

Sigma Core

A simple MIG/MAG welding machine, built for light and heavy steel construction industries. Robust, straightforward and with just the core welding functions.



Compact or
separate wire feed

Water or
air cooled

230, 270,
300, 400 or
550 amps

Graphic control
panel

MIGATRONIC

High amps. High simplicity.

Sigma Core is a simple welding machine with the core functions you need to weld - also at high amps. It is ideal for welders who demand simplicity in advanced welding. Use it for welding steel structures, prefabrication and thick plates in mild steel.

Uncomplicated and effortless

In Sigma Core, you get the most necessary options you need to produce great welds. No complicated software or unnecessary gadgets. Any welder, no matter the level of experience, will have no trouble adjusting the Sigma Core and start welding right away.

Minimising the technology gap

Sigma Core minimises the gap between earlier generation welding machines and modern day welding technology. It does so by offering an improved arc, which again improves weld quality. It is a more energy efficient solution that consumes less power and gas for an optimised production. Add the optional function Intelligent Gas Control to your Sigma Core and reduce your gas consumption even further.

Great welding performance

The high duty cycle enables you to weld for many hours without any decrease of currents or compromising weld quality. A team of welders can keep productivity level at an absolute maximum.

A cost-effective solution

Great welding performance and modern day welding technology ought to be accessible for all kinds of welding productions. Large and small. High-tech or not. It calls for a cost-effective solution. This is it.



The Core of welding.

This is the core of welding. And nothing more. It holds the most essential elements and no unnecessary features or gadgets. Choose a compact design with air cooled torches if you are supposed to be right next to your welding machine at all times.



- Wire feeding

Compact design
- Cooling

Air
- Control panel

Graphic
- Current range

15-230/270/300/400/550 A

Sigma Core C
Compact design

Simple to the Core.

This is simple to the core. It holds the essential parameters you need to weld. Trust that it will follow welders who are moving around in the workshop. Separate the wire feed unit from the power source while welding large steel structures. Keep cool the whole time with top-of-the-line air cooled torches.



- Wire feeding

Separate unit
- Cooling

Air
- Control panel

Graphic
- Current range

15-300/400/550 A

Sigma Core S
Separate wire feeder



- Wire feeding

Compact design
- Cooling

Water
- Control panel

Graphic
- Current range

15-300/400/550 A

The Core of the production.

This configuration qualifies for becoming the core of your welding production. A loyal hard worker that can weld for hours and hours, serving multiple welders. The compact design and water cooled torches is perfect for staying put in the welding booth.



- Wire feeding

Separate unit
- Cooling

Water
- Control panel

Graphic
- Current range

15-300/400/550 A

This is actually hardCore.

This will certainly make you feel hard core. It is solid, reliable and absolutely outstanding. It will be everything skilled welders ask for. Grab the wire feed unit and move away from the power source. Keep productivity level at a maximum with water cooled torches and be completely absorbed in the work.

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



This graphic control panel is designed to be easy to understand for all users. 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.



Every welder's closest ally



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 are developed for air cooling and water cooling and in various lengths.



Technical specifications

| | Sigma Core 230 C | Sigma Core 270 C | Sigma Core 300 C & S | Sigma Core 400 C & S | Sigma Core 550 C & S |
|---------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|
| Current range (MIG) | 15-230 A | 15-270 A | 15-300 A | 15-400 A | 15-550 A |
| Mains voltage +/- 15% (50-60Hz) | 3 × 400 V | 3 × 400 V | 3 × 400 V | 3 × 400 V | 3 × 400 V |
| Fuse | 10/16 A | 10/16 A | 16 A | 20 A | 35 A |
| Mains current, effective | 7.2 A | 8.5 A | 11 A | 17.5 A | 27.2 A |
| Mains current, max. | 10.5 A | 13.2 A | 15.4 A | 26 A | 39.2 A |
| Power, 100% | 4.9 kVA | 5.9 kVA | 9.0 kVA | 12.1 kVA | 18.9 kVA |
| Power, max. | 7.2 kVA | 9.1 kVA | 10.7 kVA | 18 kVA | 27.1 kVA |
| Open circuit voltage | 50-60 V | 50-60 V | 50-60 V | 65-70 V | 75-80 V |
| Open Circuit Power | | | 11 W | 12 W | 12 W |
| Efficiency | 88 % | 88 % | 87 % | 89 % | 90 % |
| Power factor | 0.94 | 0.90 | 0.90 | 0.90 | 0.90 |
| Duty cycle 100% /20°C (MIG) | 175 A / 23.0 V | 200 A / 24.2 V | 290 A / 28.5 V | 345 A / 100 % / 31.5 V | 475 A / 100 % / 37.8 V |
| Duty cycle max. /20°C (MIG) | 230 A / 40 % / 25.5 V | 270 A / 28 % / 27.5 V | - | 400 A / 65 % / 34 V | 550 A / 60 % / 41.5 V |
| Duty cycle 100% /40°C (MIG) | 230 A / 40 % / 25.5 V | 270 A / 28 % / 27.5 V | 220 A / 25 V | 300 A / 29 V | 430A / 35.5 V |
| Duty cycle 60% /40°C (MIG) | 205 A/24.3 V | 210 A/24.5 V | 240 A / 26 V | 370 A / 32.5 V | 510 A / 39.5 V |
| Duty cycle max. /40°C (MIG) | - | - | 300 A / 25 % / 29 V | 400 A / 50 % / 34 V | 550 A / 50 % / 41.5 V |
| 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. -10 Cl. A | IEC60974-1. -10 Cl. A | IEC60974-1. -10 Cl. A | IEC60974-1. -10 Cl. A | IEC60974-1. -10 Cl. A |
| Dimensions C (H x W x L) | 675 x 250 x 738 mm | 675 x 250 x 738 mm | 700 × 260 × 735 mm | 700 × 260 × 735 mm | 700 × 260 × 735 mm |
| Dimensions S (H x W x L) | - | - | 454 × 260 × 735 mm | 454 × 260 × 735 mm | 454 × 260 × 735 mm |
| Weight C | 32.5 kg | 32.5 kg | 36.9 kg | 52 kg | 53 kg |
| Weight S | | | 26 kg | 35 kg | 36 kg |

We reserve the right to make changes.

| | MWF 32 wire feeder |
|------------------------|-----------------------|
| Wire feed speed | 0.5-30.0 m/min. |
| Wire spool diameter | 300 mm |
| Duty cycle 100% /40°C | 430 A / 100 % |
| Torch connection | EURO |
| Protection class | IP 23 |
| Standards | IEC60974-5. -10 CL. A |
| Dimensions (H x W x L) | 457x260x672.5 mm |
| Weight | 14 kg |

We reserve the right to make changes.

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

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 Core

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.

Register your newly purchased Sigma Core 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 Core



Explore more on migatronik.com

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