

| Size/ Tamaño | Class / Clase 800 | | | | | | | Approx. Weight / Peso (kg) |
|-----------------|---------------------------------------|------|------|------|---------------------|--------------|-----|----------------------------------|
| | End connection / Conexión extremos | | | | Top works/Operation | | | |
| | NPT/SW | | SW | | Handwheel | | | |
| | L | ØB | L1 | ØD | H (open) | H (close) | ØW | |
| 3/8" | 79 | 8 | 9,6 | 17,6 | 162 | 153 | 80 | 2 |
| 1/2" | 79 | 10,5 | 9,6 | 21,8 | 162 | 153 | 80 | 2 |
| 3/4" | 92 | 13,5 | 12,7 | 27,1 | 165 | 154 | 80 | 2,2 |
| 1" | 111 | 18 | 12,7 | 33,8 | 193 | 182 | 105 | 3 |
| 1 1/4" | 120 | 23 | 12,7 | 42,6 | 224 | 213 | 130 | 5,2 |
| 1 1/2" | 152 | 29 | 12,7 | 48,7 | 260 | 247 | 130 | 6,3 |
| 2" | 172 | 36,5 | 16 | 61,2 | 300 | 287 | 155 | 11 |

| Size/ Tamaño | Class / Clase 1500 | | | | | | | Approx. Weight / Peso (kg) |
|-----------------|---------------------------------------|------|------|------|---------------------|--------------|-----|----------------------------------|
| | End connection / Conexión extremos | | | | Top works/Operation | | | |
| | NPT/SW | | SW | | Handwheel | | | |
| | L | ØB | L1 | ØD | H (open) | H (close) | ØW | |
| 3/8" | 92 | 8 | 9,6 | 17,6 | 165 | 154 | 100 | 3,5 |
| 1/2" | 111 | 10,5 | 9,6 | 21,8 | 193 | 182 | 105 | 3,5 |
| 3/4" | 111 | 13,5 | 12,7 | 27,1 | 193 | 182 | 105 | 3,8 |
| 1" | 120 | 18 | 12,7 | 33,8 | 224 | 213 | 130 | 5,5 |
| 1 1/4" | 120 | 23 | 12,7 | 42,6 | 260 | 247 | 130 | 8 |
| 1 1/2" | 140 | 29 | 12,7 | 48,7 | 300 | 287 | 155 | 11 |
| 2" | 178 | 36,5 | 16 | 61,2 | 355 | 340 | 200 | 18,5 |

| Size/ Tamaño | Class / Clase 150 | | | | Class / Clase 300 | | | | Class / Clase 600 | | | | ØF | H (open) | H (close) | ØW | | | |
|-----------------|-------------------|-------|-----|------|-------------------|-----|-------|-----|-------------------|-------|-----|-------|-----|-------------|--------------|------|-----|-----|------|
| | L2 | ØK | ØD | C | n-Ød | L2 | ØK | ØD | C | n-Ød | L2 | ØK | | | | | ØD | C | n-Ød |
| 1/2" | 108 | 60,3 | 90 | 8 | 4-Ø16 | 152 | 66,7 | 95 | 12,7 | 4-Ø16 | 165 | 66,7 | 95 | 14,3 | 4-Ø16 | 34,9 | 162 | 153 | 80 |
| 3/4" | 117 | 69,9 | 100 | 8,9 | 4-Ø16 | 178 | 82,6 | 115 | 14,3 | 4-Ø19 | 190 | 82,6 | 115 | 15,9 | 4-Ø19 | 42,9 | 165 | 154 | 80 |
| 1" | 127 | 79,4 | 110 | 9,6 | 4-Ø16 | 203 | 88,9 | 125 | 15,9 | 4-Ø19 | 216 | 88,9 | 125 | 17,5 | 4-Ø19 | 50,8 | 193 | 182 | 105 |
| 1 1/4" | 140 | 88,9 | 115 | 11,2 | 4-Ø16 | 216 | 98,4 | 135 | 17,5 | 4-Ø19 | 229 | 98,4 | 135 | 20,7 | 4-Ø19 | 63,5 | 224 | 213 | 130 |
| 1 1/2" | 165 | 98,4 | 125 | 12,7 | 4-Ø16 | 229 | 114,3 | 155 | 19,1 | 4-Ø22 | 241 | 114,3 | 155 | 22,3 | 4-Ø22 | 73 | 260 | 247 | 130 |
| 2" | 203 | 120,7 | 150 | 14,3 | 4-Ø19 | 267 | 127 | 165 | 20,7 | 8-Ø19 | 292 | 127 | 165 | 25,4 | 8-Ø19 | 92,1 | 300 | 287 | 155 |

Dimensions in mm. subject to manufacturing tolerance
Dimensiones en mm. sujetas a tolerancias de fabricación

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MAIN FEATURES/PRINCIPALES ATRIBUTOS



- Design/ Diseño: API602
- Class/ Clase: 150#, 300#, 600#, 800#, 1500#
- Valve end connections/Extremos: Threaded NPT to/ Rosca NPT según ASME B1.20.1
Socket Weld (SW) to/ Soldar a solape (SW) según ASME B16.11
Buttweld (BW) to/ Soldar a tope (BW) según ASME B16.25
Flanged raise face (RF) to/ Bridado con resalte (RF) según ASME B16.5
- Inspections & tests / Inspecciones y pruebas: API 598
- Zinc phosphated surface protection for forged steel valves

CE PRODUCT COMPLIANT WITH PRESSURE EQUIPMENT DIRECTIVE PED, MAX. CATEGORY I /
PRODUCTO CONFORME A LA DIRECTIVA DE EQUIPOS A PRESIÓN PED, MÁX. CATEGORÍA I

| | | | |
|-------------------|-----------------------|---|------------------|
| Customer/Ciente | Project/Proyecto | Description/Descripción | |
| - | - | | |
| Your Ref./Su Ref. | Our Ref./Nuestra Ref. | | |
| - | 229000157 | | |
| | Rev.200901 | | |
| Date/Fecha | 01/09/2020 | | |
| Name/Nombre | aes40557 | | |
| | Drawn/Dibujado | Approved/Aprobado | Checked/Comprob. |
| | CR | JG | DT |
| | | | Date/Fecha |
| | | | 02/12/2014 |
| | | Drawing N°/Plano N° GD89-A01_A05_A08_A12_A1D_B75_B95_I12_I92_I0G_J1D_K30_K40-0_S_N_P_B-0-0-A1_A3_A6_AA-0-010_050 | |

| No. | Part/Parte | Material | | | | | | | | |
|-----|---------------|-------------------|-----------------|-----------------|-------------------|------------------|---|--------------------------------|---------------------------------|-------------------|
| | | A105N | | | A350 LF2 | | A182 F11/F22 Trim 5 (89B75_/89B95_) | A182 F304 (L) (89I1_/89I9_) | A182 F316 (L) (89I0G_/89I1_) | A182 F51/F53 |
| | | Trim 1 (89A01_) | Trim 5 (89A05_) | Trim 8 (89A08_) | Trim 2 (89A12_) | Trim 10 (89A1D_) | | | | |
| 1 | Body | A105N+13Cr | A105N+HF | A105N+HF | A350 LF2+SS304 | A350 LF2+SS316 | A182 F11/F22+HF | A182 F304(L) | A182 F316(L) | A182 F51/F53 |
| 2 | Disc | A182 F6a | A182 F6a+HF | A182 F6a | A182 F304 | A182 F316 | A182 F6a+HF | A182 F304(L) | A182 F316(L) | A182 F51/F53 |
| 3 | Stem | A276 410 | | | A276 304 | A276 316 | A276 410 | A276 304(L) | A276 316(L) | A182 F51/F53 |
| 4 | Bonnet Gasket | SS304+Graphite | | | SS304+Graphite | SS316+Graphite | SS304+Graphite | SS304+Graphite | SS316+Graphite | SS316+Graphite |
| 5 | Bonnet | ASTM A105N | | | A350 LF2 | | A182 F11/F22 | A182 F304(L) | A182 F316(L) | A182 F51/F53 |
| 6 | Packing | SS304+Graphite | | | SS304+Graphite | SS316+Graphite | SS304+Graphite | SS304+Graphite | SS316+Graphite | SS316+Graphite |
| 7 | Packing | Flexible Graphite | | | Flexible Graphite | | Flexible Graphite | Flexible Graphite | Flexible Graphite | Flexible Graphite |
| 8 | Eyebolt Pin | A276 410 | | | A276 410 | | A276 410 | A276 304 | A276 304 | A276 304 |
| 9 | Packing Gland | A276 420 | | | A276 304 | A276 316 | A276 420 | A276 304(L) | A276 316(L) | A182 F51/F53 |
| 10 | Eyebolt | A193 B7 | | | A320 L7 | | A193 B16 | A193 B8(M) | A193 B8M | A193 B8M |
| 11 | Gland Flange | ASTM A105N | | | A350 LF2 | | A182 F11/F22 | A182 F304(L) | A182 F316(L) | A182 F51/F53 |
| 12 | Eyebolt Nut | A194 2H | | | A194 4 | | A194 4 | A194 8(M) | A194 8M | A194 8M |
| 13 | Stem Nut | A276 410 | | | A276 410 | | A276 410 | A276 410 | A276 410 | A276 410 |
| 14 | Handwheel | ASTM A197 | | | ASTM A197 | | ASTM A197 | ASTM A197 | ASTM A197 | ASTM A197 |
| 15 | Handwheel Nut | AISI 1035 | | | AISI 1035 | | AISI 1035 | AISI 1035 | AISI 1035 | AISI 1035 |
| 16 | Bonnet Bolt | A193 B7 | | | A320 L7 | | A193 B16 | A193 B8(M) | A193 B8M | A193 B8M |

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 Estos valores están/pueden estar limitados por el límite de temperatura del revestimiento/sistema de pintura aplicado al producto

| | | | | | |
|---|------------------------------------|---|-------------------------|------------------------|--------------------------|
| Customer/Ciente - | Project/Proyecto - |  | | | |
| Your Ref./Su Ref. - | Our Ref./Nuestra Ref. 229000157 | | | | |
| | Rev.200901 | | | | |
| Date/Fecha | 01/09/2020 | | | | |
| Name/Nombre | aes40557 | | | | |
|  | | Drawn/Dibujado CR | Approved/Aprobado JG | Checked/Comprob. DT | Date/Fecha 02/12/2014 |
| Drawing N°/Plano N° GD89-A01_A05_A08_A12_A1D_B75_B95_I12_I92_I0G_J1D_K30_K40-0_S_N_P_B-0-0-A1_A3_A6_AA-0-010_050 | | | | | |

CLASS 150 - LIMITS OF USE

| | | | | | |
|---------------------|----------|------------------------------|-----------------------|----------|------------------------------|
| A105N (89A0_) | PSmax | 19,6 bar-g / 284 psig | A182 F304 (89I1_) | PSmax | 19,8 bar-g / 287 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 5,5 bar-g / 80 psig | | PS | 1,4 bar-g / 20 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A350 LF2 (89A1_) | PSmax | 19,6 bar-g / 284 psig | A182 F304L (89I9_) | PSmax | 15,9 bar-g / 231 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 5,5 bar-g / 80 psig | | PS | 5,5 bar-g / 80 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 425°C/-29°C // 797°F/-20°F |
| A182 F11 (89B7_) | PSmax | 19,8 bar-g / 287 psig | A182 F316 (89I0_) | PSmax | 19 bar-g / 276 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 1,4 bar-g / 20 psig | | PS | 1,4 bar-g / 20 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 538°C/-29°C // 1.000°F/-20°F |
| A182 F22 (89B9_) | PSmax | 19,8 bar-g / 287 psig | A182 F316L (89J1_) | PSmax | 15,9 bar-g / 231 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 1,4 bar-g / 20 psig | | PS | 4,6 bar-g / 67 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 450°C/-46°C // 842°F/-50°F |

CLASS 300 - LIMITS OF USE

| | | | | | |
|---------------------|----------|------------------------------|-----------------------|----------|------------------------------|
| A105N (89A0_) | PSmax | 51,1 bar-g / 741 psig | A182 F304 (89I1_) | PSmax | 49,6 bar-g / 719 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 28,8 bar-g / 418 psig | | PS | 24,4 bar-g / 354 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A350 LF2 (89A1_) | PSmax | 51,1 bar-g / 741 psig | A182 F304L (89I9_) | PSmax | 41,4 bar-g / 600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 28,8 bar-g / 418 psig | | PS | 23,9 bar-g / 347 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 425°C/-29°C // 797°F/-20°F |
| A182 F11 (89B7_) | PSmax | 51,7 bar-g / 750 psig | A182 F316 (89I0_) | PSmax | 49,6 bar-g / 719 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 14,9 bar-g / 216 psig | | PS | 25,2 bar-g / 365 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A182 F22 (89B9_) | PSmax | 51,7 bar-g / 750 psig | A182 F316L (89J1_) | PSmax | 41,4 bar-g / 600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 18,4 bar-g / 267 psig | | PS | 23,4 bar-g / 339 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 450°C/-46°C // 842°F/-50°F |

CLASS 600 - LIMITS OF USE

| | | | | | |
|---------------------|----------|------------------------------|-----------------------|----------|------------------------------|
| A105N (89A0_) | PSmax | 102,1 bar-g / 1.481 psig | A182 F304 (89I1_) | PSmax | 99,3 bar-g / 1.440 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 57,5 bar-g / 834 psig | | PS | 48,9 bar-g / 709 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A350 LF2 (89A1_) | PSmax | 102,1 bar-g / 1.481 psig | A182 F304L (89I9_) | PSmax | 82,7 bar-g / 1.199 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 57,5 bar-g / 834 psig | | PS | 47,7 bar-g / 692 psig |
| | TSmx/min | 425°C/-29°C // 797°F/-20°F | | TSmx/min | 425°C/-46°C // 797°F/-50°F |
| A182 F11 (89B7_) | PSmax | 103,4 bar-g / 1.500 psig | A182 F316 (89I0_) | PSmax | 99,3 bar-g / 1.440 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 29,8 bar-g / 432 psig | | PS | 50 bar-g / 725 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A182 F22 (89B9_) | PSmax | 103,4 bar-g / 1.500 psig | A182 F316L (89J1_) | PSmax | 82,7 bar-g / 1.199 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 36,9 bar-g / 535 psig | | PS | 46,8 bar-g / 679 psig |
| | TSmx/min | 538°C/-29°C // 1.000°F/-20°F | | TSmx/min | 450°C/-46°C // 842°F/-50°F |


CLASS 800 - LIMITS OF USE

| | | | | | |
|---------------------|----------|-----------------------------|-----------------------|----------|------------------------------|
| A105N (89A0_) | PSmax | 136,2 bar-g / 1975 psig | A182 F304 (89I1_) | PSmax | 132,4 bar-g / 1920 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 76,7 bar-g / 1112 psig | | PS | 65,2 bar-g / 946 psig |
| | TSmx/min | 425°C/-29°C // 800°F/-20°F | | TSmx/min | 538°C/-46°C // 1.000°F/-50°F |
| A350 LF2 (89A1_) | PSmax | 136,2 bar-g / 1975 psig | A182 F304L (89I9_) | PSmax | 110,3 bar-g / 1600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 109,2 bar-g / 1584 psig | | PS | 63,6 bar-g / 922 psig |
| | TSmx/min | 343°C/-29°C // 650°F/-20°F | | TSmx/min | 425°C/-46°C // 800°F/-50°F |
| A182 F11 (89B7_) | PSmax | 137,9 bar-g / 2000 psig | A182 F316 (89I0_) | PSmax | 132,4 bar-g / 1920 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 39,7 bar-g / 576 psig | | PS | 66,8 bar-g / 969 psig |
| | TSmx/min | 538°C/-29°C // 1000°F/-20°F | | TSmx/min | 538°C/-46°C // 1000°F/-50°F |
| A182 F22 (89B9_) | PSmax | 137,9 bar-g / 2000 psig | A182 F316L (89J1_) | PSmax | 110,3 bar-g / 1600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 49,2 bar-g / 714 psig | | PS | 62,4 bar-g / 905 psig |
| | TSmx/min | 538°C/-29°C // 1000°F/-20°F | | TSmx/min | 450°C/-46°C // 842°F/-50°F |

CLASS 1500 - LIMITS OF USE

| | | | | | |
|---------------------|----------|-----------------------------|-----------------------|----------|-----------------------------|
| A105N (89A0_) | PSmax | 255,3 bar-g / 3703 psig | A182 F304 (89I1_) | PSmax | 248,2 bar-g / 3600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 143,8 bar-g / 2086 psig | | PS | 122,1 bar-g / 1771 psig |
| | TSmx/min | 425°C/-29°C // 800°F/-20°F | | TSmx/min | 538°C/-46°C // 1000°F/-50°F |
| A350 LF2 (89A1_) | PSmax | 255,3 bar-g / 3703 psig | A182 F304L (89I9_) | PSmax | 206,8 bar-g / 3000 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 192 bar-g / 2784 psig | | PS | 119,3 bar-g / 1730 psig |
| | TSmx/min | 343°C/-29°C // 650°F/-20°F | | TSmx/min | 425°C/-46°C // 800°F/-50°F |
| A182 F11 (89B7_) | PSmax | 258,3 bar-g / 3751 psig | A182 F316 (89I0_) | PSmax | 248,2 bar-g / 3600 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 74,5 bar-g / 1081 psig | | PS | 125,5 bar-g / 1820 psig |
| | TSmx/min | 538°C/-29°C // 1000°F/-20°F | | TSmx/min | 538°C/-46°C // 1000°F/-50°F |
| A182 F22 (89B9_) | PSmax | 258,3 bar-g / 3751 psig | A182 F316L (89J1_) | PSmax | 206,8 bar-g / 3000 psig |
| | TS | 38°C/-29°C // 100°F/-20°F | | TS | 38°C/-29°C // 100°F/-20°F |
| | PS | 92,2 bar-g / 1337 psig | | PS | 117,1 bar-g / 1698 psig |
| | TSmx/min | 538°C/-29°C // 1000°F/-20°F | | TSmx/min | 450°C/-46°C // 842°F/-50°F |

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| - | - |  | | | |
| Your Ref./Su Ref. | Our Ref./Nuestra Ref. | | | | |
| - | 229000157 | | | | |
| | Rev.200901 | | | | |
| Date/Fecha | 01/09/2020 | | | | |
| Name/Nombre | aes40557 | | | | |
| | Drawn/Dibujado | Approved/Aprobado | Checked/Comprob. | Date/Fecha | |
| | CR | JG | DT | 02/12/2014 | |
| | Drawing N°/Plano N° | | | | |
| | GD89-A01_A05_A08_A12_A1D_B75_B95_I12_I92_I0G_J1D_K30_K40-0_S_N_P_B-0-0-A1_A3_A6_AA-0-010_050 | | | | |