

Ruby GEM™ Trap



GEM Steam Trap Technical Datasheet

ECU | Rev 10 | Jun 2021

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 utilizes 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 GEM TRAP

The Ruby GEM Trap is suitable for high pressure process applications and is designed to be installed between two flanges.

- ▶ 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

- ▶ Process applications and pressures up to 1450 psig (100 barg)

Rating

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

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

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

- ▶ No spares required

	PN Flanged	ASME Flanged	RTJ
DN15 / ½"	✓	✓	On request
DN20 / ¾"	✓	✓	On request
DN25 / 1"	✓	✓	On request
DN40 / 1½"	✓	✓	On request
DN50 / 2"	✓	✓	On request
DN80 / 3"	✓	✓	On request
DN100 / 4"	✓	✓	On request
DN150 / 6"	On request	On request	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 pressurization 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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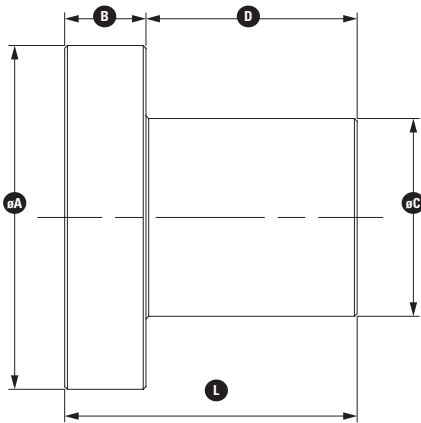
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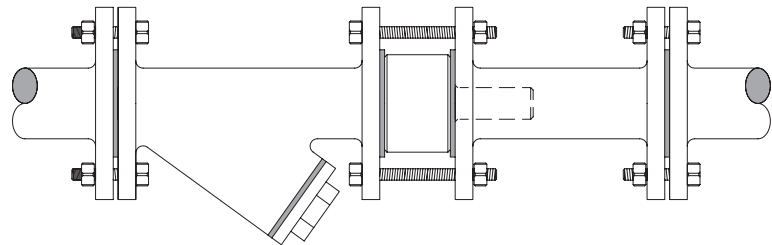


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Product Diagram



Installation Layout



Dimensions & Weights

	ø A	B (Face to Face)	ø C	D	L (Length)	Weight
R15 (DN15 / 1/2")	1 37/64"	25/32"	33/64"	1 7/32"	2 1/64"	0.44 lbs
R20 (DN20 / 3/4")	1 31/32"	25/32"	5/8"	1 11/16"	2 31/64"	0.66 lbs
R25 (DN25 / 1")	2 23/64"	25/32"	53/64"	2 9/32"	3 5/64"	1.10 lbs
R40 (DN40 / 1 1/2")	2 61/64"	1 3/16"	1 27/64"	3 11/32"	4 17/32"	3.31 lbs
R50 (DN50 / 2")	3 35/64"	1 3/16"	1 27/32"	3 5/16"	4 31/64"	4.85 lbs
R80 (DN80 / 3")	5"	1 3/16"	2 7/8"	3 5/64"	4 1/4"	9.92 lbs
R100 (DN100 / 4")	6 7/32"	1 37/64"	3 13/16"	3 15/16"	5 33/64"	20.94 lbs
R150 (DN150 / 6")	7 7/8"	1 31/32"	4 59/64"	7 7/8"	9 37/32"	55.12 lbs (approx.)

Materials

Part	Material
Trap Body	BS EN 10088-3 1.4305 / ASTM A582 303

- ▶ 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
- ▶ Other materials available on request

Suitable Pipe Schedules

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

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

