

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>Protea Limited</b>
<b>Address</b>	Unit 2 Venture Park, Stirling Way, Bretton, Petersborough, PE3 8YD, United Kingdom
<b>Type</b>	Control Systems
<b>Description</b>	Continuous Emission Monitoring Process Analyser (Infra-Red), designed to provide in-situ analysis of up to six gas-phase emission components
<b>Trade Name</b>	P2000
<b>Application</b>	Marine / Offshore applications (ENV2 category)
<b>Specified Standard</b>	LR Rules and Regulations for the Classification of Ships (July 2020), LR Test Specification No.1 (2020), IMO Resolution MEPC.184(59) - 2009 Guidelines for Exhaust Gas Cleaning Systems, IMO NOx Technical Code (2008) - Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines
<b>Ratings</b>	Power supply: 115V/ 230V, 50/60 Hz, 100W; Operating temperature range: -25C to +55C; Sample temperature up to +350C; Enclosure: Aluminium alloy casting, IP65; Ranges: NO 0-2000 ppm, NO2 0-200 ppm, CO2 0-10%, 0-16%, SO2 0-100 ppm, 0-1750 ppm.

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**Other Conditions** The P2000 operates using an infra-red radiation measurement technique. According to Appendix 8, paragraph 2.1.1 of the NOx Technical Code the P2000 is subjected to the approval of the Administration as alternative analyser for Nitrogen Oxides (NOx) analysis

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.

**Previous Version:** 15/00083(E2)

The Design Appraisal Document LR21162986TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.