



*Hydraulic Coolers, Pressure Line Filters, Air & Gas Compressors / Vacuum Pumps / Blowers  
/ Booster Packages and Rotary Lobe Pumps for Transport and Industry.*

# ***“PLF1000 “T” Ported Micronic filter”***

Pressure line filter for use with pneumatic conveying of bulk product from silo tankers , containers with rotary valves and other specialist application.

## **INSTALLATION, OPERATION AND MAINTENANCE MANUAL Part number (FIL.024 & FIL.041)**



Transairvac International Ltd, Units 28, Croft Road Industrial Estate, Newcastle-Under-Lyme, Staffordshire,  
ST5 0TW, Telephone: 0044 (0)1782) 710282, Fax: 0044 (01782) 710126

Email: [office@transairvac.com](mailto:office@transairvac.com) Web page: [www.transairvac.com](http://www.transairvac.com)

# Contents

- 1 HEALTH AND SAFETY( GENERAL)**
- 2 TECHNICAL DATA FOR PLF1000**
- 3 APPLICATION AND INSTALLATION**
- 4 MAINTENANCE**
- 5 CLEANING**
- 6 SPARE PARTS AND ACCESSORIES**
- 7 CERTIFICATE OF INCORPORATION**

## 1 HEALTH AND SAFETY ( GENERAL)

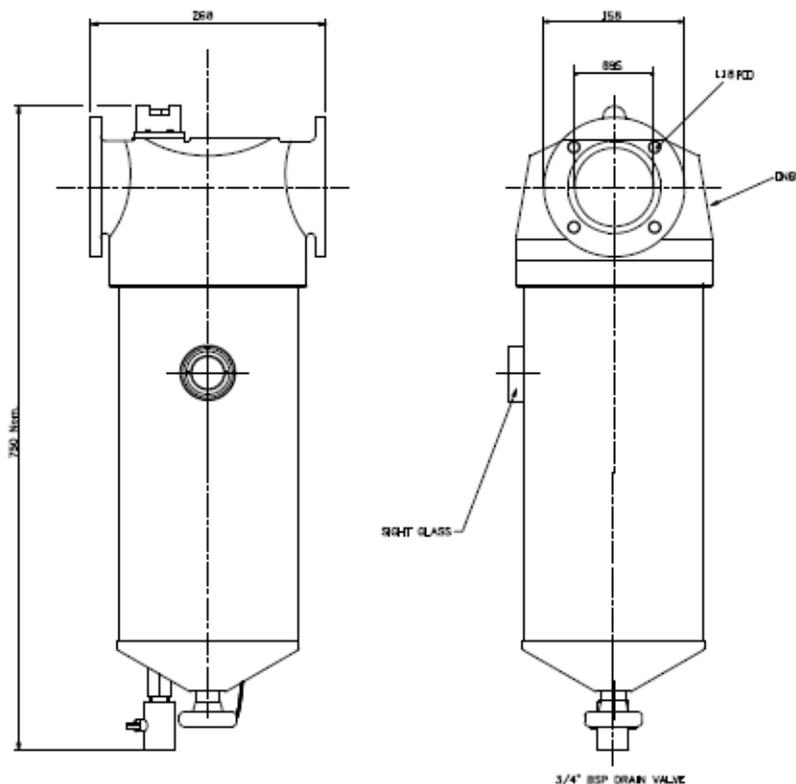
This product is for use in pressurised systems so which are potentially dangerous if items of equipment are not properly operated and maintained. It is imperative that all users of such equipment fully educate themselves as to the potential dangers and satisfy themselves that the personnel responsible for installing, testing, commissioning, operating and maintaining the machinery are competent to do so.

The main directive for this is the Pressure safety system regulation 2000 PSSR .

Instruction manuals are provided for guidance but must assume some basic level of competence by user staff. In these operating instructions safety measures are advised before each step. It is imperative that these safety precautions are observed. If there are any doubts concerning correct procedures, ask Transairvac International Ltd, who will be pleased to advise, **DO NOT TAKE RISKS.**

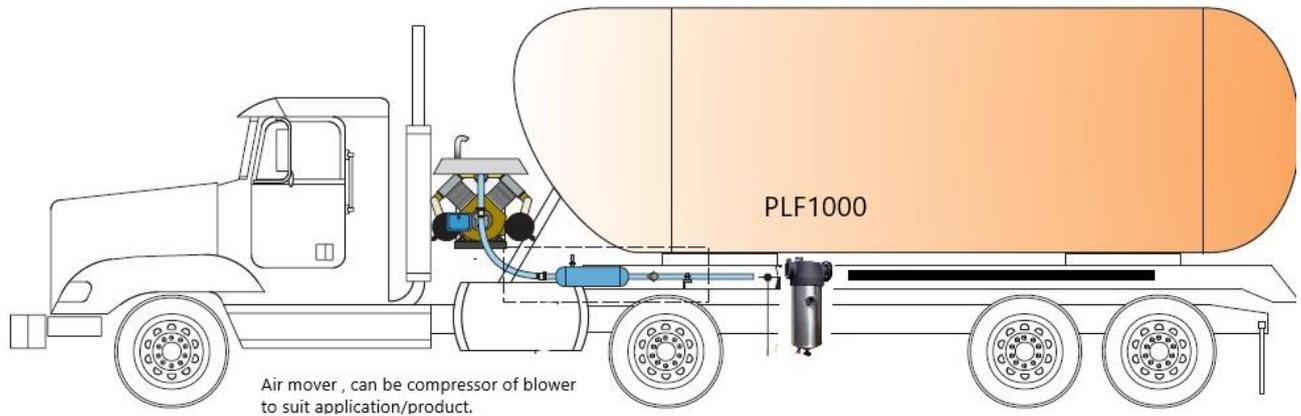
## 2 Technical Data for PLF1000 5micron Micronic filter

Gas Medium	Air
Filtration	5 micron absolute ( 100% )
Flow rate maximum	600 - 1200 m3/hr
Operating pressure	2.5 barg
Maximum pressure	3 barg ( Test pressure 5 batg)
Operating Temperature	-30 C to + 150 C
Materials of construction	Head aluminium , body and filter 316 stainless steel , Seal Silicon .
Pressure Equipment Directive(PED) 97/23/EC	Group II Gases Category SEP, Pipe line accessories



### 3 APPLICATION AND INSTALLATION

The application is to filter out any unwanted particles from the air which is used for pneumatic conveying of bulk material. It is to provide a security filter to ensure the conveying air is to an agreed standard of 5 micron absolute as specified by certain industries.



#### Non Tipping tank application



#### Tipping Tanker(Silo)



#### Tipping container with rotary valve for intermodal transportation

The filter is fitted in the pressure line as far from the air mover as practical ( to allow dissipation of heat) or after an air cooler .

The pipe work should be fully supported and no strain should be placed on the filter flanges. Fitted upright position and allowance should be made to be able to remove the outer body should element replacement be required.

There is a drain in the bottom of the filter to allow the liquid to be drained off and disposed off safely.



Arrow on filter head shows direction of air flow

#### 4. Maintenance

Before commencing any maintenance, servicing or making other adjustments, the prime mover and other equipment must be isolated to prevent accidental start-up and the system de-pressurised to atmospheric pressure.

Very little maintenance is required only potentially to clean a blocked element or replace it .

This is limited to cleaning the element and internals when required.

If the Filter restriction indicator is showing red when the system is running then it means the element has become blocked and is ready to be cleaned or replaced.



Filter restriction indicator (in the green OK) fully red then filter needs cleaning .

To remove the element it will be necessary to open the filter body by removing the retaining hand wheel at the bottom of the filter and then unlock the filter from the holding stem .

Once the locking nuts and retaining plate has been removed the element can be removed . Re-assembly is reverse of dismantling the filter , a new security wire will need to be attached to stop the retaining hand wheel from coming loose when on the road.

## 5. CLEANING INSTRUCTIONS

( Never use a jet wash on the actual element it will damage the media and will require replacement)

It can be cleaned by blowing compressed air from inside to outside .

Other methods of cleaning can be used including ultrasonic and reverse flow cleaning . Transairvac have a sperate in detail cleaning instructions about this and is available on request.

If the element is damaged in anyway it will require replacement .

## 6. Spare Parts and Accessories (available on separate sheet on request) download from web site

No	Part No.	Description	Size	No. off
	FIL.024	PLF 1000.		
1	FIL.024/1	Filter head		1
2		Drain seal washer		1
3	FIL.026/2	Head sealing ring		1
4	GAS. PLF1000	Flange Gasket		2
5	FIL.004/26	Nylon Washer		2
6	Std. Stock	Plain Washe(stainless steel)	M12	1
7	Std. Stoc	Spring Washer	M12	1
8	CAP. 10/30	Cap screw	M10x30	8
9	Std. Stock	12mm nut stainless steel 316	M12	2
10	FIL.004/20	Tie Rod		1
11	FIL.004/23	Base Plate		1
12	FIL.004/22	Hand Nut		1
13	FIL.004/8	Filter Element 5 micron	3	1
14	Std. Stock	Screw Plug	1/4" BSP	2
15	VAL. 02	Drain Valve		1
16	FIL.024/3	Filter body	3	1
17	FILA .60	Flange		2
18	FIL.004/25	Element Gasket		2
19	GAU.10	Pressure Gauge (-1 to +3 bar)		2
20		Sight Glass		1
21	FIL.024/4	Filter Restriction Indicator		1
22	FIT.04	Blanking Plug		
23				

Item#	Quantity	Part/Ref No:	FIL.024
Updated by:	Checked by:	Approved by- date	Filename
PLV	DEREK	P WOOD - 12/09/2008	
		PLF 1000	
<small>Transairvac Ltd 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000</small>		Drawing No:	TAV. 04.8.002
		Edition	1
		Sheet	1

## 7. UK & EU DECLARATIONS OF INCORPORATION

### EU DECLARATION OF INCORPORATION



We, **Transairvac International Ltd**, located at **Unit 28 Croft Road Industrial Estate, Croft Road, Newcastle, Staffordshire, ST5 0TW, United Kingdom** declare:

- In exclusive responsibility that the **PLF1000** meets the essential health and safety requirements of the directive(s) detailed below.
- This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this directive, where appropriate.
- The relevant technical documentation is compiled in accordance with Annex VII part B and, where appropriate, a sentence declaring the conformity of the partly completed machinery with other relevant Directives.
- We undertake to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery.

To ensure safety, the product has been assessed for compliance with the following directives and standards, either in part or in full.

Directive	Requirements and / or Standards applied
Pressure Equipment Directive 2014/68/EU	Group II Gases, Article 4, Para 3 Category SEP, Pipeline accessories
Machinery Directive 2006/42/EC	EN 60204-1: 2018

Product type	Pressure Line Air Filter PLF1000
Part number	PLF1000 (each element carries a unique build number)
Product Group	Gas Group II only (Air)
Flow	600-1200 m <sup>3</sup> /hr
Pressure	Working 2.5 barg max 3 barg rated
Temperature	-30°C to + 150°C
Specification	5 micron absolute particle size
Application	To remove particles for pneumatic conveying air for air quality criteria from silo tanker delivery
Marketplace	Bulk Liquid road transport delivery vehicle (only).

TCF reference no: TCF2023/PLF

Name: Mitchell Hill, BEng

Date: 30<sup>th</sup> September 2024

Title: Technical Director

Signature: *M. Hill*

## UK DECLARATION OF INCORPORATION



We, **Transairvac International Ltd**, located at **Unit 28 Croft Road Industrial Estate, Croft Road, Newcastle, Staffordshire, ST5 0TW, United Kingdom** declare:

- In exclusive responsibility that the **PLF1000** meets the essential health and safety requirements of the directive(s) detailed below.
- This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this directive, where appropriate.
- The relevant technical documentation is compiled in accordance with Annex VII part B and, where appropriate, a sentence declaring the conformity of the partly completed machinery with other relevant Directives.
- We undertake to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery.

To ensure safety, the product has been assessed for compliance with the following directives and standards, either in part or in full.

Directive	Requirements and / or Standards applied
Pressure Equipment (Safety) Regulations S.I.2016:1105	Sound Engineering Principles Cat 1, Module
Supply of Machinery (Safety) Regulations 2008	BS EN 60204-1: 2018

Product type	Pressure Line Air Filter PLF1000
Part number	PLF1000 (each element carries a unique build number)
Product Group	Gas Group II only (Air)
Flow	600-1200 m <sup>3</sup> /hr
Pressure	Working 2.5 barg max 3 barg rated
Temperature	-30°C to + 150°C
Specification	5 micron absolute particle size
Application	To remove particles for pneumatic conveying air for air quality criteria from silo tanker delivery
Marketplace	Bulk road transport delivery vehicle (only) mainly EU sales

TCF reference no: TCF2023/PLF

Name: Mitchell Hill, BEng

Date: 30<sup>th</sup> September 2024

Title: Technical Director

Signature: *M. Hill*