### synmatic 250 / 300

#### **MIG/MAG Inverter with Synergy**

- ✓ Very simple operation: three rotary knobs are all you need. No menu, no display.
- ✓ Nevertheless, all necessary comfort functions such as inching and manual adjustment are available.
- ✓ Infinitely variable single knob operation: Set the wire diameter, then simply select the material thickness using the rotary knob and start welding.
- ✓ MIG/MAG synergy programmes for steel wires from 0.6 mm to 1.2 mm. This covers everything from thin sheet metals to thicker plates.
- ✓ Design with ventilation duct & stand-by circuit for ventilation: Long service life due to minimised internal dust build-up.

Also: Quieter operation & saves energy.

- ✓ Powerful 4-roll wire drive with 37mm rollers: Feeds even soft

wires optimally, particularly advantageous with longer torches.



- ✓ erfi HIGHeff85+ primary inverter with high efficiency (2019/1784EU) - less mains power requirement with the same welding performance.
- ✓ Gasless and currentless wire inching.
- ✓ Design AND production in Germany. Genuine 'Made in Germany' with a 3year guarantee.

syn

Mains

Fuses

Curre

Efficie Open

D.C. 2 D.C. 3 DC 6 D.C. 1 Wire of

Wire f Weigh

Dimer

Built a Protec

\*Wire



✓ 5 metre mains cable with plug: Indispensable for everyday use! Saves an extension cable in many cases!

Accessories	;
synmatic 250, 250A/35%, 3x400V	53-11-0
Torch SB250G/3m	20-0
Regulator	38-02-B
Earth lead 25 qmm/3m	38-0

ěfi







Synmatic stands for: ☑ Intuitive operation

☑ No menus

☑ Instant welding



ēfi

cessories	#
natic 300, 300A/25%, 3x400V	53-21-00
n SB250G/3m	20-04
Ilator	38-02-BC
ı lead 25 qmm/3m	38-09

Made in Germany



matic	250	300	Only three st
6	3x400V	3x400V	Choose wire
s (slow)	16A	16A	
nt range	25-250A	25-300A	e.g. SG-3 1,0mm
ency	85%	85%	1 10223 6.8mm
Circ. Voltage	75V	75V	25222.6/mm
25% (20°/40°)		300/270A	E BEALLENN
35% (20°/40°)	250/220A		
60% (20°/40°)	170/140A	180A/150A	
100% (20°/40°)	130/110A	140/120A	
diameters	0,6-1,2*	0,6-1,2*	<u> </u>
feeder	4-roll	4-roll	0 /
ht	ca. 45kg	ca. 45kg	
nsions LxWxH	760x470 x77	0 mm(H)	8 →
according to	EN60974-1,-	5, -10 Cl. A.	
ction	IP21	IP21	•
drive rolls 0,8/	1,0mm initially end	closed	Set feed co





One step ahead.

**ASE** 

Analog Control

SYNERGIE

Programs

for Steel

**4-Roll** wire drive

88

85+

High Efficiency

5m

Mains cable with 16A CEE-Plug

300A

3x400V

DP

Inverter

### ecomatic 265PULS

✓ MIG/MAG Pulse Welding: virtually spatter free welding

due to electronic controlled metal transfer (ODPP: one droplet per pulse). Perfect welding results with almost no rework needed.



✓ In direct comparison: the low spatter arc (above) of standard welding program in direct contrast to the virtually spatter free arc in pulse mode (below). Same workpiece, welding was done with 1,0mm INOX wire. Therefore MIG/MAG-Puls is the ideal technology for sensitive surfaces and seams in visible areas.



 Multipulse: a second pulse generator is added to control heat input by separating heating and

cooling phases. Results in seams that look like welded by TIG - especially for aluminium and INOX.

- Integrated Database: all synergic welding and pulsing parameters for mild steel, aluminium, INOX and MIGbrazing are stored in the machines internal memory. So set-up for welding is as easy as dialling in the thickness of the material!
- ✓ Stepless DPi-Inverter: no voltage steps and confusing coarse and fine settings. Just use one single knob - or even the remote on your torch - to set the desired material thickness!
- ✓ Remote Control socket for welding energy control. Torches with built-in remote control (optional) are ideal to change current - also during welding.
- ✓ erfi Hot-Arc: avoids cold joints when starting the arc. Outstanding for aluminium.
- ✓ erfi DDc Arc dynamic control adjusts "hard" and "soft" arc characteristics. Arc dynamics are automatically adjusted for perfect arc start.
- ✓ 4-Roll wire feeder fully geared with powerful motor. Wire speed digitally stabilised.
- ✓ 2T / 4T (latching), 4T with slope control. Inching mode to insert wire without gas & voltage.
- ✓ Clear and obvious user Interface: four buttons for

directly addressing important functions. One rotary control for welding current/material thickness, the other for arc length adjustment. Welding professionals are given the opportunity for fine adjustments in the menus.





### The TOP model in the ecomatic series:

Practically spatter-free pulse welding
 Multipulse function for seams with a TIG look

DPi

Inverter

☑ With remote control on the torch (optional)



D.C. 40% (25/40°)

D.C. 60% (25/40°)

D.C. 100% (25/40°)

Dimensions LxWxH

Wire feeder

Protection

Weiaht

Wire diameters

170/140A

130/110A

4-Rollen

0,6-1,0

IP21

750x470x760

45kg



4-Roll Drive evo 250 und 300 are fitted with a superior 4-roll wire drive using large 37mm rolls and a powerful 50W DC motor. ecomatic 250 / 300

- ✓ Digital ammeter and voltmeter: The data of the last weld can be displayed. Important for WPS according to EN1090.
- ✓ Stepless single knob control: No complicated settings. Simply select the material thickness and weld.
- ✓ The MIG/MAG synergy programmes for steel, stainless steel and aluminium have been developed by welding experts.
- ✓ Additional programmes for MIG brazing included (e.g. for car bodies).
- ✓ Powerful 4-roll wire drive with 37 mm rollers: Feeds soft wires optimally, particularly advantageous with longer torches.



Accessories

Available access

ecomatic Mains

Fuses (slow)

Efficiency

Current range

Open Circ. Voltage

D.C. 25% (20°/40°)

D.C. 35% (20°/40°)

D.C.60% (20°/40°)

D.C. 100% (20°/40°

Dimensions LxWxH

Built according to

Wire diameters

Wire feeder

Protection

Weight

Regulator Earth lead 25 qmm/3m

ecomatic 300, 300A/25%, Torch SB250G/3m

- ✓ Fine, digitally controlled MIG/MAG arc with finely adjustable inductor effect 'hard' and 'soft'
- ✓ Hot start function, e.g. for aluminium.
- ✓ 2-stroke / 4-stroke selectable. Extended 4stroke function with hot start and slope
- ✓ Gasless inching
- ✓ Gas test function
- ✓ 5 metre mains cable with plug: Indispensable for daily use! Saves an extension cable in many cases!



✓ erfi HIGHeff85+ primary inverter with very high efficiency (fulfils 2019/1784EU), thus less mains power requirement with the same welding performance.



- ✓ Design AND production in Germany. Genuine 'Made in Germany' with a 3-year guarantee.
- ✓ Design with ventilation duct & stand-by circuit for ventilation: Long service life thanks to minimised internal dust deposits. As well: Quieter operation & saves energy.

		ecomatic stands for:		
B		☑ Digital precision		LC-Display Large Graphic
				LČ-Display
	NO P	☑ Steel, aluminium, stain steel, MIG-brazing	less	SYNERGY
	ēlį -	<ul> <li>Versatile functions</li> </ul>		Control: Steel, Alu, Braz.
		Accessories	4	4-Roll
		ecomatic 250, 250A/25%, 3x400V	# 53-10-00	4-Roll wire drive
у 1		Torch SB250G/3m	20-04	
		0	38-02-BC	
CC	*	Earth lead 25 qmm/3m	38-09	DdC
- S heny				Adjustable
				Arc
				85+
1				Efficiency
				Linciency
				<b>5m</b>
				Mains cable with
				16A CEE-Plug
G	<b>250A</b>			
				DPi
	3x400V			Inverter
			/	
			VCC'	
			<b>E</b> []'	-
	щ	ecomotic		
%, 3x400V	<u>#</u> 53-20-00	300		
/0, 38400 V	20-04	HIGHeff83+		
3	38-02-BC			
	38-09	Hade to Germany		
				16
	300A			
	3x400V	0_		
- T				
sories: 🔪				
• <b>+</b> _ /				
W.		Select mat	erial pro	gramme: select the
		inserted wire		of wire materials (steel,
250-4	300-4	SG-3 <b>S</b> G-3 0.6	Cut	minium, stainless steel, Si3) and diameters (0.8
3x400V	3x400V		C. C. L.	513) and diameters (0.8 1, 1.0 mm, etc.).
16A	16A	U.O S6-3 1.2	2mm trom	
25-250A	25-300A	AR82+C18 Alsi 1.	Imm	
85% 75V	85% 75V	GAS Cusi 0.8		
	300/270A			



\*Wire drive rolls 0,8/1,0mm initially enclosed

IP21

250/220A

170/140A

130/110A

0.6-1.0\*

4-Rollen

ca. 45kg

760x470 x770 mm(H)

IP21

# neomatic 350 / 350W / 400W

### Madein Germany

#### **Advantages neomatic:**

- ✓ erfi HIGHeff85+ primary inverter for the MIG/MAG process with very high efficiency (fulfils 1784/2019/EU).
- ✓ Selectable display of welding current, welding voltage or feed speed. Values can also be called up after the welding process - e.g. for checking with WPS in accordance with EN1090.
- ✓ 2-stroke and 4-stroke modes with extended current slope control
- ✓ Integrated database: Parameter fields and welding synergic curves are stored for all important materials and wire diameters: Mild steel, stainless steel (CrNi) and aluminium (ALMg).
- ✓ Preselect material thickness and weld: The material thickness can be set directly.
- ✓ Adjustable erfi-Hotarc avoids binding errors at the start of welding. Indispensable for aluminium!
- ✓ 4-roll wire drive with a powerful DC motor and fully geared version. Speed electronically stabilised, automatic creep-in.



✓ Clearly arranged **control panel**: The four direct buttons allow quick access to all functions. Set the material thickness on the right rotary knob, adjust

the arc length on the left if necessary done! Welding professionals can also make a wide range of fine adjustments in the menu.



neomatic	350-4	350W-4	400W-4
Mains	3x400V	3x400V	3x400V
Fuses (slow)	16A	16A	25A
Current range	25-350A	25-350A	25-400A
Efficiency	86%	86%	86%
Open Circ. Voltage	75V	75V	75V
D.C. 35% (25°/40°)	350A/320A	350A/320A	400/370A
D.C. 60% (25°/40°)	280A/250A	280A/250A	330A/300A
D.C. 100% (25°/40°)	230A/200A	230A/200A	280A/250A
Wire feeder	4-roll, geared	d 4-roll, geared	4-roll, geared
Wire diameters	0,8mm-1,2m	m 0,8mm-1,2mm	0,8mm-1,2mm
2T/4T/Inching	yes	yes	yes
Synergy programs	yes	yes	yes
Water Cooling		on board	on board
Water tank		8 liters	8 liters
Built according to:	EN60974-1,-5, -10 Cl. A.		
Protection	IP21	IP21	IP21
Dimensions LxWxH	ç	30 x 400 x 86	0
Weight	ca. 63kg	ca. 70kg	ca. 73kg

\*Wire drive rolls 1,0/1,2mm initially enclosed

SYNERGY Control 4-Roll wire drive

5m Mains cable with 16A CEE-Plug

8 8





High Efficiency neomatic 350W-4

#### Accessories

neomatic 350W-4, water cooled	53-61-00
Torch SB400W/4m	20-14
Regulator	38-02-BC
Earth lead 50 qmm/3m	38-11

#### neomatic 400W-4

neomatic 400W-VK Accessories

Torch SB400W/4m

Earth lead 50 gmm/3m

Regulator

Accessories	#
neomatic 400W-4, wassergek.	53-62-00
Torch SB400W/4m	20-14
Regulator	38-02-BC
Earth lead 50 qmm/3m	38-11

neomatic 350-4 **Accessories** neomatic 350-4, gas cooled. 53-60-00 Torch SB360G/4m 20-08 38-02-BC Regulator

Earth lead 35 gmm/3m

#

38-10

<b>E</b> IF
J



# neomatic 330W-PULS / 400W-PULS

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✓ MIG/MAG pulse process: The controlled droplet trans-

fer allows practically spatter-free material transfer from the welding wire to the workpiece. Therefore: Almost no rework and a perfect seam appearance.



- ✓ MULTIPULSE: A second, superimposed pulse frequency can be applied for seams in visible areas in "TIGstyle".
- ✓ In comparison: The top image shows the low-spatter arc in standard MIG/MAG operation (here: stainless steel, 1.0 mm wire), while the bottom image shows the practically spatterfree arc with pulse technology for the same welding task.Ideal for sensitive surfaces and visible seams.



- ✓ Integrated database: Parameter fields and synergic curves are stored for all important materials and wire diameters: Mild steel, stainless steel (CrNi) and aluminium (ALMg) standard and pulsed processes respectively.
- Preselect material thickness and weld: The material thickness can be called up directly by remote control via the torch (optional).
- Remote control connection: Set material thickness directly on the torch using up/down pushbuttons (optional)!
- ✓ 4-roll wire drive with powerful DC motor. Wire speed is electronically stabilised, automatic creep-in.
- ✓ 2-stroke and 4-stroke modes with extended current slope control, adjustable erfi hot start
- ✓ Processes: MIG/MAG, MIG pulse, MIG-Multipulse
- ✓ erfi HIGHeff85+ primary inverter with very high efficiency (fulfils 2019/1784EU), therefore less mains power requirement with the same welding output.

Туре	330WPuls	400WPuls	400WP-VK
Mains	3x400V	3x400V	3x400V
Fuses (slow)	16A	25A	25A
Current range	25-330A	25-400A	25-400A
Efficiency	86%	86%	86%
Open Circ. Voltage	75V	75V	75V
D.C. 35% (25/40°)	)	400/370A	400/370A
D.C. 40% (25/40°)	330/300A		
D.C. 60% (25/40°)	280/250A	330/300A	330/300A
D.C. 100% (25/40°	) 230A/200A	280/260A	280/260A
Wire feeder	4-ro	ll, geared	
Wre diameters	0,8-1,2	0,8-1,2	0,8-1,2
Water cooling	on board	on board	on board
Wasser tank	8 Liters	8 Liters	8 Liters
Protection	IP21	IP21	IP21
Dimensions LxWxH	ł	930x40	0x860
Weight	70kg	73kg	





#### neomatic 330W-Puls Accessories neomatic 330W Puls, water cooled 53-70-00 Torch SB400W/4m/UpD 20-14-U Regulator 38-02-BC Earth lead 50 gmm/3m 38-11



4-Roll Wire Drive with aluminium cast chassis using a powerful 70W-DC motor in fully geared version.



**Up/Down Current Control** on the torch Including a 4m torch!

neomatic 400W-Puls-VK

Accessories	#
neomatic 400W-Puls-VK + VK450W water c.	53-73-00
Interconnection cable 50qmm, 5m length	31-15
Torch SB400W/4m/UpD	20-14-U
Regulator	38-02-BC
Earth lead 50 qmm/3m	38-11







#### MIG/MAG Inverter Synergy / Multi-Torch

# trimatic 250



Techn. Spec.	Trimatic 250
Mains	3x400V
Fuses (slow)	16A
Current range	25-250A
Efficiency	85%
Open Circ. Voltage	75V
D.C. 35% (25°/40°)	250A/220A
D.C. 60% (25°/40°)	170A/140A
D.C. 100% (25°/40°)	) 130A/110A
Wire feeders	2 x 4-roll
Wire diameters	0,6-1,0*
2T/4T/Inching	yes/yes/yes
Synergy programs	yes
Built according to:	EN60974-1,-5 -10Cl. A.
Protection	IP21
Dimensions LxWxH	758 x 466 x 770**
Weight	55kg

Accessories	#
trimatic 250	53-90-00
2x Torch SB150G/3m	2x 20-01
2x Regulator	2x 38-02-BC
Earth lead 25 qmm/3m	38-09

#### Available accessories:





**TRIMATIC** is the perfect choice for car body workshops that demand a high flexibility solution for all welding purposes. Due to its synergic control and automatic torch switching capability the **TRIMATIC 250** sets are intuitive to use and allow precise current control.

- Two integrated 4-roll wire feed units for two independent torches
- ✓ Plus an extra terminal to connect the spool gun for soft aluminium wires
- ✓ Synergic programs for steel 0,6-1,0mm, aluminium 0,8-1,0mm, MIG-brazing 0,8-1,0mm and INOX 0,8-1,0mm as well. Plus manual control program.
- ✓ Big LC-Display: welding current, welding voltage and wire feed. Saves values after welding
- ✓ 2-stroke or 4-stroke operation with active current monitoring. Gasless wire inching, gas test function.
- ✓ Precise stepless current adjustment
- ✓ Wire soft start ("creep in"): controlled arc start with slower wire speed, adjustable
- ✓ Space for 2 big wire spools in standard D300 size. (smaller D200 using adaptor)
- ✓ Space for 2 gas cylinders each 20 litres: for both Argon and mixed gas supply
- ✓ Complete set of cable- and torch holders for 2 normal torches and spoolgun included.
- ✓ Easily moveable on big castors
- Massive and sturdy handle, comfortable height of operation panel
- ✓ 2 gas hoses including gas distributor
- ✓ 5m mains cable+CEE16 plug



**Spoolgun MBH25D** Ideal for welding thin aluminium panels. Due to the short wire feed path, to weld even 0.8 mm aluminium wire! Ideal for car body panels!

\*Wire drive rolls 0,8/1,0mm initially enclosed ,\*\* dimensions w/o torch holder

### **Micro X17 MAGmobil**



170A 230V



Portable & flexible inverter system for MIG/MAG and MMA processes.

- ✓ erfi X-Inverter technology: Passive PFC, therefore less mains power requirement with the same welding performance.
- ✓ Design with ventilation duct & stand-by circuit for ventilation: Long service life thanks to minimised internal dust deposits. Also: Quieter operation & saves energy.
- ✓ Space for large D300 spools: Use the system in the workshop with standard '15kg' spools. Alternatively, D200 ('5kg') also possible for mobile use.
- Infinitely variable single knob operation: Forget about complicated settings. Simply select the material thickness and start welding. This not only works with steel, but also with stainless steel, aluminium AIMg4.5 and ALSi5, MIG brazing and even with gasless cored wire (FCW) thanks to the synergy programs.
- Powerful 4-roll wire drive with 37 mm rollers: Also feeds soft wires optimally, particularly advantageous with longer torches.
- MMA welding: Excellent welding properties even for stick electrodes thanks to adjustable hot start and arc dynamics.
- Fine, digitally controlled MIG/MAG arc with finely adjustable throttle effect 'hard' and 'soft', a hot start e.g. for aluminium.
- ✓ 2-stroke / 4-stroke selectable, gas- and currentless threadingDigital ammeter, remote control on the torch possible\*
- ✓ 5 metre mains cable with plug: Indispensable for daily use! Saves an extension cable in many cases! \*Only in conjunction with optional SB240-Torch



**Powerful wire drive:** superior 4-roller drive with 50 W motor, 37 mm feed rollers with large contact surface.



 Large D300 coils: Space for normal D300 coils. D200 using adapter.

Accessories	#
Micro X17 170A/35%, 230V	75-03-01
Torch SB150G/3m	20-01
Regulator	38-02-BC
Earth lead 16 qmm/3m	38-072



Sustainable construction: Made in Germany

The MicroX17MAGmobil, including the complete power unit, is manufactured exclusively in Germany. The electronic design with lightning-fast digital DSP control comes from the hands of erfi head Dipl.-Ing. Peter Finzel. This means: Expertise and spare parts are guaranteed. A sustainable product is only created through service. What's more, the device is made almost entirely from highly recyclable metal, with as little plastic as possible.



Inductor effect: 2-stroke or 4here '+0.0' neutral stroke selectable.

#### Made in Germany

Available accessories:



MIG/MAG up to 170A

E-Hand up to 150A

Micro X17 MAGmobil				
Mains		230V		
Fuses (slow)		16A		
Current range MIG/MAG		25-170A		
Current range MMA		20-150A		
Open Circ. Voltage		90V		
Current adjustment		stepless		
Drosseleinstellung		stepless		
D.C. 35% (25/40°)		170/150A		
D.C. 100% (25/40°)		120/100A		
Wire feeder		4-roll		
Wire diameter		0,6-1,0		
Amp-meter		•		
Hot Arc and Slope		•		
2T/4T		•		
Protection		IP23S		
Dimensions LxWxH		565 x 295 x 455		
Weight		20,5kg		
	-			

# MicroX18HF

**DC-TIG-Inverter up to 180A** with HF-Arc Start



Accessories	#
Micro X18 180A/35%, 230V	72-02-01
TIG-Torch RL17/4m/U	75-02-02
Regulator	38-02-BC
Earth lead 16 qmm/3m	38-072

### MicroX16

MMA Inverter up to 150A (3,25mm)



Accessories	#
Micro X16 150A/35%, 230V	72-01-01
Electrode cable	38-074
Earth lead 16 qmm/3m	38-072

Welding system for TIG DC and MMA based on the latest fully digital primary inverter technology.

- ✓ Very large comfort LCD: All parameters are in view thanks to the big graphic display. Easy to operate with two shortcut keys and rotary encoder. Precise ampere setting.
- HF high-frequency ignition: Starts the arc without touching the workpiece - no tungsten inclusions.
- ✓ Comprehensive pulse function: The fast pulse function with frequency control up to 1250Hz allows effective concentration

of the arc and reduces heat input. The time pulse allows the precise setting of a slow pulse sequence for synchronised droplet transfer.



180A

- ✓ Job memory: 7 frequently used welding types and settings can be saved and recalled at the touch of a button.
- ✓ Remote control on the torch: The welding current can be called up directly on the torch using two buttons (up/down). Included as standard!
- ✓ Extended 4-cycle with slope control: Previously set second



Premium MMA welding inverter for stick electrodes up to 3.25mm (150A/26V) in a sturdy all-metal cabinet.

- ✓ Digital display for welding current and messages. Completely digital real-time control.
- ✓ Hotstart: briefly increased current for optimum ignition.
- ✓ Automatic arc dynamics ideal for difficult electrodes. Current increases at the short-circuit moment.
- ✓ Antisticking prevents the electrodes from sticking to workpiece.
- ✓ All the advantages of the X series: XRi, passive PFC, stand-by

current can be called up at the touch of a button on the torch.

- ✓ Spot welding function: Creates even tacking spots with precisely preset welding time.
- ✓ Current curves can be set on the LC display with graphical support. This allows perfect

sequences to be created and saved for every application.

(150A/26V)

- Anstieg ✓ Electrodes up to 3.25mm
- ✓ 5 metre mains cable 3-year guarantee!



#### **Advantages of Micro X:**

✓ Robust sheet steel chassis with separate ventilation duct. The electronics are housed in a dust-protected room to minimise soiling.



- Stand-by circuit: Dust protection, energy saving; quiet working environment thanks to demand-controlled fan. XRi
- ✓ Passive PFC to minimise current peaks, improved power factor, reduced power consumption.



✓ XRi: Uninterrupted operation on long mains cables.

✓ 5 metre mains cable - 3 year guarantee!





#### **Sustainable construction:** Made in Germany

The MicroX16 and X18HF, including the complete power unit, are manufactured exclusively in Germany. The electronic design with lightning-fast digital DSP control comes

from the hands of erfi head Dipl.-Ing. Peter Finzel. This means: Expertise and spare parts are guaranteed. A sustainable product is only created through service. What's more, the device is made almost entirely from highly recyclable metal, with as little plastic as possible.

Technical Spec.	MicroX16	MicroX18HF	
Mains	230V	230V	
Fuses (slow)	16A	16A	
Current range	10-150A	8-180A	
Open Circuit Voltage	92V	92V	
D.C. 35%(25°C)	150A/26,0V	180A/17,2V	
D.C. 30%(40°C)	150A/26,0V	180A/17,2V	
D.C. 100% (25°C)	100A/24,0V	110A/14,4V	
D.C. 100% (40°C)	90A/23,6V	100A/14,0V	
Mains cable	5 Meters	5 Meters	
Digital display	LED	LCD	
Remote	-	Up/Down	
Fan cooling + Stand-By	••		
Hotstart/Arc force/Antistick	●/●/●	●/●/●	
HF-start/pulse/spot	-/-/-	●/●/●	
Passive PFC	•	•	
Protection	IP21	IP23	
Weight	9,5kg*	13,5kg*	
Dimensions LxWxH	365x149x283mm		

\*w/o mains cablel, including mains 10,5kg bzw. 14,5kg

### Made in Germany