



Sapphire GEM® Trap

Threaded Process and Line Drainage Venturi Orifice Steam Trap. Rev 4 Apr 2013

The GEM® Trap

The GEM Trap is a staged venturi orifice steam trap. It has no moving parts so will not wear and cannot fail. The unique venturi orifice 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 10 year performance guarantee*, and a full sizing and commissioning service.

The Sapphire GEM® Trap

- Threaded in BSP or NPT
- Supplied with Stainless Steel spherical seat unions and strainer
- Suitable for line drainage and process applications
- Trap body can be removed from the unions very quickly for orifice checks
- Strainer basket is easy to access and can be maintained inline
- Robust reinforced mesh strainer basket with large surface area

On all low duty applications, Sapphire Traps contain GEM's inverted cone to further protect the orifice from debris.



Sizes and Connection Types Available

	Sapphire	Inverted Cone	BSP / NPT
DN15 / 1/2 "	✓	✓	✓
DN20 / 3/4 "	✓	✓	✓
DN25 / 1"	✓	✓	✓
DN40 / 1 1/2 "	✓		✓
DN50 / 2"	✓		✓

Suitable Applications

- Process applications
- Low condensate duty applications

Operating Parameters

DN15 to DN25

- PMA 17.2 Bar (250psi)
- TMA 400°C (750°F)

DN40 & DN50

- PMA 10.3 Bar (150psi)
- TMA 185°C (365°F)

Key GEM® Trap Benefits

Quality, Efficiency, Reliability and Service

- > 10 Year performance guarantee*
- > No moving parts to wear or fail
- > No inserts - no leak path
- > No ongoing trap surveys
- > Minimal annual maintenance
- > Does not contribute to waterhammer
- > No pressurisation of condensate return system
- > Inherently more efficient than mechanical traps
- > Typical payback < 2 years
- > Permanent energy savings
- > Each traps supplied with full sizing and commissioning service

* Reduced guarantee offered for superheated steam



An Innovative Technology Company Providing
Energy and Emission Reduction Solutions

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Ancillary Parts

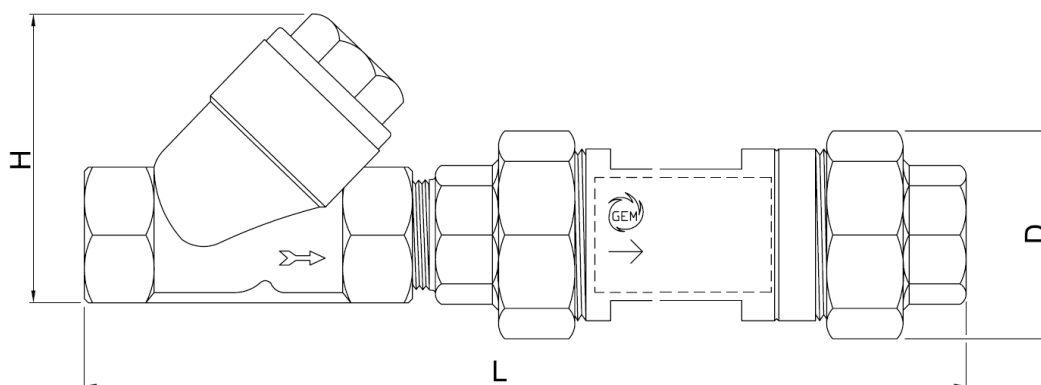
- Insulation Jacket
- Optional drainage valve

Available Spares

- Quality SS reinforced graphite gasket
- Robust SS reinforced strainer basket

Dimensions and Weights

Trap Set – Includes Trap body, 2 unions, strainer



Trap Set	H (mm)	L (mm)	D (mm)	Weight (kg)
S15 (DN15 / ½")	70	180	49	1.1
S20 (DN20 / ¾")	80	211	55	1.6
S25 (DN25 / 1")	100	245	62	2.5
S40 (DN40 / 1½")	118	306	83	5.0
S50 (DN50 / 2")	140	330	100	9.0

Materials

Part	Material
Body	303 Stainless Steel
Unions	316L Stainless Steel
Strainer Body	316L Stainless Steel
Strainer Cap	316L Stainless Steel
Strainer Basket DN15 to DN25	Reinforced 316 Stainless Steel 40 Mesh
Strainer Basket DN40 & DN50	Reinforced 316 Stainless Steel 40 Mesh or 1mm perforated plate
Gasket DN15 to DN25	METACAM 316 Stainless Steel Core/Graphite faced
Gasket DN40 & DN50	FEP O-Ring

- Full product traceability is part of our Quality Assurance procedure
- Type 3.1 material certification to BS EN 10204:2004 (E)

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