

Barcol-Air Netherlands casing leakage test sheet

According to standard NEN-EN 1751-2014

Test setup		
Date	5-9-2023	Reference nr. LM-23-0009
Exp. Date	5-9-2026	Tested by DD
Place	Barcol-Air	Witness by MBS

Contact information	
Tel	+31 (0)299 689 300
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Model (Name/Type): **Circular fire damper FR90-100-S**

Result: **Class D**

Product specifications		
Productcode	FR90-100-S	
Model	100	
Case Width		[m]
Case Height		[m]
Case Diameter	0,100	[m]
Case Length	0,320	[m]
Real Duct surface	0,101	[m ²]
Virtual Duct surface	0,314	[m ²]
Note:	When Case Length < 1m; 1m is used in calculations as specified by LUKA.	

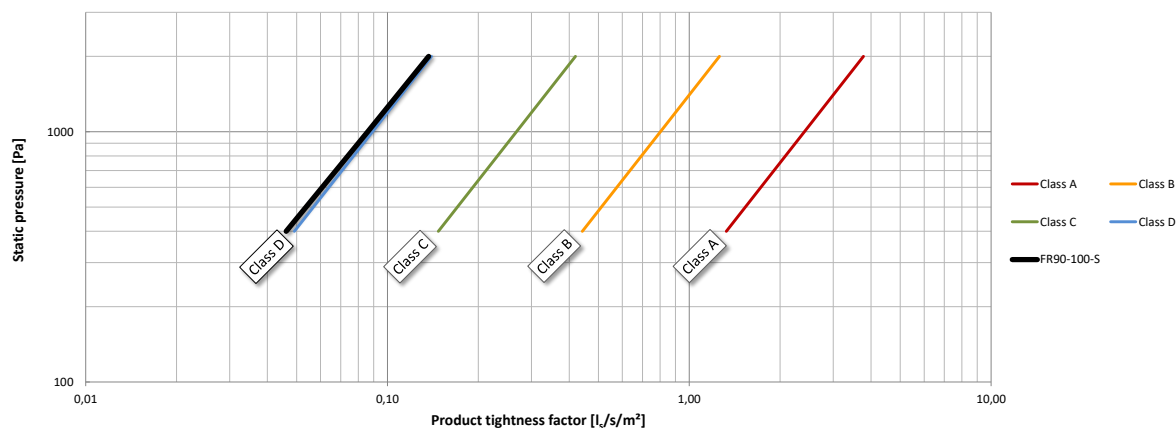
Measurement specifications	
Pressure time	60 seconds
Pressure controller	PR-41X/20mbar/81955.50
Airflow meter(s)	Low Flow F-111B-20K-RAD-00-V
	High Flow F-112AC-M20-RAD-55-V
Rated Accuracy	Pressure Ctrl ± 0.05%Rd + 0.093%FS
	Low Flow ± 0.5%Rd + 0.1%FS
	High Flow ± 0.5%Rd + 0.1%FS
	Pressure Ctrl ± 0.5%Rd + 0.1%FS
Date calibrated	25-11-2021
	Low Flow 6-12-2021
	High Flow 8-12-2021
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
$\Phi L = f \times P_s^{0,65}$	
ΦL = Leakage [L/s/m ²]	
f = Leakagefactor	
P_s = Static Pressure	

Measurements and calculations					
Reading	Measure instrument	Static pressure	Measured air leakage rate	Corrected air leakage rate 20°C	Product tightness factor
		[Pa]	[L/s]	[L/s]	[L/s/m ²]
1	Low Flow	400	0,015	0,015	0,046
2	Low Flow	1000	0,027	0,027	0,086
3	Low Flow	2000	0,043	0,043	0,137
4	Low Flow				
5	Low Flow				

LUKA standards				
Class A	Class B	Class C	Class D	Estimated class
[L/s/m ²]	[L/s/m ²]	[L/s/m ²]	[L/s/m ²]	
1,33	0,44	0,15	0,05	Class D
2,41	0,80	0,27	0,09	Class D
3,78	1,26	0,42	0,14	Class D
0,00	0,00	0,00	0,00	Class D
0,00	0,00	0,00	0,00	Class D

Classification of casing leakage for FR90-100-S



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/CHK/6295235
High Flow BHTG22/6301522
Pressure ctrl not specified