

Sigma One

A high performing MIG/MAG welding machine, built for the heavy-duty steel construction industry.
Powerful, simple and reliable.



Compact or
separate wire feed

Water or
air cooled

300, 400 or
550 amps

Synergic DC or
Pulse

micatronic

One purpose. Weld.

Sigma One is a super simple, high-performance inverter which is ideal for busy welding productions where the main aim is to keep the productivity level high. Use it for welding steel structures, prefabrication and thick plates in mild steel, stainless steel and aluminium in the production hall or on-site.

One purpose

With Sigma One, you get the essential welding programs and functions you need to be able to carry out efficient and high-quality multipass welding. There are no unnecessary refining of the arc, just weld. Use it for root passes and the additional layers.

Continuous welding

The high duty cycle enables you to weld for many hours without any decrease of currents or compromising welding quality. Weld as many meters per day as your tasks require. Your team of welders can keep productivity level at an absolute maximum.

Faster welding with pulse

Improve productivity even further with pulse process. The low heat input and spatter-free pulse welding lowers the risk of damaging the steel. The process gives you a better control of the weld pool and a better weld.



This One is great if you just need air.

Choose this one if you need your welding machine to breathe air. Just air. No extraordinary features. And you can still serve your sole purpose: to weld. Dedicated welders can carry out efficient high-quality multipass welding. Keep cool through it all with top-of-the-line air cooled torches.



Wire feeding Compact design	Cooling Air
Control Synergic DC or Pulse	Current range 15-550A

Sigma One C
Compact design

Go seperate ways with this One.

Separate yourself from the power source with this one. Go as far away from the power source as the intermediary cables allow. Move around large steel structures and plates while serving your sole purpose: to weld. Keep cool the whole time with top-of-the-line air cooled torches.



Wire feeding Separate unit	Cooling Air
Control Synergic DC or Pulse	Current range 15-550A

Sigma One S
Separate wire feeder



Wire feeding Compact design	Cooling Water
Control Synergic DC or Pulse	Current range 15-550A

Grab One with chilling water cooling.

Fresh cooling liquid is running through the veins of this one. Keep cool for hours and hours and have it close by while serving your sole purpose: to weld. Weld as many meters per day as your tasks require and keep productivity level at an absolute maximum.



Wire feeding Separate unit	Cooling Water
Control Synergic DC or Pulse	Current range 15-550A

One does simply get things done.

Grab this one and disappear. Let yourself be absorbed completely in your work. Serve your sole purpose: to weld. Disappear into containers or other narrow spaces with this one, and know that you do not have to come back any time soon. Keep productivity level high. Simply just disappear and get things done.

Graphic control panel

The simple and visual display is intuitive to navigate and easy to use for both the welder and the supervisor.

It will contribute to making your daily working procedures efficient.

Choose synergic DC or pulse process as your preferred type of control. A standard package of 40+ welding programs for both mild steel, stainless steel and aluminium is included.

The interface

The interface is user-friendly for both experienced and less experienced users. Well-known symbols and visual presentations of settings show how your adjustments will affect the weld. Essential information like material, gas and plate thickness is presented so it is always easy to find.

Upgrade via SD-card

If you want to upgrade your welding set-up with more synergic welding programs, it is carried out as a software update via SD-card. You can update the control panel throughout the entire service life of your Sigma One.

Lock specific settings

Use a lock card to lock the control panel in two levels. It defines which settings the user should have access to. This is specifically useful if you need to comply with WPS's in your welding production. The lock card is an optional feature.

Memory function

Save up to five of your favourite settings by the push of a button. Included in both synergic DC and pulse.



Clear information
The display has a high peak brightness, which makes it easy to see and adjust settings in dark or dimly lit spaces.

Keep your gloves on
The buttons are designed so welders can keep their gloves on when adjusting or fine-tuning settings.

Safe from spatter
The robust protection glass can withstand the dust and impacts it will be exposed to in the production hall.

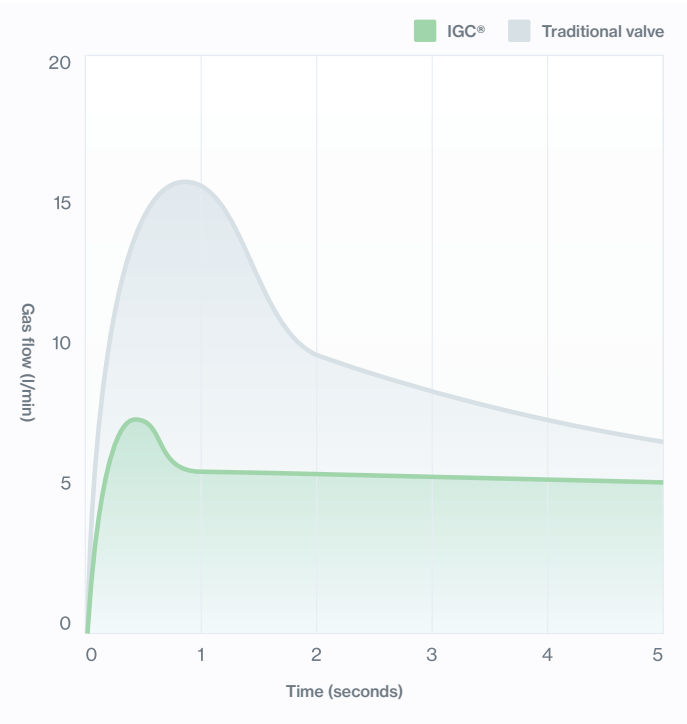
Easy updates
Get your software updates from migatroni.com and transfer them to your Sigma One via SD-card.

Use up to 50% less gas with Sigma One and IGC® Intelligent Gas Control

The IGC® technology* controls the gas flow during welding and makes sure that the correct amount of gas is supplied throughout a weld.

At the same time, it reduces unnecessary over-consumption of gas. This improves the quality of your welds and gives you long term savings.

*IGC is an optional function for your Sigma One.



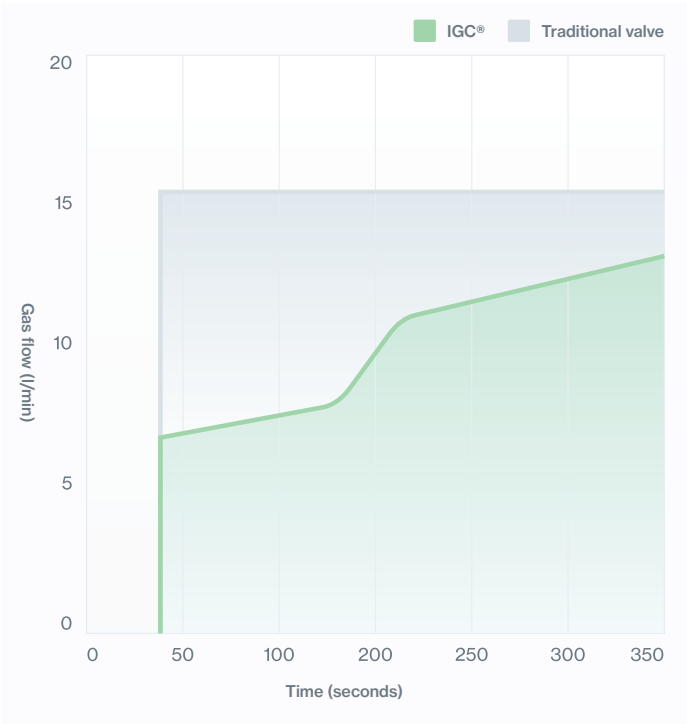
Gas consumption at the moment of ignition.

No over-consumption of gas at ignition

A traditional valve supplies too much gas than necessary at ignition. This causes a large waste of gas and turbulence, which can disrupt the weld and lower the quality.

IGC® makes sure that accumulated gas in welding hoses is released gradually during the first few seconds of a weld.

This does not disrupt the weld and over-consumption of gas at ignition is eliminated.



Gas flow using IGC®.

IGC® automatically optimises gas flow

The higher the amperage and the bigger the weld pool, the more gas you need. When using synergic welding programs, IGC® uses pre-adjusted gas synergy lines to automatically provide the optimum gas flow during every moment of a weld.

When IGC® reduces the gas flow at ignition and automatically optimises gas flow during the entire weld, you can reduce up to 50% of your gas consumption.

Every welding production is unique. Visit migatronic.com/IGC to calculate your own savings.



Get easy access to precise adjustment of welding parameters with Smart Torch modules*

*A Smart Torch module is an optional feature for your torch.

Using the graphical display, the welder can fine-tune settings precisely down to one amp - without being right next to the welding machine. It is almost like having the control panel at the welding spot even if the distance from the welding machine is 5 meters.

Adjustments available with the different modules

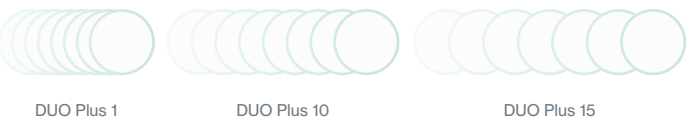
Smart Torch is indispensable in welding productions requiring accuracy and precision when it comes to adjustments of the arc.

	2 buttons	4 buttons	Graphical w/ 4 buttons
Manual	Wire feed speed.	Wire feed speed and voltage.	Wire feed speed, voltage trim, arc-adjust.
Synergic	Welding current.	Adjust welding current and voltage trim.	Welding current, voltage trim, arc-adjust.

Make MIG look like TIG with Duo Plus

Use this MIG/MAG function to get stunning TIG-like welds. DUO Plus* gives you better control of the weld pool because it automatically controls the set currents and has several cooling periods during a weld. This reduces the heat input and you are guaranteed a perfect weld bead appearance.

*DUO Plus is included with every Sigma One.



Technical specifications

	Sigma One 300 C & S	Sigma One 400 C & S	Sigma One 550 C & S
Current range (MIG), A	15-300	15-400	15-550
Mains voltage +/- 15% (50-60Hz), V	3 × 400	3 × 400	3 × 400
Fuse, A	16	20	35
Mains current, effective, A	11	17.5	27.2
Mains current, max., A	15.4	26	39.2
Power, 100%, kVA	9.0	12.1	18.9
Power, max., kVA	10.7	18	27.1
Open circuit voltage, V	50-60	65-70	75-80
Efficiency	0.85	0.85	0.90
Power factor	0.90	0.90	0.90
Duty cycle 100% /20°C (MIG), A/%/V	290/28.5	345/100/31.5	475/100/37.8
Duty cycle max. /20°C (MIG), A/%/V	-	400/60/34	550/60/41.5
Duty cycle 100% /40°C (MIG), A/%V	220/25	300/100/29	430/100/35.5
Duty cycle 60% /40°C (MIG), A/%V	240/26	370/60/32.5	510/60/39.5
Duty cycle max. /40°C (MIG), A/%/V	300/25/29	400/50/34	550/50/41.5
Application class	S/CE	S/CE	S/CE
Protection class	IP 23S	IP 23	IP 23
Standards	IEC60974-1. -10 Cl. A	IEC60974-1. -10 Cl. A	IEC60974-1. -10 Cl. A
Dimensions C (H x W x L), mm	700 × 260 × 735	700 × 260 × 735	700 × 260 × 735
Dimensions S (H x W x L), mm	454 × 260 × 735	454 × 260 × 735	454 × 260 × 735
Weight C, kg	36.9	52	53
Weight S, kg	26	35	36

We reserve the right to make changes.

	MWF 32 wire feeder
Wire feed speed, m/min.	0.5-30.0
Wire spool diameter mm.	300
Duty cycle 100% /40°C, A/%	430/100
Torch connection	EURO
Protection class	IP 23
Standards	IEC60974-5. -10 CL. A
Dimensions (H x W x L), mm	457x260x672.5
Weight, kg	11.6

We reserve the right to make changes.

	MCU 1300 cooling unit
Cooling capacity (1 l/min.), W	1300
Tank capacity, l	5
Max. pressure, bar	5
Max. temperature, °C	70
Standards	IEC60974-2. -10 CL.A
Dimensions (H x W x L), mm	207x260x680
Weight, kg	20

We reserve the right to make changes.

Get serviced by our large service network

Our network of Authorized Service Partners across Europe is ready to support your welding production. Authorized Service Partners have educated service technicians who are certified to perform professional service and maintenance. They know your welding machine and their service vehicles are packed with original spare parts, calibration measuring- and testing equipment.

Visit migatronic.com/service to find your nearby service partner

Extend the warranty on your Sigma One

You can be sure of high-quality products when you buy Migatronic. In addition to the warranty period of 2 years for new welding machines, you can extend the warranty up to 5 years.

To maintain the extended warranty, a yearly service check is required, including validation, calibration and safety test.

Register your newly purchased Sigma One on migatronic.com/warranty no later than 30 days from the date of purchase. Then you get up to 5 years warranty on selected components.



Sigma One

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