

ATHENA

INSTRUCTIONS MANUAL **EN**

HANDBUCH **DE**

MANUAL DE INSTALACION **ES**

MANUEL D'INSTALLATION **FR**

MANUALE D'INSTALLAZIONE **IT**

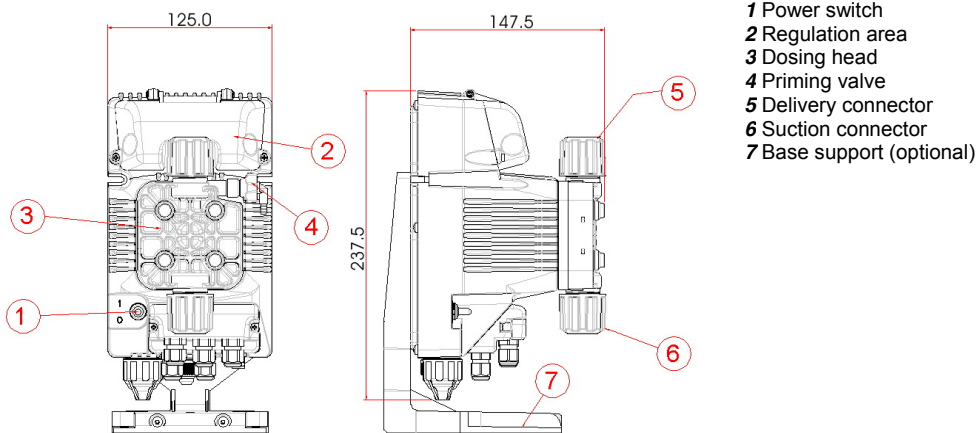
INSTALLATION and Start-Up MANUAL FOR ATHENA SERIES DOSING PUMP

Your pump is part of the pump family listed in the following table:

PVDF					
Model	Pressure	Flow Rate	cc /stroke.	Connections	Strokes / min
	bar	L/h		(mm)	
Athena 1	20	1,5	0,21	4 / 6 – 4 / 7	120
	18	2	0,28		
Athena 2	12	3	0,31	4/6	160
	10	4	0,42		
	8	5	0,52		
	2	8	0,83		
Athena 3	16	7	0,39	4/6	300
	10	10	0,55		
	6	14	0,77		
	2	16	0,88		
Athena 4	5	20	1,11	8/12	300
	4	22	1,22		
	2	35	1,94		
	1	50	2,77		

INTRODUCTION

The dosing pump is comprised of a control unit that houses the electronics and the magnet, and a hydraulic part in contact with the liquid to be dosed.



The parts in contact with the liquid have been chosen in order to guarantee perfect compatibility with most chemical products normally in use. Given the range of chemical products available on the market, we recommend checking the chemical compatibility of the dosed product and contact materials.

MATERIALS USED IN THE PUMP HEAD (STANDARD)

BODY: PVDF
 CONNECTORS: PVDF
 DIAPHRAGM: PTFE
 BALL VALVES: CERAMIC

The pumps are supplied complete with the indispensable accessories for their correct installation. You will find the following in the packaging:

Foot filter, injection valve, transparent suction tube, transparent tube for bleed valve, opaque delivery tube, Pump fixing inserts, bracket for wall mounting, level sensor connector and instruction manuals.

PRECAUTIONS

READ THE FOLLOWING PRECAUTIONS CAREFULLY BEFORE PROCEEDING WITH PUMP INSTALLATION OR MAINTENANCE

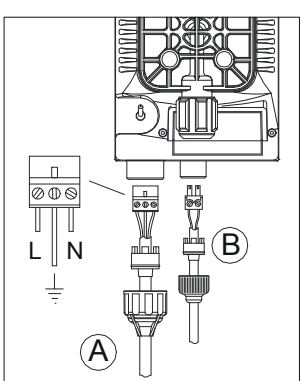
CAUTION! Always disconnect the power supply before installing or carrying out maintenance on the product

CAUTION! Follow the safety procedures relative to the dosed product

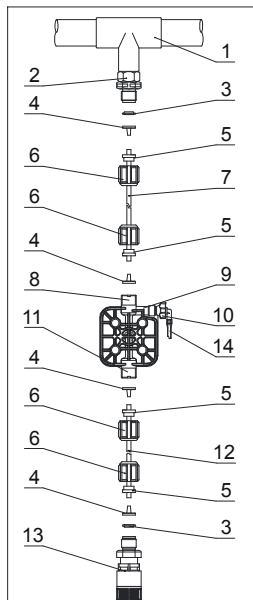
Problem free installation can be achieved by taking due care when handling, installing and commissioning the pump.

- **H₂SO₄ SULPHURIC ACID** All the pumps are tested with water. When dosing chemical products that may react with water, dry all the internal parts of the plumbing thoroughly. To do this, you will need to power the pump and run it at maximum speed with the delivery valve turned downwards. After running for a few minutes, check to see whether water is still coming out.
- Install the pump in a zone where the environment temperature does not exceed 40°C and the relative humidity is below 90%. The pump has an IP65 protection level.
- Install the pump so that any inspection and maintenance operations are easy to carry out, then secure the pump firmly in order to prevent excessive vibrations.
- Check that the power supply available in the network is compatible with that indicated on the pump label.
- If you are injecting in pressurised pipes, always make sure that the system pressure does not exceed the maximum working pressure indicated on the dosing pump label before starting up the pump.

WIRING

	<p>Input A = power supply</p> <p>Input B = Level</p>	<p>The pumps have been designed to absorb small over voltage. Therefore, in order to prevent the pump from being damaged, it is always preferable to ensure that the pump does not have a power source shared with electrical appliances that generate high voltages.</p> <p>Connection with the three-phase 380V line should only be made between phase and neutral. Connections must not be made between phase and earth.</p>
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PLUMBING



- 1 – injection point
- 2 – injection connector
- 3 – seal
- 4 – pipe holder
- 5 – pipe clamp
- 6 – ring nut
- 7 – delivery tube
- 8 – delivery valve
- 9 – pump head
- 10 – bleed valve
- 11 – suction valve
- 12 – suction tube
- 13 – foot filter
- 14 – bleed valve connector

After around 800 hours of work, tighten the bolts in the pump body, applying a tightening torque of 4 Nm.

When making the plumbing connections, make sure that you follow the instructions below:

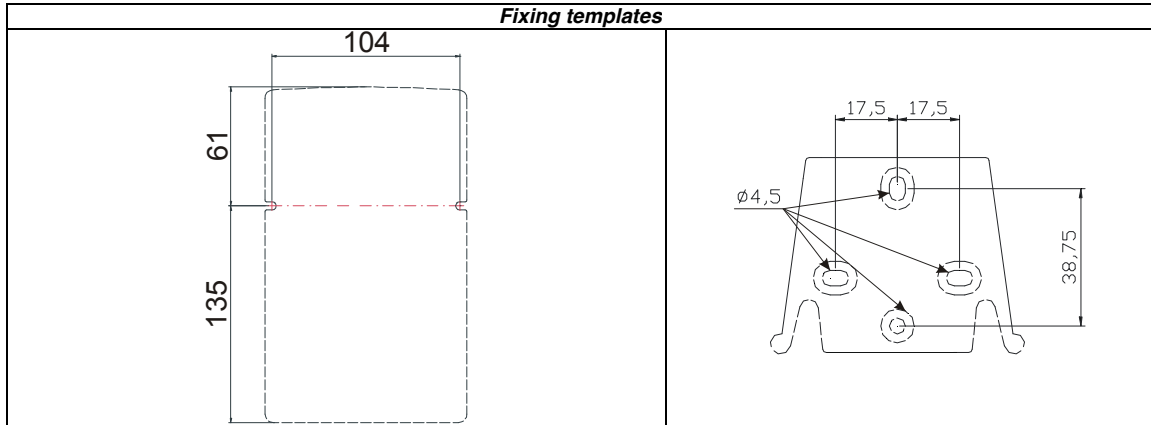
- The FOOT FILTER must be installed so that it is always positioned 5-10 cm from the foot, in order to prevent any deposits from blocking it and damaging the hydraulic part of the pump;
- A flooded suction mounting is always best and is recommended for pumps with a very small capacity inasmuch as it resolves all the priming problems.
- For external applications in which the DELIVERY PIPE may be exposed to the sun's rays, we recommend using a black pipe able to withstand ultraviolet rays;
- It is advisable to position the INJECTION POINT higher than the pump or tank;
- The INJECTION VALVE, supplied with the pump, must always be installed at the end of the dosage flow delivery line.

START-UP

Once all the aforementioned operations have been completed, the pump is ready to be started.

Priming

- Start the pump
- Open the priming connector by turning the knob in an anticlockwise direction and wait for liquid to come out of the pipe connected to it.
- Once you are sure that the pump is completely full of liquid, you can close the connector and the pump will begin to dose.



Trouble Shooting

Problem	Possible Cause	Solution
The pump is working properly but the dosage is interrupted	Valve blockage	Clean the valves or replace them if it is not possible to remove the build-ups
	Excessive suction height	Position the pump or tank so as to reduce the suction height (pump under water head)
	Excessively viscous liquid	Reduce the suction height or use a pump with a bigger flow capacity
Insufficient flow capacity	Valve leakage	Check that the ring nuts are properly tightened
	Excessively viscous liquid	Use a pump with a bigger flow capacity or reduce the suction height (pump under water head)
	Partial valve blockage	Clean the valves or replace them if it is not possible to remove the build-ups
Excessive or irregular pump flow capacity	Siphon effect on delivery	Check the injection valve installation. Insert a back-pressure valve if insufficient.
	Transparent PVC pipe on delivery	Use an opaque PE pipe on delivery
	Pump not calibrated correctly	Check the pump flow capacity relative to the system pressure.
Broken diaphragm	Excessive back-pressure	Check the system pressure. Check whether the injection valve is blocked. Check whether there are any blockages between the delivery valves and the injection point.
	Operation without liquid	Check the presence of the foot filter (valve). Use a level probe that stops the pump when the chemical product in the tank has run out.
	Membrane not secured correctly	If the membrane has been replaced, make sure that the same is correctly tightened.
The pump does not come on	Insufficient power supply	Check whether the pump plate data corresponds to that of the electricity network.

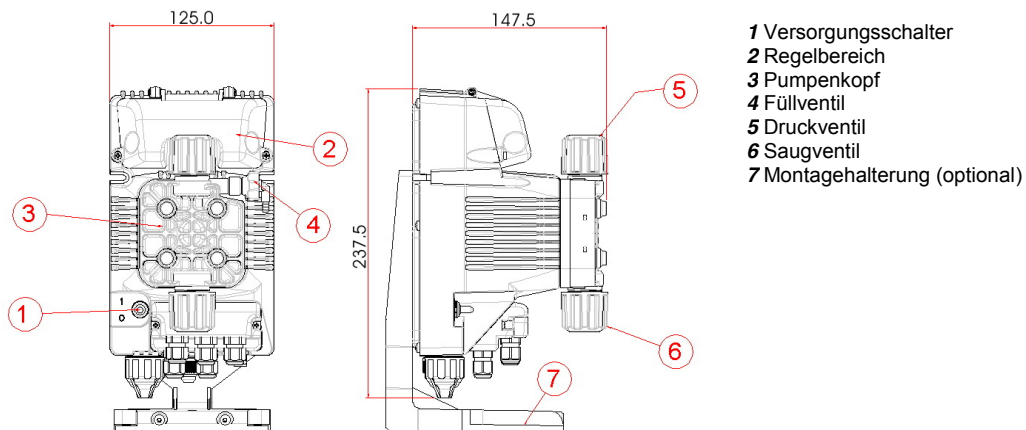
HANDBUCH FÜR DIE INSTALLATION UND INBETRIEBNAHME EINER DOSIERPUMPE DER BAUREIHE ATHENA

Ihre Pumpe gehört zu der in der nachstehenden Tabelle aufgeführten Gerätekategorie:

PVDF					
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EINFÜHRUNG

Die Dosierpumpe besteht aus einer Steuereinheit, in der die Elektronik und der Magnet installiert sind, und einer Hydraulikeinheit, die in ständigem Kontakt mit der zu dosierenden Flüssigkeit steht.



Die Teile, die mit der Flüssigkeit in Kontakt kommen, wurden eigens ausgewählt, um eine optimale chemische Kompatibilität zu gewährleisten und ermöglichen den Einsatz von nahezu allen handelsüblichen Chemikalien. Da eine Vielzahl unterschiedlicher Chemikalien auf dem Markt erhältlich ist, sollte ein chemischer Kompatibilitätstest zwischen dosiertem Produkt und Kontaktmaterial durchgeführt werden.

MATERIALIEN, AUS DENEN DER PUMPENKOPF (STANDARD) AUFGEBAUT IST

GEHÄUSE: PVDF
 VENTILE: PVDF
 MEMBRAN: PTFE
 KUGELN: KERAMIK

Die Pumpen werden zusammen mit allen für die korrekte Installation notwendigen Zubehörteilen geliefert. Der Lieferumfang beinhaltet:

Fußfilter, Injektionsventil, durchsichtiger Ansaugschlauch, durchsichtiger Schlauch zum Anschließen des Entlüftungsventils für manuelles Füllen, matter Schlauch zum Anschließen des Pumpenausgangs am Injektionspunkt, Dübel zur Befestigung der Pumpe, Bügel für die Wandmontage, Schraubverbinder
 Füllstandssonde.