

MSD

Airflow Measurement Unit



- Airflow measurement unit based on differential pressure created by measurement probe pipes
- Very accurate measurement, inaccuracy less than $\pm 10\%$
- Classification of casing leakage EN 1751 class C
- Inlet and outlet spigots have integral rubber gaskets

MATERIAL

PART	MATERIAL
Casing	Galvanised steel
Measurement probe pipes	Aluminium
Measurement tubes	PVC and PP plastic
Duct gaskets	1C-polyurethane hybrid



Function

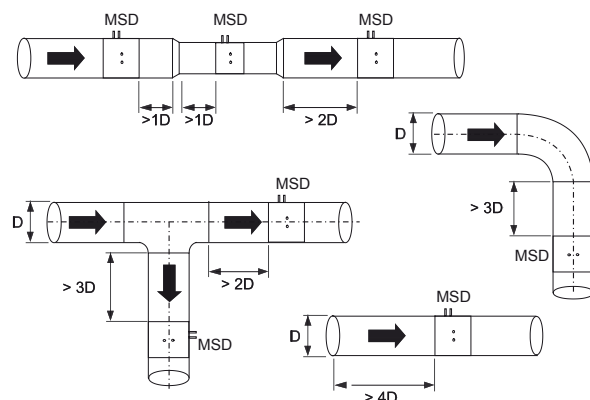
Airflow in a duct creates a pressure difference between the front and rear probes.

The corresponding airflow rate can be defined by measuring the pressure difference sensed by the two crossing sets of averaging probes.

Installation

In order to ensure the accuracy of the airflow measurement the safety distances between the measurement unit and flow disturbances (e.g. bends, T-branches) have to be respected. The necessary safety distances before and after different disturbances are presented in figures.

The figure describes also the recommended axial orientation of measurement probes related to bends and T-branches.



Measurement

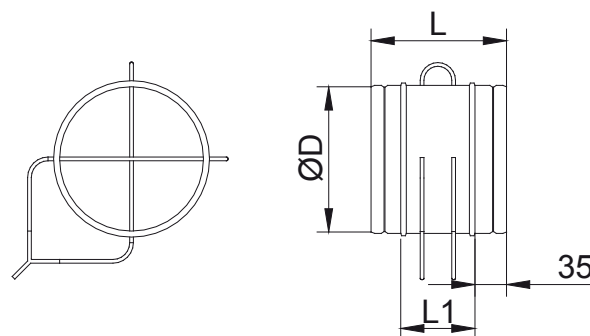
Connect the measurement tubes to the manometer and read the pressure difference. The airflow rate is calculated using the formula below or by reading the airflow rate directly from the diagram.

$$q_v = k \cdot \sqrt{\Delta p_m}$$

K- factor	
100	5.7
125	9.4
160	17.2
200	27.8
250	43.9
315	72.3
400	127.0
500	200.0

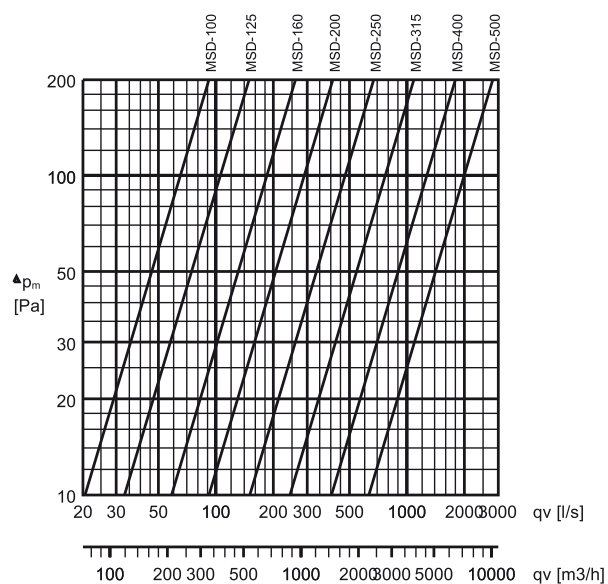
DIMENSIONS

NS	L	L1	ØD
100	142	75	99
160	142	75	159
200	142	75	199
250	142	75	249
315	142	75	314
400	195	125	399
500	195	125	499



Measurement pressure

Pressure difference from measurement taps



Suggested specifications

The casing of the measurement unit shall be made of galvanised steel.

The measurement probe pipes shall be made of aluminium.

The measurement unit shall have integral gaskets.

Product code

MSD-D

D = Diameter of duct connection

100, 125, 160, 200, 250, 315, 400, 500

Code example

MSD-100