

Instructions for Use Flowmeter



Instructions for Use - Flowmeter

Table of Contents

	Introduction
1.	Description of Functions
2.	Putting into Operation
3.	Instructions for Cleaning and Care
3.1	Disassembling
3.2	Disinfection and Cleaning
3.2.1	Manual Disinfection and Cleaning
3.2.2	Mechanical Disinfection and Cleaning
3.3	Sterilisation
4.	Technical Data
5.	Spare Parts
6.	Customer Service / Warranty / Maintenance
7.	Manufacturer's Data

Instructions for Use - Flowmeter

INTRODUCTION

These instructions for use are meant to support you to operate the outlet systems for oxygen and compressed air.

In addition, you will find a description of the various options available to combine the flowmeters with different humidification and application systems.

If any failures or questions should come up during service please do not hesitate to contact our customer service department for help.

1. DESCRIPTION OF FUNCTIONS AND MODELS

The outlet system has been designed to supply patients with oxygen or medical compressed air. The outlet device is equipped with a humidifier which enriches the extracted gas with the corresponding humidity for patients.

The flowmeter is available in the following designs:

- Flowmeter with **direct** connection to the oxygen or compressed air outlet. Depending on the type of gas, the flowmeter will be equipped with the corresponding standardised connecting probe for each particular gas.



Simple design
Illustr.: O₂ 660-0100



Twin design
Illustr.: O₂ 660-0120

Instructions for Use - Flowmeter

- Flowmeter for wall rail with NIST screw joints
The flowmeter is connected to the medical gas supply by means of a gas type-coded connecting hose.



Simple design
Illustr.: O₂ 660-0110



Twin design
Illustr.: O₂ 660-0121

Connecting hoses required

for O₂



ISO 6600107 / Neutral 6600106

for Air



ISO 6600117 / Neutral 6600116

Optional accessories for direct and rail flowmeters



Bacteria filter 0331020
with membrane set 0331030



Hose adapter 5192512 (1)
and 5192511 (2)



5192510

Instructions for Use - Flowmeter

The following humidifiers are available for both designs:



Bubble humidifier
6600142



Aerosol atomizer
6600164

Alternatively, disposable humidifying systems usual in trade can be used.

The aerosol atomizer is particularly suitable for patients who require oxygen insufflation over a longer period of time.

The gas to be taken from the central supply system is available with the mains pressure at the gradually adjustable regulating valve of the flowmeter.

With an open regulating valve, the gas streams through the flow quantity meter and the connected humidifier to the patient.

The flow rate is infinitely variable at the regulating valve.

The flow rate currently adjusted is displayed at the flowmeter, upper edge of the ball.

Bubble humidifier

The gas flows through the immersion tube to the bottom and then bubbles out from the nozzles at the end of the tube and flows back through the water to the top. This has the effect that the gas is enriched with humidity.

Aerosol atomizer

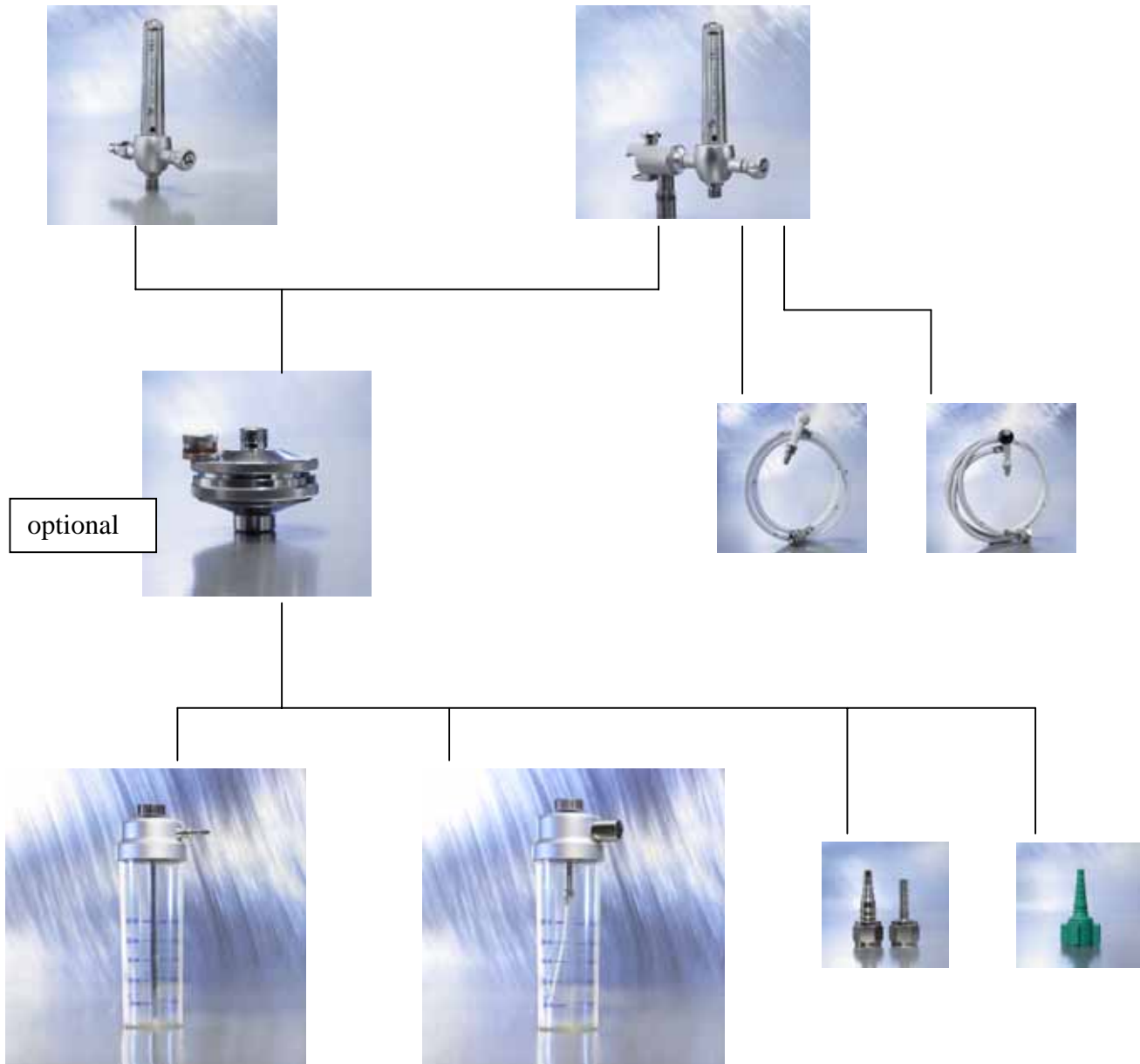
The gas flows through the atomizing nozzle, which is located above the water level, and produces a suction effect. Due to this suction in the lower drilling of the atomizing nozzle, the water is sucked in via the silicone hose and is atomized in the nozzle into aerosol.

Instructions for Use - Flowmeter

2. PUTTING INTO OPERATION

1. Screw the bottle off the humidifier case, fill it with sterile water up to the “max.” level and screw it on again.
2. If necessary, re-screw the autoclavable bacteria filter onto the end of the flowmeter.
3. Plug the flowmeter or the release probe into the gas outlet.
Please make sure that the regulation valve is closed.
4. Screw the bubble humidifier or aerosol atomizer directly onto the flowmeter or on top of the bacteria filter.
5. Set the flow rate requested at the regulating valve.
The flow rate currently adjusted is displayed at the flowmeter, upper edge of the ball.
6. Set up the connection to the patient by means of the corresponding application accessories.

Instructions for Use - Flowmeter



Instructions for Use - Flowmeter

3. INSTRUCTIONS FOR CLEANING AND CARE

3.1 Disassembling

For disinfection, cleaning or sterilisation purposes, screw off the bottle of the humidifier and empty it.

ATTENTION: Do not disassemble the flowmeter!

3.2 Disinfection and cleaning

3.2.1 Manual disinfection and cleaning

All those parts which get in contact with the patients' breathing air have to be disinfected in any case.

- Put the corresponding application elements into the disinfecting bath; the exposure time will depend on the type of disinfecting agent which is used (see the package insert of the disinfectant).
- Take the elements out of the disinfecting bath and rinse them with running sterile water.
- Dry the cleaned elements. Please make sure that there is no humidity left in the flowmeter.
- For those parts which do not get into contact with the patients' breathing air wiping disinfection will be sufficient.

3.2.2 Mechanical disinfection and cleaning

Please make sure that you only use non-aggressive detergents, for example „neo disher MA“, „neo disher FA“ or similar products.

3.3. Sterilisation

The bottles of the humidifier can be autoclaved at a temperature of 134°C.
Disposable application elements must not be autoclaved (see order data).

Instructions for Use - Flowmeter

4. Technical Data

	Flowmeter Direct				Flowmeter Rail			
	Simple		Twin		Simple		Twin	
Gas type	O ₂	Air	O ₂	Air	O ₂	Air	O ₂	Air
Article No.:	6600100	6600130	6600120	6600170	6600110	6600150	6600121	6600171
Control range	0 to 15 litres / minute, infinitely variable ¹⁾							
Material	Anodised aluminium / Stainless steel							
Connection	Connector acc. to DIN 13260-2 ²⁾				NIST Screw joint			
Fixing	-----				For device-carrying rail 25 x 10 mm ³⁾			
End piece	Male thread 9/16“ 18G UNF							
H x W x D mm	170 x 40 x 125		170 x 115 x 155		190 x 40 x 150		190 x 120 x 185	
Weight	250 g		600		450 g		800	
Accessory Article No.	Bacteria filter case, autoclavable, Art. No.:033-1020 Bacteria filter, membrane – Set Art. No.: 033-1030 Bubble humidifier, Art. No.:660-0142 Aerosol atomizer Art. No.:660-0164 Hose adapter Art. No.:519-2510 / 519-2511 / 519-2512							
Accessory Article No.					Connecting hose O ₂ 1.5 mtr DIN ²⁾ - NIST ISO 660-0107 / Neutral 660-0106 Connecting hose AIR 1.5 mtr DIN ²⁾ - NIST ISO 660-0117 / Neutral 660-0116			

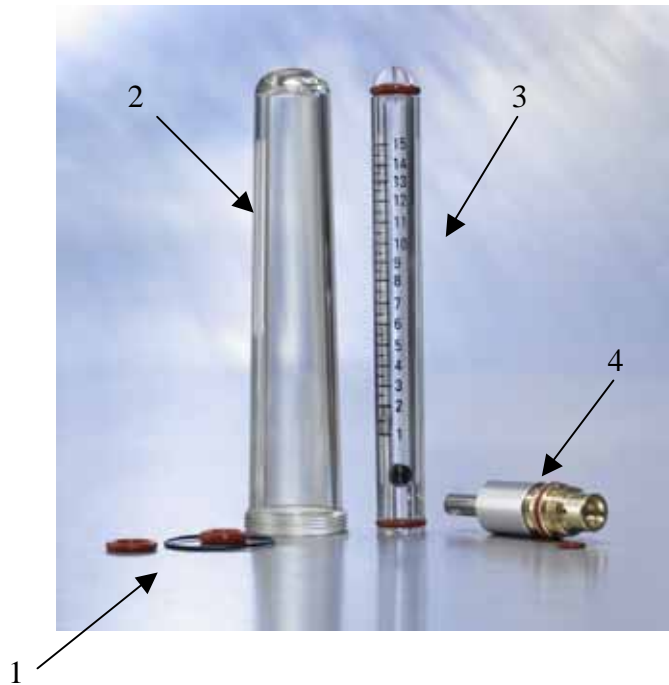
¹⁾ Other control ranges available

²⁾ Various other connections, e.g. BS, AFNOR or AGA, available

³⁾ Also available for other rail dimensions

Instructions for Use - Flowmeter

5 Spare Parts



Item	Article No.	Designation
1	6600101	Sealing set flowmeter
2	0232900	Covering tube for flowmeter
3	0232940	Measuring device O ₂ complete for flowmeter
3	0232941	Measuring device Air complete for flowmeter
4	6600102	Regulating unit flowmeter

Instructions for Use - Flowmeter

6. CUSTOMER SERVICE / WARRANTY / MAINTENANCE

The period of warranty for the equipment is 12 months starting from the date of sale in accordance with the following conditions:

- During the period of warranty, we will eliminate, free of charge, any damage or failures of the equipment caused by verifiable faults in production or in the material, provided that these failures have been reported without delay after detection. Deviating from this, the warranty for engines of any type, compressors, electric switching devices, semiconductor elements, electric displays and measuring equipment is six months. This warranty is not applicable to fragile parts made of glass, for example, or consumable and wearing parts, e.g. filters.
- In the case of a guarantee, the decision of whether to repair or exchange the equipment will be at our own option. Cases of guarantee will neither extend the period of warranty nor will they represent the start of a new period of warranty. Spare parts which are installed will not be subject to an individual period of warranty.
- Any damage caused by improper use, faulty operation, mechanical damage or non-observance of the instructions for use as well as any damage caused by force majeure or any other unusual environmental conditions will not be covered by the warranty.
- The warranty claim will expire when interventions, changes or repairs of the equipment have been carried out by people who have not been authorised by us to do so or when the equipment has been used with additional accessories or spare parts of strange origin.
- The faulty equipment has to be sent – in its original packaging - to the address mentioned below with carriage and postage paid. Further claims as well as any so-called consequential damage will be excluded as long as liability is not required by law.

Equipment may be subject to technical changes without notice!

Maintenance

- The flawless condition and proper functioning of all the silicone seals in the equipment have to be checked **once a year** and to be replaced if necessary.
- Also **once a year**, the system has to be checked for damage and improper functioning.

Instructions for Use - Flowmeter

7 Manufacturer's Data

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Safety advice for the prevention of accidents in connection with the use of an oxygen-releasing device

The user will be held responsible for the enrichment of the room or ambient air with a part by volume of > 21% of O₂.