

Diamond GEM™ Trap

Technical Datasheet



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 DIAMOND GEM TRAP

The Diamond Trap is suitable for process applications and is designed to fit into both standard and non-standard face to face flanged connections.

- ▶ Suitable for all standard PN / ASME flanged fittings
- ▶ Supplied with industry standard or custom face-to-face length
- ▶ Suitable for high pressure process applications

Rating

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

	PMA	TMA
DN15 / ½" to DN25 / 1"	50 barg (730 psig)	400°C (750°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 Drainage Valve

Available Spares

- ▶ SS reinforced graphite Y-Strainer

Gaskets

- ▶ Quality SS reinforced Trap body Gasket
- ▶ SS reinforced strainer Basket

	PN16/25/40	ANSI 150/300
DN15 / ½"	✓	✓
DN20 / ¾"	✓	✓
DN25 / 1"	✓	✓



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

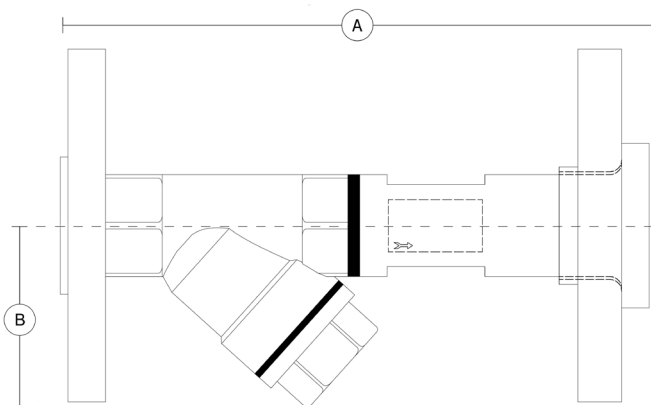
* Reduced guarantee offered for superheated steam

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Product Diagram



Dimensions & Weights

Dimensions (mm)	A (Face to Face)			B (Maximum Radial Dimension)			Weight of Assembled Trap	
	PN16/25/40	ANSI 150	ANSI 300	PN16/25/40	ANSI 150	ANSI 300	Minimum	Maximum
DN15 / 1/2"	150	150	150	51	51	51	1.5kg	2.0kg
DN20 / 3/4"	150	150	150	59	59	59	2.2kg	3.2kg
DN25 / 1"	160	160	160	66	66	66	3.3kg	4.5kg

Materials

Part	Material
Trap Body	EN 10088-3 1.4305 / ASTM A582 303
Flange	ASTM A182 F316L / EN10222-5 1.4404
Strainer Body	Cast Stainless Steel ASTM A351 CF8M
Strainer Cap	Cast Stainless Steel ASTM A351 CF8M
Gasket DN15 to DN25	Kammprofile 316 Stainless Steel Core / Graphite-faced
Strainer Basket DN15 to DN25	Reinforced 316 Stainless Steel 40 Mesh
Trap Gasket	Kammprofile 316 Stainless Steel Core / Graphite-faced
Lapped Flange	ASTM A182 F316L / EN10222-5 1.4404

- ▶ 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

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

For further information on the full GEM™ Trap range contact us at technical@thermalenergy.com or visit www.thermalenergy.com