

ENERGY
ENVIRONMENT
ECONOMY

DENIS-R ENGINE CONTROL RETROFIT PACKAGES RND, RND-M, RL, RTA



Benefits

- Installation of maintenance-free state of the art electronic components
- Use of only required minimum pneumatic control components for trouble-free operation
- Significant reduction of required maintenance time and costs
- Eliminating of time-consuming and costly troubleshooting
- Eliminating risk of going off-hire due to starting-/manoeuvring problems
- Possibility to regain or to obtain unmanned machinery (UMS) status
- Technical support and spares availability for vessel's lifetime
- Depending on customer's need, standard packages can be customized to a tailor-made solution

DENIS-R retrofit packages are designed for customers with Sulzer Bridge Control SBC77.1 or any other remote control system from any other maker that faces major operational difficulties or remote control problems.

These packages provide the appropriate remote control retrofit and engine interface adaptation required for safe and reliable operation. The alternative of maintaining the existing pneumatic control system at high service costs with increasing risk of non-availability of spare parts (limited lifetime), or

buying from other control system suppliers with no Wärtsilä certified service, is neither beneficial nor economical. Furthermore, neglected upgrading of the ageing control system increases the hazard of serious manoeuvring failures and the risk of going off-hire. ■ ■ ■



- As OEM Wärtsilä provides the relevant technological expertise and knowledge needed for such an upgrade. Wärtsilä has extensive competence with the installation and commissioning of such projects in cooperation with a certified supplier for remote control systems.

DENIS-R retrofits are available for RND, RND/M, RL and RTA engine types and for all existing remote control systems. Depending on the customer's need there are 2 main standard packages available of which the most suitable version can be determined. It is also possible to customize a standard package to a tailor-made retrofit solution.

Retrofit Versions

DENIS-R retrofit package versions are based on a modular upgrade approach by using standard remote control products.

DENIS-R, Version E

This upgrade and engine interface adaptation package includes the replacement of the old bridge control system including the telegraph system and the safety system by a new electronic remote control system. The package also includes the replacement of the pneumatic logic box by a new electrical engine interface.

DENIS-R, Version F

This upgrade and engine interface adaptation package includes the replacement of the old bridge control system including the telegraph system and the safety system by a new electronic remote control system. Furthermore the pneumatic speed governor will be replaced by a new electronic speed control system. The package also includes the replacement of the pneumatic logic box by a new electrical engine interface.

Control System Retrofit: Replacement by using standard packages

						RD, RND, RND-M, RL	RTA	RD, RND, RND-M, RL	RTA
Standard versions	Control system Bridge/ECR	Telegraph system	Safety System	Electronic Speed Control System	Comments				
					SBC-7		SBC-7.1		Non-Sulzer Control Systems
DENIS-R	E	✓	✓	✓	✗	Replacement of control/telegraph units and safety system in Bridge and ECR. Replacement of pneumatic logic box with engine interface adaptation.			
	F	✓	✓	✓	✓	Same as Version E, but with additional replacement of pneumatic governor with electronic speed control system.			



Pneumatic logic box before and after the upgrade

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