

## BASE CONTROL PACK WITH 7.5M HEAD PUMP AND BLENDING VALVE

**RADICAL**  
UNDERFLOOR HEATING

### DESCRIPTION

Designed to work with manifolds of all types, on 210mm centres. The thermostatic blending valve is the core of the control system. It is used with flow and return manifolds to control the flow temperature of water to the underfloor heating pipework. It mixes the hot water from the boiler and supplies the water back to the UFH pipe at the correct temperature.

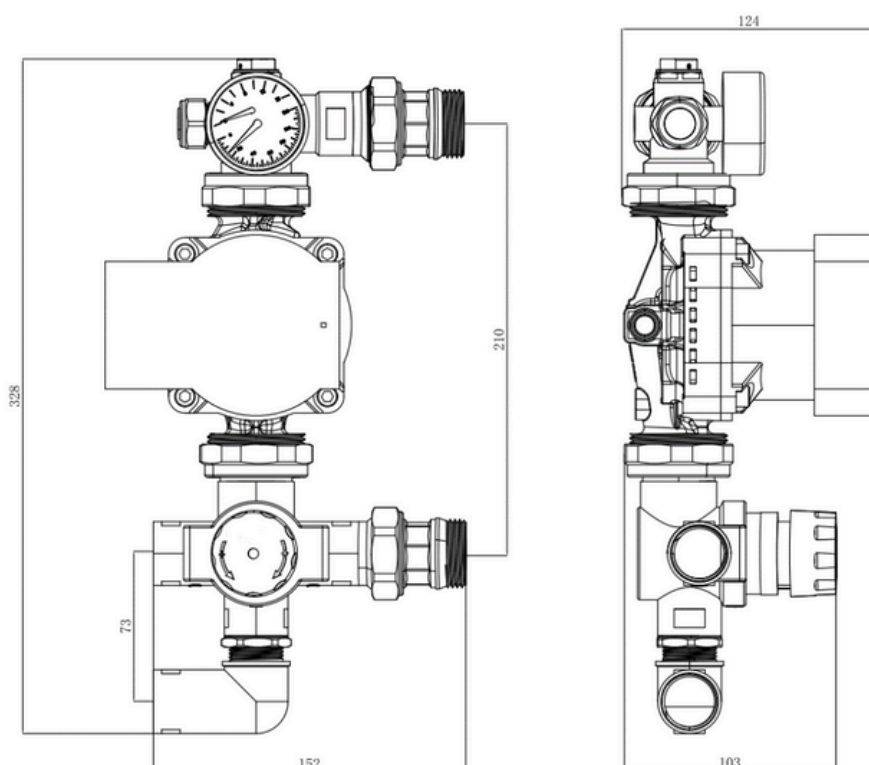
The mixing valve operates at a lower temperature than the radiator system, between 35°C and 60°C depending on the floor construction. The water supply temperature can be adjusted according to the structure of the floor.



#### TECHNICAL DATA

Maximum static pressure	10 bar
Maximum temperature	85°C
Adjustable control range	35°C to 60°C
Factory pre-set	45°C (Control knob is in the adjustable position)

### DIMENSIONS



### KEY DETAILS

- 5 Year Warranty.
- Bolt on thermostatic blending valve providing a quick and simple installation.
- Works with all manifold types.
- Adjustable water temperature according to floor structure.



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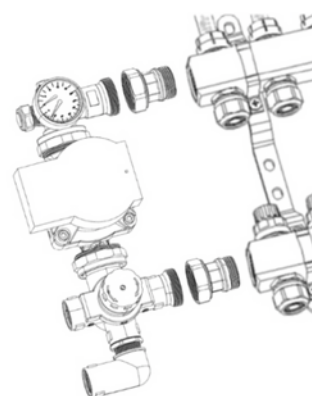
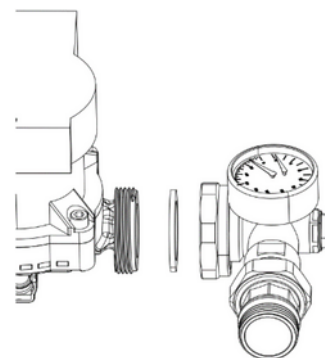
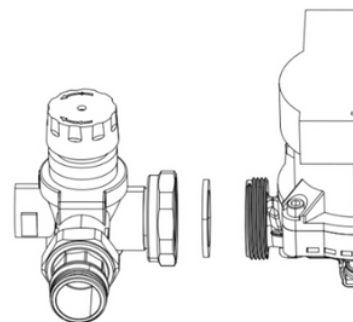
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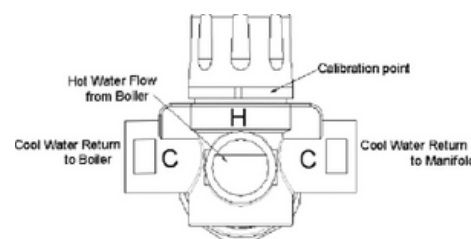
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### INSTALLATION

- Firmly fix the distribution manifolds to the wall leaving enough room beside the manifold to fit the control pack (see dimensions on Page 1). Before beginning the installation of the Thermomix Underfloor Heating Control Pack, identify all of the components in the pack.
- 1.1 Install the flat gasket into the connecting nut of the water-mixing system component and then match the connecting nut with the external thread of the water pump and tighten it. Ensure that the mixing system components, flat gaskets and pumps are in a seal fit state (note the direction arrow on the pump body).
- 1.2 Install the gasket into the connecting nut of the water supply system component, and then match the connecting nut with the external thread of the water pump and tighten it. Ensure that water supply system components, gaskets and pumps are in sealed fit.
- 1.3 Swivel out the male unions of the mixing system and supply system, rotate its 1" male threads into the main bar or 1" female threads of other control unit, use the cone ring or other sealing winding belt of the tubes to tighten and seal, then re-rotate the free nut of the union into the mixing system and supply system correctly to avoiding leaking.



NOTE: If the primary circuit serving the underfloor heating is not fitted with an automatic bypass valve, it is recommended that one is installed across the flow and return pipes to improve system efficiency.



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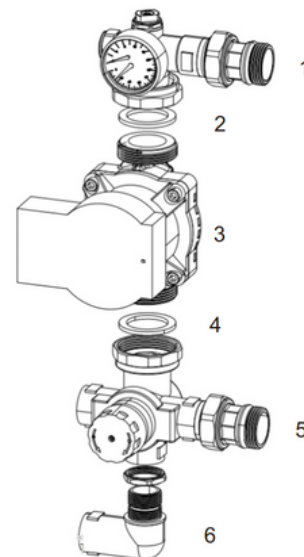
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### COMPONENTS

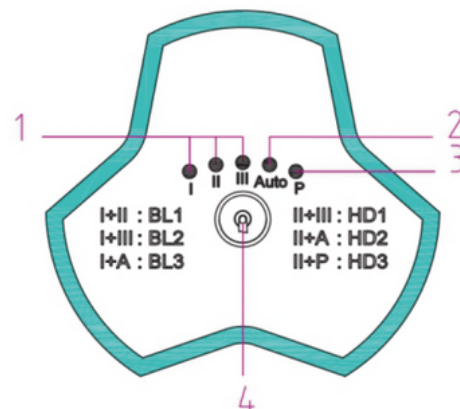
PLEASE CHECK CONTENTS OF PACK BEFORE  
BEGINNING INSTALLATION.

1. Water supply system components (1½"F\*1 M)
2. Flat gasket (45\*33\*3)
3. Bastion Pump(6/7.5 Meter)
4. Flat gasket (45\*33\*3)
5. Mixed water system components (1½"F x 1"M) x  
3/4"F)
6. Connection elbow (3/4"F\*3/4M)



### PUMP CONTROL MODES AND FUNCTIONS

1. The pump I, II, III gear display.
2. The pump automatic gearshift display (AUTO).
3. The pump PWM gear display.
4. The pump gear shifting button.



Special Note:

1. If I and II display at the same time, means BL1. If I and III display at the same time, means BL2. If I and Auto display at the same time means BL3.
2. If II and II display at the same time, means HD1. If II and Auto display at the same time, means HD2. If II and P display at the same time means HD3.



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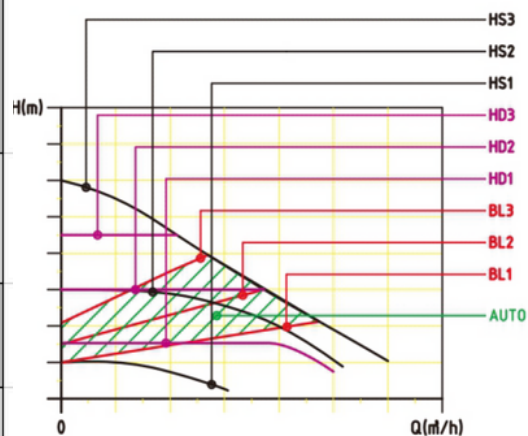


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# BASE CONTROL PACK WITH 7.5M HEAD PUMP AND BLENDING VALVE

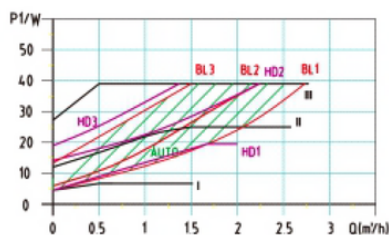
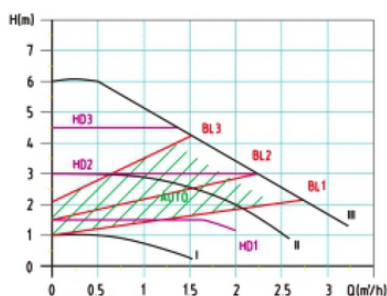
## RELATIONSHIP BETWEEN PUMP SETTINGS AND ITS PERFORMANCE

SETTING	PUMP CHARACTERISTICS CURVE	FUNCTIONS
AUTO FACTORY SETTINGS	Highest to lowest proportional pressure curve	"Auto adaptation" function will automatically control the pump performance within the specified range. Adjust the performance of the pump according to the size of system; Adjust the performance of the pump according to the load change of a period of time. In the "Auto adaptation" mode, the pump is set to proportional pressure control mode.
BL (1-3)	Proportional Pressure curve	The pump working point will move up and down on the proportional pressure curve according to the flow needs of system when the flow demand reduces, the pump pressure supply will drop while when the flow demand increase it will rise.
HD (1-3)	Constant pressure curve	The pump working point will move back and forth on the constant pressure curve according to the flow needs of system. The pressure supply of pump remains constant, having nothing to do with the flow demand.
HS (1-3)	Constant speed curve	Run on the constant curve at a constant speed. In speed HS (1-3) mode, the pump is set to run on the maximum curve under all working conditions. Set the pump to HS3 mode in a short time, then gas in the pump will be vented quickly.

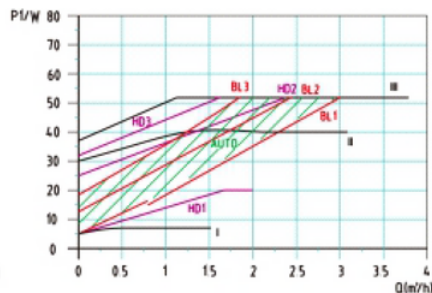
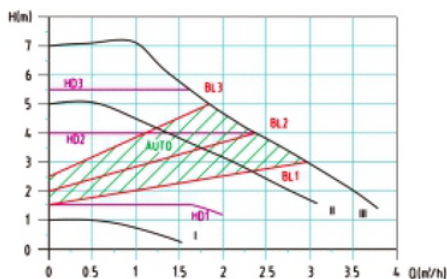


## PERFORMANCE CURVE

6m Head



7.5m Head



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## BASE CONTROL PACK WITH 7.5M HEAD PUMP AND BLENDING VALVE

### TECHNICAL DATA

SUPPLY VOLTAGE	220~240V, 50/60Hz	
MOTOR PROTECTION	Pump does not need external protection	
PROTECTION LEVE	IP44	
INSULATION CLASS	H	
RELATIVE HUMIDITY (RH)	Max 95%	
SYSTEM LOAD BEARING	1.0 Mpa	
SUCTION INLET PRESSURE	LIQUID TEMPERATURE	MINIMUM INLET PRESSURE
	≤ +75°C	0.005 Mpa
	≤ +90°C	0.028 MPa
	≤ +110°C	0.100 MPa
EMC STANDARD	EN61000-6-1 and EN61000-6-3	
SOUND PRESSURE LEVEL	Lower than 42dB(A)	
AMBIENT TEMPERATURE	0~+70°C	
TEMPERATURE GRADE	TF110	
SURFACE TEMPERATURE	Max. surface temperature should not exceed +125°C	
LIQUID TEMPERATURE	+2~+110°C	

TO PREVENT THE CONTROL BOX AND STATOR FROM CONDENSATING WATER, THE TEMPERATURE OF THE PUMP CONVEYING LIQUID MUST ALWAYS BE HIGHER THAN THE AMBIENT TEMPERATURE

AMBIENT TEMPERATURE (°C)	LIQUID TEMPERATURE	
	MIN. (°C)	MAX. (°C)
0	2	110
10	10	110
20	20	110
30	30	110
35	35	90
40	40	70

In domestic hot water, it is recommended to keep the temperature of water below 65°C



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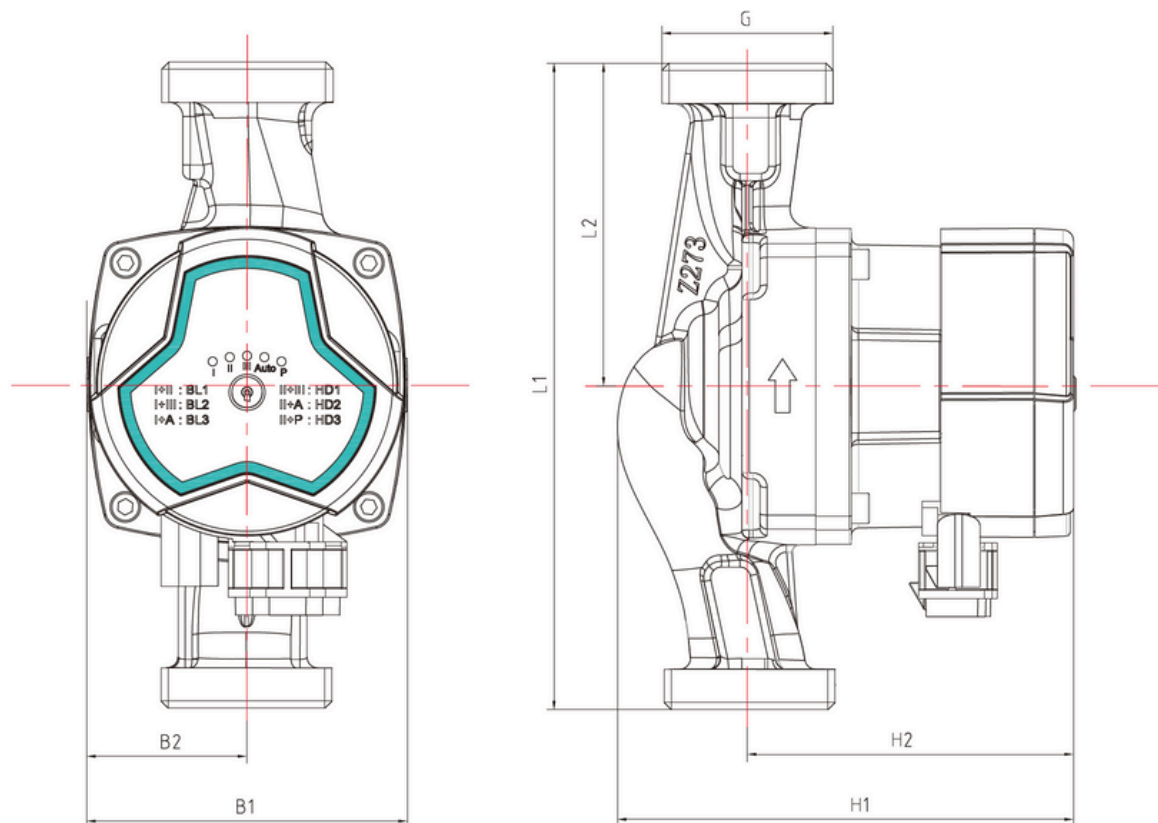
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## INSTALLATION DIMENTIONS



POWER (W)	MODEL	MAX FLOW (m³/h)	MAX HEAD (m)	AMPS A	V/Hz 220-240V 50/60Hz	MATERIAL OF PUMP BODY				DIMENTION (mm)						
						CAST IRON	PLASTIC	COPPER	STAINLESS STEEL	L1	L2	B1	B2	H1	H2	G
39	6m head	3.2	6	0.35	•	•				65	130	45	90	90	127	11/2"
					•	•		•	•	90	180	45	90	90	127	
60	7.5m head	3.4	7.5	0.5	•	•				65	130	45	90	90	127	11/2"
					•	•		•	•	90	180	45	90	90	127	



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