

# Test report

<b>Requested by</b> .....	Vally Matic A/S	<b>Date</b> .....	06-09-2021
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<b>Report no</b> .....	ChimneyLab-359
<b>Order no</b> .....	0786

<b>Product:</b>	
<b>Manufacturer</b> .....	Vally Matic A/S
<b>Function</b> .....	Flexible ventilation hose
<b>Type</b> .....	VMP—hose
<b>Serial no</b> .....	-

<b>Received date</b> .....	-
<b>Test date</b> .....	19-03-2021
<b>Procedure</b> .....	Gas tightness test according to EN 13180:2001.
<b>Type test</b> .....	Initial type test

<b>Results</b> .....	See Paragraph 5
<b>Conclusion</b> .....	See Paragraph 6
<b>Terms</b> .....	<i>This test report or extracts from it may not be reproduced without the written permission of ChimneyLab Europe ApS. The test results concern only the tested objects.</i>

Lyngaa, Denmark 06-09-2021



Finn Petersen  
Process Engineer

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Appendix 1: Fabric from Sioen Coating

Appendix 2: Flexible hose data sheet

## 1. Introduction

The purpose of this test is to determine the flexible ventilation hose gas tightness.

The tests and calculations were carried out at ChimneyLab Europe ApS in Lyngaa, Denmark, by Process Engineer Finn Petersen.

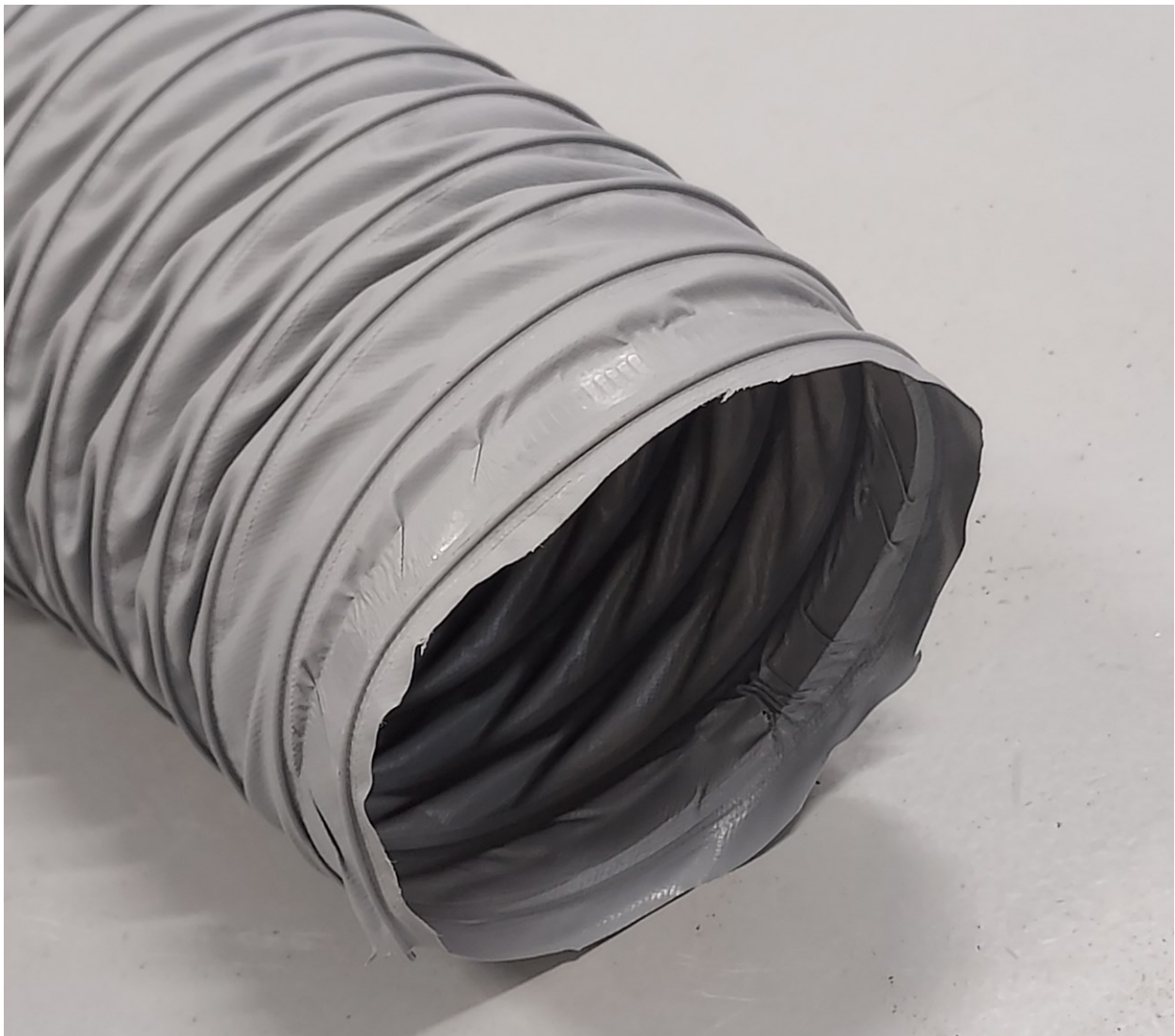
## 2. Description of test specimen

### 2.1. Flexible ventilation hose

The test specimen is a round flexible ventilation hose, produced in fabric 100 % PES / 280 dtex from Sioen Coating. The fabric has a weight of 280 g/m<sup>2</sup> and a breaking strength warp of 1100 N/5cm.

The fabric is hot welded and attached on a metal coil.

The tested product range is 50 to 315 mm nominal diameter.



*Photo 1: Flexible hose 125 mm nominal diameter*

### 3. Test description

#### 3.1. Gas tightness tests

The flexible hoses with a length of 1.3 meter were closed airtight in both ends with 0.7 x 9 mm hose clamps and connected to air flow meter and pressure transmitter.

Each hose was subjected to positive test pressure of 1000 and 5000 Pa.

For 5 minutes, the pressure was held within 5 %, and the pressure was monitored and observed for sudden changes.

The positive and negative pressure was generated by compressed air, and the flow was measured by mass flow controller and laminar flow elements.

The flexible hoses are classified positive pressure 5000 Pa. According to EN 13180:2001, Table 5, the test pressure is 5000 Pa for positive pressure.

According to EN 13180:2001, Table 2, the maximum leakage for air tightness is:

Tightness class A:  $0.027 \times P_s^{0.65} \text{ [l} \cdot \text{s}^{-1} \cdot \text{m}^{-2}]$

Tightness class B:  $0.009 \times P_s^{0.65} \text{ [l} \cdot \text{s}^{-1} \cdot \text{m}^{-2}]$

Tightness class C:  $0.003 \times P_s^{0.65} \text{ [l} \cdot \text{s}^{-1} \cdot \text{m}^{-2}]$

Where

$P_s = \text{Test pressure}$



*Photo 2: 300 mm flexible hose during gas tightness test*

#### 4. Instrumentation

Instrument	Type	Reference	Accuracy
Barometric pressure	Davis Perception 2	CLE-027	1.7 mb
Gas tightness flow, $dP \leq 249$ Pa	Dwyer micro manometer	CLE-093-031	$\pm 1$ %
Gas tightness flow, $dP \geq 250$ Pa	Dwyer micro manometer	CLE-093-032	$\pm 1$ %
Gas tightness, pressure	Dwyer micro manometer	CLE-093-033	$\pm 0.5$ %
Gas tightness flow $< 0.15$ Nm <sup>3</sup> /h	Mass flow controller Brooks	CLE-093-043	$\pm 2$ %
Gas tightness flow $< 1.0$ Nm <sup>3</sup> /h	Linear flow element, UFM	CLE-152	$\pm 2$ %
Gas tightness flow $< 48$ Nm <sup>3</sup> /h	Linear flow element, Meriam	CLE-140	$\pm 2$ %
Thermocouple, flow elements	Type K with Omega display	CLE-093-001	$\pm 0.5$ °C

*Table 1: Test equipment*

## 5. Test results

### 5.1. Gas tightness tests

Hose nominal diameter	Test pressure	Air leakage	Surface area	Measured air leakage factor	Maximum limit for class B	Maximum limit for class C	System passed tightness class
mm	Pa	Nm <sup>3</sup> /h	m <sup>2</sup>	Litre · S <sup>-1</sup> · m <sup>-2</sup>	litter · S <sup>-1</sup> · m <sup>-2</sup>	litre · S <sup>-1</sup> · m <sup>-2</sup>	-
50	999	0.126	0.20	0.171	0.802	0.267	C
50	4996	0.554	0.20	0.754	2.282	0.761	C
125	999	0.262	0.53	0.137	0.802	0.267	C
125	4996	0.786	0.53	0.412	2.282	0.761	C
315	999	0.420	1.32	0.088	0.802	0.267	C
315	4996	0.930	1.32	0.196	2.282	0.761	C
800	*	*	*	*	*	*	*
800	*	*	*	*	*	*	*

*Table 2: All gas tightness tests*

\* 800 mm hose was not tested, as the delivered hose clamps were not strong enough.

## 6. Conclusion

The flexible ventilation hoses, as tested under the conditions described in Paragraph 3, meets the requirements in EN 13280:2001 regarding:

- Air tightness class C, positive pressure max. 5000 Pa

## 7. Remarks

All information from the manufacturer regarding materials used for the test object(s) has been assumed by ChimneyLab Europe ApS. The materials have not been subject to any qualitative tests, except from an immediate visual evaluation.

This report is not an approval, but the result of a test. Producer/importing company are obligated to ensure that all relevant regulations during sale and installation of the product are fulfilled.

## Technical Data Sheet

# D2281

Fabric / Weefsel / Gewebe / Tejido / Tissu	100 % PES / 280 dtex	
Total weight / Gewicht totaal / Totalgewicht / Peso total / Poids total	280 g/m <sup>2</sup>	DIN EN ISO 2286/2 1998
Characteristics / Eigenschappen / Eigenschaften / Characteristics / Caractéristiques	AB	
Lacquering / Vernis / Lackierung / Lacado / Vernis	-/1	
Embossing / Kalander / Lackierung / Embossing / Calandre	Dull	
Breaking strength Warp Treksterkte Ketting Höchstzugkraft Kette Resistencia a la ruptura Urdimbre Résistance rupture Chaîne	1100 N/5cm	EN ISO 1421/1 1998
Breaking strength Weft Treksterkte Inslag Höchstzugkraft Schuss Resistencia a la ruptura Trama Résistance rupture Trame	1000 N/5cm	EN ISO 1421/1 1998
Tear strength Warp Scheurweerstand Ketting Weiterreisskraft Kette Resistencia a la rasgadura Urdimbre Résistance à la déchirure Chaîne	60 N	ISO 4674/1A 2004
Tear strength Weft Scheurweerstand Inslag Weiterreisskraft Schuss Resistencia a la rasgadura Trama Résistance à la déchirure Trame	30 N	ISO 4674/1A 2004
Adhesion / Hechting / Haftung / Adherencia / Adhérence	40 N/5cm	EN ISO 2411 2000

"This product may for certain colours contain substances (Lead Pigments ) which fall under the Annex XIV of the Reach Regulation 1907/2006/CE.  
In order to know which colours fall under this annex , you can take contact with the technical department of Sioen Industries.  
Upon request those substances can be eliminated from the product."



Technical Data Sheet

## D2281

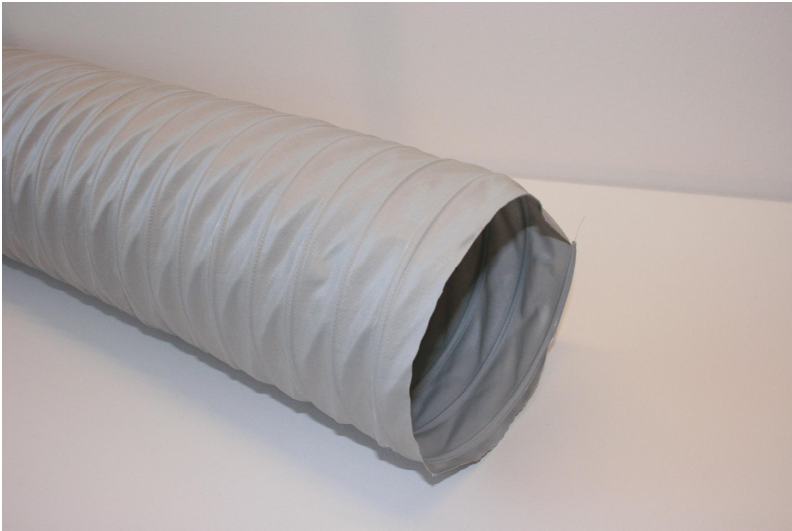
Temperature resistance / Temperatuursbestendigheid / Temperatursbeständigkeit / Resistencia a la temperatura / Tenue à la température	-30/+70 °C	DIN EN 1876/2 1998
Light fastness (Except white and (half-)transparent)	7-8	ISO 105 B02 1988
Lichtechtheid (Uitgezonderd wit en (half-)transparent)		
Lichtechtheit (Ausnahme weiss und (semi-)transparent)		
Resistencia a la luz (Excepto blanco / (semi-)transparente)		
Tenue à la lumière (Excepté en blanc et (semi-)transparent)		
Fire behavior / Brandgedrag / Brennverhalten / Fire behavior / Reaction au feu	M1	NF P 92 507 2004
Application Industrial/VentilationTube		

*"This product may for certain colours contain substances (Lead Pigments ) which fall under the Annex XIV of the Reach Regulation 1907/2006/CE. In order to know which colours fall under this annex , you can take contact with the technical department of Sioen Industries. Upon request those substances can be eliminated from the product."*

# Data sheet

Flexible hoses  
VMP—hose

Edit. November 2008



**VMM** **VALLY-MATIC**®  
*Your choice*

#### Technical data/composition:

- Hose material Polyester fabric coated on both sides with PVC (basic fabric fire resistant up to 90degr. C)
- Helix spring wire
- Smooth internal surface

Approvals: DIN 4102-1 B2/NFR92-501 M2

Temp. Range: -40 to + 90 Degr. C

Ventilation, air conditioning systems, range hoods, suction of welding fumes

Dimension mm (internal)	Weight/m(kg)	Bending radius	Max. Working pressure bar
102	0,150	100	1,5
127	0,180	125	1,0
152	0,205	150	0,9
162	0,225	162	0,8
202	0,280	200	0,7
252	0,340	250	0,7
315	0,420	310	0,7

**Application areas: Suction of kitchen fumes, suction of welding fumes or pure air transportation. Hoses are supplied in standard length 6—10 m. Other lengths and dimensions can be supplied upon request. Tests carried out at room temperature +20 degr. C**

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