

Installation and Operating Instructions

KHS Flow-Splitter

Figure 651 20 | 651 06



Figure 651 20

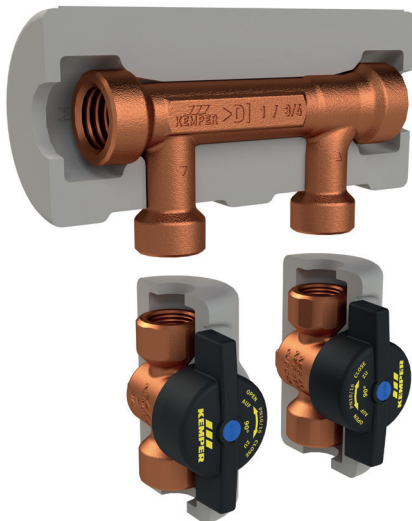


Figure 651 06



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1.1 Safety Warnings & Installation Instructions

READ AND UNDERSTAND THESE WARNINGS AND INSTRUCTIONS FIRST.

Labeling of important warning information:

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE is used to address practices not related to physical injury.

▲WARNING

Closely review all safety warnings in this manual before installation or use of the valve. Failure to review these safety warnings may lead to injury or property damage!

▲CAUTION

A trained and qualified plumber must install this product.

▲CAUTION

All service and repair work should be performed by a trained and qualified plumber using suitable tools and original spare parts.

NOTICE

Check and comply with all applicable federal, state, and local safety and industry codes and standards.

Pass these instructions on to the system operator and retain for later reference!

▲CAUTION

Carefully inspect the valve before installation for any signs of damage which may have occurred during transportation or storage. Do not use the valve if it seems in any way damaged!

▲CAUTION

Make sure that the installation location is frost-proof. Perform a leak test after installation and before commissioning the plumbing installation.

▲CAUTION

Visually check the Flow-Splitter for damages and dirt. Clean it if required.

▲WARNING

Drinking water approved sealing material must be used for installation of the Flow-Splitter.

▲CAUTION

The maximum amount of Flow-Splitters in series and the maximum length of the loop pipe depend on the hydraulic and thermal requirements of the installation.

▲WARNING

During product operation, parts of the product may heat and burn exposed skin.

NOTICE

This product is intended for use in normal working conditions only. The responsibility for correct selection of the valve to the operating conditions, distribution, and installation is borne by the system designer, contractor, and user.

⚠ WARNING

Discard all unused parts and packaging material after installation in accordance with federal, state, and local requirements.
Small parts may be a choking hazard!

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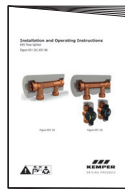
GEBR. KEMPER GMBH + CO. KG SHALL NOT BE LIABLE FOR DAMAGES ARISING FROM ANY DISREGARD OF THESE SAFETY WARNINGS & INSTALLATION INSTRUCTIONS, OR ANY DAMAGE CAUSED BY FAULTY INSTALLATION OF THE VALVE, ANY UNAUTHORIZED PRODUCT MODIFICATIONS, OR ANY INCORRECT OPERATION OF THE VALVE.



Figure 651 20



Figure 651 06



2.1 Scope

The KHS Flow Splitter can be used in cold and/or in hot water pipework. An installation principle is shown in picture 1.

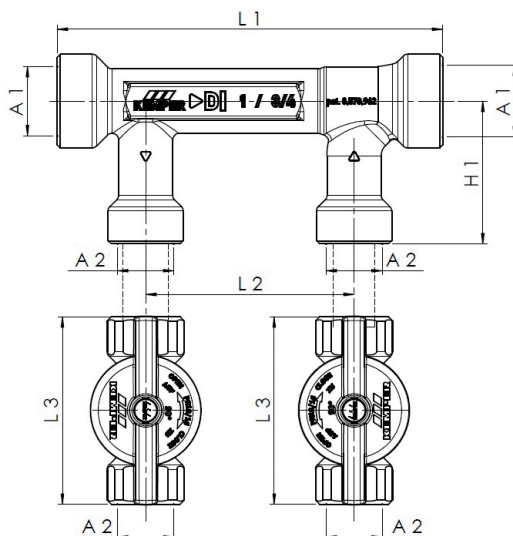
In a Cold Water installation, the aim of the KHS Flow Splitter is to avoid stagnation. Therefore the KHS Flow Splitter is installed in the main pipe and supplies the outlets of e.g. a bathroom via a loop pipe. As soon as there is flow in the main pipe due to downstream consumption, a certain amount of water is split from the main flow through the loop pipe of the bathroom.

In a Hot Water Installation, the aim of the KHS Flow Splitter is to support the maintenance of the hot water temperature as far to the outlets as possible. In circulation mode of the installation, a certain amount of the circulation flow is diverted through the loop pipe in a bathroom, which helps to maintain the hot water temperature as far as possible to the outlets.

2.2 Technical data | Dimensions

Technical data	
Body material	lead free red brass
Cartridge	POM, SST spring, EPDM O-ring
Insulation shell	PE-foam, building material class B1 acc. to DIN 410
Pressure rating	PN 16
Max. operating temperature	194 °F (90 °C)

Dimensions	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
A1 inch	1/2 FPT	3/4 FPT	1 FPT	1 1/4 FPT	1 1/2 FPT	2 FPT
A2 inch	1/2 FPT	3/4 FPT	3/4 FPT	3/4 FPT	1 FPT	1 FPT
A3 inch	1/2 FPT	3/4 FPT	3/4 FPT	3/4 FPT	1 FPT	1 FPT
H1 inch	1.91	2.30	2.70	2.89	3.09	3.48
L1 inch	7.28	7.28	7.28	7.68	8.11	8.62
L2 inch	3.94	3.94	3.94	3.94	3.94	3.94



3 Installation

3.1 Assembly instructions

The KHS Flow Splitter shall be installed in a distributing pipe to supply water to the outlets of a defined area – e.g. a bathroom. The passage connections (A1) are used to install the KHS Flow Splitter in the distributing pipe.

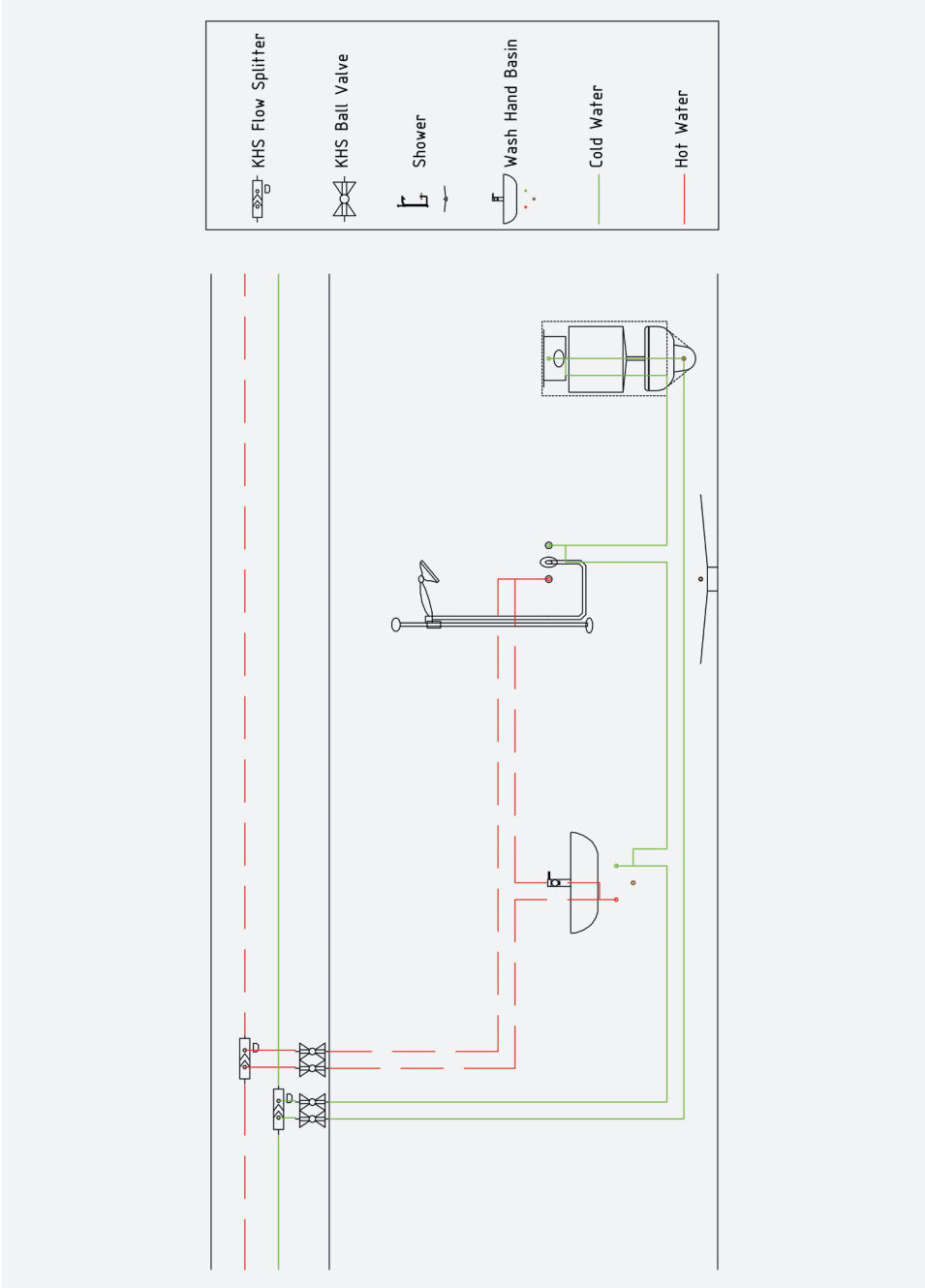
⚠ WARNING The flow direction of the KHS Flow Splitter is indicated on the body and must be respected.

The two sideways connections are for the connection of the looped pipe that supplies the outlets.

The looped pipe should run as close to each outlet as possible to minimize the length of the single connection to each outlet. If isolating valves shall be installed in the two connections of the loop pipe (A2) to be able to isolate the pipe, the Flow-Splitter Unit Figure 651 06 shall be used, as it contains two ball valves.

⚠ WARNING Only drinking water approved thread sealant must be used to connect the KHS Flow Splitter to the pipework.

3.2 Installation principle



Picture 1: Installation principle

Flow Splitter Valves

A. Multi-looped system for providing constant hot or cold water circulation to plumbing fixtures utilizing a dynamic, self-regulating flow splitter valve.

B. Manufacturers:

1. Kemper Water Control Systems, Inc.

a. Contact: Craig Boyce, Kemper Water Control Systems, Inc. (239) 298-9273.

C. Systems components shall include but not be limited to:

1. Venturi Flow Splitter: Lead-free, corrosion resistant red brass body dual tee assembly valve with internal self-adjusting flow regulator with factory loop line ¼ turn shut off valves and factory insulation jacket. When installed per manufacturer's recommendation will provide constant circulating hot or cold water flow through looped piping to plumbing fixtures.

a. Low lead, de-zincified cast red brass.

b. Available in size from 1/2" to 2" in the main flow portion of the valve

c. Incorporates a built-in, self-regulating, self-cleaning dynamic flow diverting cartridge insert

d. NSF 61/372 certified

e. Configured with female NPT thread connections and ¼ turn full bore stop valves on loop line connections

D. Install potable water loop circulation system with flow splitter in accordance with construction drawings and factory recommendations.

E. Recirculation piping from flow splitter shall be run to connection point of angle stops serving fixtures and to tub or tub/shower points of connection. Non circulation portions of piping shall be kept to 24" inches or less in length.



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