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# SYNERGIC.PRO<sup>®</sup> 304-504 WS | 352-402 W | 251-351

MIG / MAG HEAVY DUTY MACHINES - POWER WITHOUT END, SAFE CONTROLLED!





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



#### Focused arc

The REHM **FOCUS.ARC** welding process can be activated on the SYNERGIC.PRO® 304 to 504 at the push of a button:

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

#### **Penetration stabilizer**

The SYNERGIC.PRO® detects changes in the stick-out (free wire end) and automatically corrects the arc power.

That means uniform penetration in every position.

#### Mains voltage compensation

The SYNERGIC.PRO® automatically detects fluctuations in the mains voltage and adjusts the wire feeder automatically according to the mains voltage.

#### Robust undercarriage

Designed for 50 I gas bottles, with large wheels (front 160 mm, rear 250 mm)







## SYNERGIC.PRO® 251-402 W – The all-rounders for industry and craft, for thin sheet metal and medium sheet thicknesses

#### Welding parameter setting

The integrated database provides the right welding parameters for all tasks.

#### Weldable materials

- Fe
- CrNi
- Alu
- CuSi3

#### Welding from a sensational 15 A

The SYNERGIC.PRO® 251 QUATTRO-MIG is particularly suitable for use in thin sheet processing from 15 A welding current.

Thanks to the special synergy programs and SDI technology.

#### **Internal regulation**

The internal regulation is also decisive for a stable arc, which depends primarily on the welding transformer and welding choke. The SYNERGIC.PRO® series has transformers and chokes specially designed for the respective power range.

The fine tuning is done by SDI and the process parameters that are assigned to each setting.



## SYNERGIC.PRO® – 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.

## Heavy duty machines for tough industrial use

#### SYNERGIC.PRO® 304, 404, 504

- Water-cooled, gas-cooled
- Compact or with a separate feed case



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



#### SYNERGIC.PRO® 352, 402

■ Water-cooled, gas-cooled

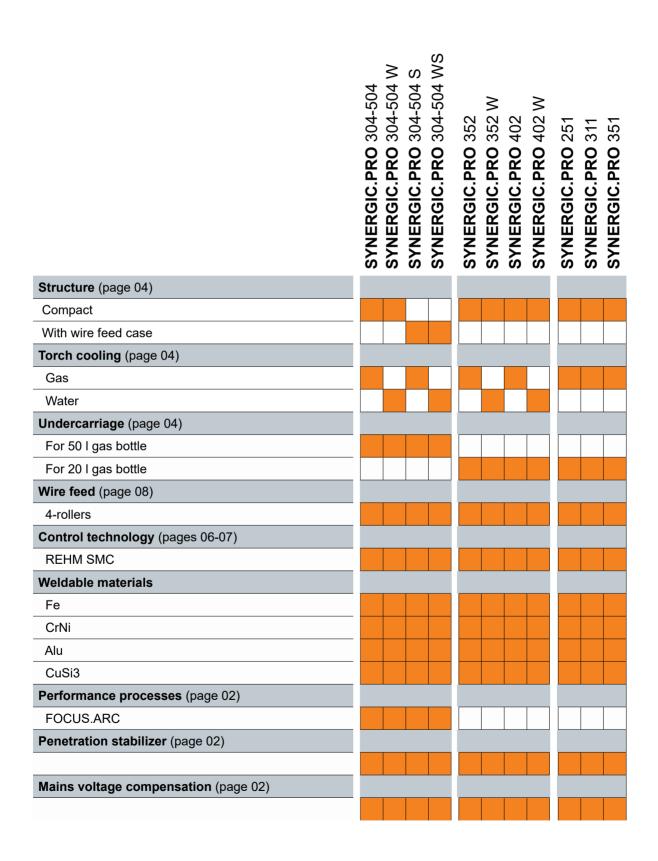


SYNERGIC.PRO® 251, 311, 351

Gas-cooled

#### Equipment scope of the SYNERGIC.PRO® series

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



## SYNERGIC.PRO® – The only MIG / MAG efficiency class with SMC®

#### Just weld - SMC® technology does the rest!

- More power with absolutely robust and proven technology
- With an extended range of types
- Best price-performance ratio
- With the revolutionary Smart Machine Control (SMC®)

#### The superordinate machine control concept from REHM



#### **SMC®** (Smart Machine Control)

An intelligent, higher level machine control concept. SMC® leads to excellent welding results and makes operation not only easy, but also safe.

#### **SDI (Stepless Dynamic Induction)**

Stepless, electronic welding choke with ultra-fast control for excellent ignition properties and an extremely stable arc.

#### RSC® (Realtime Speed Control)

Real time monitoring and high precision regulation of the wire feed speed with digital signal transmitter for constant wire feed.

#### **CCM (Characteristic Curve Memory)**

Integrated welding parameter database with concentrated expert knowledge.

#### **RMI (REHM Machine Interface)**

Fast and safe setting of the welding parameters with easy handling.

#### ■ CONTROL PANEL RMI (REHM MACHINE INTERFACE)

#### The fastest and safest way to set the correct welding parameters.

- Digital display for welding voltage with hold function
- Digital display for welding current with hold function and material thickness display
- Operating modes:

  Material thickness display

  2 cycle, 4 cycle, spot-weld, interval

- A Setting the spot-weld and interval time
- Rotary knob for wire speed rate and arc length correction
- Synergy program selection:
  Material / wire diameter combination
  and manual operation



- Stepless arc strength regulation (SDI® technology)
- 8 Coarse step switch

- 9 Fine step switch
- REHM FOCUS.ARC Switching on / off

#### Pure reliability

#### **Proven technology**

All device parts of the SYNERGIC.PRO® series, right down to the smallest screw, have been tested in sophisticated endurance tests for tough use.

A factory guarantee of three years is therefore a matter of course for us.

#### Safe ignition

The REHM automatic creep function controls the wire feed rate until the ignition of the arc. At the same time, the ignition process is considerably improved by the optimized setting of the electronically regulated choke. The creep speed can also be adjusted manually if required.

#### Low noise emission

The optimum housing construction and the standby switch for fan and water pump ensure pleasant, low noise continuous use.

#### No sticking

The controlled wire feed control ensures a constant wire length end automatically the correct wire free burn time guaranteed. This prevents it from sticking to the workpiece or the contact tip. If necessary, the wire free burning time can also be changed manually.

#### Even wire feed

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

All SYNERGIC.PRO® devices have a 4 roller precision feed system. The conveyor rollers can easily be changed without tools.



#### Easy to use wire feed case

Although the wire feed case sits securely on the power source, it can be rotated easily. It goes without saying that it can be easily removed with a handle without any tools and can also be used with mounted trolley (optional).

#### Easily maneuverable

Thanks to the robust chassis with 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).

#### Intermediate hose packages

The SYNERGIC.PRO® intermediate hose packages come with a robust metal strain relief as standard attached to the feed case. All media and control lines can be changed without tools.





#### Individual adaptation

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







#### Suitable accessories

Achieve the best welding results with REHM original accessories.



#### ■ SYNERGIC.PRO® 304 to 504 WS

TECHNICAL SPECIFICATIONS		304	404	504			
Setting range	[A]	40-300	40-400	40-500			
Duty cycle (ED) at Imax.	[%]		40				
Weld current at 100 % ED	[A]	180	260	320			
Open-circuit voltage	[V]	17-37	18-45	18-51			
Switching steps		10	20	30			
Wire feed		4 rollers					
Mains connection	[V]	3 x 400					
Fuse	[A]	32					
Torch cooling		gas / water					
Protection type		IP 23					
Welding cable socket	[mm]	13					
Weight	[kg]						
Compact gas-cooled		104	128	133			
Compact water-cooled (W)		117	141	146			
Gas-cooled with wire feed unit (S)		120	144	149			
Water-cooled with wire feed unit (WS)		133	157	162			
Dimension LxWxH	[mm]						
Compact		1,040 x 560 x 850					
With wire feed unit		1,040 x 560 x 1,400					
Gas-cooled		1122200	1122210	1122220			
Gas-cooled with wire feed unit (S)		1122201	1122211	1122221			
Water-cooled (W)		1122202	1122212	1122222			
Water-cooled with wire feed unit (WS)		1122203	1122213	1122223			







SYNERGIC.PRO® 504-4 WS

#### SYNERGIC.PRO® 251 to 402 W

TECHNICAL SPECIFICATION		251	311	351	352	402	
Setting range	[A]	15-250	35-300	35-350		40-400	
Duty cycle (ED) at Imax.	[%]	35					
Welding current at 100 % ED	[A]	140	140 185 210 260			260	
Open-circuit voltage	[V]	15-39	17-40	17-42 18-45		18-45	
Switching steps		10 12			2	20	
Wire feed		4 rollers					
Mains connection	[V]	3 x 400					
Fuse	[A]	16 32					
Torch cooling		gas gas / water					
Protection type		IP 21					
Welding cable socket	[mm]	13					
Weight	[kg]						
Compact gas-cooled		64	68	69	72	78	
Compact water-cooled (W)		-	-	-	85	91	
Dimension LxWxH	[mm]						
Compact		800 x 330 x 620			877 x 357 x 660		
Gas-cooled		1031125	1031126	1031127	1031130	1031135	
Water-cooled (W)		-	-	-	1031131	1031136	







SYNERGIC.PRO® 402-4 W

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#### 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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