



# The **ElastoMix** series

A multi-component PUR elastomer dispensing unit for higher viscosity materials at elevated temperatures



# The Elasto-Mix range of low pressure casting equipment designed to process high performance polyurethane elastomer chemistry.

An elastomer is a polymer with the property of viscoelasticity, manufactured from the mixing of di-isocyanate and long chain polyol at the appropriate temperature, ratio and output. The mixed elastomer casts (fills the mould/ aperture) heat dissipates and the chemicals cure to produce a solid polyurethane elastomer of a versatility not easily matched. Invented as a replacement for natural rubber, polyurethane elastomers offer considerable advantages in customising and engineering elastomers with benefits of environmental stability, abrasion resistance and ease of processing.

The Elasto-Mix series has been designed for maximum reliability, with process parameter control for optimisation of mechanical and technical properties of the elastomer chemicals.

The Elasto-Mix is of modular design with a high standard specification for maximum temperature control on both chemical component tanks including tank insulation. Guided microwave capacitance level controls and slow speed stirrer type agitators for improved chemical component mass temperature regulation are standard. Optional additions include made to size bespoke trace heated insulated lines for complete chemical component circuit temperature control.



## The Elasto-Mix Qube

Robust compact design developed for offshore suitability.



### Chemical component vessels

Each tank is flanged, with removable lid and loading port. Isolation ball valve on outlet and drain point. Silica gel breather to reduce moisture ingress on isocyanate tank. Guided microwave capacitance level probe and stirrer agitator fitted as standard. Pressurised vessels in a variety of sizes are available as an option.



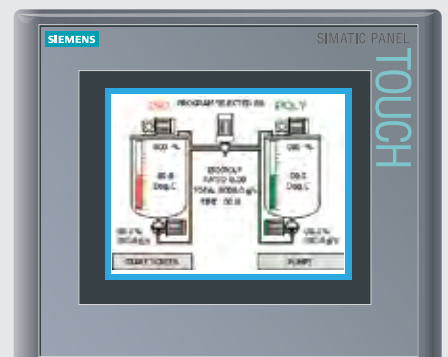
### Additional component metering

Modular design allows optional upgrade by addition extra component metering group for butanediol, catalyst or colour pigment stream.



### Electrical control system

Siemens S7 series PLC with a Siemens colour HMI touch screen system for robust and reliable process control and machine parameter monitoring. Suitable for arduous production conditions and supported internationally by the manufacturer.



## The Elasto-Mix Spray

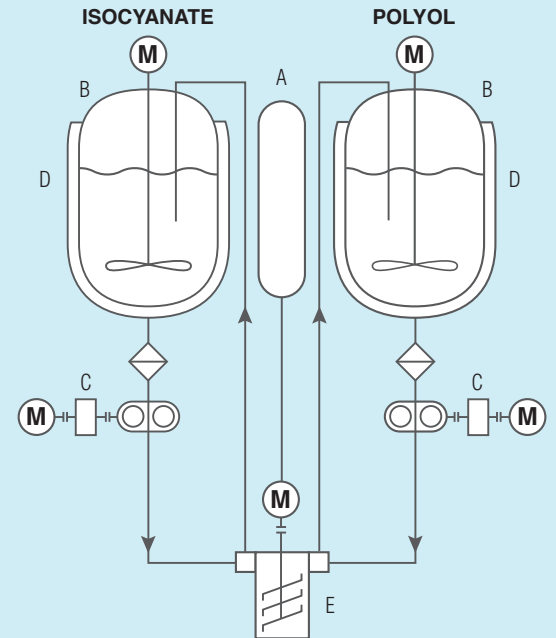
Elastomer mix heads in 2 or 3 component stream versions. Static mixer as standard.



### Operator interface panel

Operator interface panel includes manual air blast, emergency stop and programme selector enabling step by step programming at independent outputs and ratio of polyol to isocyanate.

## COMPONENT CIRCUIT



A. Solvent Tank  
B. Component Tank  
C. Metering Group  
D. Water Jacket  
E. Mixing Head



### Mass flow meter

Optional upgrade for closed loop control for self-correcting chemical metering output operating in conjunction with frequency controller.

## Cleaning circuit

An essential part of machine functions once the reaction has occurred. A stainless steel pressurised tank ensures solvent delivery via dedicated stainless steel braided hose fitted with sliding exhaust valve, manual decompression valve and minimum level alarm.



## Pump metering group

Accurate component metering by high precision volumetric gear pump with Viton double rotary shaft seal. Maximum working pressure 15bar. Output adjusted by variable speed inverter monitoring and controlling the pump. Chemical component ratio variation 1:4 to 4:1 via inverter.



## Pressure circuit

Digital pressure gauge for visual display of working pressure complete with 2 point contact (high pressure - minimum pressure) for added safety fitted to both isocyanate and polyol metering lines to prevent over pressure situations.



MODEL	output range 1:1 litres per minute		tank capacity in litres			machine weight kg	maximum power kW	cooling water reqd @ 10°C litres/minute	cooling duty Kw / hour
	minimum	maximum	POLYOL	ICOCYANATE	SOLVENT				
EM 3	0.6	2.4	70	70	18	650	7	10	1200
EM 6	1.8	7.2	70	70	18	550	7	10	1200
EM 12	3.6	14.2	70	70	18	550	7.5	10	1200
EM 30	8.8	34.0	100	100	18	650	9.5	30	3200
EM 60	15.2	60.8	100	100	18	750	14	30	6000
EM 110	28.0	109.0	100	100	18	850	17	50	8000
Qube 110	28.0	109.0	100	100	18	900	17	50	8000
EM Spray	0.6	2.4	70	70	18	550	7.5	50	1200

Outputs refer to materials with a viscosity <1000 cps at 20°C

The equipment described in this brochure has been designed and manufactured in accordance with Machinery Directive 2006/42/EC, Electromagnetic Compatibility Directive 2004/108/EC Pressure Equipment Directive 97/23/EC and all amendments.

### Services required

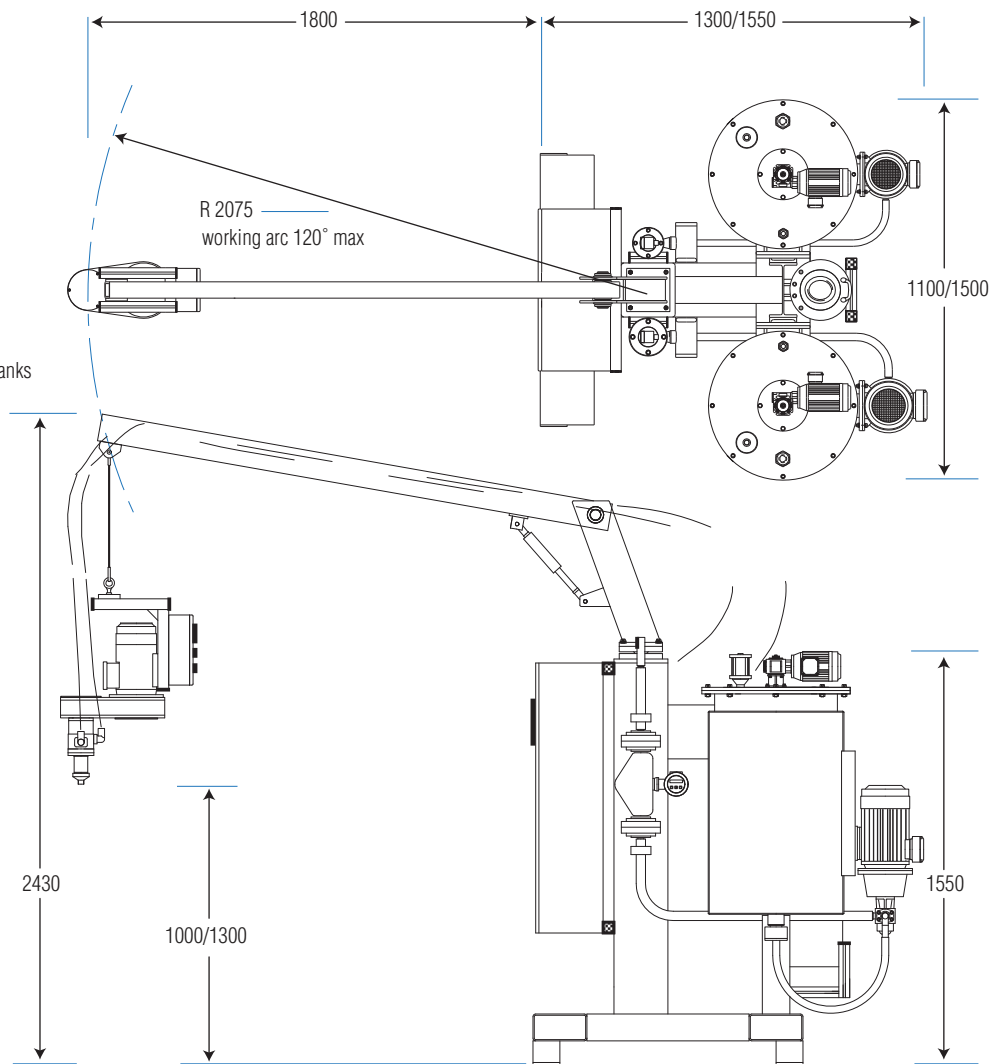
Electrical power 3 phase /415 volt /50Hz dry, clean, compressed air at 8-10bar pressure cooling water either from mains or free standing water chill unit. Factory ambient to be in the range 18°C to 30°C without draughts.

### Standard

- agitator on polyol and isocyanate component tanks
- jacketed insulated polyol and isocyanate component tanks
- guided microwave probe capacitance level
- Siemens colour screen display
- chemical transfer pumps
- electro pneumatic loading valves
- variable speed mixer motor

### Optional

- water chill unit
- colour dosing unit
- catalyst dosing unit
- volumetric flow meters
- Coriolis flow meter
- suction side filter
- 99 pouring programmes
- component tank sizes up to 500 litres
- heated jacketed tanks up to 500 litres
- chemical line trace heating
- static mixer
- vacuum de-gassing
- thermo regulation unit



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Due to the continuous development of processing technology we reserve the right to vary data contained within this brochure.

AGENTS DETAILS