FULLY DIGITAL SOLUTION
FOR AUTOMATION OF WELDING PROCESSES
Being one of Europe’s leading developers and manufacturers of welding solutions, Migatronic has been a trusted provider of equipment for automated solutions for more than four decades.

Our background and core expertise are welding and welding technology – and we know how to make welding processes function optimally via interface, hardware and well thought-out software in modern welding equipment.

**SIMPLE SOLUTIONS**

Based on experience from more than 2,000 individual welding installations, we can provide straightforward and reliable standard solutions for MIG, TIG and plasma welding processes; ready for integration with new as well as old robots and automated devices.

We know from our co-operation with international system integrators that it is simply a matter of industrial competitive power, increased productivity and uniform, high-quality welding.

Welding Value is the goal – and the linking element between Migatronic as a manufacturer, integrators and end users throughout the world.

**STRONG ROBOTIC MACHINES FOR MIG, TIG AND PLASMA**

Sigma Galaxy 400 and 500: MIG/MAG industrial machines featuring IGC® and memory function for job and sequence. For welding of all types of material – with or without pulse.

Pi 350 and 500: Water-cooled TIG DC and AC/DC machines for mild and stainless steel and aluminium – with or without pulse. IGC® included.

Pi 350 Plasma: Plasma TIG inverter from 5 to 350 A, designed for robotic use; from sheet metal to 8 mm mild and stainless steel; Plasma-melt, Plasma-press and Plasma-keyhole – with or without pulse. IGC® included.
INNOVATIVE AUTOMATED SOLUTIONS

Interdependent peripheral equipment for Migatronic robotic and automated solutions makes the technical integration uncomplicated.

We know where to make a difference, but we also know the art of moderation. Therefore, there are clear-cut boundaries between Migatronic as a provider of welding equipment and the integrator's function as a system builder and robot supplier.

The welding process is always in focus; Migatronic's core products have built-in intelligent functions and unique welding properties.

We call it Welding Intelligence.

IGC® (INTELLIGENT GAS CONTROL)

An efficient gas-saving function for MIG, TIG and plasma welding that monitors consumption and optimises gas shielding.

SCAN HERE TO LEARN MORE ABOUT IGC®
RCP² - ROBOT CONTROL INTERFACE
Analog/digital interface for MIG, TIG/PLASMA welding processes
- For all types/makes of robots
- Configurable solutions for the following BUS systems:
  - EtherNet/IP
  - PROFINET
  - PROFIBUS
  - DeviceNet
  - EtherCAT
  - Migatronic CAN/Analog I/O
- Touch Sensing
- Prepared for seam tracking system

REMOTE MIG²
Remote control unit for MIG welding machine
- Graphic display
- Impact-proof case with adjustable strap and suspension fittings
- 6 m shielded signal cable

WIRE COIL HOLDER
External mounting of wire coil – MIG, TIG/PLASMA
- Suits wire reels Ø200/300 mm
- Incl. wire hub brake

Power sources:
MIG
TIG
Plasma

Welding torches and collision protection are not included in the standard solutions.
Please contact Migatronic for further information.
THE ROBOT SETUP

**RWF²**
ROBOT WIRE FEEDER
MIG/MAG compact tacho-feeder with four-roll wire feed system
- Built-in functions, e.g. IGC®, supporting Migatronic MIG welding processes
- Built-in Air Blow system for cleaning of gas nozzle using compressed air
- Touch Sensing

**MIGALOG™**
Digital data collection – MIG
- Transfer from machine via SD card to a PC for storage
- For documentation, spot checks and procedures

**CWF TIG/PLASMA**
COLD WIRE FEEDER
TIG/PLASMA feeder with four-roll wire feed system
- Built-in functions, e.g. synchronised pulse on wire that follows machine settings
- Memory for individual settings
- Up to eight feeders connected to a welding machine

**EXTRA COOLING UNIT**
External cooling of plasma torch
- Intended for high performance and high duty cycle

Water coupling and current coupling are equipped with screw fastening
These MIG, TIG and Plasma automation solutions which can be tailored with mandatory and optional equipment, meet the requirements for mechanical integration and analog or digital communication with most makes of robots.

### MIG solutions

**MIG power sources**
- Sigma Galaxy 400 C-W
- Sigma Galaxy 500 ROBO S-W

**The above MIG power sources include**
- RCI² analog interface prepared for digital communication incl. 6 m cable
- Remote MIG² graphic display remote control incl. 6 m cable
- Built-in water flow control
- MigalOG™ licence
- IGC® (Intelligent Gas Control) with flow control
- Triple CAN plug

**Mandatory equipment**
- RWF² incl. wire drive rolls
- Program package: Standard, Standard Plus or Special
- Rack or standard trolley

**Examples of optional equipment**
- IACT™ mild steel licence (only Galaxy 400)
- IACT™ stainless steel licence (only Galaxy 400)
- Interconnection for RWF²
- Holder for separate wire coil
- Fieldbus module – see page 7
- Mounting plate for feeder (depending on robot)
- Bracket for Remote MIG²

### TIG solutions

**TIG power sources**
- Pi 350 DC W
- Pi 350 AC/DC W
- Pi 500 ROBO DC W
- Pi 500 ROBO AC/DC W

**The above TIG power sources include**
- RCI² analog interface prepared for digital communication incl. 6 m cable
- CAN plug incl. CAN distributor box
- Remote control plug incl. Arc Detect signal
- IGC® (Intelligent Gas Control) with flow control
- Built-in water flow control

**Mandatory equipment**
- Rack or standard trolley/wheels

**Examples of optional equipment**
- Cold Wire Feeder
- Holder for CWF
- Fieldbus module – see page 7
- Mounting plate for feeder (depending on robot)

Sigma Galaxy 500 ROBO and Pi 500 ROBO feature heavy-duty cooling.

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**RWF²** – compact feeder for MIG with four-roll wire feed system and electronic tacho control of wire feed speed.

**CW F** - TIG/PLASMA feeder with four-roll wire feed system

**Remote MIG²** - graphic display remote control.
Universal analog/Fieldbus interface for communication between welding equipment and robot controller.

### Plasma solutions

#### Plasma power source
- Pi 350 Plasma W

**The above Plasma power source includes**
- IGC® (Intelligent Gas Control) with flow control
- RCI² analog interface prepared for digital communication incl. 6 m cable
- Double CAN plug incl. CAN distributor box
- Remote control plug incl. Arc Detect signal
- Built-in water flow control

**Mandatory equipment**
- Rack or standard trolley

**Examples of optional equipment**
- Cold Wire Feeder
- Holder for CWF
- Fieldbus module
- Mounting plate for feeder (depending on robot)

*Plasma welding > 80 A requires connection of an external cooling unit.*

### Software

#### Fieldbus module – MIG/TIG/PLASMA interface/robot communication
- PROFIBUS
- DeviceNet
- EtherNet/IP
- PROFINET
- EtherCAT
- Hardwire multi – digital/analog I/O

**INTERFACE**

The RCI² is connected to the welding machine via CAN-bus and allows you to choose between hard-wired transfer of both digital and analog I/O signals or Fieldbus-based transfer of signals between robot controller and welding machine.

The RCI² is supplied in analog version by default, connecting analog/digital I/O signals via 37-pole amphenol plug.

Purchase of a Fieldbus module allows you to convert the interface into a Fieldbus interface. Using this interface, with inside display and mini-keypad, the system is easily configured as desired.

### FREE DOWNLOAD OF SOFTWARE

At www.migatronic.com under “My Migatronic”, Migatronic customers have free access to download of software for update of welding machines.

### FREE WPS’S – EN 1090

Migatronic provides free download of approved standard welding procedures according to EN 15612 (Construction Product Directive 89/106/EEC/Construction Product Regulation 305/2011) for welding with CMn solid wires. This extra loyalty service is free for customers who also do manual MIG/MAG welding or partly mechanised automated welding.
### MIGATRONIC DATA

We reserve the right to make changes.

<table>
<thead>
<tr>
<th>MACHINE TYPE</th>
<th>MIG 400 C-W</th>
<th>MIG 500 ROBO S-W</th>
<th>PI 350 DC/W / PI 350 AC/DC W</th>
<th>PI 500 ROBO DC/W / PI 500 ROBO AC/DC W</th>
<th>PI 350 PLASMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains voltage +/- 15%, V</td>
<td>3x400</td>
<td>3x400</td>
<td>3x400</td>
<td>3x400</td>
<td>3x400</td>
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<tr>
<td>Fuse, A</td>
<td>20</td>
<td>32</td>
<td>25</td>
<td>32</td>
<td>32</td>
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<tr>
<td>Mains current, effective, A</td>
<td>16,5</td>
<td>25,3 (380V)/27,8 (400V)</td>
<td>18,0 / 17,3</td>
<td>26,1 / 27,2</td>
<td>26,1</td>
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<tr>
<td>Mains current, max, A</td>
<td>28,2</td>
<td>36,8 (380V)/35,0 (400V)</td>
<td>23,1 / 22,7</td>
<td>33,7 / 35,1</td>
<td>23,3</td>
</tr>
<tr>
<td>Open circuit voltage, V</td>
<td>80</td>
<td>78-95</td>
<td>95</td>
<td>95</td>
<td>95</td>
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<tr>
<td>Current range, A</td>
<td>15-400</td>
<td>15-500</td>
<td>5-350</td>
<td>5-500</td>
<td>5-350</td>
</tr>
<tr>
<td>Efficiency</td>
<td>0,82</td>
<td>0,90</td>
<td>0,80 / 0,88</td>
<td>0,91 / 0,87</td>
<td>0,91</td>
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<tr>
<td>Application class</td>
<td>G/CE</td>
<td>G/CE</td>
<td>G/CE/CCE</td>
<td>G/CE/CCE</td>
<td>G/CE</td>
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<tr>
<td>Protection class</td>
<td>IP 23</td>
<td>IP 23</td>
<td>IP 23</td>
<td>IP 23</td>
<td>IP 23</td>
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<tr>
<td>Dimensions (HxWxL), mm</td>
<td>1051x524x925</td>
<td>1092 x 614 x 410</td>
<td>820x250x640 / 980x545x1090</td>
<td>980x545x1090</td>
<td>980x545x1090</td>
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<tr>
<td>Weight, kg</td>
<td>71</td>
<td>71</td>
<td>48 / 72</td>
<td>68 / 77</td>
<td>85</td>
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### DUTY CYCLE

<table>
<thead>
<tr>
<th></th>
<th>100% 20°C MIG, A</th>
<th>100% 20°C TIG, A</th>
<th>100% 20°C PLASMA, A/V</th>
<th>60% 20°C MIG, A%/</th>
<th>60% 20°C TIG, A%</th>
<th>60% 20°C PLASMA, A%/</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% 20°C MIG, A</td>
<td>310</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>100% 20°C TIG, A</td>
<td>-</td>
<td>475</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>100% 20°C PLASMA, A/V</td>
<td>-</td>
<td>-</td>
<td>340</td>
<td>-</td>
<td>-</td>
<td>475</td>
</tr>
<tr>
<td>60% 20°C MIG, A%/</td>
<td>-</td>
<td>-</td>
<td>350</td>
<td>-</td>
<td>-</td>
<td>500</td>
</tr>
<tr>
<td>60% 20°C TIG, A%</td>
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<td>-</td>
<td>500 / 80</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>60% 20°C PLASMA, A%/</td>
<td>-</td>
<td>-</td>
<td>350 / 95</td>
<td>-</td>
<td>-</td>
<td>500 / 80</td>
</tr>
</tbody>
</table>

### COOLING UNIT

<table>
<thead>
<tr>
<th></th>
<th>GALAXY 400 C-W</th>
<th>GALAXY 500 ROBO S-W</th>
<th>PI 350 DC/W / PI 350 AC/DC W</th>
<th>PI 500 ROBO DC/W / PI 500 ROBO AC/DC W</th>
<th>PI 350 PLASMA / EXTERNAL</th>
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</thead>
<tbody>
<tr>
<td>Cooling capacity (W)</td>
<td>1100</td>
<td>1650</td>
<td>1100</td>
<td>1650</td>
<td>1200 / 1650</td>
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<tr>
<td>Tank capacity, l</td>
<td>3,5</td>
<td>3,5</td>
<td>3,5</td>
<td>3,5</td>
<td>3,5 / 6,5</td>
</tr>
<tr>
<td>Flow, bar - °C - l/min</td>
<td>1,2 - 60 - 1,75</td>
<td>3,0 - 60 - 1,5</td>
<td>1,2 - 60 - 1,75</td>
<td>3,0 - 60 - 1,5</td>
<td>1,2 - 60 - 1,75</td>
</tr>
<tr>
<td>Max. pressure, bar</td>
<td>3</td>
<td>4,5</td>
<td>3</td>
<td>4,5</td>
<td>1,2 / 7,0</td>
</tr>
</tbody>
</table>

Dealer stamp: