



WELD THE WORLD

Pioneer 403/503 MSR

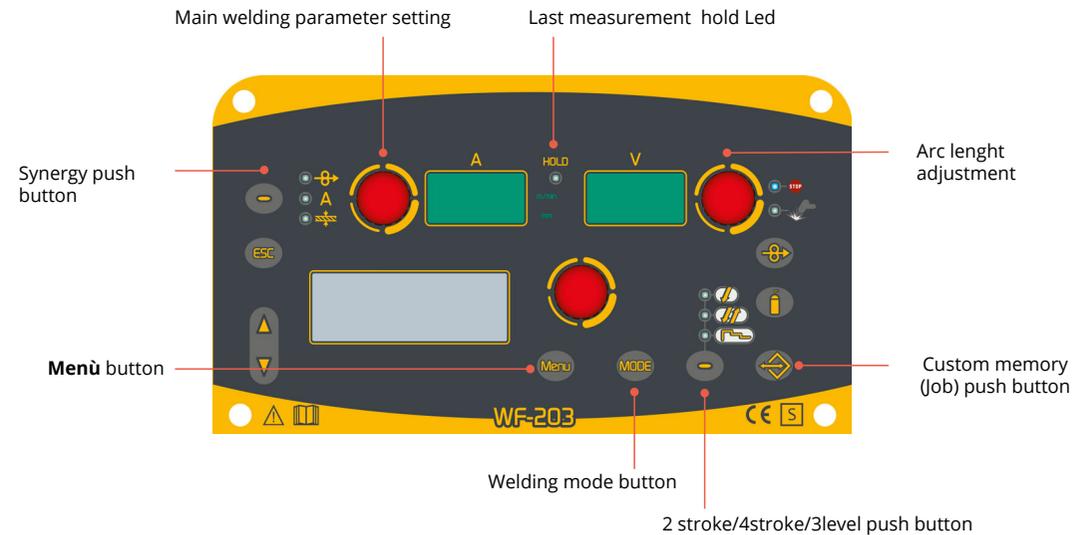


Pioneer 403/503 MSR

/MIG MAG Synergic



Pioneer 403/503 MSR is a professional synergic 3 Phase Inverter Power Source with separated wire feeder for MIG-MAG short spray welding of different materials such as standard steels, inox and aluminum. **Pioneer 403 MSR** and **503 MSR** permit also the following processes MMA, TIG DC with Lift-Arc and ARC Air, it is a proper multifunction system. The 400A duty cycle at 100% (40°C) allows you to work continuously, even with applications requiring high work cycles. The special **Power Focus** function allows to achieve higher penetration and lower risk of sticking, increased welding speed, higher arc stability even with long stick-outs, lower costs of joint preparation and reduced volumes of bevels to be filled. The special **Power Root** arc permits to reach an optimal first pass, high quality of descending vertical welding, excellent operability, cold transfer of welding drop, perfectly jointed thin metal sheets, it is also ideal for welding joints with large gaps.





Power Focus

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

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



Power Root

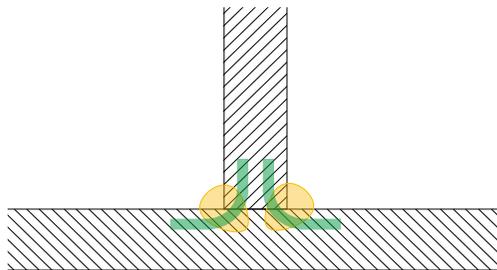
The special Power Root function is a short arc transfer, controlled with a cold drop which ensures a very high quality during the root passes.

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

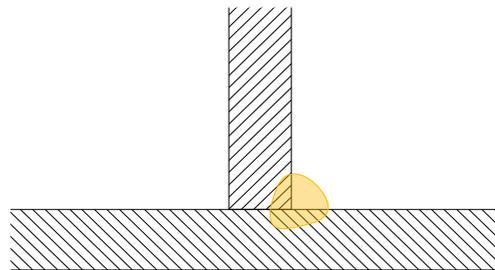
PB - Fillet Weld

S355 - THK 8 mm
Welded from both sides

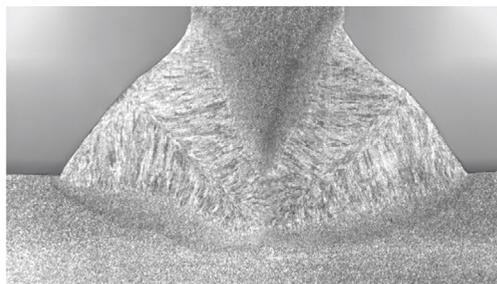


PB - Fillet Weld

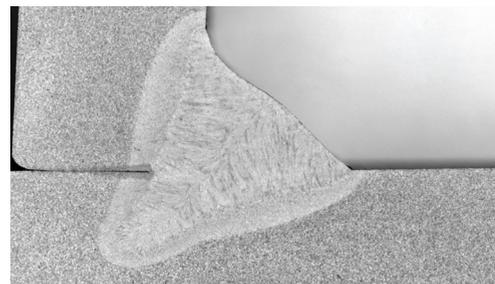
S355 - THK 10 mm



The higher number of field lines increases the resistant section

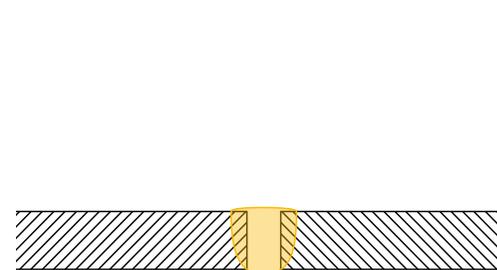


Section of weld bead 8 mm



PG - Butt Weld

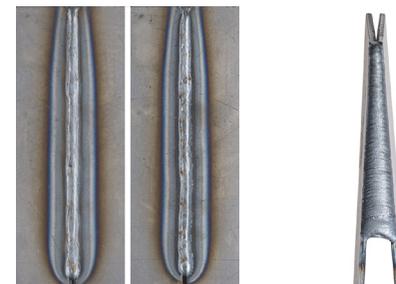
S355 - THK 3mm - GAP 1.5mm



Front

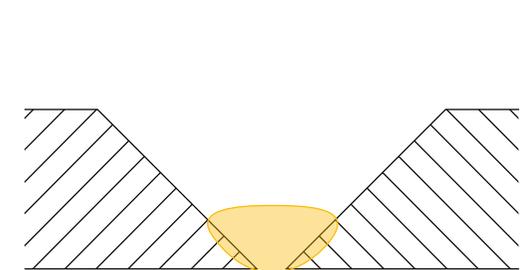
Back

Application on materials with gaps



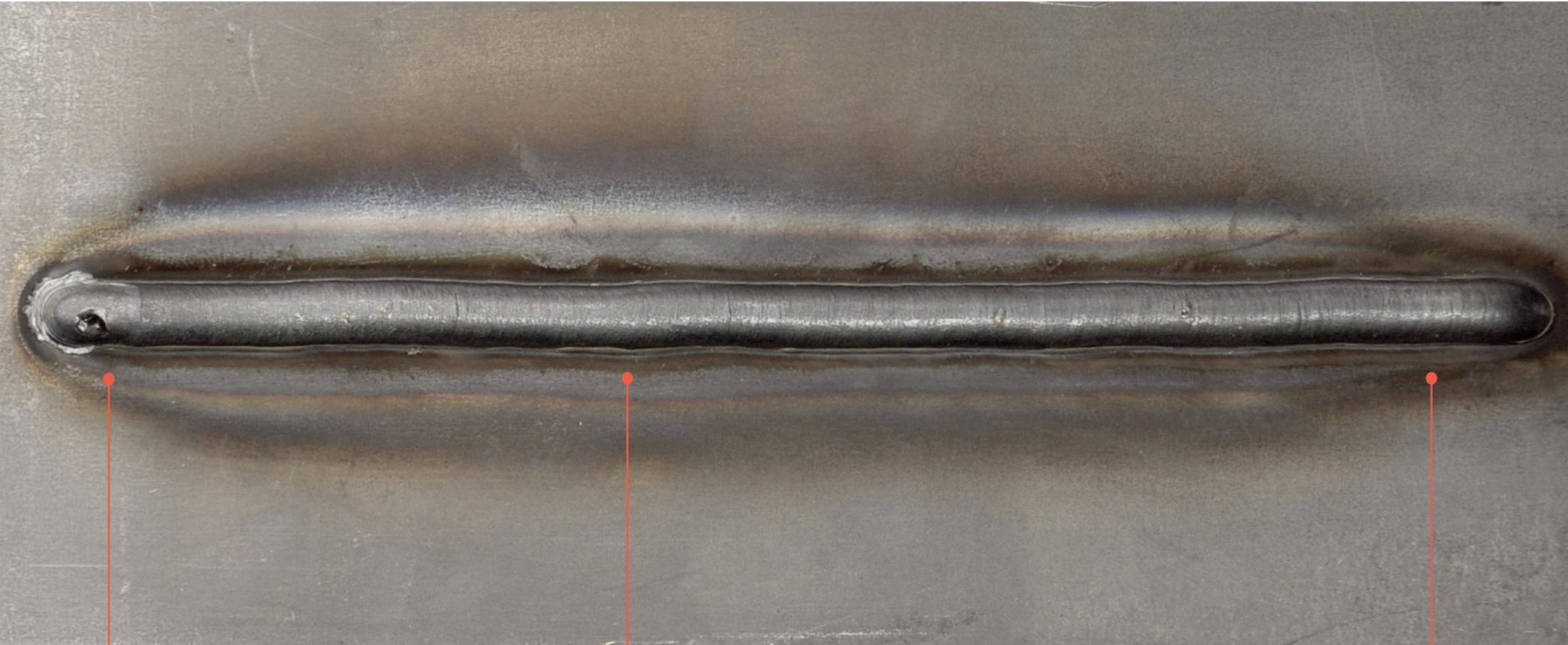
PG- Butt Weld

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



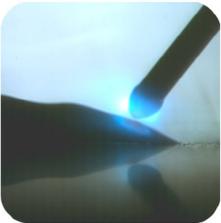
Macrography of the weldment





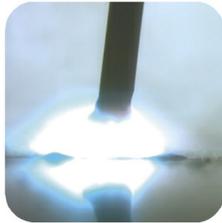
Wire Cutter

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 **HAC control System** allows metal melting to be immediately balanced. This almost entirely removes any splashes in the initial welding stage and the weld bead remains stable from beginning to end.



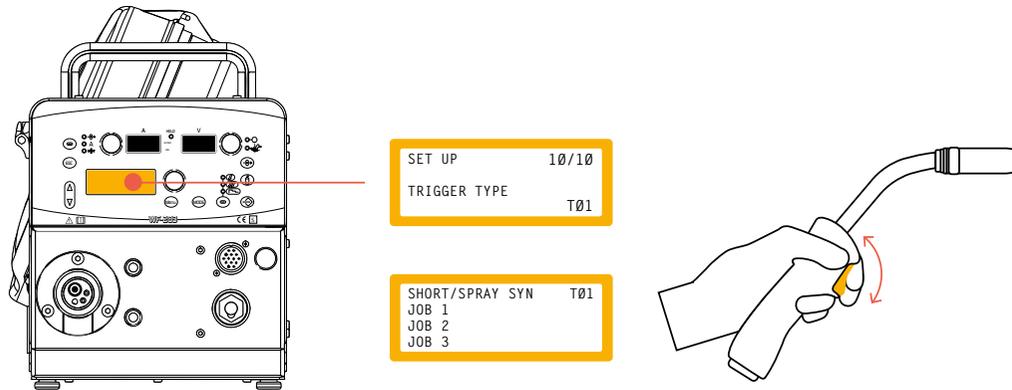
Arc Strike

The innovative arc control **HAC (Hybrid Arc Control)** ensures optimal strikes to be achieved at all time, avoiding initial blows and minimizing the likelihood of spatters. All this in any operating conditions.

Accessor functions

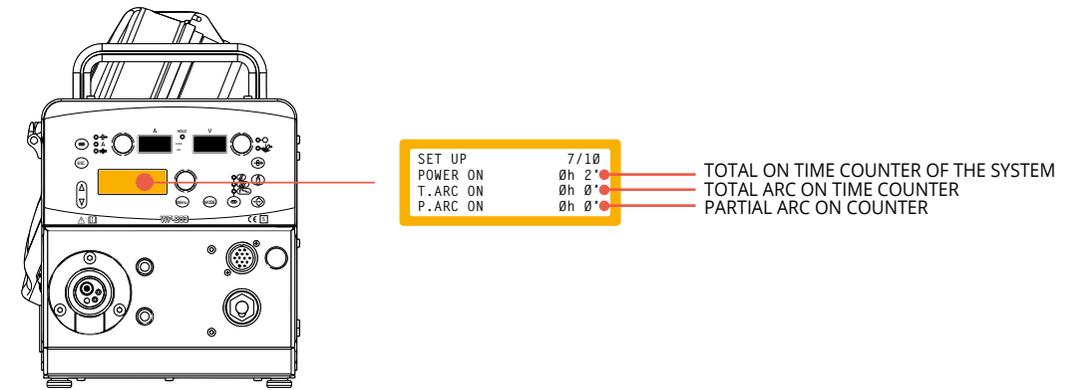
Jobs Selection

- Sequential selection of the saved jobs can be set up directly from torch
- Process change can be adjusted
 - It is possible to scroll from one job to another during welding without switching off the arc



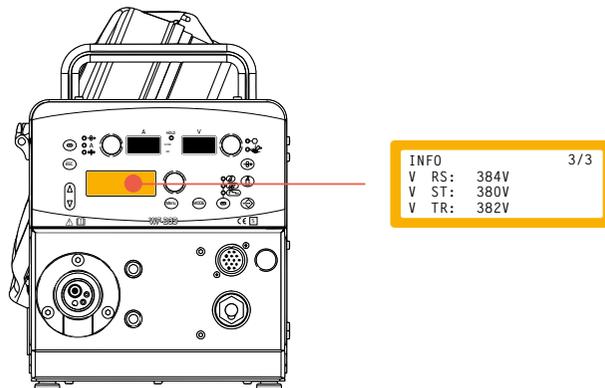
Hour Counters

- Operating hour counter
- Arc on time counter (as regards the specific operating time) particularly useful in order to calculate the working costs



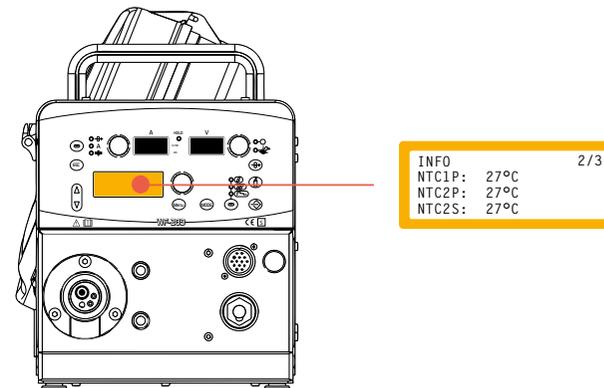
Supply Voltage Control device

It is extremely useful in order to keep under control the stability of the supplied Voltage from the mains.



Internal temperature sensors

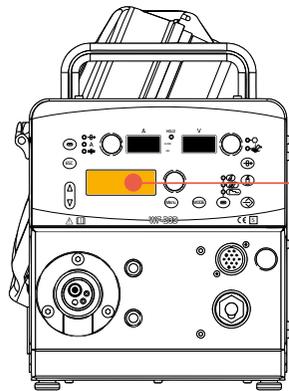
It is possible, in real time, the temperature monitoring of the internal power source thermo-switchers so that the user knows always whether the system is regularly working or not, in case a general service intervention was needed.



Multifunction

MMA

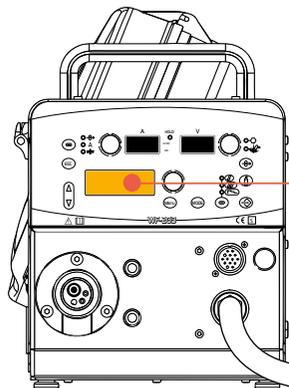
It is possible to weld in MMA directly from WF 203. Both Hot Start and Arc Force function can be adjusted in order to optimize the electrode smelting process and the arc ignition phase. It is also possible to activate the safe mode VRD (Volt Reduction Device).



MMA WELDING	ON
VRD MMA	0N
HOT START	50 %
ARC FORCE	30 %

TIG

From WF 203 is also available the Tig welding process. As regards this mode, the following parameters can be adjusted: Slope down time from welding current, end current and post gas. It is possible using a Tig Torch (equipped with central connector) to adjust, directly from the trigger, both gas-flow and welding current.



TIG WELDING	ON
SLOPE DOWN	1.0 S
END CURRENT	5 %
POST GAS	10.0

Arc Air

Pioneer 403 / 503 MSR permits also the gouging process by using Carbo-Graphite electrodes up to a 6 mm diameter (Pioneer 403 MSR) and up to 8 mm (Pioneer 503 MSR). The gouging torch can be connected both to power source and to WF 203.



Dust Test

An initial, very strict test, to ensure safety of all electronic parts of the generator. The **Pioneer 403/503 MSR** 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

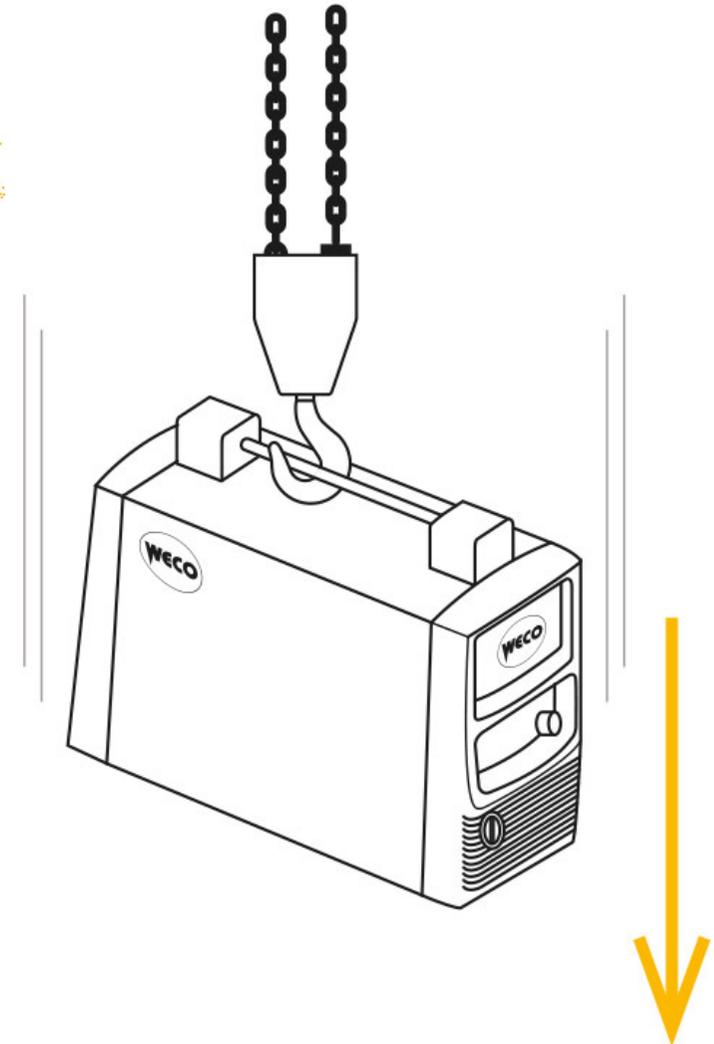
To ensure the structural stability of the inverter and to allow the welding machine to be used in any environment, including those subjected to vibrations, such as on board of lorries, ships or other unstable structures. Each internal component of the **Pioneer 403/503 MSR** is securely fixed and free from vibrations.

Safety Tests

The **Pioneer 403/503 MSR** 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 **Pioneer 403/503 MSR** 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.



Configurations

Pioneer 403/503 MSR Basic



Pioneer 403/503 MSR Air



Pioneer 403/503 MSR full optional



Pioneer 403/503 MSR with Trolley L



Accessories

**Pioneer wheels
Kit and supports
(Basic)**



Pioneer handle Kit



Trolley L + Cable bundle support



Wheels Kit WF



Cable bundle support



VP 03



TECHNOLOGY		WELDING PROCESSES			
SPECIAL FUNCTIONS					
POWER FOCUS			POWER ROOT		
MATERIALS					
STEEL		INOX		ALUMINUM	
APPLICATION FIELDS					
PIPE WELDING		HEAVY INDUSTRY		SHIPYARDS	

PLUS		
<p>ROBUST</p> <p>This Pioneer 403/503 is characterized by a very robust chassis, that permits a non-stop working even with applications requiring high work cycles.</p>	<p>STABLE WHEELS</p> <p>The Pioneer 403/503 series is equipped with stable industrial quality wheels, this grants a trouble-free and long use of this Power source also in the toughest work conditions.</p>	<p>RAPID AND EFFICIENT SERVICE</p> <p>The Pioneer 403/503 Series allows a rapid and efficient service, as a consequence of this it is possible to optimize service timing and costs.</p>
ACCESSORI		
KIT PUSH PULL	UPGRADING SOFTWARE	DIGIMANAGER TORCH

Technical Data

PIONEER 403 MSR

	3x400Vac ± 15% @ 50-60Hz								
	T25A								
	MIG-MAG			TIG			MMA		
% _{0 40°C}	--	65%	100%	--	--	100%	--	65%	100%
▷I ₂	--	400A	370A	--	--	400A	--	400A	370A
% _{0 25°C}	--	--	100%	--	--	100%	--	--	100%
▷I ₂	--	--	400A	--	--	400A	--	--	400A
I ₂	20A-400A			10A- 400A			10A-400A		
U ₀	10/62V								
P _{I MAX}	19,3kVA - 16,4 kW								
IP	23								
	460x990x1370mm								
	110Kg								

PIONEER 503 MSR

	3x400Vac ± 15% @ 50-60Hz								
	T32A								
	MIG-MAG			TIG			MMA		
% _{0 40°C}	30%	60%	100%	35%	60%	100%	30%	60%	100%
▷I ₂	500A	430A	400A	500A	450A	420A	500A	430A	400A
% _{0 25°C}	--	--	100%	--	--	100%	--	--	100%
▷I ₂	--	--	500A	--	--	500A	--	--	500A
I ₂	20A-400A			10A- 400A			10A-500A		
U ₀	10/62V								
P _{I MAX}	25,5kVA - 22,3 kW								
IP	23								
	460x990x1370 mm								
	110Kg								

WF203

	42VDC
P _{MAX}	120W
r.p.m	270
	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
	680 x 280 x 380 mm
	15,8 kg

CU23

	1x400Vac ± 15% @ 50-60Hz
	T 1.6 A
P _{I L / MIN}	0,95kW
P _{MAX L / MIN}	2.8kW
P _{MAX}	0,32MPA (50HZ) - 0,43MPA (60HZ)
	4.5l
IP	23 S
	720 x 290 x 235 mm
	30,0 kg



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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