

Barcol-Air Netherlands casing leakage test sheet

According to standard NEN-EN 1751-2014



Test setup		
Date	18-5-2018	Reference nr. LM-18-0015A
Exp. Date	18-5-2021	Tested by TK
Place	Barcol-Air	Witness by MBs
Air temperature	20 [°C]	
Atmospheric pressure	1013 [hPa]	

Contact information	
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Model (Name/Type):	VAV unit type: AHQD-100	Result:	class C
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Product specifications	
Productcode	AHQD
Model	100
Case Width	[m]
Case Height	[m]
Case Diameter	0,100 [m]
Case Length	0,500 [m]
Real Duct surface	0,157 [m ²]
Virtual Duct surface	0,314 [m ²]
Note:	When Case Length <1m; 1m is used in calculations as specified by LUKA.

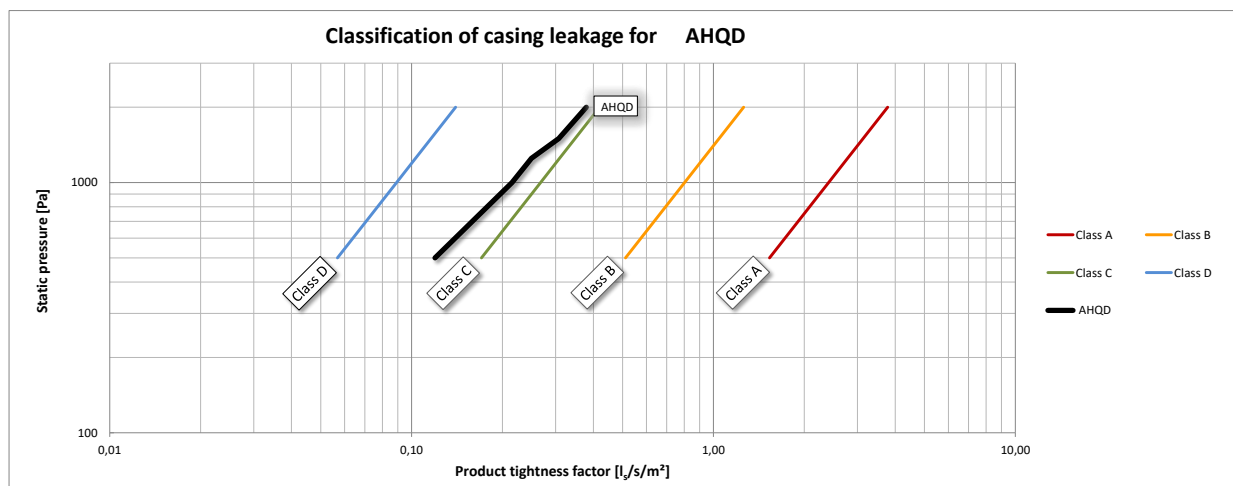
Measurement specifications	
Pressure time	60 seconds
Pressure controller	PR-41X/20mbar/81955.50
Airflow meter(s)	Low Flow F-111B-20K-RAD-00-V
	High Flow F-112AC-M20-RAD-55-V
Rated Accuracy	Pressure Ctrl ± 0.05%Rd + 0.093%FS
	Low Flow ± 0.5%Rd + 0.1%FS
Date calibrated	High Flow ± 0.5%Rd + 0.1%FS
	Pressure Ctrl 21-2-2020
Date calibrated	Low Flow 18-2-2020
	High Flow 17-2-2020

Leakage is measured in normal liters (= 1 liter at 0°C and 101325 pa)

NEN-EN 1751-2014	
Max. Leakagefactor [L/s/m ²]	
Class A	0,027
Class B	0,009
Class C	0,003
Class D	0,001
$\Phi L = f \times P_s^{0,65}$	
$\Phi L =$ Leakage [L/s/m ²]	
$f =$ Leakagefactor	
$P_s =$ Static Pressure	

Measurements and calculations					
Reading	Measure instrument	Static pressure [Pa]	Measured air leakage rate [L/s]	Corrected air leakage rate 20°C [L/s]	Product tightness factor [L/s/m ²]
1		500	0,035	0,038	0,120
2		1000	0,063	0,068	0,215
3		1250	0,073	0,078	0,249
4		1500	0,090	0,097	0,307
5		2000	0,111	0,119	0,379

LUKA standards				
Class A [L/s/m ²]	Class B [L/s/m ²]	Class C [L/s/m ²]	Class D [L/s/m ²]	Estimated class
1,53	0,51	0,17	0,06	Class C
2,41	0,80	0,27	0,09	[L/s/m ²]
2,78	0,93	0,31	0,10	0
3,13	1,04	0,35	0,12	Class C
3,78	1,26	0,42	0,14	[L/s/m ²]



Other results	
Visual deformation	Negative
Pressure [Pa]	2000

*As the tested model is the smallest model of this product range, the same classification result (or better) is valid for all larger models.

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Calibration certifications nr.
 Low Flow BHTG19/5369552
 High Flow BHTG22/5368561
 Pressure ctrl not specified