Carnét Launches Halogen-Free Pressure Regulators

Carnét pressure regulators and dial-flow regulators now employ halogen-free sealing materials to improve patient safety in the rare event of fire. Careful selection of non-metallic sealing materials is of paramount importance in minimising the potential for harm. Where halogenated compounds (i.e. those containing chlorine and/or fluorine) are used, the combustion of these materials can produce toxic by products. Since the pressure regulator is providing oxygen to a patient who is often in a very vulnerable condition, the result of breathing in such toxic chemicals could be catastrophic. Such incidences have led to fatalities in continental Europe.

European Standard EN ISO 15001 (Anaesthetic and Respiratory Equipment - Compatibility with Oxygen) is currently under review. The existing version introduces the concept of managing the toxicity risks in the selection on non-metallic materials in medical oxygen service, but it does not go as far as mandating that halogens cannot be used.

Ben Johnson, BPR Medical's Product Development Manager said: "Finding a halogen-free alternative sealing material was a big challenge – bigger than we anticipated. There are precious few high performance elastomers that are 100% free of chlorine and fluorine. We searched the globe for suitable alternatives and eventually found a source that could provide the product we needed with the high level of quality assurance that medical device applications demand."

The new halogen-free sealing material is now in use on all high pressure O-ring seals in the Carnét Suction and Oxygen Therapy range and can be distinguished from standard sealing materials by its distinctive violet colouring. In addition, all products serviced by Carnét will have the new high pressure sealing materials installed and service kits for products in the field will provide halogen-free replacement seals.