

# TECHNICAL PASSPORT OF THE PRODUCT

## Bypass for manifold

### 1. Purpose and scope

Raftec collector bypasses - are used together with collector blocks with an interface dimension of 210 mm and are used to redirect the flow of the heat carrier from the supply to the return collector in the event that the flows through the collector loops fall below the value set on the overflow valve. The use of a bypass with an overflow valve makes it possible to maintain the hydraulic properties of the collector system independently of the influence of the control elements of the collector loops (manual, thermostatic valves or servo drives). The use of an overflow valve protects the pump equipment from working on a "closed tap" and allows maintaining the circulation of the heat carrier through the collectors when the collector loops are completely closed. Bypasses are compatible with collector blocks of the series: RCO03-12, LCR-1.2-1.10.

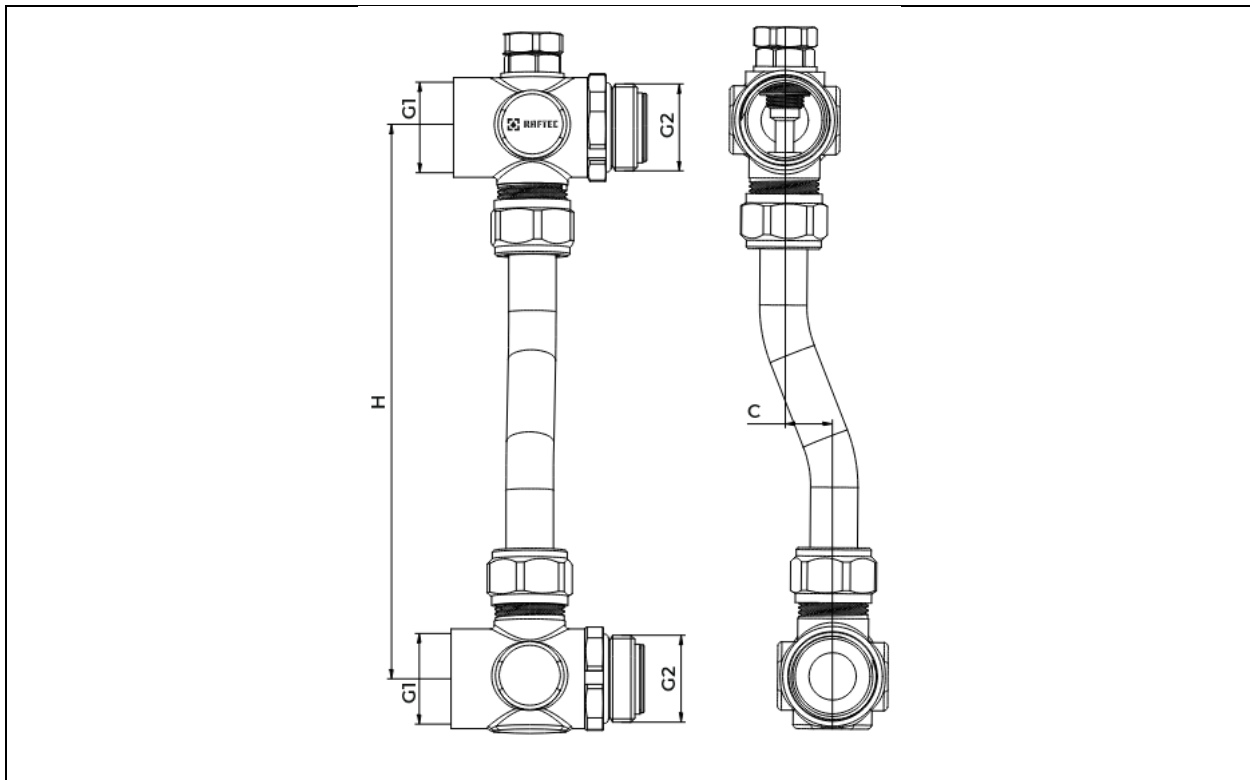
### 2. Specifications

№	Characteristic	Meaning
1	Working pressure, bar	10
2	Maximum temperature, °C	to 80
3	Pressure drop adjustment range, kPa	from 20 to 60
4	Flow capacity at pressure drop setting:	
	0,2 bar	4,33 m <sup>3</sup> /h
	0,3 bar	3,22 m <sup>3</sup> /h
	0,4 bar	2,41 m <sup>3</sup> /h
	0,5 bar	1,82 m <sup>3</sup> /h
	0,6 bar	1,43 m <sup>3</sup> /h
5	Maximum ambient temperature, °C	65
6	Average total length of service, years	25

### 3. Construction and materials

№	Name of element	Material	Mark of material according to standards
1	Corpus	Hot pressed brass	HPb57-3
2	Gasket and coil	Ethylene-propylene-diene monomer	EPDM
3	Bypass pipe	Copper is nickel plated	-

#### 4. Nomenclature and overall dimensions



Bypass for manifold						
Size	Article	G1, mm.	G2, mm.	H, mm.	C, mm.	Weight, g.
1"	BR03	1"	1"	210	21	915

#### 5. Installation guide and instructions

1. It is recommended to take the configuration pressure loss on the bypass valve 15% higher than the calculated losses in the most heavily loaded collector loop.
2. For approximate calculations, it is permissible to calculate hydraulic losses according to the following table:

№	System type	Pipeline losses	Losses in heating devices	Calculation formula for determining the drop setting on the valve
1	Radiator heating	150 Pa/m	15000	$0,1725N + 0,001725L$ (bar)
2	Warm floor	200 Pa/m	-	$0,0023 L$ (bar)

\* L-total length of the most loaded loop;

\* N-number of devices connected in a loop.

3. The products must be operated under the conditions specified in the table of technical characteristics.
4. The sleeve nuts of the connectors securing the bypass should be tightened regularly (at least once every 6 months).
5. Freezing of the working medium inside the bypass is not allowed. After the system installation is complete, pressurize the system with a test pressure.
6. Installation must be performed by qualified and competent personnel.
7. Fittings must be operated under the conditions indicated in the tables listed in part no. 2 "technical properties".

## **6. Guarantee**

1. The manufacturer guarantees compliance of the products with safety requirements, provided that the consumer observes the rules of use, transportation, storage, installation and operation.
2. The warranty covers all defects caused by the fault of the manufacturer.
3. The warranty does not apply to defects arising in the following cases:
  - violation of passport regimes of transportation, storage, installation, operation and maintenance of the product;
  - improper transportation and loading and unloading;
  - the presence of traces of exposure to substances aggressive towards the product materials;
  - damage caused by fire, natural disasters, force majeure;
  - the presence of damage caused by improper actions of the consumer;
  - the presence of traces of external interference in the product design.
4. The manufacturer reserves the right to make changes in the design of the product that do not affect the declared technical properties.

## **7. Warranty service conditions**

1. Complaints about the quality of goods can be made during the warranty period.
  2. Defective products are repaired or replaced with new ones free of charge during the warranty period. The decision to replace or repair the product is made by the service center. The replaced product or its part obtained as a result of the repair becomes the property of the service center.
  3. Costs associated with disassembly, installation and transportation of a defective product during the warranty period are not reimbursed to the buyer.
  4. If the claim is unfounded, the buyer pays the costs of diagnosis and examination.
  5. Products are accepted for warranty repair (as well as for return) fully equipped.
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**WARRANTY CARD № \_\_\_\_\_**

Trade name \_\_\_\_\_

Brand, article, size \_\_\_\_\_

Amount \_\_\_\_\_

Name and address of business organization \_\_\_\_\_

Date of sale \_\_\_\_\_ Signature of the seller \_\_\_\_\_

Strain or seal \_\_\_\_\_

Business organization \_\_\_\_\_

I agree with terms and conditions:

BUYER \_\_\_\_\_

(signature)

The warranty period is seven years (eighty-four months) from the date of sale to the end user.

When complaining about the quality of goods, the buyer submits the following documents:

1. An application in any form that states:

- name of the organization, full name of the buyer, real address and contact telephone number;
- name and address of the organization that performed the installation;
- the main parameters of the system in which the product was used;
- brief description of the defect;

2. Document proving the purchase of the product;

3. Protocol on the hydraulic test of the system in which the product was installed;

4. Completed warranty card, which is displayed on the website of the manufacturer «raftec.eu».

Return or exchange tag: \_\_\_\_\_

Date \_\_\_\_\_ r. Signature: \_\_\_\_\_

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