

LESER USP's
API Series 526



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Objectives of this Presentation. Knowledge to learn.

1. [Objectives](#) | 2. [Single Trim](#) | 3. [Shielded Bellows](#) | 4. [Spindle Guiding](#) | 5. [Handling](#) | 6. [Body and Nozzle Design](#) | 7. [Disc and Nozzle Materials](#) | 8. [Spring Adjustment](#)

The aim of this presentation is to point out **the advantages of LESER API Series 526** against the competition.

1. Objectives
2. Single Trim
3. Shielded Bellows
4. Spindle Guiding
5. Handling
6. Body and Nozzle Design
7. Disc and Nozzle Materials
8. Spring Adjustment

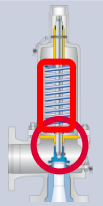
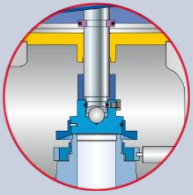
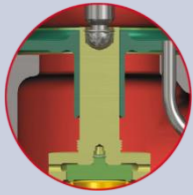
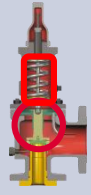


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Single Trim.

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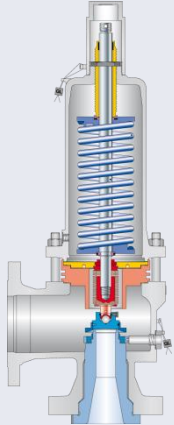
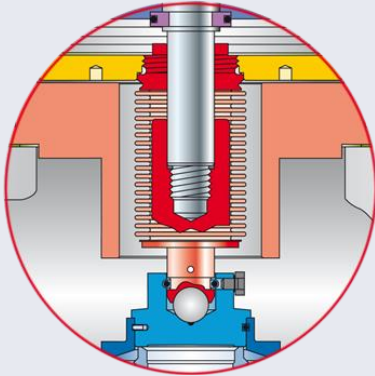
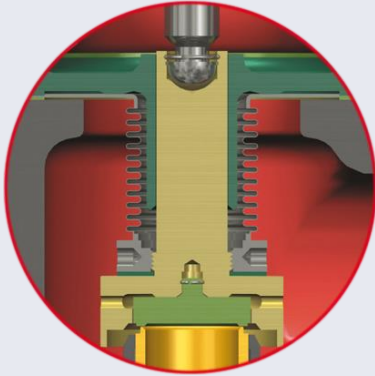
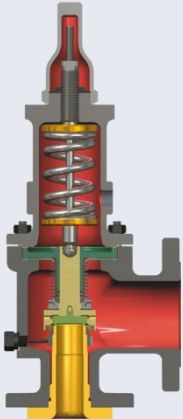
	LESER	Competitor	LESERs Benefit
Trim	<ul style="list-style-type: none"> Single trim and design for all services (steam/gas and liquid) and options (e.g. bellows, O-ring disc) Same setting for all services (steam/gas and liquid) 	<ul style="list-style-type: none"> Different parts and springs for different options and services 	<ul style="list-style-type: none"> Same parts for all services for easier maintenance No changes for ASME, PED or Chinese AQSIQ approval Less parts reduce spare part stock
Spring	<ul style="list-style-type: none"> Low number of springs for a fixed set pressure range 	<ul style="list-style-type: none"> Multiplicity of springs 	<ul style="list-style-type: none"> LESER needs only 13 springs for 15 psig to 1,500 psig (Orifice D) vs. 39 springs Reduced spring stock for a better spring availability
			

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Shielded Bellows.

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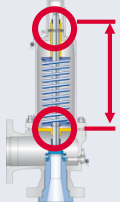
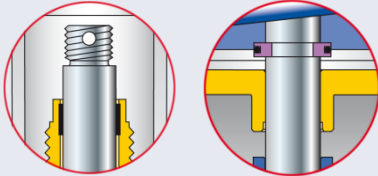
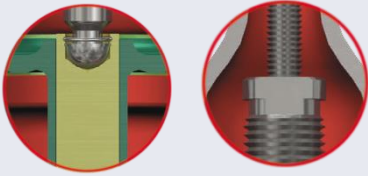
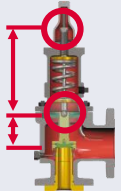
	LESER	Competitor	LESERs Benefit
Inconel Bellows	<ul style="list-style-type: none">■ Inconel bellows are shielded by the bonnet spacer■ Designed for 10,000 bellows cycles	<ul style="list-style-type: none">■ Balanced bellows or Inconel bellows are fully expose to the flow■ Designed for 1,000 bellows cycles	<ul style="list-style-type: none">■ Longer lifetime■ Less shutdown time in the plant
			

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Spindle Guiding.

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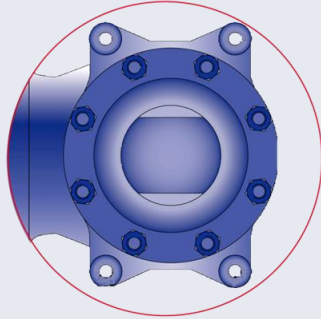


	LESER	Competitor	LESERs Benefit
Bushing	<ul style="list-style-type: none"> The adjusting screw is equipped with a PTFE bush 	<ul style="list-style-type: none"> Metal spindle is directly in contact with the adjusting screw 	<ul style="list-style-type: none"> Less friction during operation Less abrasion of the spindle
Spindle Design	<ul style="list-style-type: none"> One-piece spindle 	<ul style="list-style-type: none"> Two-piece spindle consists of disc holder and spindle 	<ul style="list-style-type: none"> Better alignment Easier assembly Simpler design Lower mass
Spindle Guiding	<ul style="list-style-type: none"> Widely spaced top and bottom guide Short guiding length (max. 1,5 x spindle diameter) 	<ul style="list-style-type: none"> Closely spaced guiding Larger guiding length (approx. 2 x disc holder diameter) 	<ul style="list-style-type: none"> Better alignment Less friction at the guiding
 <p>A 3D cutaway diagram of a valve spindle assembly. Two red circles highlight the top and bottom guide rings. Red double-headed arrows indicate the wide spacing between these guides.</p>	 <p>Two circular diagrams. The left one shows a single-piece spindle with a spring. The right one shows a two-piece spindle assembly with a disc holder and spindle.</p>	 <p>Two circular diagrams. The left one shows a spindle with a disc holder. The right one shows a spindle with a long, closely spaced guiding section.</p>	 <p>A 3D cutaway diagram of a valve spindle assembly. Two red circles highlight the top and bottom guide rings. Red double-headed arrows indicate the narrow spacing between these guides.</p>

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Handling.

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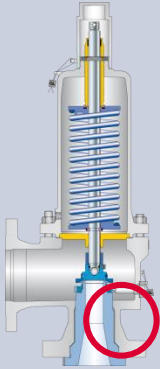
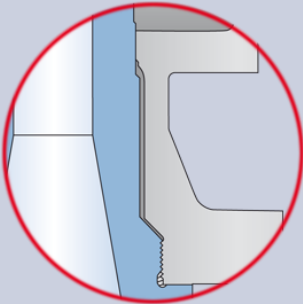
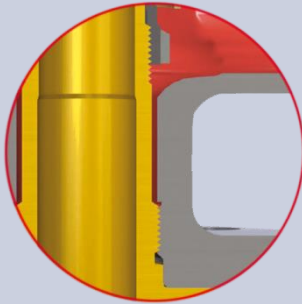
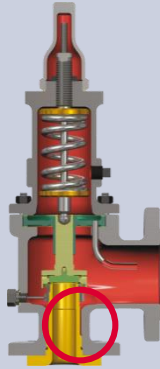
	LESER	Competitor	LESERs Benefit
Supporting Brackets	<ul style="list-style-type: none">■ Every body is equipped with supporting brackets	<ul style="list-style-type: none">■ No supporting brackets available	<ul style="list-style-type: none">■ Easier handling and installation of heavy safety valves■ Absorption of reaction forces during discharge
			

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Body and Nozzle Design.

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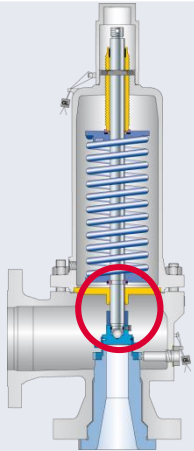
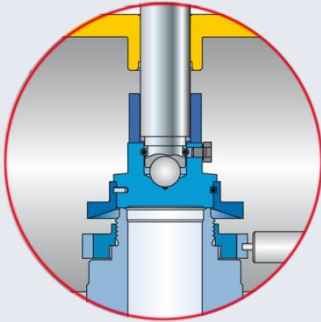
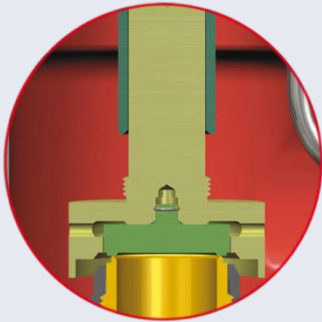
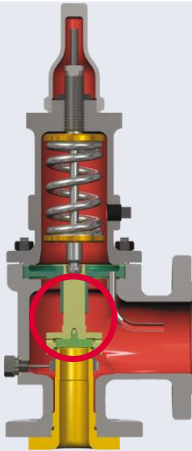
	LESER	Competitor	LESERs Benefit
Body	<ul style="list-style-type: none"> ■ Flat bottom body ■ Self draining design 	<ul style="list-style-type: none"> ■ Body with sump 	<ul style="list-style-type: none"> ■ No dirt deposition ■ Less corrosion
Nozzle	<ul style="list-style-type: none"> ■ Top and bottom guided nozzle 	<ul style="list-style-type: none"> ■ Only bottom guided nozzle 	<ul style="list-style-type: none"> ■ Better alignment of disc and nozzle ■ Guiding of the nozzle for easy installation
			

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Disc and Nozzle Materials.

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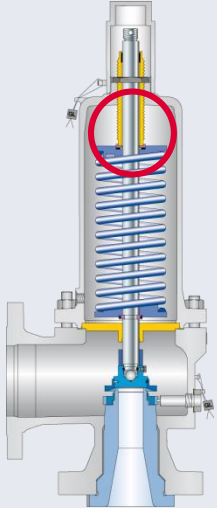
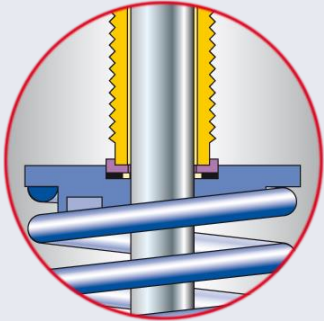
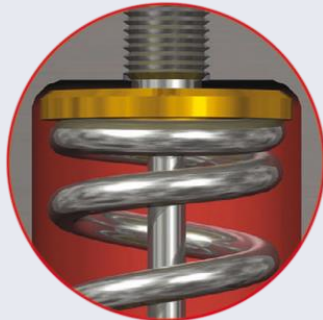
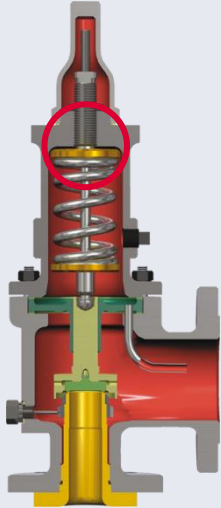
	LESER	Competitor	LESERs Benefit
Materials	<ul style="list-style-type: none">■ Class 150 ... Class 300: hardened disc■ Class 600 and higher: hardened disc and stellite nozzle	<ul style="list-style-type: none">■ Disc and nozzle made of 316L	<ul style="list-style-type: none">■ Longer lifetime due to harder surface
			

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Spring Adjustment.

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	LESER	Competitor	LESERs Benefit
Bearing	<ul style="list-style-type: none">Needle bearing between adjustment screw and upper spring plate	<ul style="list-style-type: none">Direct contact between adjusting screw and upper spring plate	<ul style="list-style-type: none">Easier and more precise settingNo distortion of the spring
			

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Thank you for your attention.



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