

Specification for Main parts

DS410-Li, DS610-Li, DS410-Ci, DS610-Ci

1. DS410 Li

- LPG Regulator for 4 Cylinders

Model	Radium 30L-STD
Gas inlet	Female connection with ferrule for Φ 6mm pipe – M10x1
Gas outlet	Mail connection for rubber hose Φ_{int} 12mm
Engine cooling water inlet/outlet	Mail connection for rubber hose Φ_{int} 10mm
PRV nipple	Mail connection for rubber hose Φ_{int} 6mm
Manifold pressure nipple	Mail connection for rubber hose Φ_{int} 5mm
Temperature sensor connector	FCI SICMA 2
Shut off automatic valve	At regulator inlet (AMP Superseal connector)
Solenoid valve nominal voltage	12V D.C.
Solenoid valve nominal power	11W @ 12V D.C.
Engine maximum power	100 kW
Gas outlet nominal pressure	1.0 bar
Operating temperature (R67-01)	-20°C / +120°C
Manifold pressure probe	Present (Integrated)
Gas pressure reduction stages	2 + servo-circuit
Overall dimensions	129 x 142 x 103 (mm)
Weight	1.53 Kg
Accessories	Shut off valve, inlet filter installed

- LPG Injectors Rail for 4 Cylinders

Model	Apache – one rail with 4 injectors
Working pressure	From 0.5 to 2.0 bar
Max pressure	3.0 bar
Coil resistance	3.0 Ω \pm 15%
Alimentation	12V \pm 15%
Peak current time	3.5ms \pm 3%
Minimum injection pulse	3.3ms \pm 3%
Complete opening /closing time (Tested at 1 bar different pressure, 12V, with total inj. Time 5 ms)	Opening : 3.7ms \pm 5% Closing : 2.8ms \pm 5%
Inlet gas fitting	Rubber hose Φ 10mm / Φ 16mm
Outlet gas fitting	Calibrated nozzles M8x1, external Φ 7mm
Calibrated hole range for nozzles	1.0 – 3.5mm (0.25mm step)
Operating temperature	-20°C / +120°C

- ECU for 4 Cylinders

Model	STAG-4
Power supply voltage	12V - 20%, + 30%
Maximum power supply current	24A
Current input in the standby mode	< 10 mA
Operating temperature	-40°C / +110°C
Protection class	IP54

2. DS610 Li

- LPG Regulators for 6 cylinders

Model	Radium 03L-HP
Gas inlet	Female connection with ferrule for $\Phi 6\text{mm}$ pipe – M10x1
Gas outlet	Mail connection for rubber hose $\Phi_{\text{int}} 12\text{mm}$
Engine cooling water inlet/outlet	Mail connection for rubber hose $\Phi_{\text{int}} 15\text{mm}$
PRV nipple	Mail connection for rubber hose $\Phi_{\text{int}} 6\text{mm}$
Manifold pressure nipple	Mail connection for rubber hose $\Phi_{\text{int}} 5\text{mm}$
Temperature sensor connector	FCI SICMA 2
Shut off automatic valve	At regulator inlet (AMP Superseal connector)
Solenoid valve nominal voltage	12V D.C.
Solenoid valve nominal power	11W @ 12V D.C.
Engine maximum power	180 kW
Gas outlet nominal pressure	1.6 bar
Operating temperature (R67-01)	-20°C / +120°C
Manifold pressure probe	Present (Integrated)
Gas pressure reduction stages	2 + servo-circuit
Overall dimensions	129 x 142 x 103 (mm)
Weight	1.6 Kg

- LPG Injectors Rail for 6 Cylinders

Model	Apache – two rails with 3 injectors
Working pressure	From 0.5 to 2.0 bar
Max pressure	3.0 bar
Coil resistance	3.0 Ω \pm 15%
Alimentation	12V \pm 15%
Peak current time	3.5ms \pm 3%
Minimum injection pulse	3.3ms \pm 3%
Complete opening /closing time (Tested at 1 bar different pressure, 12V, with total inj. Time 5 ms)	Opening : 3.7ms \pm 5% Closing : 2.8ms \pm 5%
Inlet gas fitting	Rubber hose $\Phi 10\text{mm}$ / $\Phi 16\text{mm}$
Outlet gas fitting	Calibrated nozzles M8x1, external $\Phi 7\text{mm}$
Calibrated hole range for nozzles	1.0 – 3.5mm (0.25mm step)
Operating temperature	-20°C / +120°C

- ECU for 6 Cylinders

Model	STAG-300 Plus
Power supply voltage	12V - 20%, + 30%
Maximum power supply current	24A
Current input in the standby mode	< 10 mA
Operating temperature	-40°C / +110°C
Protection class	IP54

3. DS410 Ci

- CNG Regulator for 4 Cylinders

Model	HYVR 36Li
Gas inlet	Female connection with ferrule for $\Phi 6\text{mm}$ pipe – M10x1
Gas outlet	Mail connection for rubber hose $\Phi_{\text{int}} 10.5\text{mm}$
Engine cooling water inlet/outlet	Mail connection for rubber hose $\Phi_{\text{int}} 11\text{mm}$
Manifold pressure nipple	Mail connection for rubber hose $\Phi_{\text{int}} 6\text{mm}$
Temperature sensor	Installed
Shut off automatic valve	Not installed
Flow capacity	120 kW
Gas outlet nominal pressure	2.0 bar
Operating temperature (R110)	-40°C / +120°C
Manifold pressure probe	Present (Integrated)
PRD setting	3.5 bar
Internal filter	40 μm sintered element
Overall dimensions	126 x 74 x 157 (mm)
Weight	1.2 Kg
Accessories	PRD, inlet filter installed

- CNG Injectors Rail for 4 Cylinders

Model	Apache – one rail with 4 injectors
Working pressure	From 0.5 to 2.0 bar
Max pressure	3.0 bar
Coil resistance	3.0 Ω \pm 15%
Alimentation	12V \pm 15%
Peak current time	3.5ms \pm 3%
Minimum injection pulse	3.3ms \pm 3%
Complete opening /closing time (Tested at 1 bar different pressure, 12V, with total inj. Time 5 ms)	Opening : 3.7ms \pm 5% Closing : 2.8ms \pm 5%
Inlet gas fitting	Rubber hose $\Phi 10\text{mm}$ / $\Phi 16\text{mm}$
Outlet gas fitting	Calibrated nozzles M8x1, external $\Phi 7\text{mm}$
Calibrated hole range for nozzles	1.0 – 3.5mm (0.25mm step)
Operating temperature	-20°C / +120°C

- ECU for 4 Cylinders

Model	STAG-4
Power supply voltage	12V - 20%, + 30%
Maximum power supply current	24A
Current input in the standby mode	< 10 mA
Operating temperature	-40°C / +110°C
Protection class	IP54

4. DS610 Ci

- CNG Regulators for 6 cylinders

Model	HYVR 36Li
Gas inlet	Female connection with ferrule for $\Phi 6\text{mm}$ pipe – M10x1
Gas outlet	Mail connection for rubber hose $\Phi_{\text{int}} 10.5\text{mm}$
Engine cooling water inlet/outlet	Mail connection for rubber hose $\Phi_{\text{int}} 11\text{mm}$
Manifold pressure nipple	Mail connection for rubber hose $\Phi_{\text{int}} 6\text{mm}$
Temperature sensor	Installed
Shut off automatic valve	Not installed
Flow capacity	120 kW
Gas outlet nominal pressure	2.0 bar
Operating temperature (R110)	-40°C / +120°C
Manifold pressure probe	Present (Integrated)
PRD setting	3.5 bar
Internal filter	40 μm sintered element
Overall dimensions	126 x 74 x 157 (mm)
Weight	1.2 Kg
Accessories	PRD, inlet filter installed

- LPG Injectors Rail for 6 Cylinders

Model	Apache – two rails with 3 injectors
Working pressure	From 0.5 to 2.0 bar
Max pressure	3.0 bar
Coil resistance	3.0 $\Omega \pm 15\%$
Alimentation	12V $\pm 15\%$
Peak current time	3.5ms $\pm 3\%$
Minimum injection pulse	3.3ms $\pm 3\%$
Complete opening /closing time (Tested at 1 bar different pressure, 12V, with total inj. Time 5 ms)	Opening : 3.7ms $\pm 5\%$ Closing : 2.8ms $\pm 5\%$
Inlet gas fitting	Rubber hose $\Phi 10\text{mm}$ / $\Phi 16\text{mm}$
Outlet gas fitting	Calibrated nozzles M8x1, external $\Phi 7\text{mm}$
Calibrated hole range for nozzles	1.0 – 3.5mm (0.25mm step)
Operating temperature	-20°C / +120°C

- ECU for 6 Cylinders

Model	STAG-300 Plus
Power supply voltage	12V - 20%, + 30%
Maximum power supply current	24A
Current input in the standby mode	< 10 mA
Operating temperature	-40°C / +110°C
Protection class	IP54