REHM Welding Technology

Developed and manufactured in Germany
Premium brand
MADE IN GERMANY

NEW

INVERTIG i
260 DC-450 AC/DC HIGH
SIMPLE, ENERGY-EFFICIENT TIG WELDING

Similar image

Cutting-edge inverter technology and SIRIUS

The perfect team of trend-setters in TIG technology and inventors of graphic-based operating systems for welding equipment

The INVERTIG i represents REHM's fourth SIRIUS generation. It offers the user even more options for achieving the best welding results quickly and reliably in the easiest way.

The power units' dynamics set new standards. The inverter requires no output inductor.
This allows the full potential of digital control engineering to be realized.
The result is highly efficient welding processes with a perfect arc.

1 Menu button | 2 Home button | 3 Return button | 4 QUICK CHOICE buttons | 5 Selection buttons

6 R-Pilot encoder | 7 Impact-protected full colour display | Self-explanatory presentation | Dynamic displays | Smart assist feature

QUICK CHOICE buttons

The Quick Choice buttons that REHM first introduced on its welding equipment in 2008 make it extremely easy to save and call up programs in the INVERTIG i.

INVERTIG i – Easy TIG welding!

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.

Everything at a glance. Hides everything that is unnecessary.

HYPER.PULS with all settings at a glance

DC without pulse. Hides everything that is inactive

Screen in day mode

Screen in night mode

INVERTIG i 260-450 DC and AC/DC HIGH

The HIGH series impresses with its **ease of use** and the **best energy efficiency** as well as a **large number of welding processes**, in which all the know-how and experience of us as a technology leader in the TIG area is invested.

The welding processes of the INVERTIG i at a glance

DC welding

The 140 KHz arc has set the bar for all standard welding tasks.

- Directionally stable starting at 5 A
- For sheet thicknesses of 0.2 mm or more

Sample sheet 0.2 mm

DC-HYPER.PULS welding

Higher welding speed, better flow characteristics, very fine seams.

IDEAL FOR:

Food industry, pharmaceuticals industry

Plant engineering, fixture construction and toolmaking

Metalworking and railing construction

Thin sheets (starting at 0.2 mm)

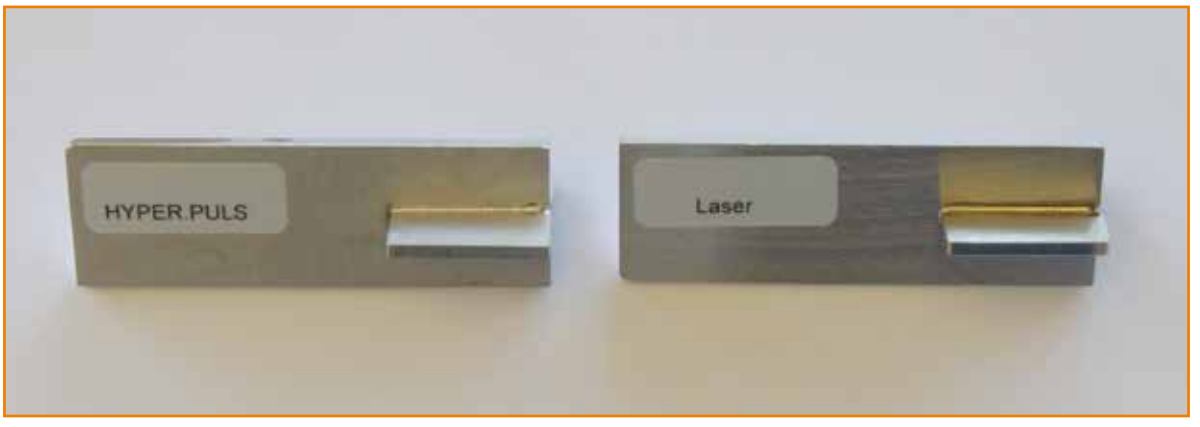
- Very fine, smooth seam
- Very good arc control
- Faster weld pool generation

Features

The REHM HYPER.PULS constricts welding current to 18,000 Hz, providing much higher energy density in the arc and on the workpiece.
The DC balance can be used to set the time for high and low current.

- Higher arc energy density
- The REHM HYPER.PULS is almost silent

Circumferential welding | hand-held torch (3.0 mm on 0.2 mm)



Corner weld for pharmaceutical engineering | without filler, hand-held torch

DC-HYPER.SPOT tack welding

Significantly reduces warping and discolouration.
Anyone can tack weld with it.

All tack welding applications without gap

- Identical tack welds make a uniform weld seam.
- Tack welds with almost no discolouration or warping.
- Perfect tack welds are no problem, even for semi-skilled labour.

Features

The REHM HYPER.SPOT uses the benefits of the HYPER.PULS: the quick weld pool generation.
The INVERTIG i also controls the entire tack-welding process.
Once set, the torch must only be positioned – the REHM HYPER.SPOT does the rest.
The REHM HYPER.SPOT can do tack welds with four times the welding current used in the manual process.
And all tack welds are identical.

Stainless steel tank with 250 tack welds

REHM spot welding

Targeted heat input at a specific point.

IDEAL FOR:
- Tool repair
- Surface-layer welding

For interval welding, the INVERTIG i can use all welding processes and their advantages.
The combination of interval, HYPER.PULS, and HYPER.SPOT delivers clear advantages, especially in welding on tool edges and in the area of repair. The heat input is targeted to the point in question and can be set precisely according to requirements.
The results have so far been matched only with laser welding equipment.

Edge sealing

AC arc welding

IDEAL FOR:
- Aluminium
- Cladding
- Brackets and structures
- Frames
- Containers
- Repair welding

The AC welding process generates a very stable arc that can be set perfectly according to user requirements for the task in question.
Reliably removes the oxide layer and delivers a very stable arc.

AC waveform

The INVERTIG i offers the user several basic forms from which to choose to achieve the perfect weld for his task.

Soft sine
The sinusoidal shape generates a stable arc for most standard applications.

Hard sine
REHM's new AC waveform combines the advantages of the sine curves with those of the rectangular curve.
It represents the new standard for AC arc welding for most applications!

Triangle
Similar to sine with slightly reduced heat input.

Rectangle
Very directionally stable with high heat input.
This waveform is used primarily for fillet welds on thick-walled components.

AC automatic frequency control

Easy on the electrode in the upper power range and increases stability in the lower.

- Arc focused in the lower power range
- Extended service life and increased electrode capacity

The automatic frequency control that REHM has developed has generated enthusiasm among users for more than 30 years.

AC balance

An optimized AC balance is easy on the electrode and increases welding speed.

- Ideal oxide removal from aluminium
- Reduced positive share is easy on the electrode and increases penetration

With the INVERTIG i, AC balance can be set with time balance (classical) and with current level for the positive or negative half of the wave.

AC HYPER.PULS

- Aluminium tack welding without filler material
- Thin-walled components

With the REHM inverter. Even with AC, the REHM HYPER.PULS can operate at up to 18,000 Hz.
The hyperpulse causes vibrations in the weld pool that allow a quicker connection in such applications as tack welding.

AC-HYPER.SPOT

Aluminium tack welding without filler material

All tack welding applications without gap

- Identical tack welds make a uniform weld seam.
- Tack welding requires no filler material.
- Perfect tack welds are no problem, even for semi-skilled labour.

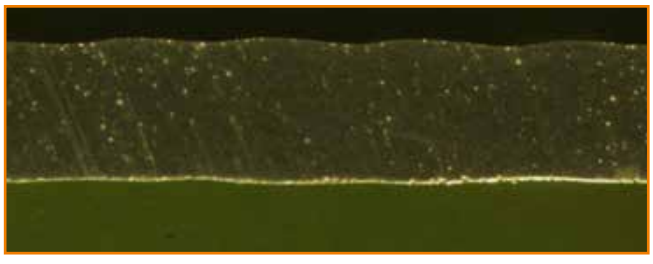
The AC HYPER.SPOT can generate tack welds on aluminium without filler material.
The only condition is a gap-free workpiece preparation.

AC DualWave

Reduces pore formation

- Aluminium with various material thicknesses
- Aluminium tank construction
- Reduces weld seam pores
- Better cleaning during repair welding

REHM's DualWave procedure combines AC arc welding and DC welding.
During the AC phase, the aluminium's oxide layer is removed.
In the DC phase, DualWave uses the benefits of the DC arc. More heat input in this phase means better weld pool out gassing.



Conventional repair welding with AC.
Normal pore formation.

Repair welding with DualWave.
Far fewer pores.

INVERTIG i 260 DC to 450 AC/DC HIGH

TECHNICAL DATA		260 DC + 260 AC/DC	310 DC + 310 AC/DC	350 DC + 350 AC/DC	450 DC + 450 AC/DC
Setting range	[A]	5-260	5-310	5-350	5-450
Duty cycle (ED) at Imax.	[%]	80			45
Welding current at 100 % ED	[A]	230	290	340	400
Open-circuit voltage	[V]	88.5			
Mains voltage	[V]	3 x 400			
Mains voltage tolerance	[%]	+15/-25			
Fuse (slow-blow)	[A]	16		32	
Protection type		IP 23			
Power factor	[cos phi]	0.99			
Power consumption at Imax.	[kVA]	6.5	8.5	10.2	15.1
Power consumption at 100 % duty cycle	[kVA]	5.5	7.7	9.7	12.5
Weight without undercarriage	[kg]				
Water-cooled DC		55			59
Water-cooled AC/DC		56			60
Dimensions LxWxH	[mm]				
Without undercarriage		570 x 330 x 580			
Undercarriage Advanced		900 x 560 x 1,020			
Undercarriage Profi		950 x 611 x 1,100			
Upright stand		544 x 30 x 43			
Item no.					
DC		1422526	1422531	1422535	1422545
AC/DC		1422528	1422533	1422537	1422547

RECOMMENDED PREMIUM SET (only available in combination with welding machines)	Item no.	Recommended for
Premium set 251W UD 8m/35mm²	1184260	260 DC + AC/DC HIGH
Premium set 301W UD 8m/50mm² Drumi	1184261	310 DC + AC/DC HIGH, 350 DC + AC/DC HIGH
Premium set 451W UD 8m/70mm² Drumi	1184262	450 DC + AC/DC HIGH

Sets consist of: TIG torch R-TIG 8 m with Up/Down module, earth cable 4 m, pressure reducer

OPTIONS

	Item no.
Holder for torch and hose pack	1180214
Upright stand (without undercarriage)	1381100
Undercarriage Profi (50 l)	1381101
Undercarriage Advanced (50 l with loading rack and fixing brake)	1381102
Shock proof cover display	1381108
Toolbox	1381143
Air pre-filter	1381144

Energy efficiency

The cleanest energy is the energy that is not needed.
The INVERTIG i’s high efficiency uses up to 30 % less energy than conventional equipment.
Government support provides attractive opportunities to make you machine park more environmentally friendly.
Ask your dealer or contact REHM directly about funding opportunities.
The INVERTIG i meets all the requirements of the EU Directive for eco-design*.

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

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:

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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