

## SPIKE BAG

# USER MANUAL





## **INTRODUCTION:**

**MANUFACTURER:** Keofitt A/S  
Kullinggade 31B + E  
5700 Svendborg, Denmark

**TYPE:** SPIKE BAG  
**YEAR OF INTRODUCTION:** 2012  
**MANUAL LAST UPDATED:** May 2015

The English version of this Manual is the governing version and it is the only authorized version. Consequently, KEOFITT cannot be held liable for other versions including translations of this Manual.



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# 1. PRESENTATION

The Keofitt SPIKE Sampling Bags are cost-effective single-use sampling bags featuring a unique self-sealing septum allowing very thick needles for fast and convenient sampling of most liquids including viscous products.

The Keofitt SPIKE Bags are available in two versions as described in the table below:

VERSION	DESCRIPTION	APPLICATION
<b>SPIKE Sampling Bag</b>	Made from medical grade PP (polypropylene). Manufactured under Clean Room conditions (class D).	Where sterile sampling is not required and the use of a sample recipient manufactured under clean room conditions suffices.
<b>Sterile SPIKE Sampling Bag</b>	Made from medical grade PE (polyethylene). Manufactured under Clean Room conditions (class D). Sterilised by Gamma irradiation.	Where aseptic (closed system) sampling is not required, but sterility inside the bag is.

Throughout this manual both versions are collectively referred to as the Spike Bag, unless otherwise specified.

The Spike Bag features a unique septum, which accepts very thick needles (spikes) with 3.5 mm internal diameter. This assures a much faster sampling process than otherwise experienced with hypodermic needles. Despite the thick needle the unique selfsealing septum design protects the sample from contaminants from outside, while at the same time keeping the bag completely tight. For an optimal and convenient application Keofitt has designed a thick needle/spike referred to as the Keofitt Spike. It comes in two versions that fit the standard Simplex, M4 and W9 Keofitt Sampling valves with either Keofitt Hose Piece connection or Mini Clamp connection (see Accessories).

## **NOTE!**

The Spike Bag is intended for collection of samples to be analysed within hours, days or weeks after sampling.

For prolonged storage time (months to years) consider the Keofitt Sterile Sampling Bag.

For lower gas permeability values (O<sub>2</sub> and CO<sub>2</sub>) choose the multilayer Keofitt Sterile Sampling Bag.

When in need for sterilising the flow path prior to sampling use the Keofitt Aseptic Sampling Bag.

The product to be sampled should have a maximum viscosity of 1000 cP and should not contain particles larger than approx. 1 mm. in diameter. Products with somewhat higher viscosities may be sampled, only will it take longer.

The Spike Bag is a single-use product that may be incinerated after use. Actual disposal method depends on the nature of the product to be sampled.

## 2. SPIKE SAMPLING BAG CONSTRUCTION

### 2.1 Material

The SPIKE Sampling Bag is made from medical grade PP.

The Sterile SPIKE Sampling Bag is made from medical grade PE.

The Spike Bag is a single layer construction and the material thickness varies as a result of the production process between 0.3 and 0.5 mm. This provides a solid construction with high mechanical strength.

The thick-walled bag reduces evaporation to a minimum (see water vapour transmission rate in the datasheet). The single layer design of the bag, however, provides limited barriers to gasses like oxygen and carbon dioxide (see gas permeability rates in the datasheet)

### 2.2 Septum

The Spike Bag is foreseen with a unique self-sealing septum allowing needles up to 4-5 mm in outer diameter. This is made possible by slitting the septum to a specific geometry.

The septum is made from pharmaceutical polyisoprene based rubber with a fluorocarbon film and sits in a housing made from medical grade polyethylene. Internally the septum housing comprises a thin area, which is also penetrated by the spike to gain access to the interior of the spike bag.

### 2.3 Sealed septum housing

In order to protect the septum from becoming contaminated it is sealed off by an aluminium foil welded to the septum housing. The sealed septum housing with the septum inside has undergone a sterilisation process by irradiation prior to being integrated in the bag. This eliminates the need for further cleaning and disinfection of the septum at the time of taking the sample.

Peeling off the aluminium foil by hand easily gives access to the septum.

### 2.4 Secondary outlet port

Next to the septum is a secondary outlet port designed as an integrated piece of tubing. The Spike Bag is supplied with the outlet port closed during manufacture by pinching and welding the end of the tube. Upon cutting away the welded tip of the tubing the outlet port may be used for fully or partly emptying the bag.

Upon a new welding process, using electrical welding pliers or a small welding rig, one may obtain a re-sealing of the bag.

### 2.5 Label

Each Spike Bag carries a label with the following information:

- Name of the product
- Size
- Article number
- Lot number
- Expiry date

The labels are either blue or white indicating the type of bag:

- BLUE label: SPIKE Sampling Bag
- WHITE label: Sterile SPIKE Sampling Bag

### 2.6 Suspension

The Spike Bags are foreseen with an integrated fixture for hanging the bag on a hook or similar device. When hanging up the Spike Bag, the septum and the secondary port are pointing downwards. In this position the fluid will flow out of the Spike Bag by gravity. The spike bag will collapse gradually as it is



emptied and is as such self-emptying.

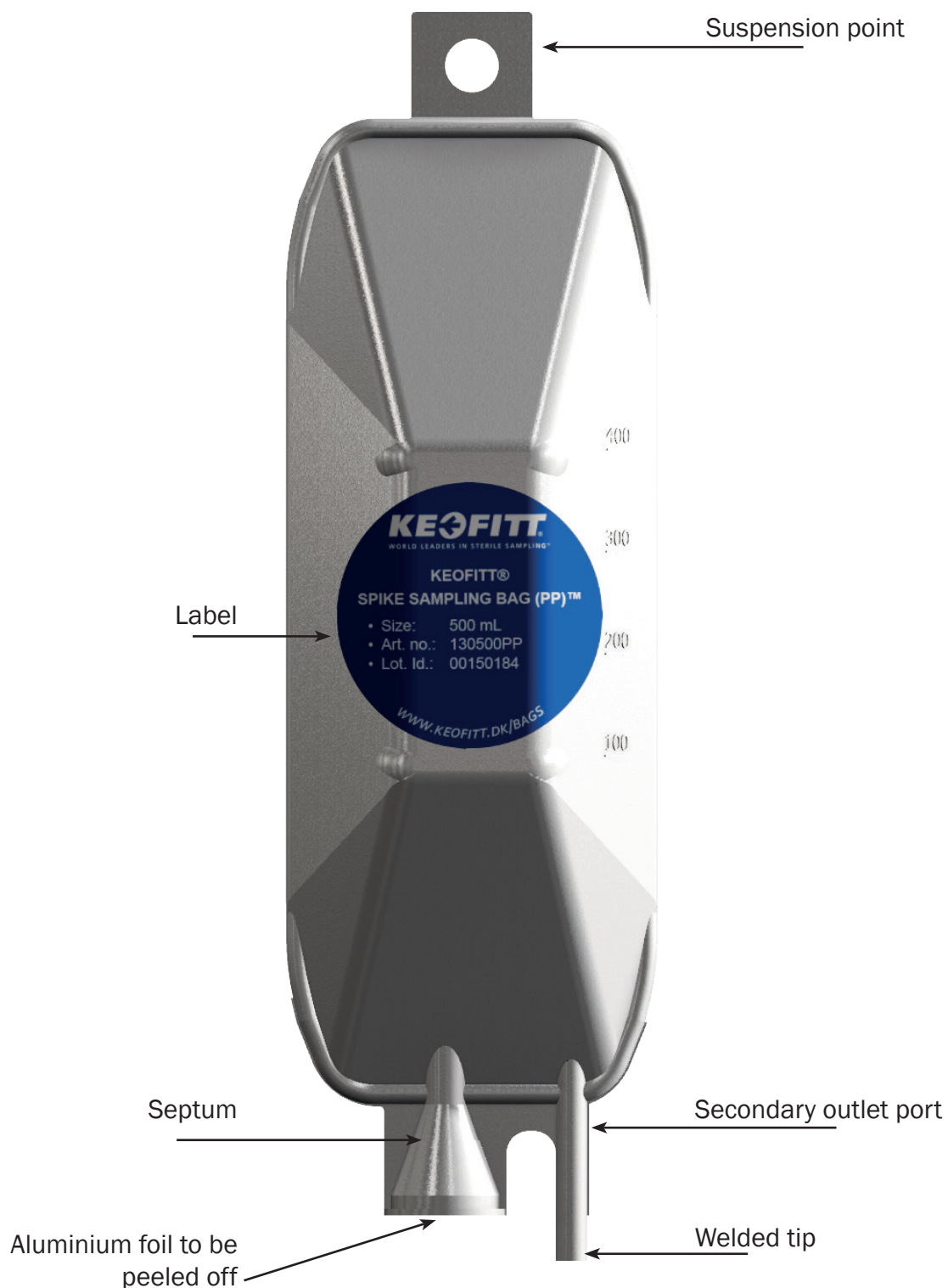
## 2.7 Disposal

The Spike Bag is designed as a single-use product.

The report "Environmental impact screening" describes the test results and analysis from a comparative test between the single-use Spike Bag and ordinary reusable glass bottles.

The conclusion is that the single-use Spike Bags in most situations are more environmentally friendly than reusable glass bottles due to the high energy consumption from rinsing and autoclaving glass bottles for reuse.

For more details please consult the report, which is available at Keofitt upon request.



## **3. SAMPLING BAG FUNCTION**

The Spike Bag is designed to provide the user with a safe and convenient way of collecting a liquid sample from a process line.

This chapter describes in detail the functionalities of the Spike Bag.

### **3.1 Pre-use storage**

When delivered the Spike Bags are flat collapsed to take up only little space.

The Spike Bags are not individually wrapped as the aluminium foil covering the septum provides sufficient protection against contamination from the surroundings.

### **3.2 Pre-sample functions**

After removal of the protective aluminium foil the septum is ready for a needle or a spike to be introduced through the septum into the Spike Bag.

As the Spike Bag is laid flat on delivery the amount of air inside the bag is minimised, which is an advantage especially in case the sample is sensitive to atmospheric air (and oxygen in particular)

### **3.3 Sampling**

With the needle penetrating the septum sampling may now be carried out and it will take place in a closed circuit with no exposure to the ambient.

### **3.4 Transportation and storage**

Once the sample is taken and the Spike Bag is pulled off the needle the auto-sealing properties of the septum assures complete tightness of the Spike Bag.

The Spike Bag requires no special precautions other than what would be considered for a similar sized plastic bottle.

For storage the Spike Bags may be suspended or laid flat down in many layers (a force of 1000 N exerted on a Spike Bag laid flat down will not cause it to leak)

### **3.5 Retrieval of the sample**

Once the Spike Bag is in the laboratory the sample may be retrieved either through the septum or through the secondary outlet port.

### **3.6 Disposal**

After use the Spike Bag is to be emptied completely before disposal. The Spike Bag itself is very well suited for incineration, but the composition of the actual product being sampled may require a different method of disposal.

## 4. HOW TO OPERATE

This chapter explains how to take the sample and how to extract the sample afterwards.

The Keofitt Spike is hereinafter referred to as the Spike.

For other spikes or needles different procedures may apply; please consult the corresponding manuals or instructions.

### 4.1 Pre-sample preparation

Before taking the sample the sampling valve and the Spike must be either cleaned/disinfected or steam sterilised. In either case refer to the User Manual for your sampling valve in order to perform the correct pre-sample operations.

The Spike may be cleaned/disinfected/sterilised together with the sampling valve or the Spike may be wrapped and autoclaved in advance and fitted to the cleaned valve just prior to taking the sample.



#### WARNING:

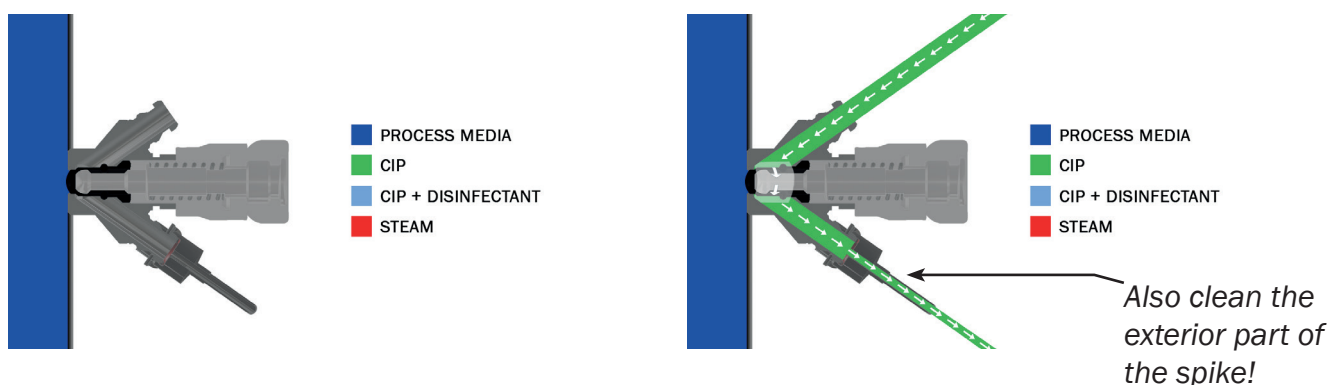
- With the Spike mounted on the sampling valve be careful not to be impaled upon the protruding spike

If you are not using an pre-autoclaved Spike, there are in principle the following ways to prepare for taking a sample with a Spike Bag; the choice of solution depends very much on the actual hygiene requirements:

#### 4.1.1 Clean-In-Place (CIP)

With the Spike fitted on the sampling valve perform the usual Pre-rinse – Clean - Final Rinse procedures; for cleaning use an appropriate cleaning agent.

Make sure to also clean the outside of the Spike to prevent contaminants being introduced through the septum during the sampling operation.



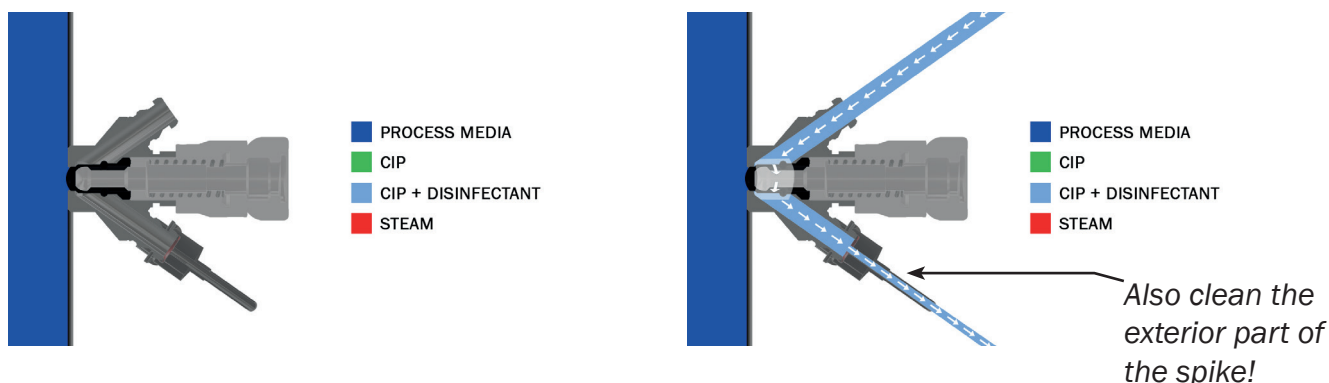
#### WARNING:

- Take care not to prick yourself on the protruding spike

### 4.1.2 Disinfection

If disinfection is required by your hygienic standards the three CIP steps above must be followed by the application of an appropriate disinfectant and finished by a final rinsing.

Make sure to also disinfect the outside of the Spike to prevent contaminants being introduced through the septum during the sampling operation.



#### WARNING:

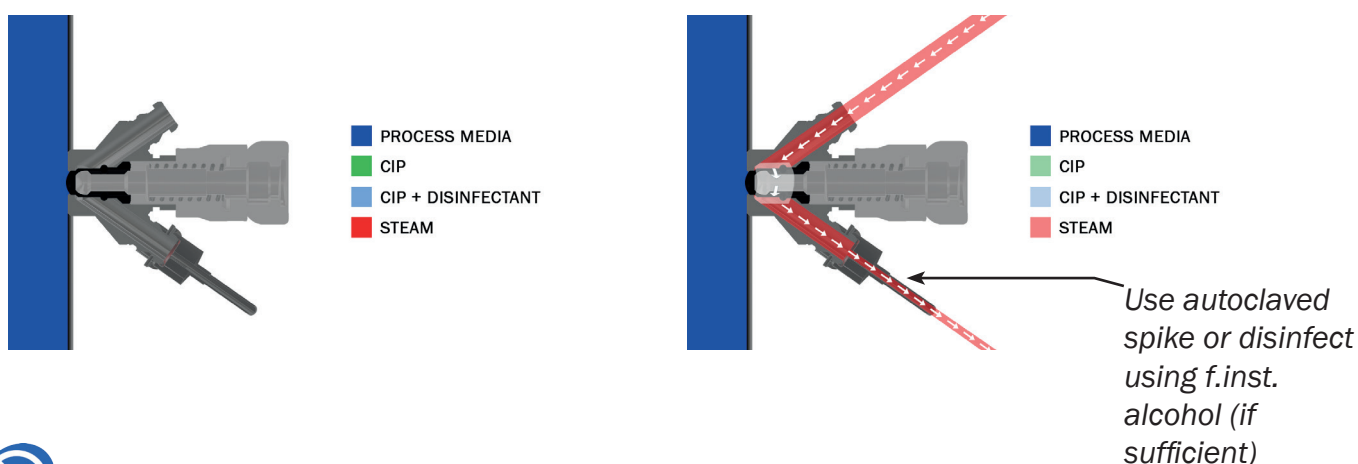
- Take care not to prick yourself on the protruding spike

### 4.1.3 Steam sterilisation

Steaming has the advantage that it does flushing, cleaning and sterilisation all in one operation.

With the Spike fitted on the sampling valve perform the steaming process as described in the Sampling valve User Manual.

Since the outside surface of the Spike is not exposed to the steam, it is recommended to use autoclaved Spikes; alternatively use a chemical disinfectant like alcohol and soak or rub the outside of the Spike just prior to sampling.



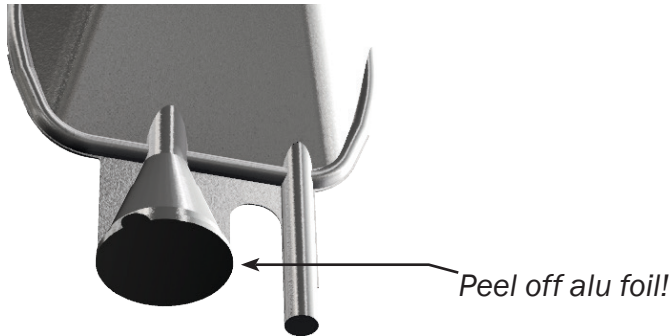
#### WARNING:

- Take care not to prick yourself on the protruding spike
- The Spike gets very HOT

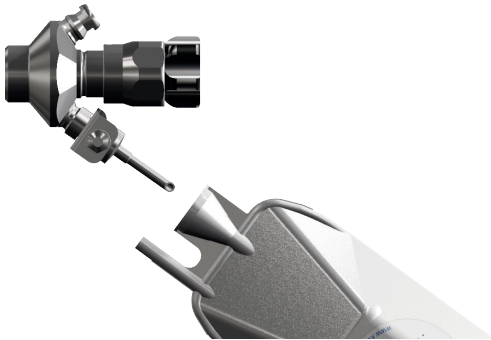
## 4.2 Inserting the Spike Bag

When everything is ready to take a sample perform the following steps:

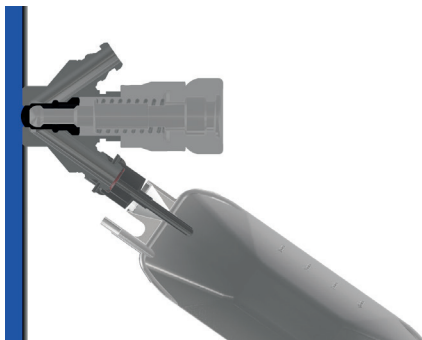
1. Remove the protective aluminium foil from the Spike Bag's septum by peeling it completely off by hand



2. Push the Spike Bag against the Spike making sure the Spike enters into the slit in the septum



3. Push the Spike Bag further until penetration of both the septum and the thin membrane of the septum housing. Only then the Spike is fully inserted



### **WARNING:**

- It is crucial for the tip of the Spike to enter into the slit in the septum; otherwise the septum might be out by the tip and damaged thus compromising the self-sealing properties of the septum

## 4.3 Taking the sample

The actual process of taking a sample consists of the following steps:

1. With the Spike Bag in place hold it with one hand while opening the sampling valve slowly with the other hand.
2. Allow the liquid to fill the Spike Bag and turn off the valve once the required volume is obtained.
3. With the sampling valve closed pull the Spike Bag off the Spike.



### **WARNING:**

- Do never exceed the nominal volume of the bag, as the bag will eventually be pushed off the Spike due to pressure building up.

## 4.4 Storage of the sample

The sample is now securely contained within the Spike Bag without any risk of leaking or of any contaminants entering into the sample.

Evaporation through the thick plastic wall is very low and should in most cases not have any implication on storage time.

However if the sample contains dissolved CO<sub>2</sub> (beer and soft drinks) please consult the gas permeability in the datasheet in order to assess a suitable maximum storage time. Similar action, if the sample is sensitive to oxygen (O<sub>2</sub>).

## 4.5 Retrieving the sample

The generally used methods of retrieving the sample is one of the following:

1. While suspended introduce a needle or a spike into the septum of the Spike Bag
2. As no. 1, but with the Spike Bag lying flat on a table
3. As no. 1 or 2, but use a syringe to extract a sample of the sample
4. Cut off the welded end of the secondary outlet port and pour part or the entire sample into another container. If necessary the secondary port may be re-welded for sealing and later cut open again
5. Like no 4, but instead of pouring, connect a piece of tubing to the secondary port by means of a barbed fitting. Connect the other end of the tubing to whatever relevant device or container



## 4.6 Disposal

Completely empty the Spike Bag before discarding it for incineration, if incineration is applicable. Large volumes of liquid will reduce the energy gain from incinerating the plastic Spike Bag.

If the sample media is of such a nature that the Spike bag must not be incinerated, even when emptied, follow the waste instructions relevant for the actual sample media.

## 5. SPIKE BAGS AND ACCESSORIES

Below is an overview of the available Spike Bags.

		SPIKE BAGS	
		Size	Art. no.
		500 ML	130500PE
		1000 ML	131000PE
		500 ML	130500PP
		1000 ML	131000PP
		3000 ML	133000PP
			

KEOFITT SAMPLING BAGS

# KEOFITT SAMPLING BAGS - PARTS & ACCESSORIES

SAMPLING BAGS PARTS & ACCESSORIES	For hose piece	 400013 QC SPIKE M4	 800013 QC W9 SPIKE
	For mini clamp	 900013 MINICLAMP SPIKE	
	Misc.	 150000 BAG CARRIER	



# 5.1 SPIKE Sampling Bag datasheet



## KEOFITT SPIKE SAMPLING BAG PE 500ML

ART. NO. 130500PE

### GENERAL

- The KEOFITT Sterile Spike Sampling Bag (PE) is a cost-effective single-use sampling bag to be used where aseptic (closed system) sampling is not required. Samples are to be analyzed within hours or days after sampling.
- It features a unique septum allowing 4-5 mm needles for fast and convenient sampling of most liquids including viscous products. Septum area protected by an aluminium foil seal to be peeled off prior to use.
- Auto-sealing septum to prevent contamination of the sample. Thick walled (0,3 - 0,5 mm) bag for mechanical strength and relatively low water vapour and gas permeability.
- The KEOFITT Sterile Spike Sampling Bag (PE) is a single-layer sampling bag made from medical grade polyethylene and manufactured under clean room conditions (ISO class 8). The bags are supplied sterilized by Gamma irradiation.
- The product to be sampled should have a maximum viscosity of 1000 cP and should not contain particles larger than approx. 1 mm. in diameter. Products with somewhat higher viscosities may be sampled, only will it take longer.
- Outlet port to be cut open for easy emptying of the sampling bag. Possibility to extract, partly or fully, the sample through the septum using a needle or a spike.



### FEATURES

- Outlet: Outlet port or through septum using needle or spike
- Inlet: Spike

### CERTIFICATION\*

· Irradiation certificate · Certificate of Conformity · FDA (21CFR177.1520) (bag)

### TECHNICAL DATA

#### Materials

- Bag: Medical grade LDPE
- Septum: Pharma. polyisoprene rubber
- Membrane housing: Medical grade LDPE
- Membrane coating: Fluorocarbon film

#### Sterility

- Manufacturing: Clean room conditions (ISO class 8 or Class 100.000)
  - Packaging: Laminar Air Flow (LAF)
  - Sterilizing: Gamma irradiation
- The Products are subject to bacteriological tests and particle counts according to Ph.Eur.

#### Temperature

- Up to 90° C / 194° F sample temperature provided delicate handling.
- Leave for cooling to below 60° C / 140° F before further handling
- The bags may be frozen down to -30° C / -22° F

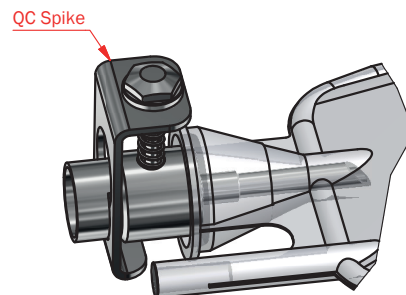
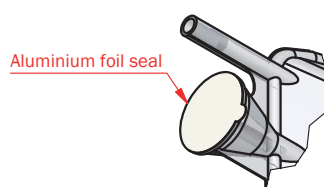
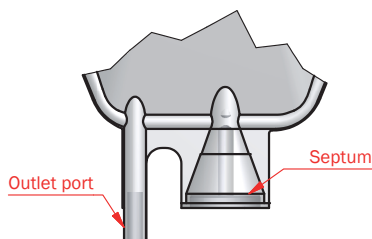
#### Permeability

The permeability of gasses is given by the approximate values below:

- Water Vapour: 0,2 g/m2/day
- Carbon Dioxide: 1500 cm3/m2/day
- Oxygen: 400 cm3/m2/day

#### Shelf life and storage

- Shelf life: 5 years
- Storage temperature: 10 - 34°C / 50 - 94° F
- Storage humidity: Less than 80%









\*For further information and download please visit keofitt.dk

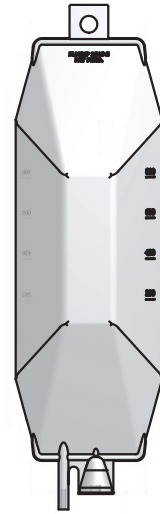
Last updated 11-05-2015

## KEOFITT SPIKE SAMPLING BAG PE 1000ML



ART. NO. 131000PE

### GENERAL

-  The KEOFITT Sterile Spike Sampling Bag (PE) is a cost-effective single-use sampling bag to be used where aseptic (closed system) sampling is not required. Samples are to be analyzed within hours or days after sampling.
-  It features a unique septum allowing 4-5 mm needles for fast and convenient sampling of most liquids including viscous products. Septum area protected by an aluminium foil seal to be peeled off prior to use.
-  Auto-sealing septum to prevent contamination of the sample. Thick walled (0,3 - 0,5 mm) bag for mechanical strength and relatively low water vapour and gas permeability.
-  The KEOFITT Sterile Spike Sampling Bag (PE) is a single-layer sampling bag made from medical grade polyethylene and manufactured under clean room conditions (ISO class 8). The bags are supplied sterilized by Gamma irradiation.
-  The product to be sampled should have a maximum viscosity of 1000 cP and should not contain particles larger than approx. 1 mm. in diameter. Products with somewhat higher viscosities may be sampled, only will it take longer.
-  Outlet port to be cut open for easy emptying of the sampling bag. Possibility to extract, partly or fully, the sample through the septum using a needle or a spike.



### FEATURES

-  Outlet: Outlet port or through septum using needle or spike
-  Inlet: Spike

### CERTIFICATION\*

· Irradiation certificate · Certificate of Conformity · FDA (21CFR177.1520) (bag)

### TECHNICAL DATA

#### Materials

- Bag Medical grade LDPE
- Septum Pharma. polyisoprene rubber
- Membrane housing Medical grade LDPE
- Membrane coating Fluorocarbon film

#### Sterility

- Manufacturing Clean room conditions (ISO class 8 or Class 100.000)
  - Packaging Laminar Air Flow (LAF)
  - Sterilizing Gamma irradiation
- The Products are subject to bacteriological tests and particle counts according to Ph.Eur.

#### Temperature

- Up to 90° C / 194° F sample temperature provided delicate handling.
- Leave for cooling to below 60° C / 140° F before further handling
- The bags may be frozen down to -30° C / -22° F

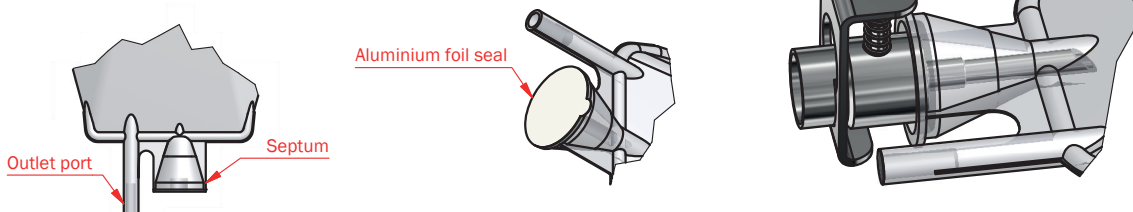
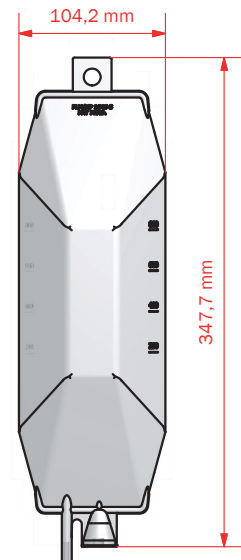
#### Permeability

The permeability of gasses is given by the approximate values below:

- Water Vapour 0,2 g/m2/day
- Carbon Dioxide 1500 cm3/m2/day
- Oxygen 400 cm3/m2/day

#### Shelf life and storage

- Shelf life 5 years
- Storage temperature 10 - 34°C / 50 - 94° F
- Storage humidity Less than 80%



\*For further information and download please visit keofitt.dk

Last updated 11-05-2015







## 5.2 Sterile SPIKE Sampling Bag datasheet



### KEOFITT SPIKE SAMPLING BAG PP 500ML



ART. NO. 130500PP

#### GENERAL

-  The KEOFIT Spike Sampling Bag (PP) is a cost-effective single-use sampling bag to be used where sterile sampling is not required. Samples are to be analyzed within hours or days after sampling.
-  It features a unique septum allowing 4-5 mm needles for fast and convenient sampling of most liquids including viscous products. Septum area protected by an aluminium foil seal to be peeled off prior to use.
-  Auto-sealing septum to prevent contamination of the sample. Thick walled (0,3 - 0,5 mm) bag for mechanical strength and relatively low water vapour and gas permeability.
-  The KEOFIT Spike Sampling Bag (PP) is a single-layer sampling bag made from medical grade polypropylene and manufactured under clean room conditions (ISO class 8).
-  The product to be sampled should have a maximum viscosity of 1000 cP and should not contain particles larger than approx. 1 mm. in diameter. Products with somewhat higher viscosities may be sampled, only will it take longer.
-  Outlet port to be cut open for easy emptying of the sampling bag. Possibility to extract, partly or fully, the sample through the septum using a needle or a spike.



#### FEATURES

-  Outlet: Outlet port or through septum using needle or spike
-  Inlet: Spike

#### CERTIFICATION\*

· Certificate of Conformity · Ph. Eur. 3.1.6 + 2.2.24 + 2.6.8 + 2.6.9 + 3.2.2.1

#### TECHNICAL DATA

##### Materials

- Bag: Medical grade PP
- Septum: Pharma. polyisoprene rubber
- Membrane housing: Medical grade PP
- Membrane coating: Fluorocarbon film

##### Sterility

- Manufacturing: Clean room conditions (ISO class 8 or Class 100.000)
  - Packaging: Under usual clean conditions
  - Sterilizing: None
- The Products are subject to bacteriological tests and particle counts according to Ph.Eur.

##### Temperature

- Up to 90° C / 194° F sample temperature provided delicate handling.
- Leave for cooling to below 60° C / 140° F before further handling
- The bags may be frozen down to -30° C / -22° F

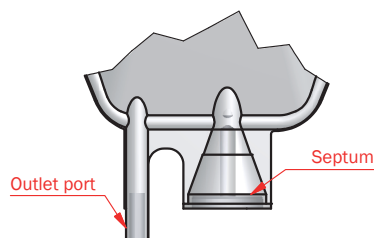
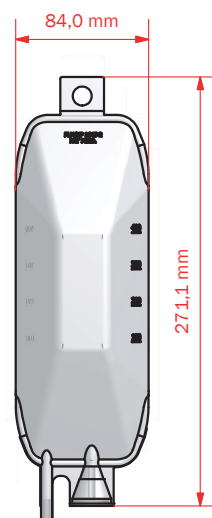
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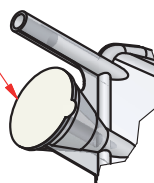
- Water Vapour: 0,13 g/m2/day
- Carbon Dioxide: 1200 cm3/m2/day
- Oxygen: 250 cm3/m2/day

##### Shelf life and storage

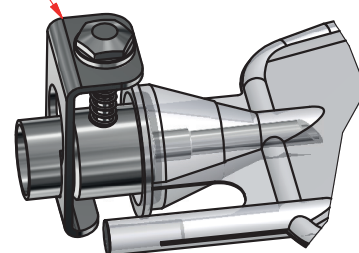
- Shelf life: 5 years
- Storage temperature: 10 - 34° C / 50 - 94° F
- Storage humidity: Less than 80%



Aluminium foil seal



QC spike



\*For further information and download please visit keofitt.dk

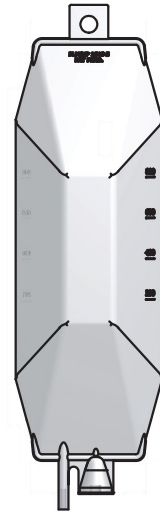
Last updated 11-05-2015

## KEOFITT SPIKE SAMPLING BAG PP 1000ML

ART. NO. 131000PP

### GENERAL

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- It features a unique septum allowing 4-5 mm needles for fast and convenient sampling of most liquids including viscous products. Septum area protected by an aluminium foil seal to be peeled off prior to use.
- Auto-sealing septum to prevent contamination of the sample. Thick walled (0,3 - 0,5 mm) bag for mechanical strength and relatively low water vapour and gas permeability.
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- Outlet port to be cut open for easy emptying of the sampling bag. Possibility to extract, partly or fully, the sample through the septum using a needle or a spike.



### FEATURES

- Outlet: Outlet port or through septum using needle or spike
- Inlet: Spike

### CERTIFICATION\*

· Certificate of Conformity · Ph. Eur. 3.1.6 + 2.2.24 + 2.6.8 + 2.6.9 + 3.2.2.1

### TECHNICAL DATA

#### Materials

- Bag Medical grade PP
- Septum Pharma. polyisoprene rubber
- Membrane housing Medical grade PP
- Membrane coating Fluorocarbon film

#### Sterility

- Manufacturing Clean room conditions (ISO class 8 or Class 100.000)
  - Packaging Under usual clean conditions
  - Sterilizing None
- The Products are subject to bacteriological tests and particle counts according to Ph.Eur.

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- The bags may be frozen down to -30° C / -22° F

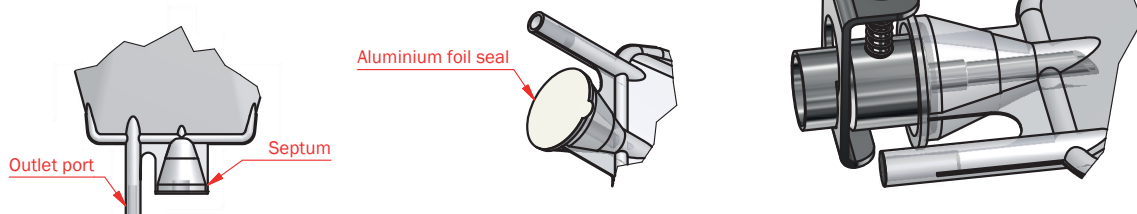
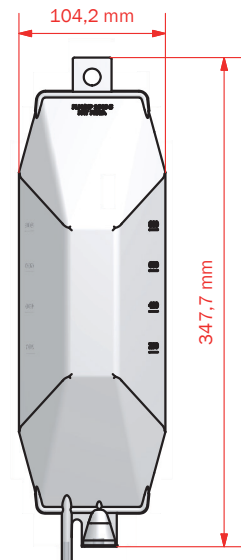
#### Permeability

The permeability of gasses is given by the approximate values below:

- Water Vapour 0,13 g/m<sup>2</sup>/day
- Carbon Dioxide 1200 cm<sup>3</sup>/m<sup>2</sup>/day
- Oxygen 250 cm<sup>3</sup>/m<sup>2</sup>/day

#### Shelf life and storage

- Shelf life 5 years
- Storage temperature 10 - 34° C / 50 - 94° F
- Storage humidity Less than 80%









\*For further information and download please visit keofitt.dk

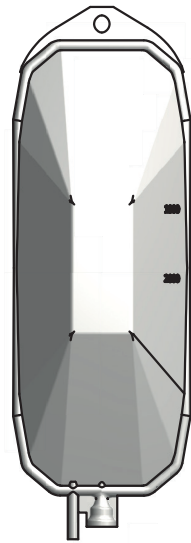
Last updated 11-05-2015

## KEOFITT SPIKE SAMPLING BAG PP 3000ML



ART. NO. 133000PP

### GENERAL

-  The KEOFIT Spike Sampling Bag (PP) is a cost-effective single-use sampling bag to be used where sterile sampling is not required. Samples are to be analyzed within hours or days after sampling.
-  It features a unique septum allowing 4-5 mm needles for fast and convenient sampling of most liquids including viscous products. Septum area protected by an aluminium foil seal to be peeled off prior to use.
-  Auto-sealing septum to prevent contamination of the sample. Thick walled (0,3 - 0,5 mm) bag for mechanical strength and relatively low water vapour and gas permeability.
-  The KEOFIT Spike Sampling Bag (PP) is a single-layer sampling bag made from medical grade polypropylene and manufactured under clean room conditions (ISO class 8).
-  The product to be sampled should have a maximum viscosity of 1000 cP and should not contain particles larger than approx. 1 mm. in diameter. Products with somewhat higher viscosities may be sampled, only will it take longer.
-  Outlet port to be cut open for easy emptying of the sampling bag. Possibility to extract, partly or fully, the sample through the septum using a needle or a spike.



### FEATURES

-  Outlet: Outlet port or through septum using needle or spike
-  Inlet: Spike

### CERTIFICATION\*

· Certificate of Conformity · Ph. Eur. 3.1.6 + 2.2.24 + 2.6.8 + 2.6.9 + 3.2.2.1

### TECHNICAL DATA

#### Materials

- Bag Medical grade PP
- Septum Pharma. polyisoprene rubber
- Membrane housing Medical grade PP
- Membrane coating Fluorocarbon film

#### Sterility

- Manufacturing Clean room conditions (ISO class 8 or Class 100.000)
  - Packaging Under usual clean conditions
  - Sterilizing None
- The Products are subject to bacteriological tests and particle counts according to Ph.Eur.

#### Temperature

- Up to 90° C / 194° F sample temperature provided delicate handling.
- Leave for cooling to below 60° C / 140° F before further handling
- The bags may be frozen down to -30° C / -22° F

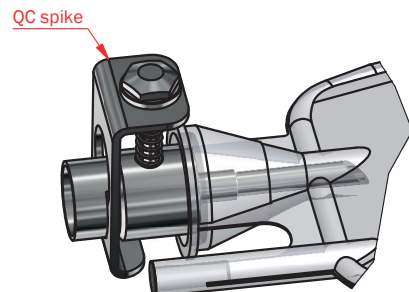
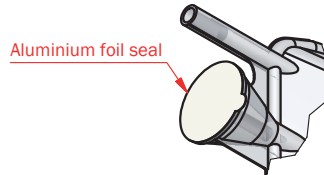
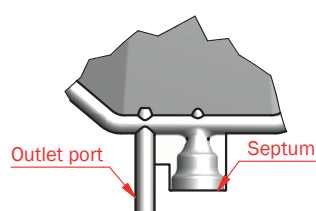
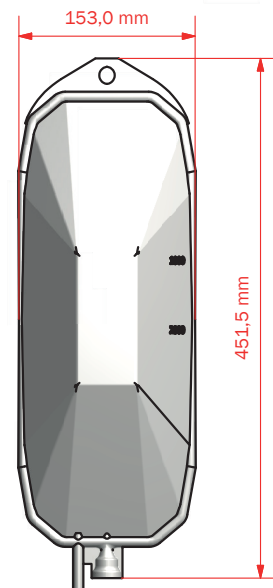
#### Permeability

The permeability of gasses is given by the approximate values below:

- Water Vapour 0,13 g/m2/day
- Carbon Dioxide 1200 cm3/m2/day
- Oxygen 250 cm3/m2/day

#### Shelf life and storage

- Shelf life 5 years
- Storage temperature 10 - 34°C / 50 - 94° F
- Storage humidity Less than 80%



\*For further information and download please visit keofitt.dk

Last updated 11-05-2015

# 5.3 Quick Coupling M4 Spike datasheet



## QUICK COUPLING M4 SPIKE

ART. NO. 400013

### GENERAL



KEOFITT has the widest selection of spare parts and accessories to complete your sampling system



Compatible with all KEOFIT sampling valves with M4 hose piece

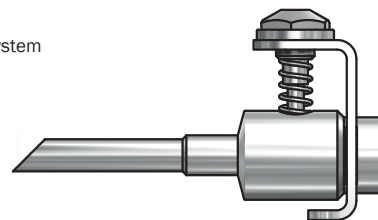
### FEATURES



Connection: M4 hose piece



For Keofitt Spike Bag



### CERTIFICATION

· QC: 3.1 Material Cert. · O-ring: FDA

### TECHNICAL DATA

#### Materials

· Steel parts                      AISI 316L (1.4404)  
· O-ring                              Silicone (FDA · EU 1935/2004)

#### Surface

· Outside                            Electropolished  
· Inside                              Ra <= 0.5 µm (wetted surfaces only)

#### Pressure & Temperature

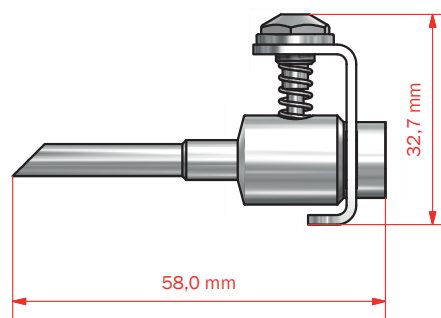
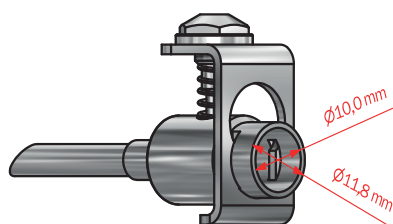
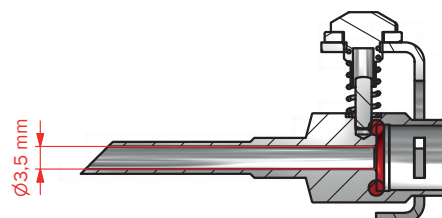
· Pressure                            -  
· Temperature                      -

#### Net Weight

· Kg/lbs                                0,030 kg / 0,067 lbs

#### Spareparts

400830                                O-ring  
-  
-  
-



# 5.4 Quick Coupling W9 Spike datasheet



## QUICK COUPLING W9 SPIKE

ART. NO. 800013

### GENERAL



KEOFITT has the widest selection of spare parts and accessories to complete your sampling system



Compatible with all KEOFIT sampling valves with W9, Reflex & Simplex hose piece

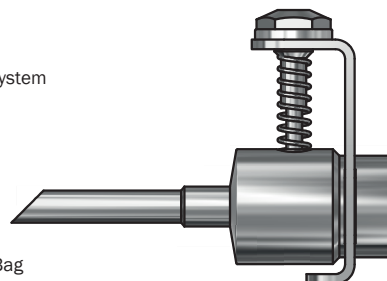
### FEATURES



Connection: W9 hose piece



For Keofitt Spike Bag



### CERTIFICATION

· 3.1 Material Certificate · O-ring: FDA

### TECHNICAL DATA

#### Materials

· Steel parts                      AISI 316L (1.4404)  
 · O-ring                              Silicone (FDA · EU 1935/2004)

#### Surface

· Outside                              Electropolished  
 · Inside                                Ra <= 0.5 µm (wetted surfaces only)

#### Pressure & Temperature

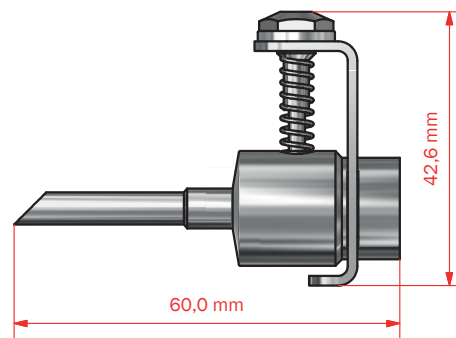
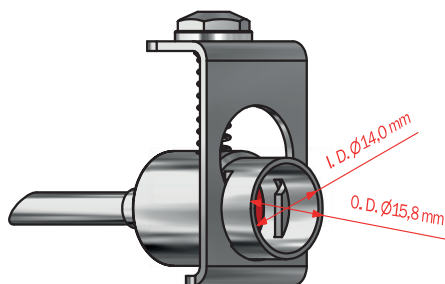
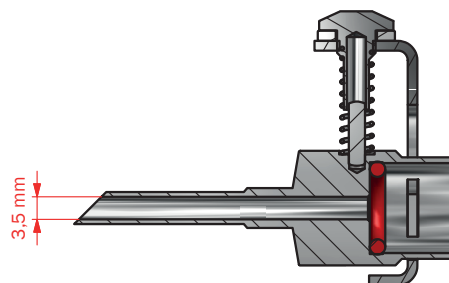
· Pressure                            -  
 · Temperature                    -

#### Net Weight

· Kg/lbs                                0,047 kg / 0,10 lbs

#### Spareparts

800830                                O-ring  
 -  
 -  
 -



# 5.5 Mini Clamp Spike datasheet



## MINI CLAMP SPIKE

ART. NO. 900013

### GENERAL



KEOFITT has the widest selection of spare parts and accessories to complete your sampling system



Compatible with all KEOFIT sampling valves with Mini Tri Clamp connection

### FEATURES



Connection: Mini Tri Clamp



For Keofitt Spike Bag



### CERTIFICATION

- 3.1 Material Certificate

### TECHNICAL DATA

#### Materials

- Steel parts                      AISI 316L (1.4404)

#### Surface

- Outside                              Electropolished
- Inside                                Ra <= 0.5 µm (wetted surfaces only)

#### Pressure & Temperature

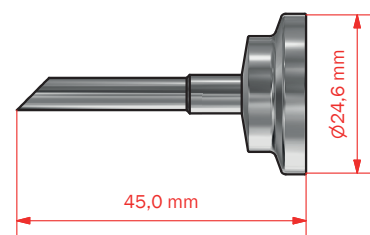
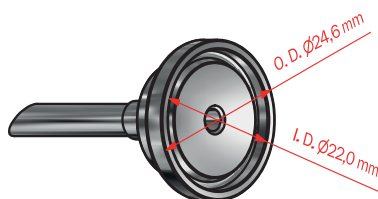
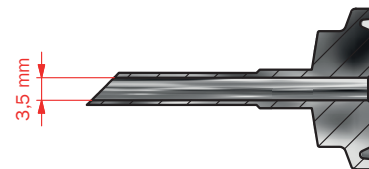
- Pressure                            -
- Temperature                      -

#### Net Weight

- Kg/lbs                                0,027 kg / 0,06 lbs

#### Spareparts

- 











Keofitt reserves the right to change technical data without notice!

For complete set of updated data sheets and manuals for Keofitt products please refer to our web page [www.keofitt.dk](http://www.keofitt.dk)

**KEOFITT**®

WORLD LEADERS IN STERILE SAMPLING™

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