

# MAGNETIC STIRRERS

2016





## WELL-PROVEN CONCEPTS - INNOVATIVE PRODUCTS





- 100% wear- and maintenance-free
- 30% more stirring power than comparable systems
- Super-flat, space-saving stirring drives ideal for robotics
- Made for permanent operations
- Heat resistant and submersible
- Synchronous speed at all stirring positions
- Zero-stand-by power supply units
- Individual configurations fast and economic realizable
- Experience with inductive and magnetic drive concepts since 1974



INDUCTIVE DRIVE -MAINTENANCE- AND WEAR-FREE

Our magnetic drives are working on the inductive principle. This means that instead of conventionally problematic motors with pull magnets, 2mag is working with stationary coils, which are defined flown through by alternating currents. The thereby generated electromagnetic rotating field is 100% wear- and maintenance-free.

The drive does not have any mechanically moved parts, as e.g. belts, bearings or motors. Therefore, the drives are reliable and absolutely wear-free even at high operation temperatures (up to  $+300\,^{\circ}$ C).





# magnetic emotion

The main importance of our passion lies upon our customers and our products! 2mag is providing you more than 30 years of competence in the conception, development, production and sales of magnetic and inductive drive concepts, as e.g. magnetic stirrers. This experience paired with a great passion and emotion for our customers – and our products – enables the fast and economic creation of solutions precisely for your needs.

"Customizing", the manufacturing of special made products, is our business, our competence and our passion! Individual requests will result in individual – and even more important – also economically realizable solutions.

Ask us – test us – we are there for you!

## emotion for motion

- Customer-oriented
- Short communication ways competent team
- Direct access to experienced contact persons
- Fast reactions
- Innovative products
- Well-proven concepts
- Experience with inductive and magnetic drive concepts since 1974



# magnetic emotion



What is the effect of a magnetic North pole without a South pole?

What is the effect of an electric + Pole without a - Pole?

What is the effect of Techniques without Competence?

What is the effect of a Product without Passion?

What is the effect of a Supplier without a Customer?

According to experience, always 2 are needed to achieve a successful dialogue and interaction. The main focus of our action and business philosophy are our customers and their needs and requirements.

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# SINGLE POINT STIRRERS WITH INTERNAL CONTROL

Designed for chemical, biotechnical and medical applications of all kinds, developed for the daily lab use and continuous operation.



## MIX 1

Ultra flat, wear-free magnetic stirrer with 1 stirring position, up to 10,000 ml stirring volume, also suitable for viscous media.

- Naintenance- and wear-free
- Up to 10 litres or for viscous media
- → Outstanding long-life quality
- ₱ Developed and made in Germany







Туре	MIX 1	
Stirring points	1	
Stirring volume/stirring point	1 - 10,000 ml	
Speed range	100 - 2,000 rpm	
Power setting	5/10/15/20 W (4-step)	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	188 x 238 x 38 mm	
Protection category	IP64	
Weight (gross)	approx. 4 kg	
Order no.	30001	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

100% maintenance-free and wear-free inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, speed range from 100 up to 2,000 rpm, jerk-free stirring even at low speeds.

4-step power setting for high power with regard to large and viscous stirring volumes and reduced power for the warming-free continuous operation.

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar. QuickSet for quick setting of start- and maximum speed, automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning.

Accessories
ASTEROID 40 - Stirring bar
Stirring bar remover PTFE

# SINGLE POINT STIRRERS WITH INTERNAL CONTROL

Designed for chemical, biotechnical and medical applications of all kinds, developed for the daily lab use and continuous operation.



## MIX 1 eco

Ultra flat, wear-free magnetic stirrer with 1 stirring position, up to 3,000 ml stirring volume, also suitable for the operation with aggressive media.

- Price-optimized
- Maintenance- and wear-free
- **№** Up to 3,000 ml







Туре	MIX 1 eco	
Stirring points	1	
Stirring volume/stirring point	1 - 3,000 ml	
Speed range	120 - 1,400 rpm	
Stirring power (max.)	10 W	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 0.7 A	
Dimensions (WxDxH)	120 x 120 x 35 mm	
Protection category	IP64	
Weight (gross)	approx. 1.7 kg	
Order no.	30101	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Price-optimized magnetic stirrer, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for mixing of solutions, speed range from 120 up to 1,400 rpm, jerk-free stirring even at low speeds.

SoftStart for reliable catching/centring and safe accelerating of the stirring bar, fully encapsulated stainless steel housing, extremely robust construction.

## SINGLE POINT STIRRER FOR MOBILE OPERATION

Designed for the mobile and mains-independent operation, ideal for chemical, biotechnical and medical applications, en route and far away from laboratory and infrastructure.



#### accuMIX

Ultra flat, wear-free magnetic stirrer with 1 stirring position, up to 3,000 ml stirring volume, robust and firm construction for rechargeable battery- and mains operation.

- → Battery operation
- Up to 3,000 ml
- Developed and made in Germany







accuMIX
1
1 - 3,000 ml
100 - 1,600 rpm
2/10 W (2-step)
Stainless steel
-10 °C up to +50 °C (at 80% humidity)
100-240 V / 50-60 Hz / 1.7 A
215 x 130 x 40 mm
IP30
approx. 2.5 kg
30401

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Mobile magnetic stirrer, 100% maintenance- and wear-free by inductive 2mag-Magnetic-Drive concept for mixing of solutions, speed range from 100 up to 1,600 rpm, jerk-free stirring also at low speeds, two-step power setting for high power with regard to large and viscous stirring amounts and reduced power for battery-saving long-term operation.

SoftStart for reliable catching/centering and safe accelerating of stirring bar, stainless steel housing, very robust construction.

Constructed for the independent battery- and stationary mains operation, equipped with 8 commercially available high performance rechargeable batteries (Mignon/AA), universal charging/power supply device, intelligent battery charging station with single controlled charging slots as well as battery service function and 12 V adapter cable for the operation at car sockets respectively cigarette lighter.

#### Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE

## SINGLE POINT STIRRER WITH ILLUMINATED STIRRING PLATE

Designed for chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation. Particularly glare-free illumination of samples for the optical test range, e.g. color changes, titrations ...



#### **IuMIX**

Ultra-flat, wear-free magnetic stirrer with 1 large stirring position and a luminescent plate, up to 3,000 mL stirring volume, also suitable for viscous media. Stirring function and illumination function separately switchable.

- Nomogenous brightness, variable
- Maintenance- and wear-free
- → Outstanding long-life quality
- Developed and made in Germany





Туре	luMIX	
Stirring points	1	
Stirring volume/stirring point	1 - 3,000 ml	
Speed range	100 - 2,000 rpm	
Power setting	4-step (25/50/75/100%)	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	188 x 238 x 44 mm	
Protection category	IP64	
Weight (gross)	approx. 3.6 kg	
Order no.	31001	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Stirring - 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, extremely wide speed range from 100 to 2,000 rpm, jerk-free stirring even at low speeds, 4-step power setting for high power with regard to large and viscous stirring volumes and reduced power for the warming-free continuous operation.

**Light** - Bright and warming-free luminescent PMMA plate, white LEDs with homogenous brightness and variable light intensity (4-step), non-reflecting illumination..

Clear digital display for light-, speed- and power settings, SoftStart procedure for reliable catching/centering and safe accelerating of the stirring bar, QuickSet for quick setting of start and maximum speed, automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning.

Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE



2mag - MIXphilosophy Combination possibilities of stirring systems				
	Stirring drive	+	control unit	
	MIXdrive 60	MIXcontrol 40 MIXcontrol 20 (RS232) (RS232)		MIXcontrol eco (DINrail)
	MIXdrive 15			
Basic	MIXdrive 6		(Dilviali)	
up to +50 °C (in air) up to +50 °C (submersed)	MIXdrive 1	MIXcontrol 20 (RS232) MIXcontrol eco (DINra		MIXcontrol eco (DINrail)
	MIXdrive 1 eco			
	MIXdrive 1 XS	MIXcontrol eco (DINrail)		
	cuvetteMIXdrive			
	MIXdrive 60 HT	MIXcontrol 40 (RS232)	MIXcontrol 20 (RS232)	MIXcontrol eco (DINrail)
НТ	MIXdrive 15 HT			
(High Temperature)	MIXdrive 6 HT	( /	( /	, , ,
up to +200 °C (in air)	MIXdrive 1 HT	MIXcontrol	20 (RS232)	MIXcontrol eco (DINrail)
up to +95 °C (submersed)	MIXdrive 1 eco HT	MIXcontrol eco (DINrail)		
	MIXdrive 1 XS HT			iivi aii j



The individual combination possibilities of three control unit types MIXcontrol with the stirring drives MIXdrive always offer you the maximum quality for the optimum value for money exactly complementary to your needs.

The control units MIXcontrol define thereby the performance of the stirrers and the operation comfort.

The stirring drives MIXdrive are the indestructible equipment for your tasks in all days' laboratory work. No matter whether you decide for a serial device or a custom-made device, our aim is always: quality, stability and a reliable and affordable solution for exactly your needs. All MIXdrive are, with regard to the inner life, technically identical and can be combines with any of the 3 different control units MIXcontrol.

We offer you different stirring combinations for your individual applications. In case there will be no adequate stirrer available for you, we will be able to shortly work out a solution according to your needs.

Ask us – test us – we are there for you!

STIRRING DRIVES - TEMPERATURE RESISTANT AND SUBMERSIBLE

Designed for chemical, biotechnical and medical applications of all kinds, developed for maximum requirements, maximum mechanical, thermal and chemical stability as well as uncompromising continuous operation.



#### MIXdrive 1

Ultra flat, wear-free magnetic stirrer with 1 stirring position, suitable for vessels up to 10,000 ml.



₹ Extremely robust construction

₹ Integrable in systems

→ Developed and made in Germany







Туре	MIXdrive 1	
Stirring points	1	
Stirring volume/stirring point	1 - 10,000 ml	
Stirring power (max.)	20 W	
Material housing	Stainless steel	
Perm. operation conditions (Basic)	-10 °C up to +50 °C in air, up to +50 °C in water	
Perm. operation conditions (HT)	up to +200 °C in air, up to +95 °C in water	
Operating voltage (max.)	48 VDC	
Dimensions (WxDxH)	180 x 180 x 38 mm	
Protection category	IP68	
Weight (gross)	approx. 3.3 kg	
Order no. Basic-version	40001	
Order no. HT-version	40201	

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

1 stirring position, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed stainless steel housing, IP68, water-, dust-, and germproof, extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- or oil baths, suitable for the use in CO<sub>2</sub>-incubators and ovens.

Two different temperature areas available: **Basic-version** up to +50 °C, **HT-version** up to +95 °C submerged in water baths and up to +200 °C in ovens, individual dimensions on request.

Please order control unit separately!

#### Compatible control units

MIXcontrol eco
MIXcontrol eco DINrail
MIXcontrol 20
MIXcontrol 40 (only in combination with distriBOX 4)

#### Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE Extension cord for MIXdrive distriBOX 4 - distributor

Designed for chemical, biotechnical and medical applications of all kinds, developed for maximum requirements, maximum mechanical, thermal and chemical stability as well as uncompromising continuous operation.



## MIXdrive 1 eco

Ultra flat, wear-free magnetic stirrer with 1 stirring position, suitable for vessels up to 3,000 ml.



₹ Extremely robust construction

Integrable in systems

→ Developed and made in Germany







Туре	MIXdrive 1 eco	
Stirring points	1	
Stirring volume/stirring point	1 - 3,000 ml	
Stirring power (max.)	10 W	
Material housing	Stainless steel	
Perm. operation conditions (Basic)	-10 °C up to +50 °C in air, up to +50 °C in water	
Perm. operation conditions (HT)	up to +200 °C in air, up to +95 °C in water	
Operating voltage (max.)	48 VDC	
Dimensions (WxDxH)	120 x 120 x 35 mm	
Protection category	IP68	
Weight (gross)	approx. 1.5 kg	
Order no. Basic-version	40101	
Order no. HT-version	40301	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

1 stirring position, 100% maintenance-free and wear-free by inductive 2mag Magnetic-Drive concept for powerful mixing of solutions, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed stainless steel housing, IP68, water-, dust-, and germproof, extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- or oil baths, suitable for the use in CO<sub>2</sub>-incubators and ovens.

Two different temperature areas available: **Basic-version** up to +50 °C, **HT-version** up to +95 °C submerged in water baths and up to +200 °C in ovens, individual dimensions on request.

Please order control unit separately!

#### Compatible control units

MIXcontrol eco

MIXcontrol eco DINrail

MIXcontrol 20 (only in combination with distriBOX 4)

MIXcontrol 40 (only in combination with distriBOX 4/8)

#### Accessories

Extension cord for MIXdrive distriBOX 4 - distributor distriBOX 8 - distributor

Designed for chemical, biotechnical and medical applications of all kinds, developed for maximum requirements, maximum mechanical, thermal and chemical stability as well as uncompromising continuous operation.



## MIXdrive 1 XS

Ultra flat, wear-free magnetic stirrer with 1 stirring position, optimized for stirring volume up to 1,000 ml, ideal size for integration.

- → Wear-free magnetic stirrer, up to +200 °C
- ₹ Extremely robust construction
- ₹ Integrable in systems
- Developed and made in Germany





Туре	MIXdrive 1 XS	
Stirring points	1	
Stirring volume/stirring point	1 - 1,000 ml	
Stirring power (max.)	10 W	
Material housing	Stainless steel	
Perm. operation conditions (Basic)	-10 °C up to +50 °C in air, up to +50 °C in water	
Perm. operation conditions (HT)	up to +200 °C in air, up to +95 °C in water	
Operating voltage (max.)	48 VDC	
Dimensions (WxDxH)	48 x 48 x 18 mm	
Protection category	IP68	
Weight (gross)	approx. 0.25 kg	
Order no. Basic-version	40300	
Order no. HT-version	40303	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

1 stirring position, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed stainless steel housing, thread M4 integrated in stainless-steel bottom plate (not HT-version), IP68, water-, dust- and germproof, extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- or oil baths, suitable for the use in CO<sub>2</sub>-incubators and ovens.

Two different temperature areas available: **Basic-version** up to +50 °C, **HT-version** up to +95 °C submerged in water baths and up to +200 °C in ovens, individual dimensions on request.

Please order control unit separately!

Compatible control units

MIXcontrol eco
MIXcontrol eco DINrail
MIXcontrol 20 (only in combination with distriBOX 4)

Accessories

Extension cord for MIXdrive distriBOX 4 - distributor

Designed for chemical, biotechnical and medical applications of all kinds, developed for maximum requirements, maximum mechanical, thermal and chemical stability as well as uncompromising continuous operation.



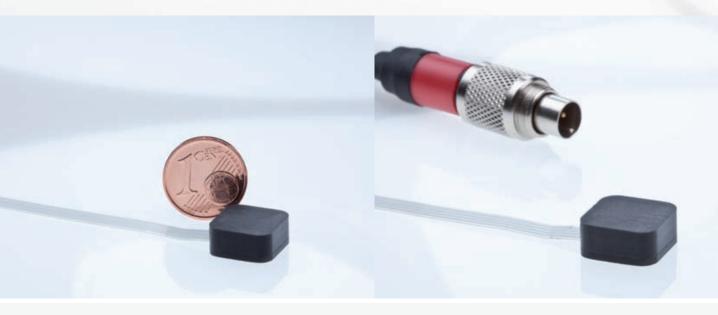
## cuvetteMIXdrive 1

Miniaturized, wear-free magnetic stirrer with 1 stirring position for cuvettes, optimized for stirring volume up to 25 ml, ideal size for system integration e.g. in photometer.

- Naintenance- and wear-free

- → Outstanding long-life quality
- Developed and made in Germany





Туре	cuvetteMIXdrive 1	
Stirring points	1	
Stirring volume/stirring point	1 - 25 ml	
Stirring power (max.)	10 W	
Material housing	PUR	
Permitted operation conditions	-10 °C up to +50 °C in air, up to +50 °C in water	
Operating voltage (max.)	48 VDC	
Dimensions (WxDxH)	13 x 13 x 6 mm	
Protection category	IP68	
Weight (gross)	approx. 0.1 kg	
Order no.	40400	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

1 stirring position, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for reliable mixing of solutions, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed polyurethane housing, IP68, water-, dust- and germproof.

Extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- or oil baths, suitable for the use in CO<sub>2</sub>-incubators and ovens.

Please order control unit separately!

Compatible control units

MIXcontrol eco
MIXcontrol eco DINrail

Accessories

Extension cord for MIXdrive

Designed for reliable mass screenings as well as chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation.



## MIX 6 / MIX 15

Ultra-flat magnetic stirrer with 6 stirring positions, suitable for 6 x 1,000 ml Erlenmeyer flasks, or with 15 stirring positions, suitable for 15 x 250 ml beaker glasses (tall form).

- Naintenance- and wear-free
- ₹ For different vessel sizes
- → Outstanding long-life quality
- Developed and made in Germany







Туре	MIX 6	MIX 15
Stirring points	6	15
Stirring point distance	130 mm	65 mm
Stirring volume/stirring point	1 - 3,000 ml	
Speed range	100 - 2,000 rpm	
Power setting	5/10/15/20 W (4-step)	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	245 x 425 x 38 mm	
Protection category	IP64	
Weight (gross)	approx. 8.8 kg	
Order no.	30006	30015

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

6 or 15 stirring positions, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept, power reserves up to 3,000 ml stirring volume per stirring point, extremely wide speed range of 100 to 2,000 rpm, 100% synchronized speed, jerk-free stirring even at low speeds, 4-step power setting of the stirrer, high power setting for viscous liquids and reduced stirring power for long-term operation without any heating effects caused by the stirrer.

Clear digital display for settings of stirrer speed and power, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar, QuickSet for quick setting of start- and maximum speed, Automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning..

Accessories

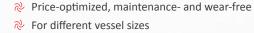
ASTEROID 40 - Stirring bar Stirring bar remover PTFE

Designed for chemical, biotechnical and medical applications of all kinds, developed for the daily lab use and continuous operation.



## MIX 15 eco

Ultra flat, wear-free magnetic stirrer with 15 stirring positions, suitable for 15 x 250 ml beaker glasses (tall form).



Developed and made in Germany







Туре	MIX 15 eco	
Stirring points	15	
Stirring point distance	65 mm	
Stirring volume/stirring point	1 - 1,500 ml	
Speed range	120 - 1,200 rpm	
Stirring power (max.)	10 W	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	245 x 425 x 38 mm	
Protection category	IP64	
Weight (gross)	approx. 8.8 kg	
Order no.	30115	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Price-optimized magnetic stirrer with 15 stirring positions, 100% maintenance-free and wear-free by inductive 2mag Magnetic-Drive concept for powerful mixing of solutions, power reserves up to 1,500 ml per stirring position, speed range from 120 up to 1,200 rpm, 100% synchronized speeds, jerk-free stirring even at low speeds.

Clear digital display for stirrer speed settings, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar. Automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning.

Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE

Designed for reliable mass screenings as well as chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation.



## MIX 8 XL / MIX 12 XL

Ultra-flat magnetic stirrer, stirring point distance 90 mm, with 8 stirring positions, suitable for 8 x 600 ml beaker glasses (tall form), or with 12 stirring positions, suitable for 12 x 600 ml beaker glasses (tall form).

- New developed magnetic stirrer
- Naintenance- and wear-free
- For different vessel sizes
- → Outstanding long-life quality
- Developed and made in Germany





Туре	MIX 8 XL	MIX 12 XL	
Stirring points	8	12	
Stirring point distance	90	mm	
Stirring volume/stirring point	1 - 3,0	000 ml	
Speed range	100 - 1,600 rpm		
Power setting	5/10/15/20 W (4-step)		
Material housing	Stainless steel		
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)		
Electrical data	100-240 V / 50-60 Hz / 1.5 A		
Dimensions (WxDxH)	185 x 420 x 38 mm	275 x 420 x 38 mm	
Protection category	IP64		
Weight (gross)	approx. 6.4 kg	approx. 8.8 kg	
Order no.	30208	30212	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Powerful 8 or 12 stirring positions, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept, power reserves up to 3,000 ml per stirring point, extremely wide speed range of 100 to 1,600 rpm, 100% synchronized speed, jerk-free stirring even at low speeds, 4-step power setting of the stirrer, high stirring power for viscous liquids and reduced stirring power for long-term operation without any heating effects caused by the stirrer.

Clear digital display for settings of stirrer speed and power, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar, QuickSet for quick setting of start- and maximum speed, automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning.

Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE

Designed for reliable mass screenings as well as chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation.

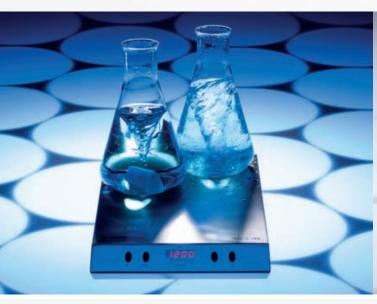


## MIX 4 MS

Ultra-flat magnetic stirrer with 4 individually controlled stirring positions, suitable for 4 x 2,000 ml Erlenmeyer flasks.

- ₹ 4 independent stirring positions
- Wear- and maintenance-free
- Outstanding long-life quality
- Developed and made in Germany







Туре	MIX 4 MS
Stirring points	4
Stirring point distance	140 mm
Stirring volume/stirring point	1 - 3,000 ml
Speed range	100 - 2,000 rpm
Stirring power (max.)	28 W (4 x 7 W)
Material housing	Stainless steel
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)
Electrical data	100-240 Volt / 50-60 Hz / 1.5 A
Dimensions (WxDxH)	245 x 425 x 38 mm
Protection category	IP64
Weight (gross)	approx. 8.9 kg
Order no.	30404

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Powerful 4 stirring positions, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept, power reserves up to 3,000 ml per stirring point, individual and independent speed setting for each stirring drive (Master-Slave-Technology), also ON/OFF function, synchronous speed mode for all positions, extremely wide speed range of 100 to 2,000 rpm, jerk-free stirring even at low speeds.

Clear digital display for settings of stirrer speeds, SoftStart procedure for reliable catching/centering and safe a cceleration of the stirring bar, automatic memory function to save the last settings, outstanding long-life cycle of the hermetically sealed drive system, resistant stainless steel housing for easy and fast cleaning.

Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE



2mag - MIXphilosophy Combination possibilities of stirring systems				
Stirring drive + control unit				
	MIXdrive 60			
	MIXdrive 15	MIXcontrol 40 (RS232)	MIXcontrol 20 (RS232)	MIXcontrol eco (DINrail)
Basic	MIXdrive 6	(113232)	(113232)	(Dilviuii)
up to +50 °C (in air)	MIXdrive 1	MIXcontrol	20 (RS232)	MIXcontrol eco (DINrail)
up to +50 °C (submersed)	MIXdrive 1 eco	MIXcontrol eco (DINrail)		
	MIXdrive 1 XS			INrail)
	cuvetteMIXdrive			
	MIXdrive 60 HT			
НТ	MIXdrive 15 HT	MIXcontrol 40 (RS232)	MIXcontrol 20 (RS232)	MIXcontrol eco (DINrail)
(High Temperature)	MIXdrive 6 HT	(1.0=0=)	(110-0-)	(=,
up to +200 °C (in air)	MIXdrive 1 HT	MIXcontrol	20 (RS232)	MIXcontrol eco (DINrail)
up to +95 °C (submersed)	MIXdrive 1 eco HT	MIXcontrol eco (DINrail)		INrail\
	MIXdrive 1 XS HT			



The individual combination possibilities of three control unit types MIXcontrol with the stirring drives MIXdrive always offer you the maximum quality for the optimum value for money exactly complementary to your needs.

The control units MIXcontrol define thereby the performance of the stirrers and the operation comfort.

The stirring drives MIXdrive are the indestructible equipment for your tasks in all days' laboratory work. No matter whether you decide for a serial device or a custom-made device, our aim is always: quality, stability and a reliable and affordable solution for exactly your needs. All MIXdrive are, with regard to the inner life, technically identical and can be combines with any of the 3 different control units MIXcontrol.

We offer you different stirring combinations for your individual applications. In case there will be no adequate stirrer available for you, we will be able to shortly work out a solution according to your needs.

Ask us – test us – we are there for you!

STIRRING DRIVES - TEMPERATURE RESISTANT AND SUBMERSIBLE

## MULTIPLE STIRRING DRIVES WITH EXTERNAL CONTROL UNIT

Designed for chemical, biotechnical and medical applications of all kinds, developed for maximum requirements, maximum mechanical, thermal and chemical stability as well as uncompromising continuous operation.



#### MIXdrive 6 / MIXdrive 15 / MIXdrive 60

Ultra-flat, 100% maintenance- and wear-free magnetic stirrer with inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions.

- → Wear-free magnetic stirrer, up to +200 °C
- Extremely robust construction
- → Integrable in systems
- Developed and made in Germany







Туре	MIXdrive 6	MIXdrive 15	MIXdrive 60
Stirring points	6	15	60
Stirring point distance	130 mm	65 mm	32.5 mm
Stirring volume/stirring point	1 - 3.0	000 ml	1 - 500 ml
Stirring power (max.)		40 W	
Material housing	Stainless steel		
Perm. operation conditions (Basic)	-10 °C up to +50 °C in air, up to +50 °C in water		
Perm. operation conditions (HT)	up to +200 °C in air, up to +95 °C in water		
Operating voltage (max.)	48 VDC		
Dimensions (WxDxH)	245 x 375 x 38 mm		
Protection category	IP68		
Weight (gross) approx.	8.9 kg	9.5 kg	9.7 kg
Order no. Basic-version	40006	40015	40060
Order no. HT-version	40206	40215	40260

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

#### MIXdrive 6

6 stirring positions, suitable for  $6 \times 1,000$  ml Erlenmeyer flasks, stirring point distance 130 mm.

#### MIXdrive 15

15 stirring positions, suitable for  $15 \times 250 \text{ ml}$  beaker glasses (tall form), stirring point distance 65 mm.

#### MIXdrive 60

60 (6x10) stirring positions, suitable for 60 testing tubes, ideal for integration, stirring point distance 32,5 mm.

100% synchronized speeds, jerk-free stirring even at low speeds. Fully encapsulated and hermetically sealed stainless steel housing, IP68, water-, dust-, and germproof.

Extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- or oil baths, suitable for the use in  $CO_2$ -incubators and ovens.

Two different temperature areas available: **Basic-version** up to +50 °C, **HT-version** up to +95 °C submerged in water baths and up to +200 °C in ovens, individual dimensions on request.

Please order control unit separately!

#### Compatible control units

MIXcontrol eco MIXcontrol eco DINrail MIXcontrol 20 MIXcontrol 40

#### Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE Extension cord for MIXdrive

Designed for 2mag MIXdrive stirring drives. For chemical, biotechnical and medical applications of all kinds.



## MIXcontrol eco

Price-optimized control unit for small medium volumes and the connection of 1 stirring drive MIXdrive.

- ₱ Price-optimized
- № 120 up to 1,200 rpm
- **№** SoftStart





Туре	MIXcontrol eco		
Speed range	120 - 1,200 rpm		
Stirring power (max.)	10 W		
Power setting	-		
Material housing	Plastic		
Perm. operation conditions	0 °C up to +40 °C (at 80% humidity)		
Electrical data	100-240 V / 50-60 Hz / 0.75 A		
Dimensions (WxDxH)	65 x 50 x 45 mm		
Protection category	IP20		
Weight (gross)	approx. 0.5 kg		
Order no.	90100		
Order no.	30100		

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Control unit with 10 watts stirring power, speed range from 100 up to 1,200 rpm, SoftStart for reliable catching/centering and safe accelerating of the stirring bar.

#### Compatible stirring drives

MIXdrive 1

MIXdrive 1 eco

MIXdrive 1 XS

cuvetteMIXdrive 1

MIXdrive 6

MIXdrive 15

MIXdrive 60

Designed for 2mag MIXdrive stirring drives. For chemical, biotechnical and medical applications of all kinds.



#### MIXcontrol eco DINrail

Price-optimized control unit for DIN installation (electrical cabinets).





- → DINrail installation (electrical cabinets)
- ₹ 120 up to 1,200 rpm
- **№** SoftStart

# magnetic emotion

Туре	MIXcontrol eco DINrail
Speed range	120 - 1,200 rpm
Stirring power (max.)	10 W
Power setting	-
Material housing	Plastic
Perm. operation conditions	0 °C up to +40 °C (at 80% humidity)
Operating voltage (max.)	24 VDC
Dimensions (WxDxH)	24 x 100 x 120 mm
Protection category	IP20
Weight (gross)	approx. 0.5 kg
Order no. 0-10 V	90150
Order no. with potentiometer	90140

Individual units and dimensions on request.

3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Control unit for DINrail installation (electrical cabinets) for small to medium volumes and the connection of one stirring drive MIXdrive, with analog interface 0-10 volts or potentiometer for ON/OFF and speed adjustment.

Also available with RS232 interface.

Control unit with 10 watts stirring power, speed range from 100 to 1,200 rpm, SoftStart for reliable catching/centering and safe accelerating of the stirring bar.

#### Compatible stirring drives

MIXdrive 1

MIXdrive 1 eco

MIXdrive 1 XS

cuvetteMIXdrive 1

MIXdrive 6

MIXdrive 15

IVIIAUTIVE 1

MIXdrive 60

Designed for 2mag MIXdrive stirring drives. For chemical, biotechnical and medical applications of all kinds.



#### MIXcontrol 20

Universal control unit for the connection of 1 stirring drive MIXdrive.

- № 20 watts stirring power
- <sup>⋄</sup> 4-step power setting
- ₱ Speed range 100 1,600 rpm
- Developed and made in Germany







Туре	MIXcontrol 20	
Speed range	100 - 1,600 rpm	
Stirring power (max.)	20 W	
Power setting	4-step (25/50/75/100%)	
Material housing	Stainless steel	
Permitted operation conditions	0 °C up to +40 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	200 x 155 x 38 mm	
Protection category	IP20	
Weight (gross)	approx. 1.4 kg	
Order no.	90200	
Order no. RS232	90210	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Control unit with 20 watts stirring power, speed range from 100 up to 1,600 rpm, jerk-free stirring also at low speeds, power setting (4-steps) for high power with regard to large and viscous stirring amounts and reduced power for the warming-free continuous operation of MIXdrive stirring drives.

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar. QuickSet for quick setting of start- and maximum speed, automatic memory function to save the last settings, resistant stainless steel housing, easy to clean.

Also available with RS232 interface.

Interfaces (0-10 volts, 4-20 mA, USB, Ethernet) and customized software adaption on request.

#### Compatible stirring drives

MIXdrive 1

MIXdrive 1 eco (only in combination with distriBOX 4)

MIXdrive 1 XS (only in combination with distriBOX 4)

MIXdrive 6

MIXdrive 15

MIXdrive 60

Designed for 2mag MIXdrive stirring drives. For chemical, biotechnical and medical applications of all kinds.



#### MIXcontrol 40

Powerful control unit, for 2mag MIXdrive series, developed for the hard daily lab use and uncompromising continuous operation.

- ₹ 40 watts stirring power
- → For connection of 2 stirring drives MIXdrive
- № Speed range 100 2,000 rpm
- Developed and made in Germany







Туре	MIXcontrol 40	
Speed range	100 - 2,000 rpm	
Stirring power (max.)	40 W	
Power setting	4 - 40 W (10-step)	
Material housing	Stainless steel	
Permitted operation conditions	0 °C up to +40 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	200 x 155 x 38 mm	
Protection category	IP20	
Weight (gross)	approx. 1.4 kg	
Order no.	90400	
Order no. RS232	90410	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Powerful control unit for the connection of up to two stirring drives MIXdrive, powerful 40 watts stirring power, wide speed range from 100 up to 2,000 rpm, jerk-free stirring also at low speeds, power setting (10-steps) for high power with regard to large and viscous stirring amounts and reduced power for the warming-free continuous operation of MIXdrive stirring drives.

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar. QuickSet for quick setting of start- and maximum speed, automatic memory function to save the last settings, resistant stainless steel housing, easy to clean.

Also available with RS232 interface.

Interfaces (0-10 volts, 4-20 mA, USB, Ethernet) and customized software adaption on request.

#### Compatible stirring drives

MIXdrive 1 (only in combination with distriBOX 4)

MIXdrive 1 eco (only in combination with distriBOX 4/8)

MIXdrive 6

MIXdrive 15

MIXdrive 60

# HEATABLE STIRRER

Developed for stirring and temperating jobs in daily lab use. Designed for chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation.

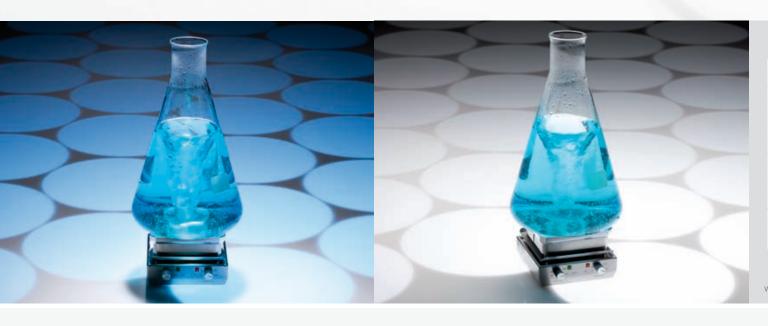


#### hotMIX 1

Smallest hotplate magnetic stirrer of the world. Compact, powerful and very robust magnetic stirrer with aluminium hotplate, unbeaten space-saving and also suitable for the operation with viscous and aggressive media.

- Maintenance- and wear-free
- ₹ Fast electrical heating
- № Robust, long-life quality
- Developed and made in Germany





Туре	hotMIX 1	
Stirring points	1	
Stirring volume/stirring point	1 - 2,000 ml	
Speed range	100 - 1,600 rpm	
Stirring power (max.)	10 W	
Temperature (max.)	+200 °C	
Material heating plate	Aluminium alloy	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +40 °C (at 80% humidity)	
Electrical data	230 V / 550 W	
Dimensions (WxDxH)	120 x 140 x 80 mm	
Protection category	IP20	
Weight (gross)	approx. 2 kg	
Order no.	61001	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Price-optimized magnetic stirrer, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for mixing of solutions, speed range from 100 up to 1,600 rpm, jerk-free stirring even at low speeds. SoftStart for reliable catching/centering and safe accelerating of the stirring bar, resistant stainless steel housing for easy and fast cleaning, spill over protection, extremely robust construction.

Hotplate made from resistant aluminium alloy, max. heating temperature +200 °C, socket for contact thermometer (accessory), warning-LED in case of hot plate, 3 integrated overtemperature protection loops against overheating.

Accessories

mixTHERM - Thermometer

## STIRRING HOTPLATES WITH EXTERNAL CONTROL UNIT

For mass screenings, incubating or concentrating of probes, evaporating of solvents, simple and easy system integration.



## STIRRING HOTPLATE 6 / STIRRING HOTPLATE 15

Stirring-heating plate with 6 stirring positions, stirring point distance 130 mm, suitable for 6 x 1,000 ml Erlenmeyer flasks or with 15 stirring positions, stirring point distance 65 mm, suitable for 15 x 250 ml beaker glasses (tall form).



Energy-saving

For all vessel sizes and shapes

➢ Simple system integration

Developed and made in Germany







Туре	HOTPLATE 6	HOTPLATE 15	
Stirring points	6	15	
Stirring point distance	130 mm	65 mm	
Stirring volume/stirring point	1 - 1,500 ml	1 - 1,000 ml	
Stirring power (max.)	40 W		
Power setting	4 - 40 W (10-step)		
Temperature (max.)	+200 °C		
Speed range	100 - 2,000 rpm		
Operating voltage (max.)	230 V / 1,200 W		
Dimensions (WxDxH)	250 x 430 x 75 mm		
Protection category	IP20		
Weight (gross)	approx. 15 kg		
Order no.	66306	66315	

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Stirring - Powerful 6 or 15 stirring points, maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept, extremely wide speed range of 100 to 2,000 rpm, 100% synchronized speed, jerk-free stirring even at low speeds, 10-step power setting of the stirrer, high power setting for viscous liquids and reduced stirring power for long-term operation without any heating effects caused by the stirrer, clear digital display for settings of stirrer speed, stirrer power and temperature of the integrated heater, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar.

Heating - Heating plate made of resistant aluminium alloy, PTFE-coated for increased chemical resistance and easier cleaning, fast heating-up by powerful integrated electrical heater, homogenous temperature distribution, maximum heating temperature +200 °C, PowerDetect for automatic compensation of physically determined loss in stirring power which can come up to 40% at high temperatures, independent over-temperature protection inside the plate.

Inclusive separate control unit for operation of magnetic stirrer and integrated heater, for long-term protection of the electronics against aggressive liquids and gases as well as thermal influences, stainless steel housing.

#### Accessories

External probe sensor Pt100 Stand for heatMIXcontrol

## STIRRING-HEATING BLOCKS WITH EXTERNAL CONTROL UNIT

For viscosity measurements, R&D, combinatorial chemistry, biological applications, testing the solution behavior of synthetic materials, quality control in food, chemical and waste water technology, simple and easy system integration.



## STIRRING DRYBATH 15-100 / STIRRING DRYBATH 15-250

Stirring-heating block combination with 15 bore holes, suitable for 100 ml lab-flasks and for 150 ml beaker glasses tall form (ø 57.5 mm, depth 48 mm, distance 65 mm) or with 15 bore holes suitable for 250 ml lab-flasks and for 400 ml beaker glasses tall form (ø 71.5 mm, depth 78 mm, distance 84 mm).

- → Fast heating-up
- Energy-saving
- → Durable quality
- Developed and made in Germany







Туре	DRYBATH 15-100	DRYBATH 15-250
Stirring points	1	.5
Stirring point distance	65 mm	84 mm
Bore holes Ø/T	Ø 57.5 / 48 mm	Ø 71.5 / 78 mm
Stirring volume/stirring point	1 - 150 ml	1 - 400 ml
Stirring power (max.)	40 W	
Power setting	4 - 40 W (10-step)	
Temperature (max.)	+200 °C	
Speed range	100 - 2,000 rpm	
Operating voltage (max.)	230 V / 1,000 W	
Dimensions (WxDxH)	280 x 430 x 120 mm	335 x 515 x 150 mm
Protection category	IP20	
Weight (gross)	approx. 23 kg	approx. 31 kg
Order no.	63100	63250

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Stirring - maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept, extremely wide speed range of 100 to 2,000 rpm, 100% synchronized speed, jerk-free stirring even at low speeds, 10-step power setting of the stirrer, high stirring power for viscous liquids and reduced stirring power for long-term operation without any heating effects caused by the stirrer, clear digital display for settings of stirrer speed, stirrer power and temperature of the integrated heater, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar.

Heating - Heating plate made of resistant aluminium alloy, PTFE-coated for increased chemical resistance and easier cleaning, fast heating-up by powerful integrated electrical heater, homogenous temperature distribution, maximum heating temperature +200 °C, PowerDetect for automatic compensation of physically determined loss in stirring power which can come up to 40% at high temperatures, independent over-temperature protection inside the plate.

Inclusive separate control unit for operation of magnetic stirrer and integrated heater, for long-term protection of the electronics against aggressive liquids and gases as well as thermal influences, stainless steel housing.

#### Accessories

External probe sensor Pt100
Stand for heatMIXcontrol
Reducing adapters - Inserts for reducing the bore hole diameter

## STIRRING-HEATING BLOCKS WITH EXTERNAL CONTROL UNIT

For viscosity measurements, R&D, combinatorial chemistry, biological applications, testing the solution behavior of synthetic materials, quality control in food, chemical and waste water technology, simple and easy system integration.



#### STIRRING DRYBATH 8-250 ERL

Stirring-heating block combination with 8 stirring positions (ø 87.2 mm, depth 78 mm, distance 100/140 mm), suitable for 250 ml Erlenmeyer flasks.

- ₹ Fast heating-up
- ₹ Energy-saving
- ∂ Durable quality
- Developed and made in Germany





Individual units and dimensions on request.

3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Stirring - Maintenance-free and wear-free by inductive 2mag-Magnetic Drive concept, extremely wide speed range of 100 to 2,000 rpm, 100% synchronized speed, jerk-free stirring even at low speeds, 10-step power setting of the stirrer, high stirring power for viscous liquids and reduced stirring power for long-term operation without any heating effects caused by the stirrer, clear digital display for settings of stirrer speed, stirrer power and temperature of the integrated heater, SoftStart procedure for reliable catching/centering and safe acceleration of the stirring bar.

Heating - Massive heating block made of resistant aluminium alloy, PTFE-coated for increased chemical resistance and easier cleaning, contact adapters for an optimal heat transfer, lowest possible temperature gradient inside the stirring vessels, integrated electrical heater, maximum heating temperature +200 °C.

PowerDetect for automatic compensation of physically determined loss in stirring power which can come up to 40% at high temperatures, specially made insulated stainless steel frame for energy- and time saving heating process, additionally for a homogenous temperature distribution and protection against accidental contact, independent over-temperature protection inside the plate.

Inclusive separate control unit for operation of magnetic stirrer and integrated heater, for long-term protection of the electronics against aggressive liquids and gases as well as thermal influences, stainless steel housing.

Inclusive 8 contact adapters for an optimized heat transfer.

#### Accessories

External probe sensor Pt100 Stand for heatMIXcontrol

# STIRRER FOR CELL CULTURES WITH INTERNAL CONTROL

Designed for careful and protective mixing of cell suspensions and culture broths, developed for highest demands as well as warming-free and uncompromising continuous operations.



#### bioMIX 1

Price-optimized maintenance-free magnetic stirrer with 1 stirring point, large surface, space saving, also suitable for viscous culture media.

- Space saving
- → Germ-proof, easy to clean
- Outstanding long-life quality
- Developed and made in Germany







Туре	bioMIX 1	
Stirring points	1	
Stirring volume/stirring point	5 - 5,000 ml	
Speed range	5 - 250 rpm	
Stirring power (max.)	6 W	
Power setting	10-step (10 - 100%)	
Material housing	Stainless steel	
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	180 x 230 x 38 mm	
Protection category	IP64	
Weight (gross)	4.0 kg	
Order no.	85001	

 $3\, years\, warranty\, on\, material\, and\, manufacturing.$  We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Maintenance-free 2mag-stepper-motor-drive for extremely slow and 100% jerk-free and gentle mixing of cell cultures, extended speed range from 5 up to 250 rpm, jerk-free, even and smooth stirring also at slow speeds, power setting (10-step) for high power with regard to large and viscous stirring amounts and reduced power for the warming-free continuous operation.

Digital display for speed- and power setting, SoftStart for reliable and safe accelerating of stirring bar, QuickSet for quick setting of start- and maximum speed, saving of last working status when turning off, suitable for culture flasks with spinning propeller- and spinning ball systems.

Fully encapsulated and water resistant stainless steel housing, germ-proof, IP64, easy to clean and firm, robust construction and performance, ultra-flat design.

#### Hint

For using in incubators we recommend due to the minimized temperature emission the especially developed series bioMIXdrive.

# STIRRING DRIVES FOR CELL CULTURES WITH EXTERNAL CONTROL UNIT

Designed for careful and protective mixing of cell suspensions and culture broths, developed for highest demands as well as warming-free and uncompromising continuous operations for e.g. in CO<sub>2</sub>-incubators.



## bioMIXdrive 1 / 2 / 3 / 4

Ultra flat, wear-free magnetic stirrer with large standing surface, up to 5,000 ml stirring volume, also suitable for viscous culture media.

- → Water- and germ-proof
- Warming-free long term operation in CO₂-incubator
- → Outstanding long-life quality
- Developed and made in Germany







Туре	bioMIXdrive			
Stirring points	1	2	3	4
Stirring point distance	-		140 mm	
Stirring volume/stirring point		5 - 5,0	000 ml	
Speed range	5 - 250 rpm			
Stirring power/stirring point	5 W			
Material housing	Stainless steel			
Perm. operation conditions	-10 °C up to +50 °C (at 100% humidity)			
Perm. operation conditions	+50 °C submerged in water			
Operating voltage (max.)	48 VDC			
Dimensions (WxD, mm)	180 x 180	130 x 270	130 x 410	270 x 270
Dimensions (H, mm)	38			
Protection category	IP68			
Weight (gross), approx.	2.3 kg	2.5 kg	3.5 kg	4.7 kg
Order no.	80001	80002	80003	80004

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Maintenance-free 2mag-stepper-motor-drive for extremely slow and 100% jerk-free and gentle mixing of cell cultures, extended speed range from 5 up to 250 rpm, jerk-free, even and smooth stirring also at slow speeds, suitable for culture flasks with spinning propeller- and spinning ball systems.

Fully encapsulated and hermetically closed stainless steel housing, IP68, water-, dust- and germ-proof, extremely robust construction and performance, easy to clean and maximum firm, submersible in water baths, designed for the warming-free long term operation in CO<sub>2</sub>-incubators, individual measurements on request.

Please order control unit separately!

Compatible control units

bioMIXcontrol bioMIXcontrol S bioMIXcontrol 4MS (only for bioMIXdrive 1)

Accessories

Extension cord for bioMIXdrive

Designed for bioMIXdrive stirring drives. For chemical, biotechnical and medical applications of all kinds.



## bioMIXcontrol / bioMIXcontrol S

Efficient control unit, for 2mag bioMIXdrive series, developed for the hard daily lab use and uncompromising warming-free continuous operation.

Also available as stackable control unit bioMIXcontrol S for system integration.

- Power setting 10-step
- Outstanding long-life quality
- Developed and made in Germany







Туре	bioMIXcontrol bioMIXcontrol S		
Speed range	5 - 250 rpm		
Stirring power (max.)	40 W		
Power setting	4-40 W (10-step)		
Material housing	Stainless steel		
Permitted operation conditions	0 °C up to +40 °C (at 80% humidity)		
Electrical data	100-240 V / 50-60 Hz / 1.5 A		
Dimensions (WxDxH)	200 x 155 x 38 mm	215 x 120 x 55 mm	
Protection category	IP20		
Weight (gross)	approx. 1.4 kg		
Order no.	98400 98500		

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Control unit for the connection of 1 stirring drive bioMIXdrive 1, 2, 3 or 4 extended speed range from 5 to 250 rpm, without any own-generated heating effect, jerk-free stirring, even and smooth stirring also at slow speeds.

Power setting (10-steps) for high power with regard to large and viscous stirring amounts and reduced power for the warming-free continuous operation e.g. in  $CO_2$ -incubators.

Digital display for speed- and power setting, SoftStart for reliable and safe accelerating of stirring bar, QuickSet for quick setting of start- and maximum speed, storage of last working status when turning off, firm stainless steel housing, easy to clean.

Interfaces (0-10 volts, 4-20 mA, RS232, USB, Ethernet) and customized software adaption on request.

#### Compatible stirring drives

bioMIXdrive 1

bioMIXdrive 2

bioMIXdrive 3

bioMIXdrive 4

Designed for bioMIXdrive 1 stirring drive. For chemical, biotechnical and medical applications of all kinds.



## bioMIXcontrol 4MS

Efficient control unit, for 4 drives 2mag bioMIXdrive 1, developed for the hard daily lab use and uncompromising warming-free continuous operation.

- ➢ For 4 stirring drives bioMIXdrive 1
- → Outstanding long-life quality
- Developed und Made in Germany







bioMIXcontrol 4MS		
5 - 250 rpm (4x individual settings)		
6 W / bioMIXdrive 1 (automatic)		
4		
Stainless steel		
0 °C up to +40 °C (at 80% humidity)		
100-240 V / 50-60 Hz / 1.5 A		
200 x 155 x 38 mm		
IP20		
approx. 2.5 kg		
98604		

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Control unit for the connection of 4 stirring drive bioMIXdrive 1, individual and independent speed setting for each stirring drive (Master-Slave-Technology), also ON/OFF function, synchronous speed mode for all drives, extended speed range from 5 to 250 rpm, 6 watts/stirring position without any own-generated heating effect, automatic stirring power for the warming-free continuous operation e.g. in  $\text{CO}_2$ -incubators, jerk-free stirring, even and smooth stirring also at slow speeds.

Digital display for speed setting, SoftStart for reliable and safe accelerating of stirring bar, QuickSet for quick setting of start and maximum speed, storage of last working status when turning off, firm stainless steel housing, easy to clean.

Interfaces (0-10 volts, 4-20 mA, RS232, USB, Ethernet) and customized software adaption on request.

Compatible stirring drives bioMIXdrive 1



## MICROTITER PLATE STIRRERS

Designed for reliable mass screenings as well as chemical, biotechnical and medical applications of all kinds, developed for the hard daily lab use and uncompromising continuous operation.



#### MIXdrive 6 / 12 / 24 / 96 MTP

Ultra flat, wear-free magnetic stirrer with 6/12/24/96 stirring positions, suitable for microtiter plates.

- Wear-free magnetic stirrer
- Extremely robust construction
- Developed und Made in Germany







Type MIXdrive	6 MTP	12 MTP	24 MTP	96 MTP
Stirring points	6	12	24	96
Stirring point distance	39 mm	26 mm	19 mm	9 mm
Stirring volume/stirring point (max.)	20 ml	7 ml	3,5 ml	0,5 ml
Stirring power	10 W			
Material housing	Stainless steel			
Permitted operation conditions	-10 up to +50 °C in air, up to +50 °C in water submerged			
Operating voltage	48 VDC			
Dimensions (WxDxH)	140 x 102 x 26 mm			
Protection category	IP68			
Weight (gross)	approx. 1.3 kg			
Order no.	43006	on request	43024	43096

Individualisierte Ausführungen und abweichende Gerätegrößen auf Anfrage. 3 Jahre Gewährleistung auf Material- und Fabrikationsfehler. Technische Änderungen vorbehalten. Für Druck- und Schreibfehler keine Haftung.

All stirring positions 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, 100% synchronized speeds, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed stainless steel housing, IP68, water-, dust- and germproof, extremely robust construction and performance, easy to clean and maximum resistance, submersible in water- resp. oil baths up to +50°C.

Suitable for the use in  $CO_2$  incubators and ovens, metal pins removable, suitable for integration into robots, individual dimensions on request.

Please order control unit separately.

Compatible control units

MIXcontrol eco MIXcontrol MTP

# CONTROL UNITS FOR MIXDRIVE MTP STIRRING DRIVES

Designed for MIXdrive MTP stirring drives.



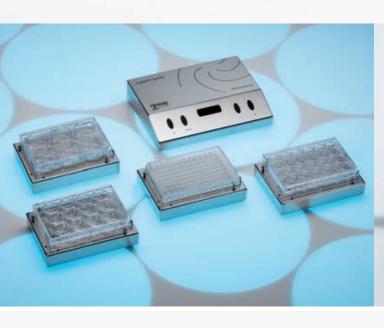
#### **MIXcontrol MTP**

Powerful control unit for connection of one stirrring drive MIXdrive 6/12/24/96 MTP.



- ₹ For stirring drives MIXdrive MTP
- Extremely robust construction
- ₱ Developed und Made in Germany







Туре	MIXcontrol MTP
Speed range	100 - 2.000 rpm
Stirring power (max.)	10 W
Power setting	4-step (25/50/75/100%)
Material housing	Stainless steel
Permitted operation conditions	0 °C up to +40 °C (at 80% humidity)
Electrical data	100-240 V / 50-60 Hz / 1,5 A
Dimensions (WxDxH)	200 x 155 x 38 mm
Protection category	IP20
Weight (gross)	approx. 1.4 kg
Order no. MIXcontrol MTP	90250
Order no. MIXcontrol MTP RS232	90252

Individualisierte Ausführungen und abweichende Gerätegrößen auf Anfrage. 3 Jahre Gewährleistung auf Material- und Fabrikationsfehler. Technische Änderungen vorbehalten. Für Druck- und Schreibfehler keine Haftung.

Universal control unit for the connection of one stirring drive MIXdrive MTP, universal 10 watts stirring power, wide speed range from 100 up to 2,000 rpm, jerk-free stirring also at low speeds, 4-step power setting (25/50/75/100%).

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar.

QuickSet for quick setting of start- and maximum speed, automatic memory function to save the last settings, resistant stainless steel housing, easy to clean.

#### Also available with RS232 interface.

Interfaces (0-10 volts, 4-20 mA, USB, Ethernet) and customized software adaption on request.

#### Compatible stirring drives

MIXdrive 6 MTP MIXdrive 12 MTP MIXdrive 24 MTP MIXdrive 96 MTP

# INDUSTRIAL STIRRERS FOR HIGHLY VISCOUS MEDIA AND LARGE VOLUMES

Designed for chemical and biotechnical applications of all kinds as e.g. within the field of quality insurance and pilot plant stations, developed for highest demands, unbeaten strong, high stability as well as uncompromising continuous operation.



#### MIX 1 XL

Ultra flat, strong magnetic stirrer with large set-up area and fully automatic stirring bar monitoring mixWATCH, up to 40 litres stirring volume, also suitable for highly viscous media, very strong magnetic coupling, therefore predestined for magnetic power transmission over wide distances or for thick vessel bottoms.

- → Up to 40 litres or for viscous media
- → mixWATCH stirring bar monitoring
- Outstanding long-life quality
- Developed and made in Germany





Туре	MIX 1 XL		
Stirring points	1		
Stirring volume/stirring point	1 - 40 litres		
Speed range	70 - 2,000 rpm		
Power setting	5/10/15/20 W (4-step)		
Acceleration	variable, 20/30/60/120 s		
Interval	variable, 0 - 240 s (2-step)		
Material housing	Stainless steel		
Permitted operation conditions	-10 °C up to +50 °C (at 95% humidity)		
Electrical data	100-240 V / 50-60 Hz / 1.5 A		
Dimensions (WxDxH)	225 x 280 x 35 mm		
Protection category	IP64		
Weight (gross)	approx. 4.0 kg		
Order no.	30201		

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Maintenance-free 2mag-motor-drive with large speed range from 70 up to 2,000 rpm, fully encapsulated and tight stainless steel housing (IP64), extremely robust construction and performance, easy to clean and firm.

Integrated controller with strong 20 watts stirring power, 4-step power setting for high power with regard to large and viscous stirring volumes and reduced power for the warming-free continuous operation, SoftStart-function (adjustable, 4 steps) for reliable catching/centering and safe accelerating of the stirring bar at different volumes and viscosities, adjustable interval times for automated restart of the stirrer after max. 240 seconds.

Digital display for speed-, power-, SoftStart- and interval setting, QuickSet for quick setting of start and maximum speed, after-run and glass breakage, storage of last function status when turning off.

**mixWATCH** - Stirring bar monitoring with fully automatic trim of the maximum reachable speed for a reliable and unattended operation of the stirrer (detailed description on page 39).

#### Accessories

ASTEROID 40 - Stirring bar SATELLITE 70 - beared sirring bar Stirring bar remover PTFE

## INDUSTRIAL STIRRERS FOR HIGHLY VISCOUS MEDIA AND LARGE VOLUMES



Designed for chemical and biotechnical applications of all kinds as e.g. within the field of quality insurance and pilot plant stations, developed for highest demands, unbeaten strong, high stability as well as uncompromising continuous operation.

#### maxMIX

Unbeaten strong magnetic stirrer with large set-up area, up to 150 litres stirring volume, also suitable for highly viscous media.

- ♥ Up to 150 litres stirring volume
- Ideal for highly viscous media
- Developed and made in Germany







Туре	maxMIX
Stirring points	1
Stirring volume/stirring point	1 - 150 litres
Speed range	100 - 1,200 rpm
Stirring power (max.)	40 W
Acceleration	variable, 20 - 99 s
Material housing	Stainless steel
Permitted operation conditions	-10 °C up to +50 °C (at 80% humidity)
Electrical data	100-240 V / 50-60 Hz / 1.5 A
Dimensions (WxDxH)	265 x 320 x 68 mm
Protection category	IP64
Weight (gross)	approx. 9.3 kg
Order no.	30501

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Very strong magnetic coupling, therefore predestined for magnetic power transmission over wide distances (up to 60 mm), for thick vessel bottoms or for double-coat vessels. Maintenance-free 2mag-motor-drive with large speed range from 100 up to 1,200 rpm, fully encapsulated and tight stainless steel housing, IP64, extremely robust construction and performance, easy to clean under running water and firm, individual measurements on request.

Integrated control unit with strong 40 watts stirring power, large speed range from 100 up to 1,200 rpm, SoftStart-function (variable 20-99 seconds) for reliable catching/centring and safe accelerating of the stirring bar at different volumes and viscosities.

Digital display for speed- and SoftStart-setting, QuickSet for quick setting of the start and maximum speed, QuickStopfunction against after-run and glass breakage, storage of last function status when turning off, firm stainless steel housing, easy to clean.

#### Accessories

SATELLITE 140 - beared stirring bar for large volumes Stirring bar remover XL maxFRAME - Enlargement of surface area

# INDUSTRIAL STIRRING SYSTEMS FOR HIGHLY VISCOUS MEDIA AND LARGE VOLUMES



Designed for chemical and biotechnical applications of all kinds as e.g. within the field of quality insurance and pilot plant stations, developed for highest demands, unbeaten strong, high stability as well as uncompromising continuous operation.

#### MIXdrive 1 XL

Ultra flat, compact and strong magnetic stirrer, up to 40 litres stirring volume, also suitable for highly viscous media, temperature resistant up to +150°C.

#### MIXcontrol XL

Powerful control unit for MIXdrive 1 XL stirring drives with 20 watts stirring power and mixWATCH stirring bar monitoring.

- → Temperature resistant up to 150°C
- <sup>→</sup> Up to 40 litres stirring volume
- mixWATCH stirring bar monitoring
- Outstanding long-life quality
- Developed and made in Germany





Туре	MIXdrive 1 XL	MIXcontrol XL	
Stirring points	1	-	
Stirring volume/stirring point	1 - 40 litres	-	
Stirring power (max.)	-	20 W	
Speed range	•	70 - 2,000 rpm	
Acceleration	•	variable, 20/30/60/120 s	
Interval	•	variable, 0 - 240 s	
Material housing	Stainless steel		
Operating voltage (max.)	24 VDC	-	
Electrical data	-	100-240 V / 50-60 Hz / 1.5 A	
Permitted operation conditions	+5 °C up to +150°C (at 95% humidity)	0 °C up to +40°C (at 80% humidity)	
Dimensions (WxDxH)	225 x 225 x 38 mm	200 x 175 x 48 mm	
Protection category	IP66	IP20	
Weight (gross)	approx. 3.4 kg	approx. 1.8 kg	
Order no.	40601	90600	

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Maintenance-free 2mag-motor-drive with large speed range from 70 up to 2,000 rpm, IP66, temperature resistant up to +150°C, designed for use in ovens, extremely robust construction and performance, easy to clean and firm, very strong magnetic coupling by SmCo-magnets, therefore predestined for magnetic power transmission over wide distances or for thick vessel bottoms.

The stirring system MIXdrive 1 XL with the control unit MIXcontrol XL is equipped as standard with **mixWATCH**. (detailed description on page 39).

Please order control unit separately!

SoftStart-function (adjustable, 4-step), for reliable catching/centering and safe accelerating of the stirring bar at different volumes and viscosities, adjustable interval times for automated restart of the stirrer after max. 240 seconds.

20 watts stirring power, speed range from 70 up to 2,000 rpm, power setting in 4 steps (25/50/75/100%). Digital display for speed- and interval setting, QuickSet for quick setting of start and maximum speed, QuickStop-function against after-run and glass breakage, storage of last function status when turning off. Equipped as standard with RS232 interface.

#### Accessories

ASTEROID 40 - Stirring bar SATELLITE 70 - beared sirring bar Stirring bar remover PTFE

Interfaces (0-10 volts, 4-20 mA, USB, Ethernet) and customized software adaption on request.

### INDUSTRIAL STIRRING SYSTEMS FOR HIGHLY VISCOUS MEDIA AND LARGE VOLUMES

magnetic motion

Designed for chemical and biotechnical applications of all kinds as e.g. within the field of quality insurance and pilot plant stations, developed for highest demands, unbeaten strong, high stability as well as uncompromising continuous operation.

#### **MAXdrive**

Unbeaten strong magnetic stirrer with large set-up area, up to 250 litres stirring volume, also suitable for highly viscous media.

#### **MAXcontrol**

Control unit for the connection of MAXdrive, powerful 60 watts stirring power, large speed range from 100 up to 1,200 rpm.

- → Up to 250 litres stirring volume
- Stirring over wide distances
- Ideal for highly viscous media
- Outstanding long-life quality
- Developed and made in Germany





Туре	MAXdrive	MAXcontrol	
Stirring points	1	-	
Stirring volume/stirring point	1 - 250 litres	-	
Stirring power (max.)	•	60 W	
Speed range	•	100 - 1,200 rpm	
Acceleration	-	variable (20 - 99 s)	
Material housing	Stainless steel		
Operating voltage (max.)	48 VDC	-	
Electrical data	-	100-240 V / 50-60 Hz / 1.5 A	
Permitted operation conditions	-10 °C up to +50°C (at 95% humidity)	0 °C up to +40°C (at 80% humidity)	
Dimensions (WxDxH)	260 x 260 x 68 mm	200 x 175 x 48 mm	
Protection category	IP64	IP20	
Weight (gross)	approx. 9.0 kg	approx. 1.8 kg	
Order no.	50001	94400	

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Very strong magnetic coupling, therefore predestined for magnetic power transmission over wide distances (up to 60 mm), for thick vessel bottoms or for double-coat vessels, ideal for the integration into process engineering systems.

Maintenance-free 2mag-motor-drive with large speed range from 100 up to 1,200 rpm. Fully encapsulated and tight stainless steel housing, IP64, extremely robust construction and performance, easy to clean under running water and maximum firm. Individual measurements on request.

Please order control unit separately!

Variable SoftStart-function for reliable catching/centering and safe accelerating of the stirring bar at different volumes and viscosities. Digital display for speed- and SoftStart-setting (variable 20-99 seconds).

QuickSet for quick setting of the start-and maximum speed, QuickStop-function against after-run and glass breakage, storage of last function status when turning off, firm stainless steel housing, easy to clean.

Interfaces (0-10 volts, 4-20 mA, RS232, USB, Ethernet), customized software adaption and stirring bar monitoring on request.

#### Accessories

SATELLITE 140 - beared stirring bar for large volumes Stirring bar remover XL Extension cord for MAXdrive/FABdrive maxFRAME - Enlargement of surface area

### INDUSTRIAL STIRRING SYSTEMS FOR HIGHLY VISCOUS MEDIA AND LARGE VOLUMES

Magnetic motion

Designed for chemical and biotechnical applications of all kinds as e.g. within the field of quality insurance and pilot plant stations, developed for highest demands, unbeaten strong, high stability as well as uncompromising continuous operation.

#### **FABdrive**

Unbeaten strong magnetic stirrer with very compact housing dimensions, up to 1,000 litres stirring volume, also suitable for highly viscous media.

#### **FABcontrol**

Control unit for the connection of magnetic stirrer FABdrive, powerful 100 watts stirring power, large speed range from 80 up to 990 rpm.

- → Up to 1,000 litres stirring volume
- Stirring over wide distances
- ₹ Ideal for highly viscous media
- Developed and made in Germany





Туре	FABdrive	FABcontrol	
Stirring volume/stirring point	1 - 1,000 litres	-	
Speed range	-	80 - 990 rpm	
Stirring power (max.)	-	100 W	
Acceleration	-	variable, 20 - 99 s	
Buzzer, Tolerance	-	variable, 5 - 50 rpm	
Material housing	Stainless steel		
Perm. operation conditions	-10 °C up to +50 °C (at 95% humidity)	0 °C up to +40 °C (at 80% humidity)	
Operating voltage (max.)	48 VDC	-	
Electrical data	-	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	180 x 180 x 75 mm	200 x 175 x 48 mm	
Protection category	IP64	IP20	
Weight (gross)	approx. 9 kg	approx. 2.0 kg	
Order no.	50101	94402	

Individual units and dimensions on request.

3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Very strong magnetic coupling, therefore predestined for magnetic power transmission over wide distances (up to 150 mm), for thick vessel bottoms or for double-coat vessels, ideal for the integration into process engineering systems and industrial processing.

Maintenance-free 2mag-motor-drive with large speed range from 80 up to 990 rpm. Fully encapsulated and tight stainless steel housing, IP64, extremely robust construction and performance, easy to clean under running water and maximum firm. Individual measurements on request.

Please order control unit separately!

Variable SoftStart-function for reliable catching/centering and safe accelerating of the stirring bar at different volumes and viscosities. Digital display for speed- and SoftStart-setting (variable, 20-99 seconds) and live speed, QuickSet for quick setting of the start-and maximum speed, QuickStop-function against after-run and glass breakage.

Beep-function at falling below set speed, storage of last function status when turning off, firm stainless steel housing, easy to clean.

#### Accessories

SATELLITE 140 - beared stirring bar for large volumes Stirring bar remover XL Extension cord for MAXdrive/FABdrive mixCADDY - Mobile stand, large surface

Interfaces (0-10 volts, 4-20 mA, RS232, USB, Ethernet), customized software adaption and stirring bar monitoring on request.

### STIRRING BAR MONITORING

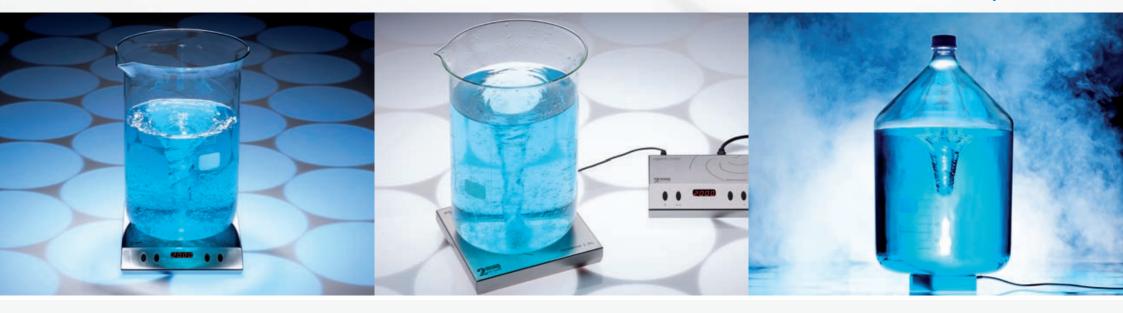


### 2mag mixWATCH

Stirring bar monitoring with fully automatic trim of the maximum reachable speed for a reliable and unattended operation of the stirrer.

- **∂** Contactless
- **Automatic**
- № Integrated in MIX 1 XL, MIXdrive 1 XL, steriMIXdrive

magnetic emotion



An absolutely innovation is the integrated contact-free stirring bar control mixWATCH. In case of the magnetic coupling is separated between the magnetic stirrer and the stirring bar during the acceleration phase e.g. caused by to high set speed or changing viscosities, the magnetic stirrer will be stopped, the stirring bar centred and started again.

For the magnetic stirres MIX 1 XL and MIXdrive 1 XL, the set speed level will be reduced automatically by 100 rpm to ensure a reliable stirring process.

The stirring drive steriMIXdrive starts also automatically, but without reducing the stirring speed.

mixWATCH is ensuring a very high process safety, e.g. with using of closed non-glass vessels or at unattended overnight operation.

### SPECIAL STIRRING SYSTEM FOR OPERATION IN PRESSURE, VACUUM AND STEAM

Designed for operation in pressure, vacuum and steam up to +150°C, e.g. in steam sterilizers.



#### steriMIXdrive

Ultra flat, compact and strong magnetic stirrer, up to 40 litres stirring volume, also suitable for highly viscous media.



#### steriMIXcontrol

Powerful control unit with 20 watts stirring power and mixWATCH stirring bar monitoring (without stirring speed reduction).



♥ Up to 40 litres stirring volume

mixWATCH stirring bar monitoring

Steam-, pressure- and vakuum resistant

Developed and made in Germany

magnetic emotion

Туре	steriMIXdrive	steriMIXcontrol
Stirring points	1	-
Stirring volume/stirring point	1 - 40 litres	-
Stirring power (max.)	-	20 W
Speed range	-	100 - 1,200 rpm
Acceleration	-	variable, 20/30/60/120 s
Interval	-	variable, 0 - 240 s
Material housing	Stainless steel / PPSU hermetically closed	Stainless steel
Perm.operation conditions	-10 °C up to +150 °C (at 100% humidity)	0 °C up to +40 °C (at 80% humidity)
Operating voltage (max.)	48 VDC	-
Electrical data	-	100-240 V / 50-60 Hz / 1.5 A
Dimensions (WxDxH)	140 x 140 x 32 mm	200 x 175 x 48 mm
Protection category	IP68	IP20
Weight (gross)	approx. 9.0 kg	1.8 kg
Order no.	40700	95200
	Individ	ual units and dimensions on request

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Very strong magnetic coupling by SmCo-magnets, therefore predestined for magnetic power transmission over wide distances or for thick vessel bottoms. Maintenance-free 2mag-motor-drive with large speed range from 100 up to 1,200 rpm.

Fully encapsulated, pressure- and vacuum resistant stainless steel housing, IP68, temperature resistant up to +150°C, extremely robust construction and performance, easy to clean and firm.

The stirring system steriMIXdrive with the control unit steriMIXcontrol is equipped as standard with **mixWATCH**. (detailed description on page 39).

Please order control unit separately!

SoftStart-function (adjustable, 4-step), for reliable catching/centering and safe accelerating of the stirring bar at different volumes and viscosities, adjustable interval times for automated restart of the stirrer after max. 240 sec.

Digital display for speed- and interval setting, QuickSet for quick setting of start and maximum speed, QuickStop-function against after-run and glass breakage, storage of last function status when turning off.

#### Accessories

ASTEROID 40 - Stirring bar SATELLITE 70 - beared sirring bar Stirring bar remover PTFE

Interfaces (0-10 volts, 4-20 mA, RS232, USB, Ethernet) and customized software adaption on request.

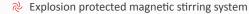
### STIRRING DRIVE FOR EXPLOSION PROTECTION ZONES

Designed for chemical, biotechnical and medical applications of all kinds, developed for the daily lab use and continuous operation in explosion protection zones.



#### atexMIXdrive

Explosion protected, ultra flat, wear-free magnetic stirrer with 1 stirring position, for up to 10,000 ml.



- Wear-free magnetic stirrer
- ♥ Up to 10,000 ml strirring volume
- Outstanding long-life quality
- Developed and made in Germany





Туре	atexMIXdrive
Stirring points	1
Stirring volume/stirring point	1 - 10,000 ml
Stirring power (max.)	20 W
Material housing	Stainless steel
Permitted operation conditions	-10 °C up to +40 °C in air, up to +40 °C in water
Operating voltage (max.)	48 VDC
Dimensions (WxDxH)	180 x 180 x 38 mm
Protection category	IP68
Weight (gross)	3.5 kg
Ex-mark	ATEX II 2G Ex mb IIC T4
Order no.	49001

2 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

1 stirring position, 100% maintenance-free and wear-free by inductive 2mag-Magnetic-Drive concept for powerful mixing of solutions, jerk-free stirring even at low speeds.

Fully encapsulated and hermetically sealed stainless steel housing, IP68, water-, dust- and germproof. Extremely robust construction and performance, easy to clean and maximum resistance.

Submersible in water- or oil baths, suitable for the use in CO<sub>2</sub>-incubators and ovens, temperate range up to +40 °C, certified according to ATEX II 2G Ex mb IIC T4.

Please order control unit separately!

#### Compatible control units

#### atexMIXcontrol

Explosion protected control unit (protection zone 1)

atexMIXcontrol cleanroom

Explosion protected control unit (protection zone 2)

MIXcontrol 20

Universal control unit (outside the protection zone)

#### Accessories

ASTEROID 40 - Stirring bar Stirring bar remover PTFE

### CONTROL UNITS FOR atexMIXDRIVE STIRRING DRIVE

Designed for 2mag stirring drives atexMIXdrive.

Designed for chemical, biotechnical and medical applications of all kinds.



#### atexMIXcontrol

Explosion protected control unit for the connection of 1 stirring drive atexMIXdrive, suitable for protection zone 1.

#### atexMIXcontrol cleanroom

Explosion protected control unit for the connection of 1 stirring drive atexMIXdrive, suitable for protection zone 2 or cleanrooms.





Туре	atexMIXcontrol	atexMIXcontrol cleanroom
Speed range	100 - 2	,000 rpm
Stirring power (max.)	2	0 W
Power setting	4-step (25/	(50/75/100%)
Material housing	Aluminium/Plastic	Aluminium
Perm. operation conditions	0 °C up to +40 °C (at 80% humidity)	
Electrical data	100-240 V / 50-60 Hz / 1.5 A	
Dimensions (WxDxH)	360 x 460 x 200 mm	210 x 55 x 30 mm
Weight (gross)	approx. 15 kg	approx. 3.6 kg
Protection category	IP65	
Ex-mark	ATEX II 2G Ex de IIC T6 Gb	ATEX II 3G Ex nA nL IIC T6
Certificate of conformity	KEMA 03 ATEX 2045	EPS 10 ATEX 1 246 X
Order no.	99200	99300

2 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

20 watts stirring power, speed range from 100 up to 2,000 rpm, jerk-free stirring even at low speeds, 4-step power setting (25/50/75/100%).

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar.

QuickSet for quick setting of start and maximum speed, automatic memory function to save the last settings, explosion protected housing, operation temperature up to +40°C, certified according to ATEX II 2G Ex de IIC T6 Gb.

20 watts stirring power, speed range from 100 up to 2,000 rpm, jerk-free stirring even at low speeds, 4-step power setting (25/50/75/100%).

Clear digital display for speed- and power settings, SoftStart for reliable catching/centering and safe accelerating of the stirring bar.

QuickSet for quick setting of start and maximum speed, automatic memory function to save the last settings, explosion protected housing, operation temperature up to +40°C, certified according to ATEX II 3G Ex nA nL IIC T6.

Compatible stirring drives atexMIXdrive

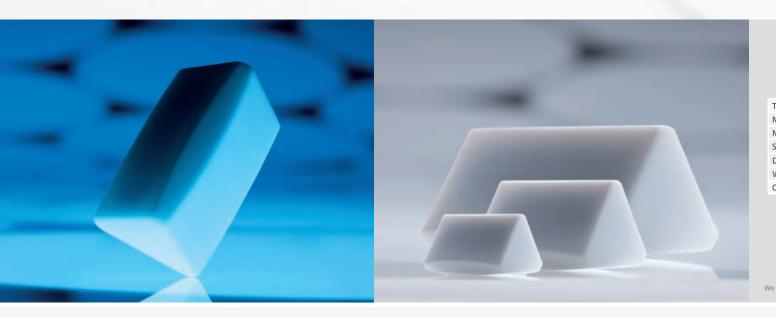
### STIRRING BARS

Designed for strong stirrers and viscous media. Designed for chemical, biotechnical and medical applications of all kinds.



### ASTEROID 25 / 40 / 70

New developed, high-effective stirring bar, ideal for large mixing volumes, viscous media, stirring over wide distances or for disadvantageous vessel bottoms.



## magnetic emotion

Туре	ASTEROID 25	ASTEROID 40	ASTEROID 70
Material (Cover)		PTFE	
Material (Magnet)	SmCo		
Shape	triangular, concave		
Dimensions ØxL	Ø 14 x 25 mm	Ø 28 x 40 mm	Ø 39 x 70 mm
Weight (gross)	approx. 0.02 kg	approx. 0.06 kg	approx. 0.3 kg
Order no.	44025	44040	44070

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

More than 4x higher torque transmissible, unbeatable increased mixing effect in comparison to conventional stirring bars, high energetic and long-term stable magnetic field, no demagnetization effect, concave design for a minimum of bearing surface and reliable rotation, triangular shape for powerful shear force, better mixing effect at lower rotation speed.

300% less PTFE abrasion than comparable round shape stirring bars, significantly higher rotation speed reachable, high quality, even and sealed PTFE cover, FDA-conform, steam sterilizable at 121°C.

Multiple improved performances for all types of magnetic stirrers.

#### Accessories

Stirring bar remover PTFE Stirring bar remover XL



### STIRRING BARS

Designed for strong stirrers and viscous media.

Designed for chemical, biotechnical and medical applications of all kinds.



#### SATELLITE 70

New developed, high-effective stirring bar, recommended for magnetic stirrers MIXdrive 1 XL or MIX 1 XL.



#### SATELLITE 140

New developed, high-effective stirring bar, recommended for magentic stirrers FABdrive, MAXdrive or maxMIX.



magnetic emotion

Туре	SATELLITE 70	SATELLITE 140
Shape	round, tripod	round, tripod
Material (Cover)	PTFE	ZEDEX
Dimensions ØxL bars	Ø 13 x 70 mm	Ø 32 x 140 mm
Dimensions Ø tripod construction	Ø 99 mm	Ø 227 mm
Weight (gross)	approx. 0.1 kg	approx. 0.4 kg
Order no.	44700	44900

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Extremely strong, abrasion-free and wear-free magnetic stirring bar, bearing on a tripod-construction, ideal for large mixing volumes, viscous media, stirring over wide distances or for disadvantageous vessel bottoms, especially for the use in stainless steel vessels and in the case of media containing abrasive particles, e.g. sand or sediments.

No direct contact between stirring bar and reaction vessel, therefore steady firm, wear-free, stirring bar sealed with PTFE, tripod construction made of ZEDEX, chemical resistance comparable to PTFE, FDA-certification, wearing parts can be re-ordered separately.

Extremely strong, abrasion-free and wear-free magnetic stirring bar, bearing on a tripod-construction, ideal for large mixing volumes, viscous media, stirring over wide distances or for disadvantageous vessel bottoms, especially for the use in stainless steel vessels and in the case of media containing abrasive particles, e.g. sand or sediments.

No direct contact between stirring bar and reaction vessel, therefore steady firm, wear-free, chemical resistance comparable to PTFE, FDA-certification, wearing parts can be re-ordered separately.

Accessories

Stirring bar remover PTFE Stirring bar remover XL

### STIRRING BAR REMOVER

Designed for strong stirring bars.



### Stirring bar remover PTFE

PTFE-coated flexible stirring bar remover with extremely strong permanent magnet (neodym), 70 cm length.

### Stirring bar remover XL

New developed, extremely strong stirring bar remover with an integrated corrosion-resistant high energy magnet, ideal for reliable inserting and removing of strong and heavy magnetic stirring bars.





Туре	Stirring bar remover PTFE	Stirring bar remover XL
Material	PTFE	Stainless steel
Dimensions ØxL	Ø 15 x 700 mm	Ø 28 x 1,000 mm
Weight (gross)	approx. 0.2 kg	approx. 1.5 kg
Order no.	45070	45100

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Universal chemical resistance also in aggressive media, ideal for fast removal of heavy and big magnetic stirring bars with a weight up to 400 g.

Simple handling due to a special developed stripping mechanism, length of 100 cm for deep reaction vessels, construction of stainless steel, solid and easy to clean, high chemical resistance.

Ideal for fast removal of big and heavy magnetic stirring bars with a weight up to  $1,000 \, \mathrm{g}$ .

### **EXTENSION CORDS / DISTRIBUTORS**

For 2mag stirring systems with external control.



#### Extension cords

Extension cord for stirring drives, length 3m.

### distriBOX 4/8

4-fold / 8-fold distributor.







Extension cords	for MIXdrive	for bioMIXdrive	for FABdrive/MAXdrive
Length	3 m	3 m	3 m
Perm. operation conditions	-10°C up to +50°C (at 80% humidity)		
Order no.	46100	46200	46300

Туре	distriBOX 4	distriBOX 8
Dimensions (WxDxH)	48 x 48 x 25 mm	48 x 92 x 25 mm
Order no.	49004	49008

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Extension cord for MAXdrive and FABdrive, length 3m.
Extension cord for MIXdrive, length 3m.
Extension cord for bioMIXdrive, length 3m.

Distributor for synchronized operating of 4 or 8 stirring drives with one MIXcontrol 20 or MIXcontrol 40, identical operation conditions, synchronous speeds, same stirring power, space-saving, sealed stainless steel housing.

### ACCESSORIES FOR MULTIPLES STIRRERS

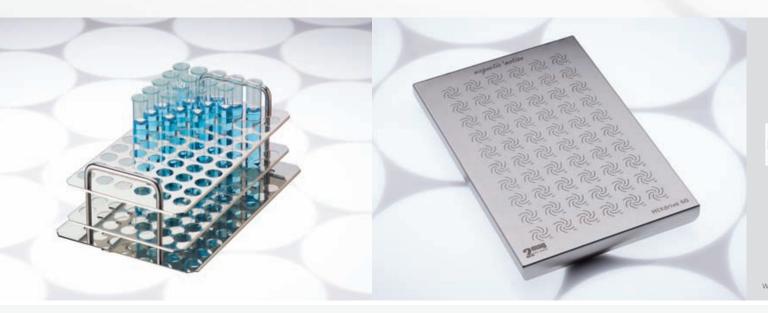
Designed for 2mag multiple stirrers.



### mixRACK

Stand for test tubes.





Туре	mixRACK
Dimensions (WxDxH)	on request
Order no.	on request

Individual units and dimensions on request.

3 years warranty on material and manufacturing.
We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

For exactly centred positioning of test tubes on the stirring points, rack function, can be used to carry all test tubes at once, two convenient handles, stainless steel construction.



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### ACCESSORIES FOR HEATABLE STIRRING SYSTEMS

Designed for 2mag STIRRING DRYBATH and STIRRING HOTPLATE.



### heatMIXcontrol - spare part

Separate control unit heatMIXcontrol for operation of STIRRING DRYBATH and STIRRING HOTPLATE.



#### Stand for heatMIXcontrol

Stand for vertical positioning of the control unit heatMIXcontrol, incl. assembling material.



# magnetic emotion

heatMIXcontrol - spare part
40 W
4 - 40 W (10-step)
Stainless steel
0 °C up to +40 °C (at 80% humidity)
230-240 V / 50-60 Hz / 5 A
225 x 171 x 48 mm
approx. 1.7 kg
IP20
68300

Туре	Stand heatMIXcontrol
Material	Stainless steel
Dimensions (WxDxH)	225 x 132 x 150 mm
Weight (gross)	approx. 0.9 kg
Order no.	69500

Individual units and dimensions on request. 3 years warranty on material and manufacturing.

We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Long-term protection of the electronics against aggressive liquids and gases as well as thermal influences, independent and adjustable over-temperature limiter for the additional protection of the heating controller against technical defects or unintended operation errors, stainless steel housing, compact and space-saving, connection for external Pt100 sensor, RS232 interface.

Stable stainless steel stand for space-saving positioning of the control unit heatMIXcontrol, organized cable route on rear side, easy installation.

#### Compatible stirring drives

STIRRING DRYBATH 15-100 STIRRING DRYBATH 15-250 STIRRING DRYBATH 8-250 ERL STIRRING HOTPLATE 6 STIRRING HOTPLATE 15

### ACCESSORIES FOR HEATABLE STIRRING SYSTEMS

Designed for 2mag STIRRING DRYBATH and STIRRING HOTPLATE.



### External probe sensor Pt100

External probe sensor Pt100 for control unit heatMIXcontrol.



### Reducing adapter

Inserts (aluminium alloy) for STIRRING DRYBATH 15-100 and STIRRING DRYBATH 15-250 for reducing the bore hole diameter.



magnetic emotion

Туре	External probe sensor Pt100
Sensor type	Pt100
Material	Stainless steel
Dimensions (ØxL)	Ø 5 x 90 mm
Cable length	1 m
Weight (gross)	approx. 0.1 kg
Order no.	69100

Reducing adapter	for DRYBATH 15-100	for DRYBATH 15-250
Outer dimensions (ØxH)	Ø 57.5 x 47 mm	Ø 71.5 x 78 mm
Inner diameter	on request	
Order no.	on request	

Individual units and dimensions on request. 3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Temperature sensor for direct controlling of the probe temperature.

Compatible control units

heatMIXcontrol

excellent heat transfer in the case of using smaller glasses. Individual inner diameter on request.

#### Compatible stirring drives

#### STIRRING DRYBATH 15-100

Stirring-heating block combination, 15 stirring positions for 100 ml laboratory flasks.

#### STIRRING DRYBATH 15-250

Stirring-heating block, 15 stirring positions for 250 ml laboratory flasks.

For reduction of the bore hole diameter, guarantees an

### ACCESSORIES FOR HEATABLE STIRRERS

Designed for 2mag hotMIX.



### mixTHERM

Thermometer with flexible Pt 1000 sensor, precise and fast rules by fuzzy logic control.



magnetic emotion

Туре	mixTHERM
Measuring range	-50 °C up to +300 °C
Order no.	61099

 $3\, years\, warranty\, on\, material\, and\, manufacturing.$  We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Precise and fast control by Fuzzy-Logic-Technology, measuring range -50 °C up to +300 °C, accuracy +/- 1 °C, identification of probe breakdown and probe short circuit, safety- and control circuit according to DIN 12878 Class 1 and 2, display background illumination, LED indication for control status, IP 65, approx. 150 g, incl. clamp for support rod.



### ACCESSORIES FOR INDUSTRIAL STIRRERS

Designed for large volumes.



#### mixCADDY

Mobile stand, suitable for stirring drive FABdrive as well as control unit FABcontrol, large surface for vessel and containers up to 57 cm diameter, load up to 250 kg.

#### maxFRAMF

Frame for easy and fast enlargement of surface area and loading capacity of magnetic stirrers maxMIX and MAXdrive.





Туре	mixCADDY
Material	Stainless steel
Dimensions (WxDxH)	104 x 52 x 81 cm
Weight (gross)	approx. 35 kg
Order no.	48100

Туре	maxFRAME
Material	Stainless steel
Dimensions (WxDxH)	500 x 500 x 70 mm
Weight (gross)	approx. 9.5 kg
Order no.	48500

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Robust design made from resistant stainless steel, electro-polished, closed profiles, easy to care, heavy duty rollers, lockable, hand forklift accessible to transfer heavy vessels, integrated mount for control unit, easy ergonomic operation, protected cable routing inside the profiles.

Solid welded stainless steel construction, easy to clean due to enclosed design, high chemical resistance, simple enlargement of the utility space of maxMIX and MAXdrive to  $500 \times 500$  mm, loading capacity up to 1000 kg.

No installation necessary.



### WATER BATHS

Designed for 2mag MIXdrive.



#### mixBATH

Durable, robust stainless steel bath, easy to clean, suitable fro MIXdrive 6/15/60.

#### mixBATHcover

Chemically resistant, transparent cover for mixBATH, consisting of polycarbonate, for minimization of evaporation effects.





Туре	mixBATH
Material	Stainless steel
Inner Dim. (WxDxH)	277 x 537 x 175 mm
Outer Dim. (WxDxH)	315 x 575 x 190 mm
Weight (gross)	approx. 5.5 kg
Order no.	40950

mixBATHcover	for MIXdrive 6	for MIXdrive 15
Material	Polycarbonate	
Dimensions (WxDxH)	315 x 575 x 8 mm	
Weight (gross)	approx. 1.5 kg	
Order no.	40806	40815

3 years warranty on material and manufacturing. We reserve the right to make technical alterations. We do not assume liability for errors in printing or typeing.

Fitting for immersion thermostats (heating/cooling), easy to clean, even weld and electropolished, framed ridge formed as handle, exact positioning of the stirrer in the case of use the stirrer under the bath. Stirring point mark inside the bath, left-/right stop for optimized thermostat positioning (circulation pump) for use with MIXdrive 6 or MIXdrive 15.

Different cutouts for the perfect positioning of the thermostat in the case of using the stirring drives MIXdrive 6 or MIXdrive 15 immersed into the mixBATH.

#### Compatible stirring drives

MIXdrive 6 MIXdrive 15

MIXdrive 60

MIXdrive 1 MIXdrive 1 eco MIXdrive 1 XS

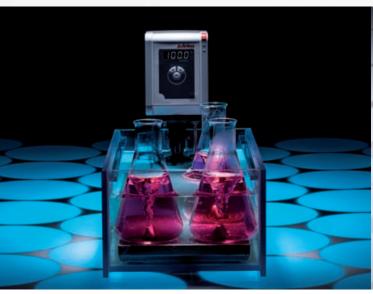
### WATER BATHS

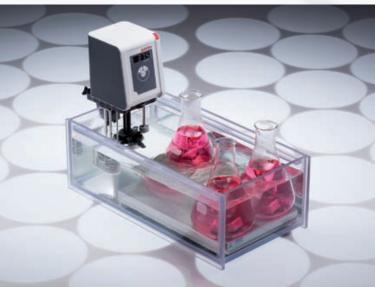
Designed für 2mag MIXdrive.



### mixBATH PC

Durable, robust bath, made of polycarbonate, easy to clean, suitable for MIXdrive 1/6/15/60 and MIXdrive 1 XS/1 eco.





magnetic emotion

Туре	mixBATH PC
Material	Polycarbonate
Inner Dim. (WxDxH)	280 x 540 x 178 mm
Outer Dim. (WxDxH)	300 x 560 x 198 mm
Weight (gross)	approx 6.2 kg
Order no.	40850

3 ans de garantie sur le matériau et la fabrication. Sous réserve de modifications techniques. Pas de responsabilité pour erreurs d'impression ou d'ortographe.

Water bath made of polycarbonate, durable up to +50°, robust, easy to clean, suitable for MIXdrive 1/6/15/60 as well as MIXdrive 1 XS/1 eco, fitting for immersion thermostats (heating/cooling), easy to clean, exact positioning of the stirrer in the case of use the stirrer under the bath.

#### Compatible stirring drives

MIXdrive 6 MIXdrive 15

MIXdrive 60

MIXdrive 1 MIXdrive 1 eco MIXdrive 1 XS

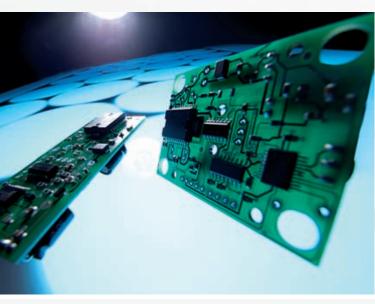
# SPEZIALISED STIRRING SYSTEMS AND CUSTOMIZED STIRRES FOR INDIVIDUAL REQUIREMENTS



### 2mag - Customized Stirrers

The main importance of our passion lies upon our customers and our products!







"Customizing", the manufacturing of special made products, is our business, our competence and our passion!

Individual requests will result in individual – and even more important – also economically realizable solutions.

2mag is providing you more than 30 years of competence in the conception, development, production and sales of magnetic and inductive drive concepts, as e.g. magnetic stirrers.

This experience paired with a great passion and emotion for our customers – and our products – enables the fast and economic creation of solutions precisely for your needs.

### 2mag MIX 60 customized

Identical to MIX 15, but with 60 stirring positions and suitable for 60 x  $\emptyset$  20 mm test tubes.

#### 2mag bioMIXdrive 1 / 2 / 3 / 4 customized

Identical to bioMIXdrive 1, on request with 2, 3 or 4 stirring positions, individual dimensions and stirring point distances.

#### 2mag MIX 4 customized

Identical to MIX 6, on request with 4 stirring positions, idividual dimensions and stirring point distances.



### 2mag - Sustainability

The trend theme sustainability of 2mag is not only a short-living term of a current spirit of time but a concept and philosophy since the founding in 2007. At the beginning as we designed our products, we thought highly of a maximal reliability, quality, durability and low lifecycle costs.

magnetic emotion



### Convince yourself of the sustainability and the value of 2mag magnetic stirrers!

- Longlife quality due to hermetically closed stainless steel housings, completely sealed
- 2mag magnetic stirring drives are water-, dust- and germ-proofed and even in some cases pressureand vacuum-tight
- High efficiency, 30 40% more stirring power than other comparable products of our competitors at the same electrical input

- 100% wear- and maintenance-free
- High quality Zero-stand-by power supply units for minimization of energy costs in the stand-by mode
- Regional suppliers warrant a high quality and a minimum environmental impact due to short transport routes
- Excellent price/performance with regard to trouble-free economic life of 10 years and more in daily use
- 3 years warranty



### 2mag AGITATION - the world is moving





I am interested in 2mag products. Please contact me.	e-mail contact:
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Department	
Name / First name	г -
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Please fax to 2mag: +49 (89) 14 33 43 69	L .

2mag AG

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2mag is not only active and successful in the field of laboratory equipment.

Also for the international famous light-design company Ingo Maurer in Munich we created a soundless magnetic drive for an exclusive illuminating and furnishing object.

Further appliances not really typical for the laboratory field are to be developed by us with a lot of passion – be surprised!

2mag – your contact for sophisticated and also fulfillable solutions for your needs and issues in the range of mixing, tempering and dosing.

Delirium Yum

Light object, designed by Ingo Maurer and Sebastian Hepting www.ingo-maurer.com

