



FITTING AND MAINTENANCE INSTRUCTIONS +10 YEAR PERFORMANCE GUARANTEE



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GEM TRAP FITTING & MAINTENANCE INSTRUCTIONS

All GEM Traps, except Quartz Traps, are 'tailor-made' and have individual serial numbers. It is imperative that each trap is fitted in its allocated position - see delivery schedule enclosed. If you are unsure of each trap's location, please contact GEM Ltd or your local representative.

Please ensure the pressure and temperature rating of the GEM Trap exceeds that of the application.

The trap body or pipeline connector should be assembled with the flow arrow in the direction of the flow.

For optimum performance GEM Traps should be fitted vertically, discharging downwards, however GEM Traps may be installed in any orientation except vertically upwards. Emerald GEM Traps should be fitted on the side of the pipework, with the mating face on the vertical plane.

All installation work to be carried out in accordance with HSE regulations and codes of practice for pressurised systems. If you are in any doubt, please call GEM Ltd.

On live systems, always ensure there are two locked off isolating valves upstream of the trap before commencing installation work.

Isolating valves should be fitted on inlet and outlet pipework adjacent to GEM Traps. Non-return valves should be fitted on trap condensate return to stop condensate back flow on applications which are not constantly in use. If condensate goes to drain non-return valves are not required.

We do not recommend the use of jointing compounds on union seats. If required, use copper grease or graphite anti-seize paste (available on request from GEM Ltd) to help the seal of unions.

GEM Trap bodies should be rotated so the labels showing serial number etc are clearly visible.

GEM Traps may be insulated without affecting their performance - please label or tag as they are compact and easily lost under insulation. Tailor made GEM Trap Insulation Bags are available from GEM Ltd and are supplied complete with Velcro fixing, high visibility weather proof covering and ID label. Individual tags are also available from GEM Ltd.

SAPPHIRE GEM TRAPS WITH SCREWED STRAINER & UNIONS

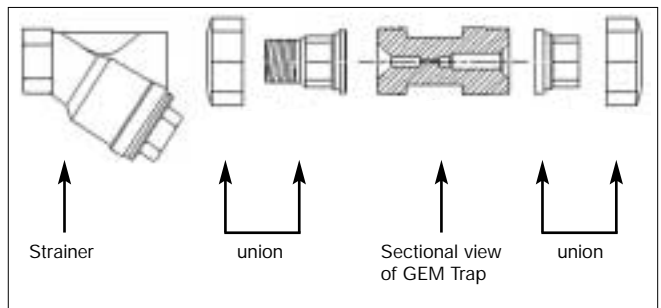
Rating: 10.3 bar (150psi), 185°C

Ensure strainer, unions and trap body are assembled as shown below. The male union has to be threaded onto strainer outlet with suitable threading compound.

NOTE: excess compound may block the GEM Trap, ensure flow is not obstructed.

Body threads are factory sprayed with PTFE to avoid binding. Before installation ensure there is adequate PTFE spray (available from GEM Ltd) on union collar threads.

Ensure all unions are fully tightened before opening isolating valves – trap sets are only assembled by hand before delivery.



Sapphire GEM Trap

STORE PERSON PLEASE KEEP THIS LEAFLET WITH TRAPS FOR INSTALLER

DIAMOND GEM TRAPS WITH SCREWED STRAINER & UNIONS

Rating: 50 bar (800psi), 265°C

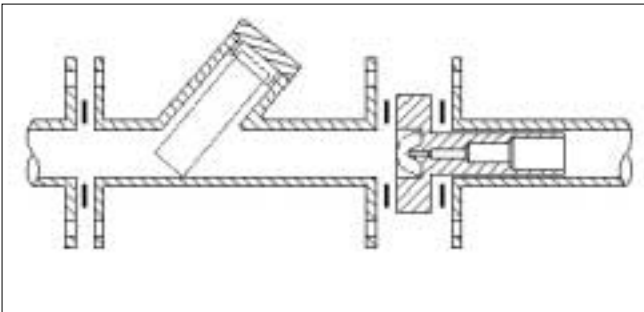
Ensure strainer, unions and trap body are assembled as shown below. The male union has to be threaded onto strainer outlet with suitable threading compound.

NOTE: excess compound may block the GEM Trap, ensure flow is not obstructed

Gaskets should be checked to ensure sealing faces are flat and blemish free, prior to assembly.

Body threads are factory sprayed with PTFE to avoid binding. Before installation ensure there is adequate PTFE spray (available from GEM Ltd) on threads.

Ensure all unions are hand tightened then turned an additional quarter turn before opening isolating valves.



Ruby GEM Trap

RUBY GEM TRAPS FOR FLANGED PIPEWORK

Rating: 100 bar (1450psi), 400°C, dependent on flange specification. Flange and bolt specifications must be adequate for the pressure of the steam system: the installer is responsible for checking they are rated for the working pressures.

The head of the Ruby is sandwiched between inlet and outlet flanges and so is suitable for both PN and ANSI flanges.

On low capacity applications a 40 mesh strainer must be fitted immediately upstream of traps without integral filters. Ensure either the inlet/outlet pipework may be removed to allow sufficient space for removal of trap head and spigot.

On high capacity applications do not fit elbows or bends on trap discharge as they may erode

EMERALD TRAPS FOR BOLT ON QUICK FIT PIPELINE CONNECTORS

Rating: 100 bar (1450psi), 500°C

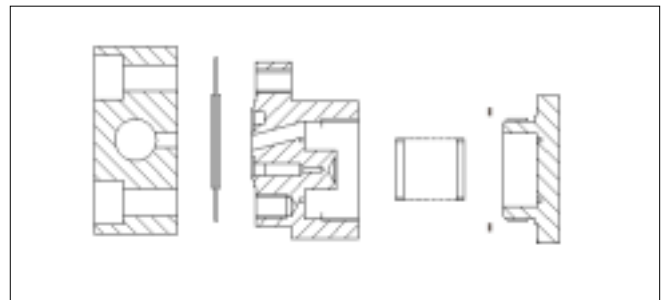
The pipeline connector should be installed on the side of the pipework with the mating face on the vertical plane and the flow arrows in the direction of flow.

The trap should be fitted on the side of the connector.

Emerald GEM Traps are factory assembled hand tight only. Please ensure the filter mesh is fitted and the trap cap and connector bolts are fully hand tightened then turned an additional quarter turn.

Gaskets should be checked to ensure sealing faces are flat and blemish free, prior to assembly.

Ensure adequate Graphite Anti Seize paste (available from GEM Ltd) is on external threads, before installation. Cap threads are factory coated with Anti Seize paste to avoid binding.



Emerald GEM Trap

TOPAZ GEM TRAPS FOR CLEAN STEAM SYSTEMS

Rating: 10 bar (145psi), 200°C

Ensure flange patterns are identical and assemble using 'tricrover' clamps.

Ensure trap is installed with its flow arrow in the direction of flow. Strainers are not required for traps installed in a clean steam system.

10 YEAR PERFORMANCE GUARANTEE

All GEM steam traps are guaranteed against wear or loss of performance for a period of 10 years from date of purchase, subject to the following conditions:

1. All GEM Steam Traps, except Quartz Traps, are tailor made and must be fitted in their correct positions as indicated on delivery schedule.
2. GEM Traps must be fitted in accordance to our installation instructions by a competent person according to standard practice.
3. The steam system's water should be suitably treated to avoid corrosion and system clogging.
4. This guarantee does not cover the performance of strainers, mesh baskets, unions or gaskets.

MAINTENANCE INSTRUCTIONS

GEM LIMITED RECOMMEND YOU UNDERTAKE:

- Temperature checks after installation. Your area engineer can assist you or perform this check for you.
- Simple periodic cleaning of strainers and trap bodies.
- Annual inspection and cleaning of strainer baskets.

Once fitted, your GEMs require minimal maintenance and the benefits of major steam savings and ultimate reliability will become evident.

