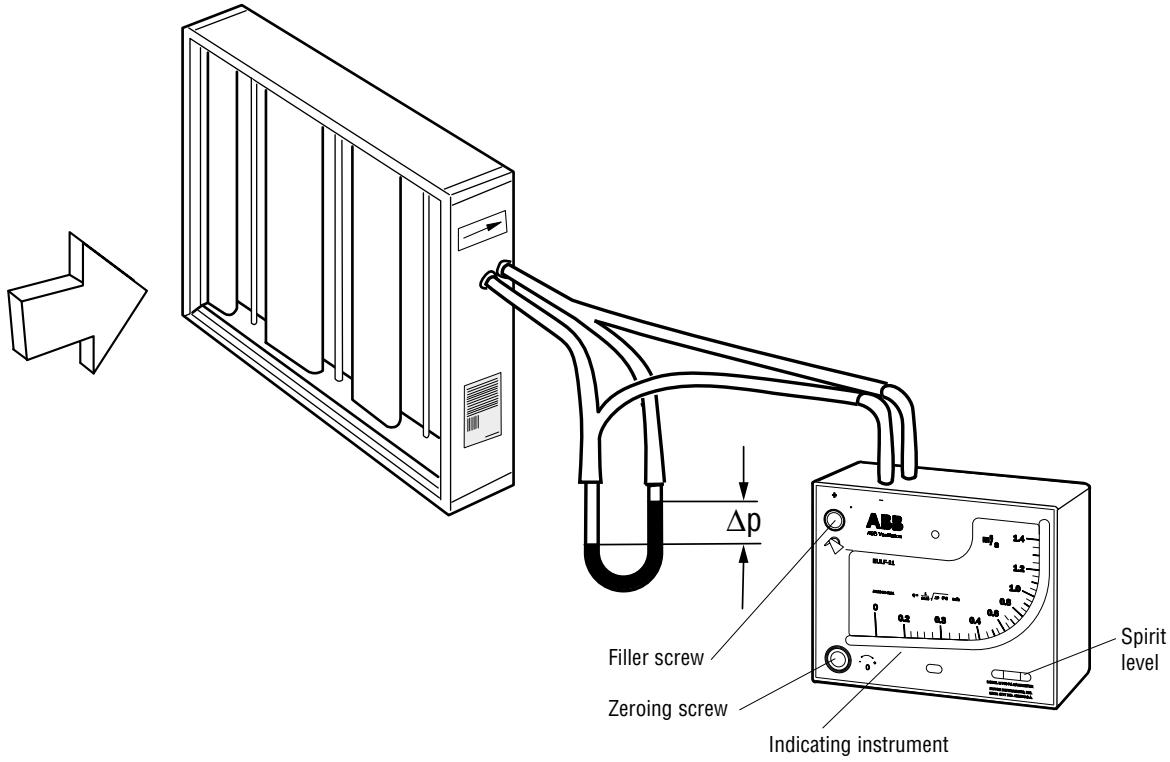
EUFM Flow measuring device with air flow meter



Measurement

1. Clean the measuring device whenever necessary (see "Maintenance" below).
2. Connect the instrument for pressure differential measurement to the pressure tappings of the measuring device (see under "Accuracy" below).
3. Read the pressure differential Dp, Pa.
4. Read the air flow q_{20} m^3/s for the relevant unit size from the pressure differential/flow chart.

Temperature correction

The chart is applicable to air at a temperature of +20° C. If the air temperature is different, either
– the air temperature must be adjusted to +20° C or

– the air flow must be corrected, using the expression: $q = q_{20} \sqrt{\frac{273 + t}{293}}$

where q = actual air flow and t = actual air temperature.

Accuracy

The accuracy of the measuring device is ± 5% of the pressure differential reading, provided that
– the measuring tubes and their holes have been thoroughly cleaned and wiped dry.
– the measuring device is located so that the air flow is not disturbed by dampers, angle sections or mixing sections in the ducting.
– the pressure differential is recorded by an instrument with good accuracy, such as a micro-manometer, Betz manometer or Magne-Helic direct-reading instrument.

Maintenance of flow measuring device

Clean the measuring tubes by means of a grease solvent, such as the ULCZ-01 cold degreasing agent, and wipe dry with a piece of lint-free cloth.
Also check that the air holes are free from dirt.

Filling the manometer

Back off the zeroing screw as far as it will go, and then screw it in three full turns to enable zero point adjustment to be carried out in either direction. Remove the filler screw. Pour the manometer liquid supplied into the filler hole until the liquid level has risen to the zero point.
N.B. Never use any other type of liquid than that supplied. Carefully adjust the zero point using the zeroing screw.
Fit the filler screw and tighten it. If the manometer has been overfilled so that the zero point cannot be set to the correct position, excess liquid can be removed by inserting a pipe cleaner or the like into the filler hole. Alternatively, pour out a little of the liquid.

Connecting the hoses

Cut the 4 mm i.d. hoses supplied to suitable lengths, and connect them between the tappings on the end wall of the unit and those on the instrument. Connect plus to plus and minus to minus. If the unit is equipped with a silencer, the tappings are located on the inspection side of the silencer. Clip the hoses in position so that they will not be damaged or kinked.