Anaesthetic breathing apparatus

BACKGROUND
Epidemiological studies suggest that the release of exhaled anaesthetic gases into the atmosphere of the operating theatre may cause significant health problems to theatre staff – including an increased risk of spontaneous abortion, birth defects, cancer, liver and renal disease. The current COSHH guidelines state that employees must be protected from these harmful effects by effective scavenging equipment.

In the conventional Jackson-Rees system, a length of anaesthetic tubing delivers the anaesthetic gas mixture to a T-junction sited close to the patient's mouth. A second arm of the T acts as patient connector while a third connects to a reservoir tube which conducts a mixture of fresh and expired gases to an opened tailed reservoir bag, from which the gases are vented to the operating theatre environment. This currently used equipment is operated in a two-handed manner which gives the safest and most comfortable position for the anaesthetist: however, attempts to scavenging the waste gases have generally resulted in reduced convenience or a tendency to kink the breathing tubes or reservoir bag increasing the risk of obstruction to the flow of gases to and from the patient.

THE TECHNOLOGY
We have developed a novel breathing system based on the T-piece principle that allows waste anaesthetic gases to be safely and efficiently disposed of. The device has a number of advantages of previously proposed solutions:

• Valveless system – truly two-handed operation
• Fully closed and scavengeable
• Simple, lightweight and compact
• Specifically designed for ease of manufacture
• Has the potential to be made in a disposable or semi-disposable system
• Operation of device is clear to anaesthetist and does not significantly change current working practice

APPLICATIONS
This device is applicable to all types of operating theatre and is especially applicable in paediatric operating theatres.

KEY BENEFITS
• This device offers two-handed operation in contrast to most other current devices
• Designed for ease of manufacture
• Easy to use and little danger of occluding the air flow

OPPORTUNITY
We are currently seeking a licensing partner to manufacture and distribute this device.

CONTACT
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