

## Instructions for use

### Compressed air injector with water trap



**Instructions for use • Compressed air injector with water trap**

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## **Instructions for use • Compressed air injector with water trap**

### **INTRODUCTION**

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

In addition, you will find a description of the various options available to combine the products with different 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 compressed air injector with water trap combined with a collecting device has been designed for secretion removal by suction over a longer period of time.

In addition, this system allows for the very precise and consistent adjustment of small vacuums and the competent, professional application of a secretion removal system by suction.

The vacuum required for this purpose is generated by means of compressed air from an injector.

The compressed air available from the central supply system streams through an injector and then outside through a sound absorber.

When the compressed air streams through the injector nozzle an undertow is generated which comes into effect at the end of the suction hose.

Depending on the setting of the infinitely variable regulating valve, this suction is capable of generating a vacuum between 0 and -0.8 bar.

This vacuum is limited by the immersion depth of the immersion tube in the water trap.

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The maximum immersion depth is 40 cm.  
 This corresponds to a maximum vacuum of 0.04 bar.

- *water column of 1 cm = 0.001 bar = 1 mbar*

When the resistance of the secretion rises the vacuum increases as well and the atmospheric pressure of the surrounding presses the water level in the immersion tube more and more under the water level in the bottle.

The difference in height (h) of the two water levels in cm corresponds to the currently generated negative pressure in mbar.

When the water level in the immersion tube reaches the lowest end (h max.) air escapes through the immersion tube and goes up in the form of air bubbles. This prevents the vacuum from increasing more and it is limited. Due to the fact that the position of the immersion tube can be modified in its height, different limiting positions may be chosen, i.e. it is possible to infinitely adjust different vacuums.

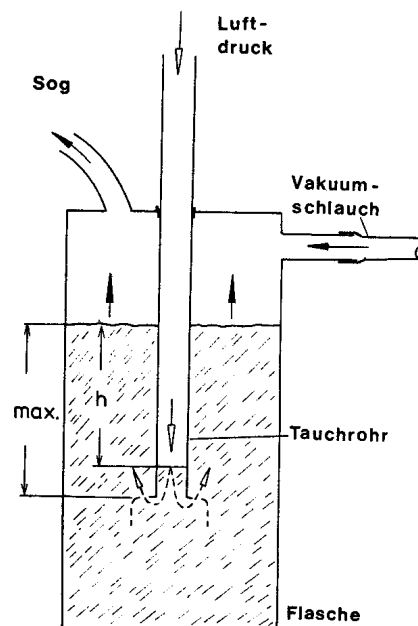


Illustration 1 System plan

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The compressed air injector with water trap is available in the following designs:

Injector for **direct** connection to the compressed air outlet

Article No.: 623-0230

The injector comes equipped with a connector standardised for this particular gas.

Injector for **wall rail** with NIST screw joints

Article No.: 623-0210

The injector is connected to the medical gas supply by means of a gas-type coded connecting hose.

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Accessories **required**

Air – connecting hose for compressed air injector with water trap – rail



ISO 6600117 / Neutral 6600116

Accessories **recommended** for permanent drainage injector – direct and rail



Illustr.: Suction set with finger tip and bacteria filter 606-2400

**Bacteria filter**

In order to avoid contamination, the bacteria filter has to be installed between the injector and the secretion-collecting jar.

**Secretion-collecting jar**

The secretion which has been sucked off is collected in the secretion-collecting jar which has been equipped with a float ball to prevent it from overflowing. Once the maximum filling height has been reached, this float ball will lock the connection to the compressed air injector.

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The following secretion-collecting jars may be connected:



Secretion-collecting jar 1.0 l  
Rail 6600255



Secretion-collecting jar 1.0 l  
Jar-carrying rack 6600265



Carrying rack for secretion-collecting jar 1.0 l 6600260



Secretion-collecting jar with  
bayonet joint

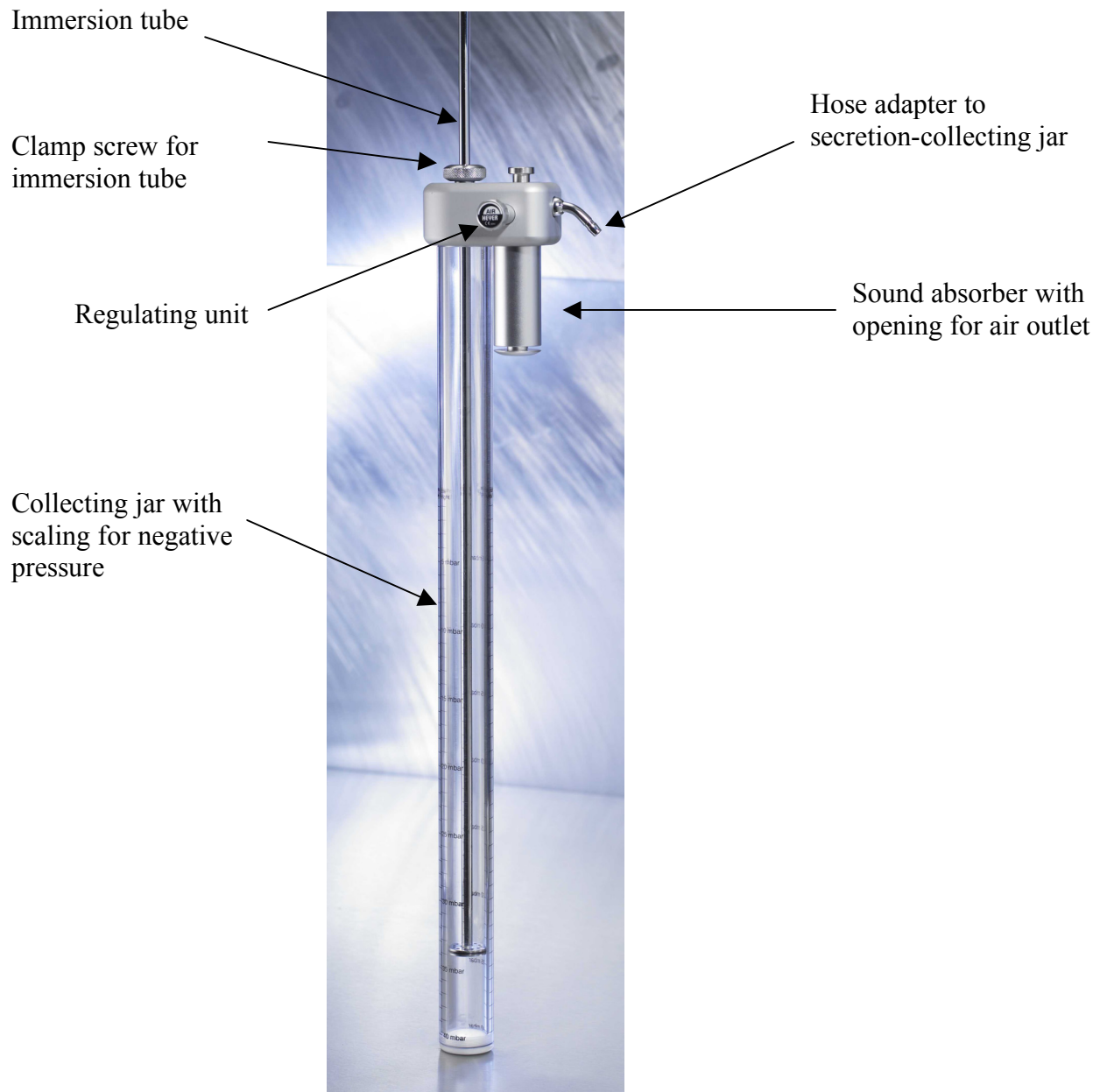
← Illustr. Size 2.0 l 6231000

Also available in  
Size 1.0 l 6231050  
Size 3.0 l 6231060

The scaling on all secretion-collecting jars is only meant as an approximate value without measuring function.

Alternatively, disposable collecting jars may be used.

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## **Instructions for use • Compressed air injector with water trap**

### **2. PUTTING INTO OPERATION of compressed air injector with water trap**

Please make sure that all the components connected, i.e. connecting hose, drainage systems, bacteria filter, safety jar, secretion-collecting jar etc., have been properly and firmly adapted.

Screw off the collecting jar and fill it with distilled water up to the marking “maximum filling height”.

Before putting into operation, place the immersion tube with the lower edge onto the marking of the vacuum that you require.

The position of the immersion tube is fixed by means of the clamp screw. Please make sure that the clamp screw has been fastened properly.

The suction power is set by opening the injector.

This process will open the vacuum flow and create the undertow required for suction.

Turn the regulating unit anti-clockwise until – with closed suction connector – air bubbles can be seen at the lower end of the immersion tube.

This means that the preset negative pressure has been reached.

In order to avoid contamination, a bacteria filter has to be installed between the injector and the secretion-collecting jar.

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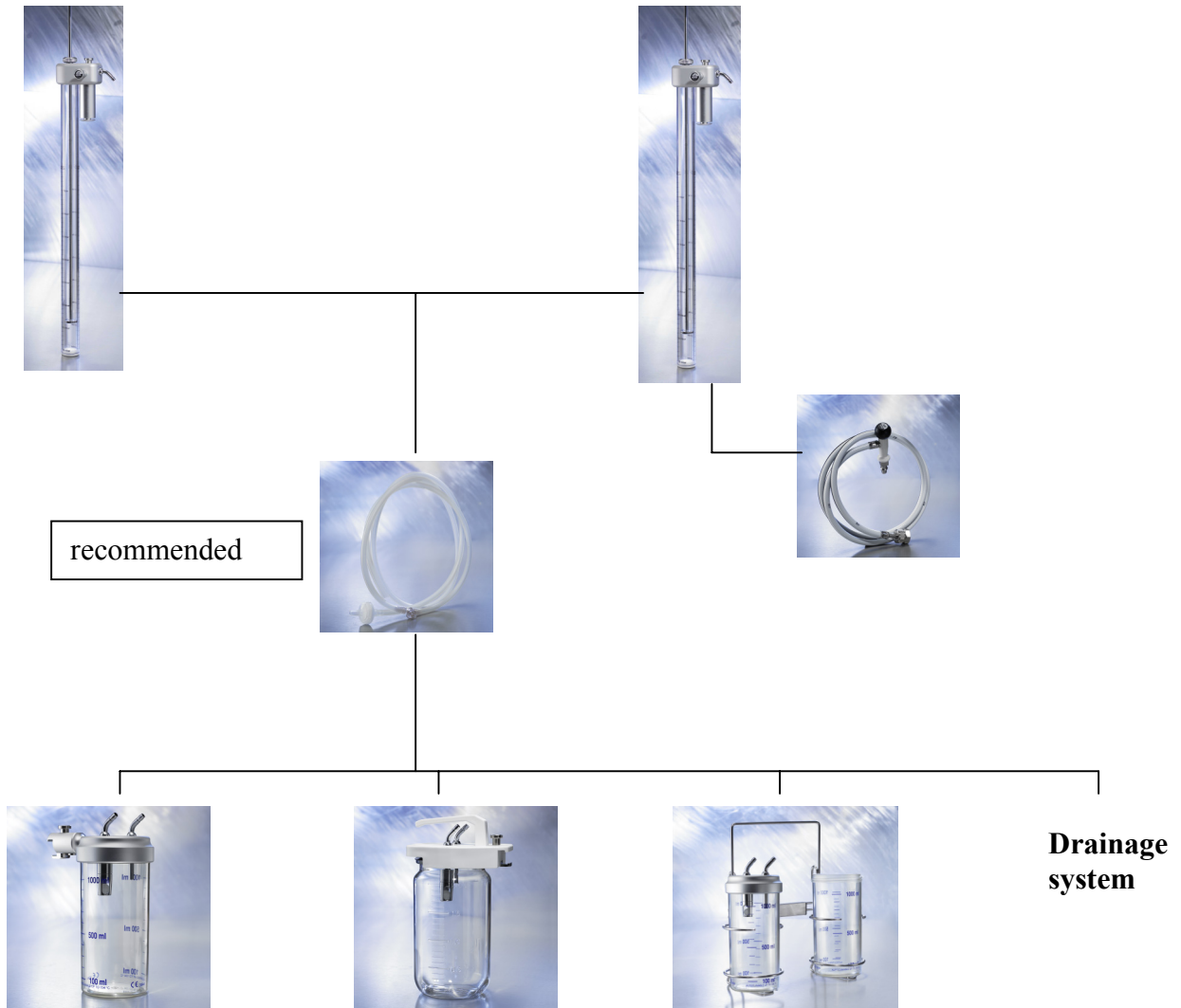
Before putting the system into operation, a function test should be carried out in accordance with the following schedule:

- Connect the injector with the outlet
- Fill the collecting jar
- Set the lower edge of the immersion tube to the marking “5 mbar“
- Open the regulating unit completely (by turning anti-clockwise until reaching the stop)
- Please make sure that, with an open hose adapter, there are no air bubbles at the end of the immersion tube.
- Close the regulating unit completely (by turning clockwise until reaching the stop).
- Please make sure that, with a closed hose adapter, there are no air bubbles at the end of the immersion tube.



**In the case of a negative test result, please urgently correct the failure yourself or contact our service department. Make sure that the apparatus is not put into operation.**

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### 3. INSTRUCTIONS FOR CLEANING AND CARE

#### 3.1 Disassembling

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

**Attention:**

**Do not autoclave the collecting jar at 134°C.**

**Do not sterilise the sound absorber.**

#### 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 apparatus.
- 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

Disposable application elements must not be autoclaved (see order data).

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### 4. Technical Data

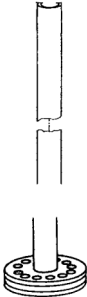


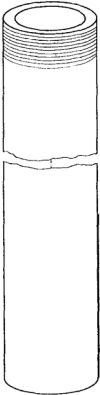
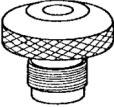

	Compressed air injector with water trap Direct	Compressed air injector with water trap Rail
Article No.:	6230230	6230210
Control range	0 to -40 mbar	
Suction power	appr. 0.8 l / min	appr. 0.8 l / min
Material	Anodized aluminium / Stainless steel	
Connection	Connector acc. to DIN 13260-2 <sup>1)</sup>	NIST screw joints
Fastening	-----	For device-carrying rail 25 x 10 mm <sup>2)</sup>
Exit	Hose adapter for silicone hose 6 x 2	
H x W x D mm	710 x 140 x 140	710 x 140 x 160
Weight	1,400 g	165 g
Accessories Article No.	See pages 6 to 7	
Accessories Article No.		Connecting hose AIR 1.5 mtr DIN <sup>1)</sup> - NIST ISO 660-0117 / Neutral 660-0116

<sup>1)</sup> Various other connections, e.g. BS, AFNOR or AGA available

<sup>2)</sup> Also available for other rail dimensions

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### 5 Spare Parts

Illustration	Designation of article	Article number
	Immersion tube with O-ring	043-2330
	O-ring for immersion tube 17 x 2 mm	049-3232
	Flat gasket for collecting jar	037-1340
	Collecting jar complete	019-2510
	Clamping ring	043-3211
	O-ring for clamping ring 8 x 2 mm	049-3020
No illustration	Filter insert water trap	1570130

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### 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.

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**7 Manufacturer's Data**

Manufacturer: Heyer Aerotech GmbH  
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