



Fascination! Welding!

# MERKLE 2018 PRODUCT RANGE





**Merkle is setting standards**

# **QUALITY AND PERFORMANCE AT ITS BEST!**

**Since its establishment in 1964 in Koetz (Bavaria) Merkle has set itself apart as one of the world leaders in the production of welding technology equipment for manual and automated welding. The CNC machines and automatic lathes, combined with modern housing and torch productions, are expressing the depth of in-house production at the 7.000 m<sup>2</sup> (75.350 ft<sup>2</sup>) Merkle headquarters in Koetz.**

Merkle's 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

# STEP-CONTROLLED MIG/MAG WELDING UNITS



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

The controller with synergic wire feed capability ensures the highest quality and efficiency for both the CompactMIG and the OptiMIG series.

- **RedMIG:**  
The economical MIG/MAG base line series
- **CompactMIG:**  
The professional MIG/MAG universal class
- **OptiMIG:**  
The powerful MIG/MAG industrial series

model	welding current	steps
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#### RedMIG

1600 K	25 - 160 A, 30%	7
2000 K	25 - 200 A, 30%	7
2800 K	25 - 280 A, 30%	14
3000 K/D	25 - 280 A, 35%	14

#### CompactMIG

280 K	25 - 280 A, 35%	14
400 K/DW	25 - 400 A, 35%	14

#### OptiMIG

351 KW/DW	25 - 350 A, 60%	28
451 KW/DW	25 - 450 A, 40%	42
551 DW	25 - 560 A, 40%	42



RedMIG

CompactMIG

OptiMIG



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:**  
Portable, MMA operation and ColdMIG process
- **SpeedMIG and SpeedMIG touch:**  
The industrial MIG/MAG series with DeepARC process for a high welding speed and a deep penetration

model	welding current	control
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#### MobiMIG

180 K	25 - 180 A, 20%	stepless
280 K	25 - 280 A, 35%	stepless
320 K	25 - 320 A, 40%	stepless

#### SpeedMIG

352 DW	25 - 350 A, 50%	stepless
452 DW	20 - 450 A, 50%	stepless
552 KW/DW	20 - 550 A, 40%	stepless

#### SpeedMIG touch

450 KW	20 - 450 A, 50%	stepless
450 DW	20 - 450 A, 50%	stepless



SpeedMIG



MobiMIG



## √ DeepARC

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

## ❄ ColdMIG

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

## ☰ HighUP

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

## ▮▮▮ ProSWITCH

- Multiple application
- Perfect root welding
- Easy to use



High speed for best performance

# SYNERGIC PULSE WELDING UNITS



The HighPULSE generation features many innovative and functional details. These are more valuable than ever for a professional welding production.

And the dynamic design with solid integrated transport handles doesn't leave any doubt who's the boss.

- Continuous energy control at the TEDAC® & TEDAC® DIGITAL torch
- Optimum operation even with gloves
- Multi-functional display
- DeepARC, ColdMIG, HighUP and ProSWITCH

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 AND PLASMA CUTTING UNITS



## Merkle MMA Welding 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.

## Merkle Plasma Cutting Units

Merkle plasma cutting units with compressed air as the plasma gas are a real economical alternative to oxyacetylene cutting. They are ideal for the cutting of all electrical conducting materials such as painted and galvanized metals.

model	welding current	mains
<b>MMA Welding Inverters</b>		
LiteARC 160	10 - 160 A, 25%	230 V
MobiARC 164 mobil	15 - 160 A, 25%	230 V
LiteARC 180	10 - 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 option

model	welding current	capacity
<b>Plasma Cutting Units</b>		
C 82	20 - 80 A, 35%	max. 30 mm
AirCUT 120 W	40 - 120 A, 60%	max. 50 mm



LiteARC 180

MobiARC 164 mobil

Plasma Cutting unit C 82





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 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
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#### LiteTIG, MobiTIG and LogiTIG

LiteTIG 190 DC	5 - 190 A, 35%	230 V
MobiTIG 194 DC mobil	5 - 180 A, 35%	230 V
MobiTIG 304 DC	5 - 300 A, 50%	400 V
LiteTIG 180 AC/DC	5 - 180 A, 35%	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



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



## Plasma Cutting Torches



model	welding current	cooling
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### MIG/MAG Hand Welding Torches

SB/SBT 157 G	180 A, 60%	gas
SB/SBT 307 G	300 A, 60%	gas
SB/SBT 351 G	280 A, 60%	gas
SB/SBT 352 W	300 A, 60%	water
SB/SBT 504 W	450 A, 60%	water
SB/SBT 603 W	600 A, 60%	water
HSB/HSBT 600 W	600 A, 100%	water

### Fume Extraction Torches

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

### Push Pull Torches

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

### MIG/MAG Machine and Robot Welding Torches

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

### TIG Cutting 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

### Plasma Cutting Torches

PR 81	80 A, gas, hand version
PR 81-M	80 A, gas, machine version
PR 122 W	120 A, water, hand version
PR 122 W-M	120 A, water, machine version



Energy control and display directly at the torch

# TEDAC® TEDAC® DIGITAL

TEDAC®  
DIGITAL



The standard Merkle TEDAC® system and the TEDAC® DIGITAL system are offering the continuous remote control and display directly at the welding torch without an additional control cable.

## ■ TEDAC® DIGITAL system:

Merkle is now entering a new level of innovation with the new system TEDAC® DIGITAL in terms of efficiency and ease-of-use.

The new 2-axis control button allows the selection and operation of all functions of the welding unit (HighPULSE 354/454/554), even with welding gloves. The information is shown in alphanumeric data in a well readable digital display on top of the torch.

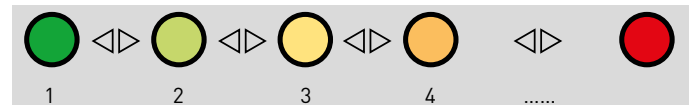
## ■ TEDAC® system

### Continuous energy control and display



The visualization of the current welding conditions through a stepless multi-coloured LED display.

### Recalling of pre-programmed jobs



Using the TEDAC® slide switch the operator can select programmable parameters (jobs) from the torch.



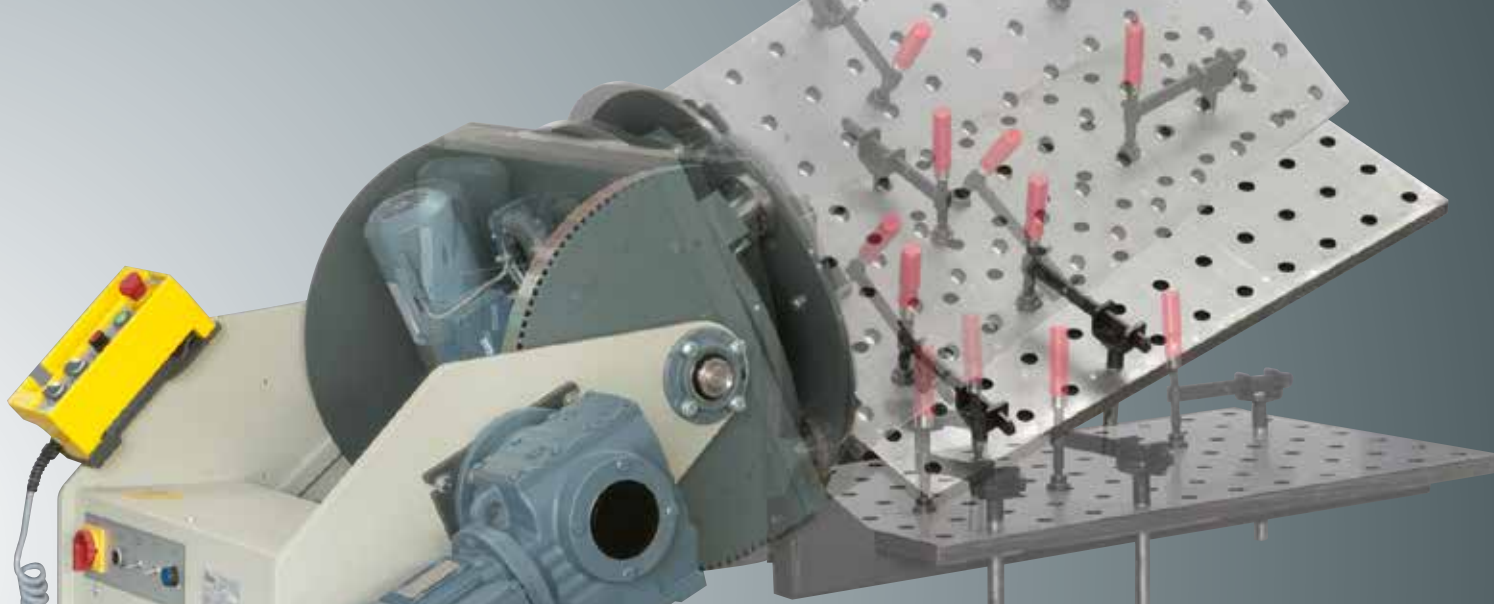
Precise energy control directly at the torch at any time: before, during and after welding. Display of the current via a digital display directly at the welding torch.



The arc length can be adjusted individually according to the selected energy.



Pre-programmed jobs can be selected with the control button. All job parameters can be programmed according to the need of the user. Perfect reproducible welding results are guaranteed in all settings.



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
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### Welding Turntables

D 52/25	50 kg	0.25 - 2.5 min <sup>-1</sup>
D 52/70	50 kg	0.7 - 9 min <sup>-1</sup>
D 102	100 kg	0.1 - 10 min <sup>-1</sup>
D 302	300 kg	0.05 - 5 min <sup>-1</sup>
D 653	650 kg	0.075 - 2.8 min <sup>-1</sup>
D 1003	1,000 kg	0.027 - 1.2 min <sup>-1</sup>
D 5001	5,000 kg	0.002 - 1.1 min <sup>-1</sup>

model	max. load	diameter
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### Roller Drive Units

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

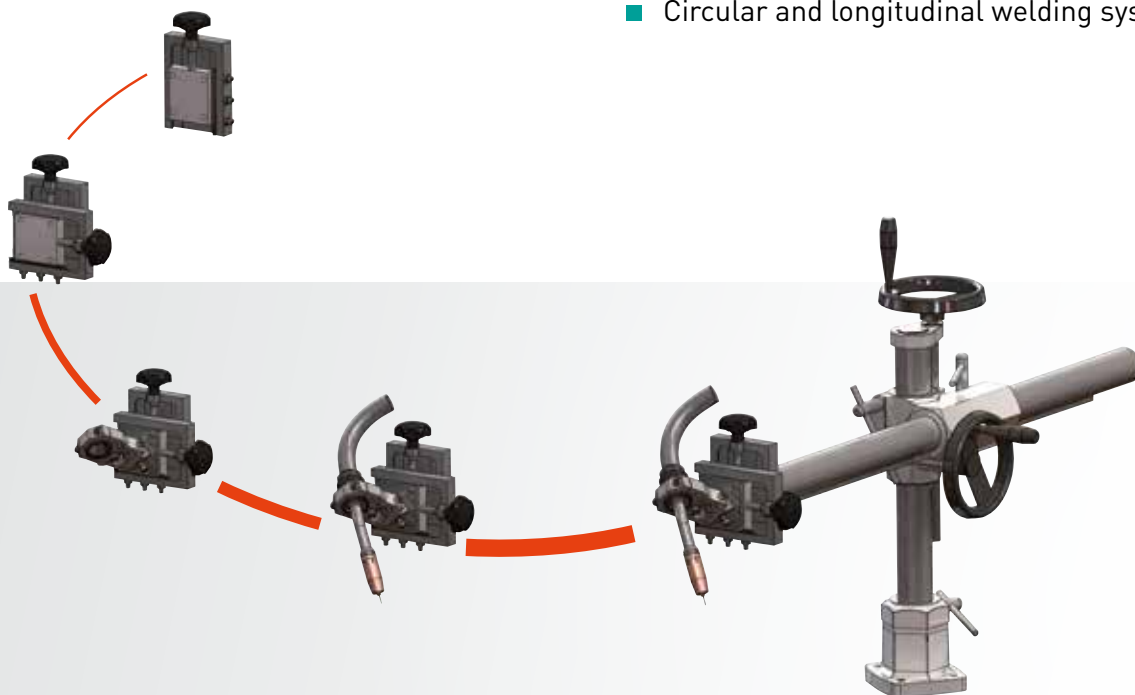


**Merkle produces a wide range of components for setting-up semi and fully automated solutions in welding technology.**

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





Trailer beam welding machine with double sided welding heads.

MERKLE SETS NEW STANDARDS FOR  
**FULLY AUTOMATED SOLUTIONS**  
WITH INNOVATIVE IDEAS.



Complete systems for an efficient production

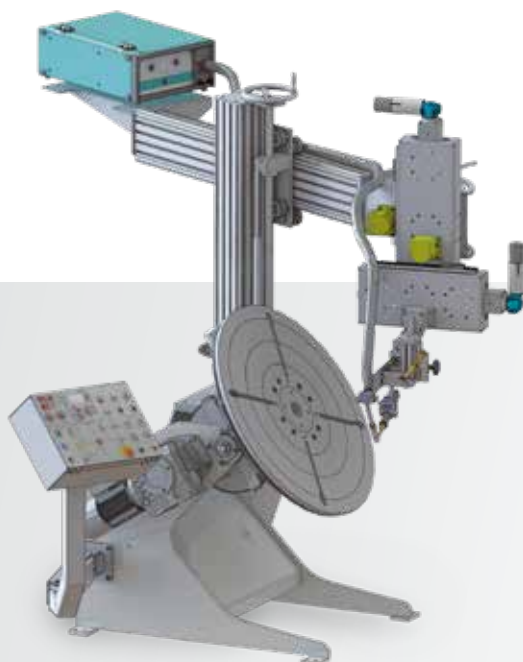
# FULLY AUTOMATED SOLUTIONS



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 Merkle's roller drive units or Merkle's 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.



Circular welding systems

## 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.



Longitudinal welding systems



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## 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



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