

RI 21-JE

LPG REDUCER

INSTALLATION PROVISIONS & WARNINGS

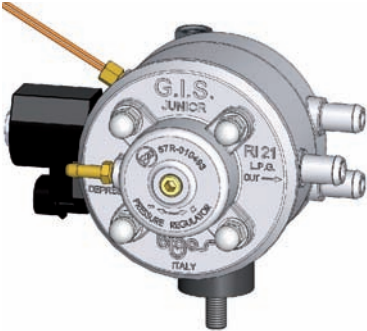


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Rev.01.02

1. DATA SHEET

Type of gas	LPG		
Model	RI21-JE 2.8	RI21-JE 4.0	
Engine maximum power	110 KW 147HP	120 KW 161HP	
Max flow rate	24.1 Kg/h 53.1 lb/h	28.9 Kg/h 63.7 lb/h	
Gas inlet pressure	30 bar (max.) 435 psi (max.)		
Working pressure	0.9 ÷ 1.8 bar 13 ÷ 26 psi	Adjustable	
Gas inlet	M10 x 1 x pipe		
<ul style="list-style-type: none"> Female connection for pipes 	ø 6mm /Steel		
Gas outlet	ø _{est} 10 mm /Aluminium		
Inlet / Outlet cooling liquid	ø _{est} 10 mm (n°2)/Aluminium		
Working temperature	-20° ÷ 120°C -4°F ÷ 248°F		
Electrical solenoid valve specification	12 V d.c. / 11 W		
Threaded pin fixing	M8 x 1,25mm coarse pitch	ISO261	
Overall dimension	140X105X100 mm 5.5X4.1X3.9 inch		
Weight	0,9 Kg 1,98 lbs		
Approval	ECE R67		



GENERAL INFORMATION

LPG Reducer RI21-JE

Pressure reducer with one reducing stage for sequential injection systems

Body construction material: aluminium

Integrated solenoid valve

Equipped with anti-vibration system Silent Block

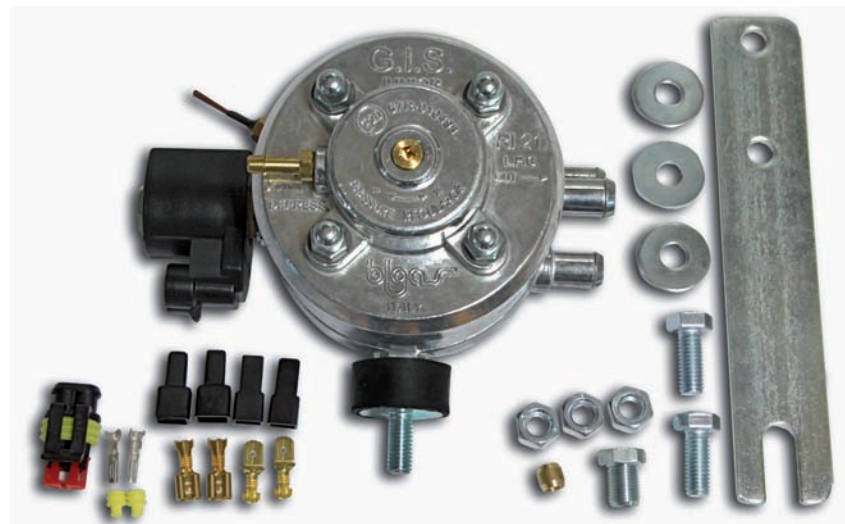
Water circuit suitable

2. GENERAL DESCRIPTION

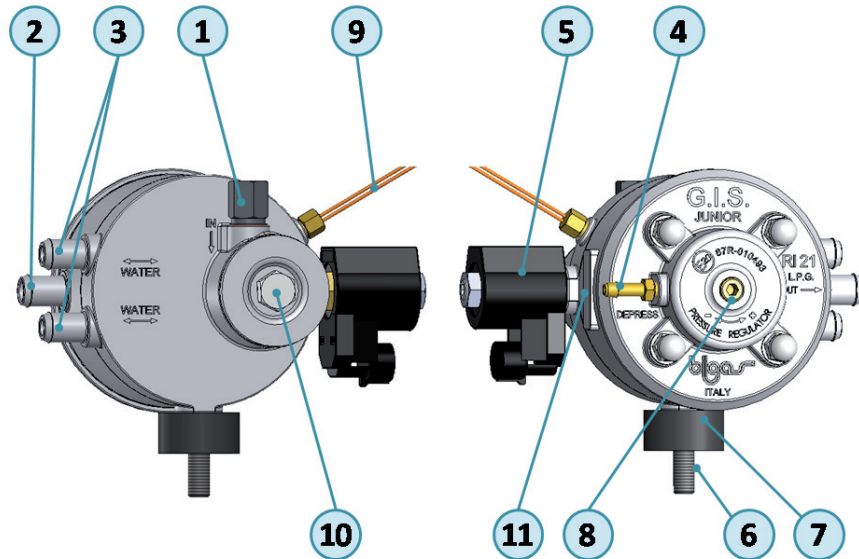
Before the installation, take sure that the device has been supplied with all the necessary accessories provided in the package, as listed below (see pic. 1):

Code	Description	Q.ty
RIDGB2J530E*	LPG Reducer RI21-JE 2.8	1 pc
RIDGB2J570E**	LPG Reducer RI21-JE 4.0	
STAF0101030	Fixing bracket - 165X30 mm (6.5 X 1.18 in)	1 pc
SACCB040060	Accessories bag (Nipples, bicone, nuts, washer, faston and cover-faston, connector super seal, etc...)	1 pc
CERT0103000	Final testing certificate	

*) the part nr refers itself to the assembled reducer not valid for the sale. For purchase refer to part nr. **RIDGB2J030E** **) For purchase refer to part nr. **RIDGB2J070E**



Pic. 1 - Complete reducer with supplied accessories, picture for illustrative purpose



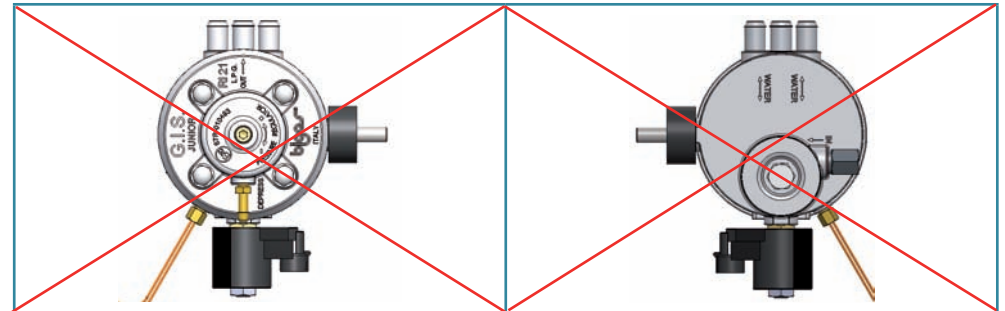
	Description
1	Gas inlet fitting
2	Gas outlet fitting
3	Water inlet / outlet fitting
4	Vacuum union
5	Solenoid valve
6	Threaded pin fixing
7	Anti-vibration system Silent Block
8	Pressure adjusting screw
9	Temperature sensor
10	Fixing screw filter cover
11	Pressure reducer serial number

3. PROVISIONS & WARNINGS

3.1 Reducer installing positions



Do not install the pressure reducer in the following positions



INCORRECT INSTALLATION



Never connect the pressure reducer directly to the engine or to the engine components.



Do not install the pressure reducer to the bulkhead which separates the engine compartment from the vehicle.






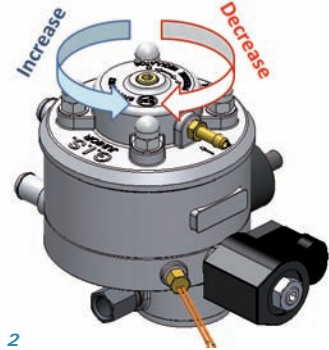
When the engine is running, verify that the pressure reducer does not hit any other device.

Using the bracket provided, fix the pressure reducer by the threaded pin (6) with Silent Block system to the car body, in order to avoid vibration to the pressure reducer while it is working. Bracket can be bent or directed as needed.



Place the pressure reducer always in a lower position than the height of the cooling liquid expansion tank, in order to prevent air bubbles which may form in the water circuit.

3.2	Piping connections	
	For all kind of pipes the installer has to observe the following rules:	
	<ul style="list-style-type: none"> • During the vehicle running there should be no movements that generate friction and usury of the pipes with other devices of the engine compartment (i.e. against sharp edges or moving parts like drive belts). • Pipes should not be stretched, nor shall have sharp corners that could create dangerous restrictions. • Carefully clean the High Pressure pipes before they are finally connected to the pressure reducer to prevent any residue getting inside it. • Do not leave any rubber parts during the cutting of the pipe. The presence of residues of burrs and chips inside the pipes could compromise the correct functioning of the system. Before installing the rubber hoses is a good practice to blow compressed air inside them. • Do not use for fastening pipes sealant products, such as: glues, silicones, mastic, etc ... 	
	3.3	Gas pipes / Air hoses
		The connection pipe from pressure reducer to the filter should be as short as possible. Please refer to the system installation manual.
	Connect the high pressure gas copper pipe to the reducer gas inlet fitting (1) and secure it with a torque wrench for a proper tightening; subsequently verify that the clamp guarantees tightness.	
Connect the rubber low pressure gas pipe Ø10X17 mm on the gas outlet connection (2) and secure them with a clamp; subsequently verify that clamp guarantees tightness.		
Using the rubber pipe Ø4X10 mm, connect the vacuum union (4) to the intake manifold and secure them with a clamp.		
3.4	Water hoses	
	Connect the rubber hose Ø10X17 mm to the pressure reducer, fixing them on the inlet/outlet water connectors (3) and secure it with clamps.	

	While engine running, verify the clamps tightening and that no leakage is coming from water pipes.
	The water cooling circuit connections of the pressure reducer can be installed in series or in parallel respecting to the heating circuit of the vehicle. Please refer to the system installation manual.
3.5	Electrical wiring
	Connect the solenoid valve (5) to the ECU using the 2 wires of the coil.
	Connect the temperature sensor (9) to the ECU.
3.6	Pressure reducer adjusting
	To optimize the reducer operation use the pressure adjusting screw (8) with hexagon socket (Pic. 2).
	To decrease the gas pressure, screw clockwise the screw (8) on the cover of the pressure reducer. To increase the gas pressure, unscrew counterclockwise the same screw. <i>(adjust the socket head screw with 5/32" hex allen wrench)</i>
	 <p>Pic. 2</p>
3.7	Maintenance plan
	Bigas recommends to provide a routine maintenance on the LPG RI21-JE every 100,000 Kms, in order to prevent possible malfunctions and to verify its status.
	Bigas recommends every 15.000-20.000 kms to replace the felt filter inside the solenoid valve, unscrewing the blocking screw on the filter cover (10).
	Bigas highlights the importance of doing a check-in and a service on the above mentioned party in order to prevent possible malfunctions not connected to the product quality.



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