



BetaLimpet

ELECTRICAL HEATER

SLAVE HEATER THAT PROVIDES ADDITIONAL ACCURATE TEMPERATURE CONTROL FOR INDUSTRIAL EQUIPMENT, SUCH AS PUMPS, VALVES AND METERS

The patented **Limpet** heating system consists of a range of compact, intelligent, microprocessor-controlled and waterproof heating modules that can be fitted on a wide range of equipment to provide heat for industrial processes or frost protection. The **BetaLimpet™** is a slave heating unit that is controlled by a programmable **AlphaLimpet™** and is attached to the equipment using a profiled aluminium adaptor block that transmits the heat into the workpiece body, as well as acting as a heat storage device. The system is designed to help ensure that in the event that a liquid that requires heating stops flowing through the equipment, it does not become too viscous and block the flow. The **BetaLimpet** can be supplied in either 110Vac or 230Vac versions and can deliver up to 120W.

Applications

- Process industries
- Food & beverage
- Pharmaceutical
- Chemical
- Cosmetics
- Frost protection

Advantages

- No control panel required
- Accurate temperature control
- Compact design
- IP67 rating
- Low power consumption

BETALIMPET FEATURES

The main features of the patented **Limpet** heating system are as follows:

Operation:

- Adjustable temperature range up to 80°C.
- 110 / 230 Volts ac; up to 120W power output.
- IP67 flexible conduit or Phoenix connectors for power in.
- An insulated jacket is essential for maximum performance and even temperature distribution.

Temperature Control:

- The **BetaLimpet** is a slave unit controlled by a programmable **AlphaLimpet** (see separate data sheet).
- The unit can either operate on the same control loop as the AlphaLimpet or can have an internal NTC so that it can sense the local temperature, send this to the controlling AlphaLimpet, which will then switch it on and off using its second control loop.

Robust Construction:

- The product is sealed to ensure that all the connections and components are waterproof.
- Robust IP67-rated aluminium case.

Heat Transfer through Profiled Adaptor Block:

- An aluminium adaptor block pre-profiled to fit onto the equipment (user to specify equipment diameter or profile).
- T-nuts are used to secure the BetaLimpet onto the adaptor block and stainless steel straps are used to secure the adaptor block to the equipment body. See mounting details on the next page.

Available in two different configurations:

- The BetaLimpet is available in three different connection options: conduit, Phoenix or gland. The standard lengths are 75cm, 50cm and 100cm respectively. Conduit connections are provided with a 1m length of mains cable.
- Further details of the configurations with the Alpha Limpet are on the next page.

TECHNICAL INFORMATION

- Dimensions: 176mm long (excluding connectors) x 63mm wide x 52mm high.
- Voltage: 110Vac or 230Vac.
- Power rating: up to 120W.
- Temperature range: 0°C to 120°C.
- Ambient: -30°C to +50°C.
- Temperature control: $\pm 0.8^\circ\text{C}$.
- Colour: Red.

ORDERING INFORMATION

BetaLimpet

Model	
BL	
Series	
1	
3	
Code	Voltage
11	110 Vac
23	230 Vac
Connections	
Code	Type
C	Conduit: standard 75cm
P	Phoenix: standard 50cm
G	Gland: standard 100cm
Internal sensor	
Code	Type
0	None
S	Control Loop 2
BL	3 23 C 0 Example

Cable Connections (non-standard)

Code	Type
C	Conduit: standard 75cm *
P	Phoenix: standard 50cm
C non-standard length (cm)	
	100
	125
	150
	175
	200
P Extra-long (cm)	
	150
C	100 Example

* For conduit the mains cable will be 25cm longer

Adaptor Blocks

Model	
AB	
Pipe Diameter	
00	Flat
50	mm
76	
80	
100	
120	
Other	Custom - Specify diameter in mm
Length	Type
250	Standard in mm
Other	Custom - Specify diameter in mm
AB	80 250 Example

BETALIMPET CONFIGURATIONS

The BetaLimpet is currently available in two different configurations as follows:

Controlled by a Series 3 AlphaLimpet:

- This has an additional power output which can be useful for slaving extra heat to other areas.
- The power to the BetaLimpet is not constant but mimics the power delivered to the AlphaLimpet's own heater. This type of secondary heater is called a Slave Unit.
- A typical arrangement with a Series 3 AlphaLimpet driving a BetaLimpet slave is shown in Figure 1.

Controlled by a Series 7 AlphaLimpet:

- The Series 7 has full twin-heating ability (internal heater with internal sensor and external heater with external sensor).
- This application is for special circumstances and provides two independent control loops, which can both be set to the same temperature, or if desired, to two different temperature set-points.

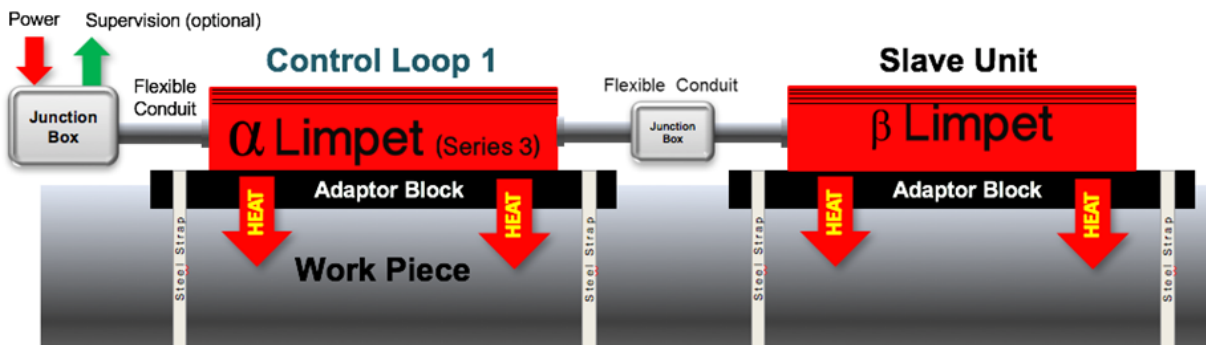


Figure 1—Typical Series 3 AlphaLimpet application with “slave” BetaLimpet

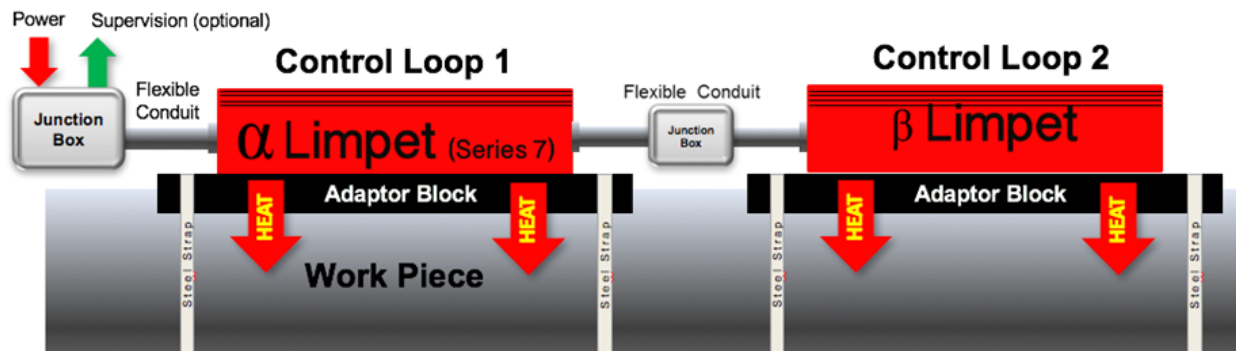


Figure 2—Typical Series 7 AlphaLimpet application with second control loop in a BetaLimpet

MOUNTING DETAILS

Tee nuts (supplied with the product) are used to secure the AlphaLimpet to an adaptor block or workpiece.

The positions of the M5 tapped holes are shown here.

