

RT020 – End Expiratory Filter

The RT020 filter is fitted for use on the expiratory port of the ventilator

In terms of filtration and performance characteristics, the RT020 End Expiratory Filter is identical to the RT019 Inspiratory/Expiratory Filter.

Integral to the performance of the filter is a unique 'double-walled shell'. The outer shell creates an insulating air gap, which is intended to reduce condensation of exhaled humid gas inside the filter.

Less condensation means the RT020 filter remains dryer, maintaining filtration performance characteristics.

The RT020 End Expiratory Filter from Fisher & Paykel Healthcare is a single-patient-use filter compatible with 22mm connecting circuits (ISO 53564).

RT020 expiratory application

The RT020 Filter is designed to prevent contamination of the ventilator and surrounding environment during use as an expiratory filter.

Aerosols from nebulisers, as well as airborne bacteria and viruses from the patient in the exhaled gas, are retained by the electrostatic filter media. In this way the ventilator is kept clear of contamination from pathogens and ventilator flow sensors are protected from debris that could otherwise compromise flow sensor accuracy.

FEATURES

- Insulated housing, intended to reduce condensate
- Electrostatic depth media, low pressure drop
- Hydrophobic media, water repelling
- Box of 20 units



The RT020 End Expiratory Filter has a unique dual wall that insulates the gas to greatly reduce condensate accumulation when using heated wire circuits.



RT020 FILTER SPECIFICATIONS

Connections:	ISO 5356-1, conical connectors
Compliance:	0.13ml/cmH ₂ O
Compressible volume:	38 ml
Resistance to flow @ 45 lpm:	1.08 cmH ₂ O
Filtration efficiency:	
Viral:	Greater than 99.99% ¹
Bacterial:	Greater than 99.9997% ¹

1. Filter challenge tests were conducted independently by Nelson Laboratories (USA). Challenge organisms used were: Bacterial challenge: *Bacillus subtilis* (size: 5-.8 microns by 1.0-1.5 microns). Viral challenge: ψ X174 bacteriophage (size 0.025-0.027 microns). Challenge tests involved comparing the number of pathogens upstream of the filter to downstream. The pathogen was aerosolised, the aerosol sizes were 3.1 microns for bacterial and 2.9 microns for viral.