

## Conventional design

Materials					
Item	Component	Standard Service Type 5262 Trim: Standard	Corrosive Service Type 5264 Trim: Standard	Type 5267 Trim: Standard	Type 5263 Trim: Standard
1	Body	1.0619	1.4408	1.7357	
		SA 216 WCB	SA 315 CF8M	SA 217 WC6	SA 352 LCB
5	Nozzle <sup>1)</sup>	1.4404	1.4404	1.4404 stellited	1.4404
		316 L	316L	316L stellited	316L
6	Adjusting ring	1.4408	1.4408	1.4404	1.4408
		CF8M	CF8M	316L	CF8M
7	Disc	1.4122	1.4404 stellited	1.4122	1.4122
		Hardened stainless steel	316L stellited	Hardened stainless steel	Hardened stainless steel
8	Guide	1.4404	1.4404	1.4404	1.4404
		316 L	316L	316L	316L
9	Bonnet	1.0619	1.4404, 1.4571	1.7357	
		SA 216 WCB	SA 479 316L, 316Ti	SA 217 WC6	SA 352 LCB
12	Spindle	1.4021	1.4021	1.4021	1.4021
		420	420	420	420
14	Split ring	1.4104	1.4404	1.4104	1.4104
		Chrome steel	316L	Chrome steel	Chrome steel
16 / 17	Spring plate	1.0718	1.4404	1.0718	1.0718
		Steel	316L	Steel	Steel
18	Adjusting screw	1.4104	1.4404 tenifer	1.4104	1.4104
		Chrome steel	316L tenifer	Chrome steel	Chrome steel
	with bushing	PTFE with 15% Glas	PTFE 15% Glas	PTFE 15% Glas	PTFE 15% Glas
19	Lock nut	- " -	- " -	- " -	- " -
		1.0718	1.4404	1.0718	1.0718
22	Lift stopper	Steel	316L	Steel	Steel
		1.4404	1.4404	1.4404	1.4404
40	Cap H2	316L	316L	316L	316L
		1.0718	1.4404	1.0718	1.0718
54	Spring	Steel	316L	Steel	Steel
		1.8159	1.4310	1.8159	1.8159
55	Stud	High temp. alloy steel	Stainless steel	High temp. alloy steel	High temp. alloy steel
		1.4401	1.4401	1.4401	1.4401
56	Nut	B8M	B8M	B8M	B8M
		1.4401	1.4401	1.4401	1.4401
57	Ball	8M	8M	8M	8M
		1.4401	1.4401	1.4401	1.4401
60	Gasket	316	316	316	316
		Graphite / 1.4401	Graphite / 1.4401	Graphite / 1.4401	Graphite / 1.4401
61	Ball	Graphite / 316	Graphite / 316	Graphite / 316	Graphite / 316
		1.3541	1.4401	1.3541	1.3541
64	Plug	Hardened stainless steel	316	Hardened stainless steel	Hardened stainless steel
		Steel	1.4401	Steel	Steel
66	Screw	- " -	B8M	- " -	- " -
		1.4401	1.4401	1.4401	1.4401
69	Needle bearing	B8M	B8M	B8M	B8M
		1.4404	1.4404	1.4404	1.4404
73	Lock screw	316L	316 L	316L	316L
		1.4404	1.4404	1.4404	1.4404
		8M	8M	8M	8M

<sup>1)</sup> Stellited sealing surfaces please refer to page 99/06

**Please notice:**

- Modifications reserved by LESER
- LESER can upgrade materials without notice
- Every part can be replaced by other material acc. to customer specification.

**Special materials:**

Body and trim available in various materials (Monel®, Hastelloy® ...).  
For nozzle and disc machined from the bar a short lead time is possible.

## Balanced bellows design

Materials					
Item	Component	Standard Service Type 5262 Trim: Standard	Corrosive Service Type 5264 Trim: Standard	Type 5267 Trim: Standard	Type 5263 Trim: Standard
1	Body	1.0619	1.4408	1.7357	
		SA 216 WCB	SA 315 CF8M	SA 217 WC6	SA 352 LCB
5	Nozzle <sup>2)</sup>	1.4404	1.4404	1.4404 stellited	1.4404
		316 L	316L	316L stellited	316L
6	Adjusting ring	1.4408	1.4408	1.4404	1.4408
		CF8M	CF8M	316L	CF8M
7	Disc	1.4122	1.4404 stellited	1.4122	1.4122
		Hardened stainless steel	316L stellited	Hardened stainless steel	Hardened stainless steel
8	Guide	1.4404	1.4404	1.4404	1.4404
		316 L	316L	316L	316L
9	Bonnet	1.0619	1.4404, 1.4571	1.7357	
		SA 216 WCB	SA 479 316L, 316Ti	SA 217 WC6	SA 352 LCB
	Valve size 6 R 10, 8T10	1.0305 Steel	1.4571 SA 479 316Ti	1.0305 Steel	1.0305 Steel
11	Bonnet spacer <sup>1)</sup>	1.0460 Carbon steel	1.4404 SA 479 316L	1.4404 SA 479 316L	1.4404 316L
12	Spindle	1.4021	1.4021	1.4021	1.4021
		420	420	420	420
14	Split ring	1.4104	1.4404	1.4104	1.4104
		Chrome steel	316L	Chrome steel	Chrome steel
15	Bellows	1.4571	1.4571	1.4571	1.4571
		316 Ti	316 Ti	316 Ti	316 Ti
16 / 17	Spring plate	1.0718	1.4404	1.0718	1.0718
		Steel	316L	Steel	Steel
18	Adjusting screw	1.4104	1.4404 tenifer	1.4104	1.4104
		Chrome steel	316L tenifer	Chrome steel	Chrome steel
	with bushing	PTFE with 15% Glas - " -	PTFE 15% Glas - " -	PTFE 15% Glas - " -	PTFE 15% Glas - " -
19	Lock nut	1.0718	1.4404	1.0718	1.0718
		Steel	316L	Steel	Steel
22	Lift stopper	1.4404	1.4404	1.4404	1.4404
		316L	316L	316L	316L
40	Cap H2	1.0718	1.4404	1.0718	1.0718
		Steel	316L	Steel	Steel
54	Spring	1.8159	1.4310	1.8159	1.8159
		High temp. alloy steel	Stainless steel	High temp. alloy steel	High temp. alloy steel
55	Stud	1.4401	1.4401	1.7709	1.4401
		B8M	B8M	B16	B8M
56	Nut	1.4401	1.4401	1.7258	1.4401
		8M	8M	7M	8M
57	Ball	1.4401	1.4401	1.4401	1.4401
		316	316	316	316
60	Gasket	Graphite / 1.4401	Graphite / 1.4401	Graphite / 1.4401	Graphite / 1.4401
		Graphite / 316	Graphite / 316	Graphite / 316	Graphite / 316
61	Ball	1.3541	1.4401	1.3541	1.3541
		Hardened stainless steel	316	Hardened stainless steel	Hardened stainless steel
66	Screw	1.4401	1.4401	1.4401	1.4401
		B8M	B8M	B8M	B8M
69	Needle bearing	1.4404	1.4404	1.4404	1.4404
		316L	316 L	316L	316L
73	Lock screw	1.4404	1.4404	1.4404	1.4404
		8M	8M	8M	8M

<sup>1)</sup> Valve size 6 R 10 and 8 T 10 without bonnet spacer    <sup>2)</sup> Stellited sealing surfaces please refer to page 99/06

### Please notice:

- Modifications reserved by LESER
- LESER can upgrade materials without notice
- Every part can be replaced by other material acc. to customer specification.

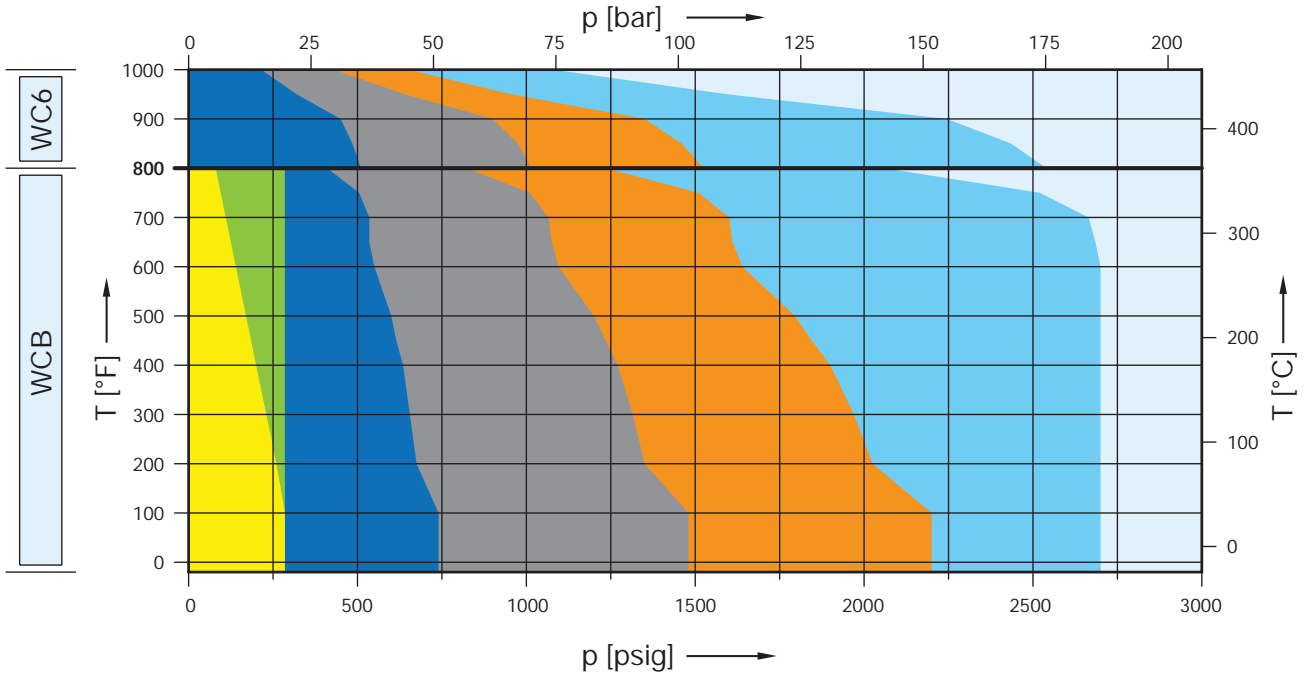
LWN 480.01-E

### Special materials:

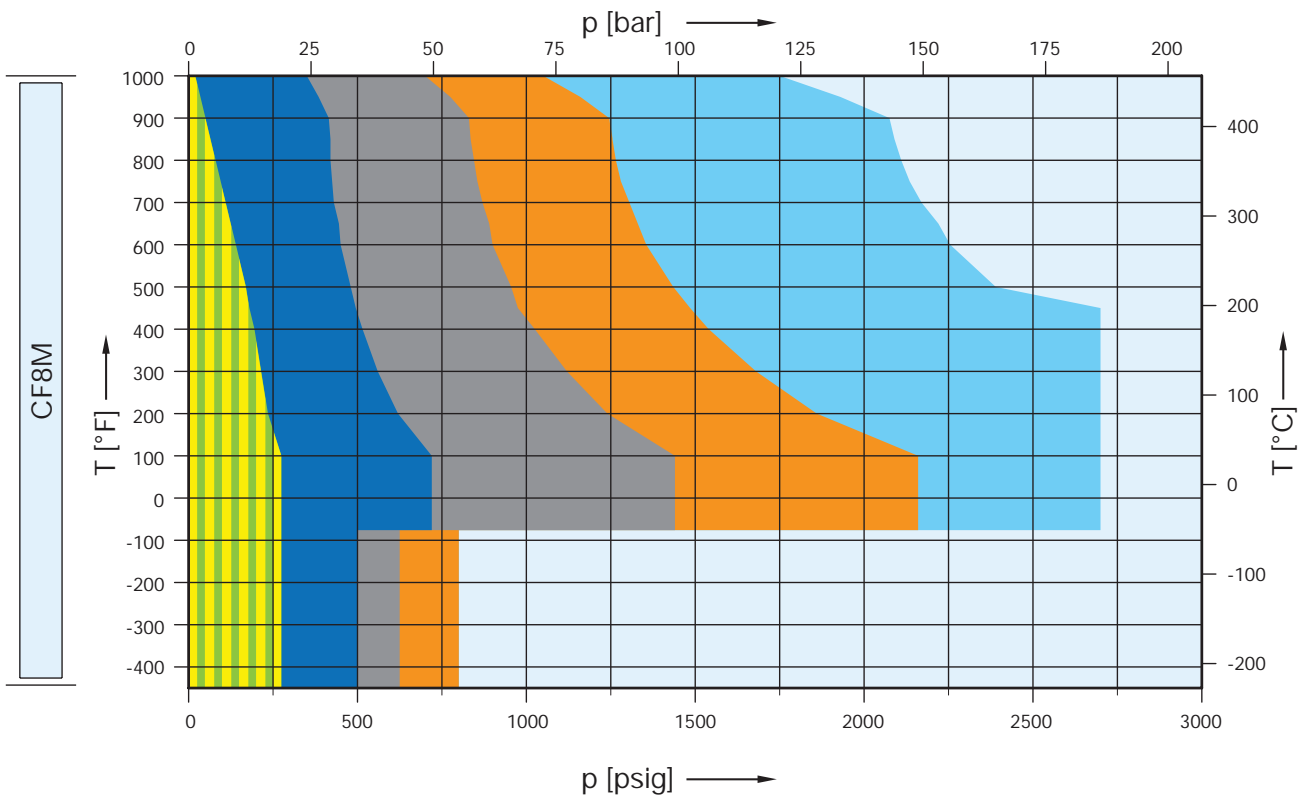
Body and trim available in various materials (Monel®, Hastelloy® ...).  
For nozzle and disc machined from the bar a short lead time is possible.

## Selection chart

	150 x 150	300L x 150	300 x 150	600 x 150	900 x 150	1500 x 300	2500 x 300
WCB	5262.162X	5262.163X	5262.164X	5262.165X	5262.166X	5262.167X	-
WC6	-	-	5267.168X	5267.169X	5267.170X	5267.171X	-



	150 x 150	300L x 150	300 x 150	600 x 150	900 x 150	1500 x 300	2500 x 300
CF8M	5264.196X	5264.197X	5264.198X	5264.199X	5264.200X	5264.201X	-



## Article numbers, dimensions and weights

### Article numbers

Valve size	2 J 3	2 J 3	3 J 4	3 J 4	3 J 4	3 J 4
Flange rating class Inlet x Outlet	150 x 150	300L x 150	300 x 150	600 x 150	900 x 150	1500 x 300
Actual Orifice diameter $d_0$ [mm]	36	36	36	36	36	36
Actual Orifice area $A_0$ [mm <sup>2</sup> ]	1018	1018	1018	1018	1018	1018
Body material						
WCB 1.0619	Art.-No. 5262.162 <sup>ra</sup>	5262.163 <sup>ra</sup>	5262.164 <sup>ra</sup>	5262.165 <sup>ra</sup>	5262.166 <sup>ra</sup>	5262.167 <sup>ra</sup>
CF8M 1.4408	Art.-No. 5264.196 <sup>ra</sup>	5264.197 <sup>ra</sup>	5264.198 <sup>ra</sup>	5264.199 <sup>ra</sup>	5264.200 <sup>ra</sup>	5264.201 <sup>ra</sup>
WC6 1.7357	Art.-No. -	-	5267.168 <sup>ra</sup>	5267.169 <sup>ra</sup>	5267.170 <sup>ra</sup>	5267.171 <sup>ra</sup>
LCB	Art.-No. 5263.529 <sup>ra</sup>	5263.530 <sup>ra</sup>	5263.531 <sup>ra</sup>	5263.532 <sup>ra</sup>	5263.533 <sup>ra</sup>	5263.534 <sup>ra</sup>

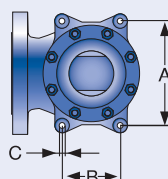
<sup>ra</sup>) Please add code for the required cap or lifting device. See below.

### Dimensions and weights

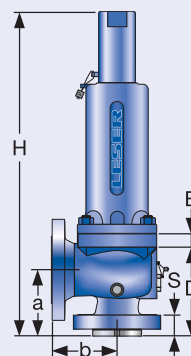
Metric Units							
Weight [kg]		44,6	44,6	77,7	77,7	100,2	100,2
	with bellows	48,4	48,4	83,2	83,2	105,7	105,7
Center to face [mm]	Inlet a	137	137	184	184	184	184
	Outlet b	124	124	181	181	181	181
	s	49	49	49	49	65	65
Height (H4) [mm]	Standard H max.	673	673	786	786	786	786
	Bellows H max.	722	722	824	824	824	824
Support brackets [mm]	A	184	184	238	238	238	238
	B	110	110	140	140	140	140
	C	Ø 14	Ø 14	Ø 18	Ø 18	Ø 18	Ø 18
	D	184	184	234	234	234	234
	E	16	16	25	25	25	25
US Units							
Weight [lbs]		98,3	98,3	171,3	171,3	220,9	220,9
	with bellows	106,7	106,7	183,5	183,5	233,1	233,1
Center to face [inch]	Inlet a	5 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>4</sub>
	Outlet b	4 <sup>7</sup> / <sub>8</sub>	4 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>
	s	1 <sup>15</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>	2 <sup>9</sup> / <sub>16</sub>	2 <sup>9</sup> / <sub>16</sub>
Height (H4) [inch]	Standard H max.	26 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	30 <sup>15</sup> / <sub>16</sub>	30 <sup>15</sup> / <sub>16</sub>	30 <sup>15</sup> / <sub>16</sub>	30 <sup>15</sup> / <sub>16</sub>
	Bellows H max.	28 <sup>7</sup> / <sub>16</sub>	28 <sup>7</sup> / <sub>16</sub>	32 <sup>7</sup> / <sub>16</sub>	32 <sup>7</sup> / <sub>16</sub>	32 <sup>7</sup> / <sub>16</sub>	32 <sup>7</sup> / <sub>16</sub>
Support brackets [inch]	A	7 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>4</sub>	9 <sup>3</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>
	B	4 <sup>11</sup> / <sub>32</sub>	4 <sup>11</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>
	C	Ø <sup>9</sup> / <sub>16</sub>	Ø <sup>9</sup> / <sub>16</sub>	Ø <sup>23</sup> / <sub>32</sub>	Ø <sup>23</sup> / <sub>32</sub>	Ø <sup>23</sup> / <sub>32</sub>	Ø <sup>23</sup> / <sub>32</sub>
	D	7 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>4</sub>	9 <sup>7</sup> / <sub>32</sub>	9 <sup>7</sup> / <sub>32</sub>	9 <sup>7</sup> / <sub>32</sub>	9 <sup>7</sup> / <sub>32</sub>
	E	<sup>5</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	<sup>31</sup> / <sub>32</sub>	<sup>31</sup> / <sub>32</sub>	<sup>31</sup> / <sub>32</sub>	<sup>31</sup> / <sub>32</sub>

### Code for lifting device

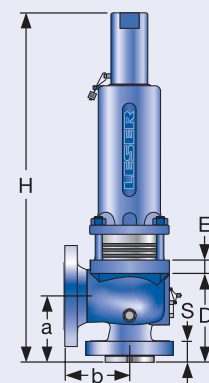
Lifting device	H2	H3	H4	H3
Bonnet	closed	closed	closed	open
WCB 1.0619, WC6 1.7357, LCB	2	3	4	5
CF8M 1.4408	2	-	4	-



Support brackets



Conventional design



Balanced bellows design

## Pressure temperature ratings

Metric Units							
Valve size		2 J 3	2 J 3	3 J 4	3 J 4	3 J 4	3 J 4
Flange rating class Inlet x Outlet		150 x 150	300L x 150	300 x 150	600 x 150	900 x 150	1500 x 300
Actual Orifice diameter $d_0$ [mm]		36	36	36	36	36	36
Actual Orifice area $A_0$ [mm <sup>2</sup> ]		1018	1018	1018	1018	1018	1018
Body material: WCB 1.0619							
Temperature range		Pressure range p [bar] S/G/L					
Maximum set pressure	-29 to 38 °C	19,7	19,7	51,0	102,1	153,1	186,2
	39 to 232 °C	12,8	19,7	42,4	85,2	127,2	186,2
	233 to 427 °C	5,5	19,7	28,3	56,9	85,2	142,1
Outlet pressure limit Conventional design		19,7	19,7	19,7	19,7	19,7	41,4
Outlet pressure limit Balanced bellows design		15,9	15,9	15,9	15,9	15,9	15,9
Body material: CF8M 1.4408							
Temperature range		Pressure range p [bar] S/G/L					
Maximum set pressure	-268 to -60 °C	19,0	19,0	34,5	43,1	55,2	55,2
	-59 to -29 °C	19,0	19,0	49,7	99,3	149,0	186,2
	-28 to 38 °C	19,0	19,0	49,7	99,3	149,0	186,2
	39 to 232 °C	12,4	12,4	34,1	67,2	102,4	171,0
	233 to 427 °C	5,5	5,5	29,0	58,3	87,2	145,5
428 to 538 °C	1,4	1,4	24,1	48,3	72,4	120,7	
Outlet pressure limit Conventional design		19,0	19,0	19,0	19,0	19,0	41,4
Outlet pressure limit Balanced bellows design		15,9	15,9	15,9	15,9	15,9	15,9
Body material: WC6 1.7357							
Temperature range		Pressure range p [bar] S/G/L					
Maximum set pressure	233 to 427 °C	-	-	35,2	70,0	105,2	175,2
	428 to 538 °C	-	-	14,8	29,7	44,8	74,5
Outlet pressure limit Conventional design		-	-	19,7	19,7	19,7	41,4
Outlet pressure limit Balanced bellows design		-	-	15,9	15,9	15,9	15,9
Body material: LCB							
Temperature range		Pressure range p [bar] S/G/L					
Maximum set pressure	-46 to 38 °C	18,4	18,4	48,0	96,0	144,1	240,1
	39 to 200 °C	13,8	13,8	42,5	85,1	127,6	212,7
	201 to 343 °C	8,4	8,4	36,4	72,8	109,2	182,0
Outlet pressure limit Conventional design		19,7	19,7	19,7	19,7	19,7	41,4
Outlet pressure limit Balanced bellows design		15,9	15,9	15,9	15,9	15,9	15,9

Remark: SA 352 Gr. LCB is not listed in the API 526. Pressure-Temperature Rating acc. to ASME B16.34 Table 2-1.3  
The stated Pressure-Temperature Rating are taken from ASME B16.34 Table 2-1.3

Due to the extended material test certificate the LESER LCB can be applied as LCC, WCB, WCC and 1.0619 with the respective pressure-temperature range as well.

## Pressure temperature ratings

US Units							
Valve size		2 J 3	2 J 3	3 J 4	3 J 4	3 J 4	3 J 4
Flange rating class Inlet x Outlet		150 x 150	300L x 150	300 x 150	600 x 150	900 x 150	1500 x 300
Actual Orifice diameter d <sub>0</sub> [inch]		1,42	1,42	1,42	1,42	1,42	1,42
Actual Orifice area A <sub>0</sub> [inch <sup>2</sup> ]		1,58	1,58	1,58	1,58	1,58	1,58
Body material: WCB 1.0619							
Temperature range		Pressure range p [psig] S/G/L					
<b>Maximum set pressure</b>	-20 to 100 °F	285	285	740	1480	2220	2700
	101 to 450 °F	185	285	615	1235	1845	2700
	451 to 800 °F	80	285	410	825	1235	2060
<b>Outlet pressure limit</b> Conventional design		285	285	285	285	285	600
<b>Outlet pressure limit</b> Balanced bellows design		230	230	230	230	230	230
Body material: CF8M 1.4408							
Temperature range		Pressure range p [psig] S/G/L					
<b>Maximum set pressure</b>	-450 to -76 °F	275	275	500	1440	800	800
	-75 to -21 °F	275	275	720	1440	2160	2700
	-20 to 100 °F	275	275	720	1440	2160	2700
	101 to 450 °F	180	180	495	975	1485	2480
	451 to 800 °F	80	80	420	845	1265	2110
	801 to 1000 °F	20	20	350	700	1050	1750
<b>Outlet pressure limit</b> Conventional design		275	275	275	275	275	600
<b>Outlet pressure limit</b> Balanced bellows design		230	230	230	230	230	230
Body material: WC6 1.7357							
Temperature range		Pressure range p [psig] S/G/L					
<b>Maximum set pressure</b>	451 to 800 °F	-	-	510	1015	1525	2540
	801 to 1000 °F	-	-	215	430	650	1080
<b>Outlet pressure limit</b> Conventional design		-	-	285	285	285	600
<b>Outlet pressure limit</b> Balanced bellows design		-	-	230	230	230	230
Body material: LCB							
Temperature range		Pressure range p [psig] S/G/L					
<b>Maximum set pressure</b>	-50 to 100 °F	265	265	695	1395	2090	3480
	101 to 400 °F	200	200	615	1230	1845	3075
	401 to 650 °F	125	125	535	1065	1600	2665
<b>Outlet pressure limit</b> Conventional design		285	285	285	285	285	600
<b>Outlet pressure limit</b> Balanced bellows design		230	230	230	230	230	230

Remark: SA 352 Gr. LCB is not listed in the API 526. Pressure-Temperature Rating acc. to ASME B16.34 Table 2-1.3  
The stated Pressure-Temperature Rating are taken from ASME B16.34 Table 2-1.3

Due to the extended material test certificate the LESER LCB can be applied as LCC, WCB, WCC and 1.0619 with the respective pressure-temperature range as well.