

Electrofusion Welding Machines

WITH SHORT CIRCUIT
PROTECTION (SCP)





Infrastructure for a Sustainable Future.

Since 1988, Georgetown, SC-based AGRU America, Inc. has created innovative engineering plastics solutions for a safer and more sustainable future. AGRU America is part of AGRU Kunststofftechnik GmbH, an Austrian family-owned enterprise in business since 1948. AGRU maintains production facilities in Austria, the United States, and China. AGRU solutions, including state-of-the-art products such as AGRU geosynthetics, concrete protective liners, pipes and fittings, and semi-finished products, are sold in over 100 countries on six continents from over 150 distribution sites. Learn more about AGRU America at <https://www.agruamerica.com>.



Service, Quality, and Dependability

AGRU offers industry-leading service, from customer service to technical support. Dedicated project coordinators ensure prompt attention to detail to address project-specific requirements. AGRU structures each touchpoint with customers in mind, from exploration and specification to payments and shipping.

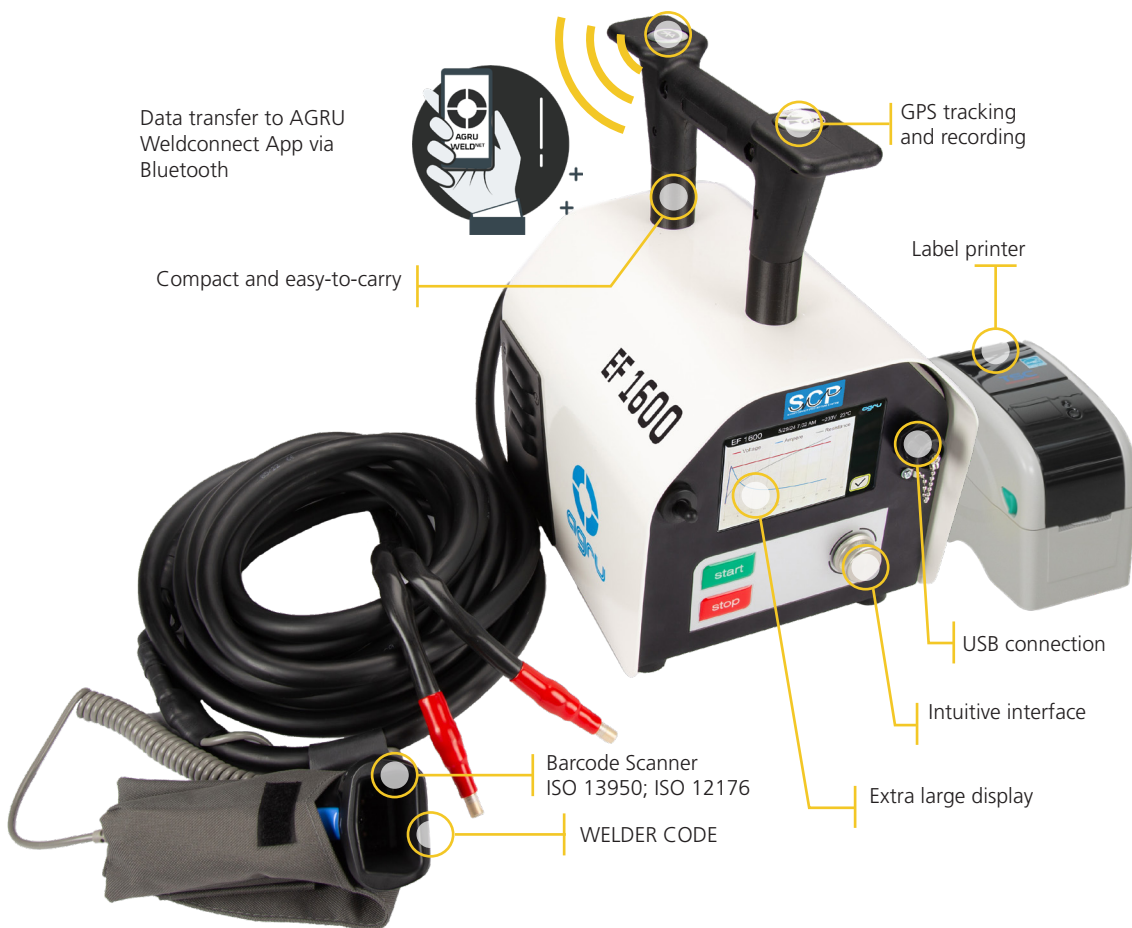
The AGRU quality assurance system complies with multiple international standards. The company's attention to quality from start to finish delivers products that meet and exceed the strictest technical specifications, providing safe operation within civil, mining, industrial, water, and wastewater infrastructures.

AGRU's growing network of production facilities, trained installers, distributors, and engineers offers an unmatched level of dependability across many industries.

An Overview of Electrofusion Welding

Electrofusion welding has been a reliable method for joining polyethylene pipes and fittings used in gas, water, sewage, and industrial applications for decades. Proper, secure, and durable welding connections require high-quality pipes and fittings, experienced and certified welders, and superior welding equipment.

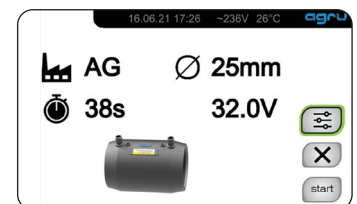
AGRU Electrofusion Technologies are well-suited to support electrofusion across a wide array of projects thanks to its fittings design and capabilities, weld safety with short-circuit protection, and extensive documentation and data management system. See below for a full breakdown of each technology.



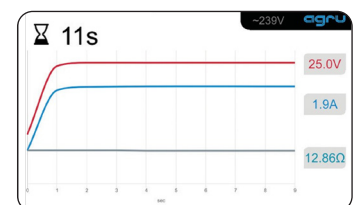
AGRU EF 1600



Step by step instructions



Complete recording and documentation



Progression diagram of welding parameters



AGRU Electrofusion Technologies

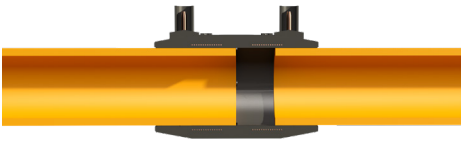
AGRU's electrofusion technology is distinguished by advanced engineering and unique features that ensure durability and reliability. These precision-engineered electrofusion couplers utilize state-of-the-art manufacturing techniques and the highest quality raw materials, tested for exceptional resistance to slow crack growth, corrosion, and UV radiation. AGRU electrofusion design ensures long-term integrity and is supported by an embedded welding wire that prevents corrosion and simplifies maintenance.

To maintain flawless performance, AGRU implements stringent quality control measures. These include post-production resistance testing of every fitting and regular X-ray inspections. These measures are crucial for ensuring reliability in large-scale applications. AGRU further enhances its electrofusion systems with innovative features such as data logging capabilities, user-friendly interfaces, and advanced visualization tools. These advancements improve connectivity, elevate monitoring, and ensure compliance with rigorous quality standards.

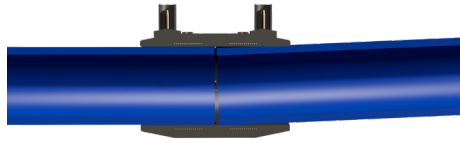


Weld Safety

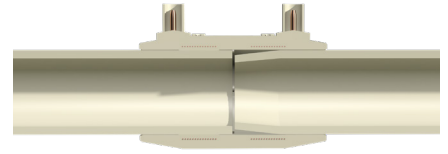
Several factors can influence electrofusion welding if installation and welding guidelines are not followed. These factors can lead to short circuits and potential ignition of the material. For example:



Incomplete pipe insertion or improperly cut pipe ends. If the welding zone is not adequately covered, this can result in excessive heat that can compromise the integrity of the weld.



Angular deviation of inserted pipes. This can create high stress during welding, potentially causing melt escape.



Conical pipe end collapse. Improper production or storage can lead to incomplete coverage of the welding zone, increasing the risk of overheating and melt push-out.

AGRU's electrofusion welding machines with Short Circuit Protection (SCP) support improved weld safety*. This technology allows the machine to detect short circuits and stops the welding process immediately. The system detects short circuits based on variations in the heating wire resistance of the fittings. The system documents and analyzes these resistance changes, which stops the welding process under flagged conditions.

The SCP system is compatible with all AGRU injection-molded fittings ranging from OD 20 mm to OD 500 mm and is implemented in all new AGRU electrofusion welding machines.



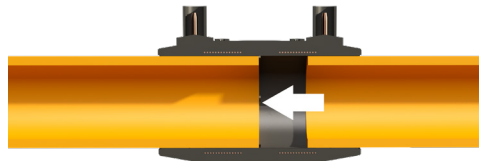
* Notwithstanding all safety mechanisms, it is the welder's responsibility to evaluate the weld preparation, the welding process, and the suitability of the weld for the intended purpose.

AGRU Electrofusion Fittings

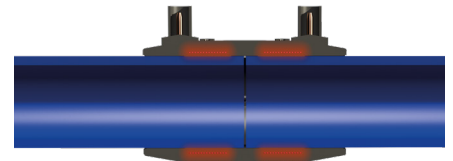
AGRU electrofusion fittings (PE 100-RC or PPR) ensure maximum safety. They have a fully embedded heating wire that is easy to clean, corrosion-resistant, and protected during handling and pipe insertion.



Smooth internal surface for easy and safe weld preparation.



Fully embedded heating wire, eliminating the risk of damage or displacement during pipe insertion.

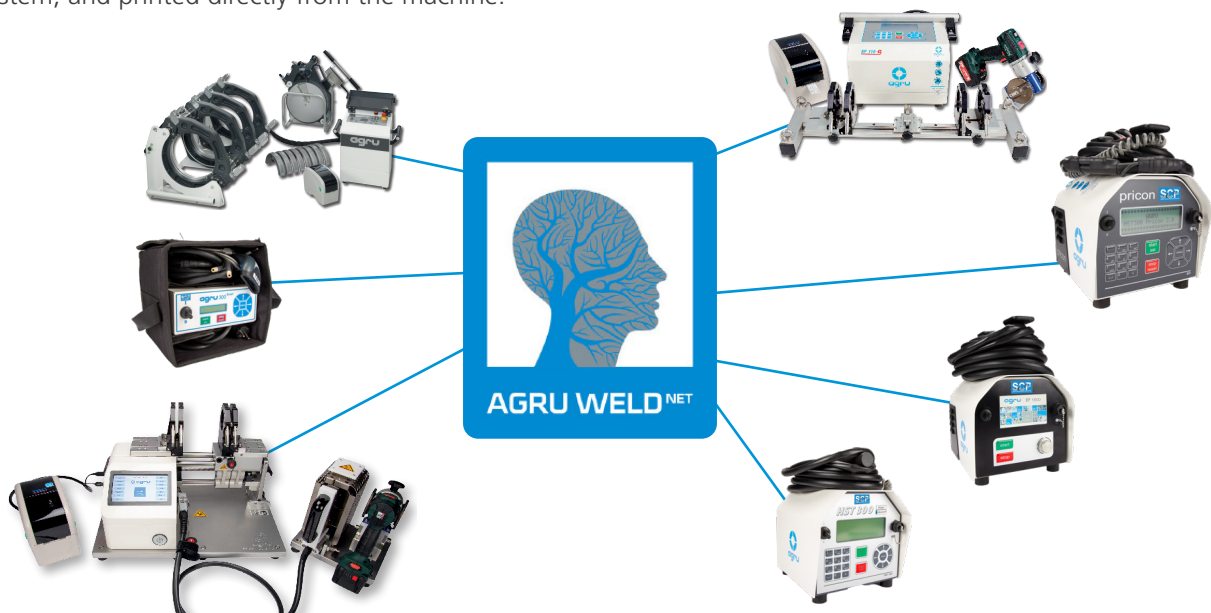


Homogeneous and durable welds through gentle and even heat distribution.

Using AGRU electrofusion fittings and AGRU welding machines with the SCP system helps ensure safety during the installation of your piping system.

Documentation and Data Management System

All new AGRU electrofusion welding machines feature a robust documentation and data management system. The entire weld history can seamlessly integrate into the AGRU WeldNet data management system. This comprehensive system documents, evaluates, and identifies all welds, including those affected by short circuits. The AGRU WeldNet system is at the heart of your entire welding operation. Welding reports can be easily retrieved from the machine via a USB stick, analyzed using the AGRU WeldNet system, and printed directly from the machine.



AGRU EF 1600

The high-performance tool for dimensions up to OD 63". Extra-large display. Complete documentation and step-by-step instructions.

AGRU EF 1600	
DETAIL	INFO
AGRU Code	SHR1600EF00
Automatic data logging	Yes – 20,000 Welds
Internal cooling system	Yes
Operating range, diameters	1/2" – 63"
Power supply	230 V, 50/60 Hz, 2800 W
Output voltage	MAX 130 A
SCP Software	Yes
Dimension	9.3 x 11.6 x 13 in
Weight	26.4 lbs



AGRU HST 300 PRICON 2.0

Small but powerful. A perfect solution for general infrastructure applications up to OD 63".



AGRU HST 300 PRICON 2.0	
DETAIL	INFO
AGRU Code	SHR300PRI00
Automatic data logging	Yes – 20,000 Welds
Internal cooling system	Yes
Operating range, diameters	1/2" – 63"
Power supply	230 V, 50/60 Hz, 2800 W
Output voltage	MAX 130 A
SCP Software	Yes
Dimension	9.3 x 11.6 x 13 in
Weight	26.4 lbs

AGRU HST 300 PRINT PLUS

The all-rounder. Perfect for common applications infrastructure.

AGRU HST 300 PRINT PLUS	
DETAIL	INFO
AGRU Code	SHR300PLU10
Automatic data logging	Yes – 10,000 Welds
Internal cooling system	No
Operating range, diameters	1/2" – 48", with limitation
Power supply	230 V, 50/60 Hz, 3295 W
Output voltage	MAX 110 A
SCP Software	Yes
Dimension	9.3 x 11.6 x 13 in
Weight	35.3 lbs



AGRU HST 300 SMART

Lightweight, easy to handle. The choice for small dimensions in the domestic or industrial sector.



AGRU HST 300 SMART	
DETAIL	INFO
AGRU Code	SHR300SMA00
Automatic data logging	Yes – 500 Welds
Internal cooling system	No
Operating range, diameters	1/2" – 6"
Power supply	230 V, 50/60 Hz, 1680 W
Output voltage	MAX 65 A
SCP Software	Yes
Dimension	10.2 x 10.2 x 15.9 in
Weight	17.6 lbs





Subject to errors of typesetting, misprints and modifications.
Illustrations are generic and for reference only.

AGRU America
500 Garrison Road
Georgetown, SC 29440
USA

(843) 546-0600
info@agruamerica.com
Revision Date: April 1, 2025

