FE Fusion Equipment

Gator 2
Automatic Butt Fusion Welding Machine

The Gator 2 range of machines have been designed and developed for use on gas and water pressure polyethylene pipe networks.

The best possible control of the joining process is achieved through an integral computer which controls and monitors all jointing parameters: time, temperature, pressure, movement and sequence.

The welding process will not continue if any of these parameters are not within the specified limits specified by the selected welding standard. Designed and manufactured to meet or exceed GIS/PL2-3:2006 and ISO 12176-1:2017.
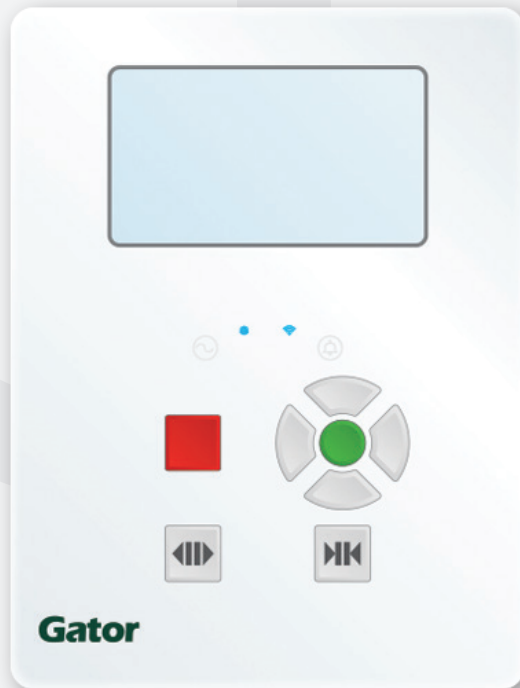
FEATURES

- 21 internationally approved butt welding standards including ISO 21307

- Manufactured to ISO 12176 part 3 and part 4 compliant

- Electronic trim stops protect against over trimming

- Large backlit display with simple user multilingual interface

- Fast clamp system to improve productivity

- Data recording of 2,000 weld records

- High quality electrohydraulic pump, motor, valves and control circuit

Optional

- CalderSafe® Mobile Weld Analyser

- Control Point - Blue Box Data Technology

PIONEERS IN AUTOMATIC BUTT FUSION

The Control Panel

Continuously Monitored

- Temperature
- Movement
- Pressure
- Time
- Trimmer Current
- Pipe Slippage
- Oil Level

Fully Automatic Features

1. Machine sequencing
2. Trim and feathering cycle
3. Pipe slippage check
4. Peak and dynamic drag measurement
5. Heater plate temperature control
6. Initial bead up distance control
7. Heater retraction
8. Pressure control at bead up, soak, fusion, and cool time
9. Out of specification early warnings

Operator Contribution

1. Input pipe, operator details and project details
2. Inspect and approve trim

Preprogrammed Parameters

1. 21 internationally approved welding standards containing specified: Heater Temperatures, Fusion Pressures, Soak Times and Cooling Times
2. Data management systems
3. Diagnostic routines

The Gator 2 Detail

Chassis

- Light, compact and sturdy construction built to resist bending under heavy loads.
- Displacement transducer produces correct bead size at any ambient temperature.
- Fast clamp system to improve productivity and reliability.
- Z link system to provide symmetrical heater pull off, reducing dwell time.
- Removal of fourth clamp to facilitate welding of long spigot fittings such as elbows and tees.
- Lightweight, tough composite plastic liners for 250mm diameter and below.
- Full range of aluminium liners.

Trimmer

- Hard anodised low friction discs.
- Low maintenance.
- Curved blades on smaller machines for optimum cut.
- Electronic trim stops for protection against over trimming.
- Quarter turn quick release fasteners.
- Tough and reliable trimmer motor.
- Auto trim cycle software developed to provide maximum material removal whilst protecting motor.
- Auto feather off feature, leaves pipe ends perfectly smooth and square.

Computer

In addition to the features on the previous page:

- Company logo on screen.
- Intuitive menu selection options.
- Selected weld parameters can be 'locked off' by supervisors.
- Service and calibration notifications.
- Software upgrades via USB.
- Large bright display with tough polycarbonate protective screen.
- Can be connected to printer/scanner.
- ISO 12176 part 3 and part 4 compliant.
- Energy management system to automatically 'switch off' elements of the machine when not required.
- Tough military waterproof cable connectors.

Heater

- Large thermal capacity reduces temperature drop on pipe contact.
- Super fast auto retraction for minimising dwell time - typically under two seconds.
- Tough ABS 'zero contact' reflective heater guards for optimum energy efficiency, safety and contamination free joints.
- Replaceable and easily removed surface heater plates.
- Dual thermocouple temperature sensors. Machine will not operate unless both sensors are reading desired temperature.
- Quarter turn quick release fasteners.

Controller

- Powerful pump motor helps to keep power pack cool under heavy loads.
- High quality hydraulic pump and solenoid valves.
- Auto oil level check.
- Anti drip hydraulic hose connectors.
- Tough stainless steel and ABS protective enclosure with ergonomically designed carry handles.
- Protective computer lid.
- Cable tidy.
- Input power monitor.

Gator

- Modular components gives smallest/ narrowest footprint, ideal for in-trench welding.
- Combined light weight heater and trimmer stand.

Put simply, the best fully automatic butt fusion machine in the world.

Gator 2
Automatic Butt Fusion Welding Machine

Technical Specification

	Gator 2 180		Gator 2 250		Gator 2 315		Gator 2 400	
Pipe Range (mm)	63-180 Ø		63-250 Ø		90-315 Ø		200-400 Ø	
Nominal Input Voltage (V)	110	220	110	220	110	220	110	220
Input Frequency (Hz)	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Min. Generator Output (kVA)	3.5	3.5	4.0	4.0	6.0	6.0	6.5	6.5

	Gator 2 180				Gator 2 250			
	Chassis	Heater	Trimmer	Controller	Chassis	Heater	Trimmer	Controller
Power (kW)	-	1.5	0.75	1.2	-	1.8	0.75	1.2
Height (mm)	320 / 370*	760	440	470	390 / 430*	800	490	470
Width (mm)	570 / 610*	485	390	560	660 / 760*	530	450	560
Length (mm)	430 / 570*	210	270	430	500 / 650*	250	270	430
Weight (kg)	39 / 44*	17	12	46	45 / 51*	21.5	14.5	46
Total Weight (kg)	114 / 119*				127 / 133*			

	Gator 2 315				Gator 2 400			
	Chassis	Heater	Trimmer	Controller	Chassis	Heater	Trimmer	Controller
Power (kW)	-	3.3	0.75	1.2	-	4.0	1.15	1.2
Height (mm)	460 / 500*	900	560	470	580 / 630*	1160	690	470
Width (mm)	690 / 860*	630	550	560	750 / 870*	680	620	560
Length (mm)	625 / 860*	250	270	430	750 / 905*	270	410	430
Weight (kg)	62 / 68.5*	29.5	19	46	76 / 84*	36	32	46
Total Weight (kg)	156.5 / 163*				190 / 198*			

Includes removable protective cradle.

Data Ouput

Printer	Thermal paper
USB Memory Device	Text file / CalderSafe® Weld Analyser
Bluetooth	CalderSafe® Mobile

Control Point and Joint Manager available upon request.

Memory

Internal Memory Capacity	Up to 2,000 Records
Back Up to SD Card	Up to 400,000 Records
CalderSafe® Mobile	Unlimited

Code	Description
G180220AF	Gator 180mm Ø 220v
G250220AF	Gator 250mm Ø 220v
G315220AF	Gator 315mm Ø 220v
G400220AF	Gator 400mm Ø 220v
35886	Spare blade for Gator 180mm Ø trimmer

Code	Description
34292	Spare blade for Gator 250mm Ø trimmer
22568	Spare blade for Gator 315mm Ø trimmer
23121	Spare blade for Gator 400mm Ø trimmer
704504	Barcode scanner
705892	Advanced thermal data printer