



SEQUENT 24.11

Instalatie cu injectie secventiala GPL si CNG
LPG and CNG sequential injection system



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CENTRALINA GAZ - GPL / METAN

- Microprocesor automotiv 16 biti - 32 MHz
- Temperatura operativa: -40 °C + 100 °C
- Rezistent la imersiune in apa
- Conform normelor automotiv de protectie si a semnalelor de intrare/iesire
- Tensiune operativa: 7 V ÷ 17 V
- Controleaza pana la 4 injectoare
- Emularea si taierea injectoarelor integrate
- Omologare: R67-01 - R110 - 2004/104/CE

GAS ECU - LPG / CNG

- Automotive microprocessor 16 bit 32 MHz
- Operating Temperature: -40 °C + 100 °C
- Watertight through immersion
- According to automotive norms for protections and inlet/outlet signals
- Operating voltage: 7 V ÷ 17 V
- It pilots up to 4 injectors
- Integrated injectors cut and emulation
- Approval: R67-01 - R110 - 2004/104/CE



**ELECTROINJECTOR BRC IN03 MY09
GPL/METAN**

- ALIMENTARE DE JOS
- Obturator flotant fara frecare
 - Impedenta: 1,55 Ω / 1,7 mH la 20 °C
 - Temperatura: -40 °C ÷ 100 °C
 - Tensiune: 6 V ÷ 16 V
 - Etansare: Cauciuc pe metal
 - Omologare: R67-01; R110

**BRC IN03 MY09 ELECTROINJECTOR
LPG/CNG**

- BOTTOM FEED
- Floating shutter in friction total absence
 - Impedance: 1,55 Ω / 1,7 mH a 20 °C
 - Temperature: -40 °C ÷ 100 °C
 - Voltage: 6 V ÷ 16 V
 - Seal: Rubber on metal
 - Approval: R67-01; R110

Puteri alimentare GPL / LPG feed powers

Reductor / Reducer		800 mbari	1200 mbari	1500 mbari	MAX
Tip normal	A	16 kW/cil.	20 kW/cil.	-	-
	T	21 kW/cil.	25 kW/cil.	-	-
Tip max	A	-	26 kW/cil.	30 kW/cil.	30 kW/cil.
	T	-	32 kW/cil.	36 kW/cil.	36 kW/cil.
Tip supermax	A	-	-	40 kW/cil.	40 kW/cil.
	T	-	-	47 kW/cil.	47 kW/cil.

Valori indicative / Values by way of example only - A: Aspirat / Aspirated - T: Turbo / Supercharged

Puteri alimentare Metan / CNG feed powers

Reductor / Reducer		Zenith Δp 1600	Zenith Δp 2000	Zenith Δp 2500
Tip normal	A	16 kW/cil.	17 kW/cil.	20 kW/cil.
	S	19 kW/cil.	19 kW/cil.	23 kW/cil.
Tip max	A	20 kW/cil.	22 kW/cil.	26 kW/cil.
	S	24 kW/cil.	26 kW/cil.	30 kW/cil.
Tip supermax	A	22 kW/cil.	25 kW/cil.	29 kW/cil.
	S	27 kW/cil.	31 kW/cil.	34 kW/cil.

Valori indicative / Values by way of example only - A: Aspirat / Aspirated - S: Turbo / Supercharged



**SENZOR PTS SENSATA (pe rampa)
JOASA PRESIUNE GPL/METAN**

- Senzor de presiune si temperatura gaz
- Masa = 22 g
- Dimensiuni ø= 24 mm; h= 64,5 mm
- Conector integrat
- Tensiune de alimentare: 5,0 ± 0,1 VDC
- Curent nominal de comanda: 10 mA MAX
- Gama de valori tensiune de iesire (presiune): 0,5 la 4,5 V
- Temperatura operativa: -30 °C ÷ 130 °C
- Omologare: R67-01, R110

**PTS SENSATA SENSOR (on Rail)
LOW PRESSURE LPG/CNG**

- Gas pressure sensor
- Mass: 22 g
- Overall dimensions: ø= 24 mm, h= 64,5 mm
- Integrated connector
- Power Supply Voltage: 5 ± 0,1 VDC
- Supply Current: 10 mA MAX
- Output Voltage Range (pressure): 0,5 to 4,5 V
- Operating temperature -30 °C ÷ 130 °C
- Approval: R67-01, R110



COMUTATOR "ONE TOUCH" GPL/METAN

- Comutator digital
- ø exterior 26 mm
- Posibilitati de montare:
 - incastrat in bord printr-un orificiu de ø 23 mm, grosime 2 mm
 - aplicat pe bord printr-un orificiu de ø 14 mm, grosime 9 mm
- Avertizor acustic (buzzer)
- 4 Leduri verzi pt. indicarea nivelului
- 1 Led bicolor verde/rosu pt. indicare tip carburant

**ONE TOUCH CHANGEOVER
SWITCH LPG/CNG**

- SMD single-stable changeover switch
- ø outside 26 mm
- Possible installations:
 - built-in with ø 23 mm hole and 2 mm dimension
 - external on the dashboard with ø 14 mm hole and 9 mm dimension
- Acoustic indicator (buzzer)
- N° 4 green Ledds for level indication
- N° 1 bi-colour (green/red) Led for mode working indication



REDUCTOR GENIUS MAX - GPL

- Constructie mono-stadiu cu membrane
- Senzor temperatura apa
- Presiune reglata: 150 kPa corelata cu presiunea din galeria de admisie
- Nu necesita operatiuni de purjare
- Putere maxima de alimentare cu instalatia Sequent 24.11: 160 kW
- Omologare: R67-01

GENIUS MAX REDUCER - LPG

- Diaphragm single-stage type building
- Water Temperature Sensor
- Adjusted pressure: 150 kPa relative to the intake manifold pressure
- No bleeding operation needed
- Maximum supply power with Sequent 24.11 system: 160 kW
- Approval: R67-01



REDUCTOR GENIUS MB - GPL

- Constructie mono-stadiu cu membrana
- Senzor temperatura apa
- Presiune reglata: 800, 1200 sau 1500 mbari corelata cu presiunea din galeria de admisie
- Nu necesita operatiuni de purjare
- Putere maxima de alimentare cu instalatia Sequent 24.11: 140 kW
- Omologare: R67-01

GENIUS MB REDUCER - LPG

- Diaphragm single-stage type building
- Water Temperature Sensor
- Adjusted pressure: 800 or 1200 or 1500 mbar relative to the intake manifold pressure
- No bleeding operation needed
- Maximum supply power with Sequent 24.11 system: 140 kW
- Approval: R67-01



FILTRU IN FAZA GAZOASA - GPL

- Filtru cu cartus
- Pierderi de sarcina: 35 kPa cu $Q = 18000$ NI/h aer
- Grad de filtrare: $\beta_{10} \geq 75$
- Omologare: R67-01;

GASEOUS PHASE FILTER - LPG

- Filter with cartridge
- Load loss: 35 kPa with $Q = 18000$ NI/h air
- Filtration degree: $\beta_{10} \geq 75$
- Approval: R67-01;



REDUCTOR ZENITH - METAN

- Constructie dublu stadiu cu membrane
- Senzor temperatura apa
- Presiune reglata: 2000 mbari corelata cu presiunea din galeria de admisie
- Nu necesita operatiuni de purjare
- Putere maxima de alimentare cu instalatia Sequent 24.11: 160 kW
- Δp reglabil intre 1600 si 2500 mbari
- Omologare: R110

ZENITH REDUCER - CNG

- Double stage type with diaphragms
- Water Temperature Sensor
- Adjusted pressure: 2000 mbar relative to the intake manifold pressure
- No bleeding operation needed
- Maximum supply power with Sequent 24.11 system: 160 kW
- Δp adjustable between 1600 and 2500 mbar
- Approval: R110



SENZOR NIVEL GAZ (PE REDUCTORUL ZENITH)

- Senzor presiune metan
- ϕ extern 50 mm
- Plaja 0-400 Bari
- Plaja de lucru 0-260 Bari
- Tensiune de lucru: de la 5 la 10 V
- Gama de tensiuni de iesire: de la 0,5 la 4,5V
- Conexiune 1/4 BSP
- Omologare: R110

GAS LEVEL SENSOR (ON ZENITH REDUCER)

- CNG pressure sensor
- ϕ outside 50 mm
- Range 0-400 Bar
- Working range 0-260 Bar
- Working voltage from 5 to 10 V
- Output Voltage Range (pressure): 0,5 to 4,5 V
- Connection 1/4 BSP
- Approval: R110



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Sequent 24.11 este un sistem destinat pt. alimentarea cu **GPL/Metan** a motoarelor cu aprindere controlata. Nascut pentru a asigura cele mai bune performante, manevrabilitate si fiabilitate, instalatia Sequent 24.11 pastreaza caracteristicile instalatiilor BRC precedente. Mai jos gasiti principalele diferente dintre instalatiile BRC.

Sequent 24.11 is a system addressed to **LPG/CNG** supply of automotive controlled ignition engines born to assure the best working performances, driveability and reliability keeping the same main features of previous BRC gaseous injection systems. Hereunder the main differences between BRC systems.

CARACTERISTICI / FEATURES	KitVALE	SQ 24.11	SQ P&D	SQ P&D MY 10
Alimentare / Supply	GPL / LPG	GPL-Metan / LPG-CNG	GPL-Metan / LPG-CNG	GPL-Metan / LPG-CNG
Cilindri / Cylinders	≤ 4	≤ 4	5 - 6 - 8	≤ 4
Conector centralina gaz LPG ECU Connector	FCI 24 pini / Ways	FCI 24 pini / Ways	FCI 56 pini / Ways	FCI 64 pini / Ways
Material carcasa centralina gaz Gas Ecu Body Material	Plastic / Plastic	Plastic / Plastic	Aluminiu / Aluminium	Aluminiu / Aluminium Plastic / Plastic
Electrovalva gaz Gas Shut-off Solenoid Valves	2	2	2	
Reductor - Coturi intrare iesire apa Reducer - Coolant inlet outlet elbows	Plastic / Plastic	Plastic / Plastic	Alama / Brass	
Emulare interna a injectoarelor de benzina Internal Petrol Injectors Emulation	✓ Rezistiva / Resistive	✓ Rezistiva / Resistive	✓ Inductiva / Inductive	✓ Inductiva / Resistive
Semnal temperatura gaz integrat pe rampa Gas Temp. input integrated on Rail	✓	✗	✓	
Semnal presiune gaz integrat pe rampa Gas Pressure input integrated on Rail	✓	✓	✓	
Senzor temperatura apa pe reductor Water Temperature Sensor on Reducer	✗	✓	✓	
Nr. Semnale Sonda Lambda N° Lambda Oxygen Input	1	1	2	1
Semnal turatie RPM Signal	✓	✓	✓	
Senzor MAP MAP Sensor	Doar pt. calibrare Only for calibration	GPL / doar pt. calibrare LPG / only for calibration Metano / Inlus in kit CNG / Included	✓ Inclus in kit / Included	
Variator de avans metan intern(*) CNG Internal Timing Advance Processor (*)	✗	✗	✗	✓
Comunicare cu OBD-ul (K si CAN) Communication with OBD (K and CAN)	✗	✗	✓	
Comutare secventiala Sequential Fuel Switch OVER	✓	✓	✓	
Tip injectoare Injectors Type	Apache	IN03 / IN03 MY09	IN03 / IN03 MY09	
Indicator nivel gaz Gas Level Indication	Comutator / Switch Comutator / Switch	Comutator / Switch Comutator / Switch	Comutator / Switch Comutator / Switch	

(*) Pentru utilizarea variatoarelor pt. metan utilizati manualele dedicate sistemelor Sequent

(*) For using CNG Timing Advance Processors please make reference to respective Sequent systems handbooks

