**MAX TANK VOLUME SELECTION TABLE**

<table>
<thead>
<tr>
<th>Process</th>
<th>MF</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>simple mixing</td>
<td>5 m³</td>
<td>70 m³</td>
</tr>
<tr>
<td>reagent preparation</td>
<td>3 m³</td>
<td>30 m³</td>
</tr>
<tr>
<td>neutralisation</td>
<td>2 m³</td>
<td>20 m³</td>
</tr>
<tr>
<td>sludge suspension</td>
<td>50 + 80 g/l</td>
<td>1.7 m³</td>
</tr>
<tr>
<td>lime</td>
<td>0 + 100 g/l</td>
<td>1.5 m³</td>
</tr>
<tr>
<td></td>
<td>100 + 200 g/l</td>
<td>----</td>
</tr>
<tr>
<td>polyelectrolyte</td>
<td>0 + 10 g/l</td>
<td>----</td>
</tr>
</tbody>
</table>

**POSITIONING MIXER**

G > 100 for MF series  
G > 200 for MS series  
IMPORTANT! If the mixer is centred in the tank, it is necessary to install 3 antirotation baffles positioned at 120° for MF series, 4 baffles positioned at 90° for MS series.  
A = liquid height  
B = tank diameter  
C = distance between propeller and bottom of the tank  
D = distance between two propellers  
E = propeller diameter

If 0.5 < A / B < 1.1: single propeller  
C = 0.5 + 2 x E  
If 1.1 < A / B < 1.6: double propeller  
D = 2 x E (MS series)  
D = 5 x E (MF series)

**CHOICE OF THE PROPELLER/TANK DIAMETER RATIO**

E = B x 0.3 for serie MS series  
E = B x 0.2 for serie MF series

**MOTOR POWER REQUIREMENT**

Mixer are mounted with a motor of adequate power. To calculate the necessary motor power use the following formulas:

\[
P_{\text{real}} = P_{\text{needed}} \times \text{liquid density} \times \text{viscosity coefficient}
\]

\[
P_{\text{needed}} = \text{power in water: read from the table of each mixer}
\]

It is necessary to verify that motor power is:

- equal to \( P_{\text{real}} + 5\% \) for MF series
- equal to \( P_{\text{real}} + 25\% \) for MS series

Keep in mind that:

- If speed is increased by 50%, motor power must be increased by \( \sim 3 \) times  
- If propeller diameter is increased by 50%, motor power must be increased \( \sim 7 \) times

**Example:** MF series with 950 rpm - propeller Ø 120 - motor 0.25 kW  
- To move to 1400 rpm it is necessary to use a motor with 1 kW  
- To use a propeller of Ø 180 it is necessary to choose a motor with 1.5 kW

Power conversion formula: \( \text{hp} = \text{kW} \times 0.75 \)

**TABLE OF VISCOSITY COEFFICIENTS**

<table>
<thead>
<tr>
<th>Viscosity (cPs)</th>
<th>Correction Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1.10</td>
</tr>
<tr>
<td>30</td>
<td>1.20</td>
</tr>
<tr>
<td>40</td>
<td>1.25</td>
</tr>
<tr>
<td>50</td>
<td>1.30</td>
</tr>
<tr>
<td>100</td>
<td>1.40</td>
</tr>
<tr>
<td>200</td>
<td>1.50</td>
</tr>
<tr>
<td>300</td>
<td>1.60</td>
</tr>
<tr>
<td>500</td>
<td>1.70</td>
</tr>
<tr>
<td>700</td>
<td>1.75</td>
</tr>
<tr>
<td>1000</td>
<td>1.85</td>
</tr>
<tr>
<td>2000</td>
<td>2.00</td>
</tr>
</tbody>
</table>
To be used with low viscosity liquids in medium capacity tank or basin to mix or prepare chemical solution.

**MOTOR**
- Single-phase / 3-phases - IP55
- 0.12 kW - 4 poles
  
  other motor powers available on request

**SHAFT**
- PVC / AISI 316L
- length: 600 mm
  800 mm
  900 mm
  1.100 mm
  
  other shaft lengths available on request

**PROPELLER**
- PVC / AISI 316L - 2 blades
- diameter: 90 mm
  
  other diameters available on request

**NEEDED POWER**

<table>
<thead>
<tr>
<th>Power</th>
<th>Power in water</th>
<th>Real Speed - rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12 kW</td>
<td>0.07 kW</td>
<td>1360</td>
</tr>
<tr>
<td>0.18 kW</td>
<td>0.11 kW</td>
<td>1350</td>
</tr>
<tr>
<td>0.25 kW</td>
<td>0.15 kW</td>
<td>1350</td>
</tr>
</tbody>
</table>

**SPARE PARTS AVAILABLE**
- Motor + flange
- Propeller
- Shaft
To be used in water treatment field to flocculation or polyelectrolyte preparation.

**MOTOR + GEAR**
- Single-phase / 3-phases - IP55
- 0.12 kW - 4 poles
  - other motor powers available on request

Reduction ratio:
- 1:7 (200 rpm - 4 poles motor)
- 1:20 (70 rpm - 4 poles motor)
  - other reduction ratio available on request

**PROPELLE**
- PVC / AISI 316L
- 2 / 3 / 6 blades (filled / unloaded)
- diameter: 90 mm, 150 mm, 220 mm
  - other diameters available on request

**SHAFT**
- PVC / AISI 316L
- length: 600 mm, 800 mm, 900 mm, 1.100 mm
  - other shaft lengths available on request

**NEEDED POWER**

<table>
<thead>
<tr>
<th>Power</th>
<th>Power in water</th>
<th>Real Speed (rpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12 kW</td>
<td>0.05 kW</td>
<td>194</td>
</tr>
<tr>
<td>0.18 kW</td>
<td>0.08 kW</td>
<td>193</td>
</tr>
<tr>
<td>0.25 kW</td>
<td>0.11 kW</td>
<td>193</td>
</tr>
</tbody>
</table>

**SPARE PARTS AVAILABLE**
- Motor + flange + support
- Propeller
- 2nd Propeller
- Additional blades (only PVC)
- Shaft
## MIXER IDENTIFICATION TABLE

<table>
<thead>
<tr>
<th>M</th>
<th>S</th>
<th>1</th>
<th>12</th>
<th>T</th>
<th>4</th>
<th>A</th>
<th>0</th>
<th>9</th>
<th>D</th>
<th>12</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
</table>

### 1° Product
- M: Mixer

### 2° TYPE
- F: Fast (without reduction gear)
- S: Slow (with reduction gear)

### 3° Ratio
- 1:1: (Fast Speed)
- 1:7: 200 rpm (with 4 poles motor)
- 1:20: 70 rpm (with 4 poles motor)

### 4° Motor power
- 0.12 kW
- 0.18 kW
- 0.25 kW
- 0.37 kW

### 5° Motor poles number
- 2: 2 poli
- 4: 4 poli

### 6° Power supply
- M: Monofase 230 Vac
- T: Trifase 230 / 400 Vac

### 7° Motor poles number
- 2
- 4

### 8° Contact materials
- A: Aisi 316
- P: PVC

### 9° Shaft length
- 06: 00 mm
- 08: 00 mm
- 09: 00 mm
- 11: 00 mm

### 10° Blades number / holes
- A: 2 / filled
- B: 3 / filled
- C: 6 / filled

### 11° Propeller diameter
- 09: 0 mm
- 15: 0 mm
- 22: 0 mm

### 12° Optional
- 0: standard
- 0: standard