



# KIESELMANN

FLUID PROCESS GROUP

Translation of the original

## Operating instruction

### Deaeration ball valve

Type: 5098

DN 15



Connection: Liner / nut

Thread



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# 1 General informations

## 1.1 Informations for your safety

We are pleased that you have decided for a high-class KIESELMANN GmbH Guth Ventiltechnik GmbH KIESELMANN Anlagenbau GMBH product. With correct application and adequate maintenance, our products provide long time and reliable operation.






Before installation and initiation, please carefully read this instruction manual and the security advices contained in it. This guarantees reliable and safe operation of this product and your plant respectively. Please note that an incorrect application of the process components may lead to great material damages and personal injury.

In case of damages caused by non observance of this instruction manual, incorrect initiation, handling or external interference, guarantee and warranty will lapse!

Our products are produced, mounted and tested with high diligence. However, if there is still a reason for complaint, we will naturally try to give you entire satisfaction within the scope of our warranty. We will be at your disposal also after expiration of the warranty. In addition, you will also find all necessary instructions and spare part data for maintenance in this instruction manual. If you don't want to carry out the maintenance by yourself, our KIESELMANN GmbH Guth Ventiltechnik GmbH KIESELMANN Anlagenbau GMBH - service team will naturally be at your disposal.

## 1.2 Marking of security instructions

Hints are available in the chapter "safety instructions" or directly before the respective operation instruction. The hints are highlighted with a danger symbol and a signal word. Texts beside these symbols have to be read and adhered to by all means. Please continue with the text and with the handling at the valve only afterwards.

Symbol	Signal word	Meaning
	DANGER	Imminent danger which will result severe personal injury or death.
	WARNING	Imminent danger which may result severe personal injury or death.
	CAUTION	Dangerous situation which may cause slight personal injury or material damages.
	NOTICE	An harmful situation which may result in damages of the product itself or of adjacent vicinity.
	INFORMATION	Marks application hints and other information which is particularly useful.

## 1.3 General designated use

The fitting is designed exclusively for the purposes described below. Using the fitting for purposes other than those mentioned is considered contrary to its designated use. KIESELMANN GmbH Guth Ventiltechnik GmbH cannot be held liable for any damage resulting from such use. The risk of such misuse lies entirely with the user. The prerequisite for the reliable and safe operation of the fitting is proper transportation and storage as well as competent installation and assembly. Operating the fitting within the limits of its designated use also involves observing the operating, inspection and maintenance instructions.

## 1.4 Personnel

Personnel entrusted with the operation and maintenance of the tank safety system must have the suitable qualification to carry out their tasks. They must be informed about possible dangers and must understand and observe the safety instructions given in the relevant manual. Only allow qualified personnel to make electrical connections.

## **1.5 Modifications, spare parts, accessories**

Unauthorized modifications, additions or conversions which affect the safety of the fitting are not permitted. Safety devices must not be bypassed, removed or made inactive. Only use original spare parts and accessories recommended by the manufacturer.

## **1.6 General instructions**

The user is obliged to operate the fitting only when it is in good working order. In addition to the instructions given in the operating manual, please observe the relevant accident prevention regulations, generally accepted safety regulations, regulations effective in the country of installation, working and safety instructions effective in the user's plant.

## 2 Safety instructions

### 2.1 Intended use

The valve is used to vent gaseous media from pipe system in plants of the food and drink industry, pharmaceutical and chemical industries as well as in biotechnology.

### 2.2 General notes



#### NOTICE - observe the operating instructions

To avoid danger and damage, the fitting must be used in accordance with the safety instructions and technical data contained in the operating instructions.



#### NOTICE

All data are in line with the current state of development. Subject to change as a result of technical progress.

### 2.3 General safety instructions



#### ⚠ WARNING

##### Risk of injury by outflowing medium

Dismantling the valve or valve assemblies from the plant can cause injuries.

- Medias flowing through the leakage drain outlet are to be drained off without splashing into a discharge arrangement.
- Carry the disassembling only if when the plant has been rendered pressure-less and free of liquid and gas.



#### ⚠ CAUTION

Steps should be taken to ensure that no external forces are exerted on the fitting.



#### ⚠ CAUTION

Before starting the system, the entire pipeline system must be thoroughly cleaned.

## 3 Delivery, transport and storage

### 3.1 Delivery

- Immediately after receipt check the delivery for completeness and transport damages.
- Remove the packaging from the product.
- Retain packaging material, or expose of according to local regulations.

### 3.2 Transport



#### CAUTION

##### **Risk of injury and damage to the product**

During the transport the generally acknowledged rules of technology, the national accident prevention regulations and company internal work and safety regulations must be observed.

### 3.3 Storage



#### NOTICE

##### **Damage to the product due to improper storage!**

Observe storage instructions

avoid a prolonged storage



#### INFORMATION

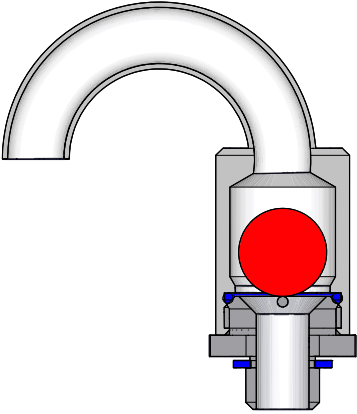
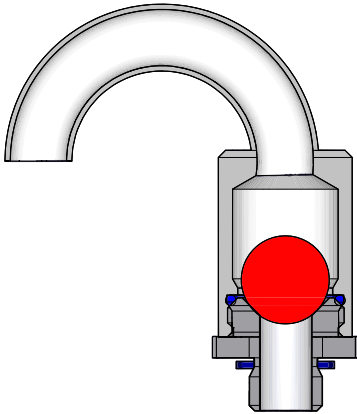
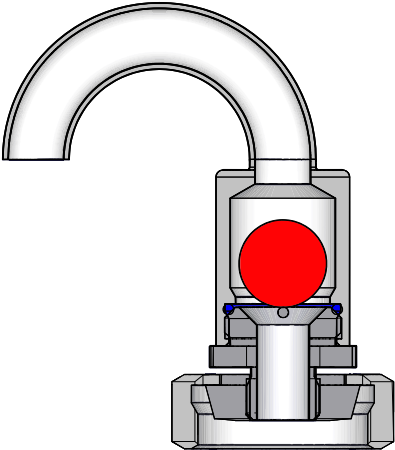
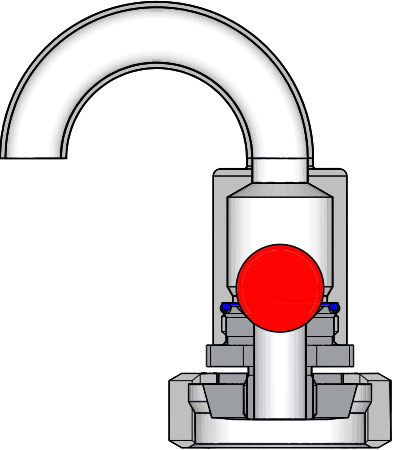
##### **Recommendation for longer storage**

We recommend regularly checking the product and the prevailing storage conditions during long storage times.

- To avoid damage to seals and bearings,
  - products up to DN 125 / OD 5 inch should be stored horizontally for maximum 6 months.
  - products larger than DN 125 / 5 inch, should be stored in the upright position with the actuator on top.
- Don't store any objects on the products.
- Protect the products for wetness, dust and dirt.
- The product should be stored in a dry and well ventilated room at a constant temperature (optimal indoor temperature: 25 °C ±5 ; indoor humidity data 70% ±5%).
- Protect seals, bearings and plastic parts for UV light and ozone.

## 4 Specification

### 4.1 Valve types

<b>5098 015 000-xxx</b> Ra 1/2"; EPDM with block pin	<b>5098 015 070-xxx</b> Ra 1/2"; EPDM without block pin
	
<b>5098 015 025-xxx</b> K/M; EPDMK/M; EPDM with block pin	<b>5098 015 030-xxx</b> K/M; EPDMK/M; EPDM without block pin
	

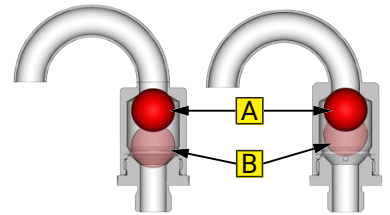


## 5 Function and operation

### 5.1 Description of function

The valve is used to vent gaseous media from pipe system.

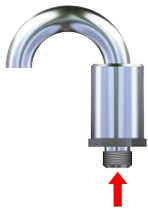
- Position A (valve open)  
Venting of gaseous media.  
Float ball (2) is in rest position A.
- Position B (valve closed)  
The valve closes on rising liquids.



### 5.2 Commissioning, service and maintenance

#### 5.2.1 Commissioning

##### 5.2.1.1 Installation instructions



##### Fitting position

The valve is generally installed in the system as shown in the figure.

The flow direction is as shown in the figure in the direction of the arrow.

##### 5.2.1.2 General welding guidelines

Sealing elements integrated in weld components must generally be removed prior to welding. To prevent damage, welding should be undertaken by certified personnel (EN ISO 9606-1). Use the TIG (Tungsten Inert Gas) welding process.



#### CAUTION

##### Damage and injuries due to high temperature supply

To avoid a distortion of the components, all welding parts must be welded to stress-relieved.

Allow all components to cool before assembling.



#### NOTICE

##### Damage due to impurities

Impurities can cause damage to the seals and seals area.

Clean inside areas prior to assembly.

##### 5.2.1.3 ATEX - Guidelines

For valves or plants/installations that are operated in the ATEX area, sufficient bonding (grounding) must be ensured (see valid ATEX Guidelines EG).

### 5.2.2 Service



#### RECOMMENDATION

##### Replacement of seals

To achieve optimal maintenance cycles, the following points must be observed!

- When replacement of seals, all product-contacting seals should be replaced.
- Only original spare parts may be installed.

##### Maintenance interval

The maintenance intervals depend on the operating conditions "temperature, temperature-intervals, medium, cleaning medium, pressure and opening frequency". We recommend replacing the seals 1-year cycle. The user, however should establish appropriate maintenance intervals according to the condition of the seals.

##### Lubricant recommendation



EPDM; HNBR; NBR; FKM; k-flex	-	Klüber Paraliq GTE703*
Silicone	-	Klüber Sintheso pro AA2*
Thread	-	Interflon Food*
*) It is only permitted to use approved lubricants, if the respective fitting is used for the production of food or drink. Please observe the relevant safety data sheets of the manufacturers of lubricants.		

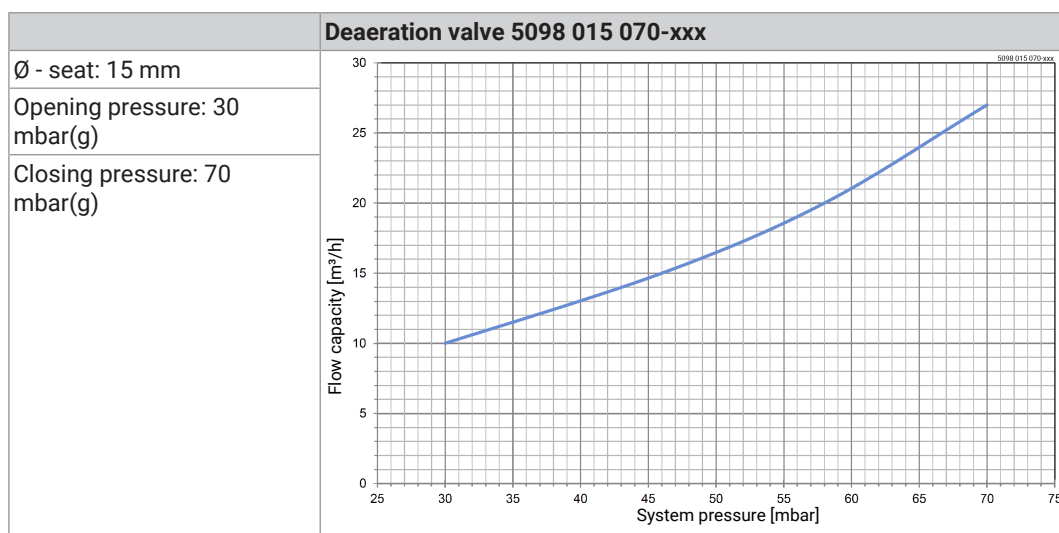
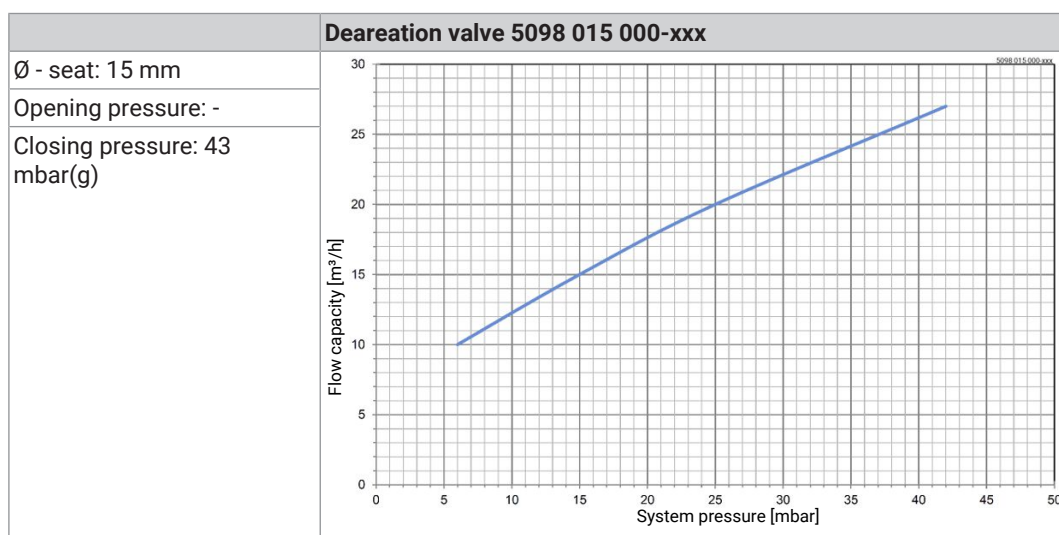
### 5.2.3 Cleaning

##### Cleaning

The optimum cleaning is carried out with the pipe cleaning.

## 6 Technical data



Model	deaeration ball valve	
Valve size	DN 15	
Connection	<ul style="list-style-type: none"> <li>• Thread DIN ISO 228</li> <li>• Liner/nut DIN 11851</li> </ul>	
Temperature range	Operating temperature: +0° to +95°C (medium dependent) Sterilization temperature: +130°C (SIP 30 min)	
Operating pressure	10 bar	
Material: (in product contact)	Stainless steel: 1.4404 / AISI 316L 1.4301 / AISI 304 Surface: $R_a \leq 0,8\mu\text{m}$ e-polished Sealing material: EPDM	



## 7 Disassembly and assembly

### 7.1 Disassembly

#### Mounting tools

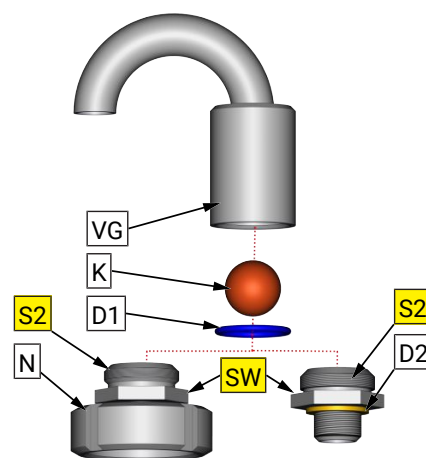
T1		Combination wrench-Set	SW 8 - SW 24	-
T11		Hinged hook wrench	-	8027000065-000



#### NOTICE

All screw connections have right-handed threads.

- Unscrew the complete valve on the spanner flat (SW) or on the groove nut (N).
- Unscrew housing (VG) and sealing seat (S1) or (S2).
- Remove float ball (K) and O-ring (D1).



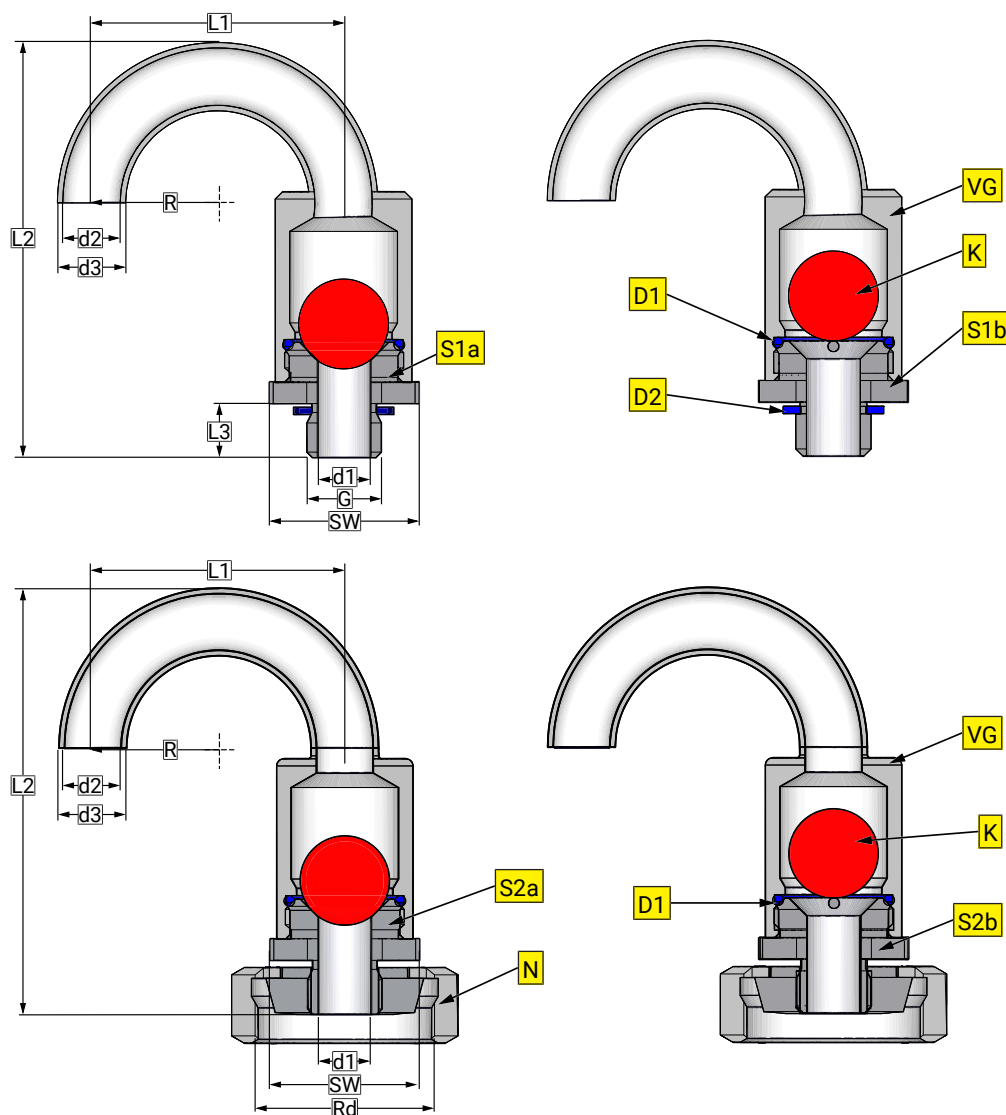
### 7.2 Assembly

- Before installation, thoroughly clean and slightly lubricate mounting areas and running surfaces.
- Assemble in reverse order.
- Perform a functional test.

## 8 Drawings and dimensions

### 8.1 Drawings

Pos.	Designation	Material	Item number
VG	Housing	1.4404 / AISI 316L	5098 015 001-041
K	Float ball	EPDM	2340 025 000-054
D1	O-ring	EPDM	2304 027 030-170
S1a	Threaded connection G1	1.4404 / AISI 316L	5098 015 004-041
S1b	Threaded connection G1 with block pin	1.4404 / AISI 316L	5098 015 002-041
S2a	Threaded connection G1 blankliner	1.4404 / AISI 316L	5098 015 004-041 2031 025 008-040
S2b	Threaded connection G1 with block pin blankliner	1.4404 / AISI 316L	5098 015 002-041 2031 025 008-040
D2	Seal	EPDM	2353 028 018-077
N	Slotted nut	1.4404 / AISI 316L	2003 025 000-021



d1 Ø 15 mm	d2 Ø 15 mm	d3 Ø 18 mm
L1 70 mm	L2 ~ 115 mm	L3 15 mm
G 1/2"	Rd 52 x 1/6"	SW 36 mm
R 35 mm		