

# Model 1415

## DESCRIPTION

Safety and relief valve, angle type, conventional  
 According ASME VIII  
 Direct spring loaded  
 Full lift safety valve  
 A 216 WCB, Stainless steel A351 CF3M.  
 A217 WC6, LCC, SUPERDUPLEX (on request)  
 Steam, gases, cryogenic fluids, H<sub>2</sub>, vapours and liquids  
 Cleaned and degreased for oxygen service  
 Flanged ASME/ANSI B16.5 ANSI150 / 300 / 600 / 900 / 1500 / 2500  
 Seat metal- metal, Stellite, Viton and PTFE  
 Set pressure range 0,2 (with bellows 2 barg) to 425 barg  
 Tolerance Set pressure  $\pm 3\%$   
 Overpressure 10%  
 European Pressure Equipment Directive PED 2014/68/EU  
 CE 0056 Module B  
 CE Production Quality Assurance (Module D) ES037955- 1035  
 Material test certificate EN 10204 3.1

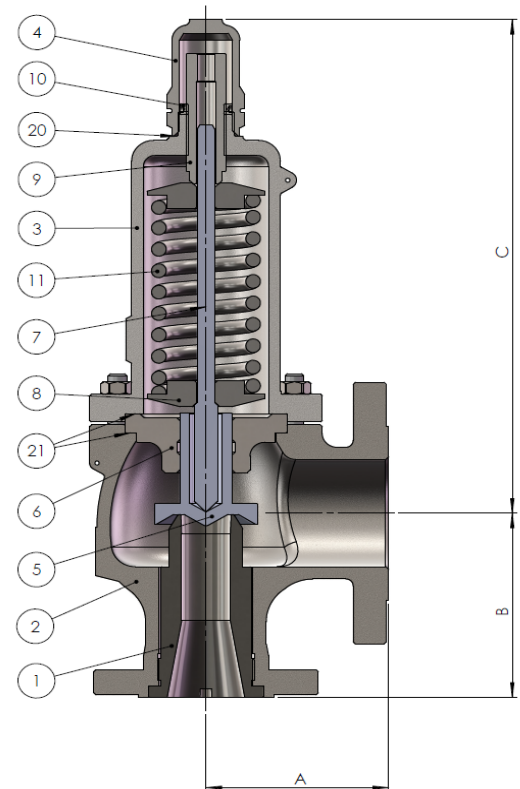
**TOSACA, MADE IN SPAIN**



## MATERIALS

| Item             | Components         | Carbon steel         | Stainless st.   | WC6                  |
|------------------|--------------------|----------------------|-----------------|----------------------|
| 1                | Nozzle             | SS AISI-316L         | SS AISI-316L    | SS AISI-316L         |
| 2                | Body               | SA216 WCB            | SA351 CF3M      | SA216 WCB            |
| 3                | Bonnet             | SA216 WCB            | SA351 CF3M      | SA216 WCB            |
| 4                | Cap                | SA351 CF8            | SA351 CF8       | SA351 CF8            |
| 5 <sup>sp</sup>  | Disc               | SS AISI-316L         | SS AISI-316L    | SS AISI-316L         |
| 6                | Guide              | SS AISI-316L         | SS AISI-316L    | SS AISI-316L         |
| 7                | Push Rod           | SS AISI-316L         | SS AISI-316L    | SS AISI-316L         |
| 8                | Spring Button      | AISI-303             | AISI-303        | AISI-303             |
| 9                | Ajusting Screw     | AISI-420             | AISI-420        | AISI-420             |
| 10               | Tensor Nut         | AISI-303             | AISI-303        | AISI-303             |
| 11 <sup>sp</sup> | Spring             | Alloy steel/AISI-302 | AISI-302        | Alloy steel/AISI-302 |
| 12               | Lever              | A351 CF8             | A351 CF8        | A351 CF8             |
| 13               | Adj.blowdown       | AISI-316L            | AISI-316L       | AISI-316L            |
| 17               | Release nut        | AISI-304             | AISI-304        | AISI-304             |
| 18 <sup>sp</sup> | Lever axis         | AISI-303             | AISI-303        | AISI-303             |
| 19               | Packing lever axis | AISI-303             | AISI-303        | AISI-303             |
| 20 <sup>sp</sup> | Gasket cap         | PTFE                 | PTFE            | PTFE                 |
| 21 <sup>sp</sup> | Gasket             | Graphite + S.S.      | Graphite + S.S. | Graphite + S.S.      |
| 22 <sup>sp</sup> | Gasket pack. lever | Viton                | Viton           | Viton                |
| 27 <sup>sp</sup> | Bellows            | AISI-316 TI          | AISI-316 TI     | AISI-316 TI          |

<sup>sp</sup> Recommended spare parts



## OPTIONS

Lifting device  
 Sealed packing lever  
 Blowdown Adjustable, single ring  
 Bellows AISI 316TI, Inconel.

## Model 1415

## DIMENSIONS

|        |                  | Orif.<br>(mm) | Area<br>(mm <sup>2</sup> ) | ANSI 150  |           |           |                | ANSI 300  |           |           |                | ANSI 600  |           |           |                |
|--------|------------------|---------------|----------------------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|
| Letter |                  |               |                            | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) |
| D/E    | 1/2" D / E 1"    | 9,5 /13       | 71/133                     | 95        | 95        | 275       | 10             | 95        | 95        | 275       | 10             | 95        | 100       | 275       | 11             |
|        | 3/4" D / E 1"    | 9,5 /13       | 71/133                     | 95        | 95        | 275       | 10             | 95        | 95        | 275       | 10             | 95        | 100       | 275       | 11             |
|        | 1" D / E 1"      | 9,5 /13       | 71/133                     | 95        | 95        | 275       | 10             | 95        | 95        | 275       | 10             | 95        | 100       | 275       | 11             |
|        | 1" D / E 2"      | 9,5 /13       | 71/133                     | 114       | 105       | 275       | 14             | 114       | 105       | 275       | 16             | 114       | 105       | 275       | 18             |
| F      | 1 1/2" F 2"      | 16            | 201                        | 121       | 124       | 315       | 17             | 121       | 124       | 315       | 17             | 152       | 124       | 315       | 20             |
|        | 1 1/2" F 2" 300L | 16            | 201                        | •         | •         | •         | •              | 152       | 124       | 315       | 17             | •         | •         | •         | •              |
| G      | 1 1/2" G 3"      | 21            | 346                        | 121       | 124       | 400       | 26             | 121       | 124       | 400       | 26             | 152       | 124       | 400       | 28             |
|        | 1 1/2" G 3" 300L | 21            | 346                        | •         | •         | •         | •              | 152       | 124       | 400       | 26             | •         | •         | •         | •              |
| H      | 1 1/2" H 3"      | 26            | 531                        | 124       | 130       | 400       | 26             | 124       | 130       | 400       | 26             | •         | •         | •         | •              |
|        | 2" H 3"          | 26            | 531                        | •         | •         | •         | •              | 124       | 130       | 400       | 27             | 162       | 154       | 400       | 32             |
| J      | 2" J 3"          | 32,5          | 830                        | 124       | 137       | 400       | 28             | 124       | 137       | 400       | 29             | •         | •         | •         | •              |
|        | 3" J 4"          | 32,5          | 830                        | •         | •         | •         | •              | 181       | 184       | 595       | 56             | 181       | 184       | 595       | 62             |
| K      | 3" K 4"          | 40            | 1.195                      | 162       | 156       | 595       | 56             | 162       | 156       | 595       | 56             | 181       | 184       | 595       | 62             |
| L      | 3" L 4"          | 49            | 1.866                      | 165       | 156       | 595       | 56             | 165       | 156       | 595       | 56             | •         | •         | •         | •              |
|        | 4" L 6"          | 49            | 1.866                      | •         | •         | •         | •              | 181       | 179       | 630       | 56             | 203       | 179       | 630       | 90             |
| M      | 4" M 6"          | 55            | 2.376                      | 184       | 178       | 630       | 88             | 184       | 178       | 630       | 90             | 203       | 178       | 630       | 110            |
| N      | 4" N 6"          | 60            | 2.827                      | 210       | 197       | 630       | 88             | 210       | 197       | 630       | 90             | 222       | 197       | 630       | 110            |
| P      | 4" P 6"          | 73            | 4.185                      | 229       | 181       | 630       | 88             | 229       | 181       | 630       | 90             | 254       | 225       | 630       | 120            |
|        | 4" P 6" 300L     | 73            | 4.185                      | •         | •         | •         | •              | 254       | 181       | 630       | 90             | •         | •         | •         | •              |
| Q      | 6" Q 8"          | 96            | 7.238                      | 241       | 240       | 690       | 140            | 241       | 240       | 690       | 140            | 241       | 240       | 690       | 190            |
| R      | 6" R 8"          | 115           | 10.387                     | 241       | 240       | 690       | 140            | 241       | 240       | 690       | 140            | •         | •         | •         | •              |
|        | 6" R 10"         | 115           | 10.387                     | •         | •         | •         | •              | 267       | 240       | 795       | 198            | 267       | 240       | 795       | 198            |
| T      | 8" T 10"         | 147           | 16.972                     | 279       | 276       | 800       | 210            | 279       | 276       | 800       | 220            | •         | •         | •         | •              |

|     |             | Orif.<br>(mm) | Area<br>(mm <sup>2</sup> ) | ANSI 900  |           |           |                | ANSI 1500 |           |           |                | ANSI 2500 |           |           |    | Weight         |
|-----|-------------|---------------|----------------------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----|----------------|
|     |             |               |                            | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) |    | Weight<br>(kg) |
| D/E | 1 1/2" D 2" | 9,5 /13       | 71/133                     | 140       | 105       | 315       | 19             | 140       | 105       | 315       | 24             | •         | •         | •         | •  |                |
|     | 1 1/2" D 3" | 9,5 /13       | 71/133                     | •         | •         | •         | •              | •         | •         | •         | •              | 178       | 140       | 325       | 30 |                |
| F   | 1 1/2" F 3" | 16            | 201                        | 165       | 124       | 315       | 22             | 165       | 124       | 315       | 22             | 178       | 140       | 325       | 30 |                |
| G   | 1 1/2" G 3" | 21            | 346                        | 165       | 124       | 430       | 28             | •         | •         | •         | •              | •         | •         | •         | •  |                |
|     | 2" G 3"     | 21            | 346                        | •         | •         | •         | •              | 175       | 156       | 444       | 41             | 175       | 156       | 444       | 50 |                |
| H   | 2" H 3"     | 26            | 531                        | 162       | 154       | 400       | 32             | 162       | 154       | 430       | 45             | •         | •         | •         | •  |                |
| J   | 3" J 4"     | 32,5          | 830                        | 181       | 184       | 595       | 70             | 181       | 184       | 595       | 65             | •         | •         | •         | •  |                |
| K   | 3" K 6"     | 40            | 1.195                      | 216       | 198       | 610       | 90             | 216       | 198       | 610       | 105            | •         | •         | •         | •  |                |
| L   | 4" L 6"     | 49            | 1.866                      | 222       | 197       | 820       | 140            | 222       | 197       | 820       | 120            | •         | •         | •         | •  |                |
| M   | 4" M 6"     | 55            | 2.376                      | 222       | 197       | 690       | 140            | •         | •         | •         | •              | •         | •         | •         | •  |                |
| N   | 4" N 6"     | 60            | 2.827                      | 222       | 197       | 820       | 140            | •         | •         | •         | •              | •         | •         | •         | •  |                |
| P   | 4" P 6"     | 73            | 4.185                      | 254       | 225       | 630       | 140            | •         | •         | •         | •              | •         | •         | •         | •  |                |

# Model 1415 BIG

## DESCRIPTION

Safety and relief valve, angle type, conventional  
 According ASME VIII  
 Direct spring loaded  
 Full lift safety valve  
 A 216 WCB, Stainless steel A351 CF3M.  
 A217 WC6, LCC, SUPERDUPLEX (on request)  
 Steam, gases, cryogenic fluids, H<sub>2</sub>, vapours and liquids  
 Cleaned and degreased for oxygen service  
 Flanged ASME/ANSI B16.5 ANSI150 / ANSI300  
 Seat metal- metal, Stellite, Viton and PTFE  
 Set pressure range 0,2 (with bellows 2 barg) to 20 barg  
 Tolerance Set pressure  $\pm 3\%$   
 Overpressure 10%  
 European Pressure Equipment Directive PED 2014/68/EU  
 CE 0056 Module B  
 CE Production Quality Assurance (Module D) ES037955- 1035  
 Material test certificate EN 10204 3.1

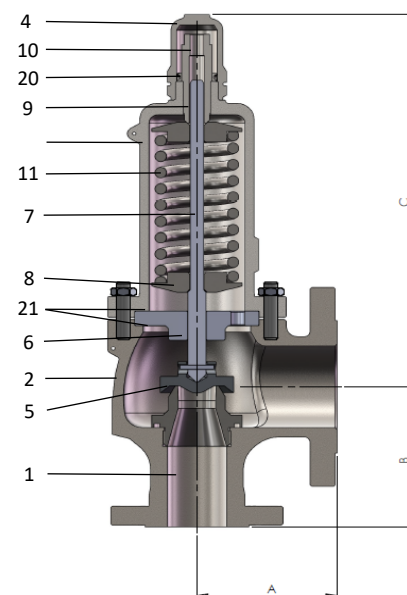
**TOSACA, MADE IN SPAIN**



## MATERIALS

| Item             | Components         | Carbon steel    | Stainless steel | SuperDuplex     |
|------------------|--------------------|-----------------|-----------------|-----------------|
| 1                | Nozzle             | AISI-316L       | AISI-316L       | 1.4410          |
| 2                | Body               | A216 WCB        | A351 CF3M       | SS A890 GR. 5A  |
| 3                | Bonnet             | A216 WCB        | A351 CF3M       | SS A890 GR. 5A  |
| 4                | Cap                | A351 CF8        | A351 CF8        | 1.4410          |
| 5 <sup>SP</sup>  | Disc               | AISI-316L       | AISI-316L       | 1.4410          |
| 6                | Guide              | AISI-316L       | AISI-316L       | 1.4410          |
| 7                | Push Rod           | AISI-316L       | AISI-316L       | 1.4410          |
| 8                | Spring Button      | AISI-303        | AISI-303        | 1.4410          |
| 9                | Ajusting Screw     | AISI-420        | AISI-303        | 1.4410          |
| 10               | Tensor Nut         | AISI-303        | AISI-303        | 1.4410          |
| 11 <sup>SP</sup> | Spring             | Alloy steel     | AISI-302        | Inconel X 750   |
| 12               | Lever              | A351 CF8        | A351 CF8        | A351 CF8        |
| 17               | Release nut        | AISI-304        | AISI-304        | AISI-304        |
| 18 <sup>SP</sup> | Lever axis         | AISI-303        | AISI-303        | AISI-303        |
| 19               | Packing lever axis | AISI-303        | AISI-303        | AISI-303        |
| 20 <sup>SP</sup> | Gasket cap         | PTFE            | PTFE            | PTFE            |
| 21 <sup>SP</sup> | Gasket             | Graphite + S.S. | Graphite + S.S. | Graphite + S.S. |
| 22 <sup>SP</sup> | Gasket pack. lever | Viton           | Viton           | Viton           |
| 27 <sup>SP</sup> | Bellows            | AISI-316 TI     | AISI-316 TI     | AISI-316 TI     |
| 28 <sup>SP</sup> | Soft seat          | Viton / PTFE    | Viton / PTFE    | Viton / PTFE    |

<sup>SP</sup> Recommended spare parts



## OPTIONS

Lifting device  
 Sealed packing lever  
 Open bonnet  
 Soft seat, viton, PTFE.  
 Bellows AISI 316TI, Inconel.  
 ECTFE powder coating for highly corrosive or ultrapure chemicals

# Model 1415 BIG

## DIMENSIONS

|          |                  |               |                            | ANSI 150  |           |           |                | ANSI 300  |           |           |                | ANSI 600  |           |           |                |
|----------|------------------|---------------|----------------------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|
| Letter   |                  | Orif.<br>(mm) | Area<br>(mm <sup>2</sup> ) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) | A<br>(mm) | B<br>(mm) | C<br>(mm) | Weight<br>(kg) |
| <b>V</b> | <b>10" V 14"</b> | 200           | 31.415                     | 406       | 305       | 1.390     | 750            | 406       | 305       | 1.390     | 780            | •         | •         | •         | •              |
| <b>W</b> | <b>12" W 16"</b> | 228           | 40.828                     | 406       | 359       | 1.432     | 800            | 406       | 359       | 1.432     | 850            | •         | •         | •         | •              |

