

## 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 slide ruler has been developed for Danfoss balancing valves.

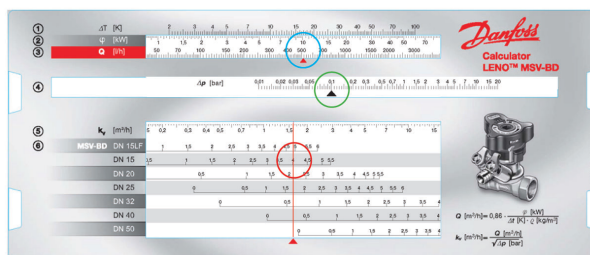
The flow indicator consists of a differential pressure gauge and a slide ruler, which enables the pressure to be calculated into flow.

The slide rulers can also help determine the pre-setting of balancing valves.

## Application

### Find the presetting

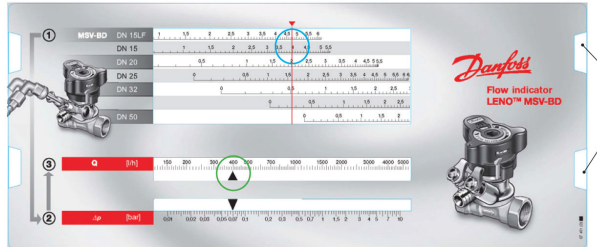
Given: LENO™ MSV-BD 15, desired flow 500l/h  
Desired: Presetting



- Move 1<sup>st</sup> ruler to the desired flow e.g. 500 l/h or 10 kW.
- Move 2<sup>nd</sup> 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 1<sup>st</sup> ruler to read presetting = 4
- Read differential pressure on manometer, e.g. 0.07 bar.
- Move 2<sup>nd</sup> 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 1<sup>st</sup> 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

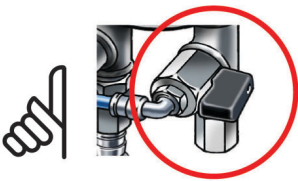
Type		Code no.
Measuring needle with ball valve and push in fitting elbows		003L8262
Strap		003L8324
Slide ruler (LENO™ MSV-BD/B and ASV-BD)		003L8319
Slide ruler (USV-I and ASV-I)		003L8321
Slide ruler (MSV-F2)		003L8320

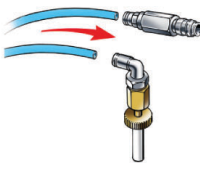
Technical Data

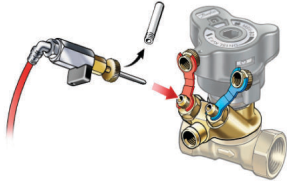
Item	Value
Pressure range	0-1 bar
Max static pressure	10 bar
Reliability, linearity and hysteresis error	2.5%
Medium temperature	-5 to 150°C
Calibration	When pointer in wrong position

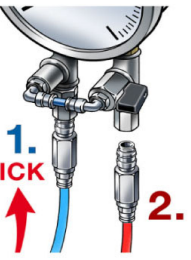
How to Measure

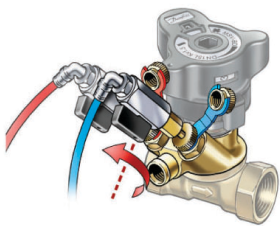
Measure the differential pressure

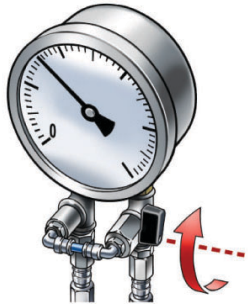
- 1) 

Make sure bypass is **open**
- 2) 

Fit connectors onto the hoses
- 3) 

Fit hoses to MSV-BD
- 4) 

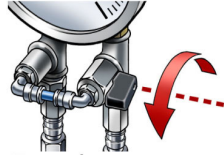
Fit hoses to manometer
- 5) 

Open ball valves, **first blue** then red
- 6) 

Close bypass and read pressure and process with flow indicator

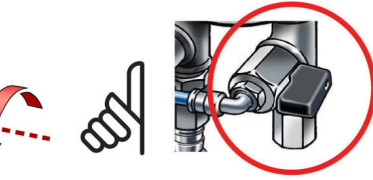
**Dismounting**

1)



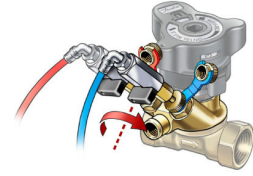
Open bypass

3)



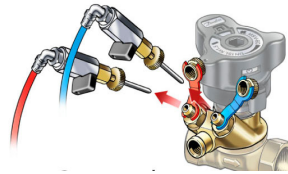
Make sure bypass is open

2)

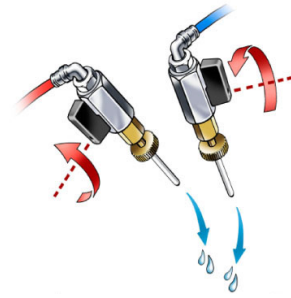


Close ball valves

4)

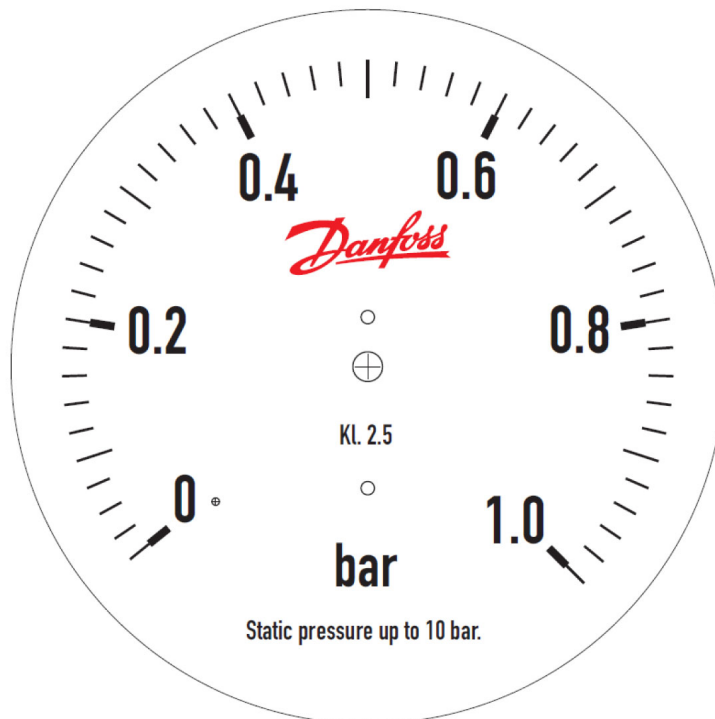


Remove hoses



Align pressure, **first red**

**Design**









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