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AG[®]
MARINE
ACCESSORIES

WATER STRAINER "TIRRENO" SERIES

GuidiLAB



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WATER STRAINER “TIRRENO” SERIES



Items

- **with Grilamid TR55 see-thru cover**
 - 1160 Nickel plated brass
 - 1160B Bronze
- **with metal cover**
 - 1158 Nickel plated brass

Uses

Tirreno strainer **is to be chosen when** water flow is angled, from the bottom to the side. It is studied for small engines, small generators or small air conditioning systems. It is meant to be compact and easy to install.

It can also be used in domestic systems to clean water in case of bigger dirt (leaves, stones...)

For nautical uses it is generally installed in the engine room of yachts or work units, but it can be used as well for swimming pools, quarries and drinking water supply systems.

Tirreno strainer is not suitable to be used as diesel or gasoline pre-filter.

Norms limitations: cover choice should follow approval indications regarding boats classes.

Different plastic or metal models are present on the Market without the performance characteristics of genuine Guidi models.

Material

- **Bronze**

Bronze is the best choice material to avoid corrosion issues.

To reduce corrosion problems the whole installation should be entirely made with bronze components (water intake, valve, fittings, thru-hull), avoiding mix of different materials.

- **Nickel plated brass**

Nickel plated brass is generally used in systems where some aesthetics is required. Nickel layer also slightly protects from oxidation. Nickel plated fittings are generally installed in visible systems in domestic installations or engine rooms.

Shape

Tirreno strainer is a Guidi product that has been improved and upgraded through years.

Its shape is studied to reduce pressure drops on the outlet, to improve water flow and to reduce massively the formation of air bubbles.



Covers

- **Grilamid TR55**

Grilamid TR55 cover is suitable for marine uses but also for domestic installations to check inside the strainer (**STATEMENT 201700782**).

Grilamid TR55 is a grain polymer with outstanding performances, very resistant to chemical corrosion and cracking, still with a high translucence. It has a very low humidity absorb grade, it is fairly flexible but with a strong resistance to torsion under heat.

Certified strainer RINA DIP - STATEMENT 201700782

On the samples of filters for engine water cooling pipes named 1160-1162-1164-3162-3164 the following tests have been performed: ascertainments of the compliance of the components to the constructive drawings, check of the documentation relevant to experimental tests, burst tests. Considering the result of the ascertainments and tests carried out it is stated that the above mentioned filters, having the properties described below, are recognized as suitable for exclusive use on board pleasure units subject to EC certification and pleasure units classified by Rina for private use service, having a gross tonnage < 300 GT.

- **Nickel plated brass**

Nickel plated brass cover is installed on **professional or work boats** (**MAC261718CS**)

Certified strainer RINA MAC - MAC261718CS

Type approval certificate No. MAC261718CS. This is to certify that the products: 1158-1163-1166 are in compliance with the Rina regulations and reference standards.

Covers can be opened and closed with a handle or nylon tool, included inside the box or available as spare part.



Baskets (gatherers)

Our baskets are **316L steel made**, suitable for salty water and some marine uses. It is a standard steel with a stainlessness level (PREN index) between 25 and 28. 316L has got a high electrolytic resistance compared to other versions, i.e. 304. 316L has a carbon ratio lower than 0,035% (standard 316 gets up to 0,080%), making it corrosion resistant.

Corrosion of steel baskets happens when the basket itself becomes the sacrificial anode, meaning there is some issue on the installation. In case of visible corrosion, it will be necessary to check the cathodic protection and grounding.

Gaskets

Tirreno strainer has an o-ring to seal the cover.

O-rings are neoprene made; a synthetic rubber salty water resistant.

Drain hole

Tirreno strainer does not have any drain.

Drain hole is generally meant to empty the water remaining inside when valves are closed or when the boat is on land.

This model takes water from the hole in the bottom, so there is no need to empty it.

Sizing

Tirreno strainer is available in sizes from 3/8" to 1".

Size of the strainer should follow the hydraulic and engine requirements, depending also on how many lines it will serve.

It is required also to consider and respect loss of pressure.

Strainers are not supposed to be oversized.



Checks/Testing

Check on materials is done **before** tooling.

During working process strainers are severely checked for dimensions, assembling, packaging.

At the end manufacturing process, a meticulous air pressure test is done.

Hydrostatic test is done with a pressurized water-oil mix, for a certain time following internal quality procedures. Then eventual leaking is searched. These are tests done under external labs supervision.

Water-oil mix is chosen because we use recycled machines cooling water before disposing it; its typical white colour allows to identify leaking.

Air testing is done by pressurizing air at a certain pressure, following our internal procedures, inside the strainer body checking eventual drops of pressure level.

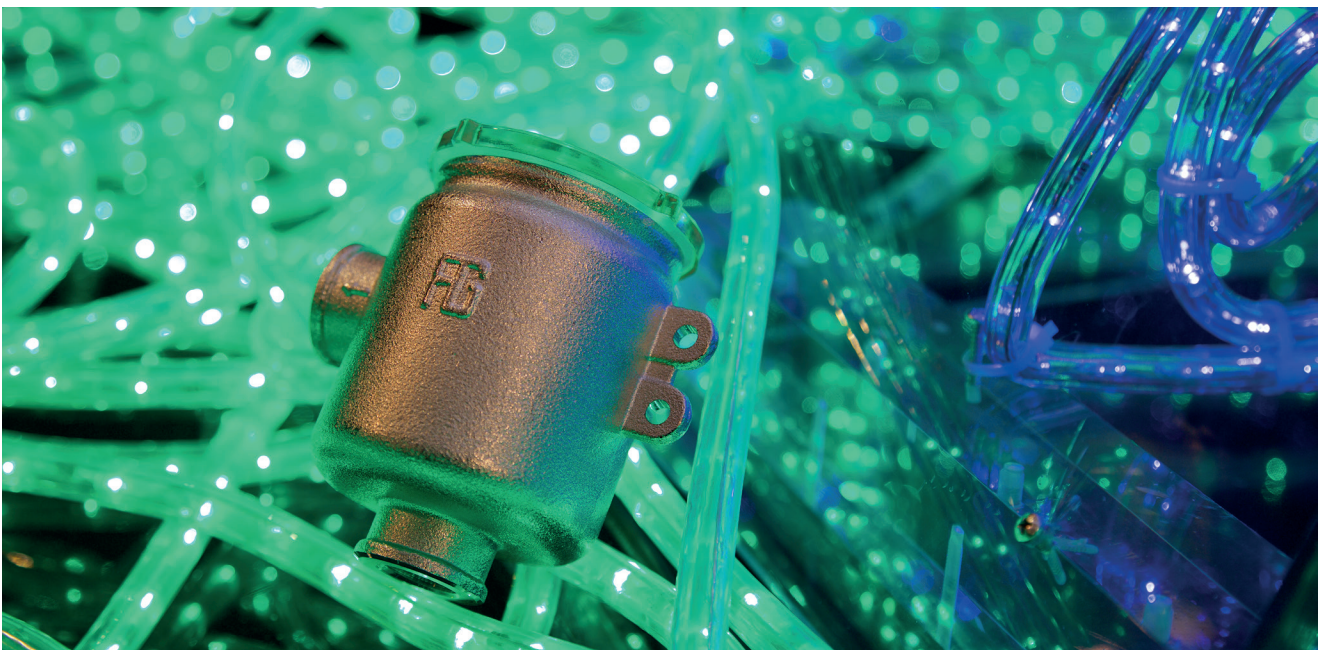
This is a very quick and clean procedure.

We issue an internal quality certificate because there is no external labs supervision, but we still strictly follow certified quality procedures.

RINA certification

This document states Guidi products are designed, manufactured and tested **following rules and procedures** established by the Italian Naval Register (rules and procedures in compliance with the international naval organization). Approvals are maintained by periodical checks.

- **Filtro Tirreno model 1158 - approval RINA DIP (see Covers section)**
- **Filtro Tirreno model 1160 • 1160B - approval RINA MAC (see Covers section)**



The longer life option - Durability & Recycling

New products development must consider a more accurate and sustainable analysis of their lifespan. Each product has got a very high durability with a quality and functioning warranty, by keeping its physical and mechanical material characteristics.

Ordinary maintenance while using these products is very low. Thanks to the easy way of taking components apart it will be possible to extend life of material beyond components working period. When product life gets to the end, through processes allowing to re-use of raw materials, each product is almost entirely recyclable.

Differences from other Guidi strainers

- **“Mediterraneo” water strainer:**

is different in size and for its waterflow. In Mediterraneo strainer water flows straight from side to side. In strainer Ionio water flows is angled, from below to the side.

- **“Ionio” water strainer:**

it is different by shape and water flow path. Mediterraneo strainer water flow is “straight side-to-side”, while in Ionio strainer it makes a “90° turn bottom-side”.

Pressure drops

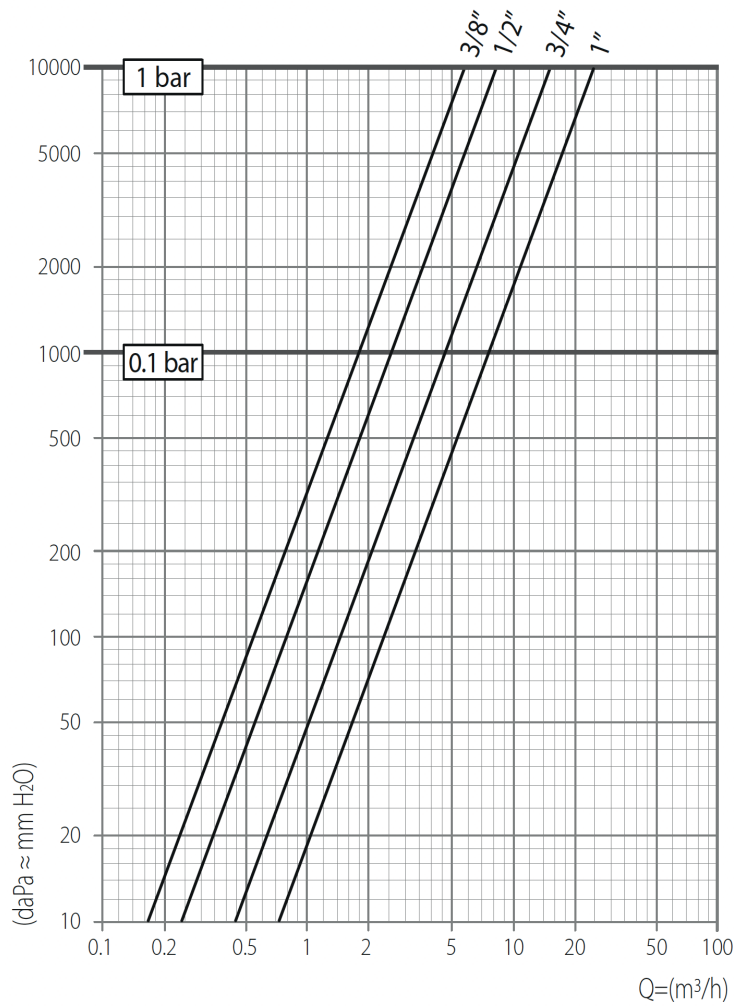
Pressure drop is a decrease in pressure due to resistance/friction reducing the water flow through the system.

Knowing the exact value of pressure drop is important for:

- Pipe sizing
- Deciding the characteristics of water circling systems

Water pressure drop can be “continuous” if happening on a linear section, or “located” in case of specific elements presence to change direction or section (reductions, bent, valves, filters...).

Flow rate - Loss of pressure diagram



Flow-rate capacity through the clean strainer - lt/h

G	0.1 bar	1 bar
3/8"	1800	5750
1/2"	2550	8180
3/4"	4750	15160
1"	7500	23800

Installation

Water flow is always set and must follow the indicated direction.

It can be installed, depending on the needs, directly to the wall or with a special side support.

Be sure installation of the strainer will allow servicing of the basket in the future. When installation is done, strainer must be grounded to avoid galvanic corrosion. If the installation is not properly designed basket inside the strainer could become the sacrificial anode.

Installation should always be above water level. This is suggested for a security reason, for example if cover was not properly tightened after servicing.

In case of brand-new installation, after few hours running filter should be checked for eventual installing or packaging material in the basket from the piping: visual check and parts removal.

Maintenance and spare parts

We suggest using **genuine parts ONLY**.

Parts are available on our website or by getting in touch with us (filter cover ring, strainer cover, 316L steel basket, polycarbonate disc for cover, NBR “U”-shaped profile for water strainer s.s. impurity gatherer).

Screws can be after-market but should always be made in austenitic A4 low carbon stainless steel.



Covers are also available as spare parts.

These should be replaced in case of leaking, aging or loss of transparency due to chemicals. New O-ring is highly recommended when cover is replaced. Cover replacement changes approval as well.

When servicing **always remember** to properly lock the cover before opening the valves. Strong risk of sinking the boat especially if installation is under the water line.

Basket replacement will be possible with “minimal” knowledge.

This procedure is supposed to be done always in security with shut water intake valves.

Basket should be **regularly checked** for impurities. Dirty or encrusted basket will reduce filter performances.

It is not only marine fouling causing problems to the strainer, but also dirt or plastics in the sea water will close the basket holes.

Basket can be cleaned just with water and compressed air.

With not running engine, valves should be shut. Basket can be removed and duly washed; in case it is encrusted a removing tool can be used on its surface. Clean basket can be placed back in its original position. **Gaskets and O-rings** must be checked for their integrity and in doubt replaced with genuine parts **ONLY**.

Before restarting the circuit, make sure that the cover is properly tightened on the body of the strainer.

Open valves of water intakes.





Don't forget to share your ideas with us!

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