



# SCR System



YANMAR SCR technology developed through bench test and onboard it

Durability tested to exceed 20,000 hours in total

System corresponding to ocean going operation for a long time

- **Highly NOx reduction performance**
- **Original layout that prevents ammonia leaks to bypass line**
- **Control unit to integrate all devices for multiple engines ( Full automatic system )**
- **Long lifetime of catalyst**
- **Strong support for both engine and SCR system**

## SCR system developed in-house by YANMAR to meet to IMO Tier 3 NOx regulations

YANMAR has developed SCR system that meets to IMO Tier 3 regulations, which require an 80%, i.e. big reduction in NOx compared with Tier 1. Making use of our original technology and wealth of experience, we have created a system whose design and functionality are optimized for marine vessels, and which is perfectly matched for use with diesel engines, both in ECA and non-ECA waters. In addition, repeated verification tests have been conducted on ocean-going vessels ( equipped with SCR system for 3 auxiliary engines ) to further improve the system.



SCR system installation on test bench

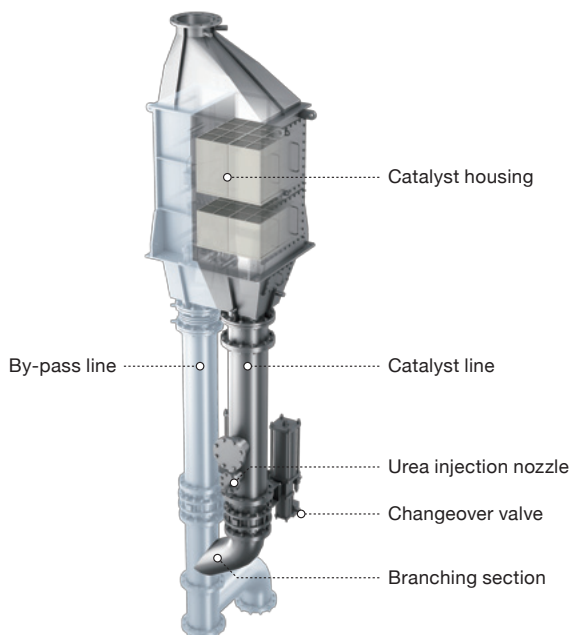


After loading the ship

# Highly Reliable and Exceptionally Durable - YANMAR's Original SCR System

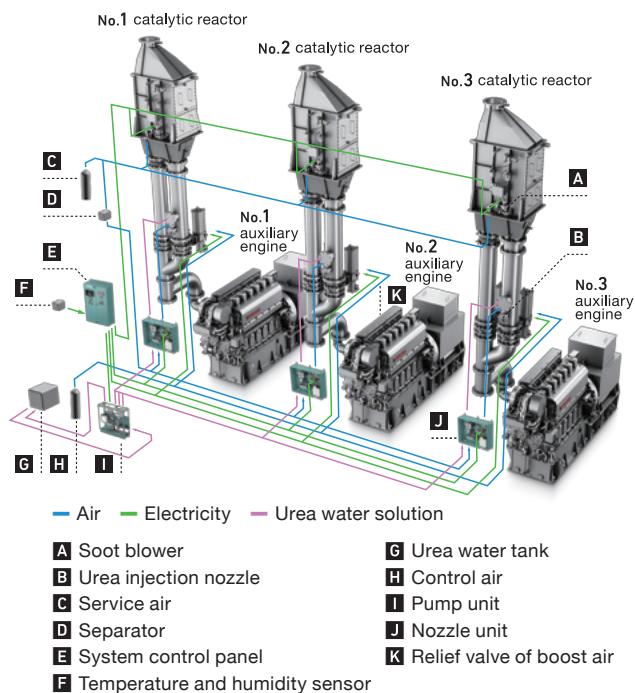
## Maintaining highly NOx reduction performance whilst ensuring safety.

The by-pass branching section and catalytic reactor have been integrated into a single unit, achieving high-performance NOx reduction. Engines equipped with our SCR system is obtained NOx certification ( Scheme A ), whilst maintaining performance onboard. Additionally, a urea injection nozzle is installed downstream from the branching section, preventing ammonia from leaking into the by-pass line.



## Automatic control for multiple engines.

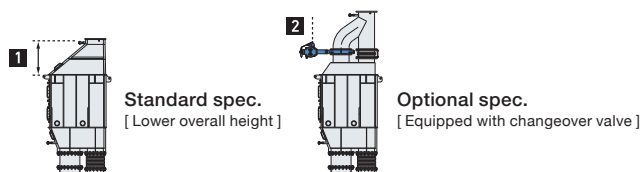
Control unit integrates all devices including catalytic reactors mounted to each individual engine. A single pump unit and control panel can manage system for multiple engines, allowing the system to remain compact.



Note: Specifications may differ according to vessel classification.

## Long lifetime of catalyst

Catalyst degradation occurs due to the flow small amounts of exhaust gas into the catalyst line when the by-pass is in operation. The unit to prevent it includes 2 types of outlet.



	Standard spec.	Optional spec.
1 Overall height of catalytic reactor outlet	Low	High
2 Changeover valve installed to same outlet	* Not req'd	Req'd
Purge air	Req'd	Not req'd

\* Prevented by internal structure of duct

## After-service for both engine and SCR system

We offer comprehensive engine and SCR system support, including periodic NOx ( reduction rate ) measurements as stipulated by the vessel classification society rules and maintenance.

## Upon request, we can also provide production equipment of urea water solution. ( optional )

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### Safety Precautions

- Use this product correctly, and only after thoroughly reading and understanding the contents of the instruction manual.
- Inappropriate use of this product will result in reduced product lifetime, and may cause failures and/or accidents.
- Carry out periodic maintenance so as to prevent failures and/or accidents.

Please enter any opinions or questions about this product here: