

# Submersible Mixer Type ABS RW 400

The compact submersible mixers have been designed for a wide range of applications. The units are suitable to achieve flow pattern in large tanks and open waters for mixing and stirring applications.

## Construction

The submersible mixer is designed as a compact, water-pressure-tight unit including propeller and integrally casted installation bracket for the attachment on the square guide tube. Different versions with a bracket for vertical angle adjustment and / or a flow ring can be chosen. The mixers are available in two standard material versions: EC = cast iron version, CR = stainless steel version. Maximum allowable temperature of the medium for continuous operation is 40 °C (104 °F).

## Motor

Squirrel cage, 3-phase, 8-pole 60 Hz, insulation class F (155 °C / 311 °F), max. submergence 20 m (66 ft).

## Propeller

Technically optimized, axially operating 2- or 3-blade propellers with very good self-cleaning effect for vibration-free operation. The propellers are designed to achieve high thrust and therefore a high flow capacity in axial direction.

## Solids deflection ring

The solids deflection ring protects the mechanical seal from damage by ingress of solid or fibrous matter.

## Bearings

All bearings are lubricated-for-life and maintenance-free, with a calculated life time of more than 100 000 h.

## Shaft sealing

Mechanical seal: Silicon carbide / Silicon carbide.  
O-Rings and lip seals: NBR.

## Seal monitoring

DI-system with a sensor in the oil chamber (not in Ex version) and connection chamber.

## Temperature monitoring

Thermal sensors in the stator which open at 140 °C (284 °F).

## Cable

10 m (32.8 ft) sewage resistant material.  
Optional lengths: 15 m (49 ft), 20 m (66 ft), 30 m (98 ft), 40 m (131 ft), 50 m (164 ft).

## Options

Explosion-proof version, flow ring, seals in viton, EMC cable, double MS, PTC or PT 100 in the stator.

## Accessories

Lifting hoop, vertical angle adjustment, vibration damper, vortex shield.

## Weight

Without flow ring: 92 kg (203 lbs).  
With flow ring: 106 kg (234 lbs).



60 Hz

## Mixer performance

| Hydraulic No. | Mixer power $P_p$ in kW (hp) | Motor kW (hp) |
|---------------|------------------------------|---------------|
| 4021          | 1.9 (2.5)                    | 3.5 (4.7)     |
| 4022          | 2.2 (3.0)                    | 3.5 (4.7)     |
| 4023          | 2.7 (3.6)                    | 3.5 (4.7)     |
| 4024          | 3.4 (4.6)                    | 4.6 (6.2)     |
| 4031          | 4.4 (5.9)                    | 4.6 (6.2)     |
| 4041*         | 1.5 (2.0)                    | 3.5 (4.7)     |
| 4042*         | 1.7 (2.3)                    | 3.5 (4.7)     |
| 4043*         | 2.1 (2.8)                    | 3.5 (4.7)     |
| 4044*         | 2.6 (3.5)                    | 4.6 (6.2)     |
| 4051*         | 3.4 (4.6)                    | 4.6 (6.2)     |

\* with flow ring

## Motor Data

| Motor                      | A 35/8       | A 46/8       |
|----------------------------|--------------|--------------|
| Rated power (kW)           | 3.5 (4.7 hp) | 4.6 (6.2 hp) |
| Rated current at 480 V (A) | 8.7          | 10.3         |
| Speed (rpm)                | 858          | 841          |
| Motor efficiency (%)       | 76.0         | 77.5         |
| Power factor               | 0.68         | 0.74         |

## Materials

| Part            | EC (cast iron)                                | CR (stainless steel)                       |
|-----------------|---|--|
| Motor housing   | EN-GJL-250, painted                           | Stainless steel 1.4404 (AISI 316L)         |
| Sliding bracket | EN-GJL-250 / EN-GJS-400-18 painted, polyamide | Stainless steel 1.4408 / polyamide (CF-8M) |
| Motor shaft     | Stainless steel 1.4021 (AISI 420)             | Stainless steel 1.4404 (AISI 316L)         |
| Propeller       | Stainless steel 1.4571 (AISI 316Ti)           | Stainless steel 1.4571 (AISI 316Ti)        |
| Fasteners       | Stainless steel 1.4401 (AISI 316)             | Stainless steel 1.4401 (AISI 316)          |

## Material comparison

| Europe                 | USA                  |
|------------------------|----------------------|
| EN 1561; EN-GJL-250    | ASTM A48; Class 35 B |
| EN 1563; EN-GJS-400-18 | ASTM A536, 60-40-18  |
| 1.4021                 | ASTM / AISI 420      |
| 1.4401                 | ASTM / AISI 316      |
| 1.4404                 | ASTM / AISI 316 L    |
| DIN 17 445; 1.4408     | ASTM / AISI CF-8M    |
| DIN 17 440; 1.4571     | ASTM / AISI 316 Ti   |

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