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ACOPULS system

Way of functioning

The ACOVAL microlubrication system of the type PULS are instantaneous working system. They deliver a liquid quantity each time they are used. They can be used:

- (1): to deliver a liquid quantity without using air to drive the liquid
- (2): the most often with a nozzle which focuses or sprays the liquid with compressed air.

Duty cycle

In the case (1) where a liquid quantity is delivered without using compressed air to drive the liquid. It is important to take into account the [superficial tension phenomenon](#). The driving duration and the time interval between two drive must allow an accurate working of the micropumps.

In the case (2) where a nozzle focuses or sprays the liquid, the activation duration must be:

- the same as the hoped time to spray the liquid (sample : a 3 seconds machining operation)
- enough to allow the air pressure to establish at the nozzle and to treat the quantity of liquid delivered by the micropump.

The time space between two drives must be enough to allow a correct system initialization.

Applications

The systems ACOPULS are often used to:

- make short machining operations with a lot of time between them
- lubricate forming operations when the load is manual
- lubricate assembly operations.

Applications at high pace

Two typical samples concerns cutting, stamping and the high pace machining.

The user often want a system of type PULS to work at the same rate as his equipment (his press or his machine tool). It's often a mistake because:

- The number of liquid quantity delivered is important so the liquid flow may be too important even with a low capacity micropump.

- The compressed air pressure may be not able to take a good place in the nozzle ant to work properly. The functioning may be disturbed.

So it is better to use a system of the type [ECOFLUX](#) or [ACOFLEX](#) with a lower speed, the air distributes the liquid during all the time.

The model

This model in a cabinet includes from one to six micropumps.

The liquid flow of each micropump is adjustable.

There is only one air flow setting or an air flow setting for each nozzle.

Standard configuration


The systems are fitted with:

- a 300 ml tank
- for each micropump:
 - a 1.5m transparent flexible hose
 - a copper coaxial nozzle with its fastening

Standard options

- 0,5 ; 1 ; 2 ; 3 ; 5 ; 9 ; 10 litres tank
- Low level switch
- Automatic filling device
- Micropump selection by groups
- Fixing magnet under the system
- Fixing magnet for the nozzles
- Half capacity micropump
- Double capacity micropump
- VITON seals
- Stainless steel sheathed coaxial hoses
- [Nozzles](#)

Samples

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|---|---|
| <p style="text-align: center;">AP1EG-V</p>  | <p>a micropump a solenoid valve an one litre tank with a low level switch a stainless steel sheathed coaxial hose a 150 mm copper coaxial nozzle.</p> |
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AP8EG-2E-V



eight micropumps
two solenoid valves
a five litre tank with a low level switch
two stainless steel sheathed coaxial hoses
two short coaxial nozzles.

AP3EG-3E-V



three micropumps
three solenoid valves
a three litre tank with a low level switch
three stainless steel sheathed coaxial hoses
three nozzles
each micropump are driven separately.

AP4EG-RAU-V



four micropumps
a solenoid valve
an one litre tank with a low level switch
four stainless steel sheathed coaxial hoses
four short coaxial nozzles.

AP4EG-4I-05V



four half capacity micropumps
four selector switches
manual switch
automatic switch
an one litre tank
four stainless steel sheathed coaxial hoses
four nozzles.