

AIRFLOW

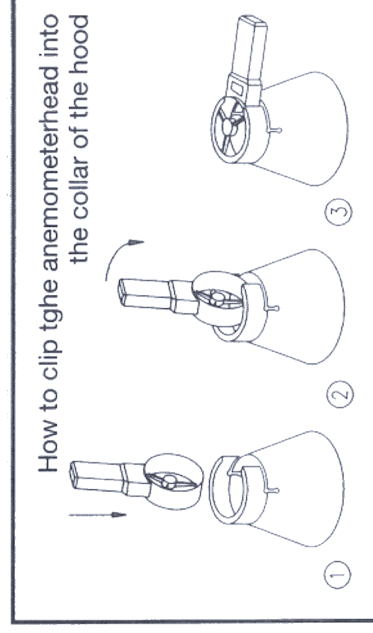
Aircone flowhoods User Notes

The Airflow Aircone range of flow hoods provides a reliable method of quick, easy and accurate air flow measurements at both exhaust and inlet grilles and diffusers. The Aircones have been designed for use with Airflow 100 mm (4") rotating vane sensors. Aircone sets are available in two kits. Kit 'A' comprises a rectangular hood 235 x 285 mm and a circular hood 180mm diameter. Kit 'B' is a larger, square hood, 335 x 335 mm.

Specifications (subject to alteration)

	Flow Hood set "A"	Flow Hood Type "B"
Part no:	26110	26120
Dimensions (measure area):	235 mm x 285 mm (9.2 x 11.2 ins) Ø 180 mm (Ø 9.8 ins)	335 mm x 335 mm (13.2 x 13.2 ins)
Temperature range:	0 - 80 °C / 32 - 176 °F	
Weight:	Approx. 1100 g (2.4 lbs inc. carry case)	Approx. 1450 g (3.2 lbs)
Recommended ranges: velocity (displayed on meter) volume flow (from data chart)	0.25 m/s to 6 m/s (50 ft/min to 1200 ft/min) 0.00164 to 0.03942 m ³ /s = 5.904 to 141.9 m ³ /h (3.47497 to 83.526 ft ³ /min)	
Aircone kit comprises:	1 off rectangular hood 1 off circular hood protective carry-case calibration curves and fitting instructions	1 off rectangular hood carry carton calibration curves and fitting instructions
Optional accessories:	-	
Suitable for instruments:	LCA series, AV series, EDRA, DVA	

To use, simply clip the anemometer vane head into the collar of the Aircone hood (see diagram 1 to 3). Ensure that the direction of flow arrow on the vane sensor is aligned with the air flow. The only exception is when using any LCA range anemometer and the larger square hood (Kit B) with side entry grilles in the exhaust air mode. In this application the LCA anemometer may be clipped in place with the LCD display facing towards the user for ease of reading.



Hold the Aircone with the flexible seal flush up against the grille to be measured. Before beginning to take measurements allow the vane sensor to rotate for approximately ten seconds to gain speed and stabilise in the air flow.

For area programmable instruments i.e. LCA 6000 VA, LCA 30 iS, AV2 and AV6 with direct readout of air volume flow please input the area dimensions from the following table:

Aircone mode:	cross section area input in m ² for metric and in ft ² for imperial volume flow:					
	LCA 6000 VA, LCA 30 iS			AV2, AV6		
	m ³ /s	m ³ /h *	ft ³ /min	m ³ /s	m ³ /h *	ft ³ /min
Set A supply	0.00657	23,652	4.24313	0.00657	23,652	4.24313
Set A extract		22,500	4.03646	0.00625	22,500	4.03646
Type B supply	0.00633	22,794	4.08813		22,794	4.08813
extract	0.00638**	22,972**	4.12042	0.00616	22,191	3.97833

* Please note that using this factor is only to help you gain the actual value in m³/h, however m³/s is indicated at all times.

** Use these values only on extract flows when using LCA anemometer in reverse fitting i.e. when LCD display is facing user.

Older versions of the models stated above may not allow input of such low area dimensions. In this unlikely event contact Airflow for details to update your software.

All other instruments are used in the normal way with air velocity readings (m/sec or ft/min) calculated into volume flow readings (m³/sec, m³/hr or ft³/min) by reference to the air performance data charts. Aircones will induce some back pressure on the system being measured. This can be determined by reading off the pressure drop against the corresponding volume flow rate from the data chart.

Where grilles are larger than the size of the rectangular Aircone hood it is suggested that the area be divided into equal areas, avoiding overlapping where possible. A series of readings of slightly reduced accuracy, can then be taken to calculate the approximate total volume flow.

Alternatively for higher flow rates Airflow offers the ProHood™ range of capture hoods for balancing larger grilles, circular diffusers and linear slot vents.

Contact Airflow Technical Sales for further information or technical assistance.

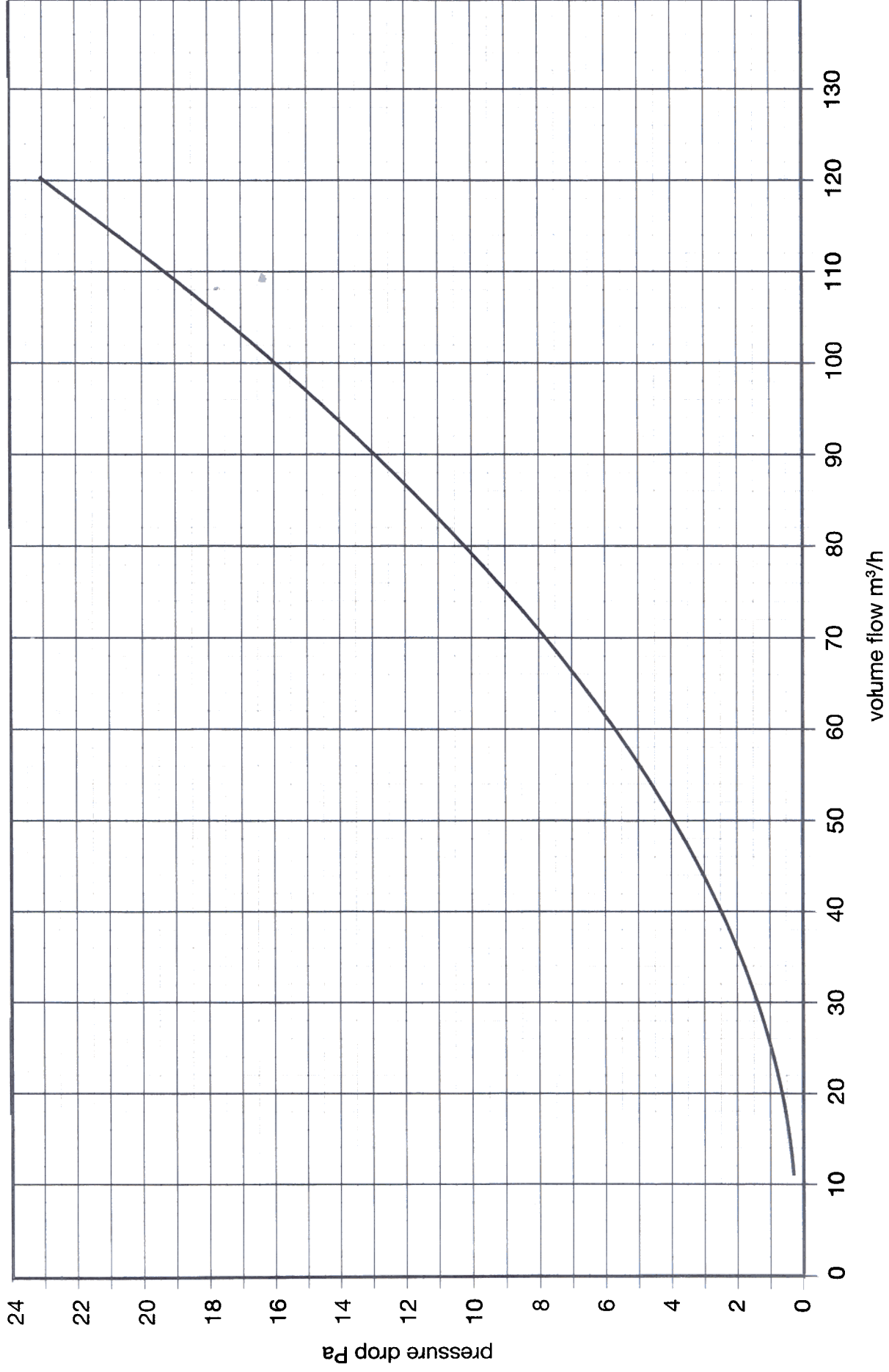
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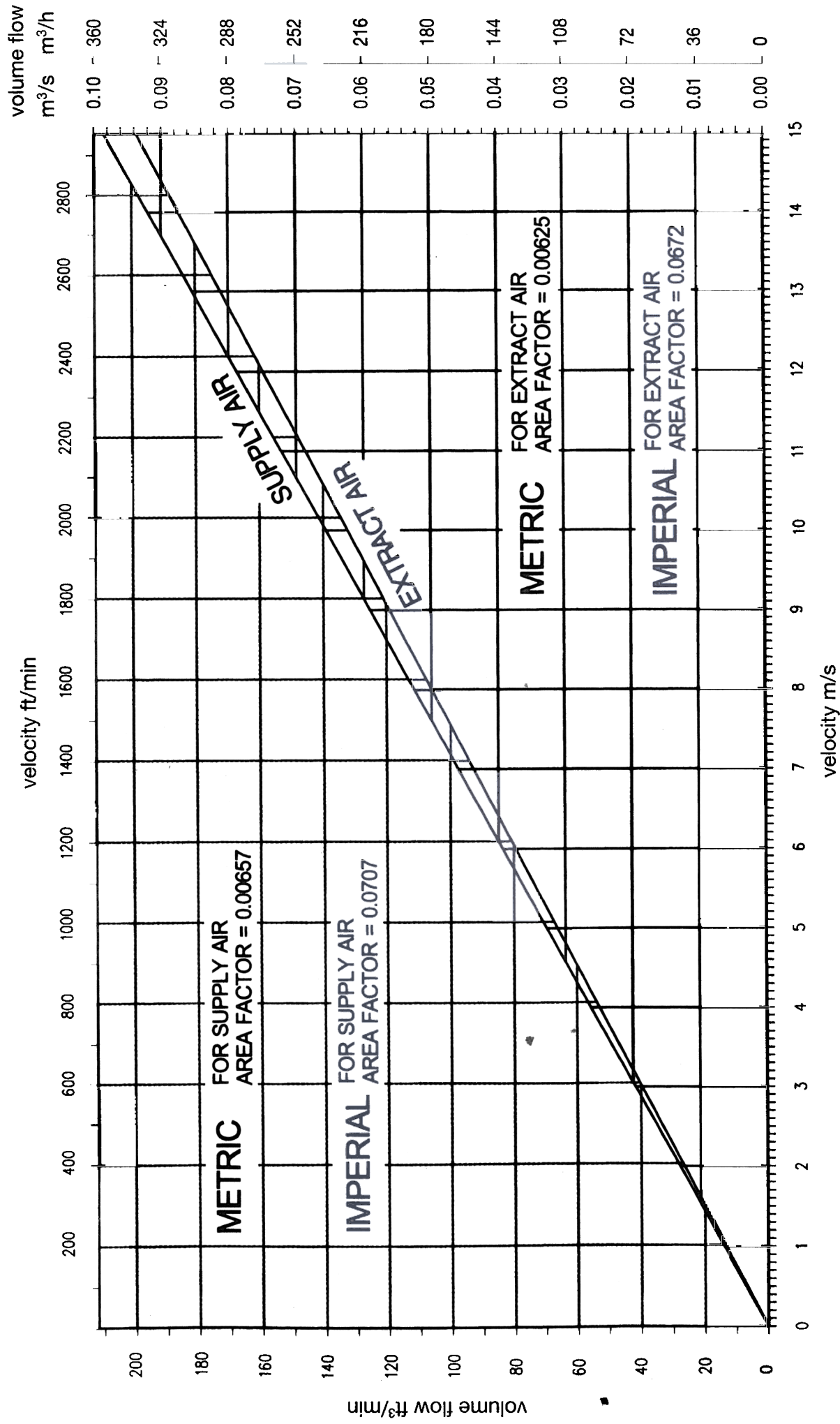
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Pressure drop across cones with anemometer head fitted (no grille)



Calibration chart for grilles of > 95 mm inlet using rectangular and circular cones



Volume flow = area factor x velocity
For instruments that are area programmable input the relevant area factor, as the area, for direct readout in m^3/s or ft^3/min