

PENGUIN

PUMPS AND FILTERING SYSTEMS



SERIES PM TANK/DRUM MIXERS

MODELS

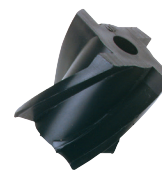
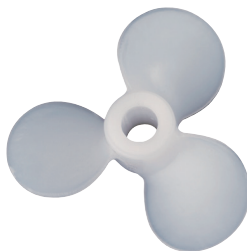
PM-1/20
PM-1/12
PM-1/4
PM-1/3
PM-1/2
PM-1

MOUNTS

C - Clamp
B - Bracket
F - Flange
T - Thread

PROPELLER MATERIALS

B - Polypropylene
S - 316SS
A - CPVC



INTRODUCTION

Penguin mixers are designed to handle a large range of chemicals for both tanks and drums without difficulty. These mixers are completely constructed of 316SS shafts, couplings, and propellers. For a completely metal-less mixer where in contact with the solution, a polypropylene propeller and sleeved shaft are supplied. All mixers have been tested for proper operation. To obtain optimum service life, please follow all instructions.

INSTALLATION

PM mixers must be mounted at least two times the propeller diameter off the bottom of the tank. If the mixer is to be used in a fully baffled tank, a bracket or flange mount must be utilized. For maximum mixing, install the unit vertically in the center of the tank.

Clamp Mount - A clamp mount mixer is most efficient 10-20 degrees off the vertical axis for non-fully baffled tanks. Exceeding a 20 degree angle is not recommended. On clamp mount mixers, the motor and mixer shaft are mounted off center in respect to the clamp, thus the force on the tip and the spindle of the clamp is very high. For mixers 1/4 hp and larger, it is necessary to support the tip and the end of the spindle with rigid flat pieces of wood or plastic in order to prevent damage to the tank wall or lip. Some force on the handle is necessary in order to move the mixer in the desired position. Once the mixer is in the desired position, tighten the bolt and nut. Models PM-1/4 through PM-1 require even greater force due to the heavier weight of the unit.

ELECTRICAL

PM-1/20 mixers are supplied in single phase, 115V, 60C motors. All other models are single phase, dual voltage 115/230C motors. When the factory supplies a cord and plug, unless otherwise requested, all dual voltage motors are wired for the lower voltage (115V). When changing 115V wiring to 230V wiring, follow the motor manufacturer's wiring instructions which are found in the motor junction box or motor label. The three phase motor is dual voltage 230V/450V, 50/60C, and is not wired at the factory.

Many options are available on the PM Series mixers including single phase 50C and explosion proof motors. If these options are required please check the motors carefully or consult the factory.

OPERATION

Dual Propellers - The top propeller of the dual propeller mixer is adjustable. It is very important to position this propeller halfway between the liquid level and the bottom propeller. Do not exceed 1/3 of the total shaft length measured from the bottom propeller.

Dual propellers should only be utilized when $H/D > 1$

H - Tank Height

D - Average diameter of the tank.

(The largest dimension of a rectangular tank is to be considered your average diameter)

PENGUIN

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Item	Description	Part Number					
		PM-1/20	PM-1/12	PM-1/4	PM-1/3	PM-1/2	PM-1
1	MOTOR						
	PHASE-VOLTAGE-CYCLE						
	1 115 60	PM-120-01					
	1 230 60	PM-120-21					
	1 115/230 60		PM-112-01	PM-14-01	PM-13-01	PM-12-01	PM-10-01
	3 230/460 60			PM-14-31	PM-13-31	PM-12-31	PM-10-01
2S	Coupling-316SS	PM-120-02S	PM-112-02S	PM-14-02S	PM-14-02S	PM-12-02S	PM-12-02S
3S	Coupling Set Screw-316SS	PM-120-03S (2)	PM-120-03S (2)	PM-120-03S (2)	PM-120-03S (2)	PM-120-03S (2)	PM-120-03S (2)
4S	Shaft-316SS (specify shaft length)	PM-120-04S	PM-120-04S	PM-14-04S	PM-13-04S	PM-12-04S	PM-10-04S
4BS	Shaft-Polypro Sleeved (specify shaft length)	PM-120-04BS	PM-120-04BS	PM-14-04BS	PM-13-04BS	PM-12-04BS	
5S-03	Propeller-316SS (3" Dia.), 1/2" Bore	PM-120-05S3	PM-120-05S3	PM-120-05S3	PM-120-05S3		
5S-04	Propeller-316SS (4" Dia.), 1/2" Bore			PM-14-05S4	PM-14-05S4	PM-12-05S4	
	Propeller-316SS (4" Dia.), 5/8" Bore						
5S-05	Propeller-316SS (5" Dia.), 5/8" Bore					PM-12-05S5	PM-12-05S5
5BS-03	Propeller-Polypro (3" Dia.), 1/2" Bore	PM-120-05BS3	PM-120-05BS3	PM-120-05BS3	PM-120-05BS3		
5BS-04	Propeller-Polypro (4" Dia.), 1/2" Bore			PM-14-05BS4	PM-12-05BS4		
	Propeller-Polypro (4" Dia.), 5/8" Bore						
6A	Turbine-Polypro (thread mount only)	PM-120-06B	PM-120-06B	PM-120-06B			
7S-01	Propeller/Turbine Set Screw-316SS(polypro propeller only)	PM-120-07S	PM-120-07S	PM-120-07S	PM-120-07S	PM-120-07S	PM-120-07S
7S-02	Propeller Set Screw-316SS (316SS propeller only)	PM-120-03S	PM-120-03S	PM-120-03S	PM-120-03S	PM-120-03S	PM-120-03S
8	Clamp Mount Ass'y	PM-120-08	PM-112-08	PM-14-08	PM-14-08	PM-14-08	PM-14-08
9	Bracket Mount Ass'y	PM-120-09	PM-112-09	PM-14-09	PM-14-09	PM-14-09	PM-14-09
10	Flange Mount Ass'y	PM-120-10	PM-112-10	PM-14-10	PM-14-10	PM-14-10	PM-14-10
11	Thread Mount Ass'y	PM-120-11	PM-112-11	PM-14-11			
12	Motor Bolts	PM-120-12 (2)	PM-120-12 (2)	PM-14-12 (4)	PM-14-12 (4)	PM-14-12 (4)	PM-14-12 (4)

() indicates quantity required other than one (1).

