JMI - Simavis

JPX/JPXX Series Submersible Mixer

JPW / JPS Series Submersible mixe

Low-speed flow properller

Application

Submersible mixers JPX/JPXX SERIES include mixing agitator and low-speed flow propeller, mainly for: 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, improving the quality of the water body; creating water flow, effectively preventing the sedimentation of the suspended substances.

Mixing agitator (with dome)

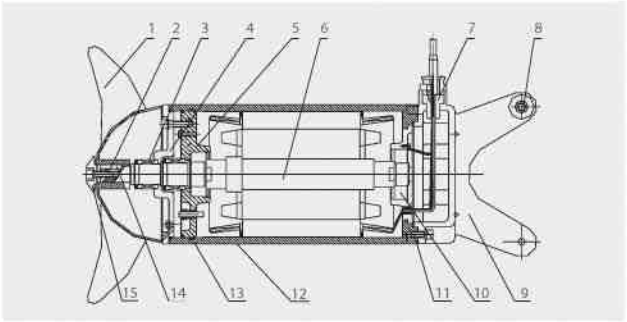
Mixing agitator

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 dynamic balancing, leading to smooth rotation.
- The in-built leakage sensor and the device for the over temperature protection for the windings of the stator (No leakage sensor for MA0.37/6 or MA0.55/4).
- 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.
- The vanes of the low-speed flow propeller are made of enhanced PU or FRP, which are sweptback shape, have the self-cleaning function, the smooth and streamlined propeller surface.distributes the propelling power equally.
- On the low-speed flow propeller, all the tightening pieces which will contact media employ the stainless-steel material;
- The decelerator employs integrated reducer with high safty coefficient, whose standard configuration is CYCLO, you can also choose helical gear speed reducer.

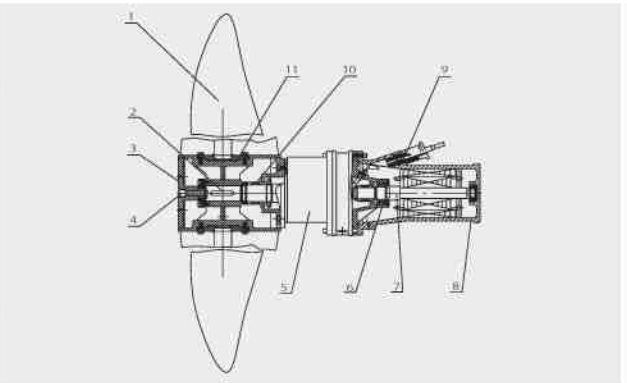
Construction

JPX Series



		GB	JIS
1	Propeller	0Cr19Ni10	SUS304
2	Lock nut	0Cr19Ni10	SUS304
3	Mechanical seal	SiC-SiC	SiC-SiC
4	Mechanical seal stand	0Cr19Ni10	SUS304
5	Front bearing support	HT200	FC200
6	Main shaft	2Cr13	SUS420J1
7	Watertight head	VR	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	VR	NBR-70
14	Flat key	45	S45C
15	Wheel clamp ring	0Cr19Ni10	SUS304

JPXX Series



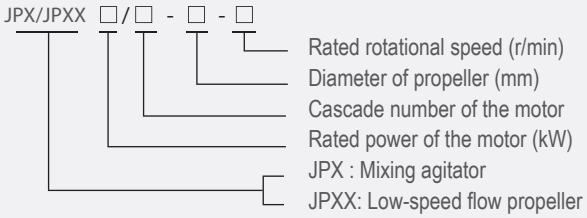
		GB	JIS
1	Propeller	PU/FRP	PU/FRP
2	Output shaft	Cr13	SUS420J1
3	End cap	HT200	FC200
4	Bolt	0Cr19Ni10	SUS304
5	Deceleration cabinet	HT200	FC200
6	Bearing	-	-
7	Stator shaft	2Cr13	SUS420J1
8	Sheath	HT200	FC200
9	Splicing kits for power cable	-	-
10	Mechanical sealing	SiC-SiC	SiC-SiC
11	Wheel boss	HT200	FC200

Limitation 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 class insulation and in accordance with IP68, continuous operating in 24hr

  The submersible mixer must operate in the complete submersion into water

Model description



Performance Parameters

JPX series mixing agitator

Pump model	Motor power (kW)	rpm of propeller (r/min)	Diameter of propeller (mm)	Weight (kg)
JPX0.37/6-220-960	0.37	960	220	45/50
JPX0.55/4-220-1400	0.55	1400	220	45/50
JPX0.85/8-260-740	0.85	740	260	55/65
JPX1.5/6-260-960	1.5	960	260	55/65
JPX2.2/8-320-740	2.2	740	320	88/93
JPX4/6-320-960	4	960	320	88/93
JPX1.5/8-400-740	1.5	740	400	74/82
JPX2.5/8-400-740	2.5	740	400	74/82
JPX3/8-400-740	3	740	400	74/82
JPX4/6-400-960	4	960	400	74/82
JPX4/12-620-480	4	480	620	190/206
JPX5/12-620-480	5	480	620	196/212
JPX7.5/12-620-480	7.5	480	620	240/256
JPX10/12-620-480	10	480	620	250/266

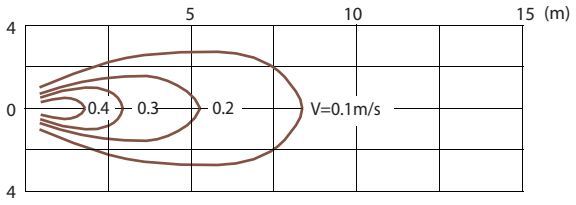
Remark: 1. In the above table, the value listed in the column of "weight" respectively contains the weight of without or with the dome.
2. Mixer agitator whose propeller diameter 220mm has two vanes, other has three vanes.

JPXX series low speed flow propeller

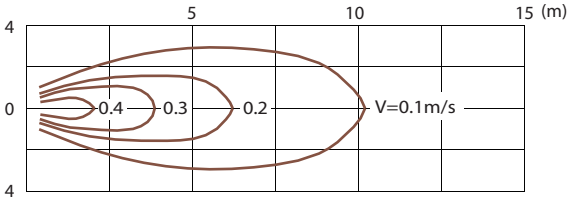
Pump model	Motor power (kW)	rpm of propeller (r/min)	Diameter of propeller (mm)	Weight (kg)
JPXX1.5/4-1100-52	1.5	52	1100	215
JPXX2.2/4-1100-63	2.2	63	1100	215
JPXX3/4-1100-85	3	85	1100	215
JPXX2.2/4-1400-42	2.2	42	1400	155
JPXX3/4-1400-52	3	52	1400	155
JPXX2.2/4-1800-34	2.2	34	1800	230
JPXX3/4-1800-42	3	42	1800	230
JPXX3/4-2500-34	3	34	2500	260
JPXX4/4-2500-42	4	42	2500	260

Remark: Low-speed flow propeller has two vanes.

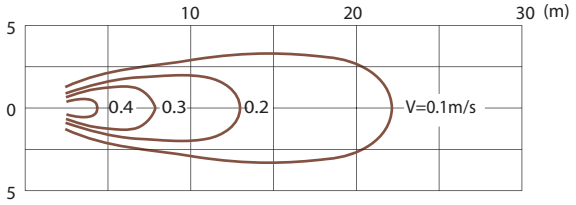
Diagrams of The Mixing Field



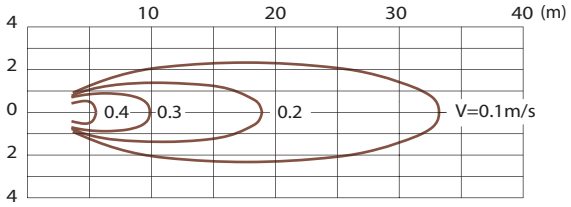
JPX0.37/6-220-960



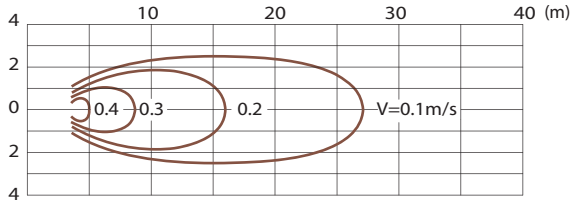
JPX0.55/4-220-1400



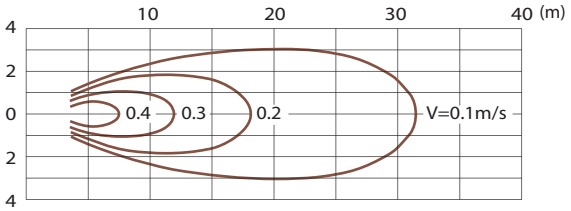
JPX0.85/8-260-740



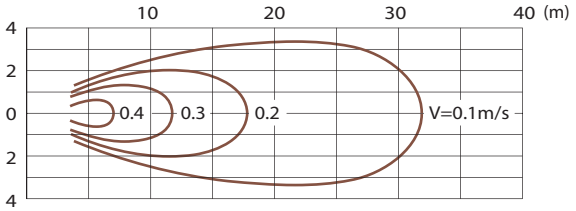
JPX1.5/6-260-960



JPX1.5/8-400-740



JPX2.2/8-320-740



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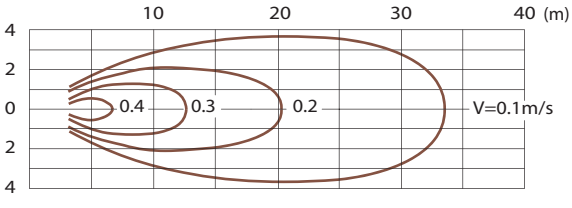
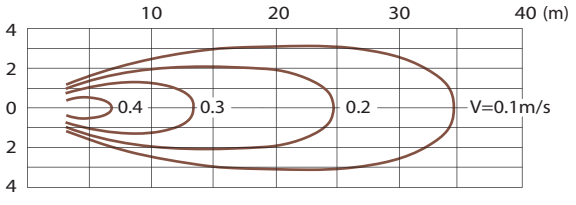
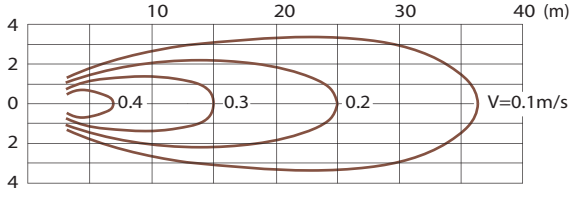


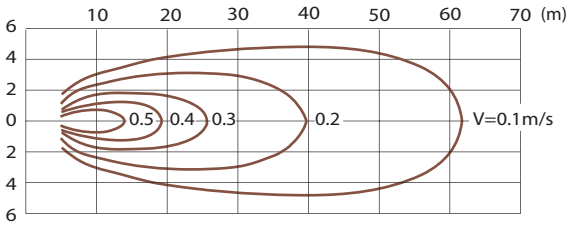
JPX3/8-400-740



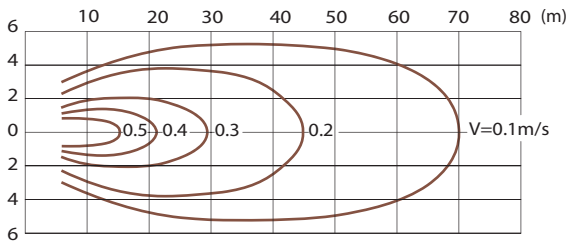
JPX4/6-320-960



JPX4/6-400-960

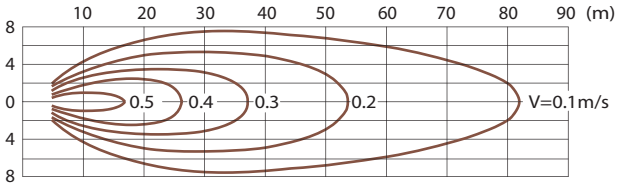


JPX4/12-620-480

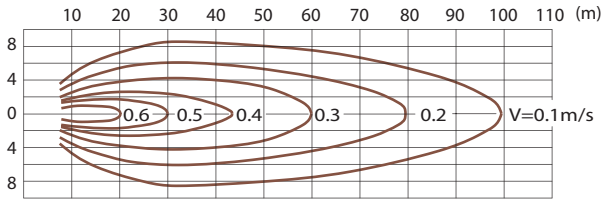


JPX5/12-620-480

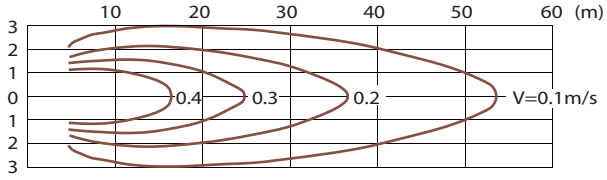
Diagrams of The Mixing Field



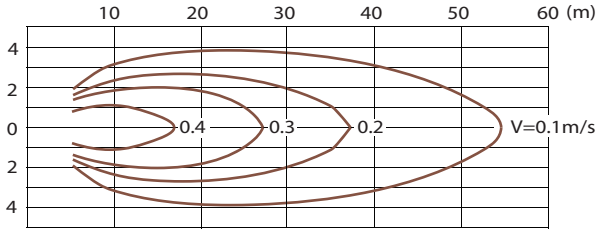
JPX7.5/12-620-480



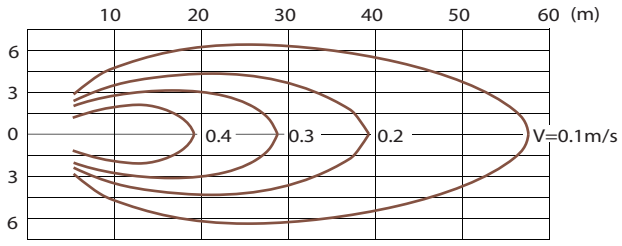
JPX10/12-620-480



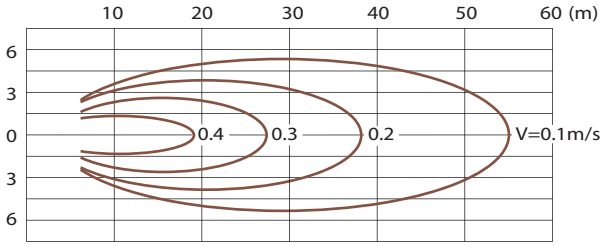
JPXX1.5/4-1100-52



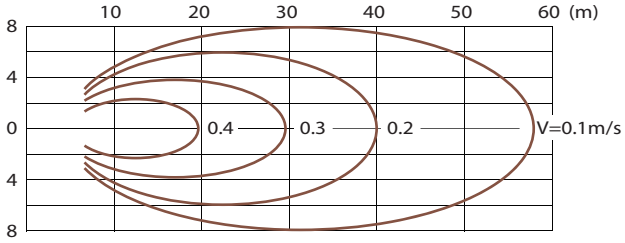
JPXX2.2/4-1100-63



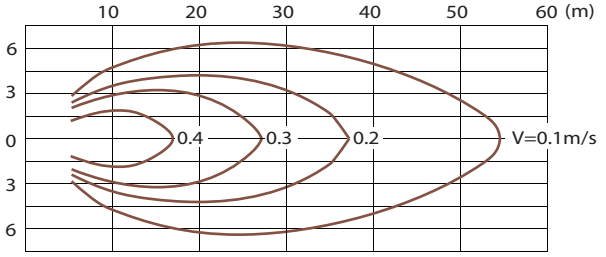
JPXX3/4-1100-85



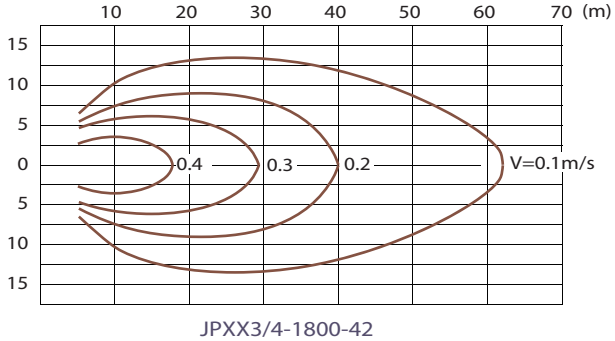
JPXX2.2/4-1400-42



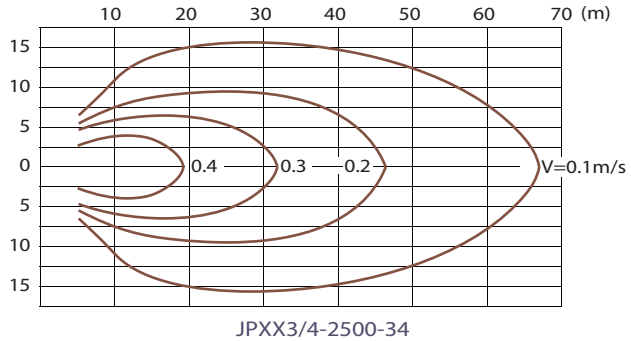
JPXX3/4-1400-52



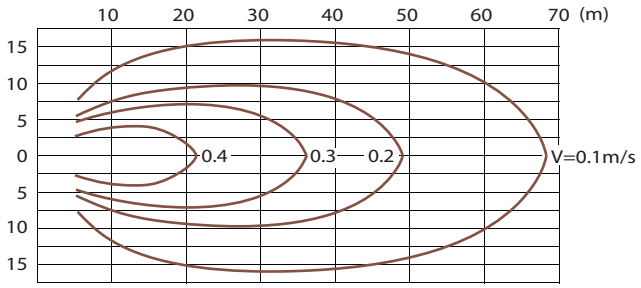
JPXX2.2/4-1800-34



JPXX3/4-1800-42



JPXX3/4-2500-34



JPXX4/4-2500-42

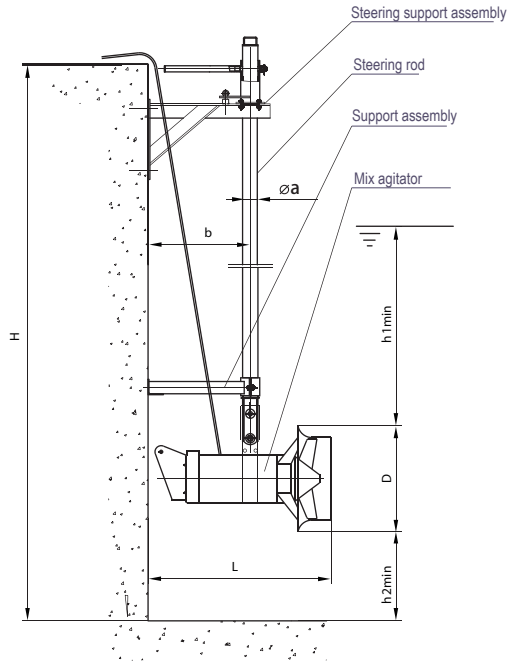
Installation Modes and Imensions

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

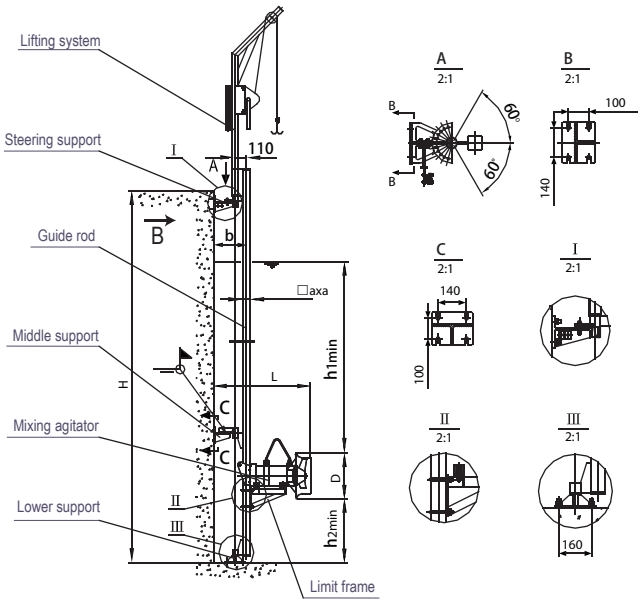
Type	a	D	b	L	H1min	H2min	Installation system
JPX0.37/6-220-960	Ø40/□50	340	330/235	520/960	500/800	110/150	I/II
JPX0.55/4-220-1400	Ø40/□50	340	330/235	520/960	500/800	110/150	I/II
JPX0.85/8-260-740	Ø48/□50	360	330/235	630/960	500/800	110/150	I/II
JPX1.5/6-260-960	Ø48/□50	360	330/235	630/960	500/800	110/150	I/II
JPX2.2/8-320-740	□70	460	320	970	800	150	II
JPX4/6-320-960	□70	460	320	970	800	150	II
JPX1.5/8-400-740	□70	530	320	960	800	200	II
JPX2.5/8-400-740	□70	530	320	960	800	200	II
JPX3/8-400-740	□70	530	320	1010	800	200	II
JPX4/6-400-960	□70	530	320	1010	800	300	II
JPX4/12-620-480	□100	760	335	1150	1100	300	III
JPX5/12-620-480	□100	760	335	1150	1100	300	III
JPX7.5/12-620-480	□100	760	335	1280	1500	300	III
JPX10/12-620-480	□100	760	335	1280	1500	300	III
JPXX1.5/4-1100-52	□100	1100	200	1130	1000	270	IV
JPXX2.2/4-1100-63	□100	1100	200	1130	1000	270	IV
JPXX3/4-1100-85	□100	1100	200	1130	1000	270	IV
JPXX2.2/4-1400-42	□100	1400	210	1212	750	325	IV
JPXX3/4-1400-52	□100	1400	210	1212	750	325	IV
JPXX2.2/4-1800-34	□100	1800	200	1150	800	125	IV
JPXX3/4-1800-42	□100	1800	200	1150	800	125	IV
JPXX3/4-2500-34	□100	2500	200	1150	1000	125	IV
JPXX4/4-2500-42	□100	2500	200	1200	1000	125	IV

- 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 of mixing liquid.
- Installation System Ⅰ is only suitable for H≤3m and the mixer models of JPX0.37/6, JPX0.55/4, JPX0.85/8 and JPX1.5/6, and with the possibility of adjusting the angles in both horizontal direction and langitudinal direction.
- 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 ±600, if H>4m, it is necessary to add a supporting frame between the guide rods.
- Supporting frame and the lower support shall be fixed onto the wall and the base 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.
- A multiple of mixers with the same installation system can share one lifting system.
- Installation systems may employ the material of stainless steel or galvanised steel for the selection of the corrosion-resisting properties of dipped of liquid.

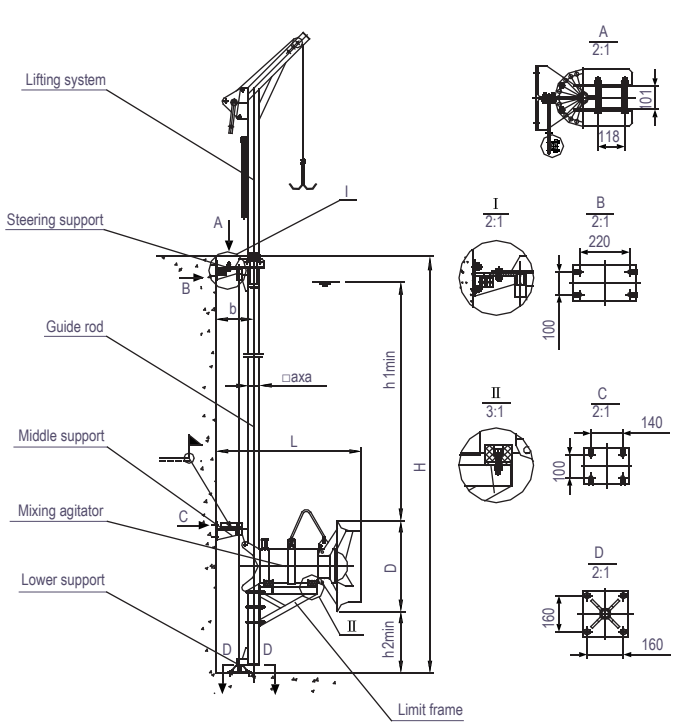
Installation Dimansion



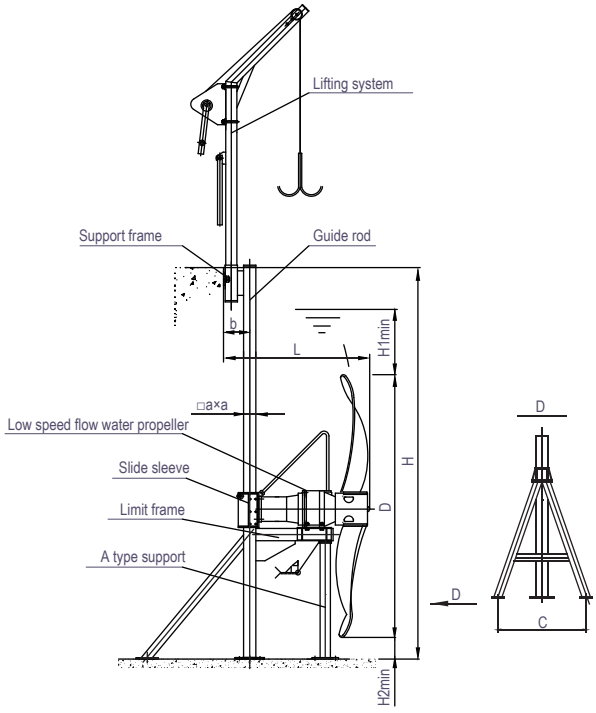
System I



System II



System III



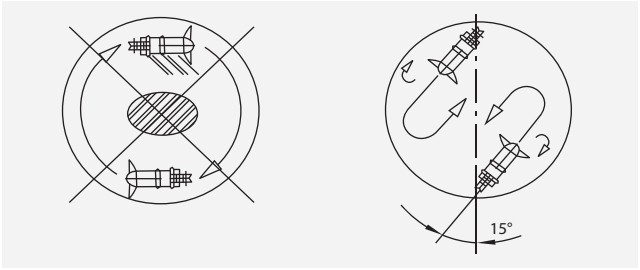
System IV

General Layout of Arrangement

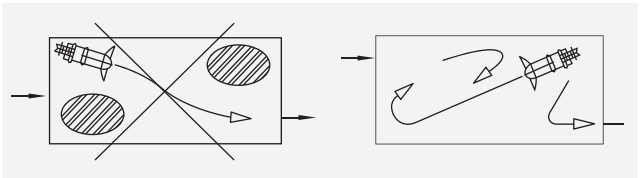
The installation and positioning of the submersible mixers will produce a great impact on the effect of mixing. In order to obtain the perfect operating result, it is suggested that the advice of the specialized designers shall be followed and full consideration given to the shape of the pond, position 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.

JPX Series

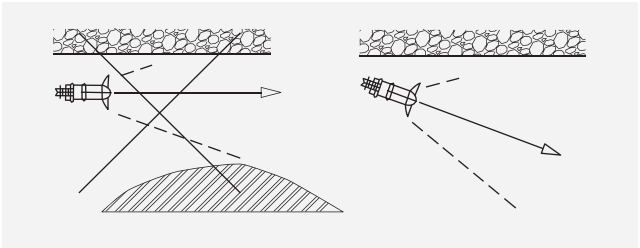
Avoid short circuit flows



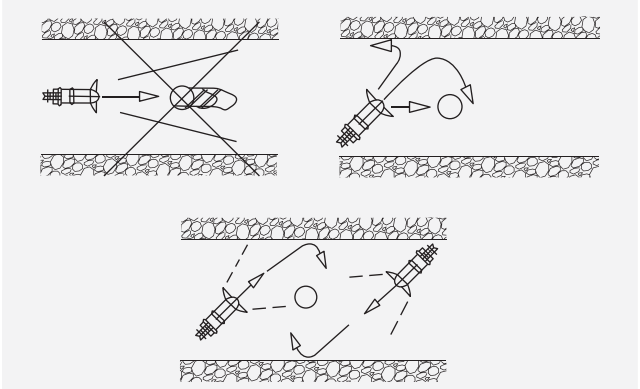
Inlet and Outlet-Oreantation



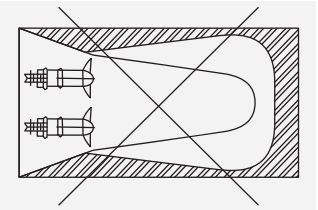
Avoiding



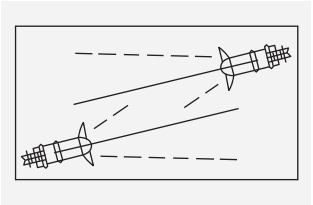
Dead zones



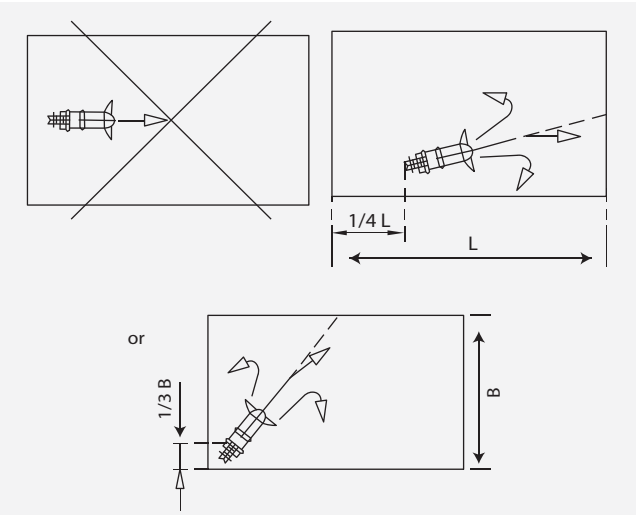
Jet intersections



Uniform energy supply



Use wall reflections



JPXX Series