

# LARIUS®

 SAMOA Group

[www.larius.com](http://www.larius.com)

## Automatic pneumatic pump block system

K 500007



INSTRUCTION MANUAL



ENGLISH

Ed. 01 - 09/2019





## **A** WORKING PRINCIPLE

### ***The phenomenon of cavitation in pumps:***

Cavitation is a physical phenomenon involving hydraulic pumps.

### ***Damage due to cavitation or lack of product***

An instantaneous collapse pressure of can cause serious damage to the pump.

The main complications are:

- Deterioration in pump performance due to turbulence caused by cavitation
- Excessive pump vibration, which causes noise
- Irreversible damage to the components inside the pump

### ***Prevention***

The phenomenon of cavitation due to air bubbles or due to lack of product is of great importance and can cause critical issues for the functioning of a hydraulic circuit.

To avoid damaging the pump, LARIUS has developed an automatic system that stops the pump from operating if the pressure in the pumping circuit collapses. The system acts pneumatically and directly on the supply of the pump supply air and should be installed wherever pumping system monitoring by operators is not constant or is absent.

## **B** USE

### OPERATION WITHOUT AUTOMATIC PUMP BLOCK RESET

With the selector (1) in “EXC” (*excluded*) position, the pump normally operates continuously even without product, without the intervention of the automatic pump block.

The “EXC” position is used to perform the first product loading procedure inside the pump with relative bleeding of air in the pumping system, or when it is necessary to replace an empty drum with a full one.



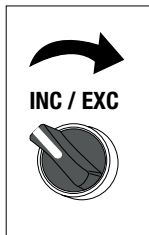
If the pump stops due to intervention of the “**automatic pump block system**”, you will need to identify and resolve the problem that caused the block and then proceed to “Reset” by pressing the button (3).



### OPERATION WITH AUTOMATIC PUMP BLOCK

Once the product loading and air bleeding procedure has been completed inside the pumping system, set the selector (1) to “INC” (*included*).

In this case, if the pump turns idle due to cavitation or due to lack of product, the “**automatic pump block system**” intervenes, interrupting the flow of air supply to the pump, stopping it immediately. This stop is indicated by a red light (2) on the panel.



**CALIBRATION OF THE “AUTOMATIC PUMP BLOCK SYSTEM” BY MEANS OF THE REGULATOR (4) IS CARRIED OUT BY LARIUS DURING THE TESTING PROCEDURE PHASE.**

**CHANGING THE SET VALUES IS PROHIBITED.**

## C DESCRIPTION OF THE EQUIPMENT



The automatic pump block system only works with inlet air pressure greater than 2.5 bar.



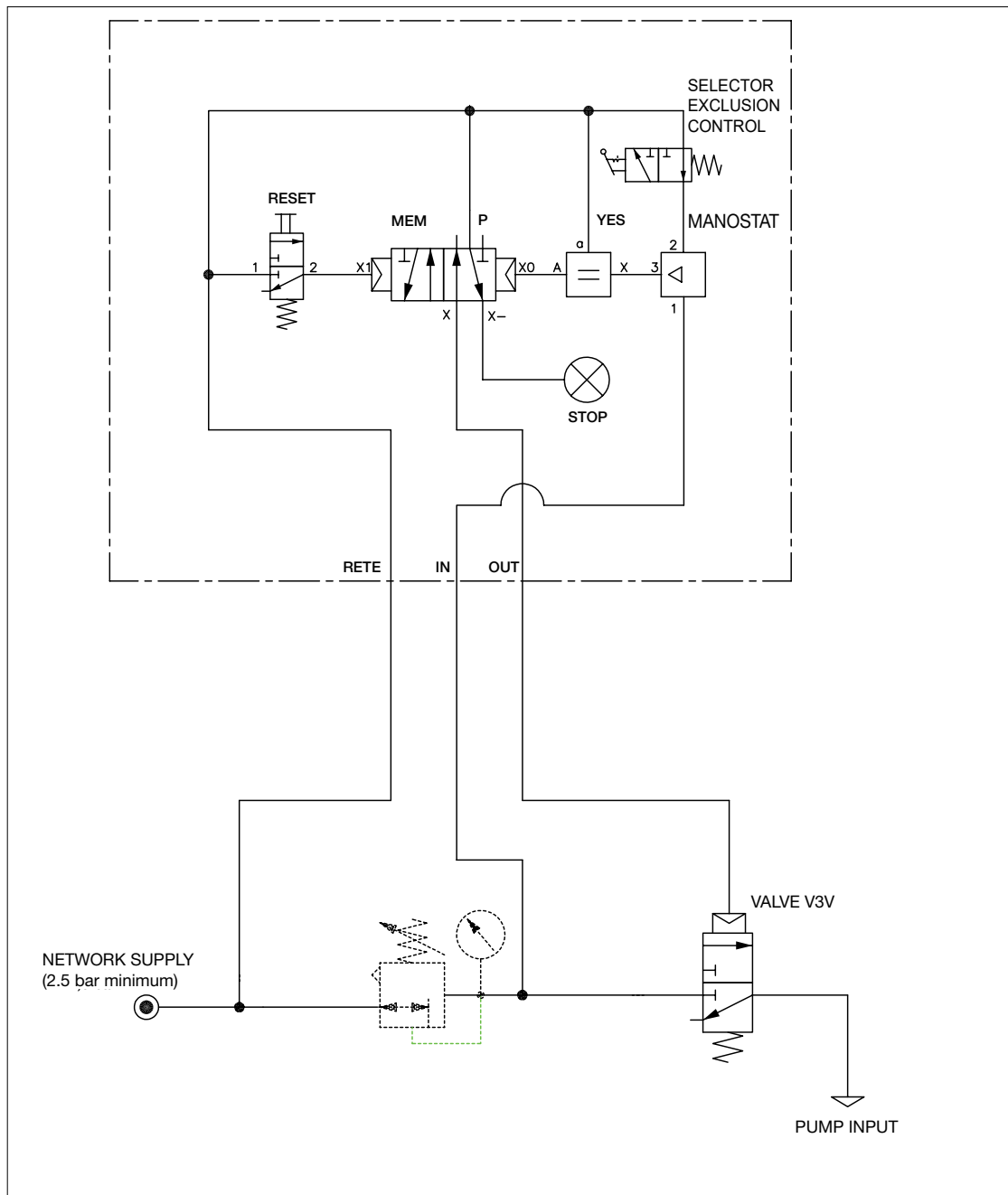
POS.	Description
1	Selector INC - EXC
2	Indicator light

POS.	Description
3	"Reset" Button
4	Manostat calibration screw

### APPLICABLE ON THE FOLLOWING PUMPS:



## D PNEUMATIC DIAGRAM



**LARIUS®**  
**SAMOA Group**

**LARIUS srl**  
 Via Antonio Stoppani 21 - 23801 Calolziocorte (LC) ITALY  
 TEL. +39 0341 621152 - Fax +39 0341 621243 - [larius@larius.com](mailto:larius@larius.com)

[www.larius.com](http://www.larius.com)

