



TECHNICAL SPECIFICATIONS



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GEM TRAP TECHNICAL SPECIFICATIONS

GEM TRAP PRODUCT RANGE

GEM Traps are easy to specify and install. With no moving parts, no spares, testing or monitoring equipment is required. All GEM Traps used in the GEM Condensate Return System are made from hardwearing stainless steel and are performance guaranteed for 10 years.

Individual Sizing

All GEM Traps, except Quartz Traps, are sized by our engineers for each specific application. For optimum performance each GEM Steam Trap is given a location reference, a serial number, a size/configuration and loading details. The details of the delivery note enable each trap to be fitted in its intended position. Once the trap is fitted you don't have to worry about it, as they only require occasional and very simple cleaning. We also keep full records for every GEM Steam Trap ever made, in case you are ever unsure of where to install your GEM.

Generic sizing

For repetitive applications, such as drip legs or trace heating, we also offer Quartz GEM Traps with generic sizing.

SAPPHIRE HP GEM TRAP SETS

	15mm	20mm	25mm
Supplied with			
Strainer	✓	✓	✓
Unions	✓	✓	✓
GEM Insulation Bag	✓	✓	✓
Materials			
Body	303 Stainless Steel		
Unions	316L Stainless Steel		
Strainer	316L Stainless Steel		
Strainer mesh	Reinforced 40 mesh		
Strainer gaskets	316L Stainless Steel		
Thread	Stainless Steel Core with Graphite face BSP to BS21, ISO7/1 & ISO228/1 NPT to order		
Operating Parameters			
PMA	17.2 bar (250 psi)		
TMA	400°C (760°F)		
Dimensions			
Length	180mm	211mm	245mm
Max Width	49mm	55mm	62mm
Max Depth	70mm	80mm	100mm

SAPPHIRE HP GEM TRAP SETS FOR ALL MEDIUM TO HIGH PRESSURE STEAM APPLICATIONS



TECHNICAL SPECIFICATIONS

SAPPHIRE GEM TRAPS SETS					
	15mm	20mm	25mm	40mm	50mm
Supplied with					
Strainer	✓	✓	✓	X	X
Unions	✓	✓	✓	✓	✓
GEM Insulation Bag	✓	✓	✓	✓	✓
Materials					
Body	303 Stainless Steel				
Unions	316L Stainless Steel – Spherical seats				
Strainer	316L Stainless Steel				
Strainer mesh	Reinforced 40 mesh				
Strainer gaskets	316L Stainless Steel				
Thread	Stainless Steel Core with Graphite face BSP to BS21, ISO7/1 & ISO228/1 NPT to order				
Operating Parameters					
PMA	10.3 bar (150 psi)				
TMA	185°C (365°F)				
Dimensions					
Length	180mm	211mm	245mm	208mm	218mm
Max Width	49mm	55mm	62mm	83mm	100mm
Max Depth	70mm	80mm	100mm	83mm	100mm

SAPPHIRE GEM TRAP SETS FOR ALL MEDIUM PRESSURE STEAM APPLICATIONS



TECHNICAL SPECIFICATIONS

	RUBY GEM TRAP SETS WITH INTEGRAL FILTER			STANDARD RUBY GEM TRAP SETS*					
	15mm	20mm	25mm	15mm	20mm	25mm	40mm	50mm	80mm
Materials									
Body	303 Stainless Steel			303 Stainless Steel					
Optional Filter	316L Stainless Steel on copper ring base			None					
Filter mesh	Reinforced 40 mesh 316L Stainless Steel			None					
Operating Parameters									
PMA	100 bar (1450 psi) – dependent on flange specifications			100 bar (1450 psi) – dependent on flange specifications					
TMA	400°C (750°F)			400°C (750°F)					
Dimensions									
Length of head	26mm	23mm	23mm	20mm	20mm	20mm	30mm	30mm	30mm
Length of spigot	31mm	43mm	56mm	31mm	43mm	61mm	85mm	85mm	78mm
Diameter of head	40mm	50mm	60mm	40mm	50mm	60mm	75mm	90mm	127mm
Diameter of spigot	13mm	16mm	21mm	13mm	16mm	21mm	36mm	47mm	73mm

* On low capacity applications a 40 mesh strainer must be fitted immediately upstream of standard traps (without integral filter)

RUBY GEM TRAP SETS FOR ALL FLANGED APPLICATIONS



TECHNICAL SPECIFICATIONS

	EMERALD GEM TRAP SETS	TOPAZ GEM TRAP SETS			QUARTZ GEM TRAP SETS	
		15mm	20mm	25mm	15mm	20mm
Supplied with						
Filter	✓	Not required			✓	✓
Gaskets	✓	Available to order			✓	✓
Clamps and fittings	Not applicable	Dockweiler and Tri-clover fittings available to order			Not applicable	
Unions	Not required	Not applicable			Not applicable	
Quick fit connector	BSP or socket welded ends for 15mm / 20mm NB pipework					
Materials						
Body	303 Stainless Steel	316L Stainless Steel			303 Stainless Steel	
Cap	316L Stainless Steel				Copper	
Gaskets	Stainless Steel core with Graphite face					
Connector	316L Stainless Steel					
Filter	316L Stainless Steel				Copper ring base	
Filter mesh	40 mesh 316L Stainless Steel				40 mesh 316L Stainless steel	
Bolts	316L Stainless Steel					
Thread	BSP/NPT or socket welded				BSP/NPT or socket welded	
Operating Parameters						
PMA	100 bar (1450 psi), cold hydraulic test to 200 bar (2900 psi)	10 bar (145 psi)			50 bar (725 psi)	
TMA	500°C (935°F)	200°C (392°F)			270°C (518°F)	
Dimensions						
Length	56mm	55mm	55mm	65mm	78mm	90mm
Diameter	60mm across cap flats				50mm	50mm
Connector length	56mm					
Connector depth	35mm					

* Quartz GEM Traps are 'off the shelf' traps designed for minimal loads, e.g. drip legs and trace heating lines. They are not tailor made by GEM for each application – consequently performance checking is the responsibility of the customer

EMERALD GEM TRAP SETS FOR USE WITH ANY BOLT ON 'QUICK FIT' CONNECTOR



TECHNICAL SPECIFICATIONS

TOPAZ GEM TRAP SETS FOR ALL CLEAN STEAM APPLICATIONS



QUARTZ GEM TRAP SETS* UNCALIBRATED FOR MINIMAL LOAD DRIP LEG AND TRACE HEATING LINES



GEM INSULATION BAGS

- Velcro fixing – easy to fit and remove for maintenance
- Bright orange cover – easily located
- Fire and weather proof
- Highly durable – guaranteed for 5 years
- Location label provided
- Year on year savings, short payback periods
- No fittings costs

Materials

- Cover – Aramid Silicon fabric
- Filling – 50mm foil faced mineral wool
- Fixings – Velcro
- Drawstring – single strand glass fibre
- Conforms to BS5422

