

Delphi AC Machine Range 2012 HFO 1234YF / R134a



G. Koutsoullis & Son Ltd

Car Airconditioning Centre
Professional Mobile Refrigeration
Sales, Service & Spare Parts



Service Tooling VP



Brand awareness

Branded products
Delphi **Imaged** packaging
Regular **communication**
Suite of **POS materials**



Environmental Protection

Range to reduce F gas emissions

All products supported

Range to support Delphi product sales
Comprehensive 2 year warranty
ISO9001 & ISO14001 supplier

Training

Extensive range of courses
Air Conditioning DEFRA / EU
accredited

2012 range



R134a machines

- AT 41607 - Semi Automatic – LCD display
- AT41608 - Fully Automatic – LCD display
- Cars and LCV
- **AT41609 - Fully Automatic – Graphic display**
- **Cars and LCV**
- AT41610 - Fully Automatic – Graphic display
- Buses and Coaches
- Service & spare parts will be available from day 1



USP's



- Modern 2012 design
- Printers as Standard
- Large class 1 gauges for ease of visibility
- Storage area on side for hoses and instruction manual
- Designed for working with Hybrid vehicle AC systems
- 2 year warranty from date of sale to garage or workshop
- 3 metre service hose lengths
- Safety glove and glasses supplied free with all machines
- Each machine supplied with dust cover
- Vehicle database included on complete range



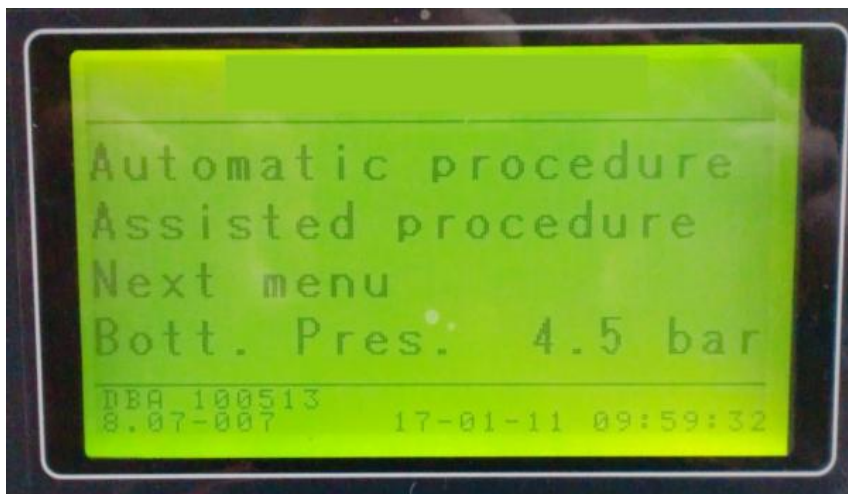
2012 LCD and Graphic Displays



75mm x 25mm, 4 line LCD display – AT41607



120mm x 40mm, 4 line LCD display – AT41608



110mm x 60mm Graphic display, ability to show Russian and Greek in Cyrillic characters – AT41609 & AT41610

Semi Automatic - AT41607



The only manual process on this machine is the UV and / or oil injection!

- 72 litre per minute vacuum pump
- 12cc recovery compressor
- 12 litre refrigerant storage tank
- Easily read LCD display
- Hybrid functionality
- Oil line flushing to avoid cross contamination with standard PAG oils.
- **Important safety feature**
- Vehicle database
- For choice of refrigerant quantity by make, model of vehicle
- Updates, via serial data key, can be purchased annually
- Thermal printer
- Output via USB stick (not included) for printing data on PC
- 3 metre hoses



Active Automatic - AT41608



Fully Automatic machine with LCD display

- Can be used manually, automatically or in database mode
- 115 litre per minute vacuum pump
- 12cc recovery compressor
- 22 litre refrigerant storage tank
- Easily read LCD display
- Hybrid functionality
 - Oil line flushing to avoid cross contamination with standard PAG oils.
 - **Important safety feature**
- Vehicle database
 - For choice of refrigerant quantity by make, model of vehicle
 - Updates, via serial data key, can be purchased annually
- Thermal printer
- Output via USB stick (not included) for printing data on PC
- 3 metre hoses
- **External connection for Oxygen free nitrogen (OFN)**
 - An environmentally preferred method of leak detection



Active Automatic Plus - AT41609



Fully Automatic machine with graphical display

- Can be used manually, automatically or in database mode
- 115 litre per minute vacuum pump
- 12cc recovery compressor
- 22 litre refrigerant storage tank
- Easily read graphical display
- Hybrid functionality
 - Oil line flushing to avoid cross contamination with standard PAG oils.
 - **Important safety feature**
- Vehicle database
 - For choice of refrigerant quantity by make, model of vehicle
 - Updates, via serial data key, can be purchased annually
- Thermal printer
- Output via serial cable (not included) for printing data on PC
- 3 metre hoses
- **External connection for Oxygen free nitrogen (OFN)**
 - An environmentally preferred method of leak detection
- Ability to display Russian and Greek language characters



Power Automatic - AT41610



High Capacity Fully Automatic machine with graphical display

- Can be used manually, automatically or in database mode
- 115 litre per minute vacuum pump
- 21cc recovery compressor
 - For larger capacity systems such as busses or coaches
- 22 litre refrigerant storage tank
- Easily read graphical display
- Hybrid functionality
 - Oil line flushing to avoid cross contamination with standard PAG oils
 - **Important safety feature**
- Vehicle database
 - For choice of refrigerant quantity by make, model of vehicle
 - Updates, via serial data key, can be purchased annually
- Thermal printer
- Output via serial cable (not included) for printing data on PC
- 3 metre hoses
- **External connection for Oxygen free nitrogen (OFN)**
 - An environmentally preferred method of leak detection
- Ability to display Russian and Greek language characters



Starter Pack



Don't forget if the garage is new to AC then you could also recommend a starter pack

Part Number	Description	Required
AT41607	Refmatic Plus (Semi Auto)	1
AT41608	Refmatic Active (Fully Auto)	1
AT41550	Complete UV Dye and Injection Kit	1
AT41419	Ford/Volvo/Hyundai Pipe Fitting Kit	1
AT41429	Opel/Volkswagen Pipe Fitting Kit	1
AT41298	Standard Valve Core Remover	1
TSP0695016	Universal 'O' Ring Kit 1	1
TSP0695017	Universal 'O' Ring Kit 2	1
TSP0695024	Service Kit Miscellaneous	1
AT41595	ISO 46 Low Viscosity Oil	2
AT41593	ISO 100 High Viscosity Oil	2
AT41594	ISO 150 Ultra High Viscosity Oil	2
AT41390	Digital Thermometer	1
AT41577	ACAT 30 & ACAT 40 (14 of each)	1

Refrigerant change to R1234yf



Should your customers ask for information regarding “The new refrigerant” you might find the following information useful.

- EU legislation has mandated the change from R134a to R1234yf
 - For global warming reasons (R1234yf has GWP 4)
- Applies to all vehicles homologated after Jan 1 2011
- Only Mercedes, so far, have confirmed they will use this refrigerant in November 2011
- In the IAM workshops may start to see cars in 2012

What equipment do they need?

- A dedicated R1234yf machine
 - Delphi's launch date will be end Q2, 1 x Fully Auto station
- Some manufacturers are offering dual gas machines
 - This machine can only be used on 1 vehicle at a time – limiting use
 - 10 to 15 minute change over between refrigerants – limiting availability

KEY FEATURES OF 2012 RANGE



ALUMINUM MANIFOLD This is the main component of the station which has made it possible to minimize the number of internal connection hoses, thanks to the piping inside the manifold, and the integration of the oil-refrigerant separator, offering numerous advantages, including:

- RAPID RECOVERY
- LEAK PROTECTION
- EASY ASSEMBLY
- EASY ACCESS FOR SERVICE
- *Patented Design*



AUTOMATIC DISCHARGE OF NON-CONDENSABLE GAS

Recycling refrigerant from old systems on which no maintenance has ever been carried out can result in the recovery of air (non-condensable vapors), which can contain moisture, and become stratified inside the bottle, dangerously raising the pressure.

Our Solution and its Advantages:

- Use of **pressure** and **temperature** Transducers for the bottle pressure
- Automatic air purge with solenoid valve
- Possibility to purge at any condition of temperature
- **No moisture into the vehicle** during the refrigerant charging

KEY FEATURES



COALESCENT FILTER

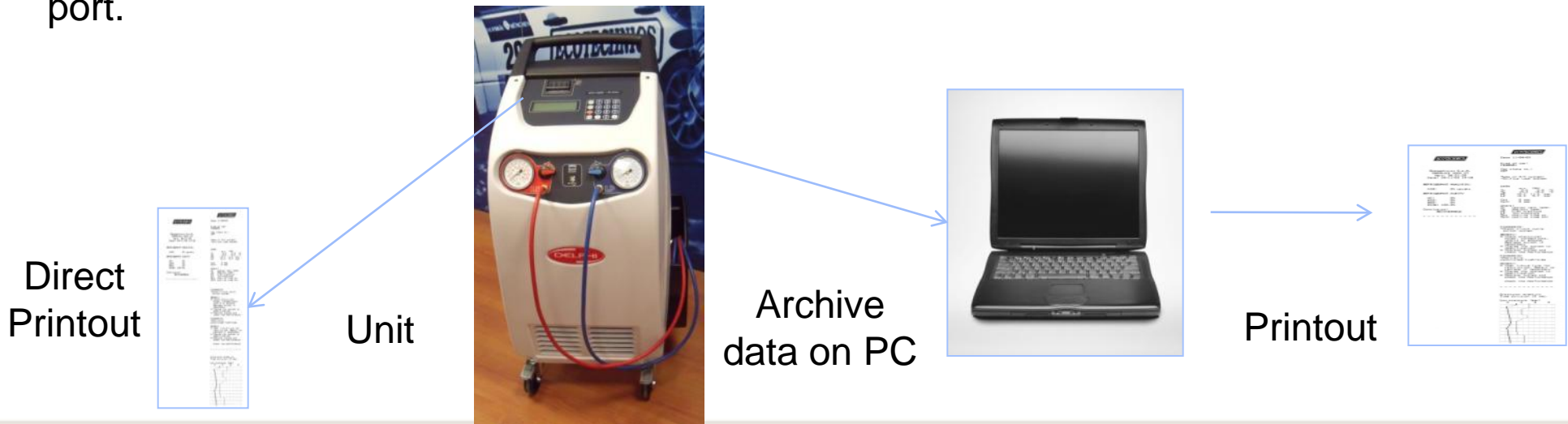
This type of filtering is always necessary in order to prevent the compressor remaining without oil due to the continual passage of refrigerant.

- Guaranteed HIGH PERFORMANCE over time
- Greater PROTECTION AGAINST SEIZING



REFRIGERANT MANAGEMENT

For creating a customized archive of all refrigerant transactions according to the most recent laws in Europe (F-gas regulation). Easy download of data from the units via a USB port.



KEY FEATURES



SAE J-2210 AND SAE J-2788



As a direct consequence of the above mentioned features we have a pure recycled refrigerant at the end of the process. This fact is very important because with this technology we can offer the only machines in Europe able to comply with the **American UL-ETL Standard** which includes the severe purity test **SAE J-2210**:

- Residual oil < 500 ppm
- Humidity < 50 ppm
- Non condensable gas < 150 ppm

We are up to Date with the most recent legislation, in the USA our technology complies with the American **SAE J-2788** Standard. For the European markets this technology is renamed **High Precision** and our machines still comply to the American standard which is more severe than SAE J-2210, This means the 2011 range:

- recovers 95% of the refrigerant
- Has a Recharge accuracy +/- 15 grams
- Has a Recovery accuracy +/- 30 grams

And compared to other machines additional refrigerant is recovered, meaning a cost saving on new refrigerant for the user.

This will result in:

- saving of about 20% by increasing refrigerant recovery
- Increased charge accuracy minimizing undesired come-backs

KEY FEATURES



SAE J-2210 AND SAE J-2788



These features are mandatory in USA but not in Europe.

We have decided to implement the High Precision technology on our units sold in Europe: in this way it is possible to recover more refrigerant from an A/C system comparing with a standard unit, and this represents a very important key feature considering the high cost of the present refrigerant R134a.

KEY FEATURES



DIAGNOSIS FOR A/C SYSTEM ON ALL AUTOMATIC MACHINES

“Electro-Mechanical Diagnosis” on all Automatic Machines based on the pressure and temperature readings.

The advantages of this technology are:

- Easy to use,
- Fast,
- Reliable,
- Accurate diagnosis of problems.
- Printout of diagnosis and possible remedies.



Static Diagnosis

FLUSHING KIT WITH REFRIGERANT AVAILABLE SOON

For correct repair in the case of compressor failure, before installing a new compressor it is imperative to remove any metal shavings that may have accumulated inside the system.

Many compressor manufacturers do not grant a warranty on their new components unless the A/C system is mechanically flushed before installation.

Advantages:

- No solvents, only refrigerant for flushing -> Environment-friendly.
- Use of a bottle in vacuum -> complete and safe removal of metal shavings
- Fully automatic cycle -> Fast flushing procedure, for considerable time-saving.
- Works also with other recharging stations (in manual mode).



Flushing Kit

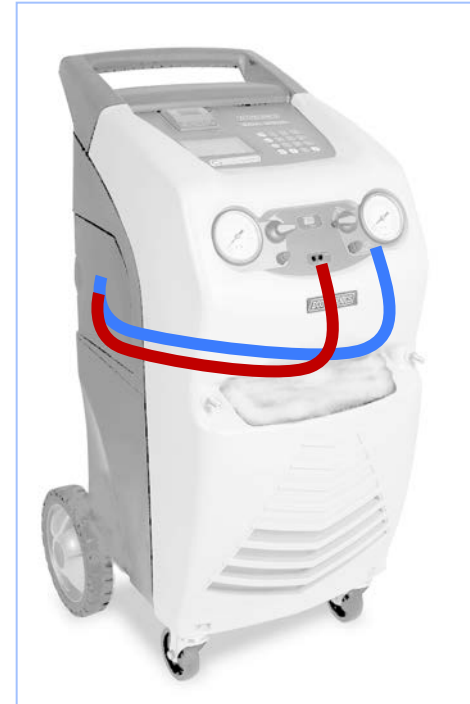
KEY FEATURES



HYBRID VEHICLES FUNCTIONS

With the special patented “**HYBRID**” function the **same unit** is used both for standard and hybrid vehicles.

- The unit has an integrated **decontamination** system for the service hoses from oil residuals coming from standard A/C installations.



KEY FEATURES



DELPHI IS READY FOR THE NEW REFRIGERANT HFO 1234YF

- The introduction of the HFO1234yf in the market will start from mid 2011. After this date, the car manufacturers will use the new refrigerant only for **NEW HOMOLOGATED** car models, while the production of all the past vehicles models will remain with the actual refrigerant.
- The transfer to the new refrigerant is expected to be completed by **2017**. Refrigerant manufacturers declare that the new refrigerant will be probably available in good quantities by the end of 2011 while by mid 2011 it will be available enough for supplying car manufacturers.
- In 2011 most of car manufacturers **will not** market new vehicles models with the new refrigerant HFO1234yf.





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Innovation for the Real World