



**PRICE
TWA**

Fabric Ducts

10.2010

Engineered Solutions

Introduction

One of the UK's leading manufacturers and distributors of heating and ventilation equipment, Price TWA works with architects, M&E consultants, building and heating contractors and facilities managers, to design, develop, supply and install high quality solutions to meet the specific needs of individual projects.

With over a decade's experience, our products and systems are proven in projects across a wide range of applications and sectors in both the public and private sector. From health to retail and education to commercial offices, our systems feature in both new-build and refurbishment projects throughout the UK.

We manufacture a wide range of systems under the Price TWA brand, supplemented by products drawn from some of Europe's leading manufacturers allowing us to provide high quality yet cost-effective solutions for a host of applications.

For more details about any of these products please contact your local distributor or visit www.pricetwa.co.uk.

As well as products and systems to meet Fabric Duct system requirements, our range also includes:

- / Natural ventilation
- / Radiant panels
- / Displacement systems
- / Kitchen ventilation systems
- / CAV and VAV systems
- / Grilles and diffusers



Fabric Duct Systems

Fabric Duct systems provide an effective and proven means of distributing cooled air evenly throughout a building, without draughts, whilst at the same time cleaning the air. Systems are available to suit almost all types of application, from manufacturing plants and warehouses to sports centres, offices and individual laboratories – indeed any area that requires a high quality, easily maintained indoor environment and particularly those requiring high standards of hygiene, comfort and temperature control.

Our systems are the result of over 45 years' continuous range and product development, which has produced four distinct ranges of fabric air distribution products tailored to meet the specific air-flow, heating and ventilation requirements of each project.

Designing Fabric Duct Schemes

Fabric systems are extremely versatile, with single or multiple duct designs, which can easily be configured with branches, elbows, tees and offsets as required – all depending on the specific needs of each individual application.

For maximum performance and to ensure optimum life from the system, the diameter of the duct should be specified such that the air entering it should fill the full diameter. As a rule of thumb, fabric ducts are sized based on an entering air velocity of 2000-2400 FPM for the majority of applications and 1400-1800 FPM for low and medium velocity projects.

In applications where specific ceiling to floor clearances must be maintained, or where there may be obstructions or protrusions at the ceiling that can not be easily relocated, (for example, roof trusses, sprinklers and lights) smaller diameter ducts may also be used.

Fabric ducts may also be used to transfer excess heat or cooler air to other areas of a building, providing an effective ventilation system.

Price TWA engineers have a wealth of experience designing and developing Fabric Duct installations, managing projects from initial design concepts through to full installation and maintenance. Proven in applications throughout the UK, our systems feature in projects of a widely varying scale and complexity.

Working in close partnership with specialist design and construction project teams, our technical support team provides guidance and design support for projects of all scope and type – whether new build or refurbishment.

Benefits of Fabric Duct Systems

Our range of high quality Fabric Duct systems provides a number of key benefits:

- / Light weight – imparting minimal roof load
- / Fast and easy installation – with virtually no waste
- / Low material and installation costs
- / Low maintenance requirements
- / Wide range of colour options
- / Wide range of materials – including anti-bacterial and flame retardant options
- / Low noise in operation – also with sound deadening characteristics
- / Flexible, customised solutions – tailored duct dimensions, colours and offsets
- / Durable solutions – no risk of rust or corrosion

Fabric Duct Product Range

With an extensive product range that includes over 100 different types of material options (including flame retardant materials which are fire approved to EN 13501 and MoD HH52/92), our fabric ducts offer close temperature control and air throws – typically in the range of 2 to 2.5m.

Systems are available for a wide range of filtration, ventilation and air distribution components and are ideal for the delivery and distribution of cooled air – especially in applications requiring high standards of hygiene, comfort and temperature control. Lightweight, easy to install and maintain, our products are available in runs up to 100m to meet even the most demanding applications – they may also be easily removed to allow access, if required.

Our range of Fabric Duct systems includes:

KE-Low Impulse System

These round textile ducts are available in up to 7 different air permeabilities and a wide range of colours and are typically used in applications which require cooling all year round as well as high air quality standards and low air velocities in the occupied area.

Woven from Trevira CS polyester yarn, the fabric surface of the Low Impulse system acts as a fine mesh, filtering and distributing cooled air which is allowed to permeate through at a very low uniform discharge velocity (normally less than 0.1 m/s). Easy to clean and maintain, this specially designed fabric has been developed for long term durability; even after repeated washing, permeability remains uniform with a maximum shrinkage rate of 0.5%.

Applications for the system include areas with high cooling and ventilation loads, areas that have a requirement for a constant fresh air supply or a low movement of air. Typically installations for this system have included food preparation and manufacturing premises (including cold stores), electronics assembly areas and laboratories.



KE-Inject System

Unlike the majority of fabric ducts, this system is made of a non-permeable material; instead of permeable fabric, small holes (of 4.5mm diameter) are punched into an individual pattern, designed to suit each specific project. This results in an induction of the room air on a large scale around the jet, meaning that not only is the velocity rate in the jet reduced more quickly than other systems, but the throw length and penetration length are also reduced.

This combination of features makes the Inject System ideally suited for applications that require a fresh air supply for short- to medium-throws; a high level of mixing can also easily be accommodated.

The Inject system can achieve a uniform and optimum air distribution throughout the whole room, with the entire length of the duct acting as a continuous diffuser, ensuring that air delivery is not limited to particular zones. It also provides a greater ability to induce and mix room air than some traditional ventilation systems – and without the associated draft issues.

With low maintenance requirements, the Inject system is ideally suited to smaller scale industrial, manufacturing or storage applications, typically with a room height of around 2m to 3m, where there is a requirement for different supply air temperatures – heated, cooled or just replacement air.

KE-Interior System

Featuring a semi circular, 'D' shaped textile duct, this stylish system offers an elegant solution for the effective delivery of cooled air and is typically used in offices, laboratories, restaurants, schools etc.

Suspended by the 'D-Alu Rail' system, Interior's unique design continues to deliver optimum air distribution regardless of ventilation requirements. Even at minimum ventilation in VAV systems, the ducts retain the integrity of their shape and their appearance, with fresh air delivered slowly and without drafts through the textile surface and into the room. Although it is suitable for all types of buildings and for new build or refurbishment projects, the Interior System is particularly suited for low-ceilinged rooms or areas with low pressure.

Using the same woven material as the Low-Impulse system, the fabric surface of Interior acts as a fine mesh, filtering and distributing cooled air which permeates through at a very low uniform discharge velocity (normally less than 0.1 m/s). Easy to clean and maintain, this specially designed fabric has been developed for long term durability; even after repeated washing, permeability remains uniform with a maximum shrinkage rate of 0.5%.



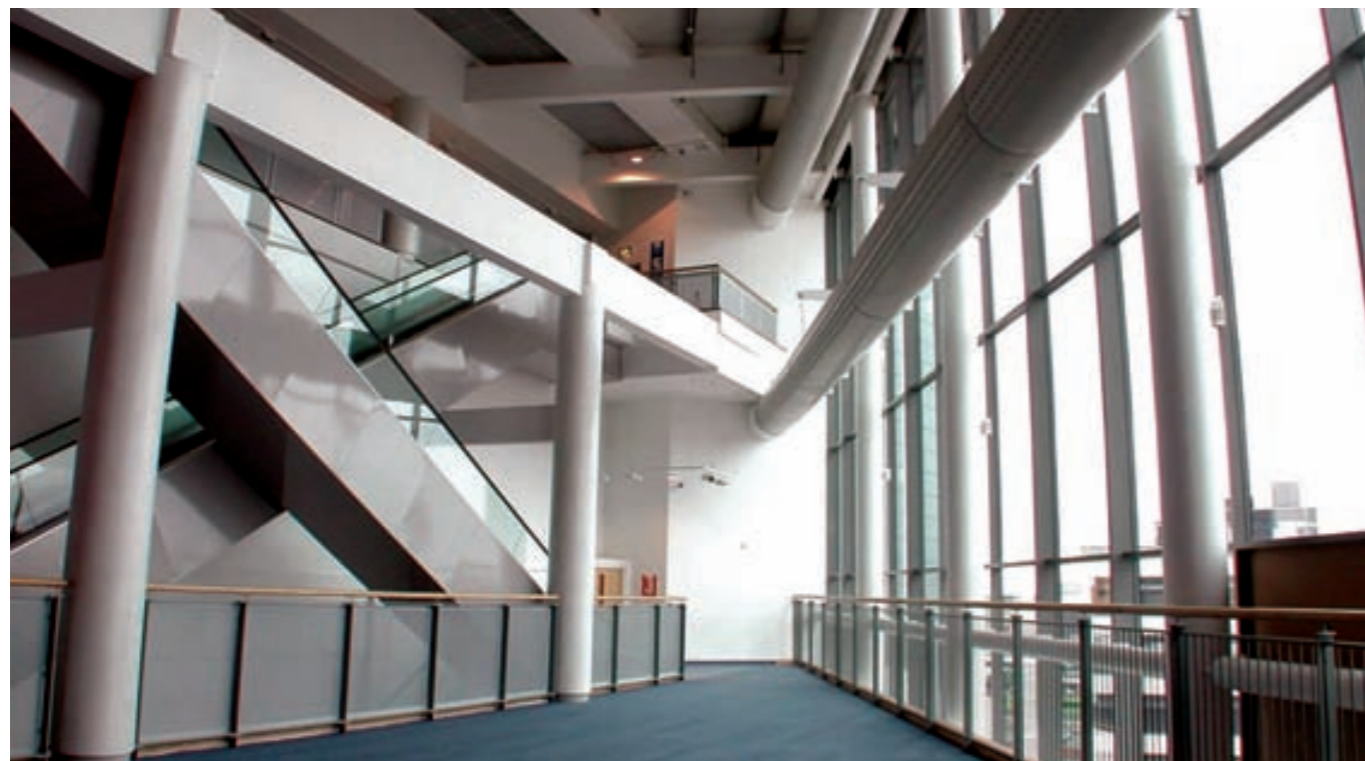
KE-DireJet System

The DireJet System is manufactured from a coated, permeable fabric with rows of conical nozzles that guarantee precise directional air flow delivery. Because the conical nozzles limit the induction of room air around the individual air jet, the velocity in the jet decreases relatively slowly; consequently, both the throw length and thermal penetration length are considerably greater than when using the Inject System.

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Suitable for areas requiring long throws – for example, in large manufacturing plants, open areas and public buildings – this system is the perfect solution to meet high supply temperature requirements.

The DireJet range is the only one available to offer five different nozzle sizes (with diameters of 12, 18, 24, 48 and 60mm) – allowing it to be used in virtually any application that requires mixing ventilation, even in extremely large premises, such as high-bay warehouses or large sports centres. The same duct may feature different nozzle types and flow models, allowing specific flow patterns and air intensity levels to be achieved across different zones.



Services

Our dedicated technical and product support teams offer a comprehensive range of services – from application analysis, product advice and design, through to scheduling supply. If required we also offer a complete installation and maintenance service through our national network of specialist engineers, enabling us to take responsibility for the whole life of our products.

With an extensive product range we are able to offer standard solutions for the vast majority of applications. However, we are also able to draw on our design and development capability to develop bespoke solutions, including control systems to meet particular application requirements.

For more information on our Fabric Duct systems, or to discuss specific project requirements, **please contact your local distributor.**

Testing

Our range of fabric ducts is the only one to be certified to each of the following standards: Quality (ISO 9001), Environment (ISO 14001) and Working Environment (OHSAS 18001).

For copies of relevant test certificates, **please contact our technical support team or visit our website www.pricetwa.co.uk.**



Local Distributor

For more information our range of products and systems or our technical design and support services, please contact us.

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