Marine

# FLEXIBLE SILICONE HOSES FOR MARINE APPLICATIONS

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HIGH PERFORMANCE MARINE HOSES

# MARINE WET EXHAUST SILICONE HOSES

ACCORDING TO ISO 13363 & SAE J2006 R1, R2, R3

Venair develops custom solutions for the nautical industry, especially for marine wet exhaust systems.

**Vena sil 500** is the standard solution for marine applications and mainly present the following properties:

- **SAE J2006** and ISO13363 approved.
- **Not affected** by anti-freeze or antirust liquids.
- **Highly resistant** to hardening with **very good compression** characteristics.
- **Excellent flexibility** during the assembly process.
- **Excellent resistance** to thermal aging and oxidizing agents (oxygen, ozone, UV).
- **Operational temperature range** from -55°C (-67 F) to +180°C (356 F), it may reach up to 200°C (392 F) during short periods of time.

Lloyd's Register

# CUSTOM SOLUTIONS FOR MAXIMUM EFFICENCY

> Choose the right solution for your marine engine.

With technical expertise and maintenance advice capabilities, Venair engineering solutions can help you provide the maximum reliability in your marine engines.

Our engineers are focus on  energy efficency and safety, providing a while range of custom solutions under customer demand.

## SAE J2006- ISO 13363- Wet exhaust systems

Our product has the Type Approval Certificate (TAC) number 12/00066 issued by Lloyd's Register, which certify the compliance with the SAE J2006 for the three styles:

- **R1- (Softwall):** Straight silicone hose with textile reinforcements.
- **R2-(Hardwall):** traight hose made of silicone with textile reinforcements and encapsulated spring steel wire bronzed plated.
- **R3-** Elbows, reducers and convoluted hoses made of silicone with textile reinforcements.

Lloyd's Register

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Certificate No. 12/00066(ST)-02
Issue Date: 27/05/2020
Expiry Date: 08/10/2022

**Type Approval Certificate**

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

| | |
|---|---|
| **Manufacturer** | **Venair Iberica S.A.U.** |
| **Address** | C/Cerdanya, 26, 08226 Terrasa (Barcelona), Spain |
| **Place of Production** | Silicone Hoses Vietnam Co. Ltd.<br>Unit A, Floor 2, Standard Factory, Road 14, Tan Thuan EPZ, Tan Thuan Dong, Ward - District, 7 Ho Chi Minh City - Vietnam |
| **Type** | Marine Wet Exhaust Hose |
| **Description** | Silicone hoses for marine wet exhaust systems<br>Style R1(Softwall), R2(Hard Wall) and R3(Flexible Connectors)<br>6 to 508mm straight hose, elbow and convoluted hose |
| **Trade Name** | VENA SIL 500 |
| **Application** | Used in marine wet exhaust systems where the exhaust gases are mixed with the discharge of cooling water |
| **Specified Standard** | Lloyd's Register's Rules and Regulations for the Classification of Ships<br>SAE J 2006<br>ISO 13363 |

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## Vena® Sil 500

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Download certification

All Vena Sil 500 hoses are made from silicone and have several layers of polyester fibre to withstand the pressure to which they are subjected in this industry.

- Range of diameters: from 6mm (1/4") to 508mm (20")
- Operational temperature range from -55°C (-67 F) to +180°C (356 F), it may reach up to 200°C (392 F) during short periods of time.Wall thickness: according to diameter.
- Pressure resistance: according to ISO 13363 and SAE J2006.

# Marine products

## VENA® SIL 500 R1- Softwall

Straight silicone hose with textile reinforcements.

| PROPERTIES | DESCRIPTION |
|---|---|
| Outer layer | Special VMQ Silicone |
| Reinforcement | Several fabrics |
| Inner layer | Special VMQ Silicone |
| Diameter | From 6mm (1/4") to 508 mm (20") |
| Lengths | Straight hoses: from 1000 to 4000 mm. |

## VENA® SIL 500 R2 - Hardwall

Straight hose made of silicone with textile reinforcements and encapsulated spring steel wire bronzed plated.

| PROPERTIES | DESCRIPTION |
|---|---|
| Outer layer | Special VMQ silicone |
| Reinforcement | Several fabrics and steel wire spiral |
| Inner layer | Special VMQ Silicone |
| Diameter | From 6mm (1/4") to 508 mm (20") |
| Lengths | Straight hoses: from 1000 to 4000 mm. |

## VENA® SIL 500 R3

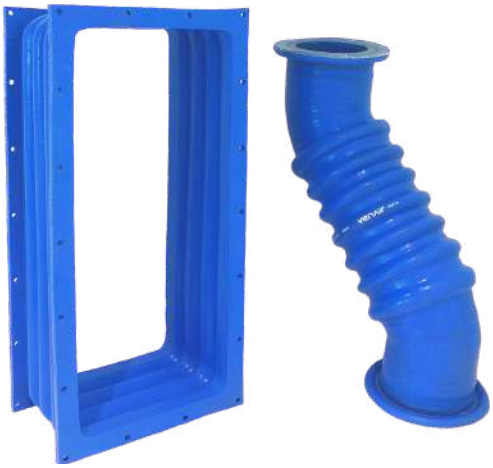
Elbows, reducers and convoluted hoses made of silicone with textile reinforcements.

| PROPERTIES | DESCRIPTION |
|---|---|
| Outer layer | Special VMQ Silicone |
| Reinforcement | Several fabrics |
| Inner layer | FSpecial VMQ Silicone |
| Diameter | From 6mm (1/4") to 508 mm (20") |
| Lengths | Elbows: 100x100, 150x150, and 200x200 mm. |

# Special solutions

In addition to this range, Venair offers a large variety of hoses to meet any of its customers' needs:

- Highly flexible straight hose, including wire spiral between the silicone layers.
- Silicone hose with fabrics that can resist very high temperatures (Aramid or fiberglass)
- Silicone hose resistant to oils and hydrocarbon particles (SIL RA, Fluorosilicone, FKM...).
- Compensators and special shapes, designed to customer specifications.



# Marine applications

**Yachts & Boats • Power & Sail • Commercial & Military Vessels**

## Wet exhaust system

We manufacture silicone wet exhaust hoses for engine and auxiliary generator systems, used in in-board engine pleasure and commercial boats.

Manufactured from only the **highest quality silicones and reinforcement fabrics**, Venair's hoses are **highly resistant** to salt and weathering conditions.


## Cooling systems

Our silicone hoses are suitable for heater and coolant applications It will remain flexible after prolonged exposure to extreme temperatures, weather, or ozone - assuring a long life.

Silicone stands up to the **higher temperatures** of oil mist in normal operating conditions, perfect for all coolants.

## Turbocharger

We can provide hoses that are specially designed for turbo-intercooler systems for marine. Our productss present a high capacity to withstand hot pressurized air.

MORE THAN HOSES

# Developing custom solutions since 1986

**Our technical & engineering team** is responsible for safeguarding the interests of our clients in designing the optimal product for each application.

Together with the inventions that come out from our R&D department, we have developed and patented a wide range of products and we have more than 70 registered trademarks that support our innovative activity.

We can produce different hoses and ducting solutions made of silicone and other materials such as other elastomer, thermoplastics and composites to fulfill every demand.

## Priorizing quality

We are committed to provide the highest quality in our products through state of the art facilities and third- party audits.

## International presence

Our products are present in over 70 countries. We have an extensive network of 30 offices in 21 countries.

## CUSTOMIZATION IS OUR ADDED VALUE

Venair is an international group leader in engineering and manufacturing silicone hoses for the most demanding industries such as fuel cells, railway, defense, biotechnological, food, and pharmaceutical.

Throughout its 30 years of history, Venair has created an extensive international direct network that has led to three manufacturing centers in Spain, Vietnam and Romania and 30 delegations distributed in Europe, America, Asia and Africa.