Ordering data

Item name
Delivery address
Invoicing address

Type of installation: 3500 / 3510
Dimension: 1½ / 2 (DN 40 / 50)
Blended water temperature: 25 / 40 / 48 / 55 °C
Hot water input: right / left
Circulating pump: UP 20 – 15/30/45 N

For thermal disinfection:
Bypass 3590.560 / 3590.640, comprising stainless steel bypass, three-way valve with motor drive, including cables and plugs.

Delivery time: 4 – 6 weeks

If you want the facility controlled by a superordinated building control system or another pump, contact our specialised customer service or your JRG dealer.

Notes

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Hauptstrasse 130
CH-4450 Sissach
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Telefax 061 975 22 00
E-Mail: info@jrg.ch
Internet: www.jrg.ch

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JRG Gunzenhauser GmbH
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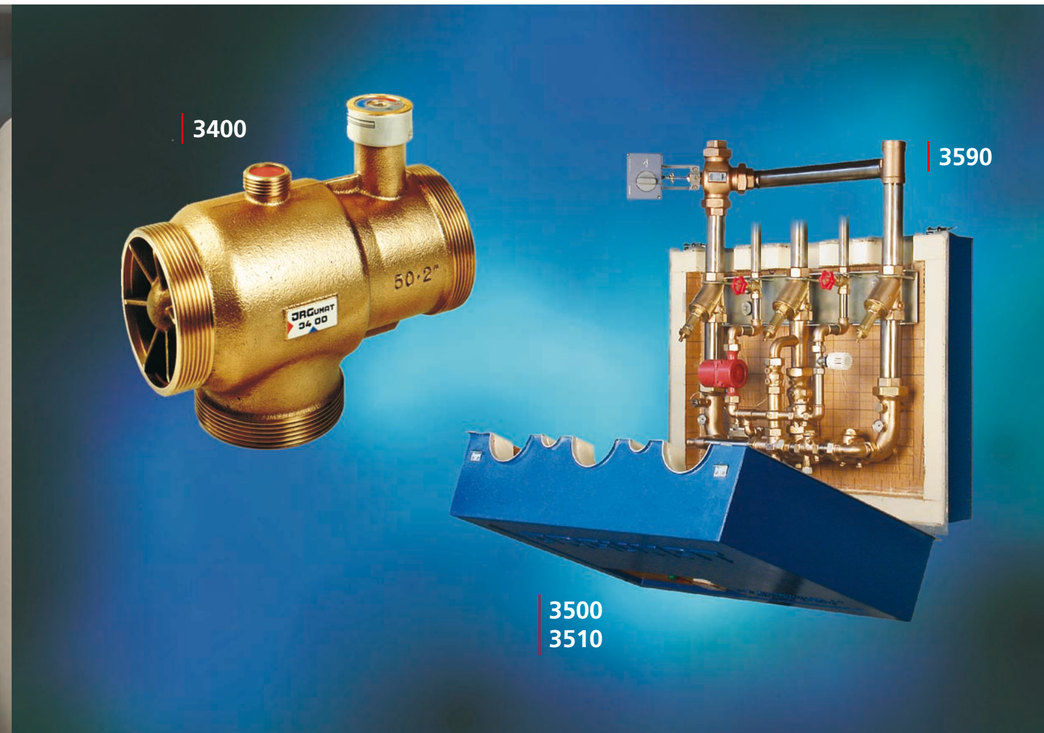
I-Nr.: 37 242 62 / 3 / 8.08 /SMS / ©JRG Gunzenhauser AG

JRGUMAT® Thermoblending valve
JRGUMAT® Compact blending water facility with thermal disinfection



Advantages

- **supplies blended water of constant temperature**
- **high control accuracy**
- **operates without any outside energy**
- **protects against scalding**
- **saves water and energy**
- **enhances comfort and safety in hot water installations**

Field of application

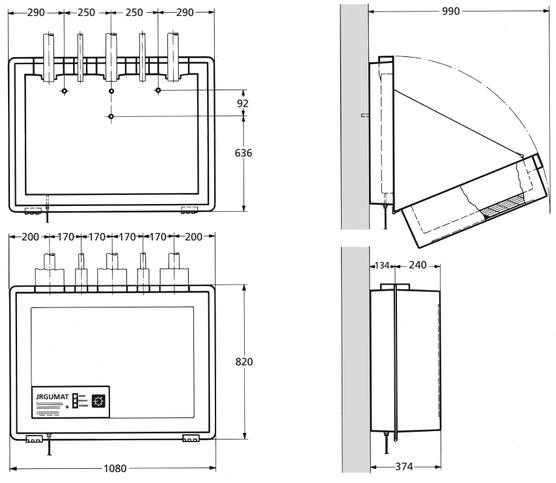
JRGUMAT® thermoblending valves, which have proven their worth a thousandfold, are thermostatically regulating blending valves which are used wherever a constant and highly accurate combined blended water temperature is desired and required.
For example as central mixer in private houses, blocks of flats, hospitals, old-age and nursing homes, hotels, barracks, shower-rooms of sports facilities, industrial and commercial buildings.
JRGUMAT® thermoblending valves also serve as overheating protection in alternative energy plants such as solar units, wood-fired heaters, wood-chip heaters, pellet furnaces, etc. Owing to the high control accuracy of JRGUMAT® thermoblending valves, they are also used for special applications, such as temperature maintainers used as regulators.

DVGW permission

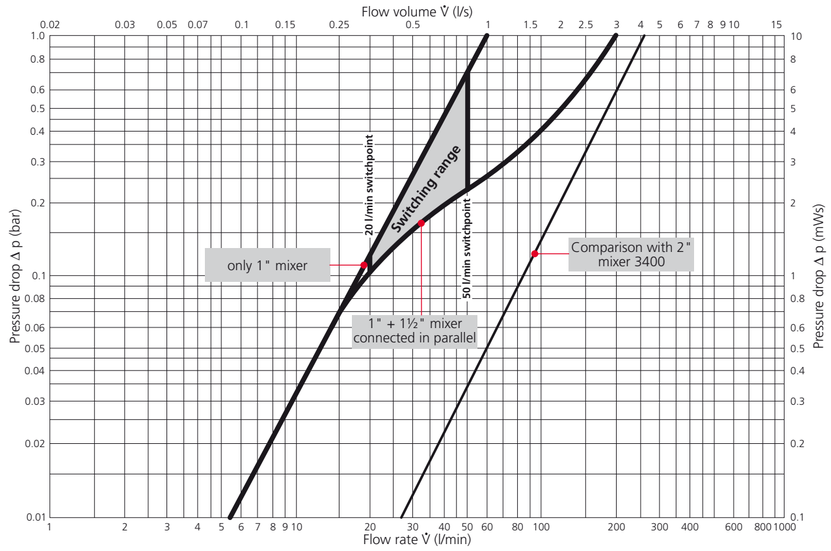
There is also absolutely no reason why JRGUMAT® thermoblending valves should not also be installed without the DIN DVGW test mark. In contrast to Switzerland, Germany and Austria have neither a DIN standard nor a DVGW or ÖVGW work sheet for central mixers, prescribing a certification test. Therefore JRGUMAT® thermoblending valves do not have DIN DVGW or ÖVGW certification.
In accordance with the General Water-Supply Regulations (AVBWasserV) §12 (4), only equipment (components and materials) and devices (according to section 5: Appliances) may be used, which are manufactured according to the recognised rules of the control systems.
The materials used in the JRGUMAT® are all suitable for drinking water. Only plastics with KTW certification are used.
In DIN 1988, Part 2, under 2.2.2 Designation, it further states that "Components and appliances must be very legibly and durably marked by the manufacturer with the manufacturer's trademark or name, so that it is possible to identify the product …".
This obligation to mark the product is fulfilled as the word JRGUMAT® is cast into the valve body. The fitting can be identified at any time as a JRG product.
Since the JRGUMAT® thermoblending valves more than meets the requirements for the SVGW certification and given our many decades of experience, we are convinced that, with the help of this documentation, there is absolutely no reason why the JRGUMAT® thermoblending valve should not even be incorporated without the DIN DVGW or ÖVGW test signs.

Technical changes are reserved at any time.

Dimensions

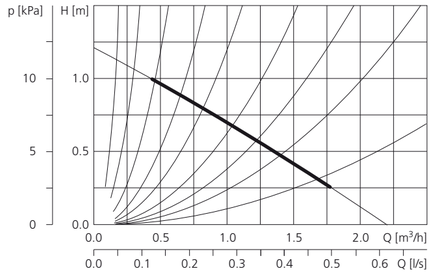


Nomogramme 3510 with circuit characteristics



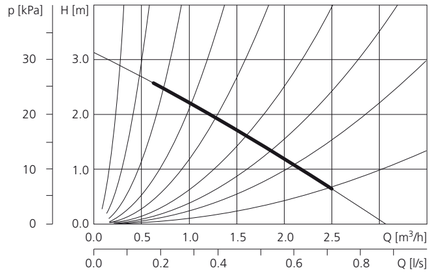
Characteristics of the circulating pumps available

UP 20-15 N (standard)



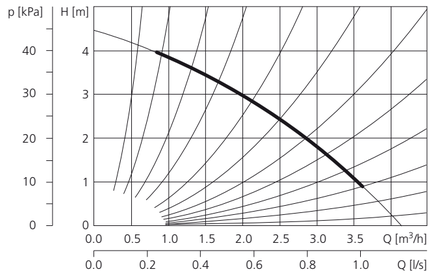
Rev. stages	P_1 [W]	I_n (A)
1	65	0.28

UP 20-30 N



Rev. stages	P_1 [W]	I_n (A)
1	75	0.31

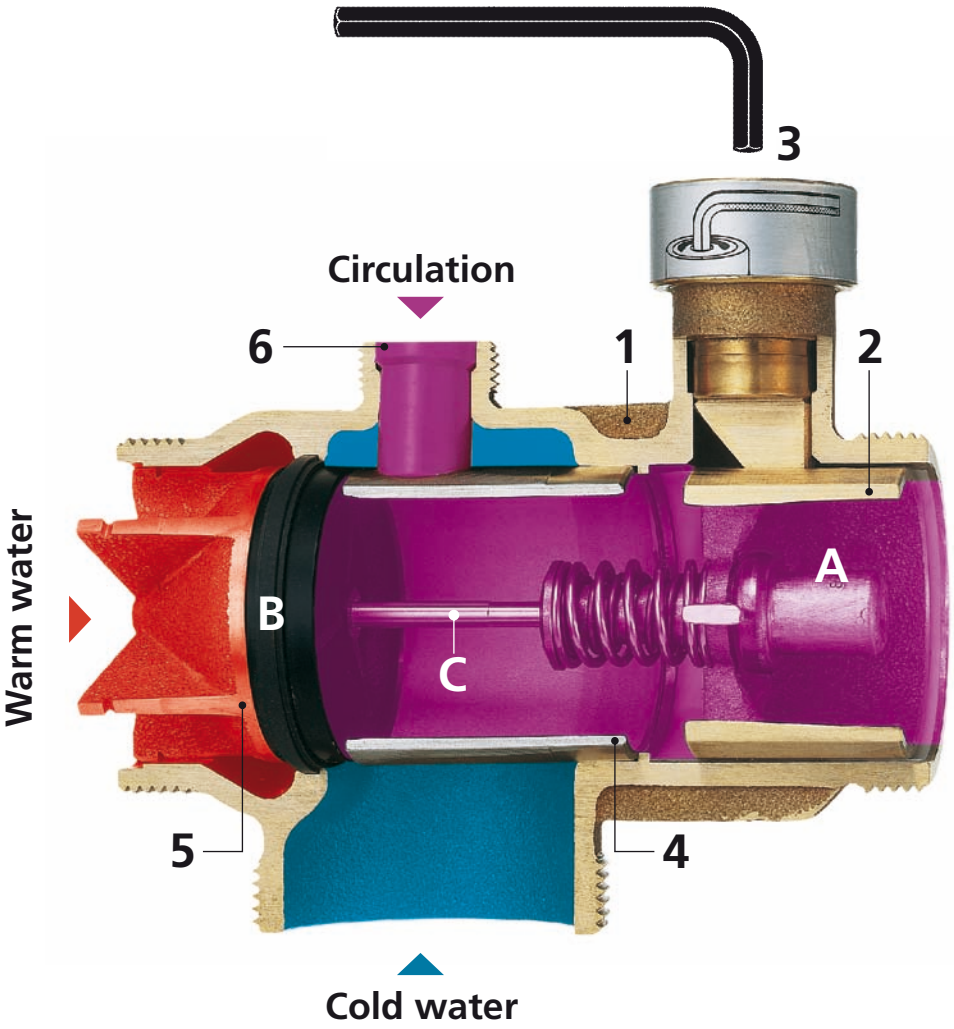
UP 20-45 N



Rev. stages	P_1 [W]	I_n (A)
1	115	0.50

(Other pumps on request)

Function



The JRGUMAT® thermoblending valve is an open architecture, proportionally-regulating three-way mixer.
The blended water temperature is transferred to the thermostat **A**. This compares it with the set-point value. If the blended water temperature does not correspond to the set-point value, a volume change takes place in the thermostat **A**. This causes the valve slide **B** to be regulated through the pin **C**, until the blended water temperature corresponds to the set-point value.
The fitting can mix the water used only as it is drawn. Functions such as back flow prevention, blocking or adjustment of the circulation flow volume cannot be performed by the JRGUMAT® thermoblending valve.
The model to be used will depend on the installation diagrams.

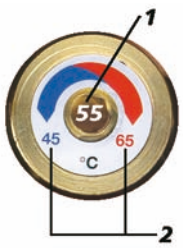
Blended water

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 Warm water seat, gunmetal
6 Circulation sleeve, plastic

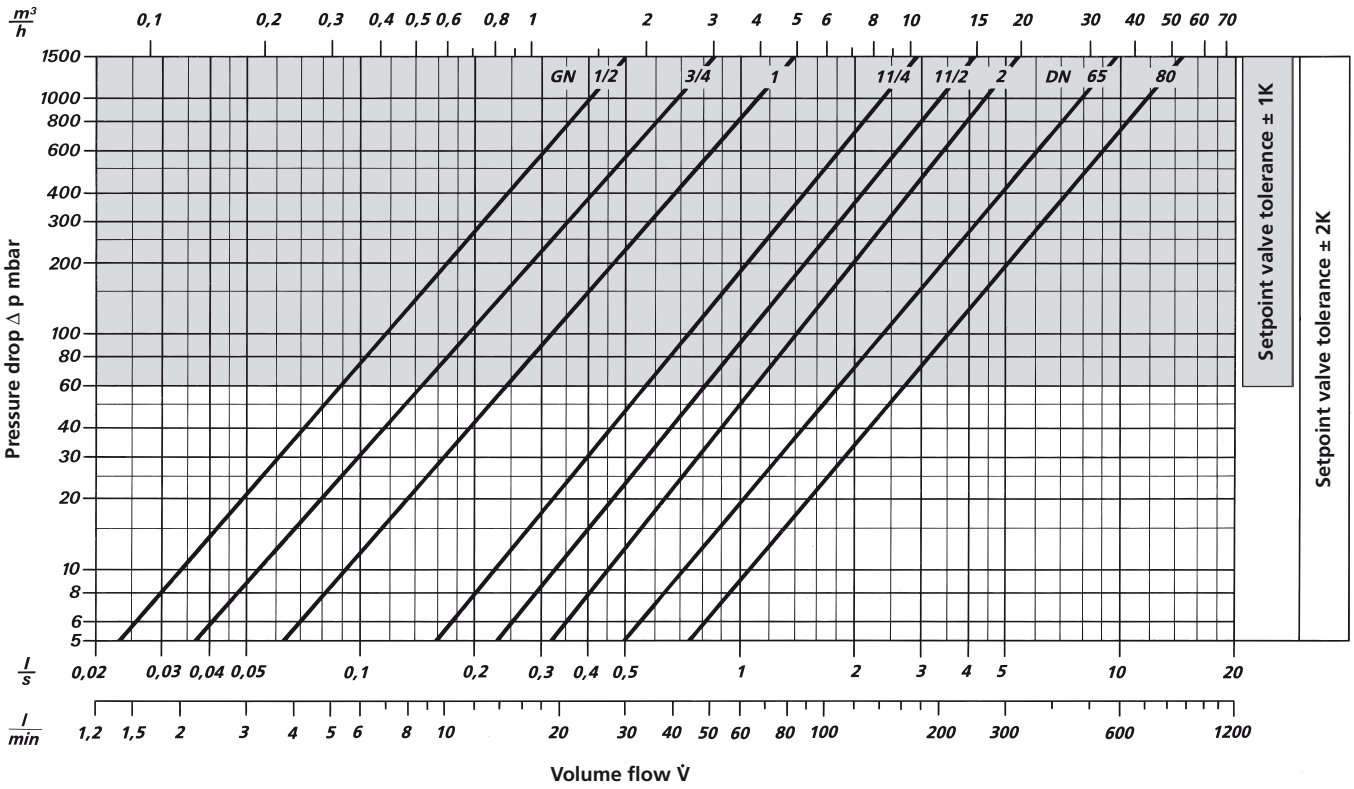
The warm water temperature

In order to be able to ensure the perfect operation of the JRGUMAT® thermoblending valve, the warm water temperature must be at least 5 K over the desired blended water temperature. Likewise the same hydraulic conditions must apply to the inflowing hot and cold water. This is ensured by the installation of the mixer in the water heater circuit in accordance with our installation diagram.



1 Standard factory-set temperature °C	2 Blended adjustment ranges °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			

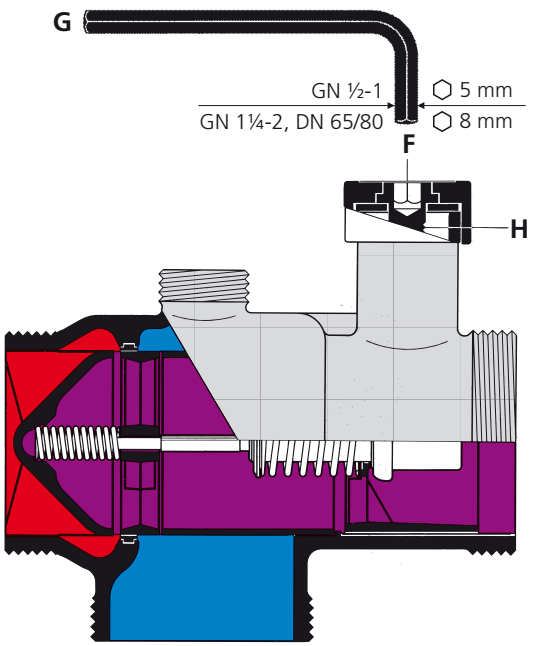
Nomogramme for JRGUMAT® thermoblending valves 3400, 3408, 3410 and 3412



The pipe dimension determined when calculating the pipe dimension is also considered the nominal DN size for the JRGUMAT® thermoblending valve. The relations between volume flow, nominal size and pressure loss can be read from the nomogramme. Optimal operating conditions prevail within the hatched range.

Noise characteristics

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



Factory settings/Resetting

JRGUMAT® thermoblending valves are equipped with one of the standard preset temperature thermostats and are adjusted to a standard temperature in the factory. This is apparent from the article number, it appears in the centre of the temperature label **F** and is indicated on the packaging. The standard temperature may be changed only within the limits of the corresponding blended water adjustment range.
This is done as follows: The Allen key **G** is used to pierce the middle of the temperature label **F**. By turning the screw **H** clockwise the blended water temperature is increased and by turning it anticlockwise it is decreased.
The volume flow must at all times lie in the hatched field "Set-point value tolerance ± 1K", (see nomogramme).
If the mixer is built into a circuit network, the circulation is to be adjusted separately with "zero-drawing".
For this purpose, the total volume flow of the pump (100%) is first set. Then set the volume flows leading to the mixer and the portion for heat-loss coverage on the storage unit.
Well-regulated circulation holds the desired blended water temperature constant, even if no blended water is drawn.

Installation instructions

The JRGUMAT® thermoblending valve works in any position. The installation instructions for water-heater circuits as well as the local standards must be observed. Only the back flow prevention valve prescribed in the diagrams may be inserted. As stop valves, only low-pressure loss valves, such as slanted-seat valves, slide valves and ball valves may be installed. The pipelines are to be thoroughly rinsed before installing the JRGUMAT® thermoblending valve.
In order to prevent malfunctioning of the mixer to be caused by radiant heat, the mixer should positioned beside the heater, leaving at least one metre between the water heater and the JRGUMAT®. If a minimum separation cannot be guaranteed, a thermosiphon must be installed.

Return flow prevention

For the connection of the JRGUMAT® thermoblending valve, only low pressure-loss JRG 1640 or 1645 non return valves, JRG 1682 swing check valves and JRG 5065, 5086 back flow preventer valves may be used.

Soldering unions

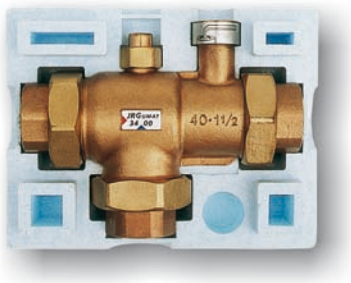
The soldered unions must not be fitted to the JRGUMAT® while conducting the soldering work otherwise the thermostat and the seals will be damaged.

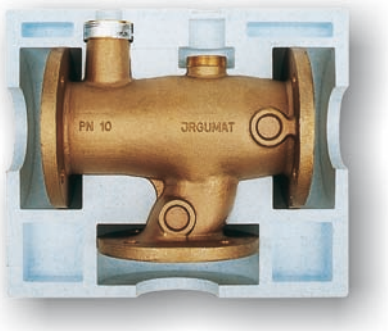
Maintenance

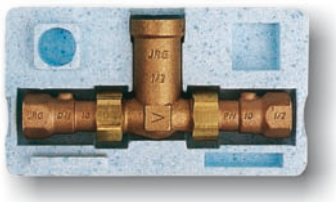
- JRGUMAT® thermoblending valves operate to a large extent without any need for maintenance.
- The accompanying assembly and operating manual should be given to the client when the installation is handed over.
- In the case of a breakdown, compare the position of the installation with the installation diagram in this folder. Check whether the desired blended water temperature is not reached with the drawing of sufficient water, or whether the temperature varies in a state of rest. In this case, the circulation may not have been sufficiently regulated.
- Should the mixer malfunction, become soiled, calcify, etc., refurbished JRGUMAT® thermoblending valves are available.

Transport packaging

JRGUMAT® thermoblending valve and JRGUTHERM® circulation flow regulator transport packaging materials serve as thermal insulation after assembly and adjustment.







Circulation adjustment units for JRGUMAT® thermoblending valves

6310

Adjusting socket

6320

JRGUTHERM® PN 10
Thermostatic circulation flow regulator

8208

Union
with non-return valve

8339

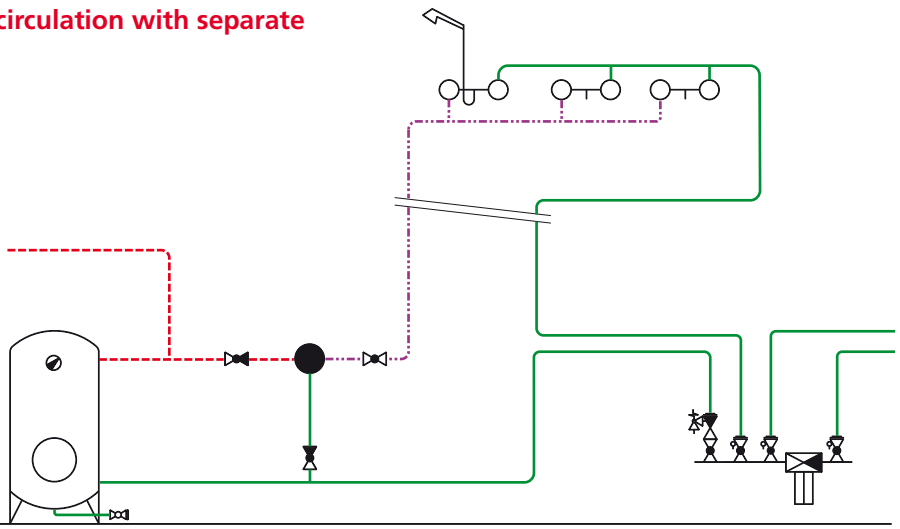
Lockable union PN 10
with ball valve, for JRGUTHERM®

Request our detailed documentation on the JRGUTHERM® thermostatic circulation regulator.

Installation examples of JRGUMAT® thermoblending valve

DIN	Text	JRG No.	SIA
	Eng. – Cold water – WKR		
	TWW – Hot water – WWV		
	TWZ – WW circulation – WWR		
	TWM – Blended water – WMV		
	WMZ – WM circulation – WMR		
	JRGUMAT® thermoblending valve	3400	
	Shut-off valve	5000-31	
	Non-return valve	1640-66	
	Back flow preventer with shut-off	5065-86	
	Swing check valve	1682	
	Safety valve	1020-30	
	Adjusting socket	6310	
	JRGUTHERM® circulation flow regulator	6320	
	Pump		
	Drain valve	6000-12	
	JRGUSIT® battery valve	5130-35	
FIL	JRGURED® combined domestic water station	1350-63	
	JRGURED® pressure-reducing valves	1300-33	
FIL	Fine filter	1830-46	

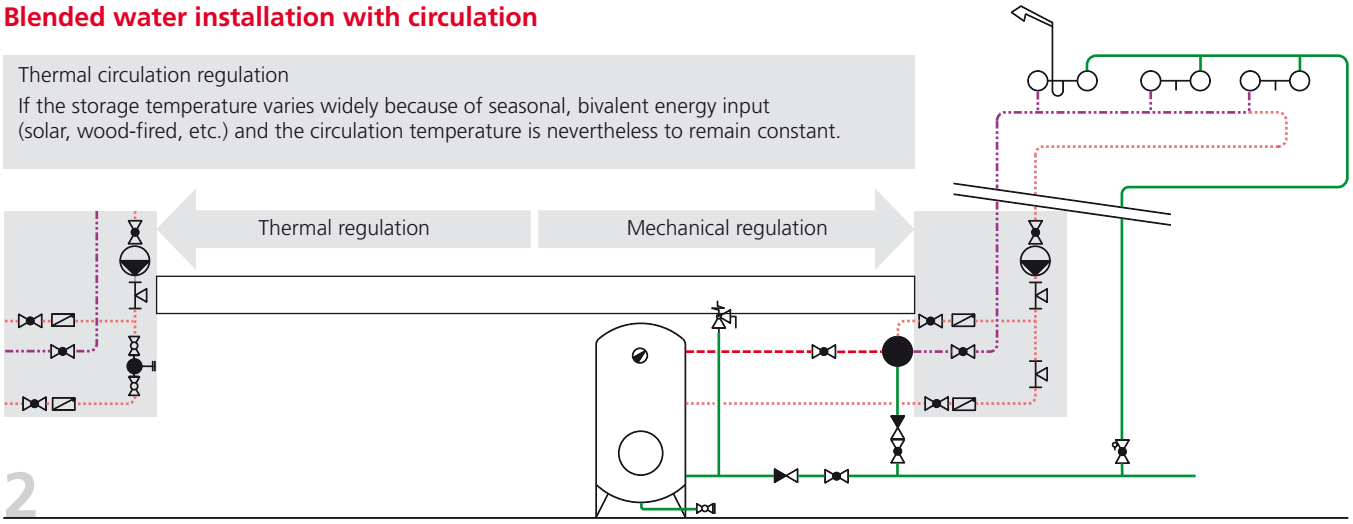
Blended water installation without circulation with separate hot water outlet



Installation examples of JRGUMAT® thermoblending valve

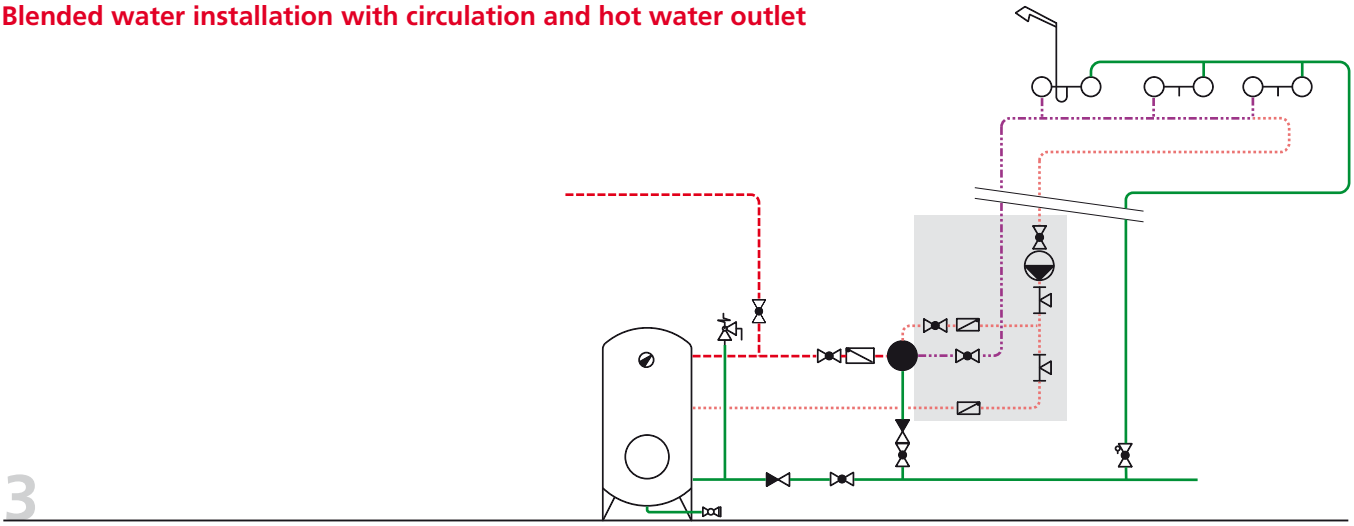
Blended water installation with circulation

Thermal circulation regulation
If the storage temperature varies widely because of seasonal, bivalent energy input (solar, wood-fired, etc.) and the circulation temperature is nevertheless to remain constant.



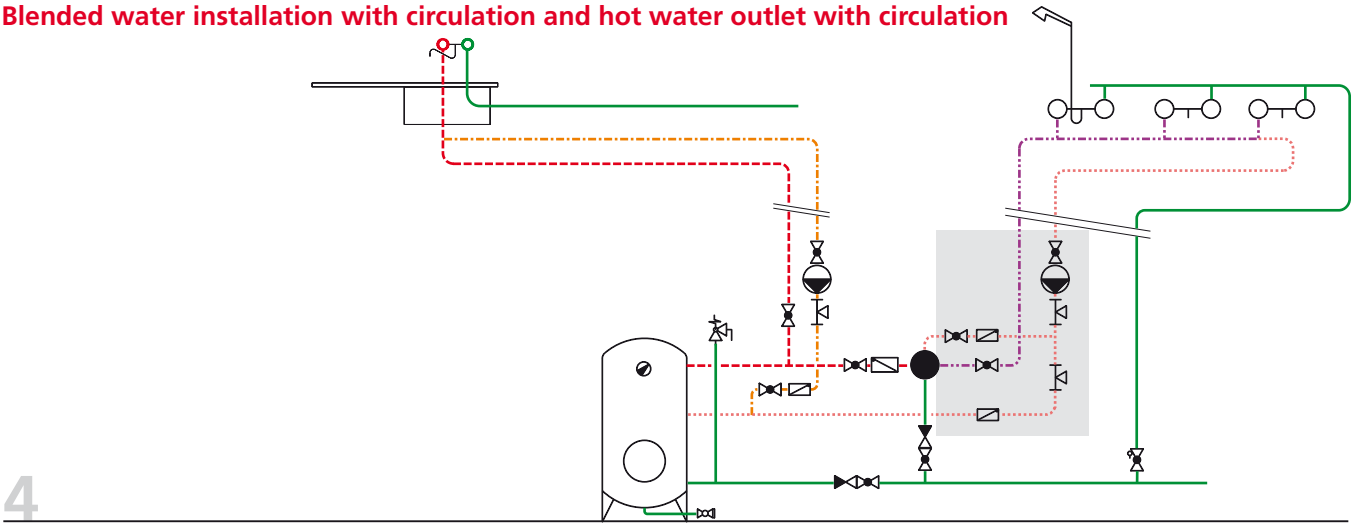
2

Blended water installation with circulation and hot water outlet



3

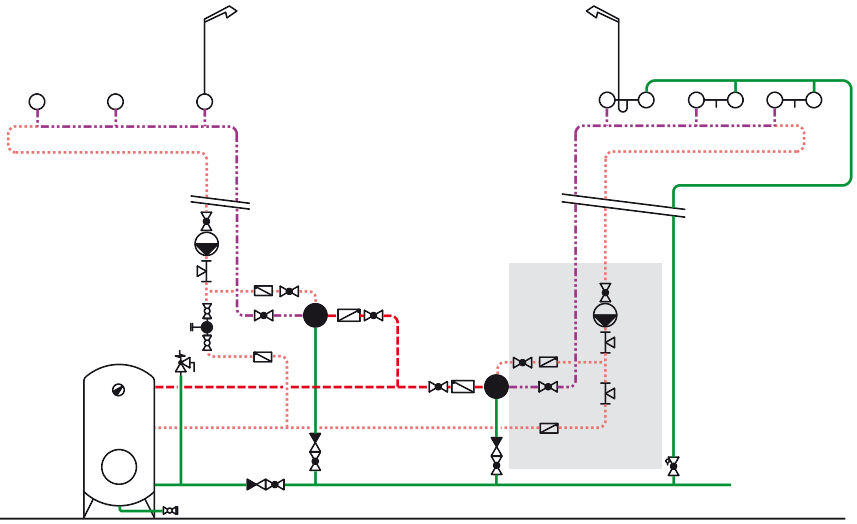
Blended water installation with circulation and hot water outlet with circulation



4

Installation examples of JRGUMAT® thermoblending valve

Blended water installation with two blended water circuits

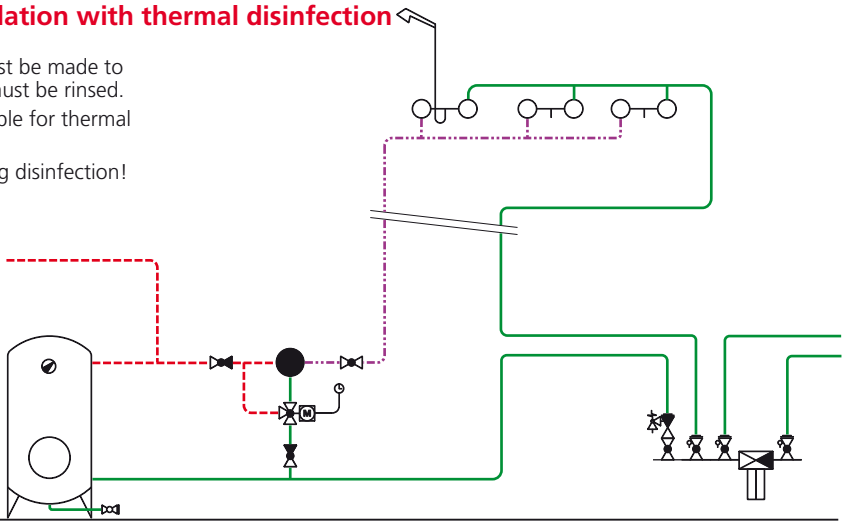


5

Blended water installation without circulation with thermal disinfection

1. Note: To ensure thermal disinfection, water must be made to flow through each tap and/or each tap must be rinsed.
2. Note: There must be sufficient hot water available for thermal disinfection.

Attention: Anti-scald protection is deactivated during disinfection!



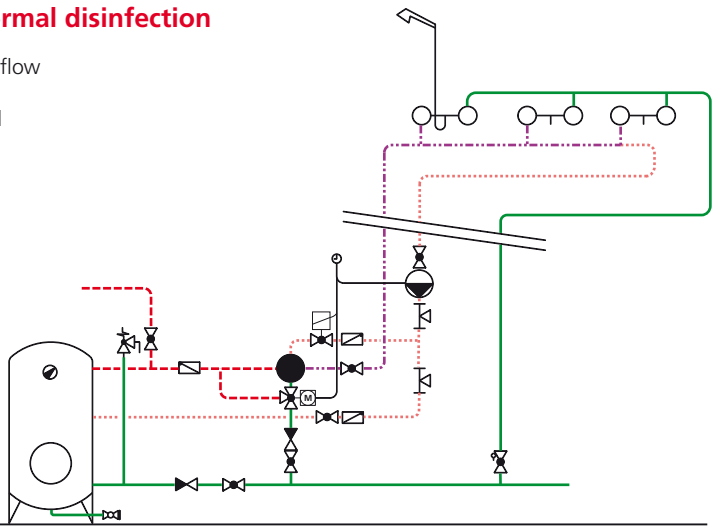
6

Blended water installation with circulation and thermal disinfection

1. Note: To ensure thermal disinfection, water must be made to flow through each tap and/or each tap must be rinsed.
2. Note: There must be sufficient hot water available for thermal disinfection.

Attention: Anti-scald protection is deactivated during disinfection!

Thermal disinfection is not possible with JRGUTHERM® JRG 6320.



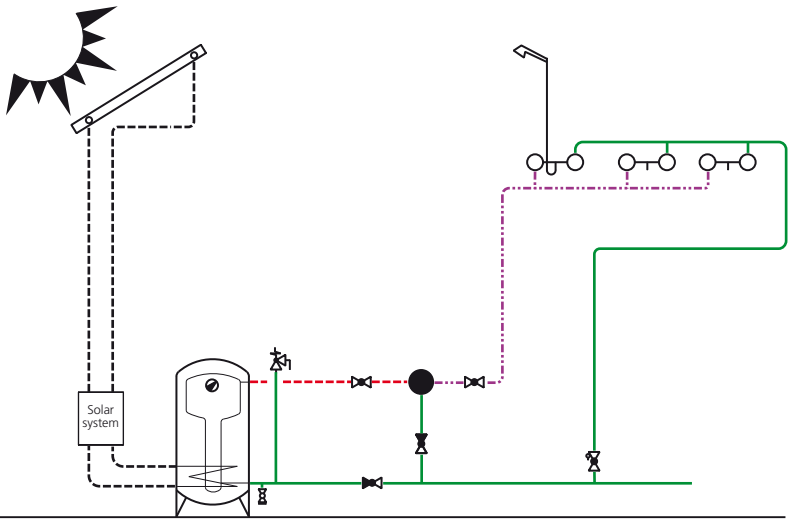
7

Installation examples of JRGUMAT® thermoblending valve

Blended water installation in alternative energy installation without circulation

Thermoblending valve as protection from temperature rise

(see also EN 12976-2)

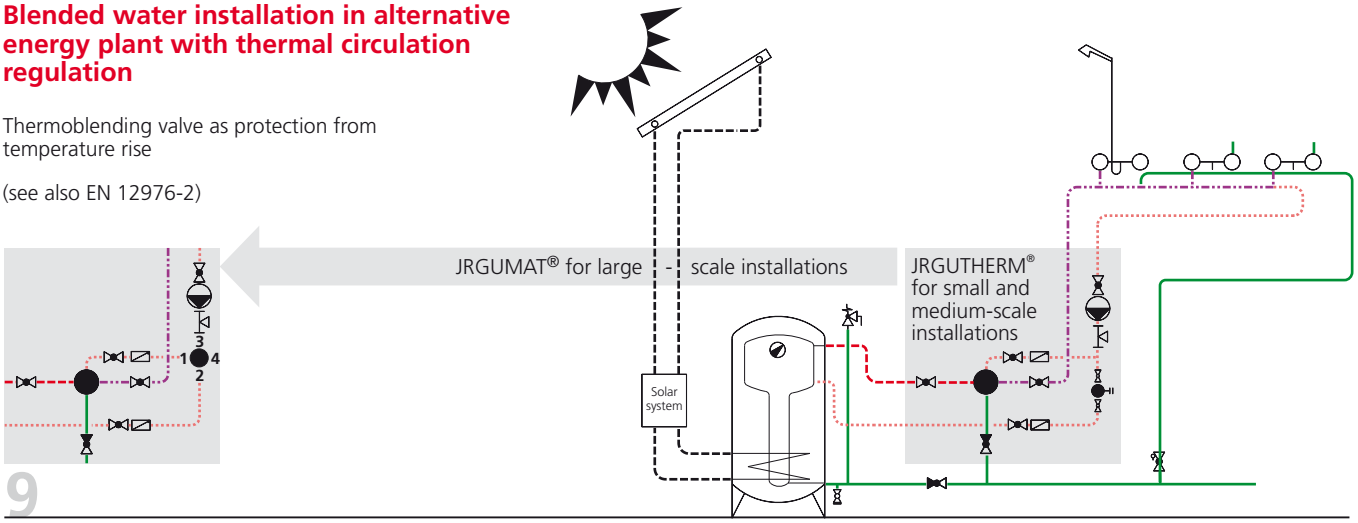


8

Blended water installation in alternative energy plant with thermal circulation regulation

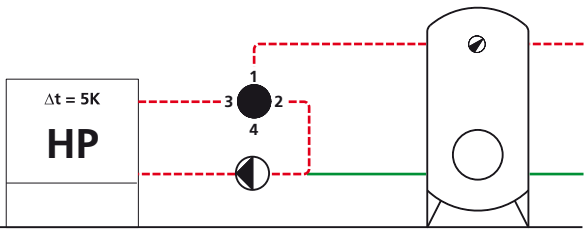
Thermoblending valve as protection from temperature rise

(see also EN 12976-2)



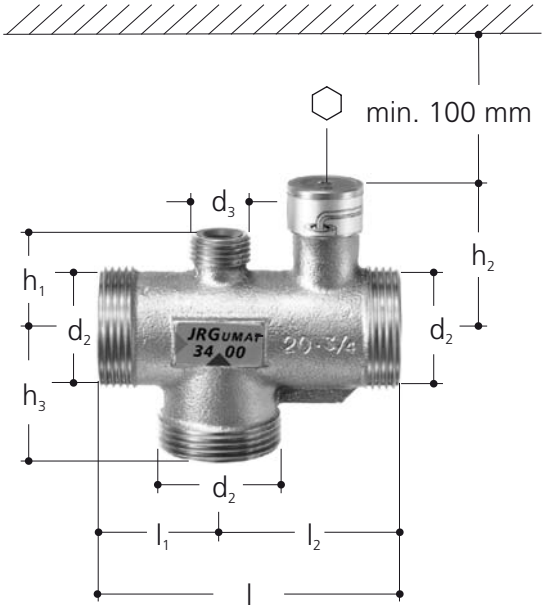
9

JRGUMAT® thermoblending valve as regulator for storage



10

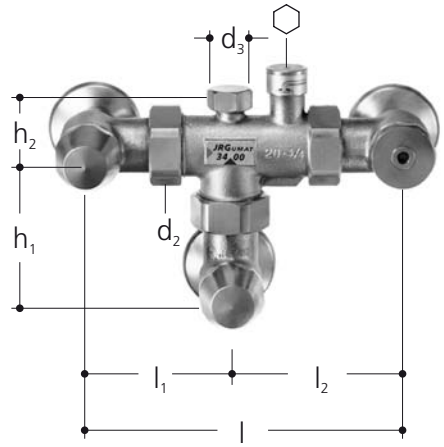
1 Cold water inflow
2 Hot water inflow
3 Blended water outflow
4 Circulation inflow, closed

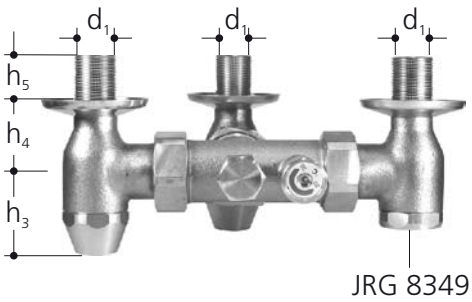


3400

JRGUMAT® thermoblending valve, PN 10
Gunmetal body, external thread all round for screw unions, for water up to max. 90°C, standard factory preset temperature °C.
Cap for circulation union JRG 8325.
Union fittings on page 13.

Art. No.	GN	DN		d_2	d_3	h_1	h_2	h_3	l	l_1	l_2	⬡	°C	kg
3400.910	½	15	641.413	G 1⅛	-	-	47	35	90	35	55	5	25	0.570
3400.912	½	15	641.413	G 1⅛	-	-	47	35	90	35	55	5	40	0.570
3400.914	½	15	641.413	G 1⅛	-	-	47	35	90	35	55	5	48	0.570
3400.916	½	15	641.413	G 1⅛	-	-	47	35	90	35	55	5	55	0.570
3400.920	¾	20	641.414	G 1¼	G ½	32	49	40	100	40	60	5	25	0.650
3400.922	¾	20	641.414	G 1¼	G ½	32	49	40	100	40	60	5	40	0.650
3400.924	¾	20	641.414	G 1¼	G ½	32	49	40	100	40	60	5	48	0.650
3400.926	¾	20	641.414	G 1¼	G ½	32	49	40	100	40	60	5	55	0.650
3400.930	1	25	641.415	G 1½	G ¾	36	51	43	110	43	67	5	25	0.870
3400.932	1	25	641.415	G 1½	G ¾	36	51	43	110	43	67	5	40	0.870
3400.934	1	25	641.415	G 1½	G ¾	36	51	43	110	43	67	5	48	0.870
3400.936	1	25	641.415	G 1½	G ¾	36	51	43	110	43	67	5	55	0.870
3400.940	1¼	32	641.416	G 2	G ¾	41	75	52	130	52	78	8	25	1.600
3400.942	1¼	32	641.416	G 2	G ¾	41	75	52	130	52	78	8	40	1.600
3400.944	1¼	32	641.416	G 2	G ¾	41	75	52	130	52	78	8	48	1.600
3400.946	1¼	32	641.416	G 2	G ¾	41	75	52	130	52	78	8	55	1.600
3400.950	1½	40	641.417	G 2¼	G ¾	50	77	58	150	58	92	8	25	2.100
3400.952	1½	40	641.417	G 2¼	G ¾	50	77	58	150	58	92	8	40	2.100
3400.954	1½	40	641.417	G 2¼	G ¾	50	77	58	150	58	92	8	48	2.100
3400.956	1½	40	641.417	G 2¼	G ¾	50	77	58	150	58	92	8	55	2.100
3400.960	2	50	641.418	G 2¾	G ¾	60	85	70	180	70	110	8	25	3.370
3400.962	2	50	641.418	G 2¾	G ¾	60	85	70	180	70	110	8	40	3.370
3400.964	2	50	641.418	G 2¾	G ¾	60	85	70	180	70	110	8	48	3.370
3400.966	2	50	641.418	G 2¾	G ¾	60	85	70	180	70	110	8	55	3.370





JRG 8349

3408

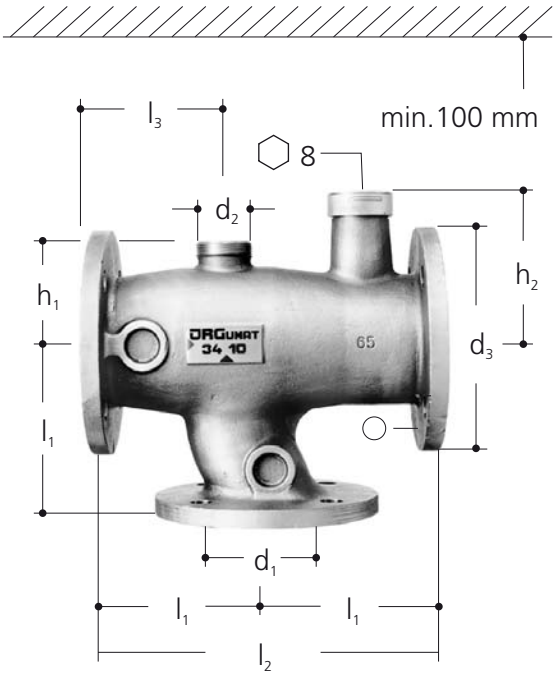
JRGUMAT® thermoblending valve, PN 10
Gunmetal body, with two corner shut-off and non-return valves and corner screw connection with thread for thermometer connection, for water up to max. 90°C, factory preset to standard temperature °C. Supplied without thermometer.

Art. No.	GN	DN	☞	d_1	d_2	d_3	h_1	h_2	h_3	h_4	h_5		
3408.910	½	15	641.313	R ½	G 1⅛	-	75	-	48	35	25		
3408.912	½	15	641.313	R ½	G 1⅛	-	75	-	48	35	25		
3408.914	½	15	641.313	R ½	G 1⅛	-	75	-	48	35	25		
3408.916	½	15	641.313	R ½	G 1⅛	-	75	-	48	35	25		

Art. No.	GN	DN	☞	l	l_1	l_2	⬡	°C					kg
3408.910	½	15	641.313	170	75	95	5	25					2.000
3408.912	½	15	641.313	170	75	95	5	40					2.000
3408.914	½	15	641.313	170	75	95	5	48					2.000
3408.916	½	15	641.313	170	75	95	5	55					2.000

Art. No.	GN	DN	☞	d_1	d_2	d_3	h_1	h_2	h_3	h_4	h_5		
3408.920	¾	20	641.314	R ¾	G 1¼	G ½	86	32	52	45	25		
3408.922	¾	20	641.314	R ¾	G 1¼	G ½	86	32	52	45	25		
3408.924	¾	20	641.314	R ¾	G 1¼	G ½	86	32	52	45	25		
3408.926	¾	20	641.314	R ¾	G 1¼	G ½	86	32	52	45	25		

Art. No.	GN	DN	☞	l	l_1	l_2	⬡	°C					kg
3408.920	¾	20	641.314	192	86	106	5	25					2.800
3408.922	¾	20	641.314	192	86	106	5	40					2.800
3408.924	¾	20	641.314	192	86	106	5	48					2.800
3408.926	¾	20	641.314	192	86	106	5	55					2.800



3410

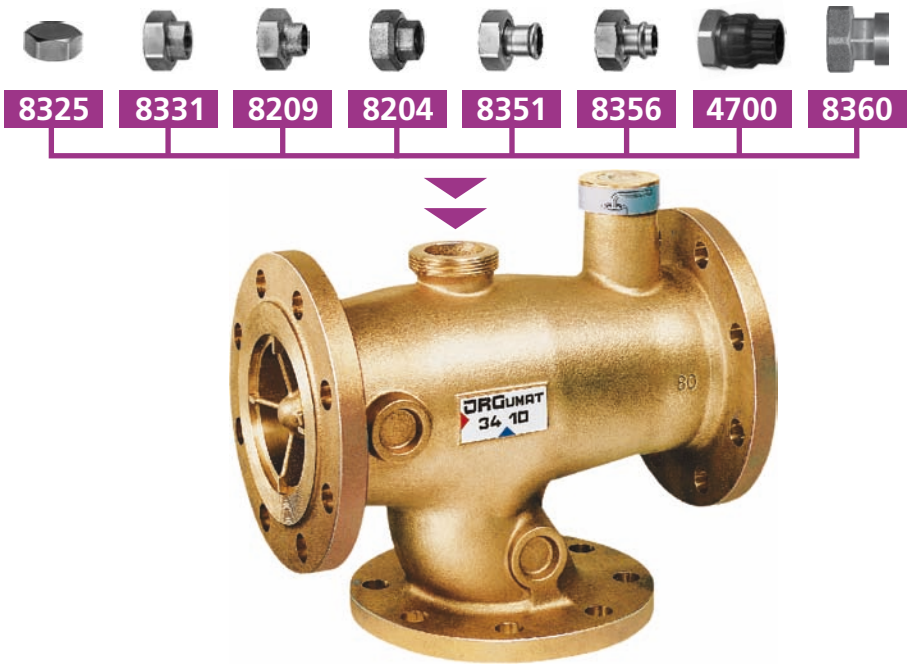
JRGUMAT® thermoblending valve, PN 10
Gunmetal body, flanges all round according to VSM/DIN, with three flange gaskets, for water up to max. 90°C, factory preset to a standard temperature °C.
Cap for circulation union JRG 8325.

3412

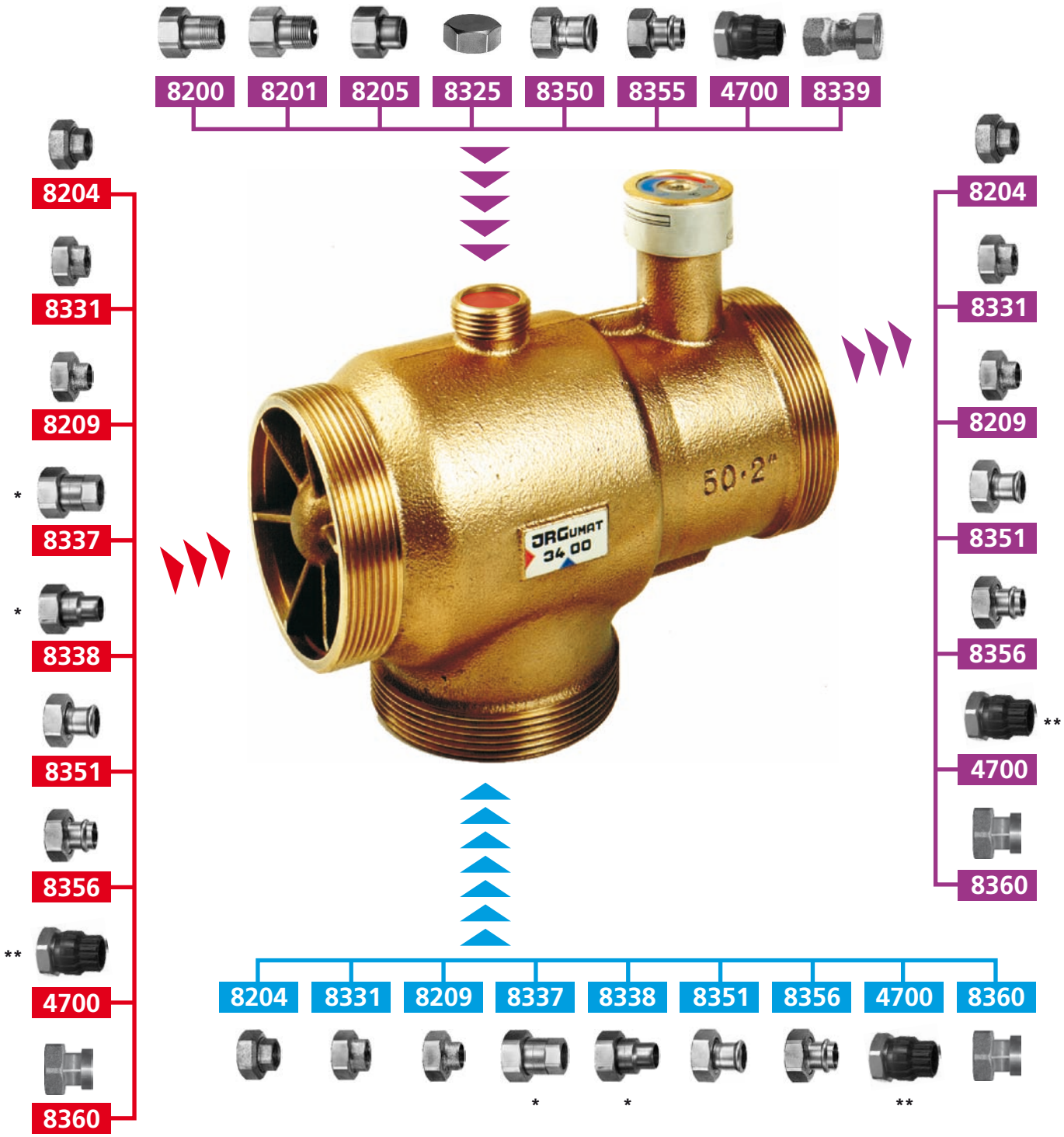
As 3410, however with flanges all round according to BS (British Standard).

Art. No.	DN		d_1	d_2	d_3	h_1	h_2	l_1	l_2	l_3	○	°C	kg
3410.601	65	741.107	65	G 1½	185	82	121	145	290	112	4	25	23.000
3410.605	65	741.107	65	G 1½	185	82	121	145	290	112	4	40	23.000
3410.606	65	741.107	65	G 1½	185	82	121	145	290	112	4	48	23.000
3410.608	65	741.107	65	G 1½	185	82	121	145	290	112	4	55	23.000
3410.801	80	741.108	80	G 2	200	92	127	155	310	124	8	25	28.000
3410.805	80	741.108	80	G 2	200	92	127	155	310	124	8	40	28.000
3410.806	80	741.108	80	G 2	200	92	127	155	310	124	8	48	28.000
3410.808	80	741.108	80	G 2	200	92	127	155	310	124	8	55	28.000

Screw unions for JRGUMAT® thermoblending valves 3410, 3412



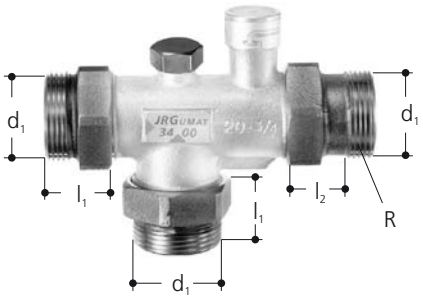
Screw unions for JRGUMAT® thermoblending valve 3400



Only the screw unions listed here may be used!

* Screw unions 8337 and 8338 with non-return valves only for GN ½ and DN 15 and 20

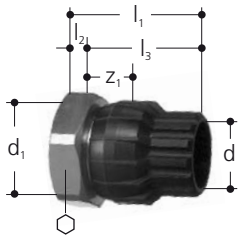
** Screw unions 4700 only up to GN 1¼ and DN 32



3480

Adapter set
gunmetal, with gaskets, for exchanging JRG 3350 for JRG 3400.
R = 1½ + 2 in 2 halves.

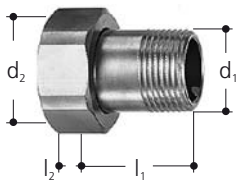
Art. No.	GN	DN			d_1	l_1	l_2	R				kg
3480.320	¾	20			G 1¼	30.5	40.5	–				0.490
3480.400	1	25			G 1½	38.0	34.0	–				0.755
3480.480	1¼	32			G 2	39.0	33.5	–				1.000
3480.560	1½	40			G 2¼	44.5	30.5	2 halves				1.180
3480.640	2	50			G 2¾	44.5	34.5	2 halves				1.750



4700

JRG Sanipex MT® adapter to fittings
gunmetal, with internal thread, seal and plastic cone grip union

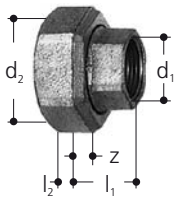
Art. No.	GN-d	☞		d	d_1	l_1	l_2	l_3	⬡	z_1		kg
4700.116	1⅛-16	333.141		16	G 1⅛	43.5	10	33.5	43	15		0.111
4700.120	1¼-16	333.151		16	G 1¼	44.5	11	33.5	46	15		0.119
4700.122	1¼-20	333.152		20	G 1¼	49.5	11	38.5	46	16		0.125
4700.124	1¼-26	333.153		26	G 1¼	59.0	11	48.0	46	19		0.150
4700.126	1¼-32	333.154		32	G 1¼	69.0	11	58.0	46	20		0.195
4700.128	1½-26	333.163		26	G 1½	59.0	11	48.0	54	19		0.204
4700.130	1½-32	333.164		32	G 1½	69.0	11	58.0	54	20		0.243
4700.136	2-40	333.175		40	G 2	82.5	13	69.5	67	25		0.410



8200 – 8201

Union
brass, with external thread for circulation connection

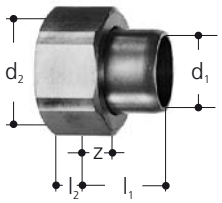
Art. No.	GN	DN	☞		d_1	d_2	l_1	l_2		Fits circulation union	kg
8200.160	⅜	12			R ⅜	G ½	27.5	9		GN ¾	0.050
8201.240	½	15	671.113		R ½	G ¾	34.0	8		GN 1–2	0.075



8204

Union
galvanized, with internal thread for mixer connection and circulation connection

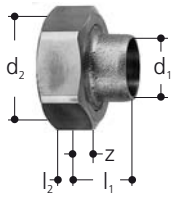
Art. No.	GN	DN	☞		d_1	d_2	l_1	l_2	z	Fits circulation union	kg
8204.240	½	15	671.133		Rp ½	G 1⅛	23	9.5	10		0.150
8204.320	¾	20	671.134		Rp ¾	G 1¼	24	10.5	9		0.170
8204.400	1	25	671.135		Rp 1	G 1½	27	11.0	10	DN 65	0.230
8204.480	1¼	32	671.136		Rp 1¼	G 2	32	11.5	13	DN 80	0.370
8204.560	1½	40	671.137		Rp 1½	G 2¼	34	12.5	15		0.450
8204.640	2	50	671.138		Rp 2	G 2¾	36	14.5	12		0.690



8205

Soldering union
brass, for circulation connection

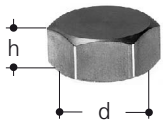
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	Fits circulation union	kg
8205.012	12	10			12	G ½	16	8.5	6	GN ¾	0.050
8205.015	15	12			15	G ¾	19	8.5	7	GN 1–2	0.060
8205.018	18	15			18	G ¾	21	8.5	7	GN 1–2	0.070



8209

Soldering union
of brass/gunmetal for mixer connection 3400 and circulation connection 3410, 3412

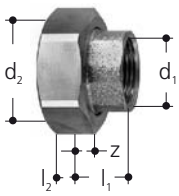
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	to 3400	Circul. union	kg
8209.015	15	12	671.315		15	G 1⅛	21	8.5	9	GN ½		0.140
8209.018	18	15	671.316		18	G 1⅛	23	8.5	9	GN ½		0.140
8209.022	22	20	671.317		22	G 1¼	24	10.0	7	GN ¾		0.180
8209.028	28	25	671.318		28	G 1½	29	10.5	9	GN 1	DN 65	0.240
8209.035	35	32	671.321		35	G 2	34	11.0	9	GN 1¼	DN 80	0.430
8209.042	42	40	671.322		42	G 2¼	39	12.0	10	GN 1½		0.500
8209.054	54	50	671.323		54	G 2¾	43	13.0	9	GN 2		0.850



8325

Cap
brass, with seal for circulation connection

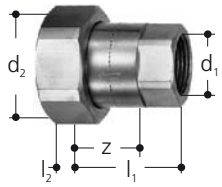
Art. No.	GN	DN			d	h				Fits circulation union	kg
8325.240	½	15			G ½	9.0				GN ¾	0.030
8325.320	¾	20			G ¾	9.0				GN 1–2	0.040
8325.560	1½	40			G 1½	10.5				DN 65	0.180
8325.640	2	50			G 2	10.5				DN 80	0.230



8331

Union
gunmetal, with internal thread for mixer connection and circulation connection

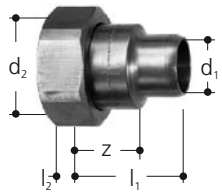
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	Fits circulation union	kg
8331.240	½	15	671.133		Rp ½	G 1⅛	23.0	8.5	10.0		0.150
8331.320	¾	20	671.134		Rp ¾	G 1¼	24.5	10.0	9.5		0.180
8331.400	1	25	671.135		Rp 1	G 1½	27.5	10.5	10.5	DN 65	0.250
8331.480	1¼	32	671.136		Rp 1¼	G 2	32.5	11.0	13.5	DN 80	0.440
8331.560	1½	40	671.137		Rp 1½	G 2¼	34.5	12.0	15.5		0.570
8331.640	2	50	671.138		Rp 2	G 2¾	37.5	13.0	13.5		0.850



8337

Union
brass, with internal thread, loose nut and non-return valve, for hot and cold water inlet

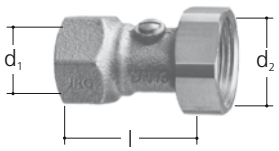
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z		kg
8337.240	½	15	671.183		Rp ½	G 1⅛	39	9.5	26		0.195
8337.320	¾	20	671.184		Rp ¾	G 1¼	45	11.0	30		0.265



8338

Soldering union
brass, with loose nut and non-return valve, for hot and cold water inlet

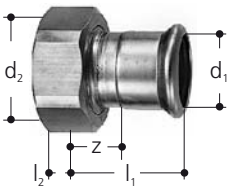
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	Fits 3400	kg
8338.015	15	15	671.355		15	G 1⅛	37.0	9.5	25.0	GN ½	0.170
8338.022	22	20	671.357		22	G 1¼	44.5	11.0	27.5	GN ¾	0.230



8339

Lockable union, PN 10
made of gunmetal, with female thread, lockable with ball valve, gasket EPDM, loose nut made of brass, for water up to 70°C, suitable to 3600, 6320

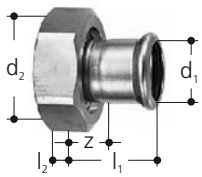
Art. No.	GN	DN		d_1	d_2	l	⬡1	⬡2		kg
8339.240	½	15	671.713	Rp ½	G ¾	55	30	27		0.170
8339.320	¾	20	671.714	Rp ¾	G 1	55	37	32		0.200



8350

Union for Mapress Pressfitting system
for circulation connection

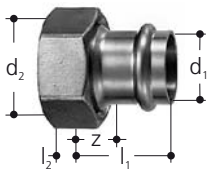
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	SW	Fits circulation union	kg
8350.015	15	12	671.412		15	G ¾	42	6.5	22	30	1–2	0.078
8350.018	18	15	671.413		18	G ¾	43	6.5	23	30	1–2	0.080



8351

Union for Mapress Pressfitting system
for mixer connection and circulation connection

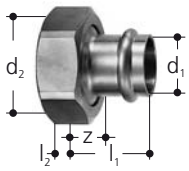
Art. No.	GN	DN			d_1	d_2	l_1	l_2	z	SW	Fits circulation union	kg
8351.015	15	12	671.412		15	G 1⅛	39	8	19	41		0.118
8351.018	18	15	671.413		18	G 1¼	39	10	18	46		0.157
8351.022	22	20	671.414		22	G 1¼	42	10	21	46		0.160
8351.028	28	25	671.415		28	G 1½	44	11	21	54	DN 65	0.245
8351.035	35	32	671.416		35	G 2	49	12	23	66	DN 80	0.350
8351.042	42	40	671.417		42	G 2¼	52	13	22	72		0.413
8351.054	54	50	671.418		54	G 2¾	57	15	22	89		0.560



8355

Union for Optipress/Viega Sanpress system
for circulation connection

Art. No.	GN	DN	☞		d_1	d_2	l_1	l_2	z	SW	Fits circulation union	kg
8355.015	15	12	671.412		15	G ¾	36.5	8.5	12.5	31	1–2	0.100
8355.018	18	15	671.413		18	G ¾	39.5	8.5	15.5	31	1–2	0.100

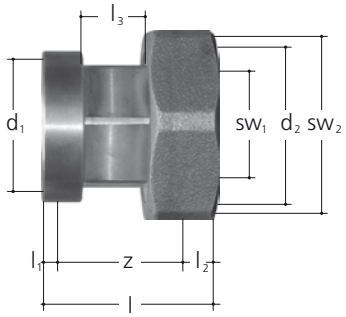


8356

Union for Optipress/Viega Sanpress system
for mixer connection and circulation connection

Art. No.	GN	DN	☞		d_1	d_2	l_1	l_2	z	SW	Fits circulation union	kg
8356.015	15	12	671.412		15	G 1⅛	39	9.0	15	41		0.140
8356.018	18	15	671.413		18	G 1¼	40	10.0	18	46		0.150
8356.022	22	20	671.414		22	G 1¼	40	10.0	16	46		0.200
8356.028	28	25	671.415		28	G 1½	41	10.5	17	54	DN 65	0.280
8356.035	35	32	671.416		35	G 2	44	11.0	18	66	DN 80	0.450
8356.042	42	40	671.417		42	G 2¼	48	12.0	7	72		0.530
8356.054	54	50	671.418		54	G 2¾	62	13.0	17	89		0.860

8360



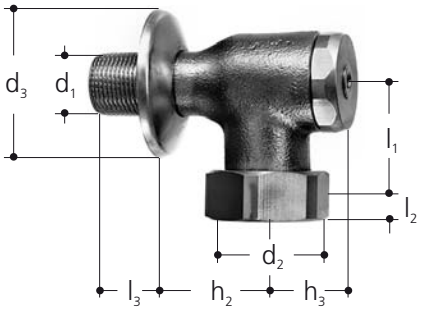
Sleeve connection, S 2 on S 1
to produce combinations, fittings with male thread according ISO 228, made of gunmetal, with female thread and loose nut, and gaskets*,
suitable to: 1611, 1621, 2161, 3400, 5120, 5211, 5281, 5283

* Gaskets AFM 34 cannot be oiled neither be greased

Art. No.	DN	☞	SW_1	SW_2	d_1	d_2	l	l_1	l_2	l_3	z		kg
[1] **8360.015**	15		22	41	G ¾	G 1⅛	56	6	8	22	42		0.220
[1] **8360.020**	20		27	46	G 1	G 1¼	57	7	8	22	42		0.298
[1] **8360.025**	25		32	54	G 1¼	G 1½	61	8	9	22	44		0.452
[1] **8360.032**	32		41	66	G 1½	G 2	65	9	9	22	47		0.669
[1] **8360.040**	40		48	72	G 1¾	G 2¼	68	10	11	22	48		0.738
[1] **8360.050**	50		58	89	G 2⅜	G 2¾	73.5	11	13.5	22	49		1.164

1 - Attention on measures changes as from summer 2007

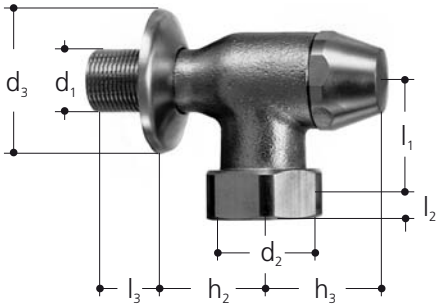
Accessories for JRGUMAT® thermoblending valve 3408



8341

Corner union
gunmetal, with external thread, escutcheon and loose nut for blended water connection, thread for thermometer connection

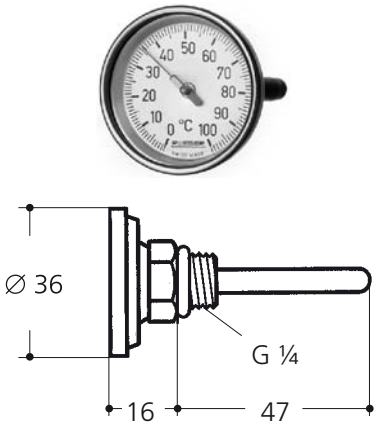
Art. No.	GN	DN		d_1	d_2	d_3	l_1	l_2	l_3	h_2	h_3	Version		kg
8341.240	½	15		R ½	G 1⅛	55	40	9.5	25	35	32	raw		0.400
8341.241	½	15		R ½	G 1⅛	55	40	9.5	25	35	32	chromed		0.400
8341.320	¾	20		R ¾	G 1¼	60	46	11.0	25	45	34	raw		0.600
8341.321	¾	20		R ¾	G 1¼	60	46	11.0	25	45	34	chromed		0.600



8347

Corner valve
gunmetal, with non-return valve, escutcheon, with external thread and loose nut, for hot and cold water inlet

Art. No.	GN	DN	✎	d_1	d_2	d_3	l_1	l_2	l_3	h_2	h_3	Version		kg
8347.240	½	15	624.333	R ½	G 1⅛	55	40	9.5	25	35	48	raw		0.480
8347.241	½	15	624.334	R ½	G 1⅛	55	40	9.5	25	35	48	chromed		0.480
8347.320	¾	20	624.333	R ¾	G 1¼	60	46	11.0	25	45	52	raw		0.750
8347.321	¾	20	624.334	R ¾	G 1¼	60	46	11.0	25	45	52	chromed		0.750



8349

Thermometer
steel and brass, chrome-plated, fits corner union
8341.240 – 8341.321
0-100°C

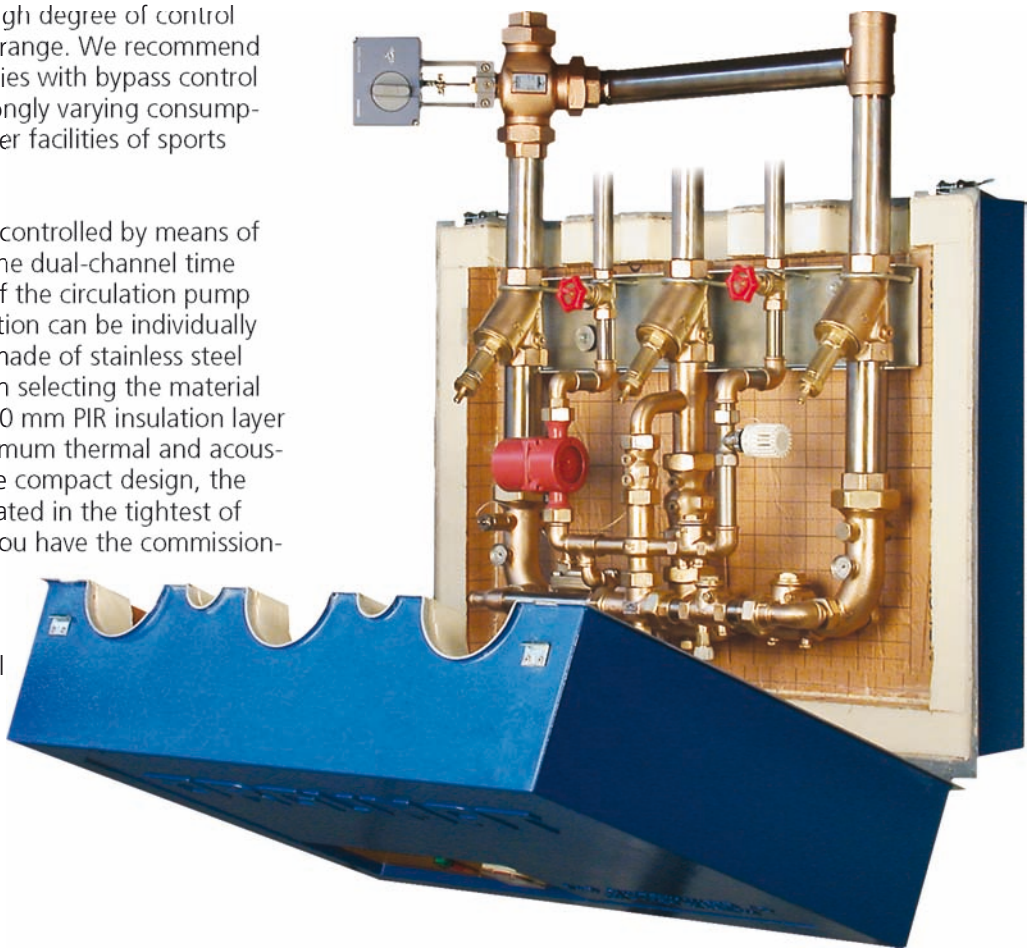
Art. No.	GN	✎		kg
8349.080	¼	624.333		0.040

JRGUMAT® compact blending water facility 3500/3510

Description of facility

Main component of the installation and the guarantor of its high degree of operational and functional safety is the JRGUMAT® thermoblending valve 3400, which has proved itself over many years. The installation is available with or without a bypass control system.
In the case of installations with a bypass control system, 2 thermoblending valves are installed in parallel.
This technique guarantees a high degree of control accuracy over a wide capacity range. We recommend compact blending water facilities with bypass control in the case of objects with strongly varying consumption volumes, e.g. in the shower facilities of sports establishments.

The circulation temperature is controlled by means of a separate p-controller. With the dual-channel time switch, the operating period of the circulation pump as well as the thermal disinfection can be individually adjusted. The internal piping made of stainless steel allows for complete freedom in selecting the material for the connecting piping. A 60 mm PIR insulation layer inside the casing provides optimum thermal and acoustic insulation. As a result of the compact design, the installation can be accommodated in the tightest of spaces. We recommend that you have the commissioning and initial regulation and adjustment of the compact blending water facility carried out by JRG specialist personnel (possible only in CH, D and A).



Thermal disinfection

All JRGUMAT® compact blending water facilities are so configured that an JRG Art. No. 3590 bypass can be fitted for the periodic thermal disinfection of the circuit. In order to be able to perform a thermal disinfection, the water must be made to flow through and/or rinse each tap. There must be sufficient hot water available for thermal disinfection.

Attention: The anti-scalding function is deactivated during the disinfection process.

In order to fit older facilities, the facility control must be adapted.

Area of application

JRGUMAT® compact blending water facilities are used wherever a highly accurate constant blended water temperature is desired and required such as in private homes and blocks of flats, hospitals, old-age and nursing homes, hotels, multipurpose halls, shower-rooms of sports facilities, school buildings, barracks, laboratories, industrial and commercial buildings.
JRGUMAT® compact blending water facilities also serve as over-temperature protection in alternative energy installations such as solar units, wood-fired furnaces, wood-chip furnaces, pellet furnaces, etc.

JRGUMAT® compact blending water facility

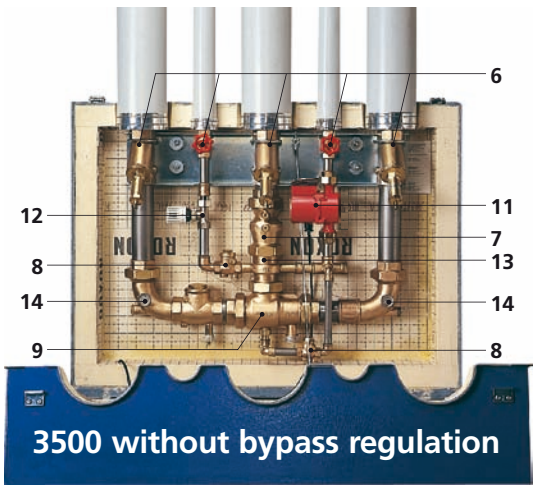
Advantages

- **Provides blended water of constant temperature with both small and large quantities consumed**
- **Highly accurate control**
- **Compact design, small space requirement**
- **Piping completely of stainless steel, fittings of gunmetal**
- **Stable heat and soundproofed casing**
- **Supplied ready to plug and go**
- **Simple planning and wall-mounting**
- **Installation errors impossible**
- **Largely maintenance-free**
- **Protects against scalding**
- **Saves water and energy**
- **Enhanced comfort and safety in hot-water installation**
- **Control for thermal disinfection**

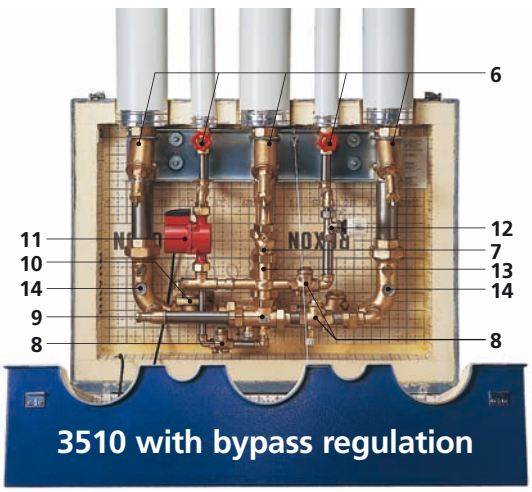
Optionally possible:

- **Facility controlled by building automation**

1 Dual-channel time switch
2 Plant switch (ON/OFF)
3 Timer bridge (ON/OFF)
4 Circulating pump ON (signal lamp)
5 Micro-fuse
6 Stop valve
7 Non-return valve
8 Swing check valve
9 JRGUMAT® thermoblending valve
10 Differential pressure valve
11 Circulating pump
12 Proportional controller
13 Blending double junction
14 Thermometer



3500 without bypass regulation



3510 with bypass regulation

The JRGUMAT® compact blending water facility meets the highest requirements. The facility is supplied with all necessary fittings, full piping, completely insulated and including the control system.

For special options and adaptations, please contact the technical customer service or your JRG dealer.

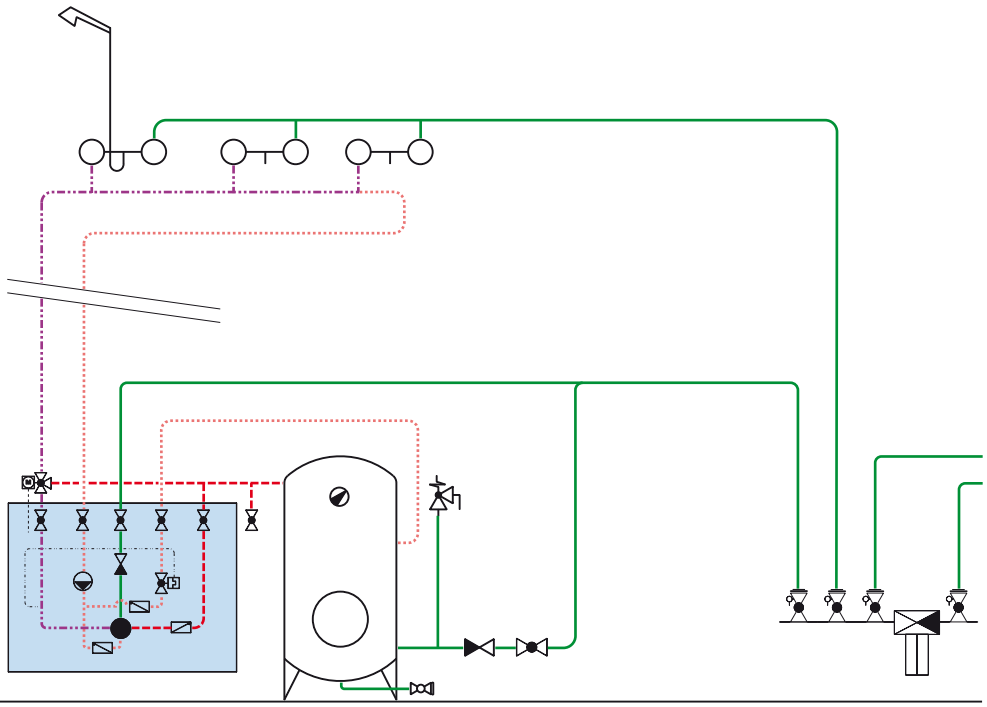
Sample installations with JRGUMAT® compact blending water facility

Blended water installation with compact blending water facility 3500, without bypass regulation

Option: With thermal disinfection 3590.

Note: There must be sufficient hot water available for thermal disinfection.

Attention: The anti-scalding function is deactivated during the disinfection process!

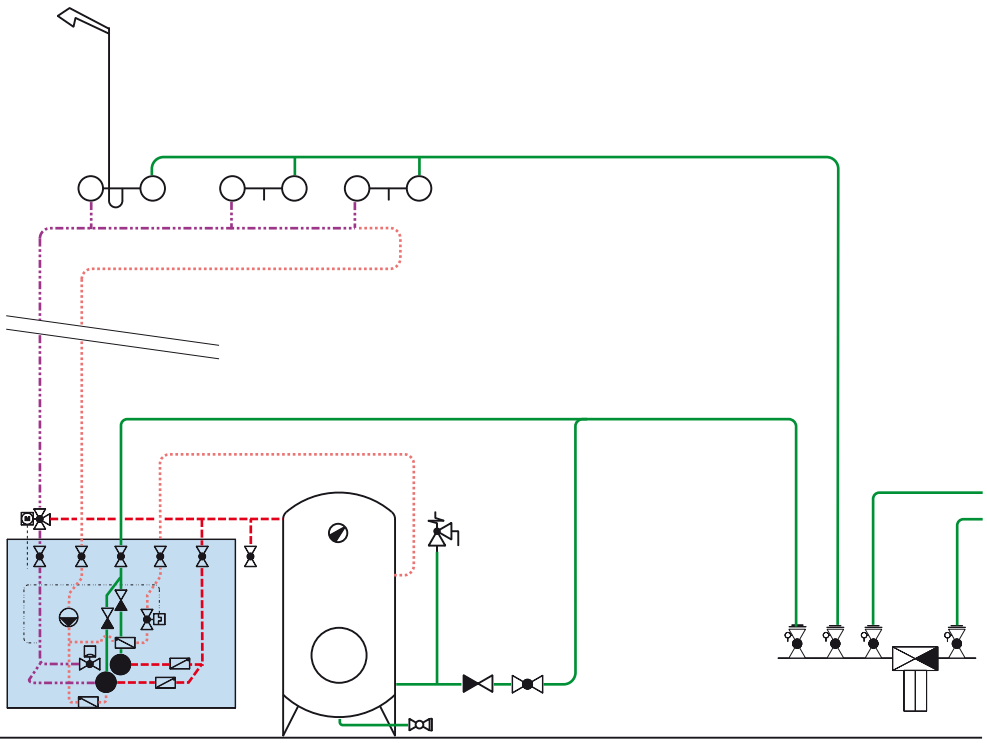


Blended water installation with compact blending water facility 3510, with bypass regulation

Option: With thermal disinfection 3590.

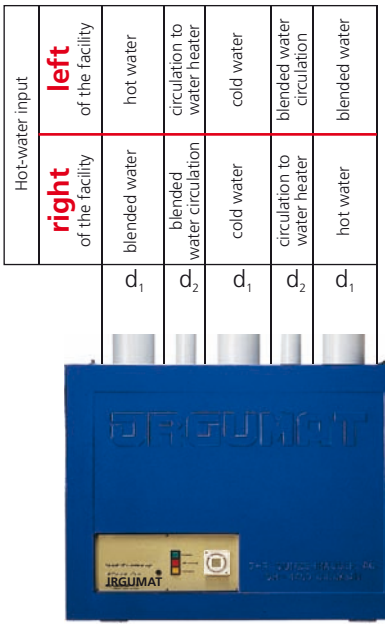
Note: There must be sufficient hot water available for thermal disinfection.

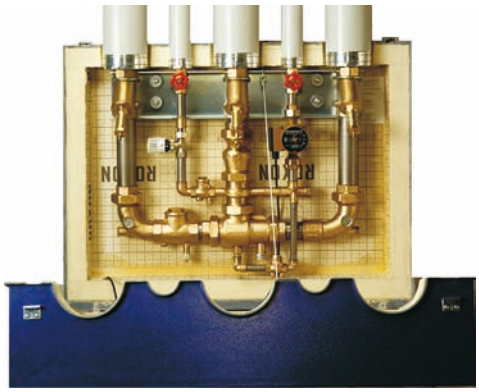
Attention: The anti-scalding function is deactivated during the disinfection process!

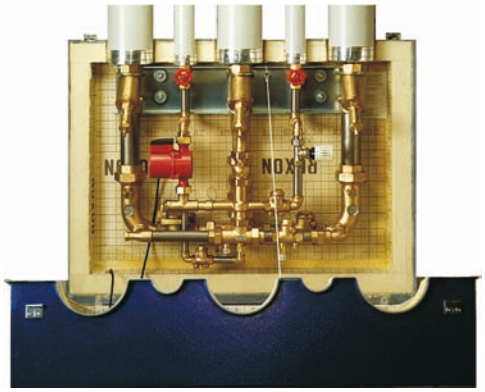


For captions see page 6

JRGUMAT® compact blending water facility







JRGUMAT® compact blending water facility

for wall mounting. Casing with glass-fibre reinforced polyester resin flip-down cover, 60 mm PIR insulation, gunmetal fitting, internal piping made of stainless steel, with dual-channel timer and visual operating status indicator.
Wired ready to plug and go.

Electrical connection: 1-phase, (P, O+E) 230 V
Cable length: 1.50 m

Standard factory set temperature / °C	Blended adjustment range °C
25	20-30
40	30-45
48	36-53
55	45-65

3500 without bypass regulation

Art. No.	GN	DN	d_1	d_2	KV value	kg
3500.010	1½	40	Rp 1½	Rp ¾	10.8 m³/h	65.0
3500.020	2	50	Rp 2	Rp ¾	14.0 m³/h	72.0

GN	DN	Power consumption P1 (W)	Rated current IN (A) 1x230 V
1½	40	78	0.32
2	50	78	0.32

3510 with bypass regulation

Art. No.	GN	DN	d_1	d_2	KV value	kg
3510.020	2	50	Rp 2	Rp ¾	13.0 m³/h	77.0

GN	DN	Power consumption P1 (W)	Rated current IN (A) 1x230 V
2	50	78	0.32

The KV value corresponds to the volume flow through the facility with a pressure drop of Δp = 1 bar.

3590 bypass for thermal disinfection

Art. No.	GN	DN				
3590.560	1½	40				
3590.640	2	50				

Technical changes are reserved at any time.