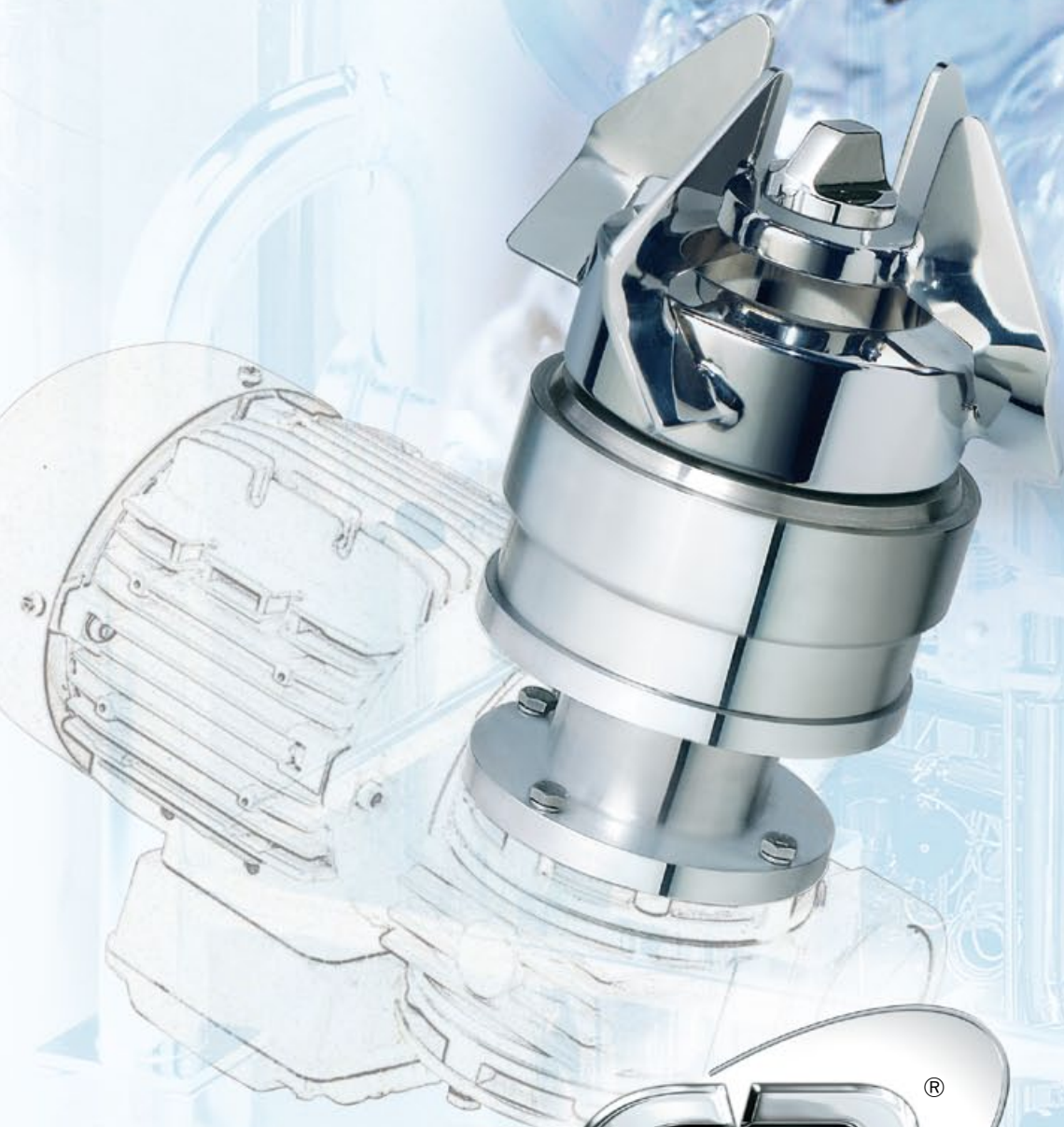


TM-Magnetic Mixer



Sanitary
flow
equipment

Product description

The AR Inox magnetic mixer are designed complying with FDA rules for pharmaceutical and biotechnology industries.

The most obvious advantage of the magnetic mixer 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 the AR inox TM -Magnetic Mixer offers great flexibility.

Bottom mounting also leaves the top of the vessel clear for easy vessel access.

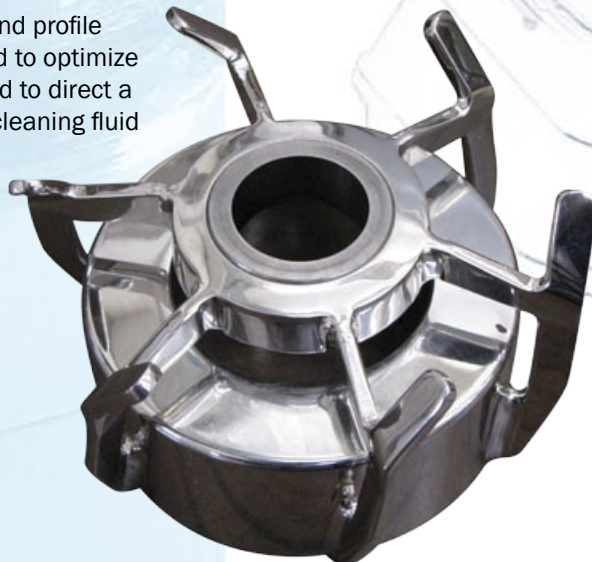
Performance

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 1.4435 or 1.4435. The impeller head runs on a special grade tungsten carbide 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.

Principle of Operation

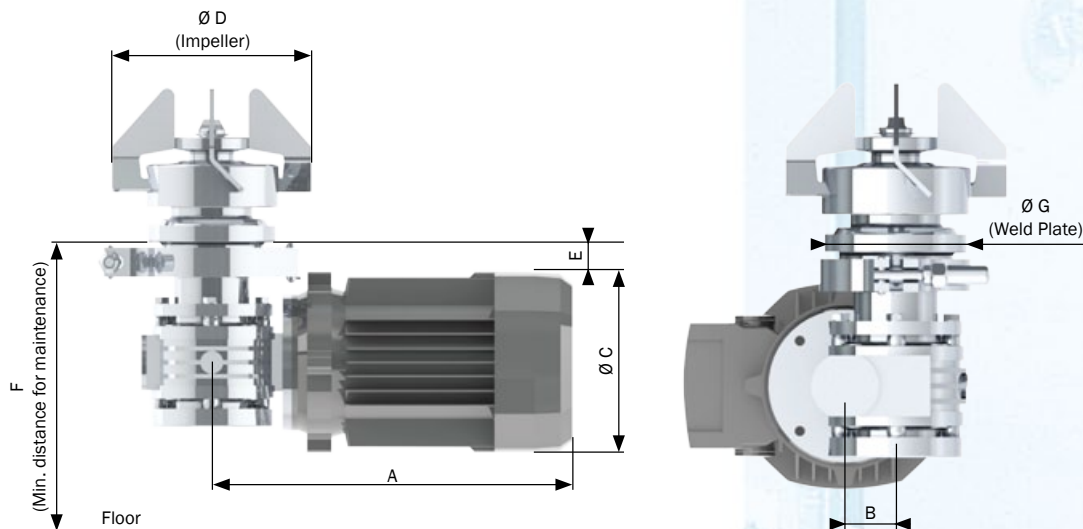
The AR Inox magnetic mixer has a driven mixer that can be removed quickly and easily. A major advantage when sterilizing the vessel in an autoclave or when sharing a single drive units mechanism between vessels. A machined pad is welded into the bottom of the vessel (usually offset from a central bottom 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 four mixing blades which form an integral impeller head.





Type	Volume Vigorous/Gentle	Motor Power rating	Weight	Impeller Diameter	Weld plate Diameter / Thickness
TM04-DC	10 - 30 l	90 w - 0,12 hp	5 Kg	Ø 104 mm	Ø 70 x10 mm
TM04-AC	10 - 30 l	90 w - 0,12 hp	5 Kg	Ø 104 mm	Ø 70 x10 mm
TM06-DC	50 - 150 l	160 w - 0,21 hp	6 Kg	Ø 130 mm	Ø 85 x15 mm
TM06-AC	50 - 150 l	180 w - 0,24 hp	6 Kg	Ø 130 mm	Ø 85 x15 mm
TM08-AC	150 - 500 l	0,55 kw - 0,74 hp	16 Kg	Ø 154 mm	Ø 125 x 23 mm
TM12-AC	300 - 2.000 l	0,75 kw - 1,00 hp	26 Kg	Ø 174 mm	Ø 150 x 23 mm
TM20-AC	1.000 - 3.000 l	1,50 kw - 2,01 hp	45 Kg	Ø 218 mm	Ø 185 x 23 mm
TM32-AC	2.000 - 6.000 l	2,20 kw - 2,95 hp	55 Kg	Ø 280 mm	Ø 250 x 30 mm
TM64-AC	3.000 - 10.000 l	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.




NOMINAL DIMENSIONS IN MM

Type	A mm	B mm	Ø C motor	Ø D impeller	E mm	F mm	Ø G weld plate
TM04-AC Complete	222	30	Ø 110 mm	Ø 104 mm	32	200	Ø 70 mm
TM06-AC Complete	248	30	Ø 126 mm	Ø 130 mm	32	200	Ø 85 mm
TM08-AC Complete	291	49	Ø 126 mm	Ø 154 mm	32	250	Ø 125 mm
TM12-AC Complete	335	62	Ø 158 mm	Ø 174 mm	38	280	Ø 150 mm
TM20-AC Complete	362	75	Ø 229 mm	Ø 218 mm	32	280	Ø 185 mm
TM32-AC Complete	420	72	Ø 180 mm	Ø 280 mm	30	350	Ø 250 mm
TM64-AC Complete	680	/	Ø 210 mm	Ø 288 mm	/	/	Ø 250 mm

Ordering information

To specify the part completely, start with the product description and select the additional options as shown below:

TM	20	-A	X	-L150	-05
					Options
Size					02 proximity speed counter
Available size 04, 06, 08, 12, 20, 32, 64					03 encoder
Power Supply					04 impeller electropolished
A alternate current					05 dismounting system
D direct current for size 04 and 06 only					06 silicon carbide bearing
P pneumatic air motor					
ATEX execution  II 2G-D T4					Extended
in compliance with the European Directive 94/9/CE ATEX can be supplied upon request					L shaft length mm over than standard execution
AX max speed 214 rpm					W weld plate length mm customized as request
AXR max speed 440 rpm					

GENERAL INFORMATION

- Weld plate and impeller in stainless steel AISI 316L -1.4435 as standard for size TM04, 06, 08 other sizes in 1.4404
- Temperature probe PTC as standard



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 TM20 to TM64.

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
Static bearing	tungsten Carbide
Dinamic bearing	tungsten Carbide
O-Ring	FDA and USP Class VI

WELD PLATE

Surface roughness	Ra<0,5 micron or better manually polished or manually polished + electro polished
design pressure	-1 to +10 bar(g)
design tempereature	-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.

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)

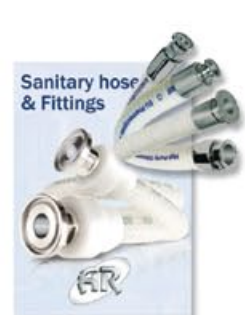
OPTIONAL ACCESSORIES

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
tempereature range	-10 to +125 °C

ATEX execution II 2G-D T4

in compliance with the European Directive 94/9/CE ATEX available on request

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.



GRIMARK



Sanitary flow equipment



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