

Turbo / CAC Application Silicone Hose

Data Sheet I.3
Page 1 of 3

For more information or data, please visit www.silflex.com or contact us by phone: +44 (0) 1443 238 464 or email: hosesolutions@silflex.com

Silflex Turbocharger & CAC (charge air cooled) hoses are manufactured in silicone with an Aramid reinforcing fabric as standard, allowing higher temperature & pressure resistance. For more demanding requirements, construction can incorporate wire reinforcing, offering greater resistance to profile changes & improved flexibility respectively. Available in a wide range of configurations and dimensions, Silflex Coolant Hose is manufactured from the highest grade silicone rubber formulated specifically for automotive applications. Superb reliability helps reduce maintenance and down time while providing greater engine protection. A high sheen finish is standard with other options available.



General Use

Silflex turbocharger hose has been specifically designed for the demanding requirements of truck, bus and rail applications. It is primarily designed for use in turbocharger systems. It can however be used in many other applications where the properties of silicone are preferable to those of other rubbers, where a flexible joint is required between rigid pipe work, or where higher working temperatures compared to standard silicone/polyester are required.

Standard Parts

Hose Elbows are produced to 90°, 45° & 135° bends with reducers to suit diameter changes. We can offer turbocharger and CAC elbows and shapes that most other manufacturers do not make. Reducers and Couplers enable a smooth flow transition between various components & pipe bore sizes. Silflex coolant hose couplers enable the connection of rigid pipe work to help eliminate vibration, increase flexibility and allow easier assembly and maintenance. Straight hose lengths provide a flexible link between system pipe work and components. Wire

reinforcement & convolutions are also available to avoid kinking due to angles or movement, and can also be manufactured in special materials or formulations.

Construction

Construction consists of several plies of silicone, reinforced with Aramid fabric. The number of plies will vary depending on the working pressure, bore size, and required wall thickness.

Convuluted Hose is produced to suit most power unit applications. Single or multiple convolution variants are available, providing increased flexibility & the ability to absorb greater levels of engine vibration. A galvanised steel wire helix can be added, buried between the plies so that it is not exposed on either the inside or outside of the hose, perfect for high or negative pressure applications or where improved flexibility is required. Additionally the hoses can be supplied with either convoluted or castellated walls where needed.

Depending on working temperature, there are build options available that allow the hose to function properly between -50°C and 305°C.

Engineering Options

Wire Reinforcement - A wire helix between the plies helps to prevent collapse in negative pressure conditions.

Anti Abrasion Sleeves - Anti Abrasion Sleeves to protect against localised abrasion.

Part Marking - Part marking with Silflex or customer logos and part numbers assists with product identification and traceability.

Location Marking - Marks can be added to the hose to specify where components are to be placed such as clips helping speed up installation.

Bespoke Hose Design

Our unique manufacturing process methods allow us to make custom designed hoses including one piece assemblies. If you require silicone hose for a turbo / CAC application that standard parts are not suitable for, then you may be interested in our bespoke hose design service.

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Data Sheet I.3
Page 2 of 3

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Fuel & Oil Mist

State-of-the-art Fluorosilicone & Profuel® linings are available if there is the possibility of the hose coming in to contact with fuel mist. Silflex Fluorosilicone lined turbocharger hose has been specifically designed for the demanding requirements of truck, bus and rail applications. It is primarily designed for use in turbocharger systems & intercooler systems where the medium flowing through the hose is likely to degrade the standard silicone. e.g. Fuel Oils, Diesel Fuel, etc. This comes in the form of a lining of Black

Fluorosilicone, covered with Plies of silicone, reinforced with Aramid fabric.

Production Volumes

As a result of our unique manufacturing process we are extremely flexible with production volumes. Silflex has a very diverse range of customers and we understand that each requires individual silicone hose solutions. Many specialist customers require low run and prototype orders however others need high volume

mass produced parts. We are a self contained unit capable of offering what other companies cannot, a personally tailored service designed to meet our customers needs.

Materials

Silicone Rubber Compound

Colour	-	Various
Hardness	-	65 ± 5
Specific Gravity	(g/cm ³)	1.18 ± 0.05
Tensile Strength	(Mpa)	8.6
Elongation at Break	(%)	308
Tear Strength	-	13

The above physical properties refer to a test sheet press cured for 5mins at 115°C, and post cured for 4 hrs @ 200°C. Tested to the relevant BS903 standard. Fluid resistance figures can be supplied

Materials

Knitted Polyester Fabric

Description	-	Fine Mesh
Yarn Type	-	100% Polyester
Finish	-	Pad Scour & Set
Bursting Strength	(Psi)	33*
Extensibility at Burst	(%)	60
Thickness	(mm)	0.5 ± 0.1

*Fabric. 7" Internal diameter ring.

Specifications

- 50°C to +180°C (Standard)
- 50°C to +250°C (High Temperature)
- 50°C to +305°C (Extreme Temperature)

Build Options

- Standard (Polyester Reinforced)
- High Temperature (Aramid Reinforced)
- Fluorosilicone Lined (Oil & Diesel Resistant)
- ProFuel™ Lined (Permanent Fuel Use)
- Extreme Temperature (Glass Fabric)

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Data Sheet I.3
Page 3 of 3

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Materials

Knitted Aramid Fabric

Description	-	Fine Mesh
Yarn Type	-	100% Aramid
Finish	-	Scour & Set Resin
Bursting Strength	(Kpa)	258*
Extensibility at Burst	(%)	25-35
Weight	(g/Cm2)	115

Other Aramid fabrics are also available depending on the working parameters of the hose. *Fabric. 7.98cm diameter ring.

Materials

Woven Meta-Aramid Fabric

Description	(Plain)	Fine Weave
Yarn Type	-	100% Polyester
Spun	-	Meta-Aramid
Finish	-	Scour & Set
Thickness	(mm)	0.44

Materials

Fluorosilicone Rubber Compound

Colour	-	Black
Hardness	-	65 ± 5
Specific Gravity	(g/cm3)	1.59 ± 0.05
Tensile Strength	(Mpa)	5
Elongation at Break	(%)	210
Tear Strength	(KN/m)	23

The above physical properties refer to a test sheet press cured for 5mins at 115°C, and post cured for 4 hrs @ 200°C. Tested to the relevant BS903 standard. Fluid resistance figures can be supplied on request.