



## MAGNETIC MIXING TECHNOLOGY FOR XXL BIOREACTORS

Magnetically coupled agitator design, developed for XXL bioreactors.

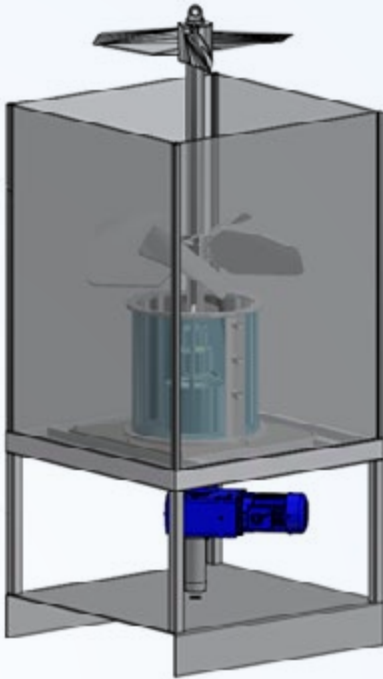
### **BENEFITS:**

- Elimination of contamination risks and related downtimes
- Service and maintenance: reduced time and cost
- No steam supply or lubrication system required
- Low operating costs
  - ▶ Low energy consumption
  - ▶ Small number of required spare parts
  - ▶ Rapid replacement
- Plug-in flange solution allows fast and easy retrofit and substitution of conventional agitators



## Technical data ZETA BMRF:

### BMRF 60000 PI

Working volume	[L]	15 000	
Stirrer elements	[-]	ZHT3 ZHW4	
Stirrer diameter	[mm]	990	
Fixing of stirrers	[-]	splitted hub & clamped with sealing	
Shaft length	[mm]	1 970	
Shaft diameter	[mm]	80	
Speed range	[rpm]	10- 50	
Tip speed	[m/s]	2.6	
Motor power	[kW]	1.5	
Diameter plug-in flange	[mm]	350	
Disassembly height	[mm]	800	

### Selected references for BMRF with working volumes $\geq 10$ kL

Ref.	Working volume	Impeller type	Speed range [rpm]	Stirrer diameter [mm]	Shaft length [m]
1	10 kL	2x Elephant ears	20 – 48	960	2.7
2	10 kL	2x Rushton	20 – 80	750	2.8
3	15 kL	2x Hydrofoils	15 – 50	990	2.6
4	15 kL	2x Hydrofoils	20 – 45	1150	3.1
5	20 kL	2x Hydrofoils	20 – 70	1150	3.1
6	20 kL	2x Hydrofoils	20 – 110	1150	2.6
7	15 kL	3x Low shear	15 – 55	970	3.1
8	15 kL	Rushton/pitched blade	20 - 110	665	2.6