Ruby Filter GEM™ Trap

GEM Steam Trap Technical Datasheet

EUK | Rev 8 | Jun 2021

The GEM Trap

The GEM Trap is a low maintenance steam trap with no moving parts; it will not wear and is performance 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 RUBY FILTER GEM TRAP

Ruby Filter Traps contain GEM's inverted cone technology and an integral thimble filter to further protect the orifice from debris.

- Suitable for all standard PN / ASME flanged applications
- Operates at high pressures
- Installed between two flanges any face-to-face length can be accommodated with a spool piece

Suitable Applications

- High pressure applications
- Low condensate duty applications
- Line drainage / trace heating

Rating

- Ruby rating is limited by the specification of the flange selected. Trap rated as follows:

	PMA	TMA
DN15 / ½" to DN150 / 6"	100 barg (1450 psig)	500°C (940°F)

Maximum temperatures and pressures are subject to the gaskets used in the fittings. Higher pressure ratings available in our RTJ Ruby Trap design.

Ancillary Parts

- Insulation Jacket
- Optional 'Y' Strainer

Available Spares

- Thimble Filter
- Circlip

Sizes & Connection Types Available

	PN Flanged	ASME Flanged	RTJ
DN15 / ½"	✓	✓	On request
DN20 / ¾"	✓	✓	On request
DN25 / 1"	✓	✓	On request

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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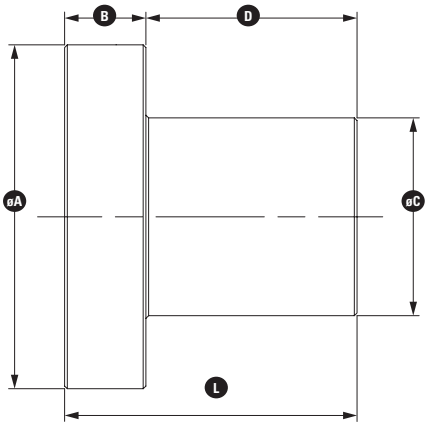
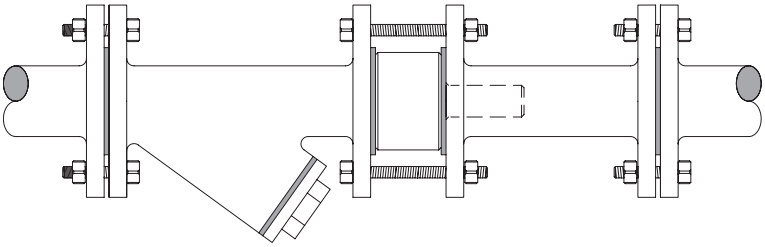
Product Diagram



Installation Layout



Dimensions & Weights

	ø A	B (Face to Face)	ø C	D	L (Length)	Weight
RF15 (DN15 / ½")	40mm	26mm	13mm	31mm	57mm	0.22kg
RF20 (DN20 / ¾")	50mm	23mm	16mm	42mm	65mm	0.35kg
RF25 (DN25 / 1")	60mm	23mm	21mm	56mm	78mm	0.53kg

Suitable Pipe Schedules

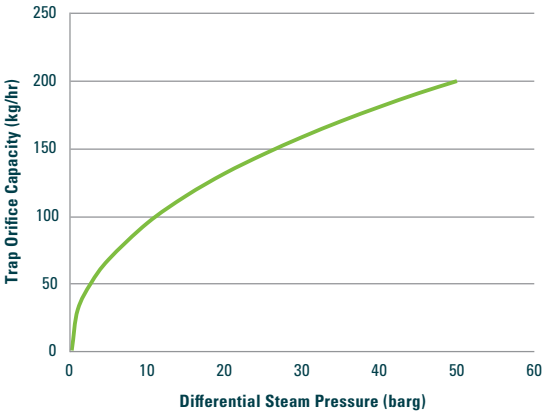
- Maximum pipe thickness Schedule 80
- Please contact the manufacturer for assistance with thicker schedules

Materials

Part	Material
Trap Body	EN 10088-3 1.4305 / ASTM A582 303
Filter Base & Mesh	304 Stainless Steel ring base / 316 Stainless Steel 50 Mesh (300 µm)
Circlip	EN 10088-3 1.4122

- Full product traceability is part of our Quality Assurance procedure
- Type 3.1 material certification to EN 10204:2004
- Thermal Energy reserve the right to amend material specification
- Other materials available on request

Discharge Capacity



Maximum discharge capacity for Ruby Filter Trap at saturation temperature.*

The GEM Trap will have 2-3 times the capacity at start-up.

* Actual capacity is dependent on internal sizing configuration.

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 **technical@thermalenergy.com** or visit **www.thermalenergy.com**