



**Phoenix<sup>TM</sup>**  
Phoenix Temperature Measurement

# TS57 Series

Thermal barrier



Datasheet

*Where experience counts :*





## TS57 Thermal Barriers

TS57 thermal barriers are engineered to meet the specific process and product monitoring requirements of individual customers. These thermal barriers are cylindrical in shape and are designed to fit inside a rotating steel tube, or attached to an aluminium log or billet.

The thermal barrier uses evaporative water technology to maintain a safe operating temperature for the data logger. Protected by a high temperature alloy steel outer case, microporous insulation layers surround a water jacket in which the data logger is housed. The thermal barrier design allows the data logger and thermocouples to rotate together with the product. The design permits free venting of the barrier without water spillage, prevents thermocouple 'twisting', and ensures the data logger is kept at a safe working temperature throughout its passage through the furnace. The ratio of insulation to the volume of water is critical to optimising the thermal barrier performance within the limitations of the heat treatment process.

Typical processes include homogenising aluminium logs, and annealing/normalising of steel tubes in walking beam furnaces.



Standard TS57 range performance:

Type	TS57-150-1	TS57-230-1
932°F (500°C) / h		14.5
1112°F (600°C) / h	2.5	11.5
1472°F (800°C) / h	1.6	
1652°F (900°C) / h	1.4	
1742°F (950°C) / h	1.3	
1832°F (1000°C) / h	1.2	
Diameter / " mm	5.9 150	9.1 230
Length / " mm	39.4 1000	39.4 1000
Weight / lb kg	28.9 / 37.3 13.1 / 16.9	49.2 / 62.8 22.3 / 28.5

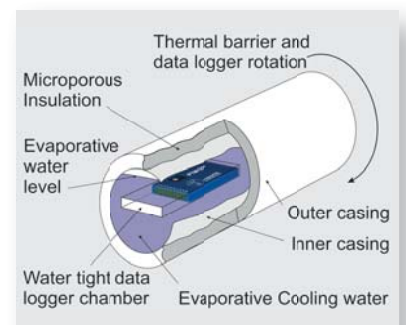


High temperature materials and highest quality workmanship!



Integrated slot along length of thermal barrier for thermocouple protection within boundaries of the product

Evaporation technology combined with high efficiency insulation for ultimate size / performance ratio.



Need a thermal barrier to suit your application? Tell us your requirements and if it's possible we'll design and manufacture it for you! We are constantly developing and looking forward to any new challenge.

**Phoenix<sup>TM</sup> LLC**  
4600 140th Avenue North,  
Suite 180,  
Clearwater  
FL 33762 USA  
Tel.: +1 (727) 608 4314



[www.phoenixtm.com](http://www.phoenixtm.com)  
[info@phoenixtm.com](mailto:info@phoenixtm.com)