



Product range 2025

# FASCINATION WELDING.



**FASCINATION WELDING.**

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



**MERKLE is setting standards**

# QUALITY AND PERFORMANCE AT ITS BEST!

**Since its establishment in 1964 in Koetz (Bavaria), the company has developed into one of the world leaders in the production of welding technology equipment for manual and automated welding. The in-house production, which includes CNC machining centers, automatic lathes, and modern housing manufacturing, as well as the production of circuit boards and welding torches across a 7,000 m<sup>2</sup> (75,350 ft<sup>2</sup>) facility, ensures the highest quality and precision for our customers. This enables quick and flexible responses to individual requirements, reliable delivery times, and an excellent price-performance ratio.**

Our quality philosophy is simple but effective: High-capacity logistics for the supply of machines, accessories, consumables and spare parts.

Overall there are more than 220 employees working at the headquarters in Koetz and the customer sales and service branches all over Europe.

An expansive distributor network with service and sales teams all over Germany, in Europe and in many parts of the world is available to our partners and customers.

Our own in house training center and the MERKLE application center for manual and automated welding technology guarantees the best support to anyone dealing with MERKLE.

New solutions in welding and cutting are being developed at our own R&D departments through experienced engineers.

**MERKLE.  
FASCINATION WELDING.**







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Perfect for the craftsman and industry

# ENERGY-EFFICIENT AND STEP-CONTROLLED!



Experience the great plus in functionality thanks to the control unit with extra large functional knobs and an ultra modern design.

Thanks to their compact design, proven stepless technology and their robust, stable construction, the units in our eco series are the perfect choice for use in trade, vehicle workshops, service companies and industry.

- **RedMIG eco 2800 K:**  
Compact. Robust. Energy-Efficient!
- **OptiMIG eco 450 DW:**  
The powerful MIG/MAG industrial series



THE SYSTEM COMPLIES WITH  
THE EU ECO-DESIGN REGULATION  
**NO. 2019/1784**

| model              | welding current | steps |
|--------------------|-----------------|-------|
| <b>RedMIG eco</b>  |                 |       |
| 2800 K             | 30 - 280 A, 30% | 14    |
| <b>OptiMIG eco</b> |                 |       |
| 450 DW             | 30 - 400 A, 80% | 28    |



RedMIG eco 2800 K

OptiMIG eco 450 DW



High Tech for precise adjustment

# CONTINUOUSLY CONTROLLED MIG/MAG WELDING UNITS



All continuously controlled MERKLE MIG/MAG units are based on synergic one-button-control technology.

The machines will always automatically adjust the correct wire feed speed and welding voltage by selection of the welding current.

- **MobiMIG:**  
Mobile or portable, incl. MMA operation and ColdMIG process
- **GreenMIG:**  
With an intuitive touch panel incl. DeepARC, ColdMIG, HighUP and electrode welding. Now new via **SOFTWARE UPGRADE** to PulseARC, Alu oder CrNi. ↻

| model          | welding current                     | control  |
|----------------|-------------------------------------|----------|
| <b>MobiMIG</b> |                                     |          |
| 180 K          | 25 - 180 A, 20%                     | stepless |
| 280 K          | 25 - 280 A, 35%<br>25 - 180 A, 20%* | stepless |
| 321 K          | 25 - 320 A, 30%<br>25 - 180 A, 20%* | stepless |
| 322 K          | 25 - 320 A, 30%<br>25 - 180 A, 20%* | stepless |
| 322 KW         | 25 - 320 A, 30%<br>25 - 180 A, 20%* | stepless |

\*with BiPower Plus (optional), operation on 1x 230 V

## GreenMIG

|           |                 |          |
|-----------|-----------------|----------|
| 400 KW/DW | 20 - 400 A, 60% | stepless |
| 500 KW/DW | 20 - 500 A, 40% | stepless |



GreenMIG



MobiMIG





Simply professional welding

# THE NEW HighPULSE SERIES WITH TOUCH OPERATION



With the new HighPULSE touch series MERKLE presents its proven synergic pulse technology combined with the intuitive operation of a touch control panel.

The language-independent operation concept and the 'all inclusive' package with all common welding programs and special welding processes allow a quick and simple setup.

- Easy-to-use and language-independent touch control panel
- Perfect operation even with welding gloves
- DeepARC, ColdMIG, HighUP and welding programs come as a standard
- Continuous energy control at the TEDAC® torch

| model                  | welding current | control  |
|------------------------|-----------------|----------|
| <b>HighPULSE touch</b> |                 |          |
| 280 K                  | 25 - 280 A, 35% | stepless |
| 350 K                  | 25 - 350 A, 40% | stepless |
| 400 KW/DW              | 20 - 400 A, 80% | stepless |
| 450 KW/DW              | 20 - 450 A, 60% | stepless |



HighPULSE touch 280 K, 350 K, 400/450 KW/DW



Proven technology for universal welding

# SYNERGIC PULSE WELDING UNITS



In the proven HighPULSE series all special welding processes and programs as well as the continuous energy control directly at the TEDAC® torch are “all inclusive”.



DeepARC

- Up to 100 % faster welding
- Deep weld penetration and no spatter adherence



ColdMIG

- Up to 30 % less heat input and high gap bridging capability
- Optimal weldability of thin sheet metals



HighUP

- Vertical-up welding made easy
- Up to 100 % faster welding with safe penetration



ProSWITCH

- Multiple application and easy to use
- Perfect root welding

| model            | welding current | control   |
|------------------|-----------------|-----------|
| <b>HighPULSE</b> |                 |           |
| 284 K            | 25 - 280 A, 35% | stepless  |
| 354 K            | 25 - 350 A, 40% | stepless  |
| 354 DW           | 25 - 350 A, 50% | stepless  |
| 454 KW/DW        | 20 - 450 A, 50% | stepless  |
| 554 KW/DW        | 20 - 550 A, 40% | stepless  |
| 352 RS           | 20 - 350 A, 60% | Interface |
| 452 RS           | 20 - 450 A, 50% | Interface |
| 552 RS           | 20 - 550 A, 40% | Interface |



HighPULSE 284/354 K

HighPULSE 354/454/554 KW/DW

HighPULSE Robotics  
352/452/552 RS





Flexibility and economy all along the line

# MMA INVERTERS



**MERKLE MMA/stick electrode welding units are built on inverter technology. They set themselves apart through their superb welding qualities. The machines are perfect for employment in the workshop, on site work and the pipe welding industry.**

For welding tasks at the customer's site, on assembly jobs, or in the workshop, the devices from the LiteARC and MobiARC series deliver sufficient power with 230 V or 400 V mains voltage.

- **LiteARC:**  
Small, lightweight, and powerful
- **MobiARC 284 cel / 284 cel ±:**  
The compact, mobile power unit, also available with polarity change from the remote control

| model                        | welding current | mains  |
|------------------------------|-----------------|--------|
| <b>MMA Welding Inverters</b> |                 |        |
| LiteARC 160                  | 15 - 160 A, 25% | 230 V  |
| LiteARC 180                  | 15 - 180 A, 25% | 230 V  |
| MobiARC 284 cel              | 20 - 280 A, 35% | 400 V  |
|                              | 20 - 160 A, 25% | 230 V* |
| MobiARC 284 cel ±            | 20 - 280 A, 35% | 400 V  |

\*with BiPower Plus (optional), operation on 1x 230 V



LiteARC 160

LiteARC 180



MobiARC 284 cel / 284 cel ±





Highest functionality and easy operation

# TIG WELDING UNITS PLASMA WELDING UNITS



**MERKLE TIG and Plasma welding machines – ideal machines for the precise joint welding with DC or AC current.**

Due to the narrow concentrated arc the heat input to the workpiece is low. The machines are applicable in manual as well as in automated operation. An automatic cold wire feed system is available.

- **LiteTIG / MobiTIG:**  
Portable small TIG welding units, easy to operate
- **LogiTIG:**  
The new portable standard for TIG AC/DC welding
- **Insquare / HighTIG:**  
The water cooled industry class

| model | welding current | mains |
|-------|-----------------|-------|
|-------|-----------------|-------|

#### LiteTIG, MobiTIG and LogiTIG

|                   |                |        |
|-------------------|----------------|--------|
| LiteTIG 190 DC    | 5 - 190 A, 35% | 230 V  |
| LiteTIG 210 DC    | 5 - 210 A, 20% | 230 V  |
| MobiTIG 304 DC    | 5 - 300 A, 50% | 400 V  |
|                   | 5 - 180 A, 35% | 230 V* |
| LiteTIG 190 AC/DC | 5 - 190 A, 35% | 230 V  |
| LiteTIG 210 AC/DC | 5 - 210 A, 20% | 230 V  |
| LogiTIG 221 AC/DC | 5 - 220 A, 25% | 230 V  |
| LogiTIG 240 AC/DC | 5 - 240 A, 35% | 230 V  |
| LogiTIG 300 AC/DC | 5 - 300 A, 50% | 400 V  |

#### HighTIG and Insquare

|                    |                 |       |
|--------------------|-----------------|-------|
| HighTIG W 350 DC   | 5 - 350 A, 50%  | 400 V |
| HighTIG 452 DC     | 5 - 450 A, 40%  | 400 V |
| HighTIG 552 DC     | 5 - 550 A, 40%  | 400 V |
| Insquare 321 AC/DC | 5 - 320 A, 60%  | 400 V |
| Insquare 421 AC/DC | 5 - 420 A, 40%  | 400 V |
| Insquare 600 AC/DC | 20 - 600 A, 80% | 400 V |

#### HighPLASMA

|                 |                |       |
|-----------------|----------------|-------|
| HighPLAS 352 DC | 5 - 350 A, 40% | 400 V |
| HighPLAS 452 DC | 5 - 450 A, 70% | 400 V |

\*with BiPower Plus (optional), operation on 1x 230 V



LiteTIG

LogiTIG

HighTIG



The user optimized answer for every job

# WELDING AND CUTTING TORCHES

## MIG/MAG Hand Welding Torches



## Fume Extraction Torches



## Push-Pull Welding Torches



## MIG/MAG Machine and Robot Welding Torches



## TIG Welding Torches



## TIG Automation Welding Torch



| model                               | welding current | cooling |
|-------------------------------------|-----------------|---------|
| <b>MIG/MAG Hand Welding Torches</b> |                 |         |
| SB/SBT 157 G                        | 180 A, 60% ED   | gas     |
| SB/SBT 307 G                        | 300 A, 60% ED   | gas     |
| SB/SBT 351 G                        | 280 A, 60% ED   | gas     |
| SB/SBT 352 W                        | 300 A, 60% ED   | water   |
| SB/SBT 504 W                        | 450 A, 60% ED   | water   |
| SB/SBT 603 W                        | 600 A, 60% ED   | water   |
| HSB/HSBT 600 W                      | 600 A, 100% ED  | water   |

### Fume Extraction Torches

|             |               |       |
|-------------|---------------|-------|
| RSB/T 351 G | 280 A, 60% ED | gas   |
| RSB/T 503 W | 450 A, 60% ED | water |

### Push Pull Torches

|              |               |       |
|--------------|---------------|-------|
| PP/PPT 307 G | 300 A, 60% ED | gas   |
| PP/PPT 502 W | 450 A, 60% ED | water |

### MIG/MAG Machine and Robot Welding Torches

|              |                |       |
|--------------|----------------|-------|
| MSB 400 W    | 380 A, 60% ED  | water |
| MSB 603 W    | 600 A, 60% ED  | water |
| ROB 355 W HW | 370 A, 100% ED | water |
| ROB 505 W    | 500 A, 60% ED  | water |

### TIG Welding Torches with „Quick TIG-System“

|          |                     |       |
|----------|---------------------|-------|
| TH 202 G | 200 A DC   180 A AC | gas   |
| TH 452 W | 425 A DC   385 A AC | water |
| TH 600 W | 600 A DC   600 A AC | water |

### TIG Automation Welding Torch

|          |               |       |
|----------|---------------|-------|
| TM 450 W | 450 A, 60% ED | water |
|----------|---------------|-------|





Energy control directly at the torch

## TEDAC® SYSTEM



The MERKLE TEDAC® system offers the remote continuous control and display directly at the welding torch.

Using the slide switch mounted on the top of the TEDAC® torch handle, the operator can raise or lower the energy setting during the welding process.

Using a visible, multicolour LED indicator any energy modifications will be shown directly on the TEDAC® torch. Thanks to the standard Euro connector there are no further control cables necessary.

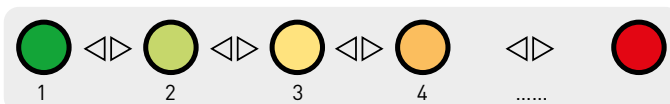
In the OptiMIG eco series, the TEDAC® torch allows seamless adjustment of the wire feed.

### Continuous energy control and display



Precise, continuous energy control through a slide switch mounted on the handle of the TEDAC® torch – before, during and after the welding process. The visualization of the current welding conditions through a stepless multi-

### Recalling of pre-programmed jobs



Using the TEDAC® slide switch the operator can select programmable parameters (jobs) from the torch. Perfectly reproducible results in every situation every time.



Ergonomically formed handle torch trigger with a micro switch for guaranteed more than 10 mio. operations.



Standard Euro connector, no further control cables are necessary.



The multi-coloured LED shows the current energy or arc trim condition selected.



Flexible application in the production

# WELDING TURNTABLES AND ROLLER DRIVE UNITS



## Welding Turntables

MERKLE develops and manufactures a wide range of welding turntables from 50 to 5000 kg load capacity. The main features are a constant, adjustable rotation speed, a large torque and a heavy-duty current collector to the face plate.

## Roller Drive Units

All roller drive units are composed of a motor drive block and one or more load blocks. The roller supports are adjustable and can be adapted to different workpiece diameters.

| model                     | max. load | RPM                           |
|---------------------------|-----------|-------------------------------|
| <b>Welding Turntables</b> |           |                               |
| D 53/25                   | 50 kg     | 0,25 - 2,5 min <sup>-1</sup>  |
| D 53/70                   | 50 kg     | 0,7 - 9,0 min <sup>-1</sup>   |
| D 150 touch               | 150 kg    | 0,05 - 10,0 min <sup>-1</sup> |
| D 350 touch               | 350 kg    | 0,05 - 5,0 min <sup>-1</sup>  |
| D 655                     | 650 kg    | 0,075 - 3,0 min <sup>-1</sup> |
| D 1005                    | 1.000 kg  | 0,01 - 1,3 min <sup>-1</sup>  |
| D 5002                    | 5.000 kg  | 0,002 - 1,1 min <sup>-1</sup> |

| model                     | max. load | diameter       |
|---------------------------|-----------|----------------|
| <b>Roller Drive Units</b> |           |                |
| R 1003                    | 1.000 kg  | 50 - 2.000 mm  |
| R 3002/2                  | 3.000 kg  | 200 - 4.000 mm |
| R 16000                   | 16.000 kg | 300 - 3.500 mm |



Turntables



Roller drive units





Components and modules for smart combinations

# AUTOMATION COMPONENTS

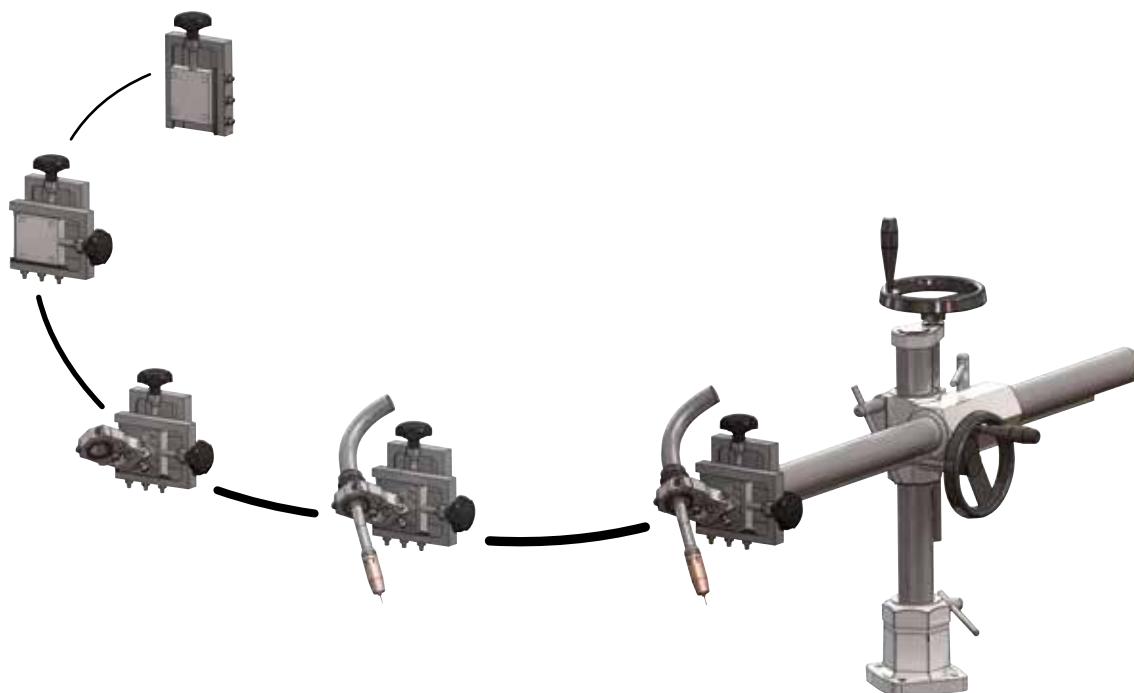


**MERKLE produces a wide range of components for setting-up semi and fully automated solutions in welding technology.**

The dimensions and the design of the components are adapted to each other and thus allow an easy assembly. All kinds of combinations are available: from a simple torch support to complex automated welding machines.

**Ask for our catalogue on automation components and complete automated solutions! The program of automation components includes:**

- Manually adjustable slide rests in various lengths
- Flexible adjustable torch holders
- Motor driven slide rests
- Torch tracking systems
- Intelligent suspension devices for wire feeders and machines
- Circular and longitudinal welding systems





Complete systems for an efficient production

# FULLY AUTOMATED SOLUTIONS



**MERKLE offers complete solutions for automated welding production. After an analysis of your welding task we will find the appropriate solution for the specific job.**

## Circular Welding Systems

The circular welding systems are based on one of the MERKLE roller drive units or MERKLE welding turntables. The application spectrum ranges from the small flange welding unit to machines for the fabrication of large tanks. All welding processes (MIG/MAG, PulseARC, TIG and Plasma) can be used.

## Longitudinal Welding Systems

For longitudinal welding jobs a number of different solutions is available. Seam welders up to 4 m in length, welding portals or totally automated systems with tracking sensors cover a wide range of applications. All welding processes can be used here.



Circular welding systems



Longitudinal welding systems





**MERKLE WeldFACTORY**

# THE SOFTWARE SOLUTION FOR **INDUSTRY 4.0**



MERKLE sets new standards  
for **fully automated solutions**  
with innovative ideas.



## 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.

06/2025

## PRODUCT RANGE

- MIG/MAG Welding Units
- Synergic Pulse Welding Units
- TIG Welding Units
- MMA / Stick Electrode Welding Units
- Welding Torches
- Turntables and Roller Drive Units
- Automation Components and Solutions
- Complete Solutions and Robotics
- Specialized Machinery Construction
- MERKLE WeldFACTORY - Industry 4.0



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