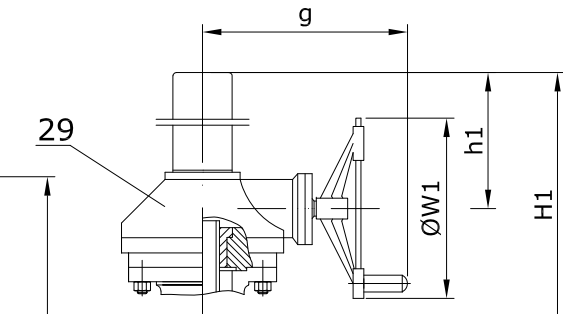
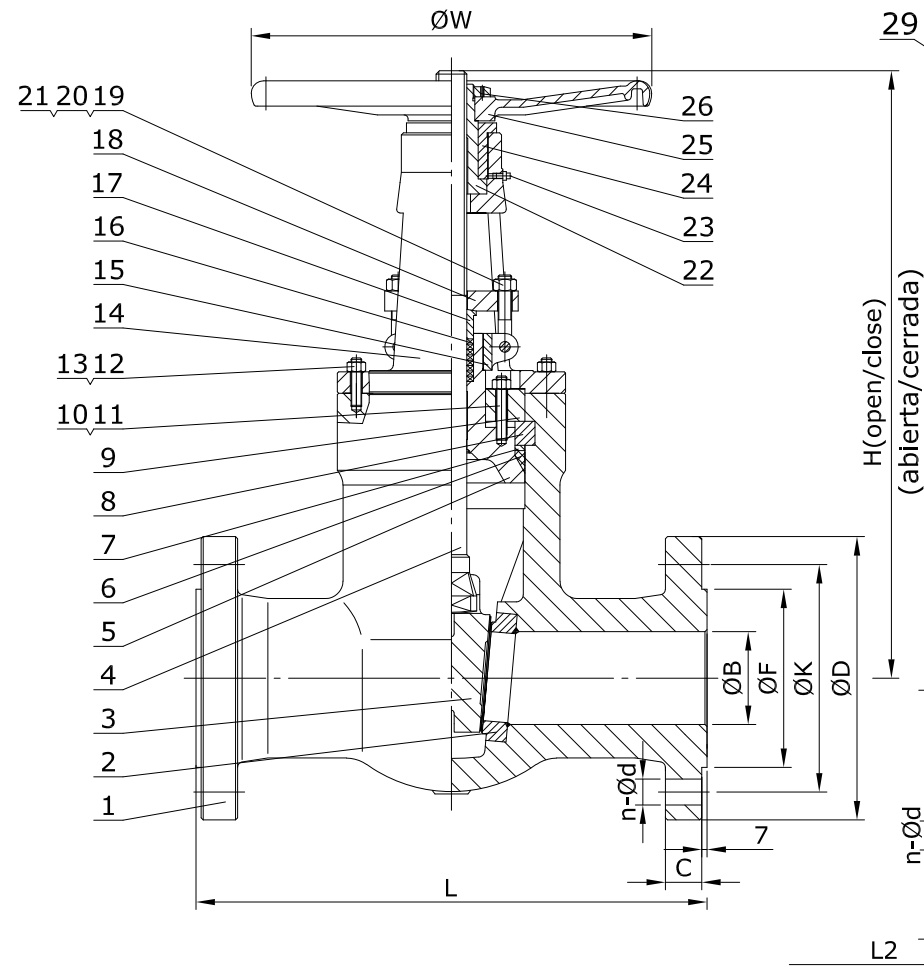
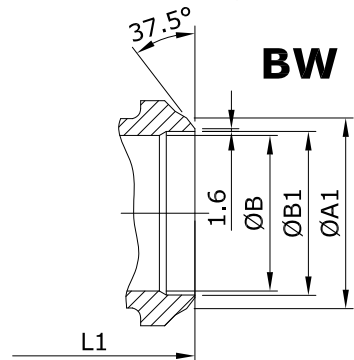
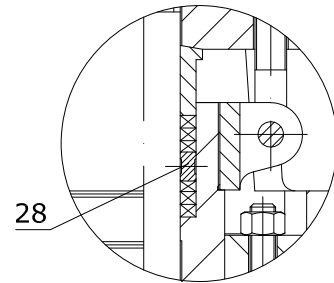
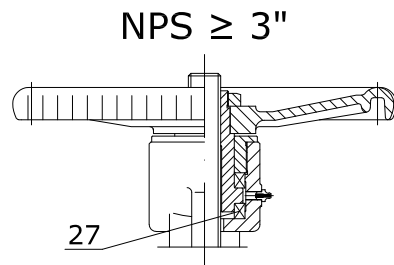
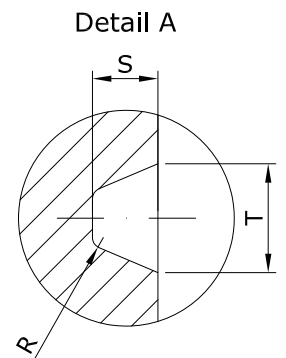
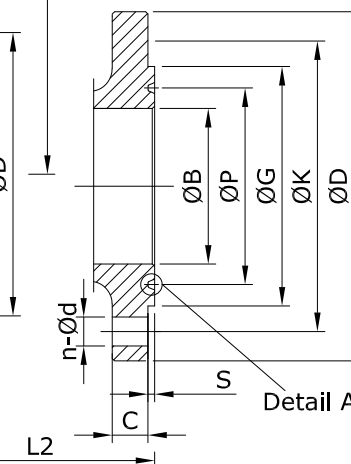




H(open/close)  
(abierto/cerrado)

**RTJ**



## MAIN FEATURES/PRINCIPALES ATRIBUTOS

- Design/ Diseño: API600
- Class/ Clase: 1500#
- Valve length/ Longitud: ASME B16.10
- Valve end connections/Extremos: Flanged to/ Bridas según ASME B16.5 (2"-24"); Size 26"-30" to be determined/ a determinar Butt Weld (BW) to/ Soldar a tope (BW) según ASME B16.25
- Inspections & tests / Inspecciones y pruebas: API 598
- Heat resistant paint, grey aluminium color/Pintura resistente al calor, color gris aluminio

- **CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory / Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
The information in this Drawing is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
Data subject to alteration due to continuous improvement. Regularly updated data on [www.comeval.es](http://www.comeval.es)  
El contenido de este plano es un extracto de la Hoja de Datos DS20. Referirse a la misma para más información  
Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                                                                        |                                                                  |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 1500 DN50-700</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__0AA0__</div> <div></div> |                                                                                        |                                                                  |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                      |                                                                                        |                                                                  |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                      |                                                                                        |                                                                  |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                                                                        |                                                                  |
| Name/Nombre                                                                                      |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                                                                        |                                                                  |
| <div></div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div> <div>Checked/Comprob.</div> <div>DT</div>                                                                                                                                                                                                                                    | <div>Approved/Aprobado</div> <div>JG</div> <div>Date/Fecha</div> <div>08/04/2015</div> | <div>Drawing N°/Plano N°</div> <div>GD90-21</div> <div>1/2</div> |

| No. | Part/Parte                      | Material                 |                  | No.                        | Part/Parte                       | Material                    |                  |
|-----|---------------------------------|--------------------------|------------------|----------------------------|----------------------------------|-----------------------------|------------------|
|     |                                 | Trim 15 (91A8K_)         | Trim 16 (91A8L_) |                            |                                  | Trim 15 (91A8K_)            | Trim 16 (91A8L_) |
| 1   | Body/ Cuerpo                    | A352 LCB                 |                  | 16                         | Packing/ Empaquetadura           | Graphite / Grafito          |                  |
| 2   | Seat Ring/ Anillo asiento       | A182 F304+HF             | A182 F316+HF     | 17                         | Packing Gland/ Casquillo prensa  | A182 F304                   |                  |
| 3   | Wedge/ Compuerta                | A351 CF8+HF              | A351 CF8M+HF     | 18                         | Gland Flange/Brida Prensa        | A352 LCB                    |                  |
| 4   | Stem/ Eje                       | A182 F304                | Nitronic 50      | 19                         | Eyebolt Pin/ Pasador             | AISI 1025                   |                  |
| 5   | Bonnet/ Bonete                  | A350 LF2                 |                  | 20                         | Gland Eyebolt/ Perno prensa      | A320 L7                     |                  |
| 6   | Gasket/ Junta                   | SS304+Graphite / Grafito |                  | 21                         | Gland Nut/ Tuerca prensa         | A194 4                      |                  |
| 7   | Gasket Washer/ Arandela junta   | A182 F304                |                  | 22                         | Stem Nut/ Tuerca del eje         | ASTM A439 D2                |                  |
| 8   | Split Ring/ Anillo              | A350 LF2                 |                  | 23                         | Grease Nipple/ Engrasador        | Carbon Steel/ Acero Carbono |                  |
| 9   | Retainer Ring/ Anillo retenedor | A350 LF2                 |                  | 24                         | Retaining Nut/ Tuerca retenedora | Carbon Steel/ Acero Carbono |                  |
| 10  | Screw/ Tornillo                 | A320 L7                  |                  | 25                         | Handwheel/ Volante               | Steel/ Acero                |                  |
| 11  | Nut/ Tuerca                     | A194 4                   |                  | 26                         | Handwheel Nut/ Tuerca Volante    | Carbon Steel/ Acero Carbono |                  |
| 12  | Bolt/ Tornillo                  | A320 L7                  |                  | 27                         | Bearings/ Casquillo              | Alloy Steel/ Acero Aleado   |                  |
| 13  | Nut/ Tuerca                     | A194 4                   |                  | 28                         | Lantern Ring/ Anillo Linterna*   | A276 304                    |                  |
| 14  | Yoke/ Puente                    | A352 LCB                 |                  | 29                         | Gear/ Reductor                   | Assembly /Conjunto          |                  |
| 15  | Ear Seat                        | A352 LCB                 |                  | *On request / Bajo demanda |                                  |                             |                  |

| Size/<br>Tamaño | End connection / Conexión extremos |      |       |       |            |       |       |      |     |        |       |       |     |      |                    |     |      |                   | Actuation/Actuación |              |                                              |      |      |     |      |      | Approx.<br>Weight /<br>Peso RF<br>(kg) (2) | Approx.<br>Weight /<br>Peso BW<br>(kg) |
|-----------------|------------------------------------|------|-------|-------|------------|-------|-------|------|-----|--------|-------|-------|-----|------|--------------------|-----|------|-------------------|---------------------|--------------|----------------------------------------------|------|------|-----|------|------|--------------------------------------------|----------------------------------------|
|                 | RF/RTJ/FF                          |      |       |       |            | RF/FF |       | RTJ  |     |        |       |       |     | BW   |                    |     |      | Handwheel/Volante |                     |              | Gear with handwheel/<br>Reductor con volante |      |      |     |      |      |                                            |                                        |
|                 | ØB                                 | ØD   | ØK    | C     | n-Ød       | L     | ØF    | L2   | ØG  | ØP     | T     | S     | R   | L1   | Schedule<br>No.(1) | ØB  | ØA1  | ØB1               | H<br>(open)         | H<br>(close) | ØW                                           | H1   | h1   | g   | ØW1  |      |                                            |                                        |
| 2"              | 48                                 | 215  | 165,1 | 38,1  | 8 - 7/8    | 368   | 92,1  | 371  | 124 | 95,25  | 11,91 | 7,92  | 0,8 | 368  | 160                | 48  | 60,3 | 38,16             | 516                 | 471          | 250                                          | -    | -    | -   | -    | 100  | 86                                         |                                        |
| 2-1/2"          | 61                                 | 245  | 190,5 | 41,3  | 8 -1       | 419   | 104,8 | 422  | 137 | 107,95 | 11,91 | 7,92  | 0,8 | 419  | -                  | 61  | -    | -                 | 629                 | 549          | 336                                          | -    | -    | -   | -    | 140  | 119                                        |                                        |
| 3"              | 70                                 | 265  | 203,2 | 47,7  | 8 - 1 1/4  | 470   | 127   | 473  | 168 | 136,53 | 11,91 | 7,92  | 0,8 | 470  | 160                | 70  | 91   | 66,5              | 713                 | 607          | 400                                          | -    | -    | -   | -    | 170  | 144                                        |                                        |
| 4"              | 92                                 | 310  | 241,3 | 54,8  | 8 - 1 3/8  | 546   | 157,2 | 549  | 194 | 161,93 | 11,91 | 7,92  | 0,8 | 546  | 120                | 92  | 117  | 92                | 853                 | 756          | 450                                          | 802  | 162  | 440 | 310  | 240  | 204                                        |                                        |
| 5"              | 115                                | 375  | 292,1 | 73,1  | 8 - 1 5/8  | 673   | 185,7 | 676  | 229 | 193,68 | 11,91 | 7,92  | 0,8 | 673  | -                  | 115 | -    | -                 | -                   | -            | -                                            | 941  | 192  | 440 | 396  | 438  | 375                                        |                                        |
| 6"              | 136                                | 395  | 317,5 | 82,6  | 12 - 1 1/2 | 705   | 215,9 | 711  | 248 | 211,14 | 13,49 | 9,53  | 1,5 | 705  | 120                | 136 | 172  | 140               | -                   | -            | -                                            | 1043 | 214  | 440 | 460  | 585  | 501                                        |                                        |
| 8"              | 178                                | 485  | 393,7 | 92,1  | 12 - 1 3/4 | 832   | 269,9 | 842  | 318 | 269,88 | 16,66 | 11,13 | 1,5 | 832  | 120                | 178 | 223  | 182,5             | -                   | -            | -                                            | 1179 | 281  | 513 | 530  | 830  | 687                                        |                                        |
| 10"             | 222                                | 585  | 482,6 | 108   | 12 - 2     | 991   | 323,8 | 1001 | 371 | 323,85 | 16,66 | 11,13 | 1,5 | 991  | 120                | 222 | 278  | 230               | -                   | -            | -                                            | 1419 | 367  | 513 | 600  | 1650 | 1405                                       |                                        |
| 12"             | 263                                | 675  | 571,5 | 123,9 | 16 - 2 1/8 | 1130  | 381   | 1146 | 438 | 381    | 23,01 | 14,27 | 1,5 | 1130 | 120                | 263 | 329  | 273               | -                   | -            | -                                            | 1910 | 408  | 588 | 600  | 2100 | 1736                                       |                                        |
| 14"             | 289                                | 750  | 635   | 133,4 | 16 - 2 3/8 | 1257  | 412,8 | 1276 | 489 | 419,1  | 26,97 | 15,88 | 2,4 | 1257 | 120                | 289 | 362  | 300               | -                   | -            | -                                            | 1980 | 436  | 588 | 600  | 2800 | 2289                                       |                                        |
| 16"             | 330                                | 825  | 704,8 | 146,1 | 16 - 2 5/8 | 1384  | 469,9 | 1406 | 546 | 469,9  | 30,18 | 17,48 | 2,4 | 1384 | 120                | 330 | 413  | 344,5             | -                   | -            | -                                            | 2035 | 477  | 588 | 600  | 3850 | 3170                                       |                                        |
| 18"             | 371                                | 915  | 774,7 | 162   | 16 - 2 7/8 | 1537  | 533,4 | 1559 | 613 | 533,4  | 30,18 | 17,48 | 2,4 | 1537 | 120                | 371 | 464  | 387,5             | -                   | -            | -                                            | 2107 | 518  | 613 | 600  | 5225 | 4341                                       |                                        |
| 20"             | 416                                | 985  | 831,8 | 177,8 | 16 - 3 1/8 | 1664  | 584,2 | 1686 | 673 | 584,2  | 33,32 | 17,48 | 2,4 | 1664 | 120                | 416 | 516  | 432               | -                   | -            | -                                            | 2209 | 625  | 613 | 800  | 6310 | 5194                                       |                                        |
| 24"             | 498                                | 1170 | 990,6 | 203,2 | 16 - 3 5/8 | 1943  | 692,2 | 1971 | 794 | 692,15 | 36,53 | 20,62 | 2,4 | 1943 | 120                | 498 | 619  | 517,5             | -                   | -            | -                                            | 2387 | 736  | 698 | 800  | 9050 | 7238                                       |                                        |
| 26"             | 540                                | (3)  |       |       |            | 3032  | 749   | -    | -   | -      | -     | -     | -   | 3032 | -                  | 540 | -    | -                 | -                   | -            | -                                            | 2794 | 888  | 698 | 1000 | -    | -                                          |                                        |
| 28"             | 584                                |      |       |       |            | 2209  | 800   | -    | -   | -      | -     | -     | -   | 2209 | -                  | 584 | -    | -                 | -                   | -            | -                                            | 2850 | 1002 | 698 | 1000 | -    | -                                          |                                        |

(1) Other schedule nos. on request / Otros schedules bajo demanda

(2) RTJ weight increases approx. by 10% / Peso RTJ es aprox. un 10% mayor

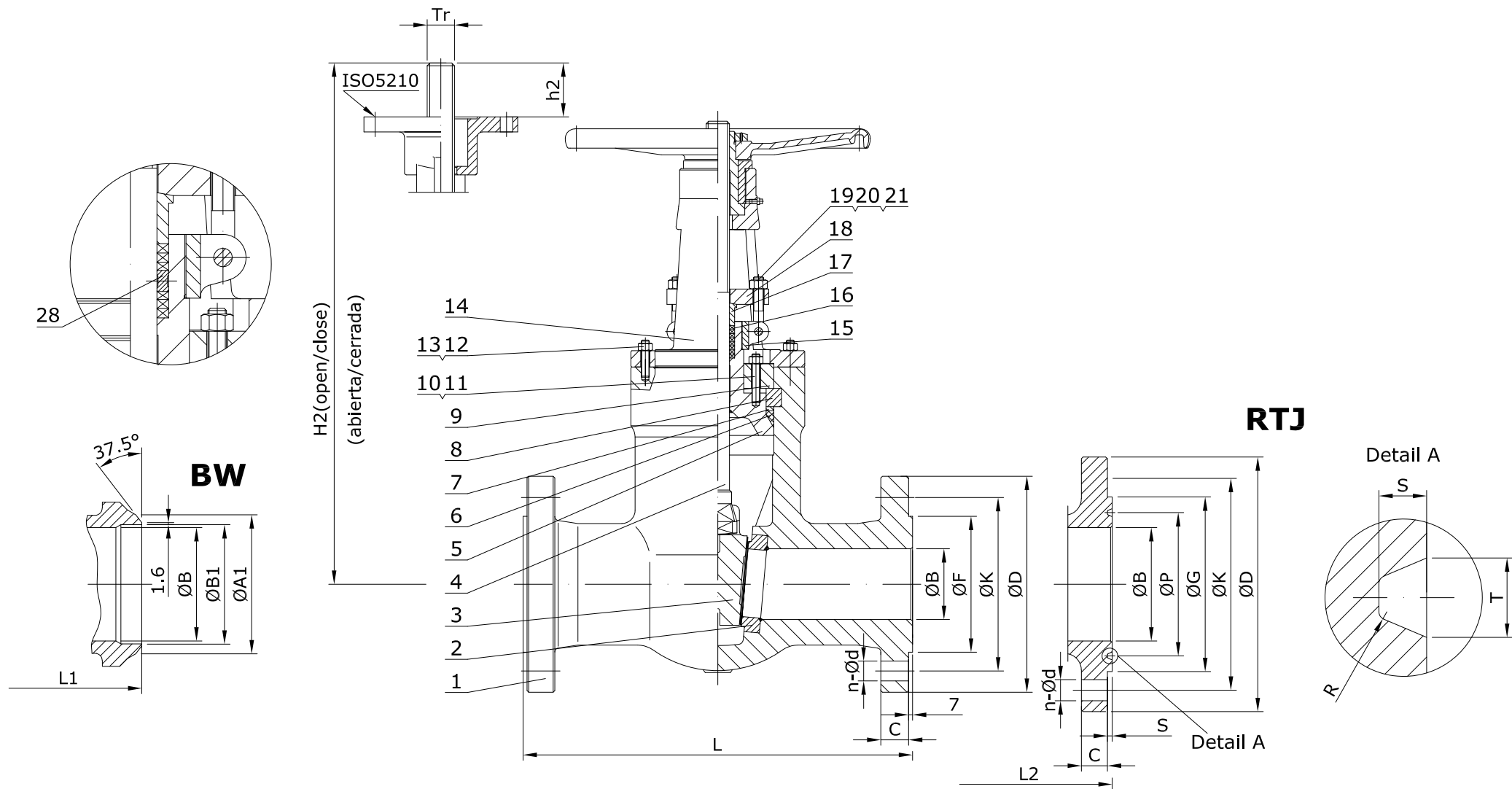
(3) Flange dimensions for 26"-28" acc.to the agreed between the customer and the supplier/  
Dimensiones de bridas para 26"-28" según lo acordado entre el cliente y el proveedor

Dimensions in mm. (except for bolt holes, which are in inch units) subject to manufacturing tolerance  
Dimensiones en mm. (excepto los agujeros de los pernos que están en pulgadas) sujetas a tolerancias de fabricación

|           |                            |
|-----------|----------------------------|
| PSmax     | 240,1 bar-g / 3480 psig    |
| TS        | 38°C/-46°C // 100°F/-50°F  |
| PS        | 182 bar-g / 2665 psig      |
| TSmax/min | 343°C/-46°C // 650°F/-50°F |

**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
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Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                  |        |                            |        |                                                                                                                                                                                      |                        |                          |                     |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------|---------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 1500 DN50-700</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ _0AA0__ _</div> |                        |                          |                     |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                      |                        |                          |                     |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                      |                        |                          |                     |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                      |                        |                          |                     |
| Name/Nombre                                                                                      |        |                            |        | <div></div>                                                                                     |                        |                          |                     |
| <div></div> |        |                            |        |                                                                                                                                                                                      |                        |                          |                     |
|                                                                                                  |        |                            |        |                                                                                                                                                                                      | Drawn/Dibujado<br>MJ   | Approved/Aprobado<br>JG  | Drawing N°/Plano N° |
|                                                                                                  |        |                            |        |                                                                                                                                                                                      | Checked/Comprob.<br>DT | Date/Fecha<br>08/04/2015 | GD90-21 2/2         |



#### MAIN FEATURES/PRINCIPALES ATRIBUTOS

- Design/ Diseño: API600
- Class/ Clase: 1500#
- Valve length/ Longitud: ASME B16.10
- Valve end connections/Extremos: Flanged to/ Bridas según ASME B16.5 (2"-18")  
Butt Weld (BW) to/ Soldar a tope (BW) según ASME B16.25
- Inspections & tests / Inspecciones y pruebas: API 598
- Heat resistant paint, grey aluminium color/Pintura resistente al calor, color gris aluminio

**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
 Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
 The Information in this Drawing is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
 Data subject to alteration due to continuous Improvement. Regularly updated data on [www.comeval.es](http://www.comeval.es)  
 El contenido de este plano es un extracto de la Hoja de Datos DS20. Referirse a la misma para más información  
 Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                        |                                                                                        |                                                       |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 1500 DN50-450</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ F0AA0__</div> <div></div> |                                                                                        |                                                       |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                        |                                                                                        |                                                       |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                        |                                                                                        |                                                       |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                                                        |                                                                                        |                                                       |
| Name/Nombre                                                                                      |        |                            |        |                                                                                                                                                                                                                                                                                                                        |                                                                                        |                                                       |
| <div></div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div> <div>Checked/Comprob.</div> <div>DT</div>                                                                                                                                                                                                                                      | <div>Approved/Aprobado</div> <div>JG</div> <div>Date/Fecha</div> <div>10/12/2014</div> | <div>Drawing N°/Plano N°</div> <div>GD90-22 1/2</div> |

| No. | Part/Parte                      | Material                 |                  | No. | Part/Parte                      | Material           |                  |
|-----|---------------------------------|--------------------------|------------------|-----|---------------------------------|--------------------|------------------|
|     |                                 | Trim 15 (91A8K_)         | Trim 16 (91A8L_) |     |                                 | Trim 15 (91A8K_)   | Trim 16 (91A8L_) |
| 1   | Body/ Cuerpo                    | A352 LCB                 |                  | 12  | Bolt/ Tornillo                  | A320 L7            |                  |
| 2   | Seat Ring/ Anillo asiento       | A182 F304+HF             | A182 F316+HF     | 13  | Nut/ Tuerca                     | A194 4             |                  |
| 3   | Wedge/ Compuerta                | A351 CF8+HF              | A351 CF8M+HF     | 14  | Yoke/ Puente                    | A352 LCB           |                  |
| 4   | Stem/ Eje                       | A182 F304                | Nitronic 50      | 15  | Ear Seat                        | A352 LCB           |                  |
| 5   | Bonnet/ Bonete                  | A350 LF2                 |                  | 16  | Packing/ Empaquetadura          | Graphite / Grafito |                  |
| 6   | Gasket/ Junta                   | SS304+Graphite / Grafito |                  | 17  | Packing Gland/ Casquillo prensa | A182 F304          |                  |
| 7   | Gasket Washer/ Arandela junta   | A182 F304                |                  | 18  | Gland Flange/Brida Prensa       | A352 LCB           |                  |
| 8   | Split Ring/ Anillo              | A350 LF2                 |                  | 19  | Eyebolt Pin/ Pasador            | AISI 1025          |                  |
| 9   | Retainer Ring/ Anillo retenedor | A350 LF2                 |                  | 20  | Gland Eyebolt/ Perno prensa     | A320 L7            |                  |
| 10  | Screw/ Tornillo                 | A320 L7                  |                  | 21  | Gland Nut/ Tuerca prensa        | A194 4             |                  |
| 11  | Nut/ Tuerca                     | A194 4                   |                  | 28  | Lantern Ring/ Anillo Linterna*  | A276 304           |                  |

\*On request / Bajo demanda

| Size/<br>Tamaño | End connection / Conexión extremos |     |       |       |            |      |       |      |     |        |       |       |     |      | Connection for actuation / Conexión para actuación |     |                                                                               |       |              |               |      |     |           |                    | Approx.<br>Weight /<br>Peso RF<br>(kg) (3) | Approx.<br>Weight /<br>Peso BW<br>(kg) |                                |                         |
|-----------------|------------------------------------|-----|-------|-------|------------|------|-------|------|-----|--------|-------|-------|-----|------|----------------------------------------------------|-----|-------------------------------------------------------------------------------|-------|--------------|---------------|------|-----|-----------|--------------------|--------------------------------------------|----------------------------------------|--------------------------------|-------------------------|
|                 | RF/RTJ                             |     |       |       |            | RF   |       | RTJ  |     |        |       |       | BW  |      |                                                    |     | Bare shaft with ISO 5210 top flange/<br>Eje libre con brida superior ISO 5210 |       |              |               |      |     |           |                    |                                            |                                        |                                |                         |
|                 | ØB                                 | ØD  | ØK    | C     | n-Ød       | L    | ØF    | L2   | ØG  | ØP     | T     | S     | R   | L1   | Schedule<br>No.(1)                                 | ØB  | ØA1                                                                           | ØB1   | H2<br>(open) | H2<br>(close) | h2   | ISO | Tr        | Stroke/<br>Carrera |                                            |                                        | No. of turns/<br>Nº de vueltas | Torque/ Par<br>(Nm) (2) |
| 2"              | 48                                 | 215 | 165,1 | 38,1  | 8 - 7/8    | 368  | 92,1  | 371  | 124 | 95,25  | 11,91 | 7,92  | 0,8 | 368  | 160                                                | 48  | 60,3                                                                          | 38,16 | 518          | 476           | 60   | F10 | Tr26×5LH  | 42                 | 8,4                                        | 189                                    | 100                            | 86                      |
| 2-1/2"          | 61                                 | 245 | 190,5 | 41,3  | 8 - 1      | 419  | 104,8 | 422  | 137 | 107,95 | 11,91 | 7,92  | 0,8 | 419  | -                                                  | 61  | -                                                                             | -     | 631,85       | 553,05        | 71,5 | F14 | Tr32×6LH  | 78,8               | 13,1333                                    | 240,75                                 | 140                            | 119                     |
| 3"              | 70                                 | 265 | 203,2 | 47,7  | 8 - 1 1/4  | 470  | 127   | 473  | 168 | 136,53 | 11,91 | 7,92  | 0,8 | 470  | 160                                                | 70  | 91                                                                            | 66,5  | 716          | 610           | 80   | F14 | Tr32×6LH  | 106                | 17,6667                                    | 279                                    | 170                            | 144                     |
| 4"              | 92                                 | 310 | 241,3 | 54    | 8 - 1 3/8  | 546  | 157,2 | 549  | 194 | 161,93 | 11,91 | 7,92  | 0,8 | 546  | 120                                                | 92  | 117                                                                           | 92    | 863          | 766           | 80   | F14 | Tr36×6LH  | 97                 | 16,1667                                    | 555                                    | 240                            | 204                     |
| 5"              | 115                                | 375 | 292,1 | 73,1  | 8 - 1 5/8  | 673  | 185,7 | 676  | 229 | 193,68 | 11,91 | 7,92  | 0,8 | 673  | -                                                  | 115 | -                                                                             | -     | 948,675      | 851,1         | 103  | F25 | Tr46×8LH  | 97,575             | 12,1969                                    | 747,625                                | 438                            | 375                     |
| 6"              | 136                                | 395 | 317,5 | 82,6  | 12 - 1 1/2 | 705  | 215,9 | 711  | 248 | 211,14 | 13,49 | 9,53  | 1,5 | 705  | 120                                                | 136 | 172                                                                           | 140   | 1012         | 914           | 120  | F25 | Tr46×8LH  | 98                 | 12,25                                      | 890                                    | 585                            | 501                     |
| 8"              | 178                                | 485 | 393,7 | 92,1  | 12 - 1 3/4 | 832  | 269,9 | 842  | 318 | 269,88 | 16,66 | 11,13 | 1,5 | 832  | 120                                                | 178 | 223                                                                           | 182,5 | 1444         | 1244          | 140  | F30 | Tr55×8LH  | 200                | 25                                         | 1333                                   | 830                            | 687                     |
| 10"             | 222                                | 585 | 482,6 | 108   | 12 - 2     | 991  | 323,8 | 1001 | 371 | 323,85 | 16,66 | 11,13 | 1,5 | 991  | 120                                                | 222 | 278                                                                           | 230   | 1635         | 1385          | 180  | F35 | Tr65×10LH | 250                | 25                                         | 2851                                   | 1650                           | 1405                    |
| 12"             | 263                                | 675 | 571,5 | 123,9 | 16 - 2 1/8 | 1130 | 381   | 1146 | 438 | 381    | 23,01 | 14,27 | 1,5 | 1130 | 120                                                | 263 | 329                                                                           | 273   | 1806         | 1506          | 180  | F35 | Tr70×10LH | 300                | 30                                         | 3505                                   | 2100                           | 1736                    |
| 14"             | 289                                | 750 | 635   | 133,4 | 16 - 2 3/8 | 1257 | 412,8 | 1276 | 489 | 419,1  | 26,97 | 15,88 | 2,4 | 1257 | 120                                                | 289 | 362                                                                           | 300   | 2081         | 1789          | 220  | F40 | Tr76×10LH | 292                | 29,2                                       | 4322                                   | 2800                           | 2289                    |
| 16"             | 330                                | 825 | 704,8 | 146,1 | 16 - 2 5/8 | 1384 | 469,9 | 1406 | 546 | 469,9  | 30,18 | 17,48 | 2,4 | 1384 | 120                                                | 330 | 413                                                                           | 344,5 | 2342         | 1981          | 220  | F40 | Tr76×10LH | 361                | 36,1                                       | 4650                                   | 3850                           | 3170                    |
| 18"             | 371                                | 915 | 774,7 | 162   | 16 - 2 7/8 | 1537 | 533,4 | 1559 | 613 | 533,4  | 30,18 | 17,48 | 2,4 | 1537 | 120                                                | 371 | 464                                                                           | 387,5 | 2619         | 2209          | 220  | F40 | Tr85×12LH | 410                | 34,1667                                    | 6500                                   | 5225                           | 4341                    |

(1) Other schedule nos. on request / Otros schedules bajo demanda

(2) Torque with safety factor (30%) / Par con factor de seguridad (30%)

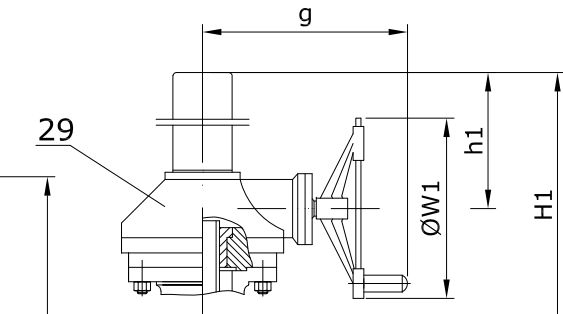
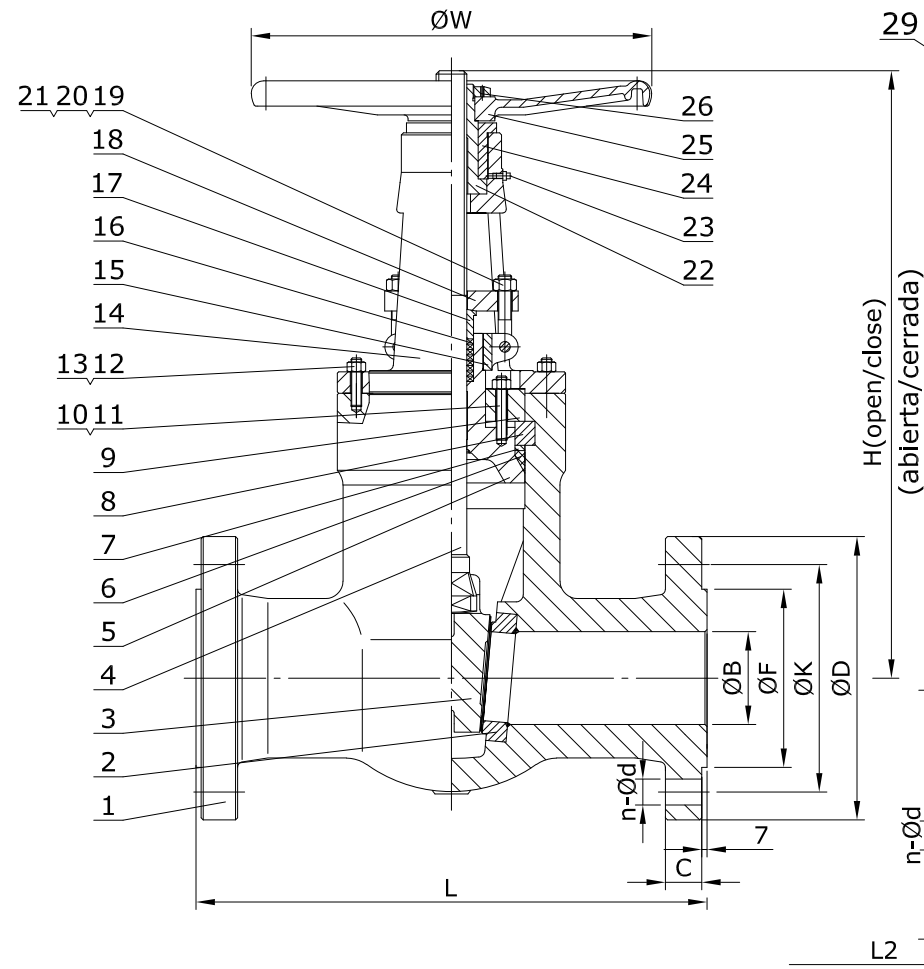
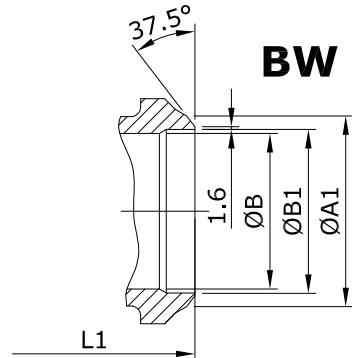
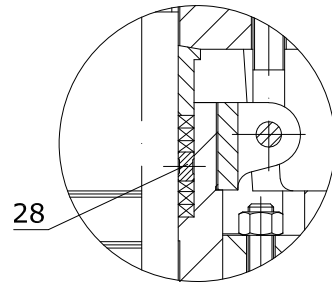
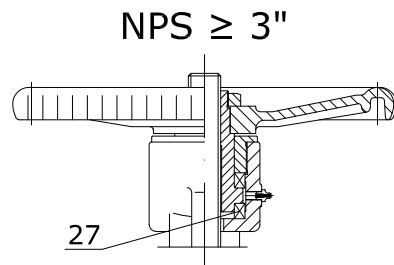
(3) RTJ weight increases approx. by 10% / Peso RTJ es aprox. un 10% mayor

Dimensions In mm. (except for bolt holes, which are In Inch units) subject to manufacturing tolerance  
Dimensiones en mm. (excepto los agujeros de los pernos que están en pulgadas) sujetas a tolerancias de fabricación

|           |                            |
|-----------|----------------------------|
| PSmax     | 240,1 bar-g / 3480 psig    |
| TS        | 38°C/-46°C // 100°F/-50°F  |
| PS        | 182 bar-g / 2665 psig      |
| TSmax/min | 343°C/-46°C // 650°F/-50°F |

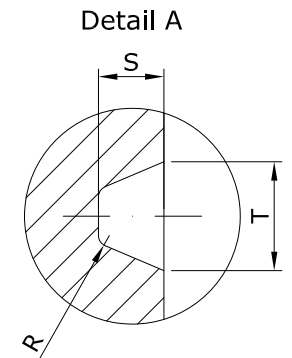
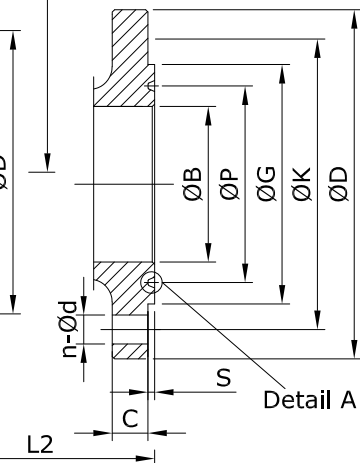
**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
The Information In this Drawing Is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
Data subject to alteration due to continuous Improvement. Regularly updated data on [www.comeval.es](http://www.comeval.es)  
El contenido de este plano es un extracto de la Hoja de Datos DS20. Referirse a la misma para más información  
Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 1500 DN50-450</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ F0AA0__ _</div> <div></div> |                                                                                        |                                                       |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| Name/Nombre                                                                                      |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| <div></div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div> <div>Checked/Comprob.</div> <div>DT</div>                                                                                                                                                                                                                                        | <div>Approved/Aprobado</div> <div>JG</div> <div>Date/Fecha</div> <div>10/12/2014</div> | <div>Drawing N°/Plano N°</div> <div>GD90-22 2/2</div> |



H(open/close)  
(abierto/cerrado)

**RTJ**



## MAIN FEATURES/PRINCIPALES ATRIBUTOS

- Design/ Diseño: API600
- Class/ Clase: 2500#
- Valve length/ Longitud: ASME B16.10
- Valve end connections/Extremos: Flanged to/ Bidas según ASME B16.5 (2"-12"); Size 14"-18" to be determined/ a determinar Butt Weld (BW) to/ Soldar a tope (BW) según ASME B16.25
- Inspections & tests / Inspecciones y pruebas: API 598
- Heat resistant paint, grey aluminium color/Pintura resistente al calor, color gris aluminio

**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory / Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
The information in this Drawing is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
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Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                           |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                            |                                                       |
|-----------------------------------------------------------------------------------------------------------|--------|----------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|
| Customer/Cliente<br>-                                                                                     |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 2500 DN50-450</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__0AB0__</div> <div></div> |                                            |                                                       |
| Your Ref./Su Ref.<br>-                                                                                    |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                      |                                            |                                                       |
|                                                                                                           | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                      |                                            |                                                       |
| Date/Fecha                                                                                                |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                            |                                                       |
| Name/Nombre                                                                                               |        |                            |        |                                                                                                                                                                                                                                                                                                                      |                                            |                                                       |
| <div> Comeval®</div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div>                                                                                                                                                                                                                                                                              | <div>Approved/Aprobado</div> <div>JG</div> | <div>Drawing N°/Plano N°</div> <div>GD90-23 1/2</div> |
| <div>Checked/Comprob.</div> <div>DT</div>                                                                 |        |                            |        | <div>Date/Fecha</div> <div>10/12/2014</div>                                                                                                                                                                                                                                                                          |                                            |                                                       |

| No. | Part/Parte                      | Material                 |                  | No.                        | Part/Parte                       | Material                    |                  |
|-----|---------------------------------|--------------------------|------------------|----------------------------|----------------------------------|-----------------------------|------------------|
|     |                                 | Trim 15 (91A8K_)         | Trim 16 (91A8L_) |                            |                                  | Trim 15 (91A8K_)            | Trim 16 (91A8L_) |
| 1   | Body/ Cuerpo                    | A352 LCB                 |                  | 16                         | Packing/ Empaquetadura           | Graphite / Grafito          |                  |
| 2   | Seat Ring/ Anillo asiento       | A182 F304+HF             | A182 F316+HF     | 17                         | Packing Gland/ Casquillo prensa  | A182 F304                   |                  |
| 3   | Wedge/ Compuerta                | A351 CF8+HF              | A351 CF8M+HF     | 18                         | Gland Flange/Brida Prensa        | A352 LCB                    |                  |
| 4   | Stem/ Eje                       | A182 F304                | Nitronic 50      | 19                         | Eyebolt Pin/ Pasador             | AISI 1025                   |                  |
| 5   | Bonnet/ Bonete                  | A350 LF2                 |                  | 20                         | Gland Eyebolt/ Perno prensa      | A320 L7                     |                  |
| 6   | Gasket/ Junta                   | SS304+Graphite / Grafito |                  | 21                         | Gland Nut/ Tuerca prensa         | A194 4                      |                  |
| 7   | Gasket Washer/ Arandela junta   | A182 F304                |                  | 22                         | Stem Nut/ Tuerca del eje         | ASTM A439 D2                |                  |
| 8   | Split Ring/ Anillo              | A350 LF2                 |                  | 23                         | Grease Nipple/ Engrasador        | Carbon Steel/ Acero Carbono |                  |
| 9   | Retainer Ring/ Anillo retenedor | A350 LF2                 |                  | 24                         | Retaining Nut/ Tuerca retenedora | Carbon Steel/ Acero Carbono |                  |
| 10  | Screw/ Tornillo                 | A320 L7                  |                  | 25                         | Handwheel/ Volante               | Steel/ Acero                |                  |
| 11  | Nut/ Tuerca                     | A194 4                   |                  | 26                         | Handwheel Nut/ Tuerca Volante    | Carbon Steel/ Acero Carbono |                  |
| 12  | Bolt/ Tornillo                  | A320 L7                  |                  | 27                         | Bearings/ Casquillo              | Alloy Steel/ Acero Aleado   |                  |
| 13  | Nut/ Tuerca                     | A194 4                   |                  | 28                         | Lantern Ring/ Anillo Linterna*   | A276 304                    |                  |
| 14  | Yoke/ Puente                    | A352 LCB                 |                  | 29                         | Gear/ Reductor                   | Assembly /Conjunto          |                  |
| 15  | Ear Seat                        | A352 LCB                 |                  | *On request / Bajo demanda |                                  |                             |                  |

| Size/<br>Tamaño | End connection / Conexión extremos |     |       |       |            |      |       |      |     |        |       |       |     |      |                    |     |      | Actuation/Actuación |                   |              |       |                                              |         |         |      | Approx.<br>Weight /<br>Peso RF<br>(kg) (2) | Approx.<br>Weight /<br>Peso BW<br>(kg) |
|-----------------|------------------------------------|-----|-------|-------|------------|------|-------|------|-----|--------|-------|-------|-----|------|--------------------|-----|------|---------------------|-------------------|--------------|-------|----------------------------------------------|---------|---------|------|--------------------------------------------|----------------------------------------|
|                 | RF/RTJ                             |     |       |       |            | RF   |       | RTJ  |     |        |       |       |     | BW   |                    |     |      |                     | Handwheel/Volante |              |       | Gear with handwheel/ Reductor<br>con volante |         |         |      |                                            |                                        |
|                 | ØB                                 | ØD  | ØK    | C     | n-Ød       | L    | ØF    | L2   | ØG  | ØP     | T     | S     | R   | L1   | Schedule<br>No.(1) | ØB  | ØA1  | ØB1                 | H<br>(open)       | H<br>(close) | ØW    | H1                                           | h1      | g       | ØW1  |                                            |                                        |
| 2"              | 38                                 | 235 | 171,4 | 50,9  | 8 - 1 1/8  | 451  | 92,1  | 454  | 133 | 101,6  | 11,91 | 7,92  | 0,8 | 451  | 160                | 38  | 60,3 | 42,82               | 630               | 590          | 400   | 590                                          | 185     | 325     | 310  | 121                                        | 98                                     |
| 2-1/2"          | 49                                 | 265 | 196,8 | 57,2  | 8 - 1 1/4  | 508  | 104,8 | 514  | 149 | 111,13 | 13,49 | 9,53  | 1,5 | 508  | -                  | 49  | -    | -                   | 722               | 660,725      | 457,5 | 700,975                                      | 193,625 | 346,275 | 310  | 164                                        | 124                                    |
| 3"              | 57                                 | 305 | 228,6 | 66,7  | 8 - 1 3/8  | 578  | 127   | 584  | 168 | 127    | 13,49 | 9,53  | 1,5 | 578  | 160                | 57  | 91   | 66,5                | 790               | 713          | 500   | 783                                          | 200     | 362     | 310  | 195                                        | 143                                    |
| 4"              | 73                                 | 355 | 273   | 76,2  | 8 - 1 5/8  | 673  | 157,2 | 683  | 203 | 157,18 | 16,66 | 11,13 | 1,5 | 673  | 160                | 73  | 117  | 87,5                | 900               | 806          | 600   | 915                                          | 306     | 362     | 460  | 230                                        | 151                                    |
| 5"              | 93                                 | 420 | 323,8 | 92,1  | 8 - 1 7/8  | 794  | 185,7 | 807  | 241 | 190,5  | 19,84 | 12,7  | 1,5 | 794  | -                  | 93  | -    | -                   | -                 | -            | -     | 1109,93                                      | 349,125 | 406,85  | 460  | 512                                        | 359                                    |
| 6"              | 111                                | 485 | 368,3 | 108   | 8 - 2 1/8  | 914  | 215,9 | 927  | 279 | 228,6  | 19,84 | 12,7  | 1,5 | 914  | 160                | 111 | 172  | 132                 | -                 | -            | -     | 1254                                         | 381     | 440     | 460  | 720                                        | 514                                    |
| 8"              | 146                                | 550 | 438,2 | 127   | 12 - 2 1/8 | 1022 | 269,9 | 1038 | 340 | 279,4  | 23,01 | 14,27 | 1,5 | 1022 | 160                | 146 | 223  | 173                 | -                 | -            | -     | 1374                                         | 435     | 513     | 530  | 1295                                       | 1264                                   |
| 10"             | 184                                | 675 | 539,8 | 165,1 | 12 - 2 5/8 | 1270 | 323,8 | 1292 | 425 | 342,9  | 30,18 | 17,48 | 2,4 | 1270 | 160                | 184 | 278  | 216                 | -                 | -            | -     | 1685                                         | 467     | 588     | 530  | 2250                                       | 1668                                   |
| 12"             | 219                                | 760 | 619,1 | 184,2 | 12 - 2 7/8 | 1422 | 381   | 1444 | 495 | 406,4  | 33,32 | 17,48 | 2,4 | 1422 | 160                | 219 | 329  | 257                 | -                 | -            | -     | 1890                                         | 512     | 613     | 600  | 4200                                       | 3370                                   |
| 14"             | 241                                | -   |       |       |            | 1526 | 412,8 | -    | -   | -      | -     | -     | -   | 1526 | 160                | 241 | 362  | 284                 | -                 | -            | -     | 2291                                         | 615     | 613     | 800  | -                                          | -                                      |
| 16"             | 276                                |     |       |       |            | 1699 | 469,9 | -    | -   | -      | -     | -     | -   | 1699 | 160                | 276 | 413  | 325,5               | -                 | -            | -     | 2470                                         | 778     | 698     | 800  | -                                          | -                                      |
| 18"             | 311                                |     |       |       |            | 1908 | 533,4 | -    | -   | -      | -     | -     | -   | 1908 | 160                | 311 | 464  | 366,5               | -                 | -            | -     | 2950                                         | 915     | 698     | 1000 | -                                          | -                                      |

(1) Other schedule nos. on request / Otros schedules bajo demanda

(2) RTJ weight increases approx. by 10% / Peso RTJ es aprox. un 10% mayor

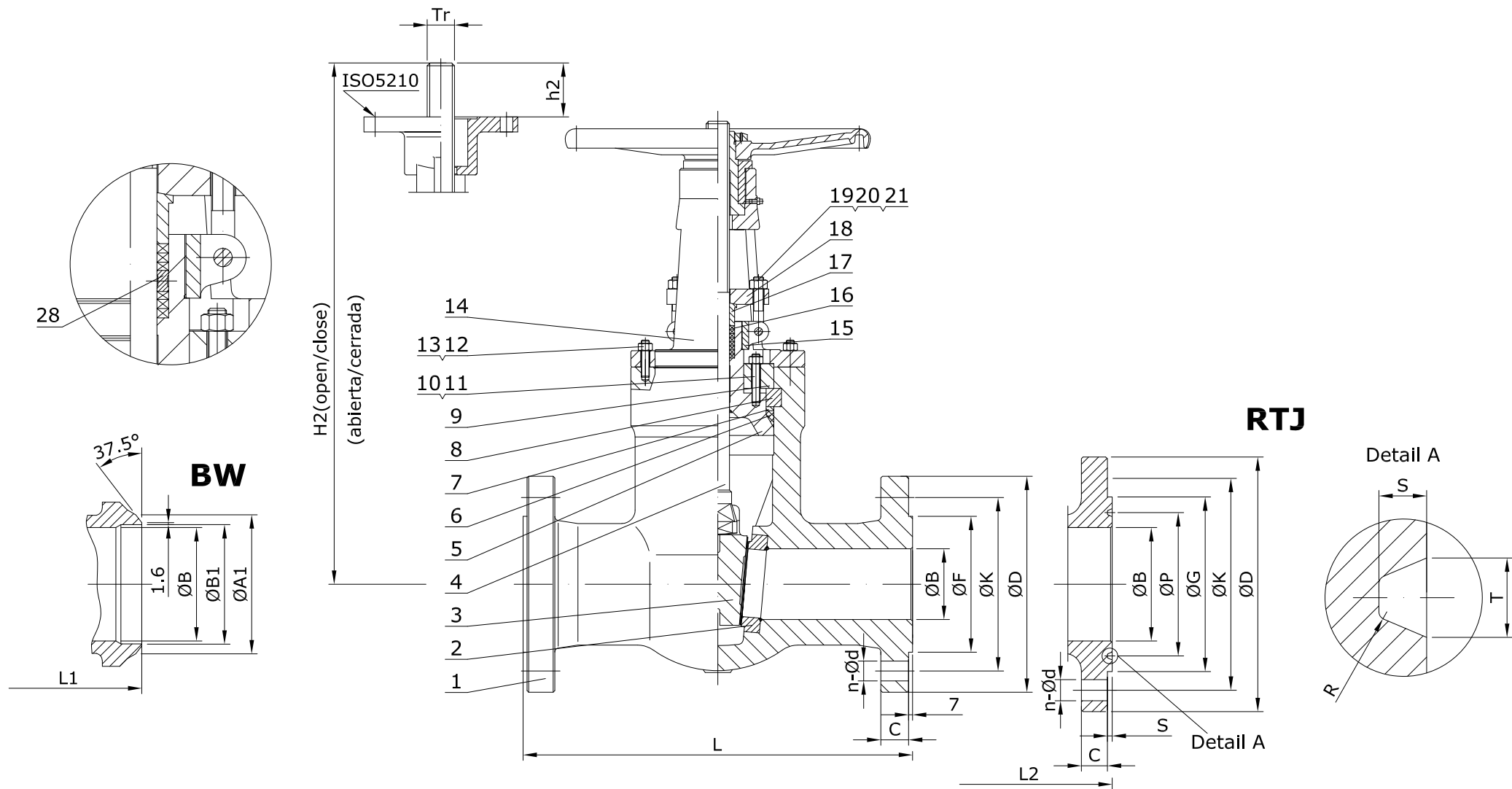
(3) Flange dimensions for 14"-18" acc. to the agreed between the customer and the supplier/  
Dimensiones de bridas para 14"-18" según lo acordado entre el cliente y el proveedor

Dimensions in mm. (except for bolt holes, which are in inch units) subject to manufacturing tolerance  
Dimensiones en mm. (excepto los agujeros de los pernos que están en pulgadas) sujetas a tolerancias de fabricación

|           |                            |
|-----------|----------------------------|
| PSmax     | 400,1 bar-g / 5805 psig    |
| TS        | 38°C/-46°C // 100°F/-50°F  |
| PS        | 303,3 bar-g / 4440 psig    |
| TSmax/min | 343°C/-46°C // 650°F/-50°F |

**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
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|                                                                                                           |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                                  |
|-----------------------------------------------------------------------------------------------------------|--------|----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Customer/Cliente<br>-                                                                                     |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 2500 DN50-450</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ _0AB0__ _</div> <div></div> |                                                                                        |                                                                  |
| Your Ref./Su Ref.<br>-                                                                                    |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                                  |
|                                                                                                           | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                                  |
| Date/Fecha                                                                                                |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                                  |
| Name/Nombre                                                                                               |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                                  |
| <div> Comeval®</div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div> <div>Checked/Comprob.</div> <div>DT</div>                                                                                                                                                                                                                                        | <div>Approved/Aprobado</div> <div>JG</div> <div>Date/Fecha</div> <div>10/12/2014</div> | <div>Drawing N°/Plano N°</div> <div>GD90-23</div> <div>2/2</div> |



#### MAIN FEATURES/PRINCIPALES ATRIBUTOS

- Design/ Diseño: API600
- Class/ Clase: 2500#
- Valve length/ Longitud: ASME B16.10
- Valve end connections/Extremos: Flanged to/ Bidas según ASME B16.5 (2"-12")  
Butt Weld (BW) to/ Soldar a tope (BW) según ASME B16.25
- Inspections & tests / Inspecciones y pruebas: API 598
- Heat resistant paint, grey aluminium color/Pintura resistente al calor, color gris aluminio

**CE** Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
 Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
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|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 2500 DN50-300</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ F0AB0__ _</div> <div></div> |                                                                                        |                                                       |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| Name/Nombre                                                                                      |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                                                                                        |                                                       |
| <div></div> |        |                            |        | <div>Drawn/Dibujado</div> <div>MJ</div> <div>Checked/Comprob.</div> <div>DT</div>                                                                                                                                                                                                                                        | <div>Approved/Aprobado</div> <div>JG</div> <div>Date/Fecha</div> <div>10/12/2014</div> | <div>Drawing N°/Plano N°</div> <div>GD90-24 1/2</div> |

| No. | Part/Parte                      | Material                 |                  | No. | Part/Parte                      | Material           |                  |
|-----|---------------------------------|--------------------------|------------------|-----|---------------------------------|--------------------|------------------|
|     |                                 | Trim 15 (91A8K_)         | Trim 16 (91A8L_) |     |                                 | Trim 15 (91A8K_)   | Trim 16 (91A8L_) |
| 1   | Body/ Cuerpo                    | A352 LCB                 |                  | 12  | Bolt/ Tornillo                  | A320 L7            |                  |
| 2   | Seat Ring/ Anillo asiento       | A182 F304+HF             | A182 F316+HF     | 13  | Nut/ Tuerca                     | A194 4             |                  |
| 3   | Wedge/ Compuerta                | A351 CF8+HF              | A351 CF8M+HF     | 14  | Yoke/ Puente                    | A352 LCB           |                  |
| 4   | Stem/ Eje                       | A182 F304                | Nitronic 50      | 15  | Ear Seat                        | A352 LCB           |                  |
| 5   | Bonnet/ Bonete                  | A350 LF2                 |                  | 16  | Packing/ Empaquetadura          | Graphite / Grafito |                  |
| 6   | Gasket/ Junta                   | SS304+Graphite / Grafito |                  | 17  | Packing Gland/ Casquillo prensa | A182 F304          |                  |
| 7   | Gasket Washer/ Arandela junta   | A182 F304                |                  | 18  | Gland Flange/Brida Prensa       | A352 LCB           |                  |
| 8   | Split Ring/ Anillo              | A350 LF2                 |                  | 19  | Eyebolt Pin/ Pasador            | AISI 1025          |                  |
| 9   | Retainer Ring/ Anillo retenedor | A350 LF2                 |                  | 20  | Gland Eyebolt/ Perno prensa     | A320 L7            |                  |
| 10  | Screw/ Tornillo                 | A320 L7                  |                  | 21  | Gland Nut/ Tuerca prensa        | A194 4             |                  |
| 11  | Nut/ Tuerca                     | A194 4                   |                  | 28  | Lantern Ring/ Anillo Linterna*  | A276 304           |                  |

\*On request / Bajo demanda

| Size/<br>Tamaño | End connection / Conexión extremos |     |       |       |            |      |       |      |     |        |       |       |     |      | Connection for actuation / Conexión para actuación |     |                                                                               |       |              |               |      |     |           |                    | Approx.<br>Weight /<br>Peso RF<br>(kg) (3) | Approx.<br>Weight /<br>Peso BW<br>(kg) |                                |                         |
|-----------------|------------------------------------|-----|-------|-------|------------|------|-------|------|-----|--------|-------|-------|-----|------|----------------------------------------------------|-----|-------------------------------------------------------------------------------|-------|--------------|---------------|------|-----|-----------|--------------------|--------------------------------------------|----------------------------------------|--------------------------------|-------------------------|
|                 | RF/RTJ                             |     |       |       |            | RF   |       | RTJ  |     |        |       |       | BW  |      |                                                    |     | Bare shaft with ISO 5210 top flange/<br>Eje libre con brida superior ISO 5210 |       |              |               |      |     |           |                    |                                            |                                        |                                |                         |
|                 | ØB                                 | ØD  | ØK    | C     | n-Ød       | L    | ØF    | L2   | ØG  | ØP     | T     | S     | R   | L1   | Schedule<br>No.(1)                                 | ØB  | ØA1                                                                           | ØB1   | H2<br>(open) | H2<br>(close) | h2   | ISO | Tr        | Stroke/<br>Carrera |                                            |                                        | No. of turns/<br>Nº de vueltas | Torque/ Par<br>(Nm) (2) |
| 2"              | 38                                 | 235 | 171,4 | 50,9  | 8 - 1 1/8  | 451  | 92,1  | 454  | 133 | 101,6  | 11,91 | 7,92  | 0,8 | 451  | 160                                                | 38  | 60,3                                                                          | 42,82 | 630          | 590           | 60   | F10 | Tr26x5LH  | 40                 | 8                                          | 170                                    | 121                            | 98                      |
| 2-1/2"          | 49                                 | 265 | 196,8 | 57,2  | 8 - 1 1/4  | 508  | 104,8 | 514  | 149 | 111,13 | 13,49 | 9,53  | 1,5 | 508  | -                                                  | 49  | -                                                                             | -     | 723,15       | 661,875       | 71,5 | F14 | Tr30x6LH  | 61,275             | 10,2125                                    | 216,575                                | 164                            | 124                     |
| 3"              | 57                                 | 305 | 228,6 | 66,7  | 8 - 1 3/8  | 578  | 127   | 584  | 168 | 127    | 13,49 | 9,53  | 1,5 | 578  | 160                                                | 57  | 91                                                                            | 66,5  | 792          | 715           | 80   | F14 | Tr32x6LH  | 77                 | 12,8333                                    | 251                                    | 195                            | 143                     |
| 4"              | 73                                 | 355 | 273   | 76,2  | 8 - 1 5/8  | 673  | 157,2 | 683  | 203 | 157,18 | 16,66 | 11,13 | 1,5 | 673  | 160                                                | 73  | 117                                                                           | 87,5  | 947          | 853           | 80   | F14 | Tr36x6LH  | 94                 | 15,6667                                    | 583                                    | 230                            | 151                     |
| 5"              | 93                                 | 420 | 323,8 | 92,1  | 8 - 1 7/8  | 794  | 185,7 | 807  | 241 | 190,5  | 19,84 | 12,7  | 1,5 | 794  | -                                                  | 93  | -                                                                             | -     | 1046,48      | 920,85        | 103  | F25 | Tr48x8LH  | 125,625            | 15,7031                                    | 942,95                                 | 512                            | 359                     |
| 6"              | 111                                | 485 | 368,3 | 108   | 8 - 2 1/8  | 914  | 215,9 | 927  | 279 | 228,6  | 19,84 | 12,7  | 1,5 | 914  | 160                                                | 111 | 172                                                                           | 132   | 1120         | 971           | 120  | F25 | Tr48x8LH  | 149                | 18,625                                     | 1209                                   | 720                            | 514                     |
| 8"              | 146                                | 550 | 438,2 | 127   | 12 - 2 1/8 | 1022 | 269,9 | 1038 | 340 | 279,4  | 23,01 | 14,27 | 1,5 | 1022 | 160                                                | 146 | 223                                                                           | 173   | 1202         | 1003          | 180  | F35 | Tr62x8LH  | 199                | 24,875                                     | 2445                                   | 1295                           | 1264                    |
| 10"             | 184                                | 675 | 539,8 | 165,1 | 12 - 2 5/8 | 1270 | 323,8 | 1292 | 425 | 342,9  | 30,18 | 17,48 | 2,4 | 1270 | 160                                                | 184 | 278                                                                           | 216   | 1373         | 1125          | 250  | F40 | Tr76x10LH | 248                | 24,8                                       | 4212                                   | 2250                           | 1668                    |
| 12"             | 219                                | 760 | 619,1 | 184,2 | 12 - 2 7/8 | 1422 | 381   | 1444 | 495 | 406,4  | 33,32 | 17,48 | 2,4 | 1422 | 160                                                | 219 | 329                                                                           | 257   | 1542         | 1242          | 250  | F40 | Tr85x12LH | 300                | 25                                         | 6205                                   | 4200                           | 3370                    |

(1) Other schedule nos. on request / Otros schedules bajo demanda

(2) Torque with safety factor (30%) / Par con factor de seguridad (30%)

(3) RTJ weight increases approx. by 10% / Peso RTJ es aprox. un 10% mayor

Dimensions in mm. (except for bolt holes, which are in inch units) subject to manufacturing tolerance  
Dimensiones en mm. (excepto los agujeros de los pernos que están en pulgadas) sujetas a tolerancias de fabricación

|           |                            |
|-----------|----------------------------|
| PSmax     | 400,1 bar-g / 5805 psig    |
| TS        | 38°C/-46°C // 100°F/-50°F  |
| PS        | 303,3 bar-g / 4440 psig    |
| TSmax/min | 343°C/-46°C // 650°F/-50°F |

Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
The Information in this Drawing is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
Data subject to alteration due to continuous improvement. Regularly updated data on [www.comeval.es](http://www.comeval.es)  
El contenido de este plano es un extracto de la Hoja de Datos DS20. Referirse a la misma para más información  
Sujeto a cambios debido a la mejora continua de nuestros productos. Datos regularmente actualizados en [www.comeval.es](http://www.comeval.es)

|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                          |                                        |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|
| Customer/Cliente<br>-                                                                            |        | Project/Proyecto<br>-      |        | <div>Description/Descripción</div> <div>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 2500 DN50-300</div> <div>LCB Trim15,16 RF/RTJ/BW</div> <div>91A8__ F0AB0__ _</div> <div></div> |                          |                                        |
| Your Ref./Su Ref.<br>-                                                                           |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                          |                          |                                        |
|                                                                                                  | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                          |                          |                                        |
| Date/Fecha                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                          |                                        |
| Name/Nombre                                                                                      |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                          |                                        |
| <div></div> |        |                            |        | Drawn/Dibujado<br>MJ                                                                                                                                                                                                                                                                                                     | Approved/Aprobado<br>JG  | Drawing N°/Plano N°<br><br>GD90-24 2/2 |
|                                                                                                  |        |                            |        | Checked/Comprob.<br>DT                                                                                                                                                                                                                                                                                                   | Date/Fecha<br>10/12/2014 |                                        |
|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                          |                          |                                        |