



## Company Profile

Based in the heart of industrial Lancashire and close to the motorway network, Proflex Hose provides a complete flow solutions service to customers large and small throughout the UK.

With many years experience but still growing rapidly, our skilled workforce manufactures and assembles our quality products in a purpose-built factory.

Together with an exhaustive range of off-the-shelf items we also produce bespoke hose and couplings to suit any application.

We currently serve the oil, gas, hydraulic, general industrial, air conditioning and refrigeration industries. We provide a 24-hour emergency response service ensuring your 'downtime' is minimised when a component fails.

Our in-house expertise extends to advanced design engineering with 20 years hands-on engineering experience among the senior management team.

If you need to move fluids, exhaust, abrasive materials, gases or even food through hoses, at high or low temperature, call Proflex Hose. We'll get you connected.

### Proflex metal flexible hose

- Annular corrugated 'U' form hose
- Type 321 Stainless Steel – standard weight
- For vibration, pipe work misalignment, temperature, chemicals, pressure and vacuum.
- Material available Standard 321 Stainless Steel, 316 for greater chemical resistance and sub sea drenching.
- Proflex Hose Ltd produces stainless steel flexible hose assemblies in-house.
- All assemblies are pressure-tested under water as standard.
- Material test certification and certificate of conformity plus external inspection by Lloyds if required.
- Other material available (depending on quantity) on request such as Monel, Inconel and Bronze.
- A full range of end fittings such as flanges, hygienic screwed fittings Male, female BSP in stainless steel and mild steel.



# Proflex : Annular Corrugated Metal Hose

Corrugated metal hose is manufactured from relatively thin wall butt welded tube into which rounded corrugations are formed. The hose flexes through the movement of metal corrugations.

Corrugated metal hoses are suitable for a wide range of applications in the steelmaking, chemical smelting, petrochemical, automotive, materials handling and power generation industries, and many other fields. The hose can be used for the conveyance of fluids and gases, the correction of misalignments and the absorption of movements and vibrations.

The advantage of metal hose over other materials is its capability to withstand high temperatures, impacts and corrosive substances and atmospheres.

Corrugated hose is seamless, making it ideal for the conveyance of liquids and gases under pressure.

Corrugated hoses can be used either un-reinforced or unbraided, or with wire braid reinforcement depending upon the pressure rating and application.

External wire braiding fitted to the hose and secured at each end during the end connection process will significantly increase the pressure capability of the hose. More than one layer of the braid may be fitted as necessary.

The operating temperature of the application will have a direct relationship on the lowering of the pressure capability of the hose as illustrated in the temperature correction table on the back of our data sheet.

All assemblies are tested prior to dispatch by pneumatic test in this test the hose is filled with compressed air and submerged in water, a leak being detected by air bubbles. Hydrostatic tests are also available – this is where the hose assembly is filled with water and internal pressure is applied, a leak being detected by water dripping from any part of the assembly.

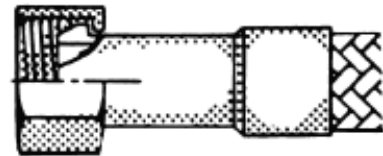


This data sheet shows some of the wide range of fittings suitable for stainless steel flexible hose assemblies.

Male Thread



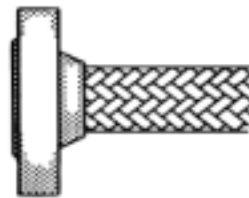
Swivel Female



O.D. Tube



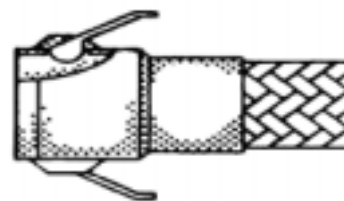
Fixed Flange



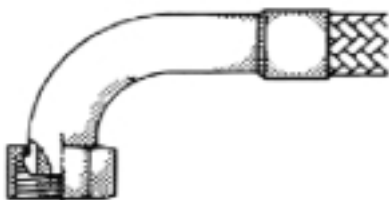
Swivel or Floating Flange



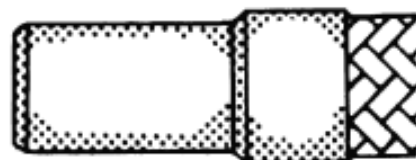
Quick Connect Couplings



90°/45° Elbow Fittings



Weld Prep End Fittings



# Convolute PTFE



## DESIGN AND PURPOSE

This is a convoluted PTFE lined hose, with excellent flexibility in bore sizes from 3/8", to 2". It is designed for use in a wide variety of general purpose applications such as automotive, steam transfer, refrigeration and other applications where the temperature resistance, chemical resistance and ease of cleaning of the PTFE liner are necessary requirements.

## CONSTRUCTION

Stainless Steel braid has a liner tube made from convoluted, extra flexible grade PTFE, with an outer stainless steel wire braid reinforcement.  
Polymer Braid has a braid made from orange polypropylene monofilaments. This provides a light-weight braid with excellent chemical resistance, but is not usable at temperatures above 100°C (internal).  
Maximum working pressures must be reduced to 50% of the pressures listed for assemblies with stainless over braid.

Tube Only has no braid. It is very lightweight, and the tube is semi-transparent. It is only usable at low pressures (less than 2 Bar).  
The three grades specified above are available with an anti-static (black) PTFE liner tube instead of the natural 3, (translucent) PTFE liner tube.  
The anti-static hose grade is required when fluids with a high electrical resistance, such as solvents or fuels, are passed through the hose. The electrical resistance between the inner surface of the hose liner and the end fittings is less than 107 ohms, permitting dissipation of any static charge, in accordance with BS2050:1978. If in

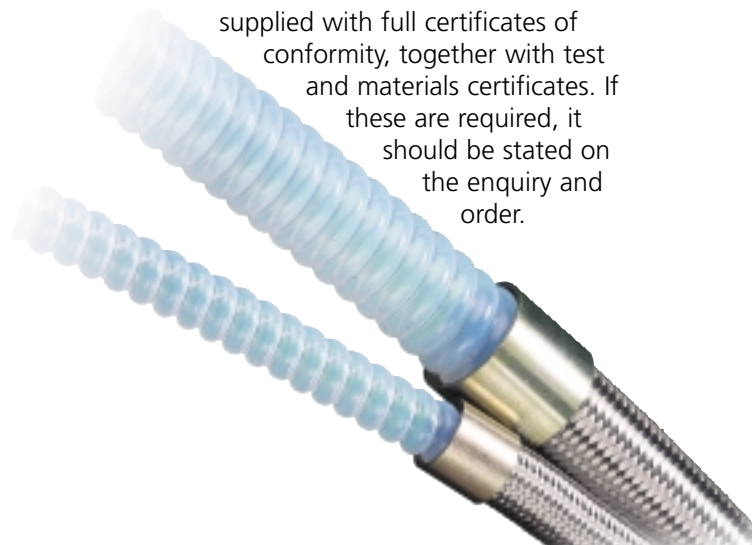
doubt, contact Proflex Hose to decide which fluids or gases require the anti-static grade.

## HOSE ASSEMBLIES

Hose can be supplied without end fittings attached for distributors to assemble themselves using either conventional hydraulic fittings or short tail (PTFE) fittings and the design of pallet swage ferrule.  
The convolutions are easily opened out to the spigot tail diameter by screwing in a (supplied) special tool (without the application of heat) after which the spigot can be inserted. Alternatively complete hose assemblies can be supplied.  
All conventional types of hose end fittings can be fitted to Visiflon hose assemblies. Hoses can also be supplied with ends "Cuffed" for customers to fit themselves.

## CERTIFICATION

Hose and hose assemblies can be supplied with full certificates of conformity, together with test and materials certificates. If these are required, it should be stated on the enquiry and order.



# Smoothbore : PTFE Lined Flexible Hose

## DESIGN

**Hose Liner:** Seamless extruded PTFE tube, made exclusively from 'Teflon 62 or 2Fluon CD086 PTFE polymer. The choice of these grades, together with the extrusion, heat treatment and quality control programmes are designed to produce the best quality PTFE tube possible, ensuring minimum porosity and maximum flexibility.

**Hose Braid:** Hose Braid: Braided from AISI grade 304 stainless steel wire, bright hard drawn to a minimum 1700 N/mm<sup>2</sup> tensile strength. The braiding process is closely controlled to ensure even tensions and the correct braid angle, to give minimum expansion/contraction under pressure.

## SIZE RANGES

**Standard Wall:** For general purpose use, including high and low pressure steam, chemicals, paints, inks, adhesives, fuels, oils, detergents, refrigerants and foodstuffs.

**Heavy Wall:** For heavy duty use, also for use with gases up to 150 Bar pressure, and for hot/cold cycling applications.

**'Dash':** For general purpose use, and to match the popular American 'dash' sizes, often used with 'reusable' type end fittings.

## USE IN APPLICATION

*Usage limitations are specified herein, but other factors may be present in any given application including mechanical abuse, abrasion, safety risks to staff, etc. Unless all these details are given to Proflex Hose Ltd in advance, so that the best possible product for the application can be recommended, Proflex Hose Ltd cannot accept responsibility for unsatisfactory performance.*

A special size range is also available for use with hydraulic end fittings which require a slightly larger hose bore than the standard sizes above, to permit the insertion of the end fittings into the hose bore.

## HOSE PROPERTIES

**Temperature Resistance:** PTFE hose is usable from -70°C up to +230°C, dependent upon the braid and the working pressure (see Specifications).

**Chemical Resistance:** PTFE is the most chemically resistant material known, and is only affected by a small number of very uncommon chemicals; Fluorine Gas, boiling Alkali Metals, Chlorine Trifluoride and Oxygen Difluoride.

**Flexibility with Strength:** Smoothbore PTFE hose has excellent dynamic flex life, and performs well at high pressures in flexing or vibrating applications.

**Self Cleaning:** The famous non-stick nature of PTFE ensures that material passing through does not become 'hung up' inside the hose, creating the risk of bacterial growth, or contamination. The hose, therefore, is effectively self-cleaning.



# Composite Hose

For the transfer of Fluids i.e. Fuels, Oils and Chemicals

Composite hoses are manufactured on the mandrel wrapped principle. The hose consists of an inner wire spiral upon which layers of fabric and film are wrapped, and bound with an external wire spiral. The tension between each other of the wire spirals gives the hose its pressure capability.



The heart of a composite hose is in the materials selection. Fabric and film materials used include Polypropylene, Polyester and Polyamide. The wire helices can be of galvanised steel, aluminium, stainless steel or polypropylene coated steel.

The final selection of materials depends upon the application for the hose.



Various terminations can be utilised with composite hose assemblies flanges, quick release fittings, lug fittings etc.

## Associated Products

Hygienic Fittings – RJT, DIN, SMS & Triclover



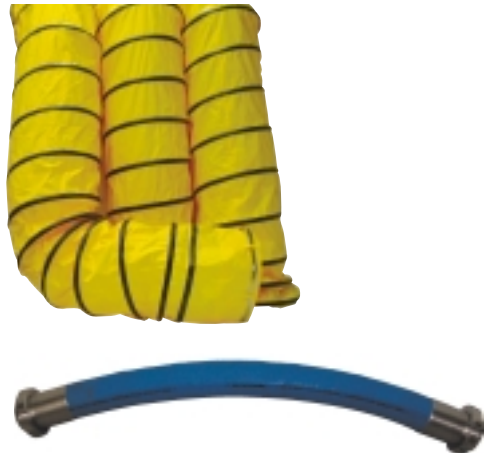
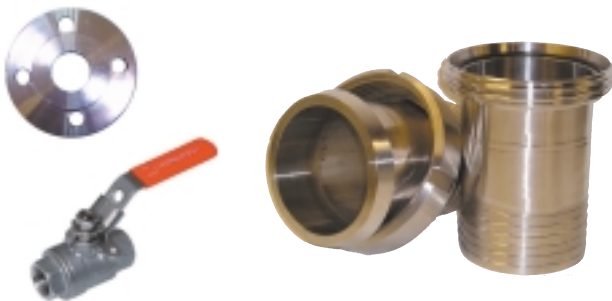
Quick Connection Couplings – Cam Lock, Lever Lock, ISO etc

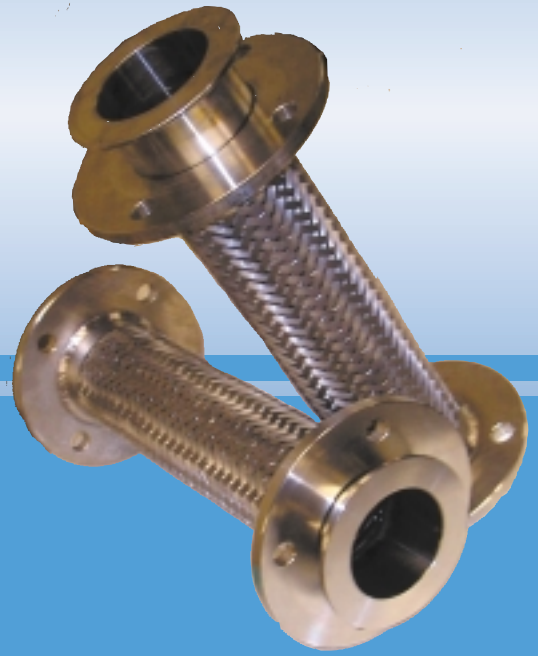


PU Ducting  
Ventilation Ducting  
Industrial Hose



Flanges & Flanged Hose Tails, Ball Valves & Bespoke fittings in Carbon Steel & Stainless Steel





## 24 HOUR CALL OUT

Flexible Metallic Hose

PTFE Hose

Composite Hose

Associated Couplings



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