



AP

High Pressure Dosing Units for Polyurethanes

The "AP" models are extremely compact and rational high pressure dosing units, specifically designed for:

- foaming small rigid low density moulded products, such as panels, flasks, insulated containers and walking coolers
- cavity filling applications
- spraying processes, for instance applied to the reinforcement of thin-walled parts

where low and medium outputs are of essence.

Cannon "AP" machines are often commonly used in place of low pressure dosing units for similar applications with characteristics which make them a valid and preferable alternative:

- low cost
- compact design
- easy processing
- friendly operator interface
- reduced maintenance
- self-cleaning mixing technology.

The "AP" is an extraordinarily effective solution based on a modern technology with low environmental impact: a great opportunity for all those Companies wishing to increase their productivity and improve the quality of their products with a minimum investment.



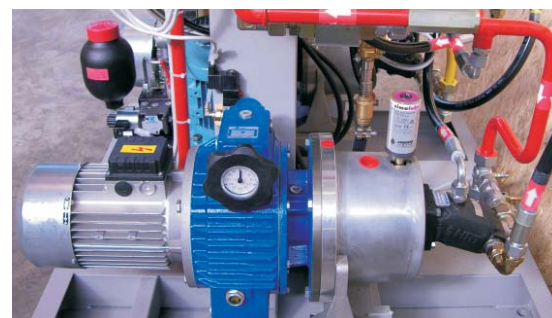
Metering Circuit

Components are metered by means of two Cannon high pressure axial piston pumps with fixed output. Each pump is driven by a dedicated AC electric motor. The machine's frame is completed with drip pans under the pumps.

The rotating speed is manually adjustable through a hand-wheel located on the mechanical variator.

The metering circuit is mainly composed of:

- low pressure filter upstream the pump
- high pressure filter on delivery line
- over-pressure safety valves
- high pressure digital gauges
- stream distributors for component recycle, pneumatically operated.



Chemicals Storage

The Cannon "AP" units are equipped with two 24 liters carbon-steel buffer tanks, which can be pressurized up to 4 bar.

The tanks, completed with minimum and maximum levels, are directly connected to the chemical drums and topped up via an automatic re-filling system, pneumatically operated.

The heat exchanger, fitted with resistance heating element and the thermostatic valve, mounted on the delivery line of the high pressure pump, allow the temperature of each component to be checked and maintained at a steady level.

Cannon "AP" is available in the following versions:

AP 10		AP 30	
Min	Max	Min	Max
40	200	75	380
6 cc/rev		12 cc/rev	

Output range (g/sec) at ratio 1:1 *

Two Cannon HP fixed output pumps

* Specific gravity: 1.2 g/cc for Isocyanate, 1.0 g/cc for Polyol with a maximum allowed component viscosity of 1,900 cps.



**Cannon "AP" 30
Metering Unit**

Mixing Heads

The "AP" dosing machines are equipped with Cannon high pressure "LN" mixing heads which feature a straight-through mixing chamber, a compact shape for easy handling and reduced maintenance.

Each "AP" models are supplied in combination with a dedicated mixing head:

- AP 10 is fitted with an LN 5 head
- AP 30 is supplied with the model LN 10

while other models of dedicated mixing heads are available for spraying applications.

Thanks to the use of the high pressure mixing technology, harmful head cleaning solvents are no longer required, considerably improving the working conditions for the operator and assuring greater safety.



Cannon LN 10

Operator Panel

The new "AP" is easily transported, requires less room for installation but above all it does not need accessory wiring; in other words it can be considered as a "Plug & Play" unit, immediately ready for production start-up!

Machine functions are monitored and controlled in real time by a Siemens PLC S7 series, which is interfaced with a dedicated control panel, based on Siemens "Touch Screen" technology, easy and intuitive to use. The system allows to set and save up to 99 pouring programmes.

"Week-End Cycle" can be set and scheduled when the normal production cycle has stopped or during long shutdown periods, in order to maintain the unit always ready to operate.

Optional Devices

On request, the "AP" models can be supplied with a series of optional devices:

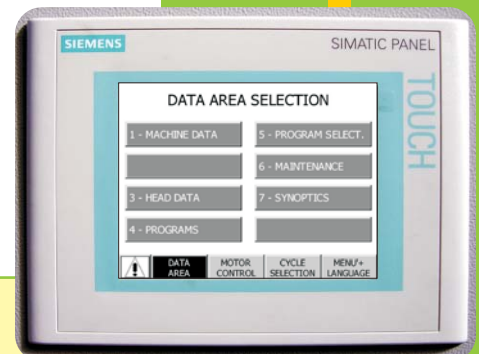
- Output Visualisation System (OVS) that, operating with volumetric flow transducers, allows to monitor in real time outputs and ratio
- pre-setting system where the operator can organize and list pouring programmes to be performed in an automatic sequence
- free standing, rotating, spring boom to support the mixing head.



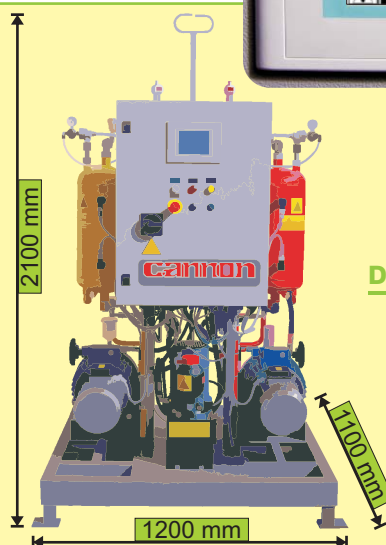
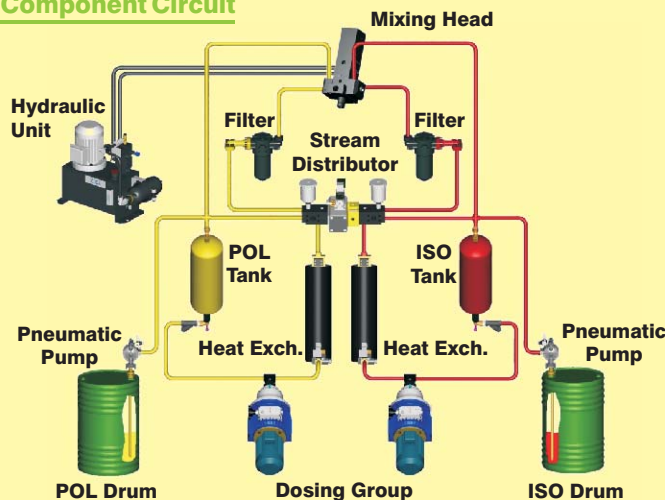
Cannon LN 5 Mix-Head Model

Mixing Head Model	LN 5	LN 10	
Min Output*	20	100	
Max Output*	140	Comp A**	Comp B**
		350	550
Head Weight (kg)	1,2	5,8	

Output (cc/s) calculated considering a viscosity < 1000 cps
 *Total Output **Total Output = (Comp A + Comp B)



Component Circuit



Machine Overall Dimensions


Afros
 Afros S.p.A.
 Via Galileo Ferraris, 65 - 21042 Caronno P.Illa (VA) - Italy
 Tel +39-0296531 - Fax +39-029653305


POLYURETHANE TECHNOLOGY
www.afros.it
www.cannon.com

