

# 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<sup>TM</sup> 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<sup>TM</sup> MSV-BD 15 is crossing the red line, in this example presetting = 4.



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#### **Determine the flow**

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



- Move 1<sup>st</sup> ruler to read presetting =
- 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<sup>TM</sup>
- ASV-I
- ASV-BD
- USV-I
- MSV-F2

## **Ordering**

#### Flow indicator suit case

Contents	Max static pressure	Differen- tial pres- sure	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**

Туре		Code no.
2 pcs. of quick coupling sockets G1/4" with push in fitting nipple	80	003L8315
Measuring hoses, 2x1.5m	0	003L8261



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Туре	Code no.
Measuring needle with ball valve and push in fitting elbows	003L8262
Strap	003L8324
Slide ruler (LENO <sup>TM</sup> 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 posi-
	tion

#### **How to Measure**

## Measure the differential pressure

1)



2)



3)



Make sure bypass is **open** 

4)



Fit connectors onto the hoses

6)

Fit hoses to MSV-BD



Fit hoses to manometer



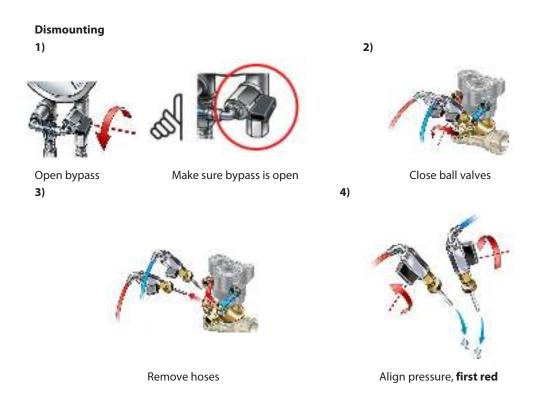
Open ball valves, **first blue** then red



Close bypass and read pressure and process with flow indicator



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## Design





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