



**CLIMA LINE**  
**CLIMA-1234 P**

VOLUMETRIC

**THE TECHNOLOGY THAT  
COMPLETELY CHANGES  
A/C RECHARGE**

**EVERYTHING UNDER CONTROL**



# CLIMA-1234 P THE COLD KEEPER

Rightly ranking among the reference manufacturers of A/C system Recharge Stations for the industry, Brain Bee keeps its vocation of pioneer company, always looking for innovative solutions aimed at facilitating the work of garage professionals.

## CLIMA-1234 P - VOLUMETRIC

**CLIMA-1234 P** has been designed to guarantee complete operative autonomy. Every intervention concerning maintenance, cleaning and recovery of the cooling system are performed by the device through the powerful control software without any assistance of the operator, who can actually optimise time with an increase in efficiency, and with a considerable decrease in costs.

Additionally, **CLIMA-1234 P** may be constantly updated in a simple and rapid way, guaranteeing the device's maximum operative efficiency.

## GRAPHIC LCD DISPLAY – TOUCH SCREEN

The heart of **CLIMA-1234 P** is its LCD display, the only user-interface element.

Simple and intuitive, the display shows a complete menu that can be activated through a few quick touch-screen operations.

Additionally, the displays' great brightness ensures that parameters are easily read, whatever the lighting conditions.



## INFORMATION ALWAYS AVAILABLE

The integrated printer enables the emission of a document acknowledging the successful results of the operations.



## UTMOST SAFETY. CERTIFIED

One of the most important criteria for designers of tools applying new technologies and solutions is to ensure utmost operating safety since the first productions. Brain Bee not only did it but it had even certified its product – pursuant to the product directives – in cooperation with the most important Certifying bodies.

Every safety issue has been carefully assessed and every component designed so as to ensure suitable safety standards. The use of antistatic materials, the production of SAE-compliant charge hoses and quick couplers, internal forced ventilation devices and thermal protections are but a few examples of the designed solutions helping us in the achievement of the certification of the stations of the **BRAIN BEE 1234** line.

## SPECIAL FUNCTIONS

- > **MULTIPASS** enables a further closed-circuit filtering of the recovered cooling liquid
- > **VESSEL HEATER**
- > **FLUSHING** with integrated solenoid valve
- > **HYBRID FUNCTION** thanks to this “reset” function, residual PAG oil within the machine can be completely replaced, with a view to managing changeover from maintenance of traditional engine vehicles to maintenance of hybrid vehicles.
- > **OIL CARE FUNCTION** a protection system that prevents humidity from entering the oil container, in order to preserve the PAG oil's purity until it is completely used
- > **UV TRACER**
- > **NON-CONDENSING VENT VALVE** electronic, it enables the eventual discharge of air by accelerating the recovery phase, thus guaranteeing higher purity of the refrigerant present in the vessel



## CLIMA-1234 BRAIN BEE TECHNOLOGY

Brain Bee has always been in the forefront of the automotive industry ready to take up the challenges launched by this sector; for this reason the company is now working on research and development projects on the technology related to the Recharge Stations for A/C systems using the R-1234yf Gas, the refrigerant which will replace the currently used R-134a coolant in the circuits of the new vehicles, as required by the European Directive 2006/40/EC.

Thanks to the company commitment within International bodies (such as SAE), the cooperation with the major car manufacturers, the performance of tests focusing on construction specifications and dedicated corporate decisions taken during the 2008-2009 period, Brain Bee has been the first company to launch a certified series of A/C RECHARGE STATIONS using the 'new' gas, and to patent its own technology.

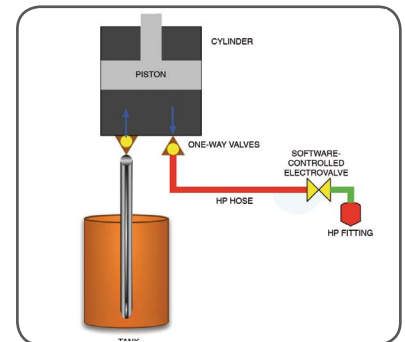
## VOLUMETRIC INJECTION TECHNOLOGY

**PATENTED  
BRAIN BEE**

Following its vocation in proposing innovative technological solutions for the automotive industry, Brain Bee launches – the first company in the A/C system Recharge Stations industry – the state-of-the-art VOLUMETRIC INJECTION technology (patented by Brain Bee) and produces new applications for its A/C stations line.

This system can be applied to both traditional technology (using the R-134a gas) and new lines using the R-1234yf gas: the immediate advantage is to have an even more performing, quicker and more accurate tool in the management of the recovery and recharge phases, particularly suitable to those vehicles requiring high gas injection ability.

**HOW IT WORKS:** The **VOLUMETRIC INJECTION** technology uses compression generated by the dosing cylinder which turns the present gas into liquid state thus reducing its volume. The special electronically controlled INJECTOR can hence push the liquefied gas into the vehicle circuit following a completely automatic sequence. A controlled system for the opening/closing of couplers allows for the recovery phase and optimizes the charge cycle by allowing injection exclusively under suitable pressure conditions.



## EXTREME CHARGE ACCURACY. COSTS REDUCTION

The **VOLUMETRIC INJECTION** technology allows the exact dosing of the injected gas whose measurement features an accuracy index of more than 99%. This feature enables the full control of the operating costs for the recharge of the air conditioning circuit.

## COMPLETELY AUTOMATED PROCESS. MORE EFFICIENCY

The quick couplers mounted on the stations fitted with **VOLUMETRIC INJECTION** technology are completely automatic and directly controlled by the complex software installed on the BRAIN BEE CLIMA stations.

The main advantage for the operator is that service interventions are easier since the operator can rely on the Station for the management of the service without requiring any further support, irrespective of the environmental conditions of the recharge.

## ELIMINATION OF THE VESSEL LOADING CELL. EXTREME RELIABILITY

The Clima station equipped with **VOLUMETRIC INJECTION** technology is the first one which does not require the use of the traditional loading cell, since it applies an exclusive system to measure the level of the gas inside the vessel.

The outcome is positive: the management of the tool in the garage is easier since calibration of the weighing system is not required anymore (which was necessary during the first installation or in case of transfer of the Station).

Problems deriving from the use of traditional weighing system for a mobile tool are also eliminated to the advantage of robustness, reliability and handiness.

# TECHNICAL FEATURES

## INTERFACE AND SOFTWARE

Display .....	4,3", 480x272 graphics (widescreen), 65536 Colours
Keyboard .....	Touch screen
Printer .....	24-column thermal printer
Software update .....	via RS232 (with CLIMA SOLUTION, optional)
Recharge Technology.....	volumetric injection (BRAIN BEE PATENDEDE)

## R1234yf GAS VESSEL

Vessel capacity .....	26 l
Capacity conforming to PED restrictions .....	20 kg
Maximum operating pressure certified under PED cat. III .....	20

## OIL CONTAINERS

Exhaust oil container capacity .....	250 ml
New PAG oil container capacity .....	250 ml
UV tracer container capacity .....	250 ml
OIL CARE valve (new PAG oil container)	
Oils/UV scale 1g resolution, 5 g precision with overcharge mechanical protection	

## PNEUMATIC CIRCUIT

Vacuum pump capacity .....	4,0 m <sup>3</sup> /h
Vacuum level (mbar) .....	0,05 mbar
Refrigerant gas recovery compressor displacement .....	14cc
Pressure safety switch	
Dehydrating filter capacity, expressed as kilograms of recovered refrigerant .....	45 kg
Automatic non-condensing gas purge	
Electronic and automatic HP and LP taps	
Net HP and LP hoses length (m) .....	4,5 m
Bulkhead couplings for HP and LP hoses	
Digital vessel pressure gauge	
Electronic and digital HP and LP pressure gauges	

Dimensions: 641 x 763 x 1200 mm

Weight: 100 kg

Power supply: 50 HZ - 220-240 V - 800 W

Pneumatic supply: 5 ÷ 8 bar

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