

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.

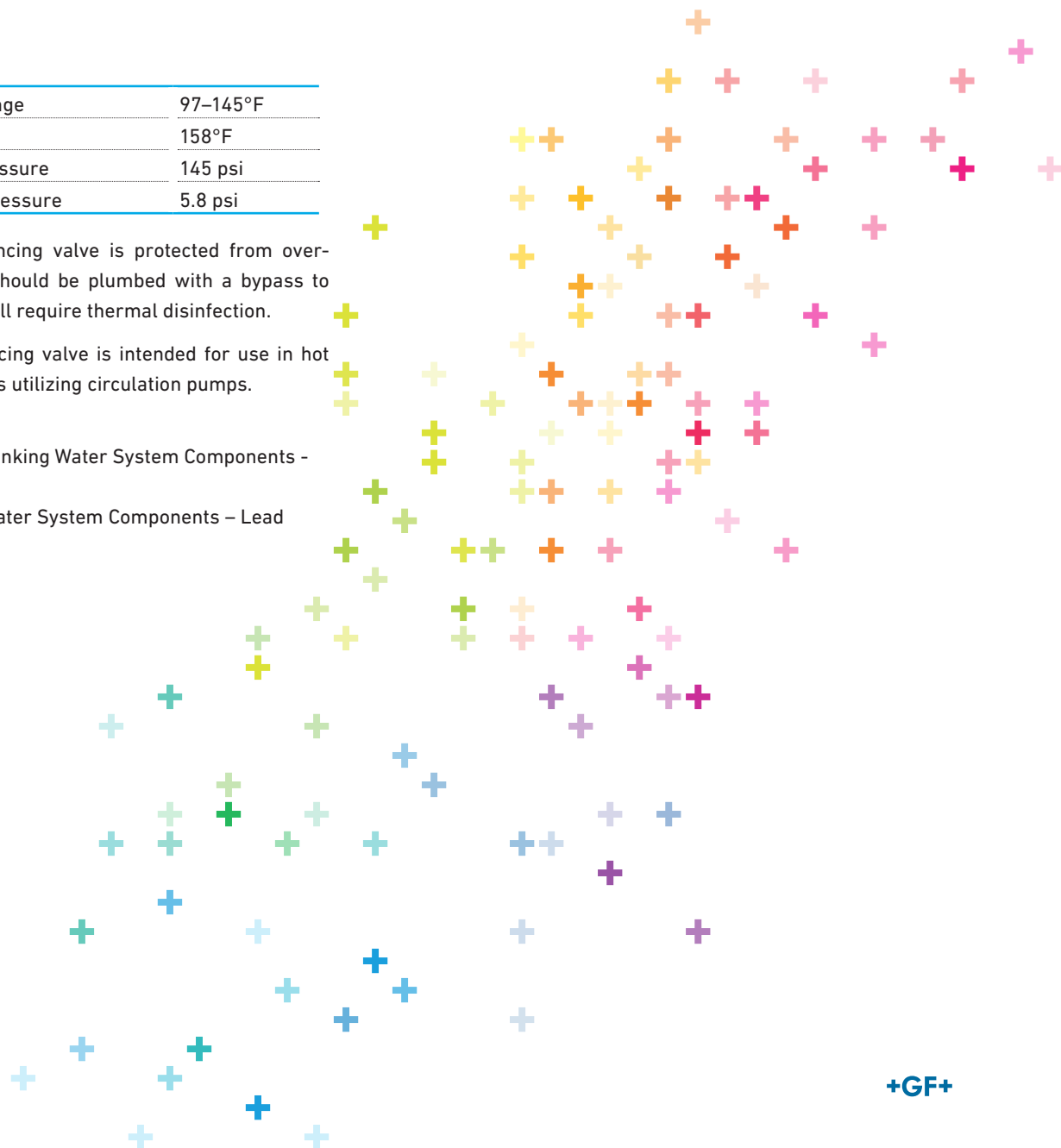
The Type 6320 LF balancing valve is intended for use in hot water circulating systems utilizing circulation pumps.

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

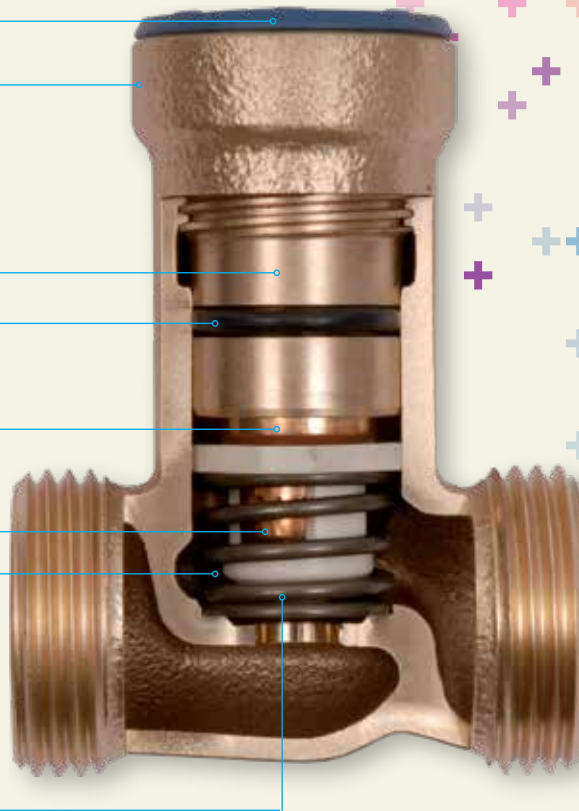
O-Ring, EPDM

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 c_{vmax} 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

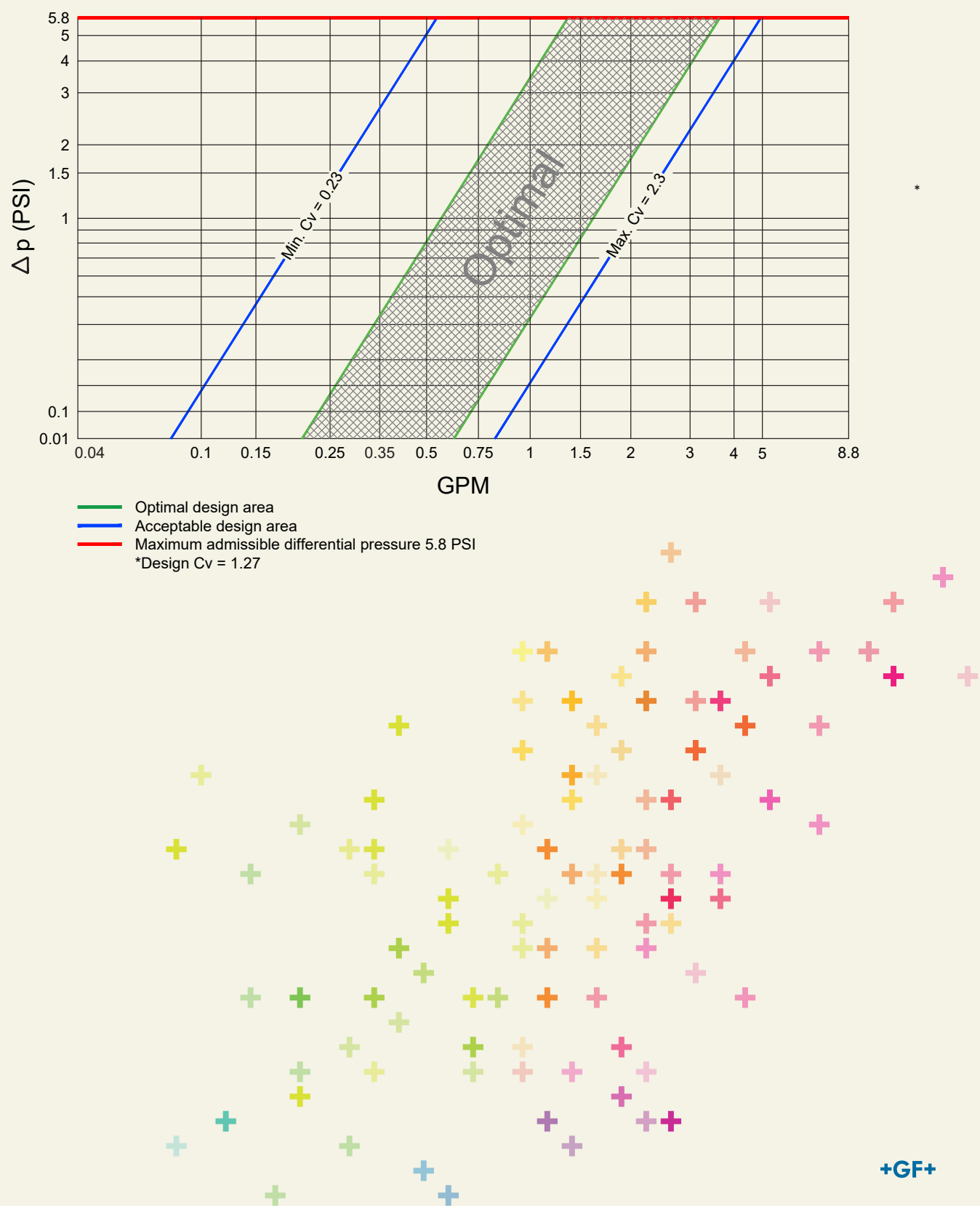
flow rate and the necessary pressure drop lies within the acceptable flow range area in Table 1.1.

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.

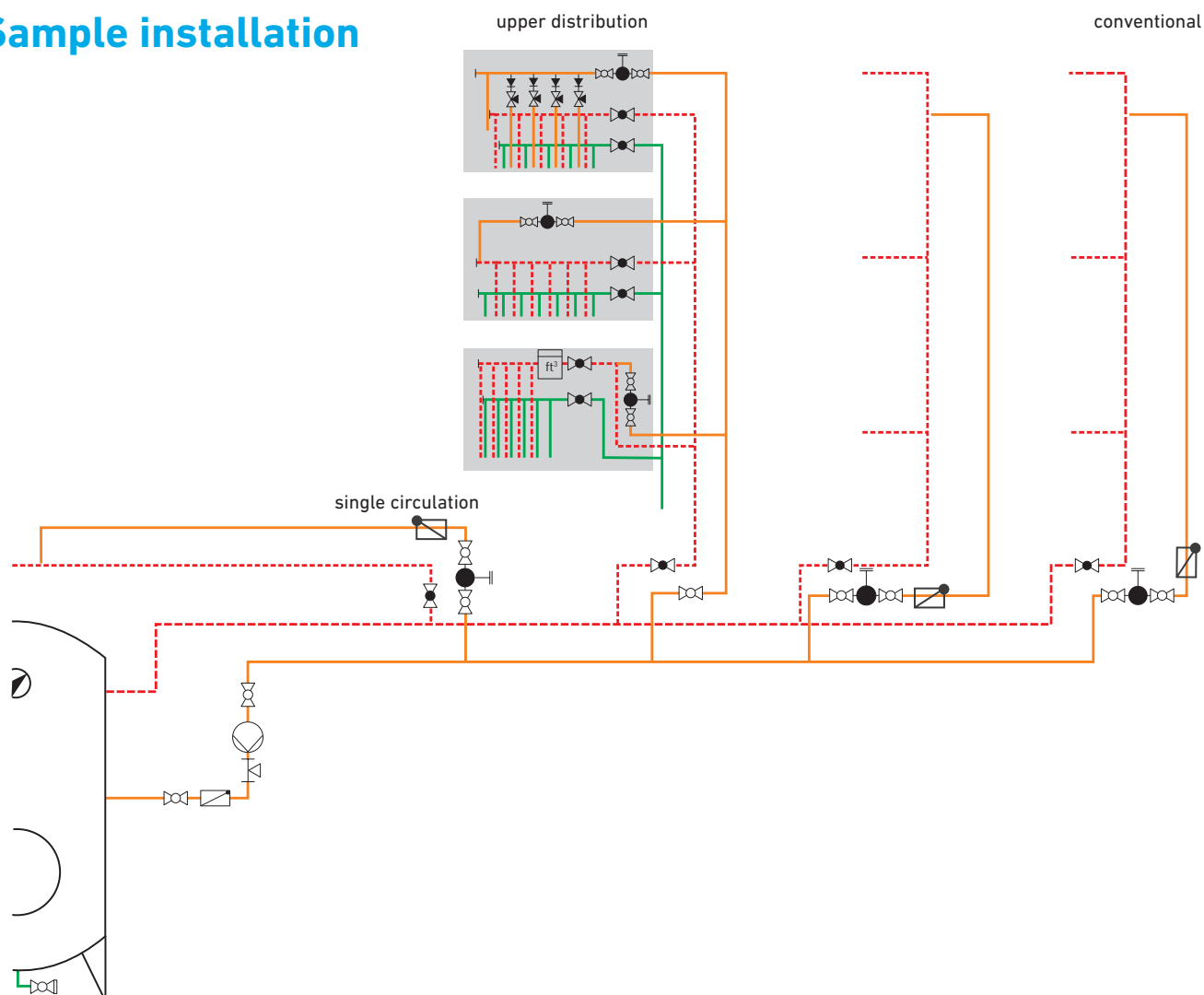
The installation of check valves are recommended to prevent backflow into branches during maintenance or repair operations.

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



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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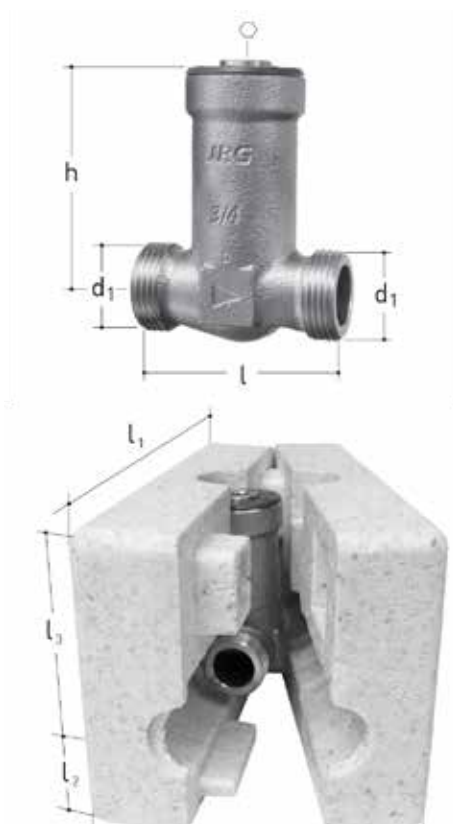
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Type 6320 LF/Screw connections



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.

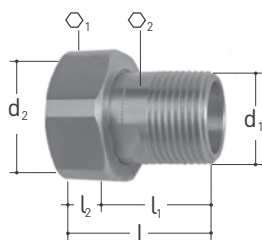
Part no.	size	d ₁	h	l	l ₁	l ₂	l ₃	b ₁		lbs
350831566	¾	G 1	2½	2¾	7⅝	1½	2¾	17/16	8mm	0.83



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	¾	Rp¾	G 1	27/16	37mm	32mm	6mm	2⅝	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	½	NPT ½	G 1	1¾	1½	¼	30mm	19mm	0.19
351056066	¾	R ¾	G 1	111/16	17/16	¼	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

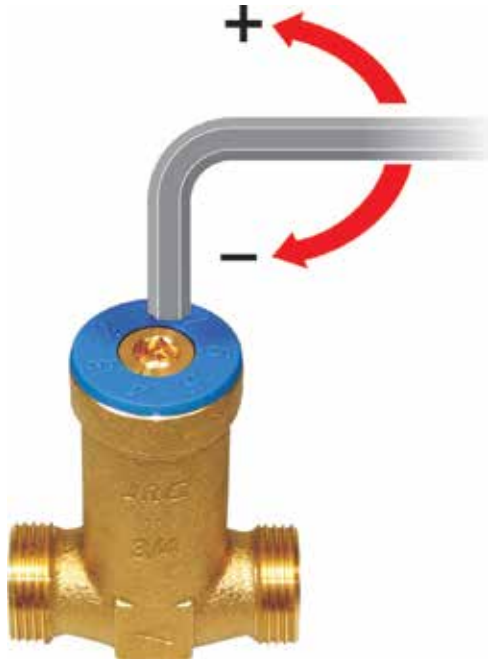
The packing of the Type 6320 LF balancing valve also serves as thermal insulation.



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.

GF Piping Systems

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Argentina / Southern South America

Georg Fischer Central Plastics
Sudamérica S.R.L.
Buenos Aires, Argentina
Phone +54 11 4512 02 90
gfccentral.ps.ar@georgfischer.com
www.gfps.com/ar

Australia

George Fischer Pty Ltd
Riverwood NSW 2210 Australia
Phone +61 (0) 2 9502 8000
australia.ps@georgfischer.com
www.gfps.com/au

Austria

Georg Fischer
Rohrleitungssysteme GmbH
3130 Herzogenburg
Phone +43 (0) 2782 856 43-0
austria.ps@georgfischer.com
www.gfps.com/at

Belgium / Luxembourg

Georg Fischer NV/SA
1070 Bruxelles/Brüssel
Phone +32 (0) 2 556 40 20
be.ps@georgfischer.com
www.gfps.com/be

Brazil

Georg Fischer Sist. de Tub. Ltda.
04571-020 São Paulo/SP
Phone +55 (0)11 5525 1311
br.ps@georgfischer.com
www.gfps.com/br

Canada

Georg Fischer Piping Systems Ltd
Mississauga, ON L5T 2B2
Phone +1 (905) 670 8005
Fax +1 (905) 670 8513
ca.ps@georgfischer.com
www.gfps.com/ca

China

Georg Fischer Piping Systems Ltd
Shanghai 201319
Phone +86 21 3899 3899
china.ps@georgfischer.com
www.gfps.com/cn

Denmark / Iceland

Georg Fischer A/S
2630 Taastrup
Phone +45 (0) 70 22 19 75
info.dk.ps@georgfischer.com
www.gfps.com/dk

Finland

Georg Fischer AB
01510 VANTAA
Phone +358 (0) 9 586 58 25
Fax +358 (0) 9 586 58 29
info.fi.ps@georgfischer.com
www.gfps.com/fi

France

Georg Fischer SAS
95932 Roissy Charles de Gaulle
Cedex
Phone +33 (0) 1 41 84 68 84
fr.ps@georgfischer.com
www.gfps.com/fr

Germany

Georg Fischer GmbH
73095 Albershausen
Phone +49 (0) 7161 302-0
info.de.ps@georgfischer.com
www.gfps.com/de

India

Georg Fischer Piping Systems Ltd
400 083 Mumbai
Phone +91 224007 2001
branchoffice@georgfischer.com
www.gfps.com/in

Indonesia

Georg Fischer Pte Ltd –
Representative Office
Phone +62 21 2900 8564
Fax +62 21 2900 8566
sgp.ps@georgfischer.com
www.gfps.com/sg

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +39 02 921 861
it.ps@georgfischer.com
www.gfps.com/it

Japan

Georg Fischer Ltd
556-0011 Osaka,
Phone +81 (0) 6 6635 2691
jp.ps@georgfischer.com
www.gfps.com/jp

Korea

GF Piping Systems
Georg Fischer Korea Co., Ltd.
Unit 2501, U-Tower
120 HeungdeokJungang-ro
(Yeongdeok-dong)
Giheung-gu, Yongin-si, Gyeonggi-do,
Korea
Phone: +82 31 8017 1450
Fax: +82 31 217 1454
kor.ps@georgfischer.com
www.gfps.com/kr

Malaysia

Georg Fischer (M) Sdn. Bhd.
No. 2, 4 & 6, Jalan Permata 3/KS 09
Taman Perindustrian Air Hitam
41200 Klang, Selangor Darul Ehsan
Phone +60 (0) 3 3122 5585
Fax +603 3122 5575
my.ps@georgfischer.com
www.gfps.com/my

Mexico / Northern Latin America

Georg Fischer S.A. de C.V.
Apodaca, Nuevo Leon
CP66636 Mexico
Phone +52 (81) 1340 8586
Fax +52 (81) 1522 8906
mx.ps@georgfischer.com
www.gfps.com/mx

Middle East

Georg Fischer
Piping Systems (Switzerland) Ltd
Dubai, United Arab Emirates
Phone +971 4 289 49 60
gcc.ps@georgfischer.com
www.gfps.com/int

Netherlands

Georg Fischer N.V.
8161 PA Epe
Phone +31 (0) 578 678 222
nl.ps@georgfischer.com
www.gfps.com/nl

Norway

Georg Fischer AS
1351 Rud
Phone +47 67 18 29 00
no.ps@georgfischer.com
www.gfps.com/no

Philippines

Georg Fischer Pte Ltd
Representative Office
Phone +632 571 2365
Fax +632 571 2368
sgp.ps@georgfischer.com
www.gfps.com/sg

Poland

Georg Fischer Sp. z o.o.
05-090 Sekocin Nowy
Phone +48 (0) 22 31 31 0 50
poland.ps@georgfischer.com
www.gfps.com/pl

Romania

Georg Fischer
Piping Systems (Switzerland) Ltd
020257 Bucharest - Sector 2
Phone +40 (0) 21 230 53 80
ro.ps@georgfischer.com
www.gfps.com/int

Russia

Georg Fischer
Piping Systems (Switzerland) Ltd
Moscow 125040
Phone +7 495 748 11 44
ru.ps@georgfischer.com
www.gfps.com/ru

Singapore

George Fischer Pte Ltd
11 Tampines Street 92, #04-01/07
528 872 Singapore
Phone +65 6747 0611
Fax +65 6747 0577
sgp.ps@georgfischer.com
www.gfps.com/sg

Spain / Portugal

Georg Fischer S.A.
28046 Madrid
Phone +34 (0) 91 781 98 90
es.ps@georgfischer.com
www.gfps.com/es

Sweden

Georg Fischer AB
117 43 Stockholm
Phone +46 (0) 8 506 775 00
info.se.ps@georgfischer.com
www.gfps.com/se

Switzerland

Georg Fischer
Rohrleitungssysteme (Schweiz) AG
8201 Schaffhausen
Phone +41 (0) 52 631 30 26
ch.ps@georgfischer.com
www.gfps.com/ch

Taiwan

Georg Fischer Co., Ltd
San Chung Dist., New Taipei City
Phone +886 2 8512 2822
Fax +886 2 8512 2823
www.gfps.com/tw

United Kingdom / Ireland

Georg Fischer Sales Limited
Coventry, CV2 2ST
Phone +44 (0) 2476 535 535
uk.ps@georgfischer.com
www.gfps.com/uk

USA / Caribbean

Georg Fischer LLC
9271 Jeronimo Road
92618 Irvine, CA
Phone +1 714 731 88 00
Fax +1 714 731 62 01
us.ps@georgfischer.com
www.gfps.com/us

International

Georg Fischer
Piping Systems (Switzerland) Ltd
8201 Schaffhausen/Switzerland
Phone +41 (0) 52 631 30 03
Fax +41 (0) 52 631 28 93
info.export@georgfischer.com
www.gfps.com/int

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Contact us

Tel. (714) 731-8800, Toll Free (800) 854-4090

Fax (714) 731-6201

us.ps@georgfischer.com

www.gfpiping.com