

PTM
mechatronics

eco-Series



EAC



Energy-efficient stirring and agitating technology



Who we are

Since its foundation in 1988, PTM mechatronics GmbH develops, produces and distributes internationally its own products within the product fields energy-efficient agitators, high-performance compressed air motors, electric gripping systems and space-saving drive technology. We always tailor our work to our company values: reliability, professionalism, partnership and open to new ideas.



PTM worldwide

Over the years, PTM mechatronics GmbH has evolved into a global player. This development is based on a network of professional and well-established sales partners all around the globe. Our products go through all necessary certifications of different countries to meet the requirements of regional provisions.

A world map in shades of blue. The PTM mechatronics logo is centered over Europe. Three lines point from the logo to three certification marks: 'nec' (National Electrical Code 505) over North and South America, 'Ex' (2014 / 34 / EU) over Africa and the Middle East, and 'EAC' (The EurAsian Conformity mark) over Asia and Australia.

PTM
mechatronics

nec
National Electrical
Code 505

Ex
2014 / 34 / EU

EAC
The EurAsian
Conformity mark

PTM is your reliable partner – worldwide

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The *eco-Series* at a glance

Perfect agitating results – energy-saving – functionally safe

Our *eco-Series* comprises products in the field of functionally safe agitation. This product range was developed to ease the sensitive handling of stirring and agitating technology in hazardous environments and make it worry-free. Our products are **ATEX certified by TÜV SÜD**. They are suitable for all sensitive environments including laboratory environments.

Your benefits at a glance

- Up to 90% less energy consumption
- Up to 90% less energy costs
- Speed control with scale
- Low noise emission 75db
- Stable speeds from 10 to 600 rpm
- High torque even at low speeds 4 to 288Nm
- Resilient to standstill
- Transmission optional
- Oil-free and silicone-free
- Connection block for overload protection
- IP67 waterproof

Advantages to electric motor

- Waterproof
- Resilient to standstill
- Easy frequent load change
- Lower weight and smaller installation dimensions
- Easy change of rotation direction
- Lower heat development
- Higher efficiency
- Lower susceptibility to heat, vibration and blows
- Higher operational safety due to its robust completely mechanical design
- Electromagnetically interference-free

Advantages to vane motor

- Higher torques
- Lower air consumption
- Low rotational speed without transmission possible
- Lower noise emission
- Higher efficiency
- Compact design



Energy-efficient

Our agitators convince by their extreme low consumption of compressed air. We achieve this by means of our PTM drive technology on the basis of the radial piston principle, which has already proven itself over decades. Compared to simple agitators, which are often driven with ordinary vane motors, they reduce the consumption of compressed air by up to 90% on the average.



**Cost savings of up to €540 per year.
Amortisation of the whole
acquisiton within 1 year.**



Vane motor 35 000 L/h	€591/year
PTM PMO 1800 3 000 L/h	€51/year

At 30-45 rpm | 14-15Nm | 0.0088 €/m³ | 8h/day

Functionally safe

Our products of the eco-Series ensure functional safety in hazardous environments – without any compromises. Certified by TÜV Süd, your agitating process in ATEX zone 1 or 0 is safe and carefree from now on. Our eco-Series provides a silicone-free and oil-free drive as standard

Highlights

- Zone separation between zone 1 and zone 0
- Hard-coated aluminium housing with grounding
- Oil-free drive
- Silicone-free and acetone-resistant sealings



Atex Zone 0:

- ATEX certification II 1/2 G Ex h IIC T6 Ga/Gb X
- ATEX certification II 1/2 D IIIC T85°C Da/Db X

Atex Zone 1:

- ATEX certificate II 2 G/D c T5 100

Precision made in Germany

We know that for a perfect agitating result it needs not only a reliable and safe drive technology. The relation between motor, agitator unit and stirring tank has to be adjusted thoroughly. Therefore, we analyse the interaction between the components in our own tests and refine the results continuously. We gladly will advise you which components fit together and how you can economically and safely achieve the perfect agitating result with tried and tested quality made in Germany.

Designed,
developed and
made in Germany

ATEX agitator motor

Our ATEX agitator motors provide a functionally safe application in all ATEX environments all over the world. You can trust in an economical and homogeneous work process. The integrated connection block combines overpressure valve, throttle check valve, and silencer in one compact part for a safe and error-free connection to ensure the longevity of our motors.



Highlights

- Connector block with silencer, overpressure valve and throttle check valve
- Redundant overload protection
- ATEX certificate II 2 G/D c T5 100
- Hard-coated aluminium housing with grounding
- IP67 waterproof
- Oil-free and silicone-free
- Clockwise rotation
- 12 step regulator for exact rotational speed
- Memory function through anti-twist protection

Options

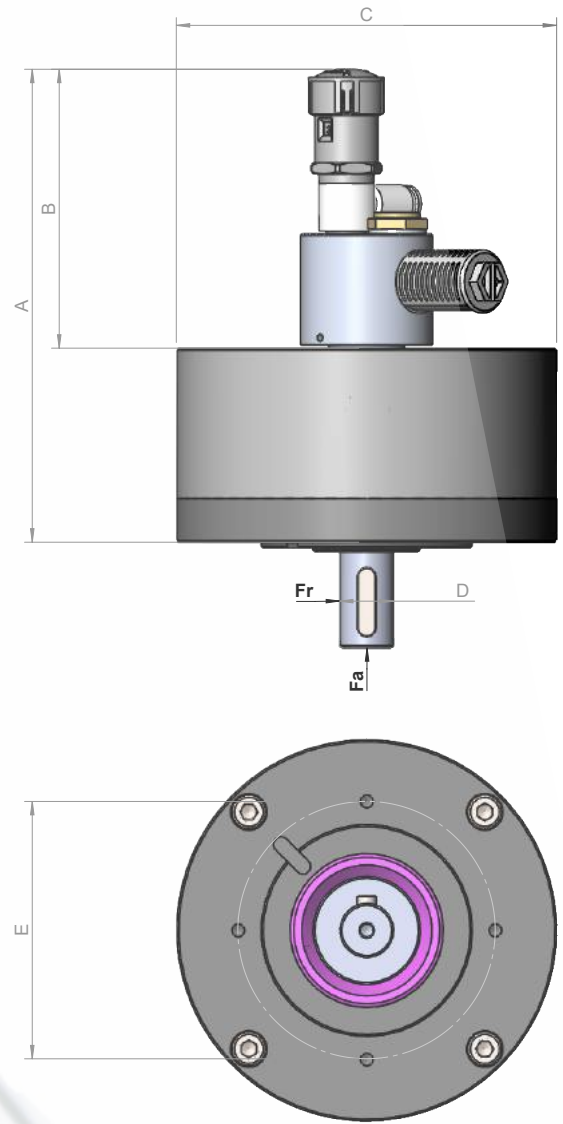
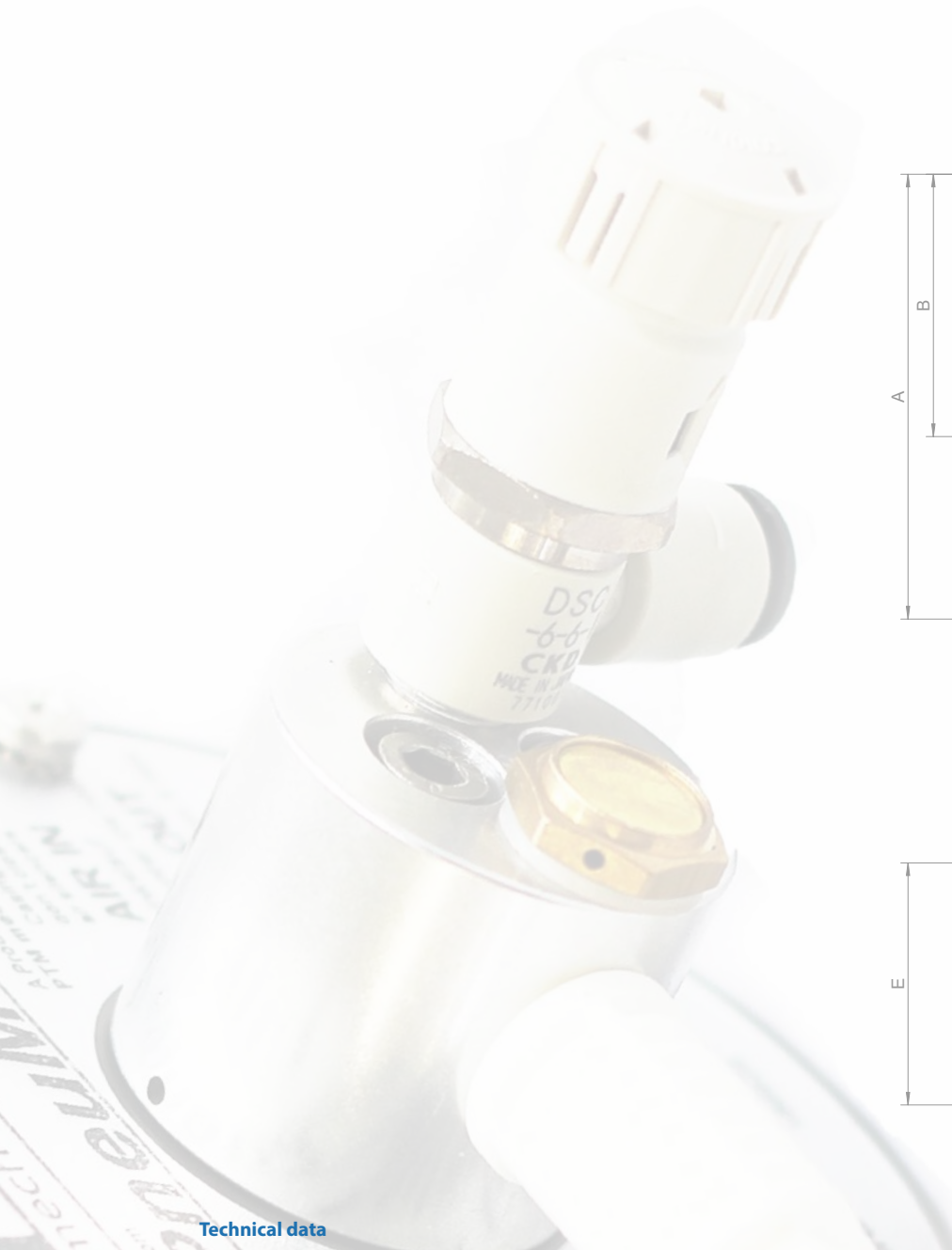
- Mounting angle
- Mounted speed-sensor
- Anticlockwise rotation

Exemplary applications

- Agitators
- Coating technology
- Chemical plant engineering
- Mills and milling plants
- Chemical process vessels
- Processing of paints, varnishes, adhesives, fillers and sealants



Motor with mounting angle



Technical data

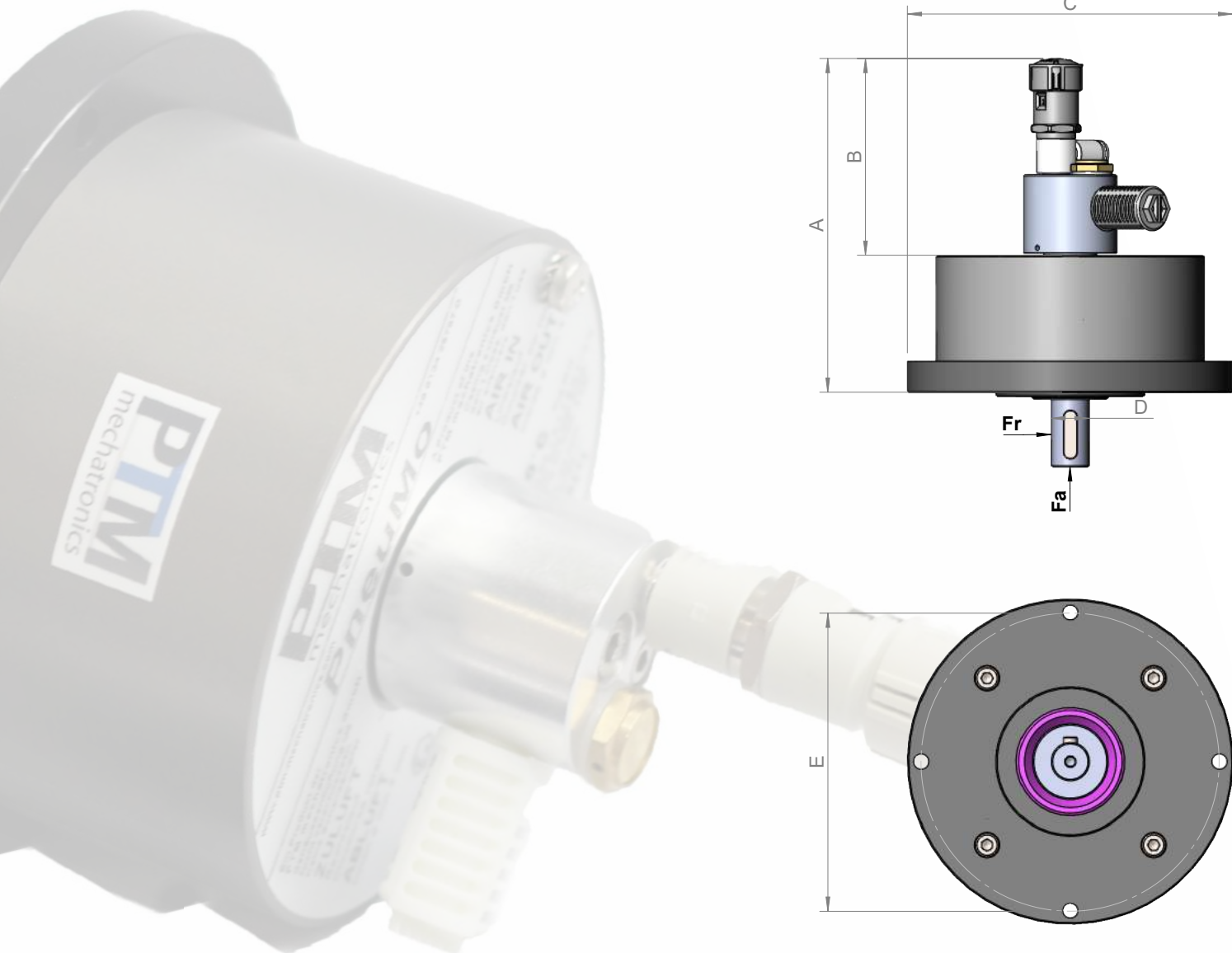
	PMO450EX	PMO900EX	PMO1800EX	PMO3600EX
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm
A	124mm	138.5mm	142mm	164mm
B	73mm	73mm	74mm	74mm
C	Ø99mm	Ø99mm	Ø159mm	Ø159mm
D	Ø14h6	Ø14h6	Ø19h6	Ø19h6
E	Ø67mm	Ø67mm	Ø115mm	Ø115mm
Fr (radial force)	400N	400N	800N	800N
Fa (axial force)	100N	100N	200N	200N

ATEX agitator motor - with mounting flange

Our ATEX agitator motor with integrated mounting flange provides an easy and quick mounting on your container.



easy mounting



Technical data

	PMO450EX-B1	PMO900EX-B1	PMO1800EX-B1	PMO3600EX-B1
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm
A	124mm	138.5mm	142mm	164mm
B	73mm	73mm	74mm	74mm
C	Ø120mm	Ø120mm	Ø199mm	Ø199mm
D	Ø14h6	Ø14h6	Ø19h6	Ø19h6
E	Ø110mm	Ø110mm	Ø180mm	Ø180mm
Fr (radial force)	400N	400N	800N	800N
Fa (axial force)	100N	100N	200N	200N

ATEX agitator drive – zone 1 – with bearing flange

Functional safety in ATEX zone 1

You get a complete product comprising drive with integrated connection block and bearing flange. The bearing flange provides stability even with extreme radial load. Thus, it is possible to agitate safely in large containers and viscid fluids.

As the drive is IP67 waterproof, it can come into contact with fluids worry-free. This is important with regard to the fluids inside the containers as well as an easy cleaning.



For extreme radial load



Highlights

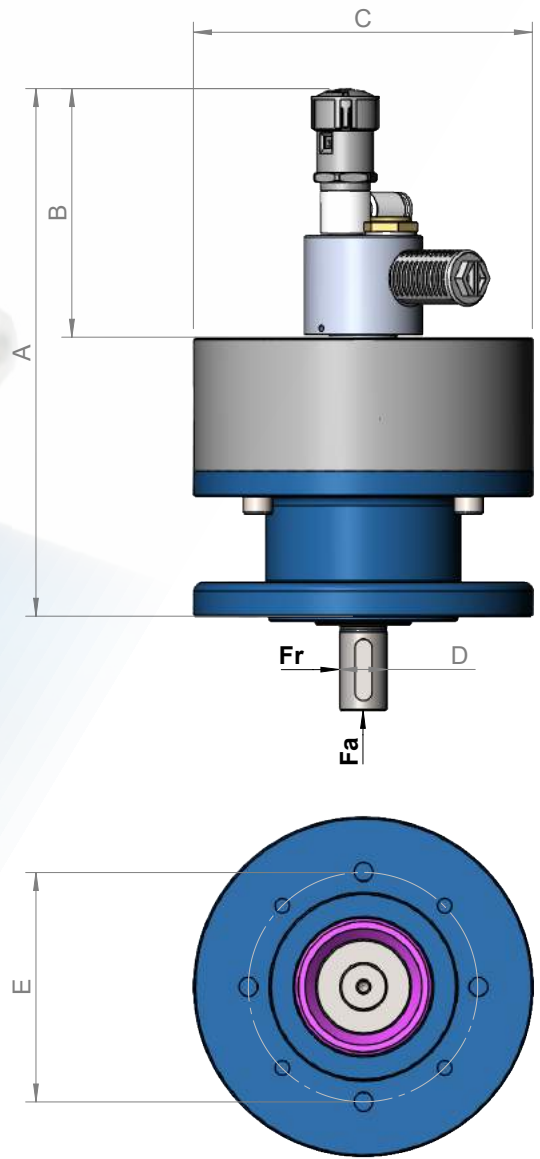
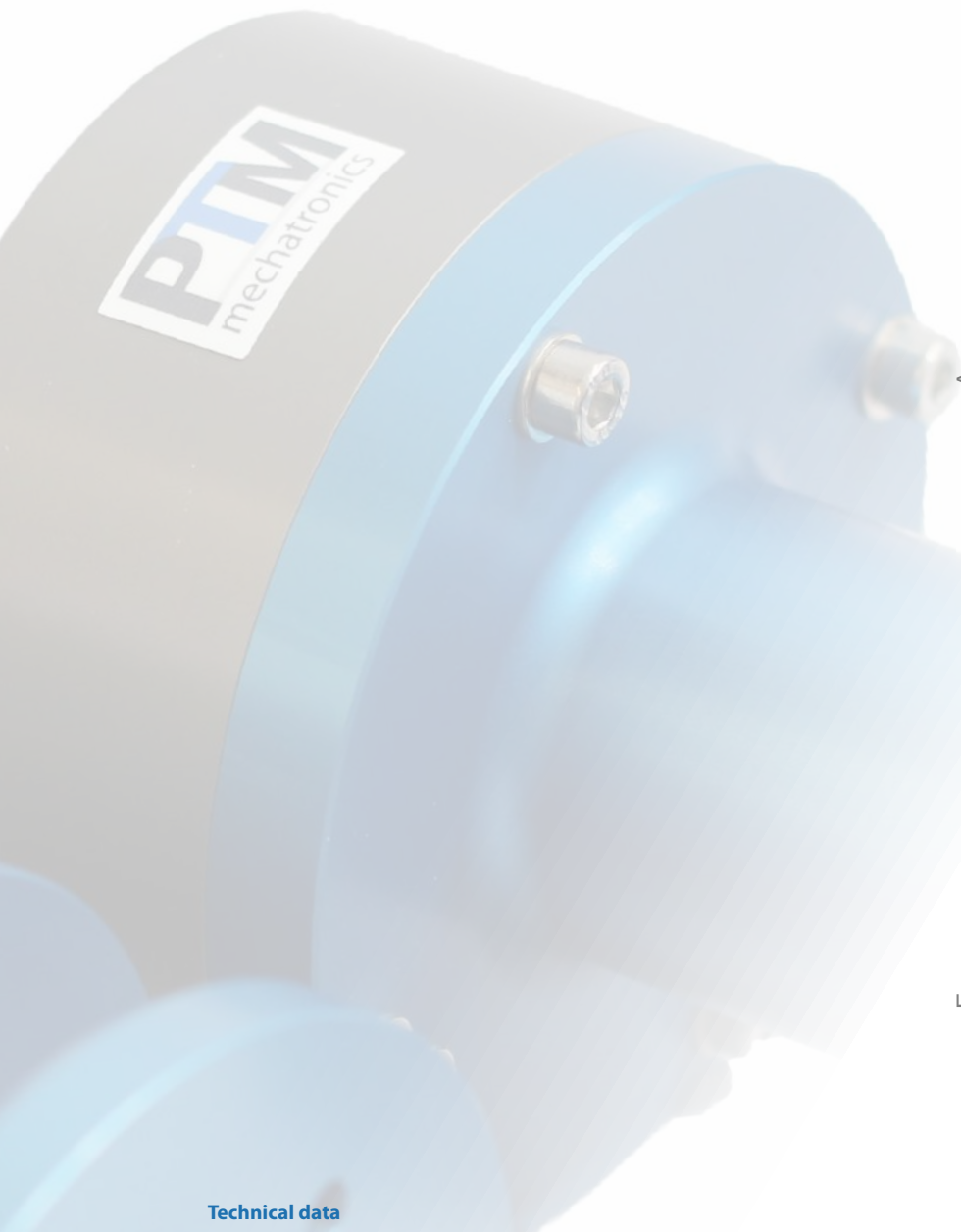
- Bearing flange allows extreme radial load
- Application in IBC containers up to 1000 liters
- ATEX certificate II 2 G/D c T5 100
- IP67 waterproof

Options

- Mounted speed-sensor
- Anticlockwise rotation
- eco-Traversal for fast and easy mounting on container
- eco-Stirrer elements
- Shafts available in various lengths

Our recommendation: Agitator system – eco-Mix Zone I

See page 14



Technical data

	PMO450EX-B3	PMO900EX-B3	PMO1800EX-B3	PMO3600EX-B3
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm
A	155mm	169.5mm	180mm	202mm
B	73mm	73mm	74mm	74mm
C	Ø99mm	Ø99mm	Ø199mm	Ø199mm
D	Ø14h6	Ø14h6	Ø19h6	Ø19h6
E	Ø67mm	Ø67mm	Ø115mm	Ø115mm
Fr (radial force)	2000N	2000N	3000N	3000N
Fa (axial force)	100N	100N	200N	200N

ATEX agitator drive – zone 0/1 – with zone separation flange

Functional safety in ATEX zone 0

You get a complete product comprising drive with integrated connection block and zone separation flange. The zone separation flange enables the worry-free agitating process in ATEX zone 0. Additionally, it provides stability even with extreme radial load. Thus, it is possible to agitate safely in large containers and viscid fluids.

As the drive is IP67 waterproof, it can come into contact with fluids worry-free. This is important with regard to the fluids inside the containers as well as an easy cleaning.

Highlights

- Zone separation flange allows extreme radial load
- Application in IBC containers up to 1000 liters
- Ex II 1/2 G Ex h IIC T6 Ga/Gb X
- Ex II 1/2 D Ex h IIIC T85°C Da/Db X
- Pluggable drive shafts
- Oil-free and silicone-free

Direct mounting on a container – zone 0

We recommend our agitator system eco-Topmix Zone 0

See page 18

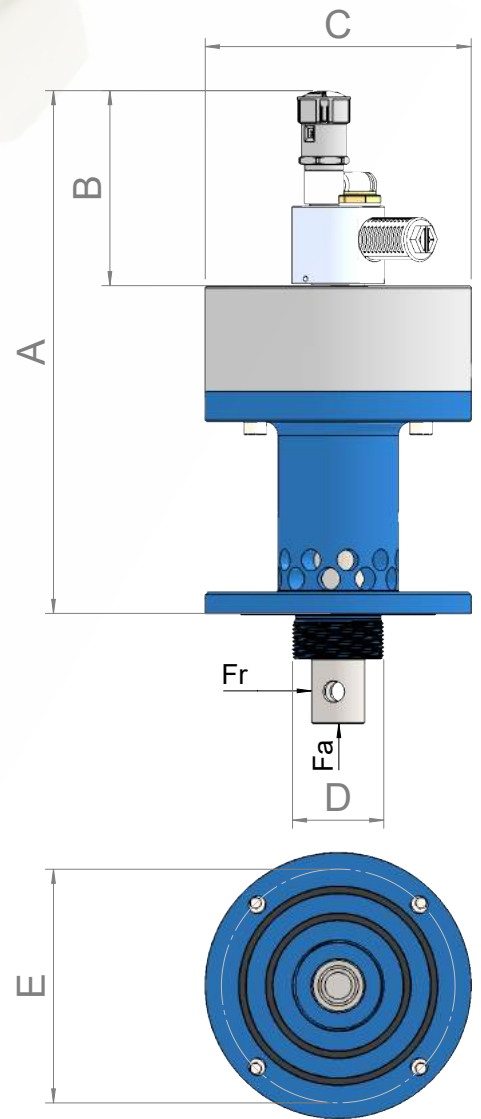


**Flexible eco-Transpose
for quick mounting
See page 24**



Options

- Mounted speed-sensor
- Anticlockwise rotation
- eco-Transpose for fast and easy mounting on container
- eco-Stirrer elements
- Shafts available in various lengths



Technical data

	ECO Serie 0450	ECO Serie 0900	ECO Serie 1800	ECO Serie 3600
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm
A	195mm	210mm	219mm	241mm
B	73mm	73mm	74mm	74mm
C	Ø99mm	Ø99mm	Ø159mm	Ø159mm
D	M34x1.5	M34x1.5	M44x1.5	M44x1.5
E	4x90°; Ø6.5mm LK: Ø87mm	4x90°; Ø6.5mm LK: Ø87mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm
Fr (radial force)	700N	700N	1000N	1000N
Fa (axial force)	100N	100N	200N	200N

Agitator system *eco-Mix Zone 1*

Functional safety in ATEX zone 1

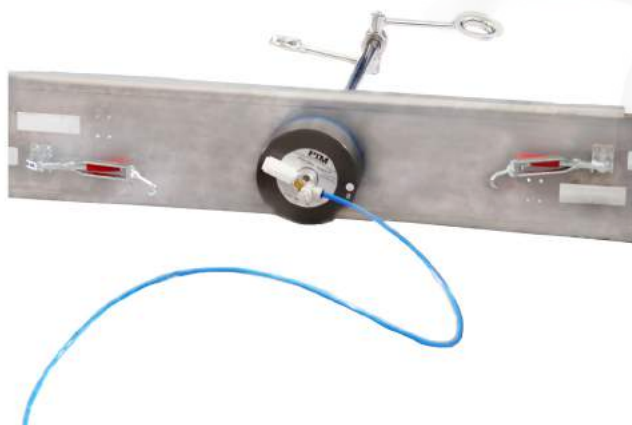
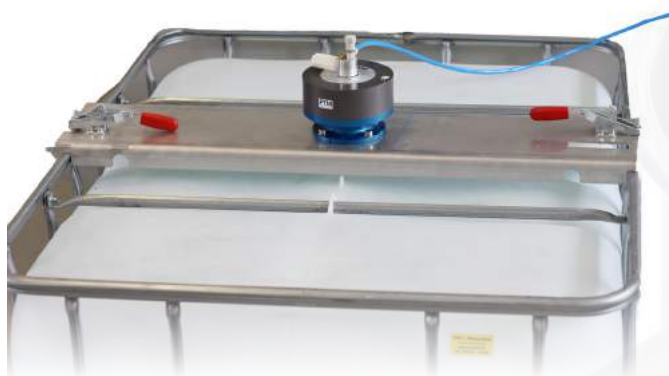
You get a complete product comprising ATEX agitator motor with integrated connection block, bearing flange, drive shaft and stirrer element. Our complete agitator systems *eco-Mix* are perfectly matched to the common standard hobcock sizes (please see table Technical data p. 17). With our optional *eco-Traverse*, the *eco-Mix* can easily be fixed to your open or closed container.

Highlights

- Bearing flange allows extreme radial load
- Application in IBC containers up to 1000 liters
- Ex II 1/2 G Ex h IIC T6 Ga/Gb X
- Ex II 1/2 D Ex h IIIC T85°C Da/Db X
- IP67 waterproof
- Pluggable drive shafts
- oil-free and silicone-free

Optional *eco-Traverse* – see page 24

*Clamp, connect → that's it.
Total weight less than 5 kg*





- 12 step regulator for exact rotational speed
- Memory function through anti-twist protection

Container sizes



**IBC Container
600-1000 liters**

220 liters

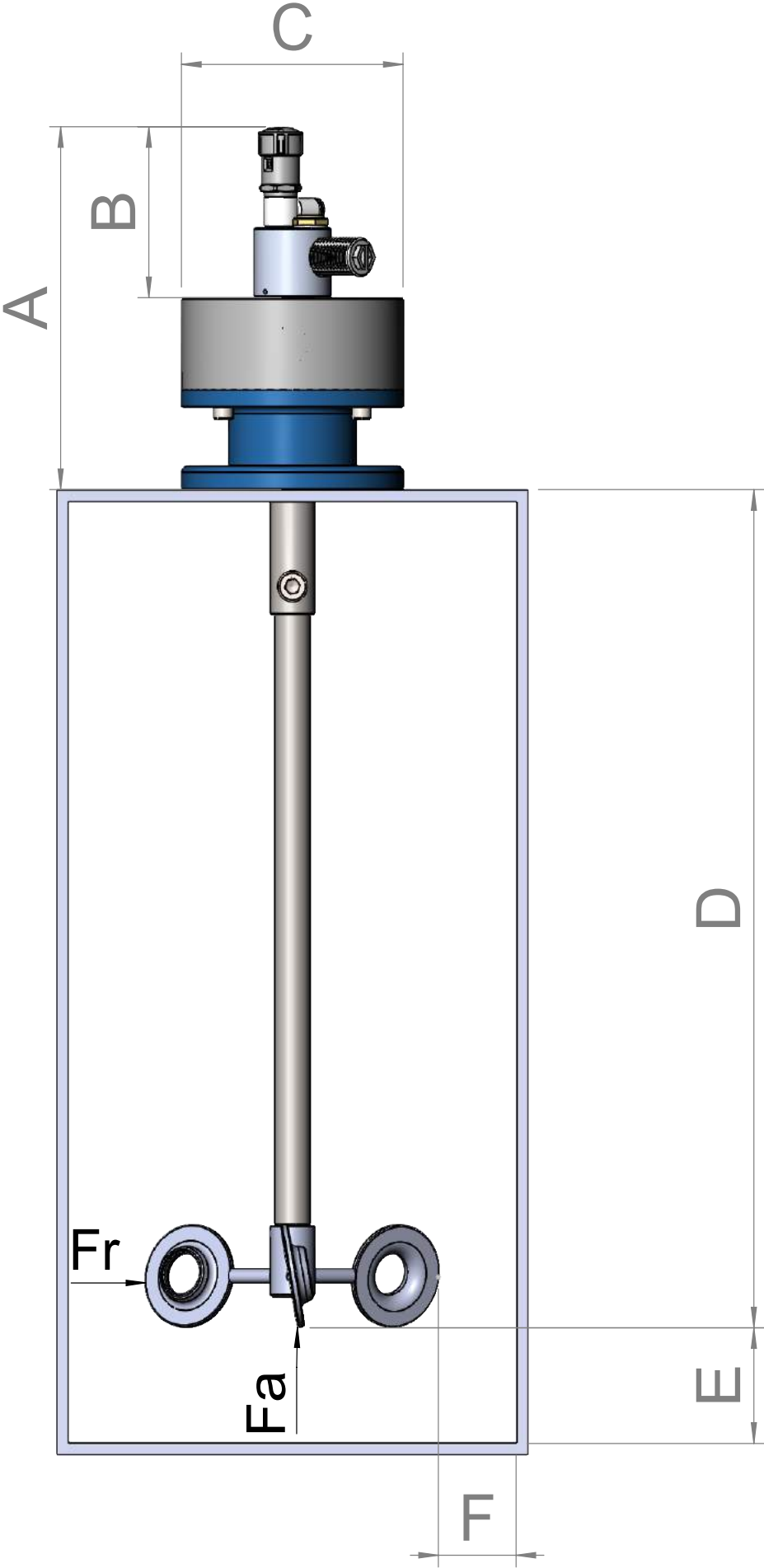
110 liters

60 liters

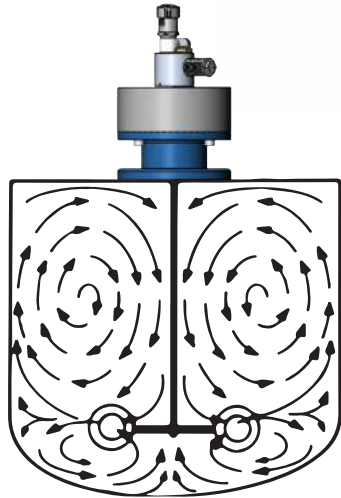
30 liters



Agitator system *eco-Mix Zone 1*



Because of the high momentum, the whole container content is in motion and homogenized with just one agitator stage within a short period of time; without any baffles or sediments.





Technical data

	ECO MIX 30L	ECO MIX 60L	ECO MIX 110L	ECO MIX 220L	ECO MIX 600L	ECO MIX 1000L
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm	3.3 rpm – 33 rpm 288 Nm
A	155mm	169.5mm	180mm	202mm	180mm	202mm
B	73mm	73mm	74mm	74mm	74mm	74mm
C	Ø99mm	Ø99mm	Ø199mm	Ø199mm	Ø199mm	Ø199mm
D	298mm	488mm	685mm	720mm	840mm	840mm
E (minimum distance axial)	25mm	25mm	25mm	25mm	25mm	25mm
Fr (radial force)	25mm	25mm	25mm	25mm	25mm	25mm
Fa (axial force)	75N	50N	50N	50N	40N	40N
Fa (axial force)	100N	100N	200N	200N	200N	200N
Stirrer element	170mm	210mm	260mm	320mm	500mm clapable	500mm clapable
Drive shaft	200mm	392mm	617mm	640mm	557mm	557mm
Container hole diameter	35mm	35mm	45mm	45mm	45mm	45mm
Drilling pattern	4x90°; Ø5.5mm LK: Ø87mm	4x90°; Ø5.5mm LK: Ø87mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm

Agitator system *eco-Topmix Zone 0*

Functional safety in ATEX zone 0/1

You get a complete product comprising ATEX agitator motor with integrated connection block, zone separation flange, drive shaft and stirrer element. Our agitator systems *eco-Topmix* are perfectly matched to the common standard hobbock sizes (please see table Technical data p. 21). Finally, you just need to fix your *eco-Topmix* to your open or closed container – ready and functionally safe without compromises.

Highlights

- Zone separation flange allows extreme radial load
- Application in IBC containers up to 1000 liters
- Ex II 1/2 G Ex h IIC T6 Ga/Gb X
- Ex II 1/2 D Ex h IIIC T85°C Da/Db X
- IP67 waterproof
- Pluggable drive shafts

Options

- *eco-Transpose*
- Stainless-steel counter nut with PTFE seal
- Overpressure protected sealing



*Clamp, connect → that's it.
Total weight less than 5 kg*

Stainless-steel counter nut with PTFE seal





- 12 step regulator for exact rotational speed
- Memory function through anti-twist protection

Container sizes



**IBC Container
600-1000 liters**

220 liters



110 liters



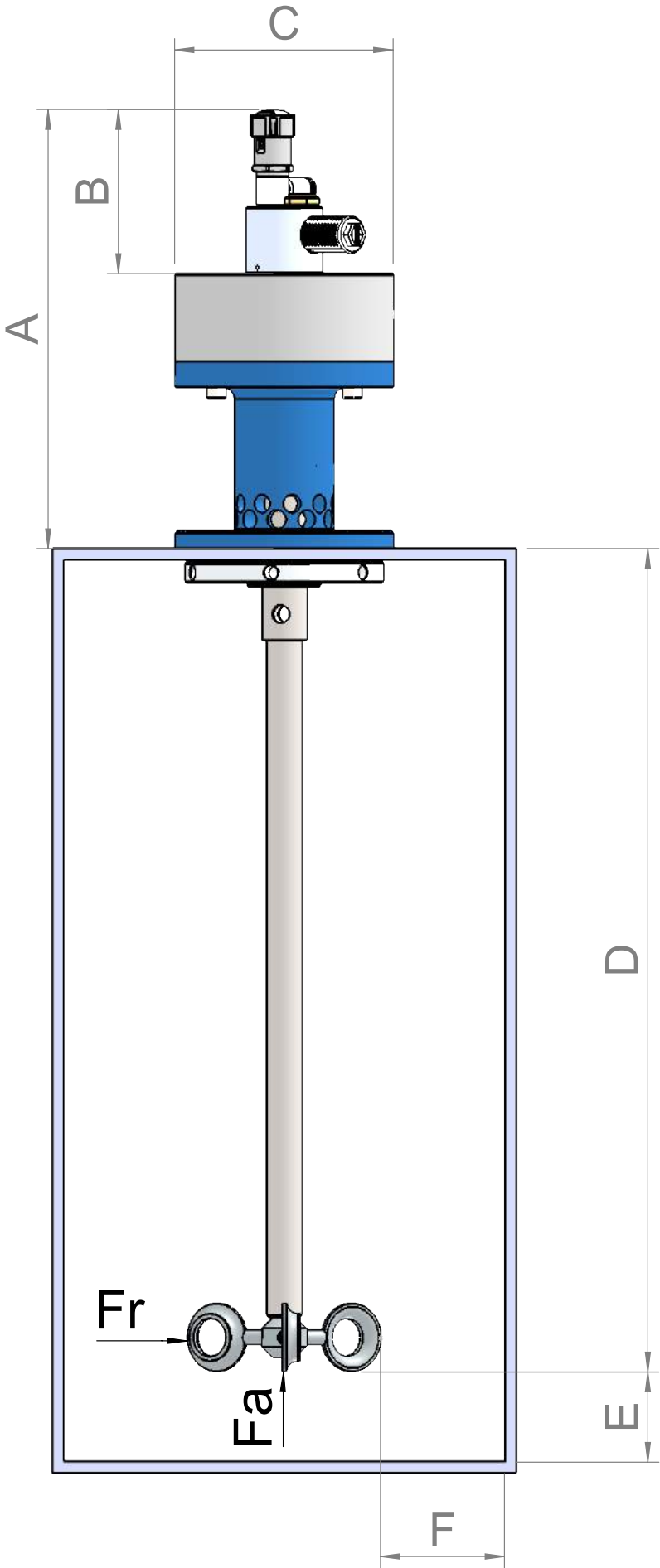
60 liters



30 liters



Agitator system *eco-Topmix Zone 0*

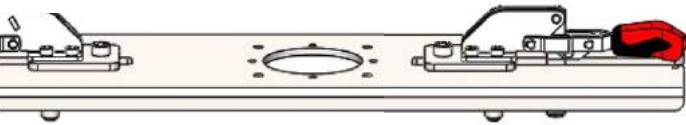
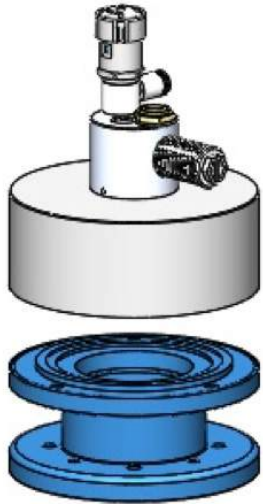


Because of the high momentum, the whole container content is in motion and homogenized with just one agitator stage within a short period of time; without any baffles or sediments.



Technical data

	ECO TOPMIX 30L	ECO TOPMIX 60L	ECO TOPMIX 110L	ECO TOPMIX 220L	ECO TOPMIX 600L	ECO TOPMIX 1000L
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 4 Nm	30 rpm – 300 rpm 8 Nm	30 rpm – 300 rpm 16 Nm	30 rpm – 300 rpm 32 Nm	30 rpm – 300 rpm 32 Nm
Rotation speed Max. torque (with transmission 1:2)	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 2 Nm	30 rpm – 600 rpm 4 Nm	30 rpm – 600 rpm 8 Nm	30 rpm – 600 rpm 16 Nm	30 rpm – 600 rpm 16 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm	10 rpm – 100 rpm 48 Nm	10 rpm – 100 rpm 96 Nm	10 rpm – 100 rpm 96 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm	3.3 rpm – 33 rpm 144 Nm	3.3 rpm – 33 rpm 288 Nm	3.3 rpm – 33 rpm 288 Nm
A	195mm	210mm	219mm	241mm	219mm	241mm
B	73mm	73mm	74mm	74mm	74mm	74mm
C	Ø99mm	Ø99mm	Ø199mm	Ø199mm	Ø199mm	Ø199mm
D	298mm	488mm	685mm	720mm	840mm	840mm
E (minimum distance axial)	25mm	25mm	25mm	25mm	25mm	25mm
Fr (radial force)	25mm	25mm	25mm	25mm	25mm	25mm
Fa (axial force)	75N	50N	50N	50N	40N	40N
Fa (axial force)	100N	100N	200N	200N	200N	200N
Stirrer element	170mm	210mm	260mm	320mm	500mm clapable	500mm clapable
Drive shaft	200mm	392mm	617mm	640mm	557mm	557mm
Container hole diameter	35mm	35mm	45mm	45mm	45mm	45mm
Drilling pattern	4x90°; Ø5.5mm LK: Ø87mm	4x90°; Ø5.5mm LK: Ø87mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm	4x90°; Ø8.5mm LK: Ø125mm



eco-Disc



eco-Cup



eco-Blade

Drive selection	Nm
my-eco 450	4
my-eco 900	8
my-eco 1800	16
my-eco 3600	32

**Drive selection
my-eco 450 to 3600**

Zone 1	Zone 0/1
Z1	Z0/1

eco-Traversal
eco-Traversal for 30 to 60 liters hobbock
eco-Traversal for 110 to 220 liters containers
eco-Traversal for 600 to 1000 liters IBC containers

Counter nut
Stainless-steel counter nut with PTFE seal

Drive shaft
AW (0-800mm)

Element	Diameter / Options
eco-Disc	60-700mm transmission, sliding hub, foldable
eco-Cup	
eco-Blade	

my-eco - my agitator

With my-eco, we offer you our whole eco-Series product range for the individual configuration of your agitator. You can select all components necessary for your application. Should you need any assistance, we are happy to advise you, even on site.

Step 1 Please select the drive for your agitator by means of the torque.

Step 2 Do you need the agitator for ATEX zone 0 with zone separation flange Z0/1 or for zone 1 with bearing flange Z1?

Zone	Atex certificate
Z1	Ex II 2 G/D c T5 100
Z0/1	Ex II 1/2 G Ex h IIC T6 Ga/Gb X Ex II 1/2 D Ex h IIIC T85°C Da/Db X

Step 3 Add our flexible eco- Traverse to your agitator for the easy and quick mounting on all open or closed containers with just two clicks.

Step 4 When selecting ATEX zone 0 in step 2, you can additionally select a stainless-steel nut with PTFE sealing for a pressure-tight connection. In case of overpressure or vacuum inside the container, for example when liquids are pumped into the container or exhausted, your agitator remains sealed.

Step 5 Please select the length of your drive shaft.

Step 6 Please select your stirrer element.

Now it is ready - your my-eco.

eco- Traverse

Highlights

- Stainless-steel traverse made of V4A stainless steel
- 3 traverses with different adjustable spans



Quick-action clamp

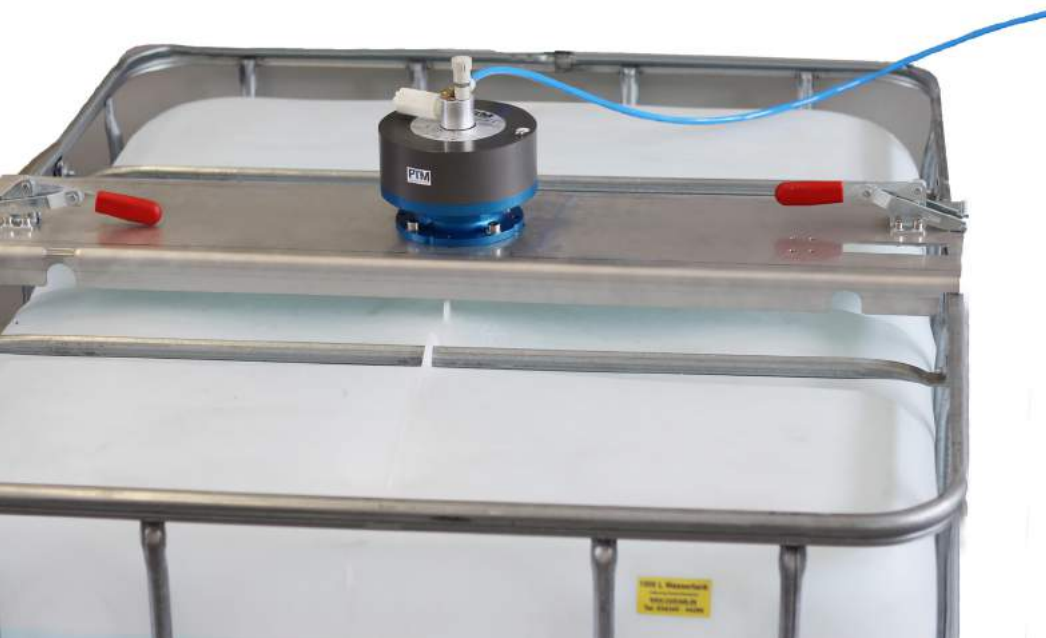


3 sizes available

eco-Traverse for 30 to 60 liters hobbock

eco-Traverse for 110 to 220 liters containers

eco-Traverse for 600 to 1000 liters IBC containers



Pressure-tight connection to IBC container

Laboratory agitator *eco-Lab*

ATEX certificate II 2 G/D c T5 100

Especially in laboratory environments, perfect agitating results are highly important. For these applications, we have developed our ATEX laboratory agitator *eco-Lab* for all applications on tripod.

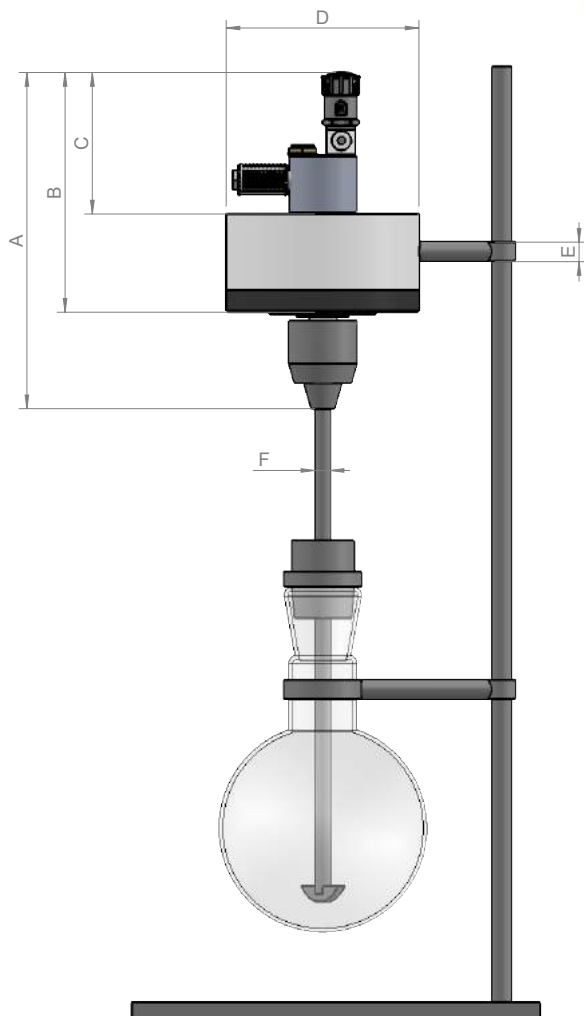
You get a complete product comprising drive and integrated connection block, quick-action chuck, mounting pin, drive shaft and stirrer element and an easy and carefree handling with absolute functional safety.

Highlights

- ATEX certificate II 2 G/D c T5 100
- Hard-coated aluminium housing with grounding
- Oil-free drive
- Several sealing concepts (silicone-free, Viton, acetone-resistant)
- IP67 waterproof

Exemplary application

- Agitators on tripod
- Chemical vessels
- Processing of paints, varnishes, adhesives, fillers and sealants



Technical data

	eco-Lab 450	eco-Lab 900
Rotation speed Max. torque (without transmission)	30 rpm – 300 rpm 4 Nm	30 rpm – 300U/min 8 Nm
Rotation speed Max. torque (with transmission 1:2)	60 rpm – 600 rpm 2 Nm	60 rpm – 600 rpm 4 Nm
Rotation speed Max. torque (with transmission 3:1)	10 rpm – 100 rpm 12 Nm	10 rpm – 100 rpm 24 Nm
Rotation speed Max. torque (with transmission 9:1)	3.3 rpm – 33 rpm 36 Nm	3.3 rpm – 33 rpm 72 Nm
B	191mm	306mm
C	73mm	73mm
D	99mm	99mm
E	10mm	10mm
F (shaft diameter)	0–13mm	0–13mm

Laboratory accessories

EX tripod

Technical details

- Laboratory stand with 74 cm laboratory rod
- 2 cross clamps



EX stirrer feedthrough

Material: PTFE EX

Temperature resistance: -15°C to +200°C

Chemical resistance: ++ very good

Conductivity: 1.000 kOh

Product description

Ground joint cone made of static dissipative PTFE-EX with sealing rings on the outside to prevent sticking of the connection and to reduce the danger of breaking glass.

A special gasket made of PTFE-EX and an FKM o-ring which is compressed by GL screw cap provide a good sealing of the stirrer shaft. Bore with female thread M5 on the knurl for earth connection.



Applications

Perfect bearing for stainless steel, glass and stirrer shafts EX

Kern NS	für Rührwellen Ømm	Gesamtlänge mm ca.	Kappengewinde GL
29/32	8	71	18
29/32	10	72	25

EX-Stirrer

Material: PTFE EX

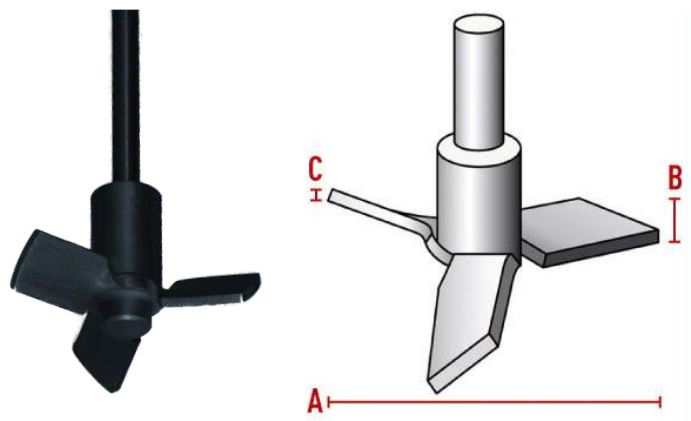
Temperature resistance: -200°C to +250°C

Chemical resistance: ++ very good

Conductivity: 1.000 kOhm

Product description

PTFE-EX jacketed stainless-steel shaft, propeller completely made of PTFE-EX with three 45° angled round or angular blades, good chemical resistance. The mix only comes into contact with PTFE-EX.



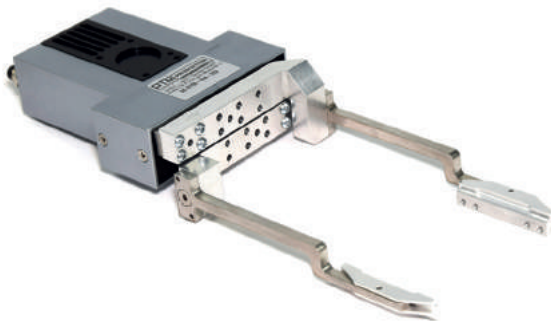
The mix is sucked bottom-up, good axial flow with low shear force. Earthing is made for example via a stirrer seal made of PTFE-EX.

Länge mm	Wellen Ømm	Spann Ømm	Flügelmaße laut Abbildung A - B - C mm
350	8	6.5	75 - 18 - 3.0



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☎ +49 8134 257 97 – 0

☎ +49 8134 257 97 – 99

✉ info@ptm-mechatronics.com

🌐 www.ptm-mechatronics.com

PTM
mechatronics

PTM mechatronics GmbH
Gewerbepark 1
82281 Egenhofen
Germany