



KIESELMANN
FLUID PROCESS GROUP

Operating instructions

- Translation of the original -

Vacuum valve

Type: 6138

Type: 6139

spring loaded



English **GBR**



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1. General information

1.1 Information for your safety

We are pleased that you have decided for a high-class KIESELMANN 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 service team will naturally be at your disposal.

1.2 Marking of security instructions in the operating manual

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 <u>will result</u> severe personal injury or death.
	WARNING	Imminent danger which <u>may result</u> severe personal injury or death.
	CAUTION	Dangerous situation which may cause slight personal injury or material damages.
	ATTENTION	An harmful situation which may result in damages of the product itself or of adjacent vicinity.
	NOTICE	Marks application hints and other information which is particularly useful.

1.3 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 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 Field of application

This vacuum valve is used to prevent underpressure in tanks and vessels in plants of the food and drink industry, pharmaceutical and chemical industries as well as in biotechnology.



ATTENTION

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

2.2 General safety instructions



WARNING

- Dismantling the valve or valve assemblies from the plant can cause injuries from fluids or gases flowing out. Dismantle the valve or valve assembly only when the plant has been rendered pressure-less and free of liquid and gas.



CAUTION

- Internal or external dirt may impair the function of the fitting or the safety equipment. Therefore the fitting must be operated in a way that protects it from external influences and it must be cleaned and maintained at regular intervals.
- Note the welding guidelines.

2.3 General notes



NOTICE

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

3. Function and operation

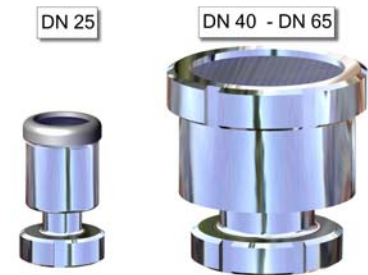
3.1 Description of function

The function of the vacuum valve is to prevent impermissible pressure shortfalls (≤ 1 bar absolute pressure) in tanks and containers, which can result in damage. The valve opens to the atmosphere. The pressure in the tank is brought to the atmospheric pressure by the inflowing air. With pressure equality the valve closes by spring tension. The flow capacities referred to the relevant underpressure are shown in the capacity diagram (see "Performance chart" page 10.).

3.2 Installation instructions

► Fitting position

The vacuum valve is generally to be installed vertically.
(see figure on the right)



► 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.



ATTENTION

- Impurities can cause damage to the seals. Clean inside areas prior to assembly.

3.3 Service and Maintenance

► Service

The maintenance intervals depend on the operating conditions "temperature, temperature-intervals, medium, cleaning medium, pressure and opening frequency". We recommend replacing the seals every 2 years. The user, however should establish appropriate maintenance intervals according to the condition of the seals.



NOTICE

EPDM; Viton; k-flex; NBR; HNBR ⇨
Silicone ⇨
Thread ⇨

Lubricant recommendation

Klüber Paraliq GTE703*
Klüber Syntheso pro AA2*
Interflon Food Grease*

**) 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.*

► Cleaning

A complete cleaning of all the parts that have come in contact with the product is only possible in the dismantled state.

The cleaning of the fitting surfaces that touch the product takes place with the tank cleaning. The cleaning of the external surfaces must be performed at regular intervals. The cleaning cycles are to be defined by the user.

3.4 Technical Data

Model:	Vacuum valve, spring loaded
Valve size:	DN25 - DN65
Connections:	Thread (G) DIN EN ISO 228 Welding end (S) DIN EN 10357 Liner/nut (K/M) DIN 11851 Clamp (Cl) DIN 32676
Temperature range:	+0°C to +85°C medium dependent

Operating pressure: <i>in bar(g)</i>	bar(g)		Plate PTFE	Plate POM
	Seal	Silicone/NBR	3	6
		NBR	3	10
		EPDM	3	10

Material in product contact:	Stainless steel:	<ul style="list-style-type: none"> • 1.4301 / AISI304 • 1.4404 / AISI316L
	Surfaces:	<ul style="list-style-type: none"> • Ra < 0,8µm e-polished
	Seal material:	<ul style="list-style-type: none"> • Silicone • NBR • EPDM

4. Disassembly and assembly

➤ Disassembly DN25

- Unscrew cap (3).
- Develop the wire-cloth (8), the tightly seat (4), plate (2) and spring (10) from the housing (1).
- Remove the O-Rings (5) and (9).

➤ Disassembly DN40 - DN65

- Unscrew groove nut (3).
- Remove the wire-cloth (8) and the tightly seat (4).
- Dismantle O-Ring (9).
- Develop the plate (2) with add-on parts.
- Unscrew the screw (7).
- Dismantle disc (6) and seal (5).

➤ Assembly

- Thoroughly clean and slightly lubricate mounting areas and running surfaces (see "Service and Maintenance" page 5.).
- Assemble in reverse order.



ATTENTION

- Secure the screw (7) with a **removable screw locking** (e.g. *Loctite 243*).

➤ Functional check

- Test proper performance in the operating state according to the specified performance data.

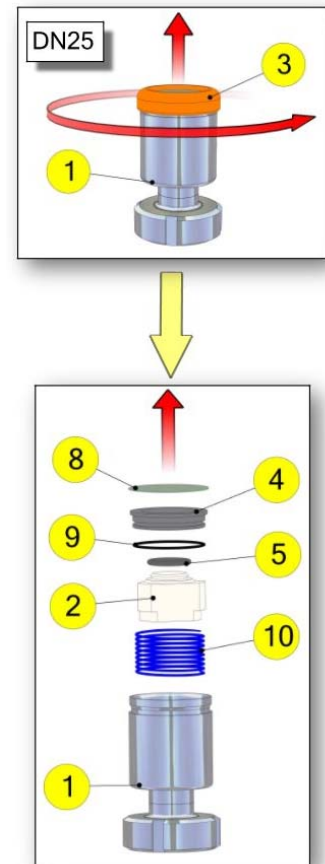


Fig. 1

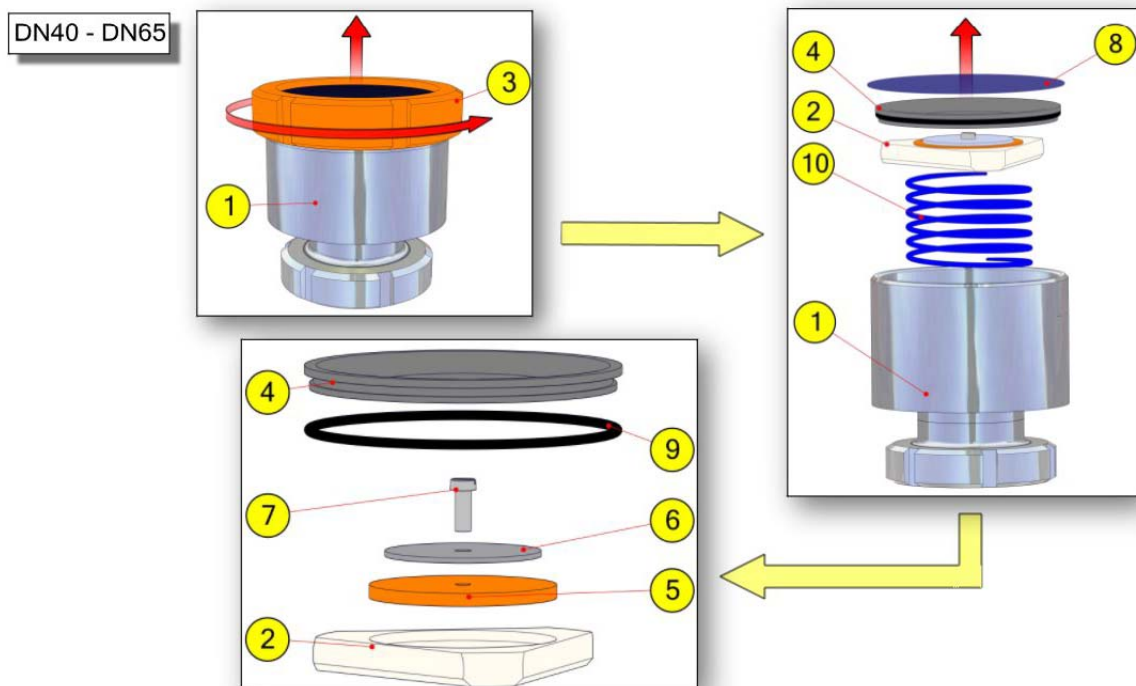


Fig. 2

5. Spare part sets

DN	Spare part set Silicone / NBR	Pos. 5 Silicone	Pos. 9 NBR
25	-	-	-
32	6138 032 990-000	2356043006-085	2304065030-055
40	6138 040 990-000	2356043006-085	2304065030-055
50	6138 050 990-000	2356058006-085	2304085035-055
65	6138 065 990-000	2356072006-085	2304113035-055

DN	Spare part set NBR	Pos. 5 NBR	Pos. 9 NBR
25	6138 025 990-000	2304022035-055	2304040020-055
32	-	-	-
40	-	-	-
50	-	-	-
65	-	-	-

DN	Spare part set EPDM	Pos. 5 EPDM	Pos. 9 EPDM
25	6138 025 993-000	2304022035-170	2304040020-054
32	6138 032 993-000	2356043006-054	2304065030-054
40	6138 040 993-000	2356043006-054	2304065030-054
50	6138 050 993-000	2356058007-054	2304085035-159
65	6138 065 993-000	2356072006-054	2304111035-084

6. Drawing and Dimensions

- 1) Housing
 CI = Clamp
 K/M-G = Liner/nut
 G = Threaded
 S = Welding end
- 2) Plate
 - PTFE
 - POM
- 3) Cap (DN25)
 Groove nut (DN40 - DN65)
- 4) Tightly seat
- 5) O-Ring (DN25)
 Seal (DN40 - DN65)
 - Silicone
 - NBR
 - EPDM
- 6) Disc
- 7) Screw
- 8) Wire-cloth
- 9) O-Ring
- 10) Spring

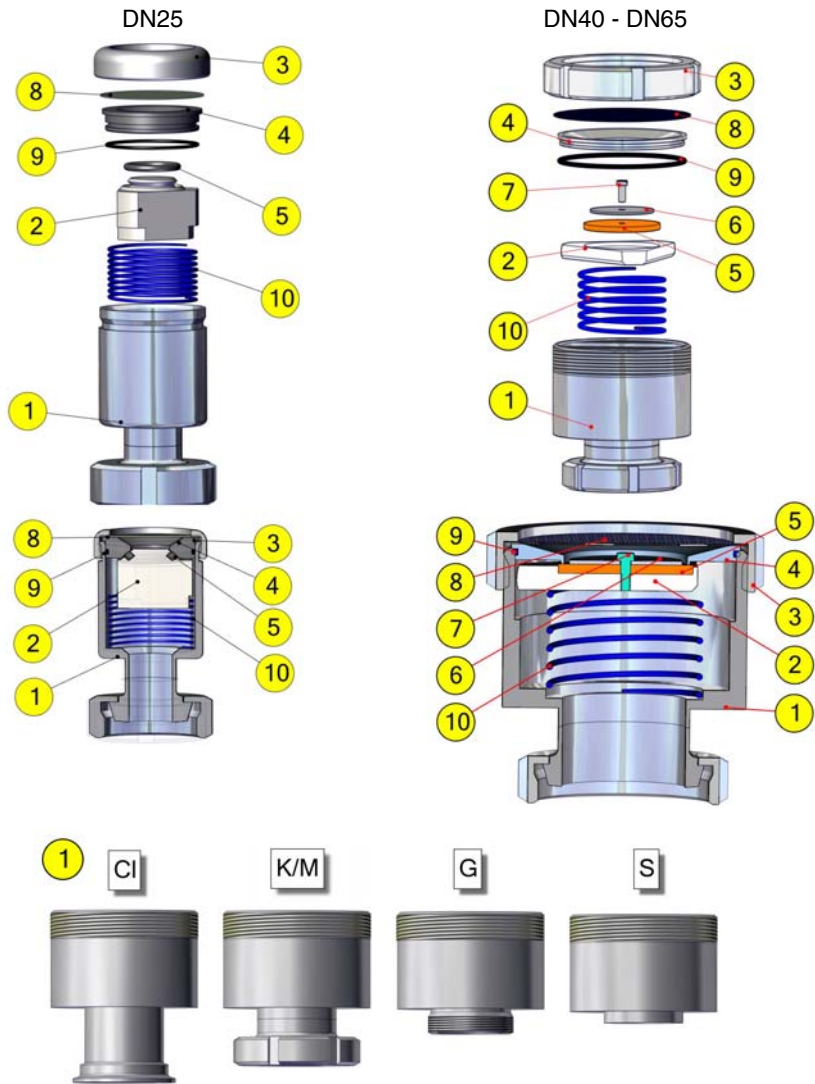
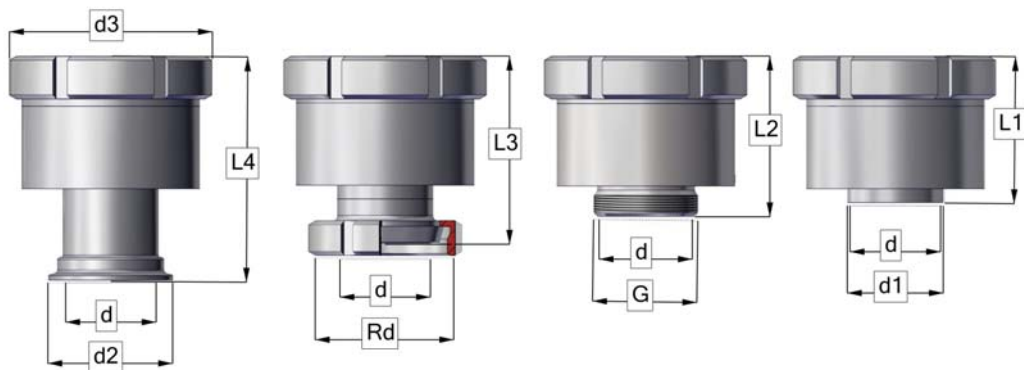


Fig. 3



	d	d1	d2	d3	Rd	G	L1	L2	L3	L4
DN 25	26	29	50,5	58	Rd 52x1/6	1	75,5	81	97	97
DN 32	32	35	50,5	92	Rd 58x1/6	1 1/4	74	88	110	95,5
DN 40	38	41	50,5	92	Rd 65x1/6	1 1/2	74	88	112	95,5
DN 50	50	53	64	110	Rd 78x1/6	2	83,5	96	111	105
DN 65	66	70	91	148	Rd 95x1/6	2 1/2	104	117	136	132

7. Performance chart

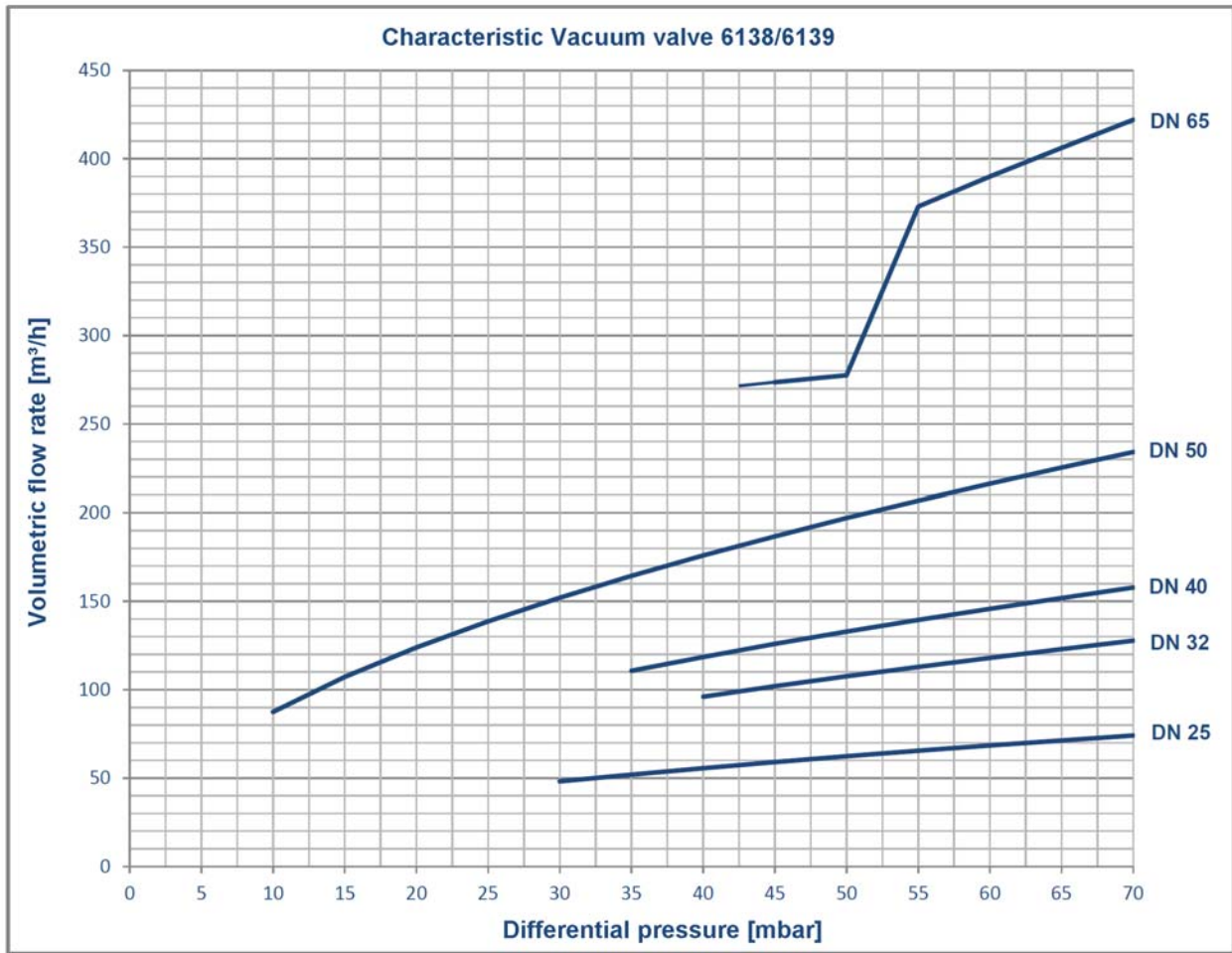


Diagramm 1