



AMT-Magnetic Mixer AMO-Homogenizer



Sanitary
flow
equipment

AMT-Magnetic Mixer

Description

Designed complying with FDA rules for pharmaceutical and biotechnology industries. The most obvious advantage is that enables the total integrity of the tank. The vessel shell is not penetrated and there are no mechanical seals or stuffing boxes; this minimized cross-contamination risk and also prevent toxic or high value media from leaking out of the vessel and thereby challenge the sterility of the vessel and its contents. Suitable for viscosities up to 800 cps offers great flexibility. Bottom mounting also leaves the top of the vessel clear for easy vessel access.

Principle of Operation

A major advantage when sterilizing the vessel in an autoclave or when sharing a single drive units mechanism between vessels. A machined pad is welded into the bottom of the vessel (usually offset from a central bottom outlet valve). The impeller head is running by a drive unit mounts externally. Inside the impeller head there is a ring of special magnets encapsulated in a 316L ss housing. Welded to this housing are the blades which form an integral impeller head.

General information

MATERIAL WETTED PARTS

Weld plate	stainless steel AISI 316L- 1.4404 or 1.4435
Impeller	stainless steel AISI 316L- 1.4404 or 1.4435
Bearing available	tungsten Carbide, silicon carbide, zirconium oxide
O-Ring	FDA and USP Class VI

MOTOR DATA

Voltage	230/400V AC- 50Hz and 460/480V AC- 60Hz
Number of poles	2 except Atex execution which have 4 poles
Protection index	IP 55
Certified	CE/cCSAus, IEC, CEI/UNEL
Thermistor	1 (PTC, 150 °C)

WELD PLATE

Surface roughness	Ra<0,5 micron or better manually polished
Available on request	electro polished
design pressure	-1 to +10 bar(g)
design temperature	-80 to +200 °C
in compliance with	the weld plate is classified in Europe, for PED Directive 97/23/EC Category IV and approved by Notified Body
labelling	for full traceability purposes each weld plate is individually marked with item and heat No.

OPTIONAL ACCESSORIES

Speed sensor	a magnetic proximity sensor can be fitted onto weld plate to measure the rotation of the impeller
sensor type	PNP, Voltage 24V DC, degree of protection IP67
temperature range	-10 to +125 °C
ATEX execution	Ex II 2G-D T4
in compliance with the European Directive 94/9/CE ATEX	available on request



AMT Performance

The geometry of the impeller allows an excellent axial pumping flow and very low shear rate for different applications:

- mixing, diluting, maintaining in suspension.....

speed range 50 to 380 rpm using an inverter. Depending on the size of vessel and impeller-head, levels of agitation can change from vigorous to gentle. Small volumes can be achieved.

- all product contact part are made in 316L. The impeller head runs on a special grade bearing that has been manufactured under controlled conditions to achieve the correct size, grain structure and hardness.
- the blade shape and profile has been designed to optimize agitation levels and to direct a proportion of the cleaning fluid through the head.



**SAME W
PLA**

Warning: the assembled Mixer may have different design temperature and / or pressure limits. The weakest component in the assembled product determines the maximum design temperature and pressure limits.

**WELDING
ATE**

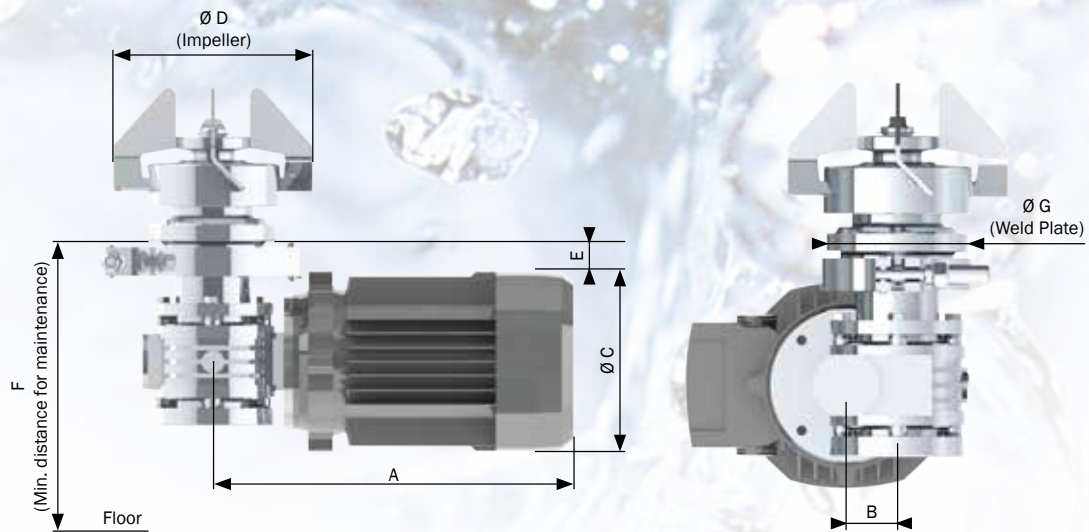


Dismounting system for magnetic coupling to take off the impeller without any magnetic attraction and without remove the motor. Dedicated for heavy, biggest size from AMT-20 to AMT-64.

Type	Volume Vigorous/Gentle	Motor Power rating	Weight	Impeller Diameter	Weld plate Diameter / Thickness
AMT-02	3-10 Lt	60 w - 0,08 hp	3,5 Kg	Ø 75 mm	Ø 60 x10 mm
AMT-04	10 - 50 Lt	90 w - 0,12 hp	5 Kg	Ø 104 mm	Ø 70 x10 mm
AMT-06	50 - 150 Lt	180 w - 0,24 hp	6 Kg	Ø 130 mm	Ø 85 x15 mm
AMT-08	150 - 500 Lt	0,55 kw - 0,74 hp	16 Kg	Ø 154 mm	Ø 125 x 23 mm
AMT-12	300 - 2.000 Lt	0,75 kw - 1,00 hp	26 Kg	Ø 174 mm	Ø 150 x 23 mm
AMT-20	1.000 - 3.000 Lt	1,50 kw - 2,01 hp	45 Kg	Ø 218 mm	Ø 185 x 23 mm
AMT-32	2.000 - 6.000 Lt	2,20 kw - 2,95 hp	55 Kg	Ø 280 mm	Ø 250 x 30 mm
AMT-64	3.000 - 10.000 Lt	5,50 kw - 7,38 hp	114 Kg	Ø 288 mm	Ø 250 x 30 mm

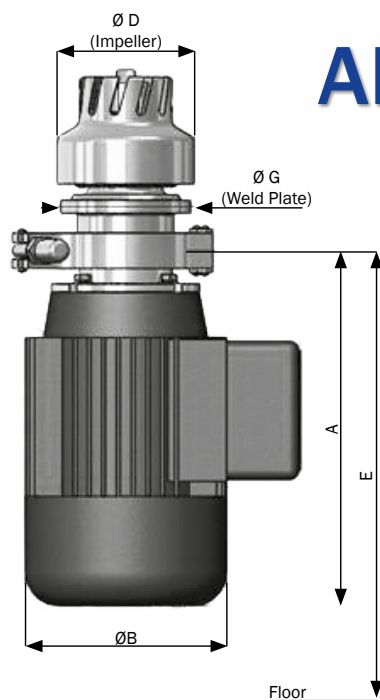
- The mixing capacities above are based on aqueous like products with a density of 1.000 Kg/m³ and a viscosity of 1cp.
- Typical applications for "Gentle mixing" are where solid are held in suspension or where powders easily dissolve into the liquid.
- Typical applications for "Vigorous mixing" are where a vortex is required for blending of powders into a liquid.

AMT-MAGNETIC MIXER



NOMINAL DIMENSIONS IN MM

Type	A mm	B mm	Ø C motor	Ø D impeller	E mm	F mm	Ø G weld plate
AMT-02	190	25	Ø 90 mm	Ø 75 mm	/	180	Ø 60 mm
AMT-04	222	30	Ø 110 mm	Ø 104 mm	32	200	Ø 70 mm
AMT-06	248	30	Ø 126 mm	Ø 130 mm	32	200	Ø 85 mm
AMT-08	291	49	Ø 126 mm	Ø 154 mm	32	250	Ø 125 mm
AMT-12	335	62	Ø 158 mm	Ø 174 mm	38	280	Ø 150 mm
AMT-20	362	75	Ø 229 mm	Ø 218 mm	32	280	Ø 185 mm
AMT-32	420	72	Ø 180 mm	Ø 280 mm	30	350	Ø 250 mm
AMT-64	600	31	Ø 220 mm	Ø 290 mm	100	470	Ø 280 mm



AMO-HOMOGENIZER

NOMINAL DIMENSIONS IN MM

Type	A mm	Ø B motor	Ø D impeller	E mm	Ø G weld plate
AMO-04	200	Ø 110 mm	Ø 74 mm	280	Ø 70 mm
AMO-08	280	Ø 140 mm	Ø 110 mm	360	Ø 125 mm
AMO-20	320	Ø 180 mm	Ø 164 mm	400	Ø 185 mm
AMO-64	430	Ø 220 mm	Ø 250 mm	550	Ø 280 mm

AMO-Homogenizer



AMO Performance

The geometry of the impeller allows an excellent axial pumping flow and very low shear rate for different applications, especially for Homogenizing that mean to transport one phase or ingredient (liquid, solid, gas) into a main continuous phase (typically liquid), with which it would normally be insoluble;

- **EMULSIFYING:** the process of dispersing one liquid into a second insoluble liquid, such as oil dispersed in water. Producing a small droplet size in necessary in order to archive a stable emulsion.
- **DISSOLVING** or down sizing applications, dissolving in dispersing an insoluble or semi insoluble solid into a liquid. Down sizing is often desired to reduce the particle size of the solids to obtain a stable suspension.
- **SUSPENDING** is dispersing of solid particles into a liquid.
- **MAIN FEATURES**

Speed range 500 to 3000 rpm using an inverter, depending on the size of vessel and impeller-head small volumes can be achieved.

Type	Volume Vigorous /Gentle	Motor Power rating	Weight	Impeller Diameter	Weld plate Diameter / Thikness
AMO-04	10 - 150 LT.	250 w - 0,33 hp	5 Kg	Ø 74 mm	Ø 70 mm
AMO-08	150 - 600 LT.	0,75 kw - 1,00 hp	16 Kg	Ø 110 mm	Ø 125 mm
AMO-20	600 - 2.500 LT.	2,20 kw - 2,95 hp	45 Kg	Ø 164 mm	Ø 185 mm
AMO-64	3.000 - 9.000 LT.	7,5 kw - 102 hp	80 Kg	Ø 250 mm	Ø 280 mm

- The mixing capacities above are based on aqueous like products with a density of 1.000 Kg/m³ and a viscosity of 1cp.
- AMO High Speed Mixer can also be combined with a standard AMT mixer to achieve a variety of powerful results, such as collapsing vortex to prevent foaming, increased agitation, maintained suspensions at low levels etc...



ASEPTIC SAMPLING VALVES



SANITARY SAMPLING VALVES



SANITARY SAMPLING BOTTLE



TANK BOTTOM ASEPTIC VALVE



SPRING CHECK VALVES



HIGH PURITY BALL VALVES



BUTTERFLY VALVES



DTS HEAT EXCHANGERS



SIGH GLASS-FLOW INDICATOR



CLAMP FITTINGS



TANK CONNECTIONS



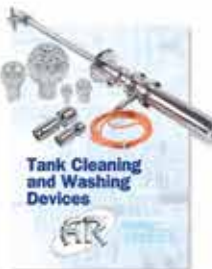
SILICONE HOSE & FITTINGS



MAGNETIC MIXER



DIAPHRAGM VALVES

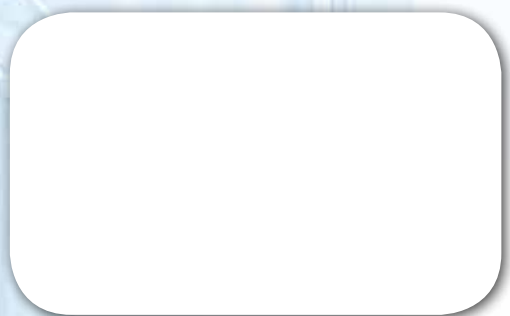


WASHING DEVICES



Sanitary flow equipment

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