

INGAS

Intelligent Changeover System for OXYGEN SUPPLY

Patent pending



- The most advanced automatic changeover system available for mobile ICU ambulances and independent clinical facilities.
- Direct and remote control, including telemetry for alarms and system status.
- Algorithms focused on the complete use of cylinders to maximize the gas savings. Integration of different safety systems and self-test leak detection.
- Acoustic and visual alarms.

INGAS much more than an automatic changeover

INGAS is much more than an automatic changeover and it is the most advanced microprocessor controlled system managing the oxygen supply from two high pressure oxygen cylinders (up to 300 bar) to a medical facility. Specifically designed for mobile intensive care ambulances and independent health facilities, such as operating rooms and ICU's, where a non-interrupted oxygen supply must be controlled and highly guaranteed.






The **INGAS** Kit includes all the necessary to guarantee a simple, compact and safe way of installation. Such kit consists of a Control Unit, two pressure regulators equipped with high pressure sensors (models available for different standard cylinder connections), two panel mount connectors for plugging high pressure sensors, two panel mount valves for connecting each pressure regulator with Control Unit and a third panel mount valve for back-up by-pass.

The **INGAS** Control Unit main purpose is the management of oxygen supply from cylinders, allowing an optimal use and maximizing gas saving. A real time analysis of the facilities is performed to detect and identify the oxygen consumption sources (flow meters, pressure regulators or ventilators) so as to guarantee a continuous supply but using the cylinder up to empty at 10 bar. Additionally, in the event that a ventilator in use is identified, the cylinder change shall be performed at 20 bar. InGAS System flow capacity is 300 L/min (18 m³/hour). In the case that the required flow rises above 300 L/min, the system shall therefore activate both cylinders in order to temporally duplicate the capacity up to 600 L/min.

The **INGAS** Control Unit includes displays for the cylinders and for the facility pressures, and lamps for active and empty cylinders, but it also incorporates advanced features like auto leak test, low pressure and over-pressure alarms, remote On/Off control, procedures for maintenance and calibration of the sensors, telemetry for parameters and alarms (via CAN bus) and a dual (hardware and software independently) safety mechanisms to guarantee the oxygen supply against electrical supply fail or fail of the own InGAS Control Unit.

Kit **INGAS 302**

- InGAS control module
- Panel mount O₂ valve x 2
- P-300 Pressure regulators with sensor x 2
- Panel mount back-up O₂ valve (by-pass)
- Panel mount sensor connection x 2

Cylinder fittings	 NF E29 650	 UNI 4406	 BS 341 nr. 3	 CGA V-1 nr. 540	 DIN 477-1- nr. 9	 PIN INDEX EN-850	 ISO 5145 nr. 7 (300 bar)
Kit INGAS 302	5520500	5520501	5520502	5520503	5520504	5520505	5520506



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