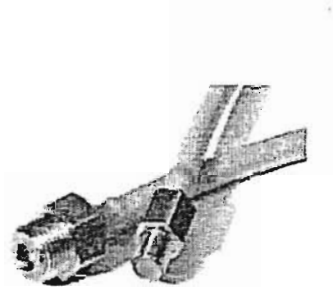
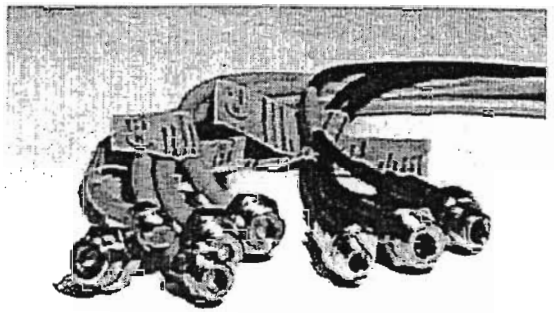
Pyrotechnic Gas Pressure Generator

Description



Gas Pressure Generators are used in order to quickly produce Gas Pressure. The Gas is produced through the burning of a pyrotechnic powder. The amount used here is very low, at about 0.05 grams. The generator is ignited using an Ignition Pill, which ignites when exposed to an electrical current (E.g. 3mJ/Ohm).



The pyrotechnic powder burns out in milliseconds after ignition. Gas is produced when the powder burns which in turn produces Gas Pressure. This pressure bursts the end cap and releases the gas into the external area.

The pressure generator consists of a nickel plated brass casing (CuZn40Pb2) and has a screw thread around the end. Attached to this you will find an input lead for connection to an electricity supply on one side and on the other side is an open for the gas to escape.

During Assembly make sure that there will we no loss of pressure due to leakages in the system.

If necessary several elements can be detonated at the same time by using a series or parallel circuit. When using a series circuit, make sure that the ignition current is bounce free. The pressure generators have a maximum of three wires. With the 3rd wire, the casing can be earthed.

All intermediate and final examinations carried out by the production and quality management personnel comply with the requirements set under DIN EN ISO 9001.

Chemring Germany GmbH knows that a 100% operational reliability cannot be tested, as the tests carried out to ensure this are self destructive.

Although the chance of a misfire is very low, Chemring Germany GmbH recommends therefore that two devices should be used together in order to ensure that at least one detonates.

Random sampling for final inspections are performed in line with the guidelines of DIN ISO 2859, part 1. Please see our general conditions and terms of sales and delivery.

[redacted]

Details

- Only to be used by trained people.
- Usage time : 3 Years
  Using gas pressure generators in security relevant machines, we suggest to use a redundancy system.

Risk Factors

- Only to be used as described.
- Never connect the pressure generator to an electricity source when it is not screwed into position as there is a risk of recoil.
- Pressure generator can be ignited using strong electrical currents, (more than 20 KV).
- Don't use in proximity to strong electrical fields (E.g. high power cable or mobile phone.).
- Don't expose the generator to heat in excess of 100 C° and don't open it violently (risk of detonation)
- During Assembly always remove it from power supply.
- Prevent from coming into direct contact with flames.
- During detonation it is possible that small pieces my fly out, so it should not be pointed in the direction of people.

Dangerous Good Information

Storage

- Storage group: 1.4 S
- Storage Temperature: -54°C to +71°C, (Store dry)

Transport

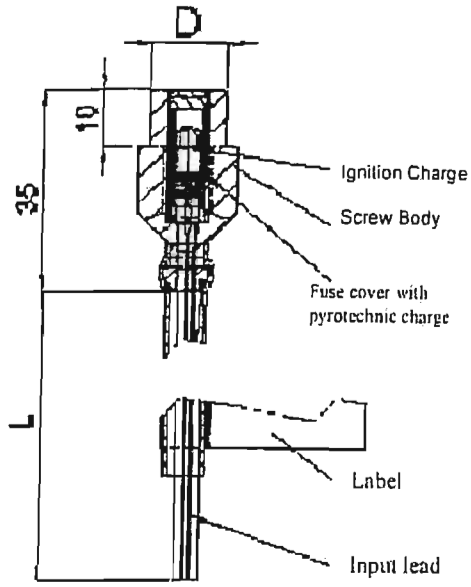
- UN-Number: 0432
- Technical Name: Pyrotechnical Device for Technical purposes.
- Danger Class: Sub class T1
- Classification: 1.4 S, Figure 47, ADR

[redacted]

Gas pressure generator
Type 1

1. General Information:

- Application range: Generating of gas pressure
- Application temperature: -40°C to +63°C
- Storage temperature: -54°C to +71°C
- Expiry time: 3 years
- Gross weight: See chart
- Net explosive content: 0.05g
- Material: CuZn40Pb2 nickel-plated
- BAM: BAM PT_1-0098
- Handling by trained people only!
- Manufacturer: [redacted]

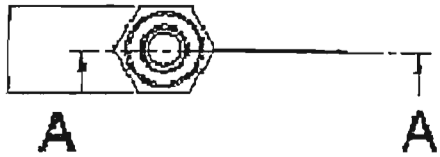


2. Specification:

Performance data:

Measured in 1cm³ furnace chamber at 20° C
a pressure of 90 ±30 bar was reached in 50ms.

- Electrostatic safety: Voltage <25 KV
  Capacity < 500 pF/ 5 KOhm
- Resistance: 1,5 ± 0,1 Ohm Measuring electricity:< 10 mA



- Ignitability:
  - 100% ignition at: Firing electricity 600 mA (DC-bus)
    Firing impulse 3 mJ/Ohm
  - 100% no ignition at: Firing electricity 180 mA (DC-bus)
    Firing impulse 0.8 mJ/Ohm
  - Ignition delay time: < 10 ms with 1 A

Technical data of lead in wire:

- Lead in wire: Flexible, 0,5 mm² copper wire in shrinkable tubing
- Length of wire: See chart
- Wire material: Copper 0,06 Ω/m tin plated
- Insulating material: PVC
- Wire cross-section: 0.6 mm

Article number	Type	Thread	Number of wires	Length of wire [mm]	Wrench size
9695100	1.2	M 16 x 1,5	2	500	19
9695200	1.3	G 1/4	3	500	15
9695300	1.3	M 16 x 1,5	3	500	19
9695500	1.3	G 1/8	3	500	18

[redacted]

3. Dangerous Goods Information

Storage

- Storage group: 1.4
- Compatibility group: S
- Storage temperature: -54°C to +71°C, (store clean and dry)

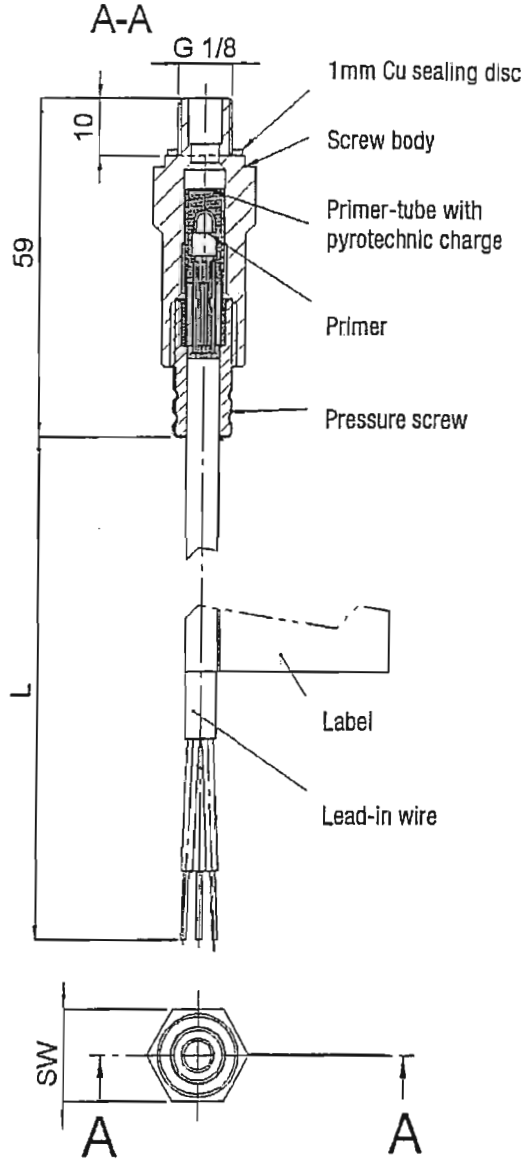
Transport

- UN-No.: 0432
- Technical name: Pyrotechnical article for technical purposes
- Hazard category: Subsection T1
- Hazard classifictaion: 1.4 S

4. Hazard information

- Usage only for specified purposes
- Do not connect gas pressure generator with voltage source before installation → Recoil hazard
- Must not be used near strong electrical fields.
- Do not open forcibly.
- Before dismounting disconnect voltage source.
- Avoid heating and open fire.
- Do not point in direction of persons.

Gas pressure generator
Type 2 G 1/8



1. General Information:

- Application range: Generating of gas pressure
- Application temperature: -40°C to +63°C
- Storage temperature: -54°C to +71°C
- Expiry time: 3 years
- Gross weight: see chart
- Net explosive content: 0.05g
- Material: CuZn40Pb2 nickel-plated
- BAM: BAM PT1-0250
- Handling by trained people only!
- Manufacturer: Chemring Defence Germany GmbH

2. Specification:

Performance data:

Measured in 1cm³ furnace chamber at 20° C
a pressure of 90 ±30 bar was reached in 50ms.

- Electrostatic safety: Voltage <25 KV
  Capacity < 500 pF/ 5 KOhm
- Resistance: 1,5 ± 0,1 Ohm Measuring electricity:< 10 mA
- Ignitability:
  - 100% Ignition at: Firing electricity 600 mA (DC-bus)
    Firing Impulse 3 mJ/Ohm
  - 100% no ignition at: Firing electricity 180 mA (DC-bus)
    Firing impulse 0.8 mJ/Ohm
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- Length of wire: siehe Tabelle
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- Insulating material: PVC
- Wire cross-section: 0.6 mm

Art.-No.	Thread	No.of wires	Cable length (mm)	Wrench size	Gross weight (g)
9695700	G 1/8	3	500	16	81
9695710	G 1/8	3	1000	16	100
9695730	G 1/8	3	3000	16	180

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3. Dangerous Goods References:

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- Storage temperature: -54°C to +71°C, (store clean and dry)

Transport

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- Technical name: Pyrotechnical article for technical purposes
- Hazard classifictaion: 1.4 S ADR/RID

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