WHAT ABOUT NOx AND BALLAST WATER TREATMENT?
At Damen Green Solution we offer SCR solutions to reduce NOx to comply with the IMO Tier III regulations. In addition, we are experienced in ballast water treatment. Our solutions include onboard examples as well as our unique port-based solution, InvaSave.

We are more than happy to help you.

PICK YOUR OWN LOCATION
We can install the scrubber, either at one of Damen’s shipyards throughout the world, or at another shipyard of your choice.

COMBINING CAPABILITIES TO HELP YOU
Damen can help you. We are more than happy to provide you with a complete package. We offer training, services, spare parts, consultancy, support, customer finance, etc.

CONTACT US AT GREEN@DAMEN.COM
Or contact your local Damen Shipyards & Conversion yard to discuss the solution that suits you best.

COST EFFECTIVE, CERTIFIED AND SIMPLE SOLUTIONS
EXHAUST GAS TREATMENT

COMPLIANCE WITH THE IMO SOₓ REGULATIONS

All major components of the scrubber system are placed in two modules which are prefabricated onshore in a controlled environment. We carry out the onboard preparation work, preferably whilst the vessel is engaged.

**INLINE SCRUBBER**
Small footprint, low back pressure and absolutely NO ingress of water into the engines.

**OPEN TOWER**
Our scrubber has an open structure, no rotating components or filters and because of our patented design we guarantee an optimal reaction between exhaust gas and seawater.

**MECHANICAL WATER TREATMENT**
During an efficient treatment we create compressed sludge, resulting in minimal residue.

**REDUCTION OF SOₓ AND PM**
Compliant to the latest IMO standards and reduces SOₓ and Particular matters (PM) efficiently.

The IMO regulations which limit the amount of sulphur in marine fuel to 0.5% will be effective from 1st January 2020. Inside (S)ECA areas the limit is already 0.1%. In order to comply, there are two main solutions.

**SOLUTION – EXHAUST GAS TREATMENT + HFO**
The installation of an exhaust gas treatment system has in some cases a return on investment period of less than 24 months. Don't wait, 2020 is now.

**ALTERNATIVE – LOW SULPHUR FUEL (MGO)**
Low sulphur fuel is a quick way to comply, but are you willing to spend more money for fuel every time you bunker?

The hybrid scrubber system would run in closed or open loop mode. The water is either re-circulated or discharged overboard.