

The Discom Maritime Effect

As a designer, builder or shipowner you are perfectly familiar with the significance of reliability and safety at sea. These are the characteristics that typify Discom. In over three decades we have provided hundreds of ships with dampers and total exhaust gas systems. In today's shipping industry the function of the exhaust gas system has changed slowly but surely. Now an exhaust gas system must effectively tackle the excess noise, vibrations and hazardous substances. In addition, modern exhaust gas systems help improve efficiency onboard. Heat recovered from flue gasses is no longer fiction, but in fact reality. Discom has been fulfilling these needs with a total concept, meeting all the requirements one might want to set to an exhaust gas system.

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Solutions for noise, emission and heat

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Discom's water injected exhaust gas systems

In many different situations you would like to cool your exhaust gas temperatures.

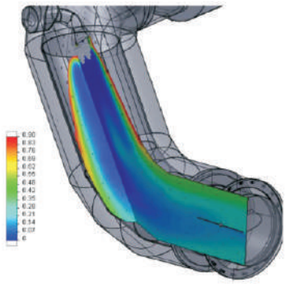
- Hull protection from burning
- Reducing hot spots
- Sailing in explosive and/or chemical areas
- 360 degree view from bridge (no funnel)
- No visible smoke and/or soot
- Reducing visibility infra red signature
- Extreme low noise levels within minimum space
- No exhaust piping through superstructures

If one of these situations sounds familiar to you, we would like to invite you to contact us!

With over 35 years of experience in Marine and Navy applications and over 100 ships with our water injected exhaust systems running, you may expect something from us.

Discom's unique cooling principle: often copied, never equalled!

In the water injection piece, the hot exhaust gas is cooled through the injection of (sea)water. A dual cone spray nozzle is used to cool the gases from the inside and not, as the well-known water ring from the outside.



The Discom cooling principle is extremely effective, avoids hot spots and offers control over the backpressure. Our unique nozzle design gives full control over the size of water droplets, spray pattern, avoids back spray and due the relative large free passage, avoids clogging.

Materials and corrosion resistance often a struggle?

Seawater in combination with hot exhaust gas creates an extreme corrosive environment. Ofcourse we can build water injected exhaust system from "ordinary" Stainless Steel, which is cheaper, as we know from practice, but for sure doesn't last long.



About 15 years ago we started using a special developed high grade super austenitic stainless steel. This has proven not to be effected by such a corrosive environment at all.

Besides being extreme resistant to corrosion it withstands high exhaust gas temperatures in case of a disturbed water cooling. Critical for rescue and navy vessels.

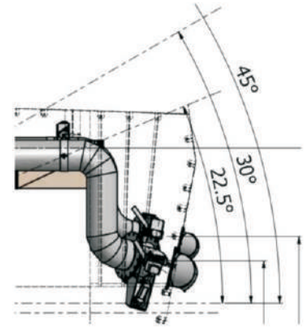
Contact our employees for more details. By phone at **+31 (0)78 681 09 60** or by email at **info@discom.eu**.

Noise & vibration control

It is evident, being a silencer manufacturer for over 35 years, we comply to your expectation with regards to noise and vibration levels. Our extensive range of standard silencers or a custom build unit in combination with our anti vibration mounts guarantees you the lowest noise levels possible.

Backpressure & scoop designs

With our roots in designing exhaust systems you may expect that we take full responsibility for keeping within the backpressure limitation of the engine manufacturer. Even at a challenging system discharging under the waterline. In this case a bypass and our scoops secure a reliable system within the design limitations.



Water Cooled Valves



In some cases exhaust gas cooling is only used to protect ship's hull from burning or reducing hotspots.

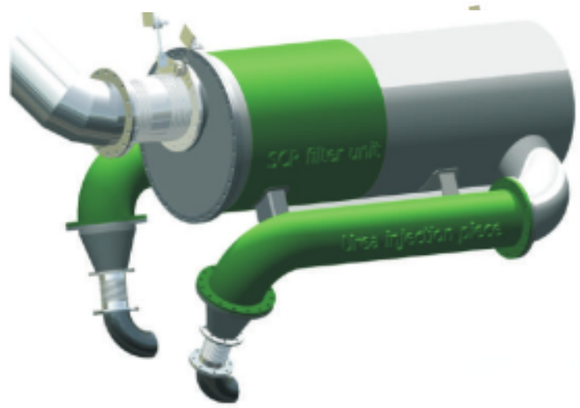
For that purpose we designed our range of Water Cooled Valves (WCV).

These valves can be supplied in a pneumatic or electrically operated version and or in a shock resistant version up to 200 G.

Our WCV is fully certified according to maritime classification.

Emission Control

As new regulations are coming into force (TIER III, EPA TIER IV and Euro Stage V) the need for after treatment of exhaust gases is evident.



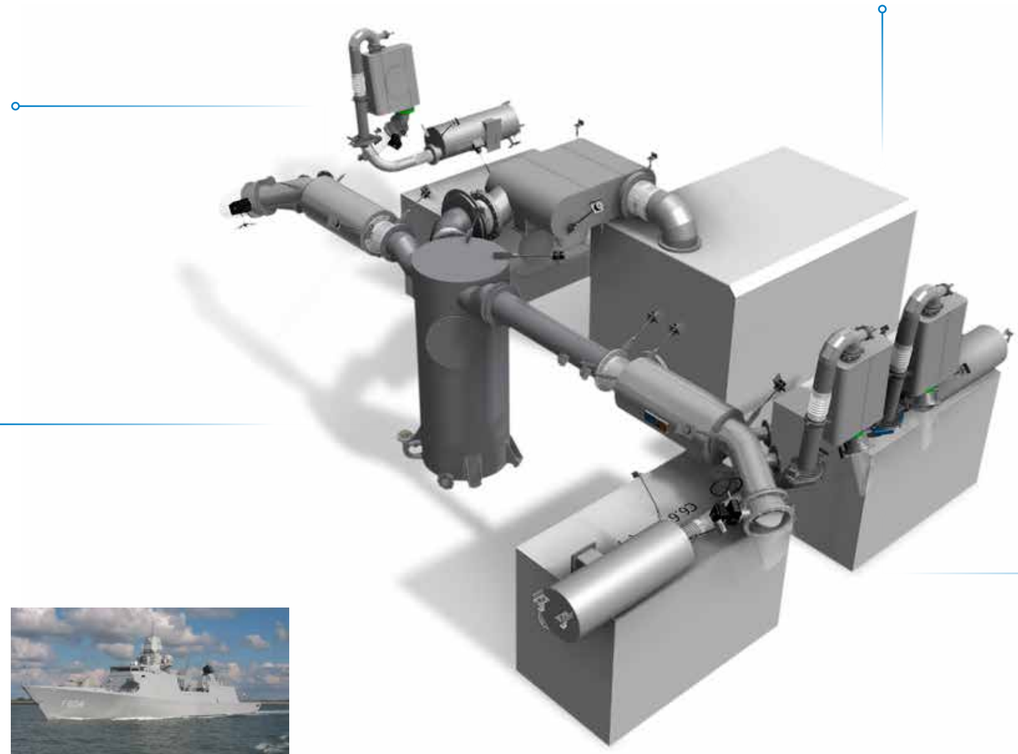
Please visit our website for more information about our solutions for noise, emission and heat: **www.discom.eu**

Solutions for noise, emission and heat

In recent decades ships have evolved impressively. Clients are setting ever stricter demands to efficiency, reliability and safety. Trade ships, workboats, cruise ships, ferries and marine vessels are examples of the most advanced techniques and technologies. The same efficiency, reliability and safety are required for the exhaust gas systems. Discom has been serving the maritime industry for over 35 years, providing total solutions with all the guarantees you may think of.



Vibration-free suspension A properly designed vibration-free suspension for an exhaust system means a serious contribution to having a comfortable ship. A good vibration-free suspension not only ensures a more pleasant state of mind, but also a longer life of the system. Discom's engineers will always provide a suitable solution.



Water-injected exhaust systems The main advantages of (sea)water injected systems are the following: cooled exhaust gasses which means thermal insulation is not required, more compact building options, less flue gas nuisance and, for marine vessels in particular, reduced visibility on infrared devices. The design of (sea)water injected exhaust systems requires extensive knowledge of and experience with this technology and the materials involved. Discom, given its long experience, guarantees reliable solutions.

Reusing heat The hot exhaust gasses produced by ship engines contain much energy some of which can be reused. Discom provides the possibility to indeed reuse this energy. To this purpose we provide the exhaust system with a heat exchanger. For instance, this energy can be used to improve the output of your entire system or for processing purposes.



Exhaust gas follow-up treatment Due to the maritime sector's sustainable image, increasingly more attention is being paid to exhaust emissions; removing diesel smell and soot and reducing NOx. Applying oxidation catalysts, soot filters and SCR systems allows Discom to ensure considerable environmental advantages in new and existing engines. Usually a custom-made solution is required bearing sound, back pressure and vibrations in mind.



'Dry' exhaust gas systems Despite the space problems in the engine rooms, Discom is perfectly capable of designing a 'dry' exhaust system that will meet each and every requirement. We design and manufacture 'dry' silencers in different shapes. In doing so we guarantee optimal use of volume and good acoustic results while respecting the maximum permissible back pressure in the exhaust system. In most cases we provide an integrated and certified spark arrestor.



Design determines your output

The ultimate effect of a system is usually determined at the initial stage. Making sure Discom is involved already during the designing process, means you can optimise the output of your exhaust gas system: a system with the ideal price/performance balance. Engaging Discom means you can count on experienced and dedicated engineers who will take their time to perfectly understand your wishes and requirements. This most accurate approach means crystal-clear advice is guaranteed based on acoustic, typographical, FEM and CFD calculations. Also, our engineers' long experience will help them reach perfect solutions.

Discom will never give up

Sometimes the requirements our clients set to exhaust gas systems may seem incompatible. But not to us. To find solutions we invest best efforts to reach whatever is feasible at the technical level, never overlooking reliability and safety. You can count on Discom to provide honest advice in case what you need might interfere with having a safe and reliable system in the short or long term.

Certainty in black and white

Discom has all the certificates required and meets all the standards that prevail in the maritime world. In addition to the ISO 9001:2008 certificate we also hold the ISO 3834-2: 2005 and EN 15085-2 certificates. And for the maritime industry we offer even more guarantees, with certificates issued by Lloyd's, DNV, BV, RMRS and RM. In addition, we maintain close contact with classification agencies to remain abreast of changing rules and directives.

How much more certainty at sea do you wish for?

Today the maritime industry requires top-notch solutions: Discom's solutions. Your exhaust system too can be much more effective. It is why we recommend the Discom Effect.