

# VARIO MIG 4003 DC DV 36

MIG / MAG pulse power system

## Modular design for a wide range of applications

The innovative, modular design of the VARIO line offers a wide range of applications in manual and automated welding to the user in trade and industry. With great ease of operation and always first class welding quality in MIG / MAG welding, MIG / MAG pulse welding and MIG brazing.

New dimensions also in the variety of materials to be processed: High-strength steels, construction and stainless steels of all kinds, aluminum, copper, magnesium, brass, titanium, nickel and their alloys, highly heat sensitive alloys and galvanized sheets.

Thanks to the VM-control technology the VARIO MIG is the flexible response to the professional challenges of today and tomorrow.

- **MIG/MAG- Pulse arc welding**  
Spatter-free drop transition
- **MIG/MAG-Dual-Pulse Welding**  
High-quality seam qualities in aluminum and stainless steels
- **MIG/MAG High speed welding**  
Maximum efficient combination of wire feed speed and inert gas type

## Characteristics VARIO MIG 4003 DC DV 36

- Intelligent by physical welding database with stored welding parameters for different welding processes
- Great arc stability by controlled drop transition
- Excellent gap bridging
- High duty cycle
- Controlled heat input without weld overheating through pulse operation
- Insensitive to normal supply voltage fluctuations
- Mastery of penetration by DUAL-pulse welding
- Economy gas connection
- Socket for remote control on the DV 36
- Display control with single-knob operation
- USB-interface
- Norms: VDE 0544-1, VDE 0544-10, EN 60974-1  
EN 60974-10, CE-mark

### Options

- Storability of up to 999 customized welding programs
- Quality assurance system
- Communication via industrial bus systems
- Speedy access to up to 15 programs via tastronic torch



## Technical data

### Mains connection

Supply voltage:	3 x 400 V 50 Hz
Maximum power consumption:	22 kVA
Constant power:	13,7 kVA
Continuous / Max. current:	19,8 / 28,6 A
Fuse:	25 A (slow-blow)
Connecting cable:	4 x 4 mm <sup>2</sup> Cu
Power factor cos φ:	0,95

### Welding performance

Setting range from:	10 A / 10 V infinitely variable to 400 A / 34 V
Open circuit voltage:	approx. 65 - 70 V
Duty cycle:	HSB 60% ED: 400 A / 34 V DB 100% ED: 315 A / 30 V

### Construction

Dimensions L x W x H:	1030 x 470 x 950 mm
Wire feed unit L x B x H:	700 x 400 x 340 mm
Weight:	143 / 34 kg
Protection:	IP 23
Insulation class:	H
Cooling:	AF
Certification:	S-mark, CE-mark VDE 0544-1, VDE 0544-10 EN 60974-1, EN 60974-10

Technical changes reserved.

## Further characteristics features

- Outstanding welding performance due to very low spatter
- Maximum reproducibility and setting accuracy
- Highest process safety through the ELMATECH static / dynamic control with process control „Virtual Machine“
- The control automatically assigns to each welding program an ignition (PZ), welding (PS) and crater fill program (PK) and ensures targeted arcing
- Reproducible and transferable static and dynamic properties
- Applicable for manual and mechanized welding
- Solves critical welding tasks in constrained positions by guided process control
- Increased productivity with MIG/MAG- and MIG-pulse welding
- Pointed wire electrode after welding end for perfect reignition
- Optimum combination of parameters with regard to the special welding task ensures maximum production output
- Joining galvanized sheets by MIG brazing
- Custom machine interfaces

## Welding operation control by Virtual Machine (VM)

ELMA-Tech provides a leading and unique control technology to control the welding process – the “Virtual Machine”.

It is the core of nearly all ELMA-Tech products and is able to handle complex joining processes with high reproducibility while ensuring minimum programming effort.

Transistorized power units respond in interaction with the virtual machine in a very short time (50µs) to dynamic process requirements. Through the synthesized static and dynamic behavior generator efficiencies up to 96% are achieved.

Resource-saving by the always lowest energy input in each case!



Optimal wire feeding in automated applications through the compact wire feeder DV 38 - ROB

**Excellent for automation especially at high clock rates or welding speeds!**