



## IMPORTANT INFORMATION ABOUT WARRANTY COVERAGE

- NTI offers a robust warranty to protect users against manufacturing defects.
- Not all failures are due to manufacturing defects.
- It is the installer's responsibility to understand the heating system and provide sufficient protection from conditions that can cause premature failure of components.
- It is the owner's responsibility to ensure the system and boiler maintenance are scheduled regularly.
- Build-up of material inside the heat exchanger is not a manufacturer's defect and is not covered by warranty.

Scaled TFTN heat exchanger.



### STEPS TO PROTECT AGAINST HEAT EXCHANGER FAILURE

The **most effective method** of protecting the boiler heat exchanger against failure is to isolate the boiler(s) from the heating system using a heat exchanger. If you are unsure about the quality of the system water, install a plate heat exchanger.

Follow the Steps below when installing a boiler in new or old systems:

- Test system feed water and do not use water that falls outside of the guidelines set in the installation manual.
- Ensure that there is adequate air elimination in the system.
- Treat all boiler feed water as though it is hard water.
- Use chemical inhibitors on every job.
- Flush old and new systems with fresh clean water before commissioning a new boiler.
- Use magnetic dirt separators on systems containing iron.
- Use Dirt Separators to remove debris from system water.

- Where possible, treat boiler feed water.
- Repair system leaks immediately to prevent oxygen (air) and untreated water from entering the system.

Proper equipment must be used to test the water. Digital meters are highly recommended because they can be calibrated, and the results are not open to interpretation. The use of test strips is not recommended because they degrade over time and can be influenced by many factors.

Filters and magnetic separators are ineffective when not use and maintained properly. Water filters remove larger particles and to remain effective they must be cleaned periodically. Water filters will not remove dissolved minerals, such as magnetite, calcium, and lime, which are common scale forming minerals. Magnetic separation is effective at removing magnetite, a brownish black deposit, but will not remove hematite (red rust) from water. If system water is a brownish red color the system must be flushed and cleaned immediately and a heat exchanger isolating the boiler is highly recommended. Magnetic filters will require regular cleaning during the first month of operation. As the magnetic filter removes magnetite from the system it will “plug up” reducing its ability to remove excess material. Excess magnetite will need to be flushed from the filter on a regular interval until the collection of new material is barely noticeable.

When glycol is used, the system pH should be checked periodically. Glycol has a life expectancy of up to 10 years but may fail prematurely. Failing glycol will cause a drop in pH leading to excess corrosion.