HANDTMANN COMPONENTS
Valves and Fittings for Hygienic Processes - Technical Data
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.
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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.
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
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:
Spring-loaded
Weight-loaded
Liquids
Steams
Gases

<table>
<thead>
<tr>
<th>Type</th>
<th>33551 ASME</th>
<th>33651 ASME</th>
<th>33501 33521</th>
<th>33601 33621</th>
<th>33503 33603</th>
<th>33502</th>
<th>33602</th>
<th>32500 32501 32502</th>
<th>32503</th>
<th>32603</th>
<th>32504</th>
<th>32604</th>
<th>32010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal DN-sizes</td>
<td>15 – 80 [1&quot; - 3&quot;]</td>
<td>15 – 80 [1&quot; - 3&quot;]</td>
<td>15 – 80 [1½&quot; - 3&quot;]</td>
<td>40 – 80</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 5,0 bar</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 10,0 bar</td>
<td>0,5 – 5,0 bar</td>
<td>65 – 125 [2½&quot; - 6&quot;]</td>
</tr>
<tr>
<td>Nominal OD-sizes</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td>10,0 bar</td>
<td></td>
</tr>
</tbody>
</table>

Options:
- Manual lifting
- Pneumatic lifting
- Proximity switch
- Heating device
- Scale for pressure adjustment
- Sealing against changing the pressure, changing the spring and by TÜV
OVERFLOW VALVES, PRESSURE COMPENSATION VALVES, BUNGING DEVICES

Process safety by pressure relief and -constant

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

Cutting model bunging device  
Type 35103

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
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

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

Functional principle: Δ Spring-loaded

◦ Liquids

◦ Gases
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
### Functional principle
- ∆ Spring-loaded
- ■ Weight-loaded

### 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
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

Safety relief valve on a fermenter

One modular connection platform only, instead of multiple connections

**YOUR BENEFIT:**
Cost and time saving
Safety relief valve spring-loaded with pneumatic lifting

Diaphragm valve

RLV-combination

Vacuum valve weight-loaded with pneumatic lifting

Measurement technology

Lighting
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
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.
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
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:

<table>
<thead>
<tr>
<th>Type</th>
<th>491</th>
<th>580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal DN-sizes</td>
<td>50 - 150/200 (2”-4”)</td>
<td>50 - 150/200 (2”-4”)</td>
</tr>
<tr>
<td>Nominal OD-sizes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media:</td>
<td>Steams, gases, liquids</td>
<td>Steams, gases, liquids</td>
</tr>
<tr>
<td>Control air pressure</td>
<td>&gt; 5 bar</td>
<td>&gt; 5 bar</td>
</tr>
<tr>
<td>Pressure hammer protection</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Leakage-free switching</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Options

<table>
<thead>
<tr>
<th></th>
<th>Single seat lifting</th>
<th>Leakage chamber cleaning</th>
<th>Balancer cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Control unit (monitoring, control position, reply)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Connection head with display</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Compressed air connection Ø 6/4 mm or 8/6 mm</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Proximity switch</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Various housing shapes [2-3-4 connections combinable with various DN-sizes]</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Connection option ASI-Bus-Control</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Design, function

<table>
<thead>
<tr>
<th></th>
<th>Set pressure: 0-10 bar</th>
<th>Temperature: 0° bis 95°C / 150°C short term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
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
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]

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

Functional principle:
Liquid
Steam
Gas

<table>
<thead>
<tr>
<th>Type</th>
<th>440</th>
<th>444</th>
<th>446</th>
<th>447</th>
<th>448 / 449</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal DN-sizes</td>
<td>25-150</td>
<td>25-150</td>
<td>25-150</td>
<td>25-200</td>
<td>25-200</td>
</tr>
<tr>
<td>Nominal OD-sizes</td>
<td>(1”-6”)</td>
<td>(1”-6”)</td>
<td>(1”-6”)</td>
<td>(1”-8”)</td>
<td>(1”-8”)</td>
</tr>
<tr>
<td>Media:</td>
<td>Steams, gases, liquids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Options</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Design, Function</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Operating pressure: 0-10 bar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Temperature: 0° to 95°C /150°C short-term</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Control head</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Electrical control: 4 - 20mA, Profibus</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
</tbody>
</table>
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

**Type:** VARIO AIR

**Type:** 740

<table>
<thead>
<tr>
<th>Type</th>
<th>Aeration system type 74002</th>
<th>Aeration system type 74003</th>
<th>Aeration system type 74004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal DN-sizes</td>
<td>25-150</td>
<td>25-100</td>
<td>25-80</td>
</tr>
<tr>
<td>Installation position</td>
<td>vertical &amp; horizontal</td>
<td>vertical &amp; horizontal</td>
<td>vertical &amp; horizontal</td>
</tr>
<tr>
<td>Output</td>
<td>up to 1,900 hl/h</td>
<td>up to 500 hl/h</td>
<td>up to 250 hl/h</td>
</tr>
</tbody>
</table>

**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

### System Armature

**Type:** VARIO ARM

**Type:** 308

<table>
<thead>
<tr>
<th>Type</th>
<th>System armature type 308</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal sizes DN</td>
<td>25-100</td>
</tr>
</tbody>
</table>

**Design, Function**

- Operating pressure: 0-10 bar
- Temperature 0° to 95°C

**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:**

- Welding end: DIN 11851

### Double Tank Outlet

**Type:** 30301

<table>
<thead>
<tr>
<th>Type</th>
<th>Double tank outlet type 30301</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal sizes DN</td>
<td>25-150</td>
</tr>
<tr>
<td>Tank connection DN</td>
<td>50-150</td>
</tr>
<tr>
<td>Drainage of clean media DN</td>
<td>25-100</td>
</tr>
<tr>
<td>Drainage of left-overs</td>
<td>25-100</td>
</tr>
</tbody>
</table>

**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
Type 74830

<table>
<thead>
<tr>
<th>Type</th>
<th>74830</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterfly valves nominal sizes DN</td>
<td>25 (1&quot;) 40 (1½&quot;) 50 (2&quot;) 65 (2½&quot;) 80 (3&quot;) 100 (4&quot;) 125 - 150</td>
</tr>
<tr>
<td>Butterfly valves nominal sizes OD</td>
<td>-</td>
</tr>
<tr>
<td>Diaphragm valve DN</td>
<td>15 15 15 15 15 15 15 15</td>
</tr>
<tr>
<td>Operating pressure: 0-10 bar</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Temperature 0 ° to 70 °C hot lye</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Temperature 0 ° to 90 °C hot water / 140 °C short-term (with EPDM)</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>

**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