

Warranty: TTB Range

Model	Warranty Period		Working Temperature and Flow Rates
TTB Boiler Range	Heat Exchanger	10 Years *(Sliding Scale)	Working temperature must be no greater than 90°C
	All other components	2 Years	

Components Warranty

Our warranty is to provide a replacement component in exchange for the return of the defective component and is subject to an audit upon receipt of the faulty component. Replacement components must be paid for in full prior to dispatch unless we agree otherwise. The warranty does not include any labour costs or carriage of the returned component.

Heat Exchanger Warranty

The TTB low water content stainless steel heat exchanger has a manufacturing defect warranty. This provides coverage to the end user via Lochinvar that if the heat exchanger becomes unserviceable due to a material or workmanship defect it will be replaced. Blockages of the heat exchanger due to the ingress of debris from the heating system or lime scale from the system water are not defects in the material or workmanship of the heat exchanger and are therefore not covered by the warranty. With this in mind, it is of utmost importance when installing the boiler that adequate measures are taken to prevent blockages of the heat exchanger.

Debris can be pre-existing in the system in the form of sludge or can be created throughout the operational life of the heating system due to the reaction of oxygen micro-bubbles with steel and iron components in the heating system which can create rust. Prior to installation of the boiler, the heating system should be thoroughly cleaned and flushed in accordance with BS7593:2006 and a means of filtering should be installed. The filtering should be in the form of a dirt separator or strainer which should be installed on the system return side of the low-velocity header or bypass. Further protection should be given to the system by removing the oxygen micro-bubbles. Chemical inhibitors can be used to remove the oxygen but regular monitoring and correcting of the dosing levels must be carried out to prevent fresh water make-up diluting the inhibitor to a level where it is ineffective. Alternatively, a micro-bubble air separator can be used to capture and automatically expel the air from the system.

Scale can deposit in the heat exchanger due to the precipitation of calcium carbonate – a naturally occurring mineral contained in fresh water – due to the heat from the combustion process. The continual introduction of fresh make-up water to the system introduces additional scale which can deposit in the heat exchanger eventually leading to a blockage of one or more heat exchanger coils. Care should be taken to ensure that the pH value of the water is between 7.5 and 9.5, the water hardness is in the range of 50 – 150 ppm and that the aluminium content of the TDS (Total Dissolved Solids) does not exceed 8.5 ppm.

Any fault arising due to inadequate water quality or insufficient cleansing of the heating system is not covered by the warranty.

***The sliding scale warranty on the heat exchanger is as follows: -**

0 to 2 years	100% warranty
2+ to 4 years	heat exchanger price discounted by 80%
4+ to 6 years	heat exchanger price discounted by 60%
6+ to 8 years	heat exchanger price discounted by 40%
8+ to 10 years	heat exchanger price discounted by 20%

Warranty Procedures

If a claim is to be made under the terms of our warranty, the original purchaser of the appliance should place a purchase order for the required component and obtain a Sales Return Order (SRO) number for the return of the defective component.

To process any warranty claim, we require the following information:

- **Appliance model number**
- **Appliance serial number**
- **Date and proof of purchase**
- **Brief description of fault**

Upon receipt of the defective component, it will be tested and if the component is found to be faulty, a credit will be raised against the relevant invoice.

The warranty period starts from the date of delivery of the original appliance unless the equipment is commissioned by Lochinvar, in which case the warranty period will begin from the completion date of the initial commissioning. Warranties are subject to the equipment being installed and maintained in accordance with the relevant Installation Commissioning and Maintenance Instructions and do not cover failures due to deliberate misuse, malicious damage, neglect, unauthorised alterations or repairs, accidental damage or third party damage. The warranty is held by the company/organisation that has placed the purchase order with us and is only valid if the appliance supplied has been paid for in full.

Lochinvar total liability is limited to the value of the warranted appliance or component and it shall not be responsible for any loss of income, profits (actual or anticipated), contracts or for any other business related loss, indirect or consequential losses arising in connection with the warranted appliance or component.

We retain the exclusive right to replace the product or offer a refund (subject to the *sliding scale) at our sole discretion. Such remedy shall be your sole and exclusive remedy for any breach of warranty.

Lochinvar standard terms and conditions apply to this warranty and in the event of any inconsistency between the two, the wording in this warranty shall prevail.

Lochinvar Limited
 7 Lombard Way
 The MXL Centre
 Banbury
 OX16 4TJ
 Tel: 01295 269981
 Fax: 01295 271640
 Email: info@lochinvar.ltd.uk
 Website: www.lochinvar.ltd.uk