



SIGMA GALAXY - TAKES WELDING TO ANOTHER DIMENSION



SIMPLICITY AND STATE-OF-THE-ART TECHNOLOGY

SIGMA GALAXY - A NEW MIG/MAG GENERATION

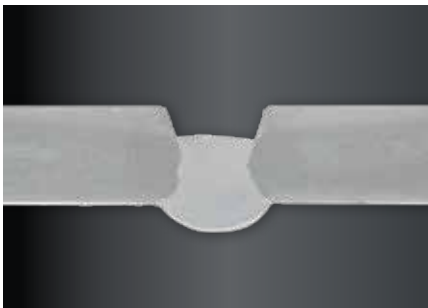
Sigma Galaxy is the result of new giant leaps in welding technology. Developed in co-operation with universities and users throughout the world, this hightechnology welding machine in a self-explanatory industrial design optimizes itself and allows the welder to focus on good workmanship.

ABUNDANCE OF FEATURES

The Sigma Galaxy contains all the best features from Sigma² plus even more intelligence in the digital softkey control panel; MIG/MAG welding with or without pulse, based on the latest research in arc physics; three program packages: Standard, Standard Plus and the newly developed IAC™ which includes mild steel and stainless steel. The Sigma Galaxy is also perfect for robot welding.



A powerful computer adjusting the process 50,000 times per second is incorporated in the Sigma Galaxy.



IAC root pass welded in vertical downwards position in 5 mm mild steel.



IAC root pass welded in vertical downwards position in 10 mm mild steel; filled with two Sequence Repeat passes in vertical downwards position.



IAC™ INTELLIGENT ARC CONTROL - LESS SPATTER AND MORE STABILITY

The Sigma Galaxy breaks new ground, among other things with the IAC™ Intelligent Arc Control function, a quite new process for sheet metal welding and root passes in mild and stainless steels. The result is significantly lower heat input and less distortion, and the mechanical properties of the material are maintained. In other words, less weld spatter and less post-treatment.



The Sigma Galaxy is equipped with Migatronik's flexible MIG-A Twist® welding torch.

INTELLIGENT WELDING CONCEPT - MAKES EXPERT WELDERS EVEN BETTER

DIGITAL MEMORY WITH MIGATRONIC MJCT™

The newly developed MJCT™ Miga Job Control allows welders to save up to 200 individual welding jobs, and for every job name saved, additionally nine sequences can be saved which means that the Galaxy can hold as much as 1,800 settings.

LOWER POWER CONSUMPTION - LESS EFFECT ON THE ENVIRONMENT

The Sigma Galaxy is green throughout. Its state-of-the-art technology with unmatched performance gives a power consumption that is much lower than in welding machines with traditional technology.

The softkey control panel is self-explanatory and based on icons



The SD card is for back-up on your pc or transfer of job settings to other Galaxy machines.

The Sigma Galaxy is available as C (compact) or S (separate wire feed unit) versions with 300 A, 400 A and 500 A power sources.



SOFTKEY CONTROL PANEL FOR EASE OF OPERATION ...

MENU

Clear overview of required information.

SEQUENCE

Setting individual sequences or Sequence Repeat function, designed specifically for position welding.

JOB

Named and saved job settings can be transferred to other Sigma Galaxy machines or saved on a pc for back-up via SD card.

TACK-WELDING FUNCTION

For quick fixation of the workpiece to all materials.

DUO PLUS™

Intelligent sequence combinations giving TIG-like welds.



SWITCH ON - PRESS - WELD!

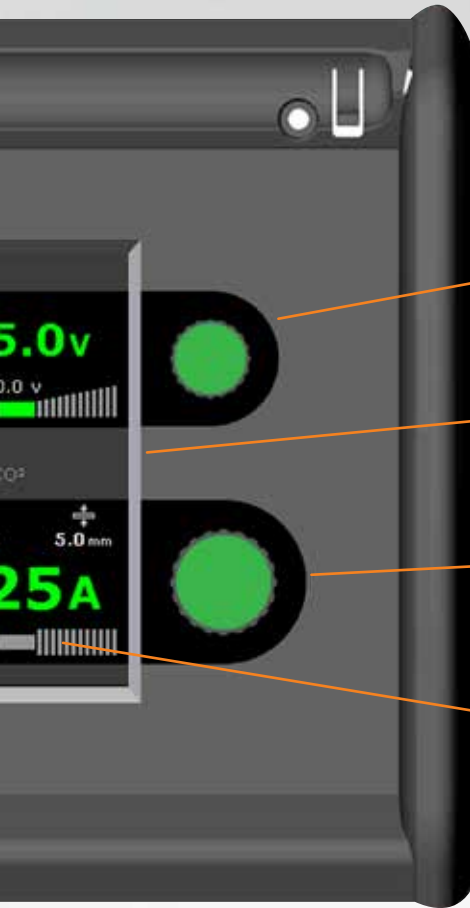
MJCT™ Miga Job Control is an easy-to-use job control function for recall of your favourite settings for repetitive welding operations. The clear digital colour display makes it easy to choose settings.



Choice of torch in the main menu; The Galaxy supports all MIG-A Twist torch functionalities



MJCT™ Miga Job Control; Easy recall of favourite settings.



The user-friendly softkey control panel with a large graphic colour display is based on icons and minimizes the risk of faulty attendance by the welder.

FINE-ADJUSTMENT

Individual adjustment of the arc length

SUPPLEMENTARY INFORMATION

Description of the chosen job/program

MAIN PARAMETERS

Setting the amperage, wire feed speed and plate thickness is synergic.

CURRENT DISPLAY

Short arc, globular transfer and spray arc.



IGC® Intelligent Gas Control: Synergic gas control with correct flow and large-scale gas savings



IAC™ Intelligent Arc Control: Automatic prediction of the next milliseconds of the welding process.



Robot welding: Sigma Galaxy can be connected to robots and automatic machines via interface.



IAC™ INTELLIGENT ARC CONTROL AUTOMATICALLY ADJUSTS THE ARC 50,000 TIMES PER SECOND...

SUBLIME WELDS - QUITE AUTOMATICALLY

IAC™ Intelligent Arc Control is a brand-new intelligent and adaptive control of the short arc process for Sigma Galaxy 300 and 400 which automatically handles all changes in the weld pool during the welding process.

The result is a 100% stable and focused short arc, colder welding, lower heat input, less distortion and lower power consumption. IAC™ Intelligent Arc Control increases welding speed in vertical downwards welding of root passes.

IAC™ INTELLIGENT ARC CONTROL - LESS SPATTER AND MORE STABILITY

IAC™ Intelligent Arc Control registers every single welding cycle and adjusts the arc 50,000 times per second. The powerful computer in the Sigma Galaxy continuously predicts the next milliseconds of the welding process which allows the IAC™ Intelligent Arc Control to supply the required energy. IAC™ Intelligent Arc Control software packages include mild steel and stainless steel.

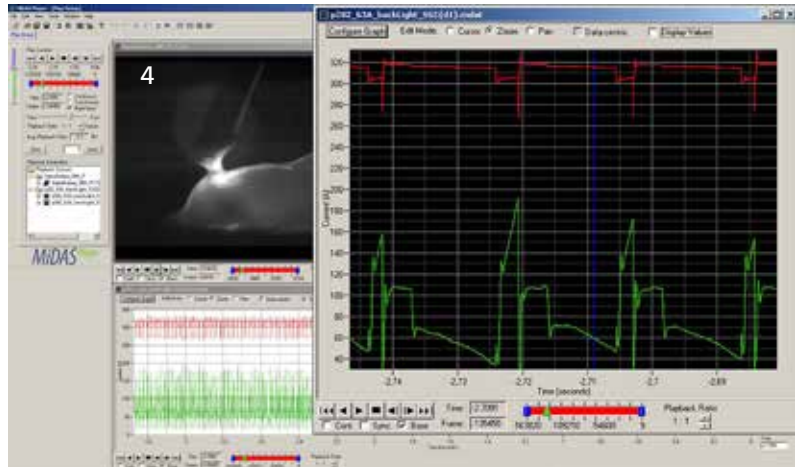


Austenitic stainless 1.0 mm sheet metal, welded with IAC



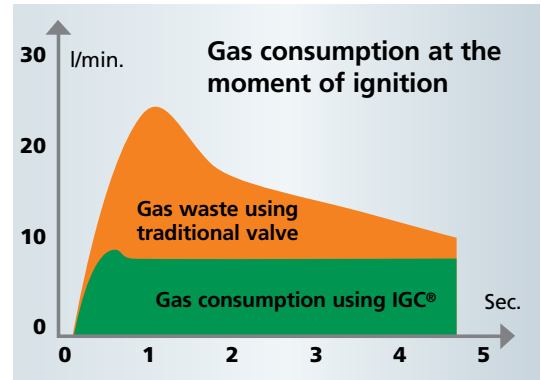
IAC™ - Vertical downwards welding of a root pass in a district heating pipe. Welding speed is significantly increased compared to traditional upwards welding..

IAC™ Intelligent Arc Control is designed for Sigma Galaxy 300 and 400.



Real time laboratory records showing full control of the IAC process, also during droplet pinch-off.

INTELLIGENT GAS CONTROL IGC® - - SYNERGIC GAS FLOW WITH LARGE-SCALE REDUCTION OF GAS CONSUMPTION



The more ignitions – the larger gas savings

INTELLIGENT GAS CONTROL - SWITCH ON, PRESS, WELD..!

IGC® Intelligent Gas Control is a standard feature in the Sigma Galaxy; a dynamic gas control that monitors consumption and optimises gas protection. IGC® may give gas savings in excess of 50% with proportionally fewer replacements of gas cylinder to the benefit of economy, environment and efficiency.

BETTER WELDING, BETTER FINISH

From the start of the welding process, the IGC® function prevents over-consumption of gas and gives a good initial performance. IGC® takes control once the weld pool is established and ensures extensive savings thanks to the controlled gas consumption that is always optimised according to current needs.

“GAS MONITORING” - ANOTHER IGC® FEATURE

IGC® also functions as an efficient “gas monitor” that automatically stops the process in case of insufficient gas protection.

LARGE-SCALE REDUCTION OF GAS CONSUMPTION

Savings depend on the company's welding profile, arc time and number of welding machines. Calculate your bottom-line savings on www.intelligentgascontrol.com.

MIGALOG™ FEATURES:

- Data collection in conformity with norms
- Data for the purpose of procedures, spot checks, training
- No extra equipment adding to cost or specially trained staff
- Registration of volts, amps, wire feed speed, heat input
- Total wire/gas consumption per workpiece/day/optional period
- Naming of files and automatic, chronologic registration on SD card

The newly developed Migatron Migalog™ software for Sigma Galaxy welding machines provides you with the easy collection of welding data for the purpose of preparing procedures and subsequent spot checks. It also provides you with valid documentation and easier verification according to technical procedures cf. EN norms, specified for the welding assignment.

The Migalog™ meets the requirements in EN 1090 for valid data for current, voltage and wire feed speed.



GALAXY DATA

We reserve the right to make changes.

MACHINE TYPE	GALAXY 300 C/S	GALAXY 400 C/S	GALAXY 500 C/S
Mains voltage +/- 15% (50-60Hz), V	3x400	3x400	3x400
Fuse, A	16	20	32
Mains current, effective, A	16.0	16.5	29.3 (380V)/27.8 (400V)
Mains current, max, A	18.3	28.2	36.8 (380V)/35.0 (400V)
Power, 100%, kVA	11.1	11.4	17.9
Power, max., kVA	12.7	19.5	24.2
Power, open circuit, W	40	40	40
Efficiency	0.84	0.82	0.90
Power factor	0.90	0.90	0.90
Current range, A	15-300	15-400	15-500
Duty cycle 100% /20°C (MIG), A/V	300	310	475
Duty cycle max. /20°C (MIG), A/%V	300/100	400/60	500/80
Duty cycle 100% /40°C (MIG), A/V	270/30.8	280/31.2	420/36.8
Duty cycle 60% /40°C (MIG), A/V	-	350/34.0	450/38.0
Duty cycle max. /40°C (MIG), A/%V	300/80/32.0	400/40/36.0	500/55/40.0
¹ Application class, C	S/CE	S/CE	S/CE
¹ Application class, S	S/CE/CCC	S/CE/CCC	S/CE/CCC
² Protection class	IP 23	IP 23	IP 23
Standards, aircooled	EN/IEC60974-1. EN/IEC60974-10		
Standards, watercooled	EN/IEC60974-1. EN/IEC60974-2. EN/IEC60974-10		
Dimensions C-L (H x W x L, mm)	906x524x925	906x524x925	906x524x925
Dimensions C-W (H x W x L, mm)	1051x524x925	1051x524x925	1051x524x925
Dimensions S-L/S-W (H x W x L, mm)	1144x524x1031	1144x524x1031	1144x524x1031
Weight C-L/C-W, kg	58 / 69	60 / 71	60 / 71
Weight S-L/S-W, kg	74 / 85	76 / 87	76 / 87

WIRE FEED UNIT	MWF 41/intern
Wire feed speed, m/min.	0.5-30.0
Wire diameter mm	300
Duty cycle 100% /40°C, A/%	420/100
Duty cycle 60% /40°C, A/%	500/60
Torch connection	EURO
Protection class	IP 23
Standards	EN/IEC60974-5. EN/IEC60974-10
Dimensions (HxWxL), mm	440x245x780
Weight, kg	19

COOLING UNIT	
Cooling capacity (1 l/min.), W	1100
Tank capacity, l	3.5
Flow, bar - °C - l/min.	1.2 - 60 -1.75
Max. pressure, bar	3
Standards	EN/IEC60974-2

C = Compact, S = Separate wire feed unit

1) The machine meets the requirements for use in areas with increased risk of electric shock.

2) The machine is designed for both indoor and outdoor use.

Dealer stamp:

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