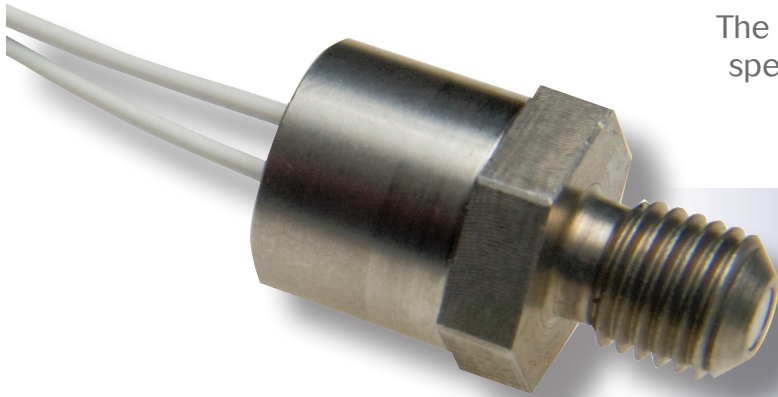


# 1SE609 Puncturing Cutter



The 1SE609 is a pyrotechnic actuated cutter specifically designed to cut a steel tube and lock the piston at the end of its stroke.

*Extremely rugged in construction, the cutter can be used in any application where strength and output power are important in providing linear motion.*

## Specifications

### Electrical

Bridge Resistance @ 70°F (21°C)	1.0 ohm
All-Fire Current	3.5 amp, 20ms
No-Fire Current @ 70°F (21°C)	1.0 amp, 5 min
Insulation Resistance	Before fire: Greater than 1 megohm with 500 Vdc leads to case. Per MIL-STD-202, Method 302, Test Conditions B.
Electrostatic Discharge	MIL-DTL-23659C 25 kW discharge from a 500 pF capacitor applied through a 5,000 ohm serried resistor.

### Mechanical

Size	See Drawing ( <i>other side</i> )
Lead Length	2.53 inches
Weight	10 gm
Stroke	Cut a corrosion resistance steel, type 304 tube with an outside diameter of 0.0625 with a wall thickness of 0.016 which is capable of withstanding a gas pressure of 12,200 psig.
Function Time	20 ms
Operating Conditions	-40°F - 150°F
Push Back Force	Will withstand up to 350 lbs of force for up to one minute after actuation.
Proof Pressure	12,200 psig
Leakage	60cc per min after actuation

## Specifications Continued

### Environmental

Temperature Shock/Humidity/Altitude	MIL-DTL-23659 para 4.6.5 (Temperature -65°F to 160°F, Relative Humidity 50% to 95%, Altitude 70,000 ft).
Salt Fog	MIL-STD-810F, Method 509.2, Procedure 1 (5% salt concentration).
Acceleration	MIL-STD-202G, Method 27.2, Test Condition A.
Triangular Shock	MIL-DTL-23659D para 4.6.4 (Waveform – Triangular, Amplitude – 400g, Rise Time – 2.0 ms, Decay Time 2.0 ms).
Vibration	MIL-DTL-23659D para 4.6.4 (-65°F to 200°F)
Random Vibration	Random vibration spectrum shall consist of a fequency: 20 to 5,000 Hz; power spectrum density: 0.01 gravity units squared per hertz.
Forty Foot Drop	MIL-STD-331, Test Method A3, safe for disposal.
Six Foot Drop	Capable of actuation after being subjected to a six foot drop and impacted on a 2 inch thick steel plate.

### Freight Classification

Shipping Name	1SE-609
Identification Number	UN0173
Hazard Classification	1.4S

# 1SE609

## Variations

EaglePicher can design and manufacture variations of the 1SE609 to meet customer requirements.

## Characteristics

Some of the characteristics listed here are nominal; others are levels to which the units have been tested. There are no limits on design capabilities. Please consult an EaglePicher representative before using this data as a specification.

## Safety

### Maximum pyrotechnic weight:

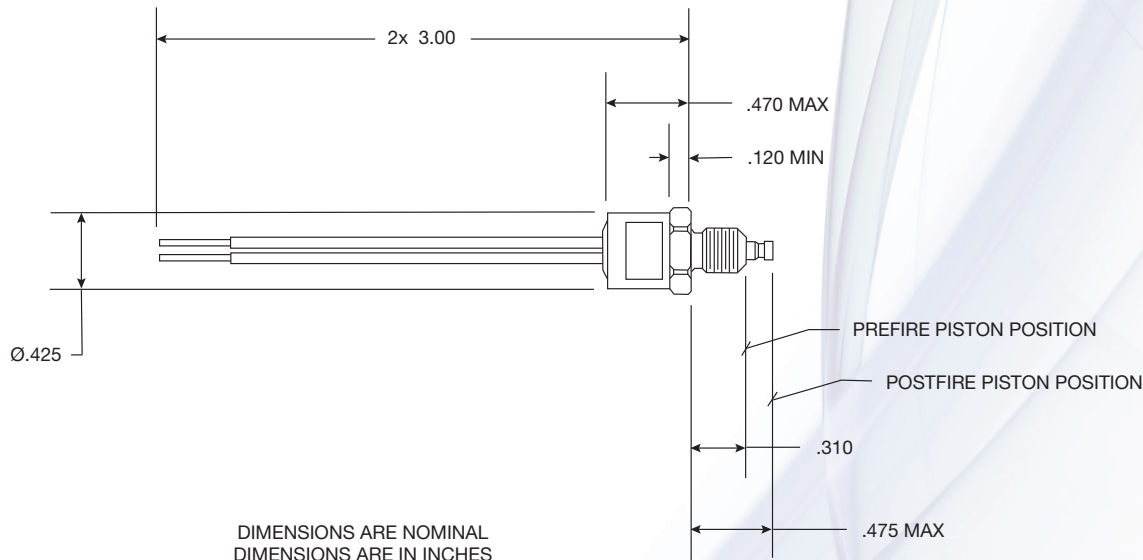
30 mg Barium Styphnate

### Warning:

The cutter may fire if exposed to temperatures above 200°F (93°C), an electrical charge exceeding the specified no-fire current, or if it is cut open before functioning.

If your company does not have a safety program, it is essential that one is established before explosive items are handled or used. For a brief overview of safety precautions, see the Safety Procedures Data Sheet or contact an EaglePicher representative.

Energetic devices are considered articles; therefore a Material Safety Data Sheet (MSDS) does not apply. However, MSDS may apply to individual components. For more information, contact your EaglePicher representative.



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