LK By-pass Δp RF

Design

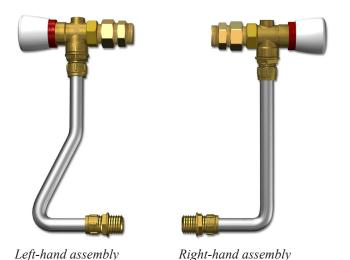LK By-pass Δp RF is a differential pressure valve for use in under floor heating systems. The by-pass valve is adapted for easy right- or left-hand connection to the LK Manifold RF.
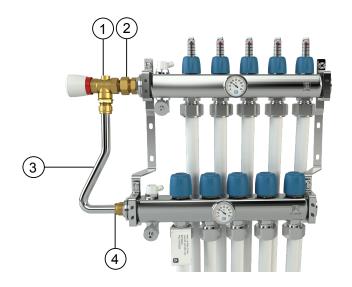
The by-pass valve is used to ensure circulation in installations where all of the manifold's return valves are fitted with actuators. When the actuator(s) close the return valves, differential pressure will increase. LK By-pass Δp RF will correspondingly open and thereby relieve differential pressure on the valves.

LK By-Pass Δp RF is especially suitable to boilers and heat pumps with small water volumes. In UFH system with individual energy measuring, use instead LK By-Pass RF, which only gives a small leakage flow to secure the cooling of the circulator pump. An alternative solution can be to use the built-in pump control in the LK Connection Box/Receiver ICS.

Assembly

The by-pass valve is supplied with two types of by-pass pipes to accommodate the extension of the length of the manifold. This makes it possible to connect LK By-pass Δp RF in right-hand or left-hand assembly. Connect LK By-pass Δp RF using the enclosed connections to the manifolds ½" side outlet.

Left-hand assembly   *Right-hand assembly*
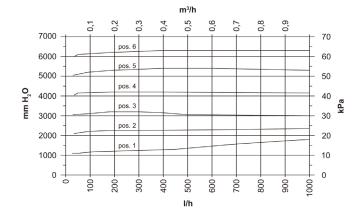
Component list

1. By-pass valve
2. Spacer coupling and connection ½"
3. By-pass pipe for left-hand connection
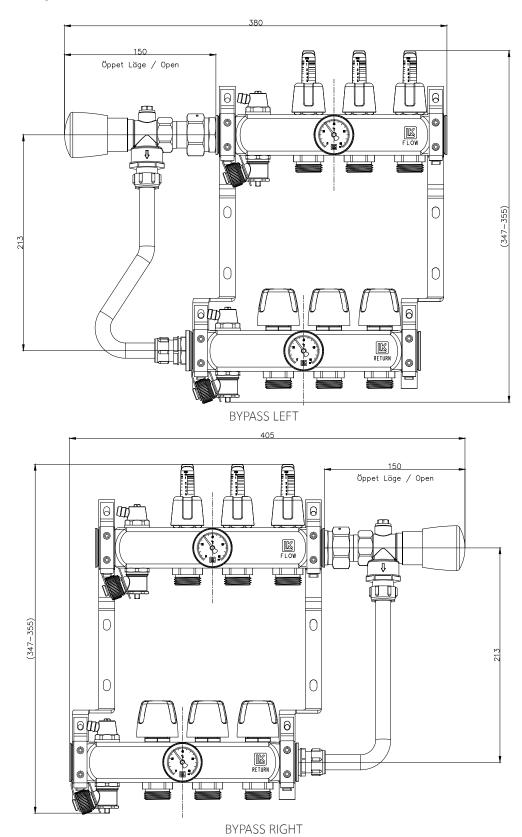4. Connection ½"

Adjustment

The by-pass valve is set to the desired opening pressure between 10-60 kPa after which the valve will regulate flow as per the diagram below. Max. by-pass flow is 800 l/h. We recommend a setting of 5 kPa higher than the estimated fall in pressure over the manifold. This normally means an opening pressure/setting of 25 kPa.

Flow diagram

LK Systems

Measurements

380

150
Öppet Läge / Open

213

(347–355)

FLOW

RETURN

BYPASS LEFT

405

150
Öppet Läge / Open

(347–355)

213

FLOW

RETURN

BYPASS RIGHT

The total length measurement of the manifold with the by-pass mounted is achieved by adding 150 mm to the length of the manifold. The length measurement of the manifold is specified in the product catalogue.

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