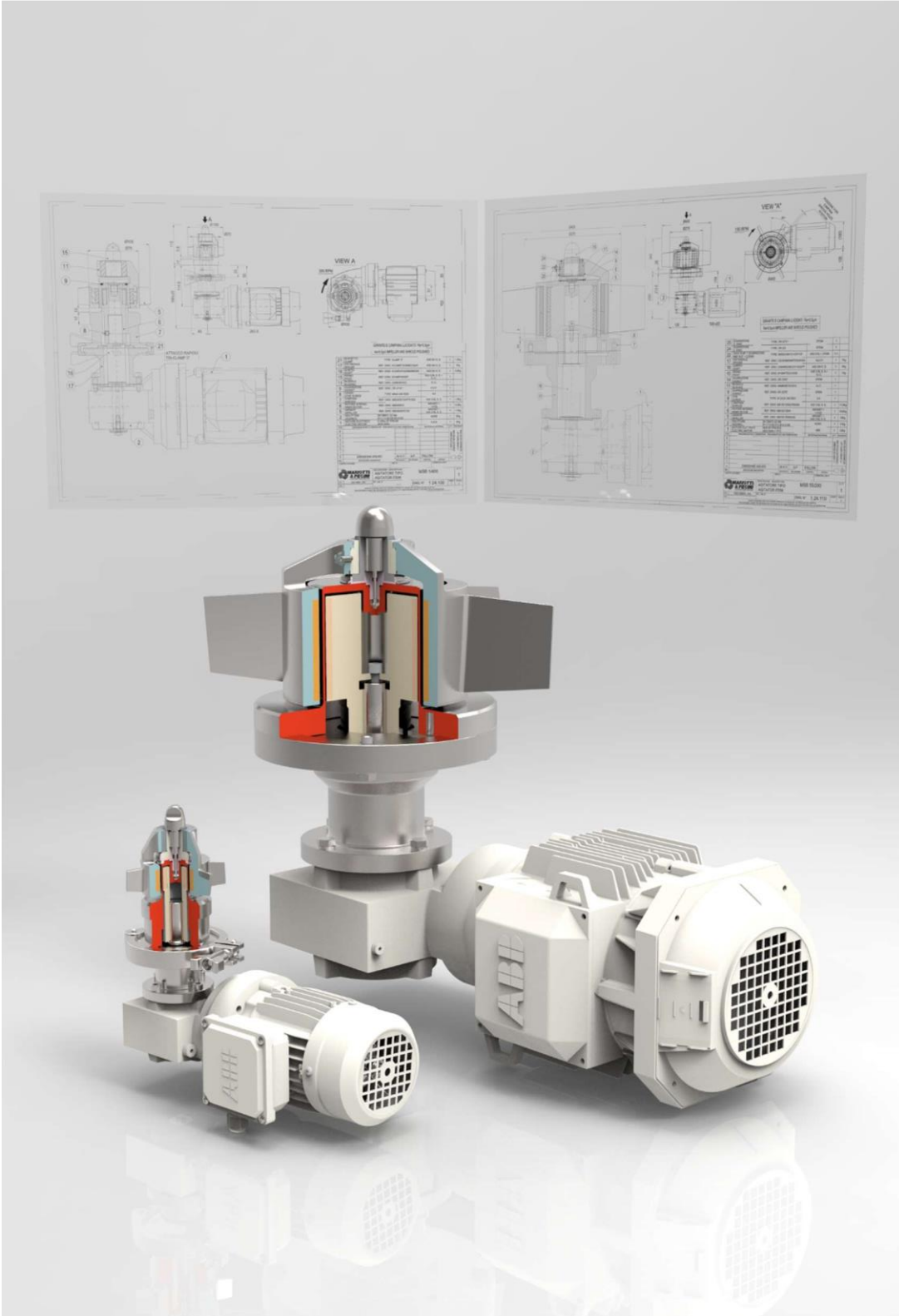


MSB - MAGNETIC AGITATOR



MAGNETIC AGITATOR – PRODUCT SAFE GUARD with MAGNA-SAFE® TECHNOLOGY

Mariotti & Pecini agitators often process substances that can be affected by light, oxygen or foreign particles. For such applications we've developed Magna-Safe® line of agitators that allows total segregation of the process chambers from the environment.

PRODUCT TECHNICAL FEATURES

The Mariotti & Pecini Magna-Safe® agitators are operating in Food, Biotech and Pharmaceutical manufacturing facilities, complying with most important pharmaceuticals and sanitary standards. Having motion transferred to the impeller by a magnetic drive unit, a stationary shroud replaces the dynamic mechanical seal resulting in a 100% leak proof design, preventing cross-contamination and maintaining the sterility of vessel content.

SPECIAL “OPEN-DESIGN” OF THE IMPELLER

The Mariotti & Pecini magnetic mixer impeller is made of a head with ring of magnet that are contained into an AISI 316L housing. The special “open” design of the impeller is allowing high pumping performance together with the following benefits:

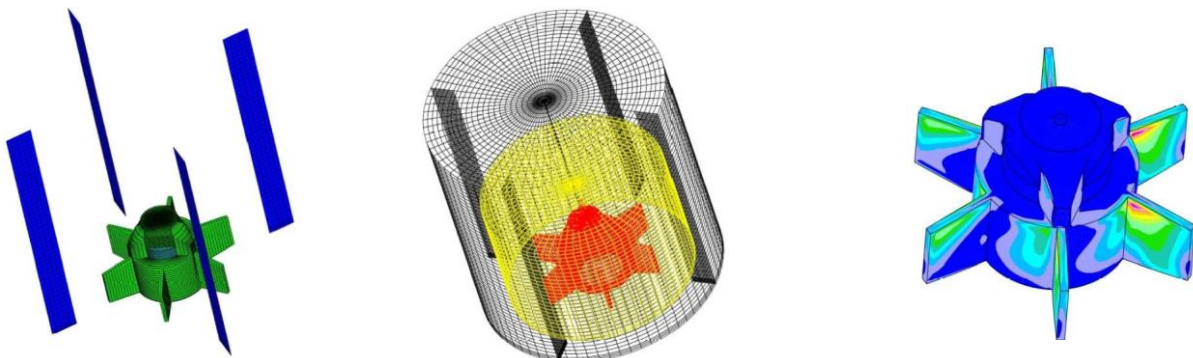
- **Fully washable** : the “open geometry” of the impeller allows complete cleaning of the part and allows CIP flow to reach recesses between the rotating and stationary part
- **Fully Sterilizable in place**
- **No air/bubbles entrapment during the rotation of the impeller:** the complete open design towards axial direction of flow avoids potential air or bubbles entrapment on the bottom of the impeller, allowing complete filling of the volumes between the parts



IMPELLER GEOMETRY VS MIXING PERFORMANCE

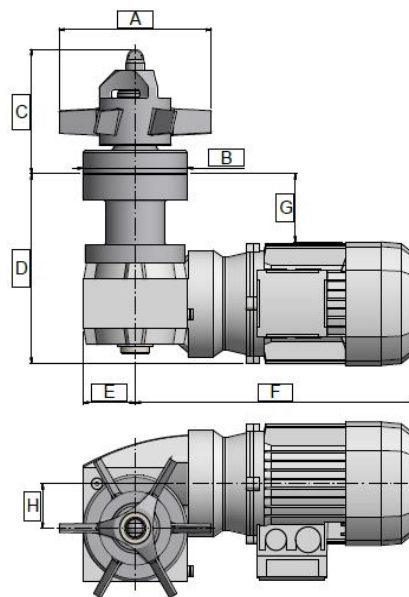
The mixing capability is fundamental feature in term of process performance for an agitated reactor. Time of mixing, vortex analysis, discharge and circulation flow are important to set mixing performance.

The possibility of discretize fluid domain and provide data to define impeller geometry, makes the Computational Fluid Dynamics as a base for Mariotti & Pecini to be used as optimization instrument for impeller geometry and shape with relation to mixing performance at specific working conditions. Magna-Safe® agitator impeller is especially developed and optimized basing on CFD response in term of power absorbance against pumping and mixing capability.



TECHNICAL DATA

Selection table					Nominal dimensions							
Model	Recommended working volumes (*) [l] (Vessel H/D : 1)	Motor power [kW]	Nominal speed [RPM]	Weight [kg]	A	B	C	D	E	F	G	H
MSB 1/400	up to 20	0,12	380	16	φ 100	φ 90 - Clamp 3"	110	190/240	45	270	50/100	30
MSB 2/400	20 ÷ 100	0,18	380	18	φ 125	φ 120	120	200/250	60	290	80/130	40
MSB 3/300	100 ÷ 300	0,25	290	22	φ 150	φ 120	120	200/250	60	320	80/130	40
MSB 5/400	300 ÷ 600	0,37	380	28	φ 175	φ 140	140	200/250	70	320	80/130	50
MSB 7/300	600 ÷ 1200	0,55	290	34	φ 200	φ 140	140	220/270	70	330	80/130	50
MSB 10/300	1200 ÷ 2500	0,75	290	50	φ 225	φ 200	180	230/280	100	390	80/130	60
MSB 15/200	2500 ÷ 4000	1,1	190	56	φ 275	φ 200	180	250	100	410	70	60
MSB 20/200	4000 ÷ 5500	1,5	190	78	φ 300	φ 250	190	250	125	450	70	80
MSB 30/200	5500 ÷ 7500	2,2	190	92	φ 325	φ 250	210	260	125	480	60	80
MSB 40/200	7500 ÷ 10000	3	190	96	φ 350	φ 250	240	270	125	520	60	80
MSB 55/200	10000 ÷ 15000	4	190	120	φ 400	φ 270	240	330	135	520	110	80



*Recommended nominal working volumes are calculated basing on product water-like with density 1000 kg/m³ and viscosity below 10 cP. For viscous applications or different tank H/D ratio, please contact our technical department.

GENERAL SPECIFICATIONS

-Vessel welding flange: AISI 316L

-Mixing head: AISI 316L

-Female sleeve: Silicon Carbide (SiC)

-Surface treatment: Mechanical polishing

-Vessel pressure: -1/+10 bar

-Male bushing: Silicon Carbide (SiC)

-Surface roughness: Ra ≤ 0,5 μm

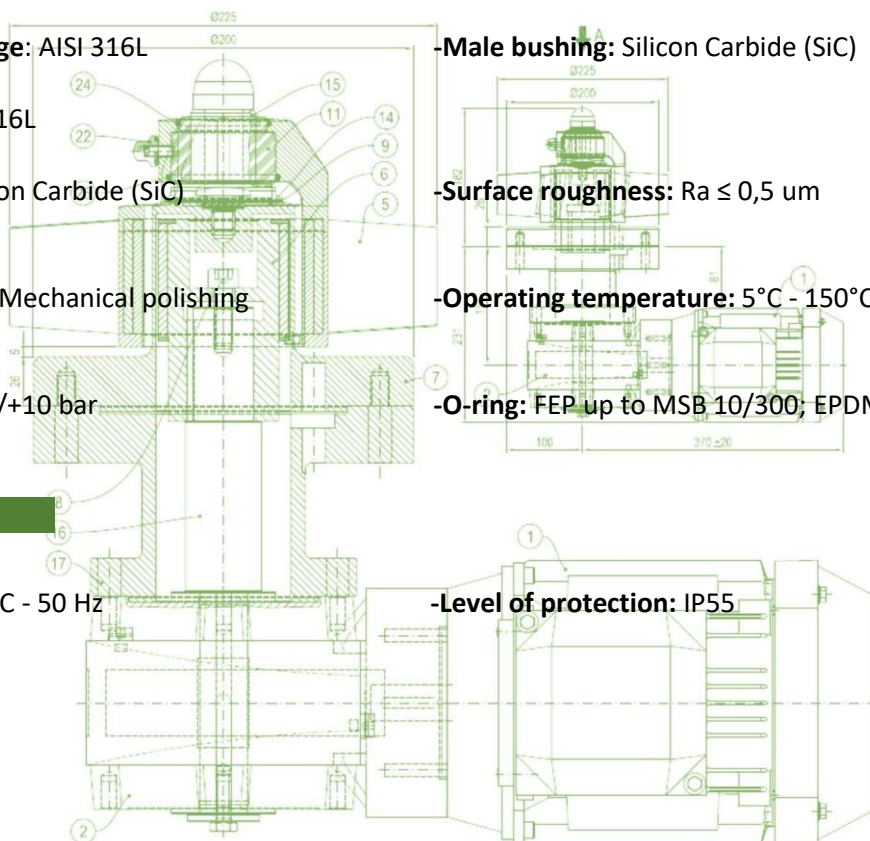
-Operating temperature: 5°C - 150°C

-O-ring: FEP up to MSB 10/300; EPDM for other models

Motor data

-Voltage: 230/400 V AC - 50 Hz

-Level of protection: IP55



Mixer optional

- Execution according to ATEX (2014/34/UE)
- Extended impeller support
- Impeller electropolished
- Customized welding flange dimensions
- Traceability certificates for product contact parts

Rotational sensor data

- Sensor type: 2 Wire type, current sourcing
- Voltage: 8,2 V (Ri ca. 1 kΩ)
- Commutation Frequency: 0 ... 5000 Hz
- Materials: EN 1.4404 / AISI 316L
- Protection grade: IP66 / IP67
- ATEX zone : 2G

Mixer spare parts

- O-rings
- Male bushing
- Female sleeve
- Complete impeller
- Shaft
- Weld plate

