An Innovative Technology Company
Providing Energy and Emission Reduction Solutions

THERMAL ENERGY INTERNATIONAL

# GEM® Condensate Return System

## Product Catalog

## RUBY STEAM TRAPS (Integral filter option for low duty applications)

Suitable for flanged applications

**Operating Parameters:**
PMA & PMO: 1450 psi (100 bar)
TMA & TMO: 935°F (500°C)

**Flange rating:**
Suitable for all standard flanges

**Pipe Connections:**
1/2" - 4" (15 mm - 100 mm)
With optional filter: 1/2" - 1" (15 mm - 25 mm)

**Material:**
303 Stainless Steel

## TOPAZ STEAM TRAPS

For clean steam applications

- Crevice free
- Hygienic
- Smooth internal surfaces to 32 µin (0.8 µm)*
- Easy to clean and sterilize

**Operating Parameters:**
PMA & PMO: 145 psi (10 bar)
TMA & TMO: 392°F (200°C)

***Please request details**

**Pipe Connections:**
1/2" - 1" (15 mm - 25 mm)

**Material:**
316 Stainless Steel

## QUARTZ STEAM TRAPS

For low load drip leg and trace heating lines

**Operating Parameters:**
PMA & PMO: 720 psi (50 bar)
when gasket fitted to torque of 37 lb.ft (50 N.m)
TMA & TMO: 935°F (500°C)

**Pipe Connections:**
BSP/NPT
1/2" - 3/4" (15 mm - 20 mm)

**Material:**
303 Stainless Steel

## SAPPHIRE STEAM TRAPS

Suitable for threaded connections (insulation bags available)

**Operating Parameters:**
PMA & PMO: 250 psi (17 bar)
TMA & TMO: 750°F (400°C)

**Pipe Connections:**
BSP/NPT thread
1/2" - 2" (15 mm - 50 mm)

**Material:**

| | |
|---|---|
| Trap body | 303 Stainless Steel |
| Union & Strainer | 316 Stainless Steel |

Strainers not supplied for sizes larger than 1" (25 mm)

## EMERALD STEAM TRAPS

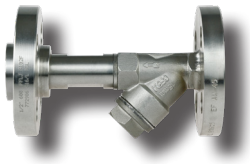
For use with any universal 2-bolt quick-fit connectors* (insulation bags available)

**Operating Parameters:**
PMA & PMO: 1450 psi (100 bar)
TMA & TMO: 935°F (500°C)

***Supplied with flanges upon request**

**Pipe Connections:**
BSP/NPT/SW
1/2" - 3/4" (15 mm - 20 mm)

**Material:**
316L Stainless Steel



## DIAMOND STEAM TRAPS

For high pressure process applications

**Operating Parameters:**
PMA & PMO: 730 psi (50 bar)
TMA & TMO: 750°F (400°C)

**Material:**
316L Stainless Steel

**Pipe Connections:**
PN16/25/40
1/2" - 1" (15 mm - 25 mm)
ASME connections available

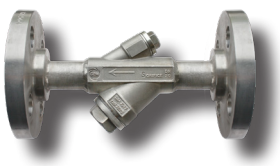
## OPAL STEAM TRAPS

For low load line drainage and trace heating lines (insulation bags available)

**Operating Parameters:**
PMA & PMO: 730 psi (50 bar)
TMA & TMO: 750°F (400°C)

**Material:**
316L Stainless Steel

**Pipe Connections:**
BSP/NPT/SW
1/2" - 3/4" (15 mm - 20 mm)
Flanged connections available



## FLANGED OPAL STEAM TRAPS

For low load line drainage and trace heating lines (insulation bags available)

**Operating Parameters:**
PMA & PMO: 730 psi (50 bar)
TMA & TMO: 750°F (400°C)

**Material:**
316L Stainless Steel

**Pipe Connections:**
PN16/25/40 ANSI 150/300/600
1/2" - 3/4" (15 mm - 20 mm)
1" (25 mm)

Thousands of GEM Traps have been installed worldwide, permanently cutting costs for blue chip international companies.

- Aesica
- Allergan
- BASF
- Bayer
- Boots
- Cadbury
- Carlsberg
- Chivas Brothers
- Coca-Cola
- Corus
- Diageo
- Dow Corning
- Dupont
- EON
- Exxon
- Ferrero
- Fruit of the Loom
- GlaxoSmithKline
- Glenmorangie
- Heinz
- Huntsman
- Interbrew
- International Paper
- Kerry Foods
- KNPC
- Kraft
- Loders Croklaan
- McCain Foods
- Merck
- Michelin
- Nestle
- NHS
- Novartis
- Pfizer
- Pirelli
- Premier Foods
- Rolls Royce
- Sappi
- Shell
- Tate & Lyle
- Unilever Uniqema
- Whyte & McKay
- Weetabix
- Wrigley

## The energy efficient GEM® Traps have no moving parts and are backed by a 10 year performance guarantee. The GEM® Condensate Return System is the permanent solution to steam trap failure.

### Benefits of GEM® Traps

- Reduced maintenance
- No requirement for stocking spares
- Permanent energy savings (11 - 30%)
- Short payback (typically 12 - 18 months)
- Full sizing and commissioning support
- Complete turn-key solution available

### Typical applications include:

- Waste energy recovery (FLU-ACE® and other);
- Biomass and waste steam drying solutions (DRY-REX® and other);
- Steam and condensate system solutions (GEM® and other); and
- Burner/Boiler system improvements.

THERMAL ENERGY INTERNATIONAL

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