



MB Variable Speed Brewery Pump

Thank you for your purchase of the MB Variable Speed Brewery Pump! This pump features a variable frequency drive that allows the pump to be supplied with 208 to 230V single-phase power. Built on a robust stainless cart, with a stainless control panel, and a stainless motor guard, it can move quickly and easily around the brewhouse.

This pump is a single-suction, single-stage, centrifugal sanitary pump for conveying wort, beer, milk, beverages, wine, and other liquids. It has a single seal and a maximum temperature of 120° C.

1. Technical Parameters

Material: SUS304 and SUS316L

Specifications: 3T-180T 0.55KW-75KW

Standards: DIN, SMS, 3A, ISO, RJT

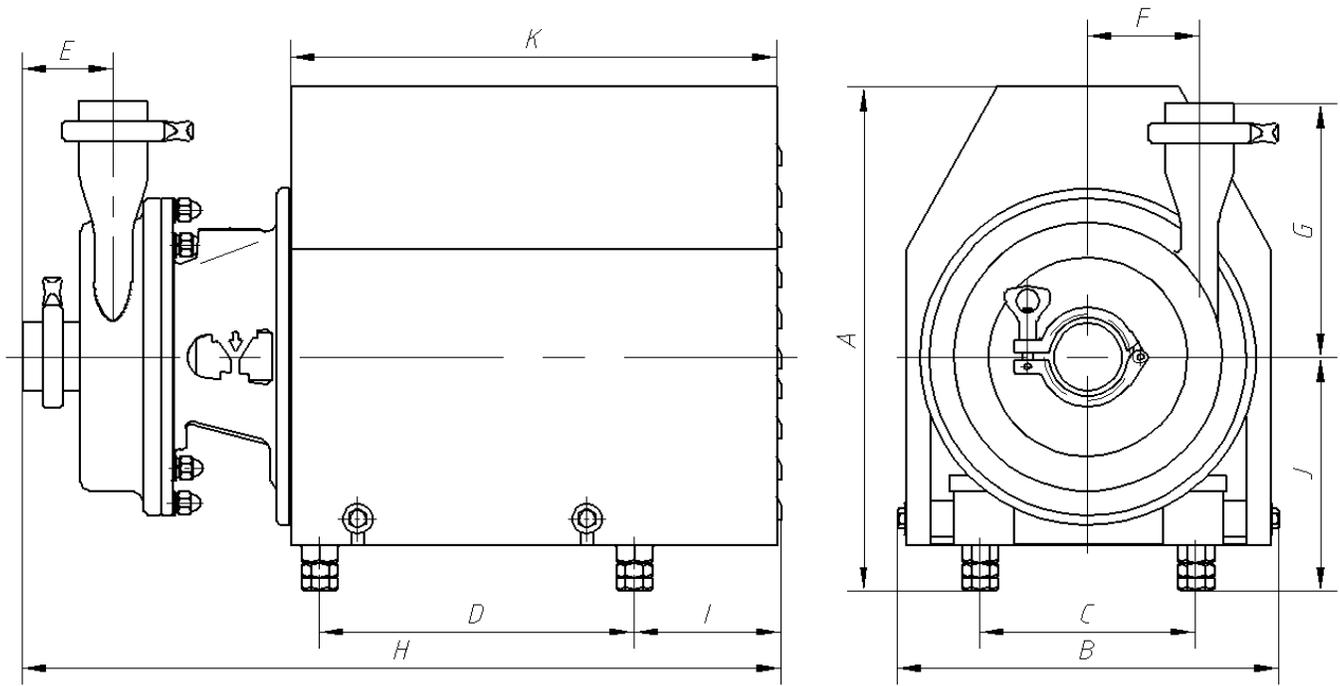
Impeller surface treatment: Polished

Operating temperature range: 50° F to 248° F

SKU	Flow (gal/hour)	Lift (Ft)	Motor Power (kW)	Inlet/Outlet (in)
PMP650	792.5	52.5'	0.75	1.5" / 1.25"
PMP655	1320	78.75'	1.5	1.5" / 1.5"

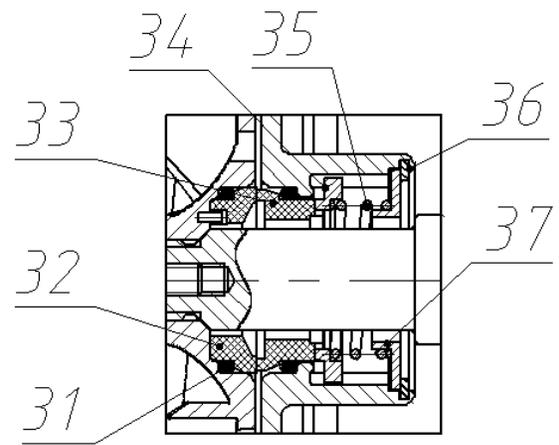
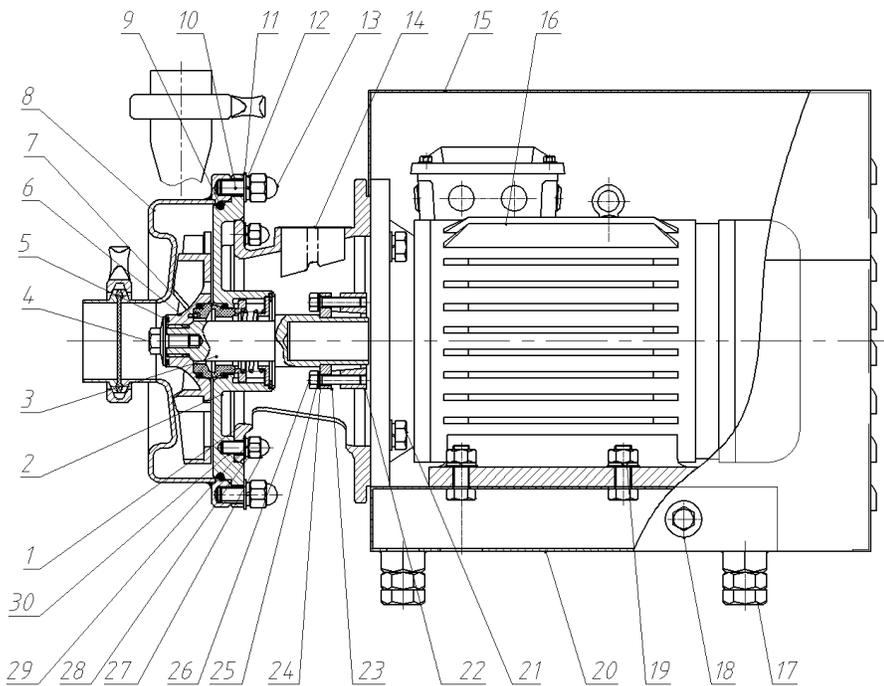
2. Instructions for use

- Install the pump below the level of liquid to be pumped.
- Before use, check that the direction of rotation of the impeller is correct.
- Check the seal between the pump cover and the pump.
- Sterilize or sanitize the pump before use.
- CIP clean pump immediately after use to prevent material adhesion.
- If there is no need for CIP cleaning; run water through the pump immediately after use.
- Clean all internal parts with a brush. Rinse, wash, and reassemble.
- **WARNING: Do not run pump dry.**



Mounting Dimensions

	PMP650	PMP655
A	12"	12.5"
B	9.5"	9.5"
C	5"	5.5"
D	8"	8.3"
E	2.3"	2.3"
F	2.4"	72.5"
G	6.3"	3"
H	17.5"	19.3"
I	1.5"	3.2"
J	6"	6.4"
K	10.2"	12.2"



Parts List

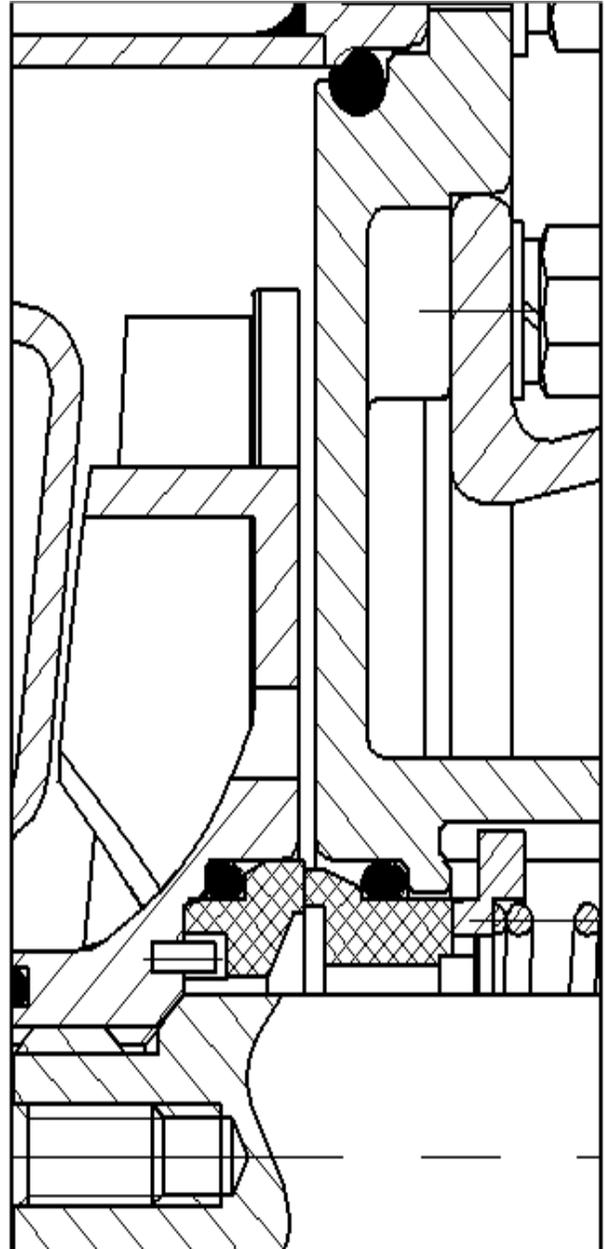
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|------------------------------|----------------------|
| 1. Pump Base | 22. Attachment Plate |
| 2. Pump Back | 23. Sleeve |
| 3. Motor Shaft | 24. Flat Washer |
| 4. Lock Screw | 25. Spring Pad |
| 5. O-Ring | 26. Bolts |
| 6. Impeller | 27. Cap Nuts |
| 7. Pin | 28. Spring Washer |
| 8. Pump Body | 29. Flat Washer |
| 9. O-Ring | 30. Hex Bolts |
| 10. Pump to Base Hex Bolts | 31. O-Rings |
| 11. Flat Washers | 32. Snap Ring |
| 12. Spring Lock Washer | 33. Ring Machine |
| 13. Cap Nuts | 34. Spring |
| 14. Nameplate | 35. Circlip |
| 15. Dog House Cover | 36. Spring Retainer |
| 16. Motor | |
| 17. Feet Bolts | |
| 18. Case Bolts | |
| 19. Motor to Housing Bolts | |
| 20. Pump Base | |
| 21. Pump Base to Motor bolts | |

3. Removing the Mechanical Seal (See Previous Diagram on page 3)

1. Unscrew the cap nuts (13), remove the washers (11,12) and pump body (8).
2. Use a screwdriver to release the coupling bolts (26). With a wrench, unscrew the locking screw (4) in a counterclockwise direction (opposite to impeller) to rotate the impeller (6). If necessary, tap the impeller to free it.
3. Remove the snap ring (32), pump back (2) and the static ring (33) on the impeller.

4. Installation of the Mechanical Seal

1. Lubricate O-ring (31) with food grade grease, put the ring (32) together onto the impeller (6). Note the alignment pin (7) slot machine on the impeller.
2. Lubricate O-ring (31) and then put the snap ring (33) together into the pump back (2).
3. Install the impeller (6) onto the shaft (3). The impeller and pump back gap (2) should be 0.8mm -1.2mm. If the gap is incorrect, loosen the bolts (26) evenly in a circle to adjust.
4. Lubricate the O-ring (5), screw on the locking screw (4) using a screwdriver against the coupling bolts (26) to hold the impeller in place. Tighten the locking screw (4).
5. Mount the pump body (8) using the washer (11, 12) and cap nuts (13).



5. General Maintenance and Repair

Daily:

- Check for Leaks
- Listen to Motor
- Clean Pump Head

Yearly:

- Replace rubber and mechanical seals. Check shaft and replace bearings if necessary

6. Troubleshooting

Symptom	Cause	Solution
Motor overload	Output port is restricted	Larger outlet hose Remove any restriction
	Excessive viscosity	Chose different pump
	Motor speed is too high	Lower VFD Frequency
No pressure	Pump head clogged	Disassemble and clean pump head
	Air in pump	Bleed air from pump
	Impeller or port obstruction	Disassemble and clean pump head
	Inlet Air Leak	Check inlet connections
	Too much resistance	Lower head or increase outlet hose size
	Pump too slow	Increase VFD speed
	Temperature of liquid is too high	Cool product below 110C
Pump vibration, increased noise, cavitation or seal leakage	Inlet above the supply tank	Lower pump
	Inlet connections sucking air	Check all connections from tank to pump
	Pump clogged	Disassemble and clean pump head
	Damaged motor bearings	Replace bearings
Air in outlet hose	Seal leak	Replace pump seal
Seal Leaks	Running dry	Do not operate the pump without priming with liquid
	Abrasive particles in the fluid	Don't make glitter beer
	Crystalline deposits on seal	Rinse well after each use