

Mixers and flowmakers

motralec

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Full range of efficient and reliable submersible mixers and flowmakers for wastewater and sludge

Grundfos offers a complete range of extremely dependable and highly efficient submersible mixers and flowmakers for a variety of processes in wastewater treatment plants and industrial processes.

The mixers and flowmakers are designed for use in the toughest environments. The mixers and flowmakers are of a modular design, which makes them easy to maintain and service. All parts are manufactured from specially selected materials, and each component is thoroughly tested for reliability and durability before assembly.

Direct or planetary gear drive

The Grundfos range of mixers is available either with direct or planetary gear driven propeller.

The stainless steel or polyamide propellers are designed for high efficiency even under heavy-duty operation conditions.



The direct driven mixers are available in 4- or 8-pole versions in the range from 0.75 to 4.5 kW, and gear driven mixers are available in the range from 1.5 to 18.5 kW.

Flowmakers are available in the range from 1.3 to 4.0 kW.

Powerful advantages

➤ Lifelong reliability

Grundfos mixers and flowmakers are of a robust construction, designed for continuous operation under the most difficult operating conditions.

➤ Energy-saving efficiency

Modular motors and planetary gear systems make the mixers and flowmakers highly dependable and very efficient with low operating costs.

➤ Easy maintenance

State-of-the-art design and sturdy construction reduce wear and tear and allow for quick and easy once-a-year maintenance.



A wide variety of applications



The Grundfos range of mixers and flow-makers is ideally suitable for a variety of applications in wastewater treatment, industrial processes, construction, agriculture and aquaculture.

Municipal wastewater treatment

- Pumping stations
- Storm water tanks
- Biological treatment of activated sludge
- Treatment of primary wastewater
- Treatment of secondary wastewater
- Treatment of digested sludge
- Sludge storage tanks
- Homogenization tanks

Industrial processes

- Paper industry
- Paint and dye-stuff mixing
- Chemical industry
- Other industrial homogenization processes

Sludge treatment

- Homogenizing storage and thickener sludge
- Digesting processes
- Degassing and lime storage mixing

Agriculture

- Slurry
- Biogas



Mixer AMD.07.18.1410

Self-cleaning propeller

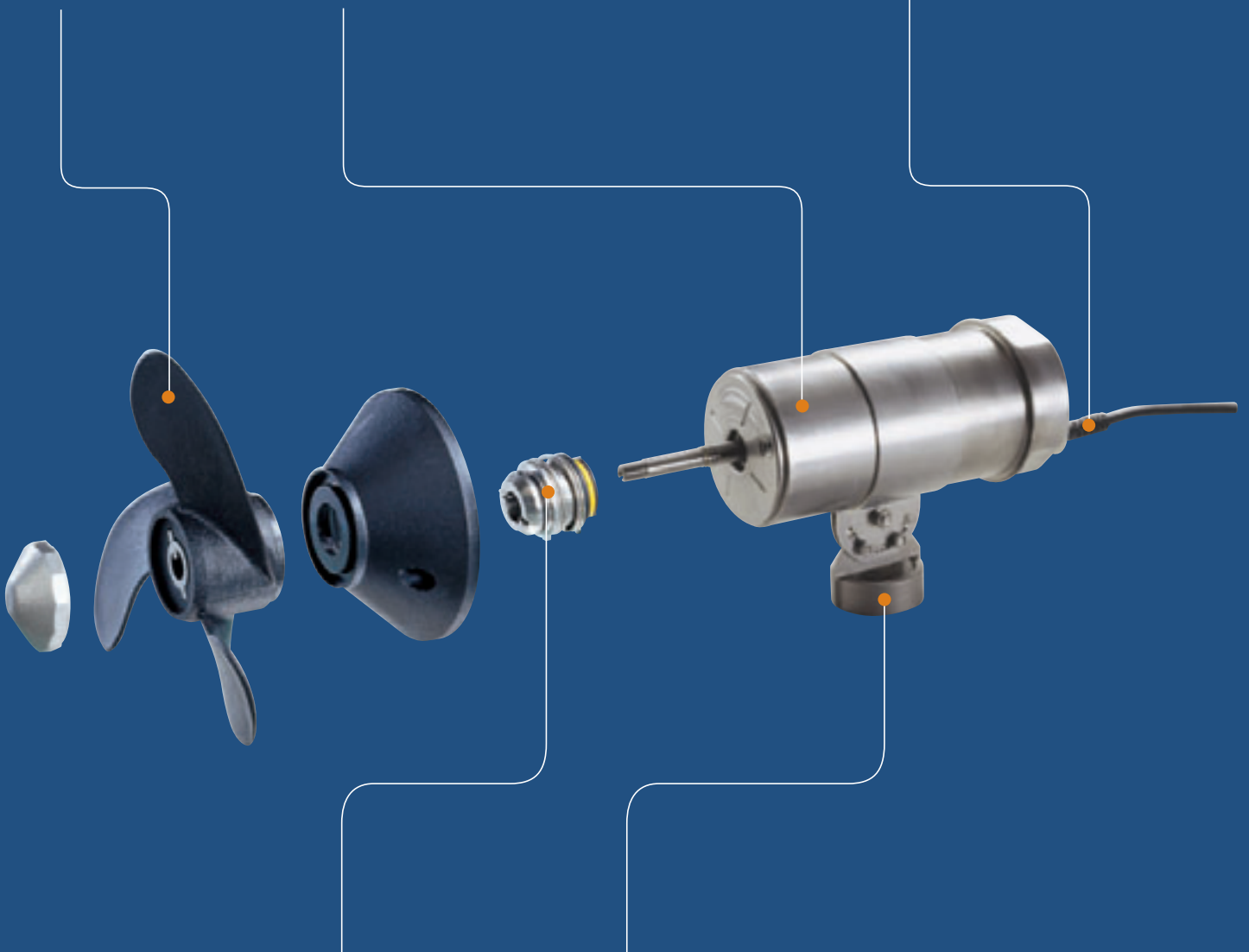
Made from highly wear-resistant polyamide material. This ensures reliable operation and a long lifetime.

Motor protection

The motor is effectively protected against overload and overheating by three thermal switches placed in each motor winding.

Cable entry

The cable entry is hermetically sealed with a glass seal. In the event of damage, no water will penetrate the motor.



Shaft seal

The shaft seal is operating in an oil-filled seal housing, which ensures optimum operating conditions and a long lifetime. When it does eventually wear out, low replacement cost is another benefit.

Bracket

Supplied with a 2" bracket, ready for installation.

Mixer AMD.XX.45.XXX

Integrated motor bracket

Non-corroding polyamide motor bracket with integrated hermetically sealed cable entry.

Motor housing

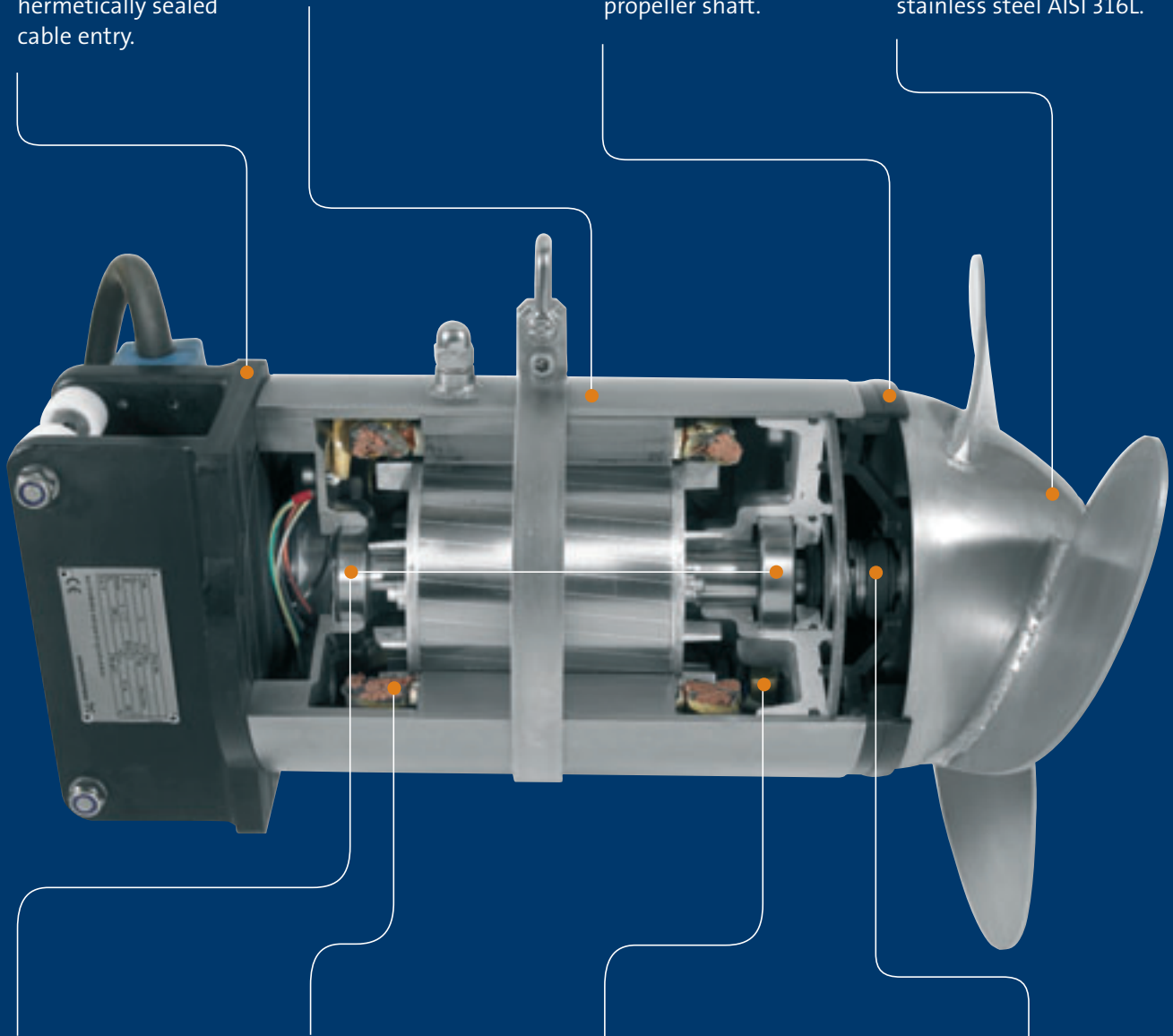
Made from stainless steel AISI 316L with a smooth self-cleaning surface.

Protection ring

Made from POM. Ensures that long-fibred materials are not caught and wound around the propeller shaft.

Self-cleaning propeller

Hydrodynamic 3-blade propeller and hub with excellent self-cleaning capabilities, made from stainless steel AISI 316L.



Two ball bearings

The rotor shaft rests on two heavy-duty ball bearings.

Motor protection

The motor is effectively protected against overload and overheating by three thermal switches placed in each motor winding.

Active electronic leak sensor

A liquid detection system prevents damage to the mixer in the event that water should penetrate into the oil chamber.

Shaft sealing

Mechanical shaft seal of silicon carbide, SiC/SiC, and secondary seal of carbon/SiC. Primary seal is protected against ingress of long-fibred materials by a stainless steel protection sleeve. Secondary seal is mounted in an oil chamber.

AMG, AFG

Cable entry

Watertight cable entry with self-shaping seal preventing cable damage.

Motor protection

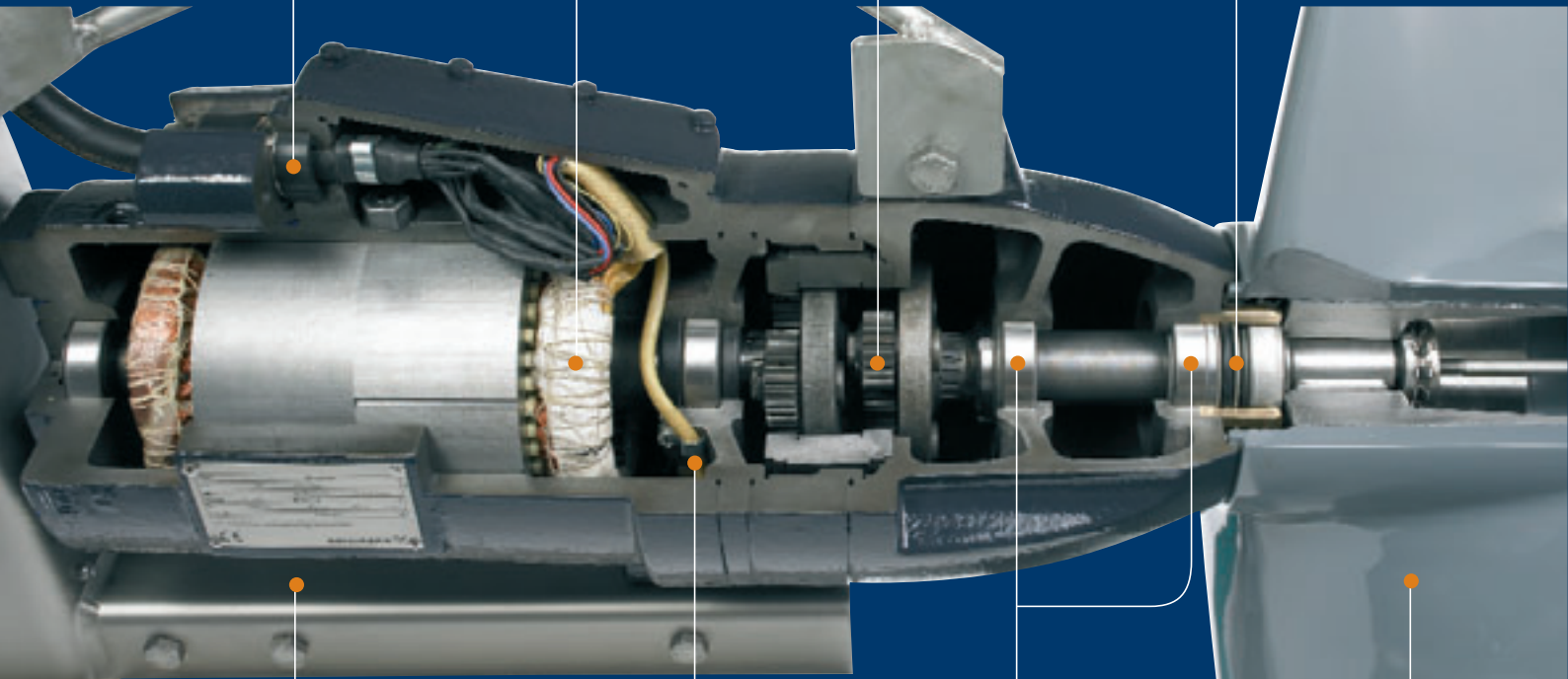
The motor is effectively protected against overload and overheating by three thermal switches or three thermistors placed in each motor winding.

Planetary gear

The best solution to transfer axial forces, thus the high efficiency of 97%. Slim design provides an optimal hydrodynamic shape.

Shaft sealing

The radial shaft sealing rings protect the mechanical shaft seal system from abrasive parts. During maintenance, only the less expensive radial shaft sealing rings need to be changed.



Stable motor bracket

Corrosion resistant motor bracket made from stainless steel, galvanically separated from the motor housing. The motor bracket ensures easy installation and stable operation.

Active electronic leak detector

Indicates possible liquid in the gear housing. Even the smallest quantity will be quickly detected. Thus service can be carried out before any damage is done.

Two ball bearings

The rotor shaft rests on two ball bearings, which accommodate both axial and radial forces.

Propeller hub

Hydro dynamic 2 or 3-blade propellers allow for high efficiency and non-clogging operation. Propeller hub forms a labyrinth seal for the sealing system.

Protection features and type key

Material specification

Component	Material	DIN W.-Nr./EN standard	AISI/ASTM	Mixer/flowmaker
Bottom fixation	Stainless steel	1.4306	304L	All types
Column profile tube		1.4404	316L	
Depth blocker				
Mounting clamp, with 2" bracket	Stainless steel	1.4404	316L	AMD.07.18.1410
Motor bracket	Stainless steel	1.4306 1.4404	304L 316L	AMG, AFG
	PA12	-	-	AMD
Top fixation	Stainless steel or galvanized steel	1.4306	316L	All types
		1.4404	316L	
		1.0037	-	
Pull and safety chain	Stainless steel	1.4404	316L	AMD, AMG
	Stainless steel	1.4401	316L	AMD.07.18.1410
Motor housing	Cast-iron, grade 25 (EN-GJL-250)	EN-JL1040	-	AMG, AFG
		1.4404	316L	AMD
Sealing flange	POM (polyoxymethylene)	-	-	AMD
Motor flange	Aluminium	-	-	AMD
Protecting ring	POM (polyoxymethylene)	-	-	AMD
Gear casing	Cast-iron, grade 25 (EN-GJL-250)	EN-JL1040	-	AMG, AFG
Stand with winch Crane boom with winch	Stainless steel or galvanized steel	1.4306	304L	Open installation
		1.4404	316L	
		1.0037	-	
Crane with chain hoist and chain	Stainless steel	1.4306	304L	Sealed installation
		1.4404	316L	
	Galvanized steel	1.0037	-	
Crane boom with winch	Aluminium	ALMg3	-	
Propeller	Stainless steel	1.4306	304L	AMG
		1.4404	316L	AMD
	Ductile, moulded polyamide PA6G	-	-	AFG.XX.130.XX
	Epoxy resin (Baydur®) with cast-iron (EN-GJS-400-15) reinforcement	EN-JS1030	-	AFG.XX.180.XX AFG.XX.230.XX
Propeller and hub	Polyamide PA 66	-	-	AMD.07.18.1410
Hub	Stainless steel	1.4306	304L	AFG.XX.130.XX
		1.4404	316L	AMD.XX.45
	Cast-iron (EN-GJS-400-15)	EN-JS1030	-	AFG.XX.180.XX
				AFG.XX.230.XX

Corrosion protection

To ensure long and trouble-free operation, the mixers/flowmakers are protected against corrosion with a high-grade multi-layer corrosion system.

Electrical data

Mains voltage [V]	3 x 400-415
Voltage tolerance [%]	+6/ -10
Mains frequency required [Hz]	50
Thermal sensor type	PTC or PTO
Thermal switch cut-out temperature [°C]	130
Enclosure class	IP 68
Insulation class	F
Max. installation depth [m]	20
Max. liquid temperature [°C]	40
Max. number of starts/hour	20
Cable length [m]	8

Type key

Example	A	M	D	.45	.45B	.675
Type range						
Version:						
M = Mixer						
F = Flowmaker						
Drive:						
D = Direct						
G = Gear						
Power output, P ₂ [kW] x 10						
Propeller diameter [cm]						
Propeller speed [min ⁻¹]						
Non explosion-proof						
E = Explosion-proof						

Technical data

Mixer/flowmaker	Power output, P _N [kW]	Power input, P ₁ [kW]	Rated motor voltage [V]	Cable type (8 m long)	Number of poles	Operating mode 2)	Propeller speed [min ⁻¹]	I _N [A] 2)	Cos φ	Starting current [A]	Number of blades	Capacity [m ³ /h]	Mean velocity [m/s]	Product numbers
AMD.07.18.1410	0.75	1.3	400	H07RN-F4G1	4	S1, delta	1410	1.9	0.75	9.3	3	231	2.6	96113490
AMD.15.45B.710	1.5	2.01	230/400	A07RN-F 12G1.5	8	S1, star	710	5.9	0.53	26.7		874	1.9	96496413
AMD.25.45B.690	2.5	3.21				S1, star	690	7.2	0.69	26.7		1058	2.3	96496412
AMD.35.45B.705	3.5	4.86	400			S1, delta	705	11.3	0.65	45.8	1245	2.71	96496411	
AMD.45.45B.675	4.5	6.08	230/400		S1, delta	675	12.5	0.72	45.8	1435	3.12	96560925		
AMD.20.45.700	2.0	2.62			S1, star	700	6.5	0.62	26.7	966	2.1	96560926		
AMD.30.45.710	3.0	4.23	400		S1, delta	710	10.4	0.61	45.8	1151	2.51	96560927		
AMD.40.45.695	4.0	5.48	230/400		S1, delta	695	12.0	0.68	45.8	1340	2.92	96560928		
AMG.15.40.325	1.5	1.88			S1, star	325	4.2	0.75	21.0	1058	2.15	96094843		
AMG.22.45.325	2.2	2.75	400/690		A07RN-F 12G2.5	4	S1, star	325	6.0	0.78	30.0	1350	2.34	96094844
AMG.30.47.328	3.0	3.75					S1, delta	328	7.3	0.79	38.7	1629	2.50	96094845
AMG.40.52.326	4.0	5.00		S1, delta	326	9.2	0.78	42.3	2118	2.72	96094846			
AMG.55.50.335	5.5	6.88		A07RN-F 12G4	4	S1, delta	335	12.9	0.82	65.8	2315	3.21	96094847	
AMG.75.58.336	7.5	9.38				S1, delta	336	16.4	0.84	98.4	3234	3.40	96094848	
AMG.110.68.334	11.0	13.70		230/400	A07RN-F 12G1.5	4	S1, delta	334	24.0	0.87	124.8	4563	3.49	96094849
AMG.150.73.354	15.0	18.70					S1, delta	354	33.0	0.76	191.4	5907	3.92	96094850
AMG.185.78.351	18.5	23.10		400/690	A07RN-F 12G1.5	4	S1, delta	351	39.0	0.80	241.8	6985	4.06	96094851
AFG.15.130.76	1.5	1.84					230/400	S1, star	76	4.2	0.67	21.0	5874	1.23
AFG.22.130.77	2.2	2.70		400/690	A07RN-F 12G1.5	4	S1, star	77	6.0	0.78	30.0	6782	1.42	96094853
AFG.30.130.92	3.0	3.75	S1, delta				92	7.3	0.78	38.7	7546	1.58	96094854	
AFG.40.130.93	4.0	5.00	230/400	A07RN-F 12G1.5	4	S1, delta	93	9.2	0.83	42.3	8453	1.77	96094855	
AFG.13.180.30	1.3	1.63				S1, star	30	3.9	0.61	17.6	7461	0.81	96560917	
AFG.18.180.34	1.8	2.25	400	A07RN-F 12G1.5	4	S1, star	34	4.5	0.74	20.3	8770	0.96	96560919	
AFG.24.180.39	2.4	3.00				S1, delta	39	7.1	0.61	32.0	10075	1.10	96560921	
AFG.37.180.46	3.7	4.63	230/400	A07RN-F 12G1.5	6	S1, delta	46	8.0	0.80	36.0	12147	1.33	96560922	
AFG.15.230.22	1.5	1.88				S1, star	22	5.2	0.52	24.0	10470	0.70	96094856	
AFG.22.230.25	2.2	2.75	400/690	A07RN-F 12G1.5	4	S1, star	25	6.4	0.63	29.0	12265	0.82	96094857	
AFG.30.230.29	3.0	3.75				S1, delta	29	8.6	0.66	41.3	15556	1.04	96094858	
AFG.40.230.35	4.0	5.00				S1, delta	35	10.0	0.73	43.7	17500	1.17	96094859	

1) If the liquid viscosity exceeds that of water, the mixer can operate up to this figure without any problems.

Operation in water gives lower values.

2) Applies to 400 V mains voltage.

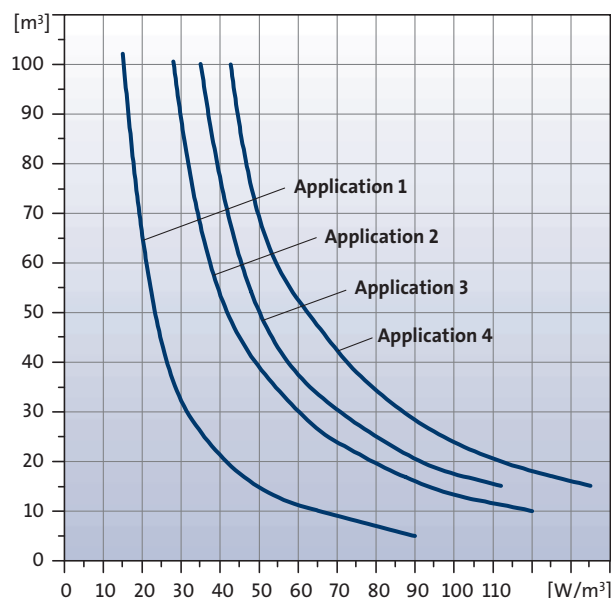
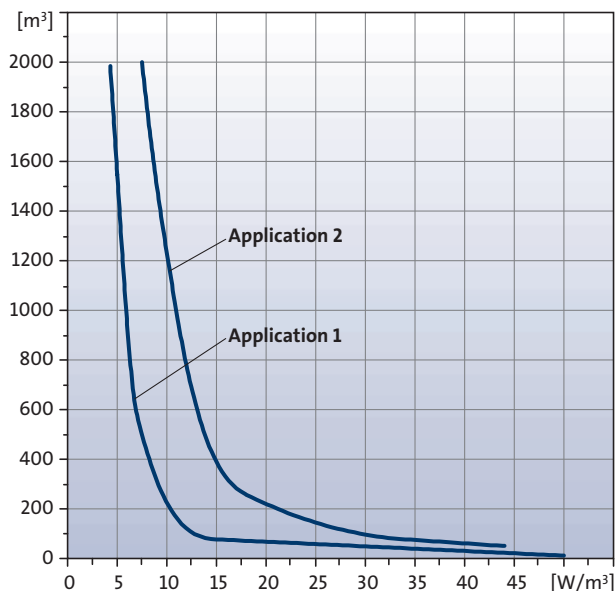
On request AMD.XX.45.XXX are available with motor bracket for column profile tube 50x50 mm and 100x100 mm for the replacement market.



Selection guide of Grundfos Mixers

This selection guide is for guidance only. For further information please contact Grundfos.

The selection charts (curves) for the Grundfos mixers are based on square and circular tank shapes.



Mixer type	Motor power P2 (kW)	Maximum tank length for one mixer [m]			
		Application 1	Application 2	Application 3	Application 4
AMD.07.18.1410	0.75	6 m	2.5 m	2.0 m	1.5 m
AMD.15.45B.710	1.50	16 m	-	5.5 m	4.5 m
AMD.25.45B.690	2.50	20 m	-	6.0 m	5.0 m
AMD.35.45B.705	3.50	24 m	-	6.5 m	5.5 m
AMD.45.45B.675	4.50	28 m	-	7.0 m	6.0 m
AMD.20.45.700	2.00	16 m	11 m	5.0 m	4.5 m
AMD.30.45.710	3.00	20 m	13 m	6.0 m	5.0 m
AMD.40.45.695	4.00	24 m	14 m	6.5 m	5.5 m
AMG.15.40.325	1.50	20 m	10 m	5.5 m	4.0 m
AMG.22.45.325	2.20	22 m	11 m	6.0 m	4.5 m
AMG.30.47.328	3.00	24 m	12 m	6.5 m	5.0 m
AMG.40.52.326	4.00	26 m	13 m	7.0 m	5.5 m
AMG.55.50.335	5.50	31 m	15 m	8.6 m	6.0 m
AMG.75.58.336	7.50	37 m	18 m	10.0 m	7.5 m
AMG.110.68.334	11.00	45 m	22 m	12.5 m	9.0 m
AMG.150.73.354	15.00	55 m	27 m	15.0 m	11.0 m
AMG.185.78.351	18.50	65 m	30 m	18.0 m	13.0 m

Application 1

Activated sludge, Selector zones
Anoxic zones, Bivalent zones
Anaerobic zones

Application 2

Primary sludge ≤ 3% solid contents
Secondary sludge ≤ 6% solid contents
Digested sludge ≤ 8% solid contents

Application 3

Pump sump without screen

Application 4

Pump sump with sand

Example mixers:

For tank volumes larger than 2000 m³, please use the required energy value for 2000 m³.

Step 1 Select curve for application in question using the above definitions, for instance Application 2.

Step 2 Select tank volume, for instance 1200 m³.

Step 3 Use the curve chart to determine required energy. This example = 10 W/m³ primary sludge.

Step 4 Calculate required power input, using this formula:

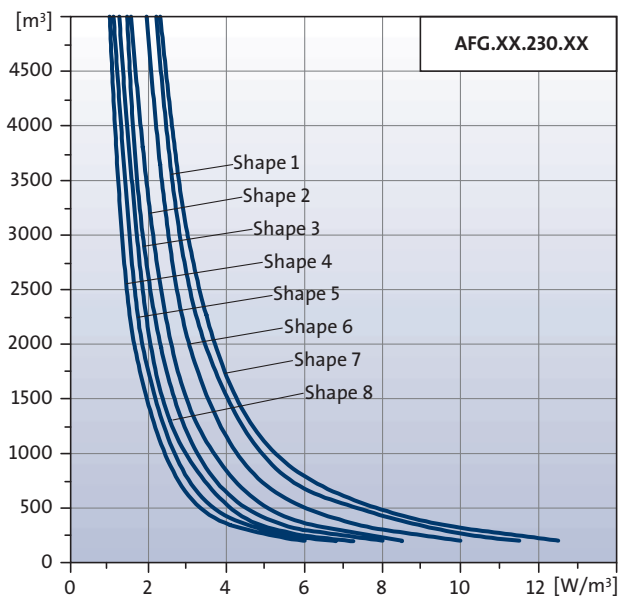
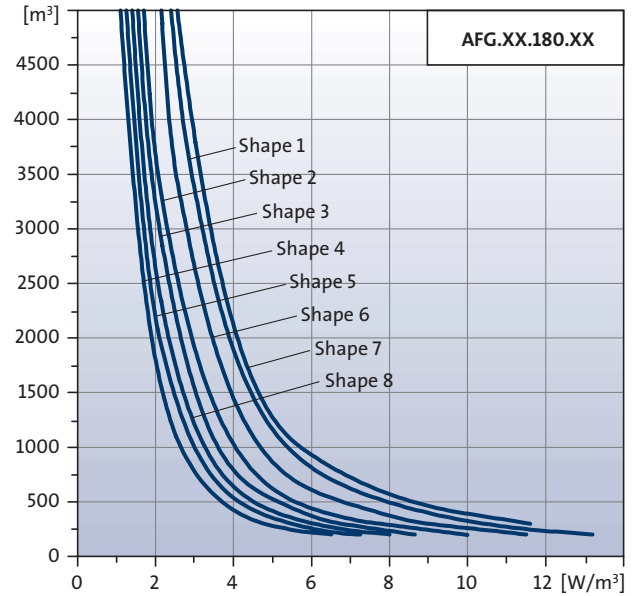
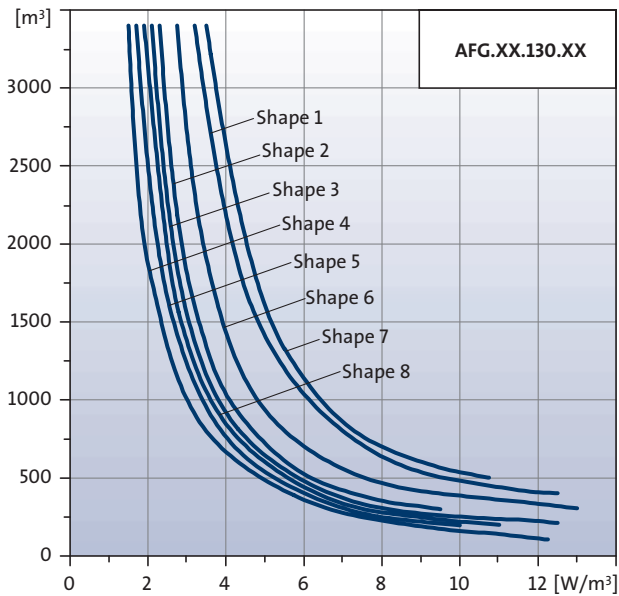
$$\frac{\text{Req. energy } 10 \text{ W/m}^3 \times \text{tank volume } 1200 \text{ m}^3}{1000} = 12 \text{ kW.}$$

Result: 1 unit of AMG.150.73.354, which will provide a power output of 15 kW (12 kW is required). Alternatively select 2 units of AMG.75.98.336.

Check that the maximum tank length is not exceeded. If this is the case the required energy must be split onto more mixers installed in series.

Selection guide of Grundfos Flowmakers

The selection charts (curves) for the Grundfos Flowmakers are based on activated sludge and a velocity of 0.3 m/sec., and a relation between tank length and width of 4:1. The curves are based on tanks with aeration. If there is no aeration, an energy saving of 25% can be calculated compared to the curves shown.



Example flowmakers:

If the tank space allows it, choose an AFG.XX.230, using the following procedure.

For tank volumes larger than 5000 m³, please use the required energy value for 5000 m³.

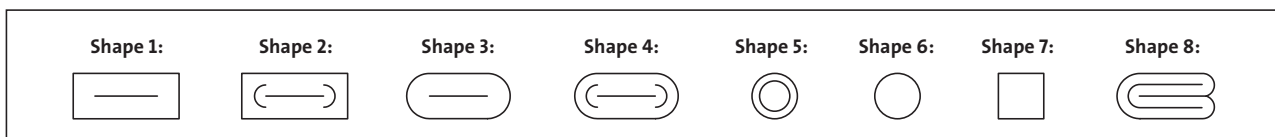
- Step 1** Select the shape of tank for instance shape 4.
- Step 2** Select volume for instance 1500 m³.
- Step 3** Use the curve chart to determine required energy.

This example = 1.9 W/m³ activated sludge.

- Step 4** Calculate required power input:

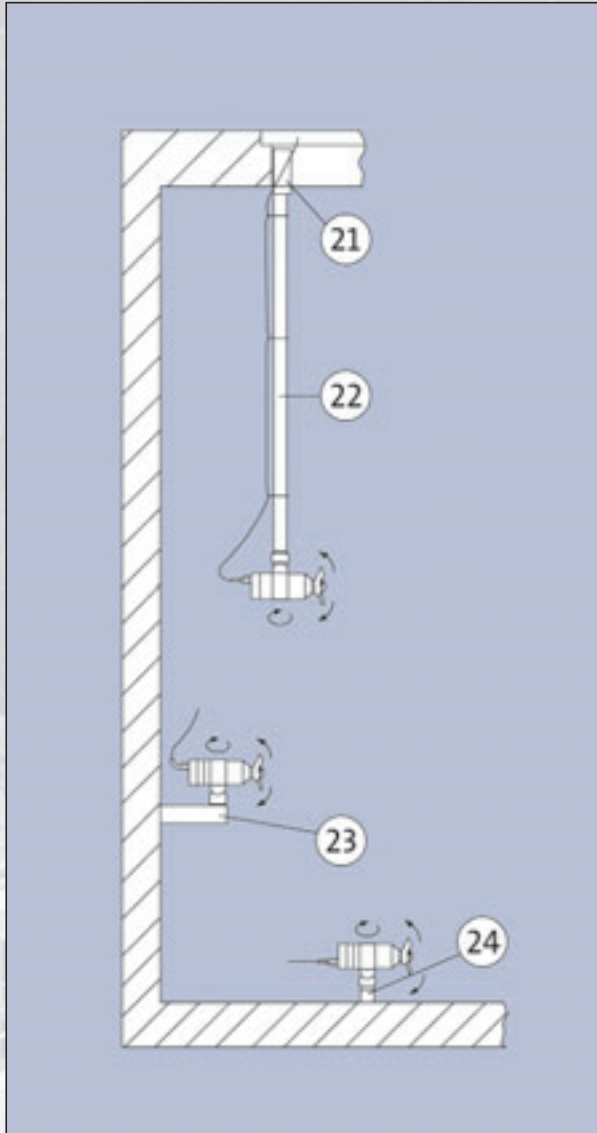
$$\frac{\text{Req. energy } 1.9 \text{ W/m}^3 \times \text{tank volume } 1500 \text{ m}^3}{1000} = 2.85 \text{ kW.}$$

Result: 1 unit of AFG.30.230.29, which will provide a power output of 3 kW (2.85 kW is required). Alternatively select 2 units of AFG.15.230.22.

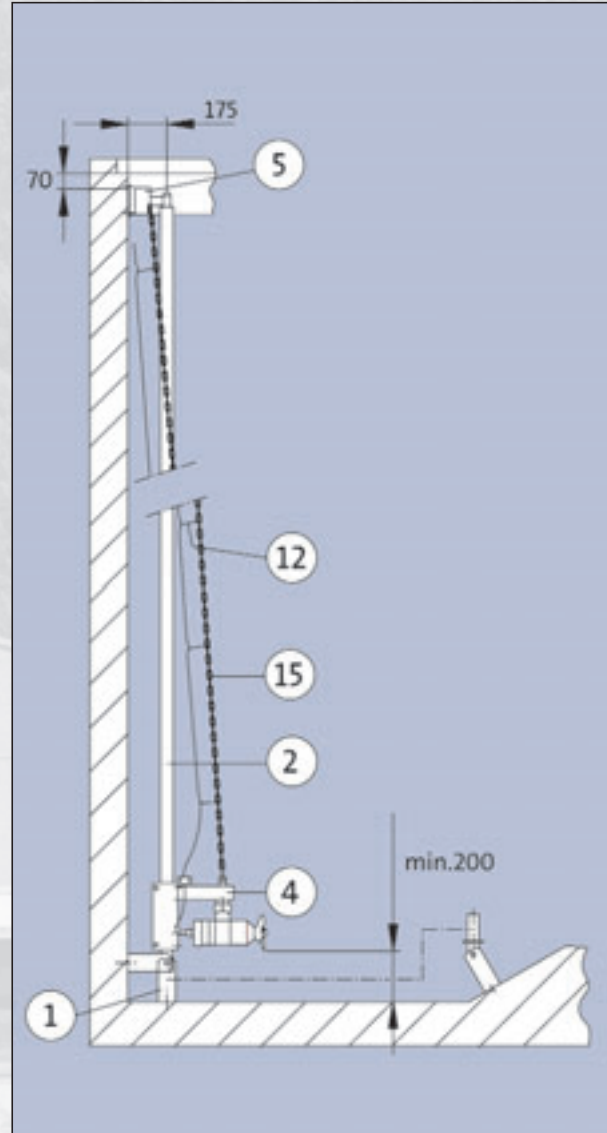


AFG.XX.130.XX	Power output (kW)	AFG.XX.180.XX	Power output (kW)	AFG.XX.230.XX	Power output (kW)
AFG.15.130.76	1.5	AFG.13.180.30	1.3	AFG.15.230.22	1.5
AFG.22.130.77	2.2	AFG.18.180.34	1.8	AFG.22.230.25	2.2
AFG.30.130.92	3.0	AFG.24.180.39	2.4	AFG.30.230.29	3.0
AFG.40.130.93	4.0	AFG.37.180.46	3.7	AFG.40.230.35	4.0

Suspended mounting, wall mounting and floor mounting



Column profile tube mounting



Bottom fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
1	AMD.07.18.1410	Horizontal/inclined (0-90°)	60/60	Stainless steel	1.4306 1.4404	304L 316L	96490666 96490667

Column profile tube

Pos.	Mixer	Description
2	AMD.07.18.1410	See column profile tube, page 24

Motor bracket

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
4	AMD.07.18.1410	60/60	Stainless steel	1.4404	316L	96115295

Top fixation

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
5	AMD.07.18.1410	60/60	Stainless steel	1.4306 1.4404	304L 316L	96489522 96489523

Cable clamp

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
12	AMD.07.18.1410	-	Stainless steel	1.4404	316L	96565202

Pull and safety chain

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
15	AMD.07.18.1410	-	Stainless steel	1.4404	316L	96490869

Fixation bracket for suspended mounting

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
21	AMD.07.18.1410	2"	Stainless steel	1.4404	316L	96115293

Tube for suspended mounting

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
22	AMD.07.18.1410	2"	Stainless steel	1.4404	316L	96115294

Fixation bracket for wall mounting

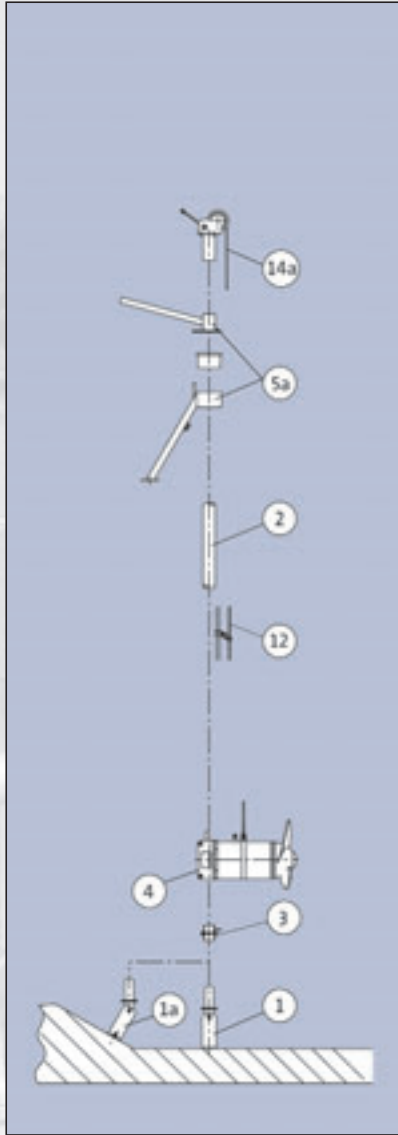
Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
23	AMD.07.18.1410	-	Stainless steel	1.4404	316L	96115291

Fixation base for floor mounting

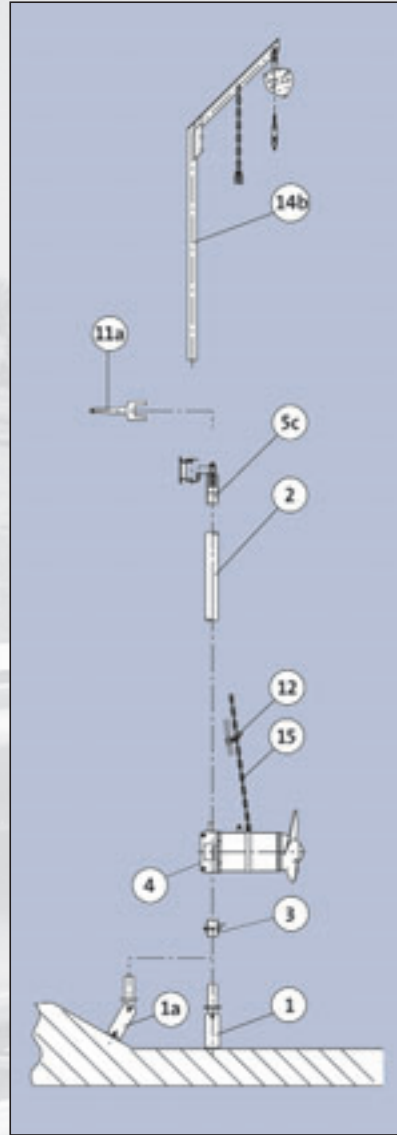
Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
24	AMD.07.18.1410	-	Stainless steel	1.4404	316L	96115292

AMD.XX.45.XXX

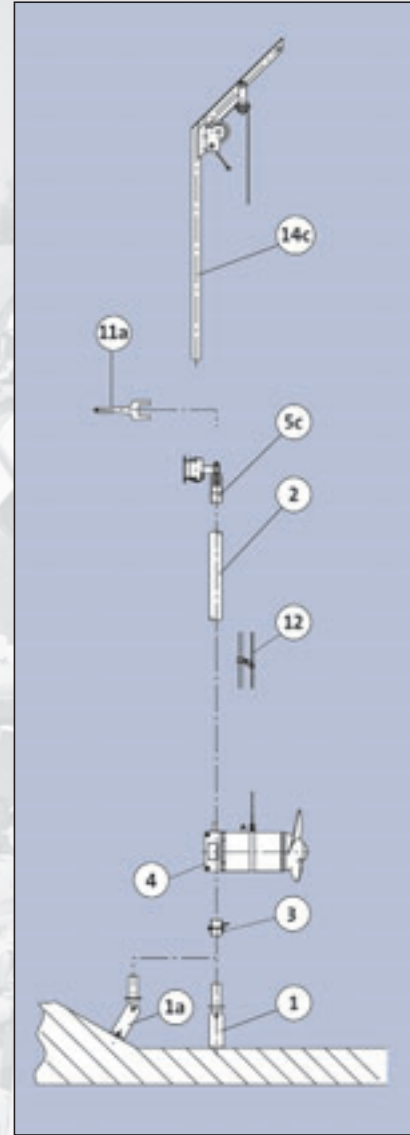
Open installation



Sealed installation



Sealed installation



Bottom fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
1/1a	AMD.XX.45.XXX	Horizontal/inclined (0-90°)	60/60	Stainless steel	1.4306	304L	96490666
					1.4404	316L	96490667

Column profile tube

Pos.	Mixer	Description
2	AMD.XX.45.XXX	See column profile tube, page 24

Depth blocker

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
3	AMD.XX.45.XXX	For clamping	60/60	Stainless steel	1.4306	304L	96561074
					1.4404	316L	96505606

Top fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
5a	AMD.XX.45.XXX	Open installation	60/60	Stainless steel	1.4306	304L	96490756
					1.4404	316L	96490757
5c		Sealed installation		Galvanized steel	1.0037	-	96490758
				Stainless steel	1.4306	304L	96489522
		1.4404	316L		96489523		

Turning key

Pos.	Mixer	Description	Product number
11a	AMD.XX.45.XXX	Key for turning the column profile tube	96494522

Cable clamp

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
12	AMD.XX.45.XXX	Cable clamp set	-	Stainless steel	1.4404	316L	96494352

Stand with winch

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14a	AMD.XX.45.XXX	Open installation	60/60	Stainless steel	1.4306	304L	96490816
					1.4404	316L	96490817
				Galvanized steel	1.0037	-	96489561

Crane with chain hoist and chain

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14b	AMD.XX.45.XXX	Sealed installation	-	Stainless steel	1.4306	304L	96490862
					1.4404	316L	96490863
				Galvanized steel	1.0037	-	96490864

Crane boom with winch

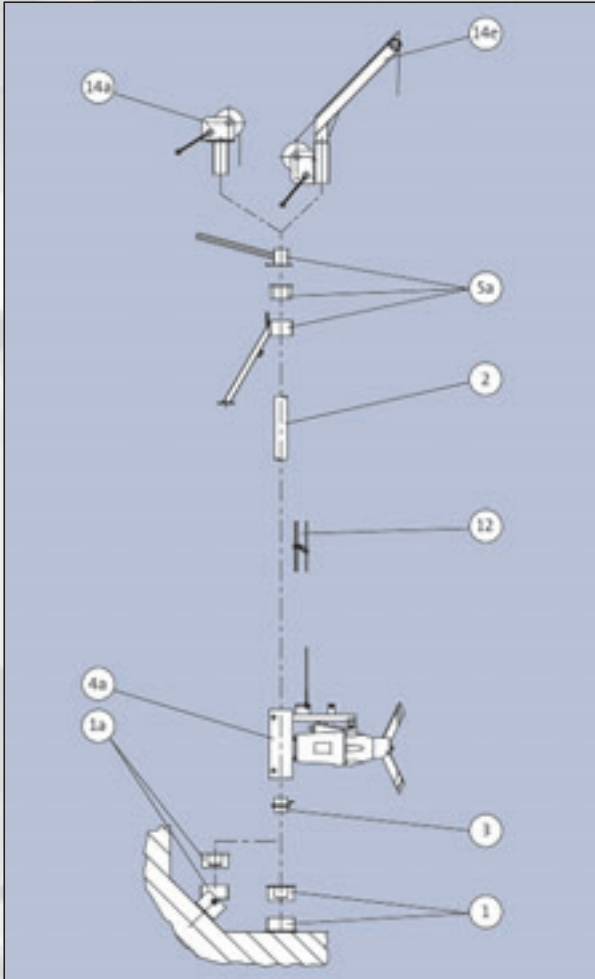
Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14c	AMD.XX.45.XXX	Sealed installation	-	Stainless steel	1.4306	304L	96562078
					1.4404	316L	96562079
				Galvanized steel	1.0037	-	96562120

Pull and safety chain

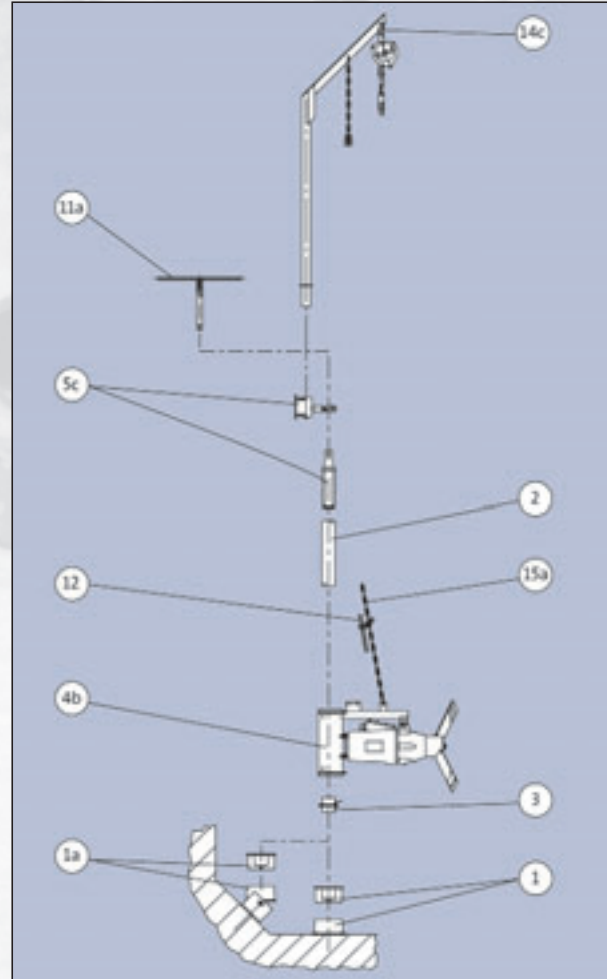
Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
15	AMD.XX.45.XXX	Sealed installation	-	Stainless steel	1.4404	316L	96490869

AMG.15.XX to AMG.40.XX

Open installation



Sealed installation



Bottom fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
1	AMG.15.40.325 AMG.22.45.325	Horizontal	80/80	Stainless steel	1.4306	304L	96490669
1a	AMG.30.47.328 AMG.40.52.326	Horizontal/inclined (0-90°)			1.4404	316L	96489417
					1.4306	304L	96490673
					1.4404	316L	96489418

Column profile tube

Pos.	Mixer	Description
2	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	See column profile tube, page 24

Depth blocker

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
3	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	For clamping	80/80	Stainless steel	1.4306	304L	96490714
					1.4404	316L	96490717

AMG.15.XX to AMG.40.XX

Motor bracket

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
4a	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Open installation	80/80	Stainless steel	1.4306	304L	96489465
					1.4404	316L	96489466
4b	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Sealed installation	80/80	Stainless steel	1.4306	304L	96490735
					1.4404	316L	96490736

Top fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
5a	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Open installation	80/80	Stainless steel	1.4306	304L	96489491
					1.4404	316L	96489492
				Galvanized steel	1.0037	-	96489493
5c	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Sealed installation	80/80	Stainless steel	1.4306	304L	96489524
					1.4404	316L	96489525

Turning key

Pos.	Mixer	Description	Product number
11a	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Key for turning the column profile tube	96494545

Cable clamp

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
12	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Cable clamp set	-	Stainless steel	1.4404	316L	96494352

Stand with winch

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14a	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Open installation	80/80	Stainless steel	1.4306	304L	96490818
					1.4404	316L	96490819
				Galvanized steel	1.0037	-	96489562

Crane boom with winch

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14e	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Open installation	80/80	Stainless steel	1.4306	304L	96490774
					1.4404	316L	96490776
				Galvanized steel	1.0037	-	96490777

Crane with chain hoist and chain

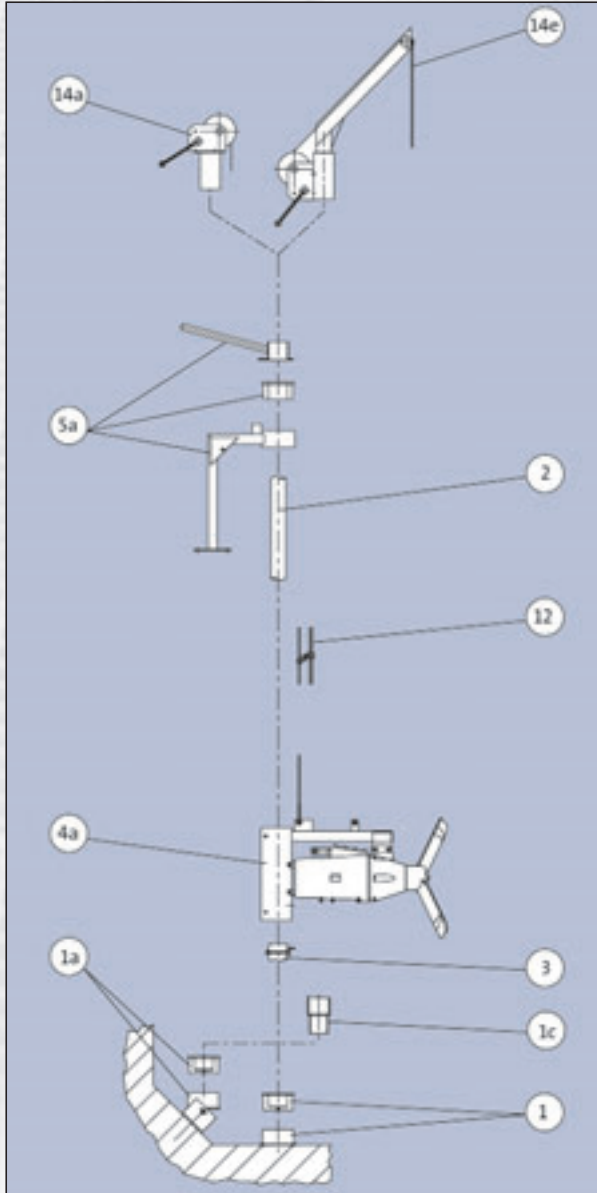
Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14c	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Sealed installation	80/80	Stainless steel	1.4306	304L	96490862
					1.4404	316L	96490863
				Galvanized steel	1.0037	-	96490864

Pull and safety chain

Pos.	Mixer	Description	Material	DIN W.-Nr.	AISI	Product number
15a	AMG.15.40.325 AMG.22.45.325 AMG.30.47.328 AMG.40.52.326	Sealed installation	Stainless steel	1.4404	316L	96494529

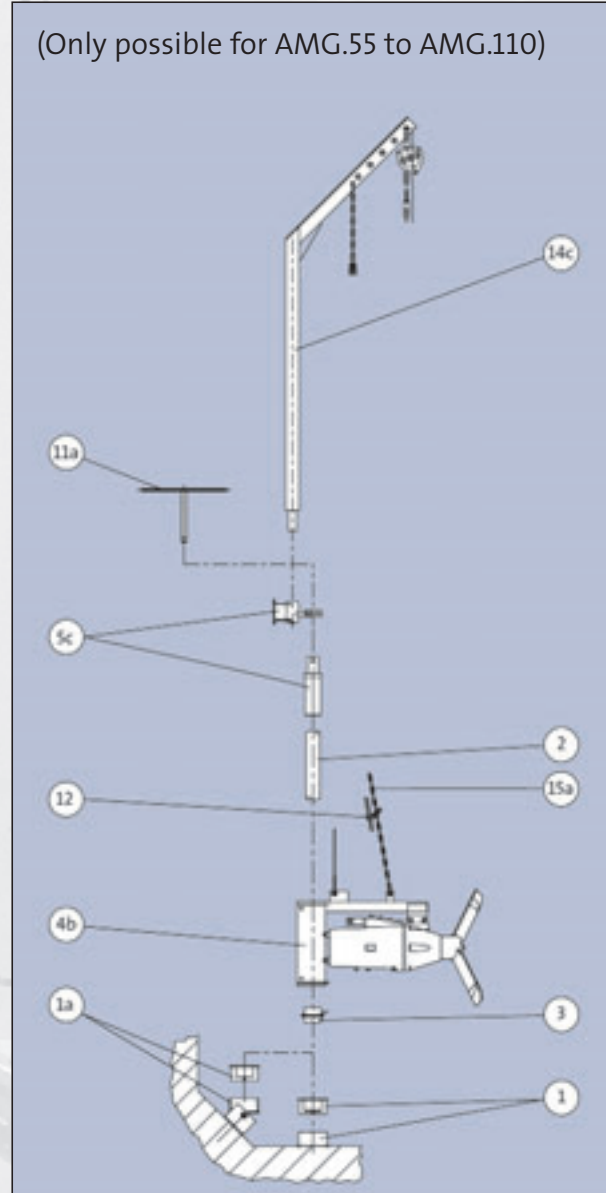
AMG.55.XX to AMG.185.XX

Open installation



Sealed installation

(Only possible for AMG.55 to AMG.110)



Bottom fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
1	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Horizontal	100/100	Stainless steel	1.4306	304L	96490675
1a	AMG.150.73.354 AMG.185.78.351	Horizontal/inclined (0-90°)	100/100	Stainless steel	1.4404	316L	96490679
					1.4404	316L	96490700

Reduction piece

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
1c	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	120/100	Stainless steel	1.4306 1.4404	304L 316L	96490702 96490706

AMG.55.XX to AMG.185.XX

Column profile tube

Pos.	Mixer	Description
2	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	See column profile tube, page 24

Depth blocker

Pos.	Mixer	Column size	Material	DIN W.-Nr.	AISI	Product number
3	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	100/100	Stainless steel	1.4306	304L	96490722
				1.4404	316L	96490723
		120/100	Stainless steel	1.4306	304L	96490725
				1.4404	316L	96490726

Motor bracket for AMG.55.XX to AMG.110.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
4a	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Open installation	100/100	Stainless steel	1.4306	304L	96489469
					1.4404	316L	96489480
			120/120	Stainless steel	1.4306	304L	96489481
					1.4404	316L	96489482
4b	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Sealed installation	100/100	Stainless steel	1.4306	304L	96493202
1.4404					316L	96493203	

Motor bracket for AMG.150.XX to AMG.185.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
4a	AMG.150.73.354 AMG.185.78.351	Open installation	100/100	Stainless steel	1.4306	304L	96490741
					1.4404	316L	96490742
			120/120	Stainless steel	1.4306	304L	96490745
					1.4404	316L	96490746

Top fixation

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
5a	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	Open installation	100/100	Stainless steel	1.4306	304L	96489494
					1.4404	316L	96489495
			120/120	Galvanized steel	1.0037	-	96489496
					1.4306	304L	96489389
5c	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	Sealed installation	100/100	Stainless steel	1.4404	316L	96489520
					1.0037	-	96489521
			100/100	Stainless steel	1.4306	304L	96489526
					1.4404	316L	96489527

Turning key

Pos.	Mixer	Description	Product number
11a	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Key for turning column profile tube	96494545

Cable clamp

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
12	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334 AMG.150.73.354 AMG.185.78.351	Cable clamp set	-	Stainless steel	1.4404	316L	96494354



AMG.55.XX to AMG.185.XX

Stand with winch for AMG.55.XX to AMG.110.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14a	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Open installation	100/100	Stainless steel	1.4306	304L	96490820
					1.4404	316L	96490821
				Galvanized steel	1.0037	-	96489563
			120/120	Stainless steel	1.4306	304L	96490822
					1.4404	316L	96490823
				Galvanized steel	1.0037	-	96489564

Stand with winch for AMG.150.XX to AMG.185.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14a	AMG.150.73.354 AMG.185.78.351	Open installation	100/100	Stainless steel	1.4306	304L	96490824
					1.4404	316L	96490825
				Galvanized steel	1.0037	-	96480826
			120/120	Stainless steel	1.4306	304L	96490829
					1.4404	316L	96490860
				Galvanized steel	1.0037	-	96480861

Crane boom with winch for AMG.55.XX to AMG.110.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14e	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Open installation	100/100	Stainless steel	1.4306	304L	96489559
					1.4404	316L	96490778
				Galvanized steel	1.0037	-	96490779
			120/120	Stainless steel	1.4306	304L	96489560
					1.4404	316L	96490780
				Galvanized steel	1.0037	-	96490783

Crane boom with winch for AMG.150.XX to AMG.185.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14e	AMG.150.73.354 AMG.185.78.351	Open installation	100/100	Stainless steel	1.4306	304L	96490810
					1.4404	316L	96490811
				Galvanized steel	1.0037	-	96490812
			120/120	Stainless steel	1.4306	304L	96490813
					1.4404	316L	96490814
				Galvanized steel	1.0037	-	96490815

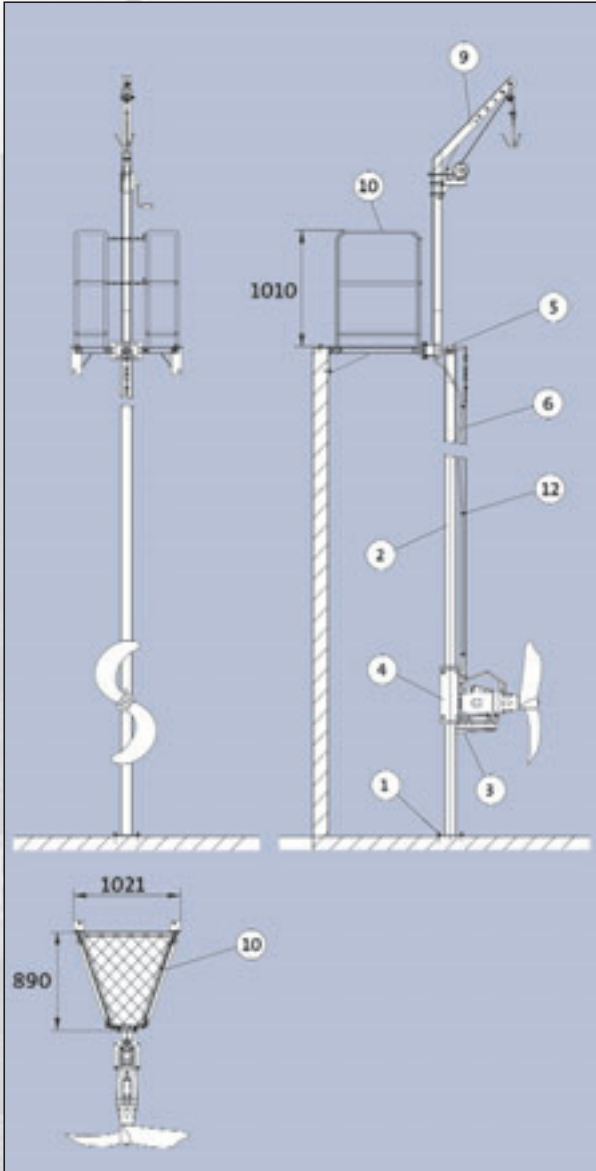
Crane with chain hoist and chain for AMG.55.XX to AMG.110.XX

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
14c	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Sealed installation	-	Aluminium	-	-	96489565

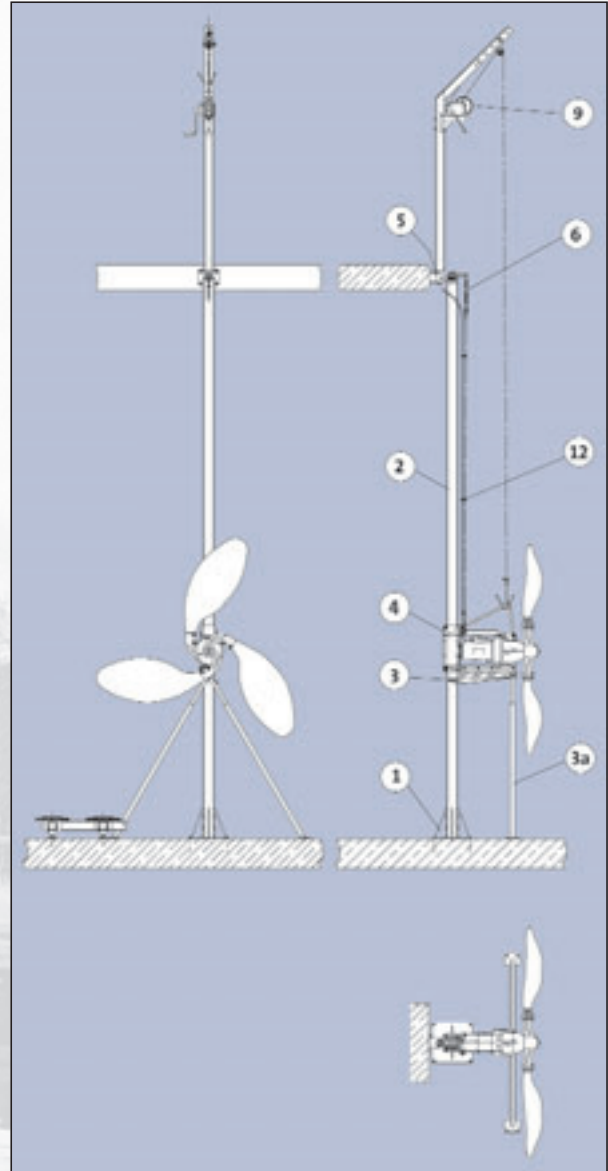
Pull and safety chain

Pos.	Mixer	Description	Column size	Material	DIN W.-Nr.	AISI	Product number
15a	AMG.55.50.335 AMG.75.58.336 AMG.110.68.334	Sealed installation	-	Stainless steel	1.4404	316L	96494529

AFG flowmaker installation



AFG.xx.130.xx



AFG.xx.180.xx and AFG.xx.230.xx

Bottom plate, fixed

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
1	AFG.XX.130.XX	100/100	Stainless Steel	1.4306	304L	96489415
				1.4404	316L	96489416
	AFG.XX.180.XX			1.4306	304L	96489411
	AFG.XX.230.XX			1.4404	316L	96489414

Column profile

Pos.	Flowmaker	Description
2	All AFG	See column profile tube, page 24

Depth blocker

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
3	AFG.XX.130.XX	100/100	Stainless Steel	1.4306	304L	96489449
				1.4404	316L	96489460
	AFG.XX.180.XX AFG.XX.230.XX			1.4306	304L	96489461
				1.4404	316L	96489462

Support for depth blocker

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
3a	AFG.XX.130.XX	100/100	Stainless Steel	1.4306	304L	96115262
				1.4404	316L	96115263
	AFG.XX.180.XX AFG.XX.230.XX			1.4306	304L	96115264
				1.4404	316L	96115265

Motor bracket

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
4	AFG.XX.130.XX	100/100	Stainless Steel	1.4306	304L	96490749
				1.4404	316L	96490750
	AFG.XX.180.XX AFG.XX.230.XX			1.4306	304L	96490752
				1.4404	316L	96490753

Top fixation

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
5	All AFG	100/100	Stainless Steel	1.4306	304L	96489526
				1.4404	316L	96489527

Relief wire

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
6	All AFG	-	Stainless Steel	1.4404	316L	96494548

Crane with winch

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
9	All AFG	-	Aluminium	-	-	96489566

Platform

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
10	AFG.XX.130.XX	-	Galvanized steel	1.0037	-	96490867

Cable clamp

Pos.	Flowmaker	Column size	Material	DIN W.-Nr.	AISI	Product number
12	All AFG	-	Stainless steel	1.4404	316L	96494356

Maximum permissible length of column profile tube

Description	Maximum permissible length of column profile tube					
	60 x 60 x 3 mm	80 x 80 x 3 mm	100 x 100 x 3 mm	100 x 100 x 4 mm	100 x 100 x 5 mm	120 x 120 x 5 mm
AMD.07.18.1410	> 10.0 m					
AMD.15.45B.710	> 10.0 m					
AMD.25.45B.690	8.0 m		> 10.0 m*			
AMD.35.45B.705	6.0 m		> 10.0 m*			
AMD.45.45B.675	5.5 m		> 10.0 m*			
AMD.20.45.700	10.0 m		> 10.0 m*			
AMD.30.45.710	8.0 m		> 10.0 m*			
AMD.40.45.695	6.0 m		> 10.0 m*			
AMG.15.40.325		> 10.0 m				
AMG.22.45.325		> 10.0 m				
AMG.30.47.328		> 10.0 m				
AMG.40.52.326		> 10.0 m				
AMG.55.50.335		> 10.0 m				
AMG.75.58.336			10.0 m	> 10.0 m		
AMG.110.68.334			7.0 m	9.0 m	> 10.0 m	
AMG.150.73.354			5.0 m	6.5 m	7.5 m	10.0 m
AMG.185.78.351			4.0 m	5.0 m	6.0 m	7.5 m
AFG.15.130.76				> 10.0 m		
AFG.22.130.77				> 10.0 m		
AFG.30.130.92				> 10.0 m		
AFG.40.130.93				> 10.0 m		
AFG.13.180.30				> 10.0 m		
AFG.18.180.34				> 10.0 m		
AFG.24.180.39				> 10.0 m		
AFG.37.180.46				9.0 m	> 10.0 m	
AFG.15.230.22				> 10.0 m		
AFG.22.230.25				> 10.0 m		
AFG.30.230.29				9.0 m	> 10.0 m	
AFG.40.230.35				8.0 m	> 10.0 m	

* Requires special motor bracket, please contact Grundfos. For larger tank depths, please contact Grundfos.

Column profile tube

Material specification and product numbers of column profile tube. The numbers include 1 m column tube. When ordering, please state desired length.

Column size	Material	DIN W.-Nr.	AISI	Product number
60/60/3	Stainless steel	1.4306	304L	96489420
		1.4404	316L	96489421
80/80/3	Stainless steel	1.4306	304L	96489426
		1.4404	316L	96489427
100/100/3	Stainless steel	1.4306	304L	96489429
		1.4404	316L	96489440
100/100/4	Stainless steel	1.4306	304L	96489441
		1.4404	316L	96489442
100/100/5	Stainless steel	1.4306	304L	96489443
		1.4404	316L	96489444
120/120/5*	Stainless steel	1.4306	304L	96489445
		1.4404	316L	96489446

* Use of column profile tube 120 x 120 mm for AMG requires reduction piece, 120 to 100 mm, for bottom fixation, see page 18.



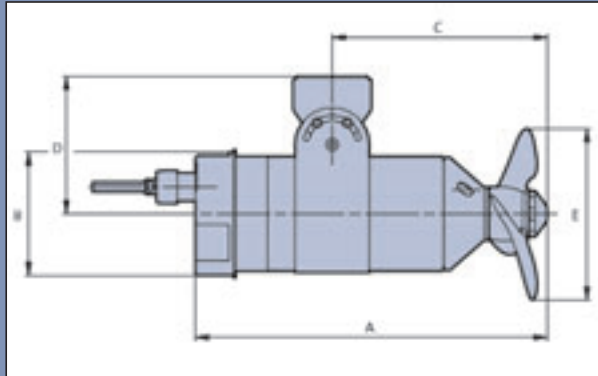
Miscellaneous

Description	Material	DIN W.-Nr.	AISI	Product number
Relay for leakage sensor,	Type ALR-20/A	-	-	96489569
Power cable ¹⁾	A07RN-F 12G1.5	-	-	96489580
Power cable ¹⁾	A07RN-F 12G2.5	-	-	96489581
Power cable ¹⁾	A07RN-F 12G4	-	-	96494351
Wire cable, Ø4 mm for AMD ¹⁾	Stainless steel	1.4404	316L	96490921
Wire cable, Ø6 mm for AMG and AFG ¹⁾	Stainless steel	1.4404	316L	96489590

¹⁾ The numbers include 1 m cable/wire. When ordering, please state the desired length.

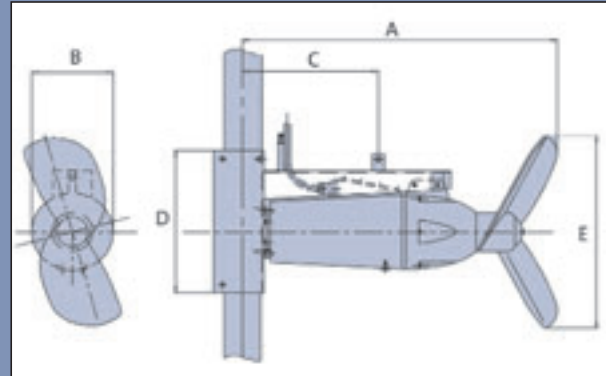
Dimensions

Mixer types AMD.07.18.1410



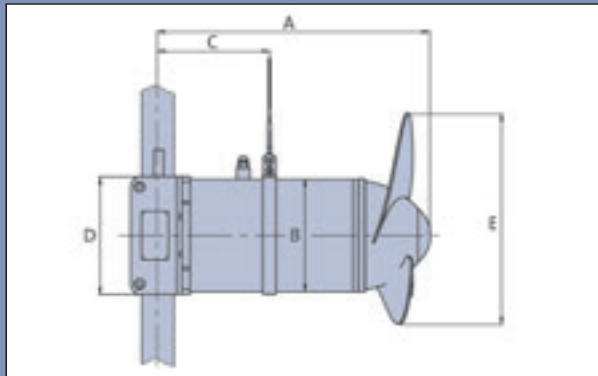
Type	Dimensions [mm]					Weight
	A	B	C	D	E	
AMD.07.18.1410	332	117	203	130	180	10.5

Mixer types AMG



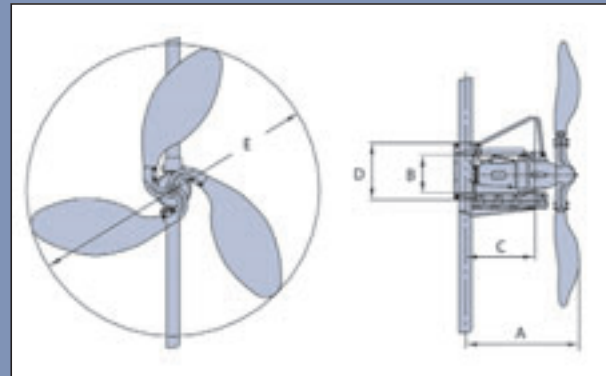
Type	Dimensions [mm]					Weight
	A	B	C	D	E	
AMG.15.40.325	720	200	305	400	417	76
AMG.22.45.325	735	200	305	400	452	76
AMG.30.47.328	750	200	305	400	480	83
AMG.40.52.326	760	200	305	400	525	86
AMG.55.50.335	980	270	455	500	505	167
AMG.75.58.336	990	270	455	500	580	171
AMG.110.68.334	1010	270	455	500	680	182
AMG.150.73.354	1160	315	455	630	730	278
AMG.185.78.351	1180	315	455	630	780	278

Mixer types AMD.XX.45.XXX



Type	Dimensions [mm]					Weight
	A	B	C	D	E	
AMD.15.45B.710	456	210	175	210	450	50
AMD.25.45B.690	456	210	175	210	450	50
AMD.35.45B.705	491	210	193	210	450	59
AMD.45.45B.675	491	210	193	210	450	59
AMD.20.45.700	456	210	175	210	450	50
AMD.30.45.710	491	210	193	210	450	59
AMD.40.45.695	491	210	193	210	450	59

Flowmakers type AFG



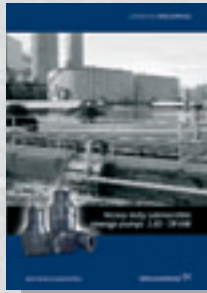
Type	Dimensions [mm]					Weight
	A	B	C	D	E	
AFG.15.130.76	795	200	353	500	1300	119
AFG.22.130.77	795	200	353	500	1300	123
AFG.30.130.92	795	200	353	500	1300	140
AFG.40.130.93	795	200	353	500	1300	154
AFG.13.180.30	1100	302	540	450	1800	202
AFG.18.180.34	1100	302	540	450	1800	202
AFG.24.180.39	1100	302	540	450	1800	209
AFG.37.180.46	1100	302	540	450	1800	209
AFG.15.230.22	1100	302	540	450	2300	205
AFG.22.230.25	1100	302	540	450	2300	217
AFG.30.230.29	1100	302	540	450	2300	220
AFG.40.230.35	1100	302	540	450	2300	240

Note: All weights inclusive motor bracket.

The Grundfos wastewater range

Heavy-duty submersible sewage pumps 1.65 - 29 kW

Brochure covers the Grundfos range of submersible channel-impeller pumps from 1.65 kW up to 21 kW and SuperVortex pumps up to 29 kW. All designed for handling unscreened raw sewage.



Heavy-duty submersible sewage pumps 15 - 155 kW

Brochure covers the Grundfos range of sewage pumps from 15 kW up to 155 kW for handling of raw sewage in heavy-duty applications.



Super-heavy-duty submersible sewage and raw water pumps

Brochure covers the Grundfos range of super-heavy-duty channel pumps, axial flow pumps, and propeller pumps from 7.5 kW up to 520 kW.



Portable dewatering pumps

Brochure covers the Grundfos range of portable dewatering pumps (DW) from 0.8 kW to 20 kW for pumping raw water with abrasives.

The KP/AP stainless steel range

Brochure covers a wide range of high quality stainless steel pumps for a variety of domestic and commercial applications.



Stainless steel heavy-duty submersible pumps

Brochure covers the Grundfos range of heavy-duty stainless steel pumps (SEN) for aggressive and corrosive environments.



Lifting stations

Brochure covers Grundfos lifting stations for individual as well as multi-user applications.



LC/LCD level controls

Brochure covers the Grundfos range of controls for the wastewater pumping systems.

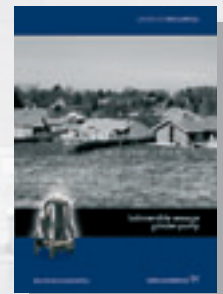
Heavy-duty submersible sewage pumps 0.9 - 11 kW

This brochure describes the innovative SEV/SE1 pump lines. Fitted with SuperVortex or single-channel impellers, these pumps can meet approximately 80% of all wastewater pumping needs.



Submersible sewage grinder pumps

Brochure covers the Grundfos range of sewage grinder pumps (SEG) for pumping of wastewater with toilet discharge.



Heavy-duty submersible wastewater pumps 0.6 - 2.6 kW

Brochure covers the Grundfos range of submersible channel-impeller and SuperVortex-impeller pumps from 0.6 to 2.6 kW. Designed for handling drainage, effluent and sewage from private dwellings.



Business with an attitude

Knowledge The sharing of knowledge, experience and expertise across our global network will always lead our business forward.

Innovation Combining the best technology with fresh ways of thinking, we will continue to develop even better pumps, systems, services and standards.

Solution With a complete product range, capable of providing every conceivable water solution, we are the most complete player on the market.

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