

2.1.2 FLOXACT-L

Air velocity sensor for
rectangular air ducts



Application

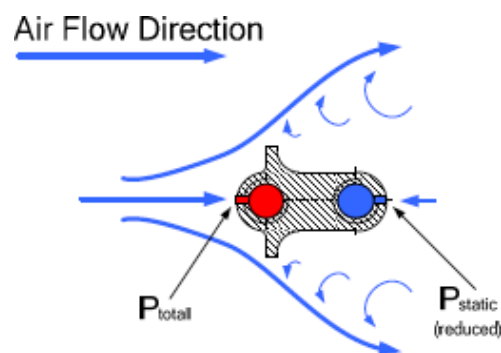
The FloXact™Stick is used for air velocity measurements in air ducts. Depending on the model, an average velocity is determined over a minimum of 2x6 measuring points. The unique shape of the measuring profile amplifies the measuring signal by at least 2.5x, enabling accurate measurements from 1.0 m/s air velocity.

The FloXact-L is available in 27 standard sizes from 200 to 1500, but other diameters are also available on request.

The FloXact-L is available in lengths up to 1500 mm.

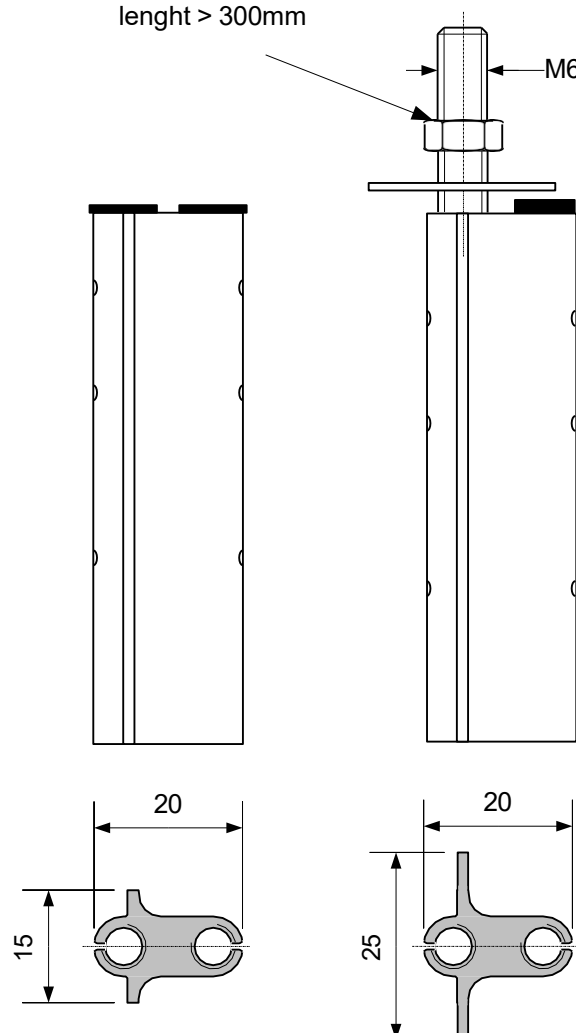
Features

- Easy installation in existing air ducts or VAV units.
- 2% accuracy (if installed correctly, see installation instructions).
- Hole distribution according to the log-Tchebycheff method.
- Average measurement over at least 2x6 measuring points.
- Amplification of measurement signal by at least 2.5x.
- Accurate measurement from 1.0m/s air velocity. Rounded measuring openings make the FloXact™Stick insensitive to skewed or turbulent flow up to 30° in all directions relative to the profile axis.
- Extruded aluminium measuring profile.
- Brass connection sleeves standard for hose internal diameter 4 mm. Sleeves for hose internal diameter 6 mm available on request.
- Above a length of 350 mm, the sensors are equipped with an additional M6 fastening at the tip for stable mounting in the air duct.
- Ambient temperature +5 to 95°C (non-condensing)



Operation of the FloXact™

M6 stud when sensor length > 300mm

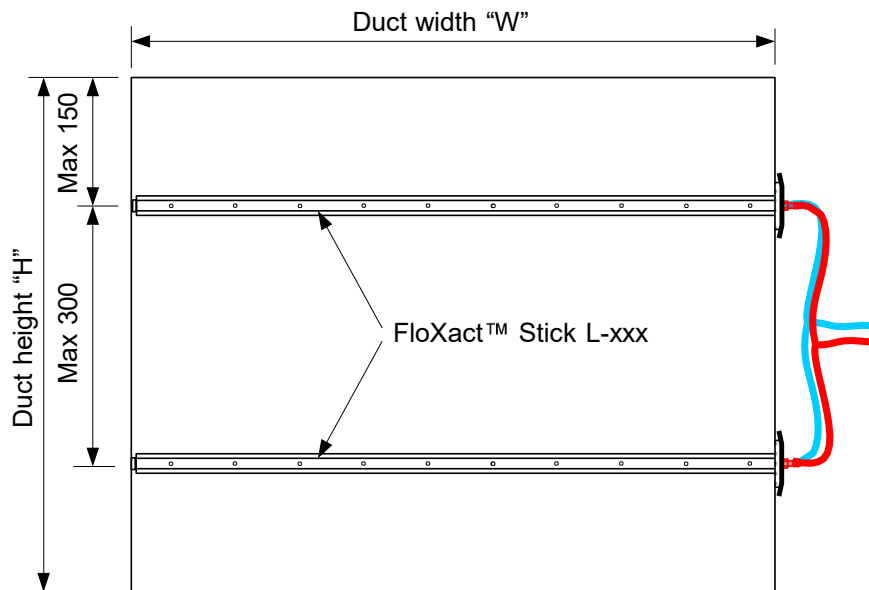


Aluminium profile:

15 mm profile length up to 200 mm

25 mm profile length >200 mm up to 1500 mm

Installation in rectangular ducts



Unit height "H"	Probe qty	Unit width													
		Kv value in l/s/Pa													
		200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200
100	1	13,8	17,3	20,7	24,2	27,6	31,1	34,5	41,4	48,4	55,3	62,2	69,1	76,0	82,9
150		27,6	34,5	41,4	48,4	55,3	62,2	69,1	82,9	96,7	110,5	124	138	152	166
200		36,8	46,1	55,3	64,5	73,7	82,9	92,1	110,5	129	147	166	184	203	221
250		46,1	57,6	69,1	80,6	92,1	103,6	115	138	161	184	207	230	253	276
300		55,3	69,1	82,9	96,7	111	124	138	166	193	221	249	276	304	332
350	2	55,3	69,1	82,9	96,7	111	124	138	166	193	221	249	276	304	332
400		73,7	92,1	110,5	129	147	166	184	221	258	295	332	368	405	442
450		82,9	103,6	124	145	166	187	207	249	290	332	373	414	456	497
500		92,1	115	138	161	184	207	230	276	322	368	414	461	507	553
600		111	138	166	193	221	249	276	332	387	442	497	553	608	663
700	3	115	144	173	201	230	259	288	345	403	461	518	576	633	691
800		147	184	221	258	295	332	368	442	516	589	663	737	810	884
900		166	207	249	290	332	373	414	497	580	663	746	829	912	995
1000	4	166	207	249	290	332	373	414	497	580	663	746	829	912	995
1100		203	253	304	355	405	456	507	608	709	810	912	1013	1114	1216
1200		221	276	332	387	442	497	553	663	774	884	995	1105	1216	1326

- The air volume can be determined with the following formula:

$$Q = Kv \times \sqrt{Pfs}$$

Q = air volume in l/s

Kv = Kv value in l/s/Pa

Pfs = pressure difference measured by the

FloXact™ Stick in Pa

- The table above is for air with 1.20 kg/m³ density (20°C, 50% r.h. and 1013 mbar). The correction for different densities is determined with the following formula : $Corr = \sqrt{\rho/1.20}$

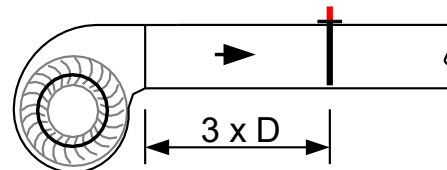
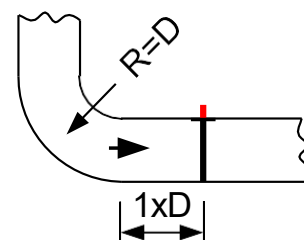
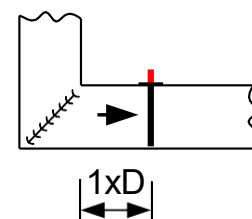
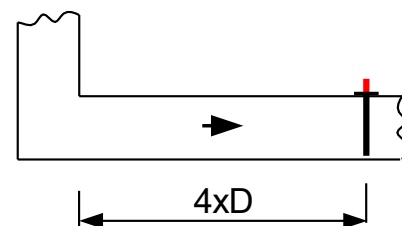
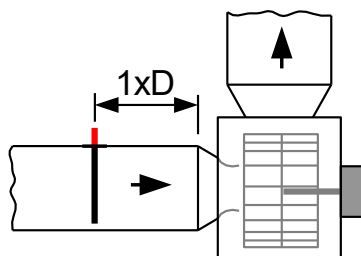
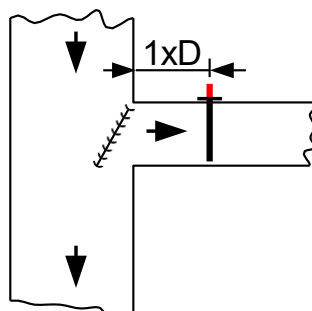
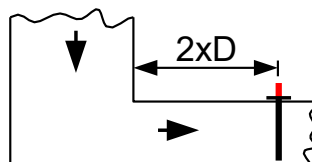
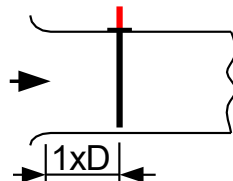
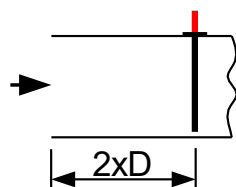
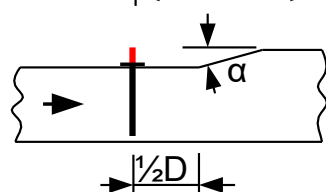
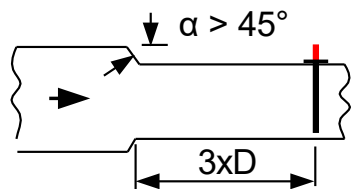
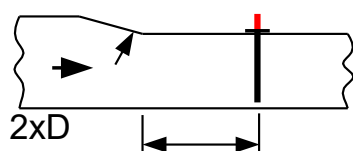
- For intermediate sizes, please contact our office

Installation instructions

- Check that the FloXact™ Stick dimensions match the dimensions of the duct in which it will be installed.
- The FloXact™ Stick is installed by drilling a hole with a diameter of 25 mm in the duct.
- Check that the direction of air flow matches the arrow on the FloXact™ Stick.
- For round ducts, we recommend installing the FloXact™ Stick diagonally in the duct to even out both horizontal and vertical irregularities in the air flow.
- For non-standard solutions, we recommend contacting the technicians at Air-Concepts.

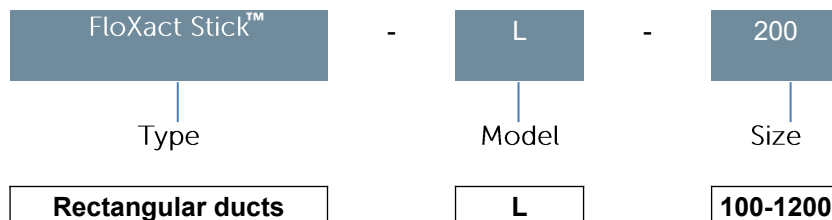
Minimum straight flow required for the FloXact™ Stick

$\alpha < 15^\circ$



Round ducts : $D = \text{duct diameter}$
 Rectangular ducts: $D = 2 \times (H \times W) / (H + W)$
 Example:
 $W = 600, H = 300$
 $D = 2 \times (600 \times 300) / (600 + 300) = 400 \text{ mm}$

Type Designation



Delivery

The FloXact™ is supplied complete with foam gasket and mounting plate with Kv value.

Air-Concepts locations

Headoffice:
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