

# Hygienic Procedures of critical Pathogen Spectra prisma VENT, prismaLINE, VENTillogic LS

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## 1. Introduction

Routinely hygienic procedures are challenged, especially in times of critical spectra of germs such as SARS-CoV-2. For our devices VENTIllogic LS, prisma VENT and prismaLINE we recommend the following procedures for parts with or without direct contact to contaminated patients or in a potentially contaminated area.

## 2. Use of Filter in Clinical Practice

There are varieties of systems in use in the daily clinical routine: starting with Heat-Moisture-Exchanger (HME – humidification, only) to virus & bacteria filter up to virus & bacteria filter with humidification (HMEF: Heat-Moisture-Exchanger-Filter). We recommend the following:

### Virus & Bacteria Filter

The use of virus & bacteria filter is **mandatory**. They function bi-directionally to protect patients, the surrounding area and / or the ventilation device.

Recommended are the following virus & bacteria filter to use with our devices:



	19212 Gibeck Iso-Gard Filter (WM 27591) VENTIllogic / prisma VENT	
	Efficacy Bacteria	> 99.9999%
	Efficacy Virus	> 99.999%
	Durability	<24h
	Dead Space	26ml
	Resistance	1.6 cmH <sub>2</sub> O /~hPa by 60 l/min
	1420/01 Medguard Filter (WM 24476) prismaLINE	
	Efficacy Bacteria	99.999%
	Efficacy Virus	99.999%
	Durability	<24h
	Dead Space	87ml
	Resistance	1.4 cmH <sub>2</sub> O/~hPa by 60 l/min

Table 1

### Air Filter and Pollen Filter:

The use of air / gross particle filter is **mandatory**. In all prisma VENT and in VENTlogic LS the pollen / fine particle filter is **mandatory**. In prismaLINE devices the use of the pollen filter is recommended. The intake area for the blower is protected. If the device remains in the same surrounding area (e.g. within the hospital, also in case of patient change), the device filter have to be replaced in the following intervals :

- Air filter (gross particle filter): every 6 months
- Pollen filter (fine particle filter): every 250h (prismaLINE and prisma VENT), every 1.000h (VENTIlogic LS: please refer to the filter symbol in the display)

**Please note:** A virus & bacterial filter is always additionally mandatory.

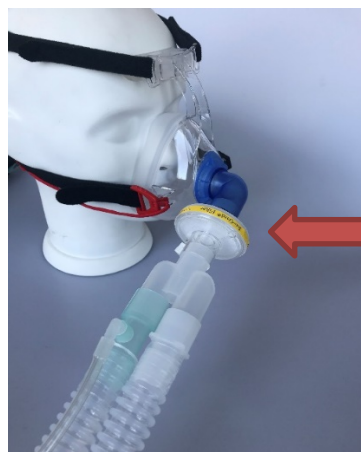
## 3. Upgrade of Ventilation Devices

To protect the surrounding area of contaminated expiration aerosol by a COVID-19 patient we recommend the use of non-vented masks as well as a virus & bacteria filter positioned in front of the leakage / exhalation valve.

To secure a sufficient oxygenation each patient needs a pulse oximeter to monitor O<sub>2</sub> level. If applicable, a CO<sub>2</sub> measurement might be required. Please find further recommendation by the WHO: "Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected".  
<https://www.who.int/>

**Please note:** Non-vented masks and bacteria filter in front of the exhalation system increase dead space and exhalation resistance. Refer to table 2 for further information.

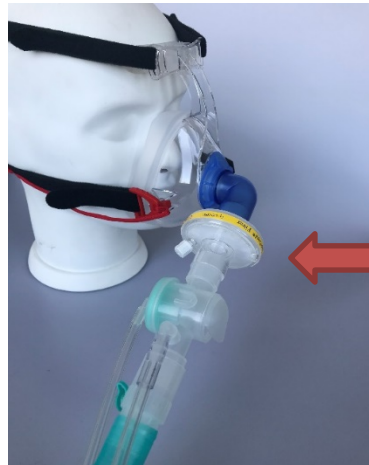
### Double Patient Circuit



Position of virus & bacteria filter:  
between mask and Y-part of the  
double patient circuit system.

Patient and surrounding are  
protected.

## Single Patient Circuit



Position of virus & bacteria filter between mask and exhalation valve.

Patient and surrounding are protected.



Virus & bacteria filter directly on top of the device outlet.

Patient is protected.

### Single Patient Circuit with Active Humidification



Position of virus & bacteria filter directly in front of the device outlet.  
Patient is protected.

**Please note:**

Do not position a filter between patient interface and the water chamber of the humidifier!  
Work of breathing might be extremely increased due to a water-saturated filter (especially if hydrophilic).

### Leakage Circuit



Virus & bacteria filter between mask and leakage system.

Patient and surrounding are protected.

### Leakage Hose System with additional O<sub>2</sub> Feeding



Position of virus & bacteria filter between mask and leakage system.

Patient and surrounding are protected.

Accessories	Dead Space (in ml)
JOYCEclinic Full Face Maske S	225
JOYCEclinic Full Face Maske M	255
JOYCEclinic Full Face Maske L	305
19212 Gibeck Iso-Gard Filter (WM 27591)	26
1420/01 Medguard Filter (WM 24476)	87

Table 2

**Please note:** Due to an increased dead space and an increased exhalation resistance, a continuous monitoring of the oxygenation and breathing volume of the patient is recommended.

## 4. Cleaning and Desinfection of Ventilation Devices and Accessories

Use a soft tissue and mild cleanser to clean surfaces of housing, power cables and mobile carriages.

The following products are recommended for surface desinfection:

- „terralin® protect
- perform® advanced Alcohol EP
- Mikrozyd® LIQUID
- Gigasept® FF (new)

Please pay particular attention to the exposure times and disinfection methods recommended by the specific manufacturer of the products. Liquids must not be allowed to enter the device.

**Dispose all disposable items** such as hose systems, interfaces and bacteria filter according to the hygienic regulations in your hospital.

In case of a potential bacterial or viral contamination (e.g. use of ventilation device without filter and change of usage surrounding) you must follow the processing procedures in the service- and repair manual, resulting in a replacement of foams, the disinfection of the device and the processing of the exhalation block (VENTIlogic LS). **The hygienic processing can be performed by the manufacturer or authorized dealers, only.**

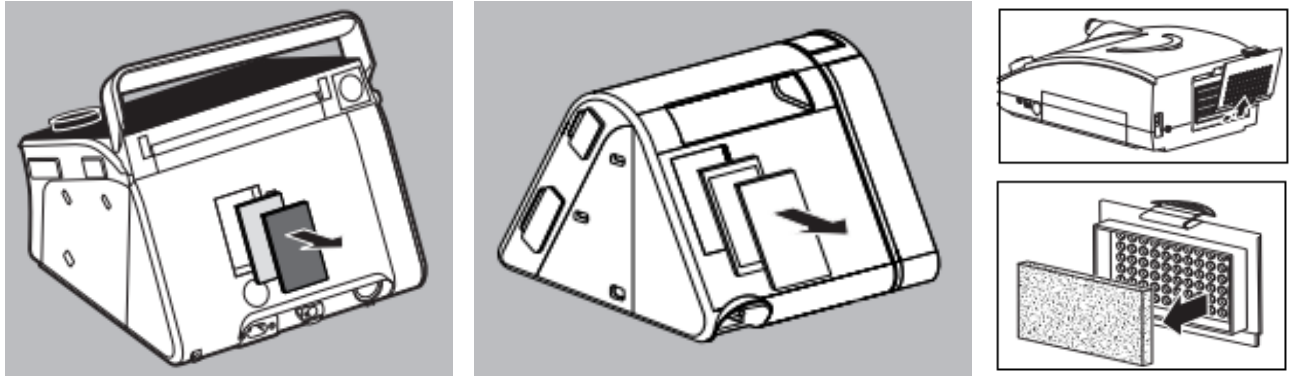
To the current state of knowledge, Sars-Co-V-2 is not infectious after a certain time. The longest time span of survival of the virus measured in a study is 9 days. (Journal of Hospital Infection, 2020; [doi: 10.1016/j.jhin.2020.01.022](https://doi.org/10.1016/j.jhin.2020.01.022)).

As an additional step, contaminated or potentially contaminated devices can undergo an entry quarantine (storage of device for specific time span).

## 5. Use of Hose Systems

We recommend to replace disposable hose systems for our ventilation devices every 7 days, when used at one patient in a hospital environment.

## 6. Overview of Accessories



<b>prisma VENT</b>	<b>prismaLINE</b>	<b>VENTillogic LS</b>
<b>Virus &amp; Bacteria Filter</b>		
<b>WM 27591</b>	WM 24476	WM 27591
<b>Air Filter (gross particle filter)</b>		
<b>WM29651</b>	WM29651	WM24880 WM27759 (fan)
<b>Pollen Filter (fine particle filter)</b>		
<b>WM29389</b>	WM29389	WM15026
<b>Set Hygienic Processing of all internal air supplying parts (by manufacturer or authorized personnel, only)</b>		
<b>WM 15916 (WM 120 TD)</b>	WM 29973	WM 15707
<b>WM 15913 (WM 110 TD)</b>	WM 29974 (prismaAQUA)	WM 15742
<b>WM 29974 (prismaAQUA)</b>		(Exhalation block)

Table 3