



BHM PUMPS

Installation and Operation Instructions



1. General information

These instructions are designed to ensure the correct installation and best use of our pump.

By strictly following the instructions for installation and use of the pump, you will avoid the possibility of damaging the pump or any other problems associated with misuse, for which we can accept no responsibility.



The BIANCO Pumps are not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the pump.

2. Technical Data

Operating conditions

- Liquid Temperature: up to 104°C
- Max ambient temperature: 50°C
- Max operating pressure: 8 bar

3. Motor

- 2 pole induction motor
- Three phase: 240V/415V/50Hz
- Single phase: 240V/50Hz
- Single phase with thermal protection
- Insulation class: F
- Protection: IP55

4. Pumped liquid

Liquid pumped must be clean liquid, free from solid or abrasive substances.

5. Application

The pump is used for the transfer of clean liquids, such as water, and for chemicals compatible with Stainless Steel 304 and Viton elastomers up to 104°C.

Pump is used for pressure boosting applications and/or tank water transfer.

6. Storage

All pumps must be stored indoors. The pumps must be kept dry and dust free. Pumps are supplied in original packaging and should be stored in the packaging until the pump is installed

7. Installation



It is advisable that installation be carried out by skilled personnel having the technical qualifications and understanding of the relevant electrical legislation.

Skilled personnel refers to persons who have been authorised by the person in charge of the plant safety who able to recognise and avoid all dangers as a result of their training, experience and instruction and their knowledge of the relevant standards and regulations (IEC364)



White International does not warrant the correct operation of the pumps if they are tampered with or modified, or used in a way outside the pump recommended uses

- The pump must be installed in a well ventilated placed protected from the elements (wind, rain, snow etc)
- Anchoring the pump to the ground or pump cover will help prevent unwanted movement of the pumps due to any vibrations
- Install the pump as close as possible to the water source. The internal diameters of the pipework must not be smaller than the ports on the pump.
- It is advisable to install a foot valve on the suction side (water source side).
- To prevent air pockets (air locking), and if the pump is installed at a higher level than the water source, the suction hose on the pump must continually slope upwards towards the pump.
- Pipe work and pipe connections should be free from leaks.
- Pipe work should be supported separately.

8. Electrical Connection



- Ensure that the wiring diagrams in the terminal board box are followed exactly.
- Electrical installation must be carried out by a skilled and authorised electrician.
- Ensure the Voltage (V) on the pump corresponds to the mains voltage to which the pump is connected
- Single phase pumps are provided with a built in thermal overload and can be connected directly to the mains. Three phase motors must be installed by a licensed electrician and must be suitable protected (such as installation of a circuit breaker) and calibrated at the values shown on the pump data plate

9. Start and Stop Operation of the Pump



Pump must not be operated unless it has been filled completely with fluid. Dry operation will cause the mechanical seal in the pump to fail.

- Fill water in through the pump discharge port to prime the pump for initial use.
- On a three phase pump, turn on the power and check that the motor is spinning correctly. Looking from the fan cover, the fan should be spinning clockwise. If it is spinning in the wrong direction, invert the connections of any two (of the three) wires on the terminal board. Ensure that the pump is disconnected the pump from the mains power.
- Pump should not be started more than 15 times in one hour.
- If the pump remains inactive for a long period of time or if pump is subjected to temperatures less than 0°C, the pump must be completely emptied to prevent possible cracking of the hydraulic components.

10. Pump Maintenance and Spare Parts

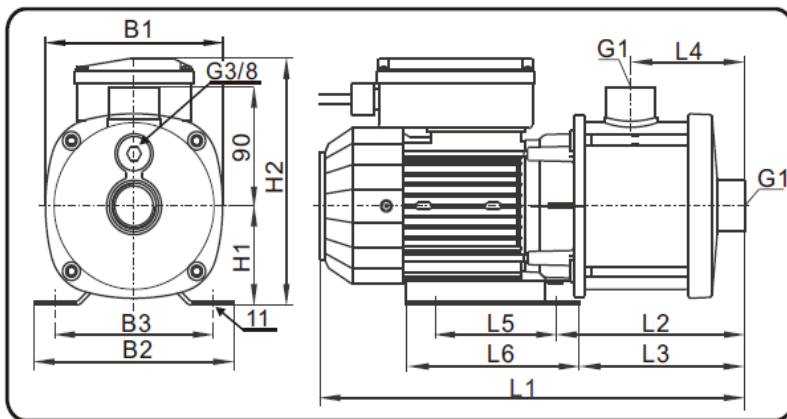
- In normal operation, the pump does not require any specific maintenance. However, if a distinct drop in performance is observed, the pump must only be dismantled by skilled personnel approved by the supplier
- Any modification not authorised beforehand relieves the manufacturer of all responsibility.
- All spare parts used must be approved by the manufacturer so as to guarantee maximum safety and performance for the operation of the pump

11. Troubleshooting

PROBLEM	CHECKS (CAUSES)	SOLUTION
1. The motor does not start and makes no noise.	A. Check the electric connections. B. Check that the motor is live. C. Check the protection fuses.	C. If they are burnt-out, change them. N.B. If the fault is repeated immediately this means that the motor is short circuiting.
2. The motor does not start but makes noise.	A. Ensure that the mains voltage is the same as the value on the plate. B. Ensure that the connections have been made correctly. C. Check that all the phases are present on the terminal board. (3~) D. Look for possible blockages in the pump or motor. E. Check the condition of the capacitor.	B. Correct any errors. C. If not, restore the missing phase. D. Remove the blockage. E. Replace the capacitor.
3. The motor turns with difficulty.	A. Check the voltage which may be insufficient. B. Check whether any moving parts are scraping against fixed parts.	B. Eliminate the cause of the scraping.
4. The pump does not deliver.	A. The pump has not been primed correctly. B. On three-phase motors, check that the direction of rotation is correct. C. The diameter of the intake pipe is insufficient. D. Blocked foot valve.	B. If necessary, invert the connection of two supply wires C. Replace the pipe with one with a larger diameter. D. Clean the foot valve.
5. The pump does not prime.	A. The intake pipe or the foot valve is taking in air. B. The downward slope of the intake pipe favours the formation of air pockets.	A. Eliminate the phenomenon and prime again. B. Correct the inclination of the intake pipe.
6. The pump supplies insufficient flow.	A. Blocked foot valve. B. The impeller is worn or blocked. C. The diameter of the intake pipe is insufficient. D. On three-phase motors, check that the direction of rotation is correct.	A. Clean the foot valve. B. Remove the obstructions or replace the worn parts. C. Replace the pipe with one with a larger diameter. D. If necessary, invert the connection of two supply wires.
7. The pump vibrates and operates noisily.	A. Check that the pump and the pipes are firmly anchored. B. There is cavitation in the pump, that is the demand for water is higher than it is able to pump. C. The pump is running above its plate characteristics.	A. Fix the loose parts more carefully. B. Reduce the intake height or check for load losses. C. It may be useful to limit the flow at delivery.

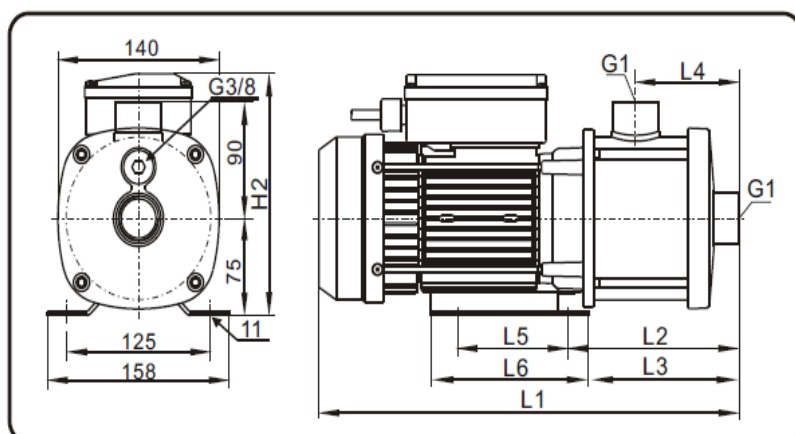
Dimensions and Performance Curves

BHM 1



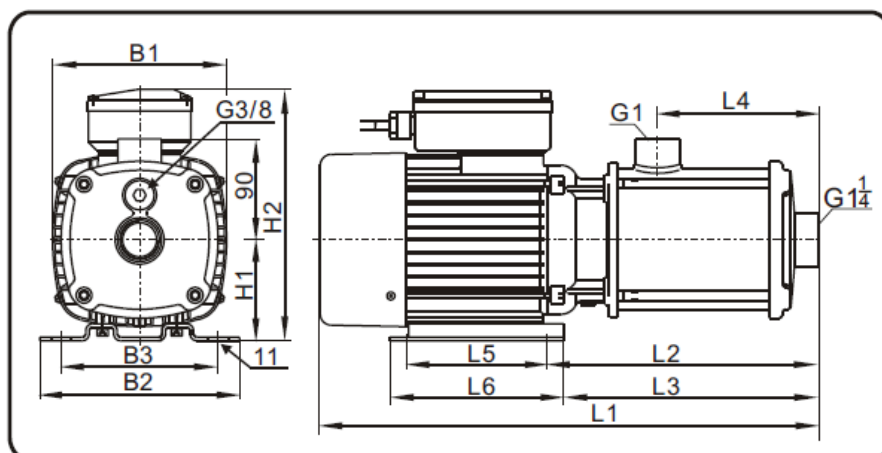
Model	Size (mm)											
	B1	B2	B3	H1	H2		L1	L2	L3	L4	L5	L6
					Single-phase	Three-phase						
BHM1-2(T)	140	158	125	75	187	174	318	131	113	72	96	136
BHM1-3(T)	140	158	125	75	187	174	318	131	113	72	96	136
BHM1-4(T)	140	158	125	75	187	174	336	149	131	90	96	136
BHM1-5(T)	140	158	125	75	187	174	354	167	149	108	96	136
BHM1-6(T)	140	158	125	75	187	174	390	203	185	144	96	136

BHM 3



Model	Size (mm)							
	H2		L1	L2	L3	L4	L5	L6
	Single-phase	Three-phase						
BHM3-2(T)	187	174	318	131	113	72	96	136
BHM3-3(T)	187	174	318	131	113	72	96	136
BHM3-4(T)	187	174	365	149	131	90	96	136
BHM3-5(T)	187	174	383	167	143	108	96	136
BHM3-6(T)	200	188	416	203	179	144	96	155

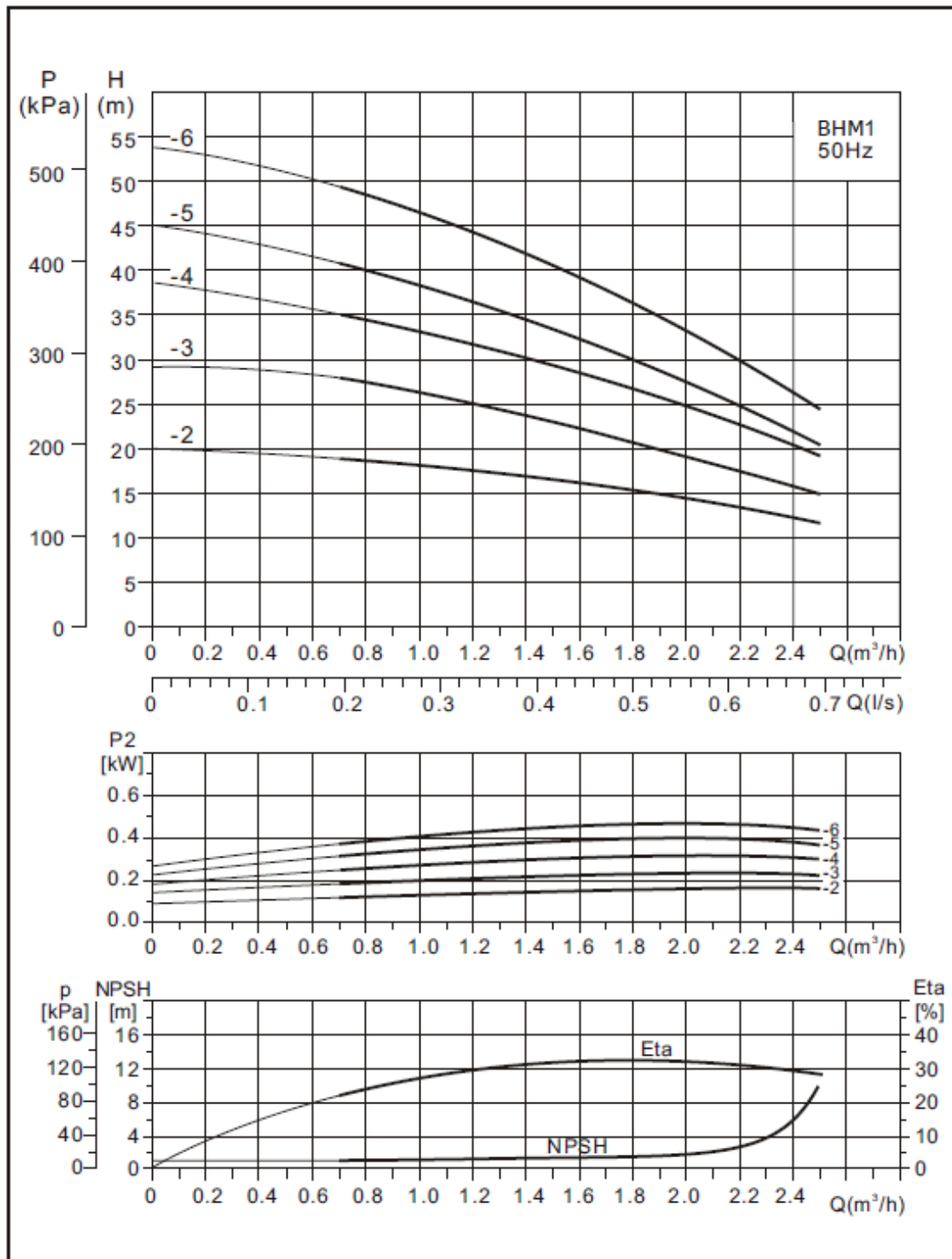
BHM 5



Model	Size (mm)											
	B1	B2	B3	H1	H2		L1	L2	L3	L4	L5	L6
					Single-phase	Three-phase						
BHM5-2(T)	140	158	125	75	187	174	318	131	113	72	96	136
BHM5-3(T)	140	158	125	75	187	174	347	131	113	72	96	136
BHM5-4(T)	140	158	125	75	200	188	362	149	125	90	96	155
BHM5-5(T)	140	158	125	75	200	188	380	167	143	108	96	155
BHM5-6(T)	155	178	140	90	224	211	446	243	228	144	125	155

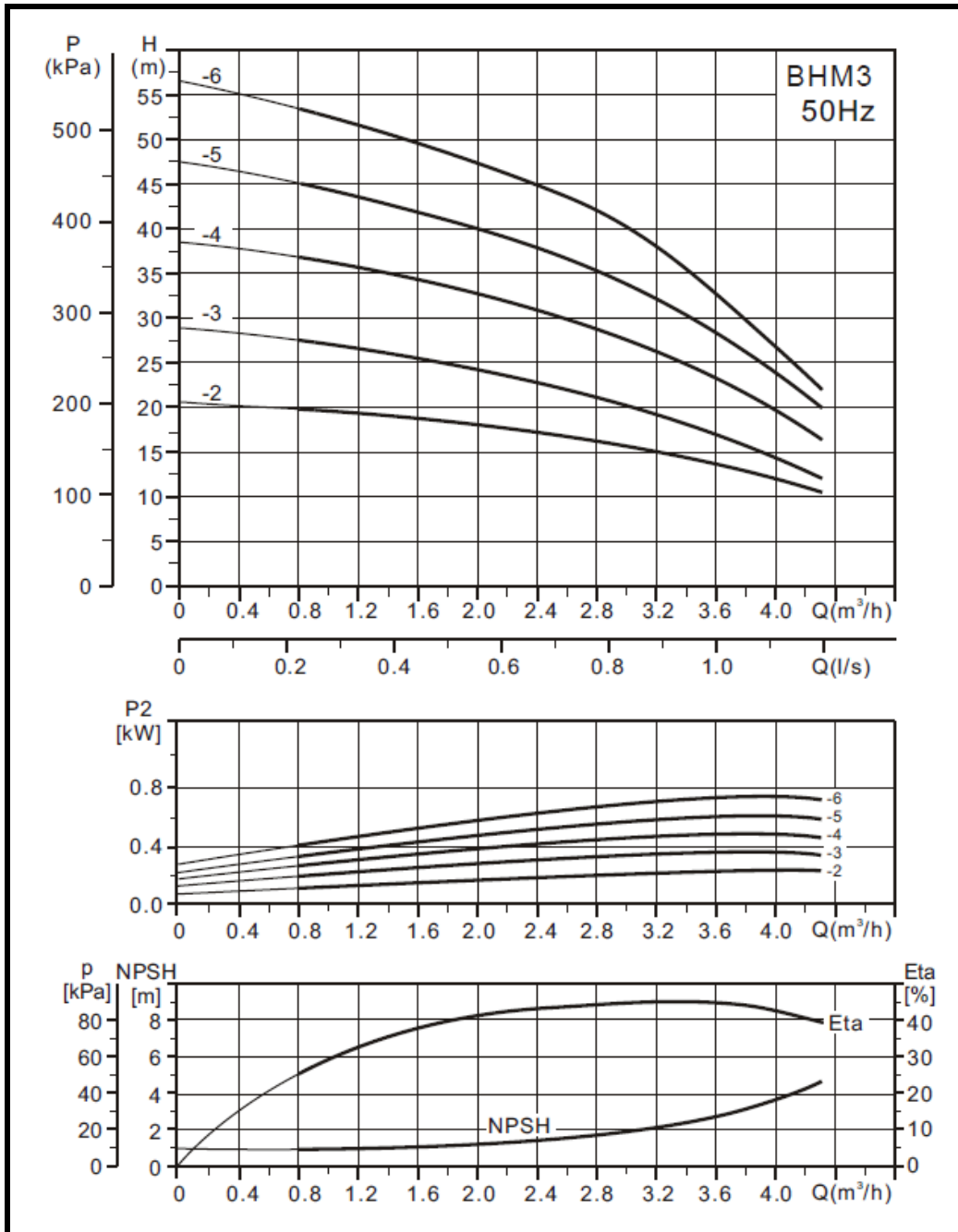
BHM 1

Model	Driving motor P ₂ (kW)	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
BHM1-2(T)	0.25	19.5	19	18.5	18	17.5	17	16	15	14	13	12
BHM1-3(T)	0.25	29	28.5	26	25	24.5	23.5	22	21	19	17	16
BHM1-4(T)	0.37	37	36	35	33	32	30	28	27	26	22	20
BHM1-5(T)	0.37	43	42	41	38	36	34	32	29	27	25	22
BHM1-6(T)	0.37	51	50	49	46	44	42	40	36	32	30	26



BHM 3

Model	Driving motor P ₂ (kW)	0.8	1.2	1.6	2.0	2.4	2.8	3.0	3.2	3.6	4.0
BHM3-2(T)	0.25	19.5	19	18.5	18	17	16.5	15	14.5	13.5	12
BHM3-3(T)	0.37	27	26	25	24	23	22	21	20	17	15
BHM3-4(T)	0.55	36	35	34	32	31	29	28	27	23	20
BHM3-5(T)	0.55	44	43	42	40	38	36	34	33	28.5	24
BHM3-6(T)	0.75	53	51.5	48	47	45	41	38	36	31.5	27



BHM 5

Model	Driving motor P ₂ (kW)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
BHM5-2(T)	0.37	18.5	18	17.5	17	16	15.5	15	13.5	13	11	10
BHM5-3(T)	0.55	29	28.5	28	27	26.5	25.5	25	23	22	20	18
BHM5-4(T)	0.75	38	37	36	34	33.5	32	30	28	27	24	20
BHM5-5(T)	1.0	47	46	45	44	42.5	41	40	36	35	32	27
BHM5-6(T)	1.3	56.5	55	54	53	52.5	51	49	45	44	42	36

