



FOUNDRY
MACHINERY AND
SPARES LIMITED

Process Control Units



Specification

The unit consists of a IP66 enclosure for electrical control panel mounted above a purpose built steel cabinet with safety frame around the panel.

The lower steel cabinet contains the positive displacement pumps for the Binder and Catalyst/Hardener pumps which are driven by variable speed a.c electric motors with frequency inverters.

The suction and delivery lines are flexible to suit the materials being used and incorporate pneumatic or solenoid operated non-return valves.

The upper enclosure contains all electrical parts, which are controlled via an integrated pro-face p.l.c with 5.7" black and white touch screen operator interface.

The p.l.c controls all functions on the mixer, sand gates and pumps, with adjustment through the touch screen.

An operator panel connected at the front of the mixer contains the controls for start, discharge & pause, it also contains emergency stop, sand programme selection (3), set time selection (fast, normal, slow), primary and mixing radial movement (if fitted).

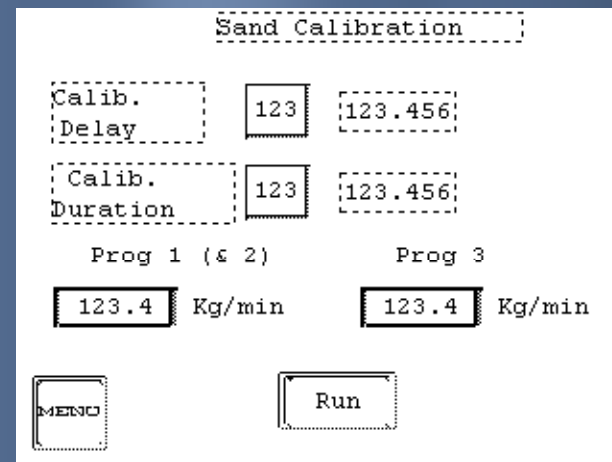
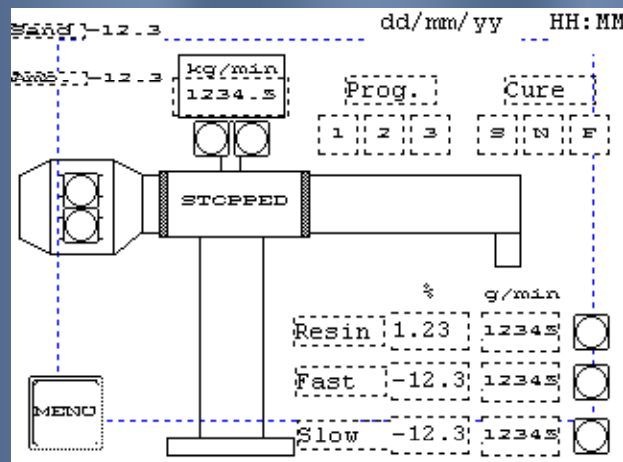
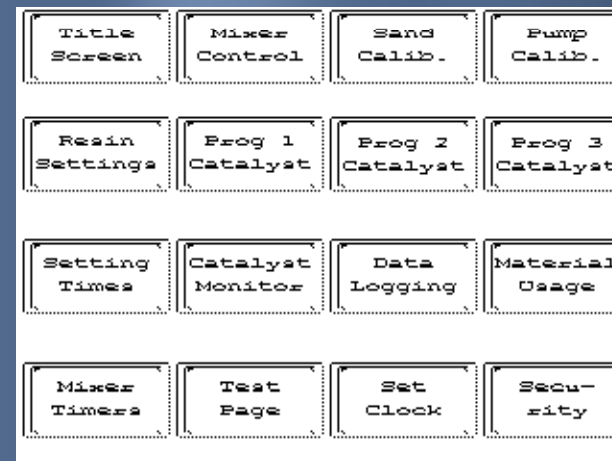
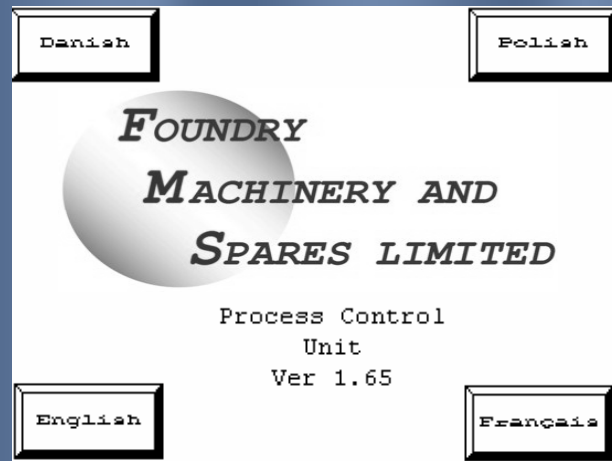
Temperature sensors are included to monitor sand and ambient temperature, and the p.l.c continuously calculates the resin and/ or the catalyst rates to maintain a preset setting time by automatically adjusting the pump outputs.

Proximity switches for each sand are included and linked to alarm function within the unit.

Chemical dosing pumps & non return valves

- Resin Pump – Cast iron gear pump with Viton seals driven by AC Inverter motor
- Slow/Fast Catalyst Pumps – Polypropylene magnetically driven gear pump with PTFE seal driven by AC Inverter motors
- Resin Non return valve – Brass ball valve actuator with Viton seals
- Slow/Fast Catalyst Non return valves – Polypropylene ball valve actuators with PTFE seals

Typical Screens



Typical Screens (continued)

Pump Calibration (g/min)

	5%	10%	20%	40%	60%	80%	100%
Resin	1234	1234	1234	1234	1234	1234	1234
Fast	1234	1234	1234	1234	1234	1234	1234
Slow	1234	1234	1234	1234	1234	1234	1234

Calib. Delay: 123.456; Calib. Duration: 123.456

MENU Spot Calibration Security ON

Resin Settings

	g/min
Prog. N°1	12.34 12345
Prog. N°2	12.34 12345
Prog. N°3	12.34 12345

MENU Security ON

Prog 1 catalyst control

Fast Catalyst

MIN Temp	MID Temp	MAX Temp
12.3 12	12.3 12	12.3 12

Slow Catalyst

MIN Temp	MID Temp	MAX Temp
12.3 12	12.3 12	12.3 12

MENU Security ON

Prog 2 catalyst control

Fast Catalyst

MIN Temp	MID Temp	MAX Temp
12.3 12	12.3 12	12.3 12

Slow Catalyst

MIN Temp	MID Temp	MAX Temp
12.3 12	12.3 12	12.3 12

MENU Security ON

Typical Screens (continued)

Prog 3 catalyst control

Fast Catalyst

MIN Temp	12.3	12	MID Temp	12.3	12	MAX Temp	12.3	12
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Slow Catalyst

MIN Temp	12.3	12	MID Temp	12.3	12	MAX Temp	12.3	12
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MENO

Security CN

	Start	Pause	Re-Start	Dis-charge
Sand	12.3	12.3	12.3	12.3
Prim. Arm	12.3	12.3	12.3	12.3
Screw	12.3	12.3	12.3	12.3
Primary Sandgate	123			

MENO

MORE

Security CN

	Start	Pause	Re-Start	Dis-charge
Fast	12.3	12.3	12.3	12.3
Slow	12.3	12.3	12.3	12.3
Resin	12.3	12.3	12.3	12.3

Pause klaxon

123

Back

Security CN

Setting Times

	Slow Set Time	Fast Set Time
Prog. N°1	12.3	12.3
Prog. N°2	12.3	12.3
Prog. N°3	12.3	12.3

MENO

Security CN

Typical Screens (continued)

Material Usage

	Total	Batch	Last Mould
Resin	-1234567.8	-123456.78	-1234.56
Slow	-1234567.8	-123456.78	-1234.56
Fast	-1234567.8	-123456.78	-1234.56
Sand	12345678.9	12345678.9	12345.6

MENU RE-SET Security CN

Batch Re-set

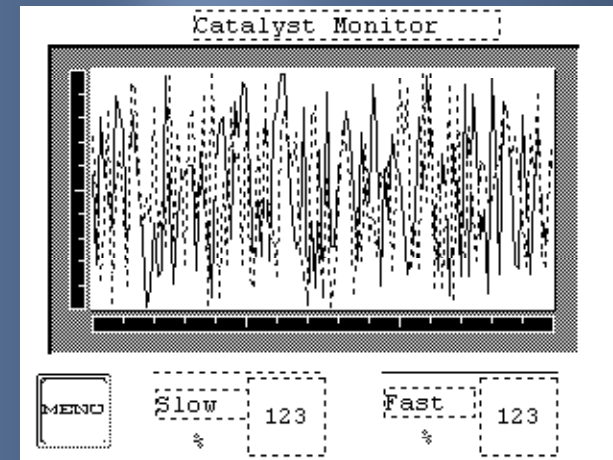
Resin re-set	12	12	12	12.34
Slow re-set	12	12	12	12.34
Fast re-set	12	12	12	12.34
Sand re-set	12	12	12	12.34

Back Total Re-set Security CN

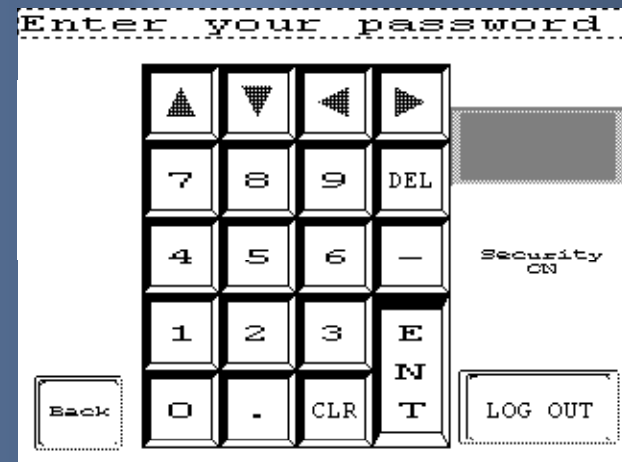
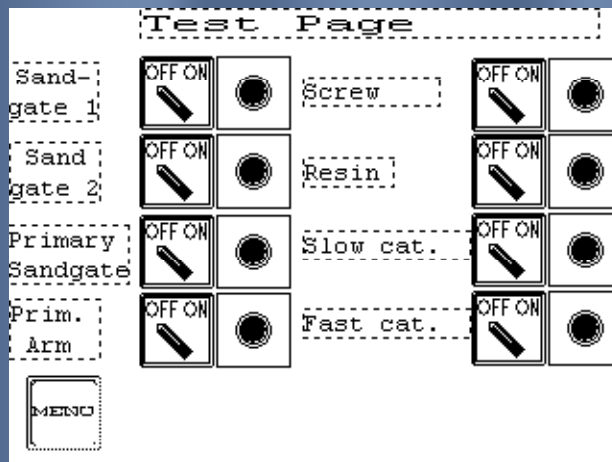
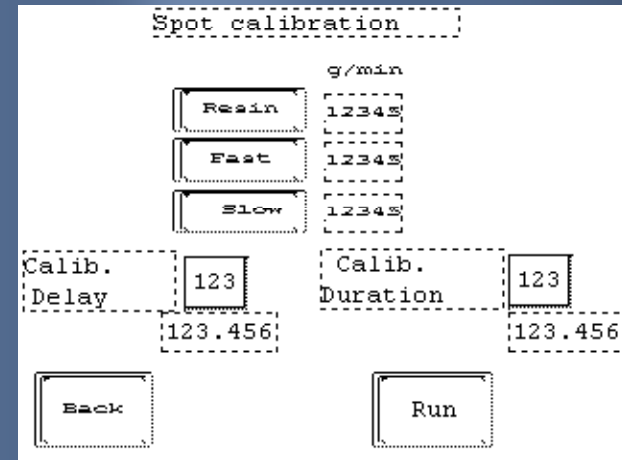
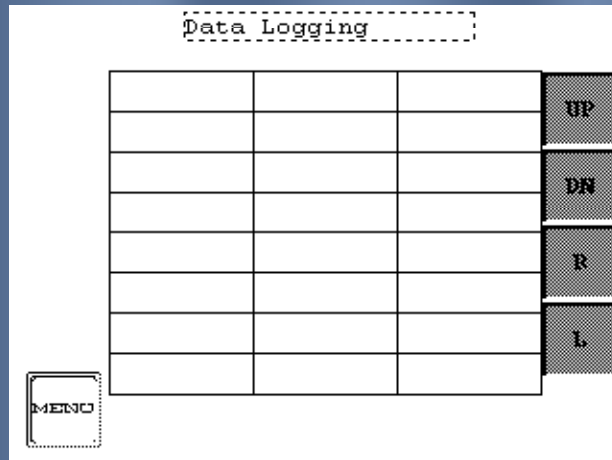
W

Do you want to re-set the material usage figures ?

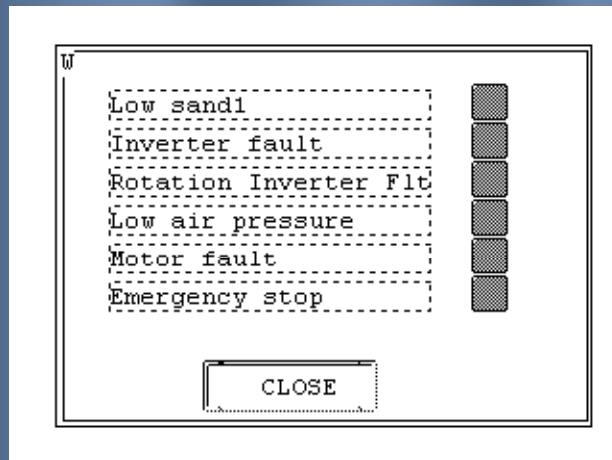
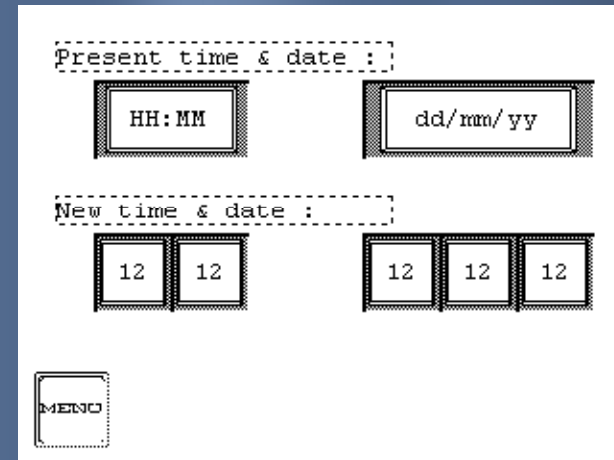
RE-SET CLOSE



Typical Screens (continued)



Typical Screens (continued)



Previous PCU panels



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