

# Casing leakage test sheet

Test setup		Reference nr.
Date	6-3-2015	LM-15.0015
Exp. Date	6-3-2018	Tested by Rik v Kroonenburg
Place	Barcol-Air	Witness by Bob Strooker
measure temperature	20 [°C]	
Atmospheric pressure	1,033 [hPa]	
Correctionfactor	1,019	

Contact information	
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Model (Name/Type): **Circular fire damper FR90-100-S**

Result: **Class D**

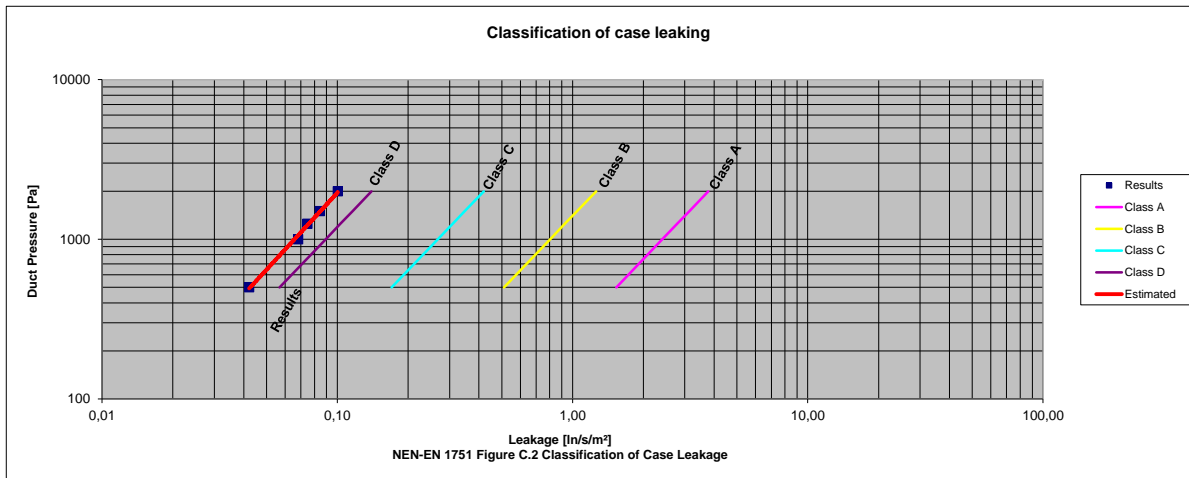
Products specifications	
Productcode	FR90
Model	100S
Case Width	[m]
Case Height	[m]
Case Diameter	0,100 [m]
Case Length	0,350 [m]
Real Duct surface	0,110 [m²]
Virtual Duct surface	0,314 [m²]
Note:	When Case Length < 1m; 1m is used in calculations as specified by LUKA.

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	23-1-2015
Date calibrated	Low Flow	21-1-2015
	High Flow	19-1-2015

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

NEN-EN 1751	
Max. Leakagefactor [ln/s/m²]	
Class A	0,027
Class B	0,009
Class C	0,003
Class D	0,001
$\Phi L = f \times Ps^{0,65}$	
$\Phi L$ = Leakage [ln/s/m²]	
f = Leakagefactor	
Ps = Static Pressure	

Measurements and calculations						LUKA standards					Estimated class
Reading	Measure instrument	Static pressure [Pa]	Leakage [ln/s]	Leakage duct surface [ln/s/m²]	Corrected at 20°C [l/s/m²]	Product tightness factor [-]	Class A [ln/s/m²]	Class B [ln/s/m²]	Class C [ln/s/m²]	Class D [ln/s/m²]	
1	Low Flow	500	0,013	0,04	0,04	0,000743	1,53	0,51			Class D
2	Low Flow	1000	0,021	0,07	0,07	0,000765		0,80	0,27	0,09	Class D
3	Low Flow	1250	0,023	0,07	0,07	0,000724			0,31	0,10	Class D
4	Low Flow	1500	0,026	0,08	0,08	0,000727			0,35	0,12	Class D
5	Low Flow	2000	0,031	0,10	0,10	0,000719			0,42	0,14	Class D



Other results	
Visual deformation	no
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 bigger models.

Approved and certified by  
Certificate nr.  
89204853.1



Calibration certifications nr.  
Low Flow BHTG22/CHK/1776430  
High Flow BHTG22/CHK/1773876  
Pressure ctrl not specified