

## Tank-air armature, type 308xx



Handtmann offers specially preassembled armature units for use in the area of fermentation and storage cellars. These tank-air armatures are predominantly installed in the central standpipe directly on the tank or also within a pipe fence element. This armature unit is used for the supply and/or removal of gaseous media. The armature unit can be equipped with butterfly valves, pressure sensors and bunging armatures. If visual monitoring of the process is required, a VARIOhab sight glass can be integrated.

***Handtmann air armature***

- Compact multi-function unit for control, monitoring and checks

***TOP equipment***

- Standard-ECO designs
- Standard-TOP designs with high-quality components and improved cleanability
- Customised designs on request

**Technical data**

<b>Product range</b>	Materials Seals Surface	Stainless steel 1.4307, 1.4404 EPDM Ra 0.8 – 1.6 µm
<b>Other areas</b>	Materials Seals Surface	Stainless steel 1.4301, 1.4307 EPDM, HNBR Bright metal
<b>Design, function</b>	Operating pressure Temperature Nominal sizes Connections	10 bar 95°C DN 25, 32, 40, 50, 65, 80, 100 Screw connection DIN 11851, welding end

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## Yeast and wort aeration VARIOair, type 740xx



The VARIOair aeration armature is predominantly used in yeast and wort aeration in breweries. The dissolved oxygen increases the yeast growth and consequently later in the fermentation phase the sugar breakdown and the alcohol formation. The armature can also be integrated as an aeration unit in other industry branches.

Handtmann offers you an aeration armature specially tailored to your requirements. The modular constructions makes it easy to extend the basic unit, e.g., with CIP cleaning. We also deliver customised, completely preinstalled aeration systems.

**Handtmann aeration armature**

- Modularly constructed standard armature
- Simple handling, any installation position
- Broad service spectrum
- Made completely of stainless steel, maintenance-free

**TOP equipment**

- Turbulent flow guiding
- 2-level compression
- Fine-pore air distribution
- Hygienic design

**Technical data**

<b>Product range</b>	Materials Seals Surface	Stainless steel 1.4307, 1.4404 EPDM $R_a \leq 0.8 \mu\text{m}$
<b>Design, function</b>	Operating pressure Pressure loss Output volume Air volume (recommended setting) Temperature CIP / SIP Nominal sizes Connections	10 bar Approx. 1 bar 50 – 1900 hl/h 5 – 6 bar, approx. 20 – 40 l/hl wort 95°C / 140°C DN 25, 32, 40, 50, 65, 80, 100, 125, 150 Screw connection DIN 11851, DIN 11864, others on request

**Procedural principle**

The interior of the VARIOair yeast and work aeration armature is divided into three areas:

**aeration area (A)**

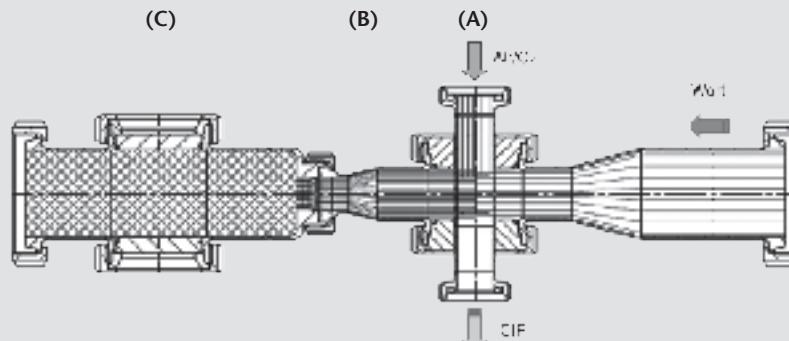
The foreseen sterile air and atmospheric oxygen required for the aeration are supplied via a special blow pipe and already reasonably distributed in advance.

**Acceleration area (B)**

Firstly there is further mixing of the wort and air. However, only a fraction of the atmospheric oxygen is dissolved directly. The cross-section reduction at the nozzle creates compression and increases the flow speed.

**Relief area (C)**

Following the passage through the nozzle, there is abrupt pressure relief. Further atmospheric oxygen is dissolved and distributed even more fine-porely in the turbulent flow.

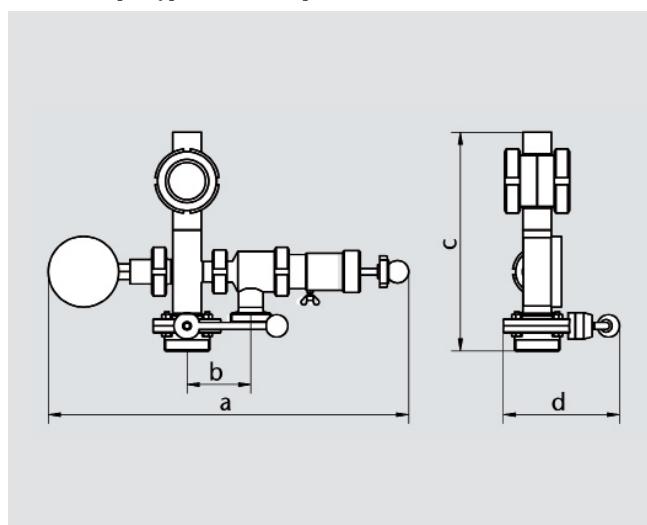


**Systemarmatur TOP mit Schauglas VARIOhab**

System armature TOP with sight glass VARIOhab

Sistema de robinetería TOP con mirilla VARIOhab

Системная арматура TOP со смотровым стеклом VARIOhab



DN	No.	a	b	c	d	DN *	€
25	<b>308 07</b>	504	86	256	137	15	
40		517	92	313	167	25	
50		529	98	333	180	40	
65		547	107	386	202	40	
80		620	123	436	224	50	

Manometer mit Membran-Druckmittler Ø 100, DN 32

Manometer with membrane diaphragm seal Ø 100, DN 32

Manómetro con transmisor de impulsión de membrana Ø 100, DN 32

Манометр с мембранным преобразователем давления Ø 100, DN 32

\* Spund-Sicherheitsventil 32503, 33502

\* Bunging safety valve 32503, 33502

\* Válvula de seguridad de taponado 32503, 33502

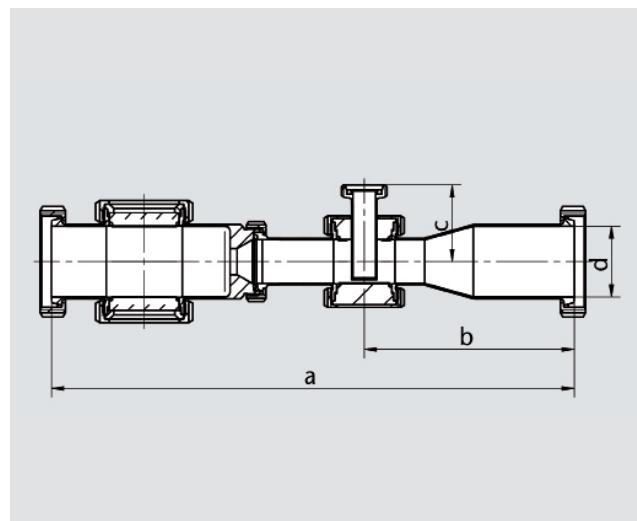
\* Предохранительный шпунт-клапан 32503, 33502

**Belüftungssystem für Hefe und Würze, Karbonisierung**

Aeration system for yeast and wort, carbonisation

Sistema de aireación para levaduras y mostos, carbonización

Система аэрации для дрожжей и сусла, карбонизация



DN	No.	a	b	c	d	e	€
Rd.-Gew.							
25	<b>740 02</b>	405	155	70	52 x 1/6"		
40		435	155	70	65 x 1/6"		
50		475	190	75	78 x 1/6"		
65		550	225	80	95 x 1/6"		
80		650	320	80	110 x 1/4"		
100		750	380	90	130 x 1/4"		
125*		830	390	100	210 x 129		
150*		950	475	100	235 x 154		

\* Flanschverbindung

\* Flange connection

\* Unión de brida

\* Фланцевое соединение

**Ausführungen nach Kundenspezifikation**

Designs according to customer specifications

Ejecuciones conforme a la especificación del cliente

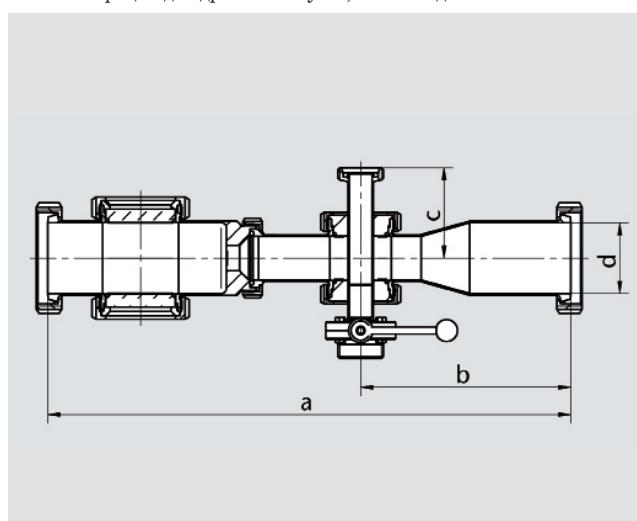
Исполнения согласно спецификации заказчика

**Belüftungssystem für Hefe und Würze, mit CIP-Anschluss**

Aeration system for yeast and wort, with CIP connection

Sistema de aireación para levaduras y mostos, con conexión CIP

Система аэрации для дрожжей и сусла, с CIP-соединением



DN	No.	a	b	c	d	e	€
Rd.-Gew.							
225	<b>740 02 C</b>	405	155	70	52 x 1/6"		
40		435	155	70	65 x 1/6"		
50		475	190	75	78 x 1/6"		
65		550	225	80	95 x 1/6"		
80		650	320	80	110 x 1/4"		
100		750	380	90	130 x 1/4"		
125*		830	390	100	210 x 129		
150*		950	475	100	235 x 154		

\* Flanschverbindung

\* Flange connection

\* Unión de brida

\* Фланцевое соединение

**Ausführungen nach Kundenspezifikation**

Designs according to customer specifications

Ejecuciones conforme a la especificación del cliente

Исполнения согласно спецификации заказчика

**2-hole RLV combination, type 990x**

Tanks or containers are often equipped with a combined CIP/gas tank line. This ends at the tank in a cleaning air/valve combination (RLV combination) equipped with two tank connections. This compact multifunctional unit controls the supply of CIP fluids or the supply and removal of the gas flows / CO<sub>2</sub> via an integrated switching valve. This guarantees safe media management.

The RLV combination is a platform for the mounting of further armatures for tank protection and tank cleaning. This allows the reduction of the number of tank couplings necessary in theory. We will be delighted to provide you with more information on the various possibilities.

***Handmann RLV combination***

- System for smaller to medium-sized container sizes
- Multifunctional unit with safety valve, vacuum valve and CIP tank cleaning
- Design with spring-loaded or weight-loaded vacuum valve
- Customer-specific versions

***TOP equipment***

- Two tank couplings required
- Reliable distribution of media
- CIP self-cleaning

**Technical data**

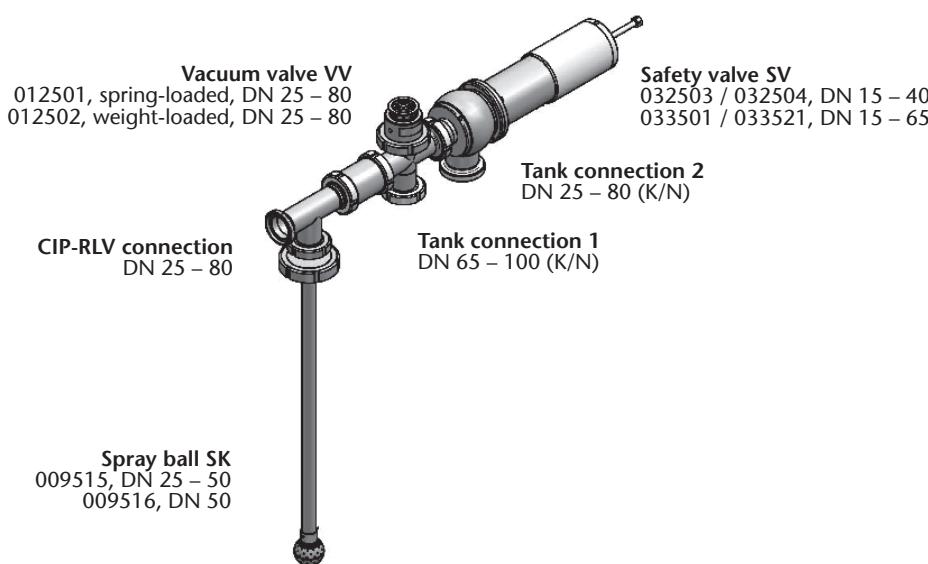
<b>Product range</b>	Materials Seals Interior surface	Stainless steel 1.4301, 1.4307 EPDM Ra ≤ 1.6 µm, Ra ≤ 0.8 µm
<b>Design, function</b>	Operating pressure Temperature	0 – 10 bar 0° to 95°C

**Note on selection of an RLV combination – necessary design data**

<b>Tank</b>	> Tank diameter, tank height, tank outlet, design pressure
<b>CIP process</b>	> Nominal size CIP pipe, CIP volume, CIP temperature
<b>Safety valve</b>	> Operating pressure, filling capacity, overpressure max., set pressure
<b>Vacuum valve</b>	> Underpressure max., drainage capacity, protection against complete draining

**Cleaning air/valve combination (example versions)**

<b>RLV</b>	<b>Tank</b> [DN]	<b>Connection nominal size</b>				<b>Spray ball</b> [DN]	<b>Safety valve</b> [DN]	<b>Vacuum valve</b> [DN]
		<b>CIP-RLV</b> [DN]	<b>Tank 1</b> [DN]	<b>Tank 2</b> [DN]	<b>CIP pipe</b> [DN]			
25	3.0	25	65	25	25/25	25	15 – 25	25
40	3.0	40	65	40	40/25	25	25 – 40	40
50	4.5	50	80	50	50/32	32	40 – 50	50
65	6.0	65	100	65	65/50	50	50 – 65	65
80	6.0	80	100	80	80/50	50	50 – 65	80
80	10.0	80	100	80	80/50	50	50 – 65	80



**1-hole RLV combination, type 9712**

Tanks or containers are often equipped with a combined CIP/gas tank line. This ends at the tank in a cleaning air/value combination (RLV combination) equipped with a tank connection. This compact multifunctional unit controls the supply of CIP fluids or the supply and removal of the gas flows / CO<sub>2</sub> via an integrated switching valve. This guarantees safe media management.

The RLV combination is a platform for the mounting of further armatures for tank protection and tank cleaning. This allows the reduction of the number of tank couplings necessary in theory. We will be delighted to provide you with more information on the various possibilities.

***Handmann RLV combination***

- System for smaller to medium-sized container sizes
- Multifunctional unit with safety valve, vacuum valve and CIP tank cleaning
- Design only possible with spring-loaded safety armatures
- Customer-specific versions

***TOP equipment***

- Only one central tank connection required
- Reliable distribution of media
- Hygienic process guiding with CIP self-cleaning

**Technical data**

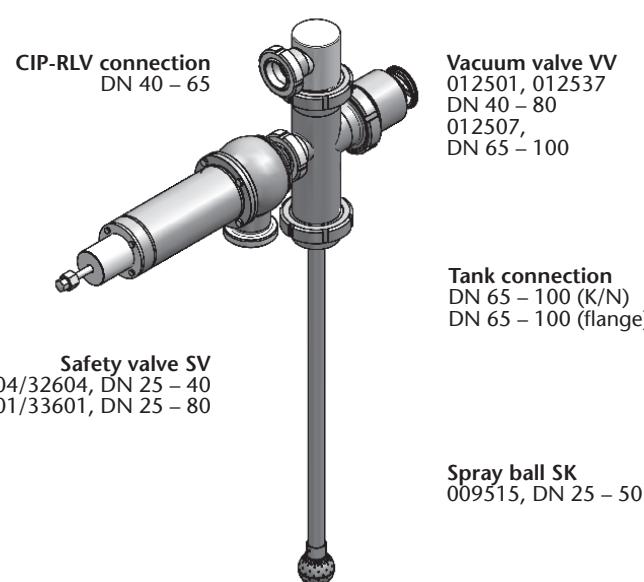
<b>Product range</b>	Materials Seals Interior surface	Stainless steel 1.4301, 1.4307 EPDM Ra ≤ 1.6 Ra ≤ 0.8 µm
<b>Design, function</b>	Operating pressure Temperature	0 – 10 bar 0° to 95°C

**Note on selection of an RLV combination – necessary design data**

<b>Tank</b>	> Tank diameter, tank height, tank outlet, design pressure
<b>CIP process</b>	> Nominal size CIP pipe, CIP volume, CIP temperature
<b>Safety valve</b>	> Operating pressure, filling capacity, overpressure max., set pressure
<b>Vacuum valve</b>	> Underpressure max., drainage capacity, protection against complete draining

**Cleaning air/value combination (example versions)**

RLV	Tank	Connection nominal size			Spray ball	Safety valve	Vacuum valve
		Tank	CIP-RLV	CIP pipe			
[DN]	up to Ø [m]	[DN]	[DN]	[DN]	[DN]	[DN]	[DN]
65	3.0	65	40	40, (25)	25	25 – 40	40 – 50
80	3.0	80	50	50, (40)	25	40 – 65	50 – 65
	4.5		50	50, (65)	32		
100	3.0	100	65	50, (40)	25	50 – 80	65 – 80
	4.5		65	65, (50)	32		
	6.0		65	65, (80)	50		



**1-hole RLV combination, type 9713**

Tanks or containers are often equipped with a combined CIP/gas tank line. This ends at the tank in a cleaning air/valve combination (RLV combination) equipped with a tank connection. This compact multifunctional unit controls the supply of CIP fluids or the supply and removal of the gas flows / CO<sub>2</sub> via an integrated switching valve. This guarantees safe media management.

The RLV combination is a platform for the mounting of further armatures for tank protection and tank cleaning. This allows the reduction of the number of tank couplings necessary in theory. We will be delighted to provide you with more information on the various possibilities.

***Handtmann RLV combination***

- System for medium-sized to large container sizes
- Multifunctional unit with large, high-performance safety valve, vacuum valve and CIP tank cleaning
- Valves optionally with pneumatic lifting, heating cartridges
- Customer-specific versions

***TOP equipment***

- Only one central tank connection required
- Reliable distribution of media
- Hygienic process guiding with CIP self-cleaning
- Integration in the process automation possible

**Technical data**

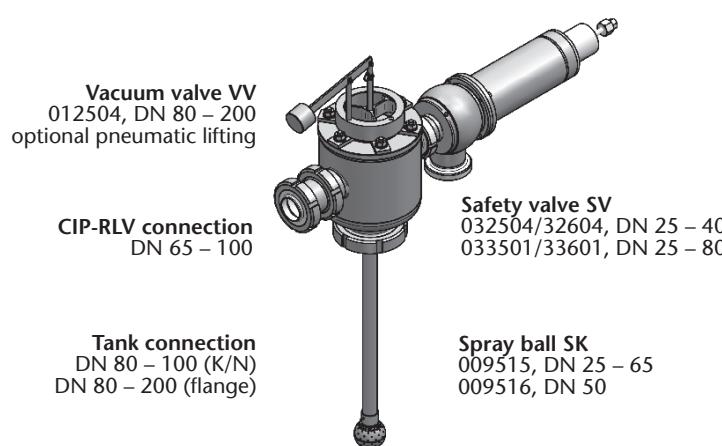
<b>Product range</b>	Materials Seals Interior surface	Stainless steel 1.4301, 1.4307 EPDM Ra ≤ 1.6 µm, Ra ≤ 0.8 µm
<b>Design, function</b>	Operating pressure Temperature	0 – 10 bar 0° to 95°C

**Note on selection of an RLV combination – necessary design data**

- |                     |   |
|---------------------|---|
| <b>Tank</b>         | > Tank diameter, tank height, tank outlet, design pressure                    |
| <b>CIP process</b>  | > Nominal size CIP pipe, CIP volume, CIP temperature                          |
| <b>Safety valve</b> | > Operating pressure, filling capacity, overpressure max., set pressure       |
| <b>Vacuum valve</b> | > Underpressure max., drainage capacity, protection against complete draining |

**Cleaning air/valve combination (example versions)**

RLV	Tank	Connection nominal size			Spray ball	Safety valve	Vacuum valve	
		Tank	CIP-RLV	CIP pipe				
80	up to Ø [m]	[DN] 3.0	80	65	65, (50)	25	25 – 40	[DN] 80
		4.5	80	80, (65)	32			
100	100	3.0	65	65, (50)	25	40 – 50	100	
		4.5	80	80, (65)	32			
150	150	3.0	65	65, (50)	25	40 – 65	150	
		4.5	80	80, (65)	32			
		6.0 ; 10.0	100	100, (80)	50 ; 65			
200	200	3.0	65	65, (50)	25	50 – 80	200	
		4.5	80	80, (65)	32			
		6.0 ; 10.0	100	100, (80)	50 ; 65			



2-Loch  
RLV-Kombination

2-hole  
RLV combination

Combinación RLV  
de 2 agujeros

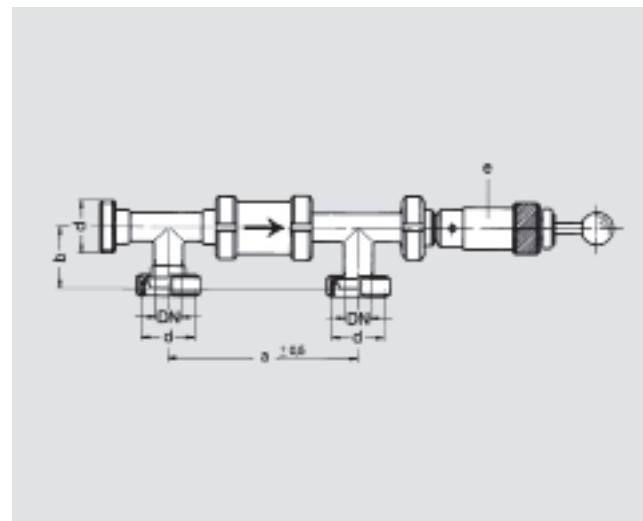
Комбинация клапанов  
для очищающего воздуха  
с 2 отверстиями

### Reinigungs-Luft-Ventilkombination (RLV)

Cleaning air valve combination (RLV)

Válvula combinada de purificación-aire (RLV)

Комбинация клапанов для очищающего воздуха (RLV)



DN	No.	a	b	c	d	e	€
				Rd.-Gew.	*DN		
25	099 03	186	65	52 x 1/6"	15		
32		217	70	58 x 1/6"	15		
40		240	75	65 x 1/6"	25		
50		280	86	78 x 1/6"	25		
65		330	97	95 x 1/6"	40		
80		350	107	110 x 1/4"	40		

\* mit Sicherheitsventil Typ 32501/32503/32504

\* with safety valve, type 32501/32503/32504

\* con válvula de seguridad, tipos 32501/32503/32504

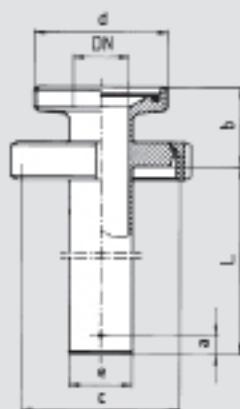
\* с предохранительным клапаном, тип 32501/32503/32504

### Einbaurohr für RLV/Sprühkopf

Mounting pipe for RLV/spray ball

Tubo para montaje de RLV/rociador

Вставная труба для комбинации клапанов/распыливающей головки



DN	No.	a	b	c	d	e	€
				Rd.-Gew.	Rd.-Gew.	Ø	
25/25	096 01	15	45	95 x 1/6"	52 x 1/6"	29	
25/32		15	48	95 x 1/6"	58 x 1/6"	29	
25/40		15	49	95 x 1/6"	65 x 1/6"	29	
32/32		15	48	110 x 1/4"	58 x 1/6"	35	
32/40		15	49	110 x 1/4"	65 x 1/6"	35	
32/50		15	51	110 x 1/4"	78 x 1/6"	35	
50/50		15	55	130 x 1/4"	78 x 1/6"	53	
50/65		15	60	130 x 1/4"	95 x 1/6"	53	
50/80		15	65	130 x 1/4"	110 x 1/4"	53	

Maß „L“ nach Angabe

Dimension "L" depending on specification

Medida "L" según las indicaciones

Размер "L" по указанию

mit Splintbefestigung Ø 3 mm

with split-pin connection Ø 3 mm

con fijación de clavija Ø 3 mm

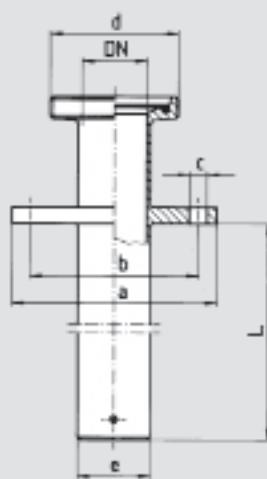
с шплинтовым креплением Ø 3 мм

### Einbaurohr für RLV/Sprühkopf

Mounting pipe for RLV/spray head

Tubo para montaje de RLV/rociador

Вставная труба для комбинации клапанов/распыливающей головки



DN	No.	a	b	c	d	e	€
		Ø	Ø	Ø	Rd.-Gew.	Ø	
50/50	096 05	150	125	13	78 x 1/6"	53	
50/65		150	125	13	95 x 1/6"	53	
50/80		150	125	13	110 x 1/4"	53	
65/65		180	150	13	95 x 1/6"	70	
65/80		180	150	13	110 x 1/4"	70	
65/100		180	150	13	130 x 1/4"	70	

Maß „L“ nach Angabe

Dimension "L" depending on specification

Medida "L" según las indicaciones

Размер "L" по указанию

mit Splintbefestigung Ø 3 mm

with split-pin connection Ø 3 mm

con fijación de clavija Ø 3 mm

с шплинтовым креплением Ø 3 мм

1-Loch  
RLV-Kombination

1-hole  
RLV combination

Combinación RLV  
de 1 agujero

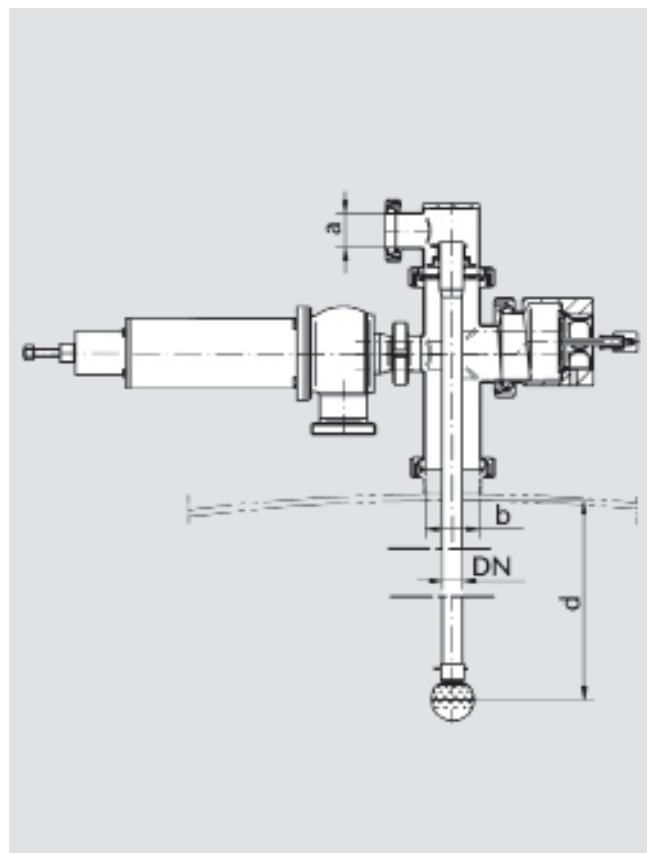
Комбинация клапанов  
для очищающего воздуха  
с 1 отверстием

### Reinigungs-Luft-Ventilkombination (RLV)

Cleaning air valve combination (RLV)

Válvula combinada de purificación-aire (RLV)

Комбинация клапанов для очищающего воздуха (RLV)



DN	No.	a	b	c	d	e	€
		DN	DN				
25	097 12	40	65				
25		50	80				
32		50	80				
32		65	100				
50		65	100				

Option: mit Sicherheitsventil, federbelastet, DN 15 - 65  
mit Vakuumventil, federbelastet, DN 25 - 80

Option: with safety valve, spring-loaded DN 15 - 65  
with vacuum valve, spring-loaded DN 25 - 80

Opción: con válvula de seguridad, con carga de resorte, DN 15 - 65  
con válvula de vacío, con carga de resorte, DN 25 - 80

Опция: с предохранительным пружинным клапаном, DN 15 - 65  
с вакуумным пружинным клапаном, DN 25 - 80

#### Ausführungen nach Kundenspezifikation

Designs according to customer specifications

Ejecuciones conforme a la especificación del cliente

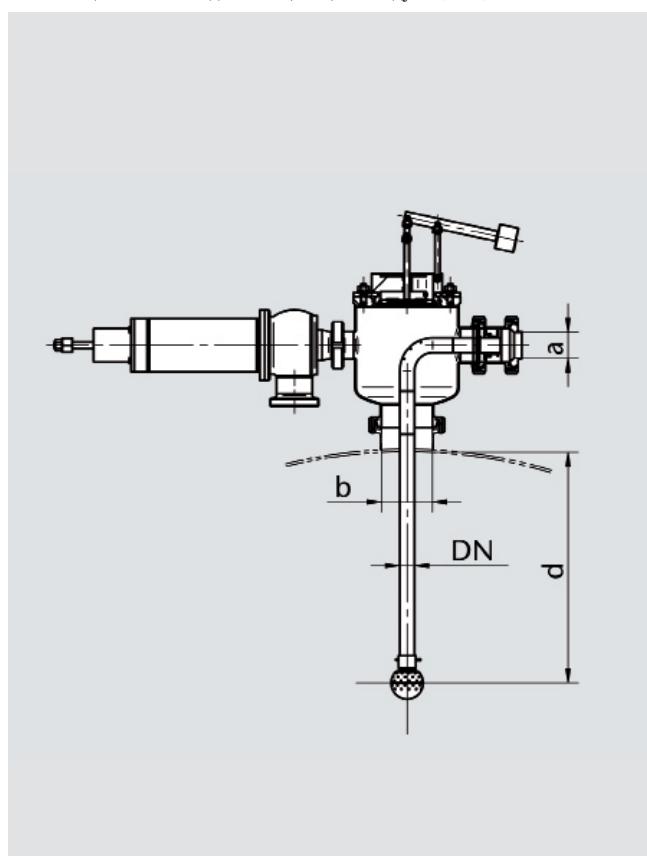
Исполнения согласно спецификации заказчика

### Reinigungs-Luft-Ventilkombination (RLV)

Cleaning air valve combination (RLV)

Válvula combinada de purificación-aire (RLV)

Комбинация клапанов для очищающего воздуха (RLV)



DN	No.	a	b	c	d	e	€
		DN	DN				
25	097 13	65	80				
25		65	100				
32		80	100				
32		80	150				
50		100	150				
50		100	200				
65		100	200				

Option: mit Sicherheitsventil, federbelastet, DN 40 - 80  
mit Vakuumventil, gewichtsbelastet, DN 80 - 200

Option: with safety valve, spring-loaded DN 40 - 80  
with vacuum valve, weight-loaded, DN 80 - 200

Opción: con válvula de seguridad, con carga de resorte, DN 40 - 80  
con válvula de vacío, con carga de peso, DN 80 - 200

Опция: с предохранительным пружинным клапаном, DN 40 - 80  
с вакуумным клапаном с контргрузами, DN 80 - 200

#### Ausführungen nach Kundenspezifikation

Designs according to customer specifications

Ejecuciones conforme a la especificación del cliente

Исполнения согласно спецификации заказчика