ENGLISH



Discovery

3200T
4000T
5000T

weld the world

WECO

Welding Solutions Since 1997

weco.it

Since 1997, WECO has been developing and manufacturing welding equipment designed to deliver high performance, reliability and continuous operation. Every solution is the result of ongoing investment in research, engineering and technological innovation, with the goal of providing equipment that meets the demands of modern industry.

Located in the heart of North-East Italy, WECO brings together Research & Development, Production, Technical Offices and Warehouse in a single facility. This integrated organization ensures direct control over every stage of the manufacturing process, delivering quality, responsiveness and continuous support to partners across Italy and international markets.

A comprehensive range of welding machines, combined with high product availability, enables fast deliveries and prompt responses to market demands, reducing lead times and ensuring production continuity.
Behind every WECO solution is the coordinated work of our Research & Development, Production, Logistics, Customer Care, Service and Sales teams, working together every day to support customers and partners with expertise, responsiveness and practical solutions, turning every requirement into a reliable solution.



Discovery T

WECO Engineering at the Service of Your Performance

Designed and developed entirely by WECO, the *Discovery T* range is a three-phase inverter solution for TIG DC and MMA welding processes, engineered to deliver outstanding performance, maximum reliability and consistent weld quality, even in the most demanding applications.

At the core of these performances is *Weco Digital Control,* an in-house developed technology based on a proprietary hardware architecture, designed to provide precise welding process control and intelligent energy management.



WECO Hardware

The digital architecture behind *Discovery* technology

At the heart of the *Discovery* range is an advanced hardware platform integrating **WPE**-controlled power electronics and intelligent energy management through the **WDC** circuit, ensuring precision, efficiency and complete control throughout every stage of the welding process.

WDC

Weco Digital Control

WDC monitors and controls the entire welding process in real time, precisely regulating current, voltage and arc dynamics. The result is reliable ignition, a stable arc and consistent performance throughout the entire welding cycle.

WPE

Weco Power Efficiency

WPE optimizes mains power consumption and the overall efficiency of the system, ensuring intelligent energy management and outstanding performance under all operating conditions.

Total control, with a single touch

Quick settings



Large 7″ touchscreen,
operable even while wearing gloves

Status bar displaying active parameters



Favorites for quick access to functions and JOBs

NFC for secure, fast login and immediate user identification

Click-and-rotate control knob

USB port for firmware updates and data import/export (CSV)

Available in multiple languages



7" Touch Display for complete control of the Discovery range.

Product features

Expand the operational capabilities of the Discovery range with dedicated welding management tools.

They enable monitoring of welding operations, data traceability and parameter verification, improving process control, reducing the risk of errors and supporting machine verification, management and documentation activities.



Weld Log

The *Discovery* range automatically records and stores every weld performed, ensuring complete process traceability and continuous activity monitoring.
For each weld, the system stores the sequential number, start date and time, duration, average current and voltage, JOB number (if used) and arc energy.

Import & Export

All data can be imported and exported via USB in CSV format for analysis, archiving and quality control.
A complete machine backup can also be created, allowing configurations and settings to be transferred quickly, easily and securely to another unit.

Guard Limits

When a weld is configured according to the parameters defined in the WPS (Welding Procedure Specification), control limits can be set for the main welding parameters. *Discovery T* displays any deviation from the preset values directly on the screen, allowing the operator to take immediate action and keep the welding process under control.

NFC

NFC technology makes access management simple, fast and secure, allowing operators to unlock the machine, authenticate users and manage parameters in an intuitive and protected way.



Special functions

Technologies designed around the way you work

The advanced features of the *Discovery T* range are designed to simplify the operator's daily work and make even the most demanding welding applications more efficient.

Thanks to integrated settings and control logic, the need for manual adjustments is significantly reduced, ensuring optimal welding parameters from the very beginning.

The welding process always remains under control, allowing welders to focus on the final result while working with greater safety, continuity and consistent quality, even in the most demanding applications.

TIG DC

Features developed for carbon steel, stainless steel and most TIG-weldable materials.



Q-Start

Easier starts, more reliable joints.
Q-Start simplifies joint fit-up during the initial stage of welding, proving particularly effective when working with small gaps or imperfect joint preparation.



Q-Spot

Precise tack welds with minimum heat input.
Q-Spot reduces heat input while increasing tack welding precision. Simply position the electrode on the fixing point and, when lifted, the machine automatically generates the current impulse.



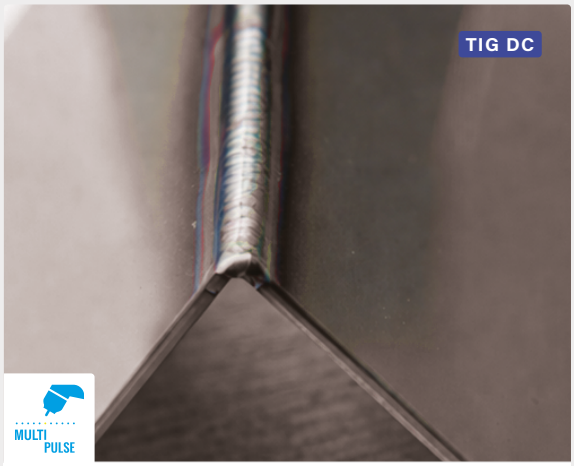
20 KHz

Maximum heat control, outstanding penetration.
WECO's pulse frequency up to 20 kHz generates an ultra-high-density arc, providing total heat control on material thicknesses from 0.5 to 2 mm and excellent penetration during root passes.



Dynamic Arc

An arc that adapts in real time.
Dynamic Arc automatically adjusts the welding current according to arc voltage, ensuring controlled heat input and a consistent weld bead, even when torch stick-out varies.



Multi-Pulse

Greater weld pool control, superior results.
Multi-Pulse introduces advanced adjustment options to optimize heat input and improve weld pool progression, enhancing weldability on thin materials while improving weld bead appearance.

Technical data

The tables highlight the balance between welding current and duty cycle across the *Discovery* range, ensuring outstanding performance in the main welding processes.

Even at the highest output currents, the machines are designed to withstand long and intensive duty cycles, ensuring consistent efficiency, reliability and high performance over time.

Discovery 3200T

Welding mode	TIG/WIG		MMA-E-HAND	
Working cycle (%)	60%	100%	60%	100%
Welding current (A)	320A	260A	320A	260A

Discovery 4000T

Welding mode	TIG/WIG	MMA-E-HAND
Working cycle (%)	100%	100%
Welding current (A)	400A	400A

Discovery 5000T

Welding mode	TIG/WIG			MMA-E-HAND		
Working cycle (%)	40%	60%	100%	40%	60%	100%
Welding current (A)	500A	450A	400A	500A	450A	400A

CU 120 -120 HP

High performance with temperature under control.
The reliability of the cooling unit is essential to ensure weld quality, operational continuity and reduced maintenance costs. WECO Cooling Units extend torch service life and reduce wear, delivering consistent performance even in the most demanding applications.

The HP version provides high coolant flow pressure, making it ideal for use with long torches, while the optional return-line filter reduces contaminants and protects pumps, tanks and fittings over time.

	CU 120	CU 120 HP
P 1/min	1650W	
P max	0,37MPA(50Hz) 0,47MPA(60Hz)	0,41MPA(50Hz) 0,51MPA(60Hz)

Processes

	Discovery 3200T	Discovery 4000T	Discovery 5000T
TIG DC HF	✓	✓	✓
MMA	✓	✓	✓
Gouging	✗	✓	✓


weco

Configurations

Solutions for every application

The *Discovery* range adapts to a wide variety of production environments thanks to its modular configurations and a comprehensive range of optional kits. Each configuration can be enhanced with dedicated accessories to expand the machine's capabilities.
From manual welding to automated systems, from metal fabrication and maintenance to serial production and shipbuilding, *Discovery* provides the flexibility required to tackle every production environment with efficiency and reliability.



Trolley L Evo - H_2O

AIR

Essential, efficient, ready to weld.
The AIR configuration includes the power source only and is the ideal solution for standard applications requiring operational simplicity and high performance.

AIR VP

More space, better organization.
The AIR VP configuration combines the power source with the VP-05 storage compartment, providing dedicated space to always have materials, consumables and accessories available during work.

H_2O

Continuous cooling for the most demanding applications.
The H_2O configuration combines the power source with the Cooling Unit (CU) featuring a glycol coolant, ensuring optimum temperature control and continuous operation, even during the most demanding duty cycles.



Trolley Zero - H_2O

		AIR *(Trolley R - Zero)*	AIR VP *(Trolley R - L- Zero)*	H_2O *(Trolley R - L- Zero)*
Discovery 3200T **Discovery 4000T** **Discovery 5000T**	Power source	✓	✓	✓
	VP-05 storage compartment	✗	✓	✗
	CU	✗	✗	✓

Accessories

More Control. More Comfort. More Possibilities.

Available accessories vary according to the selected configuration and may be supplied as standard, optional or not foreseen.



Trolley R - AIR VP

	Trolley L	Trolley R	Trolley Zero
Twin bottles kit	Optional	✗	✗
Trolley handle kit	✗	Optional	✗
Trolley lifting kit	✓	✓	✗
Spare parts storage box	✓	✓	✓



Discovery 5000 T with WF212
The complete solution for MIG/MAG and TIG welding



WF212

WF212

For advanced MIG/MAG and TIG welding

Thanks to WF212, the Discovery range becomes a complete multiprocess platform, integrating MIG/MAG and TIG welding into a single solution. WECO's in-house developed welding programs expand application possibilities, delivering outstanding performance, maximum flexibility and complete control over every welding operation.

Plug and Play

Ready to use, hassle-free.
WF212 integrates seamlessly with your Discovery, with no additional boards or extra hardware required.

Quick Switch

One button, two processes.
Quick Switch lets you switch from MIG/MAG to TIG directly from the torch.

Processes

	Discovery 3200T + WF212	Discovery 4000T + WF212	Discovery 5000T + WF212
Synergic MIG/MAG	✓	✓	✓
Pulsed MIG/MAG	✓	✓	✓
Manual MIG/MAG	✓	✓	✓
DC TIG HF	✓	✓	✓
MMA	✓	✓	✓
Gouging	✗	✓	✓



Discovery 5000T + WF212

WF212 special functions

Unlock the full potential of MIG/MAG welding

Thanks to WF212, *Discovery* power sources unlock the full potential of MIG/MAG welding processes through a range of functions developed in-house by WECO.

Advanced arc control, penetration control and optimized metal transfer. Every function has been developed to support the welder across a wide range of welding applications, helping them get the most out of the *Discovery* system.

MIG MAG

The MIG/MAG welding process delivers high productivity, precision and weld quality on carbon steel, stainless steel, aluminium and alloys. Developed functions unlock its full potential, ensuring a stable arc, reduced spatter and outstanding aesthetic and metallurgical results.



HC Pulse

Stable arc, maximum control.
HC Pulse ensures precise droplet transfer for fast, clean welds with low heat input. It reduces spatter, increases precision and delivers consistent quality, even in the most dynamic welding applications.



Pwr Focus

Focused energy, deeper penetration.
Power Focus concentrates the arc to increase penetration and reduce the required filler material.
The result is more efficient welding and consistent performance, even with extended stick-out.



Pwr Root

Maximum control from the very first pass.
Power Root delivers a stable and precise arc, ensuring optimal weld pool control for clean, reliable root passes, even on thin materials and joints with large gaps.



Pwr Mix

High performance with maximum heat control.
Power Mix optimizes heat input to reduce distortion and surface oxidation, delivering consistent weld beads, higher productivity and outstanding weld quality.



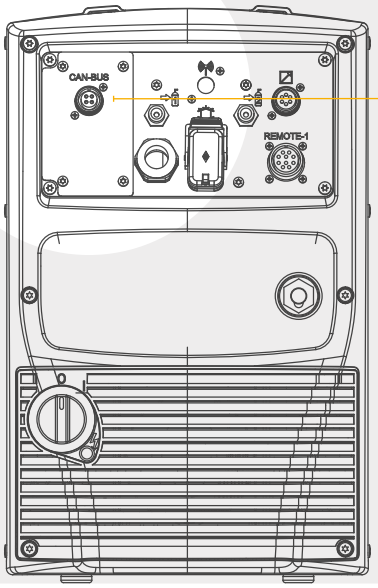
DSI

Every weld starts the right way.
DSI provides fast, clean and controlled ignition, reducing spatter and wire explosions to ensure superior weld quality from the very first moment while minimizing rework.



K-Deep

Constant penetration, reliable results.
K-Deep maintains uniform penetration even when stick-out varies, ensuring a stable weld, reducing defects and enhancing process reliability.



Industrial Automation

WECO welding machines for today's and tomorrow's applications

Discovery T power sources are designed for seamless integration into modern automated production lines, ensuring reliable communication and perfect interaction with production systems, collaborative robots and automation equipment.

The *CAN BUS connector* enables direct connection to *IR-03/04* interface boards, providing a simple and fast solution for automation applications.

For more advanced integration, *IR-05 FIELD BUS* interface boards are available, specifically designed for communication with collaborative robots and automated systems.



IR00

1 Digital input
2 Digital outputs
No external power supply required



IR03

12 Digital inputs
3 Digital outputs
2 Analog inputs
4 Analog outputs
Removable spring terminals
24 VDC power supply



IR04

Easy to configure
Debug functions available for all digital and analog signals, even without connecting the power source
32 Digital inputs
8 Digital outputs
4 Analog inputs
4 Analog outputs
OLED display
Removable spring terminals



IR05

Integrates Discovery systems with collaborative robots and automated production systems.

Compatible with *PROFIBUS, DeviceNet, Ethernet/IP, PROFINET, CANopen, EtherCAT* and *Modbus TCP.*

Ensures reliable data exchange and rapid integration into existing production systems.


WECO
WECO
WECO

Weco Srl
Corso Noblesville, n. 8
35013 Cittadella (PD) · Italy
Tel +39 049 7301120 · info@weco.it
weco.it

Management System ISO 9001:2015
TÜVRheinland CERTIFIED
www.tuv.com ID 9000002669

DISTRIBUTOR: