

## Technical Datasheet Pyrotechnic Gas Generator Type 1.3

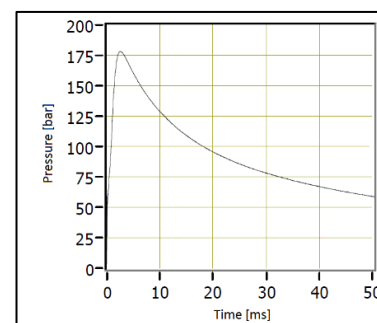
General Data	
Area of Usage	Generation of Gas Pressure
Functional Temperature Range	-30°C to +60°C
Storage Temperature	-30°C to +60°C (dry storage)
Shelf Life	3 Years
Screw Body Material	CuZn40Pb2 Nickle Plated
Net Explosive Mass	0,08 g
Waterproof	Protected according to EN 60529 IPX7(Protected against temporary submersion)



### Performance Data

In a 3 cm<sup>3</sup> pressure container a maximum pressure of 210±50 bar is achieved within 4ms. The pressure achieved over 50ms is 125±45 bar. After achieving maximum pressure, the pressure will decrease due to the cooling of the gases. The diagram to the right shows an example of the performance in a 3 cm<sup>3</sup> pressure container over 50ms.

All performance tests were conducted in an environmental temperature of 20°C. Other temperatures could lead to a reduced performance. This performance is guaranteed for three years subjected to the above mentioned conditions



### Electrical Data

Voltage Range:	DC 12 – 24 V (max. 60 V)
<i>Electrostatic Safety:</i>	
Voltage:	< 25 KV
Capacitance:	< 500 pF/ 5 KΩ
Bridge Resistance:	0,15 - 0,3Ω
Total Resistance:	1,4 - 1,7Ω
Measurement Current:	<10mA
<i>Ignition Sensitivity (regarding the pyrotechnic component):</i>	
100% Ignition at	Ignition Current 800 mA/ 10 ms (DC) Ignition Impulse 3 mJ/Ω
Ignition in Series Connection:	1,0 A/ 4ms
100% No Ignition with	Ignition Current 180 mA/ 5 min (DC) Ignition Impulse 0,8 mJ/Ω
Ignition Delay Time:	<10 ms with 1A
<i>Lead Wire:</i>	
Wire:	0,2 mm <sup>2</sup> Copper Wire (∅ 0,5 mm)
PE-Conductor:	0,5 mm <sup>2</sup> Copper Wire (∅ 0,8 mm)
Conductive Material:	Copper 0,04 Ω/m
Insulation:	PVC
Protective Tube:	Silicon

### Series Connection of Pyrotechnic Gas Generators

Pyrotechnic Gas Generators can be connected in series or in parallel. A series connection is easier to manage due to the fact that a parallel connection requires individual calibration of the branches. Using a series connection, a current of at least 1A is required for at least 4ms in order to safely ignite the generator. With a parallel connection it must be noted that each of the branches will need to be calibrated so that they have similar resistance. This makes sure that each of the generators receive enough power for a 100% ignition.

Notes:

1. The total resistance of the system depends on the type of cable and must be contemplated when choosing a suitable power source.
2. The trigger current with a series connection must be present for at least 4ms.
3. After ignition, the electrical circuit of generators is normally open. In rare cases, a gas generator ignition pill will not detonate completely resulting in a failure to generate gas. In order to guard against this slight risk, it is recommended to use numerous generators for high value properties.
4. It is not recommended to have more than 7 generators in a series.

Order Description

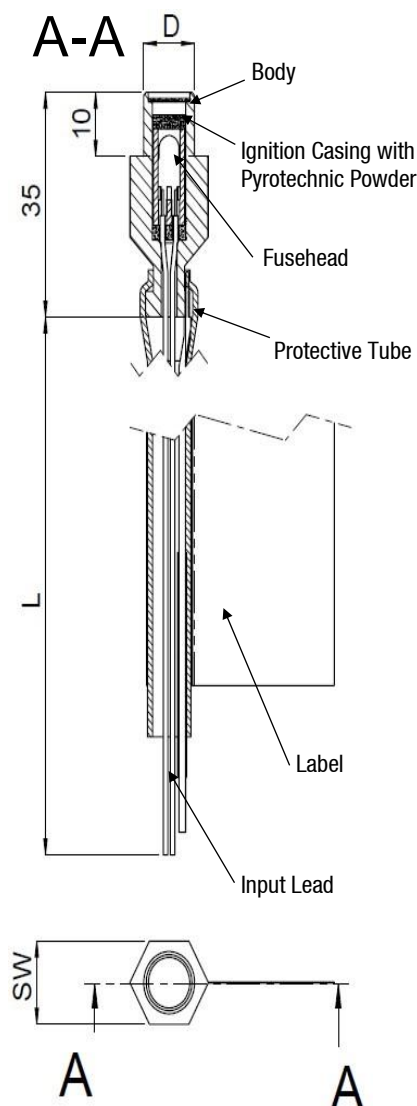
Pyrotechnic Gas Generator (PDE) ID Number	Thread [D]	Cable Length [L] (mm)	SW (mm)	Tightening Torque (N/cm)	Article-Nr.
PDE-Typ1.3-G1/8-500	G1/8	500	13	1000	9695500
PDE-Typ1.3-G1/4-500	G1/4	500	15	1500	9695200
PDE-Typ1.3-M16x1,5-500	M16x1,5	500	19	1600	9695300

Special Models according to customer specification (i.e. Thread / Length) are available upon enquiry.

\* Recommended tightening torque when using a Cu sealing washer

Safety and Warnings

- Do not forcefully open up the generators (danger of ignition)
- Only to be handled by trained personnel. Training courses for the relevant staff are offered by WesCom Signal & Rescue Germany GmbH .
- Only to be used for the intended purpose.
- Before disassembly, disconnect the power supply!
- Prevent contact with an open fire.
- Do not use near strong electrical fields (e.g. High Power Cable, Radiomasts etc...). This poses an ignition risk!
- Do not heat the generator to temperatures over 100 °C!
- During ignition there is a danger that parts of the gas release cover will be propelled at high speed, therefore do not fire in the direction of humans.
- The Gas Generator can be ignited due to strong electrostatic charges (more than 25KV).
- Do not connect the generator to a powersource when it is not properly screwed into a device. Danger of heavy recoil.
- Used generators are recyclable



Technische Änderungen vorbehalten

**Explosive Information (in accordance to German law)**

Categorie	P1
Registration number	0589-P1-0649
Qualification (§20 SprengG).	No
Producer	WesCom Signal & Rescue Germany GmbH



Warning

Fire or projection hazard.

**Dangerous Goods Information**

*Storage:*

Danger Group	1.4
Compatibility Group	S

*Transport:*

Technical Name	Articles Pyrotechnic
UN-Number	0432
Danger Classification	1.4 S



Explosive substances  
and explosive articles  
Subclass 1.4

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Technische Änderungen vorbehalten