ZETA BMRF

BOTTOM MOUNTED AGITATOR FOR BIOREACTORS

Powerful Agitators for applications in Pharma, Biotech and Food Industry.

State of the Art for Bioreactors:

Bottom-mounted magnetic agitators in bioreactors enable the process to be run safely for longer periods than with shaft-driven stirrers. They avoid the contamination risks associated with the mechanical seals where the drive shaft penetrates the tank. The eleborate systems needed to operate these seals (i.e., flushing with condensate) are no longer required.

The number and type of impeller blades are designed to suit the specific application. Typically, the multi-stage impeller systems are mounted an the shaft by means of sealed slide hubs. Welded design can be done alternatively. The generously dimensioned product-lubricated bearings of the BMRF agitators allow the use of long shafts without a top bearing. These bioreactor agitators can be used at a wide range of scales, from lab scale through microbiological fermenters of several hundred litres up to cell-culture tanks of several thousand litres.

BMRF 850 and BMRF 5000 with elephant ears

Technical Data ZETA BMRF:

PRODUCT WETTED PARTS:			DRIVE UNITS:		
Male bearing:	Standard	ZrO2	**Painting:**	Standard	RAL5015 - 2 comp.
	Optional	SSiC		Optional	FDA painting & other colors
		TC-6N	**Protection class:**	Standard	IP55
				Optional	IP 65
Female bearing:	Standard	SSiC			IP 66
	Optional	TC-6N			IP 67
			other drive option:		ATEX, Stainless Steel
Steel grade:	Standard	1.4435	MOUNTING OPTIONS:	Standard	welding flange
	Optional	1.4539		Optional	removeable containment shell (Plug In)
		1.4529			
		Hastelloy-C22	SPEED MEASUREMENT:		optional available
O-Rings:	Standard	EPDM	MOUNTING OF AGITATOR UNIT:	Standard	slide hub
	Optional	FEP		Optional	sealed slide hub
		Silicone			welded to the shaft
		Viton	MAX. OPERATION TEMPERATURE:		130°C
Standards:	according to	FDA, USP-Cl.VI, AD 2000-W2, ASME			
Certificates:	Standard	2.2 & 3.1 Mat. certificates			
	Optional	3.2 Mat. certificates			
Surface roughness:	Standard	Ra: <0,6µm	SURFACE FINISHING:		grinding, polishing and in-house e-polishing, to customer specification
	Optional	min. Ra: <0,2µm			

Further options are available on demand.

Impeller type and quantity depend on the application. Often used impeller types are shown below:

Standard BMRF bottom entry magnetic agitators for bioreactors (Type / max. torque)

BMRF 50	BMRF 125	BMRF 400	BMRF 800	BMRF 2600	BMRF 5000	BMRF 10000
50 Ncm	125 Ncm	400 Ncm	800 Ncm	2600 Ncm	5000 Ncm	10000 Ncm
BMRF 17000	**BMRF 21000**	**BMRF 30000**	**BMRF 40000**	**BMRF 50000**	**BMRF 60000**	**BMRF 70000**
17000 Ncm	21000 Ncm	30000 Ncm	40000 Ncm	50000 Ncm	60000 Ncm	70000 Ncm