



**LPG – CNG  
PRODUCT  
CATALOGUE**

**2024**

**railgroup.it**



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# ABOUT US

RAIL was established in 2006 with the core business of designing, manufacturing and marketing injectors for LPG/CNG systems in the automotive industry.

The founders, Luigi Stevani and Rocco Grossi, had already acquired experience and specific technical skills in designing such components.

Today, the company employs a dynamic and specialized workforce able to provide customers with an all-round service, from pre-sale consulting support to the proposal of customized solutions.

Professionalism and on-going commitment are the distinctive features of RAIL, together with high-level technical assistance, always tailored to the customers' requirements.

RAIL uses leading-edge equipment to manufacture its components, in full compliance with the quality and safety standards in force in the industry.

Over the years, RAIL has constantly broadened its range by adding new injector models, becoming established in over 30 countries throughout the world.

Thanks to on-going investments in research and development, RAIL now aims to increase the quality of its products still further, thereby confirming its standing with customers as a dependable and innovative partner.

# MISSION & VISION

## \* OUR MISSION

RAIL undertakes to design, manufacture and market top-quality, highly reliable components for LPG and CNG systems, thereby offering leading-edge solutions thanks to on-going innovation, research and development. Anticipate the needs of an evolving market and provide all-round customer support are our goals.

## \* OUR VISION

To become leader and international point of reference for the supply of components for LPG and CNG systems thanks to our on-going commitment to technological innovation, process optimization and customer satisfaction. To be recognized for the high quality of our products, result of time-tested skills and a constant drive for new solutions.



Professionalism and on-going commitment are the distinctive features of Rail



# RESEARCH & DEVELOPMENT

Our technical workshop and quality department are outfitted with the most modern equipment and are staffed with technicians constantly committed to improving the production processes. We focus on advanced automation at every stage, from design to creation of the finished product.

Thanks to investments in innovative solutions, our product engineering department has achieved remarkable increases in efficiency during the injector calibration and final inspection stages.

Pursuing excellence by implementing state-of-the-art technologies to guarantee the top-most quality standards is our goal. Our search for technical perfection drives us towards ongoing development targeted on providing our customers with top-quality products.

## OUR TECHNICAL OFFICE

Our technical office is the beating heart of RAIL innovation.

Our goal is always to anticipate the requirements of our customers and the market by proposing leading edge products.



### CONSULTANCY

Our experts are on hand to assist our customers at every stage, from choice of the most suitable solution, through to installation and after-sale care.



### CUSTOMIZING

We design solutions tailored to suit the customers' needs. Our technical office can customize our products as required.



### AFTER-SALES ASSISTANCE

A prompt and qualified assistance service for full customer satisfaction. Our technicians are ready to act quickly in every situation.

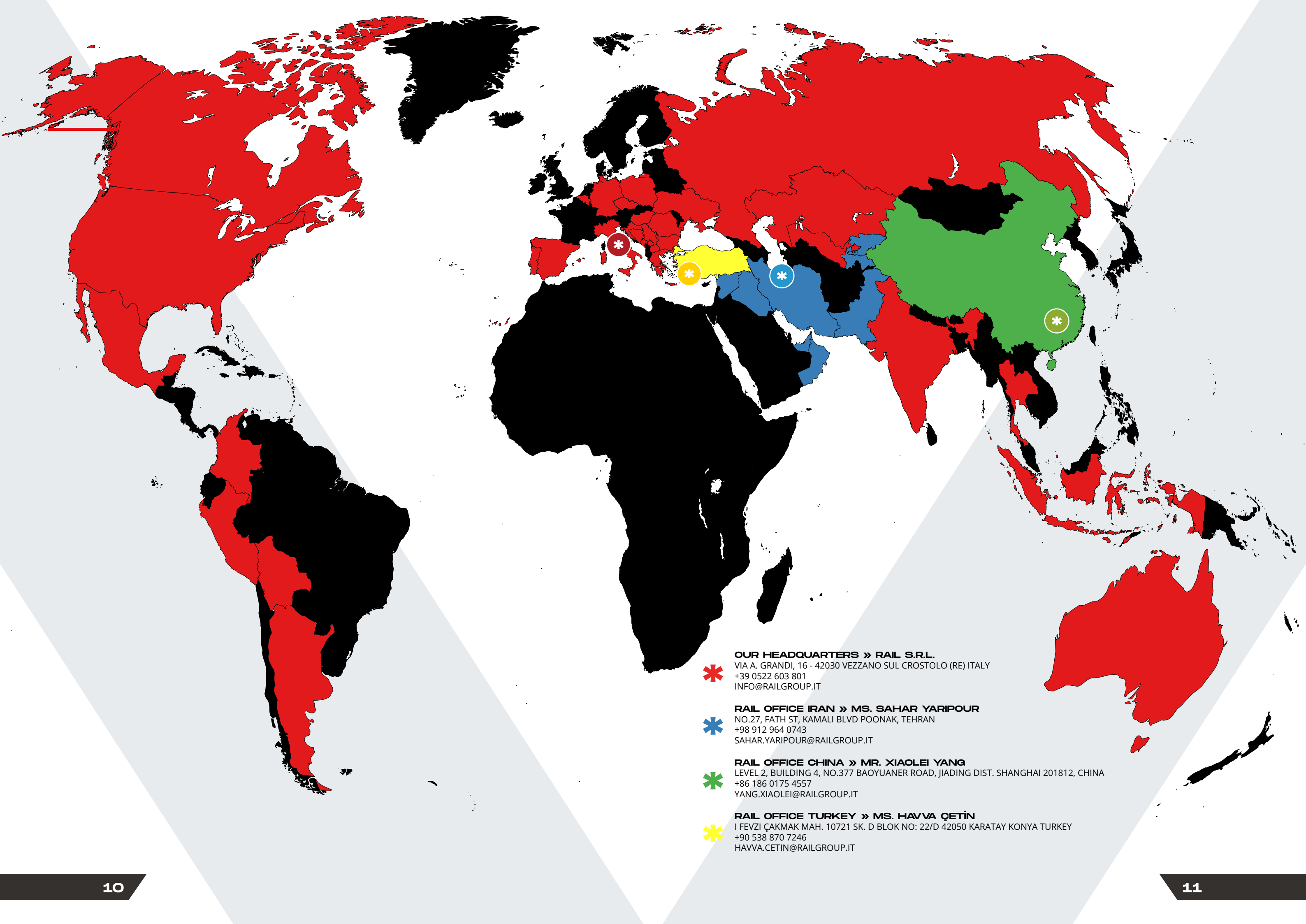
We are strongly  
focused on continuous  
improvement





# The essence of innovation





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# OUR ACHIEVEMENTS

RAIL has now been in the business for over 17 years and throughout that time has always displayed a constant capacity for growth and innovation, as testified by the goals attained year by year.

From supplying international markets in 2014 to improving the performance of products like the IGI Apache HD injector, through to the development of new lines such as the Tyrion reducer and revolutionary IG4 Dakota OEM injector.

Ongoing investments in research and development have led to an expansion of our product range and enabled us to penetrate new segments of the market, as evidenced by our entrance into the CNG and LNG reducer sector.

Our strive towards innovation and to improve our production processes is what drives the irrepressible development of RAIL in its endeavour to become a leading player in its particular sector.

2014  
2014  
2016  
2016  
2016  
2017  
2019  
2019  
2020  
2021  
2023  
2024

- We supply IG1, IGI Apache injectors to Chinese OEMs
- IG1 Apache HD/ IGI 2014: increased product lifespan and reliability, with a consequently longer warranty period
- IG1 Apache HD injectors last over 150,000 km in a group of taxis in Thailand, without requiring any maintenance
- IG1 Apache HD/ IGI 2014: no complaints about performance or lifespan since 2014
- RAIL celebrates its tenth anniversary
- IG7 Dakota reaches 1 billion cycles in laboratory endurance tests
- 3,620,000 of 4-, 3- and 2-cylinder injectors sold between 2006 and December 2019
- IG7 Dakota: All-time minimum number of complaints from the field
- Production of the Tyrion CNG reducer begins
- Beginning of production of the IG4 Dakota AM and OEM injector and development of the LNG Greener reducer
- ISO 15500 certification in India for IG4, IG7 and LNG Greener
- Work in progress, new products and new solutions



Our strive towards innovation and to improve our production processes is what drives the irrepressible development of Rail in its endeavour to become a leading player in its particular sector

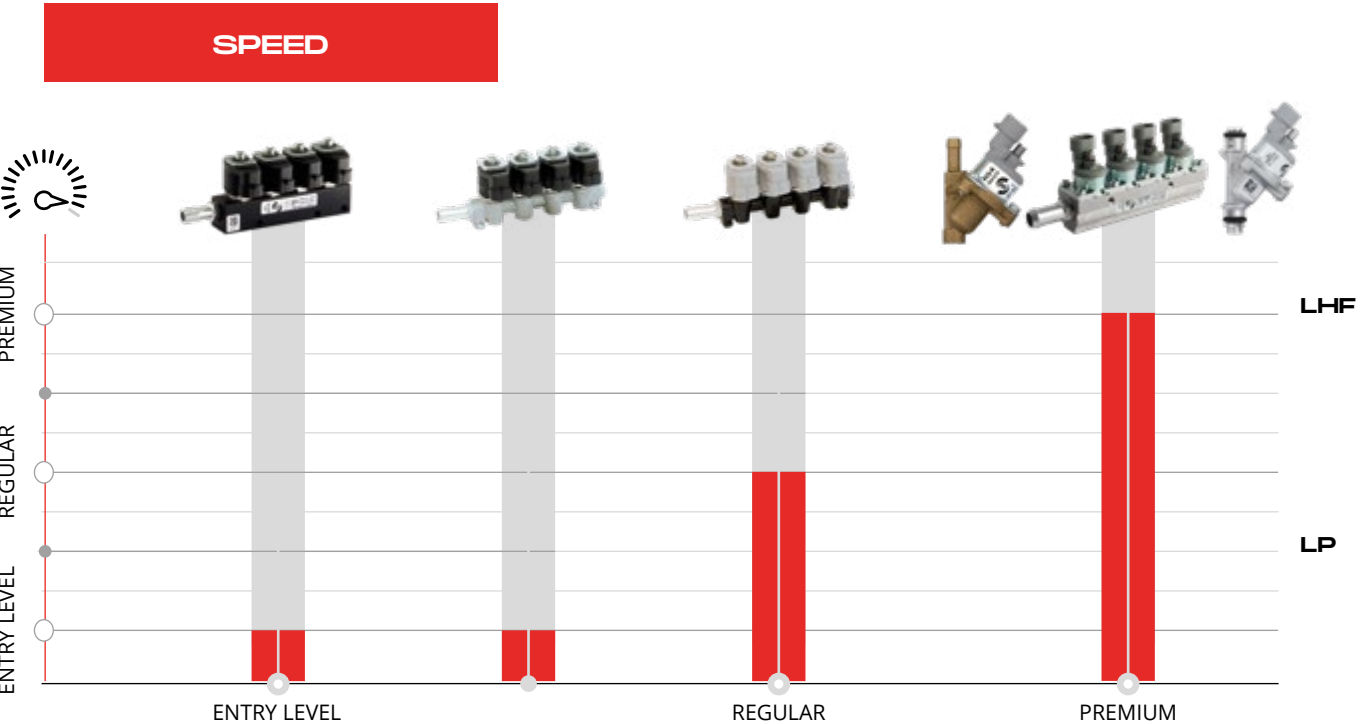
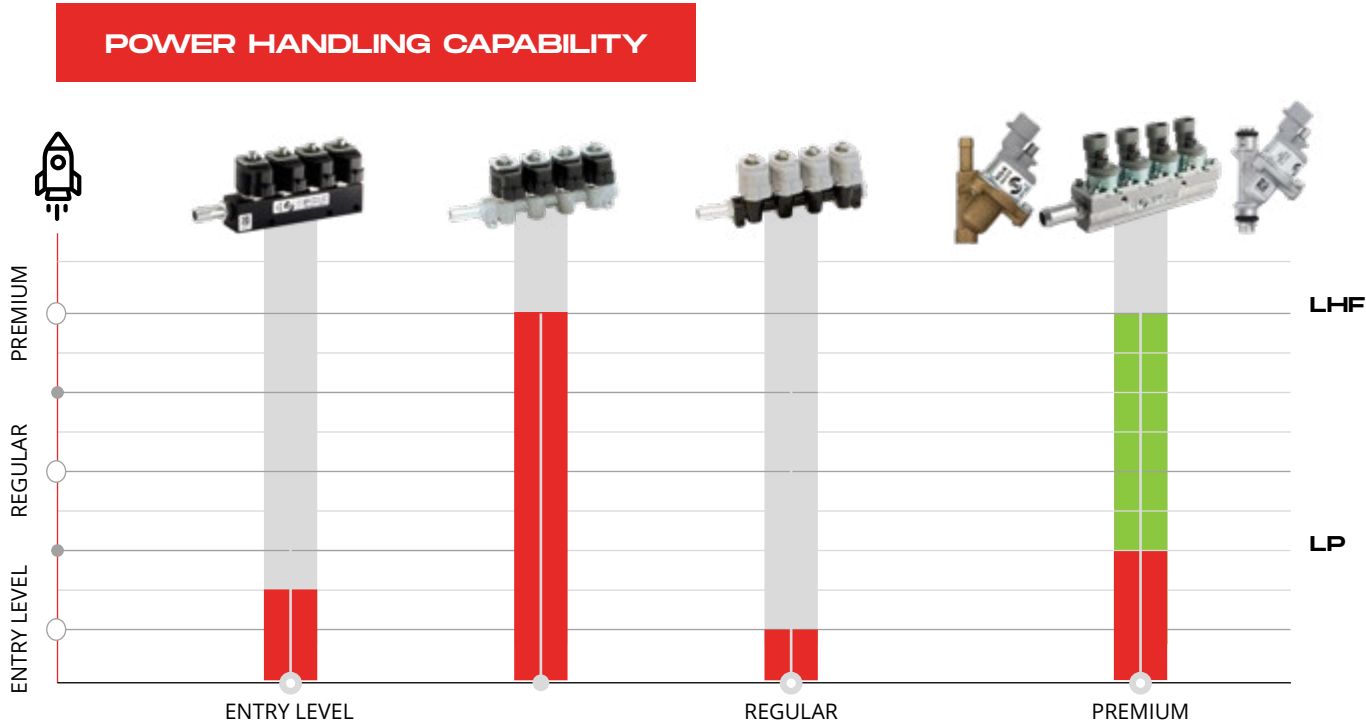
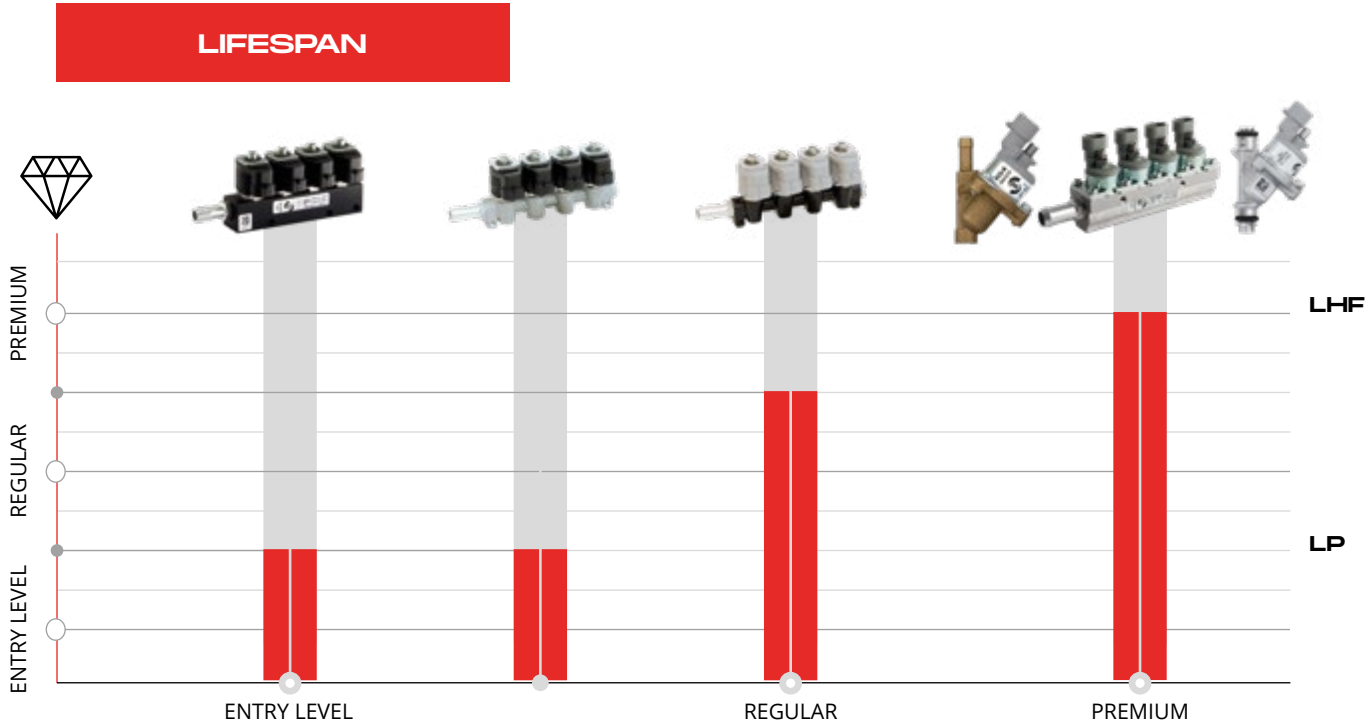




our  
products



# PRODUCT SPECIFICATIONS





# TECHNICAL INFORMATION

OEM	IG7 DAKOTA			IG4 DAKOTA OEM		
	LP		LHF	LP		LHF
	1 Ohm / 2 Ohm		2 Ohm	1 Ohm / 2 Ohm		2 Ohm
FUEL TYPE ON APPLICATION	LPG - CNG			LPG - CNG		
OPENING TIME (ms)	1.4	1.7	1.8	1.4	1.7	1.8
MAX POWER FOR LPG 1 BAR (kW)	28/Cyl.	33/Cyl.	43/Cyl.	28/Cyl.	33/Cyl.	43/Cyl.
MAX POWER FOR CNG 2 BAR (kW)	25/Cyl.	29/Cyl.	38/Cyl.	25/Cyl.	29/Cyl.	38/Cyl.
DURABILITY	1 Billion		700 Million	1 Billion		700 Million

Technical features of injectors for the application: oem, 0 km, passenger vehicles, bi-fuel or monofuel, light commercial vehicles, direct injection engine

HEAVY DUTY	IG6 POTOMAC		IG6 TAURUS II		IG7 DAKOTA HP	IG4 DAKOTA "8L"	
	Coil Resistance 1,5 Ohm	Coil Resistance 4,7 Ohm	Coil Resistance 1,5 Ohm	Coil Resistance 4,7 Ohm	2 Ohm	Coil Resistance 1 Ohm	Coil Resistance 4,7 Ohm
FUEL TYPE ON APPLICATION	CNG		CNG		CNG	CNG	
OPENING TIME (ms)	2.15	2.1	2.4	2.4	1.9	2.7	
MAX FLOW RATE	15.2 Kg/h	15.2 Kg/h	18 Kg/h x Cyl.	18 Kg/h x Cyl.	17 Kg/h x Cyl.	31.1 Kg/h x Cyl.	
N° OF CYLINDER	1 SINGLE		3, 4, 5 AND 6		2, 3 AND 4	1 SINGLE	
DURABILITY	500 Million		500 Million		500 Million	500 Million	
MAX PRESSURE RANGE	5 / 9	5 / 9	5 / 9	5 / 9	7	8	

Technical features of injectors for the application: heavy duty multi point&single point inj. ; bus, truck, industrial engine, generators (stationary engine)

AFTER MARKET	IG1		IG1 APACHE		IG1 APACHE HD	IG7 DAKOTA		IG4 AFTER MARKET VERSION	
						LP Version	LHF Version	LP Version	LHF Version
	For 2 Ohm	For 3 Ohm	For 2 Ohm	For 3 Ohm	Only 2 Ohm Available	Only 2 Ohm Available		Only 2 Ohm Available	
FUEL TYPE ON APPLICATION	LPG / CNG		LPG / CNG		LPG / CNG	LPG / CNG		LPG / CNG	
OPENING TIME (ms)	2.8	3.2	2.8	3.2	2.5	1.7	1.8	2	2.1
POWER RANGE FOR LPG 1 BAR (kW)	From 11 to 33 kW/per cylinder		From 11 to 37 kW/per cylinder		From 11 to 30 kW/per cylinder	From 12 to 33 kW/per cylinder	From 11 to 43 kW/per cylinder	From 12 to 33 kW/per cylinder	From 11 to 43 kW/per cylinder
POWER RANGE FOR CNG 2 BAR (kW)	From 11 to 29 kW/per cylinder		From 11 to 33 kW/per cylinder		From 11 to 25 kW/per cylinder	From 10 to 29 kW/per cylinder	From 10 to 38 kW/per cylinder	From 10 to 29 kW/per cylinder	From 10 to 38 kW/per cylinder
DURABILITY	250 million cycles		250 million cycles		500 million cycles	1 billion cycles	700 million cycles	1 billion cycles	700 million cycles
SEGMENT	ENTRY LEVEL		ENTRY-MEDIUM LEVEL		MEDIUM LEVEL	HIGH LEVEL		HIGH LEVEL	

Basic technical features of injectors for the application: bi-fuel, passenger vehicles & light commercial vehicles - multipoint injection - direct injection engine



# CUSTOMIZED PRODUCTS

We tailor our injectors to the customers’ specific requirements. Backed by the know-how acquired by our technical staff members and the ongoing progress of our production processes, we are able to provide products customized down to the smallest detail.

We can customize the logo by laser engraving to make the product unique and distinctive.

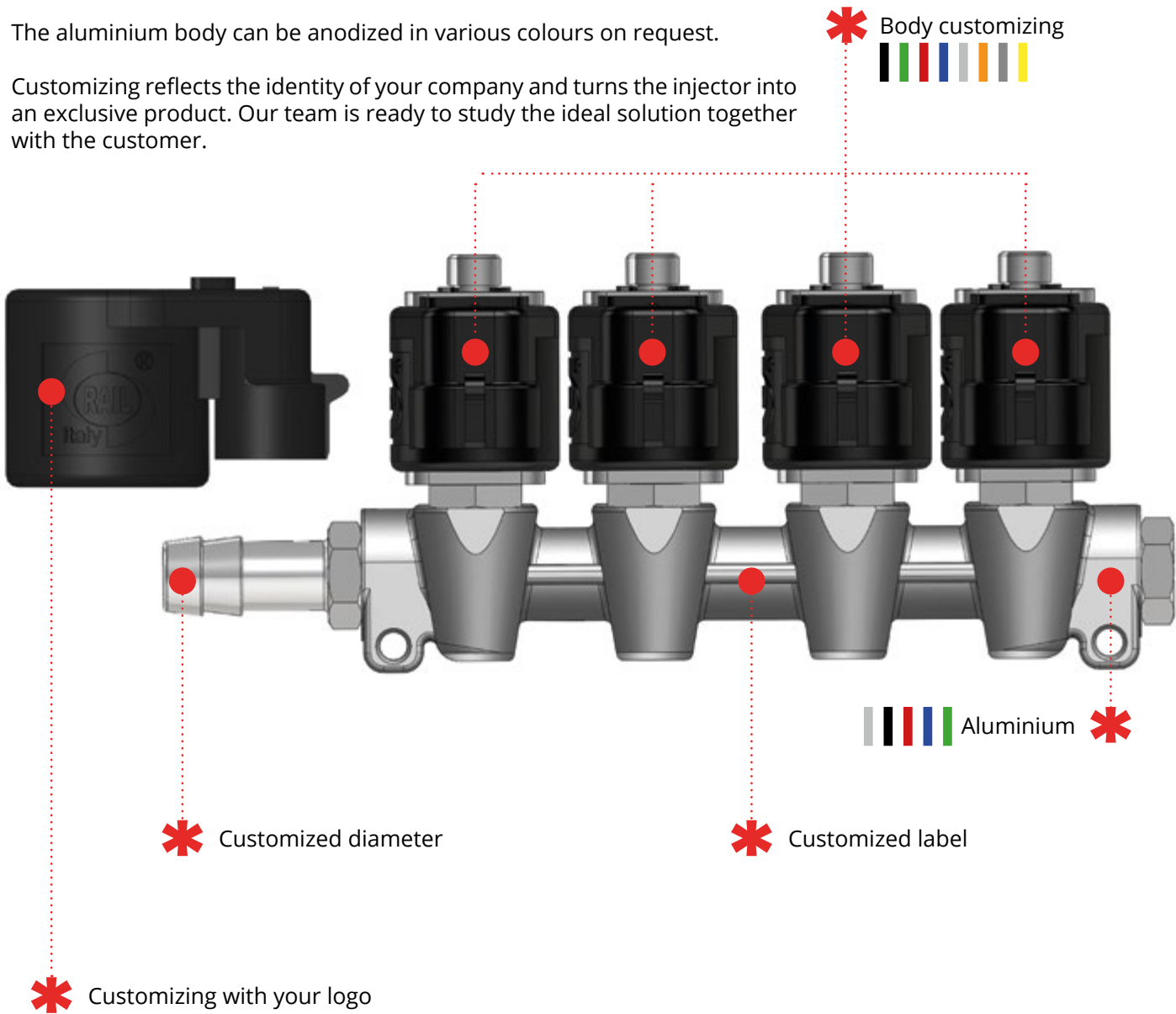
The customer can also have the coil customized with a chosen colour and trademark.

The inlet diameter of the injector can be modified on request.

The customer can choose the trademark and colour on the label to create a signature product.

The aluminium body can be anodized in various colours on request.

Customizing reflects the identity of your company and turns the injector into an exclusive product. Our team is ready to study the ideal solution together with the customer.



# KEY TO SYMBOLS

	High performance		Description
	Average performance		Accessories
	Technological injector		Aluminium
	Basic cost		Polymeric material
	Normal cost		Brass
	High cost		Steel

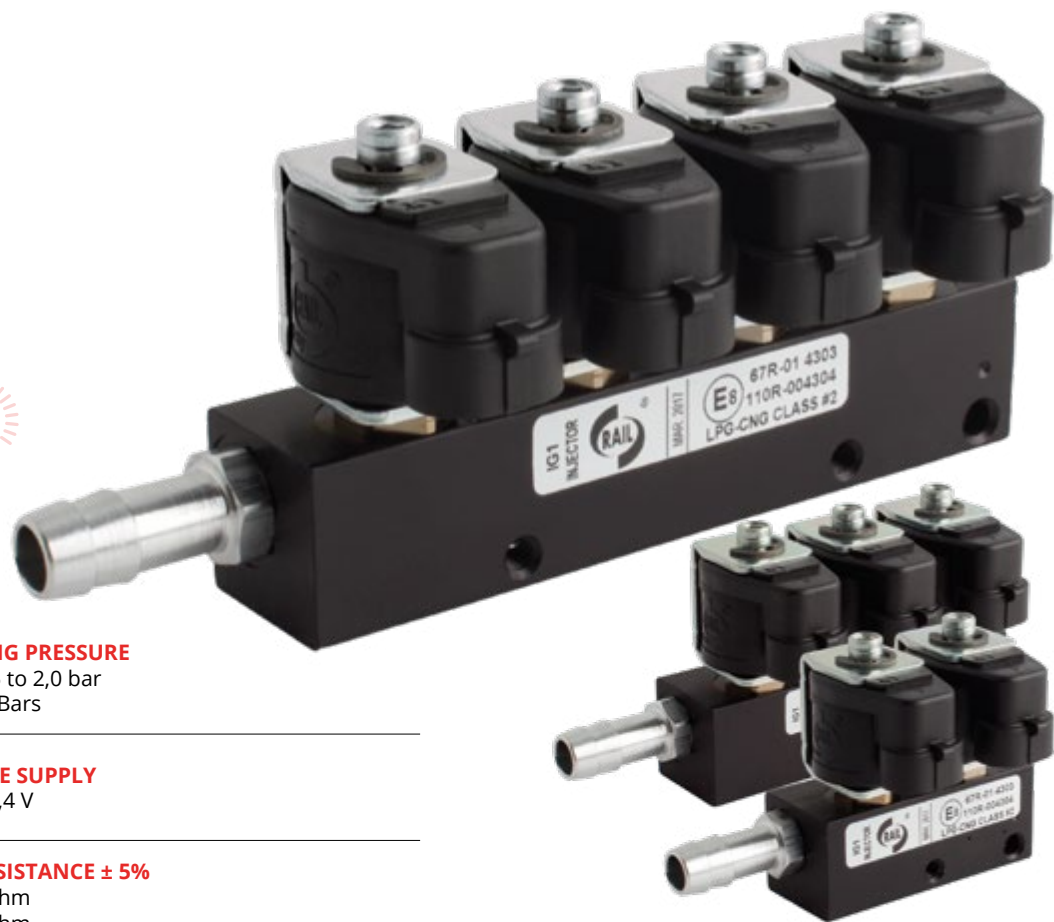




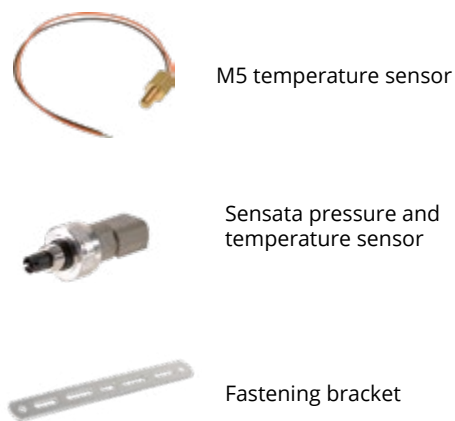
**INJECTORS  
FOR LPG – CNG  
APPLICATIONS**



IG1  
OLD

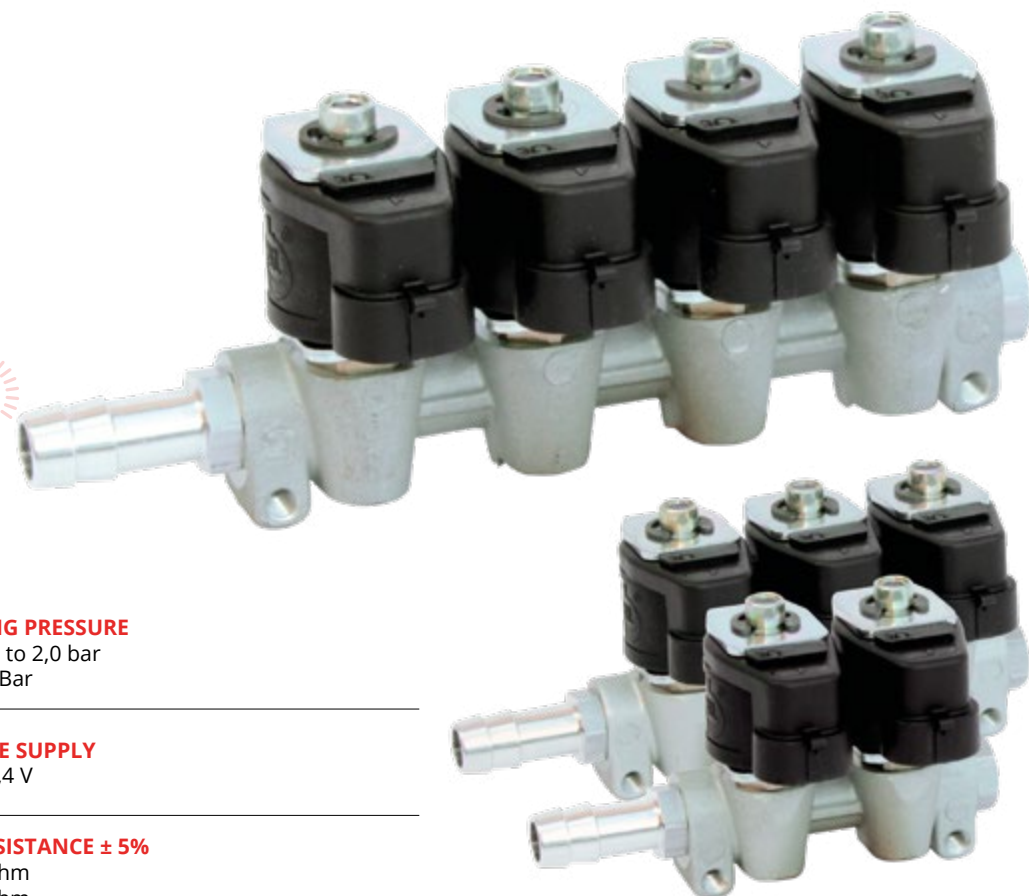


	<b>WORKING PRESSURE</b> From 0,5 to 2,0 bar Max 3,0 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> A2 2,0 Ohm A3 3,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D. 14mm/16mm available on request)
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm (D. 4mm/5mm available on request)
	<b>HOLE CALIBRATION RANGE</b> 1,0 - 3,25 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LPG 1 bar 45HP/Cyl CNG 2 bars 40HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00 / ISO 15500
	<b>MAIN FEATURE</b> TRIED-AND-TESTED INJECTOR
	<b>MAIN FEATURE</b> AVAILABLE IN THE 0.45 MM STROKE VERSION

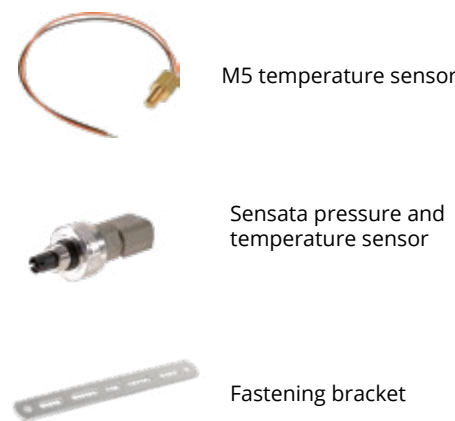


DATA SHEET

IG1  
APACHE



	<b>WORKING PRESSURE</b> From 0,5 to 2,0 bar MAX 3,0 Bar
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> A2 2,0 Ohm A3 3,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D. 14mm/16mm available on request)
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm (D. 4mm/5mm available on request)
	<b>HOLE CALIBRATION RANGE</b> 1,0 - 3,25 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LPG 1 bar 63HP/Cyl CNG 2 bars 52HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00 / ISO 15500
	<b>MAIN FEATURE</b> HIGH POWER HANDLING CAPABILITY
	<b>MAIN FEATURE</b> STYLIZED BODY



DATA SHEET

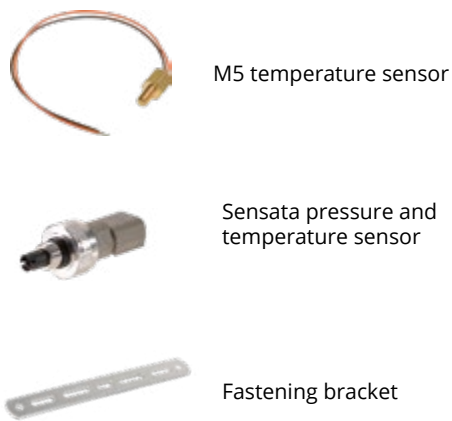


# IG1

## APACHE HD



	<b>WORKING PRESSURE</b> From 0,5 to 2,0 bar MAX 3,0 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> A2 2,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D. 14mm/16mm available on request)
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm (D. 4mm/5mm available on request)
	<b>HOLE CALIBRATION RANGE</b> 1,0 - 2,75 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LPG 1 bar 45HP/Cyl CNG 2 bars 40HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00 / ISO 15500
	<b>MAIN FEATURE</b> MEDIUM RATE INJECTOR
	<b>MAIN FEATURE</b> STAINLESS STEEL MECHANICAL COMPONENTS

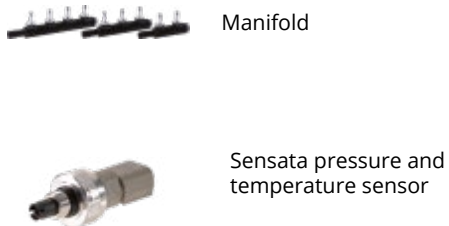


DATA SHEET

# IG2



	<b>WORKING PRESSURE</b> From 0,5 to 2,0 bar MAX 3,0 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> A2 2,0 Ohm A3 3,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> On Manifold Rubber hose D. 12mm
	<b>GAS INLET FITTING DIAMETER</b> From Manifold to injector inlet Rubber hose D.7mm
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm (D. 4mm/5mm available on request)
	<b>HOLE CALIBRATION RANGE</b> 1,0 - 3,25 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LPG 1 bar 50HP/Cyl CNG 2 bars 45HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C CNG -20° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00
	<b>MAIN FEATURE</b> SINGLE INJECTOR



DATA SHEET

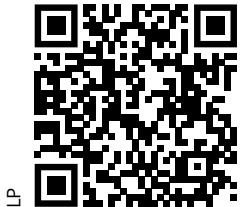


# IG4

## DAKOTA AFTER MARKET



	<b>WORKING PRESSURE</b> From 0,5 to 3,0 bar MAX 4,5 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> E2 2,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 6mm/8mm
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm
	<b>HOLE CALIBRATION RANGE</b> LP 1,0 - 2,75 mm (0,25mm step) LHF 1,0 - 3,50 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LP LPG 1 bar 40HP/Cyl LHF LPG 1 bar 60HP/Cyl LP CNG 2 bar 35HP/Cyl LHF CNG 2 bar 50HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00



DATA SHEET

# IG4

## DAKOTA OEM



	<b>WORKING PRESSURE</b> From 0,5 to 3,0 bar MAX 4,5 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> E2 2,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Installation on common rail
	<b>GAS OUTLET FITTING DIAMETER</b> Installation on engine manifold
	<b>HOLE CALIBRATION RANGE</b> LP 1,0 - 3,00mm (0,25mm step) HP 1,0 - 1,75mm (0,25mm step) LHF use without nozzles
	<b>POWER HANDLING CAPABILITY</b> LP LPG 1 bar 40HP/Cyl LHF LPG 1 bar 60HP/Cyl LP CNG 2 bar 35HP/Cyl LHF CNG 2 bar 50HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00 / ISO 15500

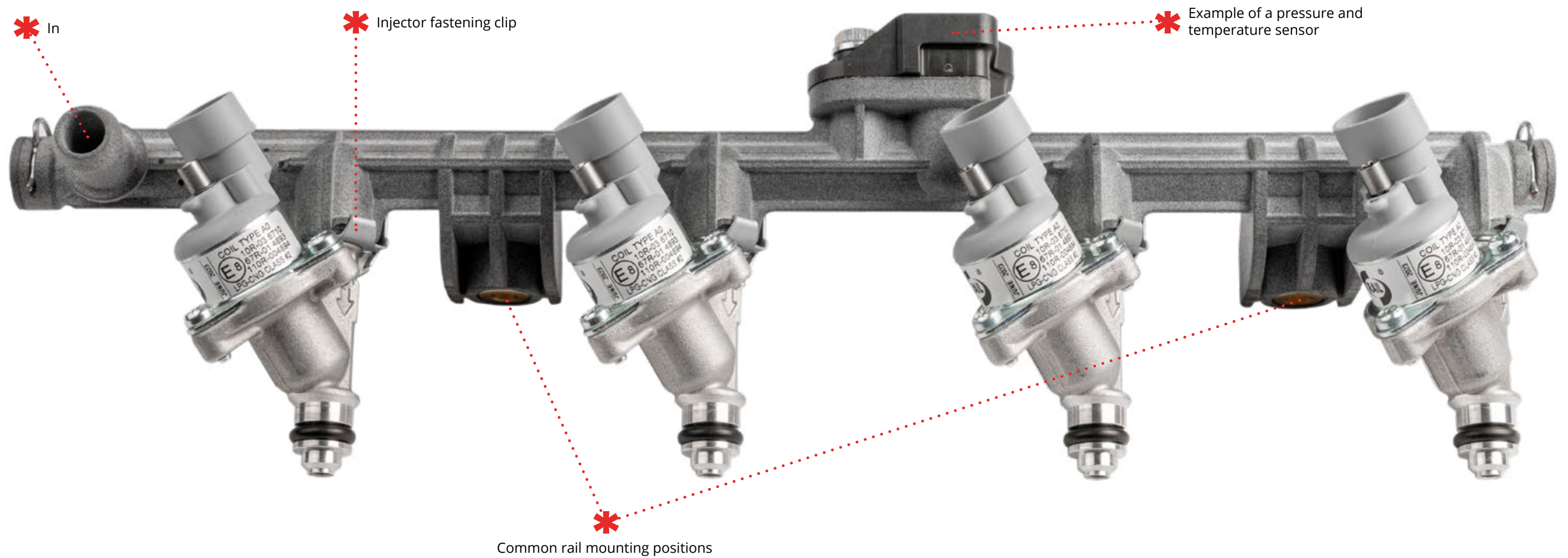


DATA SHEET



# IG4

## OEM COMMON RAIL



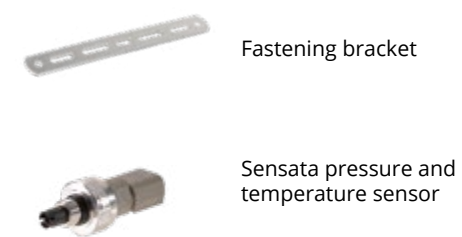
IF REQUESTED BY THE CUSTOMER, RAIL CAN DEVELOP SPECIFIC SOLUTIONS FOR  
COMPLETE INJECTOR + COMMON RAIL + SENSOR UNITS



# IG7 DAKOTA LP & LHF



	<b>WORKING PRESSURE</b> From 0,5 to 3,0 bar MAX 4,5 Bars
	<b>VOLTAGE SUPPLY</b> 10,8 - 14,4 V
	<b>COIL RESISTANCE ± 5%</b> E2 2,0 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D.14mm/16mm available on request)
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm
	<b>HOLE CALIBRATION RANGE</b> LP 1,0 - 3,25 mm (0,25mm step) LHF 1,0 - 3,50 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> LP LPG 1 bar 40HP/Cyl LHF LPG 1 bar 60HP/Cyl LP CNG 2 bar 35HP/Cyl LHF CNG 2 bar 50HP/Cyl
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 67R-01 / 110R-00 / ISO 15500



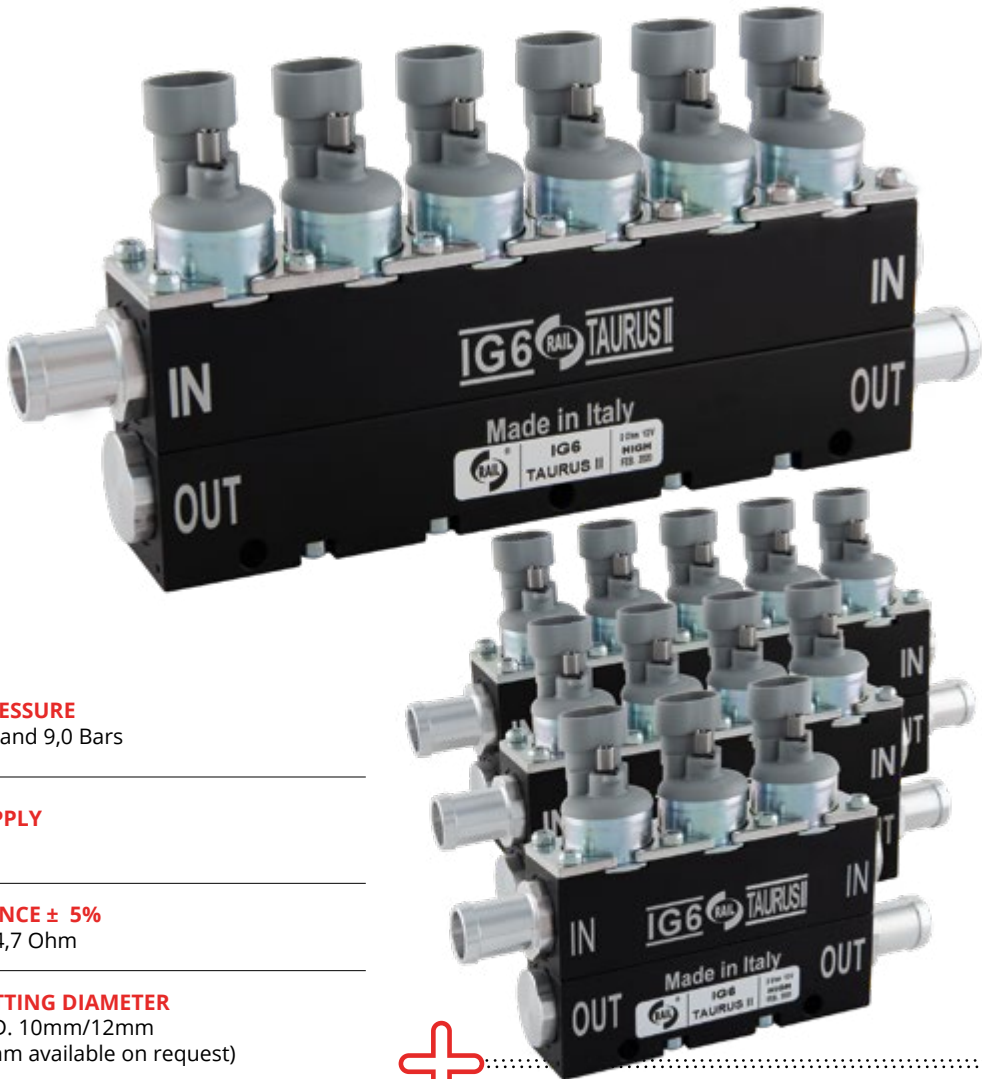
DATA SHEET






LPG – CNG  
INJECTORS  
FOR HEAVY-DUTY  
VEHICLES  
HIGH PRESSURE



# IG6 TAURUS II

AI



	<b>WORKING PRESSURE</b> Version at 5,0 and 9,0 Bars
	<b>VOLTAGE SUPPLY</b> 12V e 24V
	<b>COIL RESISTANCE ± 5%</b> E2 2,0 Ohm / 4,7 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D.14mm/16mm available on request)
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C



Sensata pressure and temperature sensor

12V HP 20hm



12V LP 20hm



24V HP 4,7Ohm



24V LP 4,7Ohm

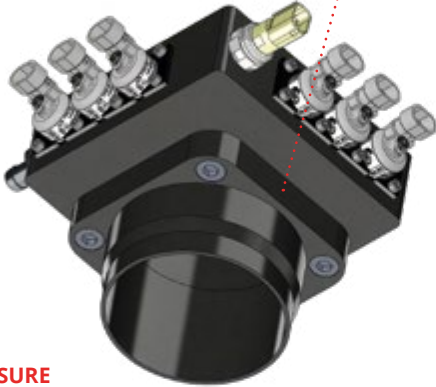


DATA SHEET

Specific injector for converting from Diesel to LPG/CNG in heavy-duty vehicles







# IG6 POTOMAC

FeC GALVANIZED  
STEEL BODY



Example of a mixer



	<b>WORKING PRESSURE</b> Version at 5,0 and 9,0 Bars
	<b>VOLTAGE SUPPLY</b> 12V e 24V
	<b>COIL RESISTANCE ± 5%</b> E5 1,5 Ohm / 4,7 Ohm
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C
	<b>CERTIFICATES</b> 110R-00
	<b>MAIN FEATURE</b> CARTRIDGE INJECTOR FOR USE IN CONJUNCTION WITH A MIXER



Sensata pressure and temperature sensor

24V 5 Bar 4,7 Ohm



12V 5 Bar 1,5 Ohm

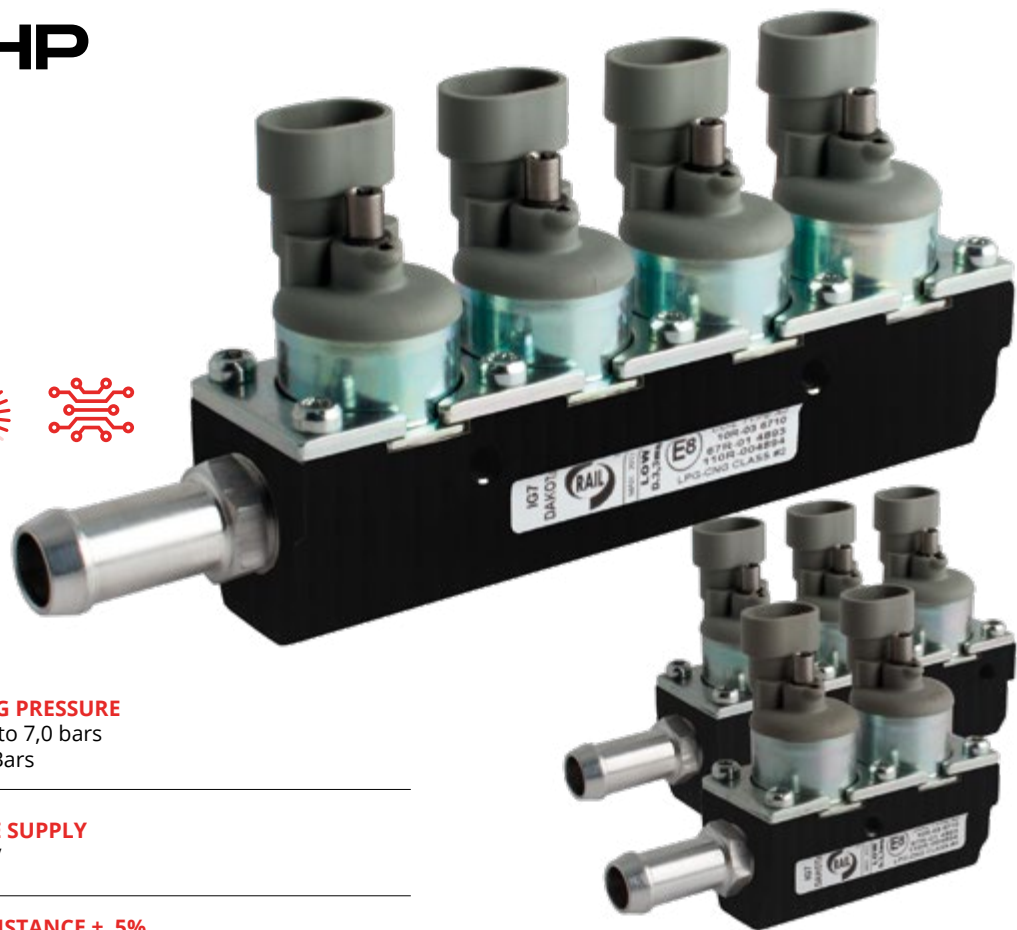


DATA SHEET

Specific injector for converting from Diesel to LPG/CNG in heavy-duty vehicles



# IG7 DAKOTA HP



	<b>WORKING PRESSURE</b> From 0,5 to 7,0 bars MAX 9,0 Bars
	<b>VOLTAGE SUPPLY</b> 12V e 24V
	<b>COIL RESISTANCE <math>\pm</math> 5%</b> E2 2,0 Ohm / 4,7 Ohm
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm (D.14mm/16mm available on request)
	<b>GAS OUTLET FITTING DIAMETER</b> Calibrated nozzles M8x1 for rubber hose D.6mm
	<b>HOLE CALIBRATION RANGE</b> 1,0 - 2,0 mm (0,25mm step)
	<b>POWER HANDLING CAPABILITY</b> CNG 7 bar 64HP/Cyl
	<b>TEMPERATURE RANGE</b> CNG -40° / +120°C
	<b>CERTIFICATES</b> 110R-00



Sensata pressure and temperature sensor



Fastening bracket

HP



DATA SHEET

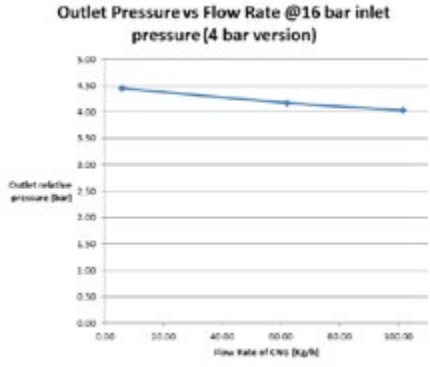
Multipoint injector for high pressure CNG applications

RANGE OF  
REDUCERS  
FILTERS  
ACCESSORIES



# GREENER LNG

SINGLE STAGE REDUCER  
FOR LNG APPLICATIONS  
SEQUENTIAL INJECTION



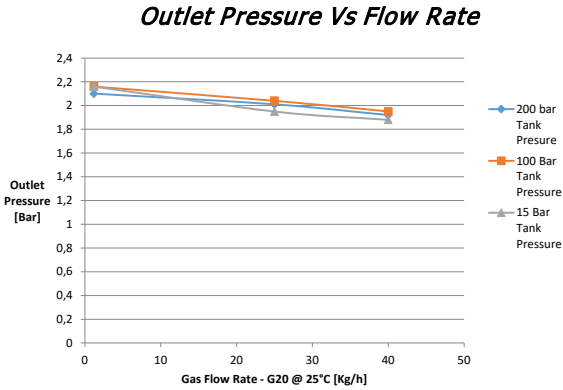
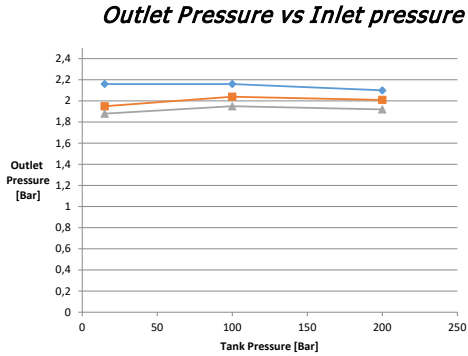
DATA SHEET

# TYRION CNG

SINGLE STAGE REDUCER  
FOR LNG APPLICATIONS  
SEQUENTIAL INJECTION



	<b>WORKING PRESSURE</b> INLET PRESSURE - From 15 to 200 Bars NOMINAL OUTLET PRESSURE - From 2 to 8 Bars
	<b>VOLTAGE SUPPLY</b> 12 V and 24 V
	<b>GAS INLET FITTING DIAMETER</b> INLET FITTING - M12X1 / 1/4" NPT UPON REQUEST
	<b>GAS OUTLET FITTING DIAMETER</b> OUTLET FITTING - 14MM
	<b>POWER HANDLING CAPABILITY</b> CNG up to 250 Kw
	<b>TEMPERATURE RANGE</b> CNG -40° / +120°C
	<b>CERTIFICATES</b> 110R-00 & ISO 15500



DATA SHEET

# FILTER FG3

LPG – CNG  
FILTER  
GASEOUS PHASE  
LOW PRESSURE



	<b>WORKING PRESSURE</b> Max 4,5 Bars
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 10mm/12mm/14mm/16mm
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C CNG -20° / +120°C



DATA SHEET

# FILTER FG4

LPG – CNG  
FILTER  
GASEOUS PHASE  
LOW PRESSURE



	<b>WORKING PRESSURE</b> Max 4,5 Bars
	<b>GAS INLET FITTING DIAMETER</b> Rubber hose D. 12mm
	<b>TEMPERATURE RANGE</b> LPG -40° / +120°C CNG -40° / +120°C
	<b>MAIN FEATURE</b> ACCESSIBLE FOR INSPECTION
	<b>MAIN FEATURE</b> VORTEX SYSTEM FOR SEPARATING OIL FROM THE GAS
	<b>MAIN FEATURE</b> HOUSING FOR BOSCH OR CONTINENTAL / SIEMENS SENSORS



Spare filter cartridge  
with O-rings



DATA SHEET

# AUS32 APPLICATIONS

FILTERS  
FOR AUS32 APPLICATIONS



**FU1**  
*Filter for AUS32 applications*  
New filter - developed in response to the new, emerging technology for reducing emissions - that uses AUS32, an aqueous solution containing 30% urea which converts the nitrogen oxides into water and harmless nitrogen.

- Compact size
- Flexible installation
- Connections compliant with SAE J2044 regulations
- EPDM seal material

**VU1 VALVE**  
*Valve for AUS32 applications*  
2-Way VU1 solenoid valve block for AUS32 applications, with outputs for sensors. 12 and 24 Volt ratings available

**FU4**  
*Filter for AUS32 applications*  
New filter - developed in response to the new, emerging technology for reducing emissions - that uses AUS32, an aqueous solution containing 30% urea which converts the nitrogen oxides into water and harmless nitrogen.

- Compact size
- Flexible installation
- Connections compliant with SAE J2044 regulations
- EPDM seal material



FU1  
Standard version



FU1  
Version with direct  
connection to pump



Valve for AUS32  
applications



Filter for  
AUS32 applications



VU1 VALVE










FU4 - AUS32 Filter

DATA SHEET



SOLENOID VALVE  
FOR LPG APPLICATIONS



	<b>WORKING PRESSURE</b> Max 3 MPa
	<b>VOLTAGE SUPPLY</b> 12V DC
	<b>COIL RESISTANCE ± 5%</b> 12,3 Ohm
	<b>GAS INLET FITTING DIAMETER</b> M10x1 Female
	<b>GAS OUTLET FITTING DIAMETER</b> M10x1 Female
	<b>TEMPERATURE RANGE</b> LPG -20° / +120°C
	<b>CERTIFICATES</b> ECE 67R-01



Wired cable L=500mm  
with male connector,  
AMP Superseal blade  
receptacle for  
connecting coils



Fastening bracket









DATA SHEET

LPG  
THERMOPLASTIC HOSE

EXTRA  
ACCESSORIES



	<b>WORKING PRESSURE</b> Max working pressure 30 Bars
	<b>GAS INLET FITTING DIAMETER</b> 3/16" Internal diameter 4.8 mm 1/4" Internal diameter 6.4 mm
	<b>GAS OUTLET FITTING DIAMETER</b> 3/16" External diameter 9.2 mm 1/4" External diameter 10.8 mm
	<b>TEMPERATURE RANGE</b> LPG -40° / +125°C
	<b>CERTIFICATES</b> 67R-01
	<b>MAIN FEATURE</b> <b>POLYAMIDE INNER CORE REINFORCED WITH SINGLE BRAID IN TEXTILE YARN AND POLYURETHANE OUTER SHEATHING</b>



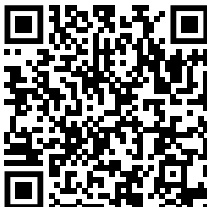
Also available in the "KIT" version  
comprising the following components.

- THERMOPLASTIC HOSE KIT  
D.6 mm and D.8 mm "straight fitting"

6 meters of D.6 mm or D.8 mm thermoplastic hose  
2x D.6 mm or D.8 mm straight fitting  
2x D.6 mm or D.8 mm conical ring  
2x D.6 mm or D.8 mm nut

- THERMOPLASTIC HOSE KIT  
D.6 mm and D.8 mm "90° Elbow fitting"

6 meters of D.6 mm or D.8 mm thermoplastic hose  
1x D.6 mm or D.8 mm straight fitting  
1x D.6 mm or D.8 mm 90° elbow fitting 2x D.6 mm or D.8  
mm conical ring  
2x D.6 mm or D.8 mm nut



DATA SHEET



# ACCESSORIES

## NOZZLES



Brass calibrated nozzle for IG1, IG1 Apache, IG1 Apache HD, IG2 Metis, IG2 Namur II, IG7 Dakota, IG4 injectors



90° intake manifold nozzle for all types of sequential applications. Improves air and gas mixing efficiency and quality.



Long intake manifold nozzle. Suitable for large intake manifolds and for MAP tapping points

## FITTINGS



Fitting for D.5 mm/6 mm rubber hoses, for M12x1 MAP tapping point. For IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



Y branch in thermoplastic resin for D.5 mm/10 mm/12 mm hoses



Wired cable L=500 mm with male connector, AMP Superseal blade receptacle for connecting injector coils



M12x1 gas inlet connector for D.10 mm hose; for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M12x1 adapter for Sensata pressure and temperature sensor; for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M12x1 gas inlet connector for D.12 mm hose; for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M12x1 gas inlet fitting for D.14 mm hoses; for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors

## SENSORS



Fitting for rubber hoses with D.5 mm or D.6 mm internal diameter for injector outlet pressure tapping point. With integrated NTC 4.7 kOhm temperature sensor for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



Fitting for rubber hoses with D.5 mm or D.6 mm internal diameter for injector outlet pressure tapping point. With integrated NTC 4.7 kOhm temperature sensor and AMP connector for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



Fitting for rubber hoses with D.5 or D.6 mm internal diameter for injector outlet pressure signal tapping point. With integrated NTC 4.7 kOhm temperature sensor and SICMA II connector for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M5 NTC 4.7 kOhm temperature sensor with stripped wires for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M5 NTC 4.7 kOhm temperature sensor with AMP connector for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota injectors



M5 NTC 4.7 kOhm temperature sensor with SICMA II connector for IG1, IG1 Apache, IG1 Apache HD and IG7 Dakota connectors



Sensata AMP Micro temperature and pressure sensor



AMP wired cable L=230 mm for Sensata sensor



# ACCESSORIES

## BRACKETS



Fixing bracket

## REPAIR KIT



Replacement kit for IG1 Old, IG1 Apache, IG1 Apache HD, IG2 Namur II and IG2 Metis 4 cylinder injectors comprising 4x complete mobile plungers, 4x springs and 4x O-ring sleeves.



Replacement kit for IG4, IG6, IG7 Dakota 1-cylinder injectors comprising 1x complete mobile plunger, 1x spring, 1x coil disk and 1x plastic bushing



Spare filter cartridge with O-rings for FG4 filters

## MANIFOLD



Manifolds to use with IG2 Metis, IG2 Namur II and IG4 Dakota A.M. single injectors 12 mm diameter available.

# ON SEAT CALIBRATOR

## EXTRA ACCESSORIES

Hand tool for measuring injector stroke; for IG1, IG1 Apache, IG1 Apache HD, IG2 Namur II, IG2 Metis and IG7 Dakota injectors.







**HOLDIM**  
group



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