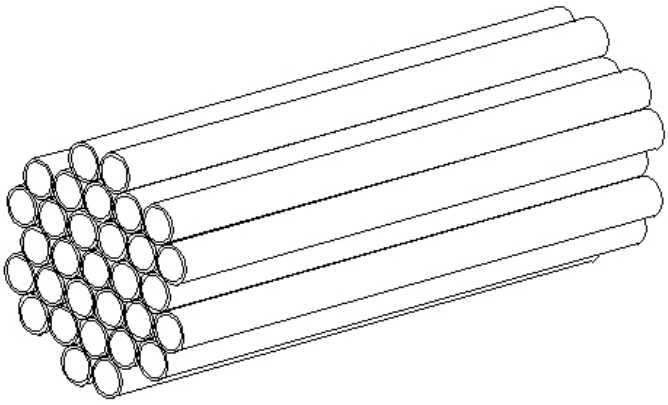
Laminar-Flow-Element (LFE)

Measuring the flow of gases using laminar flow elements offers a number of advantages over other methods:

- A high degree of measurement accuracy can be achieved.
- The measured value is available with virtually no delay.
- The method is suitable for a wide measuring range.
- The pressure of the flowing gas is only slightly affected.
- Limit values for alarm messages can be set across the entire range and very close to each other.
- The measuring element is completely wear-free.

The measuring principle

The gas flows through a laminar flow element consisting of a densely packed bundle of very fine tubes (image).
This creates an absolutely laminar flow area within the measuring cell.
The pressure difference between the inlet and outlet of the measuring cell is proportional to the flow velocity, i.e. to the flow volume. The linear characteristic Q/dp enables a high degree of measuring accuracy to be achieved.



Tube package, core of the LFE measuring cell

Technical Data

Type	Measuring range* [l/min]	Effective pressure [mbar]	max. System pressure [bar]
1.77.4	0,3 ... 3	70	2
1.77.3	1,5 … 15	70	2
1.77.5	3 … 30	70	2
1.77.1	5 … 50	70	2
1.77.2	12,5 … 125	70	2

* Other measuring ranges available on request

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