

HANDTMANN COMPONENTS

Valves and Fittings for Hygienic Processes - Technical Data



OUR EXPERIENCE - YOUR SAFETY

Products for your Industry

Handtmann specialises in safe and reliable conveyance of liquid and gaseous media in the food industry. The business segments of Handtmann include components and valves, filtration and separation solutions, plant construction and comprehensive consulting services.

Due to the high hygiene standards of the valves, they can be used by companies active in the fields of hygienic process engineering as well as in the beverage, dairy, chemical, bio and cosmetics industries.



Brewing Industry



Chemical Industry



Beverage Industry



Food Processing Industry



Dairy Industry



Pharmaceutical-,
Cosmetics- and Bio-Industry





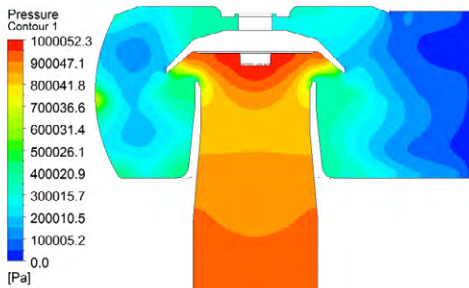
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Product film tank protection:

Scan QR code with your smartphone or tablet -> watch the video of the Product film tank protection directly on the Handtmann website.



←
Finite elements
calculation



←
Safety relief valve
weight-loaded
Type 32010

SAFETY RELIEF VALVES, SPRING - AND WEIGHT-LOADED

Your first choice for hygienically sensitive areas

Double guided valve rod,
high quality pressure spring made of stainless steel

YOUR BENEFIT:

Vertical or horizontal installation and
reproducible, safe function even in critical
operating conditions

All valve parts are exclusively
made of stainless steel

YOUR BENEFIT:

Long-lasting, safe and
low-maintenance application



Optimized valve disc construction for an
easy on-site replacement of the seals.

YOUR BENEFIT:






































Cost- and time saving



← Minimal dead space safety relief valve
Type 33503



← INOVA safety relief valve
ASME (UV) execution
Type 33551

Type	33551 ASME	33651 ASME	33501 33521	33601 33621	33503 33603	33502	33602	32500 32501 32502	32503	32603	32504	32604	32010
Nominal DN-sizes Nominal OD-sizes	15 – 80 (1" – 3")	15 – 80 (1" – 3")	15 – 80 (½" – 3")	15 – 80 (½" – 3")	40 – 80 -	50 (2")	50 (2")	15 – 25 (½" – 1")	15 – 40 (½" – 1 ½")	15 – 40 (½" – 1 ½")	25 – 40 (½" – 1 ½")	25 – 40 (½" – 1 ½")	65 – 125 (2½" – 6")
Set pressure (special pressure on request)	1,0 – 10,0 bar	1,0 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 5,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 10,0 bar	0,5 – 5,0 bar
Media: Steams, gases, liquids	 	 	  	  	  	  	  	  	  	  	  	  	  
Functional principle	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	■
Options													
Manual lifting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pneumatic lifting	–	✓	–	✓	✓	–	✓	–	–	✓	–	✓	✓
Proximity switch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heating device	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scale for pressure adjustment	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
Sealing against changing the pres- sure, changing the spring and by TÜV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–

General execution:

Materials: 1.4301, 1.4307, 1.4404

Sealing materials: EPDM, FKM, FFKM

- Range of application EPDM: from -20 °C to +150 °C short-term
- Range of application FFKM: from -20 °C to +160 °C

Surface roughness of media touched parts: Ra ≤ 0,8 µm (other surface quality on request)

Connection options:

Tri-clamp connection: DIN 32676, ASME BPE, ISO 2852, DIN 11853/11864

Thread: DIN 11851, DIN 11853/11864; RJT, SMS

Welding end: DIN 11850

Flange connection: DIN EN 1092, ASME B16.5, DIN 11853/11864

Collar coupling: DIN 11853/11864


Cone/Nut: DIN 11851


Special connections on request


Functional principle:

Δ Spring-loaded

■ Weight-loaded

 Liquids

 Steams

 Gases



←
Minisafe (overpressure protection)
E.g. fermenter
Type 33541



←
Cutting model bunging device
Type 35103

OVERFLOW VALVES, PRESSURE COMPENSATION VALVES, BUNGING DEVICES

Process safety by pressure relief and -constant

Variable 360°- connectivity
with double spherical housing

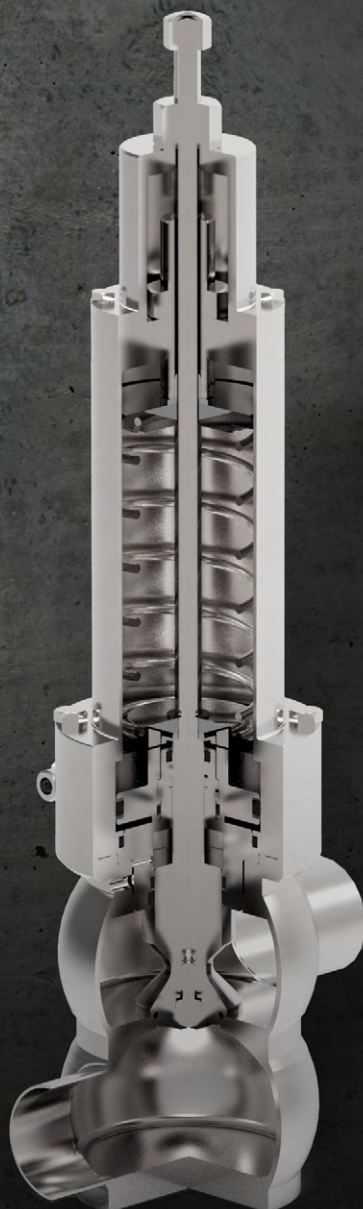
YOUR BENEFIT:

Flexibility and customer-specific
piping design: short delivery periods

Counter-pressure optimized construction
through valve piston with valve disk; Thus,
no impact of the function by counter-pressure

YOUR BENEFIT:

Protection of the system in case of emergency



One-piece double spherical
housing; Thus, very tiny distance
between the piping levels

YOUR BENEFIT:

Optimized integration into the
customer process



← INOVA
overflow valve
Type 33804



← Cutting model
combi valve
Type 12605

Type	Minisafe 33541	Overpressure valve 32102	Overflow valve 33801-33804 33901-33904	Combi valve 12605	Bunging device 35103	Bunging valve 32503
Nominal DN-sizes	8	50-100	50-100	50/65	15-25	15-40
Opening pressure range	bis 0,1 bar	bis 0,5 bar	Betriebsdruck 0-16 bar	10-220 mbar	0,5-5,0 bar	0,5-5,0 bar
Media: Steams, gases, liquids	🔥	🔥	🔥	🔥	🔥	🔥
Installation	vertical	vertical & horizontal	vertical	vertical	vertical	vertical & horizontal
Functional principle	Δ	Δ			Δ	Δ
Options						
Manual lifting	-	-	✓	-	-	-
Pneumatic lifting	-	-	✓	-	-	-
Proximity switch	-	-	✓	-	-	-

General execution:

Materials: 1.4301, 1.4307, 1.4404

Sealing materials: EPDM, FKM, FFKM

- Range of application EPDM: from -20 °C to +150 °C short-term
- Range of application FKM/FFKM: from -20 °C to +160 °C

Surface roughness of media touched parts: Ra ≤ 0,8 µm (other surface quality on request)

Connection options:

Tri-clamp connection: DIN 32676, ASME BPE, ISO 2852, DIN 11853/11864

Thread: DIN 11851, DIN 11853/11864; RJT, SMS

Welding end: DIN 11850

Flange connection: DIN EN 1092, ASME B16.5, DIN 11853/11864

Collar coupling: DIN 11853/11864

Cone/Nut: DIN 11851

Special connections on request

Functional principle:

Δ Spring-loaded

💧 Liquids

🔥 Gases



← Vacuum valve
spring-loaded
Type 12515



← Vacuum valve weight-loaded
with lifting device
Type 12504

VACUUM VALVES

For the vacuum protection of vessels and systems

Separation of housing and flange; easy on-site replacement of the seals without complete disassembly of the valve, or any special tools

YOUR BENEFIT:

Cost and time saving

Hygienic Design execution

YOUR BENEFIT:

Easy to clean, prevention of microbiologically hazardous areas and contamination of any kind.



Guided valve disk

YOUR BENEFIT:

Safe function even in
critical operating conditions

→
Cut model
Vacuum valve
Type 12525



→
Vacuum valve
spring-loaded
Type 12537



Type	12501	12525	12537	12515	12502	12519	12504	12819	12507
Nominal DN-sizes	25-80	25-80	50-80	100 -125	25-80	25-65	80-400	80-400	50-100
Opening pressure	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar	3-5 mbar
Installation	vertical & horizontal	vertical & horizontal	horizontal	vertical	vertical	vertical	vertical	vertical	vertical
Functional principle	Δ	Δ	Δ	Δ	■	■	■	■	■
Options									
Manual lifting	✓	✓	✓	✓	✓	✓	✓	✓	–
Pneumatic lifting	–	–	–	✓	✓	✓	✓	✓	✓
Proximity switch	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heating	✓	✓	✓	✓	✓	✓	✓	✓	✓
External CIP-device with splash guard	–	–	–	–	–	–	✓	–	–
Special opening pressure on request	–	–	–	–	✓	✓	3 – 200 mbar	3 – 200 mbar	–
Plastic valve cone	✓	–	–	–	✓	–	–	–	✓
Stainless steel valve cone	–	✓	✓	✓	at DN 80	✓	✓	✓	–

General execution:

Materials: 1.4307, 1.4404

Sealing materials: EPDM

- Range of application EPDM: from -20 °C to +150 °C short-term

Surface roughness of media touched parts: Ra ≤ 0,8 µm (other surface quality on request)

Connection options:

Cone/Nut: DIN 11851

Flange connection

Functional principle:

Δ Spring-loaded

■ Weight-loaded

→
Safety relief valve
on a fermenter



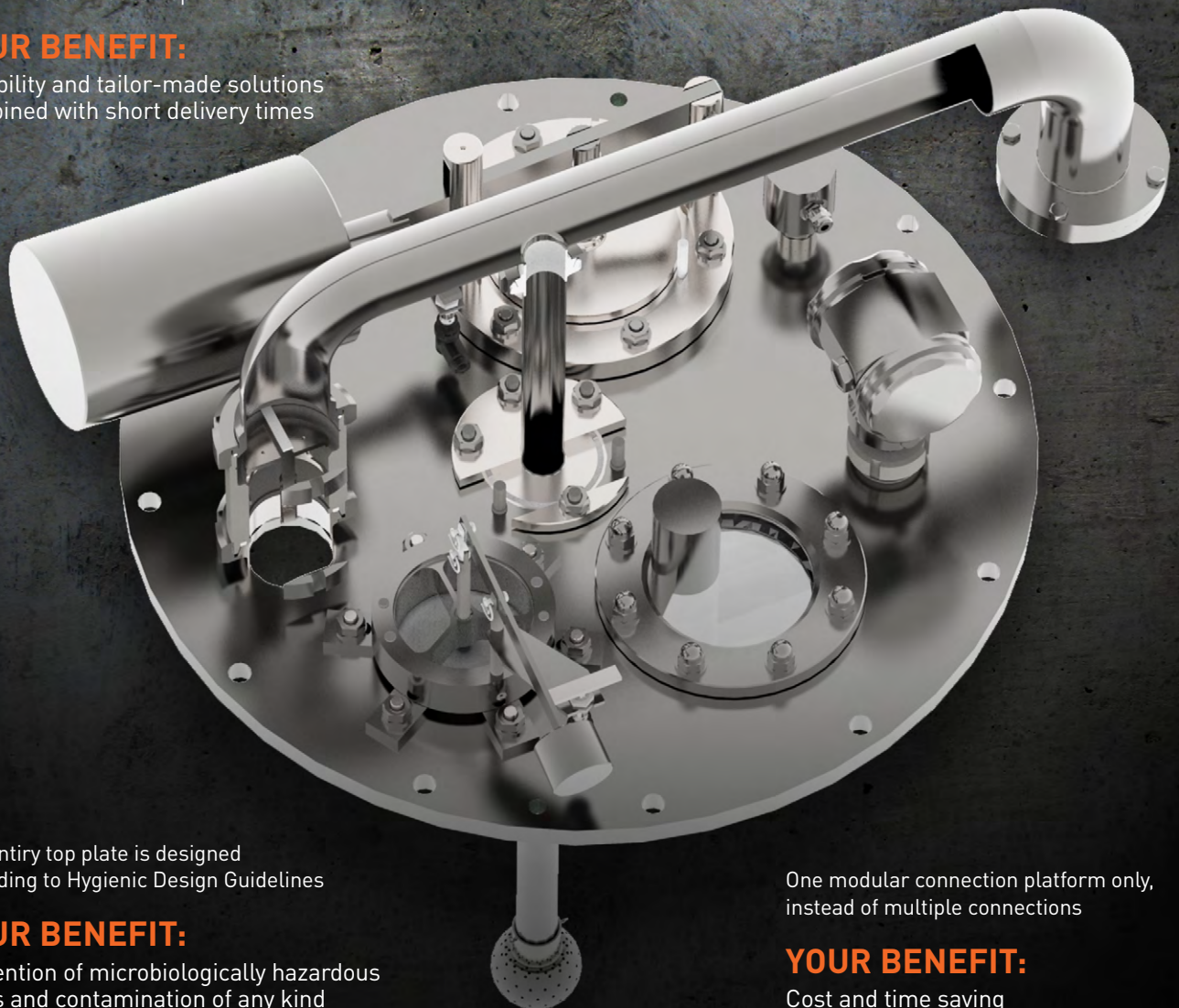
TANK TOP PLATE

Modular, technical platform for a simple combination of different functions

Modular assembly with various
customized connection options

YOUR BENEFIT:

Flexibility and tailor-made solutions
combined with short delivery times



The entire top plate is designed
according to Hygienic Design Guidelines

YOUR BENEFIT:

Prevention of microbiologically hazardous
areas and contamination of any kind

One modular connection platform only,
instead of multiple connections

YOUR BENEFIT:

Cost and time saving



← Customized top plate



← Top plate with 1-hole RLV

Safety relief valve
spring-loaded
with pneumatic
lifting

Diaphragm valve

RLV-combination

Vacuum valve
weight-loaded
with pneumatic lifting

Measurement
technology

Lighting



←
1-hole cleaning-air-valve combination (RLV)
Type 09712

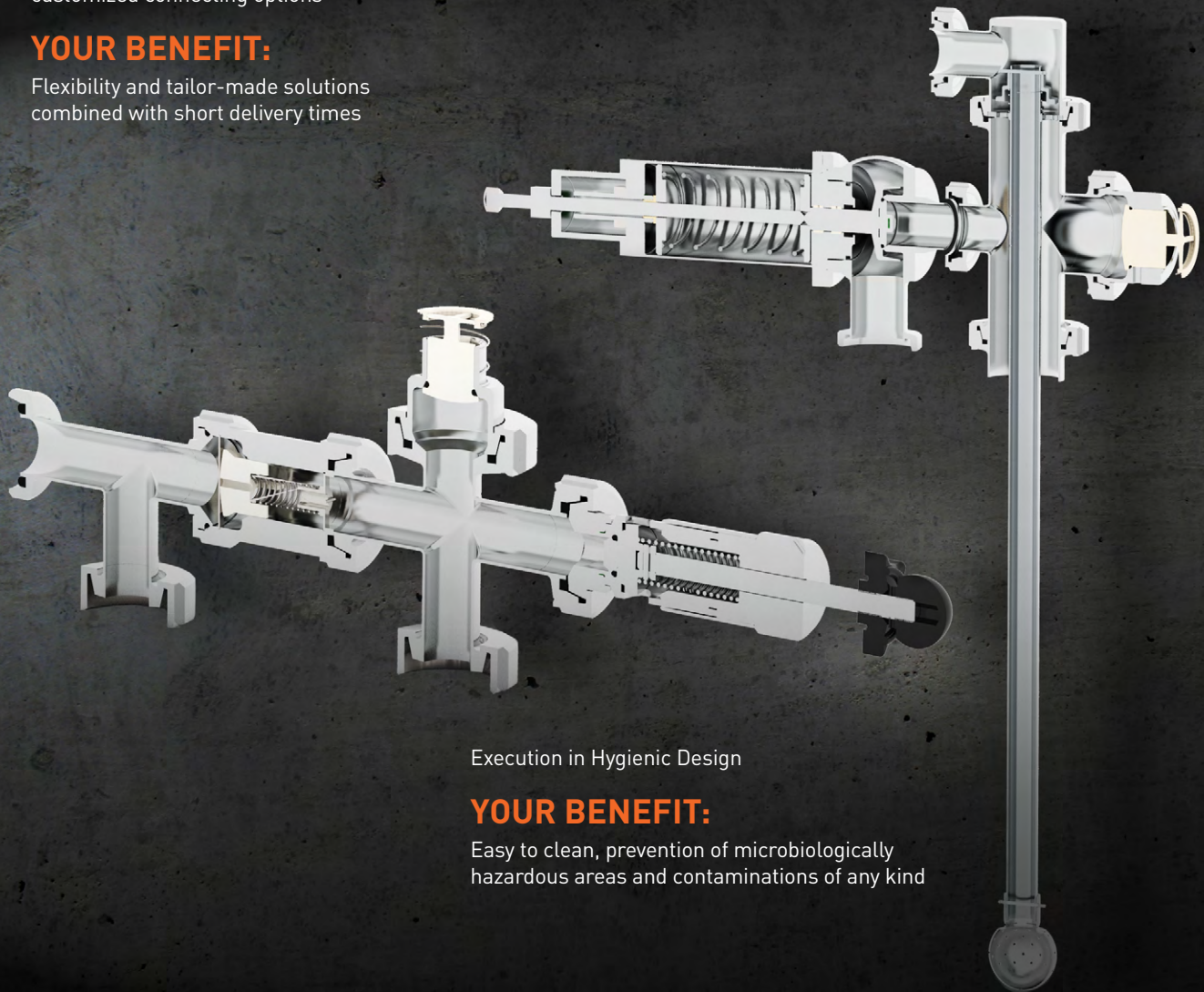
CLEANING-AIR-VALVE COMBINATION (RLV)

Compact, modular, mechanical combination of various functions

Modular assembly with various,
customized connecting options

YOUR BENEFIT:

Flexibility and tailor-made solutions
combined with short delivery times



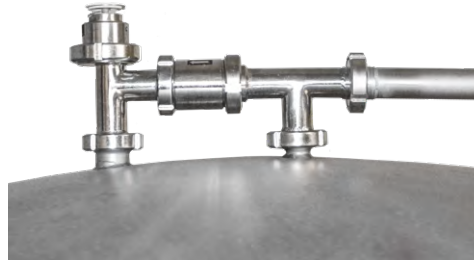
Execution in Hygienic Design

YOUR BENEFIT:

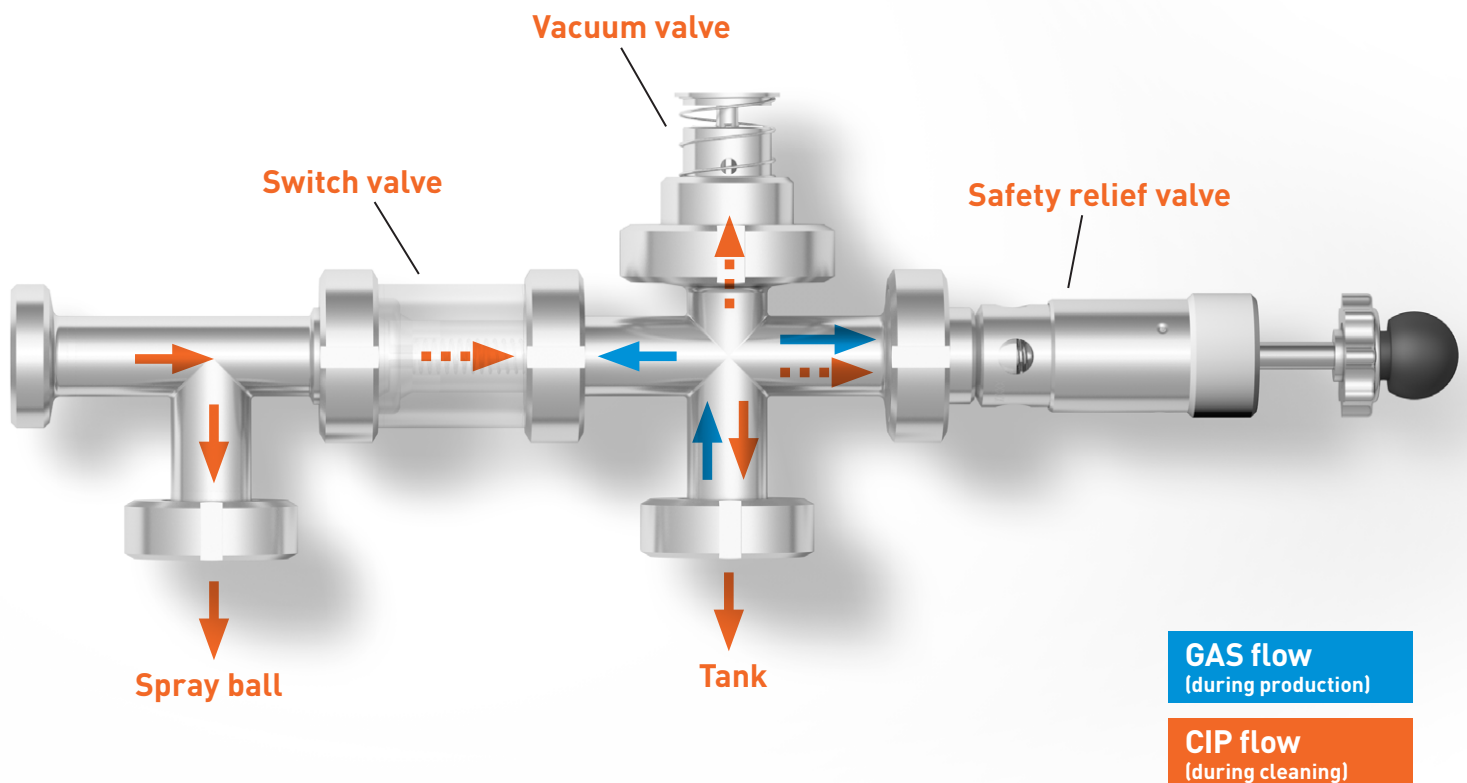
Easy to clean, prevention of microbiologically
hazardous areas and contaminations of any kind



↑
2-hole cleaning-air-valve combination (RLV)
Type 09902



←
2-hole cleaning-air-valve
combination (RLV) on a yeast tank



Production

- The tank is secured against overpressure and vacuum

Cleaning

- Tank CIP via spray ball, mounted at the first tank connection.
- Approx. 90 % of the CIP liquid are being led through the spray ball for tank cleaning.
- Approx. 10 % of the CIP liquid flows through switch valve, and cleans the seats of vacuum and pressure relief valve, too.



←
INOVA double seat valve with control head
Type 580

DOUBLE SEAT VALVES

For a safe separation of different media

Maintenance-free actuator;
easy on-site seal replacement

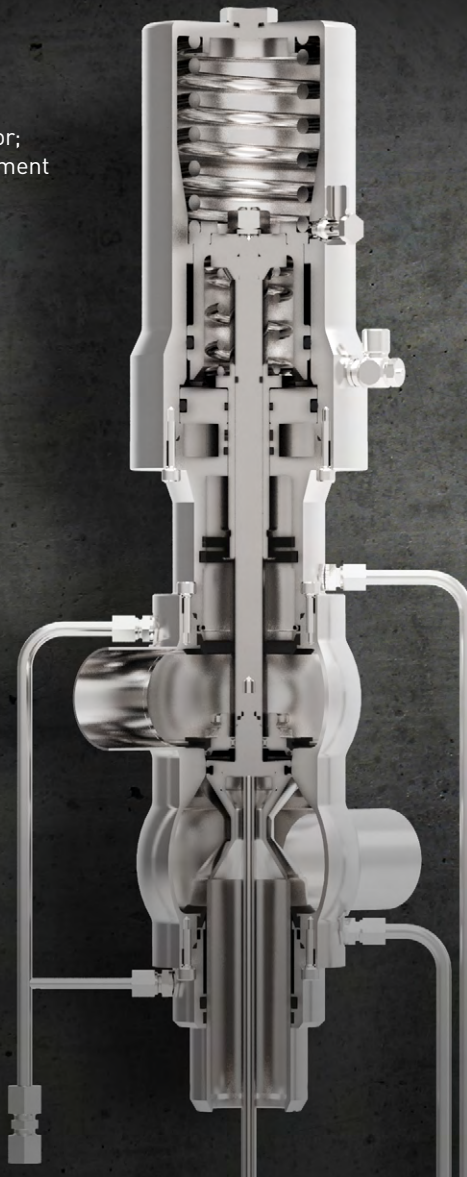
YOUR BENEFIT:

Cost and time saving

Double balancer

YOUR BENEFIT:

Pressure hammer protection



Separate leakage display
for the upper and lower lip seal

YOUR BENEFIT:

Product safety



←
INOVA double seat valve block



←
INOVA double seat valve
Type 491

Type	491	580
Nominal DN-sizes Nominal OD-sizes	50 - 150/200 (2"-4")	50 - 150/200 (2"-4")
Media: Steams, gases, liquids	🔥💧	🔥💧
Control air pressure	> 5 bar	> 5 bar
Pressure hammer protection	✓	✓
Leakage-free switching	✓	✓
Options		
Single seat lifting	–	✓
Leakage chamber cleaning	✓	✓
Balancer cleaning	✓	✓
Control unit (monitoring, control position, reply)	✓	✓
Connection head with display	✓	✓
Compressed air connection Ø 6/4 mm or 8/6 mm	✓	✓
Proximity switch	✓	✓
Various housing shapes (2-3-4 connections combinable with various DN-sizes)	✓	✓
Connection option ASI-Bus-Control	✓	✓
Design, function		
Set pressure: 0-10 bar	✓	✓
Temperature: 0° bis 95°C/150°C short term	✓	✓

General execution:

Materials: 1.4301, 1.4307, 1.4404

Sealing materials: EPDM

- Range of application EPDM: from -20 °C to +150 °C short-term

Surface roughness of media touched parts: Ra ≤ 0,8 µm (other surface quality on request)

Functional principle:

💧 Liquids
🔥 Steams
🔥 Gases



←
Butterfly valve with control head
Type 448



←
Manual butterfly valve,
execution between flanges
Type 447

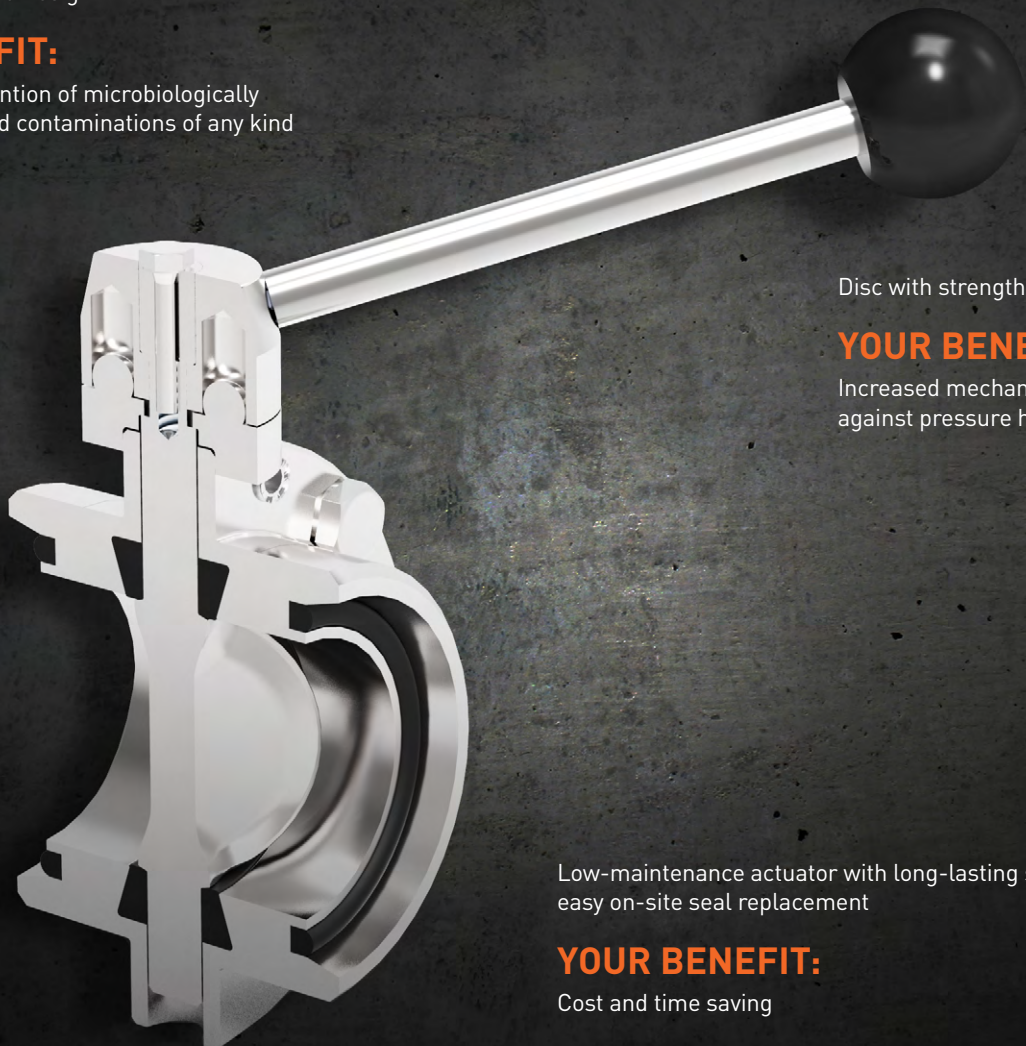
BUTTERFLY VALVES, CONTROL VALVES

For the control and regulation of process media

Execution in Hygienic Design

YOUR BENEFIT:

Easy to clean, prevention of microbiologically hazardous areas and contaminations of any kind



Disc with strengthened shaft

YOUR BENEFIT:

Increased mechanical stability
against pressure hammers

Low-maintenance actuator with long-lasting seal;
easy on-site seal replacement

YOUR BENEFIT:











Cost and time saving



←
Butterfly valve with pneumatic actuator
Type 44821



←
Control butterfly valve
Type 44937

Type	440	444	446	447	448 / 449
Nominal DN-sizes Nominal OD-sizes	25-150 (1"-6")	25-150 (1"-6")	25-150 (1"-6")	25-200 (1"-8")	25-200 (1"-8")
Media: Steams, gases, liquids	  	  	  	  	  
Options					
Air-opening/spring closing	–	–	✓	–	✓
Design, Function					
Operating pressure: 0-10 bar	✓	✓	✓	✓	✓
Temperature: 0° to 95°C /150°C short-term	✓	✓	✓	✓	✓
Control head					
Electrical control: 4 - 20mA, Profibus	–	✓	✓	–	✓

General execution:


Materials: 1.4301, 1.4307, 1.4404


Sealing materials: EPDM, HNBR, FDA compliant


- Range of application EPDM: from -20 °C to +150 °C short-term

Surface roughness of media-touched parts: Ra ≤ 0,8 µm (other surface qualities on request)

Functional principle:

 Liquids

 Steams

 Gases

Connection options:

Tri-clamp connection: DIN 32676, DIN 11853/11864, OD

Thread: DIN 11851, DIN 11853/11864

Welding end: DIN 11850, OD

Cone/Nut: DIN 11851

Execution between flanges welding end: DIN 11850, OD

Special connections on request

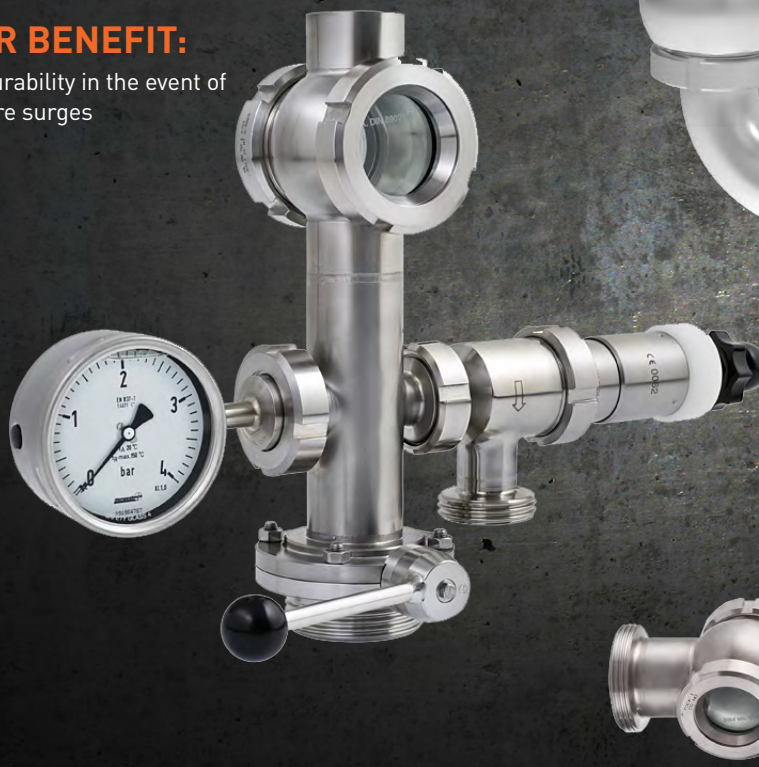
SPECIAL ARMATURES

For process control, aeration and reliable separation of beer

Compact multi-functional unit for control, monitoring and checking

YOUR BENEFIT:

High durability in the event of pressure surges



Double tank outlet

YOUR BENEFIT:

For reliable separation of clear drainage and drainage of left-overs



Aeration system for yeast and wort aeration.

YOUR BENEFIT:

Adaptation and integration for individual requirements



→
Aeration system
VARIO AIR
Type 740



→
System armature
Type 30807



Type	Aeration system type 74002	Aeration system type 74003	Aeration system type 74004
Nominal DN-sizes	25-150	25-100	25-80
Installation position	vertical & horizontal	vertical & horizontal	vertical & horizontal
Output	up to 1,900 hl/h	up to 500 hl/h	up to 250 hl/h
Design, Function			
Operating pressure: 0-10 bar	✓	✓	✓
Temperature 0° to 140°C	✓	✓	✓
CIP/SIP capability	✓	✓	✓

General execution:

Materials: 1.4307, 1.4404

Sealing material: EPDM

- Range of application EPDM: from -20 °C to +150 °C short-term

Surface properties of product-contacting components: Ra ≤ 0.8 µm [other surface properties on request]

Connection options:

Coupling: DIN 11851, DIN 11864

Type	System armature type 308
Nominal sizes DN	25-100
Design, Function	
Operating pressure: 0-10 bar	✓
Temperature 0° to 95°C	✓

General execution:

Materials: 1.4307, 1.4404

Sealing materials: EPDM, HNBR

Surface quality of product-contacting components: Ra 0.8 - 1.6 µm

Connection options:

Welding end: DIN 11851

Type	Double tank outlet type 30301
Nominal sizes DN	25-150
Tank connection DN	50-150
Drainage of clean media DN	25-100
Drainage of left-overs	25-100

General execution:

Materials: 1.4307, 1.4404

Sealing materials: EPDM, HNBR

Surface quality of product-contacting components: Ra 0.8 - 1.6 µm

Connection options:

Welding end: DIN 11851

Flanges

BLOCK AND BLEED VALVE COMBINATION

The leakage solution from Handtmann

Standardized components in
Hygienic Design

YOUR BENEFIT:

Reliable separation of media
and high process dependability
and safety at work



Smart Design

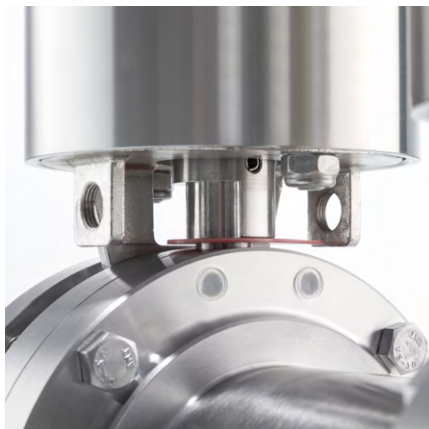
YOUR BENEFIT:

Easy maintenance and
supply of wear and tear parts

Flexible installation and
modular design

YOUR BENEFIT:

Optionally single or
multiple control and modular
design



←
Block and Bleed valve combination
Type 74830



←
Block and Bleed valve combination
Type 74830

Type	74830							
Butterfly valves nominal sizes DN	25 (1")	40 (1½")	50 (2")	65 (2½")	80 (3")	100 (4")	125 –	150 –
Butterfly valves nominal sizes OD								
Diaphragm valve DN	15	15	15	15	15	15	15	15
Operating pressure: 0-10 bar	✓	✓	✓	✓	✓	✓	✓	✓
Temperature 0 ° to 70 °C hot lye	✓	✓	✓	✓	✓	✓	✓	✓
Temperature 0 ° to 90 °C hot water / 140 °C short-term (with EPDM)	✓	✓	✓	✓	✓	✓	✓	✓

General execution:

Product-contacting parts:

Materials: 1.4301, 1.4404

Sealing materials: EPDM, FDA proof

- Range of application EPDM: from -20 °C to +150 °C short-term

Surface quality of product-contacting components: Ra ≤ 0,8 µm

Other parts:

Materials: 1,4301

Sealing materials: EPDM

- Range of application EPDM: from -20 °C to +150 °C short-term

Connection options:

Intermediate flange design welding end

Special connections on request

SERVICE SOLUTIONS

Long-term preservation of your components and plants
and continuous increase in productivity

- Spare Parts,
Care Packages &
Service Tools
- Inhouse Service
- Quickcheck
- Full Service Packages
- Training

Feel free to contact us!

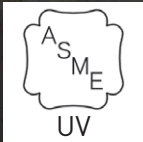
Handtmann,

Your partner for process safety
service.af@handtmann.de



CERTIFICATIONS

ASME



EAC



CE



EHEDG



TÜV Süd



YOUR PARTNER

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