

BREATHING SYSTEM FILTERS AND HMEs

2. BREATHING SYSTEM FILTERS AND HMEs

ELECTROSTATIC FILTER AND HME

The TwinStar® Plus filter/HME from Dräger is a combination of an efficient HME and a high-performance breathing system filter, thereby significantly contributing to infection prophylaxis in ventilation treatment.

- Combination of efficient HME and high-performance breathing system filter
- High retention rates for bacteria and viruses
- High return of moisture
- Minimal workload and low cost
- Sampling connector with tethered cap
- Transparent housing for visual control
- Standardized connectors for safe connection to other components
- Clear labeling and blue color coding for quick identification

| | | |
|----------|--|----------------|
| A | Filter + HME TwinStar® 90 Plus, disposable, ~90 ml deadspace, 100 pcs. | MP05800 |
| B | Filter + HME TwinStar® 60A Plus, disposable, ~60 ml deadspace, angled, 100 pcs. | MP05810 |
| C | Filter + HME TwinStar® 55 Plus, disposable, ~55 ml deadspace, 100 pcs. | MP05805 |
| D | Filter + HME TwinStar® 25 Plus, disposable, ~25 ml deadspace, 100 pcs. | MP05815 |
| E | Filter + HME TwinStar® 9 Plus, disposable, ~9 ml deadspace, 100 pcs. | MP05820 |

MECHANICAL FILTER AND HME

| | | |
|----------|--|----------------|
| F | Mechanical filter + HME TwinStar® HEPA Plus, disposable, ~90 ml deadspace, 100 pcs. | MP05801 |
|----------|--|----------------|



BREATHING SYSTEM FILTERS AND HMEs

SPECIFICATIONS

| | TwinStar® 90 Plus | TwinStar® 60A Plus | TwinStar® 55 Plus |
|--------------------------|----------------------------|----------------------------|----------------------------|
| Part number | MP05800 | MP05810 | MP05805 |
| Deadspace | 90 ml | 60 ml | 55 ml |
| Recommended tidal volume | 300 to 1500 ml | 300 to 1500 ml | 300 to 1500 ml |
| Bacterial retention** | ≥ 99.99% | ≥ 99.99% | ≥ 99.99% |
| Viral retention** | ≥ 99.9% | ≥ 99.9% | ≥ 99.9% |
| Filtration method | electrostatic | electrostatic | electrostatic |
| Moisture loss* | ≤ 5.9 mg/l at VT = 500 ml | ≤ 6.3 mg/l at VT = 500 ml | ≤ 9.4 mg/l at VT = 500 ml |
| Moisture return | ≥ 38.1 mg/l at VT = 500 ml | ≥ 37.7 mg/l at VT = 500 ml | ≥ 34.6 mg/l at VT = 500 ml |
| Resistance | ≤ 1.0 mbar at 30 l/min | ≤ 1.3 mbar at 30 l/min | ≤ 1.3 mbar at 30 l/min |
| Maximum duration of use | 24 hours | 24 hours | 24 hours |
| Product | PVC-free/ Latex free | PVC-free/ Latex free | PVC-free/ Latex free |

| | TwinStar® 25 Plus | TwinStar® 9 Plus | TwinStar® HEPA Plus |
|--------------------------|----------------------------|----------------------------|----------------------------|
| Part number | MP05815 | MP05820 | MP05801 |
| Deadspace | 25 ml | 9 ml | 90 ml |
| Recommended tidal volume | 100 to 500 ml | 30 to 150 ml | 300 to 1500 ml |
| Bacterial retention** | ≥ 99.98% | ≥ 99.99% | ≥ 99.9999% |
| Viral retention** | ≥ 99.9% | ≥ 99.9% | ≥ 99.9999% |
| Filtration method | electrostatic | electrostatic | mechanical |
| Moisture loss* | ≤ 11.8 mg/l at VT = 250 ml | ≤ 10.30 mg/l at VT = 50 ml | ≤ 10.9 mg/l at VT = 500 ml |
| Moisture return | ≥ 32.2 mg/l at VT = 250 ml | ≥ 33.7 mg/l at VT = 50 ml | ≥ 33.1 mg/l at VT = 500 ml |
| Resistance | ≤ 1.8 mbar at 30 l/min | ≤ 1.5 mbar at 15 l/min | ≤ 1.6 mbar at 30 l/min |
| Maximum duration of use | 24 hours | 24 hours | 24 hours |
| Product | PVC-free/ Latex free | PVC-free/ Latex free | PVC-free/ Latex free |

Cleanroom manufactured according to EN ISO 14644-1:2014.

*According to DIN EN ISO 9360-1 2009.

**Test has been performed by Nelson Lab, USA, in 2021.