EXHAUST GAS PURIFICATION FOR ENGINES FROM 150 - 9000 KW (201 - 12000 HP)

The exhaust gas purification system nauticlean™ not only removes soot. It also efficiently eliminates dangerous and malicious pollutants, such as nitrogen oxides and hydrocarbons.

The modularly designed nauticlean™ exhaust gas purification system can be combined out of:
- Particulate filter
- Soot regeneration
- DeNOx- and Oxidation system

SOOT PARTICULATE FILTER

The nauticlean™ filter system is based on a ceramic honeycomb structure. The exhaust gases flow through the porous honeycomb walls so that more than 99 percent of the particulates with a size of 20-300 nanometers are retained.

SOOT REGENERATION

Due to the sophisticated catalytic coating of the filters, soot will be continuously burned off. The coating will not be affected by sulfur. For limiting the maximum ash load, sulfur content of fuel should be less than 5000 ppm (0.5%).

Soot Regeneration with Full-Flow Diesel Burner:
When average temperatures of the system remain below 350 degrees Celsius or long idle cycles of the engine during extended lay-times in harbors, the full-flow diesel burner will guarantee an active regeneration under all operating conditions, without interrupting the operating procedure. Thanks to the fact that our full-flow regeneration system is not electrically powered like some other systems, the generator’s output is entirely available for the ships requirement.

Depending on the design of the DPF-system, long operation intervals are possible; thus, operating costs are low. Besides the regeneration by a diesel full flow burner, we can also offer you attractive solutions for smaller engines or generators up to 125 kW (170 hp).

DENOX- AND OXIDATION SYSTEM

The soot filter can be enhanced by the installation of further exhaust gas purification stages. By the installation of SCR catalytic elements, the nitrogen oxides can be further reduced to required limits. Oxidizing elements reduce poisonous carbon monoxide and carbon hydrocarbons. All components can be combined within one single housing.

In combination with the newly developed variNOx system, the injection sector can be dimensioned shorter - and the entire system more compact.

The control unit of the variNOx system measures the pollutant concentration within the exhaust gas and automatically regulates the dosing and injection of an appropriate quantity of reactant.

It therefore can adapt to various carburant qualities and eliminate their pollutants autonomously. nauticlean™-systems are designed for off-the-shelf reactants such as Ad Blue® or water diluted urea solution)

QUALITY

Nauticlean™ products are designed to ensure low maintenance cost and durability. Its mechanical parts are robust, vibration- and shock-resistant.

The housings of the filter and DeNOx-Oxidation cartridges are made of high-grade stainless steel and allow easy access for smooth installation and exchange of the filter cartridges during maintenance intervals.

As one of very few manufacturers worldwide, Hug Engineering AG offers a complete supply of key components for exhaust gas purification that are developed, designed and produced in Switzerland. The variety covers the control systems to the soot filters and catalytic honeycombs. This assures the perfect fit and functionality in perfect Swiss quality.

SERVICE

Worldwide spare parts supply and service is provided by Hug Engineering’s dedicated service teams.

CERTIFICATIONS

nauticlean™ systems of Hug Engineering AG correspond to all current maritime normative rules, certificates and specifications (Lloyd’s Register, DNV GL, VERT, RINA etc.).
WHY NAUTICLEAN™?

- Effective reduction of particulate matter in excess of 99%
- Clean decks, furniture and clothes
- Reduction of HC and NOx emissions
- Certifiable to all international current normative rules and specifications (Lloyd’s, DNV GL, ABS)
- IMO Tier III qualifying
- Easy access into the DPF and DeNOx housing for main tenance and/or emergency-bypass
- Requires a minimum of space - partly replaces the silencer
- Very low operating costs
- Reliable complete system out of one hand
- For new installation or retrofit

NUMEROUS INSTALLATIONS ARE PROOF OF THE EFFICIENCY AND RELIABILITY OF THE NAUTICLEAN™ EXHAUST GAS PURIFICATION SYSTEM. CONTACT US.

NAUTICLEAN™ - THE RIGHT AND REASONABLE SOLUTION FOR EXHAUST GAS AFTERTREATMENT!