

# Topaz GEM™ Trap

## GEM Steam Trap Technical Datasheet



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### The GEM Trap

The GEM Trap is a low maintenance steam trap with no moving parts; it will not wear and its performance is guaranteed\* on saturated steam for 10 years. The unique orifice and multistaged throat technology utilises the expansion of the flash steam created by the pressure differential across the trap to control the flow of condensate.

Operating over variable loads, the GEM Trap will suit all industrial applications. The single piece bodies are manufactured from wear and corrosion resistant grades of stainless steel.

The GEM Trap is the most energy efficient steam trap on the market and is supplied with a full sizing and commissioning service.

### THE TOPAZ GEM TRAP

Topaz Traps are designed for hygienic clean steam applications. They have a crevice free body and no moving parts so they are less susceptible to bacterial growth than an equivalent mechanical trap.

- ▶ Designed for hygienic and clean steam applications
- ▶ FDA guideline compliant
- ▶ '316' stainless steel to BS 970
- ▶ Crevice free body
- ▶ All Topaz Traps are degreased before packing and dispatch

#### Suitable Applications

- ▶ Hygienic and clean steam applications
- ▶ Suitable for low condensate duty and process applications
- ▶ Dockweiler and Tri-Clover® fittings

#### Operating Parameters

- ▶ TMA 200°C (392°F)
- ▶ PMA 10 barg (145 psig)

Maximum temperatures and pressures are subject to the gaskets used in the fittings.

#### Available Spares

- ▶ No spares required

#### Sizes and Connection Types Available

	Dockweiler Clamp	Tri-Clover® Clamp
DN15 / ½"	✓	✓
DN20 / ¾"	✓	✓
DN25 / 1"	✓	✓



### Key GEM Trap Benefits

#### Quality, Efficiency, Reliability and Service

##### Permanent Energy Savings

- ▶ Typical payback < 2 years
- ▶ Inherently more efficient than mechanical steam traps

##### 10 Year Performance Guarantee\*

- ▶ No moving parts to wear or fail
- ▶ No inserts – no leak path

##### Reduced Maintenance

- ▶ No on-going trap surveys
- ▶ Minimal annual maintenance

##### Improved Process Control

- ▶ No pressurisation of condensate return system
- ▶ Elimination of steam trap related waterhammer

##### Performs Across Industrial Variable Loads

- ▶ Each trap supplied with full sizing and commissioning service

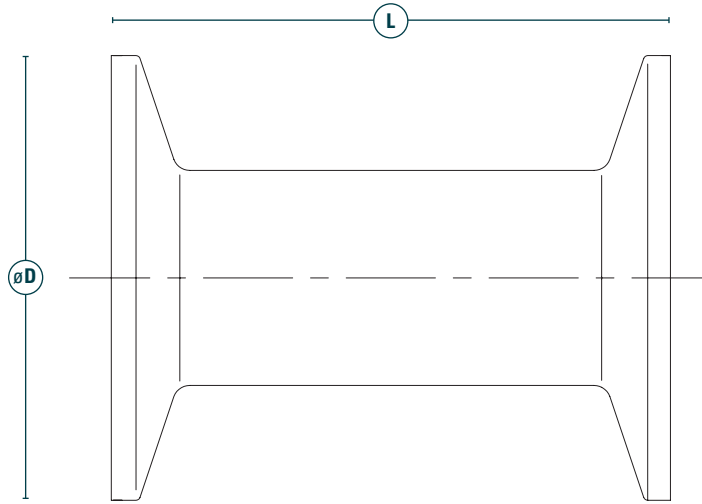
\* Reduced guarantee offered for superheated steam

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### Product Diagram



### Dimensions and Weights

	Fittings	ø D	Length (L)	Weight
T15 (DN15 / ½")	½" clamp pipe	25mm	55mm	0.1kg
T20 (DN20 / ¾")	½" clamp pipe	25mm	55mm	0.1kg
T25 (DN25 / 1")	1" clamp pipe	52mm	65mm	0.3kg

### Materials

Part	Material
Body	Stainless Steel ASTM A479 316L / BS EN 10088-3 1.4401

### Surface Finish

- ▶ Smooth internal surfaces to 0.8µm (micron Ra) (Equivalent to 180 grit)

An inspection report can be provided with each trap if requested at time of order. Surface finish can be further improved by electropolishing. Electropolishing will incur additional cost, quotations supplied on request.

- ▶ Full product traceability is part of our Quality Assurance procedure
- ▶ Type 3.1 material certification to BS EN 10204:2004
- ▶ Thermal Energy reserve the right to amend material specification

*All certification/inspection requirements must be stated at time of order placement.*

### FOR FURTHER INFORMATION

For further information on the full GEM Trap range contact us at [enq@thermalenergy.com](mailto:enq@thermalenergy.com) or visit [www.thermalenergy.com](http://www.thermalenergy.com)



An Innovative Technology Company Providing Custom Energy and Emission Reduction Solutions

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