



WELD THE WORLD



POWER PULSE DIGITAL
FEEL THE DIGITAL EXPERIENCE



Master a technology able to give you excellent results. Discover how perfect welds can be easily achieved.

POWER PULSE DIGITAL

The MIG/MAG and MIG/MAG Pulsed welding machine boasts an outstanding performance in welding common and stainless steels, aluminum and alloys.

The special programs created by our labs ensure our customers excellent cosmetic and metallurgical results.

The latest **Weco Digital Control Technology**, the **Weco Multivoltage**, **PFC** and the **Quick Setting** user interface system ensure perfect results in any operating condition. MMA, TIG DC LIFT and GOUGING processes are also available.

The 400A duty cycle at 100% (40°C) allows you to work continuously, even with applications requiring high work cycles.



Wire feeder unit WF205 equipped with a full control panel ensures availability of all the functions from the work station

Rotary wire feeder

Torch holder

The practical handles allow the power source to move with ease in any working environment

The sturdy and safe cable fixing prevents the signal cable and the power cable from getting damaged, thus prolonging the life of the extension lead

Water cooling unit - available in 2 versions up to 1600 Watt cooling capacity / large water tank / excellent torch cooling reduces costs for torch spare parts

Lockable castor wheels to improve safety in working environments



Weco Digital Control Technology

Instantly assured stability and optimal arc balance, from arc ignition to completing the welding operation. Through the previous generation of **DSP (Digital Signal Processor)** the inverter digital management permits the welding characteristic to regulate quickly and accurately. The welding parameters are dynamically controlled and changed in real time.



Weco Multivoltage

The power supply will never be an issue, even in unstable conditions (such as motor-generators). The machine can be connected to any three-phase power supply, as it automatically adapts to the voltage available on site in order to ensure perfect performance at all times. The range of three-phase power supplies starts from 230V ($\pm 15\%$), to 400V ($\pm 15\%$), up to 440V ($\pm 15\%$).



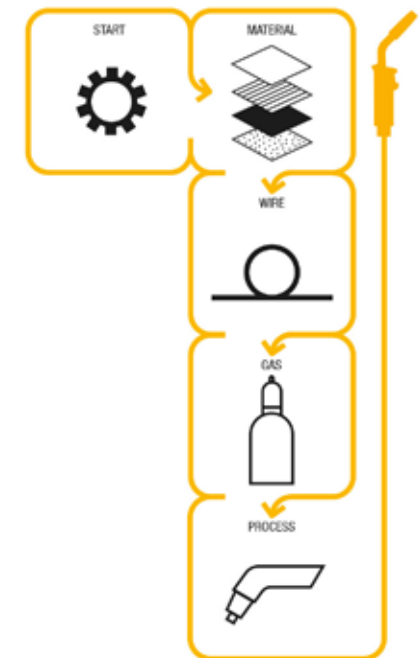
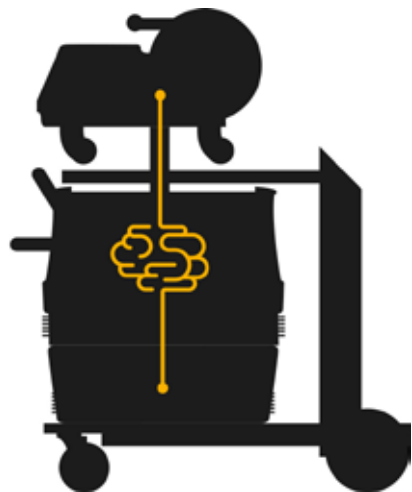
Weco PFC

The Power Pulse Digital greatly reduces the total cost of the required power consumption by means of the **PFC (Power Factor Corrector)**. What are the savings? A 30% saving in power consumption when compared to a traditional inverter and a 45% saving when compared to an electromechanical welding machine.



Quick Setting

Very intuitive and user-friendly interface, even for the less experienced welders. The large 5" high resolution display allows the parameters to be easily read even in poor lighting conditions. In addition, 7 segments have been added to the display, in order to allow welders to view the main parameters even when they wear a welding mask. The Quick Setting system makes it easier to correctly set up the welding parameters, greatly reducing the machine set-up times.





High Control (HC)

The new Pulsed HC (High Control) boasts a very quick arc control in order to optimize drop detachment with greatly reduced power.

Features

- More stable welding arc, with almost no spatter or micro-projections
- Very reactive arc to the torch movement
- Reduced energy transmitted to the welded workpiece
- Very linear transfer with optimal edge wetting at a very high speed of execution

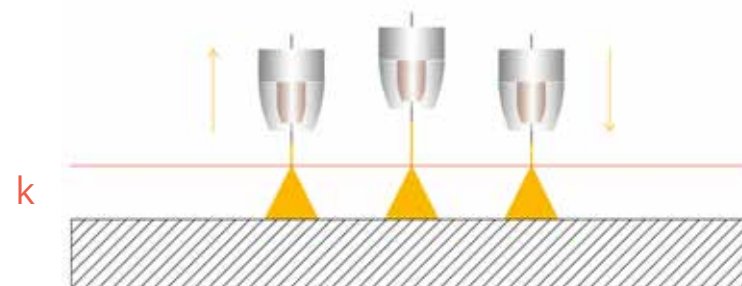
PB - Fillet Welding

S355 - THK 8 mm

A more stable welding arc, with almost no spatter or micro projections



Very reactive and always balanced arc in relation to the torch movement



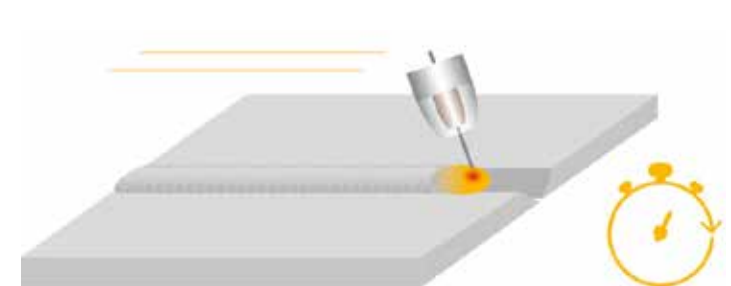
PB - Fillet Welding

SS 304 - THK 2 mm

Less energy transmitted to the welded workpiece



Very linear transfer with an optimal edge wetting at a very high speed of execution





Power Root

The special Power Root function is a short arc transfer, controlled with a cold drop which ensures a very high quality during the root passes.

Features

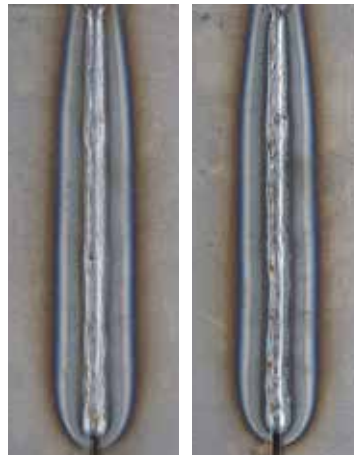
- Optimal first pass
- Quality of descending vertical welding
- Excellent operability
- Cold transfer of welding drop
- Perfectly jointed thin metal sheets
- Ideal for welding joints with large gaps

PG - Butt Weld

S355 - THK 3 mm - GAP 1.5 mm



Front / Back



Application on materials with gaps



PG - Butt Weld

S355 - THK 10 mm thick - GAP 4 mm - angle 30°



Macrography of the weldment





Power Focus

The special Power Focus function has been designed to reduce total welding costs, reducing the total number of joints to be welded.

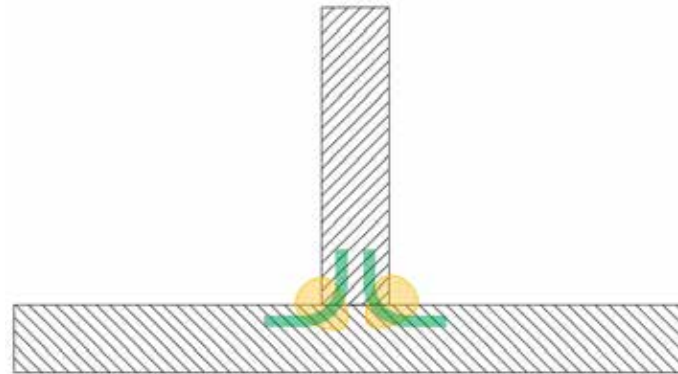
Focus Features

- Higher penetration and lower risk of sticking
- Increased welding speed
- Higher arc stability even with long stick-outs
- Lower costs of joint preparation
- Reduced volumes of bevels to be filled

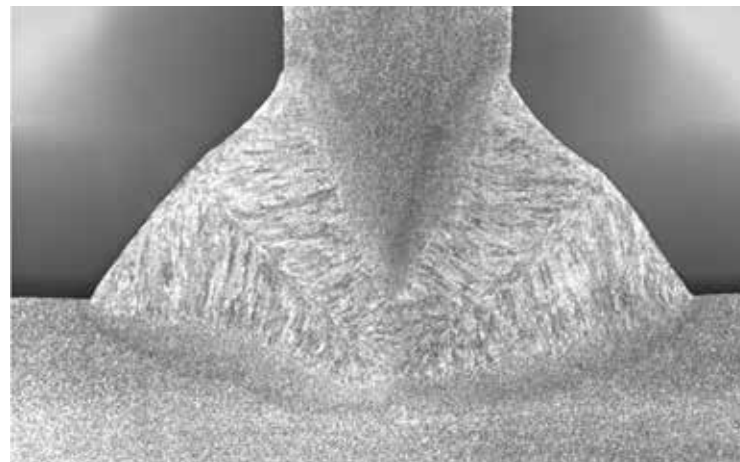
PB - Fillet Weld

S355 - THK 8 mm

Welded from both sides



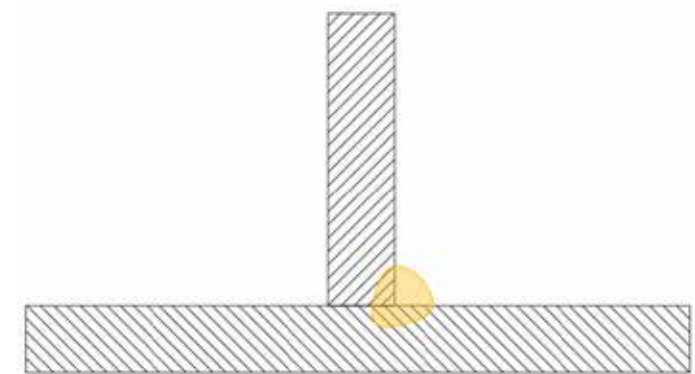
The higher number of field lines increases the resistant section



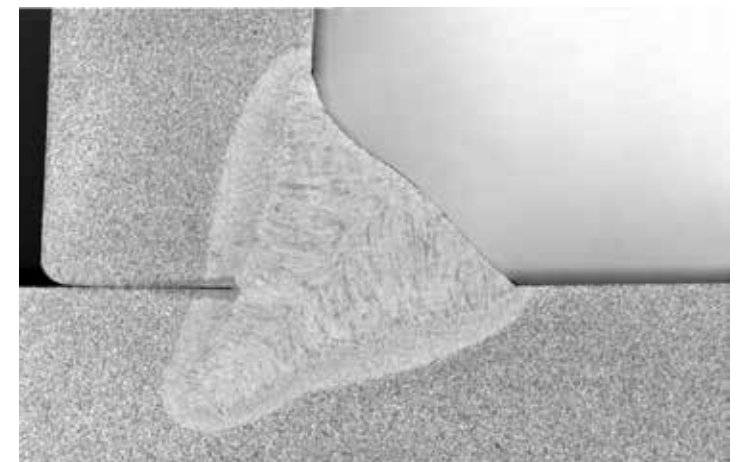
PB - Fillet Weld

S355 - THK 10 mm

S355 - THK 10 mm



Section of weld bead 8 mm





K Deep

The application was created to stabilize penetration during welding, regardless of changes in the stick-out length.

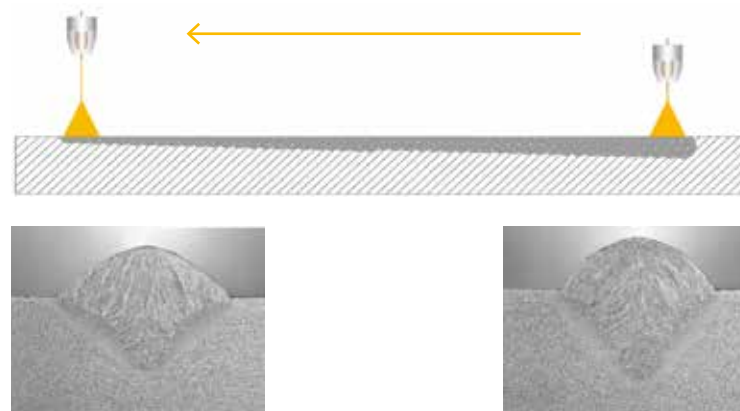
Without K Deep

PA

S355

THK 3 mm

Pulsed welding **without K Deep**: The result is a substantial decrease in the melting depth as the stick-out changes.



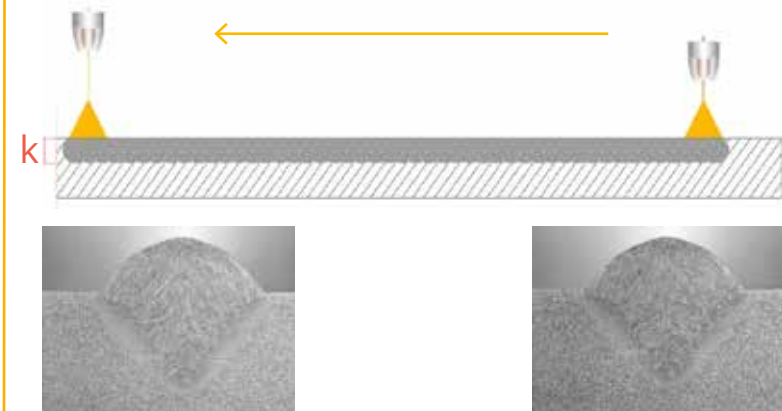
Con K Deep

PA

S355

THK 3 mm

Pulsed welding with **K Deep activated**: the result is a more stable and linear melting depth as the stick-out changes.



The digital technology (Weco Digital Control) and Weco know-how, striving to achieve the **perfect weld**.



Wire Cutter

The neat wire cut at the end of the welding operation prevents a weld pool from forming, ensuring an optimal next strike.



Stable Arc

The very fast control provided by Weco Digital Control technology allows metal melting to be immediately balanced. This almost entirely removes any splashes in the initial welding stage and the weld bead is even from beginning to end.



Arc Strike

The new starting system controlled by Weco Digital Control technology ensures optimal strikes to be achieved at all time, avoiding initial blows and minimizing the likelihood of spatters. All this in any operating conditions.



The WF205 has been designed to provide the welder with a light tool (weighing only 11.5 Kg) and easy to carry even in the most hard-to-reach locations, thanks to its small footprint..



Spool Storage

Inspection window used to check the remaining amount of wire in the spool

Ergonomic Handle

Transport is also made easier by the practical top handle, which ensures a balanced grip



MMA grip connection for welding with coated electrode directly from the wire feeder

The sturdy and safe **cable fixing** prevents the signal cable and the power cable from getting damaged, thus prolonging the life of the extension lead. Communication with the power source is ensured up to **50 meters**

USB

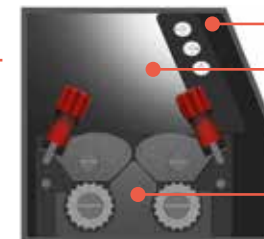
- Full update of the generator
- JOBS are saved and transferred from one power source to another

Four rollers, wire puller motor with **optical Encoder** to ensure a more effective and accurate wire feed

Welding shield, which protects the digital display from welding spatter and grinding sparks preventing damage to the front panel

Connector for the application of remote controls

Shock-proof cooling circuit quick couplings



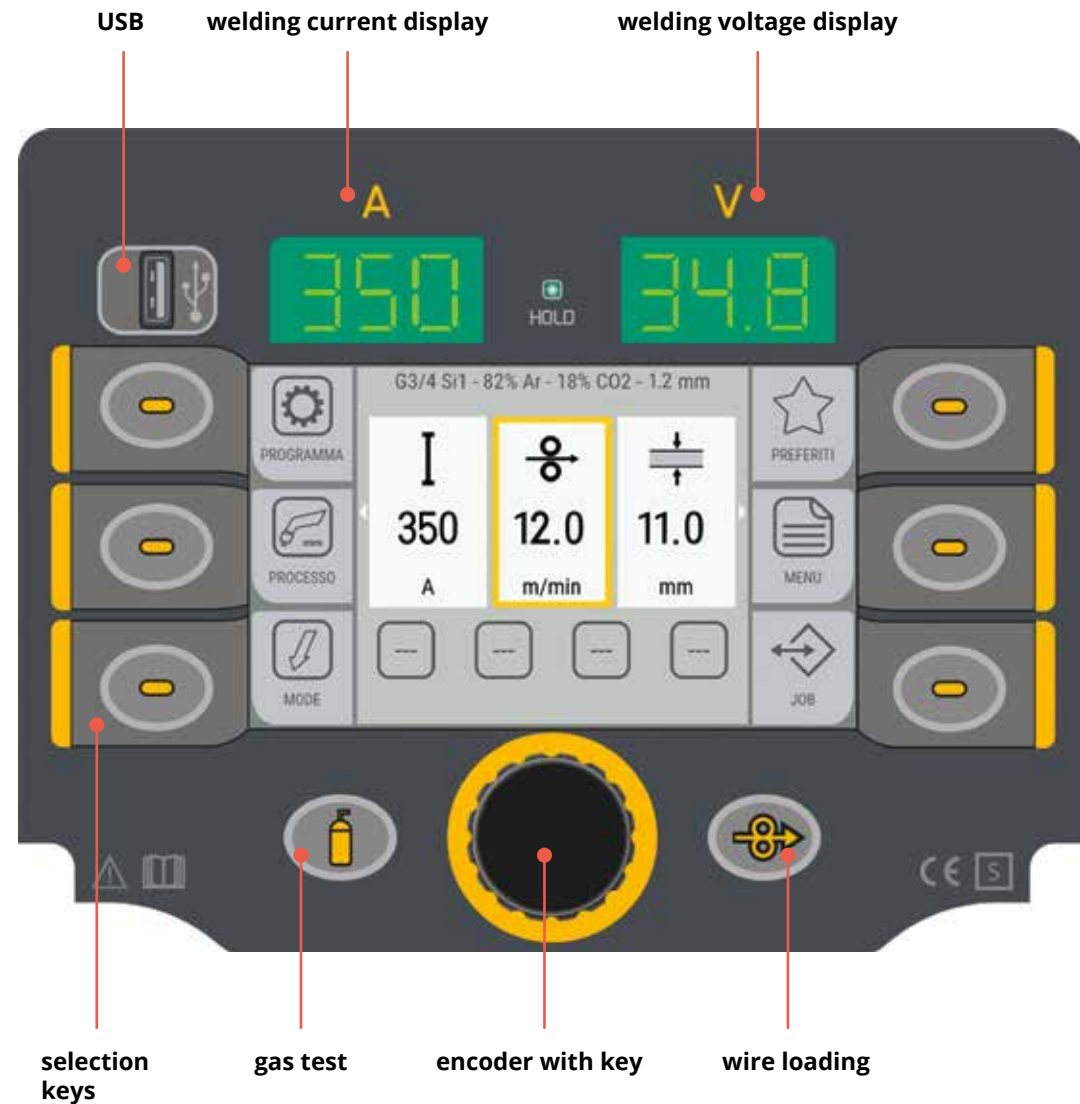
Wire holder

LED lights in the wire puller holder make it easier to insert and change the rollers even in poorly lit locations

Four drive roller system (optional) ensuring a smooth wire unwinding operation, particularly with special wires (Aluminium, Stainless Steel, CuSi, ...)

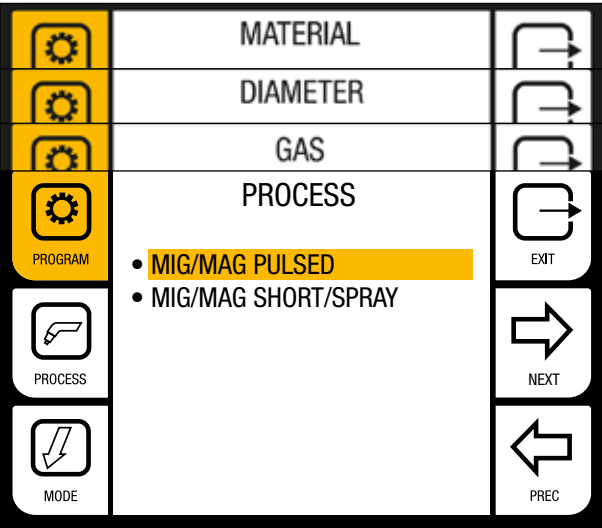
USER INTERFACE

A simple and user-friendly interface ensures quick access to all parameters. The large, very bright 5" display ensures a clear and easy to understand view by using the touch screen mode or the dedicated mechanical key.

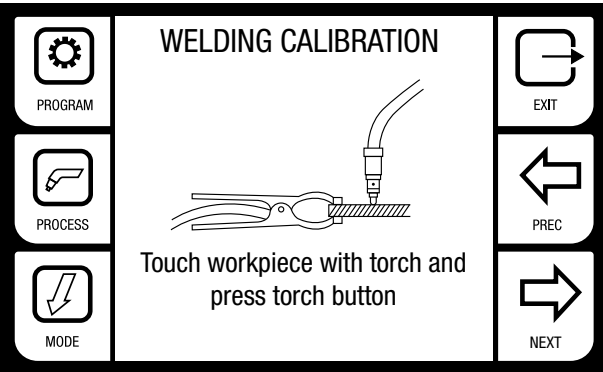


The new Quick Setting set-up procedure allows any welders, including less experienced welders, to quickly set up the machine.

Quick Setting



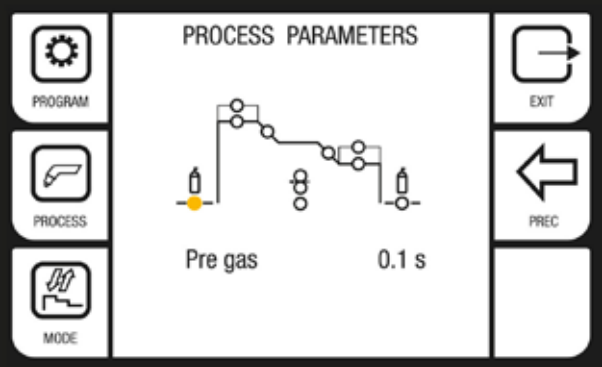
Welding circuit calibration



JOB Management



Process Management



Hours Counter system



Alarm Register



THE HISTORY OF THE PROJECT

A very well thought out ambitious project **A machine designed by welders for welders.** The Power Pulse Digital has been designed and developed to ensure reliability over time and ease of use. The well thought-out design, the very strict stress tests, the careful selection of all its components and its suppliers make it an essential tool for the welder.

NEW DESIGN

Looks matter... The new design and the new livery improves the visual and cosmetic impact of the Power Pulse Digital. The aesthetically pleasing colour combination gives the tool a high-tech and sophisticated look. Using wrinkle paint, in common with the most prestigious car brands, adds stability and shine to the colours and, above all, makes the paint more resistant to wear over time.

CAREFULLY SELECTED SUPPLIERS

Weco does not only focus on research and development, but also on the very careful selection of the most reliable suppliers. Weco has designed and built the Power Pulse Digital family by working only with European suppliers, over 90% being Italian. The origin, quality and traceability of each component of the Power Pulse Digital are guaranteed. This is why we have been able to provide a welding machine with unprecedented reliability. The on-going dialogue with each supplier allows us to continually update and improve our product. This provides our customers with a topperforming product at all times.



Dust Test

An initial, very strict test, to ensure safety of all electronic parts of the generator. The Power Pulse Digital is fully insulated from the ingress of dust due to grinding operations or to other reasons, which could cause the electronic components to fail.

Vibration Test

To ensure the structural stability of the inverter and to allow the welding machine to be used in any environment, including those subjected to vibrations, such as on board of lorries, ships or other unstable structures. Each internal component of the Power Plus Digital is securely fixed and free from vibrations.

Unstable Power Supply Test

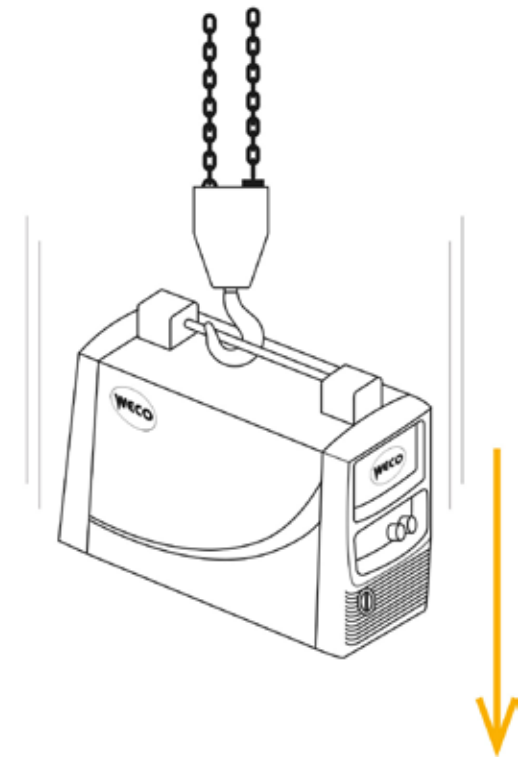
Another very strict test carried out to make sure performance is maintained even when the power input changes. Passed with flying colours! The Power Pulse Digital, by using the Weco MultiVoltage and PFC technologies, ensures consistent performance even when motor-generators or unstable power sources are used.

Safety Tests

The Power Pulse Digital has brilliantly passed all safety tests: IP tests, drop tests and stability tests on an inclined plane. Total safety is ensured in any working conditions.

Welding Test

The Power Pulse Digital is totally reliable, having been subjected to welding tests for over 3000 hours. Its performance is ensured in any working location and in any part of the world, in environments with different temperatures and ambient conditions.





Power Pulse 405d / WF205
Power Pulse 505d / WF205

Setting Panel on Wire Feeder

Welding Power Source with separate Wire Feeder. The control panel display is located directly on the WF205. This system is suitable for any application where the Wire Feeder needs to be carried away from the power source. This configuration is a practical solution for ship building, large constructions, welding at a height, inside tanks and vessels, civil engineering, site work.



Power Pulse 405dms / WF205p
Power Pulse 505dms / WF205p

Setting Panel on Power Source

Welding Power Source with separate Wire Feeder. The control panel display is located directly on the digital Power Source. This system is particularly suitable when the Wire Feeder is placed in a hanging position over the welding application. This configuration provides an easy solution for automated welding, large constructions, and structural fabrications where the Wire Feeder is continuously moving.



Power Pulse 405d / WF204
Power Pulse 505d / WF204

Setting Panel on Wire feeder

Welding Power Source with separate Wire Feeder. The control panel display is located directly on the WF204. This system is suitable for any application where the Wire Feeder needs to be carried away from the power source. This configuration is a practical solution for ship building, large constructions, welding at a height, inside tanks and vessels, civil engineering, site work.



Power Pulse 405d Air / WF205
Power Pulse 505d Air / WF205

Air

Air cooled version when the water cooler unit is replaced by a practical tool box. The Air Cooled version is suitable for sheet metal and light fabrications using very light-weight welding torches.

All available accessories have been designed to provide the welder with the best possible working conditions.

Control Remoto / Antorcha Up & Down / Antorcha Digimanager



Cylinder holder / Dual cylinder



Cable winder



CU20



Wheel Kit WF205



Inox HC



Inox double pulse



Aluminum Mg double pulse



Aluminum Mg HC



Steel HC



Steel double pulse





HIGH THERMAL CYCLE	
DUTY CYCLE	400A 100% (40°C)

POWER PULSE 405D						
	3x400Vac ± 15% @ 50-60Hz			3x230Vac ± 15% @ 50-60Hz		
	25A			30A		
	MIG-MAG	MMA	TIG	MIG-MAG	MMA	TIG
% _{40°C}	100%	100%	100%	100%	100%	100%
•I ₂	400A	400A	400A	350A	350A	400A
I ₂	10A-400A	10A-400A	5A-400A	10A-350A	10A-350A	5A-400A
U ₀ /U _r	70V / 19V					
P _{MAX}	16,8kVA - 16kW					
IP	23					
	1160 x 670 x 1420mm					
	KIT 405d PP WF205 4mt H ₂ O - 130,0Kg					

WF205	
	42VDC
P _{MAX}	50W
r.p.m	210
	1,5 - 24,0 m/min
	n°4 (ø37 mm - ø19 mm) Fe 0,6 - 1,6 mm Al 0,8 - 3,2 mm FCW 1,0 - 3,2 mm
	200 mm (5 kg) - 300 mm (15 kg)
IP	23
	665 x 265 x 360 mm
	11,5 kg no wheels
WF204	
	670 x 245 x 470 mm
	23,8 Kg - no wheels

POWER PULSE 505D												
	3x400Vac ± 15% @ 50-60Hz									3x230Vac ± 15% @ 50-60Hz		
	30A									30A		
	MIG-MAG			MMA			TIG			MIG-MAG	MMA	TIG
	50%	60%	100%	50%	60%	100%	50%	60%	100%	100%	100%	100%
	500A	450A	400A	500A	450A	400A	500A	450A	400A	350A	350A	400A
	10A-500A			10A-500A			5A-500A			10A-350A	10A-350A	5A-400A
	70V / 19V											
	23,7kVA - 22,6kW											
	23											
	1160 x 670 x 1420mm											
	KIT 505d PP WF205 4mt H ₂ O - 130,0Kg											

CU20		
	1 X 400 Vac ± 15 % / 50-60 Hz	1 X 230 Vac ± 15 % / 50-60 Hz
I _{1 MAX}	0.7 A (50 Hz)	1.2 A (50 Hz)
P _{1/LAM}	1650 W	
P _{MAX}	0.37 MPA (50 Hz)-0.47 MPA (60 Hz)	
	4,5L	
IP	23	
	720 X 290 X 235 mm	
	27.4 Kg - with liquid	



WELD THE WORLD

A well-established industrial concern whose reliability of products is ensured by its considerable investments in research, design and testing.

WECO has been producing and selling welding equipment since 1997. Its registered office and operational site, located in the north-east of Italy, includes offices, a production area, a design and storage area, which cover the requirements of a wide national and international sales network. The wide range of welding machines and the availability of a large warehouse allows us to meet the varying needs of our customers within a short period of time. Our dynamic management, our proven experience in sales issues, as well as our knowledge of application problems ensure our company a leading edge within our industry. WECO provides solutions that improve productivity, optimise intervention times, minimise operating costs, ensuring excellent performance at all times, in any operating conditions.

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