

CJECT^{ONE}

Data Sheet



Cject[®] One — RTM/VRTM Injection Machine

A sophisticated machine with programmable functions and an extensive level of control options.
The Cject One features an unrivalled level of control with simplicity of operation.



Key Features:

- > Purpose designed resin and 316 stainless steel catalyst/hardener piston pumps for high reliability and simple maintenance.
- > Advanced seal technology preventing leaks without the need for lubrication.
- > Unique pivoted pump mounting allowing easy access to entire pump assembly for maintenance.
- > Available with mix ratios to suit polyester/vinylester, epoxy or phenolic systems.
- > Fully enclosed cabinet with full operator control.
- > 110—240V industrial micro-electric PLC control with colour touch-screen operator display.
- > Automatic mix-head mounted on adjustable boom.
- > Unique catalyst/hardener monitoring system.
- > Pre-Injection vacuum test which provides pass or fail feedback prior to injection.
- > Catalyst system which includes a return isolation valve to provide additional security.
- > Solvent level sensor that detects if level is insufficient for operation.
- > Alarm monitored injection 'Pause' control enabling operator to safely stop/start during injection process.
- > Alarm monitored 'Gel Timer' indicating when flushing is required.
- > Low volume, non-pressurized mix-head flush system to ensure simple and quick cleaning.
- > Storage area for hardener and solvent.
- > Inline resin filter allowing cleaning without removing the loading hose from material.
- > Catalyst filtration which also allows cleaning.

Specifications

Material Viscosity Range	Up to 5,000 cPs *for material viscosity above 5,000 cPs please contact Composite Integration
Injection Pressure Setting Range	-1 to 9 bar (G)
Pre-set Injection Volume	0.1—1000 L or continuously
Injection Rate	0.1—8 L/min *dependent on material viscosity

Ratio Range

Polyester	0.5—4%
Phenolic	1—8%
Epoxy 2:1	100:12.5—100:50
Epoxy 1:1	100:25—100:100

Process

RTM	✓
VRTM	✓
Infusion	✓
Material	Epoxy, Phenolic, Polyester or Vinylester



Control

Pressure	PID controlled pressure control
Pressure Sensor	-1 to 19 bar (G)
Parameters	Programmable injection quantities and speeds
Program Storage	20 pre-settable programs

Operating Conditions

Noise Output	< 70 dB
Humidity	20—75% non-condensing
Storage Temperature	0—60°C
Operating Temperature	0—45°C
Maximum Resin System Temperature	50°C

Power Requirements

Electrical Supply	110—230V AC, 50/60Hz, 1A
Internal Fuse	3.15A, 20mm cartridges
Supply Fusing Required	3A (BS1362, IEC 269-3A)
Air Supply Standard	8 bar 600 L/min — dry, non-lubricated
Air Supply Limits	6—8 bar



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Safety and Monitoring

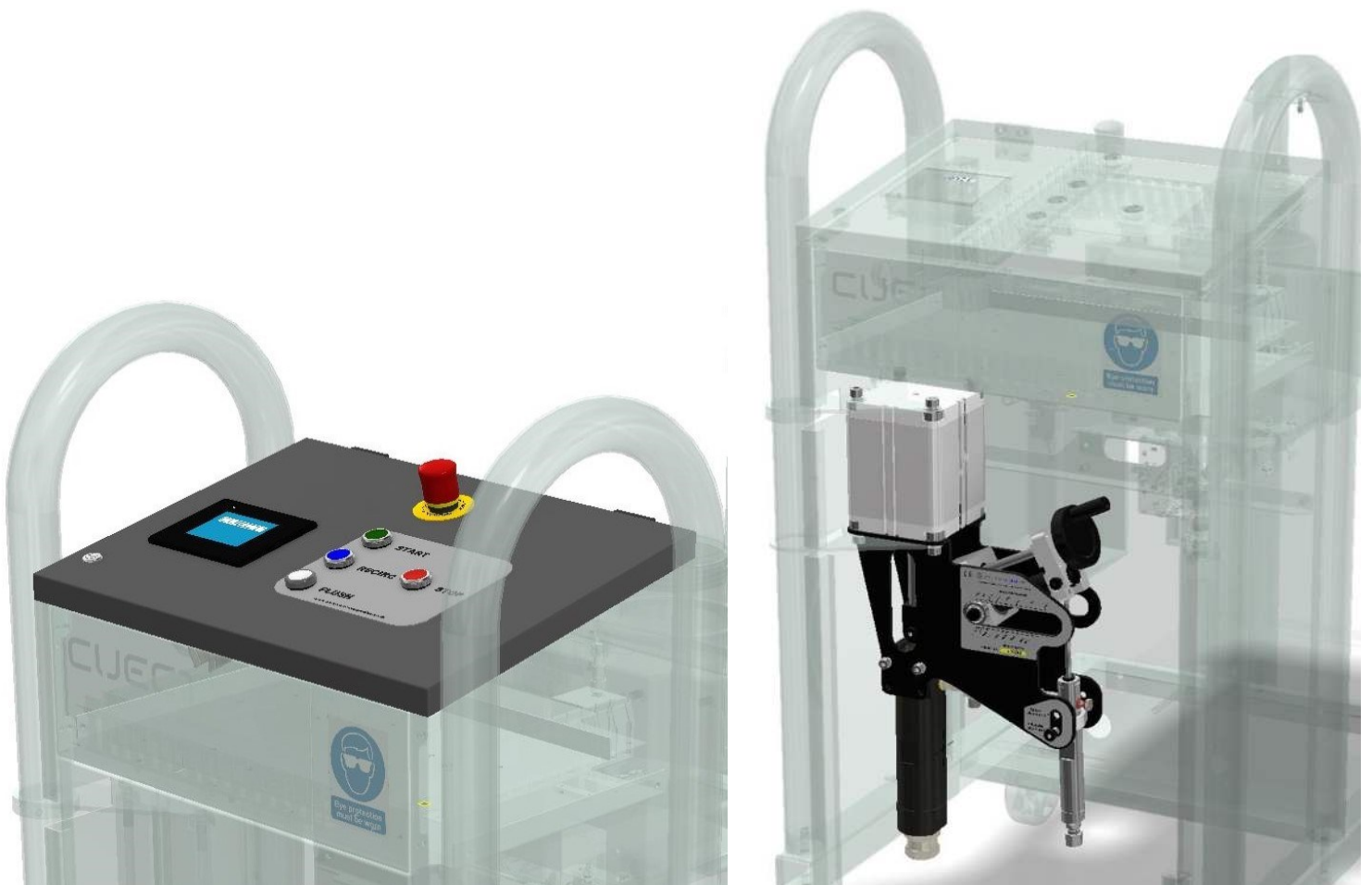
Catalyst Monitoring	Adjustable low pressure alarm
Stall Alarm	Adjustable audible alarm
Gel Alarm	Adjustable alarm to alert when flushing is required

Dimensions

Height	1270 mm
Width	650 mm
Length	850 mm *1500 mm with drum trolley
Weight	100 kg
Maximum Shipping Weight	125 kg *dependant on shipping options

Design Life and Servicing

Nominal Service	1 calendar year
Design Life	10 years



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Machine Options

Polyester Version	0.5 — 4.0%
Epoxy Version 2:1	100:12.5 — 100:50
Epoxy Version 1:1	100:25 — 100:100
Phenolic Version	1 — 8%

Standard Features

Solvent Level Sensor	Automatically measures mould vacuum to give a “pass/fail” feedback
Pre-Injection Vacuum Test	
B Component Return Isolation	

Available Options

Inline PID Heater: A Component	PID temperature control up to 60°C
High-Flow Mix-Head	Optimises material flow
High-Flow Hose (IBC Type)	Maximises machine output with standard configuration for connecting to IBC
Fixed B Component Tank	Polyester/Vinylester version —10 litre
Fixed B Component Tank: Phenolic	10 litre
Stainless Steel Drum Trolley	Suitable for up to 200 litre material barrel

Associated Parts

IBC Connection Kit: A Component Feed	Connects Ciject machine to IBC for A component material
IBC Connection Kit: B Component Feed	Connects Ciject machine to IBC for B component material
IBC Heater	240V flexible jacket with quick release buckles to heat 1000 litre intermediate bulk container
Barrel Heater	240V flexible jacket to heat 200 litre material barrel up to 80°C.
Flush Waste Container	25 litre

To specify a Ciject One machine configuration please contact our sales team through the contact information below or send an email to: sales@composite-integration.co.uk

