

Thermostatic Balancing Valve

Type 6320

NSF Lead Free



Function/Installation position

Function

The Type 6320 LF thermostatic balancing valve is intended for use in hot water circulating systems utilizing circulation pumps. The valve regulates the flow rate by continuously sensing the water temperature with a thermostat. The hydraulic balancing is thus automatically maintained.

Materials

All wetted parts are made of lead free brass, copper, stainless steel or high-grade plastic.

Installation position

The Type 6320 LF thermostatic balancing valve can be installed in the vertical or horizontal position.

It is recommended that shutoff valves be installed before and after the Type 6320 balancing valve for future alterations or maintenance.

Operating Parameters

Temperature setting range	97–145°F
Maximum temperature	158°F
Maximum operating pressure	145 psi
Maximum differential pressure	5.8 psi

The Type 6320 LF balancing valve is protected from overheating, and therefore should be plumbed with a bypass to allow for systems that will require thermal disinfection.

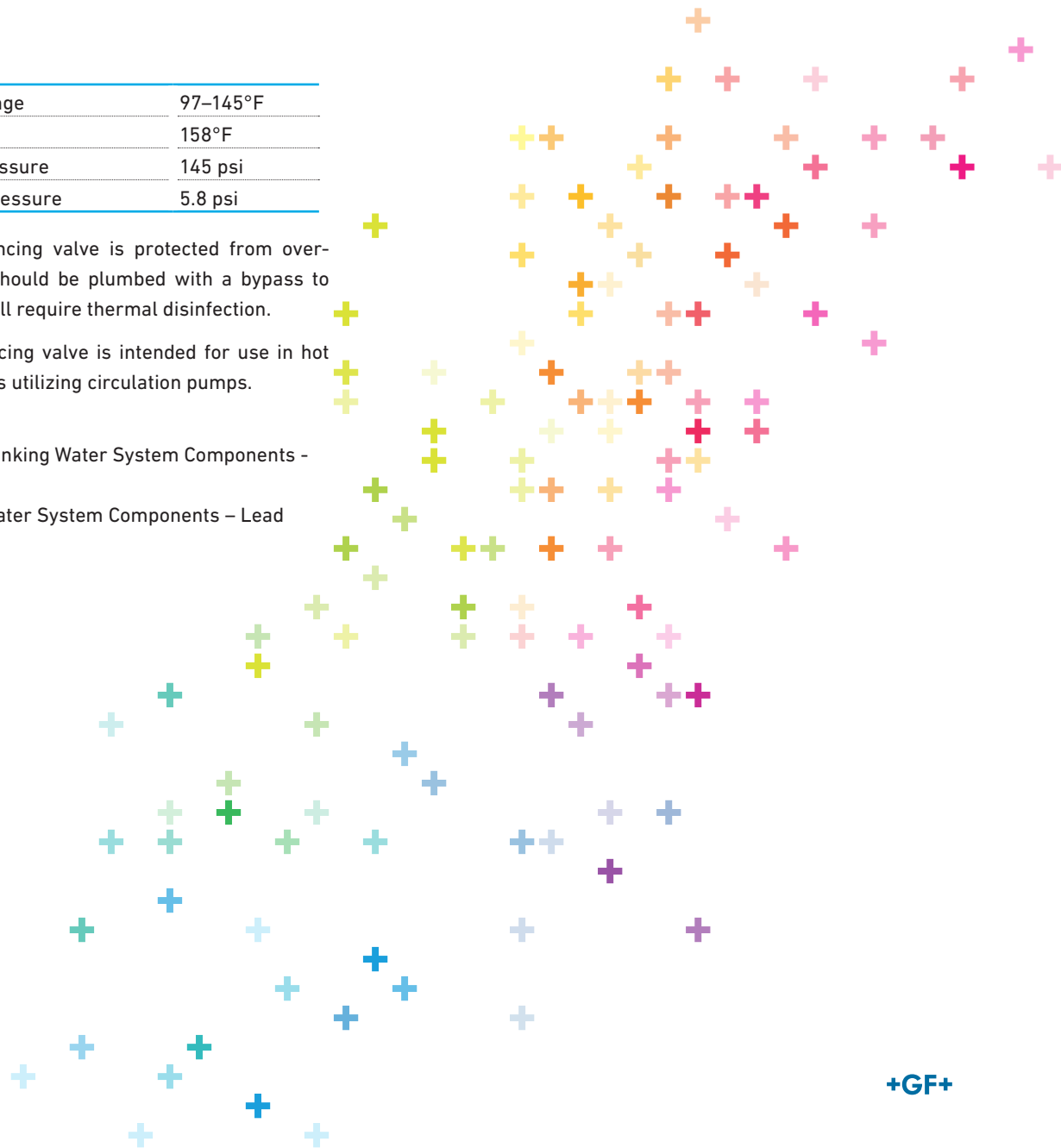
The Type 6320 LF balancing valve is intended for use in hot water circulating systems utilizing circulation pumps.

Standards

- NSF Standard 61 - Drinking Water System Components - Health Effects
- NSF 372 - Drinking Water System Components – Lead Content

Type 6320 LF advantages

- Simple regulator operation
- Virtually maintenance-free
- Automatic adjustment of the flow volume (hydraulic balance)
- Shorter heat-up phase after temperature drop
- Energy saving



Construction

Scale ring

Body, lead free brass

Regulator sleeve, lead free brass

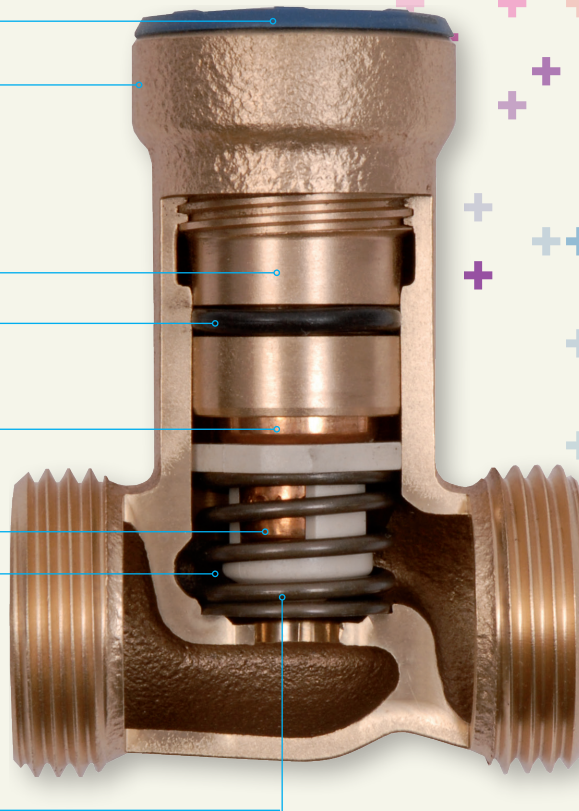
O-Ring, EPDM

Thermostat

Spring-loaded pin, lead free brass

Regulator body, POM

Working spring



Planning instruction

Even with thermostatic balancing valves such as the Type 6320 LF, it is necessary to configure the system with a simple piping layout.

In order to select the suitable pump, the heat loss of the entire system has to be determined, in accordance with good engineering practice, and converted to gpm for each branch and the mains. The pressure (head) loss is calculated from the elevation and friction loss of the most hydraulically remote pipe line. The pressure loss of the Type 6320 LF in this pipe line is measured on the $k_{V_{max}}$ line on Table 1.1.

The pump performance of excessively strong pumps are to be throttled at the pump. The Type 6320 LF must not be used to throttle the pump (maximum differential pressure = 5.8 psi).

The thermostatic balancing valves in the remaining pipe lines are to be selected in such a way that the intersection of the

flow rate and the necessary pressure drop lies within the acceptable flow range area in Table 1.1.

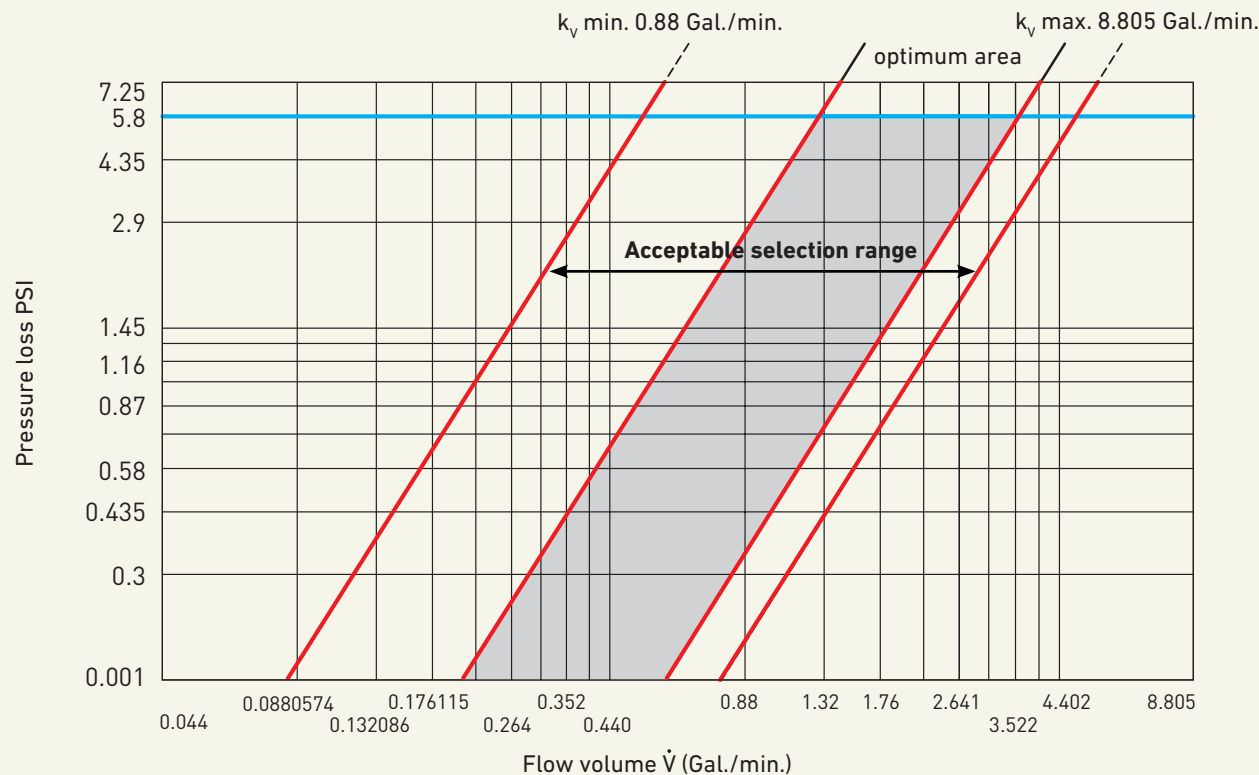
In the appropriate configuration, with the most hydraulically remote pipe line, the installation of a Type 6320 LF flow regulator can be avoided and it can be replaced by a isolation valve. The isolation valve should be fully opened in the most hydraulically remote branch.

The installation of check valves are recommended to prevent backflow into branches during maintenance or repair operations.

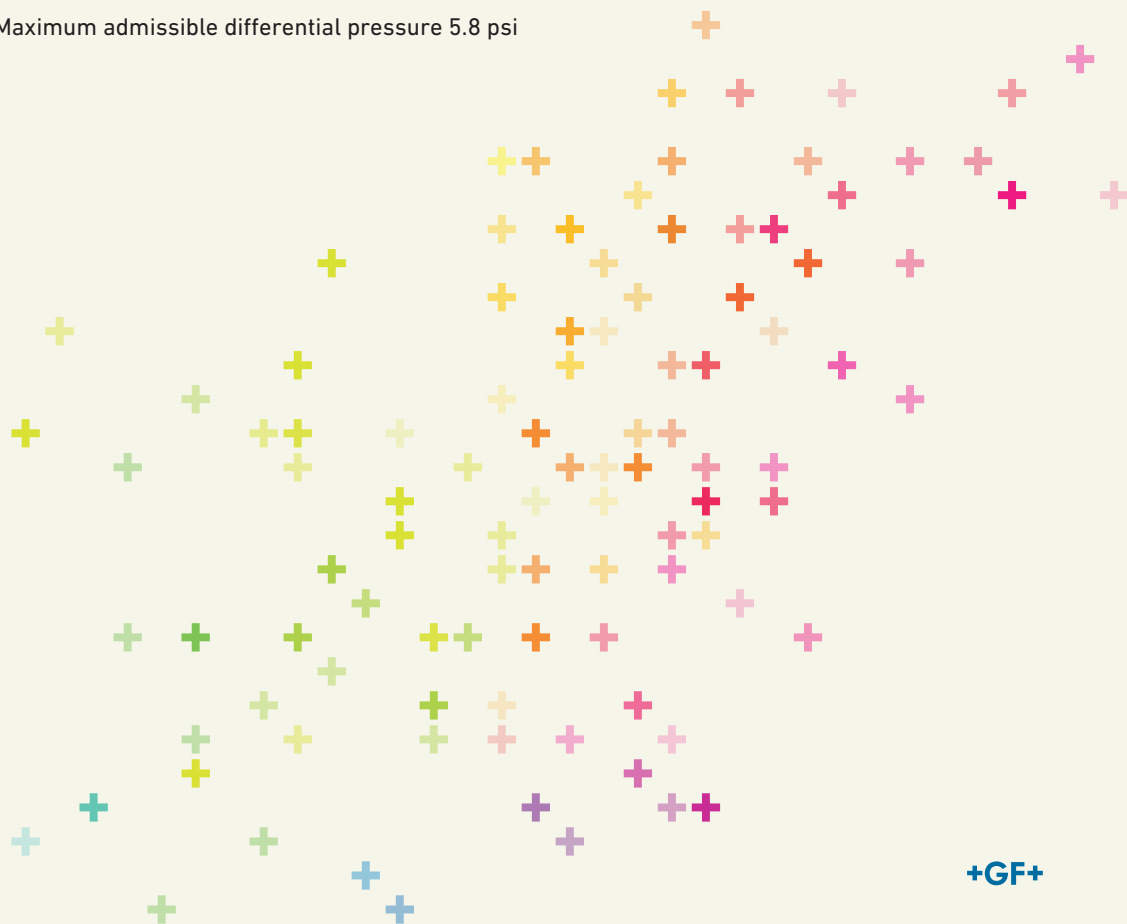
For questions and information on application technology, please contact our technical advisors or the technical customer service.

Table 1.1 - Pressure Loss through Type 6320 LF

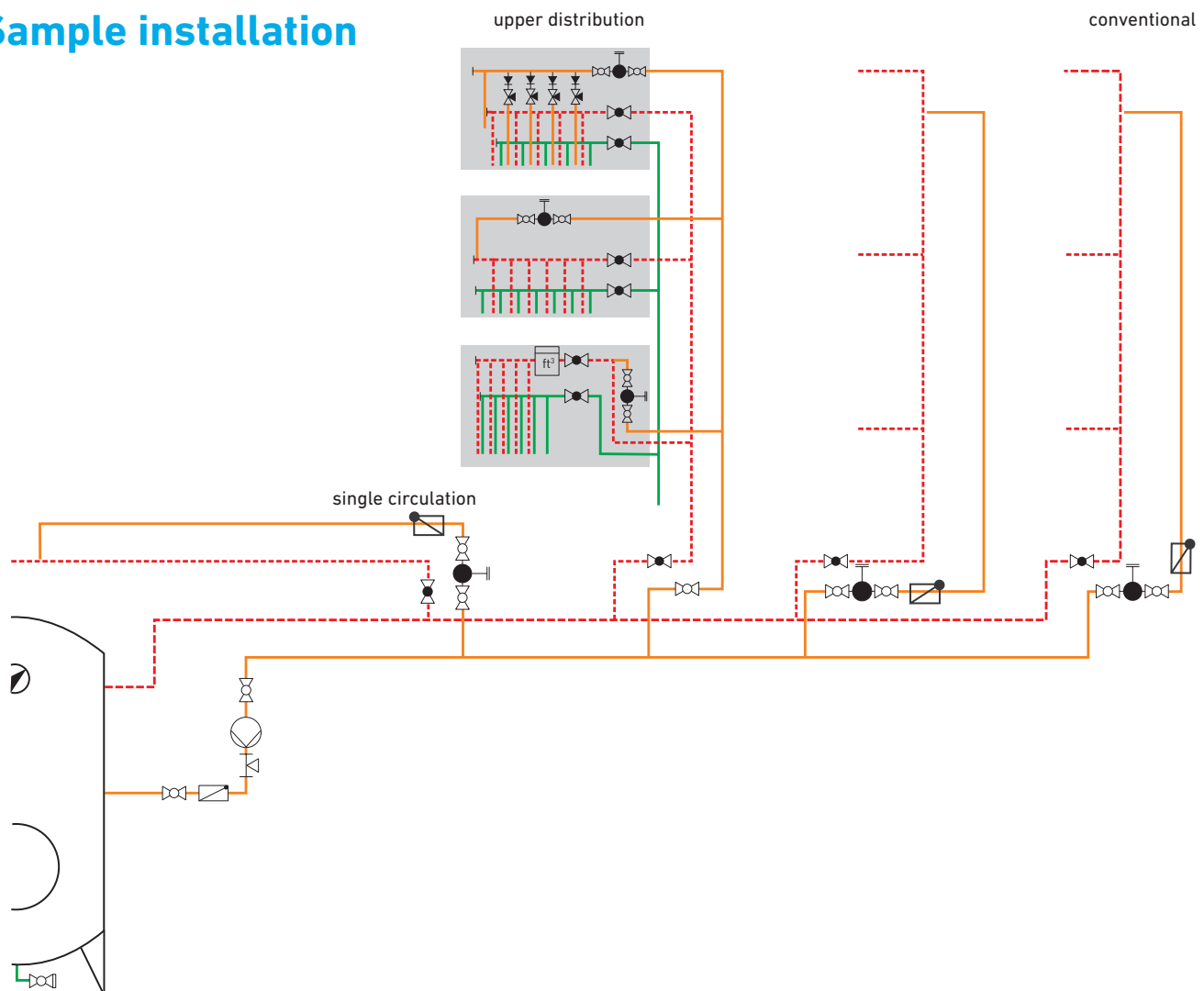
Type 6320 LF



— Maximum admissible differential pressure 5.8 psi



Sample installation



Text

Cold water

Hot water

Circulation

Stop valve

Non-return valve

Swing check valve

Type 6320 LF balancing valve

Circulation pump

Drain cock

Ball valve

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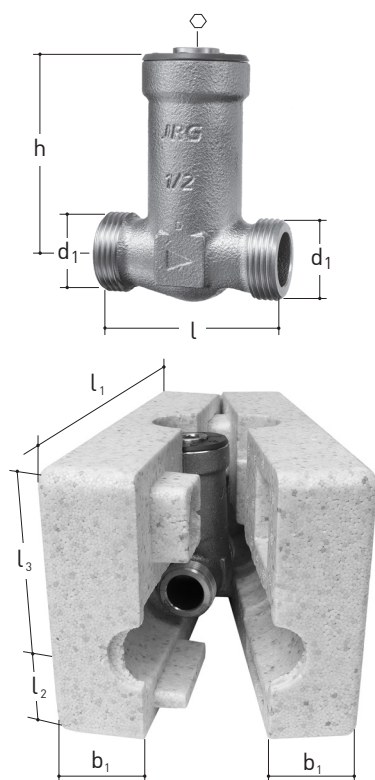
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Type 6320 LF/Screw connections

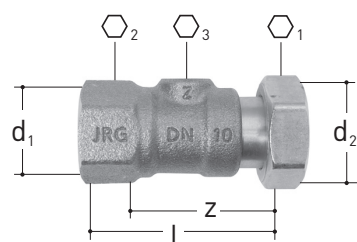


Type 6320 LF thermostatic balancing valve PN 10

For hot water systems, thermostatically regulated, lead free brass body with external threads, regulator sleeve with hexagon socket for angular Allen key and scale ring.

- Factory-set to 135°F, scale value 6
- Setting range 97–145°F
- Max. temperature 158°F
- Max. operating pressure 145 psi
- Max. differential pressure 5.8 psi
- Threaded shut off connection
- Unions with check valve
- The balancing valve packing material serves as thermal insulation
- The Type 6320 LF is to be plumbed with a bypass for systems that require thermal disinfection
- This device is intended for use in hot water circulation systems utilizing circulating pumps.

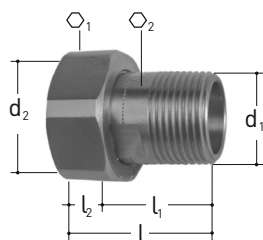
Part no.	size	d ₁	h	l	l ₁	l ₂	l ₃	b ₁		lbs
350831566	3/4	G 1	2 1/2	2 3/8	7 5/8	1 1/2	2 3/4	1 7/16	8mm	0.83



Threaded shut off connection, PN 10

Made of low lead brass, with internal thread, lockable with ball valve, EPDM seal, loose brass nut, for water up to 158°F, suitable for balancing valve Type 6320 LF.

Part no.	size	d ₁	d ₂	l				z	lbs
350887966	3/4	Rp 3/4	G 1	2 7/16	37mm	32mm	6mm	2 1/8	0.44



Union with check valve

Made of brass, with external thread and plastic check valve (PSU) with EPDM seal, suitable for balancing valve Type 6320 LF.

Part no.	size	d ₁	d ₂	l	l ₁	l ₂			lbs
351056067	1/2	NPT 1/2	G 1	1 3/4	1 1/2	1/4	30mm	19mm	0.19
351056066	3/4	R 3/4	G 1	1 11/16	1 7/16	1/4	37mm	24mm	0.28

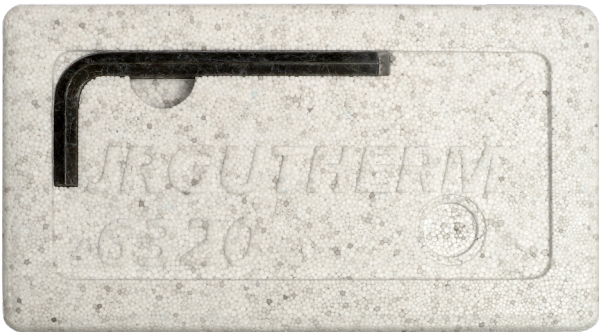
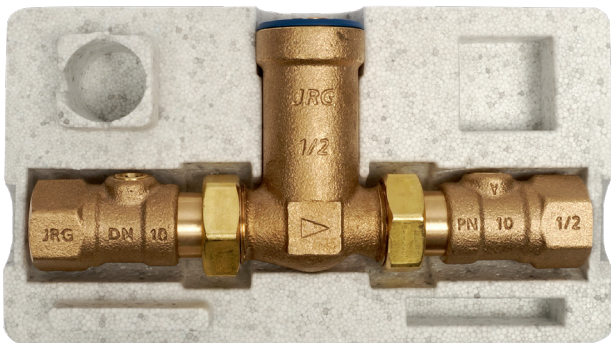
Adjustment/Setting ranges of the Type 6320 LF thermostatic balancing valve

Setting of the balancing valve

All balancing valve in the system must be adjusted to the same scale values. The settings value are shown in the table below. The calibration of the individual circulation lines takes place automatically.

Transport packaging

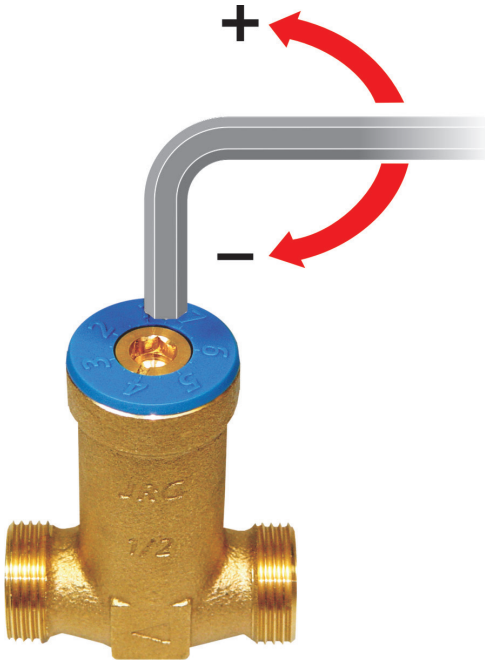
The packing of the Type 6320 LF balancing valve also serves as thermal insulation.



Adjusting the balancing valve

The factory setting of the Type 6320 LF balancing valve can be changed as follows:

Put Allen key into the hexagon socket. Turning the key clockwise lowers the circulation set point temperature, turning it counterclockwise raises the circulation set point temperature.



Type 6320 LF set points	Circulation set point temperature
1	97°F
2	106°F
3	113°F
4	120°F
5	127°F
6*	135°F
7	145°F

* Factory setting

Maintenance

- The Type 6320 LF balancing valve operates virtually maintenance-free.
- The instruction booklet supplied with the valve should be given to the building owner after installation and commissioning.

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