

An integrated air conditioning, heating, ventilation and UV air purification product for residential, commercial, new build or heritage buildings, featuring:

- Multi zone 3-36kW European small duct central air distribution system<sup>\*\*</sup>
- Plug-and-Play – easy installation
- Touch-control room controllers
- Small discreet air outlets to match any décor.

#### Offering:

- Comfortable guaranteed draught-free working or living conditions
- Even temperatures, summer or winter
- Quiet operation
- Lower energy bills
- Simple, space-saving installation in new or existing buildings.

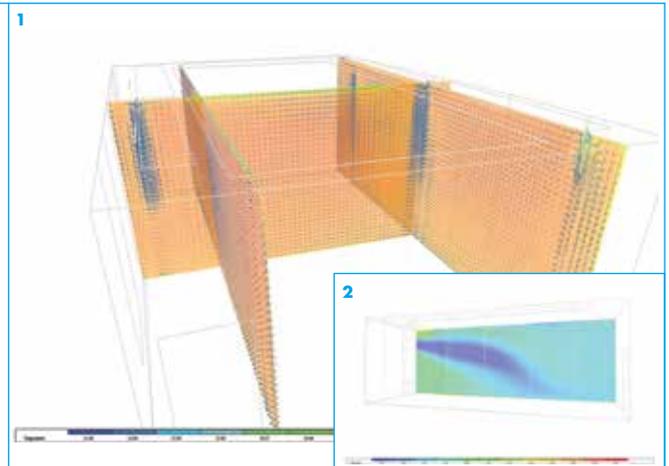
<sup>\*\*</sup> Available with direct expansion or heat pump water coils.

**Invisible.AC** offers a versatile and efficient air conditioning, heating, ventilation and UV air purification solution for residential, commercial, new build and heritage buildings. Highly efficient air-handling units distribute cooled or warmed air through flexible space-saving mini-ducts, injecting the air at high velocity through discreet linear slots or round outlets.

### Comfortable

An Invisible.AC solution combines air conditioning, heating, ventilation and UV air purification in a single system for year-round comfort. Skillfully sited high-velocity 'Aspiration' air-jets eliminate drafts and ensure a temperature differential no greater than 1°C throughout a room, compared to the variation of up to 6°C with conventional systems. The system also removes 30 percent more relative humidity. The reduced humidity means you can set the temperature higher, saving energy and running costs when cooling. System zoning gives users the flexibility and control to set precise temperatures for different conditions in different areas. The basic Invisible.AC twin zone product, designed for temperate climates, allows up to full-duty in either zone on extreme weather days!

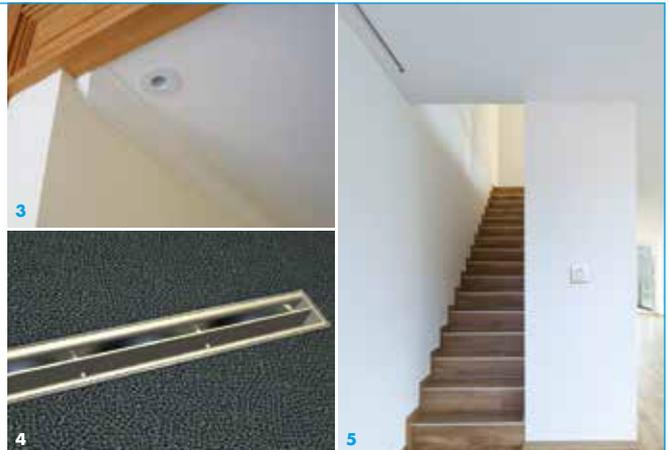
- 1 Invisible.AC room-air stratification CFD plot – improved comfort with 6 x air jets at 7m/sec.
- 2 Conventional HVAC.



### Discreet

With an Invisible.AC system, there is no need to compromise on appearance. Discreet outlets for cool or warm air eliminate the need for ugly grills, wall-units, radiators and pipe runs. The single 25-mm wide linear slot ceiling, wall or floor outlets blend with any traditional or contemporary décor. Inconspicuous round outlets are also available.

- 3 Invisible.AC discreet ceiling outlet.
- 4 Invisible.AC discreet 25mm wide linear floor slot.
- 5 Invisible.AC discreet 25mm wide linear ceiling slot and room controller.



### Efficient

Invisible.AC systems are compatible with reversible heat exchanger units to provide air conditioning and heating from a single source. As well as eliminating the additional capital costs of installing two separate systems, the combination of a modern heat-pump and an Invisible.AC system can increase energy efficiency and energy savings by 300 percent over conventional fossil fuel installations. The ability to deliver constant, even temperatures and the potential savings from system zoning can increase energy efficiency even further.

### Quiet

The Invisible.AC system is one of the quietest around. The use of acoustic technology throughout ensures that the system operates at low noise levels with minimum vibration. Sound-attenuating ducts, smooth running equipment, extensive insulation and low-turbulence outlets enable noise levels as low as NR20 for quiet areas in homes, hotels, restaurants and working areas in offices.

### Compact

The compact Invisible.AC air-handling equipment fits easily in a roof or cupboard space with small, flexible mini-ducts running in ceiling voids or partition walls.



- 6 Invisible.AC ready-insulated mini-ducting (<100mm diameter).
- 7 Invisible.AC twin-zone control box.
- 8 Invisible.AC twin-zone 6kW unit (depth 225mm).
- 9 Invisible.AC 25mm horizontal wall slot.

The **Invisible.AC** system injects air into rooms with a high-velocity – resulting in much better mixing than the low velocity ‘air-dumping’ of conventional HVAC systems. This ‘Aspiration’ technique was pioneered by an American jet propulsion engineer, Calvin McCracken, after he observed the swirling mixing of air surrounding jet engines.



### Customised solutions

#### *An Interior Designers Dream*

Invisible.AC systems give architects, interior designers, mechanical engineers and installers the flexibility to develop customised solutions to meet the individual needs of different types of customers.

### Residential

#### *New construction or Refurbishment*

Invisible.AC offers residential customers the convenience of a cooling and heating system that reduces energy costs. With zonal control, they can choose comfortable temperatures for different rooms like the bedrooms or living areas. Plus, with the Invisible.AC Twin zone product – the full duty can be used in either area!

### Commercial

Zonal control is one of the most important requirements in commercial properties like restaurants and retail outlets. Invisible.AC systems provide comfortable temperatures for customers, while maintaining appropriate temperatures in working areas and protecting products in storage or on display.

Invisible.AC systems maintain comfortable, even temperatures in the office, helping to improve working conditions and increase productivity. They ensure quiet operation in the office environment and maintain temperatures at a level that meets legislation. Individual outlets can simply be moved if office partition layouts change.

### New build

Invisible.AC products are more compact than existing technology systems, providing great performance whilst ‘invisible’. They fit into the smallest ceiling void in new construction (<150mm). They can be easily integrated with fresh-air energy recovery ventilation systems.

### Heritage

Invisible.AC – the revolution possible with mini-duct air distribution. Historic buildings were never originally intended to have ducted systems installed. Owners can now install a system that provides heating, cooling, fresh-air and dehumidification without impacting on the visual appearance or the fabric of the building.

10 Residential with 25mm slot.

11 Hotel Chocolat, Westfield Centre, Olympic Park.

12 Old Library, Pembroke College, Cambridge University.

13 Heritage ceiling installation, Vienna.



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## A complete solution

The **Invisible.AC** system consists of five basic components:

- High-static-pressure blower module
- High-efficiency copper-coil air heat exchanger carrying either water or refrigerant
- Modular plenum duct kit
- Ready-insulated sound-attenuating flexible mini-ducts to distribute cooled or warmed air throughout the building
- Slotted or round air outlets in a variety of 'Architect-approved' designs.

**Invisible.AC** systems conform to international standards and meet the cooling, ventilation, heating and filtration requirements of European markets. **Invisible.AC** products carry the CE mark, confirming that they meet all relevant EC directives.



### Brief Technical Specifications

Model	3	5	10	14	20/25	36
Capacity (kW)	1.0 - 4.0	2.5 - 7.0	6.0 - 12.0	12.0 - 18.0	18.0 - 25.0	25.0 - 36.0
Power Supply	200 - 277 VAC / 1/ 50 - 60Hz					
<b>Dimensions (mm)</b>						
Height	200	225	445	445	445	505
Width	550	900	635	965	965	1160
Depth*	1000	1000	1000	1000	1000	1000
EC Blower - V/Speed (m <sup>3</sup> /h)*	600	1000	1800	2600	3600	5200
Coils - Dx or Chilled Water (rows)	4	4	4	4	6	6

\* nominal

Distributed by

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