



New energy efficient R410A and R407C  
**Rooftop Packaged systems**



TURN TO THE EXPERTS



Carrier has over 100 years expertise in the manufacture of innovative, versatile, energy efficient **Packaged Rooftop** systems designed for longevity, ensuring peace-of-mind to all customers.

Carrier Rooftop Packaged systems encompass, standard, bespoke and direct replacement of both Carrier units and other manufacturers ranges.

Nationwide there are hundreds of units still operating that were installed over 20 years ago. These units, although running smoothly contain old technology and consume a high level of energy, increasing the running costs to the building owner or occupant, they also suffer from structural progressive corrosion.

Carrier have designed new systems that incorporate advanced components designed specifically to maximise energy efficiency. These systems are designed to replace the old systems exactly, in terms of their physical dimensions and duties. The replacement of the new system is easy and cost effective as the roof curb for the old system can be used for the new unit. The replacement of these units can also be done out of business hours, ensuring no disruption to your business operation.

These new units will help you comply with **Legislation and Regulations**

- **Ozone Depleting Substances (ODS) Legislation**  
Many Packaged Rooftop systems operate on old refrigerant such as R22. This is an HCFC refrigerant that can cause damage to the ozone layer. EU Legislation means that suppliers of new R22 for servicing existing units will be progressively restricted until its eventual phase out in 2010. After that date, owners will be reliant on suppliers of reclaimed refrigerant to service their plant.
- **F Gas Directive**
- **EN378**
- **Part L of the Energy Performance of Building Directive**
- **Noise Restrictions**

# Carrier's New range of Direct replacement units

## Features of the 50DB, 50EA and 39RT units:

Due to the zinc coated galvanised steel frame, the units have improved weather resistant properties ensuring system longevity. They have purpose-built corner and centre posts, 60 mm double-skinned panels on the outside of the unit and between the indoor and outdoor section.

These are encapsulated with Rockwool insulation that reduces sound, vibration and thermal conductivity.

- Efficient scroll or hermetic reciprocating compressors.
- Both compressor types incorporate two independent gas circuits (50%-50%). This ensures the demand on the compressor is more evenly matched and the compressors are not operating unnecessarily.
- High efficiency centrifugal fan with double inlet, statically and dynamically curved blades enabling quiet, vibration free operation.
- Two speed axial type condensing fan with low-noise benefits.
- Electric heat or LPHW heating facility (optional extra).
- Free cooling is possible using the Economoizer function (optional extra).

**Pro-dialog plus control:** is an advanced numeric control system that combines complex intelligence with great operation simplicity. Pro-dialog plus monitors all machine parameters, optimizing the operation of compressors and fans. It has a clear and user-friendly operator interface. This is compatible with the Carrier comfort Network by a communications bus (RS485), offering a number of local or remote monitoring possibilities, via a modem.

Carrier offer a full commissioning and maintenance service on all Packaged Rooftop systems.



Carrier 50DB after installation

## 50DB Cooling only

These units are specifically designed to replace the older Carrier model namely, 50DD and 50DF. They have the same footprint enabling easy replacement on-site and the duct work matches exactly to the existing models. They operate on non-ozone depleting R407C refrigerant and contain improved components including; compressors, two speed outdoor fans and high efficiency supply fan motors. With the addition of the electric heater or low pressure hot water (LPHW) heat option these units can both cool and heat.

## 50EA Heat pump

Specifically designed to replace Carriers 50EQ model, these are reverse cycle units delivering both cooling and heating. They incorporate new energy efficient components and operate on non-ozone depleting R407C refrigerant and have the same footprint dimensions enabling fast, easy and cost effective replacement on-site.

NEW 50DB	024	028	034	044	054
<b>Dimensions (mm)</b> h x w x d	1738 x 2178 x 3298	1738 x 2178 x 4258	1738 x 2178 x 5218	1738 x 2178 x 6338	1738 x 2178 x 7618
<b>Cooling Capacity (kW)</b>	70	82	108	130	150
<b>Refrigerant</b>	R407C				

NEW 50EA	024	028	034
<b>Dimensions (mm)</b> h x w x d	1738 x 2178 x 3298	1738 x 2178 x 4258	1738 x 2178 x 5218
<b>Cooling Capacity (kW)</b>	70	82	85
<b>Heating Capacity (kW)</b>	76	85	85
<b>Refrigerant</b>	R407C		

# Replacement Packaged units

## 39RT

Carrier can design a unit to suit the exact requirements of the client in terms of capacity, footprint and functionality. This can be to the exact dimensions of the existing unit on-site, whether it is a Carrier unit or other manufacturer.

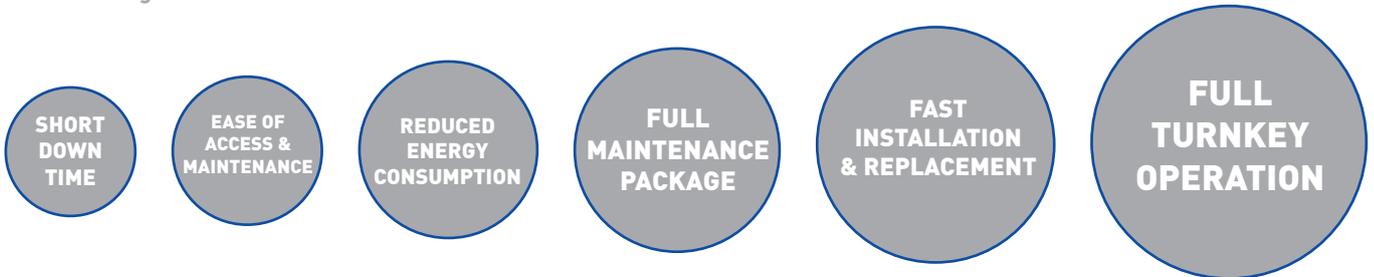
These systems incorporate advanced technology and components featured on page 3. In addition, these units deliver heating via; gas, electric heater, LPHW or steam depending on the clients requirements.

In addition they can be designed for single or multi-zone areas. These units have the option of supply and/or extract according to the clients needs.

### Optional extras available for the 39RT include:

- Gas fired heater
- Heat Pump
- Economizers for free cooling
- Energy efficient package
- Full web compatible control options

### The advantages



# Bespoke Design Packaged units

Carrier's long serving and experienced Air Handling design team are also dedicated to designing Packaged units to suit your exact requirement, these incorporate components with the latest technology and can fit your exact footprint area, meet your capacity, functionality, energy efficiency and control requirements.

## Your system, your choice:

- Energy recovery
- Free cooling
- Cooling only
- Heat pump
- Compact footprint
- Wide capacity range
- Diverse control options

# Standard Packaged systems

## New 50AZ and 50UZ Package Rooftop Units

These units are designed to operate on non-ozone depleting refrigerant R407C, the cabinet is constructed from powder-painted sheet metal. These systems are self contained, suitable for outdoor installation and ideal for both commercial and industrial applications. The 50AZ cooling unit is designed to replace Carrier's older model, the 50DP whilst the 50UZ heat pump model replaces the 50PQ.

NEW 50AZ	016	020	024	028	034	040
<b>Dimensions (mm)</b> h x w x d	1138 x 2120 x 2189	1138 x 2120 x 2189	1544 x 2120 x 2189	1544 x 2120 x 2189	1559 x 2193 x 3577	1559 x 2193 x 3577
<b>Cooling Capacity (kW)</b>	43	54.1	70	78.1	99.5	116.1
<b>Refrigerant</b>	R407C					

NEW 50UZ	016	020	024	028	038	040
<b>Dimensions (mm)</b> h x w x d	1138 x 2120 x 2189	1138 x 2120 x 2189	1544 x 2120 x 2189	1544 x 2120 x 2189	1559 x 2193 x 3577	1559 x 2193 x 3577
<b>Cooling Capacity (kW)</b>	41	52	68.5	77	107.9	119.2
<b>Heating Capacity (kW)</b>	45	56.5	79	85	123	TBA
<b>Refrigerant</b>	R407C					

## New 48AZ Cooling and Gas Heating Package Rooftop Units

The 48AZ range of Gas heating units are constructed of the same material and have same fundamental benefits as the 50AZ and 50UZ range including operating on R407C refrigerant. The unit heating capacities are built up from the characteristics of the cell combination incorporated into the unit, the standard units are shown in the selection table, however many other combinations are available delivering more options and increased flexibility.

NEW 48AZ	016	020	024	028	034	040
<b>Dimensions (mm)</b> h x w x d	1138 x 2120 x 2189	1138 x 2120 x 2189	1544 x 2120 x 2189	1544 x 2120 x 2189	1559 x 2193 x 3577	1559 x 2193 x 3577
<b>Cooling Capacity (kW)</b>	43	54.1	70	78.1	99.5	116.1
<b>Heating Capacity (kW)</b> per cell	46.8 / 61.8	61.8 / 72.9	61.8 / 72.9	61.8 / 72.9	93.6 / 125 / 147.4	93.6 / 125 / 147.4
<b>Number of Cells</b>	5 / 6	6 / 7	6 / 7	6 / 7	5+5 / 6+6 / 7+7	5+5 / 6+6 / 7+7
<b>Refrigerant</b>	R407C					

### 50TGQ Package Heat Pump Units

The 50TGQ rooftop heat pumps with vertical air discharge are designed for outdoors installation and ideally suited for commercial and industrial applications. Incorporating advanced scroll compressors and operating on R407C non-ozone depleting refrigerant. These are designed to replace the 50RQ and the 50TFQ.

NEW 50TGQ	090	120	140
<b>Dimensions (mm)</b> h x w x d	1255 x 1496 x 2250	1255 x 1496 x 2250	1255 x 1496 x 2250
<b>Cooling Capacity (kW)</b>	17.9	25.1	31.5
<b>Heating Capacity (kW)</b>	19	28.6	34.2
<b>Refrigerant</b>	R407C		

### 50GL Package Cooling Unit

These single-packaged cooling units also benefit from the utilisation of scroll compressors and operate on R410A refrigerant. With the optional electric heater they incorporate many energy-saving features.

NEW 50GL	024	030	036	048
<b>Dimensions (mm)</b> h x w x d	940 x 799 x 1226	991 x 799 x 1226	890 x 799 x 1226	990 x 1091 x 1226
<b>Cooling Capacity (kW)</b>	6.9	8.6	10.7	14.4
<b>Refrigerant</b>	R410A			

### 50JZ Package Heat Pump Units

These single-packaged heat pumps are designed to replace the 50QQ units, the 50JZ operates on R410A refrigerant, incorporates scroll compressors and has an optional electric heater that incorporates many energy-saving benefits including low installation cost, dependable performance and easy maintenance.

NEW 50JZ	024	030	036	048
<b>Dimensions (mm)</b> h x w x d	890 x 799 x 1226	940 x 799 x 1226	940 x 799 x 1226	1041 x 1091 x 1226
<b>Cooling Capacity (kW)</b>	6.9	8.6	10.7	14.4
<b>Heating Capacity (kW)</b>	7.0	8.1	10.6	13.1
<b>Refrigerant</b>	R410A			

## Dedicated Design team

Carrier have a dedicated design team focussed on helping you establish your exact needs and ensure that the system will meet specific legislative requirements and deliver maximum energy saving benefits. Whether it is a straight forward replacement, or a bespoke system needed to meet high demands in a restrictive footprint, Carrier can deliver you the perfect energy efficient solution.

The manufacturer reserves the right to change the specification shown in this brochure without notice. Please consult Carrier's design team for product selection.

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