SWISS – WELDING
Schweisstechnik GmbH

OERLIKON

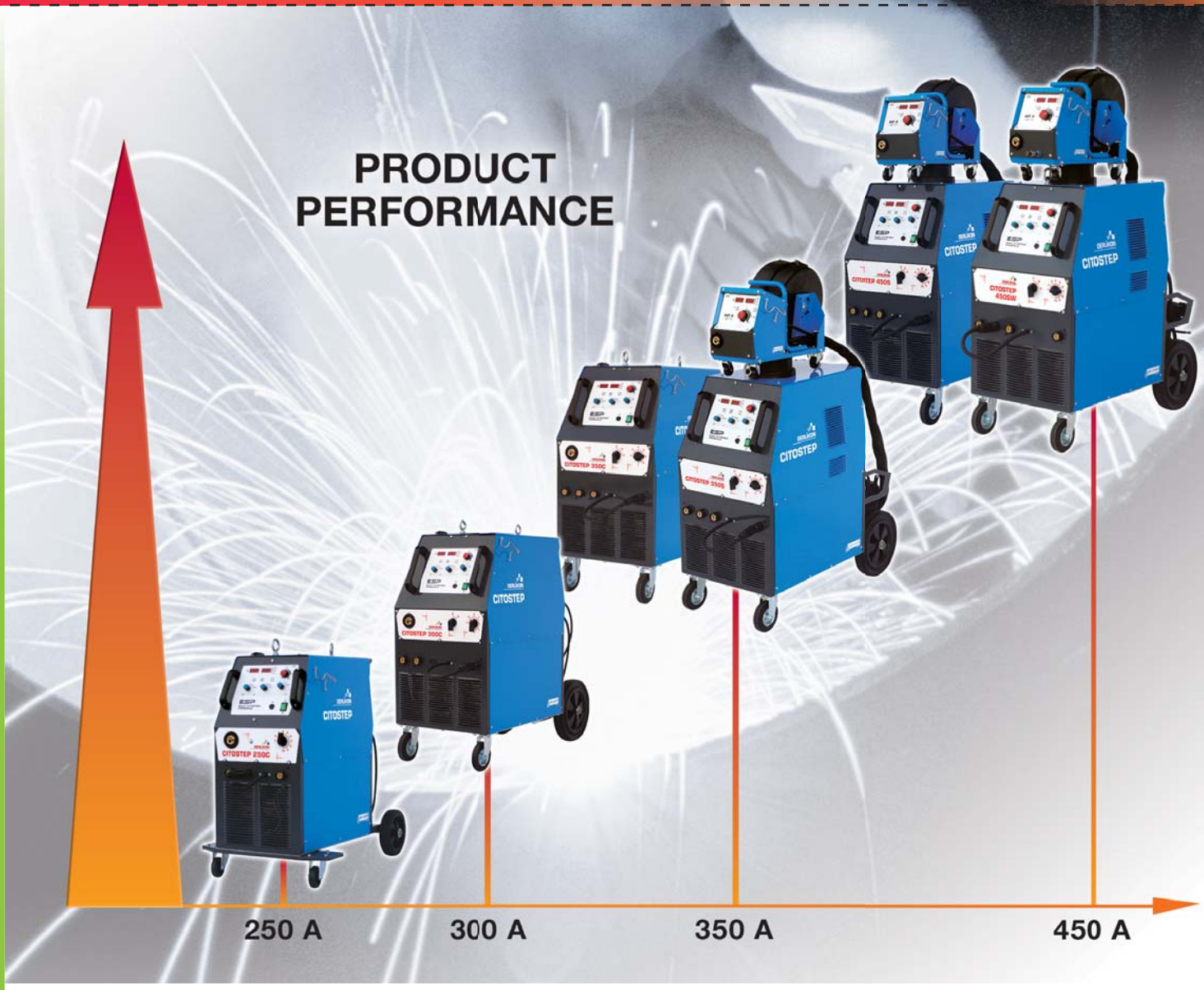
CITOSTEP

MIG/MAG Step controlled range

Swiss - Welding Schweisstechnik GmbH

CITOSTEP

CITOSTEP machines are intelligent MIG/MAG welding installations with voltage switching technology and numerical control of the parameters. Robust and reliable, they contain an innovative Easy Synergic Program (ESP) for an easy set up of the equipments.
Particularly suitable for shipyards, boiler factories, railway equipment and road transport sectors, these machines are able to weld low thickness metal sheets with reduced distortion and low emission of spatters.



Criteria choice for CITOSTEP RANGE

Name	Main power supply	Technology	Welding current range	Duty cycle @ 40 °C	Wire diameter	Wire feeder		4 rollers
						Enclosed	Separate	
CITOSTEP 250C	Three-phase 230 V / 400 V +/-10% (50-60Hz)	ESP Step control	35 - 250 A	250 A - 35%	0.6 - 1.2 mm	✔	-	✔
CITOSTEP 300C			35 - 300 A	300 A - 35%	0.6 - 1.2 mm	✔	✔	✔
CITOSTEP 350C/S			35 - 350 A	350 A - 35%	0.6 - 1.2 mm	✔	✔	✔
CITOSTEP 450S/SW			50 - 450 A	450 A - 35%	0.6 - 1.6 mm	-	✔	✔

Advanced functionalities: ESP & EFQ

In ESP mode, welding becomes easy and intuitive. The purpose of the ESP (EASY SYNERGIC PROGRAM) is to help the operator through adjustment of the welding generator to achieve an optimized welding condition for any given application.

ESP Front panel

❶ *Select wire diameter...*

❷ *Select gas of protection and metal sheet type...*

❸ *Select thickness...*

❹ *Set up the power switches and inductance following the indications of leds...*

And just weld !

When ESP is deactivated (manual mode): the power source is adjusted like any standard source (select voltage, wire speed and choke).

EFQ (Easy FreQuencer)

This welding process can be used to weld low thickness metal sheets (<4 mm) for edge-to-edge welding. Thanks to this functionality, the heating is reduced and the impacted area is decreased, avoiding the metal sheet's distortion and collapse.

To weld with EFQ, switch the equipment in Intermittent mode.

Intermittent mode

It is a 2T mode with two phases controlled by the timing adjusted in the "cycle" menu: a welding phase and a waiting phase (no weld) up to the release of the trigger.

Head to head

Vertical ascendant

10 good reasons to choose CITOSTEP for industrial installations:

❶ Robustness guaranteed by qualified crash test.
❷ ESP settings assistance to obtain the right welding parameters instantly.
❸ Quality of transformer and choke that guarantee exceptional welding of steel, stainless steel or aluminum.
❹ Control of choke for instant arc strike with minimal spatter.
❺ Duty cycle at 40 °C meeting industrial productivity requirements due to an optimized cooling.
❻ Complete welding cycle controlled by microprocessor card for high flexibility.
❼ Accurate and constant numerically controlled wire feed.
❽ Display of parameters (voltage, current, speed) essential for the conformity of operating modes.
❾ Enhanced reliability and life expectancy due to protection of switching equipment in a dust-proof compartment.
❿ Fully compliant, tested for EMC immunity and endurance to enable operations in harsh industrial environments.

Compact version equipments

synergic
MIG/MAG applications
powerful shipyard
fast setup robustness
industry expertise
railway **CITO**
boiler factories
reliability innovation

CITOSTEP 250C / 300C / 350C

Product features

- Contains a memory of parameters for the main welding applications
- Complete welding cycle
- Reversed polarity for special wires
- 4 rollers wire feeder

KEY BENEFITS

- EASY SYNERGIC PROGRAM (ESP) for an easy set up of the equipments
- Intelligent front panel with digital display
- Robust and reliable

WARRANTY 2 YEARS + 1 YEAR FREE WITH YOUR REGISTRATION

3PH THREE-PHASE

4 ROLLERS

ESP EASY SYNERGIC PROGRAM

		CITOSTEP 250C		CITOSTEP 300C		CITOSTEP 350C	
Primary input		Three-phase 230 V / 400 V +/- 10% (50-60 Hz)					
Input		230 V	400 V	230 V	400 V	230 V	400 V
Maximum consumption		27 A	16 A	34 A	20 A	43 A	24 A
Load voltage		42 V		44 V		47 V	
Duty cycle at 40 °C	at 100%	140 A		180 A		210 A	
	at 60%	170 A		230 A		270 A	
	at 35%	250 A		300 A		350 A	
Wire diameter		0.6 - 1.2 mm		0.6 - 1.2 mm		0.6 - 1.2 mm	
Protection index		IP 23					
Insulation class		H					
Dimensions		870 x 550 x 890 mm		1 012 x 477 x 1 003 mm			
Weight		86 kg		113 kg		127 kg	
Standard		EN 60974-1 / EN 60974-5 / EN 60974-10					
References		W000401180		W000401181		W000401182	

Separate version equipments

easy to use
productivity
STEP fast setup
industry expertise
performance robustness
railway
MIG/MAG applications
innovation
road transport railway

CITOSTEP 350S / 450S / 450SW

WARRANTY 2 YEARS + 1 YEAR FREE WITH YOUR REGISTRATION

3PH THREE-PHASE

4 ROLLERS

ESP EASY SYNERGIC PROGRAM

DIGITAL DISPLAY ON THE WIRE FEEDER

The spool cover is an option.

CITOSTEP 350S		CITOSTEP 450S		CITOSTEP 450SW	
Three-phase 230 V / 400 V +/- 10% (50-60 Hz)					
230 V	400 V	230 V	400 V	230 V	400 V
43 A	24 A	62 A	37 A	62 A	37 A
47 V		54 V		54 V	
210 A		270 A		270 A	
270 A		345 A		345 A	
350 A		450 A		450 A	
0.6 - 1.2 mm		0.6 - 1.6 mm		0.6 - 1.6 mm	
IP 23					
H					
1 012 x 477 x 1 003 mm					
122 kg		140 kg		158 kg	
EN 60974-1 & EN 60974-10					
W000401183		W000401949		W000401184	

Wire feeder WF4	5A	10A	5W	10W
Rollers	4 rollers			
Wire feed speed	1.0 to 20.0 m/min			
Wire diameter	0.6 to 1.6 mm			
Setting	1 potentiometer			
Display	2 numerical displays			
Harness length	5 m	10 m	5 m	10 m
Cooling	Air		Water	
Protection index	IP 23			
Insulation class	H			
Standard	EN 60974-5 & 60974-10			
Dimensions	377 x 262 x 540 mm			
Weight	21 kg	26 kg	21 kg	26 kg
References	W000401190	W000401191	W000401193	W000401194

Options

WELDLINE WMT2 25A

WELDLINE WMT2 36A

WELDLINE WMT2 500W

To order			CITOSTEP 250C	CITOSTEP 300C	CITOSTEP 350C	CITOSTEP 350S	CITOSTEP 450S	CITOSTEP 450SW
Power source			W000401180	W00401181	W00401182	W000401183	W000401949	W000401184
Torches								
WELDLINE WMT2 25A	3 m	W000277473	●	-	-	-	-	-
	4 m	W000277474	●	-	-	-	-	-
CITORCH M241	3 m	W000345085	●	●	-	-	-	-
	4 m	W000345086	●	●	-	-	-	-
WELDLINE WMT2 36A	3 m	W000277482	-	●	●	●	●	-
	4 m	W000277483	-	●	●	●	●	-
CITORCH M341	3 m	W000345091	-	-	●	●	-	-
	4 m	W000345092	-	-	●	●	-	-
CITORCH M441	3 m	W000345097	-	-	-	-	●	-
	4 m	W000345098	-	-	-	-	●	-
CITORCH M441W	3 m	W000345100	-	-	-	-	-	●
	4 m	W000345101	-	-	-	-	-	●
WELDLINE WMT2 500W	3 m	W000277492	-	-	-	-	-	●
	4 m	W000277493	-	-	-	-	-	●
Wire feeders								
Separate air cooled wire feeder	WF4 5A Harness 5 m	W000401190	-	-	-	●	●	-
	WF4 10A Harness 10 m	W000401191	-	-	-	●	●	-
Separate water cooled wire feeder	WF4 5W Harness 5 m	W000401193	-	-		-	-	●
	WF4 10W Harness 10 m	W000401194	-	-	-	-	-	●
Others								
FREEZCOOL cooling liquid 9,6 L		W000010167	-	-	-	-	-	●
Spool cover		W000402546	-	-	-	●	●	●

CITORCH M241

CITORCH M341

CITORCH M441

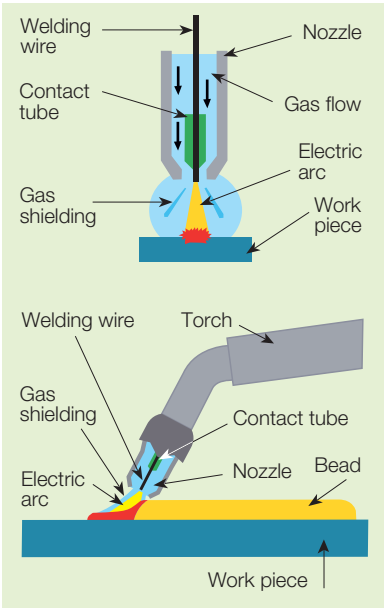
CITORCH M441W

The MIG/MAG expert

The MIG/MAG process

Principle

The MIG/MAG welding process uses an arc under gaseous protection. The electrode is a metallic wire. The electrode, the metal transferred in the arc and the weld bead are protected from the atmosphere by an inert gas for MIG welding and an active gas for MAG welding. In manual welding this process is called semi-automatic because the wire is fed automatically as soon as the arc starts.



Arc transfer modes

Short-Arc transfer

The Short Arc has a low spatter rate with good wetting and is suited to welding thin steel plate, working in position and penetration passes This mode is characterized by alternating short circuits and light arc.

Speed Short-Arc™ transfer

The Speed Short Arc allows a high travel speed due to a rigid arc and a cold regime. It is very efficient for welding thin steel plates, working in position and in closed angle and filling bevels. The SSA™ is used for short circuit welding though the normal globular regime travel speed domain.

Globular transfer

Metal is transferred in the arc as large drops with hardly masterred trajectories. It's a transfer mode giving low quality results.

Spray-Arc transfer

Metal is transferred in the arc as small droplets. The mode is very regular but requires high welding parameters and therefore is usable only for thickness above 5 mm.

Applications

Shipyards

Shipbuilding applications, both repair and construction, are a particular focus for this equipment, that combines ergonomics and robustness with very high welding quality. A small, lightweight wire feed unit facilitates access to all the compartments in a ship's hull. The addition of a water cooling unit in the power source makes it possible to use a smaller, liquid-cooled torch, facilitating these welding operations.

Railway equipment

Quality and productivity requirements are important in the railway construction sector. This is why we improve the weld quality by adapting our power sources and procedures in response to the developments in materials used within this market segment.

Boiler factories

The great diversity of welding applications in this sector means that MIG/MAG welding installations have to be versatile. Used for spot welding sheet, but also for penetration pass and joint filling, CITOSTEP units are specially adapted to these operations. Numerical control of wire speed helps to keep the welding parameters constant, ensuring excellent reproduction of the welded joints.

Road transport

Made from a wide range of materials, companies have to adapt to the rapid changes in manufacturing practices whilst remaining in control of quality. The CITOSTEP settings assistance system (ESP) facilitates this adaptation while respecting the economic and environmental considerations associated with each production site.

Kontakt

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