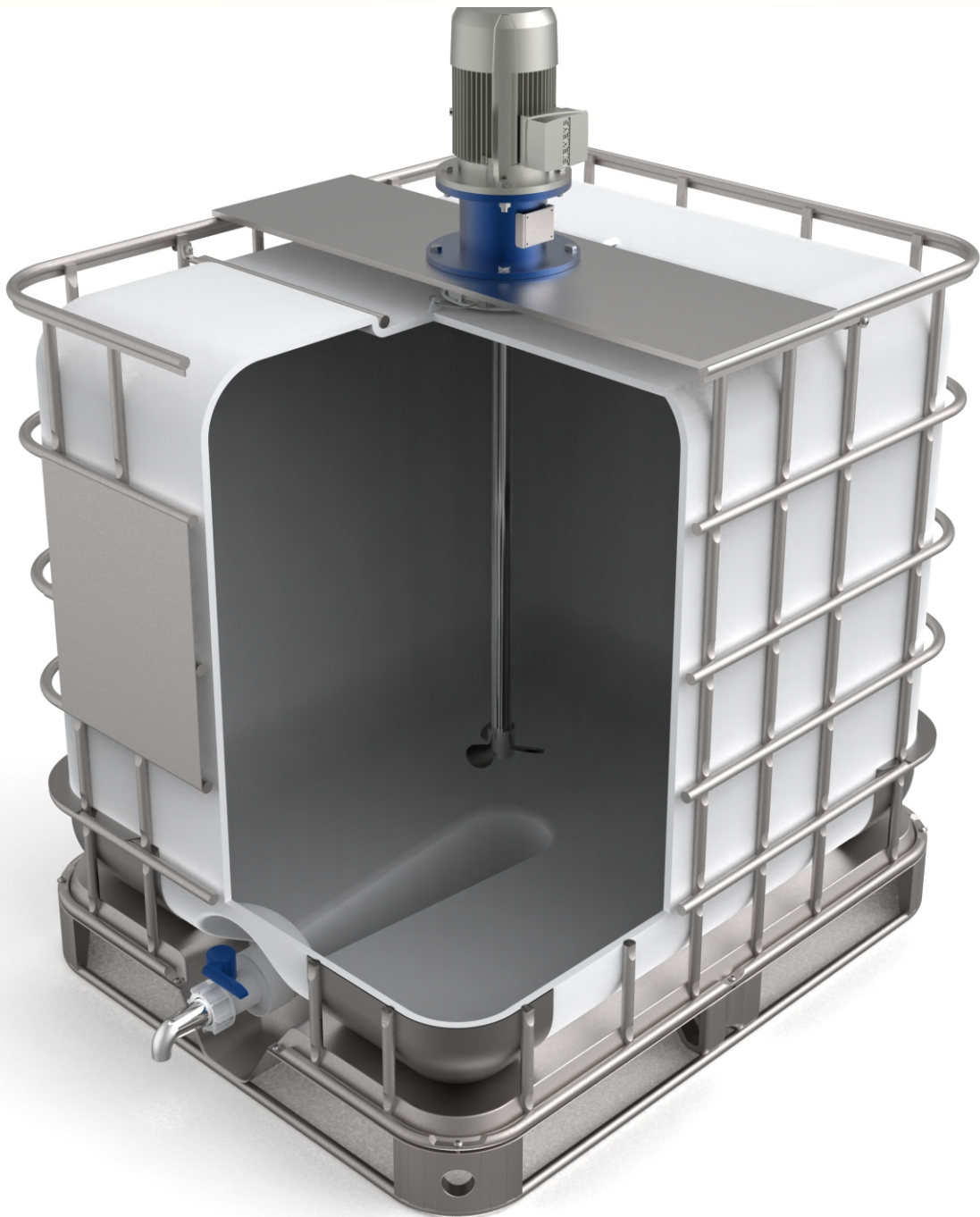


## Fast Rotating Mixers (FRM)



PAKZIST MODERN

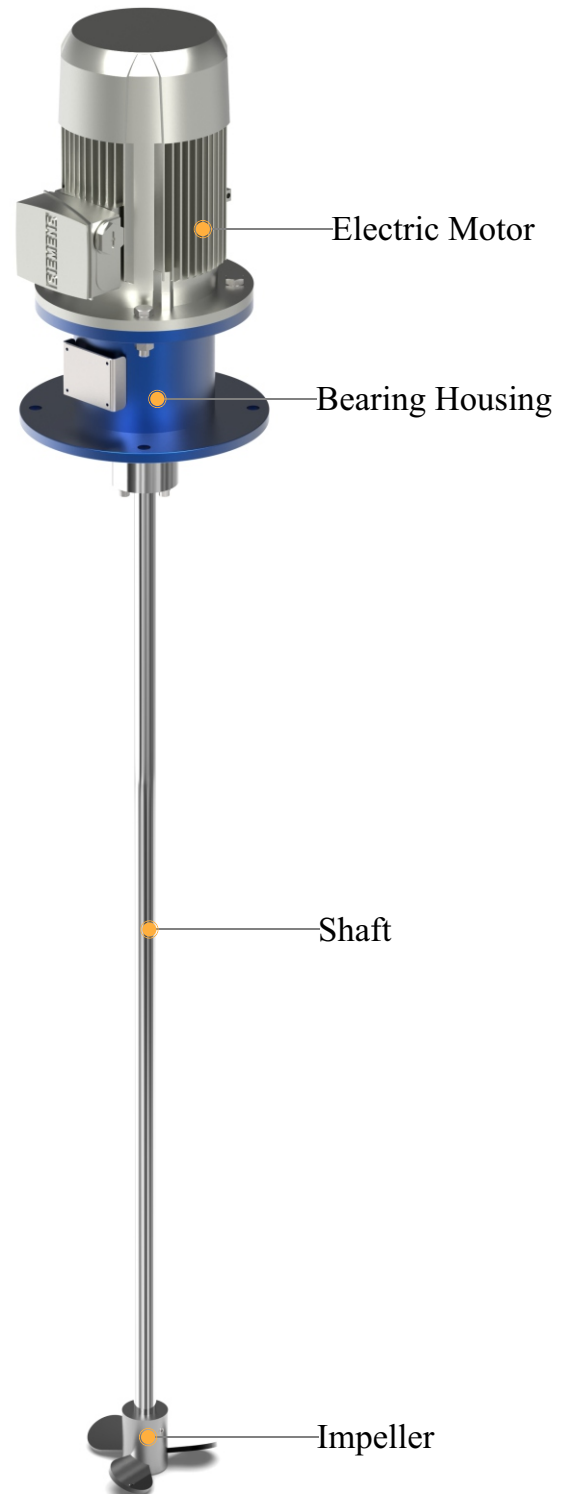
## Fast Rotating Mixers (FRM)

These mixers are designed for light to medium-duty applications with tank capacities ranging from 100 to 12,000 liters. The robust design of the bearing system and the use of strong 1.6582 alloy steel in the shaft holder enable 24-hour operation for this series.

As the name suggests, these mixers use only an electric motor to start and rotate the shaft and impeller - there's no need for additional equipment such as a gearbox for speed change. This feature reduces manufacturing, maintenance, and repair costs.

The intelligent design of the FRM series allows for a reasonable price and easy use in various processes, including dissolution, heat transfer and temperature homogenization, liquid-phase mixing, and light suspension production.

If the mixer is used for highly corrosive and oxidizing fluids, ETFE and PE coatings are available at a reasonable price.

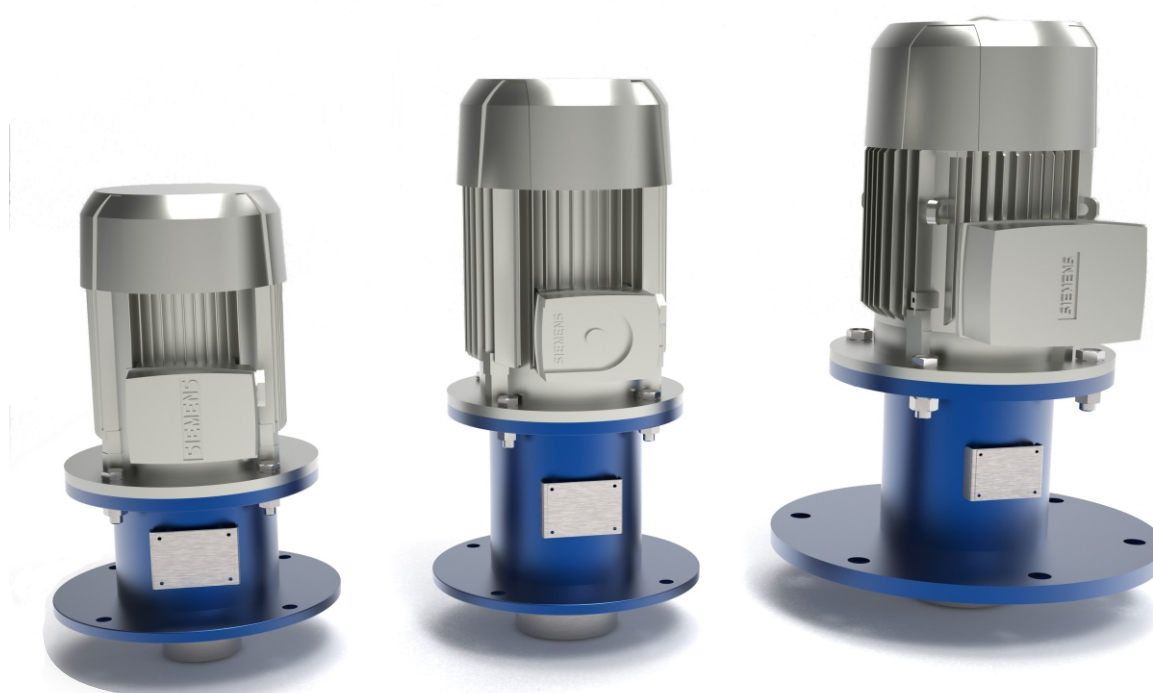


## Fast Rotating Mixers (FRM)

The mixers are available in three sizes: Small, Medium, and Large.

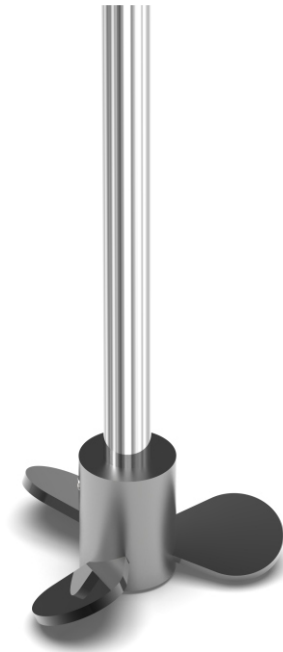
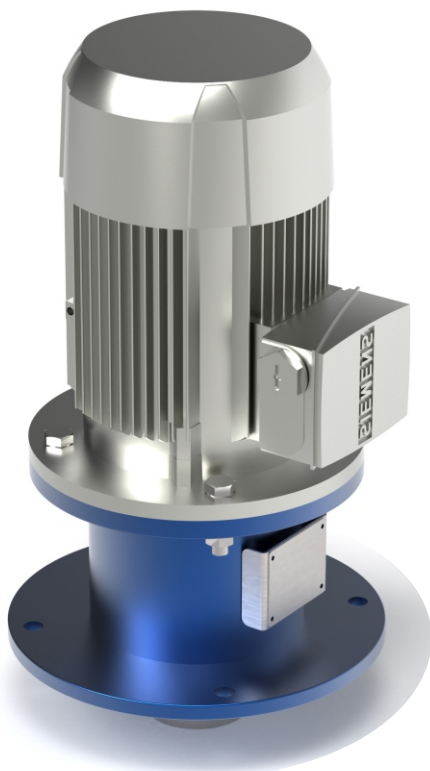
| Mixer model | Maximum Shaft Diameter | Max Applicable Power | Max speed    | Max Shaft Length | Max Tank Capacity |
|-------------|------------------------|----------------------|--------------|------------------|-------------------|
| FRMS        | 35                     | 0.75 KW              | 900-1500 RPM | 1,600 mm         | 2,000 L           |
| FRMM        | 50                     | 1.5 KW               |              | 2,400 mm         | 4,000 L           |
| FRML        | 75                     | 4 KW                 |              | 3,200 mm         | 12,000 L          |

- These mixers come with two types of couplings for connecting to structures and tanks: flange and clamp connections.
- Flange connection is recommended for fixed and non-portable mixers. To prevent vortex formation in flange-connected mixers, use baffled tanks or install the mixer off-center.
- Clamp connection is recommended when the mixer's location needs to be changed and no specific chassis is available for installation. It allows for a 20-degree angle to prevent vortex formation.



## Features Of The FRM Series Mixers:

- Suitable for small tanks with low viscosity
- Has the lowest run out and vibration when operation
- Available in single-phase and three-phase types with different voltage ranges
- Operating range of 100 to 12000 liters



- Shaft can be ordered as single or split.
- Coatings such as ETFE and PE can be used for corrosive materials.
- Designed for 24-hour operation.
- Electrostatically powder-coated mixer bearing housing.
- Reasonable investment cost.
- Explosion-proof electric motors available upon request.

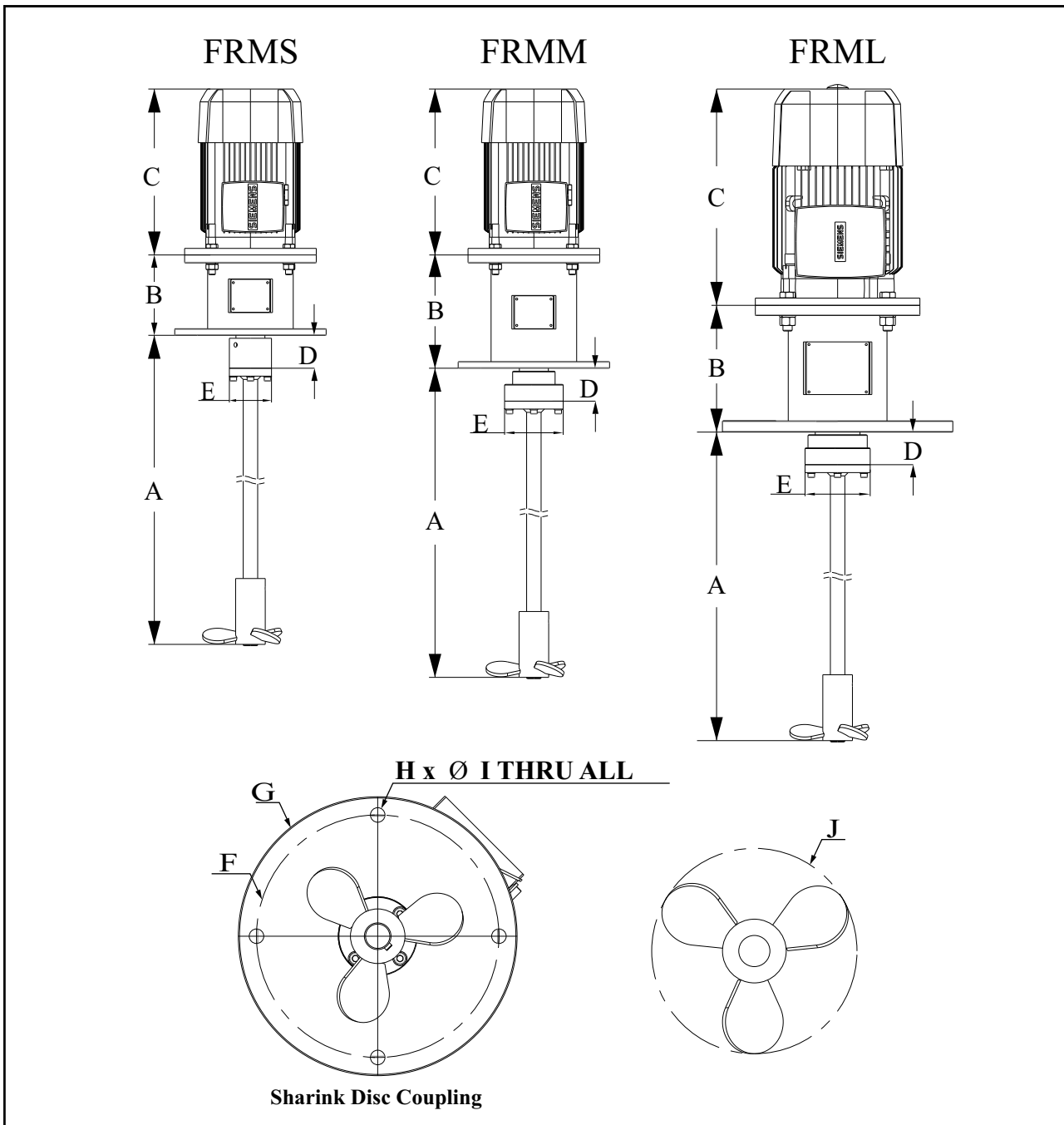


# Identity Code of FRM Mixers

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Mixer Selection</b>          |                           |
| FRM Fast Rotation Mixers        |                           |
| <b>Mixer Version Indicator</b>  |                           |
| S                               | Small                     |
| M                               | Medium                    |
| L                               | Large                     |
| <b>Tank Capacity Indicator</b>  |                           |
| A                               | 220 Liters                |
| B                               | 250 Liters                |
| C                               | 300 Liters                |
| D                               | 350 Liters                |
| E                               | 500 Liters                |
| F                               | 800 Liters                |
| G                               | 1000 Liters               |
| H                               | 1500 Liters               |
| I                               | 2000 Liters               |
| J                               | 2500 Liters               |
| K                               | 3000 Liters               |
| L                               | 4000 Liters               |
| <b>Impeller Type Selection</b>  |                           |
| 1                               | Propeller With Zero Pitch |
| 2                               | Pitch Blade Turbine       |
| 3                               | Saw Blade                 |
| <b>Wet Parts Material</b>       |                           |
| S4                              | SS 304                    |
| S6                              | SS 316L                   |
| S8                              | Super Duplex SS           |
| <b>Powder Coating</b>           |                           |
| 0                               | N/A                       |
| P                               | Polyethylene              |
| T                               | ETFE                      |
| <b>Electric Motor Selection</b> |                           |
| A                               | IP 55 (STANDARD)          |
| B                               | EX db IIB zone1           |
| C                               | EX db IIC zone1           |
| D                               | EX eb IIC zone1           |
| E                               | EX ec zone2               |
| <b>Motor Supply</b>             |                           |
| 1                               | Single PHASE 220/230 VAC  |
| 3                               | Three PHASE 230/400 VAC   |
| <b>Shaft Connection Type</b>    |                           |
| DC                              | Direct Coupling           |
| FC                              | Flange Coupling           |
| <b>Housing Coupling Type</b>    |                           |
| 1                               | Flange Type               |
| 2                               | Clamp Type                |
| <b>Housing Coating</b>          |                           |
| C1                              | Polyester                 |
| C2                              | Epoxy                     |
| C3                              | 3 Layer Coating           |



# Dimensional Drawing of FRM Mixers



| Mixer Model | Motor Frame Size | Speed Range<br>RPM | A         | B   | C   | D  | E  | F   | G   | H  | I       | J       |
|-------------|------------------|--------------------|-----------|-----|-----|----|----|-----|-----|----|---------|---------|
|             |                  |                    | mm        | mm  | mm  | mm | mm | mm  | mm  | mm | mm      | mm      |
| <b>FRMS</b> | IEC80            | 1000~1500          | 600~1600  | 122 | 252 | 50 | 64 | 200 | 230 | 4  | 12(M10) | 125~180 |
| <b>FRMM</b> | IEC80            |                    | 1200~2400 | 172 | 252 |    | 89 | 200 | 230 | 4  | 12(M10) | 145~250 |
|             | IEC90            |                    |           |     | 297 |    |    |     |     |    |         |         |
| <b>FRML</b> | IEC100           |                    | 1500~3200 | 192 | 335 |    | 99 | 300 | 350 | 6  | 19(M16) | 160~300 |
|             | IEC112           |                    |           |     | 330 |    |    |     |     |    |         |         |
|             | IEC132           |                    |           |     | 385 |    |    |     |     |    |         |         |

