

*Elastomers
Low
Pressure
Machines*

OMS
Group
Polyurethane Evolution



*EL Series
Cal Series*

ELASTOMERS

The brand new **EL** and **CAL series** of low pressure machines launched by **OMS Group** has been designed and made for the utilisation of high viscosity materials and able to work at high emperature conditioning cycles.

This ultimate version of two-component low pressure units have been created to meet the particular needs most commonly required by urethane processors wishing to optimize both mechanical and technical properties of the final products. In fact, a considered range of optional or additional equipment are included to enable machines of relatively simple specifications to be upgraded to ensure accurate components ratios and output control monitoring.



METERING PUMPS

N°2 independently controlled, high accuracy metering groups suitable for high viscosity materials. Each metering group feeds the mix head and has the following characteristics:

- pumps driven by asynchronous three-phase motors (one for each pump) and controlled by a frequency converter to ensure precise control of pump speed;
- pump and/or motor revolutions are set through the operator panel and coupled to the pouring program (19 standard programs);
- seal gear pumps with related lubricating circuit;
- digital pressure gauge fitted at feed side of each metering pump to display working pressure and complete with maximum pressure safety contact;
- maximum working pressure - 12 bar;
- cartridge filter on suction side of the Iso or Pol pump;

TEMPERATURE CONTROL SYSTEM

The temperature control of each single component is obtained by a closed loop recycle system directly within the tank jacket. For each component it is possible to set working temperature ranging from + 40°C up to +150°C for the **EL series** and from + 20°C up to + 70°C for the **CAL series**.

An independent heated chamber for each single component, insulated by suitable rock-wool panels, encloses component tank, metering pump group, filters and related junction fittings to avoid any eventual "cold" points.

This heating system ensures an adequate even temperature thus avoiding any materials gelling during the non-operative pauses (150°C per the **EL series** and 70°C for the **CAL series**).



COMPONENTS TANKS

50 litres (each) capacity carbon steel components tanks each one complete with:

- Pre-arrangement for both vacuum and nitrogen pressurisation (max 0.5 bar);
- Flanged and removable lid;
- Slow-speed agitator;
- External jacket for components temperature control through refrigerant fluid circulation;
- Manual loading system;



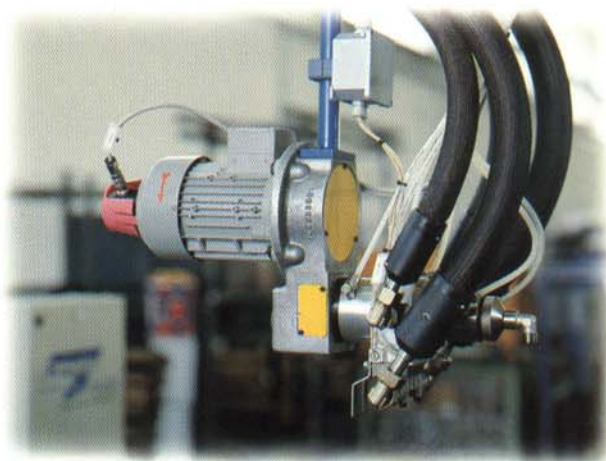
CONNECTION PIPING

Special connection piping between machine and mix head including:

- Stainless steel end-fitting;
- PTFE core with stainless steel braid;
- Electric heating tape;
- Insulating covering in flexible cellular material;
- Plastic protection braid;
- End sheath and wire for electric feeding;

A suitable temperature control system brings to the wished working temperature all piping:

+150°C max temperature for **EL series** and +70°C max temperature for **CAL series**.



MIXING HEAD

Horizontally positioned, boom fitted, recycle type mixing head equipped with pneumatic operation to control components recycle/pouring phases. The head is supplied with a mixing chamber and a dynamic mixer suitable dimensioned according to the required working outputs (6,000 rpm).

The mixing chamber is provided with external cooling jacket. Moreover, the mix head heating is assured by suitable electric resistances.

CLEANING CIRCUIT

18 litres capacity pressurised stainless steel cleaning solvent tank.

Minimum level and related alarm.

Solenoid valve for automatic pouring head cleaning and drying with related timers to adjust either solvent and air quantity.

Relief valve for the cleaning cycle.

Special manual valve to clean the mixing head in case of mains power failure.

CONTROL PANEL

Both **EL** and **CAL series** of low pressure machines are based on Siemens PLC for reliability and world-wide service and part availability.

All machine variables and working parameters are set through a graphic operator panel functioning as an interface between the PLC and the operator.

Full control and operation of all machine functions by means of the PLC which, in case of anomalies, gives an acoustic warning with display of a text message identifying the related problem.



OPTIONAL

- Capacitance probe type level controls;
- Electro-pneumatic loading valves;
- Programmable pouring module - 99 programs
- Chiller unit;
- Low pressure colour dosing unit;
- Head prearranged for 2, 3 or 4 colour metering lines;
- Diaphragm pneumatic pump for refilling from drum;
- LCD colour display;
- Printer;
- Mixer motor with inverter control of mixer speed;
- Pump and mixer rpm readout and display via the operator panel;
- Outputs readout by volumetric meters or by mass flow meters;
- Stainless steel tanks;
- Pre-machine heated tanks (300 l capacity);
- 30 m³/h vacuum pump;
- Tank pre-arrangement for vacuum;
- Traps for vacuum;
- Pressurised tanks, max 0.5 bar;
- Machine tanks of 100 l or 230 l capacity each.

SERIES	OUTPUTS				Tanks Capacity		Max Working Temperature
	R 1:1 l/min	R 2:1 l/min	R 5:1 l/min	R 10:1 l/min	Components litres	Solvent litres	
EL 2,5	Min : 0,4	Min : 0,3	Min : 0,6	Min : 0,6	50	18	150 °C
Cal 2,5	Max: 2,8	Max: 2,1	Max: 2,5	Max: 2,8			70 °C
EL 5	Min : 0,8	Min : 1,2	Min : 1,2	Min : 1,2	50	18	150 °C
Cal 5	Max: 5,6	Max: 6	Max: 5,2	Max: 5,6			70 °C
EL 10	Min : 1,4	Min : 1,4	Min : 1,5	Min : 1,5	50	18	150 °C
Cal 10	Max: 9,6	Max: 9	Max: 9	Max: 9,7			70 °C
EL 30	Min : 4	Min : 4,5	Min : 3,5	Min : 6	50	18	150 °C
Cal 30	Max: 28	Max: 30	Max: 24	Max: 28			70 °C

MAIN PRODUCTS MADE FROM ELASTOMERS

- /// On-line skate wheels;
- /// Skateboards wheels;
- /// Bicycle wheels;
- /// Industrial wheels;
- /// Printer rolls;
- /// Filters for dialysis;
- /// TPU applications;
- /// End - strokes
- /// Valves and gear housing;
- /// Hydraulic seals;
- /// Net and racks for riddles;
- /// Shock absorbers;
- /// Rolls for wood machining

The above data is issued for guidance only.

Detailed specification of any machine is subjected to confirmation.

OMS Group reserves the right to improve the features of its equipment at any time without prior notice.

Impianti OMS Spa

Via Sabbionetta,4
20050 Verano Brianza (Mi), Italy
Tel. +39-0362-9831 Fax +39-0362-983217
e-mail: impianti.oms@omsgroup.it
Internet: www.omsgroup.it



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