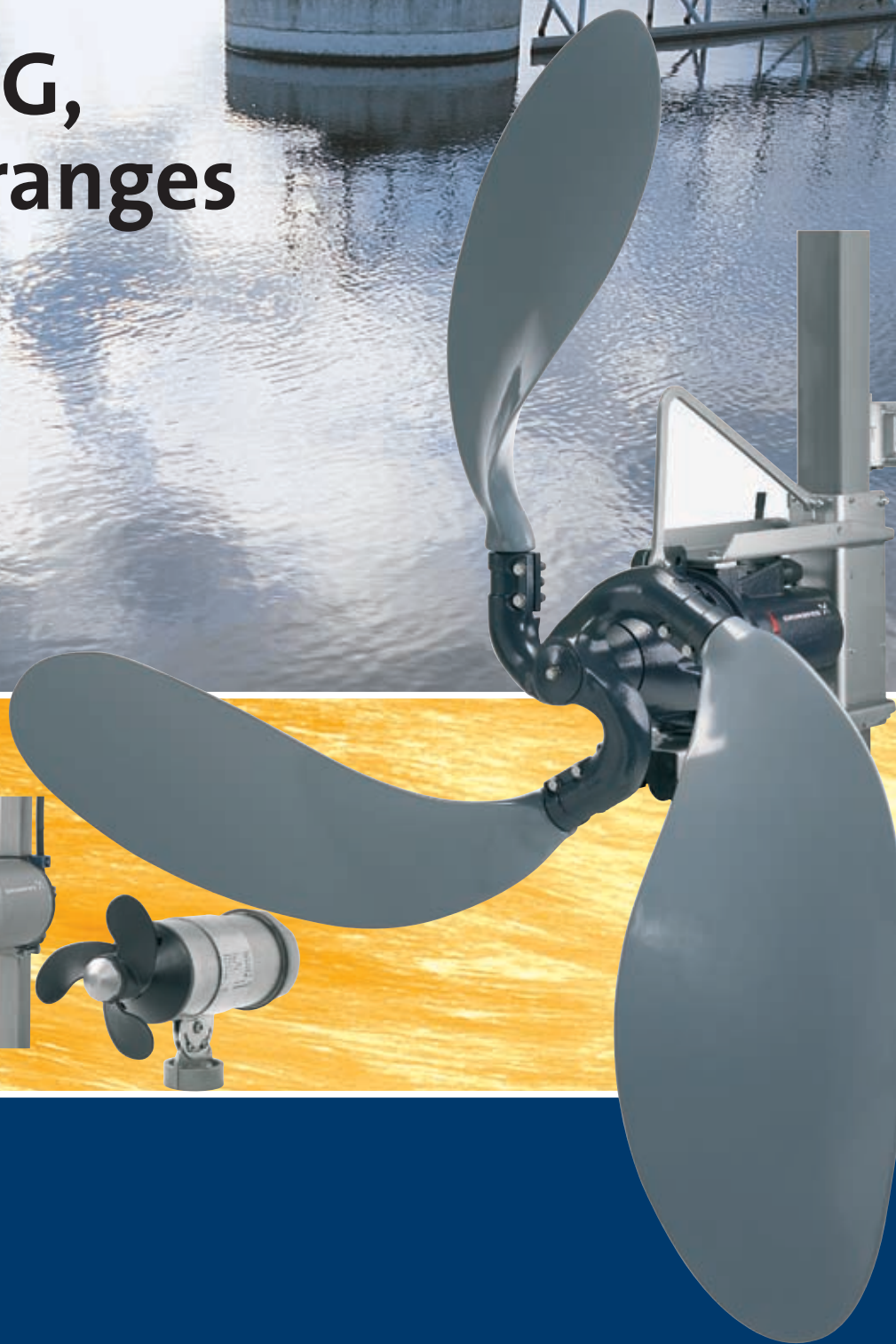
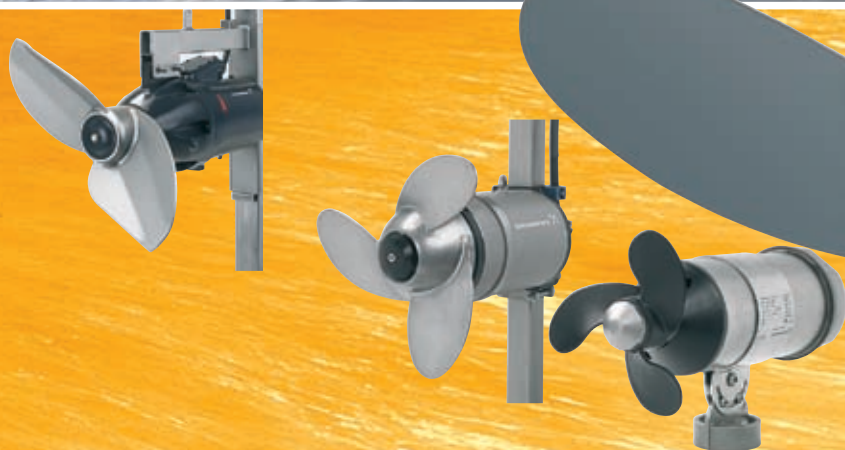


AMD, AMG, and AFG ranges



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.

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

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

➤ Life-long 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 suited for a variety of applications in wastewater treatment and industrial 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
- ▶ Homogenisation tanks

Industrial processes

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

Sludge treatment

- ▶ Homogenising 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 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. Stainless steel AISI 316 on explosive-proof versions.

Motor housing

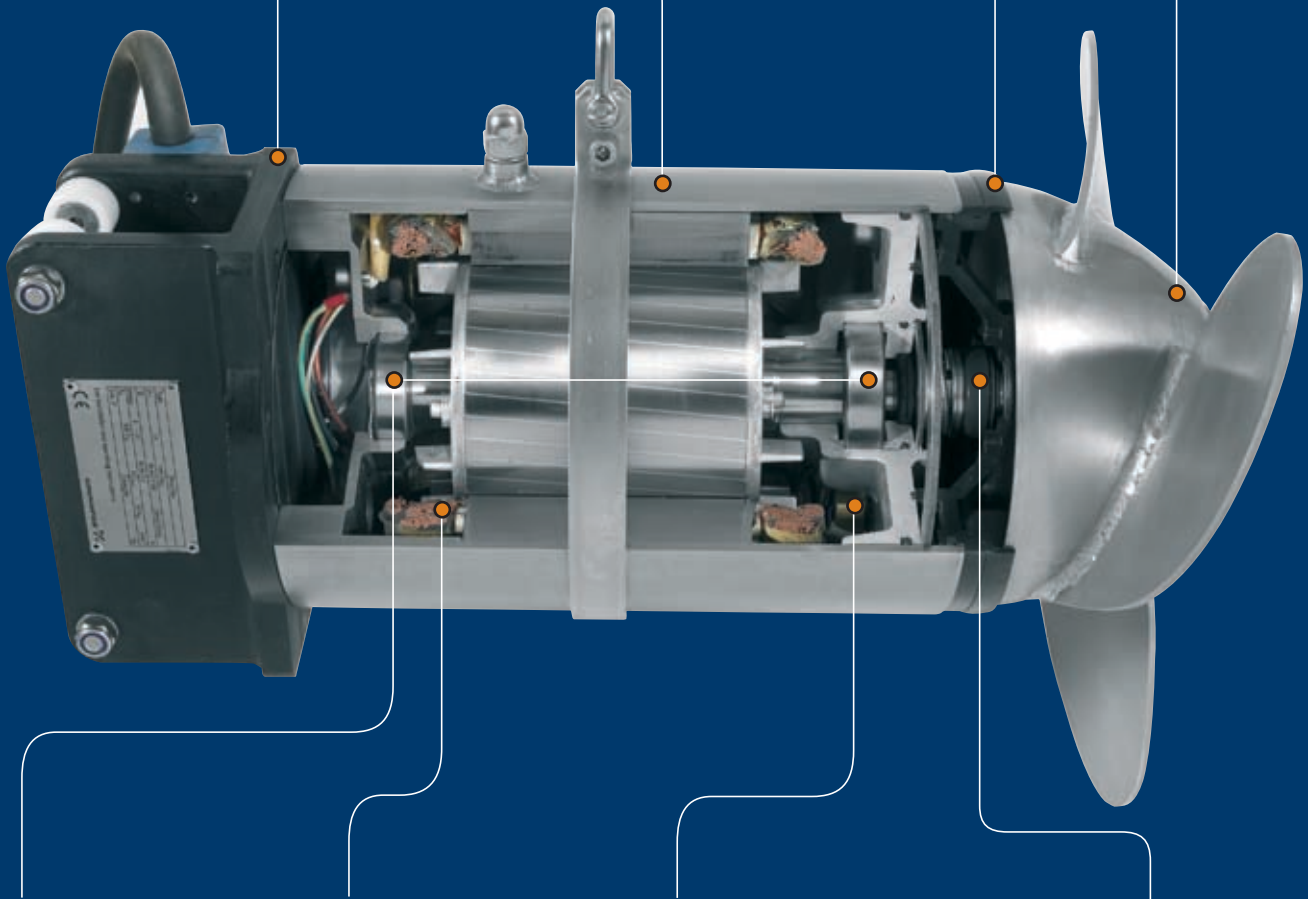
Made from stainless steel AISI 316 with a smooth self-cleaning surface.

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 316.



Two ball bearings

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

Motor protection

The motor is 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. The primary seal is protected against ingress of long-fibred materials by a stainless steel protection sleeve. The secondary seal is mounted in an oil chamber.

AMG, AFG

Cable entry

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

Motor protection

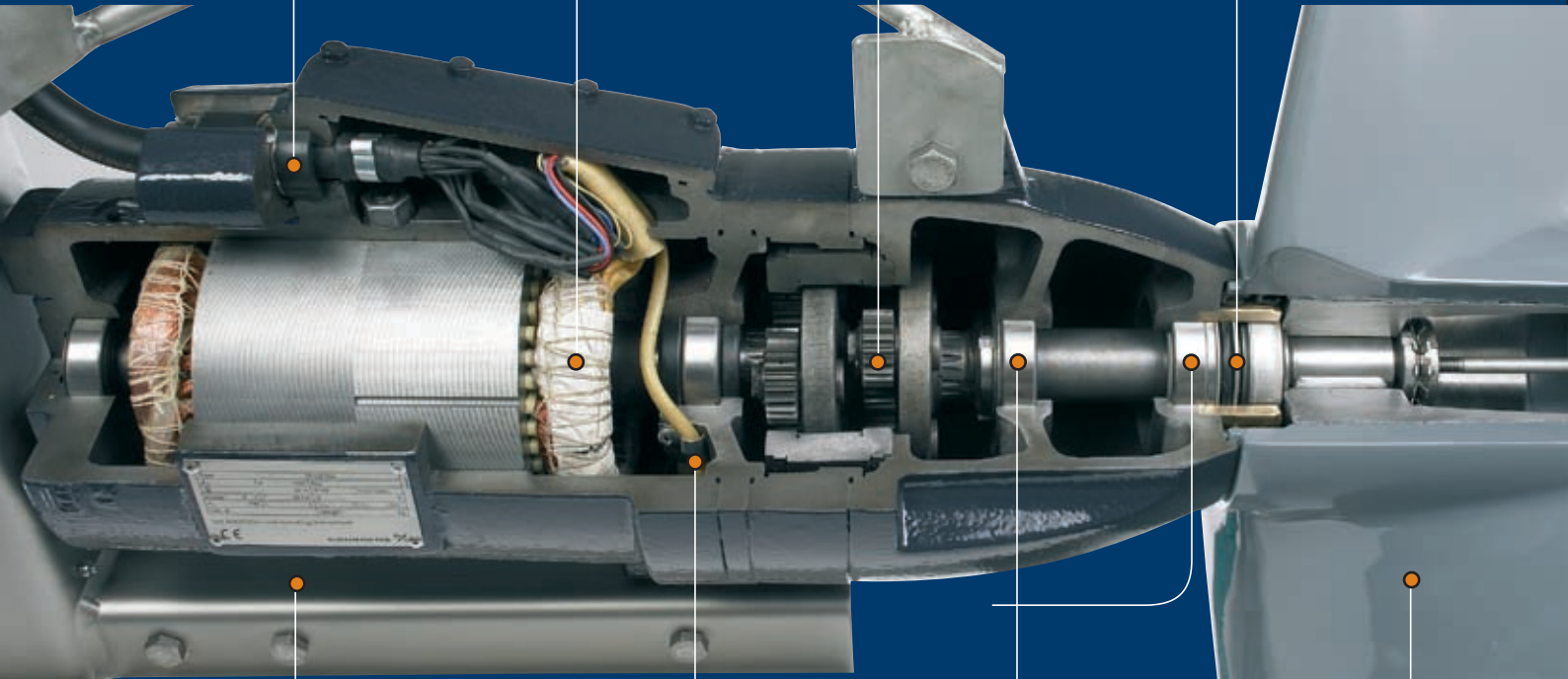
The motor is protected against overload and overheating by three thermal switches or three thermistors placed in each motor winding.

Planetary gear

The best and most efficient solution to transporting axial forces. Slim design provides optimum hydrodynamic shape.

Shaft sealing

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



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

Hydrodynamic 2 or 3-blade propellers allow for high efficiency and non-clogging operation. The propeller hub forms a labyrinth seal for the sealing system.

Product information and type key

Material specifications

| Component | Material | DIN W.-Nr./EN standard | AISI/t ASTM | Mixer/flowmaker |
|---------------------------------------|---|------------------------|----------------|--------------------------------|
| Bottom fixation | Stainless steel | 1.4301 | 304 | All types |
| Column profile tube | | 1.4401 | 316 | |
| Depth blocker | | | | |
| Mounting clamp, t with 2" bracket | Stainless steel | 1.4401 | 316 | AMD.07.18.1410 |
| Motor bracket | Stainless steel | 1.4301 | 304 | AMG, AFG |
| | | 1.4401 | 316 | |
| | PA12 | - | - | AMD |
| Top fixation | Stainless steel | 1.4401 | 316 | AMD Ex version |
| | or galvanized steel | 1.4401 | 304 | All types |
| | | 1.0037 | - | |
| Pull and safety chain | Stainless steel | 1.4404 | 316L | AMD, AMG |
| Stand with winch | Stainless steel or galvanized steel | 1.4301 | 304 | Open installation |
| Crane boom with winch | | 1.4401 | 316 | |
| | | 1.0037 | - | |
| Crane with chain t hoist and chain | Stainless steel | 1.4301 | 304 | Sealed installation |
| | | 1.4401 | 316 | |
| | Galvanized steel | 1.0037 | - | |
| Crane boom with winch | Aluminium | ALMg3 | - | AMD.07.18.1410 |
| | Stainless steel | 1.4401 | 316 | |
| | Cast-iron, grade 25 (EN-GJL-250) | EN-JL1040 | - | |
| Motor housing | Stainless steel | 1.4401 | 316 | AMG, AFG |
| Sealing flange | POM (polyoxymethylene) | - | - | AMD |
| Motor flange | Aluminium | - | - | AMD |
| Protecting ring | POM (polyoxymethylene) | - | - | AMD |
| Gear housing | Cast-iron, grade 25 (EN-GJL-250) | EN-JL1040 | - | AMG, AFG |
| Propeller | Stainless steel | 1.4301 | 304 | AMG |
| | | 1.4401 | 316 | 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 PA6G | - | - | AMD.07.18.1410 |
| Hub | Stainless steel | 1.4301 | 304 | AFG.XX.130.XX |
| | | 1.4401 | 316 | AMD.XX.45 |
| | Cast-iron (EN-GJS-400-15) | EN-JS1030 | - | AFG.XX.180.XX |
| | | | | - |

Corrosion protection

To ensure long and trouble-free operation, the cast iron parts of the mixers/flowmakers are protected against corrosion with a high-grade epoxy corrosion system. Anti-corrosive protection of submerged components. Two-component EP coating free from tar. Minimum thickness 320µ. Complies with the AA 423 standard.

Electrical

| | |
|---|-------------|
| Mains voltage [V] | 3 x 400-415 |
| Voltage tolerance [%] | +6/ -10 |
| Voltage tolerance [%] Ex version | +/-6 |
| Mains frequency required [Hz] | 50 |
| Thermal sensor type | PTC or PTO |
| Thermal sensor type Ex version | PTC |
| 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 | .45 | B | .675 |
| Type range | | | | | | | |
| Version: | | | | | | | |
| M = Mixer | | | | | | | |
| F = Flowmaker | | | | | | | |
| Drive: | | | | | | | |
| D = Direct | | | | | | | |
| G = Gear | | | | | | | |
| Power output, P ₂ [kW] x 10 | | | | | | | |
| Propeller diameter [cm] | | | | | | | |
| = Biology and slurry | | | | | | | |
| B = Biology* | | | | | | | |
| Propeller speed [min ⁻¹] | | | | | | | |
| Non explosion-proof | | | | | | | |
| E = Explosion-proof | | | | | | | |

* Must only be used for liquids ≤ 1.5% dry solids content (DS).

Technical data

Standard versions

| 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-F12G1.5 | 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 | | | | S1, delta | 675 | 12.5 | 0.72 | 45.8 | 1435 | 3.12 | 96560925 | | | | |
| AMD.20.45.700 | 2.0 | 2.62 | 230/400 | | | 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 | | | | S1, delta | 695 | 12.0 | 0.68 | 45.8 | 1340 | 2.92 | 96560928 | | | | |
| AMG.15.40.325 | 1.5 | 1.88 | 230/400 | | | A07RN-F12G2.5 | 4 | S1, star | 325 | 4.2 | 0.75 | 21.0 | 2 | 1058 | 2.15 | 96094843 | |
| AMG.22.45.325 | 2.2 | 2.75 | | | S1, star | | | 325 | 6.0 | 0.78 | 30.0 | 1350 | | 2.34 | 96094844 | | |
| AMG.30.47.328 | 3.0 | 3.75 | 400/690 | | 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 | 400/690 | 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 | | S1, delta | 334 | | | 24.0 | 0.87 | 124.8 | 4563 | 3.49 | | 96094849 | | | |
| AMG.150.73.354 | 15.0 | 18.70 | | A07RN-F12G4 | S1, delta | | | 354 | 33.0 | 0.76 | 191.4 | 5907 | | 3.92 | 96094850 | | |
| AMG.185.78.351 | 18.5 | 23.10 | S1, delta | | 351 | | | 39.0 | 0.80 | 241.8 | 6985 | 4.06 | | 96094851 | | | |
| AFG.15.130.76 | 1.5 | 1.84 | 230/400 | A07RN-F12G1.5 | 4 | | | S1, star | 76 | 4.2 | 0.67 | 21.0 | | 2 | 5874 | 1.23 | 96094852 |
| AFG.22.130.77 | 2.2 | 2.70 | | | | S1, star | 77 | 6.0 | 0.78 | 30.0 | 6782 | 1.42 | 96094853 | | | | |
| AFG.30.130.92 | 3.0 | 3.75 | 400/690 | | | S1, delta | 92 | 7.3 | 0.78 | 38.7 | 7546 | 1.58 | 96094854 | | | | |
| AFG.40.130.93 | 4.0 | 5.00 | | | | S1, delta | 93 | 9.2 | 0.83 | 42.3 | 8453 | 1.77 | 96094855 | | | | |
| AFG.13.180.30 | 1.3 | 1.63 | 230/400 | | | S1, star | 30 | 3.9 | 0.61 | 17.6 | 7461 | 0.81 | 96560917 | | | | |
| AFG.18.180.34 | 1.8 | 2.25 | | | | S1, star | 34 | 4.5 | 0.74 | 20.3 | 8770 | 0.96 | 96560919 | | | | |
| AFG.24.180.39 | 2.4 | 3.00 | 400 | | | S1, delta | 39 | 7.1 | 0.61 | 32.0 | 10075 | 1.10 | 96560921 | | | | |
| AFG.37.180.46 | 3.7 | 4.63 | | | | S1, delta | 46 | 8.0 | 0.80 | 36.0 | 12147 | 1.33 | 96560922 | | | | |
| AFG.15.230.22 | 1.5 | 1.88 | 230/400 | | | A07RN-F12G1.5 | 6 | S1, star | 22 | 5.2 | 0.52 | 24.0 | 2 | | 10470 | 0.70 | 96094856 |
| AFG.22.230.25 | 2.2 | 2.75 | | | | | | S1, star | 25 | 6.4 | 0.63 | 29.0 | | | 12265 | 0.82 | 96094857 |
| AFG.30.230.29 | 3.0 | 3.75 | 400/690 | 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.

Ex-approved versions

| 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 | Propeller speed [min ⁻¹] | I _N [A] | Cos φ | Starting current [A] | Number of blades | Capacity [m ³ /h] | Mean velocity [m/s] | Product numbers | | |
|--------------------|-----------------------------------|----------------------------------|-------------------------|-----------------------|-----------------|----------------|--------------------------------------|--------------------|-------|----------------------|------------------|------------------------------|---------------------|-----------------|------|----------|
| AMD.15.45B.710.E* | 2.1 | 1.5 | 400 | AO7RN-F12G1.5 | 8 | S1. Y | 710 | 5.9 | 0.53 | 26.7 | 3 | 874 | 1.90 | 96560929 | | |
| AMD.25.45B.690.E* | 3.3 | 2.5 | | | | S1. Y | 690 | 7.2 | 0.69 | 26.7 | | 1058 | 2.30 | 96560930 | | |
| AMD.35.45B.705.E* | 4.9 | 3.5 | | | | S1. Δ | 705 | 11.3 | 0.65 | 45.8 | | 1245 | 2.71 | 96560931 | | |
| AMD.45.45B.675.E* | 6.1 | 4.5 | | | | S1. Δ | 675 | 12.5 | 0.72 | 45.8 | | 1435 | 3.12 | 96560932 | | |
| AMD.20.45.700.E* | 2.7 | 2.0 | | | | S1. Y | 700 | 6.5 | 0.62 | 26.7 | | 966 | 2.10 | 96560933 | | |
| AMD.30.45.710.E* | 4.2 | 3.0 | | | | S1. Δ | 710 | 10.4 | 0.61 | 45.8 | | 1151 | 2.51 | 96560934 | | |
| AMD.40.45.695.E* | 5.6 | 4.0 | | | | S1. Δ | 695 | 12.0 | 0.68 | 45.8 | | 1340 | 2.92 | 96560935 | | |
| AMG.15.40.340.E** | 2.1 | 1.5 | | | | S1. Y | 340 | 6.6 | 0.46 | 42.0 | | 1058 | 2.15 | 96257401 | | |
| AMG.22.45.336.E** | 2.9 | 2.2 | | | S1. Y | 336 | 7.2 | 0.60 | 42.0 | 1350 | 2.34 | 96257402 | | | | |
| AMG.30.47.338.E** | 3.8 | 3.0 | | | S1. Δ | 338 | 10.2 | 0.54 | 75.5 | 1629 | 2.50 | 96257403 | | | | |
| AMG.40.52.334.E** | 5.0 | 4.0 | | | S1. Δ | 334 | 11.1 | 0.65 | 75.5 | 2118 | 2.72 | 96257404 | | | | |
| AMG.55.50.344.E** | 6.8 | 5.5 | | | S1. Δ | 344 | 20.7 | 0.48 | 193.0 | 2315 | 3.21 | 96257405 | | | | |
| AMG.75.58.343.E** | 9.1 | 7.5 | | | S1. Δ | 343 | 22.5 | 0.59 | 193.0 | 3234 | 3.40 | 96257406 | | | | |
| AMG.110.68.342.E** | 12.6 | 11.0 | | | S1. Δ | 342 | 26.1 | 0.71 | 257.0 | 4563 | 3.49 | 96257407 | | | | |
| AMG.150.73.355.E** | 16.6 | 15.0 | | S1. Δ | 355 | 34.0 | 0.71 | 284.0 | 5907 | 3.92 | 96257408 | | | | | |
| AMG.185.78.356.E** | 20.6 | 18.5 | | S1. Δ | 356 | 48.3 | 0.62 | 423.0 | 6985 | 4.06 | 96257409 | | | | | |
| AFG.15.130.79.E** | 2.1 | 1.5 | | AO7RN-F12G1.5 | 4 | S1. Y | 79 | 6.6 | 0.46 | 42.0 | 2 | 5874 | 1.23 | 96257410 | | |
| AFG.22.130.78.E** | 2.9 | 2.2 | | | | S1. Y | 78 | 7.2 | 0.60 | 42.0 | | 6782 | 1.42 | 96257411 | | |
| AFG.30.130.95.E** | 3.8 | 3.0 | | | | S1. Δ | 95 | 10.2 | 0.54 | 75.5 | | 7546 | 1.58 | 96257412 | | |
| AFG.40.130.94.E** | 5.0 | 4.0 | | | | S1. Δ | 94 | 11.1 | 0.65 | 75.5 | | 8453 | 1.77 | 96257413 | | |
| AFG.13.180.30.E** | 1.8 | 1.3 | | | | S1. Y | 30 | 6.4 | 0.44 | 42.0 | | 7461 | 0.81 | 96257414 | | |
| AFG.18.180.34.E** | 2.4 | 1.8 | | | | S1. Y | 35 | 6.9 | 0.54 | 42.0 | | 8770 | 0.96 | 96257415 | | |
| AFG.24.180.39.E** | 3.1 | 2.4 | | | | S1. Δ | 39 | 9.8 | 0.50 | 75.5 | | 10075 | 1.10 | 96257416 | | |
| AFG.37.180.46.E** | 4.6 | 3.7 | | | | S1. Δ | 47 | 10.8 | 0.62 | 75.5 | | 12147 | 1.33 | 96257417 | | |
| AFG.15.230.23.E** | 2.1 | 1.5 | | | | S1. Y | 23 | 7.1 | 0.43 | 44.4 | | 10470 | 0.70 | 96257418 | | |
| AFG.22.230.26.E** | 2.9 | 2.2 | | | | S1. Y | 26 | 7.7 | 0.54 | 44.4 | | 12265 | 0.82 | 96257419 | | |
| AFG.30.230.30.E** | 3.8 | 3.0 | | | | 4 | S1. Δ | 30 | 10.2 | 0.54 | | 75.5 | 3 | 15556 | 1.04 | 96257420 |
| AFG.40.230.34.E** | 5.0 | 4.0 | | | | | S1. Δ | 34 | 11.1 | 0.65 | | 75.5 | | 17500 | 1.17 | 96257421 |

*) ATEX Approval II 2G EEx de IIc T4

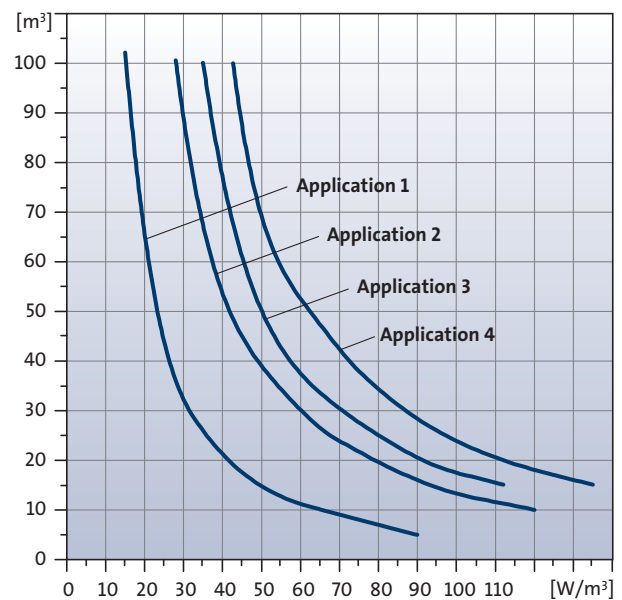
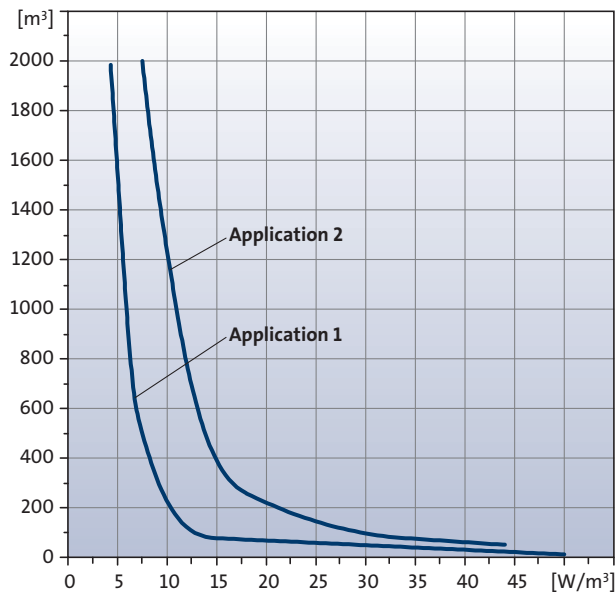
**) ATEX Approval II 2G EEx de ck ib IIc T3



Selection guide for 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 P_2 [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.XXX.(E) | 1.50 | 16 m | - | 5.5 m | 4.5 m |
| AMD.25.45B.XXX.(E) | 2.50 | 20 m | - | 6.0 m | 5.0 m |
| AMD.35.45B.XXX.(E) | 3.50 | 24 m | - | 6.5 m | 5.5 m |
| AMD.45.45B.XXX.(E) | 4.50 | 28 m | - | 7.0 m | 6.0 m |
| AMD.20.45.XXX.(E) | 2.00 | 16 m | 11 m | 5.0 m | 4.5 m |
| AMD.30.45.XXX.(E) | 3.00 | 20 m | 13 m | 6.0 m | 5.0 m |
| AMD.40.45.XXX.(E) | 4.00 | 24 m | 14 m | 6.5 m | 5.5 m |
| AMG.15.40.XXX.(E) | 1.50 | 20 m | 10 m | 5.5 m | 4.0 m |
| AMG.22.45.XXX.(E) | 2.20 | 22 m | 11 m | 6.0 m | 4.5 m |
| AMG.30.47.XXX.(E) | 3.00 | 24 m | 12 m | 6.5 m | 5.0 m |
| AMG.40.52.XXX.(E) | 4.00 | 26 m | 13 m | 7.0 m | 5.5 m |
| AMG.55.50.XXX.(E) | 5.50 | 31 m | 15 m | 8.6 m | 6.0 m |
| AMG.75.58.XXX.(E) | 7.50 | 37 m | 18 m | 10.0 m | 7.5 m |
| AMG.110.68.XXX.(E) | 11.00 | 45 m | 22 m | 12.5 m | 9.0 m |
| AMG.150.73.XXX.(E) | 15.00 | 55 m | 27 m | 15.0 m | 11.0 m |
| AMG.185.78.XXX.(E) | 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 $\leq 3\%$ solid contents
Secondary sludge $\leq 6\%$ solid contents
Digested sludge $\leq 8\%$ 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.

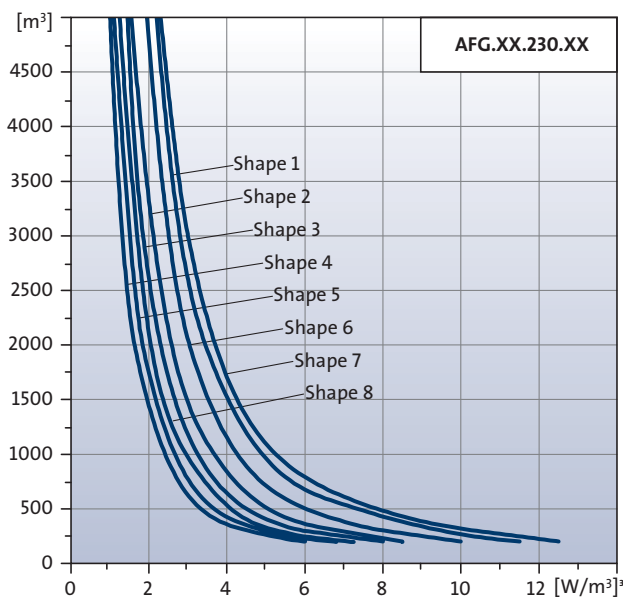
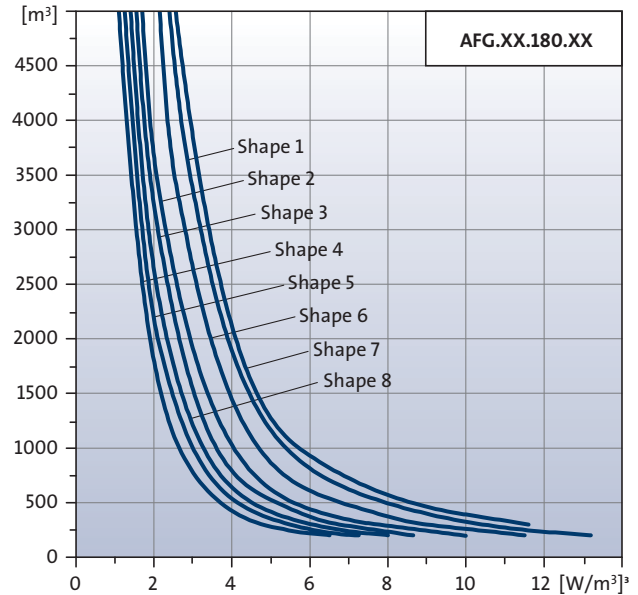
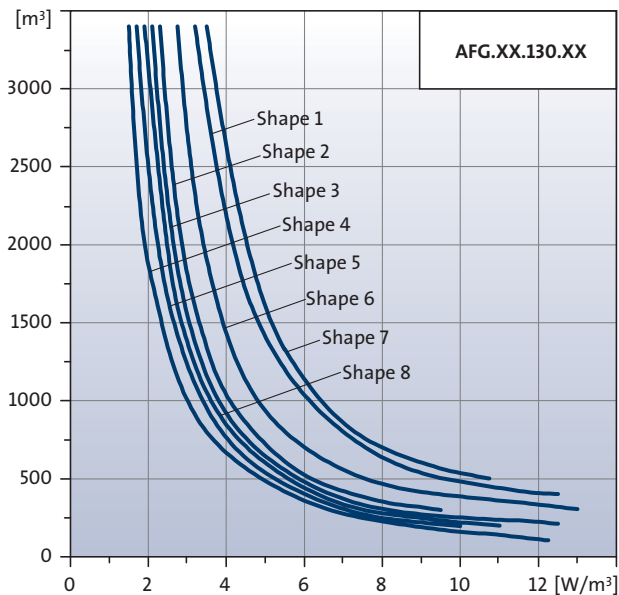
Step 4 Calculate required power input, using this formula:

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

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 for 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 expected 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 m^3 , please use the required energy value for 5000 m^3 .

Step 1 Select the shape of tank for instance shape 4.

Step 2 Select volume for instance 1500 m^3 .

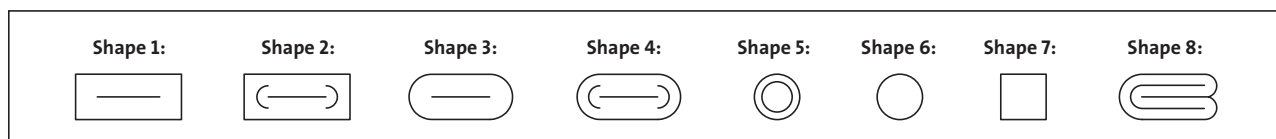
Step 3 Use the curve chart to determine required energy.

This example = 1.9 W/m^3 activated sludge.

Step 4 Calculate required power input:

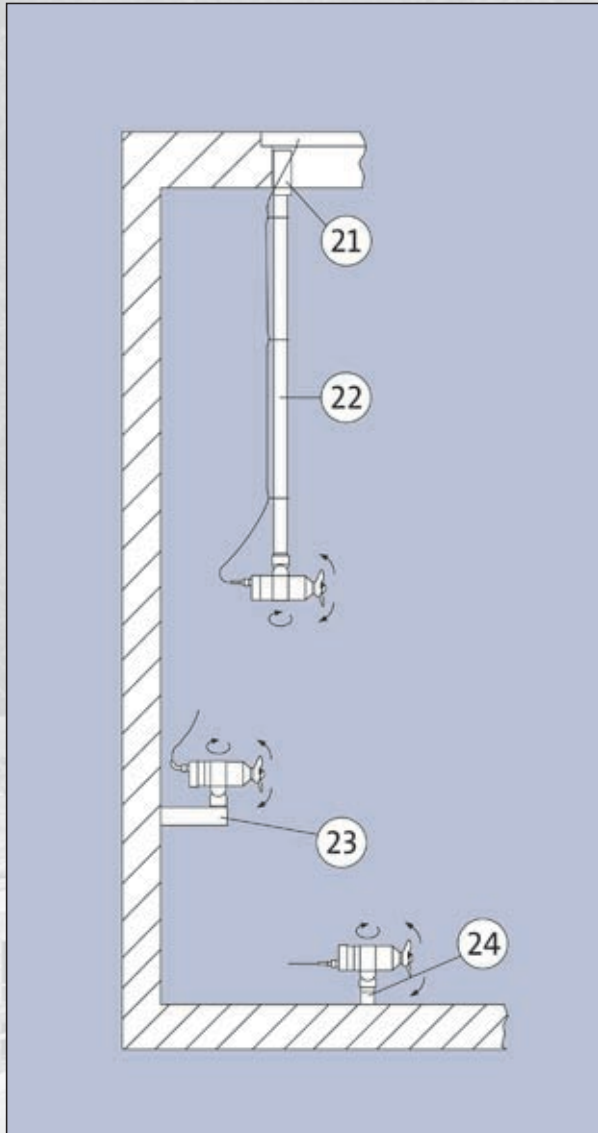
$$\frac{\text{Req. energy } 1.9 \text{ W/m}^3 \times \text{tank volume } 1500 \text{ m}^3}{1000} = 2.85 \text{ kW.}$$

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

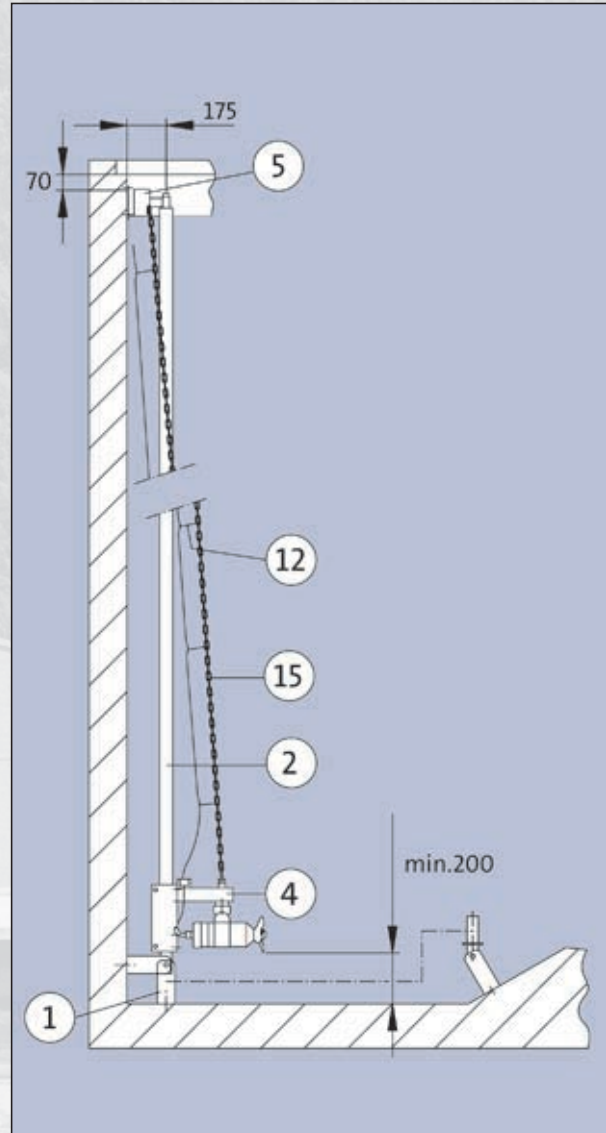


| AFG.XX.130.XX | Power output (kW) | AFG.XX.180.XX | Power output (kW) | AFG.XX.230.XX | Power output (kW) |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| AFG.15.130.XX.(E) | 1.5 | AFG.13.180.XX.(E) | 1.3 | AFG.15.230.XX.(E) | 1.5 |
| AFG.22.130.XX.(E) | 2.2 | AFG.18.180.XX.(E) | 1.8 | AFG.22.230.XX.(E) | 2.2 |
| AFG.30.130.XX.(E) | 3.0 | AFG.24.180.XX.(E) | 2.4 | AFG.30.230.XX.(E) | 3.0 |
| AFG.40.130.XX.(E) | 4.0 | AFG.37.180.XX.(E) | 3.7 | AFG.40.230.XX.(E) | 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 | 1.4301 1.4401 | 304 316 | 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 | 1.4401 | 316 | 96115295 |

Top fixation

| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|----------------|-------------|-----------------|------------------|------------|----------------------|
| 5 | AMD.07.18.1410 | 60/60 | Stainless steel | 1.4301 1.4401 | 304 316 | 96489522 96489523 |

Cable clamp

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

Pull and safety chain, length 6 m

| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|----------------|-------------|-----------------|------------|------|----------------|
| 15 | AMD.07.18.1410 | - | Stainless steel | 1.4404 | 316 | 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 | 1.4401 | 316 | 96115293 |

Tube for suspended mounting, length 3 m

| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|----------------|-------------|-----------------|------------|------|----------------|
| 22 | AMD.07.18.1410 | 2" | Stainless steel | 1.4401 | 316 | 96115294 |

Fixation bracket for wall mounting

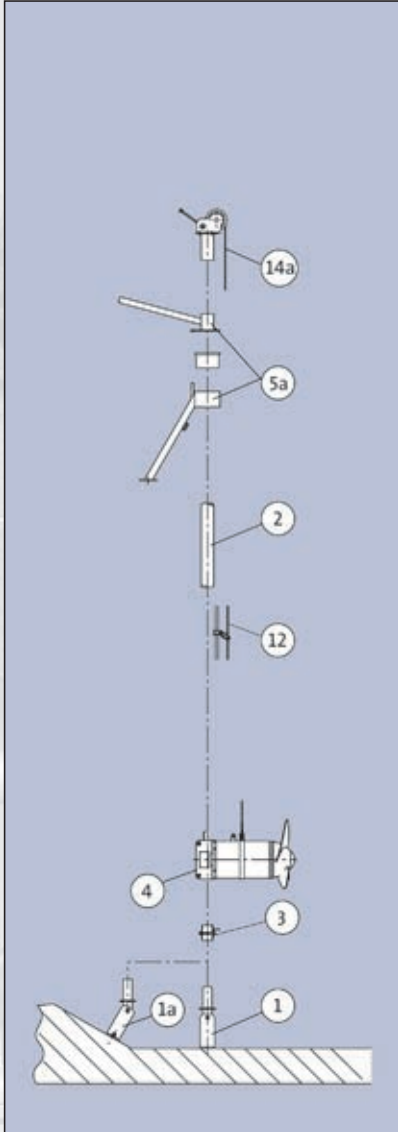
| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|----------------|-------------|-----------------|------------|------|----------------|
| 23 | AMD.07.18.1410 | - | Stainless steel | 1.4401 | 316 | 96115291 |

Fixation base for floor mounting

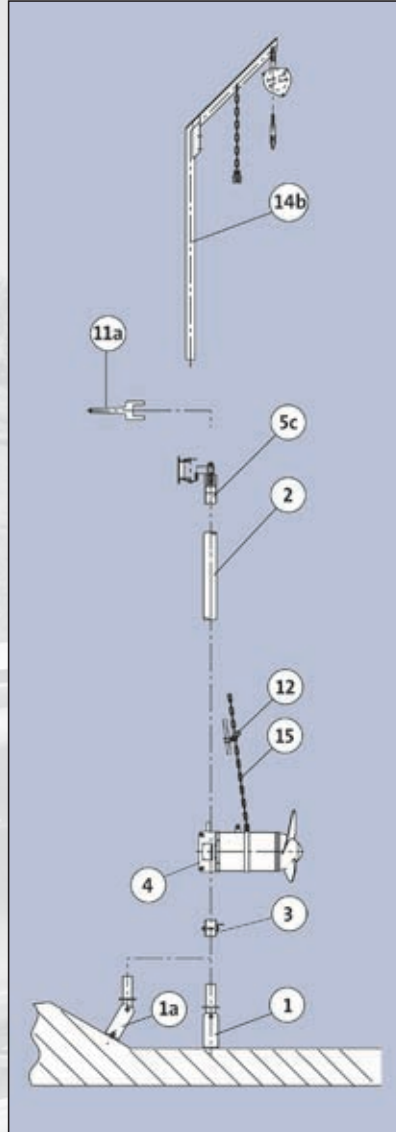
| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|----------------|-------------|-----------------|------------|------|----------------|
| 24 | AMD.07.18.1410 | - | Stainless steel | 1.4401 | 316 | 96115292 |

AMD.XX.45.XXX

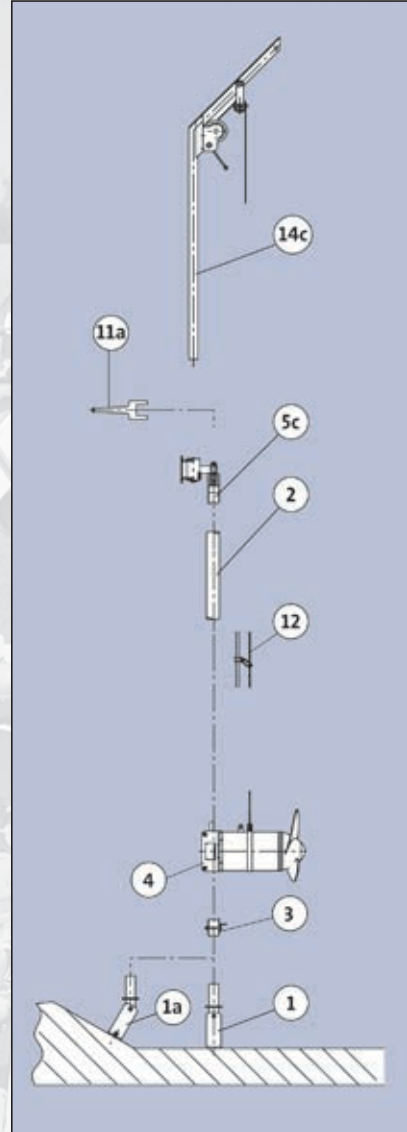
Open installation



Sealed installation



Sealed installation



Bottom fixation

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|-----------------------------|-------------|-----------------|------------|------|----------------|
| 1/1a | AMD.XX.45.XXX.(E) | Horizontal/inclined (0-90°) | 60/60 | Stainless steel | 1.4301 | 304 | 96490666 |
| | | | | | 1.4401 | 316 | 96490667 |

Column profile tube

| Pos. | Mixer | Description |
|------|-------------------|----------------------------------|
| 2 | AMD.XX.45.XXX.(E) | 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.(E) | For clamping | 60/60 | Stainless steel | 1.4301 | 304 | 96561074 |
| | | | | | 1.4401 | 316 | 96505606 |

Top fixation

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|---------------------|-------------|------------------|------------|------|----------------|
| 5a | AMD.XX.45.XXX.(E) | Open installation | 60/60 | Stainless steel | 1.4301 | 304 | 96490756 |
| | | | | | 1.4401 | 316 | 96490757 |
| 5c | | Sealed installation | | Galvanised steel | 1.0037 | - | 96490758 |
| | | | | Stainless steel | 1.4301 | 304 | 96489522 |
| | | | | | 1.4401 | 316 | 96489523 |

Turning key

| Pos. | Mixer | Description | Product number |
|------|-------------------|---|----------------|
| 11a | AMD.XX.45.XXX.(E) | 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.(E) | Cable clamp set | - | Stainless steel | 1.4404 | 316L | 96494352 |

Stand with winch, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|-------------------|-------------|------------------|------------|------|----------------|
| 14a | AMD.XX.45.XXX.(E) | Open installation | 60/60 | Stainless steel | 1.4301 | 304 | 96490816 |
| | | | | | 1.4401 | 316 | 96490817 |
| | | | | Galvanised steel | 1.0037 | - | 96489561 |

Crane with chain hoist, incl. chain

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|---------------------|-------------|------------------|------------|------|----------------|
| 14b | AMD.XX.45.XXX.(E) | Sealed installation | - | Stainless steel | 1.4301 | 304 | 96490862 |
| | | | | | 1.4401 | 316 | 96490863 |
| | | | | Galvanised steel | 1.0037 | - | 96490864 |

Crane boom with winch, incl. 8 m wire

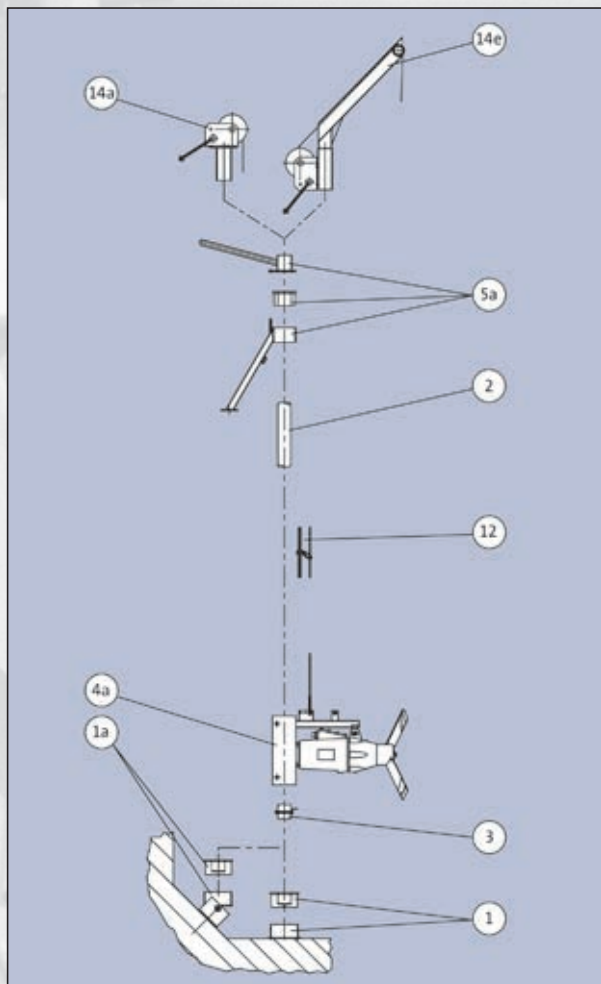
| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|---------------------|-------------|------------------|------------|------|----------------|
| 14c | AMD.XX.45.XXX.(E) | Sealed installation | - | Stainless steel | 1.4301 | 304 | 96562078 |
| | | | | | 1.4401 | 316 | 96562079 |
| | | | | Galvanised steel | 1.0037 | - | 96562120 |

Pull and safety chain, length 6 m

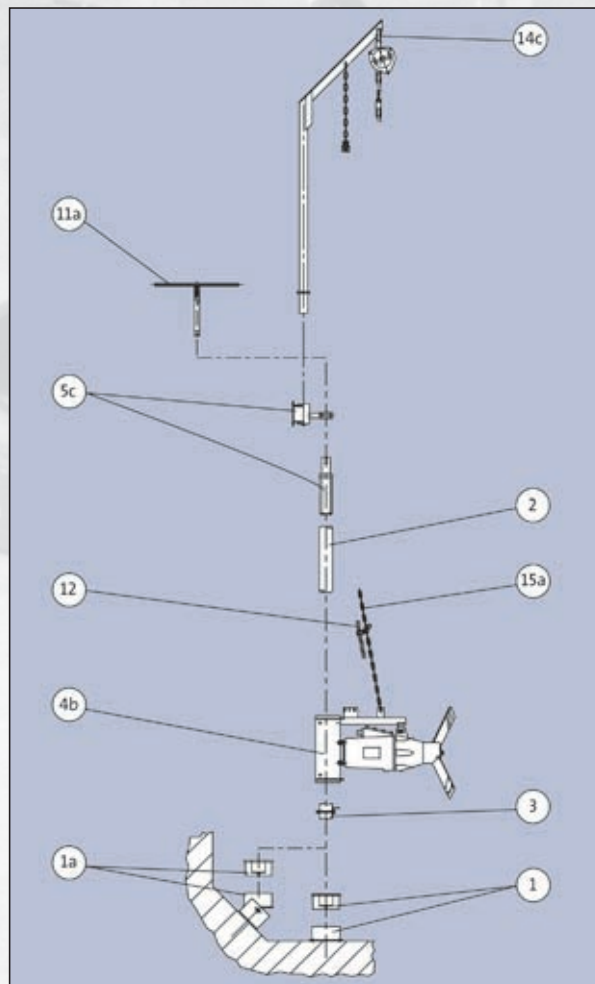
| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|---------------------|-------------|-----------------|------------|------|----------------|
| 15 | AMD.XX.45.XXX.(E) | Sealed installation | - | Stainless steel | 1.4404 | 316L | 96494529 |

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.XXX.(E) AMG.22.45.XXX.(E) | Horizontal | 80/80 | Stainless steel | 1.4301 | 304 | 96490669 |
| 1a | AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Horizontal/inclined (0-90°) | | | 1.4401 | 316 | 96489417 |
| | | | | | 1.4301 | 304 | 96490673 |
| | | | | | 1.4401 | 316 | 96489418 |

Column profile tube

| Pos. | Mixer | Description |
|------|--|----------------------------------|
| 2 | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | See column profile tube, page 24 |

Depth blocker

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|--------------|-------------|-----------------|------------|------|----------------|
| 3 | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | For clamping | 80/80 | Stainless steel | 1.4301 | 304 | 96490714 |
| | | | | | 1.4401 | 316 | 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.XXX.(E) AMG.22.45.XXX.(E) | Open installation | 80/80 | Stainless steel | 1.4301 | 304 | 96489465 |
| | | | | | 1.4401 | 316 | 96489466 |
| 4b | AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Sealed installation | 80/80 | Stainless steel | 1.4301 | 304 | 96490735 |
| | | | | | 1.4401 | 316 | 96490736 |

Top fixation

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|---|---------------------|-------------|------------------|------------|------|----------------|
| 5a | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) | Open installation | 80/80 | Stainless steel | 1.4301 | 304 | 96489491 |
| | | | | | 1.4401 | 316 | 96489492 |
| | | | | Galvanised steel | 1.0037 | - | 96489493 |
| 5c | AMG.40.52.XXX.(E) | Sealed installation | 80/80 | Stainless steel | 1.4301 | 304 | 96489524 |
| | | | | | 1.4401 | 316 | 96489525 |

Turning key

| Pos. | Mixer | Description | Product number |
|------|--|---|----------------|
| 11a | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | 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.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Cable clamp set | - | Stainless steel | 1.4404 | 316L | 96494352 |

Stand with winch, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14a | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Open installation | 80/80 | Stainless steel | 1.4301 | 304 | 96490818 |
| | | | | | 1.4401 | 316 | 96490819 |
| | | | | Galvanised steel | 1.0037 | - | 96489562 |

Crane boom with winch, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14e | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Open installation | 80/80 | Stainless steel | 1.4301 | 304 | 96490774 |
| | | | | | 1.4401 | 316 | 96490776 |
| | | | | Galvanised steel | 1.0037 | - | 96490777 |

Crane with chain hoist, incl. chain

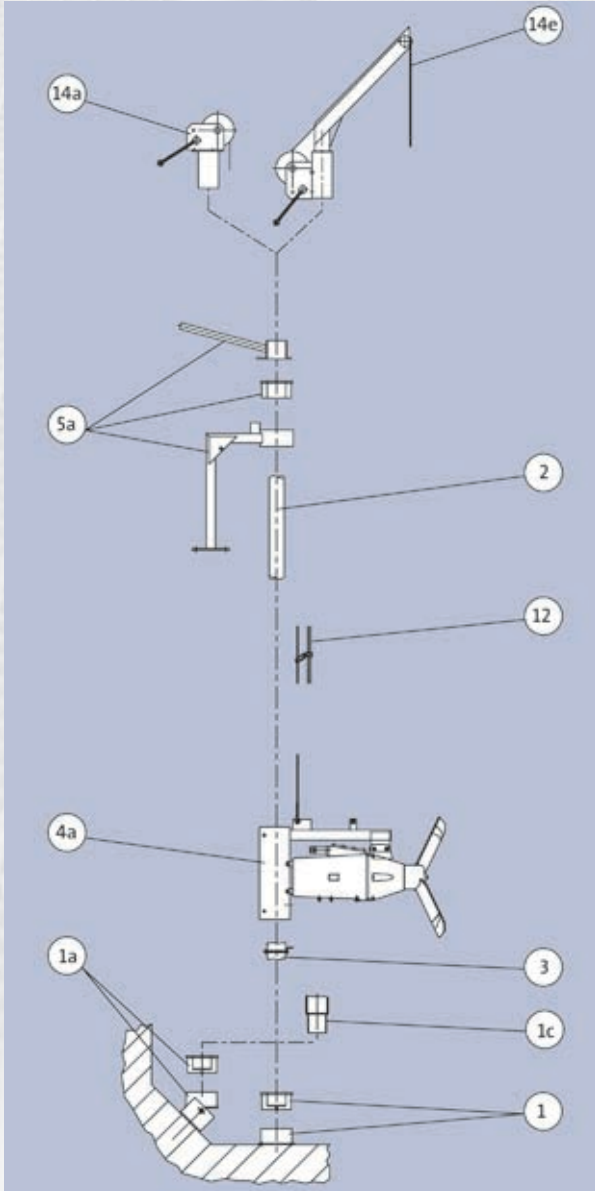
| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|---------------------|-------------|------------------|------------|------|----------------|
| 14c | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Sealed installation | 80/80 | Stainless steel | 1.4301 | 304 | 96490862 |
| | | | | | 1.4401 | 316 | 96490863 |
| | | | | Galvanised steel | 1.0037 | - | 96490864 |

Pull and safety chain, length 6 m

| Pos. | Mixer | Description | Material | DIN W.-Nr. | AISI | Product number |
|------|--|---------------------|-----------------|------------|------|----------------|
| 15a | AMG.15.40.XXX.(E) AMG.22.45.XXX.(E) AMG.30.47.XXX.(E) AMG.40.52.XXX.(E) | Sealed installation | Stainless steel | 1.4404 | 316L | 96494529 |

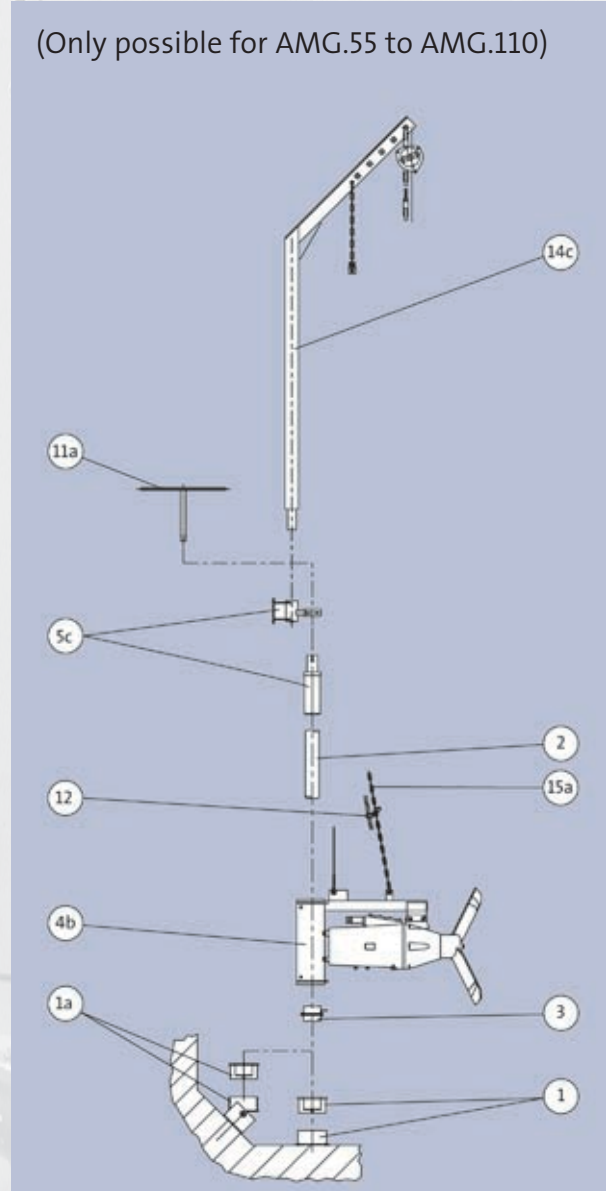
AMG.55.XX to AMG.185.XX

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.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Horizontal | 100/100 | Stainless steel | 1.4301 | 304 | 96490675 |
| | | | | | 1.4401 | 316 | 96490676 |
| 1a | AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | Horizontal/inclined (0-90°) | 100/100 | Stainless steel | 1.4301 | 304 | 96490679 |
| | | | | | 1.4401 | 316 | 96490700 |

Reduction piece

| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------|-----------------|------------|------|----------------|
| 1c | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | 120/100 | Stainless steel | 1.4301 | 304 | 96490702 |
| | | | | 1.4401 | 316 | 96490706 |

AMG.55.XX to AMG.185.XX

Column profile tube

| Pos. | Mixer | Description |
|------|--|----------------------------------|
| 2 | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | See column profile tube, page 24 |

Depth blocker

| Pos. | Mixer | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------|-----------------|------------|------|----------------|
| 3 | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | 100/100 | Stainless steel | 1.4301 | 304 | 96490722 |
| | | | | 1.4401 | 316 | 96490723 |
| | | 120/120 | Stainless steel | 1.4301 | 304 | 96490725 |
| | | | | 1.4401 | 316 | 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.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96489469 |
| | | | | | 1.4401 | 316 | 96489480 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96489481 |
| | | | | | 1.4401 | 316 | 96489482 |
| 4b | | Sealed installation | 100/100 | Stainless steel | 1.4301 | 304 | 96493202 |
| | | | | | 1.4401 | 316 | 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.XXX.(E) AMG.185.78.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96490741 |
| | | | | | 1.4401 | 316 | 96490742 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96490745 |
| | | | | | 1.4401 | 316 | 96490746 |

Top fixation

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|---------------------|-------------|------------------|------------|------|----------------|
| 5a | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96489494 |
| | | | | Galvanised steel | 1.4401 | 316 | 96489495 |
| | | | 120/120 | Stainless steel | 1.0037 | - | 96489496 |
| | | | | Galvanised steel | 1.4301 | 304 | 96489389 |
| 5c | AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | Open installation | 120/120 | Stainless steel | 1.4401 | 316 | 96489520 |
| | | | | Galvanised steel | 1.0037 | - | 96489521 |
| | | Sealed installation | 100/100 | Stainless steel | 1.4301 | 304 | 96489526 |
| | | | | | 1.4401 | 316 | 96489527 |

Turning key

| Pos. | Mixer | Description | Product number |
|------|--|-------------------------------------|----------------|
| 11a | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | 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.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | 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, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14a | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96490820 |
| | | | | | 1.4401 | 316 | 96490821 |
| | | | | Galvanised steel | 1.0037 | - | 96489563 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96490822 |
| | | | | | 1.4401 | 316 | 96490823 |
| | | | | Galvanised steel | 1.0037 | - | 96489564 |

Stand with winch for AMG.150.XX to AMG.185.XX, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14a | AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96490824 |
| | | | | | 1.4401 | 316 | 96490825 |
| | | | | Galvanised steel | 1.0037 | - | 96490826 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96490829 |
| | | | | | 1.4401 | 316 | 96490860 |
| | | | | Galvanised steel | 1.0037 | - | 96490861 |

Crane boom with winch for AMG.55.XX to AMG.110.XX, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14e | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96489559 |
| | | | | | 1.4401 | 316 | 96490778 |
| | | | | Galvanised steel | 1.0037 | - | 96490779 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96489560 |
| | | | | | 1.4401 | 316 | 96490780 |
| | | | | Galvanised steel | 1.0037 | - | 96490783 |

Crane boom with winch for AMG.150.XX to AMG.185.XX, incl. 8 m wire

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|-------------------|-------------|------------------|------------|------|----------------|
| 14e | AMG.150.73.XXX.(E) AMG.185.78.XXX.(E) | Open installation | 100/100 | Stainless steel | 1.4301 | 304 | 96490810 |
| | | | | | 1.4401 | 316 | 96490811 |
| | | | | Galvanised steel | 1.0037 | - | 96490812 |
| | | | 120/120 | Stainless steel | 1.4301 | 304 | 96490813 |
| | | | | | 1.4401 | 316 | 96490814 |
| | | | | Galvanised steel | 1.0037 | - | 96490815 |

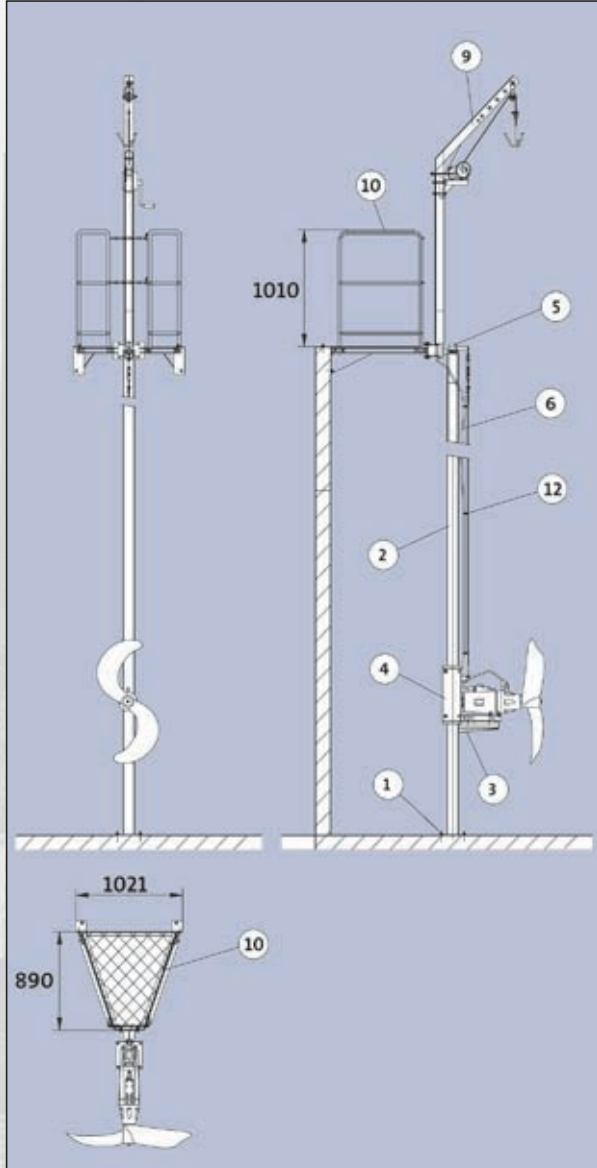
Crane with chain hoist for AMG.55.XX to AMG.110.XX, incl. chain

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|---------------------|-------------|-----------|------------|------|----------------|
| 14c | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | Sealed installation | - | Aluminium | - | - | 96489565 |

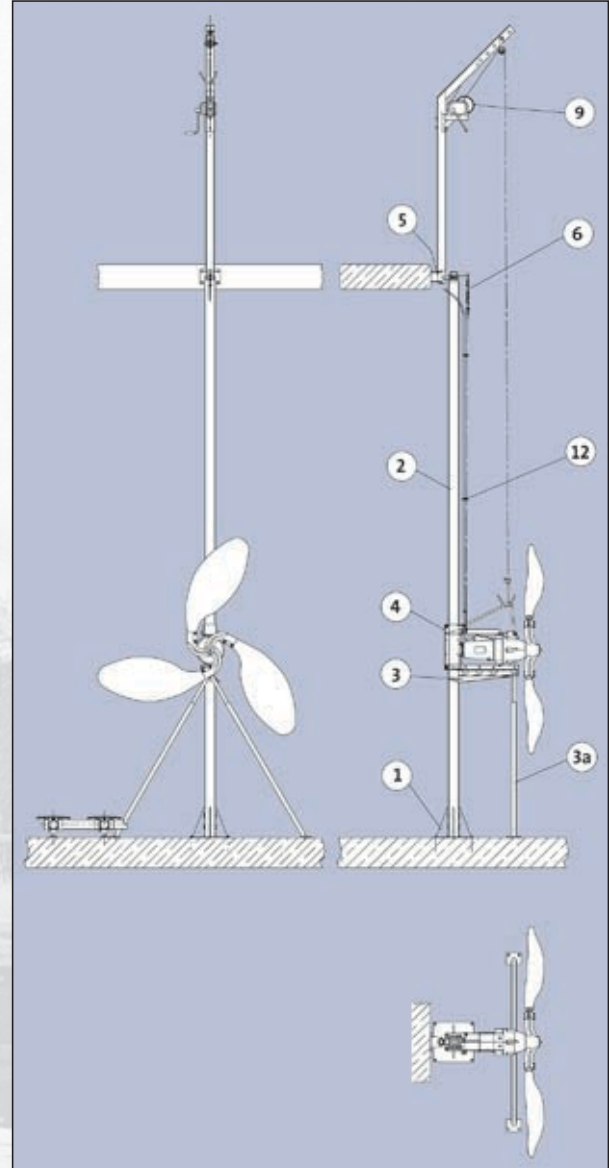
Pull and safety chain, length 6 m

| Pos. | Mixer | Description | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|--|---------------------|-------------|-----------------|------------|------|----------------|
| 15a | AMG.55.50.XXX.(E) AMG.75.58.XXX.(E) AMG.110.68.XXX.(E) | 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.(E) | 100/100 | Stainless steel | 1.4301 | 304 | 96489415 |
| | | | | 1.4401 | 316 | 96489416 |
| | AFG.XX.180.XX.(E) | | | 1.4301 | 304 | 96489411 |
| | AFG.XX.230.XX.(E) | | | 1.4401 | 316 | 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.(E) | 100/100 | Stainless steel | 1.4301 | 304 | 96489449 |
| | | | | 1.4401 | 316 | 96489460 |
| | AFG.XX.180.XX.(E) | | | 1.4301 | 304 | 96489461 |
| | | | | AFG.XX.230.XX.(E) | 1.4401 | 316 |

Support for depth blocker (to be used at risk of vibration)

| Pos. | Flowmaker | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|-------------|-----------------|-------------------|--------|----------------|
| 3a | AFG.XX.130.XX.(E) | 100/100 | Stainless steel | 1.4301 | 304 | 96115262 |
| | | | | 1.4401 | 316 | 96115263 |
| | AFG.XX.180.XX.(E) | | | 1.4301 | 304 | 96115264 |
| | | | | AFG.XX.230.XX.(E) | 1.4401 | 316 |

Motor bracket

| Pos. | Flowmaker | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-------------------|-------------|-----------------|-------------------|--------|----------------|
| 4 | AFG.XX.130.XX.(E) | 100/100 | Stainless steel | 1.4301 | 304 | 96490749 |
| | | | | 1.4401 | 316 | 96490750 |
| | AFG.XX.180.XX.(E) | | | 1.4301 | 304 | 96490752 |
| | | | | AFG.XX.230.XX.(E) | 1.4401 | 316 |

Top fixation

| Pos. | Flowmaker | Column size | Material | DIN W.-Nr. | AISI | Product number |
|------|-----------|-------------|-----------------|------------|------|----------------|
| 5 | All AFG | 100/100 | Stainless steel | 1.4301 | 304 | 96489526 |
| | | | | 1.4401 | 316 | 96489527 |

Relief wire, length 4 m incl. tension adjuster

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

Crane with winch, incl. 8 m wire

| 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.(E) | - | Galvanised 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 | 96494352 |

Maximum permissible length of column profile tube

| Product type | 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 m | | | | | |
| AMD.15.45B.XXX.(E) | > 10 m | | | | | |
| AMD.25.45B.XXX.(E) | 8.0 m | | > 10 m (*) | | | |
| AMD.35.45B.XXX.(E) | 6.0 m | | > 10 m (*) | | | |
| AMD.45.45B.XXX.(E) | 5.5 m | | > 10 m (*) | | | |
| AMD.20.45.XXX.(E) | 10 m | | > 10 m (*) | | | |
| AMD.30.45.XXX.(E) | 8.0 m | | > 10 m (*) | | | |
| AMD.40.45.XXX.(E) | 6.0 m | | > 10 m (*) | | | |
| AMG.15.40.XXX.(E) | | > 10 m | | | | |
| AMG.22.45.XXX.(E) | | > 10 m | | | | |
| AMG.30.47.XXX.(E) | | > 10 m | | | | |
| AMG.40.52.XXX.(E) | | > 10 m | | | | |
| AMG.55.50.XXX.(E) | | > 10 m | | | | |
| AMG.75.58.XXX.(E) | | | 10 m | > 10 m | | |
| AMG.110.68.XXX.(E) | | | 7.0 m | 9 m | > 10 m | |
| AMG.150.73.XXX.(E) | | | 5.0 m | 6.5 m | 7.5 m | 10 m |
| AMG.185.78.XXX.(E) | | | 4.0 m | 5.0 m | 6.0 m | 7.5 m |
| AFG.15.130.XX.(E) | | | | 7 m (**) | | |
| AFG.22.130.XX.(E) | | | | 7 m (**) | | |
| AFG.30.130.XX.(E) | | | | 7 m (**) | | |
| AFG.40.130.XX.(E) | | | | 7 m (**) | | |
| AFG.13.180.XX.(E) | | | | 7 m (**) | | |
| AFG.18.180.XX.(E) | | | | 7 m (**) | | |
| AFG.24.180.XX.(E) | | | | 7 m (**) | | |
| AFG.37.180.XX.(E) | | | | 7 m (**) | | |
| AFG.15.230.XX.(E) | | | | 7 m (**) | | |
| AFG.22.230.XX.(E) | | | | 7 m (**) | | |
| AFG.30.230.XX.(E) | | | | 7 m (**) | | |
| AFG.40.230.XX.(E) | | | | 7 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 | 1.4301 | 304 | 96489420 |
| | | 1.4401 | 316 | 96489421 |
| 80/80/3 | Stainless steel | 1.4301 | 304 | 96489426 |
| | | 1.4401 | 316 | 96489427 |
| 100/100/3 | Stainless steel | 1.4301 | 304 | 96489429 |
| | | 1.4401 | 316 | 96489440 |
| 100/100/4 | Stainless steel | 1.4301 | 304 | 96489441 |
| | | 1.4401 | 316 | 96489442 |
| 100/100/5 | Stainless steel | 1.4301 | 304 | 96489443 |
| | | 1.4401 | 316 | 96489444 |
| 120/120/5* | Stainless steel | 1.4301 | 304 | 96489445 |
| | | 1.4401 | 316 | 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

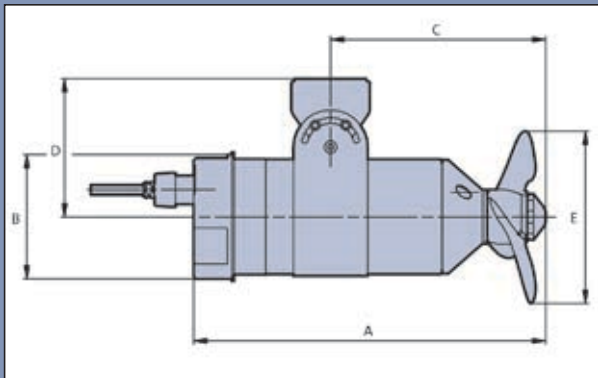
| Description | Material | DIN W.-Nr. | AISI | Product number |
|---|------------------|------------|------|----------------|
| Relay for leakage sensor | Type ALR-20/A | - | - | 96489569 |
| Relay for leakage sensor Ex version | Type ALR-20/A-Ex | - | - | 96257400 |
| Power cable ¹⁾ | A07RN-F 12G1.5 | - | - | 96489580 |
| Power cable ¹⁾ | A07RN-F 12G2.5 | - | - | 96489581 |
| Power cable ¹⁾ | A07RN-F 12G4 | - | - | 96494351 |
| Pull and safety chain for AMD and AMG ¹⁾ | Stainless steel | 1.4404 | 316L | 96489583 |
| 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.

Note: Mixers and flowmakers are delivered with 8 m power cable as standard.

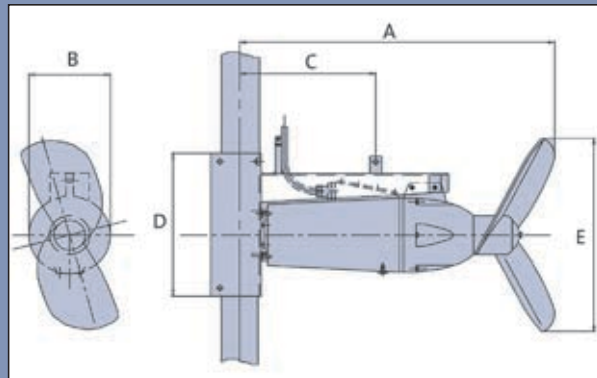
Dimensions

Mixer types AMD.07.18.1410



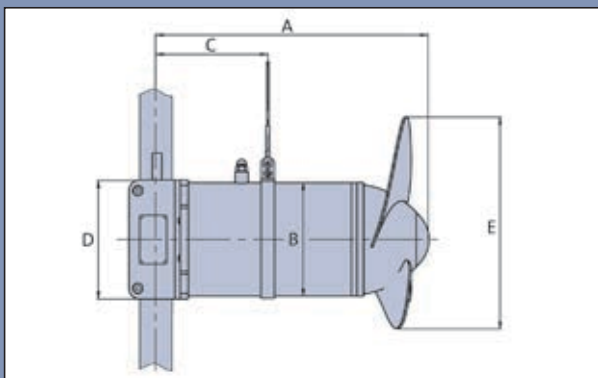
| Type | Dimensions [mm] | | | | | Weight 1) |
|----------------|-----------------|-----|-----|-----|-----|--------------|
| | A | B | C | D | E | |
| AMD.07.18.1410 | 332 | 117 | 203 | 130 | 180 | 11.5 |

Mixer types AMG



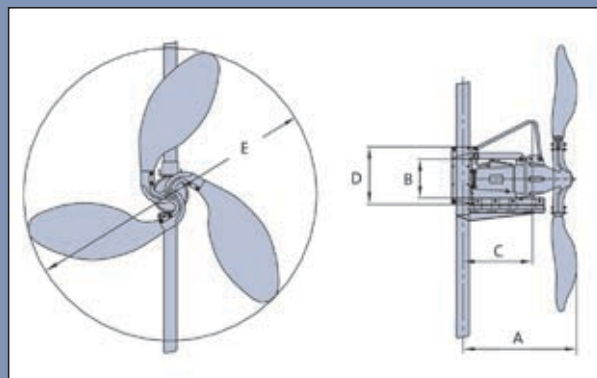
| Type | Dimensions [mm] | | | | | Weight 1) |
|--------------------|-----------------|-----|-----|-----|-----|--------------|
| | A | B | C | D | E | |
| AMG.15.40.XXX.(E) | 720 | 200 | 305 | 400 | 417 | 76 |
| AMG.22.45.XXX.(E) | 735 | 200 | 305 | 400 | 452 | 76 |
| AMG.30.47.XXX.(E) | 750 | 200 | 305 | 400 | 480 | 83 |
| AMG.40.52.XXX.(E) | 760 | 200 | 305 | 400 | 525 | 86 |
| AMG.55.50.XXX.(E) | 980 | 270 | 455 | 500 | 505 | 167 |
| AMG.75.58.XXX.(E) | 990 | 270 | 455 | 500 | 580 | 171 |
| AMG.110.68.XXX.(E) | 1010 | 270 | 455 | 500 | 680 | 182 |
| AMG.150.73.XXX.(E) | 1160 | 315 | 455 | 630 | 730 | 278 |
| AMG.185.78.XXX.(E) | 1180 | 315 | 455 | 630 | 780 | 278 |

Mixer types AMD.XX.45.XXX



| Type | Dimensions [mm] | | | | | Weight 1) |
|--------------------|-----------------|-----|-----|-----|-----|--------------|
| | A | B | C | D | E | |
| AMD.15.45B.XXX.(E) | 525 | 210 | 180 | 210 | 450 | 50 |
| AMD.25.45B.XXX.(E) | 525 | 210 | 180 | 210 | 450 | 50 |
| AMD.35.45B.XXX.(E) | 560 | 210 | 200 | 210 | 450 | 59 |
| AMD.45.45B.XXX.(E) | 560 | 210 | 200 | 210 | 450 | 59 |
| AMD.20.45.XXX.(E) | 525 | 210 | 180 | 210 | 450 | 50 |
| AMD.30.45.XXX.(E) | 560 | 210 | 200 | 210 | 450 | 59 |
| AMD.40.45.XXX.(E) | 560 | 210 | 200 | 210 | 450 | 59 |

Flowmakers type AFG



| Type | Dimensions [mm] | | | | | Weight 1) |
|-------------------|-----------------|-----|-----|-----|------|--------------|
| | A | B | C | D | E | |
| AFG.15.130.XX.(E) | 795 | 200 | 353 | 500 | 1300 | 119 |
| AFG.22.130.XX.(E) | 795 | 200 | 353 | 500 | 1300 | 123 |
| AFG.30.130.XX.(E) | 795 | 200 | 353 | 500 | 1300 | 140 |
| AFG.40.130.XX.(E) | 795 | 200 | 353 | 500 | 1300 | 154 |
| AFG.13.180.XX.(E) | 1100 | 302 | 540 | 450 | 1800 | 190 |
| AFG.18.180.XX.(E) | 1100 | 302 | 540 | 450 | 1800 | 190 |
| AFG.24.180.XX.(E) | 1100 | 302 | 540 | 450 | 1800 | 198 |
| AFG.37.180.XX.(E) | 1100 | 302 | 540 | 450 | 1800 | 198 |
| AFG.15.230.XX.(E) | 1100 | 302 | 540 | 450 | 2300 | 185 |
| AFG.22.230.XX.(E) | 1100 | 302 | 540 | 450 | 2300 | 197 |
| AFG.30.230.XX.(E) | 1100 | 302 | 540 | 450 | 2300 | 200 |
| AFG.40.230.XX.(E) | 1100 | 302 | 540 | 450 | 2300 | 220 |

1) Note: All weights include motor bracket.

The Grundfos wastewater range

Heavy-duty submersible sewage pumps 5 – 29 kW

Brochure covers the Grundfos range of submersible channel-impeller pumps from 5 kW up to 21 kW and Super-Vortex pumps up to 29 kW. All designed for handling unscreened raw sewage. Available in 50 Hz and 60 Hz versions.



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. Available in 50 Hz and 60 Hz versions.



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.

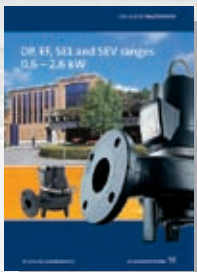
Prefabricated pumping stations

Brochure covers the Grundfos range of prefabricated pumping stations for collecting and removing drainwater, surface water, domestic and industrial wastewater and sewage.



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 Super-Vortex-impeller pumps from 0.6 to 2.6 kW. Designed for handling drainage, effluent and sewage from private dwellings.



Heavy-duty submersible sewage pumps 1.1 – 11 kW

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

Submersible recirculation pumps

Brochure covers the Grundfos range of SRP submersible recirculation pumps for wastewater treatment plants and flood control.



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.