

# Sigma One

A robust MIG/MAG inverter welding machine. Designed for light and heavy use in manufacturing companies of all sizes. Powerful, simple and reliable.



Compact or  
separate wire feed

230, 270, 300, 400 or  
550 amps

Water or  
air cooled

Synergic DC or  
Pulse

**MIGATRONIC**

# One that gets the job done

Sigma One's powerful and reliable performance matches many different needs in professional manufacturing companies: from simple welding and maintenance projects to continuous welding in busy workshops. Use it for mild steel, stainless steel and aluminium.

## Produce high-quality welds

With Sigma One, you get the essential programs and functions you need to produce strong, high-quality welds. The high versatility enables you to handle a wide range of materials and thicknesses. You can increase precision and accuracy when welding both root passes and the additional layers. Sigma One can help you to succeed with your welding projects.

## 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.

## For continuous welding – heavy use

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. A team of welders can keep the productivity level at an absolute maximum.

## For occasional welding – light use

The lower amperages options for Sigma One are meant for repair, maintenance and other quickly done welding tasks in professional industries. For the occasional welds and unexpected need for welding. It is great for small workshops or well-equipped maintenance departments.



# This One is great if you just need air.

Choose this one if you need your welding machine to breathe air. Just air. With a compact design, you can easily move it around in the workshop if necessary. It is simple to adjust and ready to weld whenever the welders need it. Keep cool through it all with top-of-the-line air cooled torches.



<b>Wire feeding</b> Compact design	<b>Cooling</b> Air
<b>Control</b> Synergic DC or Pulse (Pulse not available for 230 A)	<b>Current range</b> 15-230/270/300/400/550 A

**Sigma One**  
Compact design

# Go separate 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.



<b>Wire feeding</b> Separate unit	<b>Cooling</b> Air
<b>Control</b> Synergic DC or Pulse	<b>Current range</b> 15-300/400/550 A

**Sigma One**  
Separate wire feeder

# 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.



<b>Wire feeding</b> Compact design	<b>Cooling</b> Water
<b>Control</b> Synergic DC or Pulse	<b>Current range</b> 15-300/400/550 A

# 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 anytime soon. Keep the productivity level high and simply get things done.



<b>Wire feeding</b> Separate unit	<b>Cooling</b> Water
<b>Control</b> Synergic DC or Pulse	<b>Current range</b> 15-300/400/550 A



## If welding is your one purpose

Sigma One 300/400/550 is developed for use in busy welding productions. A place where the main aim is to keep the productivity level high. Where dedicated MIG/MAG welders spend hours and hours to fulfil their sole purpose: to weld.

### **One purpose – weld**

Great craftsmanship is a result of passion, dedication, and attention to detail. Sigma One above 300 amps encourage dedication and focus, so welders can carry out efficient high-quality multipass welding. Supervisors will experience great welding craftsmanship and see that their team of welders get the job done.



## If welding is a sudden need

Sigma One 230/270 is developed for the occasional welds and unexpected need for welding. For small workshops or a well-equipped maintenance departments. A place where workers might not be full-time welders, but still need to produce excellent welds.

### **Easy to use – have no fear**

Adjusting the Sigma One 230/270 will be easy for each weld. Even if days pass in between them. The synergic welding programs with predefined settings help the occasional welders. They do not have time to familiarise themselves with the welding machine for every use – and fear not, they do not have to. But, they will still get the job done.

# Graphic control panel

The graphic control panel is intuitive to navigate and easy to use for both welders and supervisors. It will contribute to making your daily working procedures efficient.

## Visually compelling



The graphic control panel is designed to be easy to understand. Users with limited experience with digital welding machine displays will quickly grasp this simple design. It is easy to find and adjust the core welding settings: amps, voltage and wire feed speed. It is great if you want well-known settings presented in a simple, yet visually compelling way.

## Update via SD-card



When you want to update your welding machine, it is carried out as a software update via SD-card. You can update your machine throughout its entire service life.

## Lock specific settings



Use a lock card to lock the control panel in two levels. Lock specific settings to make sure that no one makes unnecessary or wrong adjustments. It ensures that you use the same settings for recurring welds. The lock card is an optional feature.



## 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 quite large. 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 migatron.com and transfer them to your Sigma One via SD-card.

# Improve your welding skills with intelligent technology

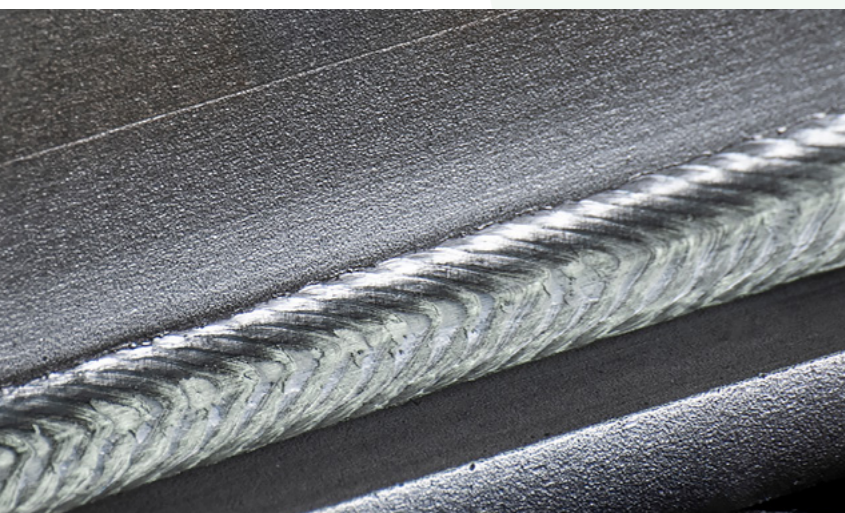
Intelligent welding technology offers a way to become a better welder without spending a lot of time or energy. This could involve finding more efficient ways to get the job done. Get to know the features in Sigma One and be able to deliver great welds with less effort.



## Miga Memory (MigaMEM)

Save up to five of your most frequently used settings and quickly recall them whenever you need to.

It saves time and will ensure the highest possible standards for specific welds. It is most useful for recurring welding tasks.



## DUO Plus

DUO Plus is an advanced pulse function which feeds the filler wire with a pulsatory current. The result is better control of the arc and a minimum of weld spatter. It ensures preservation of strength in the steel.

The pulsatory current becomes visible as neat droplets which form a beautiful weld seam.



## Intelligent Gas Control (IGC®)

With IGC, the welding machine always uses the right amount of gas for every weld. It prevents over-consumption and gives you long-term savings.

The higher the amperage and the bigger the weld pool, the more gas you need. A traditional valve does not know this, but IGC® does. Gas synergy lines are preadjusted for gas and type of wire. It makes sure that your weld pool is always perfectly protected.

When you always have the optimum gas protection, there will be no holes, pores or impure welds. Reduce the risk of failures created by insufficient gas flow or gas turbulence. Improve the weld quality and reduce your gas bill at the same time. IGC® is an optional feature.

# Every welder's closest ally

30°

45°

## Smooth welding in aluminium TWIST 30° torch

The TWIST 30° torches are developed specifically for aluminium wires and other soft wires.

The degree of the swan neck is reduced from the standard 45° to 30°. Welders will experience a smooth and stable wire feeding, less errors due to liner failure and less replacements of liners. Welding with aluminium becomes less risky and more reliable.

## Fine-tune settings at the handle Smart Torch modules

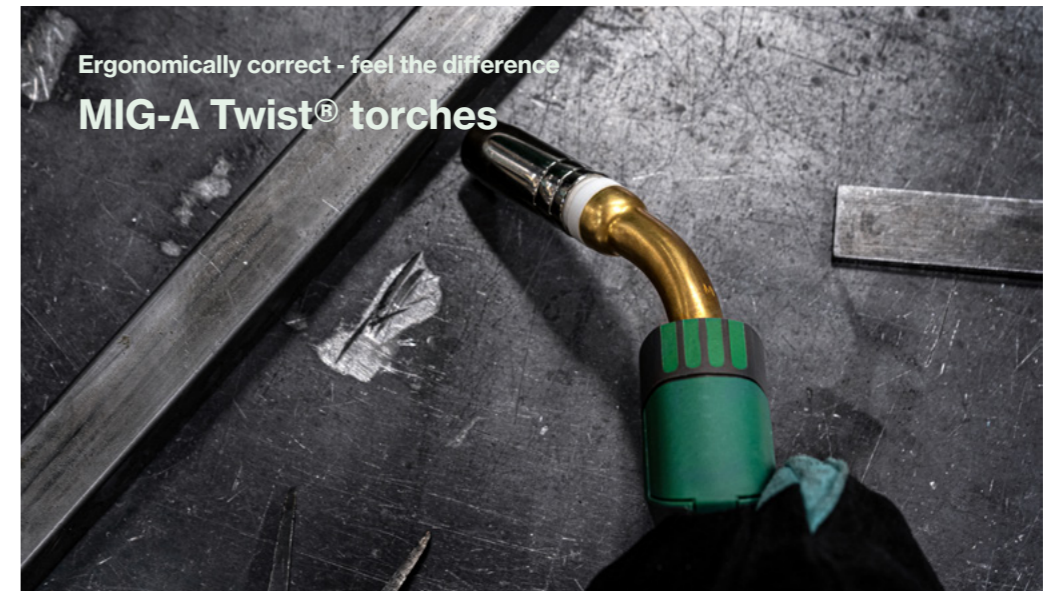


Add a Smart Torch module to your torch and be able to adjust welding parameters at the handle.

Welders can fine-tune settings precisely 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.

This gadget is for welders who require accuracy and precision of arc adjustments or if they weld in sequences.

## Ergonomically correct - feel the difference MIG-A Twist® torches



Stay in ergonomically correct working postures when welding in varying positions.

Welders twist the turnable swan neck, not their hand, and can easily lead the torch into the perfect angle. It is easily done without tools.

MIG-A Twist torches in various lengths are developed for air cooling and water cooling.



# Technical specifications

	Sigma One 230 C	Sigma One 270 C	Sigma One 300 C & S	Sigma One 400 C & S	Sigma One 550 C & S
Current range (MIG), A	15-230	15-270	15-300	15-400	15-550
Mains voltage +/- 15% (50-60Hz), V	3 x 400	3 x 400	3 x 400	3 x 400	3 x 400
Fuse, A	10/16	10/16	16	20	35
Mains current, effective, A	7.2	8.5	11	17.5	27.2
Mains current, max., A	10.5	13.2	15.4	26	39.2
Power, 100%, kVA	4.9	5.9	9.0	12.1	18.9
Power, max., kVA	7.2	9.1	10.7	18	27.1
Open circuit voltage, V	50-60	50-60	50-60	65-70	75-80
Efficiency, %	88	88	85	85	90
Power factor	0.94	0.90	0.90	0.90	0.90
Duty cycle 100% /20°C (MIG), A/%V	175 / 23.0	200 / 4.2	290/28.5	345/100/31.5	475/100/37.8
Duty cycle max. /20°C (MIG), A/%V	230 / 40 / 25.5	270 / 28 / 27.5	-	400/65/34	550/60/41.5
Duty cycle 100% /40°C (MIG), A/%V	175 / 23.0	200 / 24.2	220/25	300/100/29	430/100/35.5
Duty cycle 60% /40°C (MIG), A/%V	205 / 24.3	210 / 24.5	240/26	370/60/32.5	510/60/39.5
Duty cycle max. /40°C (MIG), A/%V	230 / 40 / 25.5	270 / 28 / 27.5	300/25/29	400/50/34	550/50/41.5
Application class	S/CE	S/CE	S/CE	S/CE	S/CE
Protection class	IP 23S	IP 23S	IP 23S	IP 23	IP 23
Standards	IEC60974-1. IEC60974-5. IEC60974-10 Cl. A				
Dimensions C (H x W x L), mm	675x250x238	675x250x238	700 x 260 x 735	700 x 260 x 735	700 x 260 x 735
Dimensions S (H x W x L), mm	-	-	454 x 260 x 735	454 x 260 x 735	454 x 260 x 735
Weight C, kg	32.5	32.5	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	14.0

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 [migatronik.com/service](http://migatronik.com/service) to find your nearby service partner

## Extend the warranty - up to 5 years

You can be sure of high-quality products when you buy Migatronik. 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.

Register your newly purchased Sigma One on [migatronik.com/warranty](http://migatronik.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



Explore more on [migatronic.com](https://www.migatronic.com)

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**MIGATRONIC**