



## IPF 25

Inlet particles filter for ACP 15 - ACP 28 pumps

# Operating instructions

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# IPF 25

## II. INLET PARTICLES FILTER

### II.1. DESCRIPTION

The IPF 25 filter is installed on the inlet of a ACP15 or ACP28 pump which handles dust or particle-laden gases (vacuum packing, metallurgy, lamp manufacture, evaporation, etc.).

This filter collects particles with a diameter greater than 25 microns, and thus protects the pumping system without any appreciable pressure drop.

This accessory is designed for the pumping if not very corrosive gases: **it is therefore not recommended for use in microelectronic applications nor during pumping of condensable or polymerizable products.**

#### **WARNING**

**Filter cartridges are flammable : do not use eliminators when pumping flammable products such as oxygen or silane.**

### II.2. CHARACTERISTICS

- Part number: 111649 (**Model IPF 25**)
- Weight: 2.644 lbs
- Connection: DN25 ISO-KF
- Material: Body : aluminium  
Glass microfiber and epoxy binder cartridge
- Tightness:  $1.10^{-6}$  mbar l/s
- Connection to pump: Nipple marked «**Pump ↓**»
- Inlet pressure (mbar): **see Appendix 1**
- Conductance (m<sup>3</sup>/h): **see Appendix 1**
- Dimensions: **see Figure 3**

LIVRE AVEC	REPERE	REFERENCE *
1 centering ring DN25 ISO-KF	<b>B</b>	068224
1 O-ring DN25 ISO-KF	<b>C</b>	079238
1 quick connect clamp DN25 ISO-KF	<b>D</b>	083264

### II.3. ASSEMBLY

As a general rule, accessories whose **tightness and materials are compatible with the pumped gases and the required safety conditions** must be used upstream and downstream of the trap.

The filter is mounted on the inlet port located vertically on the pump. Proceed as follows:

- Assemble according to **Figure 1 or 2** using the connection accessories provided with the filter.
- Ensure that the «**Pump ↓**» label points to the side of the nipple connected to the pump.

The filter is designed for use in any orientation. Care should simply be taken to avoid creating a throttling or low pressure point upstream of the filter which may cause particles to collect by gravity: this will reduce pumping speeds but will not however clog the cartridge.

## II.4. MAINTENANCE

### **WARNING**

Each time the system is dismantled, take all necessary precautions to ensure safety and protection of personnel against possible toxicity, corrosion, and radioactivity of residues. Depending on the nature of the residue, we recommend:

- Purging the system with dry nitrogen before working on it.
- Wearing gloves, goggles and, if necessary, an oxygen mask.
- Thorough ventilation of the room and disassembly under a fume hood.
- Recovery of residue in appropriate containers. If necessary, have them destroyed by a competent organization.

### a) Cartridge saturation

A reduction in pumping speed indicates filter clogging. In this condition, the cartridge causes a pressure drop which varies according to the degree of contamination. It is then necessary to replace the cartridge and clean the filter.

### **CAUTION**

Prior to performing any work on the filter, ensure that the pump is stopped and that the filter is at atmospheric pressure.

### b) Disassembly (Figure 4)

- Detach the filter from the pump and disassemble on a workbench.
- Unscrew the assembling screw **22**: the filter cartridge **21** stays on the base **2**, replace it.
- Remove the o-ring **9** from the base.
- Remove the equipped valve seat from the body **1**.
- Unscrew the assembling screw **17** and remove the washer **15**, the valve **16**.

### c) Cleaning

### **CAUTION**

Never clean the filter cartridge: always install a new one.

Elastomer seal **9** must always be replaced by new one.

### d) Reassembly

- Install the washer **15** on a new valve **16**.
- Position on the valve seat **14** the valve and its washer (**the valve flat face must rest on the valve seat**).
- Install the spring **20** on the washer, than assemble the ressort support **18** with screws **17**.
- Install a new O-ring in the body **2**.
- Position a new cartridge **21** in the body **2**.
- Center the equipped valve seat on the cartridge.
- Assemble the body **1** and secure with the mounting screws **22** and **23**.
- Connect the filter to the pump exhaust port.

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## II.5. SPARE PARTS

Parts to be replaced each time the filter is dismantled to change the cartridge:

REFERENCE	NUMBER	PART NAME	PART NUMBER
21	1	Filter cartridge	111650
16	1	Diaphragm	054196
9	1	O-ring	083539

## DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

We, **adixen Vacuum Products**  
98, avenue de Brogny - BP2069  
74009 Annecy cedex – France

**ISO 9001 CERTIFIED**

declare under our sole responsibility that the following products:

**Accessories for Multistage Roots Dry Pumps / ACP**

**ES25S, IPF 25, IPF 40, SEK 28, SEK 40, NRC 15, NRC 28, NRC 40**

to which this declaration relates are in conformity with the relevant provisions of the following European Directives:

**2006/042/EC: Machinery directive**

**2006/095/EC: Low voltage directive**

when used in accordance with the instruction manual of the product.  
The relevant operating instructions are in compliance with appendix VII, part B.

Those products comply with the relevant provisions of the above Directives and carry the CE marking.

This partly completed machinery must not be put into operation until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the 2006/42/EC Directive.

We, authorized representatives undertake to transmit, in response to a reasoned request by national authorities, relevant information on the partly completed machinery

Signatures:

Annecy, June 13, 2012

Authorized person to compile the relevant technical documentation:

  
Mr. Eric TABERLET  
President

  
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LANGUAGE : ENGLISH

# IPF 25

## FIGURES

Montage du filtre IPF 25 sur pompe ACP 15  
Assembling IPF 25 filter on ACP 15 pump

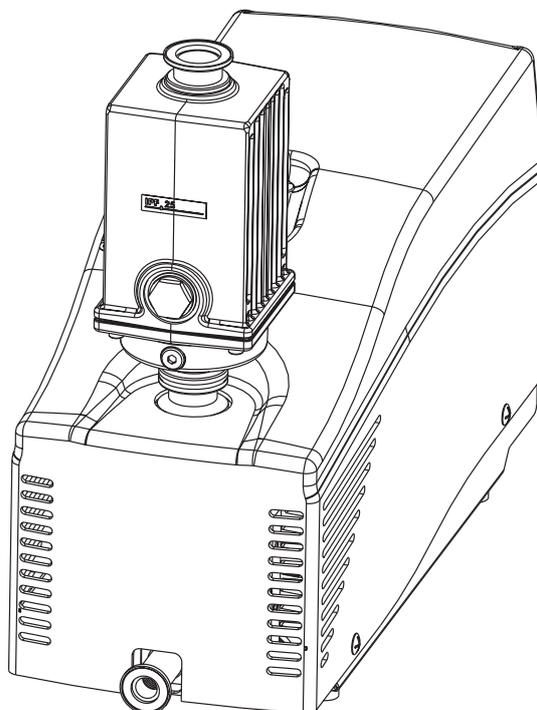


Figure 1

Montage du filtre IPF 25 sur pompe ACP 28  
Assembling IPF 25 filter on ACP 28 pump

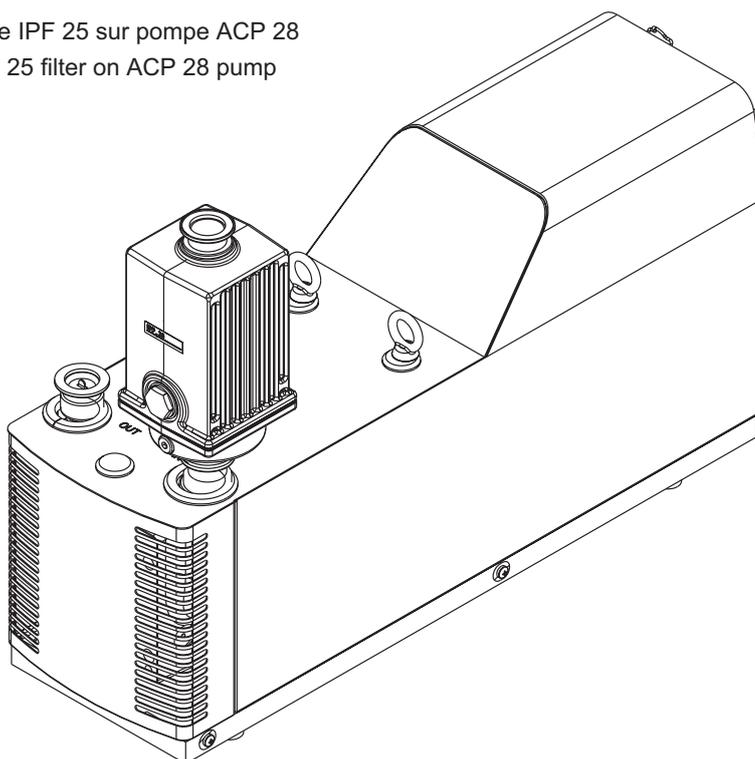
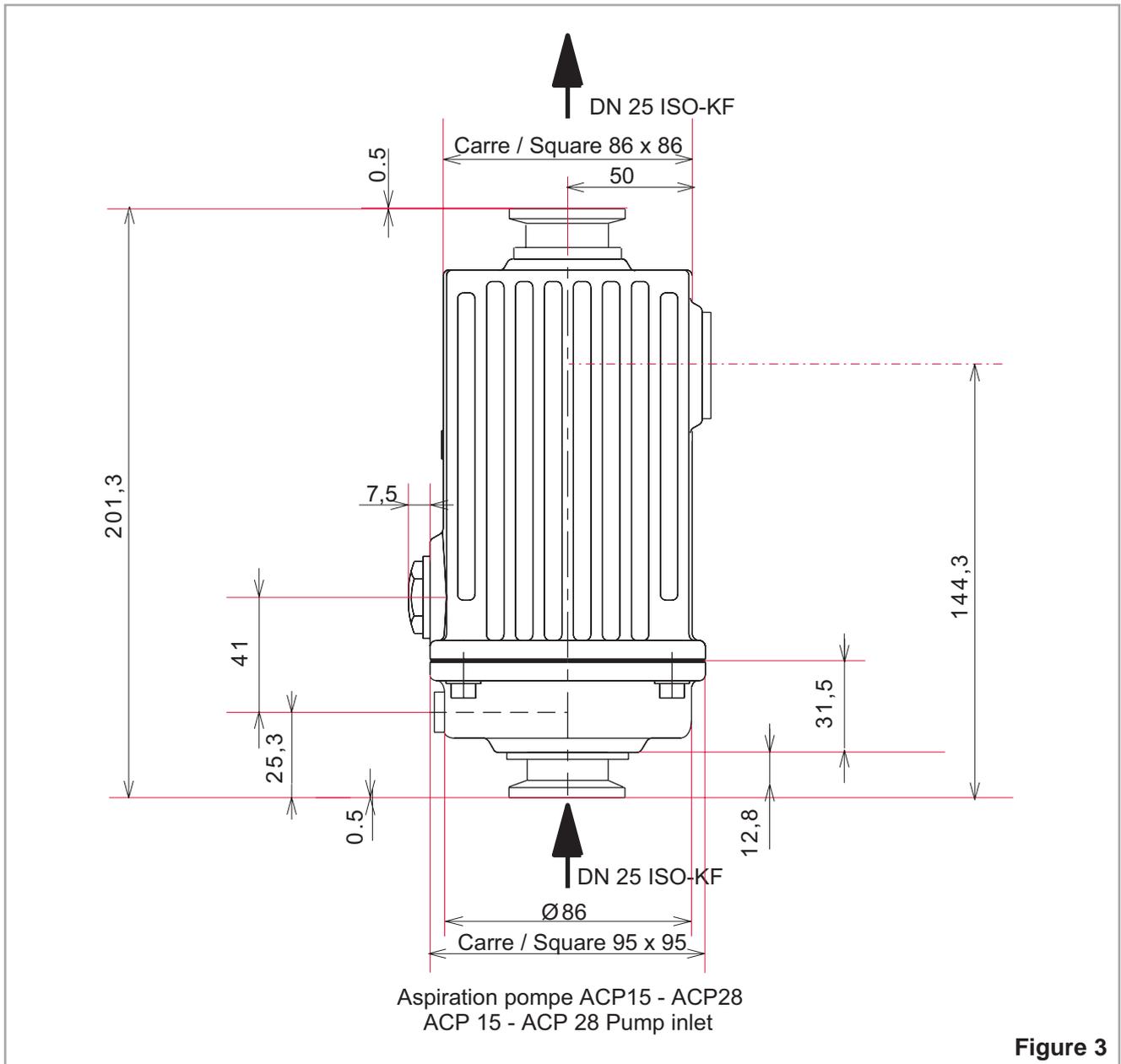
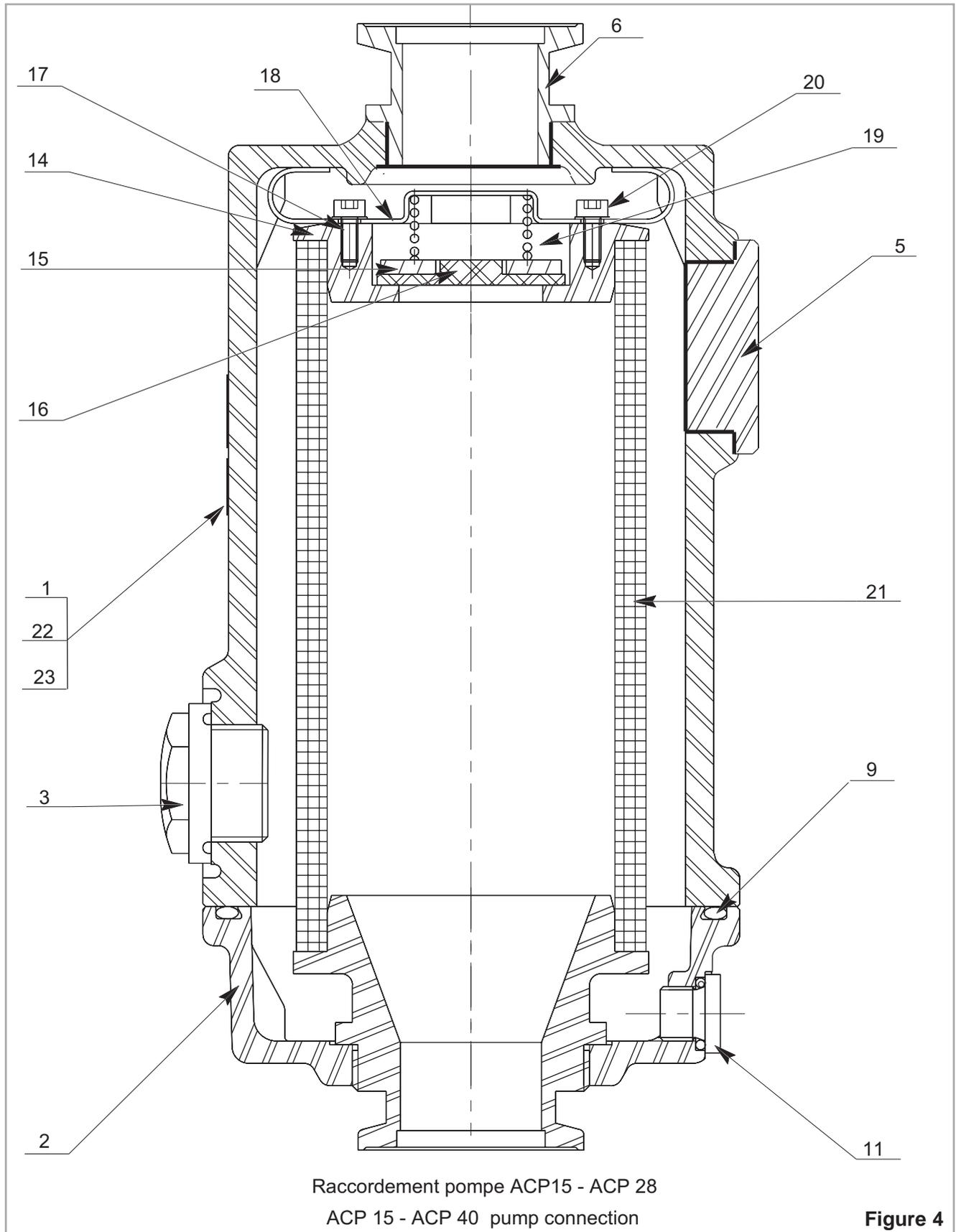


Figure 2



# IPF 25



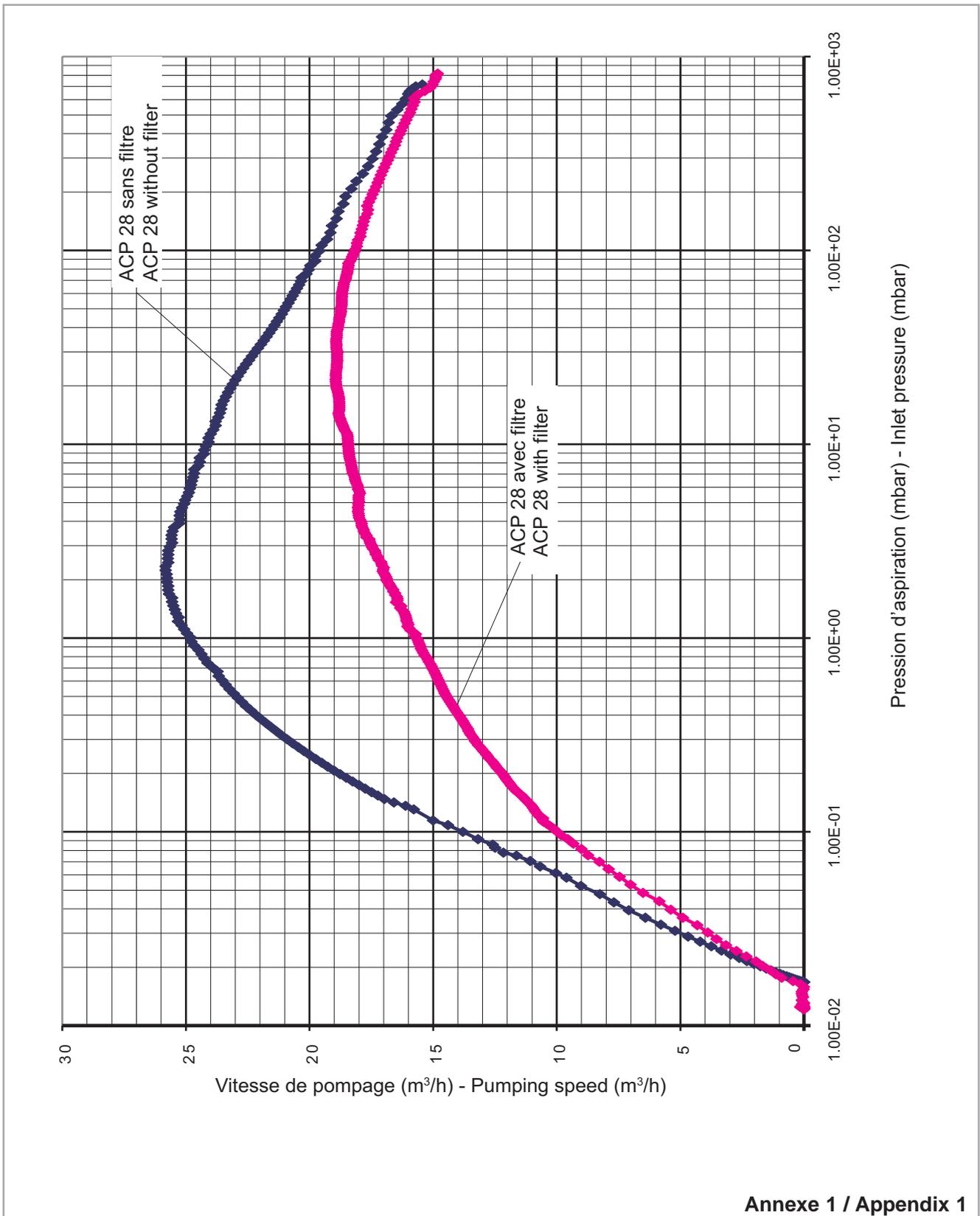
## NOMENCLATURE IPF 25

REPERE REF.	DESIGNATION MATIERE	DESCRIPTION MATERIAL	QUANTITE QUANTITY
1	Corps du séparateur <i>aluminium</i>	Body <i>aluminium</i>	1
2	<b>Corps inférieur</b> <i>aluminium</i>	Base of the separator <i>aluminium</i>	1
3	Voyant de niveau + joint <i>polyamide + élastomère NBR*</i>	Sight glass + O-ring <i>polyamid + elastomer NBR*</i>	1
5	Obturateur <i>aluminium</i>	Blank off flange <i>aluminium</i>	1
6	Embout <i>aluminium</i>	<i>Nipple</i> <i>aluminium</i>	1
9	Joint torique NBR <i>élastomère NBR*</i>	O-ring <i>elastomer NBR*</i>	1
11	Bouchon 1/8 + Joint torique <i>Aluminium + NBR</i>	Plug 1/8 + O-ring <i>Aluminium +NBR</i>	1
14	Support soupape <i>aluminium</i>	Valve seat <i>aluminium</i>	1
15	Rondelle <i>acier inoxydable</i>	Washer <i>stainless steel</i>	1
16	Soupape <i>élastomère FPM*</i>	Valve <i>elastomer FPM*</i>	1
17	Vis CHC M 8 x 3 <i>acier</i>	Screw CHC M8 x 3 <i>steel</i>	2
18	Ressort support <i>acier</i>	Spring <i>steel</i>	1
19	Ressort <i>acier</i>	Spring <i>steel</i>	1
20	Rondelle <i>acier</i>	Washer <i>steel</i>	2
21	Cartouche <i>époxy + fibre de verre</i>	Cartridge <i>epoxy binder+ glass microfibers</i>	1
22	Vis CHC M 5 x16 <i>acier</i>	Screw CHC 5 x16 <i>steel</i>	4
23	Rondelle <i>acier</i>	Washer <i>steel</i>	4

\* suivant norme NFT 40-002/ following norme NFT 40-002.

# IPF 25

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