



AP

High Pressure Dosing Units for Polyurethanes

Thanks to the great experience in dosing, mixing and foaming of polyurethanes, in addition to the continuous R&D activities and advanced technological solutions, Cannon achieved the ambitious target of installing 10.000 dosing units worldwide.

The “AP” range represents the new family of high pressure dosing units, specifically designed and manufactured by Cannon for the foaming of small rigid low density moulded products, such as small panels, flasks and small insulated containers where low and medium outputs are of essence.

Cannon “AP” machines are a valid alternative to low pressure dosing units, commonly used today for similar applications, thanks to the following characteristics:

- ▶ low cost
- ▶ compact design
- ▶ easy processing
- ▶ friendly operator interface
- ▶ reduced maintenance
- ▶ self-cleaning mixing heads

Well, it 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.

Available Models

The Cannon “AP” high pressure dosing units are available in two different versions:

Cannon AP 10		
Output Range at Ratio 1:1 (1)	Min	2.5 kg/min
	Max	12 kg/min
2 high pressure fixed output pumps (2)		6 cc/rev

Cannon AP 30		
Output Range at Ratio 1:1 (1)	Min	4.5 kg/min
	Max	23 kg/min
2 high pressure fixed output pumps (2)		12 cc/rev

(1) Specific Gravity: 1.2 g/cc per Iso, 1 g/cc per Pol. with a max allowed component viscosity of 1.900 cps

(2) Standard electrical configuration: 360÷440V a 50 Hz.

Tank Group

The Cannon “AP” foaming units are equipped with two 24 liters carbon-steel buffer tanks, pressurized up to 4 bar max.



Tank Group

The tanks, equipped with a minimum safety level, are directly connected to the chemical drums and kept full through 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 steady kept.

Dosing Group

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 rotating speed is manually adjustable through a hand-wheel located on the mechanical variator. The metering circuit is mainly composed of:

- inlet circuit low pressure pump filter
- delivery high pressure pump filter
- max pressure safety valve
- high pressure digital gauge
- stream distributor for component recycle (the two stream distributors are pneumatically operated by a common actuator).



Dosing Group



Cannon AP

Mixing Group

The "AP" dosing units can be only equipped with Cannon high pressure "LN" mixing heads whose peculiarities are the straight-shaped mixing chamber, the compactness and relevant easy handling, the reduced maintenance.

The mixing heads are operated by a dedicated hydraulic unit mounted on the machine base frame.

The configuration currently available foresee exclusive combinations of machines and mixing heads. Particularly the Cannon "AP" 10 dosing unit are fitted with LN 5 head series while the Cannon "AP" 30 are equipped with the LN 10 version.

Cannon LN 5

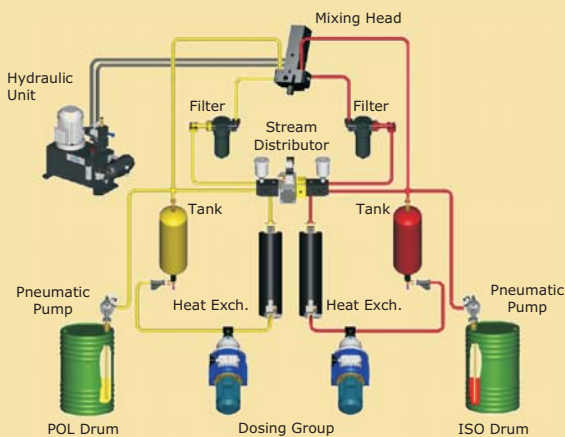
Total Output gr/s (1)	Min Recommended	20
	Max Recommended	140
Oil Consumption (cc/shot)		16
Weight (Kg)		1.2

Cannon LN 10

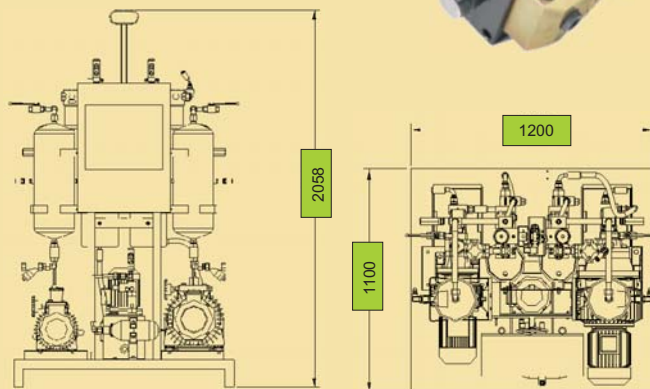
Component	A	B
Total Output gr/s (1)	Min Recommended	100
	Max Recommended	350 550
Oil Consumption (cc/shot)		160
Weight (Kg)		5.8

(1) Output calculated considering a viscosity < 1000 cps.

Component Circuit



Overall Dimensions (mm)



The harmful head cleaning operations using solvents are not anymore necessary, thus considerably improving the working conditions and assuring higher safety.

This means further economic savings thanks to the fully eliminated costs foreseen for the polluting waste elimination.

Control Panel

The main control system is based on a PLC Siemens S7 series interfaced with an operator control panel, easy and intuitive to use.

By means of a proper manual selector, fitted on the control panel, it is possible to set one the 9 available pouring programs.

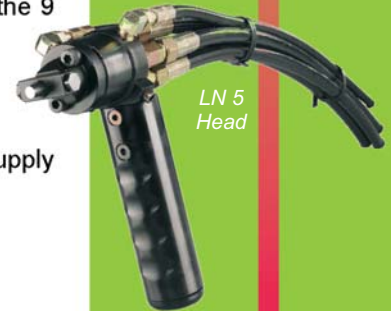
Options Available

Upon customer's request, it is possible to supply the following optional devices:

- air nucleation system
- output visualisation system (OVS) complete with volumetric flow transducers
- mixing head rotating boom (available for Cannon "AP" 30 only).



Operator Panel



LN 5 Head



LN 10 Head

Cannon

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