



WELD THE WORLD

Power Pulse 322 - 402 - 502 AC/DC

Cruiser 322 - 402 - 502 AC/DC

Synergic



The Power Source: Cruiser 322-402-502 AC/DC

TIG AC/DC - Modular Multifunction



The Power Source: Cruiser 322-402-502 AC/DC

Technical Data

The **Cruiser 322 - 402 - 502 AC/DC** are industrial Three Phase inverter power sources for TIG AC and DC welding. TIG AC functions are ideal for aluminum, magnesium and related alloys welding, while mild steel, stainless steel and copper can be easily welded in TIG DC. The **Cruiser 322 - 402 - 502 AC/DC** are specifically designed for high definition construction, petrol/chemical plants, food& beverage industry and shipyards.

	Cruiser 402AC/DC						Cruiser 502AC/DC					
	3x400Vac ± 15% @ 50-60Hz						3x400Vac ± 15% @ 50-60Hz					
	32A@						40A@					
	TIG - WIG			MMA			TIG - WIG			MMA		
% _{40°C}	50%	60%	100%	50%	60%	100%	30%	60%	100%	30%	60%	100%
-I ₂	400A	380A	340A	400A	370A	340A	500A	380A	340A	500A	370A	340A
I ₂	5A - 400A			10A - 400A			5A - 500A			10A - 500A		
U ₀	9/81V			9/81V			9-81V			9-81V		
P _{max}	18,4kVA - 16,8kW						25,5kVA - 23,4kW					
IP	23						23					
	690 x 290 x 450mm						690 x 290 x 450mm					
	56,5Kg (Power Source)						56,5Kg (Power Source)					

	Cruiser 322AC/DC					
	3x400Vac ± 15% @ 50-60Hz					
	25A@					
	TIG - WIG			MMA		
% _{40°C}	45%	60%	100%	45%	60%	100%
-I ₂	320A	280A	240A	300A	270A	240A
I ₂	5A - 320A			10A - 300A		
U ₀	11/72V			11/72V		
P _{max}	14,7kVA - 11,3kW					
IP	23					
	690 x 290 x 450mm					
	46,4Kg (Power Source)					



Lateral ventilation

The advanced ventilation system allows an optimal Duty Cycle:
 322 AC/DC: 240Ampere at 100% (40°C).
 402-502 AC/DC: 340Ampere 100% at 40°C.
 A better cooling of the inner components increase the generator's reliability. All of the electronic components are placed outside the airflow, this make the generator also suitable for working in particularly dusty conditions.

MMA



The Cruiser 322-402-502 AC/DC allows for the setting of different coated electrodes' types: CELLULOSIC - BASIC - RUTILE - CrNi- ALUMINIUM

TIG AC/DC



Weco have developed new innovative TIG functions in order to find an effective solution to any application, which will make the impossible become possible!

GOUGING/ARC AIR

(only 402 - 502 AC/DC)



The Arc Air process provides high quality gauging with up to 6mm (Cruiser 402 AC/DC) and 8mm (Cruiser 502 AC/DC) carbon electrode.

The Power Source: Cruiser 322-402-502 AC/DC

Professional TIG/MMA Power Source



The **Q START** (Quick start) function facilitates joining of the parts in the initial stage of the welding process. On activating this function the machine automatically switches to Synergic pulsed mode for a preset time. The resulting pulses create movement of the molten metal on the two sheet metal edges thereby accelerating formation of the join.

This function is invaluable in the case of seams with slight openings or with irregular preparation. The duration of the series of pulses can be adjusted, (from 0.1 to 60 second) depending on the thickness and shape of the sheet to be welded.



The **Q-Spot** (Quick Spot) function makes it possible to minimise tacking times for light gauge sheet metal. The operator conveniently places the tungsten electrode on the fixing point, thereby obtaining perfect control of the position of the join. Once the electrode has been lifted the machine emits a very high intensity welding current pulse with a very short preset time (from 0.01 Sec to 10 Sec). The pulse time varies depending on the type of sheet metal to be joined. In this way the welded point closes instantly with minimum heat transfer, leaving the metal white, clean and almost cold.

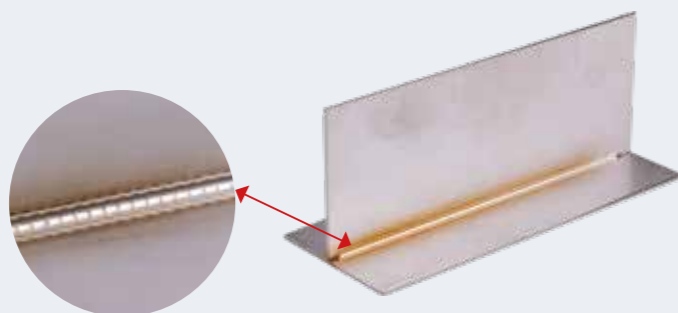
Pipe butt weld
Ø 31,75 x 2 mm.



Corner spot welding
thickness 0,6 mm



The **MULTITACK** system makes it possible to reduce heat output while joining two light gauge parts. The series of arc strikes at short time intervals allows the material to cool during the pause between one strike and the next and thus minimize its deformation. The facility to adjust the frequency of the series of arc strikes in the time unit makes it possible to adapt the electric arc to the welding speed and the joint geometry.



The Power Source: Cruiser 322-402-502 AC/DC

Professional TIG/MMA Power Source



The **DYNAMIC ARC** function makes it possible to keep the product of Voltage x Current constant. The power source increases the welding current as the arc voltage decreases and reduces the welding current if the arc voltage increases. The DynARC value can be adjusted from a minimum of 1 Ampere to a maximum of 50 Ampere at each 1 Volt variation, whether positive or negative.

Welding benefits of the DynARC function:

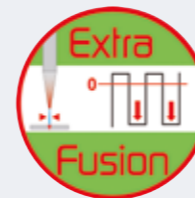
Faster welding - Less plastic deformation of the welded part. Increased vertex angle penetration - Heat output concentrated exclusively on the weld and not on the surrounding area - Less oxidation of the part and hence reduced post-welding reworking costs - Improved control of the first root pass (helpful for plumbers and plant engineers) - Reduced risk of the electrode sticking when it touches the weld puddle - Facility to work with the electrode very close to the weld puddle in order to concentrate the arc.



Dynamic Arc TIG welding



Standard TIG welding



This makes it possible to create a highly penetrative and precise fusion bath so that very light gauge sheets can be welded with an electrode tip comparable to that of an electrode for DC - TIG welding.



This allows to obtain high welding speed and creating the weld puddle rapidly on a cold workpiece.



The pulse TIG with frequency until 2500Hz allows to weld very thin materials with easy arc control and very low heat input on workpiece.



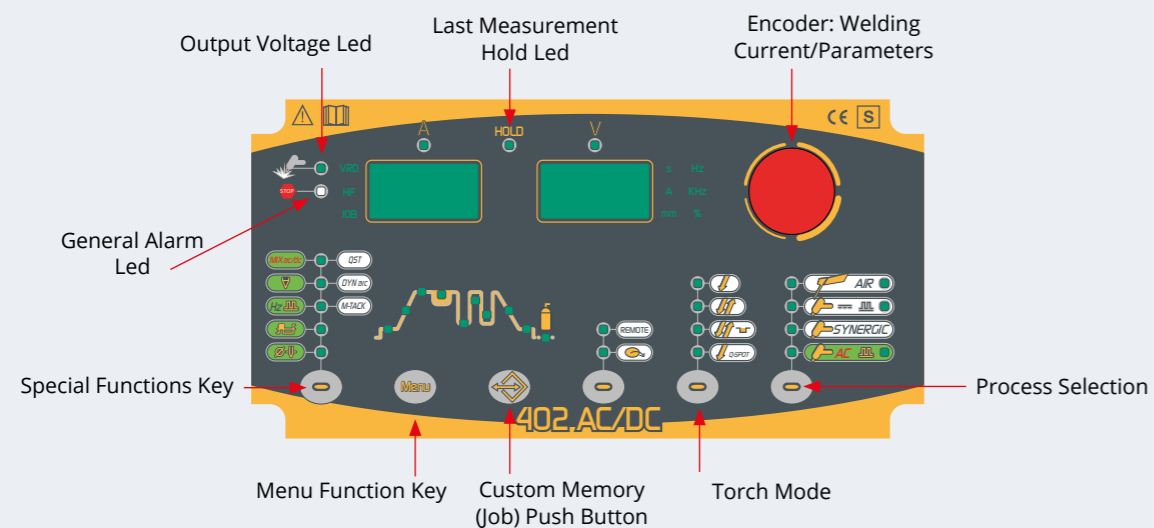
Pre-set balanced parameters, stored in the Synergic Pulse TIG DC SYN curve, simplify Pulsed welding by adjusting only welding current.

Power Pulse 322-402-502 AC/DC

MIG/MAG PULSE/DOUBLE PULSE/SYNERGIC - TIG AC/DC HF - MMA - ARC AIR



Front Panel Power Source



Power Pulse 322-402-502 AC/DC

Technical Data

The **Power Pulse 322 - 402 - 502 AC/DC** are industrial 3 Phase Inverter Power Sources with extremely high duty cycle, fitted with separated wire feeders for MIG MAG SYN and MIG MAG PULSE and DOUBLE PULSE. A wide range of MIG-MAG synergic programs facilitate the selection of precise welding parameters using any welding wires. High performances are guaranteed by MIG MAG functions, HSL, Power Focus and Power Root. MMA, TIG DC HF and ARC AIR (only 402 - 502 AC/DC) processes are also available.

	Power Pulse 322AC/DC									Power Pulse 402AC/DC									Power Pulse 502AC/DC								
	3x400Vac ± 15% @ 50-60Hz									3x400Vac ± 15% @ 50-60Hz									3x400Vac ± 15% @ 50-60Hz								
	25A@									32A@									40A@								
	MIG-MAG			TIG-WIG			MMA			MIG-MAG			TIG-WIG			MMA			MIG-MAG			TIG-WIG			MMA		
$\%_{0.40^{\circ}\text{C}}$	40%	60%	100%	45%	60%	100%	45%	60%	100%	50%	60%	100%	50%	60%	100%	50%	60%	100%	30%	60%	100%	30%	60%	100%	30%	60%	100%
$\cdot I_2$	320A	270A	240A	320A	280A	240A	300A	270A	400A	400A	380A	340A	400A	380A	340A	400A	370A	340A	500A	380A	340A	500A	380A	340A	500A	370A	340A
I_2	20A - 320A			5A - 320A			10A - 300A			20A - 400A			5A - 400A			10A - 400A			20A - 500A			5A - 500A			10A - 500A		
U_0	11/72V									9-81V									9/81V								
P_{MAX}	15,2kVA - 12,0kW									18,4kVA - 16,8kW									25,5kVA - 23,4kW								
IP	23									23									23								
	1160 x 670 x 1530mm (H ₂ O)									1160 x 670 x 1530mm (H ₂ O)									1160 x 670 x 1530mm (H ₂ O)								
	150,4Kg (H ₂ O)									160Kg (H ₂ O)									160Kg (H ₂ O)								

TECHNOLOGY

PROCESSES

SPECIAL FUNCTIONS MIG MAG

SPECIAL FUNCTIONS TIG DC HF

MATERIALS

INDUSTRY

WF104 - WF108

Wire Feeder for Power Pulse 322 - 402 - 502 AC/DC

WF104 - WF108

Technical Data



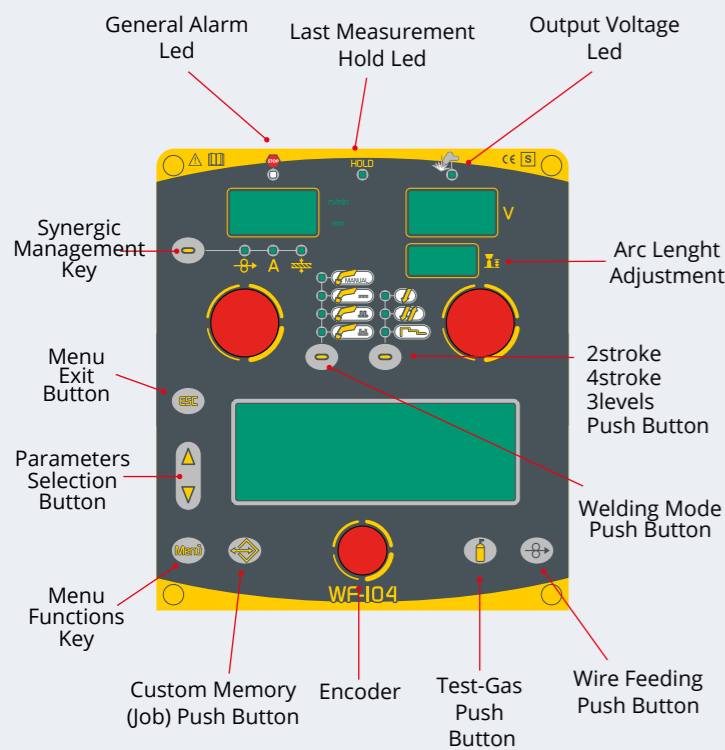
	WF104
	42VDC
P_{MAX}	120W
r.p.m.	270
	1,5 - 24,0m/min
	n°4 (ø37mm - ø19mm) Fe 0,6 - 1,6mm Al 0,8 - 3,2mm FCW 1,0 - 3,2mm
	200mm (5Kg) - 300mm (15 Kg)
IP	23
	670x 245 x 470mm
	23,8Kg

	WF108
	42VDC
P_{MAX}	120W
r.p.m.	270
	1,5 - 24,0m/min
	n°4 (ø37mm - ø19mm) Fe 0,6 - 1,6mm Al 0,8 - 3,2mm FCW 1,0 - 3,2mm
	200mm (5Kg) - 300mm (15 Kg)
IP	23
	680 x 280 x 380mm
	15,8Kg

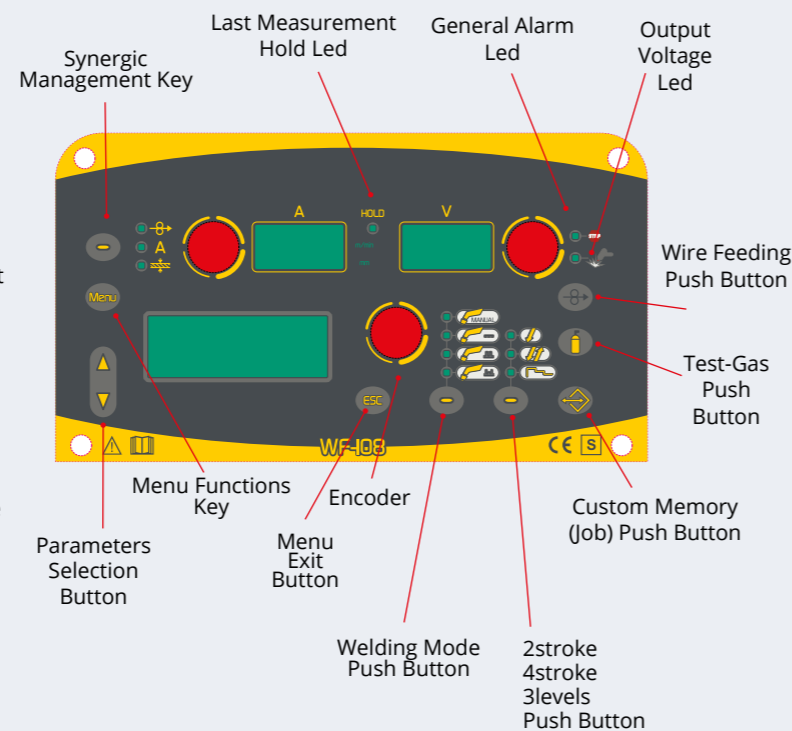
Power Pulse 322-402-502 AC/DC

Plus and Accessories

Front Panel WF104



Front Panel WF108



PLUS



STRUCTURAL STRENGTH

The structural strenght of the Power Pulse 322-402-502 AC/DC is very robust in any working environment.



ROBUST WHEELS

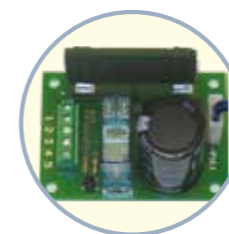
The robust wheels of the Cruiser 322-402-502 ACD/DC allows smooth movement of the power source.



EASY CARRIAGE

The Cruiser 322-402-502 AC/DC can be easily moved around any workplace thanks to our robust trolley.

ACCESSORI



KIT PUSH PULL



UPGRADING SOFTWARE



DIGIMANAGER TORCH



RC 08 REMOTE CONTROL

Power Pulse 322-402-502 AC/DC

Special Functions



W.ECO Technology Inside

Lower harmonic current emissions

W.ECO technology according to EN-60974-10, reduces harmonic current emissions.



HAC Hybrid Arc Control

Soft Arc, Low Spattering
Better welds, Money Savings

WECO unique HAC (Hybrid Arc Control) supplies a soft and very stable MIG-MAG welding arc with excellent weld bead quality and minimal spatter in any working conditions.



1 - Higher execution speed

The high dynamics applied to the pulsation of HS Pulse arc gives an extremely and focused arc that increases the fluidity and pressure of transfer as well as the wettability of joints.

This allows the operator (or automatism) to proceed much faster with the torch offering up to 35% in time saving.

2 - Higher deposition rate

The high dynamics applied to the pulse of Pulse HS arc allows for an increase in wire's speed whilst keeping same current value when welding in Standard Pulse. The increase in the quantity of wire in to the pool increases consequently the weight of deposit in the unit of time (Kg/h).

3 - Lower heat input and less plastic deformation

In Pulse HS mode the heat input is much lower (35%) than with Standard Pulse.

4 - Better mechanical properties

From our tests carried out we established that tensile strengths values in the Pure Deposit and Heat Affected Zone (HAZ) are much higher in Standard Pulse. This means that the higher heat input increased considerably the tensile strengths. In HS Pulse, hardness and tensile strengths are in line with the class which the base metal belongs to, therefore the heat input has no influence in the welded material.

5 - Higher penetration, offers lower risk of lack of fusion

Penetration obtained in HS Pulse (P2) is considerably higher compared to that of Standard Pulse (P1).

Moreover the weld face is smoother thanks to the excellent joints' wettability.

6 - Lower production costs and depreciation

The higher execution speed combined with the higher deposition rates reduces remarkably both times and working costs. Less defects on the material and almost no need of reworking allow a always better amortization.

Power Pulse 322-402-502 AC/DC

Special Functions



The **Power Root function** has been developed for improving and simplifying the root pass welding on seams. The Power Root Arc is perfectly suited for the joining of weld seams which have significant gap and irregular preparation. The arc remains highly stable on several different applications and allows optimal control of the welding puddle, especially in the vertical down position.

Power Root results are extremely easy to adjust, therefore making it easy for welders without the a great deal of experience on these types of seams.



Gap bridging

The cold droplet transfer provides process stable welding even with wide gaps. The modelability is significantly improved. The weld puddle is smooth, combined with a high viscosity.



V-groove / pipe welds

The optimized short arc cycle guarantees a high arc pressure – even in constrained positions.

No matter if vertical down or overhand welding, the root pass quality will be assured. Root pass welding with up to 4 times higher welding speed compared to vertical up.

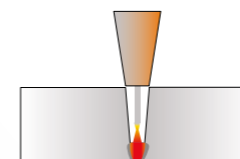


The difference between Standard Mig Mag welding and Power Focus

The difference between Standard Mig Mag welding and Power Focus is to be found on the concentration and precision of the arc.

The concentration on the Power Focus mode allows to focalize the high arc temperature precisely on the middle of the deposition, avoiding overheating on the weld edges.

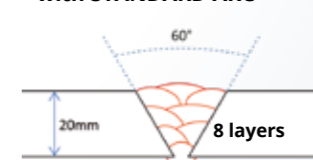
Power Focus Arc Specifications



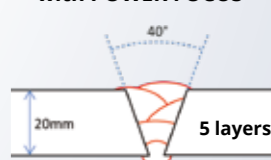
On the butt welding applications the Power Focus Arc stays concentrated in the exact middle of the weld seam, so that full penetration is achieved. In this way, it is possible to work on very narrow weld seams, which demands less mechanical preparation and of course, also less filling passes

Difference joint geometry

Joint Geometry with STANDARD ARC



Joint Geometry with POWER FOCUS



Until 40% less volume to fill!

Power Focus provides a stable arc even with stick-out very long (50mm)

Cruiser 322-402-502 AC/DC Synergic

MIG/MAG Synergic - TIG AC/DC HF - MMA - ARC AIR

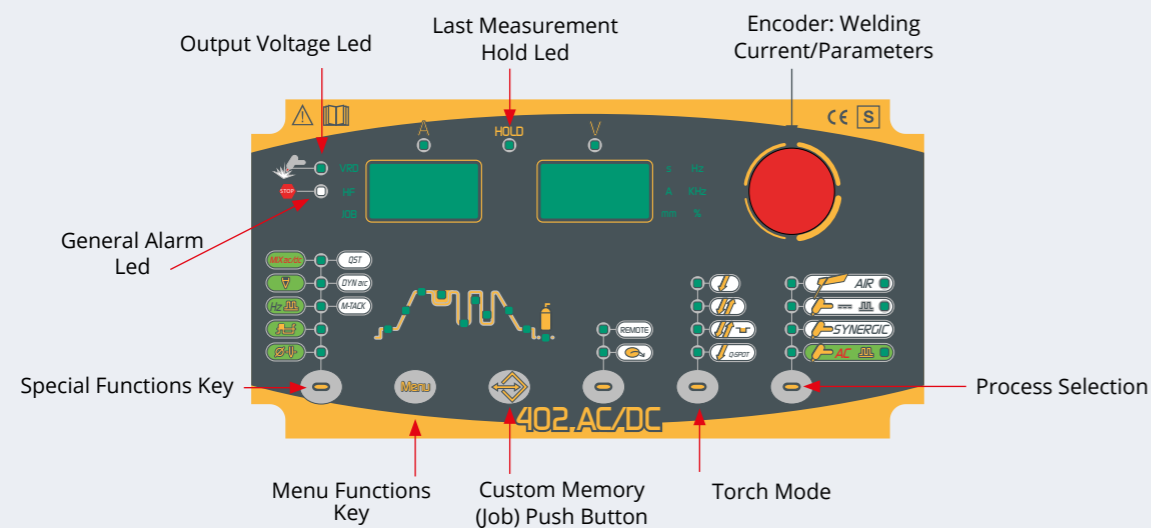
Cruiser 322-402-502 AC/DC Synergic

Technical Data



Cruiser 322 - 402 - 502 AC/DC Synergic are industrial synergic 3 Phase Inverter Power Sources (400A 100% at 40° C) fitted with separated wire feeders for MIG-MAG welding. MMA, MMA cellulosic, Lift TIG DC and ARC AIR processes are also available. A wide range of MIG-MAG synergic programs facilitate the selection of precise welding parameters using any welding wires. High performances are guaranteed even with long cable bundle (50m).

	Cruiser 322AC/DC Synergic									Cruiser 402AC/DC Synergic									Cruiser 502AC/DC Synergic								
	3x400Vac ± 15% @ 50-60Hz									3x400Vac ± 15% @ 50-60Hz									3x400Vac ± 15% @ 50-60Hz								
	25A@									32A@									40A@								
	MIG-MAG			TIG-WIG			MMA			MIG-MAG			TIG-WIG			MMA			MIG-MAG			TIG-WIG			MMA		
$\%_{40^{\circ}C}$	40%	60%	100%	45%	60%	100%	45%	60%	100%	50%	60%	100%	50%	60%	100%	50%	60%	100%	30%	60%	100%	30%	60%	100%	30%	60%	100%
$-I_2$	320A	270A	240A	320A	280A	240A	300A	270A	240A	400A	380A	340A	400A	380A	340A	400A	370A	340A	500A	380A	340A	500A	380A	340A	500A	370A	340A
I_2	20A - 320A			5A - 320A			10A - 300A			20A - 400A			5A - 400A			10A - 400A			20A - 500A			5A - 500A			10A - 500A		
U_0	11/72V									9/81V									9/81V								
P_{max}	15,2kVA - 12,0kW									18,4kVA - 16,8kW									25,5kVA - 23,4kW								
IP	23									23									23								
	1160 x 670 x 1530mm (H ₂ O)									1160 x 670 x 1530mm (H ₂ O)									1160 x 670 x 1530mm (H ₂ O)								
	147,6Kg (H ₂ O)									154,5Kg (H ₂ O)									154,5Kg (H ₂ O)								



TECHNOLOGY

PROCESSES

SPECIAL FUNCTIONS TIG AC/DC HF

MATERIALS

INDUSTRIES

WF103 - WF105

Wire Feeder for Cruiser 322 - 402 - 502 AC/DC Synergic

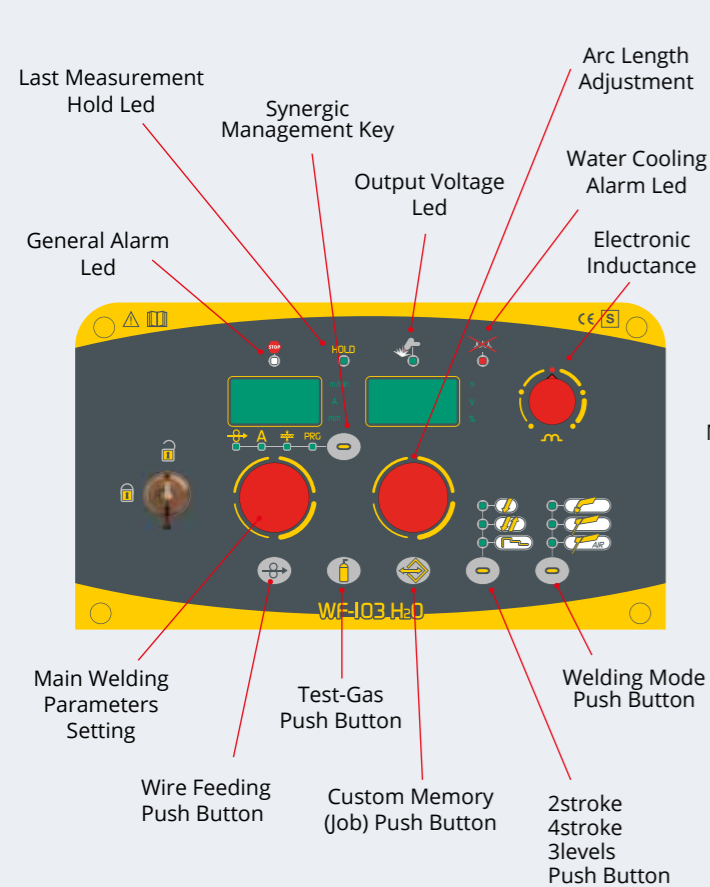
WF103 - WF105

Technical Data

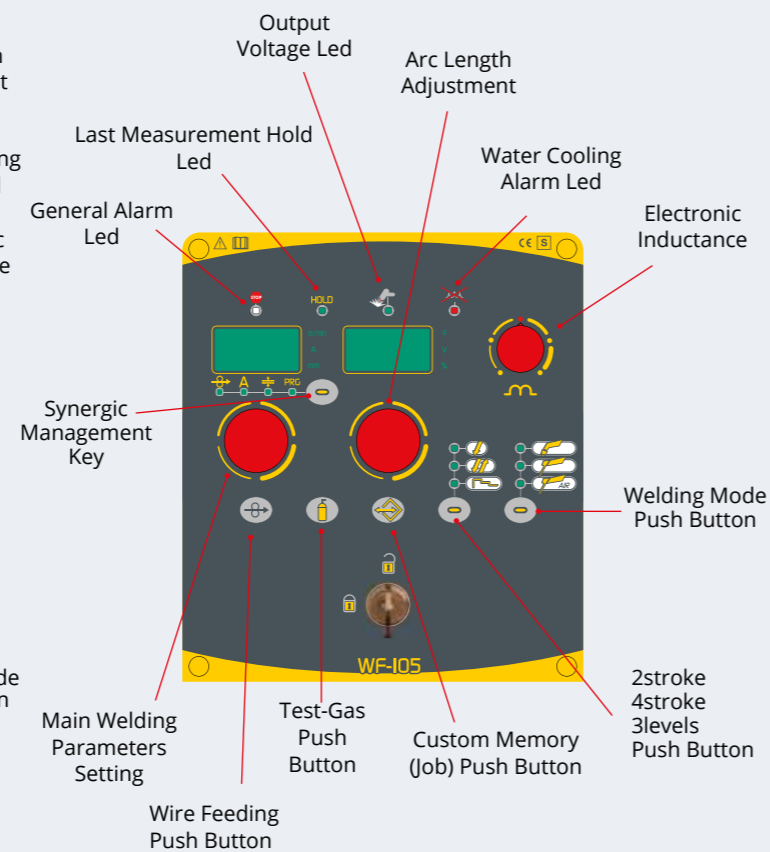


DIX connector for MMA

Front Panel WF103



Front Panel WF105



	WF103
	42VDC
P_{MAX}	120W
r.p.m.	270
	1,5 - 22,0m/min
	n°4 (ø30mm - ø22mm) Fe 0,8 - 1,6mm Al 0,8 - 1,6mm FCW 0,8 - 1,6mm
	200mm (5Kg) - 300mm (15 Kg)
IP	23
	680x 280 x 380mm
	15,6Kg

	WF105
	42VDC
P_{MAX}	120W
r.p.m.	270
	1,5 - 22,0m/min
	n°4 (ø37mm - ø19mm) Fe 0,6 - 1,6mm Al 0,8 - 3,2mm FCW 1,0 - 3,2mm
	200mm (5Kg) - 300mm (15 Kg)
IP	23
	670x 245 x 470mm
	24Kg

Cruiser 322 - 402 - 502 AC/DC Synergic Plus and Accessories

PLUS



STRUCTURAL STRENGTH

The structural strength of the Cruiser 322-402- 502AC/DC Syn is very robust in any working environment.



ROBUST WHEELS

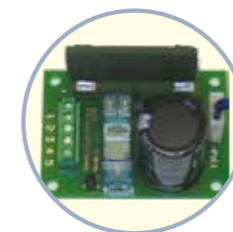
The robust wheels of the Cruiser 322-402-502ACD/DC Syn allows smooth movement of the power source.



EASY CARRIAGE

The Cruiser 322-402-502AC/DC Syn can be easily moved around any workplace thanks to our robust trolley.

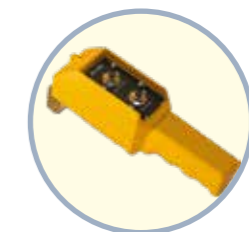
ACCESSORIES



KIT PUSH PULL



TORCH UP & DOWN



REMOTE CONTROL

Cruiser 322 - 402 - 502 AC/DC Synergic

Special Functions



W.ECO Technology Inside

Lower harmonic current emissions

W.ECO technology according to EN-60974-10, reduces harmonic current emissions.

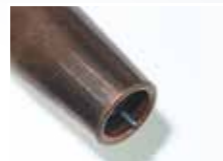


HAC Hybrid Arc Control

Soft Arc, Low Spattering
Better welds, Money Savings

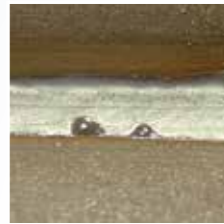
WECO unique HAC (Hybrid Arc Control) supplies a soft and very stable MIGMAG welding arc with excellent weld bead quality and minimal spattering in any working conditions.

HAC (Hybrid Arc Control)



BURN BACK:

An optimal wire cutting at the end of welding helps perfect starts.



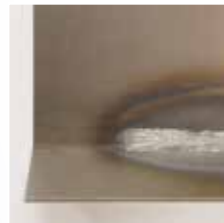
SPRAY ARC:

HAC allows you to have a short spray arc with better penetration of the root, lower heat input and higher welding speed with no edge cutting and spattering.



PG POSITION:

HAC allows thin plates welding in vertical down position with gap up to 5mm wide.



THIN PLATES:

HAC gives smooth and controlled short arc at lower parameters too. Low spattering, good edge wetting, low heating and small deformation are achieved in thin plate welding.



SPOT WELDING:

Dedicated controls, low spattering and high execution-speed allow you to get perfect welding spots.



WELDING POSITION:

HAC gives an optimal fusion of the bead's edges in short arc welding and to make overhead and vertical up position welding easier.



SOFT START:

Approaching speed of wire and welding dynamics are totally synergic giving low spattering at start, in any type of material.



3T SPECIAL: allows you to set and recall 3 different current levels by pushing the trigger switch in order to achieve top quality weld beads: Highly recommended for Aluminum welding.



LEVEL 3: A low current ends the welding optimally by filling the crater on weld beads.



LEVEL 2: The welding current is optimized with the plate thickness and the requested weld.



LEVEL 1: A correct initial current gives optimal penetration from welding start.

Power Pulse 322 - 402 - 502 AC/DC Cruiser 322 - 402 - 502 AC/DC Synergic

Modular composition

From a TIG AC/DC power source

to a Multifunction MIG MAG Synergic
or MIG/MAG Pulse / Double Pulse



CRUISER 322 - 402 - 502 AC/DC

WF108

WIRE FEEDER
4 rolls, 120W



WF104

WIRE FEEDER
4 rolls, 120W



WF105

WIRE FEEDER
4 rolls, 120W



WF103

WIRE FEEDER
4 rolls, 120W



+ KIT
POWER PULSE

+ TROLLEY M
+ C.U.09
+ CABLE

+ TROLLEY M
+ C.U.09
+ CABLE



Power Pulse 322-402-502 AC/DC



Cruiser 322-402-502 AC/DC Synergic

Power Pulse 322 - 402 - 502 AC/DC

Twin feeder - Air Cooled

Cruiser 322 - 402 - 502 AC/DC Synergic

Twin feeder - Air Cooled



TWIN FEEDER

Air Cooled



TWIN FEEDER

Air Cooled

A solid industrial activity, where the production is based on substantial investments for the supporting of research, projection and continuous testing.

Since 1997 Weco has been producing and selling welding machines

Both registered office and production plant are based on the north east of Italy. Our offices, technical/project department, production and warehouse are able to serve both our national and international sales net. A wide range of welding machines together with a huge stock, allow us to encounter and fully satisfy our customers' requests in short time.

A dynamic management supported by solid experience on the main sales' arguments and a deep knowledge on the application issues, allow this company to be ahead in the welding sector.

WECO means better solution for improving the production, optimizing the intervention time, minimizing the processes' costs, with the highest perform-standards granted.



WELD THE WORLD

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