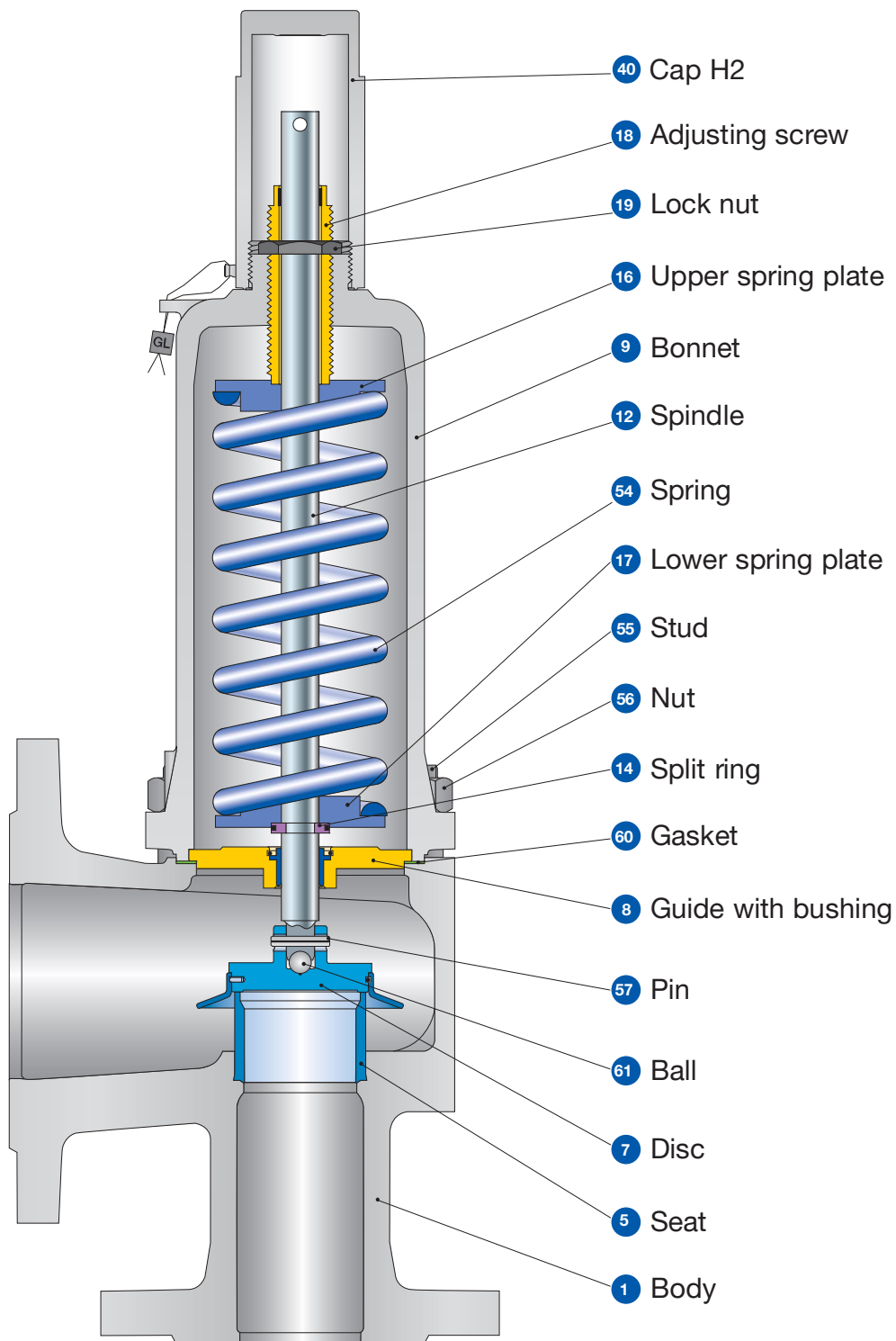


Type 441, 442 DIN Conventional design



Type 441, 442 DIN

Conventional design

Materials

| Item | Component | Type 4411 / 4421 DIN | Type 4415 / 4425 DIN | Type 4412 / 4422 DIN | Type 4414 DIN |
|-------|---------------------------------|--|--|--|---|
| 1 | Body | 0.6025 | 0.7043 | 1.0619 | 1.4408 |
| | | Cast iron | Ductile Gr. 60-40-18 | SA 216 WCB | SA 351 CF8M |
| 5 | Seat | 1.4404 | 1.4404 | 1.4404 | 1.4404 |
| | | 316L | 316L | 316L | 316L |
| 7 | Disc | 1.4122 | 1.4122 | 1.4122 | 1.4404 |
| | | Hardened stainless steel | Hardened stainless steel | Hardened stainless steel | 316L |
| 8 | Guide with bushing | 1.4104, 1.0501, 0.7040 | 1.4104, 1.0501, 0.7040 | 1.4104, 1.0501, 0.7040 | 1.4404 |
| | | Chrome or carbon steel | Chrome or carbon steel | Chrome or carbon steel | 316L |
| | | 1.4104 tenifer Chrome steel tenifer | 1.4104 tenifer Chrome steel tenifer | 1.4104 tenifer Chrome steel tenifer | - - |
| 9 | Bonnet | 0.7040, 0.7043, 1.0619 | 0.7040, 0.7043, 1.0619 | 0.7040, 0.7043, 1.0619 | 1.4408, 1.4404, 1.4571 |
| | | Ductile Gr. 60-40-18, SA 216 WCB | Ductile Gr. 60-40-18, SA 216 WCB | Ductile Gr. 60-40-18, SA 216 WCB | SA 351 CF8M, SA 479 316L, SA 479 316Ti |
| 12 | Spindle | 1.4021 | 1.4021 | 1.4021 | 1.4404 |
| | | 420 | 420 | 420 | 316L |
| 14 | Split ring | 1.4104 | 1.4104 | 1.4104 | 1.4404 |
| | | Chrome steel | Chrome steel | Chrome steel | 316L |
| 16/17 | Spring plate | 1.0718 | 1.0718 | 1.0718 | 1.4404 |
| | | Steel | Steel | Steel | 316L |
| 18 | Adjusting screw with bushing | 1.4104 PTFE | 1.4104 PTFE | 1.4104 PTFE | 1.4404 PTFE |
| | | Chrome steel PTFE | Chrome steel PTFE | Chrome steel PTFE | 316L PTFE |
| 19 | Lock nut | 1.0718 | 1.0718 | 1.0718 | 1.4404 |
| | | Steel | Steel | Steel | 316L |
| 40 | Cap H2 | 1.0460 or 0.7043 | 1.0460 or 0.7043 | 1.0460 or 0.7043 | 1.4404 |
| | | SA 105 or Gr. 60-40-18 | SA 105 or Gr. 60-40-18 | SA 105 or Gr. 60-40-18 | 316L |
| 54 | Spring standard | 1.1200, 1.8159, 1.7102 | 1.1200, 1.8159, 1.7102 | 1.1200, 1.8159, 1.7102 | 1.4310 |
| | | Carbon steel | Carbon steel | Carbon steel | Stainless steel |
| 54 | Spring optional | 1.4310 | 1.4310 | 1.4310 | - |
| | | Stainless steel | Stainless steel | Stainless steel | - |
| 55 | Stud | 1.1181 | 1.1181 | 1.1181 | 1.4401 |
| | | Steel | Steel | Steel | B8M |
| 56 | Nut | 1.0501 | 1.0501 | 1.0501 | 1.4401 |
| | | 2H | 2H | 2H | 8M |
| 57 | Pin | 1.4310 | 1.4310 | 1.4310 | 1.4310 |
| | | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| 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 | 1.3541 | 1.3541 | 1.4401 |
| | | Hardened stainless steel | Hardened stainless steel | Hardened stainless steel | 316 |

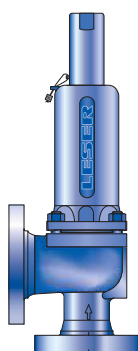
Please notice:

- Modifications reserved by LESER
- If several materials are specified LESER defines the material.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

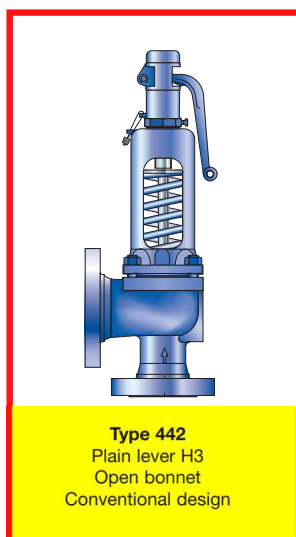
Type 441, 442 DIN

Article numbers

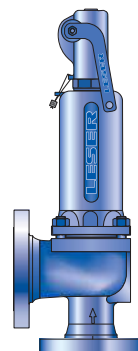
| | | | | | | | | | | | | | | |
|---|---|----------------|------|------|------|------|------|------|------|------|------|-------|-------|------|
| | DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | |
| | DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
| | Actual Orifice diameter d _o [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 | |
| | Actual Orifice area A _o [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 | |
| Body material: 0.6025 (cast iron) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4411. | 4372 | - | 4382 | 4392 | 4402 | 4412 | 4422 | 4432 | 4442 | 4452 | 4462 | - |
| | H3 | Art. No. 4411. | 4373 | - | 4383 | 4393 | 4403 | 4413 | 4423 | 4433 | 4443 | 4453 | - | - |
| | H4 | Art. No. 4411. | 4374 | - | 4384 | 4394 | 4404 | 4414 | 4424 | 4434 | 4444 | 4454 | 4464 | - |
| open | H3 | Art. No. 4421. | 4375 | - | 4385 | 4395 | 4405 | 4415 | 4425 | 4435 | 4445 | 4455 | 4465 | - |
| Body material: 0.7043 (ductile Gr. 60-40-18) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4415. | - | - | 7382 | 7392 | 7402 | 7412 | 7422 | 7432 | 7442 | 7452 | 7462 | 7472 |
| | H3 | Art. No. 4415. | - | - | 7383 | 7393 | 7403 | 7413 | 7423 | 7433 | 7443 | 7453 | - | - |
| | H4 | Art. No. 4415. | - | - | 7384 | 7394 | 7404 | 7414 | 7424 | 7434 | 7444 | 7454 | 7464 | 7474 |
| open | H3 | Art. No. 4425. | - | - | 7385 | 7395 | 7405 | 7415 | 7425 | 7435 | 7445 | 7455 | 7465 | 7475 |
| Body material: 1.0619 (WCB) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4412. | - | 4502 | 4512 | 4522 | 4532 | 4542 | 4552 | 4562 | 4572 | 4582 | 4592 | 4612 |
| | H3 | Art. No. 4412. | - | 4503 | 4513 | 4523 | 4533 | 4543 | 4553 | 4563 | 4573 | 4583 | - | - |
| | H4 | Art. No. 4412. | - | 4504 | 4514 | 4524 | 4534 | 4544 | 4554 | 4564 | 4574 | 4584 | 4594 | 4614 |
| open | H3 | Art. No. 4422. | - | 4505 | 4515 | 4525 | 4535 | 4545 | 4555 | 4565 | 4575 | 4585 | 4595 | 4615 |
| Body material: 1.4408 (CF8M) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4414. | - | - | 4642 | 4652 | 4662 | 4672 | 4682 | 4692 | 4702 | 4712 | 4722 | - |
| | H4 | Art. No. 4414. | - | - | 4644 | 4654 | 4664 | 4674 | 4684 | 4694 | 4704 | 4714 | 4724 | - |



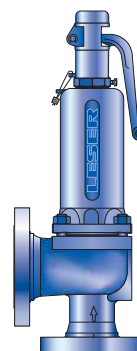
Type 441
Cap H2
Closed bonnet
Conventional design



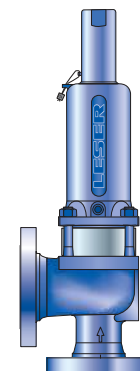
Type 442
Plain lever H3
Open bonnet
Conventional design



Type 441
Packed lever H4
Closed bonnet
Conventional design



Type 441
Plain lever H3
Closed bonnet
Conventional design



Type 441
Cap H2
Closed bonnet
Balanced bellows design

Type 441, 442 DIN

Dimensions and weights

Metric Units

| | | | | | | | | | | | | | |
|-------------------------|---|-----|-----|-----|-----|------|------|------|------|------|------|-------|---------------|
| | DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| | DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Actual Orifice diameter d ₀ [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 |
| | Actual Orifice area A ₀ [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 |
| Weight | | | | | | | | | | | | | |
| [kg] | | 9 | 9 | 9 | 12 | 16 | 22 | 32 | 56 | 75 | 85 | 131 | 285 |
| | with bellows | 9,4 | 9,4 | 10 | 13 | 17 | 24 | 36 | 60 | 83 | 93 | 142 | 289 |
| Center to face | | | | | | | | | | | | | |
| [mm] | Inlet a | 85 | 85 | 105 | 115 | 140 | 150 | 170 | 195 | 220 | 250 | 285 | 290 |
| | Outlet b | 95 | 95 | 100 | 110 | 115 | 120 | 140 | 160 | 180 | 200 | 225 | 300 |
| Height (H4) | | | | | | | | | | | | | |
| [mm] | Standard H max. | 304 | 304 | 339 | 446 | 512 | 569 | 699 | 801 | 883 | 913 | 1083 | 1380 |
| | Bellows H max. | 337 | 337 | 378 | 488 | 550 | 615 | 769 | 860 | 939 | 969 | 1141 | 1380 |
| Support brackets | | | | | | | | | | | | | |
| [mm] | A | | | | | | | | | 277 | 277 | 320 | 490 |
| | B | | | | | | | | | 160 | 160 | 185 | ¹⁾ |
| | C | | | | | | | | | Ø 18 | Ø 18 | Ø 18 | Ø 18 |
| | D | | | | | | | | | 293 | 318 | 392 | ¹⁾ |
| | E | | | | | | | | | 21 | 21 | 28 | ¹⁾ |

| | | | | |
|--|--------|-------|---|-------|
| Body material: 0.6025 (cast iron) | | | | |
| DIN Flange²⁾ | Inlet | PN 16 | – | PN 16 |
| | Outlet | PN 16 | – | PN 16 |

| | | | | | | |
|---|--------|---|---|-------|-------|-------|
| Body material: 0.7043 (ductile Gr. 60-40-18) | | | | | | |
| DIN Flange²⁾ | Inlet | – | – | PN 40 | PN 16 | PN 25 |
| | Outlet | – | – | PN 16 | | PN 10 |

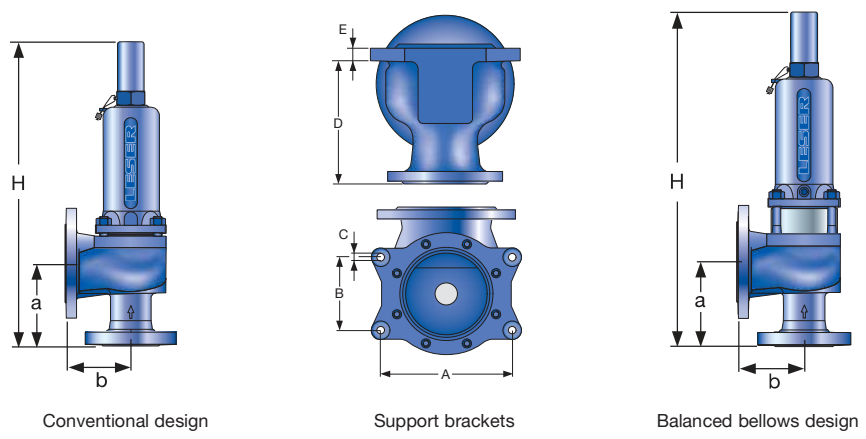
| | | | | | |
|------------------------------------|--------|---|---|-------|-------|
| Body material: 1.0619 (WCB) | | | | | |
| DIN Flange²⁾ | Inlet | – | – | PN 40 | PN 25 |
| | Outlet | – | – | PN 16 | |

| | | | | |
|-------------------------------------|--------|---|---|-------|
| Body material: 1.4408 (CF8M) | | | | |
| DIN Flange²⁾ | Inlet | – | – | PN 40 |
| | Outlet | – | – | PN 16 |

1)

| Body material | B | D | E |
|---------------|------|------|------|
| | [mm] | [mm] | [mm] |
| 0.6025 | 150 | 290 | 16 |
| 0.7043 | 150 | 489 | 25 |
| 1.0619 | 160 | 489 | 25 |
| 1.4408 | 150 | 489 | 25 |

²⁾ Standard flange rating. For other flange drillings and facings please refer to page 19.



Type 441, 442 DIN

Pressure temperature ratings

Metric Units

P = 10 bar

Type 441, 442
DIN

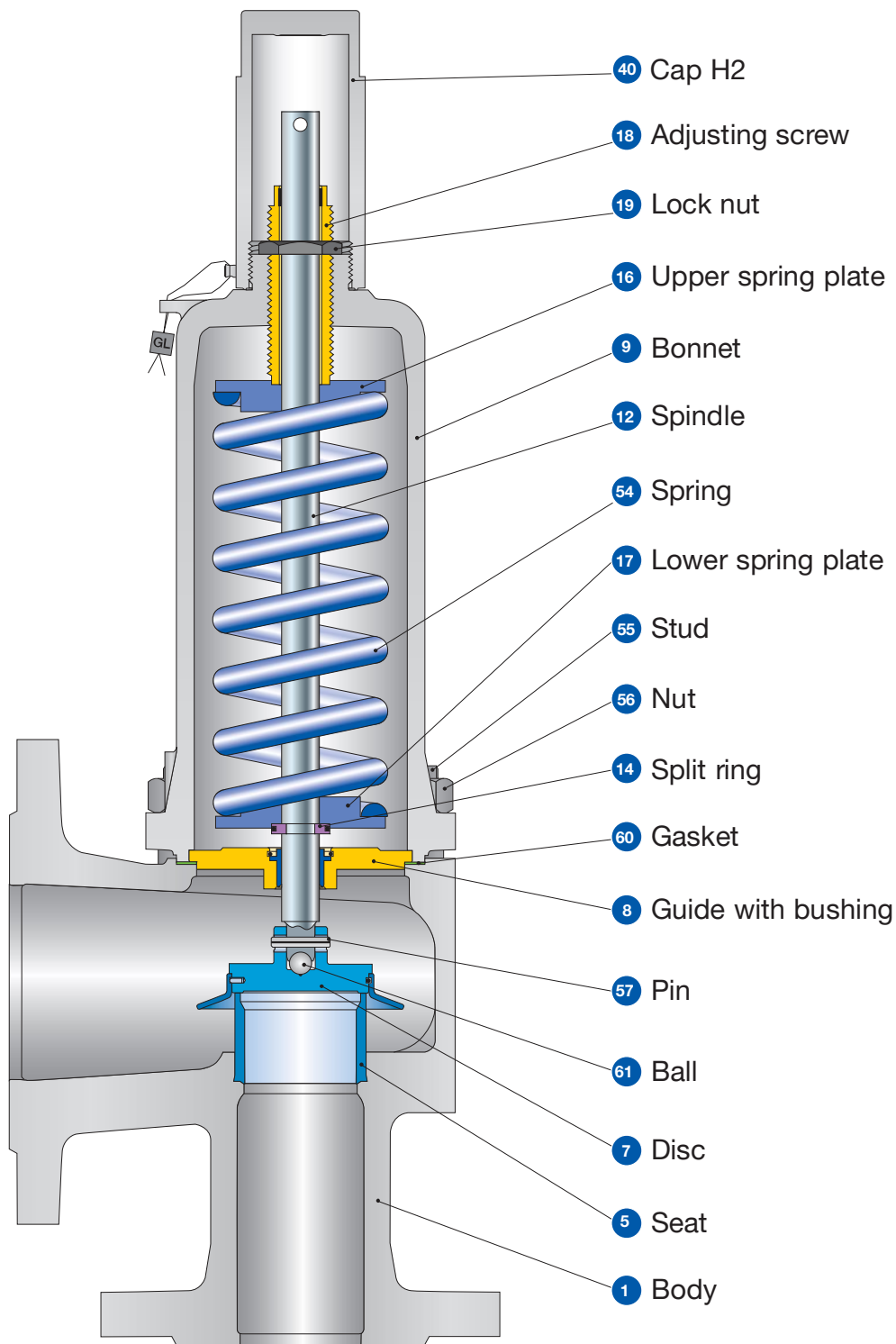
| | | | | | | | | | | | | |
|---|-----|-----|-----|-----|------|------|------|------|------|------|-------|-------|
| DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Actual Orifice diameter d _o [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 |
| Actual Orifice area A _o [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 |

| Body material: 0.6025 (cast iron) | | | | | | | | | | | | | |
|--|-----------------------------|-----------|-----|-------|------|------|------|------|------|------|------|-----|---|
| DIN Flange | Inlet | PN 16 | - | PN 16 | | | | | | | | | - |
| | Outlet | PN 16 | - | PN 16 | | | | | | | | | - |
| Minimum set pressure | p [bar _g] S/G/L | 0.1 | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | - |
| Min. set pressure ¹⁾ standard bellows | p [bar _g] S/G/L | 3 | - | 3 | 3 | 3 | 3 | 3 | 3 | 2.74 | 2.01 | 0.2 | - |
| Min. set pressure low press. bellows | p [bar _g] S/G/L | 2.00 | - | 0.98 | 1.41 | 1.11 | 1.81 | 1.50 | 1.05 | 1.18 | 1.41 | - | - |
| Maximum set pressure | p [bar _g] S/G/L | 16 | - | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | - |
| Max. set pressure with special spring | p [bar _g] S/G/L | 16 | - | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | - |
| | Temperature acc. to DIN EN | min. [°C] | -10 | - | -10 | | | | | | | | |
| | max. [°C] | +300 | - | +300 | | | | | | | | | - |
| Temperature acc. to ASME | min. [°C] | - | - | - | | | | | | | | | - |
| | max. [°C] | - | - | - | | | | | | | | | - |

| Body material: 0.7043 (ductile Gr. 60-40-18) | | | | | | | | | | | | | |
|--|-----------------------------|---|---|-------|------|------|------|------|------|------|-------|-----|-------|
| DIN Flange | Inlet | - | - | PN 40 | | | | | | | PN 16 | | PN 25 |
| | Outlet | - | - | PN 16 | | | | | | | PN 16 | | PN 10 |
| Minimum set pressure | p [bar _g] S/G/L | - | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Min. set pressure ¹⁾ standard bellows | p [bar _g] S/G/L | - | - | 3 | 3 | 3 | 3 | 3 | 3 | 2.74 | 2.01 | 0.2 | 0.2 |
| Min. set pressure low press. bellows | p [bar _g] S/G/L | - | - | 0.98 | 1.41 | 1.11 | 1.81 | 1.50 | 1.05 | 1.18 | 1.41 | - | - |
| Maximum set pressure | p [bar _g] S/G/L | - | - | 40 | 40 | 40 | 40 | 40 | 32 | 40 | 16 | 16 | 20 |
| Max. set pressure with special spring | p [bar _g] S/G/L | - | - | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 16 | 16 | 25 |
| Temperature acc. to DIN EN | min. [°C] | - | - | - | | | | | | | -60 | | - |
| | max. [°C] | - | - | - | | | | | | | +350 | | - |
| Temperature acc. to ASME | min. [°C] | - | - | - | | | | | | | -10 | | - |
| | max. [°C] | - | - | - | | | | | | | +350 | | - |

¹⁾ Min. set pressure standard bellows = Max. set pressure low pressure bellows.

Type 441, 442 DIN
Conventional design



Type 441, 442 DIN

Conventional design

Materials

| Item | Component | Type 4411 / 4421 DIN | Type 4415 / 4425 DIN | Type 4412 / 4422 DIN | Type 4414 DIN |
|-------|---------------------------------|--|--|--|---|
| 1 | Body | 0.6025 | 0.7043 | 1.0619 | 1.4408 |
| | | Cast iron | Ductile Gr. 60-40-18 | SA 216 WCB | SA 351 CF8M |
| 5 | Seat | 1.4404 | 1.4404 | 1.4404 | 1.4404 |
| | | 316L | 316L | 316L | 316L |
| 7 | Disc | 1.4122 | 1.4122 | 1.4122 | 1.4404 |
| | | Hardened stainless steel | Hardened stainless steel | Hardened stainless steel | 316L |
| 8 | Guide with bushing | 1.4104, 1.0501, 0.7040 | 1.4104, 1.0501, 0.7040 | 1.4104, 1.0501, 0.7040 | 1.4404 |
| | | Chrome or carbon steel | Chrome or carbon steel | Chrome or carbon steel | 316L |
| | | 1.4104 tenifer Chrome steel tenifer | 1.4104 tenifer Chrome steel tenifer | 1.4104 tenifer Chrome steel tenifer | - - |
| 9 | Bonnet | 0.7040, 0.7043, 1.0619 | 0.7040, 0.7043, 1.0619 | 0.7040, 0.7043, 1.0619 | 1.4408, 1.4404, 1.4571 |
| | | Ductile Gr. 60-40-18, SA 216 WCB | Ductile Gr. 60-40-18, SA 216 WCB | Ductile Gr. 60-40-18, SA 216 WCB | SA 351 CF8M, SA 479 316L, SA 479 316Ti |
| 12 | Spindle | 1.4021 | 1.4021 | 1.4021 | 1.4404 |
| | | 420 | 420 | 420 | 316L |
| 14 | Split ring | 1.4104 | 1.4104 | 1.4104 | 1.4404 |
| | | Chrome steel | Chrome steel | Chrome steel | 316L |
| 16/17 | Spring plate | 1.0718 | 1.0718 | 1.0718 | 1.4404 |
| | | Steel | Steel | Steel | 316L |
| 18 | Adjusting screw with bushing | 1.4104 PTFE | 1.4104 PTFE | 1.4104 PTFE | 1.4404 PTFE |
| | | Chrome steel PTFE | Chrome steel PTFE | Chrome steel PTFE | 316L PTFE |
| 19 | Lock nut | 1.0718 | 1.0718 | 1.0718 | 1.4404 |
| | | Steel | Steel | Steel | 316L |
| 40 | Cap H2 | 1.0460 or 0.7043 | 1.0460 or 0.7043 | 1.0460 or 0.7043 | 1.4404 |
| | | SA 105 or Gr. 60-40-18 | SA 105 or Gr. 60-40-18 | SA 105 or Gr. 60-40-18 | 316L |
| 54 | Spring standard | 1.1200, 1.8159, 1.7102 | 1.1200, 1.8159, 1.7102 | 1.1200, 1.8159, 1.7102 | 1.4310 |
| | | Carbon steel | Carbon steel | Carbon steel | Stainless steel |
| | Spring optional | 1.4310 | 1.4310 | 1.4310 | - |
| | | Stainless steel | Stainless steel | Stainless steel | - |
| 55 | Stud | 1.1181 | 1.1181 | 1.1181 | 1.4401 |
| | | Steel | Steel | Steel | B8M |
| 56 | Nut | 1.0501 | 1.0501 | 1.0501 | 1.4401 |
| | | 2H | 2H | 2H | 8M |
| 57 | Pin | 1.4310 | 1.4310 | 1.4310 | 1.4310 |
| | | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| 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 | 1.3541 | 1.3541 | 1.4401 |
| | | Hardened stainless steel | Hardened stainless steel | Hardened stainless steel | 316 |

Please notice:

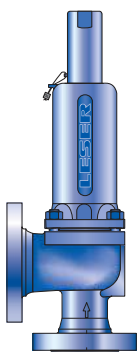
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- If several materials are specified LESER defines the material.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.



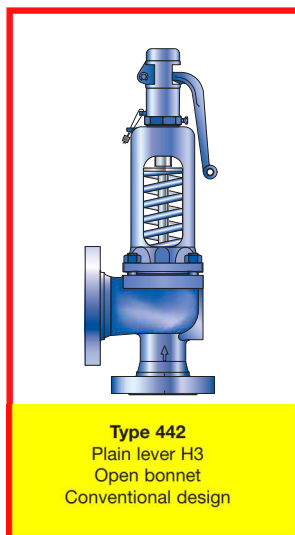
Type 441, 442 DIN Article numbers

Type 441, 442
DIN

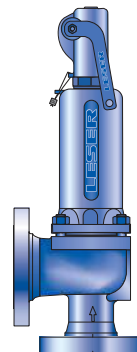
| | | | | | | | | | | | | | | |
|---|---|----------------|------|------|------|------|------|------|------|------|------|-------|-------|------|
| | DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | |
| | DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
| | Actual Orifice diameter d _o [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 | |
| | Actual Orifice area A _o [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 | |
| Body material: 0.6025 (cast iron) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4411. | 4372 | - | 4382 | 4392 | 4402 | 4412 | 4422 | 4432 | 4442 | 4452 | 4462 | - |
| | H3 | Art. No. 4411. | 4373 | - | 4383 | 4393 | 4403 | 4413 | 4423 | 4433 | 4443 | 4453 | - | - |
| | H4 | Art. No. 4411. | 4374 | - | 4384 | 4394 | 4404 | 4414 | 4424 | 4434 | 4444 | 4454 | 4464 | - |
| open | H3 | Art. No. 4421. | 4375 | - | 4385 | 4395 | 4405 | 4415 | 4425 | 4435 | 4445 | 4455 | 4465 | - |
| Body material: 0.7043 (ductile Gr. 60-40-18) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4415. | - | - | 7382 | 7392 | 7402 | 7412 | 7422 | 7432 | 7442 | 7452 | 7462 | 7472 |
| | H3 | Art. No. 4415. | - | - | 7383 | 7393 | 7403 | 7413 | 7423 | 7433 | 7443 | 7453 | - | - |
| | H4 | Art. No. 4415. | - | - | 7384 | 7394 | 7404 | 7414 | 7424 | 7434 | 7444 | 7454 | 7464 | 7474 |
| open | H3 | Art. No. 4425. | - | - | 7385 | 7395 | 7405 | 7415 | 7425 | 7435 | 7445 | 7455 | 7465 | 7475 |
| Body material: 1.0619 (WCB) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4412. | - | 4502 | 4512 | 4522 | 4532 | 4542 | 4552 | 4562 | 4572 | 4582 | 4592 | 4612 |
| | H3 | Art. No. 4412. | - | 4503 | 4513 | 4523 | 4533 | 4543 | 4553 | 4563 | 4573 | 4583 | - | - |
| | H4 | Art. No. 4412. | - | 4504 | 4514 | 4524 | 4534 | 4544 | 4554 | 4564 | 4574 | 4584 | 4594 | 4614 |
| open | H3 | Art. No. 4422. | - | 4505 | 4515 | 4525 | 4535 | 4545 | 4555 | 4565 | 4575 | 4585 | 4595 | 4615 |
| Body material: 1.4408 (CF8M) | | | | | | | | | | | | | | |
| Bonnet closed | H2 | Art. No. 4414. | - | - | 4642 | 4652 | 4662 | 4672 | 4682 | 4692 | 4702 | 4712 | 4722 | - |
| | H4 | Art. No. 4414. | - | - | 4644 | 4654 | 4664 | 4674 | 4684 | 4694 | 4704 | 4714 | 4724 | - |



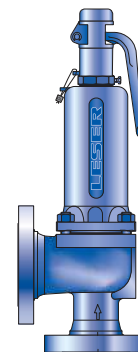
Type 441
Cap H2
Closed bonnet
Conventional design



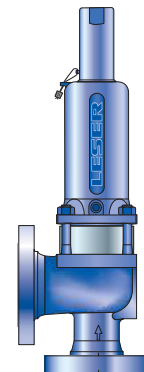
Type 442
Plain lever H3
Open bonnet
Conventional design



Type 441
Packed lever H4
Closed bonnet
Conventional design



Type 441
Plain lever H3
Closed bonnet
Conventional design



Type 441
Cap H2
Closed bonnet
Balanced bellows design

Type 441, 442 DIN

Dimensions and weights

Metric Units

| | | | | | | | | | | | | | |
|-------------------------|---|-----|-----|-----|-----|------|------|------|------|------|------|-------|---------------|
| | DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| | DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Actual Orifice diameter d _o [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 |
| | Actual Orifice area A _o [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 |
| Weight | | | | | | | | | | | | | |
| [kg] | | 9 | 9 | 9 | 12 | 16 | 22 | 32 | 56 | 75 | 85 | 131 | 285 |
| | with bellows | 9,4 | 9,4 | 10 | 13 | 17 | 24 | 36 | 60 | 83 | 93 | 142 | 289 |
| Center to face | | | | | | | | | | | | | |
| [mm] | Inlet a | 85 | 85 | 105 | 115 | 140 | 150 | 170 | 195 | 220 | 250 | 285 | 290 |
| | Outlet b | 95 | 95 | 100 | 110 | 115 | 120 | 140 | 160 | 180 | 200 | 225 | 300 |
| Height (H4) | | | | | | | | | | | | | |
| [mm] | Standard H max. | 304 | 304 | 339 | 446 | 512 | 569 | 699 | 801 | 883 | 913 | 1083 | 1380 |
| | Bellows H max. | 337 | 337 | 378 | 488 | 550 | 615 | 769 | 860 | 939 | 969 | 1141 | 1380 |
| Support brackets | | | | | | | | | | | | | |
| [mm] | A | | | | | | | | | 277 | 277 | 320 | 490 |
| | B | | | | | | | | | 160 | 160 | 185 | ¹⁾ |
| | C | | | | | | | | | Ø 18 | Ø 18 | Ø 18 | Ø 18 |
| | D | | | | | | | | | 293 | 318 | 392 | ¹⁾ |
| | E | | | | | | | | | 21 | 21 | 28 | ¹⁾ |

Body material: 0.6025 (cast iron)

| | | | | |
|--------------------------------|--------|-------|---|-------|
| DIN Flange²⁾ | Inlet | PN 16 | – | PN 16 |
| | Outlet | PN 16 | – | PN 16 |

Body material: 0.7043 (ductile Gr. 60-40-18)

| | | | | | | |
|--------------------------------|--------|---|---|-------|-------|-------|
| DIN Flange²⁾ | Inlet | – | – | PN 40 | PN 16 | PN 25 |
| | Outlet | – | – | PN 16 | | PN 10 |

Body material: 1.0619 (WCB)

| | | | | | |
|--------------------------------|--------|---|---|-------|-------|
| DIN Flange²⁾ | Inlet | – | – | PN 40 | PN 25 |
| | Outlet | – | – | PN 16 | |

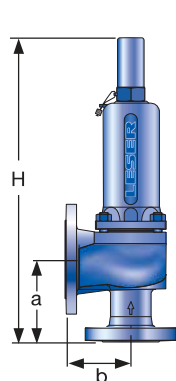
Body material: 1.4408 (CF8M)

| | | | | |
|--------------------------------|--------|---|---|-------|
| DIN Flange²⁾ | Inlet | – | – | PN 40 |
| | Outlet | – | – | PN 16 |

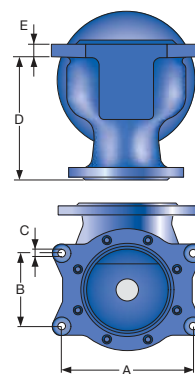
1)

| Body material | B | D | E |
|---------------|------|------|------|
| | [mm] | [mm] | [mm] |
| 0.6025 | 150 | 290 | 16 |
| 0.7043 | 150 | 489 | 25 |
| 1.0619 | 160 | 489 | 25 |
| 1.4408 | 150 | 489 | 25 |

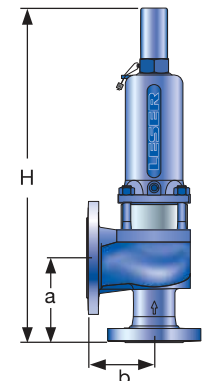
²⁾ Standard flange rating. For other flange drillings and facings please refer to page 19.



Conventional design



Support brackets



Balanced bellows design

Type 441, 442 DIN

Pressure temperature ratings

Metric Units

P = 10 bar

Type 441, 442
DIN

| | | | | | | | | | | | | |
|---|-----|-----|-----|-----|------|------|------|------|------|------|-------|-------|
| DN _i | 20 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| DN _o | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Actual Orifice diameter d _o [mm] | 18 | 18 | 23 | 29 | 37 | 46 | 60 | 74 | 92 | 98 | 125 | 165 |
| Actual Orifice area A _o [mm ²] | 254 | 254 | 416 | 661 | 1075 | 1662 | 2827 | 4301 | 6648 | 7543 | 12272 | 21382 |

| Body material: 0.6025 (cast iron) | | | | | | | | | | | | | |
|--|-----------------------------|-------|---|-------|------|------|------|------|------|------|------|------|-----|
| DIN Flange | Inlet | PN 16 | - | PN 16 | | | | | | | | | - |
| | Outlet | PN 16 | - | PN 16 | | | | | | | | | - |
| Minimum set pressure | p [bar _g] S/G/L | 0.1 | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | - |
| Min. set pressure ¹⁾ standard bellows | p [bar _g] S/G/L | 3 | - | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2.74 | 2.01 | 0.2 |
| Min. set pressure low press. bellows | p [bar _g] S/G/L | 2.00 | - | 0.98 | 1.41 | 1.11 | 1.81 | 1.50 | 1.05 | 1.18 | 1.41 | - | - |
| Maximum set pressure | p [bar _g] S/G/L | 16 | - | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | - |
| Max. set pressure with special spring | p [bar _g] S/G/L | 16 | - | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | - |
| Temperature acc. to DIN EN | min. [°C] | -10 | - | -10 | | | | | | | | | - |
| | max. [°C] | +300 | - | +300 | | | | | | | | | - |
| Temperature acc. to ASME | min. [°C] | - | - | - | | | | | | | | | - |
| | max. [°C] | - | - | - | | | | | | | | | - |

| Body material: 0.7043 (ductile Gr. 60-40-18) | | | | | | | | | | | | | |
|--|-----------------------------|---|---|-------|------|------|------|------|------|------|-------|-----|-------|
| DIN Flange | Inlet | - | - | PN 40 | | | | | | | PN 16 | | PN 25 |
| | Outlet | - | - | PN 16 | | | | | | | PN 16 | | PN 10 |
| Minimum set pressure | p [bar _g] S/G/L | - | - | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Min. set pressure ¹⁾ standard bellows | p [bar _g] S/G/L | - | - | 3 | 3 | 3 | 3 | 3 | 3 | 2.74 | 2.01 | 0.2 | 0.2 |
| Min. set pressure low press. bellows | p [bar _g] S/G/L | - | - | 0.98 | 1.41 | 1.11 | 1.81 | 1.50 | 1.05 | 1.18 | 1.41 | - | - |
| Maximum set pressure | p [bar _g] S/G/L | - | - | 40 | 40 | 40 | 40 | 40 | 32 | 40 | 16 | 16 | 20 |
| Max. set pressure with special spring | p [bar _g] S/G/L | - | - | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 16 | 16 | 25 |
| Temperature acc. to DIN EN | min. [°C] | - | - | -60 | | | | | | | | | |
| | max. [°C] | - | - | +350 | | | | | | | | | |
| Temperature acc. to ASME | min. [°C] | - | - | -10 | | | | | | | | | |
| | max. [°C] | - | - | +350 | | | | | | | | | |

¹⁾ Min. set pressure standard bellows = Max. set pressure low pressure bellows.

Type 526
Flanged Safety Relief Valves
– spring loaded

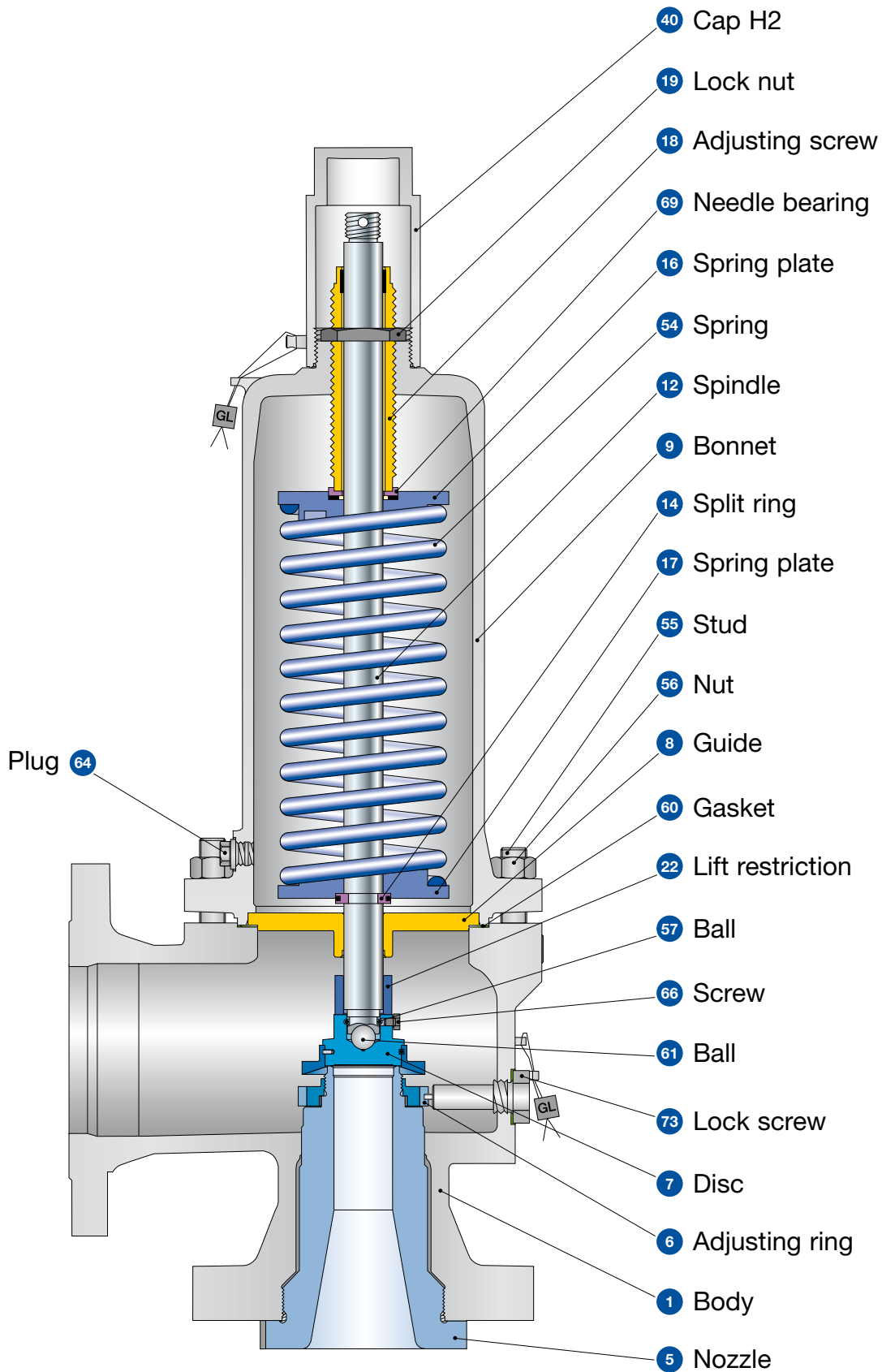


Type 526
 Packed lever H4
 Closed bonnet
 Conventional design

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Type 526
Conventional design

Type 526



Type 526

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 351 CF8M | SA 217 WC6 | SA 352 LCB |
| 5 | Nozzle ¹⁾ | 1.4408 | 1.4408 | 1.4408 stellited | 1.4408 |
| | | CF8M | CF8M | CF8M stellited | CF8M |
| 6 | Adjusting ring | 1.4408 | 1.4408 | 1.4408 | 1.4408 |
| | | CF8M | CF8M | CF8M | 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 with bushing | 1.0501 | 1.4404 | 1.4404 | 1.0501 |
| | | Steel | 316L | 316L | Steel |
| | | 1.4104 tenifer | - | - | 1.4104 tenifer |
| | | Chrome steel tenifer | - | - | Chrome steel tenifer |
| 9 | Bonnet | 1.0619 | 1.4408 ²⁾ | 1.7357 | |
| | | SA 216 WCB | SA 351 CF8M | SA 217 WC6 | SA 352 LCB |
| | | 1.0305 ⁴⁾ | 1.4571 / 1.4404 ³⁾ | 1.0305 ⁴⁾ | 1.0305 ⁴⁾ |
| | Steel | SA 479 316Ti / 316L | Steel | Steel | |
| 12 | Spindle | 1.4021 | 1.4404 | 1.4021 | 1.4021 |
| | | 420 | 316L | 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 ³⁾ | 1.4404 | 1.0718 ⁵⁾ | 1.0718 ⁵⁾ |
| | | Steel | 316L | Steel | Steel |
| 18 | Adjusting screw with bushing | 1.4104 | 1.4404 tenifer | 1.4104 | 1.4104 |
| | | Chrome steel | 316L tenifer | Chrome steel | Chrome steel |
| | | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass |
| | | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass |
| 19 | Lock nut | 1.0718 | 1.4404 | 1.0718 | 1.0718 |
| | | Steel | 316L | Steel | Steel |
| 22 | Lift restriction | 1.4404 | 1.4404 | 1.4404 | 1.4404 |
| | | 316L | 316L | 316L | 316L |
| 40 | Cap H2 | 1.0460 / 0.7040 | 1.4404 | 1.0460 / 0.7040 | 1.0460 / 0.7040 |
| | | SA 105 / Gr. 60-40-18 | 316L | SA 105 / Gr. 60-40-18 | SA 105 / Gr. 60-40-18 |
| 54 | Spring | 1.7102, 1.8159 | 1.4310 | 1.7102, 1.8159 | 1.7102, 1.8159 |
| | | High temp. alloy steel | Stainless steel | High temp. alloy steel | High temp. alloy steel |
| 55 | Stud | 1.4401 | 1.4401 | 1.4401 | 1.4401 |
| | | B8M | B8M | B8M | B8M |
| 56 | Nut | 1.4401 | 1.4401 | 1.4401 | 1.4401 |
| | | 8M | 8M | 8M | 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 |
| 64 | Plug | Steel | 1.4401 | Steel | Steel |
| | | Steel | B8M | Steel | 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 |
| | | 316L | 316L | 316L | 316L |

¹⁾ Stellited sealing surfaces please refer to page 102. LESER reserves also to use the nozzle material 1.4404 / 316L. ²⁾ Valve sizes up to 2" ³⁾ Valve sizes ≥ 3"
⁴⁾ Valve size 6 R 10, 8 T 10 and 6 Q 8 in high pressure design (Option code Z90). ⁵⁾ For valve sizes 6 Q 8, 6 R 10 and 8 T 10 in high pressure design: 1.4122 / chrome steel.

Please notice:

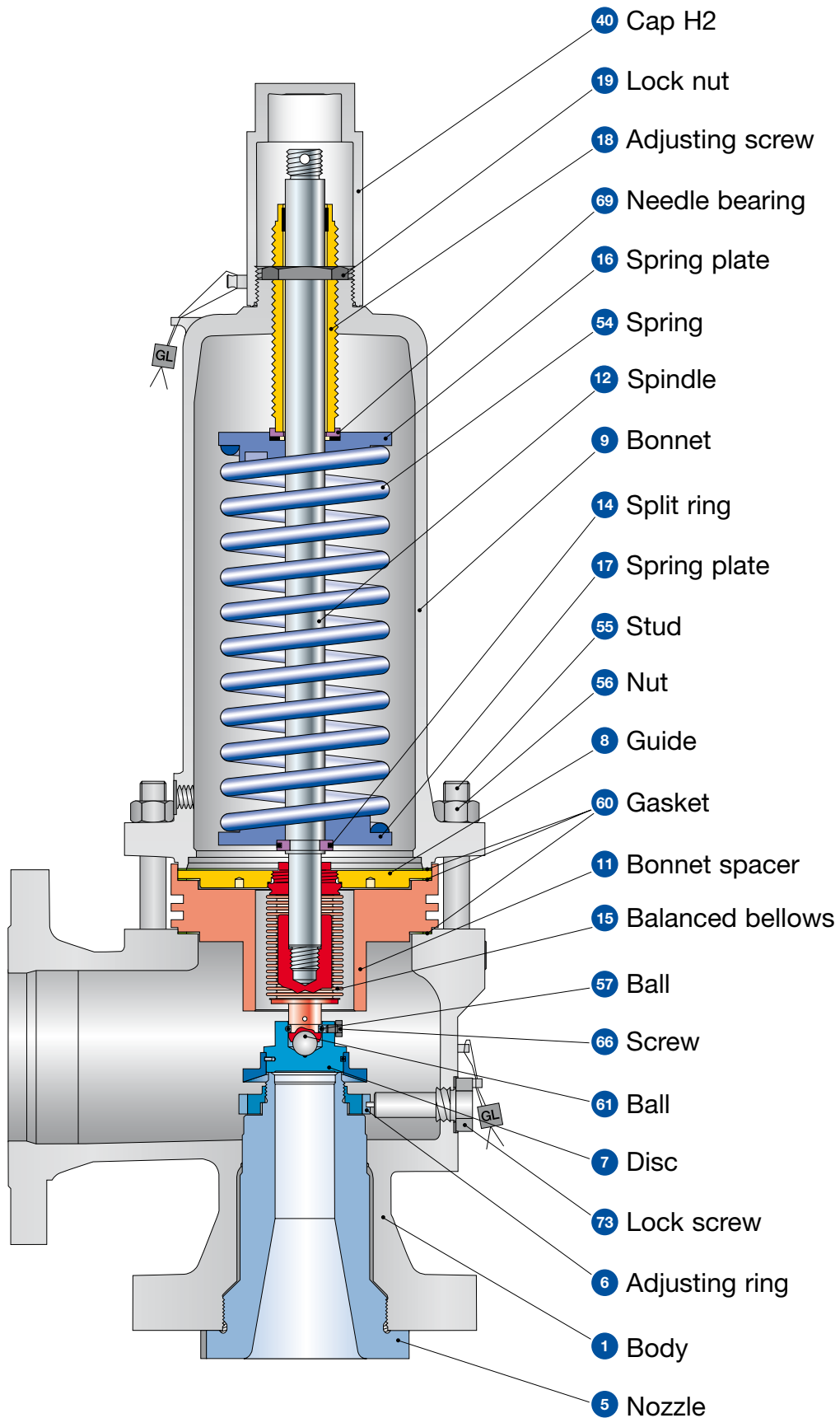
- Modifications reserved by LESER.
- If several materials are specified LESER defines the material.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

Special materials:

See API Alloy Concept page 80.

Type 526
Balanced bellows design

Type 526



Type 526

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 351 CF8M | SA 217 WC6 | SA 352 LCB |
| 5 | Nozzle ¹⁾ | 1.4408 | 1.4408 | 1.4408 stellited | 1.4408 |
| | | CF8M | CF8M | CF8M stellited | CF8M |
| 6 | Adjusting ring | 1.4408 | 1.4408 | 1.4408 | 1.4408 |
| | | CF8M | CF8M | CF8M | 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 | 1.4408 ²⁾ | 1.7357 | |
| | | SA 216 WCB | SA 351 CF8M | SA 217 WC6 | SA 352 LCB |
| | | 1.0305 ⁴⁾ | 1.4571 / 1.4404 ³⁾ | 1.0305 ⁴⁾ | 1.0305 ⁴⁾ |
| | | Steel | SA 479 316Ti / 316L | Steel | Steel |
| 11 | Bonnet spacer ⁵⁾ | 1.0460 | 1.4404 ⁷⁾ | 1.4404 ⁷⁾ | 1.4404 ⁷⁾ |
| | | SA 105 | SA 479 316L | SA 479 316L | SA 479 316L |
| 12 | Spindle | 1.4021 | 1.4404 | 1.4021 | 1.4021 |
| | | 420 | 316L | 420 | 420 |
| 14 | Split ring | 1.4104 | 1.4404 | 1.4104 | 1.4104 |
| | | Chrome steel | 316L | Chrome steel | Chrome steel |
| 15 | Bellows | 2.4856 | 2.4856 | 2.4856 | 2.4856 |
| | | Inconel 625 | Inconel 625 | Inconel 625 | Inconel 625 |
| 16 / 17 | Spring plate | 1.0718 ⁴⁾ | 1.4404 | 1.0718 ⁶⁾ | 1.0718 ⁶⁾ |
| | | Steel | 316L | Steel | Steel |
| 18 | Adjusting screw with bushing | 1.4104 | 1.4404 tenifer | 1.4104 | 1.4104 |
| | | Chrome steel | 316L tenifer | Chrome steel | Chrome steel |
| | | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass |
| | | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass | PTFE 15% glass |
| 19 | Lock nut | 1.0718 | 1.4404 | 1.0718 | 1.0718 |
| | | Steel | 316L | Steel | Steel |
| 40 | Cap H2 | 1.0460 / 0.7040 | 1.4404 | 1.0460 / 0.7040 | 1.0460 / 0.7040 |
| | | SA 105 / Gr. 60-40-18 | 316L | SA 105 / Gr. 60-40-18 | SA 105 / Gr. 60-40-18 |
| 54 | Spring | 1.7102, 1.8159 | 1.4310 | 1.7102, 1.8159 | 1.7102, 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 | 316L | 316L | 316L |
| 73 | Lock screw | 1.4404 | 1.4404 | 1.4404 | 1.4404 |
| | | 316L | 316L | 316L | 316L |

¹⁾ Stellited sealing surfaces please refer to page 102. LESER reserves also to use the nozzle material 1.4404 / 316L. ²⁾ Valve sizes up to 2" ³⁾ Valve sizes ≥ 3"

⁴⁾ Valve size 6 R 10, 8 T 10 and 6 Q 8 in high pressure design (Option code Z90). ⁵⁾ Valve size 1 1/2 D 3, 1 1/2 E 3, 1 1/2 F 3, 6 R 10 and 8 T 10 without bonnet spacer.

⁶⁾ For valve sizes 6 Q 8, 6 R 10 and 8 T 10 in high pressure design: 1.4122 / chrome steel. ⁷⁾ LESER reserves also to use material 1.4408/CF8M.

Please notice:

- Modifications reserved by LESER.
- If several materials are specified LESER defines the material.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

Special materials:

See API Alloy Concept page 80.

Type 526

Article numbers

Overview

| Material | WCB | CF8M | WC6 | LCB | WCB | CF8M | WC6 | LCB | WCB | CF8M | WC6 | LCB |
|---------------------|-----------------------|-----------------------|--------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1.0619 | 1.4408 | 1.7357 | | 1.0619 | 1.4408 | 1.7357 | | 1.0619 | 1.4408 | 1.7357 | |
| Flange class | 150 x 150 | | | | 300L x 150 | | | | 300 x 150 | | | |
| Valve size | 1 D 2 | | | | 1 D 2 | | | | 1 D 2 | | | |
| D | 5262.001 ^o | 5264.010 ^o | - | 5263.500 ^o | Use 1 D 2 300 x 150 | | | | 5262.002 ^o | 5264.011 ^o | 5267.006 ^o | 5263.501 ^o |
| E | 1 E 2 | | | | 1 E 2 | | | | 1 E 2 | | | |
| | 5262.015 ^o | 5264.024 ^o | - | 5263.505 ^o | Use 1 E 2 300 x 150 | | | | 5262.016 ^o | 5264.025 ^o | 5267.020 ^o | 5263.506 ^o |
| F | 1 1/2 F 2 | | | | 1 1/2 F 2 | | | | 1 1/2 F 2 | | | |
| | 5262.029 ^o | 5264.039 ^o | - | 5263.510 ^o | 5262.030 ^o | 5264.040 ^o | - | 5263.511 ^o | 5262.031 ^o | 5264.041 ^o | 5267.035 ^o | 5263.512 ^o |
| G | 1 1/2 G 3 | | | | 1 1/2 G 3 | | | | 1 1/2 G 3 | | | |
| | 5262.045 ^o | 5264.110 ^o | - | 5263.516 ^o | 5262.046 ^o | 5264.111 ^o | - | 5263.517 ^o | 5262.047 ^o | 5264.112 ^o | 5267.052 ^o | 5263.518 ^o |
| Flange class | 150 x 150 | | | | 300L x 150 | | | | 300 x 150 | | | |
| Valve size | 1 1/2 H 3 | | | | 1 1/2 H 3 | | | | 2 H 3 | | | |
| H | 5262.142 ^o | 5264.152 ^o | - | 5263.523 ^o | 5262.143 ^o | 5264.153 ^o | - | 5263.524 ^o | 5262.144 ^o | 5264.154 ^o | 5267.148 ^o | 5263.525 ^o |
| J | 2 J 3 | | | | 2 J 3 | | | | 3 J 4 | | | |
| | 5262.162 ^o | 5264.196 ^o | - | 5263.529 ^o | 5262.163 ^o | 5264.197 ^o | - | 5263.530 ^o | 5262.164 ^o | 5264.198 ^o | 5267.168 ^o | 5263.531 ^o |
| K | 3 K 4 | | | | 3 K 4 | | | | 3 K 4 | | | |
| | 5262.202 ^o | 5264.211 ^o | - | 5263.535 ^o | Use 3 K 4 300 x 150 | | | | 5262.203 ^o | 5264.212 ^o | 5267.207 ^o | 5263.536 ^o |
| Flange class | 150 x 150 | | | | 300L x 150 | | | | 300 x 150 | | | |
| Valve size | 3 L 4 | | | | 3 L 4 | | | | 4 L 6 | | | |
| L | 5262.232 ^o | 5264.242 ^o | - | 5263.540 ^o | 5262.233 ^o | 5264.243 ^o | - | 5263.541 ^o | 5262.234 ^o | 5264.244 ^o | 5267.238 ^o | 5263.542 ^o |
| M | 4 M 6 | | | | 4 M 6 | | | | 4 M 6 | | | |
| | 5262.580 ^o | 5264.587 ^o | - | 5263.546 ^o | Use 4 M 6 300 x 150 | | | | 5262.581 ^o | 5264.588 ^o | 5267.584 ^o | 5263.547 ^o |
| N | 4 N 6 | | | | 4 N 6 | | | | 4 N 6 | | | |
| | 5262.590 ^o | 5264.597 ^o | - | 5263.550 ^o | Use 4 N 6 300 x 150 | | | | 5262.591 ^o | 5264.598 ^o | 5267.594 ^o | 5263.551 ^o |
| P | 4 P 6 | | | | 4 P 6 | | | | 4 P 6 | | | |
| | 5262.645 ^o | 5264.653 ^o | - | 5263.554 ^o | 5262.646 ^o | 5264.654 ^o | - | 5263.555 ^o | 5262.647 ^o | 5264.655 ^o | 5267.650 ^o | 5263.556 ^o |
| Q | 6 Q 8 | | | | 6 Q 8 | | | | 6 Q 8 | | | |
| | 5262.657 ^o | 5264.662 ^o | - | 5263.559 ^o | Use 6 Q 8 300 x 150 | | | | 5262.658 ^o | 5264.663 ^o | 5267.660 ^o | 5263.560 ^o |
| R | 6 R 8 | | | | 6 R 8 | | | | 6 R 10 | | | |
| | 5262.665 ^o | 5264.671 ^o | - | 5263.562 ^o | 5262.666 ^o | 5264.672 ^o | 5267.669 ^o | 5263.563 ^o | 5262.667 ^o | 5264.673 ^o | - | 5263.564 ^o |
| T | 8 T 10 | | | | 8 T 10 | | | | 8 T 10 | | | |
| | 5262.675 ^o | 5264.678 ^o | - | 5263.566 ^o | Use 8 T 10 300 x 150 | | | | 5262.676 ^o | 5264.679 ^o | 5267.677 ^o | 5263.567 ^o |

| Material | WCB | CF8M | WC6 | LCB | WCB | CF8M | WC6 | LCB | WCB | CF8M | WC6 | LCB | WCB | CF8M | WC6 | LCB |
|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1.0619 | 1.4408 | 1.7357 | | 1.0619 | 1.4408 | 1.7357 | | 1.0619 | 1.4408 | 1.7357 | | 1.0619 | 1.4408 | 1.7357 | |
| Flange class | 600 x 150 | | | | 900 x 300 | | | | 1500 x 300 | | | | 2500 x 300 | | | |
| Valve size | 1 D 2 | | | | 1 1/2 D 2 | | | | 1 1/2 D 2 | | | | 1 1/2 D 3 | | | |
| D | 5262.003 ^o | 5264.012 ^o | 5267.007 ^o | 5263.502 ^o | Use 1 1/2 D 2 1500 x 300 | | | | 5262.004 ^o | 5264.013 ^o | 5267.008 ^o | 5263.503 ^o | 5262.005 ^o | 5264.014 ^o | 5267.009 ^o | 5263.504 ^o |
| E | 1 E 2 | | | | 1 1/2 E 2 | | | | 1 1/2 E 2 | | | | 1 1/2 E 3 | | | |
| | 5262.017 ^o | 5264.026 ^o | 5267.021 ^o | 5263.507 ^o | Use 1 1/2 E 2 1500 x 300 | | | | 5262.018 ^o | 5264.027 ^o | 5267.022 ^o | 5263.508 ^o | 5262.019 ^o | 5264.028 ^o | 5267.023 ^o | 5263.509 ^o |
| F | 1 1/2 F 2 | | | | 1 1/2 F 3 | | | | 1 1/2 F 3 | | | | 1 1/2 F 3 | | | |
| | 5262.032 ^o | 5264.042 ^o | 5267.036 ^o | 5263.513 ^o | Use 1 1/2 F 3 1500 x 300 | | | | 5262.033 ^o | 5264.043 ^o | 5267.037 ^o | 5263.514 ^o | 5262.034 ^o | 5264.044 ^o | 5267.038 ^o | 5263.515 ^o |
| G | 1 1/2 G 3 | | | | 1 1/2 G 3 | | | | 2 G 3 | | | | 2 G 3 | | | |
| | 5262.048 ^o | 5264.113 ^o | 5267.053 ^o | 5263.519 ^o | 5262.049 ^o | 5264.114 ^o | 5267.054 ^o | 5263.520 ^o | 5262.050 ^o | 5264.115 ^o | 5267.055 ^o | 5263.521 ^o | 5262.051 ^o | 5264.116 ^o | 5267.056 ^o | 5263.522 ^o |
| Flange class | 600 x 150 | | | | 900 x 150 | | | | 1500 x 300 | | | | | | | |
| Valve size | 2 H 3 | | | | 2 H 3 | | | | 2 H 3 | | | | | | | |
| H | 5262.145 ^o | 5264.155 ^o | 5267.149 ^o | 5263.526 ^o | 5262.146 ^o | 5264.156 ^o | 5267.150 ^o | 5263.527 ^o | 5262.147 ^o | 5264.157 ^o | 5267.151 ^o | 5263.528 ^o | | | | |
| J | 3 J 4 | | | | 3 J 4 | | | | 3 J 4 | | | | | | | |
| | 5262.165 ^o | 5264.199 ^o | 5267.169 ^o | 5263.532 ^o | 5262.166 ^o | 5264.200 ^o | 5267.170 ^o | 5263.533 ^o | 5262.167 ^o | 5264.201 ^o | 5267.171 ^o | 5263.534 ^o | | | | |
| K | 3 K 4 | | | | 3 K 6 | | | | 3 K 6 | | | | | | | |
| | 5262.204 ^o | 5264.213 ^o | 5267.208 ^o | 5263.537 ^o | 5262.205 ^o | 5264.214 ^o | 5267.209 ^o | 5263.538 ^o | 5262.206 ^o | 5264.215 ^o | 5267.210 ^o | 5263.539 ^o | | | | |
| Flange class | 600 x 150 | | | | 900 x 150 | | | | 1500 x 150 | | | | | | | |
| Valve size | 4 L 6 | | | | 4 L 6 | | | | 4 L 6 | | | | | | | |
| L | 5262.235 ^o | 5264.245 ^o | 5267.239 ^o | 5263.543 ^o | 5262.236 ^o | 5264.246 ^o | 5267.240 ^o | 5263.544 ^o | 5262.237 ^o | - | 5267.241 ^o | 5263.545 ^o | | | | |
| M | 4 M 6 | | | | 4 M 6 | | | | | | | | | | | |
| | 5262.582 ^o | 5264.589 ^o | 5267.585 ^o | 5263.548 ^o | 5262.583 ^o | - | 5267.586 ^o | 5263.549 ^o | | | | | | | | |
| N | 4 N 6 | | | | 4 N 6 | | | | | | | | | | | |
| | 5262.592 ^o | 5264.599 ^o | 5267.595 ^o | 5263.552 ^o | 5262.593 ^o | - | 5267.596 ^o | 5263.553 ^o | | | | | | | | |
| P | 4 P 6 | | | | 4 P 6 | | | | | | | | | | | |
| | 5262.648 ^o | 5264.656 ^o | 5267.651 ^o | 5263.557 ^o | 5262.649 ^o | - | 5267.652 ^o | 5263.558 ^o | | | | | | | | |
| Q | 6 Q 8 | | | | 6 Q 8 | | | | | | | | | | | |
| | 5262.659 ^o | 5264.664 ^o | 5267.661 ^o | 5263.561 ^o | | | | | | | | | | | | |
| R | 6 R 10 | | | | 6 R 10 | | | | | | | | | | | |
| | 5262.668 ^o | 5264.674 ^o | 5267.670 ^o | 5263.565 ^o | | | | | | | | | | | | |
| T | 8 T 10 | | | | 8 T 10 | | | | | | | | | | | |
| | - | - | - | - | | | | | | | | | | | | |

^o) Please add code for the required cap or lifting device.

| 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 | - |

Type 526

Dimensions

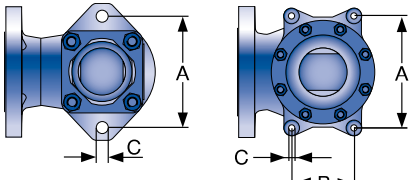
Metric units

Type 526

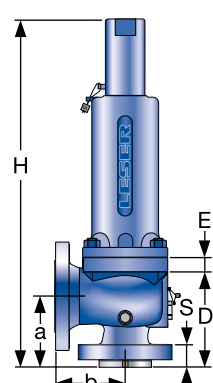
| Safety valve dimensions | | [mm] | a | b | s | H _{max.} | H _{max.} with bellows | a | b | s | H _{max.} | H _{max.} with bellows | a | b | s | H _{max.} | H _{max.} with bellows |
|----------------------------|--|--------------|------------------|-----|------|-------------------|--------------------------------|-------------------|-----|------|-------------------|--------------------------------|------------------|-----|------|-------------------|--------------------------------|
| Support brackets | | [mm] | A | B | C | D | E | A | B | C | D | E | A | B | C | D | E |
| Flange rating class | | | 150 x 150 | | | | | 300L x 150 | | | | | 300 x 150 | | | | |
| Valve size | | | 1 D 2 | | | | | 1 D 2 | | | | | 1 D 2 | | | | |
| D | d ₀ [mm] | 14.0 | 105 | 114 | 30 | 440 | 465 | Please see 1 D 2 | | | | | 105 | 114 | 30 | 440 | 465 |
| | A ₀ [mm ²] | 154 | 130 | – | Ø 14 | 132 | 16 | 300 x 150 | | | | | 130 | – | Ø 14 | 132 | 16 |
| Valve size | | | 1 E 2 | | | | | 1 E 2 | | | | | 1 E 2 | | | | |
| E | d ₀ [mm] | 14.0 | 105 | 114 | 30 | 440 | 465 | Please see 1 E 2 | | | | | 105 | 114 | 30 | 440 | 465 |
| | A ₀ [mm ²] | 154 | 130 | – | Ø 14 | 132 | 16 | 300 x 150 | | | | | 130 | – | Ø 14 | 132 | 16 |
| Valve size | | | 1 1/2 F 2 | | | | | 1 1/2 F 2 | | | | | 1 1/2 F 2 | | | | |
| F | d ₀ [mm] | 18.0 | 124 | 121 | 32 | 536 | 561 | 124 | 121 | 32 | 536 | 561 | 124 | 152 | 35 | 536 | 561 |
| | A ₀ [mm ²] | 254 | 162 | – | Ø 14 | 148 | 16 | 162 | – | Ø 14 | 148 | 16 | 162 | – | Ø 14 | 148 | 16 |
| Valve size | | | 1 1/2 G 3 | | | | | 1 1/2 G 3 | | | | | 1 1/2 G 3 | | | | |
| G | d ₀ [mm] | 22.5 | 124 | 121 | 32 | 536 | 574 | 124 | 121 | 32 | 536 | 574 | 124 | 152 | 35 | 536 | 574 |
| | A ₀ [mm ²] | 398 | 162 | – | Ø 14 | 148 | 16 | 162 | – | Ø 14 | 148 | 16 | 162 | – | Ø 14 | 148 | 16 |
| Flange rating class | | | 150 x 150 | | | | | 300L x 150 | | | | | 300 x 150 | | | | |
| Valve size | | | 1 1/2 H 3 | | | | | 1 1/2 H 3 | | | | | 2 H 3 | | | | |
| H | d ₀ [mm] | 28.3 | 130 | 124 | 38 | 542 | 580 | 130 | 124 | 38 | 542 | 580 | 130 | 124 | 43 | 666 | 692 |
| | A ₀ [mm ²] | 629 | 162 | – | Ø 14 | 155 | 16 | 162 | – | Ø 14 | 155 | 16 | 184 | 110 | Ø 14 | 177 | 16 |
| Valve size | | | 2 J 3 | | | | | 2 J 3 | | | | | 3 J 4 | | | | |
| J | d ₀ [mm] | 36.0 | 137 | 124 | 49 | 673 | 722 | 137 | 124 | 49 | 673 | 722 | 184 | 181 | 49 | 786 | 824 |
| | A ₀ [mm ²] | 1018 | 184 | 110 | Ø 14 | 184 | 16 | 184 | 110 | Ø 14 | 184 | 16 | 238 | 140 | Ø 18 | 234 | 25 |
| Valve size | | | 3 K 4 | | | | | 3 K 4 | | | | | 3 K 4 | | | | |
| K | WCB, LCB, CF8M (WC6) d ₀ [mm] | 43.0 | 156 | 162 | 49 | 758 | 796 | Please see 3 K 4 | | | | | 156 | 162 | 49 | 758 | 796 |
| | A ₀ [mm ²] | 1452 | 238 | 140 | Ø 18 | 206 | 25 | 300 x 150 | | | | | 238 | 140 | Ø 18 | 206 | 25 |
| WC6 | | | | | | | | | | | | | | | | | |
| Flange rating class | | | 150 x 150 | | | | | 300L x 150 | | | | | 300 x 150 | | | | |
| Valve size | | | 3 L 4 | | | | | 3 L 4 | | | | | 4 L 6 | | | | |
| L | d ₀ [mm] | 53.5 | 156 | 165 | 49 | 758 | 796 | 156 | 165 | 49 | 758 | 796 | 179 | 181 | 49 | 853 | 886 |
| | A ₀ [mm ²] | 2248 | 238 | 140 | Ø 18 | 206 | 25 | 238 | 140 | Ø 18 | 206 | 25 | 278 | 160 | Ø 18 | 262 | 25 |
| Valve size | | | 4 M 6 | | | | | 4 M 6 | | | | | 4 M 6 | | | | |
| M | d ₀ [mm] | 60.3 | 178 | 184 | 48 | 852 | 885 | Please see 4 M 6 | | | | | 178 | 184 | 48 | 852 | 885 |
| | A ₀ [mm ²] | 2856 | 278 | 160 | Ø 18 | 260 | 25 | 300 x 150 | | | | | 278 | 160 | Ø 18 | 260 | 25 |
| Valve size | | | 4 N 6 | | | | | 4 N 6 | | | | | 4 N 6 | | | | |
| N | d ₀ [mm] | 66.0 | 197 | 210 | 48 | 871 | 904 | Please see 4 N 6 | | | | | 197 | 210 | 48 | 871 | 904 |
| | A ₀ [mm ²] | 3421 | 278 | 160 | Ø 18 | 280 | 25 | 300 x 150 | | | | | 278 | 160 | Ø 18 | 280 | 25 |
| Valve size | | | 4 P 6 | | | | | 4 P 6 | | | | | 4 P 6 | | | | |
| P | d ₀ [mm] | 80.0 | 181 | 229 | 48 | 855 | 888 | 181 | 229 | 48 | 855 | 888 | 225 | 254 | 62 | 1079 | 1138 |
| | A ₀ [mm ²] | 5027 | 278 | 160 | Ø 18 | 262 | 25 | 278 | 160 | Ø 18 | 262 | 25 | 370 | 210 | Ø 18 | 306 | 25 |
| Valve size | | | 6 Q 8 | | | | | 6 Q 8 | | | | | 6 Q 8 | | | | |
| Q | d ₀ [mm] | 105.5 | 240 | 241 | 68 | 1120 | 1200 | Please see 6 Q 8 | | | | | 240 | 241 | 68 | 1120 | 1200 |
| | A ₀ [mm ²] | 8742 | 370 | 210 | Ø 18 | 346 | 25 | 300 x 150 | | | | | 370 | 210 | Ø 18 | 346 | 25 |
| Valve size | | | 6 R 8 | | | | | 6 R 8 | | | | | 6 R 10 | | | | |
| R | d ₀ [mm] | 126.0 | 240 | 241 | 68 | 1120 | 1200 | 240 | 241 | 68 | 1120 | 1200 | 240 | 267 | 68 | 1426 | 1426 |
| | A ₀ [mm ²] | 12568 | 370 | 210 | Ø 18 | 346 | 25 | 370 | 210 | Ø 18 | 346 | 25 | 470 | 150 | Ø 18 | 460 | 25 |
| Valve size | | | 8 T 10 | | | | | 8 T 10 | | | | | 8 T 10 | | | | |
| T | d ₀ [mm] | 161.5 | 276 | 279 | 62 | 1462 | 1462 | Please see 8 T 10 | | | | | 276 | 279 | 62 | 1462 | 1462 |
| | A ₀ [mm ²] | 20485 | 470 | 150 | Ø 18 | 497 | 25 | 300 x 150 | | | | | 470 | 150 | Ø 18 | 497 | 25 |

d_0 = Actual orifice diameter
 A_0 = Actual orifice area

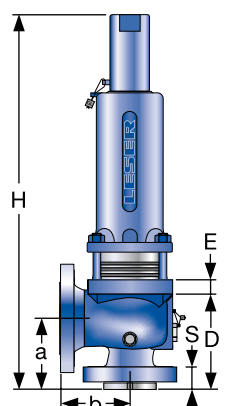
| a | b | s | H _{max.} | H _{max.} with bellows | a | b | s | H _{max.} | H _{max.} with bellows | a | b | s | H _{max.} | H _{max.} with bellows | a | b | s | H _{max.} | H _{max.} with bellows |
|------------------|-----|------|--------------------|--------------------------------|----------------------|-----|------|--------------------|--------------------------------|-------------------|-----|------|--------------------|--------------------------------|-------------------|-----|------|-------------------|--------------------------------|
| A | B | C | D | E | A | B | C | D | E | A | B | C | D | E | A | B | C | D | E |
| 600 x 150 | | | | | 900 x 300 | | | | | 1500 x 300 | | | | | 2500 x 300 | | | | |
| 1 D 2 | | | | | 1 1/2 D 2 | | | | | 1 1/2 D 2 | | | | | 1 1/2 D 3 | | | | |
| 105 | 114 | 30 | 440 | 465 | Please see 1 1/2 D 2 | | | | | 105 | 140 | 44 | 517 | 542 | 140 | 178 | 57 | 576 | 576 |
| 130 | - | Ø 14 | 132 | 16 | 1500 x 300 | | | | | 162 | - | Ø 14 | 129 | 16 | 162 | - | Ø 14 | 189 | 16 |
| 1 E 2 | | | | | 1 1/2 E 2 | | | | | 1 1/2 E 2 | | | | | 1 1/2 E 3 | | | | |
| 105 | 114 | 30 | 440 | 465 | Please see 1 1/2 E 2 | | | | | 105 | 140 | 44 | 517 | 542 | 140 | 178 | 57 | 576 | 576 |
| 130 | - | Ø 14 | 132 | 16 | 1500 x 300 | | | | | 162 | - | Ø 14 | 129 | 16 | 162 | - | Ø 14 | 189 | 16 |
| 1 1/2 F 2 | | | | | 1 1/2 F 3 | | | | | 1 1/2 F 3 | | | | | 1 1/2 F 3 | | | | |
| 124 | 152 | 35 | 536 | 561 | Please see 1 1/2 F 3 | | | | | 124 | 165 | 44 | 560 | 560 | 140 | 178 | 57 | 576 | 576 |
| 162 | - | Ø 14 | 148 | 16 | 1500 x 300 | | | | | 162 | - | Ø 14 | 174 | 16 | 162 | - | Ø 14 | 189 | 16 |
| 1 1/2 G 3 | | | | | 1 1/2 G 3 | | | | | 2 G 3 | | | | | 2 G 3 | | | | |
| 124 | 152 | 35 | 536 | 574 | 124 | 165 | 44 | 560 | 573 | 156 | 172 | 68 | 688 | 705 | 156 | 172 | 68 | 688 | 705 |
| 162 | - | Ø 14 | 148 | 16 | 162 | - | Ø 14 | 174 | 16 | 184 | 110 | Ø 14 | 198 | 16 | 184 | 110 | Ø 14 | 198 | 16 |
| 600 x 150 | | | | | 900 x 150 | | | | | 1500 x 300 | | | | | | | | | |
| 2 H 3 | | | | | 2 H 3 | | | | | 2 H 3 | | | | | | | | | |
| 154 | 162 | 56 | 691 | 717 | 154 | 162 | 56 | 691 | 717 | 154 | 162 | 56 | 691 | 717 | | | | | |
| 184 | 110 | Ø 14 | 202 | 16 | 184 | 110 | Ø 14 | 202 | 16 | 184 | 110 | Ø 14 | 202 | 16 | | | | | |
| 3 J 4 | | | | | 3 J 4 | | | | | 3 J 4 | | | | | | | | | |
| 184 | 181 | 49 | 786 | 824 | 184 | 181 | 65 | 786 | 824 | 184 | 181 | 65 | 786 | 824 | | | | | |
| 238 | 140 | Ø 18 | 234 | 25 | 238 | 140 | Ø 18 | 234 | 25 | 238 | 140 | Ø 18 | 234 | 25 | | | | | |
| 3 K 4 | | | | | 3 K 6 | | | | | 3 K 6 | | | | | | | | | |
| 184 | 181 | 49 | 786 | 824 | 198 | 216 | 67 | 880 | 880 | 197 | 216 | 65 | 879 | 879 | | | | | |
| 238 | 140 | Ø 18 | 234 | 25 | 278 | 160 | Ø 18 | 288 | 25 | 278 | 160 | Ø 18 | 287 | 25 | | | | | |
| 156 | 162 | 49 | 758 | 796 | | | | | | | | | | | | | | | |
| 238 | 140 | Ø 18 | 206 | 25 | | | | | | | | | | | | | | | |
| 600 x 150 | | | | | 900 x 150 | | | | | 1500 x 150 | | | | | | | | | |
| 4 L 6 | | | | | 4 L 6 | | | | | 4 L 6 | | | | | | | | | |
| 179 | 203 | 57 | 853 | 886 | 197 | 222 | 72 | 871 | 904 | 197 | 222 | 72 | 871 | 904 | | | | | |
| 278 | 160 | Ø 18 | 262 | 25 | 278 | 160 | Ø 18 | 280 | 25 | 278 | 160 | Ø 18 | 280 | 25 | | | | | |
| 4 M 6 | | | | | 4 M 6 | | | | | 4 M 6 | | | | | | | | | |
| 178 | 203 | 56 | 852 | 885 | 197 | 222 | 72 | 871 | 904 | 197 | 222 | 72 | 871 | 904 | | | | | |
| 278 | 160 | Ø 18 | 260 | 25 | 278 | 160 | Ø 18 | 280 | 25 | 278 | 160 | Ø 18 | 280 | 25 | | | | | |
| 4 N 6 | | | | | 4 N 6 | | | | | 4 N 6 | | | | | | | | | |
| 197 | 222 | 72 | 871 | 904 | 197 | 222 | 72 | 871 | 904 | 197 | 222 | 72 | 871 | 904 | | | | | |
| 278 | 160 | Ø 18 | 280 | 25 | 278 | 160 | Ø 18 | 280 | 25 | 278 | 160 | Ø 18 | 280 | 25 | | | | | |
| 4 P 6 | | | | | 4 P 6 | | | | | 4 P 6 | | | | | | | | | |
| 225 | 254 | 62 | 1079 | 1138 | 225 | 254 | 62 | 1079 | 1138 | 225 | 254 | 62 | 1079 | 1138 | | | | | |
| 370 | 210 | Ø 18 | 306 | 25 | 370 | 210 | Ø 18 | 306 | 25 | 370 | 210 | Ø 18 | 306 | 25 | | | | | |
| 6 Q 8 | | | | | 6 Q 8 | | | | | 6 Q 8 | | | | | | | | | |
| 240 | 241 | 68 | 1120 ¹⁾ | 1200 ²⁾ | 240 | 241 | 68 | 1120 ¹⁾ | 1200 ²⁾ | 240 | 241 | 68 | 1120 ¹⁾ | 1200 ²⁾ | | | | | |
| 370 | 210 | Ø 18 | 346 | 25 | 370 | 210 | Ø 18 | 346 | 25 | 370 | 210 | Ø 18 | 346 | 25 | | | | | |
| 6 R 10 | | | | | 6 R 10 | | | | | 6 R 10 | | | | | | | | | |
| 240 | 267 | 68 | 1426 | 1426 | 240 | 267 | 68 | 1426 | 1426 | 240 | 267 | 68 | 1426 | 1426 | | | | | |
| 470 | 150 | Ø 18 | 460 | 25 | 470 | 150 | Ø 18 | 460 | 25 | 470 | 150 | Ø 18 | 460 | 25 | | | | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | |



Support brackets



Conventional design



Balanced bellows design

¹⁾ Type 526 high pressure design: 1202
²⁾ Type 526 high pressure design: 1282