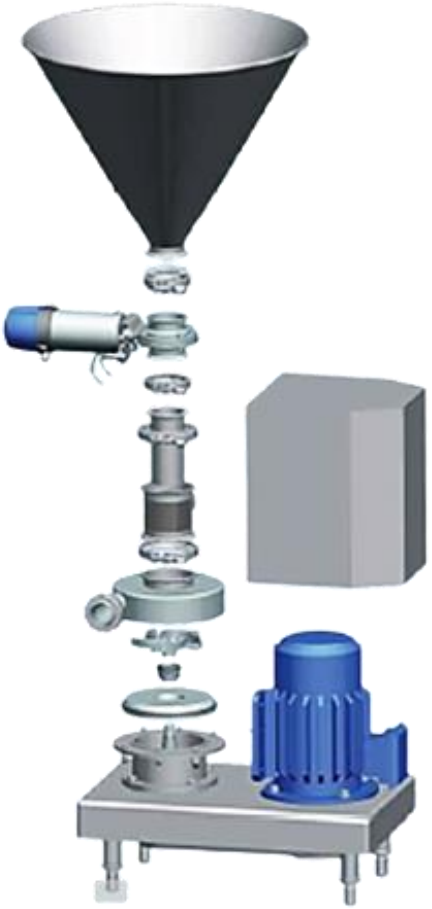
SYSTEM OVERVIEW

SEPAK INDUSTRIES blender mixing pump consists of a casing and centrifugal pump impeller mounted vertically. The suction side has a double wall tube to keep the inlet of the solid product separate from the liquids, avoiding the formation of blockages before the material enters the casing.

The liquid enters the mixing chamber with a high velocity, creating a vacuum at the centre of the impeller, causing suction of the solids. The fall of solids can be regulated by means of a valve situated at the bottom of the hopper. Maintaining low pressure at suction and at the discharge sides of the blender is vital to avoid cavitation. A feeding pump must be provided only for the applications that really require it (considerable pressure drops at suction side, high viscosity products) please keep in mind that 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 500cP, the feeding pump and the discharge pump must be positive displacement pumps.



FEATURES

- Simple and versatile assembly for quick and homogenous mixing of great variety of solid without contact with the air. Complete mixing with circulation of the material. In some applications, it can be used in line without recirculation.
- 3A sanitary design
- Easy assembly and disassembly by clamp connection
- Cleaning can be carried out without disassembly of the mixer
- Sanitary single mechanical seal.

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APPLICATIONS

- Preparation of sugar syrup, sorbitol, glucose, derivatives, flour and starch slurries and brines.
- Reconstitution of powdered milk and powdered whey
- Dissolution of cocoa, sugar in milk, bentonites for wine filtering, casein and caseinates in the cheese industry.
- Pre mixtures of yoghurt and other milk-based desserts
- Preparation of pesticides and fertilizer

MATERIALS

- **Parts in contact with the media:** AISI 3156L
- **Gaskets (standard):** EPDM
- **Mechanical Seal (standard):** C/St.St/EPDM
- **Inside Finish:** mirror polished, Ra≤0.8µm
- **Outside Finish:** mirror polished

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.

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.

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.

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OPTIONS

- Dual cooled seal
- **Connections:** DIN, SMS
- Pneumatic actuator valve
- 60° Hopper
- Screen in the mixing chamber
- Drainage
- High and low-level sensors
- Vibrator (pneumatic or electric)
- Switch board for operation and protection of equipment including stop/start, emergency stop and motor protection.

VIBRATORS

- **Pneumatic vibrator:** vibration is produced by means of a roller applied to steel grooves. The frequency of vibration can be changed by means of regulating the entry of air in the vibrator.
- **Electric vibrator:** Motor drives mass off centre on each side of the rotating shaft in order to provide the required vibration

Hopper Vibrator: facilitates the complete discharge of solids and very fine powders.

- Vibration facilitates the flow of solids until the hopper is empty, avoiding residue build-up.
- If substantial vibration is required, mixer can be adapted to operate under the relevant conditions.
- This adaption is made by means of an anti-vibration support for the hopper and an elastic coupling.

SOLID DETECTION SENSOR

Due to the high degree of automation of our processes, it is important that all the variables relevant to the process is controlled.

- In order to cover this need, we offer the possibility of adding one or two solid detection sensors to the hopper.
- These sensors provide a signal to indicate low and/or high levels in the hopper.
- The low signal can be used to control the valve in the lower part of the hopper in order to avoid the entry of air into the mixing chamber.
- The high-level sensor can be used to control a solid feeding unit.

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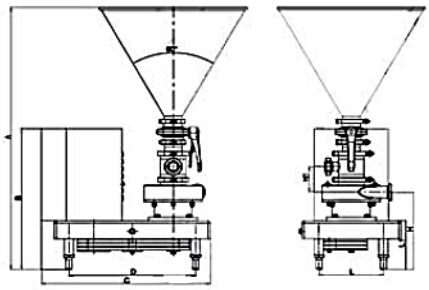
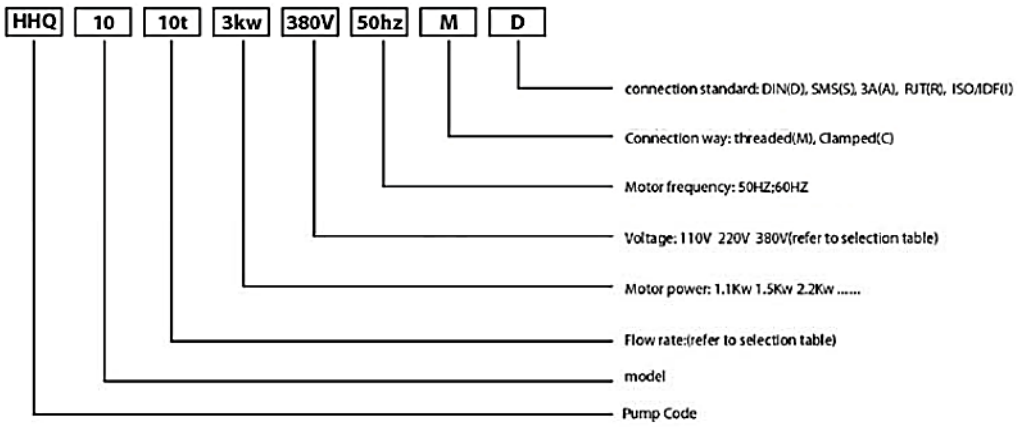
MODEL	FLOW (L/HR)	POWER (kW)	SOLID INLET SIZE	LIQUID INLET SIZE	OUTLET	HOPPER VOLUME	SOLID SUCTION VOLUME	CONNECTION WAY
HHQ-10	10	3.0	DN65 – 3”	DN40 – 1.5”	DN50 – 2”	45	2000kg/h	Clamp;Thread; Weld
HHQ-20	20	4.0	DN65 – 3”	DN40 – 1.5”	DN50 – 2”	45	3000kg/h	Clamp;Thread; Weld
HHQ-30	30	5.5	DN80 – 3.5”	DN50 – 2”	DN65 – 2.5”	45	4200kg/h	Clamp;Thread; Weld
HHQ-40	40	7.5	DN80 – 3.5”	DN50 – 2”	DN65 – 2.5”	45	5500kg/h	Clamp;Thread; Weld
HHQ-50	50	11.0	DN100 – 4”	2.5”	DN80 – 3”	65	7000kg/h	Clamp;Thread; Weld
HHQ-60	60	15.0	DN100 – 4”	2.5”	DN80 – 3”	65	9000kg/h	Clamp;Thread; Weld



HHQ	POWER (KW)	INLET d"/DN	INLET d"/DN	OUTLET d"/DN	Assembly Dimension											
					A	B	C	D	F	G	H	K	L	M	N	P
HHQ-10	3	3"/65	1.5"/40	2"/50	183	94	108	340	550	330	1130	590	670	630	400	600
HHQ-20	4	3"/65	1.5"/40	2"/50												
HHQ-30	5.5	3.5"/80	2"/50	2.5"/65	204	117	132	418	780	330	1350	705	920	870	430	610
HHQ-40	7.5	3.5"/80	2"/50	2.5"/65												
HHQ-50	11	4"/100	2.5"	3"/80	227	125	170	428	830	410	1460	840	970	920	500	700
HHQ-60	15	4"/100	2.5"	3"/80												

Model instruction of mixing pump



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