

## PICOMIG

THE MIG/MAG COMPACT CLASS:

POWERFUL PERFORMANCE IN ANY LOCATION 180 – 350 A



# THE PICOMIG FAMILY.

Welding machines from the Picomig family are the compact all-rounders for your everyday applications, featuring an integrated wire feeder and the option to use three welding processes. You can choose between the pulse or standard versions. Characteristics for steel, CrNi, CuSi, aluminium and flux-cored wires are included ex works.



## THE ADVANTAGES +

- Digital welding processes for the best welding results
- Convenient welding for optimal results
- Portable, compact
- Sturdy casing suitable for construction sites
- Easy one-knob operation
- Saves power thanks to excellent efficiency
- Extensive range of accessories

# BlueEvolution.

## THE EWM ENVIRONMENT INITIATIVE.

With our resource-saving inverter technology and energy-reducing joining processes, we unite economic efficiency and environmental sustainability. For you, this means: you save material. You save time. You use less energy. You reduce your costs. And you increase the quality of your welding. Join our BlueEvolution and become:



### RESOURCE RESCUERS.

EWM inverter technology allows lighter and more compact machines to be built. This results in less material consumption, and resources like copper, aluminium and steel are conserved. This also corresponds to the action plan of the Ecodesign guidelines for resource-conserving recycling management with high requirements on the reparability and recyclability of products.



### ENERGY WINNERS.

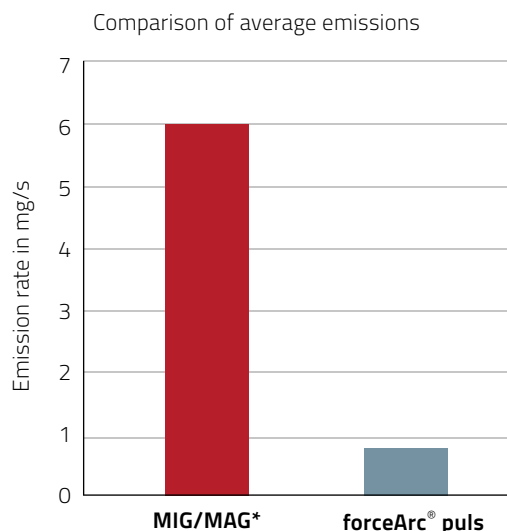
When used in conjunction with power-saving EWM joining processes, the high efficiency of our inverter technology saves primary energy and therefore cuts electricity costs. These savings are also enhanced by weld seam geometries which use less wire and gas. Take advantage of shorter welding times and reduced need for post weld work to save CO<sub>2</sub> and become an energy winner.



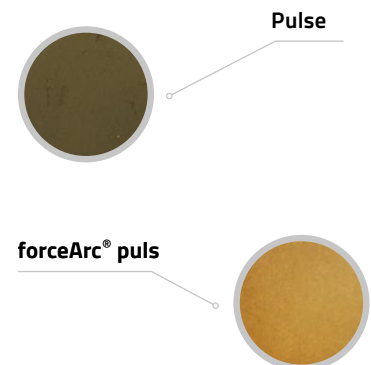
### EMISSIONS HEROES.

Innovative EWM welding processes produce fewer harmful welding fume particles and therefore cut down on emissions – thus improving working conditions for everyone utilising these welding processes. A reduction of the passes to be welded also cuts down on welding times. This not only reduces emissions but avoids their production from the outset.

### REDUCE WELDING FUME EMISSIONS.



### GLASS FILTER AFTER WELDING



\*Mean value as per German Social Accident Insurance Institution for the woodworking and metalworking industries information sheet 593 – Harmful substances during welding and related processes (BGI 593 – Schadstoffe beim Schweißen und bei verwandten Verfahren)

# CASING VARIANTS.

## D200 / 5 KG WIRE SPOOL – PICOMIG 180/220.

In the workshop, during assembly – above all on the construction site, the Picomig 180 and 220 show what they can do: these portable, robust single-phase welding machines are compatible with a large mains voltage tolerance. Both machines are available in both pulse and synergic versions and as part of a practical, ready-to-weld set to let you start welding immediately.

### Wire spool housing

Can house a 5 kg wire spool (diameter up to 200 mm/ D200). Also suitable for a 15 kg wire spool (diameter up to 300 mm/D300) using optional Picomig ON Trolley.



### Casing suitable for construction sites

Robust, portable and compact. The Picomig machine can easily withstand the various strains and stress arising from use on the construction site with casing you can rely on.

### Unbelievably powerful

Your Picomig 220 is extremely powerful with a current up to 220 A directly from a single-phase 230-V socket.



Picomig 220 set



ON Trolley Picomig



Portable



ON WAK wheel set

## D300 / 15 KG WIRE SPOOL – PICOMIG 185/225/305/355.

Modular casing system for workstations in all kinds of environments. Gas- or water-cooled. Flexible design: suitable for use both in production or as a mobile machine on the construction site or for assembly. Portable or mobile on a Trolley. Space-saving and lightweight design guarantees flexibility and mobility.

### Wire spool housing

Can house a 15 kg wire spool (diameter up to 300 mm/D300).



### Modular casing system

The modular power source with many different combination variations thanks to optional accessories. Unbelievably powerful: your Picomig 225 with a current up to 220 A directly from a single-phase 230-V socket.



### cool150 U40

The high-performance cooling unit for water-cooled welding torches.

### Different

#### Trolley models

Whether it's for use in the workshop or on the construction site – there are five Trolley models to choose from.



Modular tool box



Construction site Trolley  
35.2-2



Portable



Modular water cooling

# PICOMIG 180/220.

D200 / 5 KG WIRE SPOOL.



## WELL PROTECTED. +

For optimal protection in use.



## DIRECT PERSPECTIVE. +

You've always got the wire spool, filling level and inlet guide in view.



## 4-ROLL WIRE FEEDER. +

Powerful, high-precision 4-roll wire feeder to reliably feed all solid and flux-cored wires. Fitted for 0.8 mm + 1.0 mm steel wires ex works.



## FULLY INSULATED WIRE SPACE. +

Wire feeding with a 5 kg/D200 wire spool in a fully insulated wire space is possible with the Picomig 220.



**PARK SOCKET.** +

For secure "parking" of welding current cable for MMA welding.



**PLUS OR MINUS?** +

You can change the welding polarity without any tools.



**BETTER ORIENTATION.** +

Provides the revised JOB list on the inner flap.

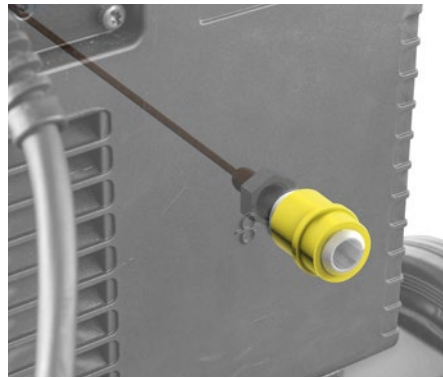


**EURO TORCH CONNECTOR.** +

Highly efficient welding torch connector, also suitable for DINSE<sup>®</sup> connector with adapter.

# PICOMIG 185/225/305/355.

D300 / 15 KG WIRE SPOOL.



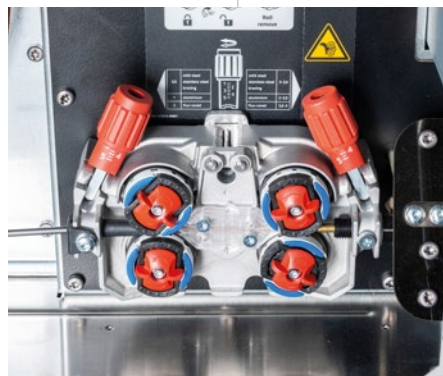
## DRUM FEED. +

Features a cavity in the rear panel for drum feed. The Rolliner wire guide can be installed in this cavity for drum feed.



## DIRECT PERSPECTIVE. +

You've always got the wire spool, filling level and inlet guide in view.



## TRIED-AND-TESTED DRIVE. +

Powerful, high-precision EWM eFeed 4-roll wire feeder to reliably feed all solid and flux-cored wires. Equipped with 0.8 mm/0.9 mm/1.0 mm UNI rolls for low to high-alloy steel ex works.



## BETTER ORIENTATION. +

Provides the revised JOB list on the inner flap.





**EASY TRANSPORT.** +

Carry your Picomig however you wish: either with the sturdy carrying handle or with the optionally available carrying strap.



**PLUS OR MINUS?** +

Tool-free reversal of the welding polarity (+/-).



**PARK SOCKET.** +

For secure "parking" of welding current cable for MMA welding.



**EURO TORCH CONNECTOR.** +

Highly efficient welding torch connector, also suitable for DINSE<sup>®</sup> connector with adapter.

# WELDING PROCESSES AND FUNCTIONS.

## PROCEDURES AND PROCESSES FOR OPTIMUM WELDING RESULTS.

Maximum operating convenience, a long service life and all pulse, standard and innovative welding processes are optimised and included in the machine at no extra charge. Here, perfect weld seams are pre-programmed for low to high-alloy steel and aluminium.

PICOMIG 180		PICOMIG 185		PICOMIG 220	
PULS TKG		PULS TKG		PULS TKG	
<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>
<b>Pulse</b>	<b>Pulse</b>	<b>Pulse</b>	<b>Pulse</b>	<b>Pulse</b>	<b>Pulse</b>
<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>
<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>
PICOMIG 180		PICOMIG 185		PICOMIG 220	
SYNERGIC TKG		SYNERGIC TKG		SYNERGIC TKG	
<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>
<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>	<b>TIG</b>
<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>	<b>MMA</b>



**rootArc® / rootArc® puls**

Perfect root welding/easy-to-execute filler and final passes



**forceArc® / forceArc® puls**

Powerful, high-performance arc with deep penetration



**PICOMIG 225**

PULS TKG

Standard (MIG/MAG)

Pulse

TIG

MMA

**PICOMIG 305**

PULS TKM

rootArc<sup>®</sup>/ rootArc<sup>®</sup> puls

forceArc<sup>®</sup>/ forceArc<sup>®</sup> puls

Standard (MIG/MAG)

Pulse

TIG

MMA

End-crater fill

**PICOMIG 355**

PULS TKM

rootArc<sup>®</sup>/ rootArc<sup>®</sup> puls

forceArc<sup>®</sup>/ forceArc<sup>®</sup> puls

Standard (MIG/MAG)

Pulse

TIG

MMA

End-crater fill

**PICOMIG 225**

SYNERGIC TKG

Standard (MIG/MAG)

TIG

MMA

**PICOMIG 305**

SYNERGIC TKM

rootArc<sup>®</sup>

forceArc<sup>®</sup>

Standard (MIG/MAG)

TIG

MMA

End-crater fill

**PICOMIG 355**

SYNERGIC TKM

rootArc<sup>®</sup>

forceArc<sup>®</sup>

Standard (MIG/MAG)

TIG

MMA

End-crater fill



**Pulse**

Low spatter pulsed arc



**Standard**

Perfect short and spray arcs



**End-crater fill**

Safe filling of end-craters at the end of the weld seam

TKG = Portable, compact, gas cooled  
TKM = Portable, compact, gas or water cooled

# WELDING PROCEDURES. OVERVIEW.

## Welding of non-alloy and low-alloy steel

Root welding \_\_\_\_\_ ▪ rootArc®

Welding filler passes and cover passes \_\_\_\_\_ ▪ forceArc® puls  
rootArc® puls

Welding fillet welds with deep penetration \_\_\_\_\_ ▪ forceArc® puls

Welding using 100% CO<sub>2</sub> \_\_\_\_\_ ▪ rootArc®

## Welding non-alloy, low-alloy and high-alloy steel

Welding full penetration fillet welds \_\_\_\_\_ ▪ forceArc® puls

## Welding of high-alloy steel

Welding filler passes and cover passes \_\_\_\_\_ ▪ forceArc® puls  
rootArc® puls

## Welding of aluminium and aluminium alloys

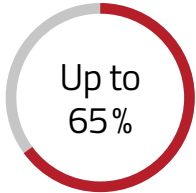
Welding aluminium  
and aluminium alloys \_\_\_\_\_ ▪ Pulsed arc

# YOUR REQUIREMENTS – OUR SOLUTIONS.

## Flexibility in production



EWM allin – one machine for welding all material thicknesses and using all processes



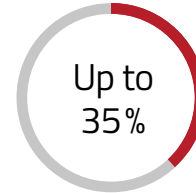
Energy savings



Reduced production time (welding, finishing work)

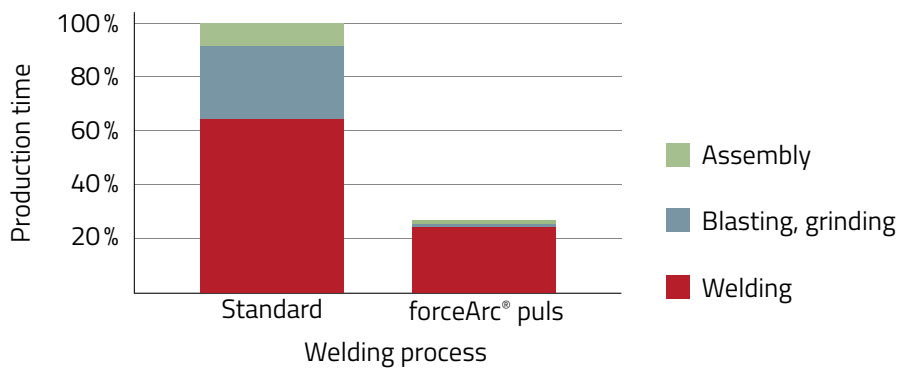


Reduced material costs

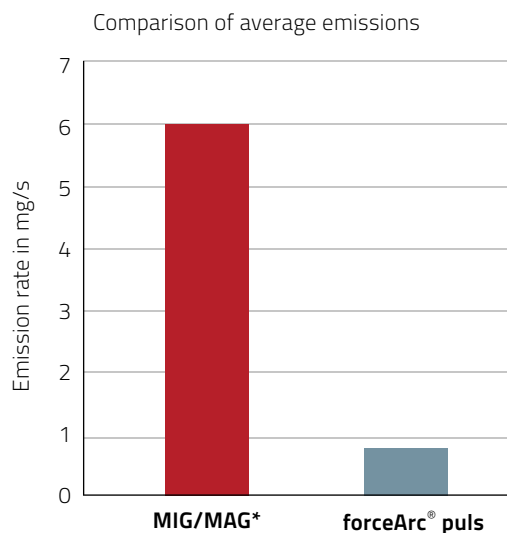


Reduced welding fume emissions

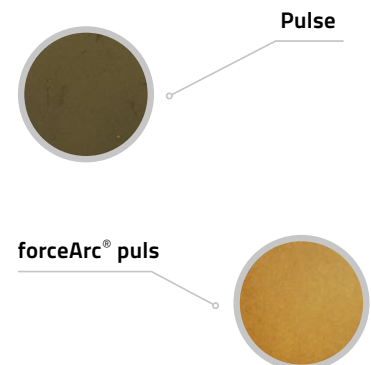
## Time saved by using forceArc® puls in production



## REDUCE WELDING FUME EMISSIONS.



### GLASS FILTER AFTER WELDING



\*Mean value as per German Social Accident Insurance Institution for the woodworking and metalworking industries information sheet 593 – Harmful substances during welding and related processes (BGI 593 – Schadstoffe beim Schweißen und bei verwandten Verfahren)

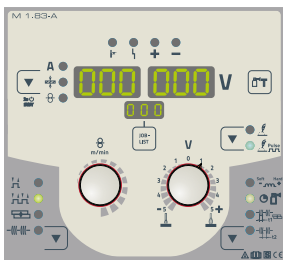
# CONTROLS.

## EVERYTHING WITHIN REACH AT THE PUSH OF A BUTTON.

All welding machines in the Picomig family feature the popular one-knob operation. Backlighting of individual symbols ensure a clear overview, even with the welding helmet pulled down. But don't worry, despite some improvements, the machines are still everything you have come to know and love: you can still define all welding tasks and configure custom settings via the extensive JOB list.

**PICOMIG 180/185/305/355 puls**

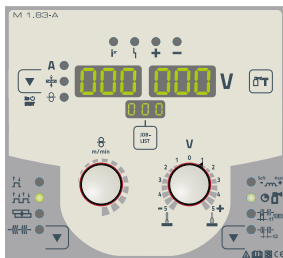
**PICOMIG 220/225 puls**



The control interface is intuitive to operate and offers you a simple starting point, even for more complex welding tasks, allowing you to concentrate on what's important. Make your selection for a corresponding welding task using the JOB list, taking into account the material, gas and wire diameter. The corresponding symbol in the operating panel design lets you know immediately whether or not the pulse function is activated.

**PICOMIG 180/185/305/355 Synergic**

**PICOMIG 220/225 Synergic**



The Picomig Synergic control is designed to give you a clear overview and easy-to-understand structure at first glance. All welding parameters and functions are easy to reach thanks to the modern design and you can access a wide range of pre-programmed welding tasks using the JOB list, allowing you to focus on what's important and making your work even easier going forward.



Quick access to all relevant information, operating instructions, accessories and options for retrofitting using the QR code directly via the control.

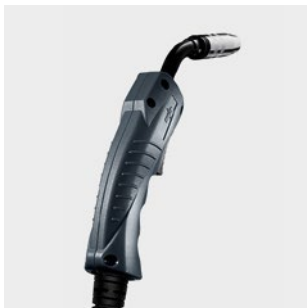
# WELDING TORCHES.

## TORCH VARIETY.

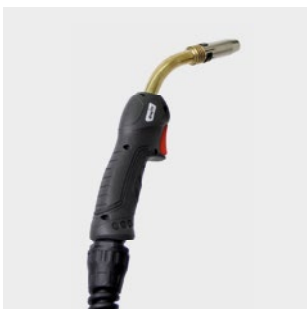
Professional welding torch. Guaranteed EWM quality and ergonomic perfection. For the best welding quality, increased service life for consumables and reduced production costs.



**PM welding torch –  
the professional**



**MT welding torch –  
the all-rounder**



**UM welding torch –  
the universal torch**



### THE PROFESSIONAL +

Professional MIG/MAG welding torch which is comfortable to hold and can be guided flexibly during welding. Thanks to the rubber inserts in the grip, you've got a secure hold and the flexible ball joint guarantees comfortable working during positional welding. The torch trigger protection prevents the arc being ignited unintentionally.

### INCREASED WELDING QUALITY +

- Errors are minimised thanks to interference-free wire guiding – 40% larger bend radius of the torch neck (from PM 301)
- Optimal heat dissipation in the torch body and therefore minimal heating of the consumables
- Outstanding shielding gas coverage of the arc range
- Secure contact through screw-retained contact tip and gas nozzle





# WE ARE WELDING



# ACCESSORIES.

## TROLLY VERSIONS FOR PICOMIG 180/220.

Mobility on two or four wheels. With the various Trolley versions available, you've got flexibility while on the move. Whether it's at the construction site, during assembly or in production.

### WHEEL SET ON WAK D.09/D.12/T.05

Item no. 092-002550-00000



- Wheel set for a power source
- Facilitates work at frequently changing welding sites

### PICOMIG ON TROLLY

Item no. 092-000312-00000



- For a power source
- No option for transporting a shielding gas cylinder
- With holder for 300 mm wire spool

### TROLLY 35-1

Item no. 090-008629-00000



- For a power source
- Suitable for transporting a shielding gas cylinder up to 33l (200 bar)
- Sturdy design with two stable wheels

### TROLLY 54 + ON TA TR.21

Item no. 090-008639-00000 + item no. 092-004390-00000



- + Other accessories required:  
ON TG.03/04 MS TR.20/21  
(item no. 092-004392-00000)  
Mounting set for fastening  
on the transport cart



- For a power source
- Suitable for transporting a shielding gas cylinder up to 33l (200 bar)
- Fitted with suspension for cables on the cylinder holder as standard
- **Required** can be retrofitted with machine frame (gas cooled) ON TA TR.21 = cross arm for housing a welding machine

# ACCESSORIES.

TROLLY VERSIONS FOR PICOMIG 185/225/305/355.

## TROLLY 35.2-2

Item no. 090-008296-00000



## TROLLY 53

Item no. 090-008638-00000



- For a power source
- Suitable for transporting a shielding gas cylinder up to 33l (200 bar)
- Optional crane suspension allows lifting by crane



- For a power source or for a power source with a cooling unit or tool box
- No option for transporting a shielding gas cylinder
- Saves space, ideal for use on a ring line
- **Can be** retrofitted with tool box as an option

## TROLLY 55-5

Item no. 090-008632-00000



- For a power source or for a power source with a cooling unit or tool box
- Suitable for transporting a shielding gas cylinder up to 50l (300 bar)
- Sturdy design with four stable wheels
- **Can be** retrofitted with tool box as an option

## ON Case

Item no. 092-002899-00000

**OPTIONAL**



## TROLLY 54

Item no. 090-008639-00000



- + Additional required accessories:  
ON TG.03/04 MS TR.20/21  
(item no. 092-004392-00000)  
Mounting set for fastening  
on the transport cart

## ON TA TR.21

Item no. 092-004390-00000

**OPTIONAL**



- For a power source or for a power source with a cooling unit or tool box
- Suitable for transporting a shielding gas cylinder up to 33l (200 bar)
- Fitted with suspension for cables on the cylinder holder as standard
- **Can be** retrofitted with machine frame (gas cooled) or tool box as an option

ON TA TR.21 =  
cross arm for housing a  
welding machine

## TROLLY 55-6 DF

Item no. 090-008826-00000



- For a power source or for a power source with a cooling unit or tool box
- Suitable for transporting one or two shielding gas cylinders up to 50l (300 bar)
- Crane-liftable using four fixing points
- Supplied with wheel brakes
- Solid, stable design
- **Can be** retrofitted with tool box as an option

## ON Case

Item no. 092-002899-00000

**OPTIONAL**



# ACCESSORIES.



## WIRE SPOOL HOLDER

Wire spool adapter for use with a wire basket spool (B 300).

- Picomig 185/225/305/355

Item no. 094-001803-00001



## + MODULAR TOOL BOX

Tool box for mounting to trolley: all tools and replacement parts always at hand.

- Picomig 185/225/305/355

Item no. 092-002899-00000



## + TORCH HOLDER

Welding torch holder for attaching to the welding machine.

- Picomig 185/225/305/355

Item no. 092-002699-00000



## DIRT FILTER

Reliably protects the machine from impurities in difficult working conditions.

- Picomig 180/220

Item no. 092-002553-00000



## + DIRT FILTER

Reliably protects the machine from impurities in difficult working conditions.

- Picomig 185/225/305/355

Item no. 092-002662-00000



## + CRANE SUSPENSION

For compact power sources, such as Picomig 225/305/355 TKG, the additional ON FIX CS K option for securing is required.

- Picomig 180/185/220/225/305/355

Item no. 092-002549-00000



## COOLING UNIT

High-performance cooling unit for water-cooled welding torches.

- Picomig 305/355
- cool50 U40

Item no. 090-008598-00502



## + COOLANT

blueCool – reliably cools your Picomig

- Picomig 305/355

Available in various sizes



## + REMOTE CONTROL +

For setting the wire feed speed and voltage correction.

- Picomig 305/355

Item no. 090-008087-00502



## REMOTE CONTROL + CARRYING STRAP +

For setting the wire feed speed and voltage correction.

- Picomig 305/355

Item no. 090-008108-00000






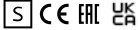
Carrying strap for easier transport. Ideally suited for use on the go and in case of frequently changing working sites.

- Picomig 185/225/305/355

Item no. 092-004310-00000



# TECHNICAL DATA OVERVIEW.

PICOMIG	 <b>180 puls TKG 180 Synergic TKG</b>	 <b>185 puls TKG 185 Synergic TKG</b>	 <b>220 puls TKG 220 Synergic TKG</b>
Setting range for MIG/MAG welding current	5 – 180 A		5 – 220 A
Duty cycle (DC) at 40 °C	180 A / 25% 120 A / 60% 100 A / 100%		220 A / 30% 170 A / 60% 150 A / 100%
Open circuit voltage	80 V		70 V
Mains voltage/tolerance	1 x 230 V (-40% to +15%)		
Mains frequency	50/60 Hz		
Wire feed speed	1 – 15 m/min 39.37 – 590.55 ipm		1 – 18 m/min 39.37 – 708.66 ipm
Factory-installed roll equipment	0.8 / 1.0 mm UNI (steel)	0.8 / 0.9 / 1.0 mm UNI (steel)	0.8 / 1.0 mm UNI (steel)
Spool diameter	D200	D300	D200
Torch connection	Euro torch connector		
Insulation class/ protection classification	H/IP23		
Safety identification			
EMC class	A		
Dimensions (LxWxH) in mm	559x276x340	636x298x482	559x276x340
Dimensions (LxWxH) in inches	22x10.9x13.4	25x11.7x19	22x10.9x13.4
Weight in kg	16	23,8	18
Weight in lbs	35.3	52.5	39.7
Standards	IEC 60974-1, -5 and -10 CL.A		


TKG = Portable, compact, gas cooled

TKM = Portable, compact, gas or water cooled



**225 puls TKG**  
**225 Synergic TKG**

**305 puls TKM**  
**305 Synergic TKM**

**355 puls TKM**  
**355 Synergic TKM**

5 – 220 A	5 – 300 A	5 – 350 A
220 A / 30%	300 A / 35%	350 A / 40%
170 A / 60%	240 A / 60%	300 A / 60%
150 A / 100%	190 A / 100%	270 A / 100%
70 V	80 V	79 V
1 x 230 V (-40% to +15%)	3 x 400 V (-25% to +20%)	
50/60 Hz		
1 – 18 m/min	0.5 – 25 m/min	
39.37 – 708.66 ipm	19.69 – 944.88 ipm	
0.8 / 0.9 / 1.0 mm UNI (steel)	1.0 / 1.2 mm UNI (steel)	
D300		
Euro torch connector		
H/IP23		
		
A		
636 x 298 x 482		
25 x 11.7 x 19		
24	29,5	34,4
52.9	65	75.9
IEC 60974-1, -5 and -10 CL.A		


**COOL50 U40**

Cooling capacity at 1 l/min	1,000 W
Max. pump pressure in bar	3.5
Pump	Centrifugal pump
Protection classification	IP23
Safety identification	
Harmonised standards used	IEC 60974-1, -2 and -10 CL.A
Dimensions (LxWxH) in mm	695 x 298 x 329
Dimensions (LxWxH) in inches	27.4 x 11.7 x 13
Weight (without coolant) in kg	21
Weight (without coolant) in lbs	46.3



WE ARE WELDING

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## #WEAREWELDING

Follow us



EWM is your partner for the best welding technology. With EWM, you'll weld more efficiently, more reliably and produce higher-quality results. EWM's innovative systems, high-performance welding procedures, digital technologies and services, and expert consultation all support you in achieving perfect results from your welding tasks.



www.ewm-group.com

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