



Gator 2 Automatic Butt Fusion Welder

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 12176-1:2012.

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 QA System
- Control Point and Joint Manager

The Control Panel



Continuously Monitored



Temperature (C°)



Movement (mm)



Pressure (bar)



Time (secs)



Trimmer Current (Amps)



Heater Continuity (Ω)



Pipe Slippage (mm)



Oil Level (ml)

Fully Automatic Features

1. Machine sequencing
2. Trim and feathering cycle
3. Pipe slippage check
4. Static 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

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

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.

Gator 2 Automatic Butt Fusion Welding Machine

Automatic Butt Fusion

Technical Specification

	Gator 2 180		Gator 2 250		Gator 2 315		Gator 2 400	
Range (mm)	63 - 180		63 - 250		90 - 315		200 - 400	
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
Generator Rating (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)	305	740	435	500	370	780	490	500
Length (mm)	580	485	300	445	675	530	300	445
Width (mm)	430	255	380	540	510	255	455	540
Weight (kg)	39*	19	13.5	53	45*	25	18	53
Total Weight (kg)	117.5*				134*			

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)	465	890	560	500	580	1160	695	500
Length (mm)	695	630	300	445	715	690	618	445
Width (mm)	630	255	555	540	710	255	405	540
Weight (kg)	62*	34	22	53	71.5*	38.5	32.5	53
Total Weight (kg)	164*				207*			

* Weights excluding protective cradle.

Data Output

Printer	Thermal paper
USB Memory Device	Text file/Joint Manager
Bluetooth	CalderSafe Mobile QA System

* Control Point and Joint Manager available upon request.

Memory

Internal Memory Capacity	Up to 2,000 Records
Back Up to SD Card	Up to 100,000 Records
CalderSafe Mobile QA System	Unlimited

Code

Description

G180110AF	Gator Automatic Butt Fusion 180mm 110v supply
G250110AF	Gator Automatic Butt Fusion 250mm 110v supply
G315110AF	Gator Automatic Butt Fusion 315mm 110v supply
G400110AF	Gator Automatic Butt Fusion 400mm 110v supply
G180220AF	Gator Automatic Butt Fusion 180mm 220v supply
G250220AF	Gator Automatic Butt Fusion 250mm 220v supply
G315220AF	Gator Automatic Butt Fusion 315mm 220v supply
G400220AF	Gator Automatic Butt Fusion 400mm 220v supply
705899	Bluetooth thermal printer
704504	Barcode scanner for ISO standard traceability

CalderTech Europe

Bretfield Court, Dewsbury,
West Yorkshire WF12 9BG, UK
T: +44 (0)1924 469571
E: info@caldertech.com

CalderTech Australasia

Unit 3/30 Juna Drive,
Malaga WA 6090, Australia
T: +61 (0)8 9209 1132
E: sales@caldertech.com.au

