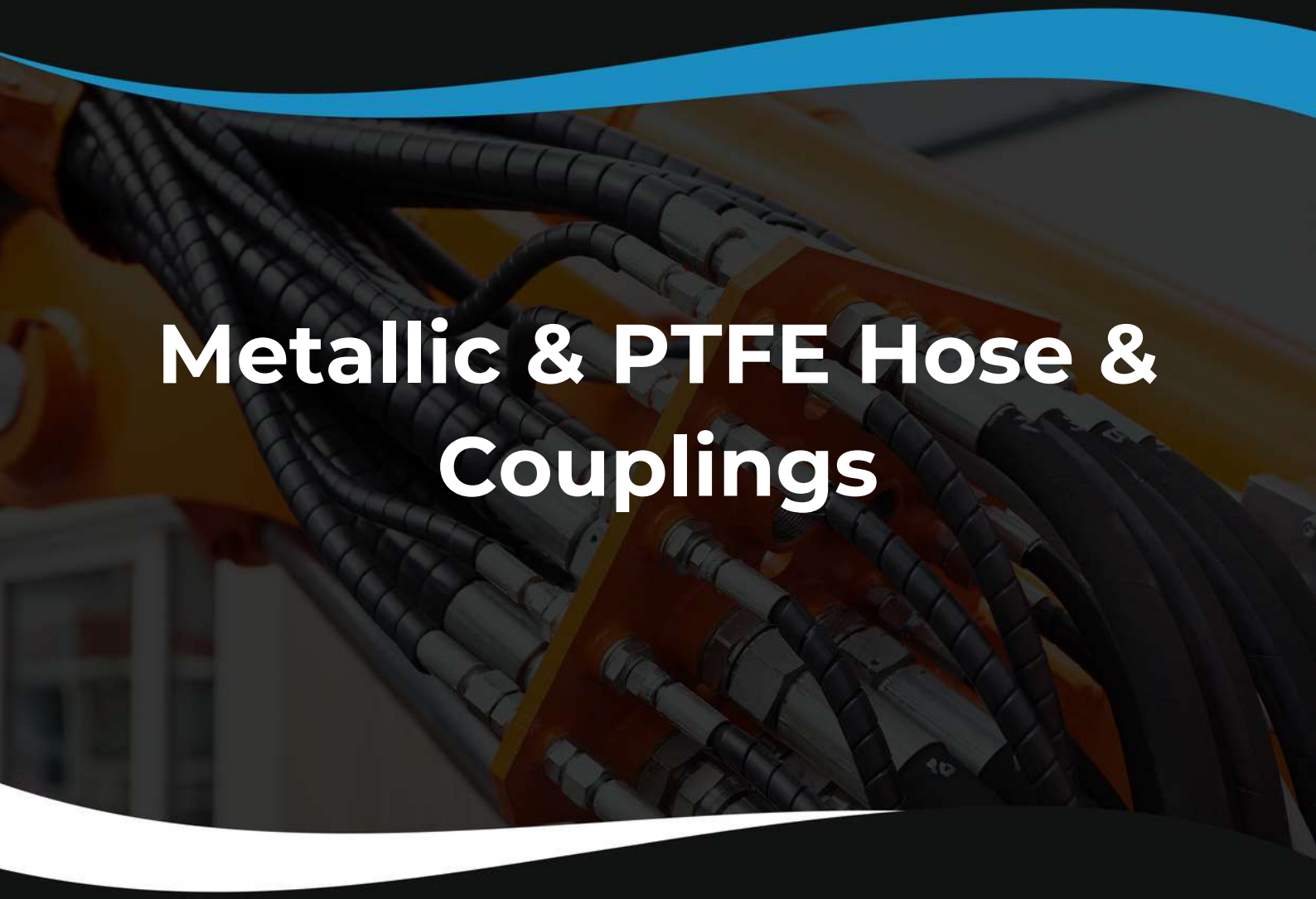
Hydraulic & Offshore SUPPLIES



Metallic & PTFE Hose & Couplings

Contact our team *and*
Order today on:
+44 (0)191 549 7335

Offshore House, Southwick Industrial Estate, Sunderland, SR5 3TX
hos@hos.co.uk | www.hos.co.uk

R&G FLUID POWER GROUP

Annular Corrugated Metal Hose

Corrugated metal hose is manufactur ed fr om relatively thin wall butt welded tube into which rounded corrugations ar e formed. The hose flexes through the movement of metal corrugations.

Corrugated metal hoses ar e suitable for a wide range of applications in the steelmaking, chemical smelting, petr ochemical, automotive, materials handling and power generation industries, and many other fields. The hose can be used for the conveyance of fluids and gases, the corr ection 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 corr osive 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 pr essure rating and application.

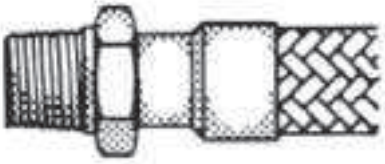
External wir e braiding fitted to the hose and secured at each end during the end connection process will significantly incr ease the pr essure capability of the hose. More than one layer of the braid may be fitted as necessary .

The operating temperatur e of the application will have a dir ect relationship on the lowering of the pressure capability of the hose as illustrated in the temperature corr ection table on the back of our data sheet.

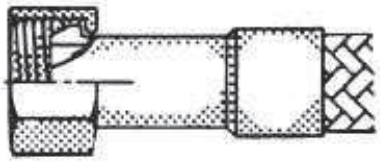
All assemblies ar e tested prior to dispatch by pneumatic test in this test the hose is filled with compressed air and submerged in water , a leak being detected by air bubbles. Hydrostatic tests are also available – this is were the hose assembly is filled with water and inter nal pressure is applied, 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.

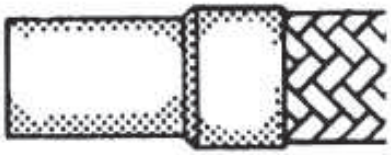
Male Thr ead



Swivel Female

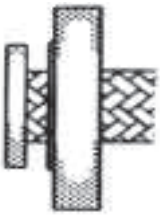


O.D. T ube

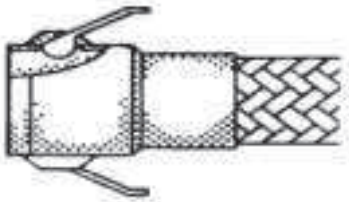


Fixed Flange

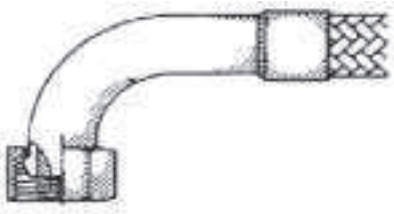
Swivel or Floating Flange



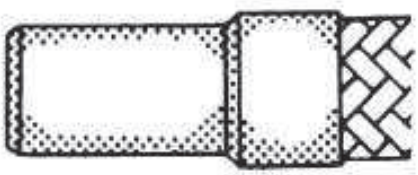
Quick Connect Couplings



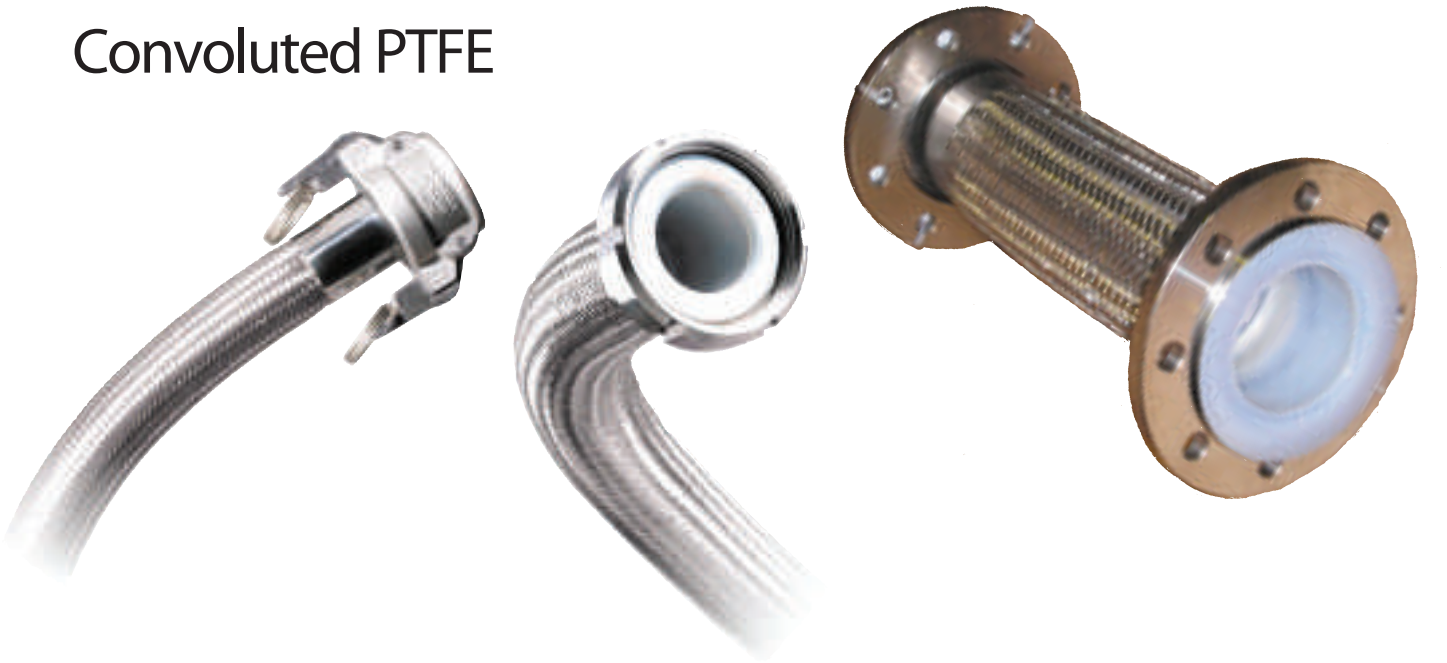
90°/45° Elbow Fittings



Weld Prep End Fittings



Convoluted PTFE



DESIGN AND PURPOSE

This is a convoluted PTFE lined hose, with excellent flexibility in bore sizes fr om 3/8", to 2". It is designed for use in a wide variety of general purpose applications such as automotive, steam transfer , r efrigeration and other applications wher e the temperatur e resistance, chemical resistance and ease of cleaning of the PTFE liner are necessary r equirements.

CONSTRUCTION

Stainless Steel braid has a liner tube made fr om convoluted, extra flexible grade PTFE, with an outer stainless steel wir e braid r einforcement.
Polymer Braid has a braid made from orange polypropylene monofilaments. This pr ovides a light-weight braid with excellent chemical resistance, but is not usable at temperatures above 100°C (internal). Maximum working pr essures must be r educed 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-transpar ent. It is only usable at low pressures (less than 2 Bar).
The three grades specified above ar e available with an anti-static (black) PTFE liner tube instead of the natural 3, (translucent) PTFE liner tube.
The anti-static hose grade is r equired when fluids with a high electrical r esistance, such as solvent s or fuels, ar e passed through the hose. The electrical r esistance 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 HOS 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 ar e 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. Alter natively 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.

CER TIFICA TION

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 tr eatment and quality control programmes are designed to pr oduce the best quality PTFE tube possible, ensuring minimum porosity and maximum flexibility.

Hose Braid: Hose Braid: Braided fr om AISI grade 304 stainless steel wire, bright har d drawn to a minimum 1700 N/mm2 tensile str ength. The braiding pr ocess 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 pressur e 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 HOS in advance, so that the best possible product for the application can be recommended, HOS 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 standar d sizes above, to permit the insertion of the end fit tings 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 pr essure (see Specifications).

Chemical Resistance: PTFE is the most chemically resistant material known, and is only af fected 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 thr ough 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 ar e manufactur ed on the mandr el wrapped principle. The hose consists of an inner wire spiral upon which layers of fabric and film are wrapped, and bound with an exter nal wir e 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 helixes 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 & T riclover

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

PU Ducting
Ventilation Ducting
Industrial Hose

Flanges & Flanged Hose T ails, Ball V alves & Bespoke fittings in Carbon Steel & Stainless Steel

Hydraulic & Offshore SUPPLIES

Offshore House, Southwick Industrial Estate, Sunderland, SR5 3TX
hos@hos.co.uk | www.hos.co.uk