

# Pharmaceutical Industry

## LESER Industry Solution

The pharmaceutical industry has special requirements regarding the cleanability, materials and documentation of safety valves. With the Clean Service Series LESER offers safety valves which fulfil all these demands. As a full range supplier LESER provides safety valves for all hygienic applications as well as for utilities.

Safety valves provide overpressure protection e.g. for:

- Vessels and other process equipment in case of an unexpected malfunction
- Piping systems against thermal expansion
- Dryers or reactors in case of failure





## Customers

- AstraZeneca plc
- Bayer AG
- Boehringer Ingelheim AG & Co. KG
- F. Hoffmann-La Roche AG
- Fresenius Medical Care AG & Co. KGaA
- L'Oreál S.A.
- Merck KGaA
- Novartis International AG
- Pfizer Inc.

## LESER Product Solution

### Clean Service

Product Features	Benefits
<ul style="list-style-type: none"> <li>• Valve sizes from DN 25 to DN 100, 1" to 4"</li> <li>• Materials: 1.4404 / 316L 1.4435 / 316L</li> <li>• No bacteria traps or contamination</li> <li>• Minimum dead leg design and flush-mounting capability</li> <li>• Gap and crevice free design of internals</li> <li>• Optional pneumatic lifting device and proximity switch for plant automation</li> <li>• Wetted-part surface acc. to DIN 11866 and ASME BPE 2002</li> <li>• Use of  and  compliant elastomer</li> <li>• Single trim for steam, gas and liquid</li> <li>• Temperature: -45 °C to +150 °C</li> <li>• Set pressure from 0.1 bar to 68 bar</li> </ul>	<ul style="list-style-type: none"> <li>• Great variety of clamp and threaded connections for high flexibility</li> <li>• Standard elastomer bellows for protection of the hard to clean parts</li> <li>• Series 48x is fully made of stainless steel, no casting parts for high surface quality</li> <li>• One-piece spindle for optimised setting accuracy and less friction</li> <li>• CIP (cleaning in place) and SIP (sterilizing in place) with pneumatic lifting device H8 possible</li> <li>• Self-draining body design, avoids residues and reduces corrosion</li> </ul>



### Compact Performance

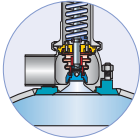
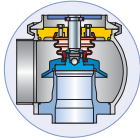
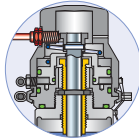



Product Features	Benefits
<ul style="list-style-type: none"> <li>• Valve sizes from 3/8" to 1 1/2"</li> <li>• Materials: 0.7043, 1.0619 / WCB, 1.4404 / 316L, 1.4408 / CF8M, high alloys</li> <li>• Threaded or flanged connections</li> <li>• Standard metal seat, stellite, O-ring or sealing plate for improved seat tightness</li> <li>• Optional bellows design available</li> <li>• Temperature: -270 °C to +538 °C</li> <li>• Single trim for steam, gas and liquid</li> <li>• Set pressure from 0.1 bar to 850 bar</li> </ul>	<ul style="list-style-type: none"> <li>• Great variety of threaded and flanged connections for high flexibility (including Swagelok®)</li> <li>• High capacity relative to the safety valve size for maximised efficiency</li> <li>• Bellows design for back pressure and corrosive applications</li> <li>• Vulcanized and sealing plate seating options to meet application requirements</li> <li>• Self draining body for less corrosion</li> <li>• Blank surfaces for appealing look</li> </ul>









# LESER

The-Safety-Valve.com

# Advantages

Feature	Cleanability	HyTight Assembly (Hygienic and Tightness)	Plant Automation
			
<b>Benefit</b>	<ul style="list-style-type: none"> <li>• CIP (cleaning in place) and SIP (sterilizing in place) capabilities for sanitary processes</li> <li>• International surface definition acc. to ASME BPE and DIN 11866</li> <li>• Low dead space for easy cleanability</li> </ul>	<ul style="list-style-type: none"> <li>• Gap free internal design</li> <li>• Surface roughness up to R<sub>a</sub> 15 µmch</li> <li>• Superior tightness</li> </ul>	<ul style="list-style-type: none"> <li>• Automated opening of valve during cleaning cycle (CIP, SIP) with lifting device H8</li> <li>• Proof of valve opening during cleaning cycle with lift indicator</li> <li>• Remote display from a control room possible</li> </ul>
Feature	Broad Product Range	Non-upright Installation	Made in Germany; Assembled Locally
			
<b>Benefit</b>	<ul style="list-style-type: none"> <li>• Solutions for all industrial applications for steam, gas and liquid</li> <li>• Facilitates coordinated planning, delivery and sizing from one source</li> <li>• Highest flexibility for implementing special solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Space saving installation</li> <li>• High flexibility of equipment design</li> <li>• Type test approval for most Clean Service Types available</li> </ul>	<ul style="list-style-type: none"> <li>• All products exclusively made in Germany</li> <li>• Large local stocks for short delivery times</li> <li>• In cases of an emergency same day delivery possible</li> </ul>

# Additional Products

					
<b>High Performance</b>	<b>API</b>	<b>Modulate Action</b>	<b>High Efficiency</b>	<b>Critical Service</b>	<b>Best Availability Change-over Valve</b>
441, 458, XXL	526	429, 433	810, 820	447, 449, 546	310, 311 XXL
DN 20 to DN 400	DN 25 to DN 200	DN 15 to DN 150	DN 25 to DN 200	DN 25 to DN 100	DN 25 to DN 500
3/4" to 16"	1" to 8"	1/2" to 6"	1" to 8"	1" to 4"	1" to 20"
0.1 to 300 bar	0.1 to 414 bar	0.2 to 160 bar	2.5 to 63 bar	0.1 to 16 bar	PN 10 to PN 160

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Your local partner:

# Worldwide Approvals

Europe	ISO 4126-1 / -4
Germany	AD 2000-Merkblatt A2
United States	ASME Sec. VIII Div. 1
Canada	CRN
China	AQSIQ
Russia	ROSTECHNADZOR / GOST R

For further information visit [www.leser.com](http://www.leser.com)

