



## SYNERGIC.ARC 304-504 WS | 251-351

MIG / MAG HEAVY DUTY MACHINES – MAXIMALLY ROBUST AND ENERGY-EFFICIENT





## SYNERGIC.ARC 304-504 WS – The heavy duty machines for tough industrial use

**The high-quality and robust components used in the SYNERGIC.ARC can be used even in tough use.**

- Highest continuous load  
The SYNERGIC.ARC 304 to 504 provide more than the duty cycle required for continuous operation at a high level. With 270 A, 330 A and 400 A continuous power, the SYNERGIC.ARC to the marathon runners when it comes to deposition performance.
- Robust and proven 4-roller wire drive.
- Undercarriage with large wheels (front 160 mm, rear 250 mm).
- The undercarriage is designed for 50 l gas bottles. The gas bottle can be rolled onto the trolley via an integrated ramp. This protects intervertebral discs and avoids work accidents.
- The entire control panel is built for tough use. The display is protected by an impact-resistant 3 mm thick protective screen and can also be protected against sparks or welding spatter with a cover.  
The control knob is also impact-protected due to its special mechanical design.
- The connection of the intermediate hose package at the front increases the range of the feed case by approx. 1.5 m.

### FOCUS.ARC

The welding process for more performance in conventional welding.

- Higher deposition rate than spray arc
- Welding with short, powerful arc
- Safe root detection
- Safe edge detection
- Reduced undercuts





## SYNERGIC.ARC 251-351 – The all-rounders for industry and craft, for thin sheet metal and medium sheet thicknesses

### Welding parameter setting

With the synergy characteristics created by REHM, the setting of the SYNERGIC.ARC is child's play even for beginners.

### Pre-programmed settings for weldable materials

- Fe
- CrNi
- Alu
- CuSi3

### Optimal arc

The REHM SDI technology and the arc length controller enable fine-tuning of the arc even in filigree applications.

### The workshop machine

Due to its small dimensions, the SYNERGIC.ARC 251 to 351 fits easily under any workbench.

- Robust and proven 4-roller wire drive
- The undercarriage is designed for 20 l gas bottles
- Equipped with 2 operating variants as standard



## SYNERGIC.ARC – MIG / MAG welding with the best in its class!

Find the right performance class for you and experience the best heavy duty machines for MIG / MAG welding. The SYNERGIC.ARC convinces with its robustness and durability as well as perfect welding results and easy operation!

### Heavy duty machines for tough industrial use

#### SYNERGIC.ARC 304, 404, 504

- Water-cooled, gas-cooled
- Compact or with separate feed case
- Undercarriage Profi and Advanced for 50 l bottles



SYNERGIC.ARC 304-504 W



SYNERGIC.ARC 304-504 WS

### The all-rounders for industry and craft, for thin sheet metal and medium sheet thicknesses

#### SYNERGIC.ARC 251, 311, 351

- Gas-cooled
- Compact
- Undercarriage Basic for 20 l bottles



SYNERGIC.ARC 251-351

## Equipment scope of the SYNERGIC.ARC series

There is the right machine for every requirement, with the always suitable equipment.

	SYNERGIC.ARC 304-404	SYNERGIC.ARC 304-504 W	SYNERGIC.ARC 304-404 S	SYNERGIC.ARC 304-504 WS	SYNERGIC.ARC 251	SYNERGIC.ARC 311	SYNERGIC.ARC 351
<b>Structure</b>							
Compact	■	■			■	■	■
With feed case			■	■			
<b>Torch cooling</b>							
Gas	■		■		■	■	■
Water		■		■			
<b>Undercarriage</b>							
Profi for 50 l gas bottle	■	■	■	■			
Advanced for 50 l gas bottle	■	■	■	■			
Basic for 20 l gas bottle					■	■	■
<b>Wire feed</b>							
4 rollers	■	■	■	■	■	■	■
<b>Control technology</b>							
REHM SIRIUS	■	■	■	■	■	■	■
QUICK CHOICE buttons	■	■	■	■	■	■	■
Operation 1 (stepless)	■	■	■	■	■	■	■
Operation 2 (steps)	■	■	■	■	■	■	■
<b>Weldable materials</b>							
Fe	■	■	■	■	■	■	■
CrNi	■	■	■	■	■	■	■
Alu	■	■	■	■	■	■	■
CuSi3	■	■	■	■	■	■	■
<b>Performance processes</b>							
FOCUS.ARC	■	■	■	■	■	■	■
Electrode welding	■	■	■	■	■	■	■
Gouging							
<b>Remote control via REHM RC-Torches</b>							
	■	■	■	■	■	■	■
<b>Built-in conveyor rollers</b>							
0.8/1.0 mm					■	■	
1.0/1.2 mm	■	■	■	■			■

404-504

## Another brilliant operation from REHM

**SIRIUS shows at SYNERGIC.ARC its strengths: with two operators in one machine. And thanks to the 7-inch display, you always have everything in view, even from a great distance.**

### OPERATION 1: Based on stepless devices

You want an operation that leaves nothing to be desired in terms of setting options? Use the proven SIRIUS operation from the FOCUS. ARC P and MEGA.ARC P model series.

#### YOUR ADVANTAGE:

All welding parameters and settings at a glance.



### OPERATION 2: Based on step-switched devices

Do your employees prefer to work with step-switched devices? No problem. Simply switch the SIRIUS operation to stepped mode. The SYNERGIC.ARC can now be operated as a step-switched device, as usual.

#### YOUR ADVANTAGE:

You can now set the steps from the torch.



## SYNERGIC.ARC and SIRIUS – It couldn't be simpler

Do you want to weld better, safer and more efficiently? Then the **SYNERGIC.ARC**, the true friend of the welder and the effective employee in one, is the right choice.

**Easy to handle.**

**Simply reliable.**

**And with the proven digital operating system SIRUS – simply better.**

### The benchmark in operating welding machines



SIRIUS is an innovative digital operating system.

SIRIUS simplifies the operation of complex digitally controlled processes.

SIRIUS offers graphically dynamic and transparent visualization.

SIRIUS includes assist functions.

SIRIUS enjoys the highest level of user acceptance.

SIRIUS makes complex things simple.

The new, digitally controlled machine **SYNERGIC.ARC** offer a variety of optimization options.

Using these is a must in modern manufacturing. Increase your competitiveness by revealing and exploiting untapped potential through **SIRIUS**.

The **SYNERGIC.ARC** combines welding machine technology at its best with maximum ease of use. At its heart is the innovative **SIRIUS** operating system, which simplifies previously complex relationships and presents them in a comprehensible manner for the user.

### The essential elements of operation

#### Central, high-resolution display

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Everything at a glance in a graphically excellent display and in the optimal size of 7 inches.

Protected by an impact-resistant 3 mm thick plastic pane, considerably more robust than conventional displays.

#### QUICK CHOICE buttons

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Simple and quick saving of current welding tasks.

#### R-Pilot - the central control element

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Allows one-hand operation even with gloves.

The only protruding control element - protected from mechanical damage by side handles / plastic parts.

## Pure reliability

### Proven inverter technology

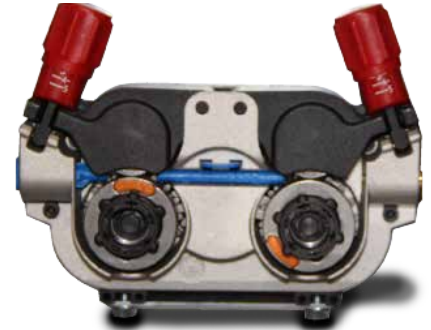
Ultra-fast low-induction REHM inverter.

### Even wire feed

A powerful, digitally controlled feed motor ensures sufficient power in the wire drive.

All SYNERGIC.ARC devices have a 4 roller precision feed system.

**The conveyor rollers can easily be changed without tools.**



### Angled torch connection

Serves as protection of the hose package and cable and also guarantees the ideal wire routing.

### Intermediate hose packages

The SYNERGIC.ARC intermediate hose packages come with a robust metal strain relief as standard attached to the feed case.



### Easy maneuverable

Thanks to the robust chassis with the large, smooth running wheels, the devices can be easily maneuvered and transported in the workshop and on the construction site.

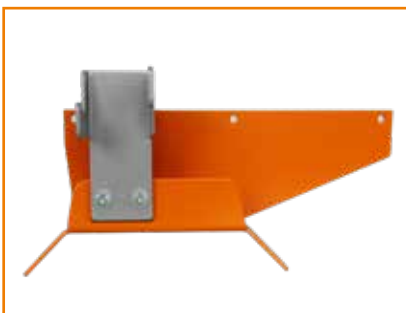
They are also suitable for crane or forklift transport (304, 404, 504).

### Individual adaption

With the possible options and retrofittable equipment, turn our welding machines into your individual machine.



Toolbox for compact machines SA (1381115)



Retrofit kit holder for torch and hose pack (7501129)



Retrofit kit air pre-filter case (7501132)



### Suitable accessories

Achieve the best welding results with REHM original accessories.



### EN 1090 conformity

The SYNERGIC.ARC displays all relevant parameter at and fulfilled in order that the required standard.

Thanks to its high efficiency, the SYNERGIC.ARC meets all the requirements of the EU directive for eco-design\*

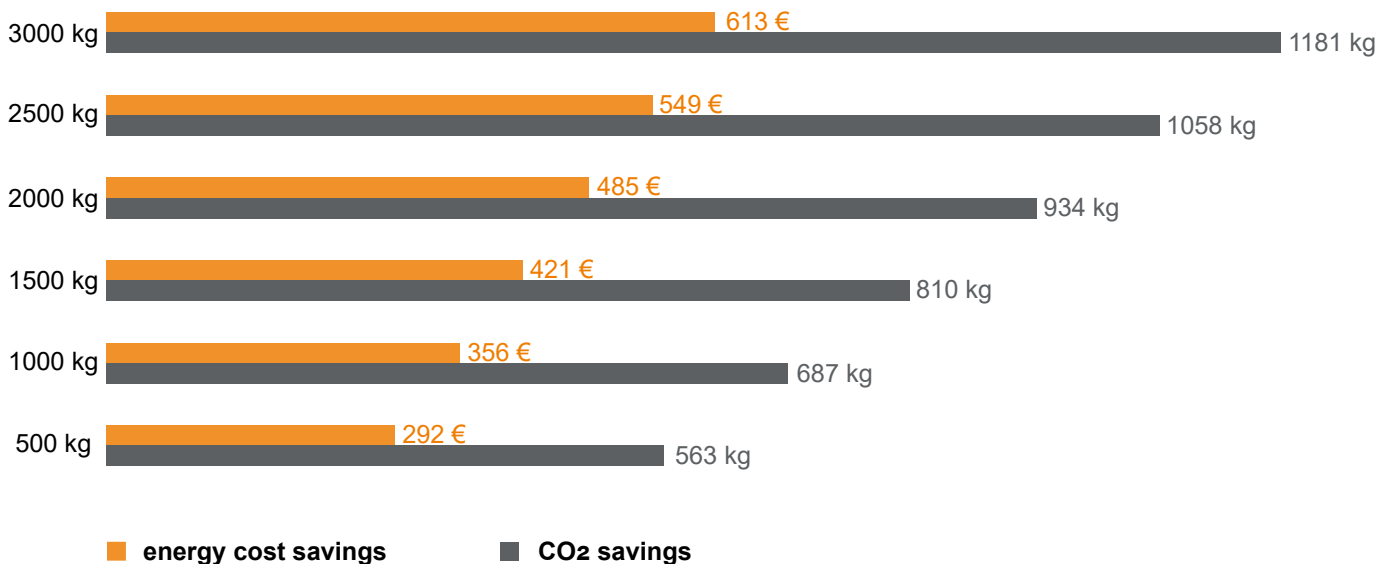


- $\geq 85\%$  efficiency
- $\leq 50\text{ W}$  stand-by
- Up to 30 % energy savings during welding compared to existing devices
- Up to 80 % energy savings at idle, thanks to intelligent stand-by management
- Maximum duty cycle thanks to the low-loss REHM inverter

\*Directive 2009/125/EC of the European Parliament and of the Council of October, 21st, 2009

**Cost savings through reduced energy consumption and saving of environmentally harmful CO<sub>2</sub> through the use of state-of-the-art inverter technology.**

Wire consumption per year



## The new REHM torch range RC is the ideal addition to the SYNERGIC.ARC range of applications.

### The advantages of REHM RC torches:

- Robust, ergonomically shaped handle shell
- High-dimensioned cables for welding current
- Buckling-resistant lines for coolant transport
- No additional control cables required
- No manufacturer-specific wear parts required

With the RC torches, the welding current on the SYNERGIC.ARC can be infinitely adjusted. Or be switched between the stages at lightning speed, in step-switched operating mode.



### REHM RC torches save money

All REHM SYNERGIC.ARC can be fitted with a REHM RC torch set. This means enormous potential for the user compared to a device without an RC torch or a step-switched device. With just 5 changes of setting per hour, you save around €400 a year.

**SET VARIANTS** (Sets consist of: REHM RC torch 4 m with Up/Down module, earth cable 4 m, pressure reducer)

Designation	Item no.
RC SET 1 RC 24/4/UD MaKa 25mm <sup>2</sup> Drumi	1184250
RC SET 2 RC 36/4/UD MaKa 50mm <sup>2</sup> Drumi	1184251
RC SET 3 RC 240W/4/UD MaKa 50mm <sup>2</sup> Drumi	1184252
RC SET 4 RC 401W/4/UD MaKa 70mm <sup>2</sup> Drumi	1184253
RC SET 5 RC 555W/4/UD MaKa 95mm <sup>2</sup> Drumi	1184254
RC SET 6 RC 26/4/UD Maka 35mm <sup>2</sup> Drumi	1184255

#### REHM RC TORCHES

Designation	Cooling	Imax. CO <sub>2</sub>	Imax. Mixgas	Duty cycle	Item no.
Torch RC MAG-24 4m U/D	Gas	250 A	220 A	60 %	7601530
Torch RC MAG-26 4m U/D	Gas	270 A	240 A	60 %	7601532
Torch RC MAG-36 4m U/D	Gas	320 A	290 A	60 %	7601531
Torch RC MAG-240W 4m U/D	Water	300 A	270 A	100 %	7601750
Torch RC MAG-401W 4m U/D	Water	400 A	350 A	100 %	7601751
Torch RC MAG-555W 4m U/D	Water	550 A	500 A	100 %	7601752

## SYNERGIC.ARC 251 to 351

TECHNICAL DATA	251	311	351
Setting range [A]	20-250	20-300	20-350
Duty cycle (ED) at I <sub>max</sub> . [%]	40		
Welding current at 100 % ED [A]	200	240	280
Wire feed	4 rollers		
Mains connection [V]	3 x 400		
Fuse [A]	16	32	
Torch cooling	gas		
Protection type	IP 23		
Weight power source with undercarriage [kg]	50		
Dimensions power source LxWxH [mm]	830 x 340 x 710		
<b>Item no.</b>			
Gas-cooled	1122230	1122231	1122232
<b>Recommended premium set</b>	<b>Item no.</b>	<b>Recommended for</b>	
RC SET 1	1184250	251, 311	
RC SET 2	1184251	351	

## SYNERGIC.ARC 304 to 504 WS

TECHNICAL DATA	304	404	504
Setting range [A]	20-300	20-400	20-500
Duty cycle (ED) at I <sub>max</sub> . [%]	50		30
Welding current at 100 % ED [A]	270	330	400
Wire feed	4 rollers		
Mains connection [V]	3 x 400		
Fuse [A]	32		
Torch cooling	gas / water		water
Protection type	IP 23		
<b>Weight power source without undercarriage [kg]</b>			
Compact gas-cooled	46	-	
Compact water-cooled (W)	56		
With wire feed unit gas-cooled (S)	57	-	
With wire feed unit water-cooled (WS)	70		
<b>Dimensions power source LxWxH [mm]</b>			
Compact (with floor stand)	640 x 340 x 720		
With wire feed unit (with floor stand)	640 x 340 x 1.280		
Compact (with undercarriage)	950 x 560 x 920		
With wire feed unit (with undercarriage)	950 x 560 x 1.480		
<b>Item no.</b>			
Gas-cooled	1122240	1122260	-
Gas-cooled with wire feed unit (S)	1122242	1122262	-
Water-cooled (W)	1122241	1122261	1122265
Water-cooled with wire feed unit (WS)	1122243	1122263	1122267
<b>Recommended premium set</b>	<b>Item no.</b>	<b>Recommended for</b>	
RC SET 1	1184250	304, 304 S	
RC SET 2	1184251	404, 404 S	
RC SET 3	1184252	304 W, 304 WS	
RC SET 4	1184253	404 W, 404 WS, 504 W, 504 WS	

# 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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