

Quartz GEM™ Trap

Technical Datasheet



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 QUARTZ GEM TRAP

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

- ▶ Same face to face dimension as mechanical traps
- ▶ Quick and easy to install

Suitable Applications

- ▶ High volume generic trapping
- ▶ Low condensate duty applications
- ▶ Line drainage / trace heating

Rating	PMA	TMA
DN15 / 1/2"	50 barg (730 psig)	400°C (752°F)
DN20 / 3/4"	50 barg (730 psig)	400°C (752°F)

Available Spares

- ▶ Quality Kammprofile graphite-faced gasket with SS core
- ▶ Thimble Filter

Sizes & Connection Types Available

	Threaded BSPT / NPT
DN15 / 1/2"	✓
DN20 / 3/4"	✓



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

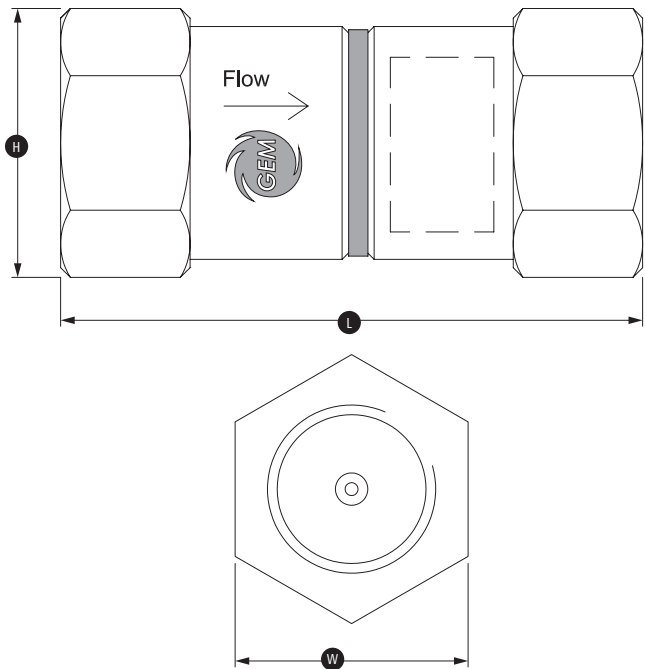
* Reduced guarantee offered for superheated steam

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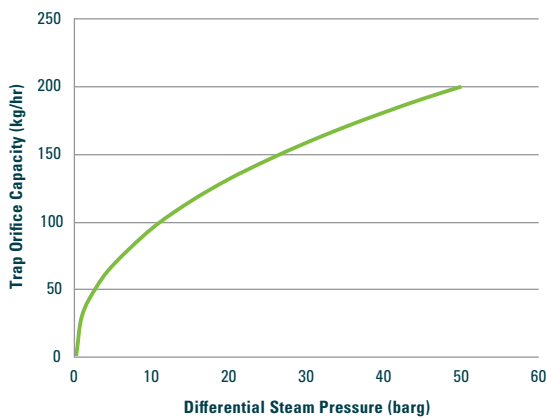
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Product Diagram



Discharge Capacity



Maximum discharge capacity for Quartz 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.

Materials

Part	Material
Quartz Outlet	Stainless Steel ASTM A479 304 / EN 10088-3 1.4301 3 1.4301
Quartz Inlet	Stainless Steel ASTM A479 304 / EN 10088-3 1.4301
Gasket	Kammprofile 316 Stainless Steel Core / Graphite-faced
Filter	304 Stainless Steel ring base / 316 Stainless Steel 50 Mesh

- ▶ 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

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

Dimensions & Weights

	Q15 (DN15 / ½")	Q20 (DN20 / ¾")
Height (H)	42mm	42mm
Length (L)	78mm	90mm
Width (W)	36mm	36mm
Weight	0.5kg	0.5kg