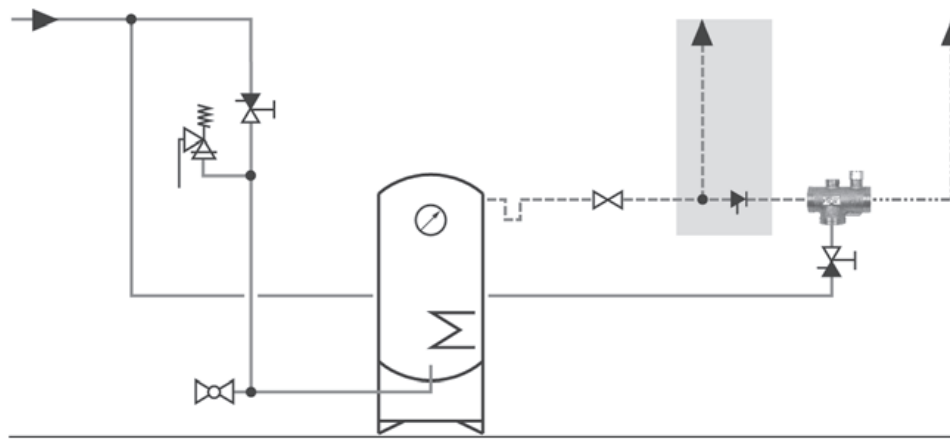
Factory setting/Changing

JRGUMAT thermoblending valves are fitted with a thermostat allocated to a standard temperature and set to a standard temperature at the factory. This is apparent from the article number, it appears in the centre of the temperature label **D** and is indicated on the packaging. A change in standard temperature can only be made within the limits of the blended water adjustment range allocated. Proceed as follows: Pierce the middle of the temperature label **D** with the Allen key **E**. Turning the screw **F** clockwise will increase the blended water temperature while turning the key counterclockwise will lower it. The flow rate must be in the hatched field “Nominal value tolerance ± 1K” (q.v. nomogramme).
If the mixing valve is installed in a circulation network, the circulation must be adjusted separately at “zero removal”. To do this, the overall flow rate of the pump (100%) must be adjusted first. Then set the flow rates, which lead to the mixing valve and set the proportion required to cover heat loss on the water heater.
A well-regulated circulation keeps the desired blended water temperature constant even if no blended water is drawn off.

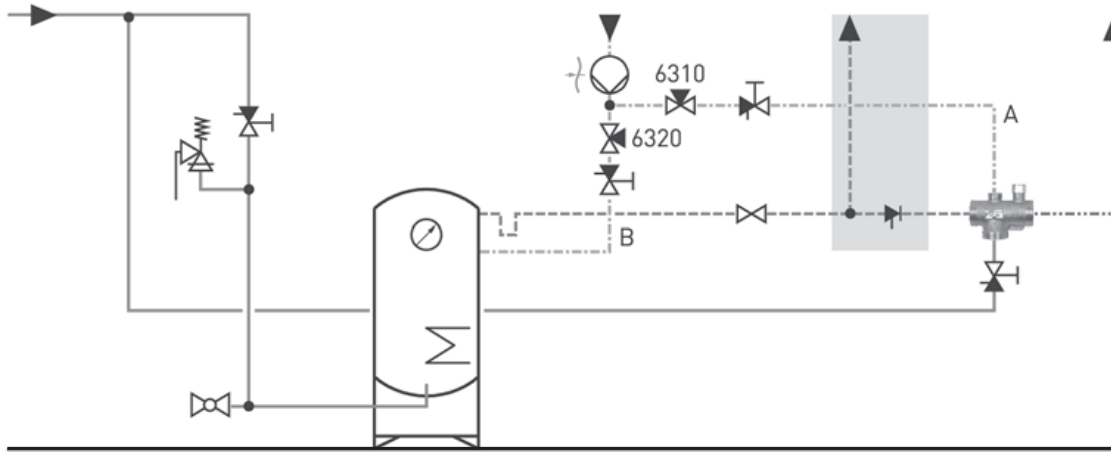
Typical blended water installations

JRG Code	Text	EN 806-1	SIA
–	PWC potable water, cold		
–	PWH potable water, hot		
–	PWH-C, potable water, hot, circulation		
–	PWH-M potable water, hot, mixed water		
3400/3410	JRGUMAT thermostatic mixing valve		
5200–5234	Shut-off valve		
1610–1615	Bock flow preventer (controllable)		
5262–5284	Shut-off valve with integrated back flow preventer (controllable)		
1025/1028	Spring loaded safety valve		
6310–6325	Circulation valve		
–	Liquid pump with mechanical drive		
6000–6012	Ball valve		
1810–1870	Mechanical filter		
–	Driven by electric motor		
6410	Driven by electric solenoid		
–	Timer		

Without circulation with separ. hot water outlet



With circulation and hot water outlet

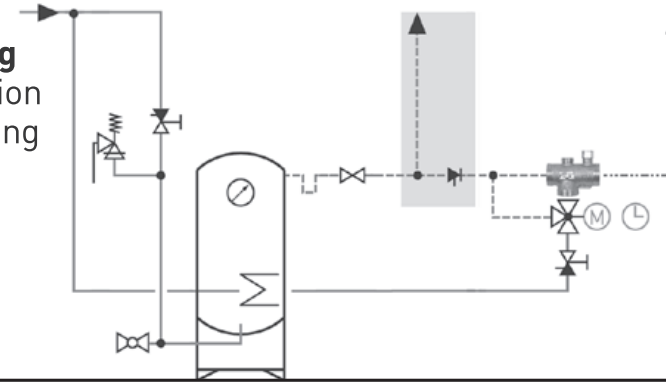


With circulation and thermal disinfection

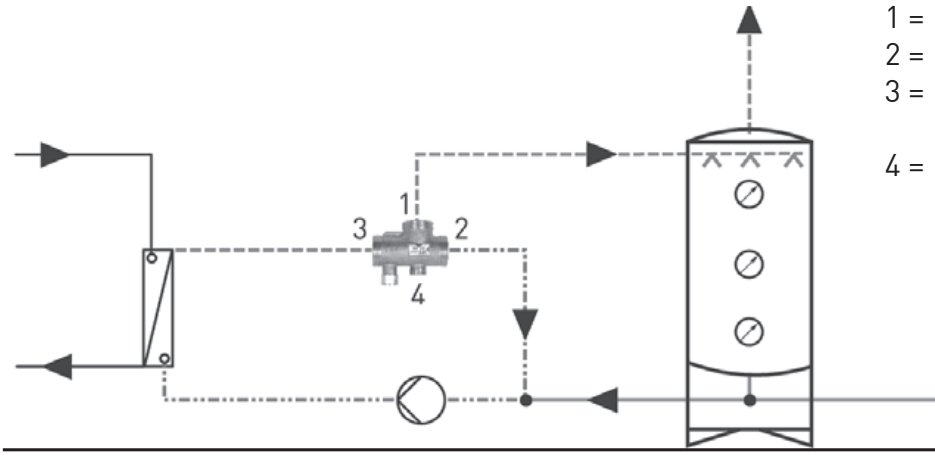
1. Note: To be able to guarantee thermal disinfection, water must pass through every connection or every connection must be flushed.
2. Note: Enough hot water must be available for thermal disinfection.

Danger of scalding
Anti-scald protection is deactivated during disinfection!

Thermal disinfection only with JRG LegioTherm 2T, JRG Code 3600 possible.



Regulator for hot-water storage tank



1 = Cold water inlet
2 = Hot water inlet
3 = Mixed water outlet
4 = Circulation input with cap JRG Code 8325

Commissioning

The pipes must be flushed thoroughly before commissioning a JRGUMAT thermoblending valve. When the installation is commissioned, the mixing valve is ready for use.

Maintenance

JRGUMAT thermoblending valves require no maintenance. No attempts should be made to repair JRGUMAT thermoblending valves.

Malfunctions

If your JRGUMAT thermoblending valve malfunctions at any time, please contact your plumber.

Compare the installation with the examples. Check whether the required blended water temperature is not attained when enough is removed or whether the temperature fluctuates when idle. In this case, the circulation has not been adequately adjusted.

Unions/Gaskets
JRGUMAT thermoblending valves may only be connected using flat-sealing, genuine JRG unions/gaskets.

AFM 34 seals may not be lubricated with oil or grease.

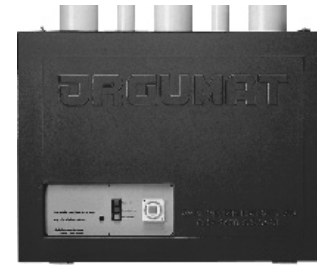
Questions?

For questions and application-related requests for information, please apply to our technical advisors or to the technical after-sales service.

JRG Code 6320

JRGUTHERM circulation flow regulator

JRG Code 3500/3510



JRGUMAT compact blending facility

JRG Code 6325

JRGUTHERM 2T
Circulation flow regulator

JRG Code 3600

JRG Legio-Therm 2T circulation flow regulator

Detailed documentations available on request.

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Einbaudatum:
Date de montage:
Data d'installazione:
Built-in date:
Innbyggingsdato:

Ihr Installateur:
Votre installateur:
Il vostro installatore:
Your plumber:
Din rørlegger:

Ident.-Nr. 35 09 458 09 / 6 / 7.15 / SMS