



# SERIES **MobiTIG**

**Powerful welding units at a compact size!**







1. Steel / stainless steel welding in DC



2. Aluminium welding in AC mode (MobiTIG 180 AC/DC)

# PORTABLE AND POWERFUL

The welding units series MobiTIG have been designed and built on inverter technology; this is the guarantee for optimum welding characteristics and a low weight.

The compact and portable units are suitable for TIG and MMA/stick electrode welding.

The units can be characterized by numerous features:

- Continuous setting of the welding current
- Low weight, portable
- 2-stroke/4-stroke operation
- High frequency (HF) and LiftTIG ignition
- 2 welding currents with activation at the welding torch
- DC pulsation and high frequency pulsation up to 12 kHz
- Adjustable start/final current and downslope time
- Socket for remote control
- Digital display for all parameters, with pre-display and hold function for welding current
- Programmable jobs (MobiTIG 190/284 DC)



3. MMA / stick electrode welding



MobiTIG 190/194 DC mobil

# FULL POWER

## WITH INTEGRATED STORAGE SYSTEM!

Both welding units of the series **MobiTIG 190/194 DC mobil** are impressing through their compact and handy design as well as their incredible power! In addition both machines are convincing with a multitude of functions.

The patented\* **MobiTIG 194 DC mobil** offers an integrated storage system. Instead of storing machine and accessories in a separate box, Merkle uses the housing as a clever storage system for earth and electrode cable, hand shield, gloves, slag hammer and electrodes.

- With integrated storage system.
- Optimal access to the accessories thanks to the special door design.
- A lot of space for the welding accessories.
- Room for earth and electrode cable, hand shield, gloves, slag hammer and electrodes.



European Patent No. 2193870



MobiTIG 190 DC



Continuous control



Protec edge protection (MobiTIG 190 DC)



Stable plastic cover (MobiTIG 194 mobil)



Compact and handy

### FUNCTIONALITY AND EASY OPERATION

- Professional power in a compact format: ideal for all quick welding jobs
- Modern inverter technology ensures optimal welding parameters every time
- Continuous welding current adjustment
- Small, light, handy and portable
- Merkle quality at an amazingly low price





MobiTIG 194 DC mobil

## HIGH FREQUENCY DC PULSE

The machines of the series MobiTIG come as a standard with the high frequency DC pulse. The arc can be pulsed with a frequency up to 12 kHz.

With this technology the arc characteristics provide outstanding opportunities in TIG DC welding that are not available in the normal TIG arc.

- Extreme arc constriction
- Arc similar to plasma welding
- Less heat input
- Higher welding speed
- Extremely stable arc



Standard TIG weld



High frequency DC pulse weld



Perfect for corner welds

# WITH BIPOWER PLUS

## AND OPTIONAL WATER COOLING UNIT

**The Merkle MobiTIG 284 DC combines all advantages needed for a flexible usage at the job site or workshop.**

The BiPowerPLUS option opens new areas of flexibility for welding. In the workshop with 400 V three phase, or on the job site with 230 V single phase, you are prepared wherever you find yourself.



Another highly efficient advantage is offered by the optional water cooling unit WK 210.

Different applications are possible: welding with a water cooled torch in the workshop or using a gas cooled torch on site. Easy mounting and dismounting in a few seconds via one pluggable electrical connection (option) placed on the rear panel of the unit.



MobiTIG 284 DC with water cooling unit WK 210 and trolley TW 112



Water cooling unit WK 210, optional



TCG torch connector



Solid plastic cover



Stable and robust plastic/metal housing

### TROLLEY TW 112

The trolley TW 112 is designed for easy transportation of the welding unit in the workshop or on site.

- Extra large wheels (200 mm)
- Gas bottle holder for a 10 or 20 l cylinder (if machine is fixed to the trolley)
- Drawer for tools, accessories, spare parts and consumables (option)
- Suspension possibilities for cables and torch heads.
- Torch holders for various welding torch types on left and right side

## DC units

## AC/DC unit



Technical data	MobiTIG 190 DC	MobiTIG 194 DC mobil	MobiTIG 284 DC		TIG 300 DC	MobiTIG 180 AC/DC
<b>Power supply</b>	1 x 230 V	1 x 230 V	3 x 400 V	1 x 230* V	3 x 400 V	1 x 230 V
<b>Frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
<b>Cont. power (TIG/MMA)</b>	2.8 / 3.7 kVA	2.8 / 3.7 kVA	8.3 / 9.7 kVA	3.2 / 3.7 kVA	7.6 / 9.7 kVA	2.8 kVA / 3.7 kVA
<b>Cont. current (TIG/MMA)</b>	12/16 A	12/16 A	12/14 A	14/16 A	11/14 A	12 A / 16 A

## TIG operation mode:

<b>No load voltage</b>	64 V	64 V	90 V	103 V	89 V	64 V
<b>Working voltage</b>	10 - 17.6 V	10 - 17.6 V	10 - 21.2 V	10 - 17.6 V	10 - 22 V	10 - 17.2 V
<b>Welding current (TIG) DC</b>	5 - 190 A	5 - 190 A	3 - 280 A	3 - 190 A	5 - 300 A	5 - 180 A
<b>Welding current (TIG) AC</b>	-	-	-	-	-	10 - 180 A
<b>Duty cycle 20 % (10 min.)</b>	180 A (40 °C)	180 A (40 °C)	-	-	-	180 A (40 °C)
<b>Duty cycle 35 % (10 min.)</b>	180 A (20 °C)	180 A (20 °C)	280 A (40 °C)	180 A (20 °C)	-	180 A (20 °C)
<b>Duty cycle 50 % (10 min.)</b>	-	-	250 A (40 °C)	-	-	-
<b>Duty cycle 60 % (10 min.)</b>	150 A (20 °C) 110 A (40 °C)	150 A (20 °C) 110 A (40 °C)	240 A (40 °C)	110 A (40 °C)	300 A (20 °C)	150 A (20 °C) 110 A (40 °C)
<b>DB Duty cycle 100 %</b>	130 A (20 °C) 90 A (40 °C)	130 A (20 °C) 90 A (40 °C)	210 A (40 °C)	90 A (40 °C)	220 A (40 °C)	130 A (20 °C) 90 A (40 °C)

## MMA/stick electrode mode:

<b>Electrode diameter</b>	1.5-3.25 mm	1.5-3.25 mm	1.5 - 5 mm	1.5 - 3.25 mm	1.5 - 5 mm	1.5 - 3.25 mm
<b>No load voltage</b>	64 V	64 V	90 V	103 V	99 V	64 V
<b>Welding current</b>	5 - 160 A	5 - 160 A	5 - 280 A	5 - 160 A	5 - 300 A	20 - 160 A

Protection class	IP 23				IP 23
Ignition	HF-/LiftTIG				HF-/LiftTIG
Adjustment	current 1, current 2; time 1, time 2; gas post flow, start / final current				see left side
LED display	current, voltage, time, frequency with pre-display and hold function				see left side
Job program	yes			-	-
Operation modes	2 stroke / 4 stroke / 4 stroke with current 2				see left side
TIG Pulse	0.2 Hz - 12 kHz			0.2 Hz - 800 kHz	0.2 Hz - 12 kHz
MMA/stick electrode welding	Hotstart, Anti-Stick, Arc Force				see left side
Torch connection	Merkle TCG with 5-pol. plug				see left side
Sockets	50 mm²				50 mm²
Norm	EN 60974-1 „S“ / CE				EN 60974-1 „S“ / CE
Weight	8.9 kg	12.8 kg	20 kg	26 kg	9.1 kg
Dimensions (l x w x h)	355 x 160 x 275 mm	530 x 210 x 445 mm	495 x 210 x 450 mm	535 x 230 x 465 mm	355 x 160 x 275 mm

Technical details are subject to chance.

\* Option BiPowerPLUS





06/2016

## CREATE YOUR FUTURE SUCCESSFULLY.

With Merkle. Your specialist for welding units, welding machines, torches and intelligent automation systems. With own subsidiaries and Merkle dealers in Germany, Europe and many other countries throughout the world.

**Welcome to Merkle.**

## PRODUCT RANGE

- MIG/MAG Welding Units
- Synergic Pulse Welding Units
- TIG Welding Units
- MMA / Stick Electrode Welding Units
- Plasma Welding and Cutting Units
- Turntables and Roller Drive Units
- Welding and Cutting Torches
- Automation Components and Solutions
- Merkle Robotics



### Merkle Schweissanlagen-Technik GmbH

Industriestr. 3 • D-89359 Koetz • Germany  
Phone: +49 8221 915-0 • Fax: +49 8221 915-40  
Email: [info@merkle.de](mailto:info@merkle.de)

**[www.merkle.de](http://www.merkle.de)**

