

**混合器(混合泵)**  
BLENDER(Mixing Pump)



## 混合泵 Mixing Pump



### 应 用

- \* 该混合器是用于将固体混合到液体中。
- \* 在食品加工工业中，该混合器为奶粉的配制，糖浆的制作，盐水的调制等提供了在线处理完美的解决办法。
- \* 在制药，化妆品和化学制品行业中，它也可以用于预备固体和液体的混合。

### Applications

- \* The Mixers are used to mix solids in liquids.
- \* In the food-processing industry, they provide a perfect solution for reconstituting powdered milk, making syrups, preparing brines, etc.
- \* They can also be a solution for preparing solid-liquid mixtures in the pharmaceutical, cosmetics and chemical industries.



## 工作原理

- \* 该混合器最基本包括外套和一个垂直安装的离心泵叶轮。吸入侧边有一个料斗和管道，用于将固体进口和液体分离开来，从而避免了在物料进入外套之前就形成絮状物。
- \* 液体以高速度进入混合腔，因此在叶轮的中心产生了真空，从而吸入了固体。固体的进入方式可以通过安装在加料斗下面的阀门来进行控制。
- \* 在混合器吸入和排出的侧边保持低压非常重要。避免气穴现象。因此，只有当应用确实需要时，才提供输送泵（大量的压力会降低吸入固体，高粘度物料等），请一定要记住，吸入容量会减少。
- \* 当出口压力很高时，需要安装一个离心泵来排泄混合器的侧边。
- \* 当黏性超过500cP时，输送泵和排泄泵必须是正位移泵(转子泵)。

## Operating Principles

- \* The mixer basically consists of a casing and a centrifugal pump impeller which are mounted vertically. The suction side has a double-wall tube that keeps the inlet of solids separate from that of liquids, thus avoiding the formation of flocs before the material enters the casing.
- \* The liquid enters the mixing chamber at a high velocity, thereby creating a vacuum on the center of the impeller, which causes the suction of the solids. The fall of the solids can be regulated by means of a valve situated at the bottom of the hopper.
- \* It is important to keep low pressure at the suction and at the discharge sides of the blender. Avoid cavitation. Thus a feeding pump must be provided only for the applications that really require it (considerable pressure drops at the suction side, high viscosity products, etc.), please, keep in mind that the suction capacity will decrease.
- \* When discharge pressure is high, a centrifugal pump needs to be fitted to the discharge side of the blender.
- \* For viscosities above 500 cP, the feeding pump and the discharge pump must be positive displacement pumps.



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### 设计和特点

- \* 简单和垂直的装配可以快速的均匀的混合各种固体，而不会和空气接触完全混合带物料的再流通在一些应用中，它可以成一直线的使用，无需再流通。
- \* 根据3A卫生标准设计
- \* 通过卡箍连接可以简单装配和拆卸
- \* 不用拆卸就可以进行清洗
- \* 卫生单机机械密封圈

### Design and Features

- \* Simple and versatile assembly for quick and homogeneous mixing of a great variety of solids without contact with the air. Complete mixing with recirculation of the material. In some applications, it can be used in line, without recirculation.
- \* 3A Sanitary design.
- \* Easy assembly and disassembly by Clamp connections.
- \* Cleaning can be carried out without disassembling the unit.
- \* Sanitary single mechanical seal

### 选 项

- \* 可冲洗双重冷却机械密封
- \* 连接：DIN, SMS, 3A
- \* 气动阀门
- \* 60°加料斗
- \* 混合室内筛子
- \* 排泄装置

### 材 质

- \* 与物料接触部位: AISI 316L, AISI 304
- \* 垫圈(标准): EPDM
- \* 机械密封圈(标准): SSC/ Sic/EPDM
- \* 内表面处理:  $Ra \leq 0.8\mu m$
- \* 外表面处理: 镜面抛光

## Options

- \* Dual cooled seal.
- \* Connections: DIN, SMS.
- \* Pneumatic actuator valve.
- \* 60° hopper.
- \* Screen in the mixing chamber.
- \* Drainage.

## Materials

- \* Parts in contact with the media: AISI 316L, AISI 304
- \* Gaskets(standard): EPDM
- \* Mechanical seal(standard): SSC/Sic/EPDM
- \* Inside finish:  $Ra \leq 0.8\mu m$
- \* Outside finish: mirror polished



料桶，粉末、固体、粘性液体等物料  
Hopper, powder, solids, viscous liquid materials, etc.

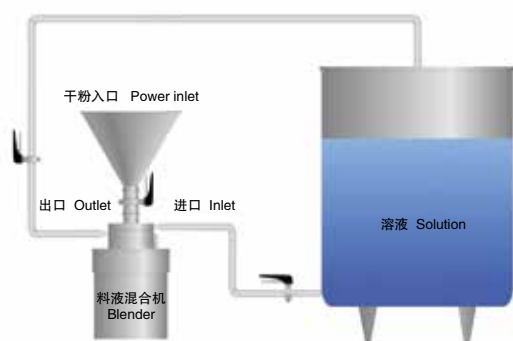
蝶阀，手动/气动或其他类型的阀门  
Butterfly valve, manual/Pneumatic or other kinds of valves.

混合物出口  
Mixture Outlet

液体进口  
Liquid Inlet

混合室  
Mixing chamber

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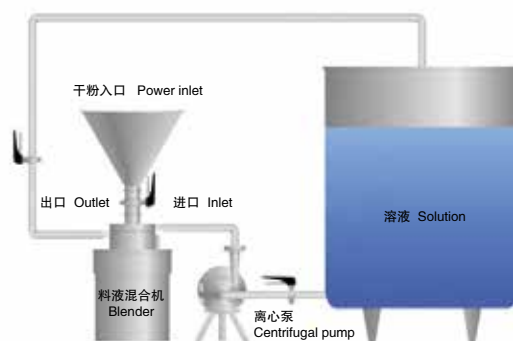


## 典型应用1：

能够实现对多种粉类制品的快速溶解，主要处理固形物含量不超过15%的溶液的制作。通常使用在奶粉，果胶，添加剂，蔗糖等物料的快速溶解过程中。

### Typical Application 1:

Can be achieved on fast-dissolving of a variety of powder product, dealing mainly with the solution which with solid content not more than 15%. Usually used in the rapid dissolution process of milk powder, pectin, additives, sugar and other materials.



## 典型应用2：

在料液混合机与配料罐间增加了一台离心泵的目的是为了给料液混合机供料，这种配置能够处理固形物含量比较大的溶液，通过离心泵产生的高速液体加速干粉的溶解效果。多应用在最终溶液中固形物含量在25%以下的溶液的处理中。

### Typical Application 2:

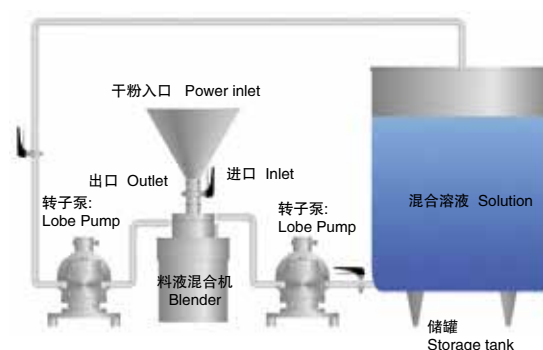
Increasing a centrifugal pump between Mixer and make-up tank is in order to feed mixer expected, this configuration can handle relatively high solid content of solution, high-speed liquid through the centrifugal accelerates solution processing of dry powder. Mainly used in the processing of final solution with solids content of 25% or less.

## 应用

- \* 配制糖浆，山梨醇，葡萄糖，乳糖和派生物
- \* 配制奶粉
- \* 溶解可可粉或糖于牛奶中
- \* 配制乳浆
- \* 配制面粉和淀粉浆
- \* 配制盐水
- \* 预混酸奶酪和其他乳制甜点
- \* 溶解斑脱土用于酒过滤
- \* 溶解酪蛋白和奶酪制作工业中的酪蛋白
- \* 配制杀虫剂和肥料

## Applications

- \* Preparation of sugar syrup, sorbitol, glucose, lactose and derivatives
- \* Reconstitution of powdered milk
- \* Dissolution of cocoa and/or sugar in milk
- \* Reconstitution of powdered whey
- \* Preparation of flour and starch slurries
- \* Preparation of brines
- \* Pre-mixtures of yogurt and other milk-based desserts
- \* Dissolution of bentonites for wine filtering
- \* Dissolution of casein and caseinates in the cheese-making industry
- \* Preparation of pesticides and fertilizers.



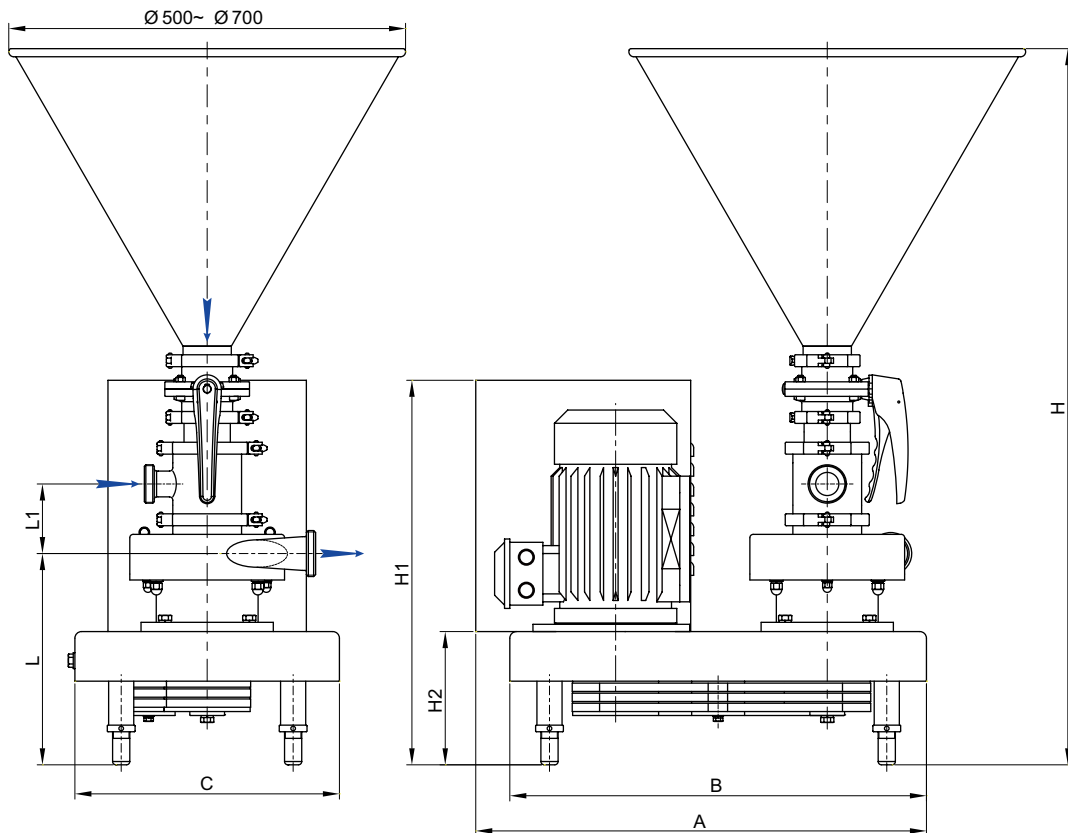
## 典型应用3：

这个系统中配备了2台转子泵，转子泵在输送含有粘度的物料过程中具有比较大的优势，并且具有比较高的压力，这个系统是专门为处理混合高固形物含量的溶液而设计的，特别是在处理固形物含量达到50%以上的溶液的混合处理中具体很好的应用。

### Typical Application 3:

This system is equipped with two sets of rotor pumps; rotor pump has a relatively large advantage in the process of delivery of materials containing the viscosity, and has a relatively high pressure. This system is designed to handle high solids content of mixed solution, especially perfect in dealing with the solution with solids content of 50% or more.

物料混合泵(物料混合器) 选型表  
Mixing Pump(Blender) Selection Table



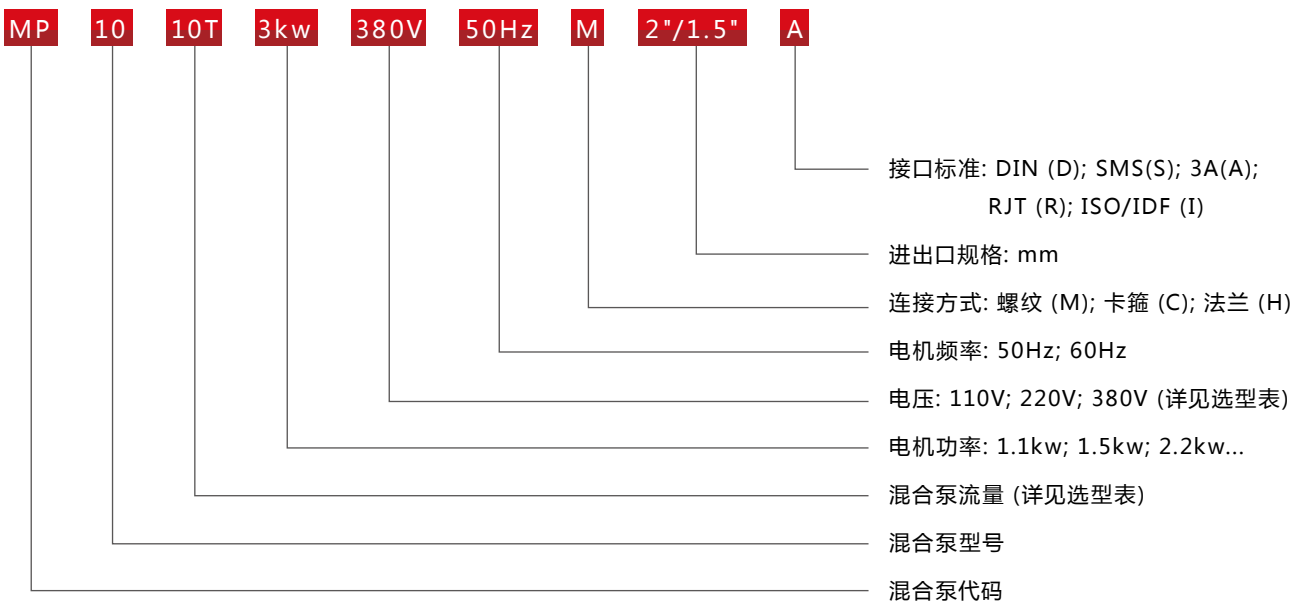
选型表 Selection Table

规格	流量	功率	料斗	固体吸入量	固体进口	液体进口	混合液出口	A	B	C	H	H1	H2	L	L1
MP-10 MP-20	10T 20T	3kw 4kw	45L	2000kg / h 3000kg / h	3"	1.5"	2"	680	630	400	1080	580	200	320	105
MP-30 MP-40	30T 40T	5.5kw 7.5kw	55L	4200kg / h 5500kg / h	3.5"	2"	2.5"	830	870	430	1135	650	220	360	120
MP-50 MP-60	50T 60T	11kw 15kw	65L	7000kg / h 9000kg / h	4"	2.5"	3"	980	920	500	1200	835	220	400	125

注意: 详细选型详见选型表; 以下表格里的尺寸为参考值, 实际尺寸以实物为准。

Attention: Please refer to selection table for details of next page, The size in the following form is the reference value, the actual size is according to practicality.

混合泵型号说明  
Model Instruction of Mixing Pump



例 : MP-10-10T-3KW-380V-50Hz-M-2"/1.5"-A





