



Lloyd's  
Register

## Type Approval Certificate Extension

This is to certify that Certificate No. 15/00092 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	TECNOVA HT s.r.l. Via Castellazzo, 29 20010 - Pregnana Milanese (MI) Italy
<b>PLACE OF PRODUCTION</b>	ELETTROMECCANICA B.T.B. s.r.l. Via della Tecnica, 6 52025 Levanella - Montevarchi (AR) Italy
<b>DESCRIPTION</b>	Marine Emission Monitoring System
<b>TYPE</b>	S-Keeper 7 - Full
<b>APPLICATION</b>	Marine use in environmental category ENV2 as defined in LR Test Specification No.1:2015
<b>STANDARD</b>	Manufacturer's specification; MEPC.259(68) MARPOL Annex VI NTC2008

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 15/00092(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

*All other details remain as the previous Certificate No. 15/00092 to which this extension should be attached.*

<b>Certificate No.</b>	15/00092(E1)
<b>Issue Date</b>	13 December 2018
<b>Expiry Date</b>	09 November 2020
<b>Sheet</b>	1 of 1

Lloyd's Register EMEA  
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## Lloyd's Register EMEA (London Office)

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Issue number 0

### DESIGN APPRAISAL DOCUMENT

Date 13 December 2018	Quote this reference on all future communications TTS/ETS/MC/LB/11085122
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## LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2017.

Issued to: TECNOVA HT s.r.l.

for: MARINE EMISSION MONITORING SYSTEM

Type: S-Keeper7 -Full

TYPE APPROVAL CERTIFICATE No. 15/00092(E1)

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2017 and this Design Appraisal Document forms part of the Certificate.

### APPROVAL DOCUMENTATION

Application Checklist – Appendix to Form 2502TA/2502TA MR	19/06/2018
Form 2502 – Request For Marine Service – Type Approval – 2018/105	23/08/2018
Production Quality Assessment Form – TECNOVA HT s.r.l. – Pregnana Milenese (MI) – MLN1580900	30/09/2015
Production Quality Assessment Form – Elettromeccanica B.T.B. s.r.l. – Levanella - Montevarchi (AR) – MLN1580900	09/10/2015
ISO 9001:2008 – Perry Johnson Registrars, INC	11/04/2015
TECNOVA HT s.r.l. Quality Management System Certification. Registration Number: C2013-02482-R1	15/10/2016
MOD05-04#0 LR Setup Test Report S-Keeper 7 rev.1	05/11/2015
S-Keeper 7 Software Datasheet	29/09/2015
S-Keeper 7 Software Quality Plan	17/07/2003
S-Keeper7 – Wiring Diagram	26/09/2018
S-Keeper7 – Layout & Components list	26/09/2018
S-Keeper7 – Pneumatic Diagram	26/09/2018
Testing the analyser performance reference to IMO NOx Technical Code 2008 MEPC.177(58) Appendix 3 Sec. 1.6, 1.7, 1.8, 1.9, 1.10	-
S-Keeper7 Sampling system SO2 Washout	-

### TEST REPORTS

CSI report n°0076/ME/CMP/15	23/10/2015
CSI report n°0017/ME/CMP/15	16/09/2015
P&P LMC n°RT-AB-063/15 rev.00	31/07/2015
TESLAB n°153050F	06/05/2015
TESLAB n°154069A	06/05/2015

### Supplementary Type Approval Terms and Conditions

*Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.*

Maurizio Crucil  
Senior Specialist  
Trieste Technical Support Office  
Lloyd's Register EMEA



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**Part 3**  
**Subject: Alarm and Monitoring System**  
**Product:**

Producer/Licence No.	Description of Product				Cert. No.
	Type	Details of Approval	Application	Remarks	
<b>TECNOVA HT s.r.l.</b> <b>Via Castellazzo, 29</b> <b>20010 – Pregnana Milanese</b> <b>(MI)</b> <b>Italy.</b>	Marine Emission Monitoring System		Marine and offshore applications	Expires: 09 November 2020	15/00092(E1)
	S-Keeper7 - FULL	NO <sub>x</sub> , CO <sub>2</sub> , SO <sub>2</sub> , CO Measure with O <sub>2</sub> ,Particulate, HC (Options)	ENV 2, 2015		
	S-Keeper7 - LITE-S	SO <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO Measure with O <sub>2</sub> ,Particulate, Plus (Options)	Comply with: MEPC.259(68), 6.2 MARPOL Annex VI NTC2008, Appendix III, 1.6-1.7-1.8-1.9-1.10-3 NTC2008, Appendix IV, 5.51, 9		
	S-Keeper7 - LITE-N	NO <sub>x</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO Measure with O <sub>2</sub> , Particulate, HC (Options)			
	S-Keeper 7 - LITE	NO <sub>x</sub> , CO <sub>2</sub> , CH <sub>4</sub> Measure with O <sub>2</sub> , Particulate (options), Plus (Options)			
	S-Keeper7 - EASY	NO <sub>x</sub> , CO <sub>2</sub> , SO <sub>2</sub> Measure with O <sub>2</sub> ,Particulate, Plus (Options)			
	S-Keeper7 - EASY-S	SO <sub>2</sub> , CO <sub>2</sub> Measure with O <sub>2</sub> , Particulate, Plus (Options)			
	S-Keeper7 - EASY-N	NO <sub>x</sub> , CO <sub>2</sub> Measure with O <sub>2</sub> , Particulate, Plus (Options)  - Aux Input: Engine Speed; Engine Torque; Air Inlet flow; Pressure & humidity sensors - Software: Windows based - I/O Connections: 1xEthernet RJ45; 1xRS-485; 1xSPDT contact - Power Supply: 230V 50Hz (4.8kVA)			