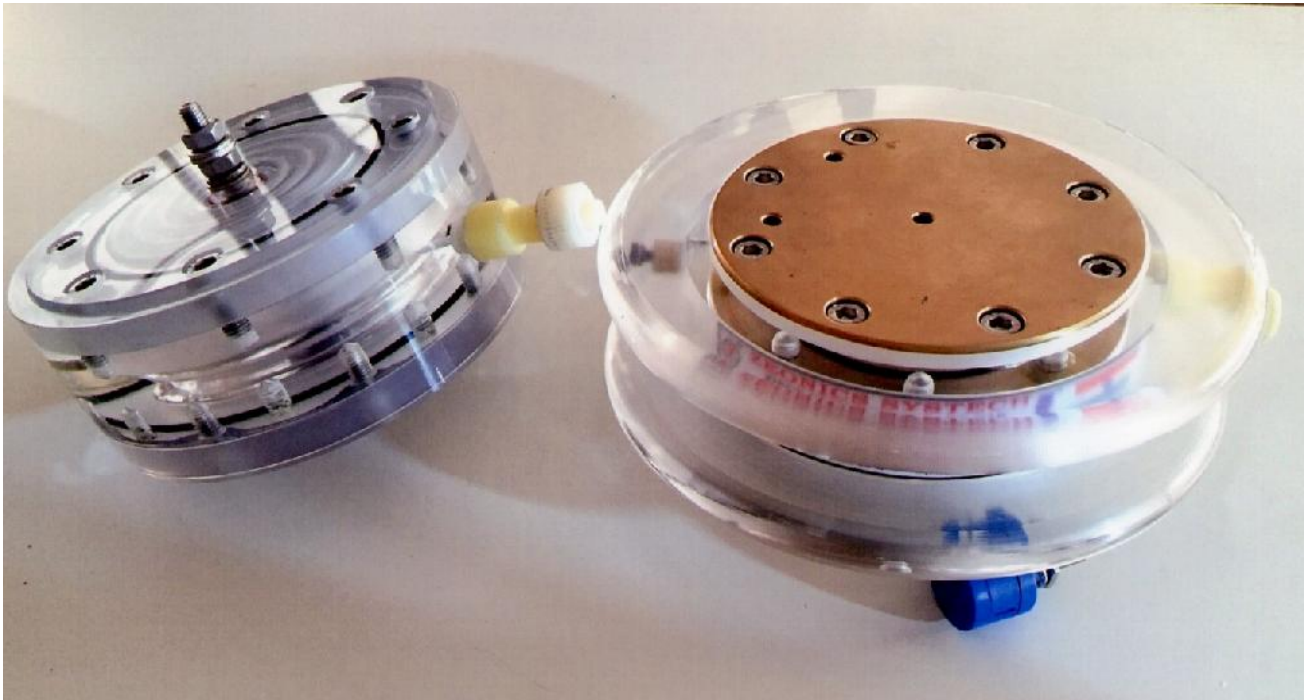




**ZEONICS SYSTECH**  
DEFENCE & AEROSPACE ENGINEERS (P) LTD.



# High Voltage Spark Gaps

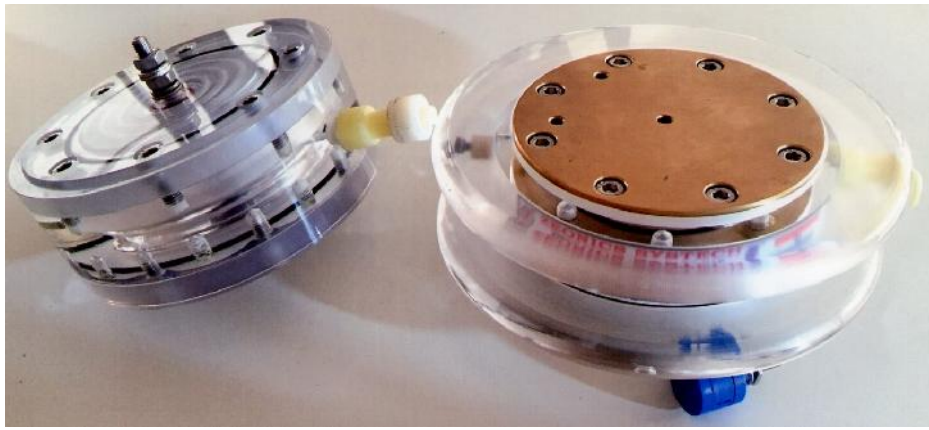


High voltage spark gaps are essentially gas-based switches. These switches are used for transferring large amounts of current, voltage and power into specific Pulse Power equipment.

There are several spark gaps which are manufactured at Zeonics, starting from miniature spark gaps in the region of 5kV to large spark gaps of upto 300kV discharge. We manufacture spark gaps from 1kA rating upto 2.45MA. The larger spark gaps are essentially converted to Rail Gaps.

**Proudly Made in INDIA**





### Field Distortion Spark Gaps

- |                            |                                  |
|----------------------------|----------------------------------|
| 1. SBV                     | : 25kV to 100kV                  |
| 2. Control                 | : 30% to 80% of SBV              |
| 3. I <sub>pk</sub> Current | : 30kA to 100kA                  |
| 4. PRR                     | : 10kA 50PPS 100kA 1PPM          |
| 5. Gas Flow                | : Nitrogen/SF6 at 25Lps to 50Lps |
| 6. Electrodes              | : Copper Tungsten                |
| 7. Gas purging             | : Every Few Shots when at 30kV   |
| 8. Type No.                | : ZHS/001/055                    |



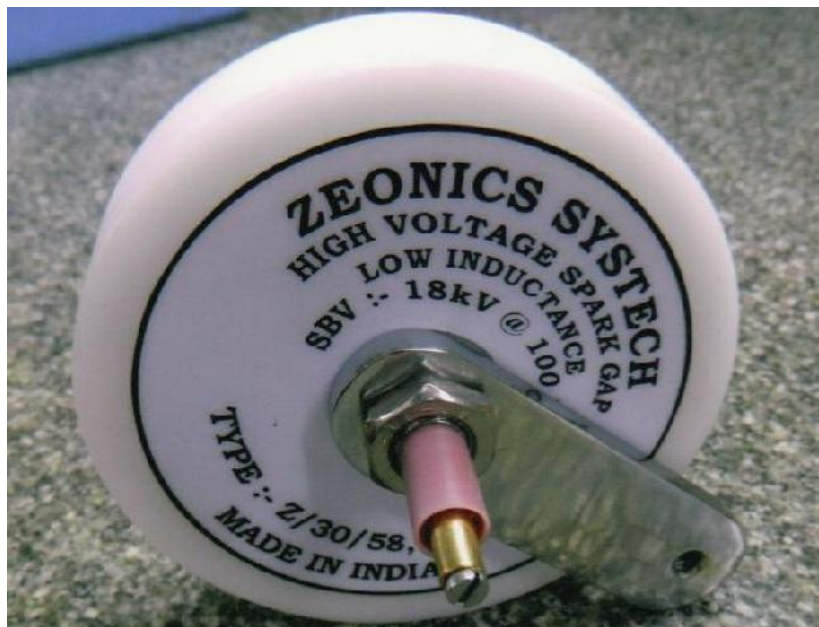
### High Voltage Gas-filled Spark Gap Trigatron

- |                    |                                       |
|--------------------|---------------------------------------|
| 1. SBV             | : 60kV to 130kV (Pressure Controlled) |
| 2. Control         | : 50kV to 95kV                        |
| 3. Peak current    | : 10kA                                |
| 4. Max. pressure   | : 50 psi Nitrogen or SF6 at 30P       |
| 5. Trigger voltage | : 20kV pulse maximum                  |
| 6. Type No.        | : Z/28/92 (731)                       |



## High Voltage Nuclear Hardened Spark Gap Switches

1. Working voltage : SBV 40kV DC
2. Test voltage : 50% to 80% of SBV (20kV to 32kV)
3. Peak current : 20kA maximum
4. Temperature : -20°C to +85°C
5. Rh at 40°C : 95%
6. Neutron capability : Maximum  $1 \times 10^9$  flux neutrons it can handle
7. Peak current : 25kA
8. Type No. : ZE/3T/40



## Low Inductance High Voltage Spark Gap

1. SBV : 18kV @ 100PSI
2. Typical Rise Time : < 5nSec at 100PSI
3. Gas : Nitrogen
4. Type No. : Z/30/58



## Applications

Spark gaps are used for applications like Ignition systems, rocket firing systems, explosive detonation, Lithotripsy, CT scanners, Lightning Arresters, Lightning protection systems, etc.

## Advantages

Spark gaps are very rugged, easy to operate and extremely reliable. They do not fail easily and can be used for military duty. Once the construction is done and the gas has been decided, Spark gaps are very reliable as they do not get affected by EMI or Nuclear blasts.

Spark Gaps provide isolated and high power switching abilities.

## Installation

Spark gaps need to be fixed specifically for specific applications. Some Spark gaps are used in oil atmosphere, some in open air, and some are also in different gas pressures.

## Types available

We have very wide variety of Spark gaps which cannot be compressed into a single catalogue. Please contact us and tell us your exact requirements, and we can design a spark gap for you.

**Contact: Zeonics Systech Defence & Aerospace Engineers Pvt. Ltd.**

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