



# FOCUS.ARC P 300-450WS

REVOLUTION IN THE MIG / MAG TECHNOLOGY



similar picture

# FOCUS ! ARC

## Just better welding

Whether increasing performance, quality improvement, or a responsible health protection – with the fully digital controlled welding process FOCUS.ARC you ensure all advantages.

### Faster

- Up to 50% more profitability
- More meters of welding seam per hour
- Less rework
- REHM potential analyser



### Better

- Better view into the welding process
- Better arc control
- Less faults
- Higher quality



### Healthier

- Up to 70% less welding fume
- Eliminated pollution from welding sprays
- 80% less grinding dust



**FOCUS.ARC is not just a promise, it proves its performance capability.  
Because only the result counts - please turn over!**



# SIRIUS

## The benchmark in operating welding machines

SIRIUS is an innovative digital machine interface. With SIRIUS you get a futureproof intuitive operating system with full I 4.0 connection, which is open for all systems. SIRIUS makes complexity easy.

### Ingenious

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- Simplifies the control of complex digital welding processes
- Graphically dynamic and transparent visualization
- Assist functions
- Highest application expertise



### Flexible

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- Ready for I 4.0
- Easy integration in manufacturing systems and networks
- Free configurable interfaces



### Smarter

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- Load the REHM App and get started
- Communication with all networks and mobile devices
- LAN, W-LAN



SIRIUS offers you endless prospects – more information can be found on page 06/07



# FOCUS ! ARC

Compared with conventional welding processes concentrates the FOCUS technology the energy in the center of the arc



Previously: Conventional arc  
Wide arc with spread energy at the edge



Now: FOCUS.ARC  
Concentrated arc with centered energy

## Advantages of the REHM FOCUS welding processes\*:

### Digitally controlled welding processes

- Controlled particle transfer
- Controlled short circuit resolution
- Controlled heat input

### Reduction of rework

- The rework can be reduced up to 80 %

### Increased quality

- Better view into the welding process
- Better controllability of the arc
- Less welding failures

### Improving health protection

- Up to 70% reduction of harmful welding fume
- Up to 80% reduction of grinding dust
- Up to 100% reduction of welding spray contamination



Previously: Severe smoke development with conventional arc.



Now: Up to 70% reduction of harmful welding fume with the FOCUS.ARC welding process.

\* Information only applies in conjunction with REHM FOCUS.PULS

# Digitally controlled welding processes for all applications

## FOCUS.PULS

**High performance welding process for steel construction**

- Accurate with adjustable heat input
- Heat input reduced by 30 %
- Melting disposition rate up to 60 % increased
- Welding with reduced seam opening angle
- Significant improved quality
- Overweldable spots
- REHM generates a profit potential analysis

## POWER.PULS

**Very good modulation of the welding process for steel, stainless steel and aluminium**

- Faster welding of stainless steel with weld seam surface almost similar to TIG
- Very little temper colour, electrochemically eliminable
- Adjustable heat input
- Welding seams in TIG optic, by using double pulse
- Overweldable spots
- Full optimization for special applications

## FOCUS.ROOT

**Almost spatter free welding process for thin materials and root welding**

- Very good bridging of gaps
- Significant weld speed increase at down welding
- Root welding also with reduced seam opening angle
- Save penetration
- No spatters

## FOCUS.ARC

**Welding in unmatched dimensions**

- Welding with a short, powerful arc
- Safe root detection
- Particularly deep penetration
- Safe edge detection
- Reduced penetration

## REHM recommendation:

### Welding processes for different materials and material thicknesses

mm		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Fe	Nonpuls	FOCUS.ROOT			Mixed arc		POWER.ARC										
		POWER.ARC					FOCUS.ARC										
	Puls	POWER.PULS															
		FOCUS.PULS UI															
CrNi	Nonpuls										POWER.ARC						
	Puls	POWER.PULS															
		FOCUS.PULS UI															
Alu	Puls	POWER.PULS															

cold
  warm



## SIRIUS opens up new potentials

**SIRIUS simplifies the operation of complex welding processes by visualization and assist functions.**

Modern digitally controlled machines offer multiplicity ways of improvement, which need to be utilized in the industrial production. Increase your competitiveness, by making unused potential transparent with SIRIUS.

- SIRIUS ensures the easy and fast access on unutilized potentials
- SIRIUS supports the performance and quality with it's clear structures and simplifies the work of the welder
- SIRIUS is multilingual
- SIRIUS provides a clear overview like never before and leads to outstanding welding results



The SIRIUS display shows everything at a glance – in day and night modus



Parameters to be optimized are transparent and graphic-dynamic visualized



The relevant parameters are always in the foreground, which can be recognized from distance by the operator

# SIRIUS

## SIRIUS with *Open Connect* is fully Industry 4.0 capable

The possibilities to communicate digitally through SIRIUS are endless.  
The interface architecture of SIRIUS can be configured and expanded in any way.



Easy embedding into existing systems via integrated server module. SIRIUS communicates via all established interfaces like Ethernet, USB, CAN-bus, LAN, W-LAN, 2,4 GHz Wireless technology.

- SIRIUS is not an single application, only for the documentation of welding data
- SIRIUS offers full embedding in the workflow processes
- SIRIUS creates easy embedding to CAD or workflow software
- SIRIUS comes with free programmable interfaces
- SIRIUS digitises and communicates machine and process data into all networks

A first idea about our easy and self explanatory machine interface you can find here:  
[www.rehm-online.de/de/technologie/sirius.html](http://www.rehm-online.de/de/technologie/sirius.html)



## Technology you can count on - robust, durable and state of the art! Made in Germany by REHM.

### Robust control panel

- The display is protected by a shock proved transparent cover
- The control knob is specially designed for tough conditions

### Ergonomic control panel

- Perfect working height
- Perfect angle of the display for the best view of the worker

### Excellent communication skills

- **Integrated web server** with all established interfaces and W-LAN

### Power station

- Ultrafast **inverter poor of inductivity**
- Own processor control for quick reaction in the arc
- Contains PFC (Power Factor Controller)
- Wide range input voltage
- 450 amperes out of 9 kg weight
- Intelligence beats weight

### Undercarriage Advanced

#### Big wheels

- Front 160 mm with fixing brake
- Rear 260 mm

#### Gas bottle mount

- Robust mount for up to 50 l

#### Wheel arches in the back

- Prevents the power cords to be squeezed while moving

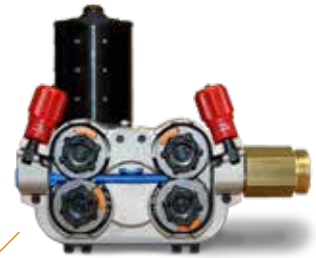






### Everything under control

- Ergonomic designed handle bars for save steering



### Wire feeder

- Digital controlled precise and powerfully 4-wheel drive
- Feeder rolls are according to the wire diameter coded by colours
- Quick change system for feeder rolls without tools
- Contact pressure for inlet and outlet independently adjustable

### Intelligent water cooling unit

- Circular pump for high output flow
- Energy management only cools on demand based on temperature sensing of coolant
- Conserves resources
- Increases live time of all components

### Main board

- The control centre of the FOCUS.ARC
- High integrated unit with main processor coordinates all procedures and processes
- Controls the communication intern and extern



#### Loading rack for gas bottles

- Protection for intervertebral disk
- Avoids work accidents

#### Integrated crane hooks

#### Breaks on the front wheels

- Avoid rolling of the machine at transport and exchanging the gas bottle



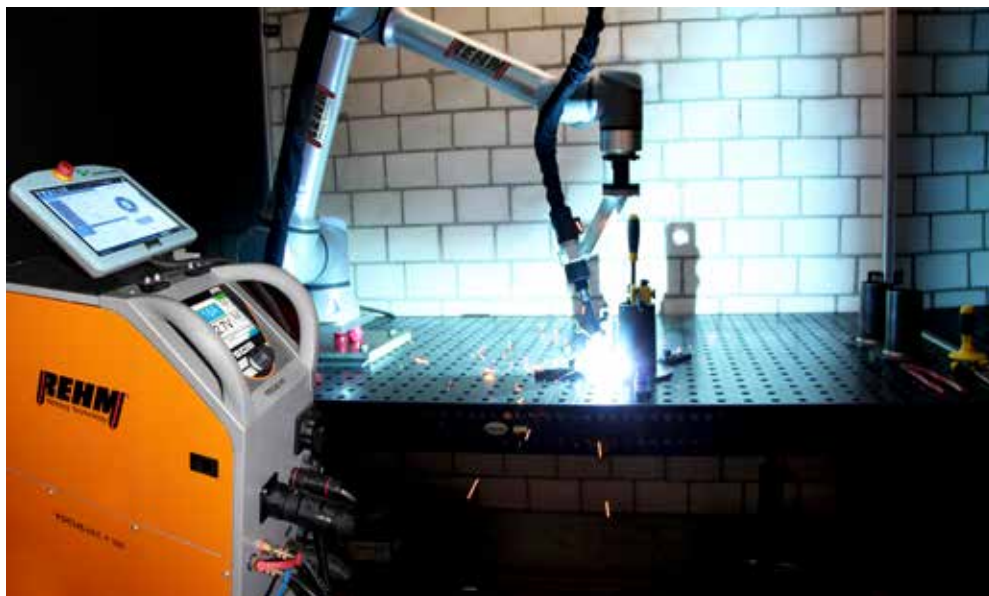
## A strong team REHM COBOT and FOCUS.ARC P

The simple operation of the REHM COBOT is a perfect match for SIRIUS, the most modern operating and communication system for welding machines.



### THAT SPEAKS FOR THE REHM COBOT SYSTEM:

- Short payback period
- Reduction of manufacturing costs
- Higher productivity (24/7)
- Prevents a shortage of skilled workers and relieves the qualified employees
- Problem-free integration into operational processes
- System is configured according to customer requirements
- Compact design saves expensive production space
- Offers attractive new task
- Easy to use
- Consistent welding quality all times



You will find more information about our COBOT System here:



**Compact machines**  
(Choose undercarriage separate)

**Machines with separate wire feeder**  
(Choose undercarriage separate.  
Serially operated in the feed case)

**FOCUS.ARC P**

Machines	Item no.
FOCUS.ARC P 300 1,0/1,2	1307055
FOCUS.ARC P 300 W 1,0/1,2	1307056
FOCUS.ARC P 350 1,0/1,2	1307065
FOCUS.ARC P 350 W 1,0/1,2	1307066
FOCUS.ARC P 400 1,0/1,2	1307075
FOCUS.ARC P 400 W 1,0/1,2	1307076
FOCUS.ARC P 450 1,0/1,2	1307085
FOCUS.ARC P 450 W 1,0/1,2	1307086

Machines	Item no.
FOCUS.ARC P 300 S 1,0/1,2	1307057
FOCUS.ARC P 300 WS 1,0/1,2	1307058
FOCUS.ARC P 350 S 1,0/1,2	1307067
FOCUS.ARC P 350 WS 1,0/1,2	1307068
FOCUS.ARC P 400 S 1,0/1,2	1307077
FOCUS.ARC P 400 WS 1,0/1,2	1307078
FOCUS.ARC P 450 S 1,0/1,2	1307087
FOCUS.ARC P 450 WS 1,0/1,2	1307088



FOCUS.ARC P 300



FOCUS.ARC P 300 W



FOCUS.ARC P 450 WS

Most images are not illustrating the standard equipment

## ■ OPTIONS

Item no.

Housing	
Operation in the machine FOCUS.ARC	1381153
Without undercarriage	1381100
Preparation for trolley	1381385
Trolley including preparation	1381386
Undercarriage Profi 50 I	1381101
Undercarriage Advanced 50 I (with loading rack and fixing brake)	1381102
Top shock proof cover display FOCUS.ARC	1381107
Bottom shock proof cover display FOCUS.ARC	1381108
Toolbox for compact machines	1381143
Air pre-filter	1381144
Crane lifting lugs for wire feed unit	1381146
Drum wire feed-through (wire feed unit)	1381147
Option undercarriage for wire feed case	1381150
Holder for torch and hose pack	1180214

## ■ UPGRADE EQUIPMENT

Item no.

Interfaces	
Interfaces - SET FA to URe series	7504015
Programmed interface including 5m connection cable and installation manual	
Interface FP1 standard 5m	1381285
Start, current flows, two analog values with 5m control line	

## POWER FACTOR CONTROLLER (PFC)

### The benchmark for efficient welding



- Compliance with the new regulation EU 2019/1784
- Highest energy efficiency
- Worldwide operation
- Clean consumption out of the supply network
- Useable anywhere

You can find everything you need to know about PFC here:



## Various undercarriage options are available for the FOCUS.ARC P:



TECHNICAL DATA	Undercarriage Advanced	Undercarriage Profi	Trolley
Weight [kg]	31.5	30	30
Dimensions LxWxH [mm]	900 x 560 x 1.020	950 x 611 x 1,100	770 x 660 x 1,330
Item no.			
	1381102	1381101	1381386



TECHNICAL DATA	Upright stand	Retrofit kit driving carriage for wire feed case
Weight [kg]	0.8	3.36
Dimensions LxWxH [mm]	544 x 30 x 43	480 x 120 x 140
Item no.		
	1381100	1381150

## ■ TECHNICAL DATA

TECHNICAL DATA		300	350	400	450
Setting range	[A]	20-310	20-360	20-410	20-460
Duty cycle (ED) at I <sub>max</sub> .	[%]	80			60
Weld current at 100 % ED	[A]	280	320	370	400
Open-circuit connection	[V]	89		75	
Wire feed	[Ø mm]	1.0 / 1.2			
Mains connection	[V]	3 x 400			
Mains voltage tolerance	[%]	+ 15 / - 25			
Fuse	[A]	32			
Protection type		IP 23			
Power factor	[cos phi]	0.99			
Power consumption at I <sub>max</sub> .	[kVA]	11	13.7	16.8	20.6
<b>Weight without undercarriage</b>	[kg]				
Compact gas-cooled		46		49	
Compact water-cooled (W)		56		59	
With wire feed case gas-cooled (S)		57		60	
With wire feed case water-cooled (WS)		70		73	
<b>Dimensions without undercarriage LxWxH</b>	[mm]				
Compact gas-cooled		650 x 330 x 624			
Compact water-cooled (W)		650 x 330 x 820			
With wire feed case gas-cooled (S)		650 x 330 x 1,100			
With wire feed case water-cooled (WS)		650 x 330 x 1,100			

## Customer applications that speak for themselves

### Stahlbau Heil, Stuttgart

Our customer, Stahlbau Heil, was looking for new technologies to increase productivity. Due to the large range of parts that have to be manufactured, the specification was a versatile, yet easy-to-use system.



After a convincing FOCUS.ARC P demonstration, our customer received 4 FOCUS.ARC P 450 WS as part of a project. Above all, the many process variants and the SIRIUS operating and communication system were convincing.

For each workplace, specific goals were defined, which aimed at problems or costs that had previously occurred to eliminate. For example, reducing rework, increasing quality or simpler work. The results that have been documented by Stahlbau Heil over time have exceeded even the most optimistic forecasts.

#### THE RESULT SPEAKS FOR ITSELF.

- The welders are enthusiastic about the device, there is a high level of acceptance and satisfaction.
- The annual saving through the use of this REHM technology amounts to approx. 17,000 euros at one workplace.



- ✓ INTELLIGENT PROCEDURES
- ✓ MORE SPEED
- ✓ HIGHER EFFICIENCY



## THE REHM PERFORMANCE PROGRAM

- REHM MIG / MAG welding machines
- REHM TIG welding machines
- REHM MMA electrode inverter
- REHM PLASMA cutting systems
- Welding accessories and consumables
- Welding fume extraction
- Technical welding advice
- Torch repairs
- Service

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## REHM – The benchmark for modern welding



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