RI27-J

CNG REDUCER

INSTALLATION PROVISIONS & WARNINGS

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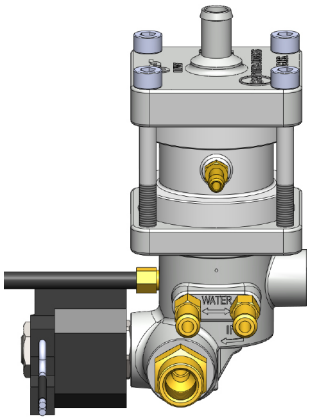
1. DATA SHEET

Type of gas	CNG	
Model	RI27-J	
Engine maximum power	300 KW *407HP*	
Max flow rate *	74 Kg/h *163 lb/h*	
Gas inlet pressure	260 bar (max.) *3771 PSI*	
Working pressure	2 bar *29 PSI*	
Gas inlet • **Female connection for pipes**	M 12x1 x pipe ø 6 mm	Brass
Gas outlet	$ø_{est}$ 10 mm	Brass
Inlet / Outlet cooling liquid	$ø_{est}$ 8 mm (n°2)	Brass
Working temperature	-40° ÷ 120°C *-40° ÷ 248°F*	
Electrical solenoid valve specification	12 V d.c. / 16 W	
Threaded hole fixing	M10 x 1,5 mm	
Overall dimension	142X83X100 mm *5.6X3.26X3.9 inch*	
Weight	1.5 Kg *3.3 lbs*	
Approval	**ECE 110** **ISO 15500**	



GENERAL INFORMATION

CNG Reducer RI27-J

Pressure reducer with two reduction stages.

Body construction material: nickeled brass

Integrated solenoid valve

***) Max air flow rate**

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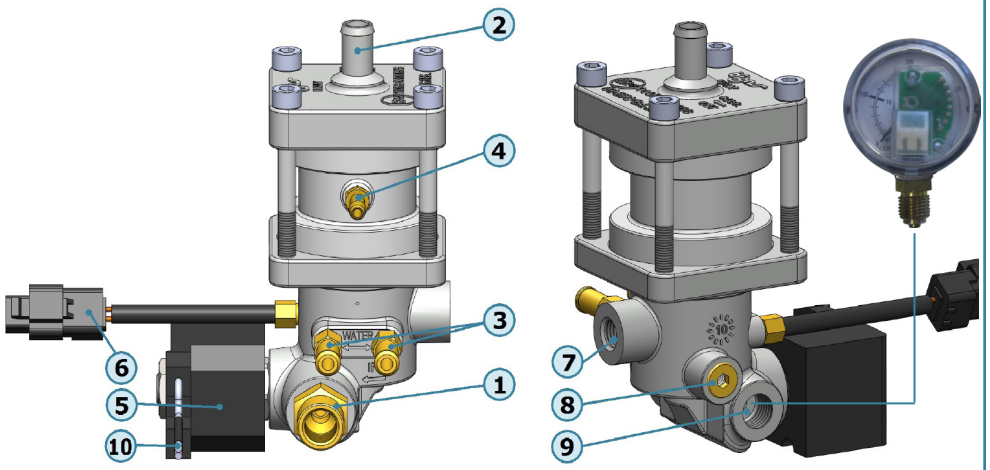
2. GENERAL DESCRIPTION

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*
RIDMB28040E	CNG Reducer RI27-J	**1 pc**
	Fixing bracket - 165X30 mm	**1 pc**
	Accessories bag (Niples, bicone, nuts, washer, faston and cover-faston, etc…)	**1 pc**
	Final testing certificate	

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	Temperature sensor with SICMA connector
7	Threaded hole fixing
8	Pressure Relief Valve - PRV
9	Threaded hole for pressure gauge *(Pressure gauge : not supplied)*
10	Wires for solenoid valve feeding

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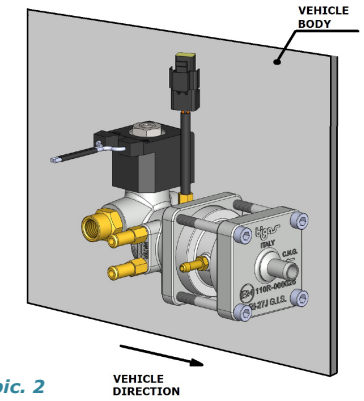
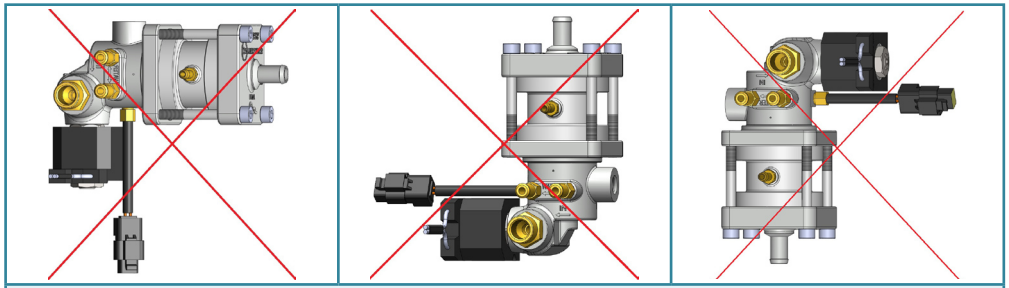
3. PROVISIONS & WARNINGS

3.1 Reducer installing positions

Install the pressure reducer in the position of **pic. 2**



pic. 2



INCORRECT INSTALLATION

	Never connect the pressure reducer directly to the engine or to the engine components.
	Do not istall 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 hole **(7)** to the car body, in order to avoid vibration to the pressure reducer. 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.
	In order to facilitate possible maintenance operations on the pressure reducer, the installer has to pay attention where he places the pressure reducer in the engine compartment.

3.2	Piping connections
⚠	For all kind of pipes the installer has to observe the following rules: • 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 ...

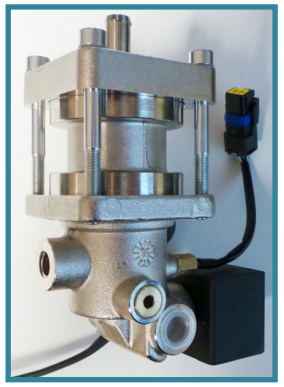
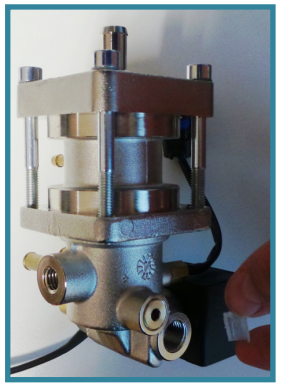
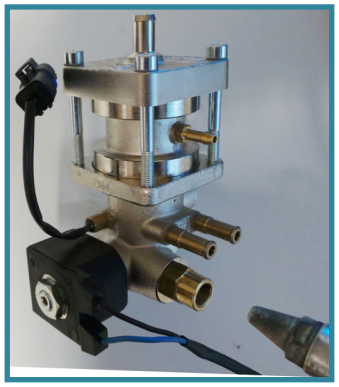
3.3	Gas pipes
⚠	The connection pipe from pressure reducer to the filter should be as short as possible. Please refer to the system installation manual.
	Connect the high pressure gas copper pipe to the reducer gas inlet fitting **(1)** and secure it with a torque wrench for a proper tightening.
	Connect the rubber low-pressure gas pipe on the gas outlet connection **(2)** and secure it with a clamp; subsequently verify that the clamps guarantees tightness.

3.4	Water hoses
	Connect the rubber hose to the pressure reducer, frictioning it 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 CNG ECU using the 2 wires of the coil **(10)**.
	Connect the temperature sensor with SICMA connector **(6)** to the gas ECU.

3.6	Pressure gauge connection
⚠	Before installing the pressure gauge remove the white cap from the threaded hole **(9)** and inject compressed air into the opposite gas inlet fitting **(1)** in order to eject out possible particles present in the housing.

3.7	Maintenance plan
	Bigas recommends to provide a routine maintenance on the CNG RI27-J every 100,000 Kms, in order to prevent possible malfunctions and to verify its status. 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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