Data Sheet

Flow Indicator - Measuring Device for Flow and Pressure

Description

The flow indicator is a new simple measuring device for measuring flow and pressure in heating, cooling and domestic hot water systems.

The flow indicator consists of a differential pressure gauge and a slide ruler, which enables the pressure to be calculated into flow.

The slide ruler has been developed for Danfoss balancing valves.

The slide rulers can also help determine the presetting of balancing valves.

Application

Find the presetting

Given: LENO™ MSV-BD 15, desired flow 500l/h
Desired: Presetting

- Move 1st ruler to the desired flow e.g. 500 l/h or 10 kW.
- Move 2nd ruler to the desired differential pressure (Δp), e.g. 0.1 bar.
- Presetting can be read where the scale of LENO™ MSV-BD 15 is crossing the red line, in this example presetting = 4.

Determine the flow

Find out the dimension of the installed LENO™ MSV-BD valve and read the actual presetting (here DN 15 and presetting 4).

- Move 1st ruler to read presetting = 4
- Read differential pressure on manometer, e.g. 0.07 bar.
- Move 2nd ruler to 0.07 bar, and read flow = 400 l/h
- To balance 500 l/h, change the presetting or regulate the differential pressure.
- Move 1st ruler to 500 l/h, and read new presetting = 4.5
- Or adjust the differential pressure at the pump.

The flow indicator can be used for manual balancing valves and partner valves for ASV:

- Leno™
- ASV-I
- ASV-BD
- USV-I
- MSV-F2

Ordering

Flow indicator suit case

Contents	Max static pressure	Differential pressure	Code no.
Differential pressure gauge & slide ruler. 2 pcs. of quick coupling sockets G1/4" with push in fitting nipple. Blue measuring hose (1.5 meter/6 x 1mm). Red measuring hose (1.5 meter/6 x 1mm). 2 pcs. of measuring needles with ball valve and push in fitting elbows.	10 bar	0-1 bar	003L8310

Accessories

Type		Code no.
2 pcs. of quick coupling sockets G1/4" with push in fitting nipple		003L8315
Measuring hoses, 2x1.5m		003L8261

Type		Code no.
Measuring needle with ball valve and push in fitting elbows		003L8262
Strap		003L8324
Slide ruler (LENO™ MSV-BD/B and ASV-BD)		003L8319
Slide ruler (USV-I and ASV-I)		003L8321
Slide ruler (MSV-F2)		003L8320

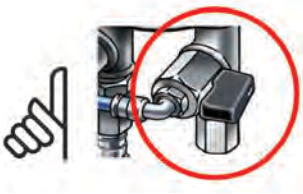
Technical Data

Item	Value
Pressure range	0-1 bar
Max static pressure	10 bar
Reliability, linearity and hysteresis error	2.5%
Medium temperature	-5 to 150°C
Calibration	When pointer in wrong position

How to Measure

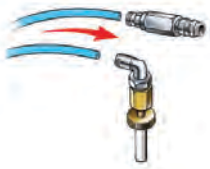
Measure the differential pressure

1)



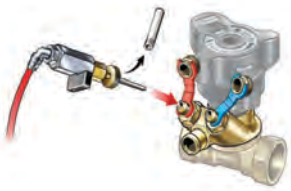
Make sure bypass is **open**

2)



Fit connectors onto the hoses

3)

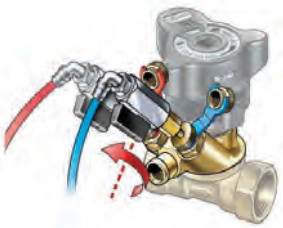


Fit hoses to MSV-BD

4)

Fit hoses to manometer

5)



Open ball valves, **first blue** then red

6)

Close bypass and read pressure and process with flow indicator

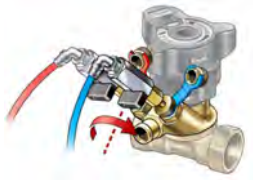
Dismounting

1)

Open bypass

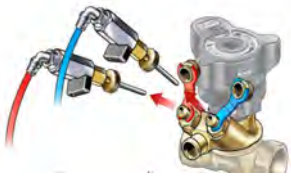
Make sure bypass is open

2)



Close ball valves

3)

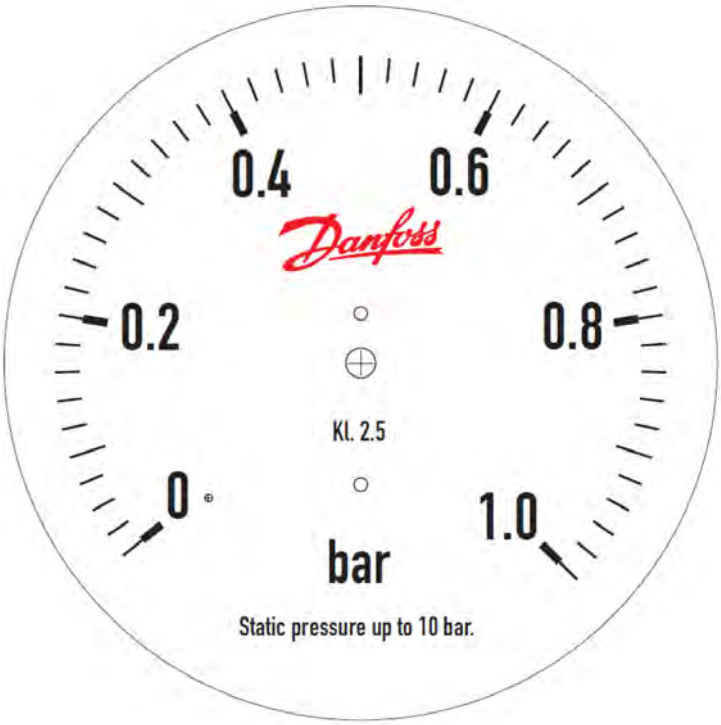


Remove hoses

4)

Align pressure, **first red**

Design



Danfoss A/S
Heating Solutions
Haarupvaenget 11
8600 Silkeborg
Denmark
Phone: +45 7488 8000
Fax: +45 7488 8100
Email: heating.solutions@danfoss.com
www.heating.danfoss.com