

LAB TEST REPORT
Validation CAV Flow Rates

Client:	
Project no:	2016003
Project name:	CAV
Date:	21/08/2016

Test description:	validate claimed flow rates as mentioned on CAV
Product tested:	3 Turkish brands (types unknown)

TEST CONDITIONS



The CAV was connected to the calibrated orifice ACIN 33984. Pressure losses were measured 0,5 m upward of the CAV. Note that NO duct was mounted after the CAV: this resulted in a higher pressure loss of 20-40 Pa. Several flow rates from the working range were imposed at the prescribed pressure loss of 250 Pa. Note that the latter pressure loss could not be reached for the higher flow rates, i.e. close to the maximum values (although the fan is capable to it). The cause is unclear as the valve was not in its extreme position; it was like the spring was already at maximal tension!?).

When testing CAV 3 we used a different measuring set. We connected the CAV to our VAV200-1 (Was calibrated with the orifice ACIN 33984). And we mounted a duct before(1,5m) and after the CAV (0,5m). Several flow rates from the working range were imposed at the pressure loss of 250 Pa and 150 Pa.

RESULTS

CAV3				
Set flow [m³/h]	Measured flow [m³/h]	dPs CAV [Pa]	error flow [%]	
300	255	250	-15,0	
500	429	250	-14,2	
700	565	250	-19,3	
900	680	250	-24,4	
1100	805	250	-26,8	
300	240	150	-20,0	
700	609	150	-13,0	
900	710	150	-21,1	

CONCLUSIONS - REMARKS

- According to the data we have, for the CAV, it seems that the error increases with the flow

Measurement Devices:
probes Testo 480 pressure sensor

	transmitter		
	flow rate	ACIN orifice 33984 & VAV200-1	
Applied standards:		NBN EN ISO 7726	



- Importance of the trial environment - Instruments for measuring precise quantities