

Type 442 DIN
Plain lever H3
Open bonnet
Conventional design



Type 441 DIN
Packed lever H4
Closed bonnet
Conventional design

Type 441 DIN 442 DIN

Type 441, 442 DIN

Flanged Safety Relief Valves – spring loaded

Contents

Chapter/Page

Materials

- Conventional design 01/02
- Balanced bellows design 01/04

How to order

- Numbering system 01/06
- Article numbers 01/08

Dimensions and weights

- Metric Units 01/10
- US Units 01/11

Pressure temperature ratings

- Metric Units 01/12
- US Units 01/14

Flange drillings and facings 01/16

Order information – Spare parts 01/18

Available options 01/20

Approvals 01/21

Capacities

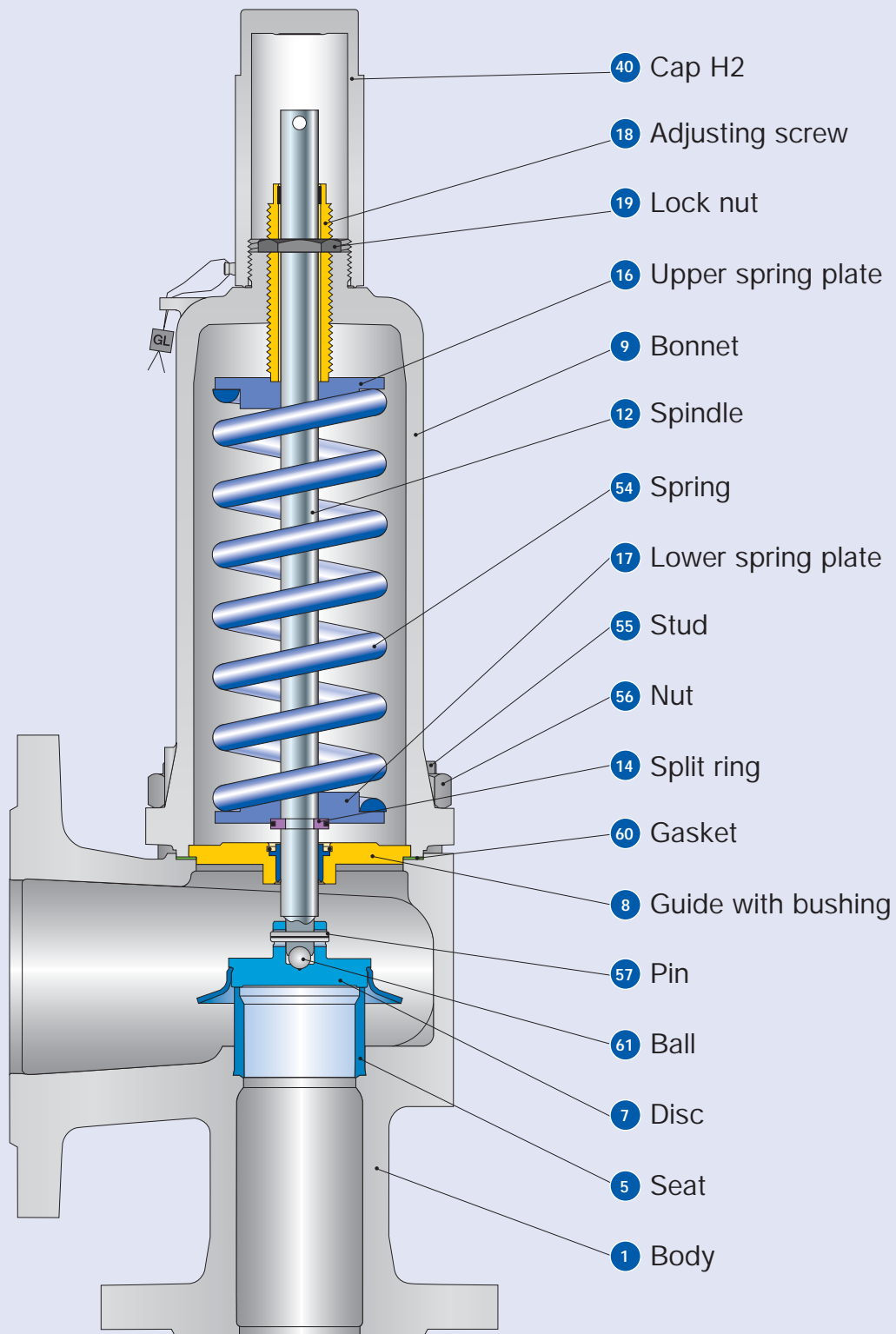
- Steam [Metric Units + US Units] 01/22
- Air [Metric Units + US Units] 01/24
- Water [Metric Units + US Units] 01/26

Determination of coefficient
of discharge K_{dr}/α_w 01/28

Type 441, 442 DIN

Conventional design

Type 441, 442 DIN



Conventional design

| Materials | | 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 | 1.4104 tenifer | 1.4104 tenifer | - |
| | | Chrome steel tenifer | Chrome steel 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 | 1.0718 or 0.7043 | 1.0718 or 0.7043 | 1.0718 or 0.7043 | 1.4404 |
| | | 12L13 or Gr. 60-40-18 | 12L13 or Gr. 60-40-18 | 12L13 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.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.