HME
Heat & Moisture Exchangers

world class **performance** in **breathing comfort** safety

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

Pharma Systems

Pharma Systems HME

- Conical fittings in accordance with ISO standard ensures 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 prevents sampling tube and analyzers from moisture and lowers the risk for colonization.

- Eliminates the need for active heat and humidification sources.

- Provides high humidification efficiency with all ventilation parameters.

- Offers immediate start of function and stability over time.

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

- Pharma Neo is also available with a unique flexible port for CO_2 testing

- 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.

Our HME models

|	**HME 10** *For smaller tidal volumes*	**HME Midi 11** *Medium size*	**HME 12**	**Pharma Neo** *For neonatal and infant patients*

Product specification				
Tidal volume (ml)	50–900	100–1200	150–1500	10–50
Dead Space, Basic	26		86	4
Dead space (ml) straight	23	45		
Dead space (ml) angled	23	47		
Weight (g)	13	29	32	3
Resistance cm H$_2$O				
Basic	30 LPM 0,7		60 LPM 0,6	7,5 LPM 1,0
Port	30 LPM 0,7	30 LPM 0,7	60 LPM 0,9	7,5 LPM 1,0
Port Angle	30 LPM 0,7	30 LPM 0,7		
Moisture return				
At Vt 250 ml (mg H$_2$O / l air)	29			
At Vt 500 ml (mg H$_2$O / l air)		32,5	>33 mg	
At VT 25 ml (mg H$_2$O/l air)				31,0
Fittings:	P. side: 22 male / 15 female M. side: 15 male (mm)	P. side: 22 male / 15 female M. side: 22 female / 15 male M. side, angled: 15 male (mm)	P. side: 22 male / 15 female M. side, basic: 22 female M. side, port: 22 female / 15 male (mm)	P. side: 15 male M. side: 15 female (mm)
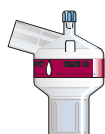
Port angle
Code: 6061
Box/Case: 50/500

Basic
Code: 6060
Box/Case: 50/500

Port
Code: 6305
Box/Case: 50/400

Basic
Code: 6070
Box/Case: 25/250

Basic
Code: 6215
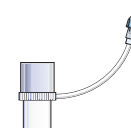Box/Case: 25/500

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

Port
Code: 6063
Box/Case: 50/500

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

Port
Code: 6072
Box/Case: 25/250

Port
Code: 6220
Box/Case: 25/500

Pharma Systems

Bact-Trap™ Hepa HME

BACT-TRAP™ HEPA HME
Bacterial • Viral • Heat • Moisture

CT-TRAP™ MIDI HEPA HME
cterial • Viral • Heat • Moisture

world class **performance** in **breathing comfort** safety

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.

Pharma Systems

Pharma Systems Bact-Trap™ Hepa HME

- Conical fittings in accordance with ISO standard ensures 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 prevents sampling tube and analyzers from moisture and colonization.

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

- Different options ensures the right choice of device.

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

- 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.

Our Bact-Trap™ Hepa HME models

Bact-Trap™ Midi Hepa HME
Medium size heat and moisture exchanger combined with bacterial/viral HEPA filter

Bact-Trap™ Hepa HME
Heat and moisture exchanger combined with bacterial/viral HEPA filter

Product specification				
Tidal volume (ml)	100–1200		200–1500	
Dead space (ml) straight	45		68	
Dead space (ml) angled	47			
Weight (g)	33		40	
Resistance cm H$_2$O				
Port	30 LPM	1,5	60 LPM	2,1
Port Angle	30 LPM	1,5	60 LPM	2,4
Filtration efficiency				
Bacterial	>99,9999%		>99,9999%	
Viral	>99,9999%		>99,9999%	
Particle test	>99,99%		>99,99%	
Moisture return				
At Vt 500 ml (mg H$_2$O / l air)	27		33	
Fittings:	P. side: 22 male / 15 female M. side: 22 female / 15 male M. side, angled: 15 male (mm)		P. side: 22 male / 15 female M. side, basic: 22 female M. side, port: 22 female / 15 male (mm)	

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

Basic
Code: 6340
Box/Case: 50/400

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

Basic
Code: 7030
Box/Case: 25/250

Port
Code: 7040
Box/Case: 25/250

Bact-Trap™

world class **performance** in **breathing comfort** safety

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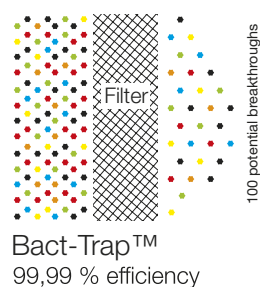
⬦ Pharma Systems

Pharma Systems Bact-Trap™

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

- Conical fittings in accordance with ISO standard ensures 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

Filter

100 potential breakthroughs

Bact-Trap™
99,99 % efficiency

Our Bact-Trap™ models

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
For smaller volumes

Bact-Trap™ Midi
Medium size

Bact-Trap™

| Product specification				
Tidal volume (ml)	50–900		100–1200	150–1500
Dead space (ml) basic	26			76
Dead space (ml) straight w. port	23		49	
Dead space (ml) angled w. port	23		51	76
Weight (g)	13		27	32
Resistance cm H$_2$O				
Basic	20 LPM	0,9		60 LPM	1,5
Port	20 LPM	0,9	30 LPM	1,1	60 LPM	1,8
Port Angle	20 LPM	0,9	30 LPM	1,1	
Filtration efficiency				
Bacterial	>99,9%		>99,99%	>99,999%
Viral	>99,9%		>99,99%	>99,99%
Fittings:	P. side: 22 male / 15 female M. side: 15 male (mm)		P. side: 22 male / 15 female M. side: 22 female / 15 male M. side, angled: 15 male (mm)	P. side: 22 male / 15 female M. side, basic: 22 female M. side, port: 22 female / 15 male (mm)

Basic
Code: 7050
Box/Case: 50/500

Port
Code: 7055
Box/Case: 50/500

Port
Code: 7110
Box/Case: 50/400
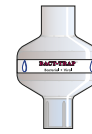
Basic
Code: 7010
Box/Case: 25/250

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

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

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

Port
Code: 7011
Box/Case: 25/250

Pharma Systems

INS648 ver 2

Bact-Trap™ Hepa

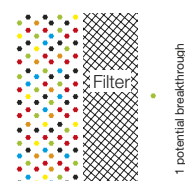world class **performance** in **breathing comfort** safety

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.

◊ Pharma Systems

Pharma Systems 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.

- Conical fittings in accordance with ISO standard ensures 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™ Hepa
99,9999 % efficiency

Our Bact-Trap™ Hepa models

Bact-Trap™ Midi Hepa
Medium size

Bact-Trap™ Hepa

Product specification				
Tidal volume (ml)	100–1200		200–1500	
Dead space (ml) straight	46		71	
Dead space (ml) angled	48			
Weight (g)	32		38	
Resistance cm H$_2$O				
Basic			60 LPM	1,2
Port	30 LPM	1,4	60 LPM	1,4
Port Angle	30 LPM	1,4		
Filtration efficiency				
Bacterial	>99,9999%		>99,9999%	
Viral	>99,9999%		>99,9999%	
Particle test	>99,99%		>99,99%	
Fittings:	P. side: 22 male / 15 female M. side: 22 female / 15 male M. side, angled: 15 male (mm)		P. side: 22 male / 15 female M. side, basic: 22 female M. side, port: 22 female / 15 male (mm)	

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

Port
Code: 7140
Box/Case: 50/400

Port angle
Code: 7150
Box/Case: 50/400

Basic
Code: 7070
Box/Case: 25/250

Port
Code: 7080
Box/Case: 25/250

Bact-HME

world class performance in breathing comfort safety

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.

Pharma Systems

Pharma Systems Bact-HME

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

- Conical fittings in accordance with ISO standard ensures 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 prevents 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.

Our Bact-HME models

	Pharma Mini *For smaller tidal volumes*	**Bact-HME Midi** *Medium size*	**Bact-HME**
Product specification			
Tidal volume (ml)	50–900	100–1200	150–1500
Dead space (ml) basic	26		75
Dead space (ml) straight w. port	23	47	
Dead space (ml) angled w. port	23	49	
Weight (g)	15	29	34
Resistance cm H$_2$O			
Basic	20 LPM 1,4		60 LPM 2,0
Port	20 LPM 1.5	30 LPM 1,4	60 LPM 2,3
Port Angle	20 LPM 1,4	30 LPM 1,3	
Filtration efficiency			
Bacterial	>99,99%	>99,99%	>99,999%
Viral	>99,99%	>99,99%	>99,99%
Moisture return			
At VT 250 ml (mg H$_2$O/l air)	31,8		
At VT 500 ml (mg H$_2$O/l air)		32	33
Fittings:	P. side: 22 male / 15 female M. side: 15 male (mm)	P. side: 22 male / 15 female M. side: 22 female / 15 male M. side, angled: 15 male (mm)	P. side: 22 male / 15 female M. side, basic: 22 female M. side, port: 22 female / 15 male (mm)

Basic
Code: 6100
Box/Case: 50/500

Port
Code: 6120
Box/Case: 50/500

Port
Code: 6310
Box/Case: 50/400

Basic
Code: 6000
Box/Case: 25/250

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

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

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

Port
Code: 6020
Box/Case: 25/250

Pharma Trach

Heat and moisture exchanger for tracheotomized
spontaneously breathing patients.

Pharma Systems

Pharma Systems Pharma Trach

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

- Suitable for:
  - Tracheostomized Home Care or ENT patient

  - 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.

Our Pharma Trach models

Pharma Trach

Intended for tracheotomized spontaneously breathing patients. Recommended for Respiratory care, ENT, Emergency and Home. Pharma Trach is suitable for both adult and children usage. Care.

Product specification	
Dead space (ml)	12
Weight (g)	4
Resistance cm H$_2$O	
30 LPM	0,7
Moisture return	
At VT 500 ml (mg H$_2$O/l air)	26
Fittings:	Patient side: 15 female (mm)

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

Pharma Trach x2
HME-cassettes x10
HME-cassettes port x5
Oxyg. supply tube x1
Hook x1

Basic
Code: 6240
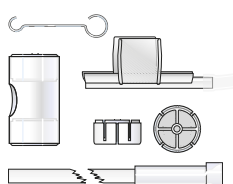Box/Case: 25/500

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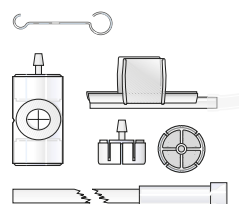
Oxygen Port+
Code: 6243+
Box/Case: 25/500

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

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

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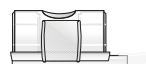Box/Case: 25/500

Multi function+
Code: 6241+
Box/Case: 25/500
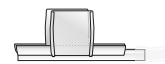
Suction
Code: 6242
Box/Case: 25/500

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

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

x20
HME pack
Code: 6250
Box/Case: 25/250
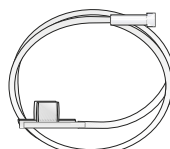
x20
HME pack, Oxy. Port
Code: 6251
Box/Case: 25/250

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

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

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

Pharma Systems

Pharma Flex

world class performance in breathing comfort safety

The flexible link between the patient and breathing systems.

Pharma Systems

Pharma Systems Pharma Flex

- Conical fittings in accordance with ISO standard ensures 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 is a highly flexible lightweight flextube, which prevents la-

teral pressures and minimizes drag from breathing circuits.

- Pharma Flex Direct is a lightweight flextube which allows adjustment of dead space and length. Easy to direct in positioning required.

Our Pharma Flex models

Pharma Flex Direct
The flexible link between the patient and breathing systems – a tool for position control

Pharma Flex
The flexible link between the patient and breathing systems

Product specification		
Tube diameter (mm)	15	15
Length (mm)	110–190	175
Dead space		
Dead space (ml) straight	min 15 – max 32	30
Dead space (ml) elbow	min 17 – max 36	33
Swivel	min 15 – max 32	34
Fittings:	P. side: 15 female / 22 male P. side, swivel: 15 female M. side: 15 male (mm)	P. side: 15 female / 22 male P. side, swivel: 15 female M. side: 15 male (mm)

Straight			**Straight**		
Code:	5011		Code:	5010	
Box/Case:	50/500		Box/Case:	50/500	

Elbow			**Elbow**		
Code:	5013		Code:	5015	
Box/Case:	50/500		Box/Case:	50/500	

Straight 15 mm female			**Straight 15 mm female**		
Code:	5012		Code:	5009	
Box/Case:	50/500		Box/Case:	50/500	

Swivel Elbow			**Swivel Elbow**		
Code:	5002		Code:	5005	
Box/Case:	50/500		Box/Case:	50/500	
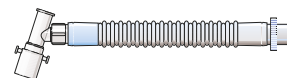
Swivel Port			**Swivel Port**		
Code:	5003		Code:	5006	
Box/Case:	50/500		Box/Case:	50/500	
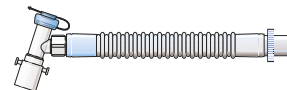
Our Connectors

Product specification	
Dead space	5
Fittings:	P. side: 15 female / 22 male P. side, swivel: 15 female M. side: 15 male (mm)

Elbow
Code: 4610
Box/Case: 25/500

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

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

Pharma Systems