Pharma Systems

World Class Performance

Breathing comfort safety systems since 1990

Heat & moisture exchangers and bacterial/viral filters for patient comfort and infection prevention

EVERY BREATH MATTERS™

Product guide

About us

Pharma Systems is a Swedish company that has provided breathing comfort safety systems since 1990. We manufacture a range of products which set the evaluation criteria for all other breathing system products, as well as standard products with the highest possible performance.

We design, manufacture and deliver a high-quality range of products at the right price and with all the best features.

Our head office is situated in Sweden, near Stockholm, with a subsidiary in Estonia.

Pharma Systems is a truly international company which has long been active in more than 60 countries.

Quality & Research

To ensure the outstanding quality of used materials and technologies, permanent testing and product development are needed. Our testing laboratory is equipped with devices that enable us to measure a number of qualities, which are important for complete product evaluation. Continuous research is a foundation for new efficient products.

Pharma Systems makes daily in-house tests to ensure quality and to find the best solutions for manufacturing and use of HME and filter media.

There are no limits concerning Pharma Systems quality control. Each potential threat that could jeopardize or lead to negative changes in the quality of our products, quality of service or delivery are investigated and prevented.

Audited by Intertek

EN ISO 13485:2012
CERTIFICATION™
Intertek

Pharma Systems is a certified and approved manufacturer holding the following certificates:

EN ISO 13485:2012   MDD 93/42/EEC   *Pharma Systems manufacturing sites are FDA registered*

For more detailed information about our tests, please visit www.pharmasystems.se

◊ Pharma Systems

Our products

Heat & moisture exchangers **4**

Bacterial/viral filters **10**

Build your own system **16**

Combined heat & moisture exchanger w. bacterial/viral filter **18**

Catheter mounts **22**

All Pharma Systems HME and HME/filters are:

- Latex free
- DEHP free

INTRODUCTION TO
PASSIVE HUMIDIFICATION

Under normal conditions, the nose and upper airways humidify, heat up and filter the air we breathe. This is crucial for the mucociliary cleansing system in the airway to function properly.

However, when ventilated and during anesthesia the patient is intubated either with an ET-tube, LMA or a tracheostomy tube. Then the Heat & Moisture and Filtering mechanisms are much bypassed which exposes dry ventilatory gases to the lung system.

Longer periods of breathing dry and cold gases could lead to the following:
• Reduction in ciliary function
• Mucosal injury
• Airway obstruction from thick secretions
• Respiratory heat loss (hypothermia)
• Indirectly to Ventilator Associated Pneumonia

Heat & Moisture Exchangers (HME's) from Pharma Systems is an easy way to correct this condition.
An HME simply collects the patient's expired Heat & Moisture within its hygroscopic media. Then it returns it during the following inspiration.

Heat and moisture passing through the HME filter

HME's are lightweight, time saving, low cost and can easily be combined with a bacterial/viral filter. Furthermore there is no need for electricity and additional water.

Use of an HME will:
• Maintain mucusciliary transport
• Prevent mucosal damage
• Reduce mucus plugs
• Reduce heat loss from the airways

HME's also have other advantages:
• Keep patient circuits dry (no need for water traps & heated wire)
• Decrease risk for colonization in the circuit
• Very simple to use in comparison with active humidification

Design of HME/Filters is also important
Round shape provides equal spread of airstream and creation of turbulences in corners is eliminated thus the HME/Filter media is used in a very effective way.
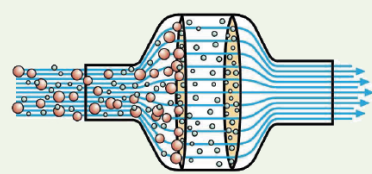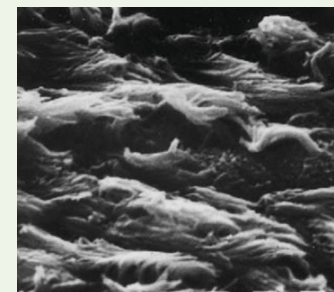

The HME's from Pharma Systems are designed with a smooth housing that utilizes most of the surface area for the air exchange to take place, which results in optimal performance with high humidification properties.
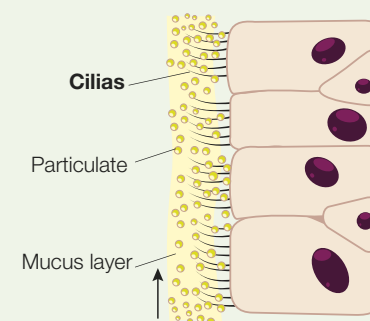
Healthy cilias
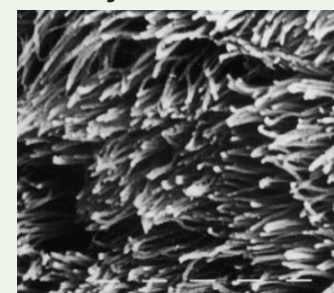
Damaged cilias

Movement of mucus to the pharynx

Cilias
Particulate
Mucus layer

HEAT AND MOISTURE EXCHANGERS

Pharma Systems heat and moisture exchangers offer the user high efficiency solution for breathing systems in a clear housing for easy inspection.

• Conical fittings in accordance with ISO standard ensure safe connection security.

• Designed to provide heated, humidified gases to the patient

• Lowers the risk of hypothermia and damage to the respiratory tract.

• Eliminates the need for water traps and their maintenance.

• Dry gas prevent sampling tube and analyzers from moisture and lowers the risk for colonization.

• Eliminates the need for active heat and humidification sources.

• Provide high humidification efficiency with all ventilation parameters.

• Offer immediate start of function and stability over time.

• All Pharma Systems HMEs are tested according to ISO 9360.

• Initial set-up is simple, quick and secure.

• Different options ensure the right choice of device.

• Should be changed every 24 hours or more frequently if resistance increases.

HME
• Choose between HME 10 (for smaller tidal volumes), HME Midi 11 and HME 12.

Pharma Neo
• Designed for neonatal and infant patients.
• Unique tubing port solution for CO^2 monitoring.

HME 10

Heat and moisture exchanger for smaller tidal volumes

Product specification	
Tidal volume (ml)	50-900
Dead Space, Basic	26
Straigh/angled w. port	23
Weight (g)	13

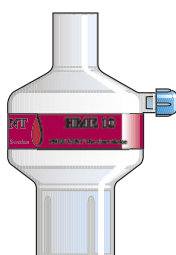| Resistance cm H_2O		
Basic	30 LPM	0,7
Port	30 LPM	0,7
Port Angle	30 LPM	0,7

Moisture return	
At Vt 250 ml (mg H_2O / l air)	29

Fittings: 15 Male/22 Female - 22 Male (mm)
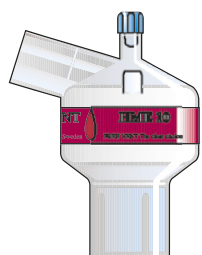
Basic
Code: 6060
Box/Case: 50/500

Port
Code: 6063
Box/Case: 50/500

Port angle
Code: 6061
Box/Case: 50/500

Port 2
Code: 6065
Box/Case: 50/500

HME Midi 11

Medium size heat and moisture exchanger

Product specification	
Tidal volume (ml)	100-1200
Dead space (ml) straight	45
Dead space (ml) angled	47
Weight (g)	29

Resistance cm H_2O		
Port	30 LPM	0,7
Port Angle	30 LPM	0,7

Moisture return	
At Vt 500 ml (mg H_2O / l air)	32,5

Fittings angled: 15 Male/15 Female – 22 Male (mm)

Port
Code: 6305
Box/Case: 50/400

Port angle
Code: 6307
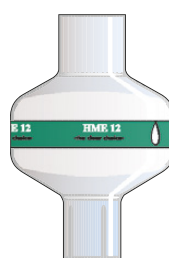Box/Case: 50/400

HME 12

Heat and moisture exchanger

Product specification	
Tidal volume (ml)	150-1500
Dead space (ml)	86
Weight (g)	32

Resistance cm H_2O		
Basic	60 LPM	0,6
Port	60 LPM	0,9

Moisture return	
At VT 500 ml (mg H_2O/l air)	>33 mg

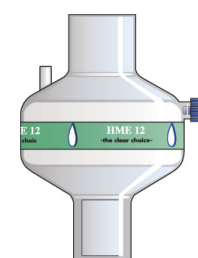Fittings: 22 female / 15 Female - 22 Male (mm)
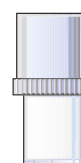Fittings port: 15 male – 22 female / 15 female – 22 male (mm)

Basic
Code: 6070
Box/Case: 25/250

Port
Code: 6072
Box/Case: 25/250

Pharma Neo

Heat and moisture exchanger for neonatal and infant patients

Product specification	
Tidal volume (ml)	10-50
Dead space (ml)	4
Weight (g)	3

Resistance cm H_2O		
Basic	7,5 LPM	1,0
Port	7,5 LPM	1,0

Moisture return	
At VT 20 ml (mg H_2O/l air)	32,5
At VT 25 ml (mg H_2O/l air)	31,0

Fittings: 15 male / 15 female (mm)

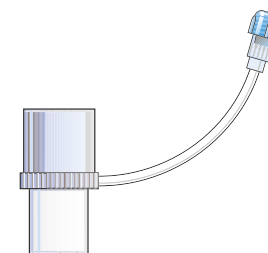**Basic**
Code: 6215
Box/Case: 25/500

Port
Code: 6220
Box/Case: 25/500

All products are available with or without carbon dioxide integrated port – CO_2 Port, for safe reading and protection of monitoring machine .

Hygienic and disposable – for single patient use in clinically clean packaging.
Hygienic and disposable – for single patient use in clinically clean packaging.

HEAT AND MOISTURE EXCHANGER

for tracheotomized spontaneously breathing patients

Pharma Trach

- Provides heated & humidified air to spontaneously breathing patients through a tracheotomy or endotracheal tube.

- Suitable for:
  - Tracheostomized Home Care or ENT patients
  - For all spontaneously breathing tracheotomized patients in respiratory care, including immediate postweaning phase.

- Initial set-up is simple, quick and secure.

- Different options ensure the right choice of device.

- Should be changed every 24 hours or sooner depending on secretions.

- Excellent humidification efficiency.

- Lightweight and low resistance - minimal work of breathing.

- Easy to use and cost efficient.

- Several options available,
  - Humidified oxygen supply
  - Self-closing suctioning port
  - Unique exchangeable HME cassettes - cost saving and hygienic.

- Designed for adult and pediatric patients.

- Now available with Universal oxygen connector!

- 20 years of usage wordwide.

Pharma Trach

Heat and moisture exchanger intended for tracheotomized spontaneously breathing patients. Recommended for respiratory care, ENT, Emergency and Home Care.

Product specification	
Dead space (ml)	12
Weight (g)	4

Resistance cm H_2O	
30 LPM	0,7

Moisture return	
At VT 500 ml (mg H_2O/l air)	26

Fittings: 15 male / 15 female (mm)

Basic
Code: 6240
Box/Case: 25/500

Oxygen Port
Code: 6243
Box/Case: 25/500

Oxygen Port+
Code: 6243+
Box/Case: 25/500

Multi function
Code: 6241
Box/Case: 25/500

Multi function+
Code: 6241+
Box/Case: 25/500

Suction
Code: 6242
Box/Case: 25/500

x20
HME pack
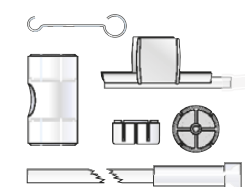Code: 6250
Box/Case: 25/250

x20
HME pack, Oxy.Port
Code: 6251
Box/Case: 25/250

x20
HME pack, Oxy. Port+
Code: 6251+
Box/Case: 25/250

Pharma Trach x2
HME-cassettes x10
Oxyg. supply w tube x1
Hook x1

Basic multi pack
Code: 6245
Box/Case: 25/250

Pharma Trach x2
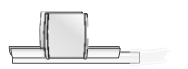*HME-cassettes x10*
Oxyg. supply w tube x1
Hook x1

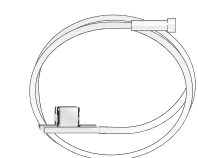**Multi function pack**
Code: 6246
Box/Case: 25/250

Pharma Trach Oxygen Supply Gripper
Code: 6244
Box/Case: 25/250

Oxygen Supply Gripper
Code: 6258
Box/Case: 25/250

Oxy. Supply Gripper Tube
Code: 6260
Box/Case: 25/250

Oxygen Supply Tube
Code: 6261
Box/Case: 25/250

INTRODUCTION TO
AIRWAY FILTRATION

Nosocomial infections during hospital stays have special dangers associated with them and are receiving much attention today.

Without effective protection, patients in ICU and operating theaters are more exposed to the risk of infections due to Gram-positive and Gram-negative bacteria as well as viruses. Furthermore, hospital staff as well as expensive capital equipment run a risk.

Effective protection
One very effective protection mechanism, is to capture airborn particles with airway filters. All breathing filters are based on the depth filter model which comprises an open matrix of fibers through which the patient can breathe easily and safely. It is also important that they are hydrophobic and repell water.

Bacteria and viruses
Interestingly, that despite what one may imagine, the smallest organisms are not always the hardest to capture. The smaller a particle is, the more gas molecules in the air affects it (Brownian motion). As these molecules are in continous motion, the movement of small particles increases and the probability that they will collide with a filter fiber is thus greater.
Also, bacteria and viruses are mainly transported in tiny airborne droplets and rarely in isolated form.

Filter tests
There are many different test methods for filters.
To obtain reliable results, it is important that the filtration tests takes place in an environment that is similar to a real clinical situation, and that the filters are tested in independent laboratories, such as the well renowned Nelson Lab. in the US.

All Pharma Systems filters are tested according to the above and using approved methods. They have been used for many years worldwide and are considered very reliable to use.
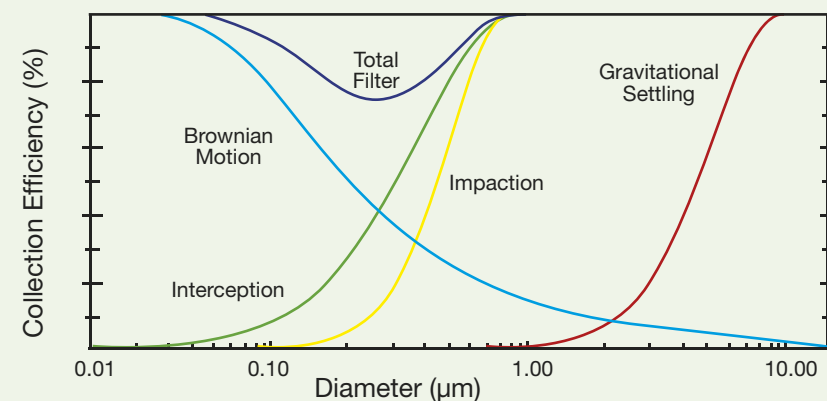
BACTERIAL/VIRAL FILTERS

Our bacterial/viral filters offer the user a high efficiency protection for breathing systems in a clear housing for easy inspection.

- Conical fittings in accordance with ISO standard ensure safe connection security.

- Protects the patient from bacterial/viral contamination.

- Reduces the risk of cross-infection among patients and hospital staff.

- Less cleaning and decontamination of anaesthetic machines and ventilators.

- Initial set-up is simple, quick and secure.

- Different options ensure the right choice of device.

- Efficiency not affected by anesthetic agent.

- Bact-Trap Filters should be changed every 24 hours or more frequently if resistance increases.

Filtration efficiency
based on a challenge of 1.000.000

Bact-Trap™
99,99 % efficiency

Bact-Trap™ Hepa
99,9999 % efficiency

Bact-Trap™

- A >99.99% effective bacterial/viral filter to prevent the spread of infectious particles into the circuits, machines and manual resuscitators.

- Choose between Bact-Trap, Bact-Trap Mini and Bact-Trap Midi.

Bact-Trap™ Hepa

- A breathing filter which is a combination of pleated mechanical filter and electrostatic charge attraction.

- Designed for optimal patient comfort – smooth and round shape to prevent pressure sores on patient.

- Complies with the highest filtration standard.

- >99.9999% effective bacterial/viral filter to prevent the spread of infectious particles into the circuits, machines and manual resuscitators.

- Choose between Bact-Trap Hepa and Bact-Trap Hepa Midi.

Attention! If Bact-Trap or Bact-Trap Hepa is used in combination with nebulizer or Aerosol therapy — possible increase of resistance should be monitored.

Bact-Trap™ Mini

Bacterial/viral filter for smaller volumes

Product specification	
Tidal volume (ml)	50-900
Dead space (ml)	
Basic	26
Straigth/angled w. port	23
Weight (g)	13

Resistance cm H_2O		
Basic	20 LPM	0,9
Port	20 LPM	0,9
Port Angle	20 LPM	0,9

Filtration efficiency	
Bacterial	>99,9%
Viral	>99,9%

Fittings: 22 Female/15 Female – 22 Male (mm)
Fittings port: 15 Male – 22 Female/15 Female – 22 Male (mm)

Basic
Code: 7050
Box/Case: 50/500

Port
Code: 7055
Box/Case: 50/500

Port angle
Code: 7061
Box/Case: 50/500

Port 2
Code: 7054
Box/Case: 50/500

Bact-Trap™ Midi

Medium size bacterial/viral filter

Product specification	
Tidal volume (ml)	100-1200
Dead space (ml) straight	49
Dead space (ml) angled	51
Weight (g)	27

Resistance cm H_2O		
Port	30 LPM	1,1
Port Angle	30 LPM	1,1

Filtration efficiency	
Bacterial	>99,99%
Viral	>99,99%

Fittings angled: 15 Male/15 Female – 22 Male (mm)

Port
Code: 7110
Box/Case: 50/400
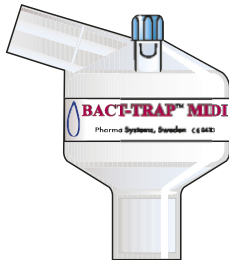
Port angle
Code: 7120
Box/Case: 50/400

Bact-Trap™

Bacterial/viral filter

Product specification	
Tidal volume (ml)	150-1500
Dead space (ml)	76
Weight (g)	32

Resistance cm H_2O		
Basic	60 LPM	1,5
Port	60 LPM	1,8

Filtration efficiency	
Bacterial	>99,999%
Viral	>99,99%

Fittings: 22 Female/15 Female – 22 Male (mm)
Fittings port: 15 Male – 22 Female/15 Female – 22 Male (mm)

Basic
Code: 7010
Box/Case: 25/250
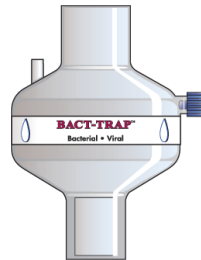
Port
Code: 7011
Box/Case: 25/250

Bact-Trap™ Midi Hepa

Medium size bacterial/viral filter

Product specification	
Tidal volume (ml)	100-1200
Dead space (ml) straight	46
Dead space (ml) angled	48
Weight (g)	32

Resistance cm H_2O		
Port	30 LPM	1,4
Port Angle	30 LPM	1,4

Filtration efficiency	
Bacterial	>99,9999%
Viral	>99,9999%
Particle test	>99,99%

15 male - 22 female/15 female 22 male (mm)
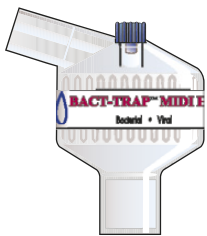
Port	Port angle
Code: 7140	Code: 7150
Box/Case: 50/400	Box/Case: 50/400

Bact-Trap™ Hepa

Bacterial/viral filter

Product specification	
Tidal volume (ml)	200-1500
Dead space (ml) straight	71
Weight (g)	38

Resistance cm H_2O		
Basic	60 LPM	1,2
Port	60 LPM	1,4

Filtration efficiency	
Bacterial	>99,9999%
Viral	>99,9999%
Particle test	>99,99%

Fittings: 22 female/15 female – 22 male (mm)
Fittings port: 15 male – 22 female/15 female – 22 male (mm)
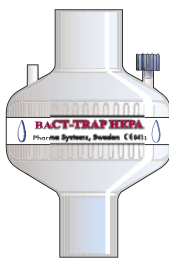
Basic	Port
Code: 7070	Code: 7080
Box/Case: 25/250	Box/Case: 25/250

To assure the outstanding quality of our HEPA filters, a particle test is conducted (ISO 23328), where all filters receive >99.99% filtration efficiency.

Hygienic and disposable – for single patient use in clinically clean packaging.

Build your own system

Pharma Systems

Elbow 4610	**Swivel port** 4616			
	Swivel elbow 4615	**Pharma Flex, Swivel elbow** 5005	**Pharma Flex-Direct, Swivel elbow** 5002	**Pharma Flex, Swivel port** 5006

Pharma Flex-Direct, Swivel port 5003

Pharma Flex elbow 5015

Pharma Flex-Direct straight 15/22 mm 5013

Pharma Flex-Direct elbow

Pharma Flex straight 15/22 mm 5011

Pharma Flex, straight, female 15 mm 5010

Pharma Flex-Direct, straight, female 15 mm 5009

Pharma Flex-Direct, straight, female 15 mm 5012

6061	6065	6060	6063	6305	6307	6072	6070
HME 10 port Angle	HME 10 port 2	HME 10	HME 10 port	HME 11 port	HME 11 port Angle	HME 12 port	HME 12

6000	6020	6310	6320	6100	6120	6121	6130
Bact HME	Bact HME port	Bact HME Midi port	Bact HME Midi port Angle	Pharma Mini	Pharma Mini port	Pharma Mini Port 2	Pharma Mini port Angle

7061	7054	7055	7050	7120	7110	7011	7010
Bact-Trap Mini port angle	Bact-Trap Mini port 2	Bact-Trap Mini port	Bact-Trap Mini	Bact-Trap Midi port angle	Bact-Trap Midi port	Bact-Trap port	Bact-Trap

7070	7080	7150	7140	7030	7040	6340	6350
Bact-Trap Hepa	Bact-Trap Hepa port	Bact-Trap Midi Hepa port angle	Bact-Trap Midi Hepa port	Bact-Trap Hepa HME	Bact-Trap Hepa HME port	Bact-Trap Midi Hepa HME port	Bact-Trap Midi Hepa HME port angle

INT-00082/2.EM

COMBINED
HEAT AND MOISTURE EXCHANGER
WITH BACTERIAL/VIRAL FILTER

Our combined heat and moisture exchangers with bacterial/viral filters offer the user a high efficiency solution for breathing systems in a clear housing for easy inspection of secretions.

- Conical fittings in accordance with ISO standard ensure safe connection security.

- Efficient humidification prevents moisture from collecting in the tubing.

- Two HME elements to reduce risk for hypothermia.

- Efficient filters reduce potential colonization into the circuit and equipment.

- Reduces the risk of cross-infection among patients and hospital staff.

- Eliminates the need for heated wire circuits, water traps and their maintenance.

- Dry and filtered gas prevent sampling tube and analyzers from moisture and colonization.

- Initial set-up is simple, quick and secure.

- Different options ensure the right choice of device.

- Should be changed every 24 hours or more frequently if resistance increases.

Bact-Trap™ Hepa HME

- A breathing HME filter which is a combination of pleated mechanical filter and electrostatic charge attraction with high efficiency heat and moisture output.

- Designed for optimal patient comfort – smooth and round shape to prevent pressure sores on patient.

- Complies with the highest global filtration standard - ISO 23328.

- >99.9999% effective bacterial/viral filter to prevent the spread of infectious particles into the circuits, machines and manual resuscitators.

- Provides heat & moisture and isolates patients from potential bacterial/viral contamination.

Bact-HME, Bact-HME Midi and Pharma Mini

- A >99.99% effective bacterial/viral filter to prevent the spread of infectious particles into the circuits, machines and manual resuscitators.

Attention! Bact-Trap Hepa HME should not be used in combination with nebulizer, aerosol therapy or active humidification.

Bact-Trap™ Midi Hepa HME

Medium size heat and moisture exchanger combined with bacterial/viral HEPA filter

Product specification		
Tidal volume (ml)		100-1200
Dead space (ml) straight		45
Dead space (ml) angled		47
Weight (g)		33

Resistance cm H$_2$O		
Port	30 LPM	1,5
Port angle	30 LPM	1,5

Filtration efficiency	
Bacterial	>99,9999%
Viral	>99,9999%
Particle test	>99,99%

Moisture return	
At VT 500 ml (mg H$_2$O/l air)	27

Fittings: 15 male - 22 female/15 female – 22 male (mm)
Fittings port: 15 male/15 female – 22 male

Port
Code: 6340
Box/Case: 50/400

Port angle
Code: 6350
Box/Case: 50/400

Bact-Trap™ Hepa HME

Heat and moisture exchanger combined with bacterial/viral HEPA filter

Product specification		
Tidal volume (ml)		200-1500
Dead space (ml) straight		68
Weight (g)		40

Resistance cm H$_2$O		
Basic	60 LPM	2,1
Port	60 LPM	2,4

Filtration efficiency	
Bacterial	>99,9999%
Viral	>99,9999%
Particle test	>99,99%

Moisture return		
Tidal volume	Breath/min Frequency	Moisture output (mg/l)
500 ml	20	33,0
1000 ml	10	32,2
1000 ml	20	31,1

Fittings: 22 female/15 female – 22 male
Fittings port: 15 male – 22 female/15 female – 22 male (mm)

Basic
Code: 7030
Box/Case: 25/250

Port
Code: 7040
Box/Case: 25/250

To assure the outstanding quality of our HEPA filters, a particle test is conducted (ISO 23328), where all filters receive >99.99% filtration efficiency.

Hygienic and disposable – for single patient use in clinically clean packaging.

Pharma Mini

Heat and moisture exchanger combined with bacterial/viral filter for smaller tidal volumes

Product specification	
Tidal volume (ml)	50-900
Dead space (ml) Basic	26
Straigth/angled w. port	23
Weight (g)	15

Resistance cm H_2O		
Basic	20 LPM	1,4
Port	20 LPM	1,5
Port Angle	20 LPM	1,4

Filtration efficiency	
Bacterial	>99,99%
Viral	>99,99%

Moisture return	
At VT 250 ml (mg H_2O/l air)	31,8

Fittings: 15 Male/15 female – 22 male (mm)

Basic
Code: 6100
Box/Case: 50/500

Port
Code: 6120
Box/Case: 50/500

Port 2
Code: 6121
Box/Case: 50/500

Port angle
Code: 6130
Box/Case: 50/500

Bact-HME Midi

Medium size heat and moisture exchanger combined with bacterial/viral filter

Product specification	
Tidal volume (ml)	100-1200
Dead space (ml) straight	47
Dead space (ml) angled	49
Weight (g)	29

Resistance cm H_2O		
Port	30 LPM	1,4
Port Angle	30 LPM	1,3

Filtration efficiency	
Bacterial	>99,99%
Viral	>99,99%

Moisture return	
At VT 500 ml (mg H_2O/l air)	32 mg

Fittings: 22 female/15 female – 22 male
Fittings port: 15 male – 22 female/15 female – 22 male (mm)

Port
Code: 6310
Box/Case: 50/400

Port Angle
Code: 6320
Box/Case: 50/400

Bact-HME

Heat and moisture exchanger combined with bacterial/viral filter

Product specification	
Tidal volume (ml)	150-1500
Dead space (ml)	75
Weight (g)	34

Resistance cm H_2O		
Basic	60 LPM	2,0
Port	60 LPM	2,3

Filtration efficiency	
Bacterial	>99,999%
Viral	>99,99%

Bact-HME – Efficiency, Humidification, Temperature

Tidal Volume liter	Frequency breath/min	Moisture output mg/l	Temperature output °C
0,25	20	34,0	32,2
0,50	20	32,9	30,6
1,0	10	32,5	29,4
1,0	20	31,1	27,3

Fittings: 22 female/15 female – 22 male
Fittings port: 15 male – 22 female/15 female – 22 male (mm)

Basic
Code: 6000
Box/Case: 25/250

Port
Code: 6020
Box/Case: 25/250

All products are available with or without carbon dioxide integrated port – CO2 Port, for safe reading and protection of monitoring machine

Hygienic and disposable – for single patient use in clinically clean packaging.
Hygienic and disposable – for single patient use in clinically clean packaging.

CATHETER MOUNTS

The flexible link between the patient and breathing systems.

- Conical fittings in accordance with ISO standard ensure safe connection security.

- Initial set-up with Pharma Flex is simple, quick and secure.

- Different options ensure the right choice of device.

- Should be changed every 24 hours.

Pharma Flex

- A highly flexible lightweight flextube, which prevents lateral pressures and minimizes drag from breathing circuits.

Pharma Flex Direct

- A lightweight catheter mount which allows adjustment of dead space and length. Easy to direct in positioning required.
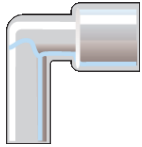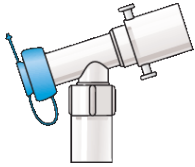
Connectors

Patient elbows

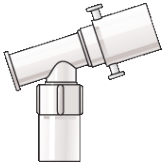| Product specification	
Dead space	5 ml

Fittings: 15 Female/22 Male

Elbow
Code: 4610
Box/Case: 25/500

Swivel Port
Code: 4616
Box/Case: 25/500

Swivel Elbow
Code: 4615
Box/Case: 25/500

Pharma Flex Direct

The flexible link between the patient and breathing systems – a tool for positioning control

Product specification	
Tube diameter (mm)	15
Length (mm)	175

Dead space:	
Straight	30 ml
Elbow	33 ml
Swivel	34 ml

Fittings patient side: 15 male or 15 female – 22 male (mm)
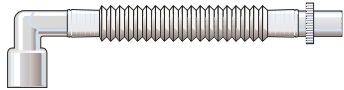Fittings swivel: 15 male/15 female

Straight
Code: 5011
Box/Case: 50/500

Elbow
Code: 5013
Box/Case: 50/500

Straight 15 mm female
Code: 5012
Box/Case: 50/500

Swivel Elbow
Code: 5002
Box/Case: 50/500

Swivel Port
Code: 5003
Box/Case: 50/500

Pharma Flex

The flexible link between the patient and breathing systems

Product specification	
Tube diameter (mm)	15
Length (mm)	110-190

Dead space:	
Straight	min 15 – max 32 ml
Elbow	min 17 – max 36 ml
Swivel	min 15 – max 32 ml

Fittings : 15 male or 15 female – 22 male (mm)
Fittings swivel: 15 male/15 female

Straight
Code: 5010
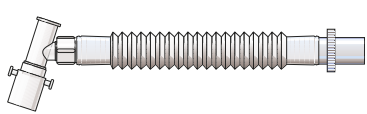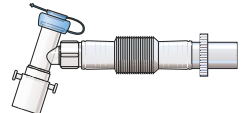Box/Case: 50/500

Elbow
Code: 5015
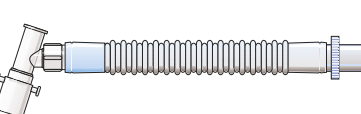Box/Case: 50/500

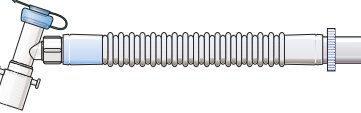**Straight 15 mm female**
Code: 5009
Box/Case: 50/500

Swivel Elbow
Code: 5005
Box/Case: 50/500

Swivel Port
Code: 5006
Box/Case: 50/500

Hygienic and disposable – for single patient use in clinically clean packaging.

Testing and quality

The quality system ensures that all applicable standards are strictly followed. These are Annex II of the directive 93/42/EEC on Medical Devices, ISO 13485, special quality assurance rules for the medical industry. Manufacturing facilities are inspected on regular basis by MDD Notified Body 0413 and Quality System Certification Body.

To assure the outstanding quality of used materials and technologies, permanent testing and product development are needed. Our testing laboratory is equipped with devices that enable measuring a number of qualities, which are important for complete product evaluation.

Pharma Systems makes daily in-house tests to ensure quality and to find the best solutions for manufacturing and use of HME and filter media. For the filtration efficiency evaluation our laboratory uses TSI Certitest 8310, recommended in the standard EN 23328-1 (Breathing system filters for anesthetic and respiratory use –Part 1: Salt test method to assess filtration performance.)

The test rig for the HME efficiency testing is built in accordance with ISO 9360 (Anesthetic and respiratory equipment – heat and moisture exchangers, HMEs for humidifying respired gases in humans – Part 1: HMEs for use with minimum tidal volumes of 250 ml)

In addition to our own test laboratory other testing sources are used for independent evaluation.

Nelson Lab. in USA

Pharma Systems

Pharma Systems is a Swedish company founded within medical device industry in 1990.
We design and manufacture passive humidifiers as well as bacterial/viral filters for anesthesia, respiratory care, ENT and home care. There is also an offering of various accessories such as different combinations of flex tubes and swivels.

The product range consists of four basic product groups: electrostatical bacterial/viral filters, mechanical HEPA filters, heat & moisture exchangers (HME's) and combinations of the above (HME/filters).
Offered is also a group of unique heat & moisture exchangers for spontaneously breathing patients, the Pharma Trach group. The products are designed to protect the patients, caregivers and equipment from cross contamination as well as maintaining adequate humidification and respiratory functions among intubated & tracheotomized adults and children in anesthesia and ICU.
They can also be used for spontaneously breathing patients as well as in emergency care, transportation, ENT, pediatrics and home care.

The product range is of high quality and is consistently rated as a top brand in various international comparison studies. Pharma Systems has many years in experience not only of innovative product design but also emphasizing on diligent quality control.
Products are currently and repeatedly used in more than 60 countries worldwide and are also supported by various know-how in (education programs and clinical data).

Pharma Systems has an official "Environmental Policy and Principles".
In Scandinavia, most companies have long been doing their outmost to become environmental friendly.
Pharma Systems recognize this and we are proud for the below commitment within this area that permeates the whole company and is a responsibility towards the environment in terms of global warming and other pollution destruction.

We are also proud to be a part of the community that supports infection prevention within the hospital environment and likely supports our products with information both for end users in hospitals as well as distribution agents.
As Pharma system are working with solutions for customers, we also like to surround our product family with further support; such as product test data, certificates, different clinical education and presentation material.

Pharma Systems products are friendly to the environment. The company has an environmental policy.

Ordering information

HEAT AND MOISTURE EXCHANGER	Code	Box/Case	Your notes
HME 10, Basic	6060	50/500	
HME 10, Port Angle	6061	50/500	
HME 10, Port	6063	50/500	
HME 10, Port 2	6065	50/500	
HME Midi 11, Port	6305	50/400	
HME Midi 11, Port Angle	6307	50/400	
HME 12, Basic	6070	25/250	
HME 12, Port	6072	25/250	
Pharma Neo, Basic	6215	25/500	
Pharma Neo, Port	6220	25/500	
Pharma Trach, Basic	6240	25/500	
Pharma Trach, Multi function	6241	25/500	
Pharma Trach, Multi function+	6241+	25/500	
Pharma Trach, Suction	6242	25/500	
Pharma Trach, Oxygen Port	6243	25/500	
Pharma Trach, Oxygen Port +	6243+	25/500	
Pharma Trach, Oxygen supply	6244	25/250	
Pharma Trach, Basic multi pack *(Pharma Trach x2, HME-cassettes x10, Oxyg. supply w tube x1, hook x1)*	6245	25/250	
Pharma Trach, Multi function pack *(Pharma Trach x2, HME-cassettes x10, Oxyg. supply w tube x1, hook x1)*	6246	25/250	
Pharma Trach, HME pack *(20 = HME-pack)*	6250	25/250	
Pharma Trach, HME pack, Oxy. Port *(20 = HME-pack)*	6251	25/250	
Pharma Trach, HME pack, Oxy. Port+ *(20 = HME-pack)*	6251+	25/250	
Oxygen Supply Gripper	6258	25/250	
Oxygen Supply Tube	6261	25/250	
Oxygen Supply Gripper – tube	6260	25/250	

BACTERIAL/VIRAL FILTERS	Code	Box/Case	Your notes
Bact-Trap, Basic	7010	25/250	
Bact-Trap, Port	7011	25/250	
Bact-Trap Mini, Basic	7050	50/500	
Bact-Trap Mini, Port 2	7054	50/500	
Bact-Trap, Mini, Port	7055	50/500	
Bact-Trap, Mini, Port Angle	7061	50/500	
Bact-Trap Hepa, Basic	7070	25/250	
Bact-Trap Hepa, Port	7080	25/250	
Bact-Trap Midi, Port	7110	50/400	
Bact-Trap Midi, Port Angle	7120	50/400	
Bact-Trap Midi Hepa, Port	7140	25/250	
Bact-Trap Midi Hepa, Port Angle	7150	25/250	

COMBINED HME EXCHANGER W. BACTERIAL/VIRAL FILTER	Code	Box/Case	Your notes
Bact-HME, Basic	6000	25/250	
Bact-HME, Port	6020	25/250	
Pharma Mini, Basic	6100	25/250	
Pharma Mini, Port	6120	25/250	
Pharma Mini, Port 2	6121	25/250	
Pharma Mini, Port Angle	6130	25/250	
Bact-HME Midi, Port	6310	50/400	
Bact-HME Midi, Port Angle	6320	50/400	
Bact-Trap Midi Hepa HME, Port	6340	50/400	
Bact-Trap Midi Hepa HME, Port Angle	6350	50/400	
Bact-Trap Hepa HME, Basic	7030	25/250	
Bact-Trap Hepa HME, Port	7040	25/250	

CATHETER MOUNTS	Code	Box/Case	Your notes
Elbow	4610	25/500	
Swivel Port	4615	25/500	
Swivel Elbow	4616	25/500	
Pharma Flex, Straight	5010	50/500	
Pharma Flex, Elbow	5015	50/500	
Pharma Flex, Straight 15 mm female	5009	50/500	
Pharma Flex, Swivel Elbow	5005	50/500	
Pharma Flex, Swivel Port	5006	50/500	
Pharma Flex Direct, Straight	5011	50/500	
Pharma Flex Direct, Elbow	5013	50/500	
Pharma Flex Direct, Straight 15 mm female	5012	50/500	
Pharma Flex Direct, Swivel Elbow	5002	50/500	
Pharma Flex Direct, Swivel Port	5003	50/500	

All products are available with or without carbon dioxide integrated port – CO_2 Port, for safe reading and protection of monitoring machine

Pharma Systems

Pharma Systems