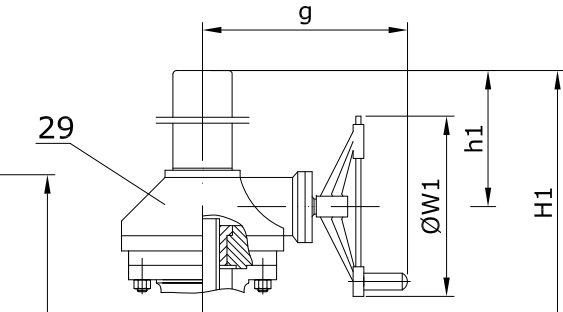
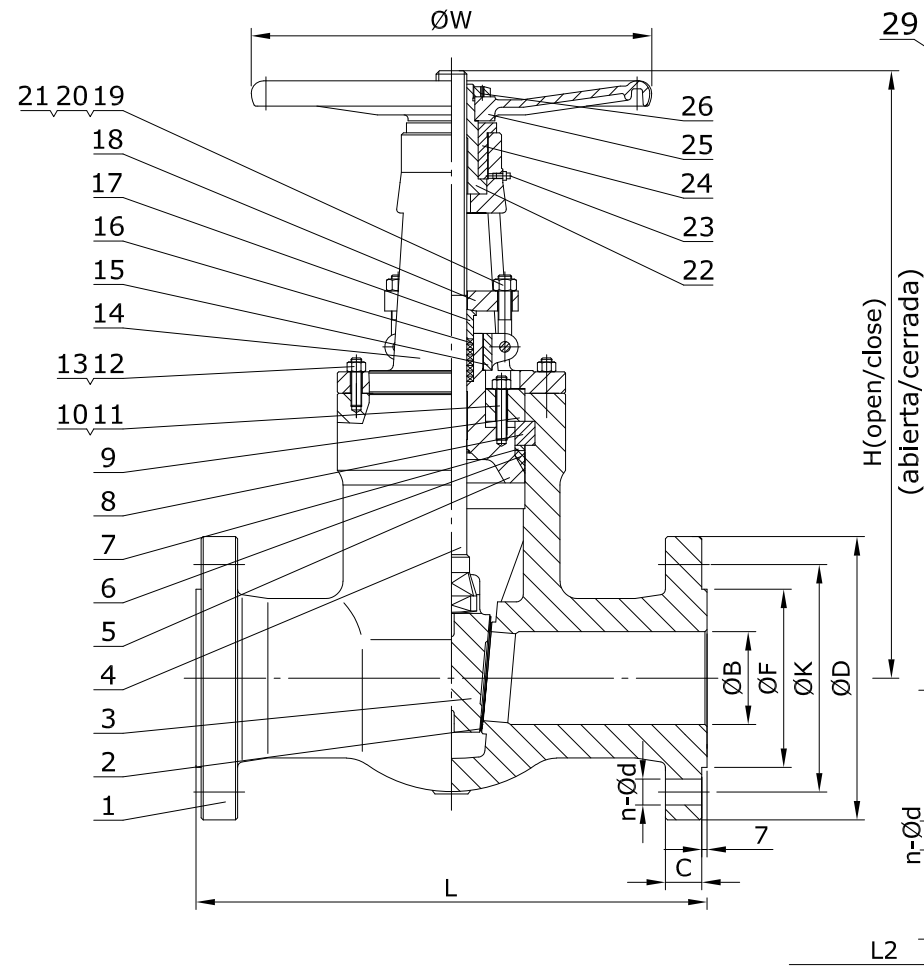
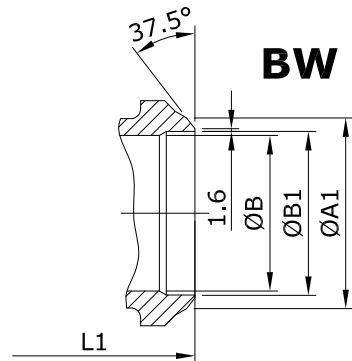
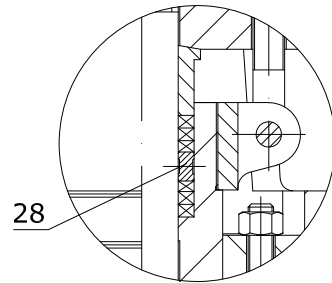
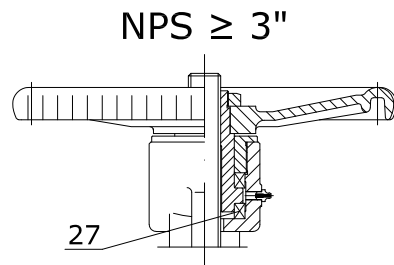
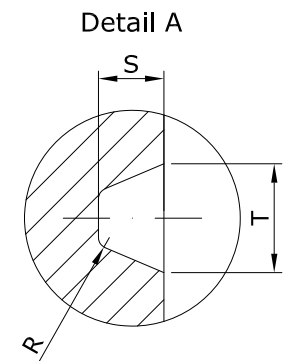
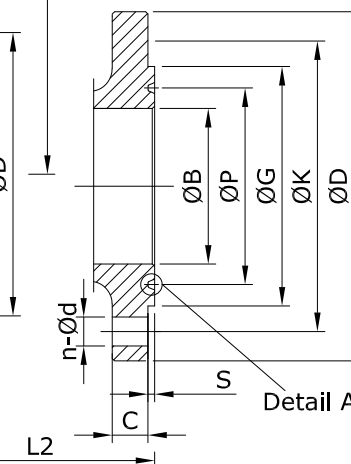




H(open/close)  
(abierto/cerrado)

**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

**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>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K____0AA0____</div> <div></div> |  |                          |  |                                        |  |
| Your Ref./Su Ref.<br>-                                                                |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                           |  |                          |  |                                        |  |
|                                                                                       | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                           |  |                          |  |                                        |  |
| Date/Fecha                                                                            |        |                            |        |                                                                                                                                                                                                                                                                                                                           |  |                          |  |                                        |  |
| Name/Nombre                                                                           |        |                            |        |                                                                                                                                                                                                                                                                                                                           |  |                          |  |                                        |  |
|  |        |                            |        | Drawn/Dibujado<br>MJ                                                                                                                                                                                                                                                                                                      |  | Approved/Aprobado<br>JG  |  | Drawing N°/Plano N°<br><br>GD90-81 1/2 |  |
|                                                                                       |        |                            |        | Checked/Comprob.<br>DT                                                                                                                                                                                                                                                                                                    |  | Date/Fecha<br>08/04/2015 |  |                                        |  |

| No. | Part/Parte                      | Material                 |                 | No.                        | Part/Parte                       | Material                  |                 |
|-----|---------------------------------|--------------------------|-----------------|----------------------------|----------------------------------|---------------------------|-----------------|
|     |                                 | A995 4a (91K3_)          | A995 5a (91K4_) |                            |                                  | A995 4a (91K3_)           | A995 5a (91K4_) |
| 1   | Body/ Cuerpo                    | A995 4a                  | A995 5a         | 16                         | Packing/ Empaquetadura           | Graphite / Grafito        |                 |
| 2   | Seat/ Asiento                   | Integral+HF              |                 | 17                         | Packing Gland/ Casquillo prensa  | A182 F51                  | A182 F53        |
| 3   | Wedge/ Compuerta                | A995 4a+HF               | A995 5a+HF      | 18                         | Gland Flange/Brida Prensa        | A995 4a                   | A995 5a         |
| 4   | Stem/ Eje                       | A182 F51                 | A182 F53        | 19                         | Eyebolt Pin/ Pasador             | A276 316                  |                 |
| 5   | Bonnet/ Bonete                  | A182 F51                 | A182 F53        | 20                         | Gland Eyebolt/ Perno prensa      | A193 B8M                  |                 |
| 6   | Gasket/ Junta                   | SS316+Graphite / Grafito |                 | 21                         | Gland Nut/ Tuerca prensa         | A194 8M                   |                 |
| 7   | Gasket Washer/ Arandela junta   | A182 F51                 | A182 F53        | 22                         | Stem Nut/ Tuerca del eje         | A439 D2                   |                 |
| 8   | Split Ring/ Anillo              | A182 F51                 | A182 F53        | 23                         | Grease Nipple/ Engrasador        | St. Steel/ Acero Inox.    |                 |
| 9   | Retainer Ring/ Anillo retenedor | A182 F51                 | A182 F53        | 24                         | Retaining Nut/ Tuerca retenedora | St. Steel/ Acero Inox.    |                 |
| 10  | Screw/ Tornillo                 | A193 B8M                 |                 | 25                         | Handwheel/ Volante               | Steel/ Acero              |                 |
| 11  | Nut/ Tuerca                     | A194 8M                  |                 | 26                         | Handwheel Nut/ Tuerca Volante    | St. Steel/ Acero Inox.    |                 |
| 12  | Bolt/ Tornillo                  | A193 B8M                 |                 | 27                         | Bearings/ Casquillo              | Alloy Steel/ Acero Aleado |                 |
| 13  | Nut/ Tuerca                     | A194 8M                  |                 | 28                         | Lantern Ring/ Anillo Linterna*   | A182 F51                  | A182 F53        |
| 14  | Yoke/ Puente                    | A995 4a                  | A995 5a         | 29                         | Gear/ Reductor                   | Assembly /Conjunto        |                 |
| 15  | Ear Seat                        | A995 4a                  | A995 5a         | *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 - 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                                | (3)  |       |       |            |       | 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

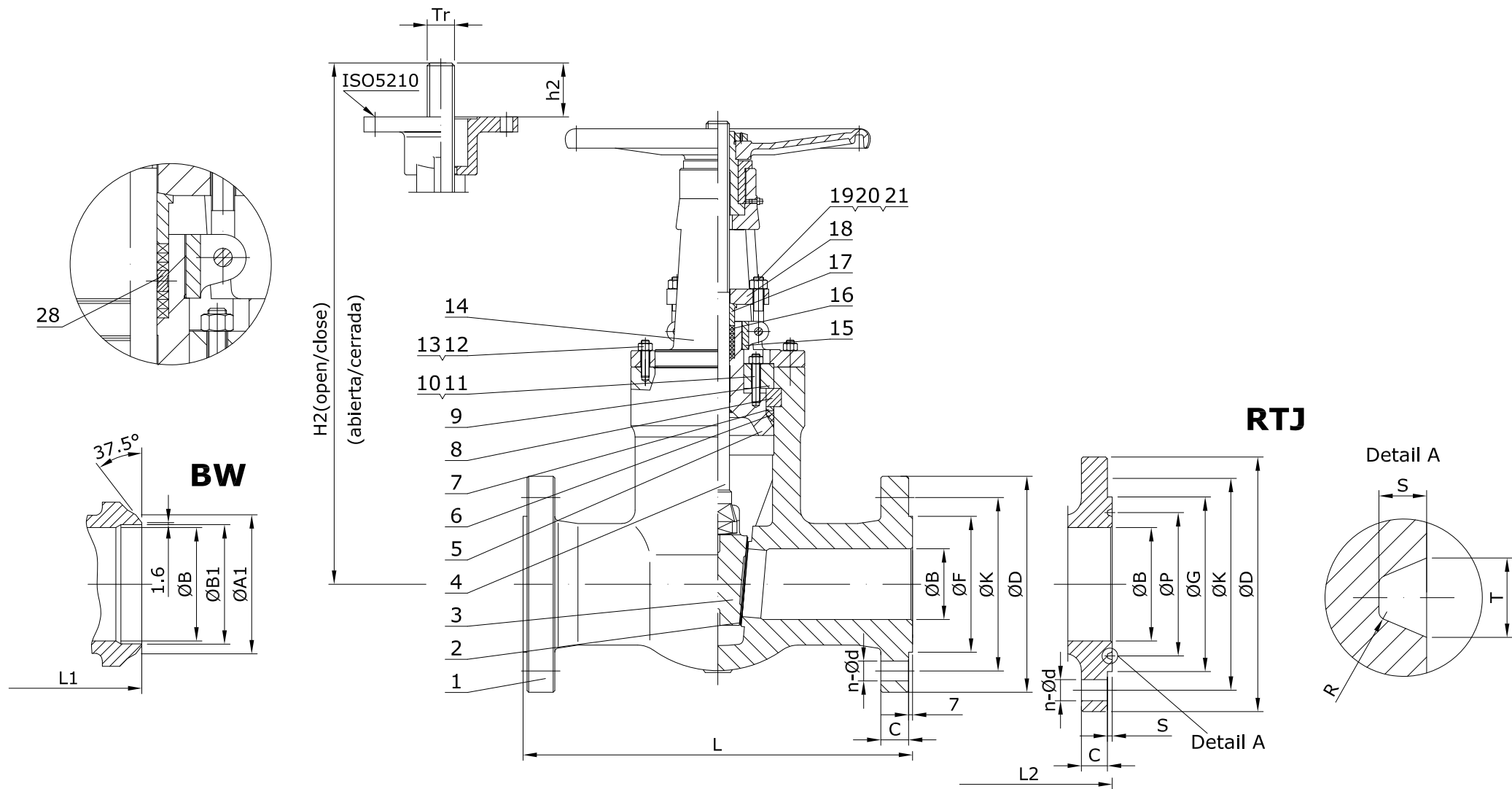
Dimensions in mm. (except for bolt holes, which are in inch units) subject to manufacturing tolerance

Dimensiones en mm. (excepto los agujeros de los pernos que están en pulgadas) sujetas a tolerancias de fabricación

|           |                            |
|-----------|----------------------------|
| PSmax     | 258,6 bar-g / 3750 psig    |
| TS        | 38°C/-29°C // 100°F/-20°F  |
| PS        | 192 bar-g / 2785 psig      |
| TSmax/min | 315°C/-29°C // 600°F/-20°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>MANUAL GATE VALVE</div> <div>VÁLVULA DE COMPUERTA MANUAL</div> <div>UNIFLOW</div> <div>Class 1500 DN50-700</div> <div>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K____0AA0__</div> <div></div> |  |                          |  |                                        |  |
| Your Ref./Su Ref.<br>-                                                                |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                      |  |                          |  |                                        |  |
|                                                                                       | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                      |  |                          |  |                                        |  |
| Date/Fecha                                                                            |        |                            |        |                                                                                                                                                                                                                                                                                      |  |                          |  |                                        |  |
| Name/Nombre                                                                           |        |                            |        |                                                                                                                                                                                                                                                                                      |  |                          |  |                                        |  |
|  |        |                            |        | Drawn/Dibujado<br>MJ                                                                                                                                                                                                                                                                 |  | Approved/Aprobado<br>JG  |  | Drawing N°/Plano N°<br><br>GD90-81 2/2 |  |
|                                                                                       |        |                            |        | Checked/Comprob.<br>DT                                                                                                                                                                                                                                                               |  | Date/Fecha<br>08/04/2015 |  |                                        |  |
|                                                                                       |        |                            |        |                                                                                                                                                                                                                                                                                      |  |                          |  |                                        |  |



#### MAIN FEATURES/PRINCIPALES ATRIBUTOS

- Design/ Diseño: API600
- Class/ Clase: 1500#
- Valve length/ Longitud: ASME B16.10
- Valve end connections/Extremos: Flanged to/ Bidas 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

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>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K_ _ _ 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>GD90-82</div> <div>1/2</div> |

| No. | Part/Parte                      | Material                 |                 | No. | Part/Parte                      | Material           |                 |
|-----|---------------------------------|--------------------------|-----------------|-----|---------------------------------|--------------------|-----------------|
|     |                                 | A995 4a (91K3_)          | A995 5a (91K4_) |     |                                 | A995 4a (91K3_)    | A995 5a (91K4_) |
| 1   | Body/ Cuerpo                    | A995 4a                  | A995 5a         | 12  | Bolt/ Tornillo                  | A193 B8M           |                 |
| 2   | Seat/ Asiento                   | Integral+HF              |                 | 13  | Nut/ Tuerca                     | A194 8M            |                 |
| 3   | Wedge/ Compuerta                | A995 4a+HF               | A995 5a+HF      | 14  | Yoke/ Puente                    | A995 4a            | A995 5a         |
| 4   | Stem/ Eje                       | A182 F51                 | A182 F53        | 15  | Ear Seat                        | A995 4a            | A995 5a         |
| 5   | Bonnet/ Bonete                  | A182 F51                 | A182 F53        | 16  | Packing/ Empaquetadura          | Graphite / Grafito |                 |
| 6   | Gasket/ Junta                   | SS316+Graphite / Grafito |                 | 17  | Packing Gland/ Casquillo prensa | A182 F51           | A182 F53        |
| 7   | Gasket Washer/ Arandela junta   | A182 F51                 | A182 F53        | 18  | Gland Flange/Brida Prensa       | A995 4a            | A995 5a         |
| 8   | Split Ring/ Anillo              | A182 F51                 | A182 F53        | 19  | Eyebolt Pin/ Pasador            | A276 316           |                 |
| 9   | Retainer Ring/ Anillo retenedor | A182 F51                 | A182 F53        | 20  | Gland Eyebolt/ Perno prensa     | A193 B8M           |                 |
| 10  | Screw/ Tornillo                 | A193 B8M                 |                 | 21  | Gland Nut/ Tuerca prensa        | A194 8M            |                 |
| 11  | Nut/ Tuerca                     | A194 8M                  |                 | 28  | Lantern Ring/ Anillo Linterna*  | A182 F51           | A182 F53        |

\*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%)

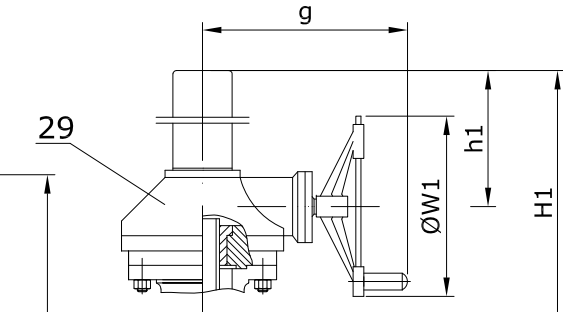
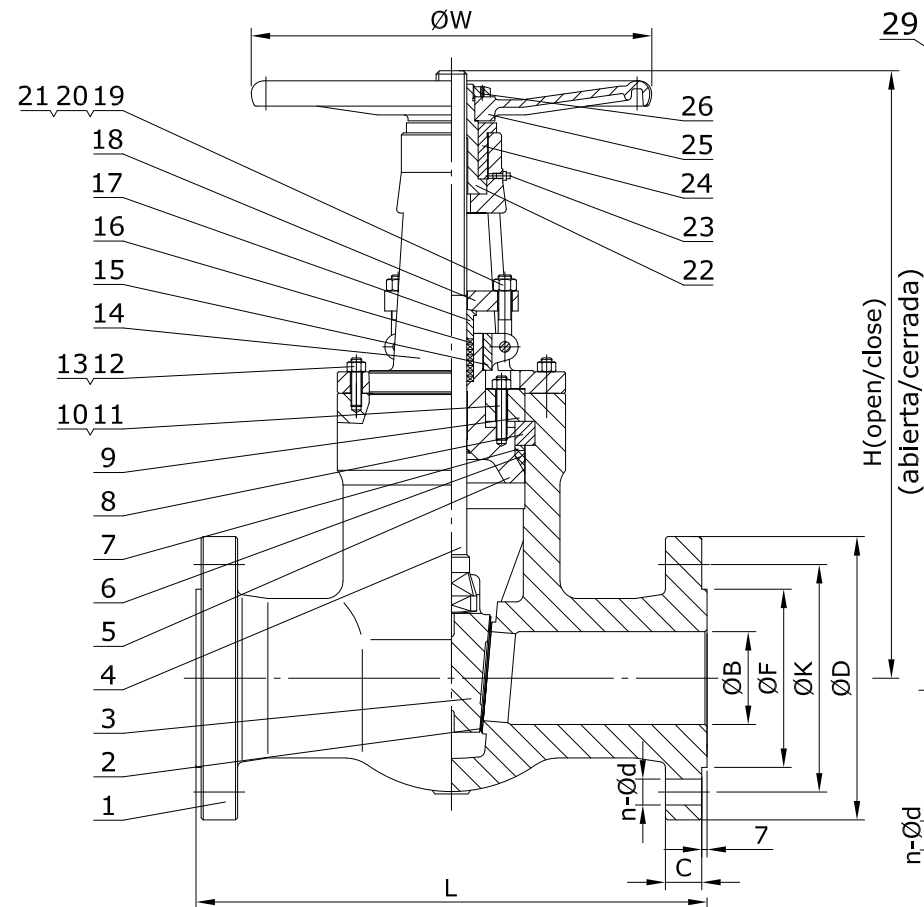
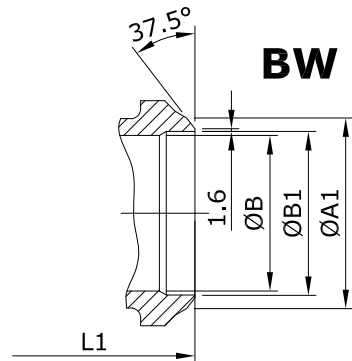
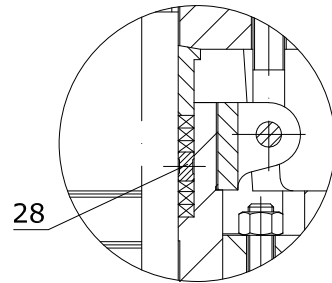
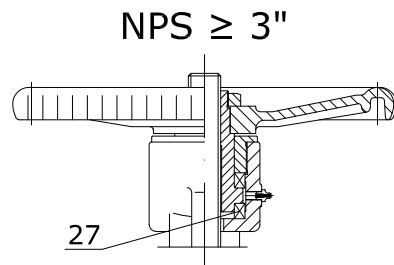
(3) RTJ weight increases approx. by 10% / Peso RTJ es aprox. un 10% mayor

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<br>TS     | 258,6 bar-g / 3750 psig<br>38°C/-29°C // 100°F/-20°F |
| PS<br>TSmax/min | 192 bar-g / 2785 psig<br>315°C/-29°C // 600°F/-20°F  |

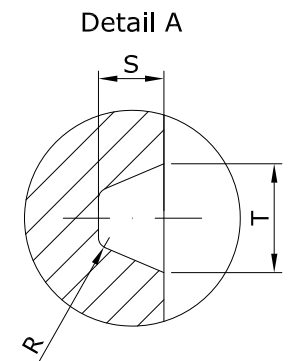
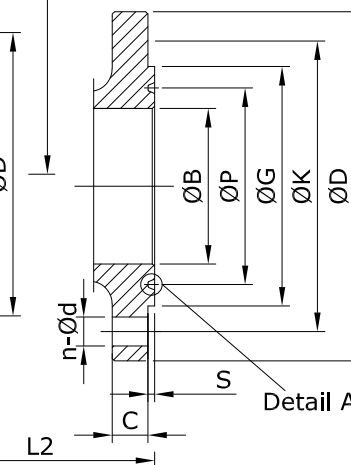
 Product may be compliant with Pressure Equipment Directive PED, max. category III for European territory /  
Producto conforme a la Directiva de Equipos a Presión PED, máx. categoría III para Europa  
The Information In this Drawing Is an extract from Data Sheet DS20. Please refer to the Data Sheet for further details  
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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>MANUAL GATE VALVE<br/>VÁLVULA DE COMPUERTA MANUAL<br/>UNIFLOW<br/>Class 1500 DN50-450<br/>A995 4a/A995 5a RF/RTJ/BW<br/>91K__ _ F0AA0__ _ _</div>  |                          |                                    |
| Your Ref./Su Ref.<br>-                                                                |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                              |                          |                                    |
|                                                                                       | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                              |                          |                                    |
| Date/Fecha                                                                            |        |                            |        |                                                                                                                                                                                                                                              |                          |                                    |
| Name/Nombre                                                                           |        |                            |        |                                                                                                                                                                                                                                              |                          |                                    |
|  |        |                            |        | Drawn/Dibujado<br>MJ                                                                                                                                                                                                                         | Approved/Aprobado<br>JG  | Drawing N°/Plano N°<br>GD90-82 2/2 |
|                                                                                       |        |                            |        | Checked/Comprob.<br>DT                                                                                                                                                                                                                       | Date/Fecha<br>10/12/2014 |                                    |



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/ Bridas 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

- **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 2500 DN50-450</div> <div>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K_ _ _ _ 0AB0_ _ _</div> <div></div> |  |                          |  |                                        |  |
| Your Ref./Su Ref.<br>-                                                                |        | Our Ref./Nuestra Ref.<br>- |        |                                                                                                                                                                                                                                                                                                                                |  |                          |  |                                        |  |
|                                                                                       | Rev. 1 | Rev. 2                     | Rev. 3 |                                                                                                                                                                                                                                                                                                                                |  |                          |  |                                        |  |
| Date/Fecha                                                                            |        |                            |        |                                                                                                                                                                                                                                                                                                                                |  |                          |  |                                        |  |
| Name/Nombre                                                                           |        |                            |        |                                                                                                                                                                                                                                                                                                                                |  |                          |  |                                        |  |
|  |        |                            |        | Drawn/Dibujado<br>MJ                                                                                                                                                                                                                                                                                                           |  | Approved/Aprobado<br>JG  |  | Drawing N°/Plano N°<br><br>GD90-83 1/2 |  |
|                                                                                       |        |                            |        | Checked/Comprob.<br>DT                                                                                                                                                                                                                                                                                                         |  | Date/Fecha<br>10/12/2014 |  |                                        |  |

| No. | Part/Parte                      | Material                 |                 | No.                        | Part/Parte                       | Material                  |                 |
|-----|---------------------------------|--------------------------|-----------------|----------------------------|----------------------------------|---------------------------|-----------------|
|     |                                 | A995 4a (91K3_)          | A995 5a (91K4_) |                            |                                  | A995 4a (91K3_)           | A995 5a (91K4_) |
| 1   | Body/ Cuerpo                    | A995 4a                  | A995 5a         | 16                         | Packing/ Empaquetadura           | Graphite / Grafito        |                 |
| 2   | Seat/ Asiento                   | Integral+HF              |                 | 17                         | Packing Gland/ Casquillo prensa  | A182 F51                  | A182 F53        |
| 3   | Wedge/ Compuerta                | A995 4a+HF               | A995 5a+HF      | 18                         | Gland Flange/Brida Prensa        | A995 4a                   | A995 5a         |
| 4   | Stem/ Eje                       | A182 F51                 | A182 F53        | 19                         | Eyebolt Pin/ Pasador             | A276 316                  |                 |
| 5   | Bonnet/ Bonete                  | A182 F51                 | A182 F53        | 20                         | Gland Eyebolt/ Perno prensa      | A193 B8M                  |                 |
| 6   | Gasket/ Junta                   | SS316+Graphite / Grafito |                 | 21                         | Gland Nut/ Tuerca prensa         | A194 8M                   |                 |
| 7   | Gasket Washer/ Arandela junta   | A182 F51                 | A182 F53        | 22                         | Stem Nut/ Tuerca del eje         | A439 D2                   |                 |
| 8   | Split Ring/ Anillo              | A182 F51                 | A182 F53        | 23                         | Grease Nipple/ Engrasador        | St. Steel/ Acero Inox.    |                 |
| 9   | Retainer Ring/ Anillo retenedor | A182 F51                 | A182 F53        | 24                         | Retaining Nut/ Tuerca retenedora | St. Steel/ Acero Inox.    |                 |
| 10  | Screw/ Tornillo                 | A193 B8M                 |                 | 25                         | Handwheel/ Volante               | Steel/ Acero              |                 |
| 11  | Nut/ Tuerca                     | A194 8M                  |                 | 26                         | Handwheel Nut/ Tuerca Volante    | St. Steel/ Acero Inox.    |                 |
| 12  | Bolt/ Tornillo                  | A193 B8M                 |                 | 27                         | Bearings/ Casquillo              | Alloy Steel/ Acero Aleado |                 |
| 13  | Nut/ Tuerca                     | A194 8M                  |                 | 28                         | Lantern Ring/ Anillo Linterna*   | A182 F51                  | A182 F53        |
| 14  | Yoke/ Puente                    | A995 4a                  | A995 5a         | 29                         | Gear/ Reductor                   | Assembly /Conjunto        |                 |
| 15  | Ear Seat                        | A995 4a                  | A995 5a         | *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

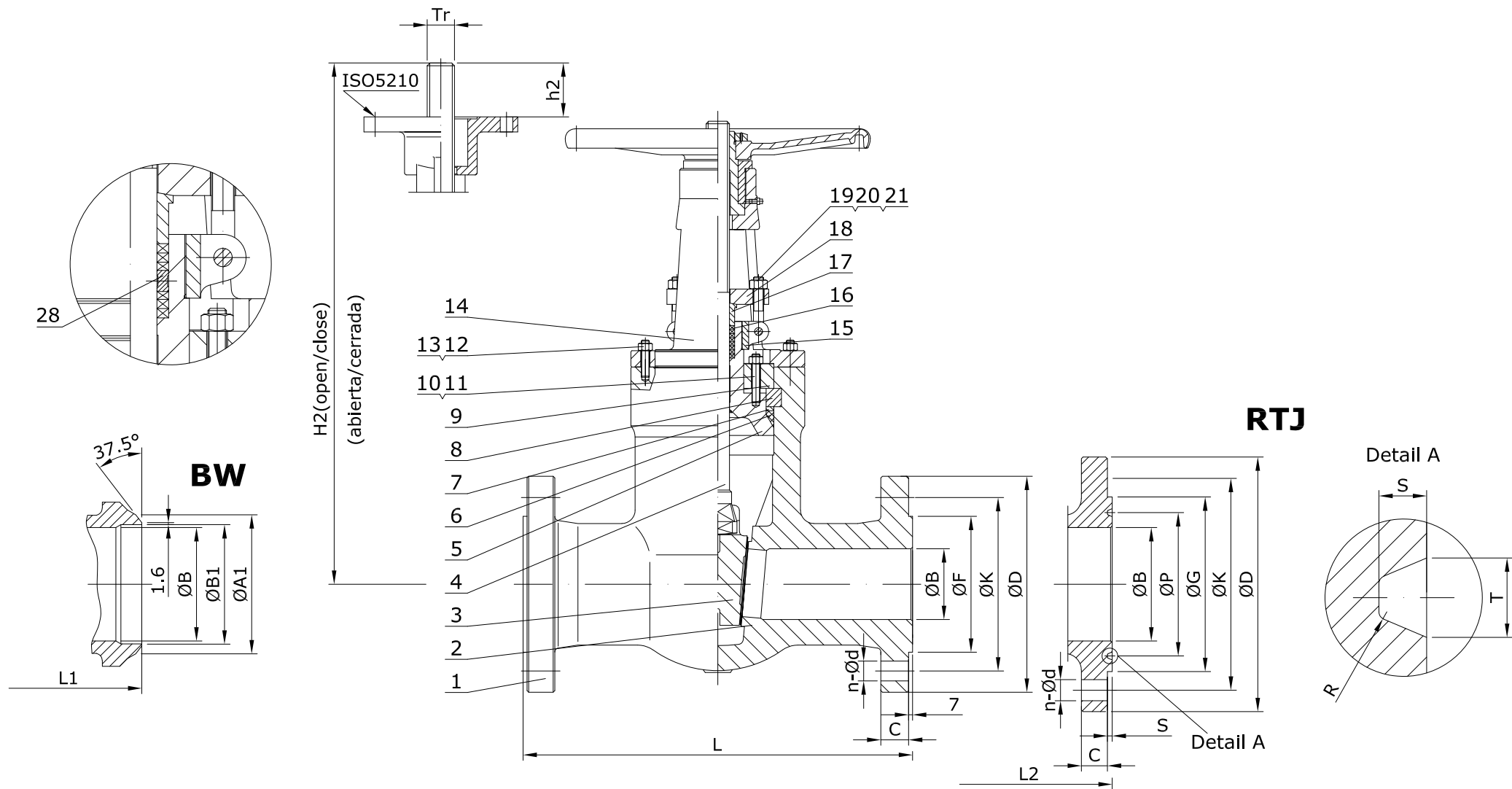
(3) Flange dimensions for 14"-18" acc.to the agreed between the customer and the supplier/  
Dimensiones de bridas para 14"-18" según lo acordado entre el cliente y el proveedor

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     | 431 bar-g / 6250 psig      |
| TS        | 38°C/-29°C // 100°F/-20°F  |
| PS        | 319,9 bar-g / 4640 psig    |
| TSmax/min | 315°C/-29°C // 600°F/-20°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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|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                               |                                                                                        |                                                                  |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 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>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K_ _ _ _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></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>GD90-83</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

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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|                                                                                                  |        |                            |        |                                                                                                                                                                                                                                                                                                                         |                                            |                                                       |
|--------------------------------------------------------------------------------------------------|--------|----------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|
| 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>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K__ 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>Approved/Aprobado</div> <div>JG</div> | <div>Drawing N°/Plano N°</div> <div>GD90-84 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           |                  |
|-----|---------------------------------|--------------------------|------------------|-----|---------------------------------|--------------------|------------------|
|     |                                 | A995 4a (91K3 _)         | A995 5a (91K4 _) |     |                                 | A995 4a (91K3 _)   | A995 5a (91K4 _) |
| 1   | Body/ Cuerpo                    | A995 4a                  | A995 5a          | 12  | Bolt/ Tornillo                  | A193 B8M           |                  |
| 2   | Seat/ Asiento                   | Integral+HF              |                  | 13  | Nut/ Tuerca                     | A194 8M            |                  |
| 3   | Wedge/ Compuerta                | A995 4a+HF               | A995 5a+HF       | 14  | Yoke/ Puente                    | A995 4a            | A995 5a          |
| 4   | Stem/ Eje                       | A182 F51                 | A182 F53         | 15  | Ear Seat                        | A995 4a            | A995 5a          |
| 5   | Bonnet/ Bonete                  | A182 F51                 | A182 F53         | 16  | Packing/ Empaquetadura          | Graphite / Grafito |                  |
| 6   | Gasket/ Junta                   | SS316+Graphite / Grafito |                  | 17  | Packing Gland/ Casquillo prensa | A182 F51           | A182 F53         |
| 7   | Gasket Washer/ Arandela junta   | A182 F51                 | A182 F53         | 18  | Gland Flange/Brida Prensa       | A995 4a            | A995 5a          |
| 8   | Split Ring/ Anillo              | A182 F51                 | A182 F53         | 19  | Eyebolt Pin/ Pasador            | A276 316           |                  |
| 9   | Retainer Ring/ Anillo retenedor | A182 F51                 | A182 F53         | 20  | Gland Eyebolt/ Perno prensa     | A193 B8M           |                  |
| 10  | Screw/ Tornillo                 | A193 B8M                 |                  | 21  | Gland Nut/ Tuerca prensa        | A194 8M            |                  |
| 11  | Nut/ Tuerca                     | A194 8M                  |                  | 28  | Lantern Ring/ Anillo Linterna*  | A182 F51           | A182 F53         |

\*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     | 431 bar-g / 6250 psig      |
| TS        | 38°C/-29°C // 100°F/-20°F  |
| PS        | 319,9 bar-g / 4640 psig    |
| TSmax/min | 315°C/-29°C // 600°F/-20°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 2500 DN50-300</div> <div>A995 4a/A995 5a RF/RTJ/BW</div> <div>91K__ 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>GD90-84 2/2</div> |