

Tecflex 800S Series Flexible Ducting



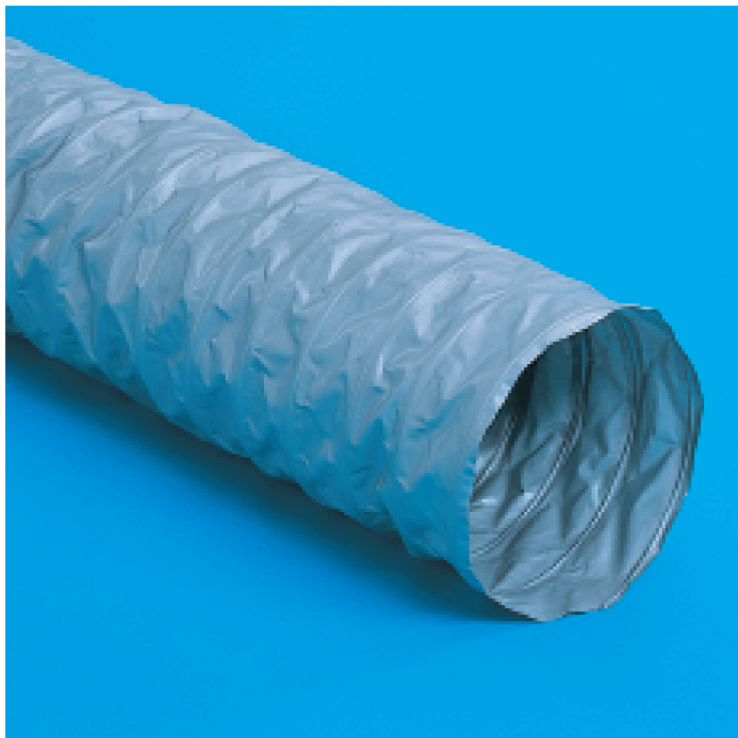
- Suitable for high, medium and low pressure applications.
- Fire resistant – Complies with the requirements of BS476.
- Suitable for air conditioning and fume extraction systems.
- Complies with the requirements of DW144.
- Manufactured from puncture and tear resistant materials.
- Withstands repeated flexing without damage.
- Plain and pre-insulated types available.

Tecflex 800S

Description

Tecflex 800S is a new and improved version of the best selling Tecflex 800. This new construction with the supporting steel wire helix now embedded between two layers of fabric produces approximately 10-25% less resistance! Tecflex 800S is also environmentally friendly; solvents are no longer the principle bonding agents. The estimated solvent reduction is over 90%!

Tecflex 800S is suitable for use in high, medium and low pressure ventilation and air conditioning systems. It is also suitable for use in fume extraction systems. Due to the materials used in its construction Tecflex 800S is able to withstand repeated flexing without damage or kinking. Tecflex 800S complies with the requirements of HVCA specification DW144.



Construction

Tecflex 800S is manufactured from a tough, grey coloured fabric comprising a pvc coating bonded to a tightly woven glass cloth to provide a tough yet highly flexible, puncture resistant, ducting. The fabric is supported by an encapsulated high tensile steel wire helix. Encapsulation of the wire helix within the fabric overlap provides an exceptionally smooth inner wall resulting in excellent friction loss characteristics.

Flexibility

The selection of an exceptionally durable fabric together with carefully controlled manufacturing techniques has resulted in a highly compressible, ultra flexible ducting.

Tecflex 800S compresses down to approximately 10% of its extended length – making connections in confined spaces considerably easier and reducing installation times.

Tecflex 800S is supplied in economical 6 metre lengths. However, if longer lengths are required, two lengths of the same diameter may be screwed together and secured with PVC Tectape to provide a permanent airtight joint.

Specification

Un-insulated flexible ducting for joints or connections shall be Tecflex 800S. It shall be manufactured from a tight weave glass fibre fabric coated with a grey coloured PVC and supported by an encapsulated high tensile steel wire helix.

The duct shall meet the requirements of BS476 parts 6, 7 and 20.

Technical Data

Diameter Range	– 80mm to 600mm
Temperature Range	– From -20°C to +70°C
Air Velocity	– 25M/S maximum
Working Pressure	– Maximum 2000 Pa positive up to 406mm dia.
Colour	– Silver Grey
Standard Length	– 6 Metres (longer or shorter lengths can be produced subject to minimum quantities).

Installation

Fully extend ducting, then cut to exact length required using a sharp knife and pliers. We recommend that joints be sealed on medium and high pressure applications using Tecseal or Tectape XT.

To fix Tecflex 800S to spigots we recommend the Tecfix banding or clip system.

Tectherm 800S

Description

Tectherm 800S is a high quality, fully flexible, factory insulated ducting offering excellent standards of performance. It is suitable for high, medium and low pressure applications.



Construction

Tectherm 800S is manufactured using Tecflex 800S as the inner core, wrapped in a 25mm thick high density fibreglass blanket which is overlapped to ensure continuity of thermal insulation (50mm thick fibreglass blanket also available). The insulation is then covered by a tough scuff resistant, reinforced aluminium and polyester laminate which acts as a vapour barrier.

The use of Tecflex 800S as the inner core completely shields the airstream from the fibreglass insulation. This, together with highly automated insulating machinery ensures consistency of product quality.

This construction results in a highly flexible duct in which bends of $1/2$ D radius can be produced.

Specification

Insulated flexible ducting for joints or connections shall be Tectherm 800S. It shall be manufactured using Tecflex 800S as the inner core and wrapped in an overlapped high density fibreglass blanket 25/50mm thick and covered with a tough scuff resistant reinforced aluminium fabric jacket acting as a vapour barrier. The duct shall meet the requirements of BS476 parts 6, 7 and 20.

Technical Data

Diameter Range	– 80mm to 600mm
Temperature Range	– From -20°C to $+70^{\circ}\text{C}$
Air Velocity	– 25M/S maximum
Working Pressure	– Maximum 2000 Pa positive up to 406mm dia.
Insulation	– 25mm thick microfibre 16kg/m^3 K value = 0.25. (50mm thick also available).
Outer Jacket	– Scuff resistant reinforced Aluminium laminate fabric.
Colour	– Metallic Silver.
Standard Length	– 6 Metres.

Installation

Fully extend ducting, then cut to exact length required using a sharp knife and pliers. We recommend that joints be sealed on medium and high pressure applications using Tecseal or Tectape XT.

To fix Tectherm 800S to spigots we recommend the Tecfix banding or clip system. When installing Tectherm 800S, securely clamp the inner core first and then tape or clamp the outer jacket and inner core to the spigot. Taping the outer jacket to the spigot will prevent any fibre migration.

N.B. We also manufacture acoustic flexible ducting in two grades to meet virtually any application. Please ask for our separate leaflet:

Tecsonic 400 series Acoustic Flexible Ducting.

Tecflex and Tectherm 800S

Fire Test Data

BSCP413:1973 recommends that flexible joints (lengths not normally exceeding 300mm) and flexible connections (lengths not exceeding 3.7 metres) shall meet certain criteria. This is a generally accepted standard and is also acceptable in the Greater London Council area. The requirements are:-

1 BS476, Part 6 – Fire Propagation Test

The materials used in the construction of the duct be non-combustible or should have an index of performance not exceeding 12, or which not more than 6 should derive from the initial period of test.

Tecflex 800S – Passed.

2 BS476, Part 7 – Surface Spread of Flame

A Class I rating must be obtained.

Tecflex 800S achieved a Class I rating.

N.B The ratings achieved by Tecflex 800S to Parts 6 and 7 provides a “Class 0” rating.

3 BS476, Part 20 – Fire Resistance

A resistance to the penetration of fire of at least 15 minutes is required.

(Part 20 supersedes Part 8)

Tecflex 800S and Tectherm 800S met this requirement.

Independent Test Data

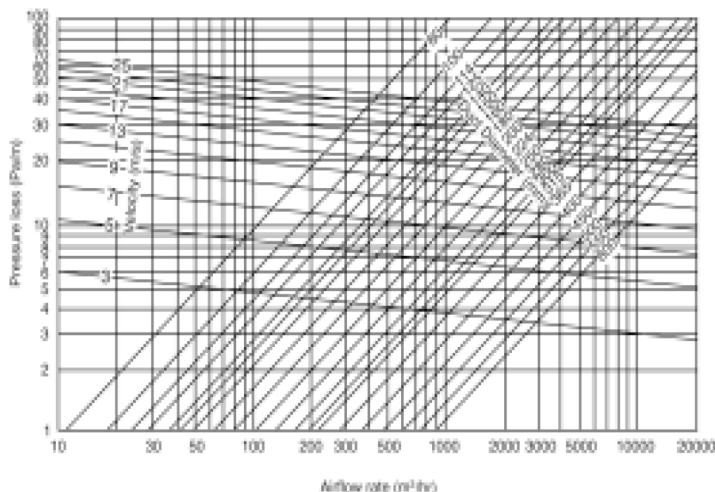
The above results are based upon independent testing at Warrington Research Centre, report numbers; 55021, 55020, and 104193/A and B, copies of which are available on request.

Note: The Tecflex, Tectherm and Tecsonic ranges of flexible duct are manufactured in the U.K.

Pressure Loss

Pressure drop in flexible duct varies significantly from the data given below if the duct is not fully extended when installed. Typically a duct which is 90% extended can result in an increased pressure drop of up to 80%. A duct which is 75% extended could result in a pressure drop variance of as much as 200%. This information applies to all types of flexible duct and illustrates the importance of careful installation. The pressure loss graph below is based on fully extended straight flexible ducting, per metre.

The graph below is produced from an independent test undertaken by BSRIA, report number 14868 dated 30.06.99.



Mounting Instructions – Recommendations

- 1 Ducting must always be installed fully extended to produce the best results.
- 2 Hanging straps should be at least 25mm wide.
- 3 The distance between supports will vary according to the diameter of ducting. As a guide, on straight runs, supports should be at approx. 500mm centres. Keep duct sag to a minimum.
- 4 Ensure that when making connections the flexible duct is not over stressed.
- 5 Ensure that flexible ducting is not in contact with sharp objects which may puncture the duct when the system is commissioned.
- 6 Ensure that ducting is not placed on un-insulated steam or hot process pipes.