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MAX

submersible mixer

WASTEX

MAX

MAX submersible mixer

Mixing agitator (With dome)

Mixing agitator

Application

The submersible mixers in our company include mixing agitator and low-speed flow propeller, mainly used for: The purposes of mixing, agitating and making ring flows in the process of municipal and industrial sewage treatment: activated sludge tank, bioreactor tank, mixing tank, sludge silos, equalizing reservoir, sewage tank and etc. ; The maintenance equipment for the landscape water environment, improving the quality of the water body; Creating water flow, effectively preventing the sedimentation of the suspended substances.

Features

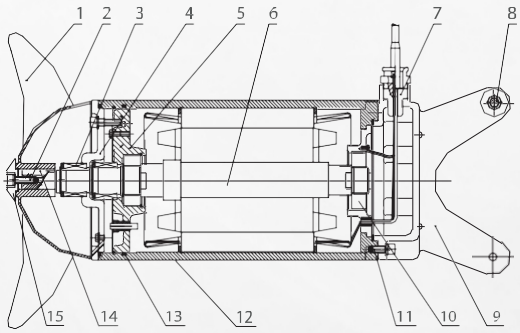
- The two rows of independent mechanical sealing ensure the long-term and reliable operation of the submersible motor.
- The international well-known high-quality bearings have longer service life, which are maintenance free.
- The unique sealing design for the cables removes the hidden danger of water leakage for the cables.
- The shaft of the motor employs the stainless steel, and the rotors are inspected with the use of dynarnic balancing, leading to smooth rotation.
- The in-built leakage sensor and the device for the overtem perature protection for the windings of the stator(No leakage sensor for MAX0.37/6 or MAX0.55/4).
- The mixer agitators have the stainless steel pressing impeller, which are of the sweptback shape through the optimized design, resulted in high efficiency and self-cleaning function.

Conditions of usage

- The highest temperature of the media shall not exceed 40
- The pH value of the media: 5~9
- The density of the media shall not exceed 1150kg/m3 The depth of submersion shall not exceed 20m
- The electric power supply: 380V, 50Hz
- The motor: F/H class insulation and in accordance with IP68, continuous operating in 24hr
- The submersible mixer must operate in the complete sub-mersion into water

Construction

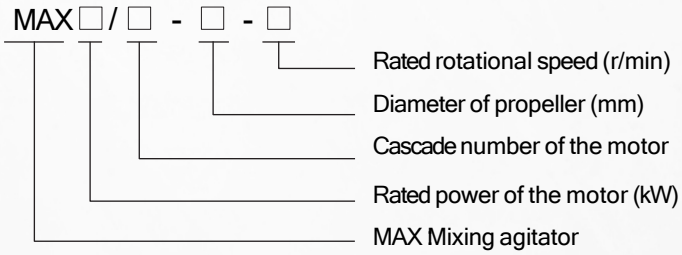
The structure will be different according to the power.



No.	Name	Material	
		GB	JIS
1	Propeller	0Cr19Ni10	SUS304
2	Lock nut	0Cr19Ni10	SUS304
3	Mechanical seal	SiC-SiC	SiC-SiC
4	Mechanical seal stand	0Cr19Ni10	5US304
5	Front bearing support	HT200	FC200
6	Main shaft	2Cr13	SU5420J1
7	Watertight head	硫化橡胶	VR
8	Roller	0Cr19Ni10	SUS304
9	Junction box	0Cr19Ni10	SUS304
10	Bearing	-	-
11	Inner hexagonal screw	0Cr19Ni10	SUS304
12	Sheath	0Cr19Ni10	SUS304
13	O-type sealant ring	丁腈-70/NBR-70	NBR-70
14	Flat key	45	545C
15	Wheel clamp ring	0Cr19Ni10	SUS304

The table above is standard material for MAX type. If other material needed, pls contact us.

Type description



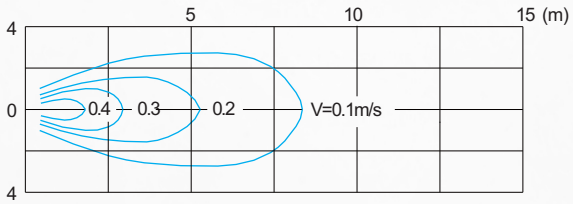
Performance parameters

Mixing agitator

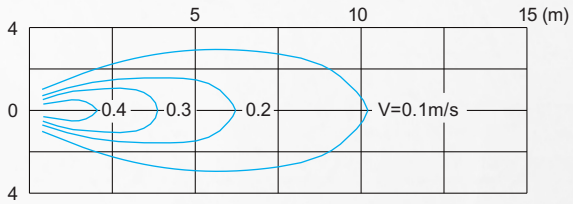
Pump model	Motor power (kW)	Rated current (A)	rpm of propeller (r/min)	Diameter of propeller (mm)	Thrust (N)	Weight (kg)
MAX0.37/6-220-960	0.37	1.3	960	220	138	45/50
MAX0.55/4-220-1400	0.55	1.6	1400	220	145	45/50
MAX0.85/8-260-740	0.85	3.2	740	260	163	55/65
MAX1.5/6-260-960	1.5	4	960	260	290	55/65
MAX2.2/8-320-740	2.2	5.9	740	320	582	88/93
MAX4/6-320-960	4	10.3	960	320	609	88/93
MAX1.5/8-400-740	1.5	5.2	740	400	600	74/82
MAX2.5/8-400-740	2.5	7	740	400	800	74/82
MAX3/8-400-740	3	8.6	740	400	920	74/82
MAX4/6-400-960	4	10.3	950	400	1200	74/82
MAX4/12-620-480	4	14	480	620	1400	190/206
MAX5/12-620-480	5	18.2	480	620	1800	196/212
MAX7.5/12-620-480	7.5	28	480	620	2600	240/256
MAX10/12-620-480	10	32	480	620	3300	250/266
MAX15/12-620-480	15	39	480	620	4000	270/286

In the above table, the value listed in the column of "weight"' respectively contains the weight of without or with the dome.
Mixer agitator whose propeller diameter is 220 mm has two vanes, other has three vanes.

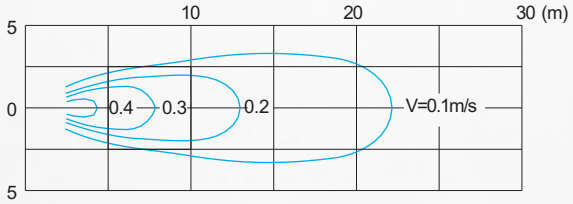
Diagrams of the flow field



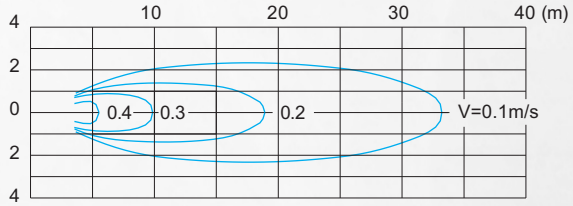
MAX0.37/6-220-960



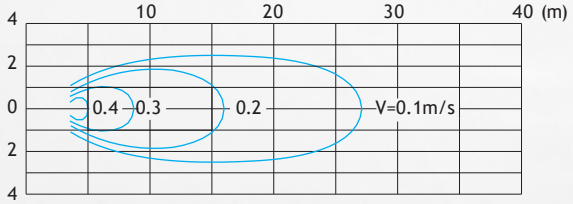
MAX0.55/4-220-1400



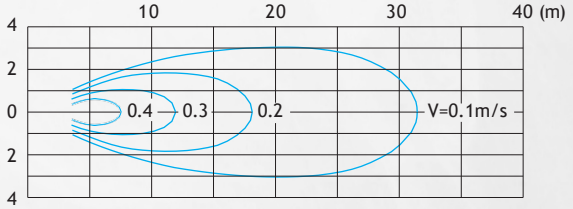
MAX0.85/8-260-740



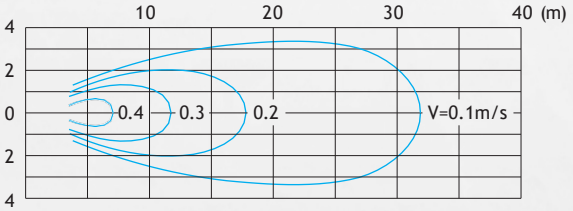
MAX1.5/6-260-960



MAX1.5/8-400-740



MAX2.2/8-320-740



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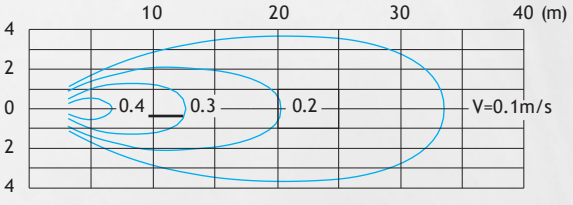
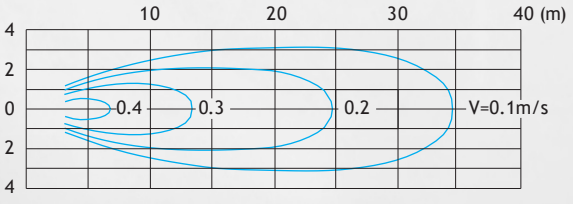
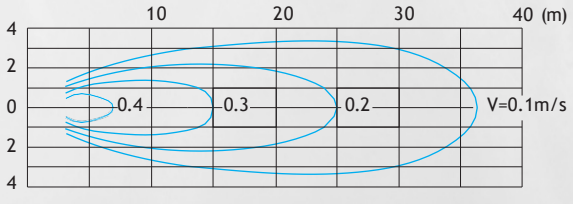


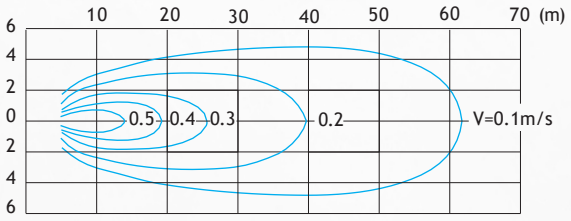
MAX3/8-400-740



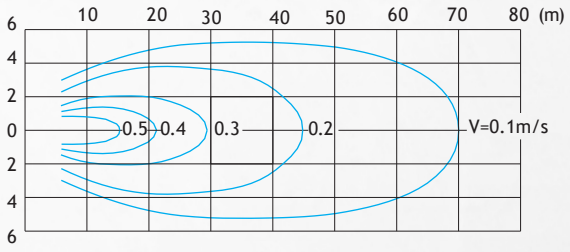
MAX4/6-320-960



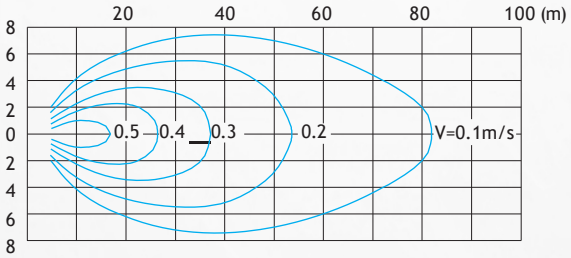
MAX4/6-400-960



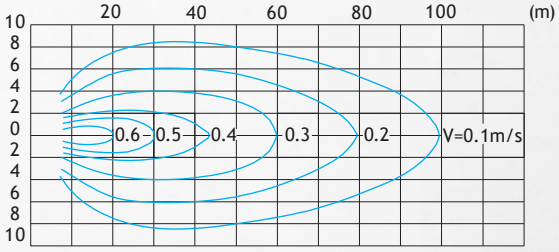
MAX4/12-620-480



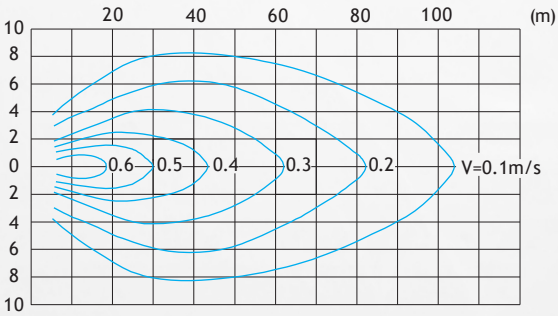
MAX5/12-620-480



MAX7.5/12-620-480



MAX10/12-620-480



MAX15/12-620-480

Installation modes and dimensions

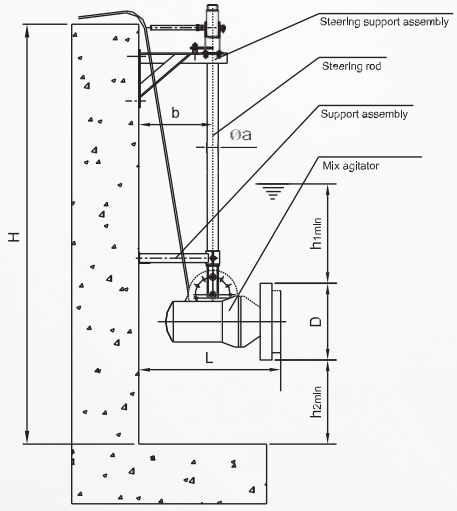
The submersible mixers can be installed in a multiple of modes. Here are generally accepted modes of installation for selection with reference made to the following table. Our company can also provide the special designs in accordance with the demand of the users.

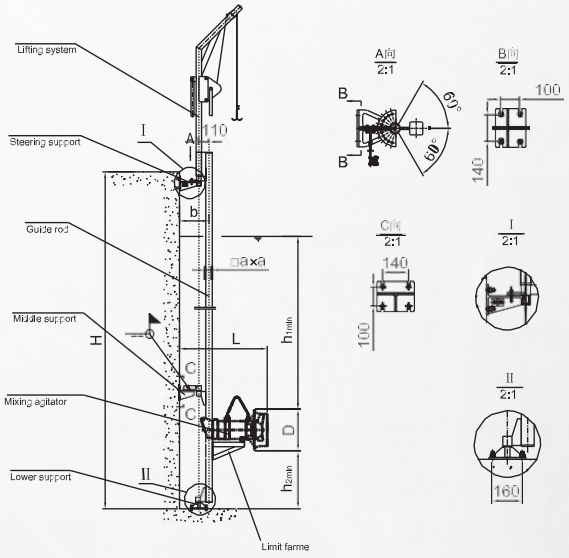
Type	a	D	b	L	H_1min	H_2min	Installation system
MAX0.37/6-220-960	Ø40/□50	340	330/235	520/850	500/800	110/150	I/II
MAX0.55/4-220-1400	Ø40/□50	340	330/235	520/850	500/800	110/150	I/II
MAX0.85/8-260-740	Ø48/□50	360	330/235	630/960	500/800	110/150	I/II
MAX1.5/6-260-960	Ø48/□50	360	330/235	630/960	500/800	110/150	I/II
MAX2.2/8-320-740	□70	460	320	970	800	150	II
MAX4/6-320-960	□70	460	320	970	800	150	II
MAX1.5/8-400-740	□70	500	320	960	800	200	II
MAX2.5/8-400-740	□70	500	320	960	800	200	II
MAX3/8-400-740	□70	500	320	1010	800	200	II
MAX4/6-400-960	□70	500	320	1010	800	300	II
MAX4/12-620-480	□100	760	335	1150	1100	300	III
MAX5/12-620-480	□100	760	335	1150	1100	300	III
MAX7.5/12-620-480	□100	760	335	1280	1500	300	III
MAX10/12-620-480	□100	760	335	1280	1500	300	III
MAX15/12-620-480	□100	760	335	1330	1500	300	III

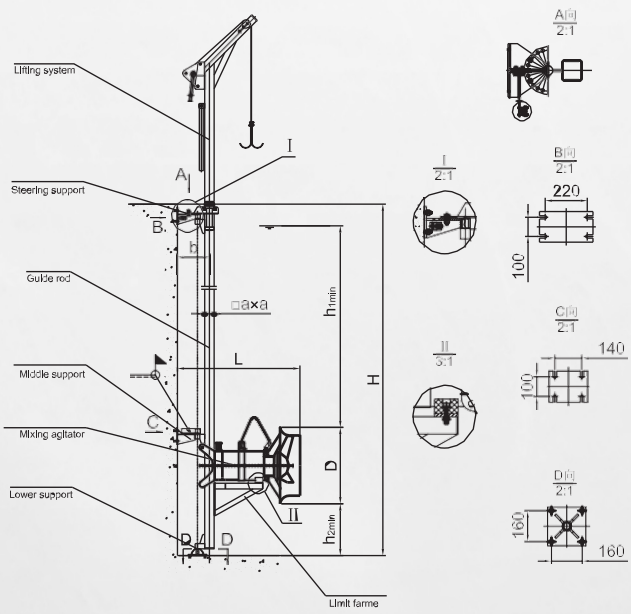
Notes :

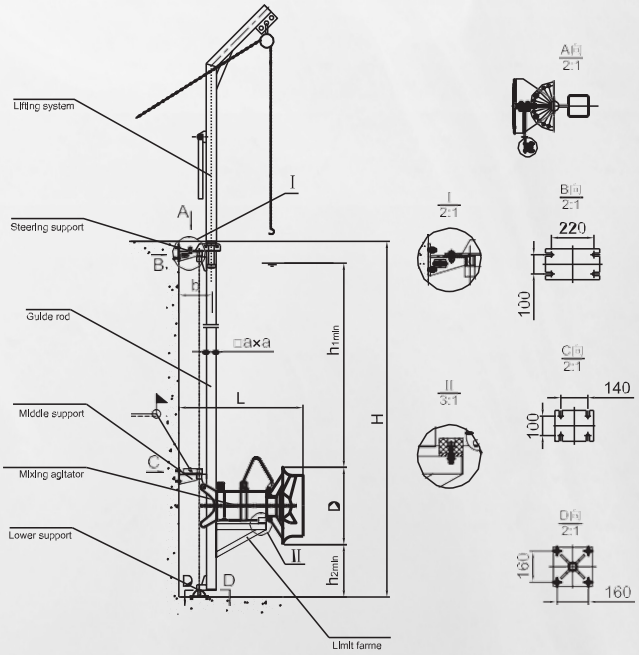
- The special installation systems for the submersible mixers can facilitate the quick installation and dismantling of the submersible mixers under the conditions of no need for draining off sewage from the pond.
- Installation System I is only suitable for the mixer models of MAX0.37/6, MAX0.55/4 ,MAX0.85/8 and MAX1.5/6 and with the possibility of adjusting the angles in both the horizontal and longitudinal directions.
- For installation systems Ⅱ and Ⅲ, the guide rod can rotate round the axial line of the guide rod along the horizontal direction with the maximum angle of rotation±60°.
- If H>6m, it is necessary to add a supporting frame between the guide rods.
- The supporting frame and the lower support shall be fixed onto the pond wall and the pond bottom with the use of expansion bolts or chemical anchors. For the big diameter impellers and the big power mixers the best choice is to pre-embed.
- While placing an order by customer. Please supply the pond depth H and the drawing of the pond shape so as to determine the dimensions of the guide rod and the number of the supporting frames.
- A multiple of mixers with the same installation system can share one lifting system.
- The installation systems may employ the material of stainless steel or carbon steel for the selection of the corrosion-resisting properties.

Installation dimensions







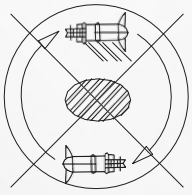


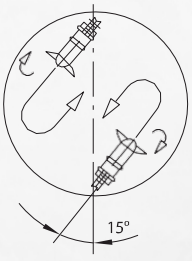
Arranging sketch map

The installation and positioning of the submersible mixers will produce a great impact on the effect of mixing. In order to obtain the perfect operating result, it is suggested that the advice of the specialized designers shall be followed and full consideration given to the shape of the pond, position of the water inlet and outlet, the vortex resulting from the outflow from the mixer onto the structures and some other conditions. Every effort shall be made to reduce the short-circuit circulation and the occurrence of dead corners and avoid the dashing of the flow against the pond wall for lowering the flow velocity. Making reference to the arranging sketch map below will help you to make a reasonable selection of the mixers and their installation modes.

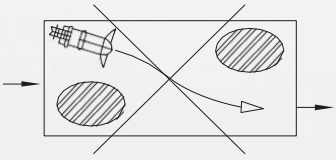
Mixing agitator

Avoid short circuit flows

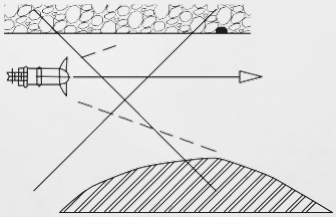


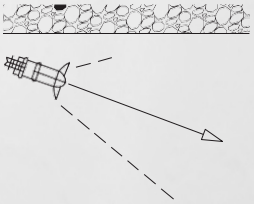


Take inlet and outlet into account

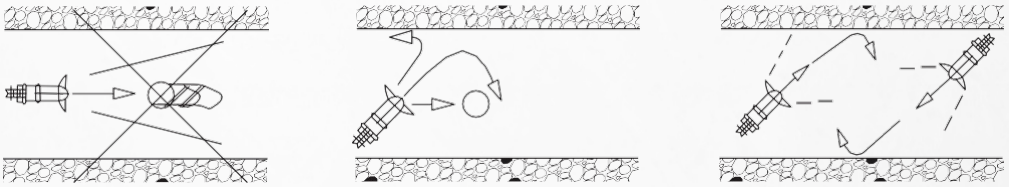


Take jet expansion into account, no unnecessary wall friction.

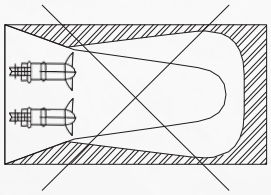




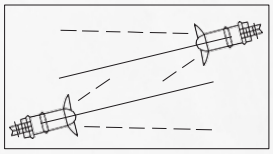
Installations cause dead zones



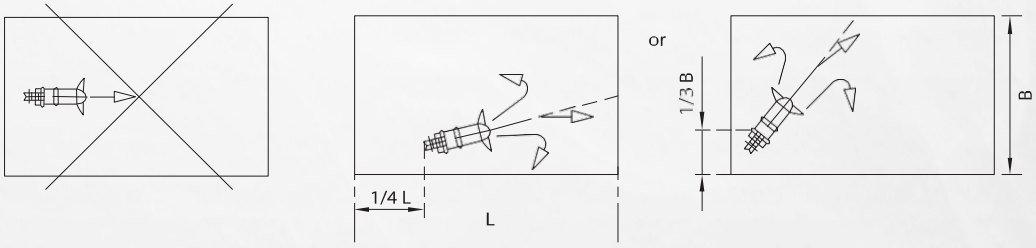
Jet intersections



Take uniform energy supply into account



Use wall reflections



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