PRODUCT INFORMATION: Gas Gap™

Product: **Gas Gap™** Lightning Protector



End Users:

- Gas Transmission
- Oil/Petrochemical Industries
- Pipeline Operators
- Electrical Utilities

Background:

Cathodic Protection of buried and submerged metallic structures, *(i.e., pipelines, tanks, etc.)* requires the necessity to electrically isolate *(i.e., Flange, Monolithic Isolating Joints)* the primary structure from contact with the electrical utilities grounding network.

Lightning being one of the most unpredictable and destructive forces in nature, strikes the earth more than 90 million times a year. Electrically isolated metallic structures, *(i.e. pipelines)* are potentially dangerous because they are prone to an electrical charge, resulting in equipment damage and creating a safety hazard to employees and the general public alike.

Millions of dollars are lost each year because of lightning damage. Protect your valued structures from lightning exposure with the performance proven Rustrol® **Gas Gap™**.

Applications:

The Rustrol® **Gas Gap™** maintains the advantages of electrical isolation, necessary for assuring Cathodic Protection of the primary structure *(i.e. pipelines)*, while providing a safe grounding path during electrical disturbances. The Rustrol® **Gas Gap™** offers superior protection for personnel and equipment.

- Lightning Exposure
- Power Surge Current Exposure
- Equipotential Bonding of Cathodic Protection Systems

Advantages:

The Rustrol® **Gas Gap™** provides unmatched performance such as:

- Fail-Safe Operation
- Maintenance-Free
- Low DC and AC Voltage Thresholds
- Performance Characteristics Un-Matched by typical Air-Filled Spark Gaps
- Long Product Life, maintaining stable characteristics

Rustrol® **Gas Gap**™ Operating Characteristics

Gas Gap™ Model No.	GG-100TS	GG-100TA	GG-100TC	GG-100QA
Lightning Impulse Discharge Current @ 8/20µsec	100 kA	100 kA	100 kA	100 kA
DC Spark-Over Voltage @ 100 V/s	100 V ± 20%	500 V ± 15%	100 V ± 20%	100 V ± 20%
AC Spark-Over @ 60 Hz	100 V ± 20%	500 V ± 15%	100 V ± 20%	100 V ± 20%
AC Spark-Over @ 50 Hz	70 V ± 20%	350 V ± 15%	70 V ± 20%	70 V ± 20%
Impulse Spark-Over Voltage @ 1 kV/µsec	Typical @ 650 V	Typical @ 950 V	Typical @ 650 V	Typical @ 650 V
Dimensions/Diameter/Length	1″ (25 mm) dia. x 3.5″ (90 mm)	2 3/8″ (60 mm) dia. x 6″ (150 mm)	2″ (50 mm) dia. x 6″ (150 mm)	2 3/4″ (70 mm) dia. x 13 3/8″ (340 mm)
Mounting Configuration	Standard Rustrol® Gas Gap™ assemblies are manufactured to be explosion resistant and are provided with 8″ (200 mm) of AWG multi-strand connecting cable and flange mounting brackets to accommodate up to 1″ (M30) bolt diameter. Optional cable length and mounting brackets available on request.			
Construction	Metal-Ceramics Complete with Shrink Tubing	Metal-Ceramics Polyurethane Sealed	Metal-Ceramics Stainless Steel Araldite Cast Resin	Metal-Ceramics Polyurethane Sealed
Typical Applications: IF - Flange Assembly IJ - Monolithic Joint	IF/IJ	IF/IJ	IF/IJ	IF/IJ Typical for Buried Applications
Exposure Frequency	Light/Moderate	Moderate	Moderate/Severe	Moderate
Certifications/Listings	CE	CE	CE Ex II 2G EEx m II T3*	CE
Fail-Safe Feature	✓	✓	✓	✓

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