

# IGNITER UNITS & MICRO GAS GENERATORS

AUTOMOTIVE SAFETY PRODUCTS



In accordance with the interface requirements of the customer, Hirtenberger develops and manufactures micro gas generators for seatbelt pretensioner systems in pintype or leadwire versions. Moreover, Hirtenberger produces micro

gas generators with metal housings and in full – plastic design. Customized performance tuning guarantees the compliance with the customer specifications.

# IGNITER UNITS

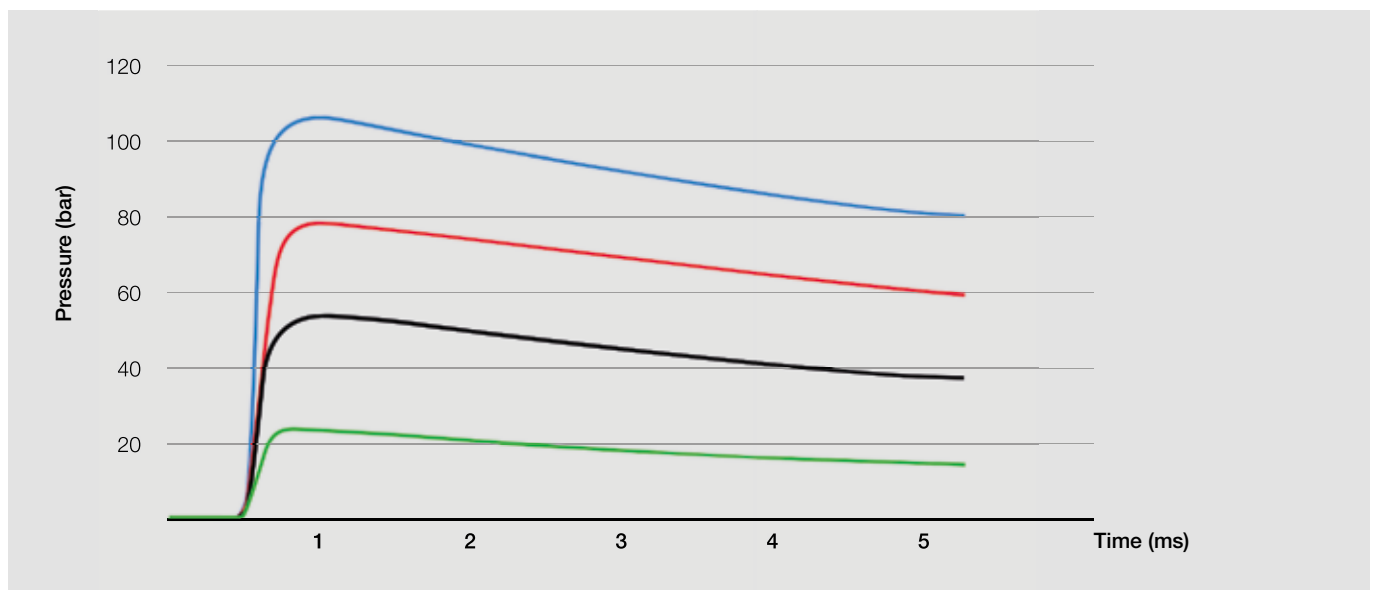
Hirtenberger produces igniter units with GTMS- and HPP-igniters for the use in pyrotechnical devices from micro gas generators to actuators and airbags (tether actuation units).

Igniter units are produced either with the customized standard 11 mm interface or in leadwire versions. Due to customer specific requirements, discs, ferrite cores or coils are integrated.



## Performance

Typical performance of different igniter units in a 3.5 ccm ballistic vessel.



# MICRO GAS GENERATORS

Hirtenberger manufactured more than 300 Mil. micro gas generators for seatbelt pretensioners since 1993. Nearly all major OEMs use micro gas generators from hirtenberger.

## Leadwire

With the competence in the production of cable harnesses and high value added due to the inhouse production of the key components, Hirtenberger has a leading position in the production of leadwire micro gas generators. Hirtenberger offers products with various customized connectors and terminals and handles cable-lengths from 70 mm up to 1500 mm.

## Pintype

Hirtenberger assembles various types of pintype micro gas generators (different electrical and mechanical interfaces, igniters, variation in booster charges, etc.) on highly-automated productions lines. Innovative designs – also in full-plastic – are possible to ensure the requested performance at optimum costs.





CHARACTERISTICS		
	LEADWIRE	PINTYPE
design	steel, plastic or aluminum housing	
	full plastic or steel cap	Al, Zinc diecast or plastic retainer
bursting hole	radial or axial	
length	depending on load, initiator and assembly situation	
diameter	standard: Ø 13.6 mm or tailor-made designs	
cable length	100 - 1500 mm	–
interface	customer specific connector and terminals	customer specific 11 mm shorting clips
propellants	NC: max. 1200 mg (addicted to design) green propellant: max. 1500 mg (addicted to design)	
ignitor	fusehead, GTMS igniter or HPP (Hirtenberger Plastic Pill)	
ESD protection	for special ESD immunity integrated varistor	–
EMI protection	integrated (choke-coil or ferrite core)	–
specifications	AK-LV 109: all versions USCAR: green propellant + GTMS igniter CE-Conformity acc. EU-Pyrotechnical Directive 2007/23/EG	

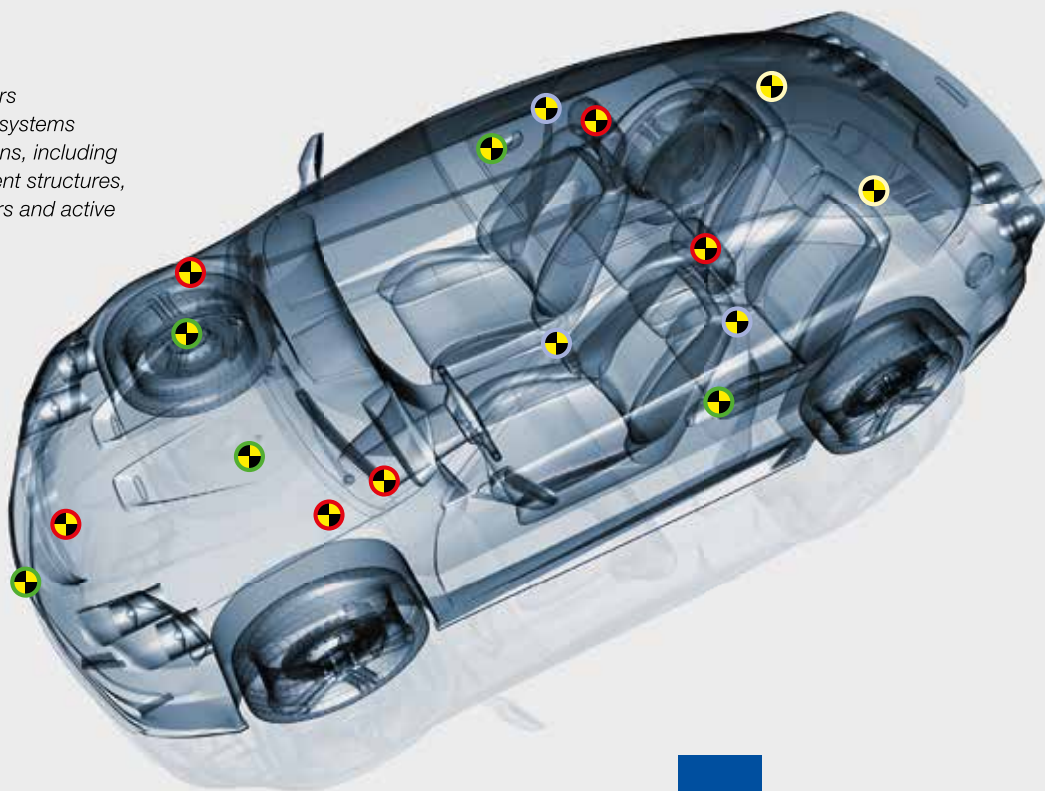


# PROTECTING PEOPLE

## Hirtenberger solutions

**Actuators** for pedestrian-protection systems, crash-active headrests, active hood locks, adaptive steering columns, pedal releases **Micro Gas Generators** for belt and buckle pretensioners and adaptive airbags.

-  Actuators
-  Micro Gas Generators
-  Roll-over protection systems
-  Various other solutions, including pipe cutters, intelligent structures, battery disconnectors and active door locks



**Various other solutions**, including roll-over protection systems, pipe cutters, intelligent structures, battery disconnectors and active door locks.