

Heating & Cooling Solutions



Designed and manufactured
for energy efficiency



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Introduction

Diffusion has been manufacturing heating and cooling equipment in the UK for over 50 years during which time it has established an enviable reputation for both quality of product and service. Our competitively priced product range comprises of a wide range of fan coil units, air curtains, trench heating, fan convectors and general purpose heaters.

Along with our standard product range we also offer a specialised bespoke product service which is primarily aimed at end users, architects and consultants. This approach provides the customer with the reassurance of knowing that the correct equipment has been designed for the application. Units can be provided to suit all applications in various shapes, sizes and finishes.

Our main objective at Diffusion is to deliver high quality solutions to meet our clients' needs making sure energy concerns are a major factor. Our aim is to design and manufacture equipment that accommodates specific requirements to do so in the most cost effective way, where the quality is never compromised.



“Our main objective at Diffusion is to deliver high quality solutions”

As a company we are critically aware of the need for a low carbon foot print both from ourselves and our customers. As a company we source up to 90% of our components from other UK based manufactures and suppliers.

At Diffusion we are proud of project history and understand that building a firm relationship with our customers is essential. We are happy to do any job, however big or small and insist that our customers shall receive the same level of service whatever the size of the project.

Diffusion's ECO 270 fan coil units and bespoke air curtains have been installed in The Shard

Fan Coils Controls Solutions

Diffusion is pleased to announce their appointment as a **TREND OEM Partner**.

Combining Diffusion's established high efficiency EC fan coils with the latest Trend ECO controls, we can provide a fully packaged fan coil solution.



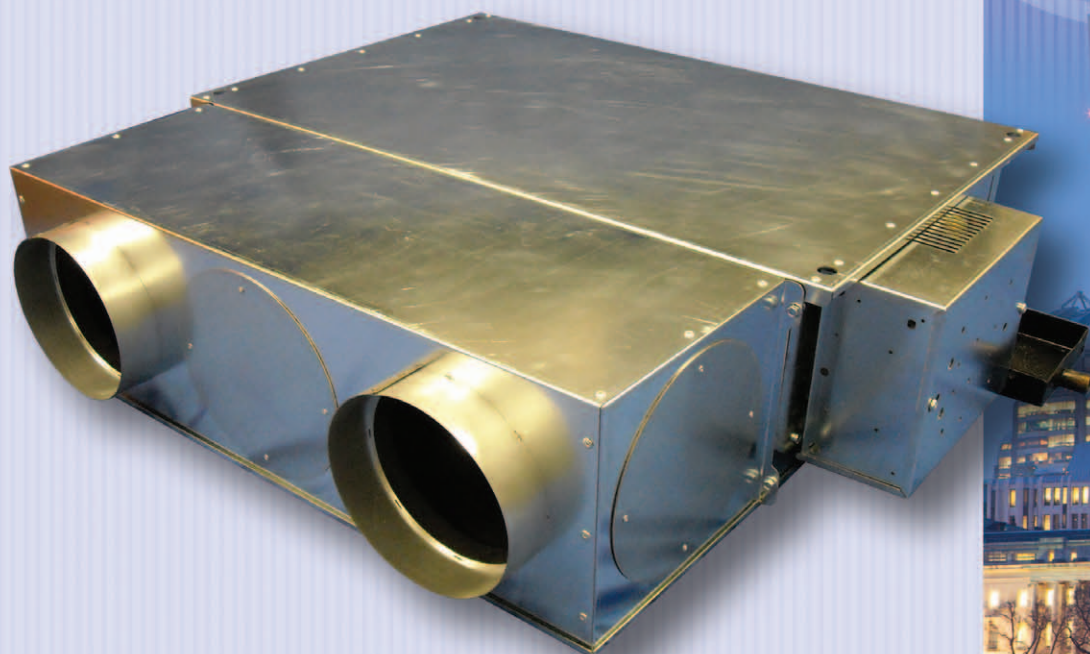
Key features include:

- ▶ Trend controllers incorporating the unique Diffusion energy saving strategy, with additional features:
 - ▶ Software integrated potentiometer providing visibility through the BMS of fan speed setting
 - ▶ Eco Mode – 'Deadband Increase' providing energy saving when close temperature control is not required
 - ▶ Separate Heating & Cooling set points
 - ▶ EC fan motor status input facility (when using our motor status monitor option)
 - ▶ Condensate high limit alarm input monitoring
 - ▶ Supply and Return air temperature sensor inputs
- ▶ Fan coils manufactured with fully packaged factory fitted and tested controls
- ▶ EC fan modulation providing the optimum energy efficient performance
- ▶ Optional fixed fan speed (via Software switch)
- ▶ Bespoke unit identification and address pre-programming, greatly reducing onsite commissioning time
- ▶ Optional range of room sensors & displays via the Wallbus network with automatic detection
- ▶ Optional occupancy detection input available

TREND
OEM Partner

EC fan modulation
providing the optimum energy
efficient performance

ECO 270 Range



Diffusion's new ECO fan coil range is probably the most energy efficient fan coil range ever.

With energy savings of up to 25% the new ECO 270 ECDC fan coil offers leading specific fan powers, at typical selections without any additional cost to the product.

ECO 270 Range

This new ECO range of units offers extremely low Specific Fan Powers at typical fan coil duty and air volume selection points.

Specific Fan Powers below 0.2 W/l/s can be achieved at typical NR35 duty and airflow selections with no increase in unit size or cost over our standard ecdc 270mm deep fan coil unit range.

Specific Fan Powers below 0.15 W/l/s can be achieved depending on the unit duty/air volume selection point.

The new ECO unit range offers significant improvements in SFP, typically 20% (on a like for like unit basis), over existing ecdc fan coil units currently available.

BREEAM Buildings

Using 50% less energy than conventional EC fan coil units, the new Highline 270 has helped some major projects achieve BREEAM rating of Excellent.

Features:

- ▶ Incorporating Leading ec/dc Motor Technology.
- ▶ ErP Directive 2015 Compliant.
- ▶ Low Specific Fan Powers.
- ▶ Infinite Fan Speed Control.
- ▶ Performance at System Pressures Up To 50 Pa.
- ▶ Independently Established Performance Data.
- ▶ Lifetime 'ECO' filter.

Case Studies

1 Tower Bridge

LOCATION: **1 Tower Bridge, London**
 PRODUCT: **Slimline 170 & Highwall Fan Coil Units**
 CONSULTANT: **Meinhardt**
 CLIENT: **Berkeley Homes**

One Tower Bridge is a mixed-use development located in one of the best riverside locations in London, comprising 9 blocks of a total of 396 residential units, commercial, cultural spaces and a single storey basement area.

Blocks 1-8 consist of 353 residential units and ancillary floor space including an estate management facility, a large cultural space and commercial units accommodated in buildings of up to eleven storeys.

There is also a 20 storey residential tower block with roof area and 'lantern' structure at its top. Included in the scheme are communal and private amenity spaces including an extension to and improvement of Potters Field Park and associated highway works and landscaping. The scheme also incorporates a large basement car park, plant rooms and a leisure suite.

Diffusion are supplying 8 blocks with Slimline 170mm deep horizontal and Highwall 200mm deep vertical units.



“One of the best riverside locations in London, comprising 9 blocks of a total of 396 residential units”

“Diffusion are supplying 8 blocks with Slimline 170mm deep horizontal and Highwall 200mm deep vertical units.”

184 Shepherds Bush Road

LOCATION: **184 Shepherds Bush Road, London**
 PRODUCT: **Highline 270 Fan Coil Units**
 CONSULTANT: **Hilson Moran and Troup Bywater & Anders**
 CONTRACTOR: **Phoenix**

No. 184 Shepherd's Bush Road comprises a three storey industrial building, formerly known as Citroen House.

The site was originally built as a motor garage service depot with showroom, constructed for the Ford Motor Company around 1916. Soon afterwards it was taken over by Citroen in 1926 and used as a car showroom.

The redevelopment of the grade II listed Building will see 115,000 sq ft of office space and will be the new home of Customer science company, Dunnhumby.

The plans have sought to retain the architecture of the building while creating an additional three floors of contemporary offices within a diagrid glazed structure.

Diffusion are supplying 300 exposed Highline 270 fan coil units fitted with inlet silencers.

“The site was originally built as a motor garage service depot”



Principal Place

LOCATION: **Shoreditch, London**
 PRODUCT: **Highline 270 Fan Coil Units**
 CONSULTANT: **Hilson Moran**
 CONTRACTOR: **Michael J Lonsdale**



Principal Place is a new office development in Worship Street, Shoreditch, London. It will be a 15-storey office block designed by Foster and Partners. Alongside it, there will be a 50-storey residential tower called Principal Tower.

The 600,000-square-foot office scheme offers efficient and high density Grade A space with typical floors of 44,500 square feet. The building will feature a 15,000-square-foot reception area and a significant public realm, as well as two roof terraces exclusively for tenant use

In addition to the office scheme, half acre public piazza and 20,000 sq ft of retail space, there is also a significant residential component. Principal Tower, the 50-storey luxury residential establishment at Principal Place, will be Foster + Partners' first fully designed residential tower, reaching 175 meters, making it one of the tallest residential buildings in Central London.

Diffusion is supplying over 1200 Highline 270 fan coils units with low specific fan powers of 0.17 w/l/s. The units being supplied are fitted with the latest energy saving EC-DC motor technology. The building will target a BREEAM Excellent rating and is currently under construction with completion scheduled for 2016. The residential tower will be completed in 2018

The Star and Garter

LOCATION: **Richmond, London**
 PRODUCT: **Highline 270, Slimline 170 and Highwall 260 Fan Coil Units**
 CONSULTANT: **Hoare Lea**
 CONTRACTOR: **Haydon**

The Star and Garter home, on Richmond Hill, London was built in 1921 and designed by Sir Edwin Cooper, based on a 1915 plan by Sir Giles Gilbert Scott, to provide accommodation and nursing facilities for 180 seriously injured servicemen.

The Star and Garter Homes, the charitable trust running the home, announced in 2011 that it would be selling the building as it did not now meet modern requirements and could not be easily or economically upgraded.

The building, which is Grade II listed, was sold in April 2013 for £50 million to a housing developer, London Square, which, as of 2015, is restoring and converting the building into apartments.

The development will see 86 high end 1,2 and 3 bedroom apartments, a new swimming pool and gym for residents.

Diffusion is supplying over 400 fan coils throughout the building.

“The development will see 86 high end 1,2 and 3 bedroom apartments”



Case Studies

Abu Dhabi Investment Council

LOCATION: **Abu Dhabi**
 PRODUCT: **Highline 270 WH EC Fan Coil Units**
 CONSULTANT: **Arup & DIAR**
 CONTRACTOR: **BK Gulf**

The Abu Dhabi Investment Council Headquarters is the result of a competition winning design by Aedas Architects with Arup back in June 2007.

The development consists of two towers, roughly circular on plan and slightly barrelled, that are each 150m (492.12 ft) tall and share a common podium and 2 level basement.

In response to the Architectural vision, the tower superstructures comprise a honeycomb perimeter steel frame surrounding a central concrete core, which is both highly efficient and relatively quick and simple to construct.



The buildings are over-clad on the south, east and west sides by a unique dynamic shading system, that opens and closes to provide self shading as the sun moves around the building. This system is predicted to reduce the solar energy entering the building by 20% and is one of a number of innovative measures to enhance environmental performance and limit energy use. The project has been designed in accordance with the US Green Building Council LEED rating system.

Due to the latest drive by the Abu Dhabi government in reducing carbon emission, other features were also introduced to the design of the services. ie. Energy efficient EC motor fan coil units which reduce the power consumption by 70%, and photovoltaic panels which produce 5% of the electricity.

“Energy efficient EC motor fan coil units reduce power consumption by 70%”

“The project was designed in accordance with the US Green Building Council LEED rating system”

122 Leadenhall St - Cheesegrater

LOCATION: **City of London**
 PRODUCT: **270mm Deep Ceiling Void Fan Coil Units**
 CONSULTANT: **Arup**
 CONTRACTOR: **Crown House Technologies**

This iconic building, designed by Rogers Stirk Harbour & Partners, occupies a prominent city site opposite Lloyd's of London. The 46 story building, 224m (734.9 ft) high, provides 610,000 sq ft of the highest quality offices, retail units and restaurant.

Diffusion supplied Highline 270 ECDC high efficiency, low specific fan power units to this prestigious project. The stringent mechanical and acoustic requirements were demonstrated at Diffusion's dedicated test facility.



De Vere Gardens

LOCATION: **Kensington, London**
 PRODUCT: **Bespoke & Standard Fan Coil Units**
 CONSULTANT: **Hoare Lea & Partners**
 CONTRACTOR: **Michael J Lonsdale**



De Vere Gardens is a prestigious development in Kensington which provides 97 luxury apartments over seven floors.

To meet the demanding requirements of this project, Diffusion worked closely with consultants Hoare Lea to ensure the high specification requirement was achieved for the 659 units supplied.

A number of fan coil types were utilised to fit within the spatial restrictions whilst maintaining very low noise levels of NR25. Bespoke free standing units, 175mm -270mm deep ceiling void units and wall void units were utilised throughout the building and these were modified to suit the installation where required.

“A number of fan coil types were utilised to fit within the spatial restrictions whilst maintaining very low noise levels of NR25”

One Hyde Park

LOCATION: **Knightsbridge, London**
 PRODUCT: **Solent Range Bespoke Fan Coil Units**
 CLIENT: **Project Grande (Guernsey) Limited**
 CONTRACTOR: **EPS Page, LorneStewart, Imtech Meica, Briggs & Forrester, MJ Lonsdale**

One Hyde Park is a major residential and retail complex. The development includes three retail units totalling 385,000 sq ft and 86 residential properties marketed with prices starting at around £20 million.

The units were required to meet in-room noise levels of NR25 at elevated external static pressures whilst keeping the unit size within a restricted footprint.

The vertical, fully painted units supplied incorporate the latest energy saving ECDC motor technology. The units are fully packaged and include built in attenuators, high efficiency filters up to F7 grade, DC fans, heating/cooling coils and a recessed controls enclosure incorporating a full controls package.

- Ultra low noise levels
- Versatile and adaptable
- Infinitely variable fan speed
- High external static pressures
- ECDC energy efficient motors

“The vertical, fully painted units incorporate the latest energy saving ECDC motor technology”



Case Studies

Marks & Spencer

LOCATION: Nationwide
PRODUCT: Air Curtains, Fan Convectors & Energy Saving Controllers - Savannah, Mirage, Airboss, Fan Air, TR, CT & SR
CLIENT: Marks & Spencer
CONSULTANTS: SDS & TB&A

Marks & Spencer has been a customer of Diffusion for over fifty years, a relationship which started when they needed uniform over door heaters for their shops in 1960. Today we still supply a wide range of our standard products for the main store upgrades, plus the fast growing M & S Simply Food outlets. Our Mirage and Savanna air curtains are generally fitted within the main entrance areas and our ever popular SRW is used in back of house areas. Diffusion has recently supplied equipment for Marks & Spencer projects in and around Paris, France and we hope to continue with the expansion plan in Europe.



3 Merchant Square

LOCATION: Paddington Basin, London
PRODUCT: 235mm deep ceiling void & wall void Fan Coil Units
CONSULTANT: Hoare Lea & Partners
CONTRACTOR: Briggs & Forrester

3 Merchant Square is a 20-storey mixed tenure residential building, with ground floor community, retail and nursery space. The modern development provides flexible living space in 201 apartments, a short walk from Hyde Park and the shops and theatres of the West End.



Diffusion supplied units to this project consisting of mostly 235mm deep ceiling void units and wall void units. The units, where access was limited, were modified to enable the controls to be remotely mounted for ease of maintenance.

The acoustic testing in Diffusions laboratory ensured compliance with the stringent noise requirement.

“Marks & Spencer has been a customer of Diffusion for over fifty years”

The Shard

LOCATION: **Southwark, London**
 PRODUCT: **Highine 270 Fan Coil Units & Bespoke Oasis Air Curtains**
 CLIENT: **Mace**
 CONSULTANT: **Troup Bywater & Anders**

The Shard is a skyscraper in Southwark, London. Standing almost 310 metres (1,020 ft) tall, it is the tallest building in the European Union.

The tower has 72 habitable floors and contains premium office space, a hotel, luxury residences, retail space, restaurants, a 15-storey public viewing gallery, and a spa.



It was designed with an irregular pyramidal shape from the base to the top, and is clad entirely in glass. Shard London Bridge's structure was completed in April 2012, and it was opened to the public on 5 July 2012.

As well as having ECO Highine 270 fan coil units throughout The Shard, Diffusion also supplied bespoke Oasis air curtains for the viewing gallery which is situated on floors 68, 69 and 72.

Fatface and H&M

LOCATION: **Whitley Shopping Village**
 PRODUCT: **Bespoke Chameleon Air Curtains**
 CLIENT: **Fatface and H&M**
 CONTRACTOR: **Securlec & Aspen Air Conditioning**

Diffusion provided Chameleon Air Curtains finished in brushed stainless steel to both high street retailers. Due to the fully glazed entrance areas Diffusion had to design and manufacture extended shrouds to hide all unsightly fixings and electrical cables.

The units were supplied with the energy saving packages to enable close control of the electric air curtains via the store BMS system.

Diffusion have also done many other stores throughout the country with both retailers providing our standard products such as the Mirage air curtains on main entrances and the ZH tile heater stock room areas.



Diffusion provided Chameleon Air Curtains finished in brushed stainless steel

Case Studies

Willis Building

LOCATION: **51 Lime Street, London**
 PRODUCT: **Bespoke Chameleon Air Curtains, 260 & 300 Fan Coil Units**
 CLIENT: **Willis Group**
 CONSULTANT: **Hurley Palmer Flatt**
 CONTRACTOR: **MSG Construction, Michael J Lonsdale**

The main entrances in both buildings had complainants about drafts entering the reception areas making them very uncomfortable in cold periods. To overcome this issue it was decided that electric air curtains would be installed.

To meet the requirements of this project, Diffusion worked closely with the Willis Group and MGS Construction to ensure the high specification requirement was achieved on the front entrances.

Diffusion provided three 1365mm bespoke Chameleon electric air curtains that were mounted directly over the door openings on purpose made frame work. The units and frame work were painted RAL9011 graphite black so that they blended into the surroundings of the reception areas.

The units were supplied with our energy saving controllers to enable close control of the electric air curtains via the main BMS system. Diffusion have supplied over one thousand 260 and 300 vertical and horizontal Highline airside control units across the Willis Building.



Primark

LOCATION: **Nationwide**
 PRODUCT: **Mirage & Savanna Curtains, SRW & CTW Heaters**
 CONSULTANT: **Hoare Lea & Partners**
 CONTRACTOR: **DIS, Mitie, Hensall**

Primark is a British-owned, Irish clothing retailer, operating across Europe and soon the USA. They have over 200 stores in the UK and Ireland. The company's main headquarters are in Dublin; they are a subsidiary of international food, ingredients and retail group Associated British Foods.

In October 2011 Primark opened its first concession model. Primark is now stocked in Selfridges department stores in Trafford Centre, Manchester, The Bull Ring, Birmingham and Oxford Street, London.

Diffusion has worked on a number of projects over the past 5 years with the rapidly growing high street clothing retailer and have recently provided air curtains & heaters to large projects in Manchester and London.



“ Diffusion has worked on a number of projects with Primark over the past 5 years ”

“ The units and frame work were painted graphite black so that they blended into the surroundings ”

Riverlight

LOCATION: **Vauxhall, London**
 PRODUCT: **235mm Deep Ceiling Void Fan Coil Units**
 CONSULTANT: **Hoare Lea & Partners**
 CONTRACTOR: **Parker Bromley**

Riverlight is a new residential development offering a prime riverfront location in the heart of London's largest regeneration area providing views along the Thames and over Westminster and Chelsea.

Diffusion supplied 530 units with a depth of 235 mm for the 1 & 2 bedroom apartments and penthouses.

The ceiling void fan coils were adapted to incorporate remote control boxes to facilitate improved access for maintenance.

Acoustic testing was undertaken within the Diffusion laboratory to ensure the stringent noise requirement was achieved.



“Acoustic testing was undertaken within the Diffusion laboratory to ensure the stringent noise requirement was achieved”

Superdry Stores

LOCATION: **Nationwide**
 PRODUCT: **Chameleon, CTE, SRE Air Curtains & Heaters**
 CONSULTANT: **QED**
 CONTRACTOR: **Multi-Temp (UK) Ltd, Brykol**

In 2008 a nationwide expansion of the Superdry brand took place, with stores opening in major cities all over the UK, the majority in University cities. Before the expansion, Superdry clothing was sold only in the London store, House of Fraser concessions and Cult stores. Today the brand is sold in over 20 countries across 4 continents. The 77Breed and SurfCo brands were added to Supergroup's portfolio in 2006.

We have recently supplied equipment to new Superdry Stores in York, Colchester and Newbury. The Diffusion architectural Chameleon air curtain has been used over the main entrances as it fits in with the ultra modern decor of these cutting edge stores. The units are supplied with our state of the art controls package allowing for maximum energy savings.

CTE & SRE units have been installed in staff areas and stock rooms.

Diffusion has recently supplied Chameleon air Curtains to projects in Munich & Hamburg, Germany and are hoping to continue with expansion plans in Europe.



Case Studies

Broadgate Tower

LOCATION: **London**
 PRODUCT: **Chameleon 2700 Vertical Stainless Steel Air Curtain**
 CLIENT: **Broadgate Estates**
 CONSULTANT: **M3 Consulting & Ramboll**

Diffusion has supplied two bespoke stainless steel air curtains for a vertical installation at Broadgate Tower, where they have been discreetly mounted on both main entrance doors within the modern reception area.

Working closely with Ramboll, M3 Consulting and Broadgate Estates Diffusion altered the standard unit slightly to suit their requirements. The units were 2700mm vertical floor standing type finished in stainless steel Grade type SS-01 (ground finish 320) allowing them to blend in with existing fixtures.

Both units were supplied with energy saving controllers to enable close control of the two 24kw electric units via the main MODBUS network.



WestQuay Shopping Centre

LOCATION: **Southampton**
 PRODUCT: **Bespoke Chameleon Air Curtains**
 CLIENT: **Hammerson**
 CONSULTANT: **WSP UK Ltd**
 CONTRACTOR: **RG Beattie Ltd**

The front entrance to the prestigious WestQuay Shopping Centre had issues with this area becoming cold in certain periods of the year due to drafts bypassing ineffective LPHW air curtains and decided to upgrade this area with higher performing electric units.



Diffusion provided five 1800mm long stainless steel Chameleon electric air curtains that were mounted directly over the door openings, along with purpose made dummy sections to fit between the units to give the appearance of one continuous air curtain.

The units were supplied with energy saving controllers to enable close control of the electric air curtains via the main BMS system.

“The units were supplied with our energy controls package”

Oasis Academy & St Michael's and All Angels School (SMAAH)

LOCATION: **Enfield, London & Camberwell, London**

PRODUCT: **Heating only Raft Fan Converter**

CONSULTANT: **Aecom & Ramboll**

CONTRACTOR: **BBESL**

Diffusion has supplied a number of bespoke heating only fan convectors for installation at Oasis Academy & St Michael's & All Angels School.

Diffusion worked closely with BBESL & the consultants Aecom & Ramboll to design a fan convector that would provide classrooms with sufficient heating at extremely low noise levels. With noise criteria of NR29 in the main classrooms and NR34 in science labs the units had to be extremely quiet and were supplied with built in acoustic attenuators. The units were also supplied with energy efficient ECDC motors.



“The units had to be extremely quiet and were supplied with built in acoustic attenuators”

St. Pancras Renaissance London Hotel

LOCATION: **Kings Cross, London**

PRODUCT: **Bespoke Horizontal, Vertical and Underfloor Fan Coil Units**

CONSULTANT: **AECOM**

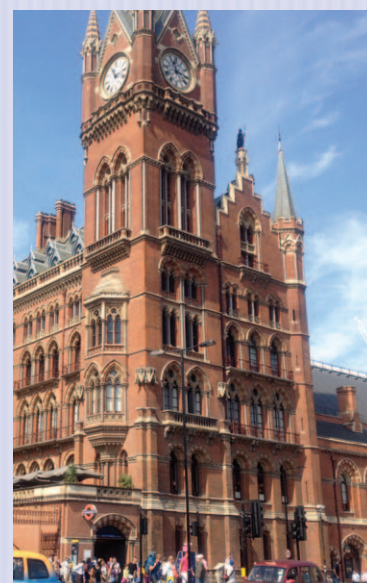
CONTRACTOR: **EMCOR**

St Pancras Renaissance London Hotel is the forming frontispiece of St. Pancras railway station. It opened in 2011, as a five-star hotel offering beautifully restored Victorian architecture.



The main public rooms of the old Midland Grand Hotel were restored along with some bedrooms, originally designed by George Gilbert Scott which opened in 1873 and closed in 1935. Between 1935 and 2011, the building was known as St Pancras Chambers and was used as railway offices.

Diffusion supplied 500 bespoke fan coil units. St Pancras Hotel is a Grade 1 listed building, which meant all of the fan coil units were designed to fit the architectural, restoration and delivery requirements of the site.



Case Studies

Fitzroy Place

LOCATION: **Mortimer Street, London**
 PRODUCT: **235mm Highline Fan Coil Units, Savanna High Performance Air Curtain and Eclipse**
 CONSULTANT: **AECOM**
 CONTRACTOR: **Hayden & Dornan Engineering Services**

Fitzroy Place is renowned for its beautifully proportioned homes, which are surrounded by Soho, Mayfair, Marylebone and Regents Park.

There is a wide variety of apartments including suites, one, two and three bedrooms, duplexes and penthouses.

Diffusion has supplied 643 fan coil units with a depth of 235mm across Fitzroy Place. The ceiling void fan coils were adapted to incorporate remote control boxes and side removable filters to facilitate improved access for maintenance.

Acoustic testing was undertaken within the Diffusion Laboratory to ensure the stringent noise requirement was achieved.



Diffusion has also recently supplied a number of bespoke Recessed air curtains and standard Slimvector fan convectors to the Fitzroy Place office, residential and commercial complex in Fitzrovia, London. The air curtains were of a recessed type, as the ceiling area was extremely shallow and therefore we had to design not only a shallow air curtain, but one that could also offer the required discharge velocities to create the correct curtain.

The Lanesborough Hotel

LOCATION: **Hyde Park Corner, London**
 PRODUCT: **Bespoke Savanna High Performance Air Curtain. Highline 270, Highline 260 and Lowline 420 Fan Coil Units**

CONSULTANT: **PSH**
 CONTRACTOR: **Barrier Air Conditioning**

Diffusion has recently supplied a bespoke air curtain and various fan coil units to the 5-star hotel The Lanesborough on Hyde Park Corner, London. The hotel is reputedly the most expensive hotel in London and has accommodated visiting royalty, eminent politicians and entertainers.



The renovation work designed by world renowned interior designer, Alberto Pinto, has enhanced all guest rooms and public areas. It honors the building's architectural heritage as one of London's most revered Regency landmarks, and embodies the signature style that has become synonymous with The Lanesborough, whilst incorporating contemporary luxury and technological innovations.

Due to The Lanesborough being a landmark Grade II listed building the recessed Savanna high performance air curtain had to be designed to fit within the ceiling constraints, plus making sure it was still an effective air curtain when being mounted at a height of 3.5m (FFL). Diffusion has supplied Highline 270, vertical highline 260 and vertical Lowline 420 all with energy efficient motors. These have been supplied to many various locations throughout the hotel such as The Queens Entrance, The Wellington, Great Hall Circulation and The Belgravia Room.



“The Lanesborough incorporates contemporary luxury and technological innovations”

Research & Development

Committed to providing the information you need

Our dedicated R&D facilities complement our in-house design and manufacturing capability to meet the requirements placed by various specifications.

Using the combination of real-world simulation, experienced staff and certified test equipment means you can be confident that all Diffusion products will perform according to plan in their target environments.

Using calibrated and certified instruments, we measure air volume, thermal and acoustic performance.

Validating Air Volume Performance to BS 848-1, BS EN ISO 5801

Air volume flow rates are determined on a purpose designed and built BS848-1 air volume test bench using orifice plate flow measuring technology. The rig simultaneously measures air volume flow rate, air pressure drop, motor amps, motor power and electrical power factor. For witness testing, the units can be mounted in the air volume test bench with the project specific ductwork, plenums and grilles fitted to provide accurate air volume flow rate and pressure drop measurements of the actual site ductwork configuration.

Validating Acoustic Performance to BS 4856-4

Acoustic performance is determined by taking measurements in a purpose designed and built acoustic test lab. The lab comprises two reverberation chambers positioned end to end enabling the simultaneous measurement of inlet & case radiated, and discharge sound pressure levels. For validation testing the measurement method is in accordance with BS 4856-4.

For witness testing, the chambers can accommodate fan coil units fitted with the project specific ductwork, plenums and grilles, to provide accurate acoustic performance figures for the actual site ductwork configuration.

Validating Thermal Performance to BS 4856-3

Thermal performance is determined in a purpose built laboratory, comprising a bespoke designed and installed computer controlled thermal test system. The laboratory can accurately simulate, control, and maintain thermal state, of a given projects heating or cooling load requirements to enable unit performance to be determined. Measurements are simultaneously recorded of environmental conditions providing instantaneous and time logged thermal performance duties. All tests are carried out in accordance with BS 4856-3.



Management

Approach

We understand that in order to deliver an excellent service and to build a good relationship that has longevity with our clients, all levels of staff play a major part in this process.

Our approach is proactive; we try to cover all bases before any issues arise. Due to the length of time we have had in this business and the great team we have behind us, we have vast experience in most aspects of the industry, any problems that may arise and also how to resolve them.

The service we provide is based on experience, vast knowledge of the industry and the products we manufacture.

We focus on many aspects:

- ▶ The client's needs and interests
- ▶ The main objective of the project
- ▶ Cost effective solutions
- ▶ High quality goods
- ▶ Assist clients throughout the length of the project and after
- ▶ Energy awareness and climate control

Health & Safety

It is company policy to ensure that all staff, visitors and clients are in a safe and healthy environment whilst at work or on site for Diffusion. Because of this we comply with the Health and Safety at Work Act and all other relevant legislations and codes of practice.

We have several members of staff that have involvement with the health and safety matters for the company and its employees. We also recognise that it is a clear legal duty for each and every employee to take reasonable care for their personal health and safety and that of all other persons who may be affected by his or her actions while at work.

Quality

Management

All members of staff at Diffusion are integral to ensuring we deliver the top level of service possible. We are more than satisfied with the goods and service we produce, but always strive to go that extra mile.

Whether it is adhering to the standards we set ourselves or meeting the accredited or statutory standards, we excel in both.

We are certified in ISO 9001: 2008 and ISO 14001: 2004. We also meet with all the relevant BSI standards, IEE wiring regulations and we are a member of B.S.R.I.A



Whether it is adhering to the standards we set ourselves or meeting the accredited or statutory standards, we excel in both.

Client List

AECOM

Aldi
Anderson Green Ltd
Argos
ARUP
Ascot Race Course
ASDA
Balfour Beatty
Banana Republic
Bancroft Ltd
BBC
Boots
Borahurst Ltd
Briggs & Forrester
BT
Buro Happold
Cannon Avent
Chapman Bathurst
Chelsea Football Club
Chiswick Business Park
City Inn Hotels
Claridges
Co-op
Crown House
Cundall
Debenhams
Dorothy Perkins
Fat Face
Forever 21
G E Capital
GAP
Gratte Brothers

Grontmij

Grosvenor Casino
H & M
Halifax
Harrods
Harvey Nichols
HBOS
Heathrow Airport
Hilson Moran
Hilton Building Services
Hilton Hotels
Hoare Lea
Hotchkiss
Hugoboss
Hurley Palmer Flatt
John Lewis
Land Rover
Land Securities
Leeds United Football Club
LK Bennet
Lloyds TSB
Long & Partners
Louis Vuitton
Mace Ltd
Manchester United Football Club
Marks and Spencer
Marriott Hotels
Mecserve
Michael J Lonsdale
Mitie
Morrisons
Mott Macdonald

MTT

N G Bailey
NatWest
New Look
Next
Nike
North Face
Primark
Radisson Hotels
Republic
Royal and Sunalliance
Royal Opera House
Sainsbury's
Savoy Hotel
Spie Matthew Hall
Spinnaker Tower
Standard Life
Stanhope
Superdrug
Superdry
Swarovski
The White Company
T K Maxx
Tesco
Toyota
Travelodge
Troup Bywaters & Anders
W H Smiths
Waitrose
Wolseley
Working Environments
WSP

Established in 1960,
Diffusion has over 50 years
experience in producing
environmental solutions
via the manufacturing of heating,
air conditioning and
ventilating products.



www.diffusion-group.co.uk

Diffusion Environmental Systems
47 Central Avenue, West Molesey,
Surrey KT8 2QZ

Tel: (+44) 020 8783 0033

Fax: (+44) 020 8783 0140

Email: diffusion@etenv.co.uk

 @DiffusionLondon



Diffusion Environmental Systems
have a policy of continuous development.
We therefore reserve the right to alter
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