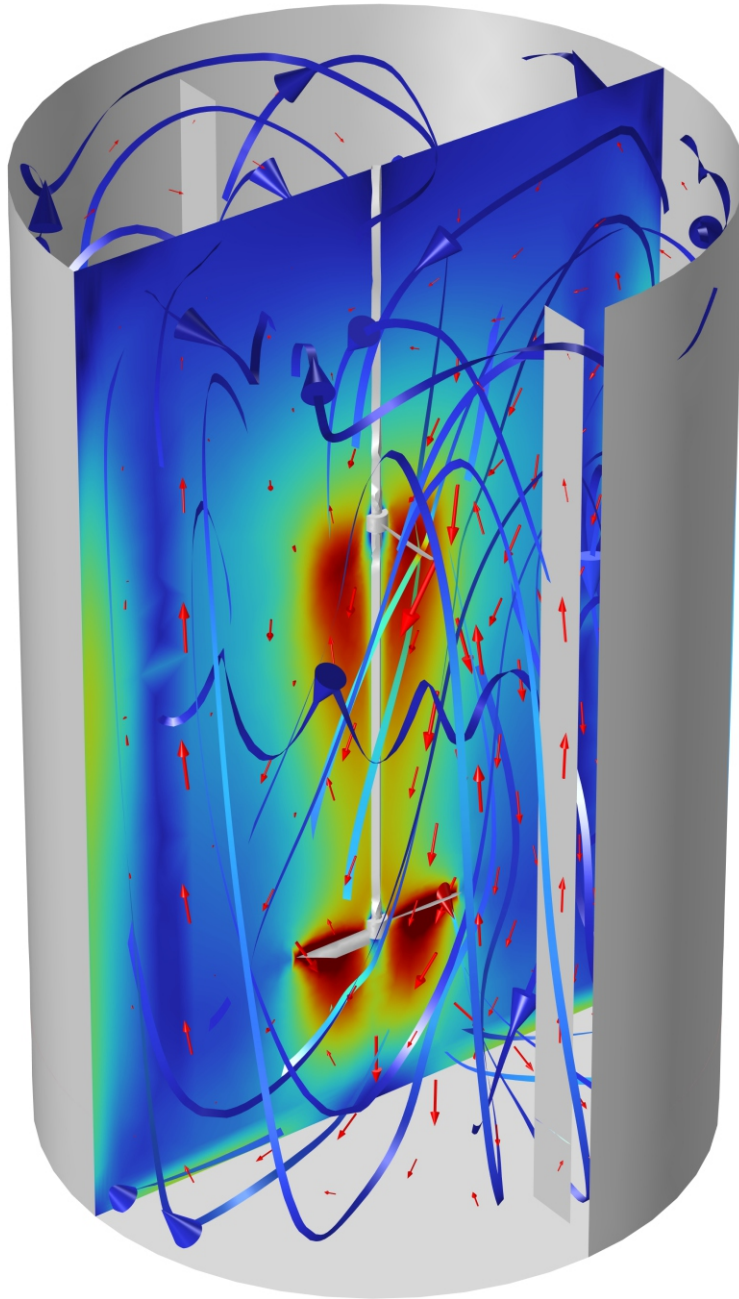


Medium Slow Rotating Mixers (MSRM)



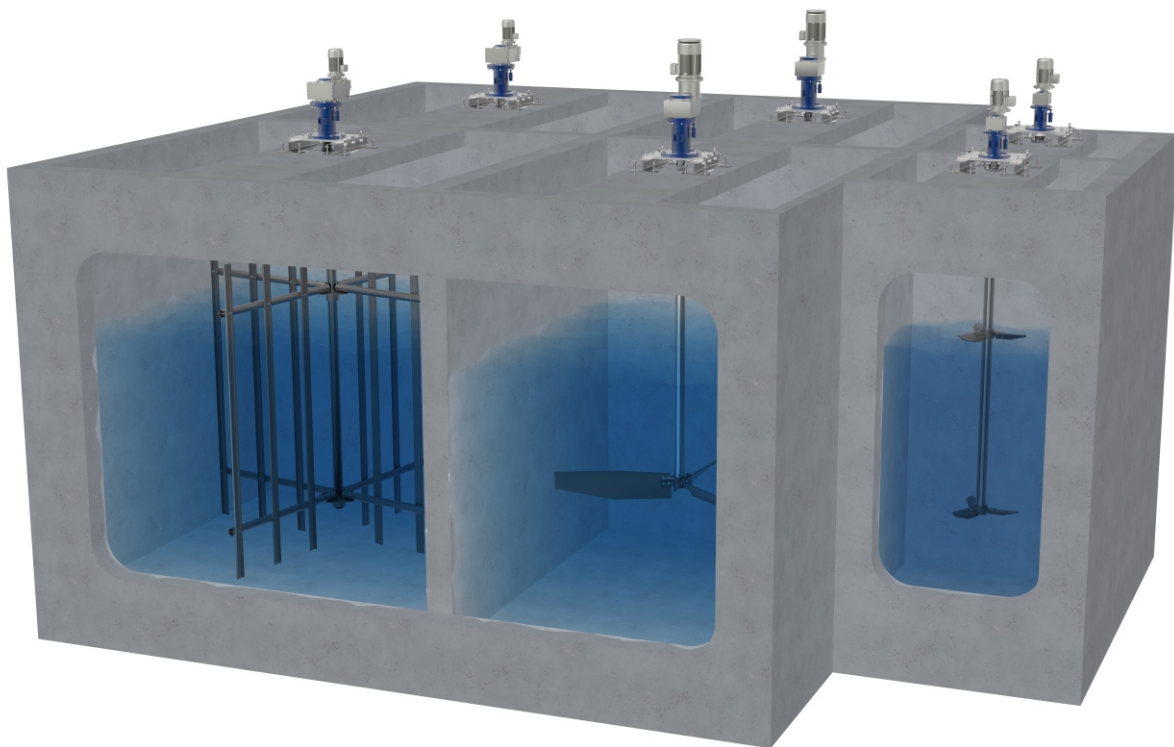
PAKZIST MODERN

Slow Rotating Mixers - MSRM Series

These mixers are designed and built to be suitable for medium to large tanks in terms of volume, and for mild to vigorous mixing in terms of intensity. They are suitable for installation on concrete and metal reactors and tanks. These mixers are designed for 24/7 operation and can continue normal operation for a long time without the need for repair and maintenance.

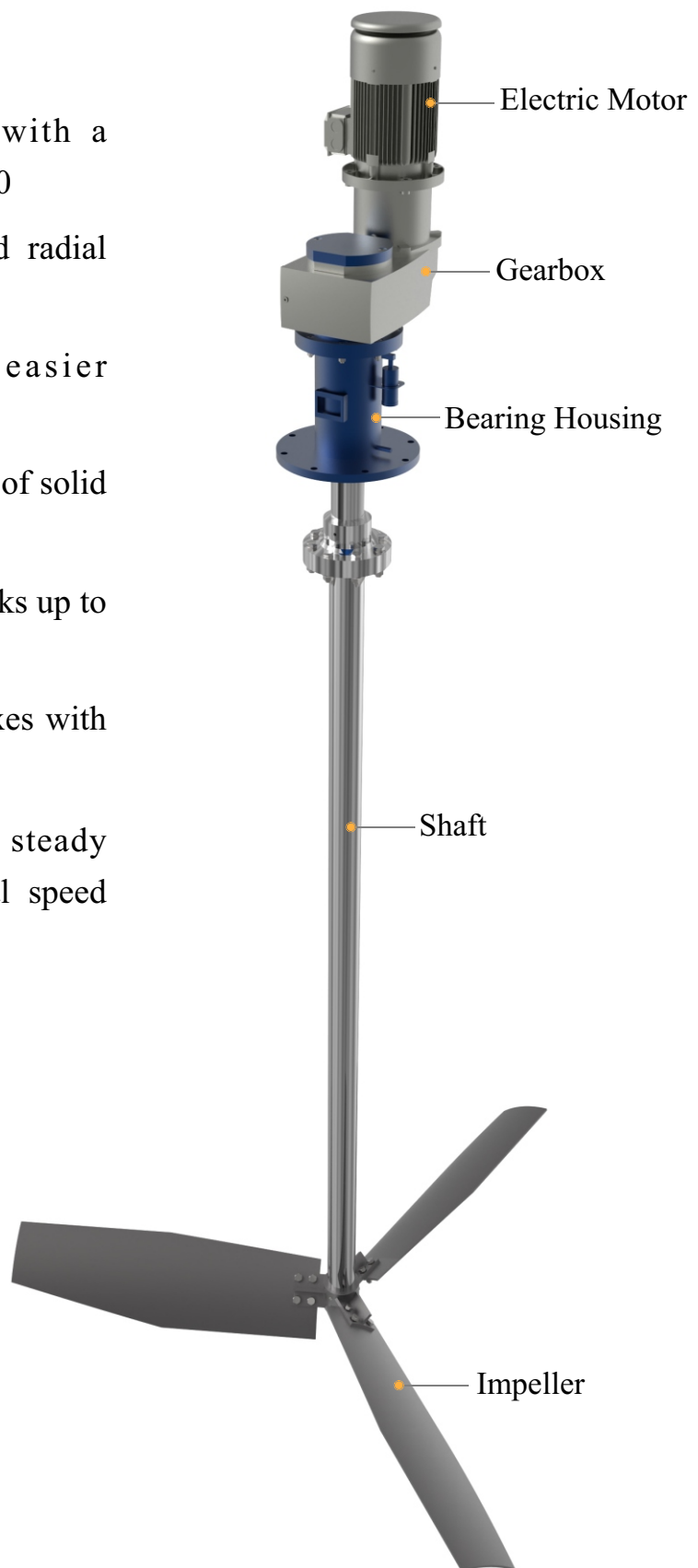
The MSRM series mixers are classified into three sizes: small, medium, and large.

Mixer Model	Maximum Shaft Diameter	Max Applicable Power	Max Speed	Max Tank Capacity	Max Shaft Length
MSRMS	90 mm	4 KW	5-150 RPM	40,000 L	5,000 mm
MSRMM	170 mm	15 KW		80,000 L	6,000 mm
MSRML	355 mm	45 KW		200,000 L	12,000 mm



The Features of MSRM Mixers are:

- Double bearing system with a working life of 100,000 L10
- Protection against axial and radial stresses on the gearbox
- Use of split hubs for easier installation and replacement
- Use of hollow shafts instead of solid for lightness
- Installation capability for tanks up to 200 cubic meter capacity
- Use of parallel shaft gearboxes with service factors above 2
- Ability to install bottom steady bearing to increase critical speed and reduce Shaft deflection
- Low initial capital investment



Withstand Radial Forces

These mixers are capable of withstanding the hydrodynamic forces exerted on the impeller by the fluid. They achieve mastery over these radial forces through a very strong and modern bearing arrangement used in their housing.

Withstands Axial Loads in Two Dimensions

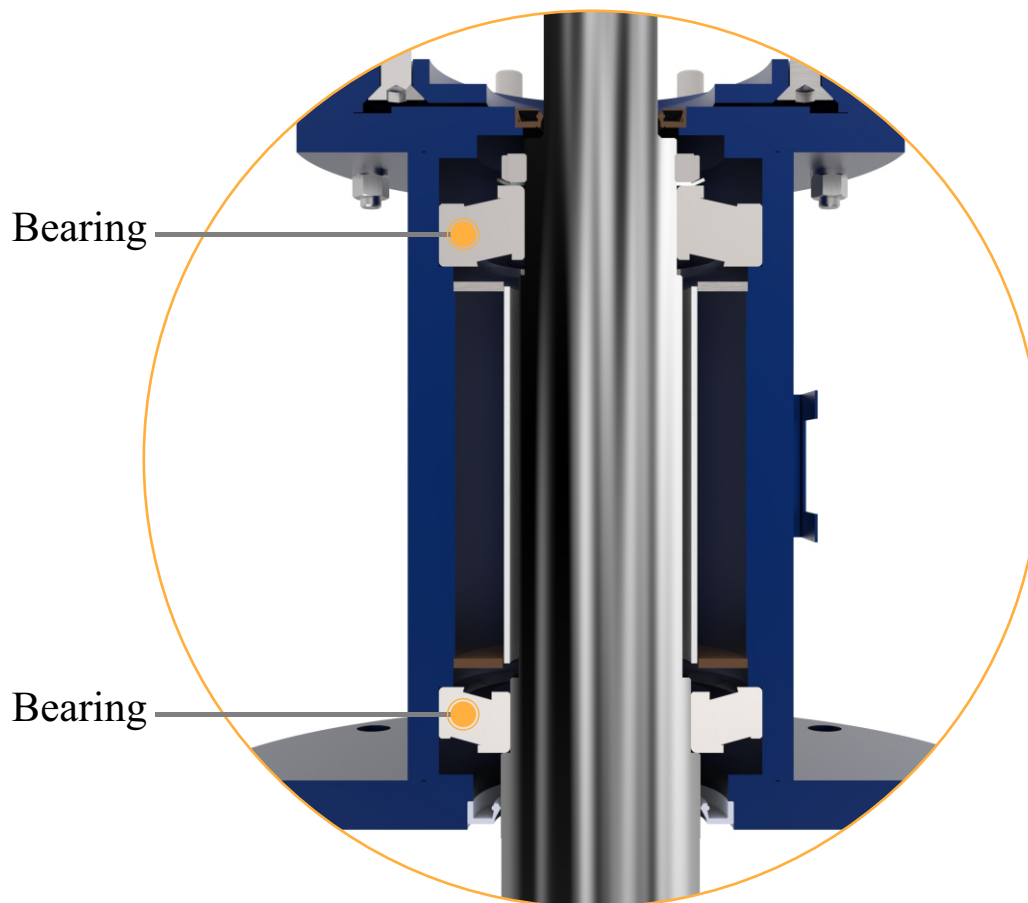
In mixers that are installed vertically, the weight of the shaft, impeller, coupling, and other components is transmitted to the bearing housing as an axial force. On the other hand, since these mixers have a down pumping design, the fluid is pushed downward. This creates an upward force on the mixer that counteracts the downward force of gravity. These opposing forces are controlled so they do not cause damage to the gearbox.



Lubrication System

The bearings used in these mixers need regular lubrication and maintenance. To enable trouble-free operation, a precise lubrication system for these mixers has been designed.

These mixers are adaptable for different applications, with a working range up to 45 KW. All hydraulic and mechanical components were analyzed using CFD and FEA methods.

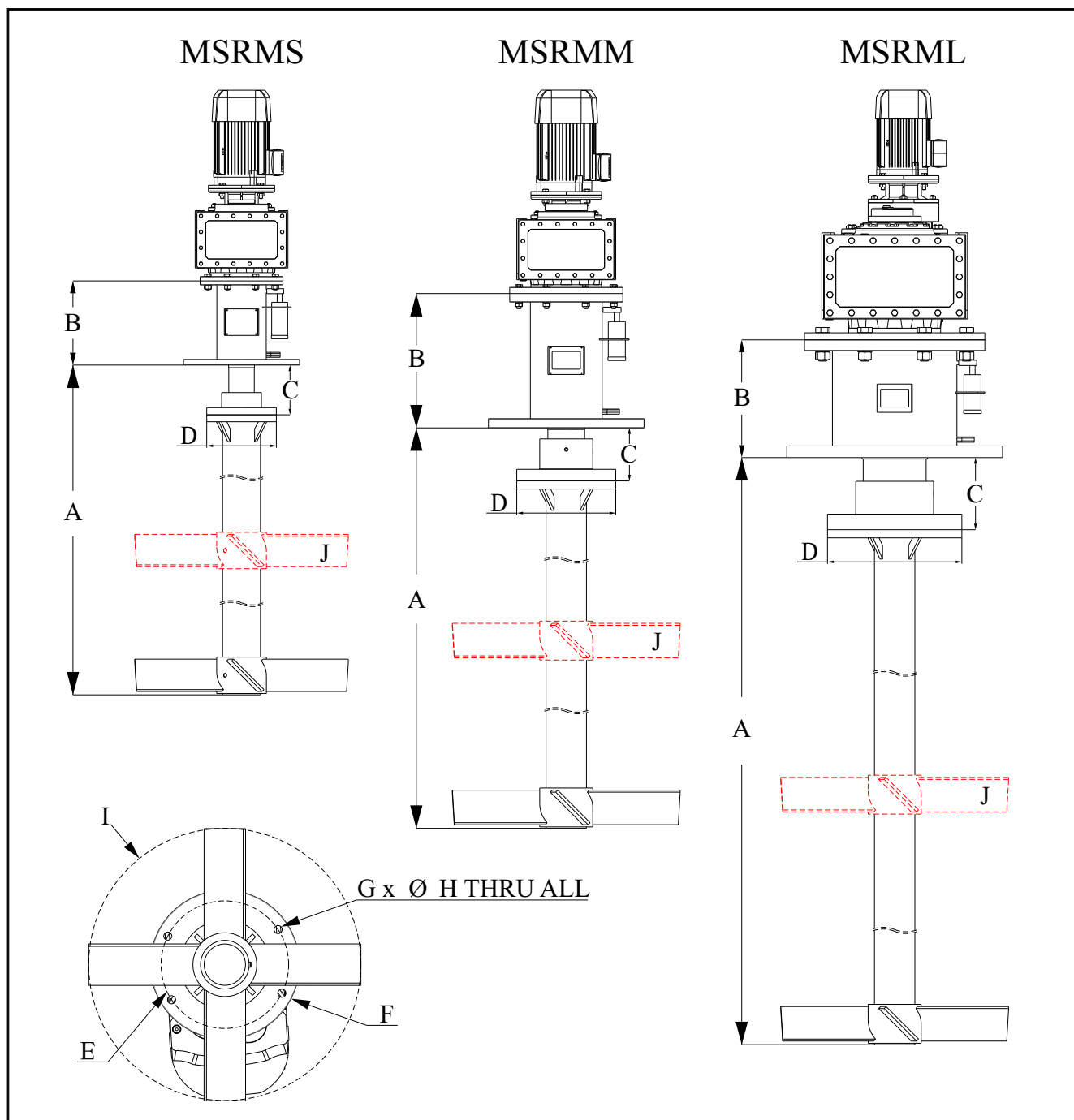


Identity Code of MSRM Mixers

Mixer Selection									
MSRM Medium Range Slow Rotating Mixers									
Mixer Version Indicator									
S Small									
M Medium									
L Large									
Impeller Type Selection									
1 Alex Flow Impeller									
2 Radial Flow Impeller									
Wet Parts Material									
S4 SS 304									
S6 SS 316L									
S7 Duplex SS									
S8 Super Duplex SS									
Powder Coating									
0 N/A									
P Polyethylene									
T ETFE									
Electric Motor Selection									
A IP 55 (STANDARD)									
B EX db IIB zone1									
C EX db IIC zone1									
D EX eb IIC zone1									
E EX ec zone2									
Motor Supply									
1 Single PHASE 220/230 VAC									
3 Three PHASE 230/400 VAC									
Shaft Connection Type									
DC Direct Coupling									
FC Flange Coupling									
Housing Coupling Type									
1 Flange Type									
2 Clamp Type									
Housing Coating									
C1 Polyester									
C2 Epoxy									
C3 3 Layer Coating									
Gearbox Selection									
U SIEMENS									
V NORD									
W BREVINI									
X SEW									
Y BONFIGLIOLI									
Z YILMAZ									



Dimensional Drawing of MSRM Mixers



Mixer Model	Speed Range	A	B	C	D	E	F	G	H	I	J Number Of Impellers
	RPM	mm	mm	mm	mm	mm	mm	mm	mm	mm	
MSRMS	5 ~ 150	1000~5000	100~800	150	210	300	350	6	19(M16)	500~5000	1~6
MSRMM		1000~6000		150	280	400	440	8	21(M20)		
MSRML		1000~12000		204	380	540	610	8	23(M30)		