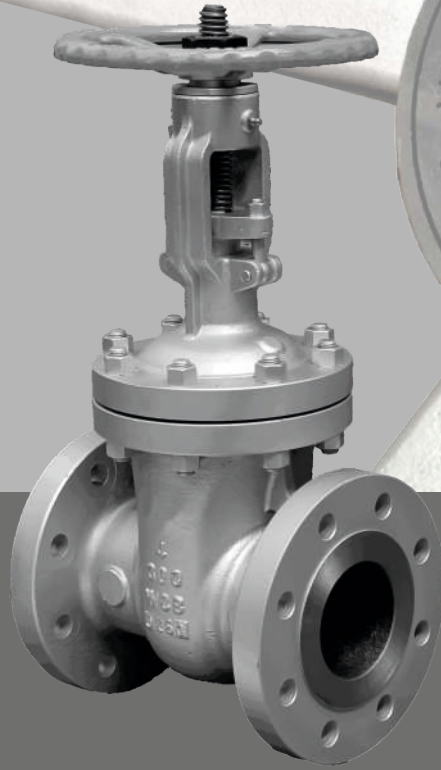
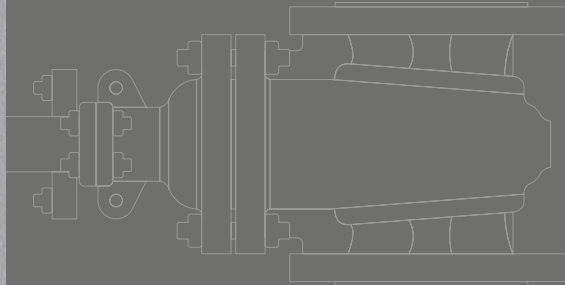


ANSI - CAST STEEL

GGC VALVES



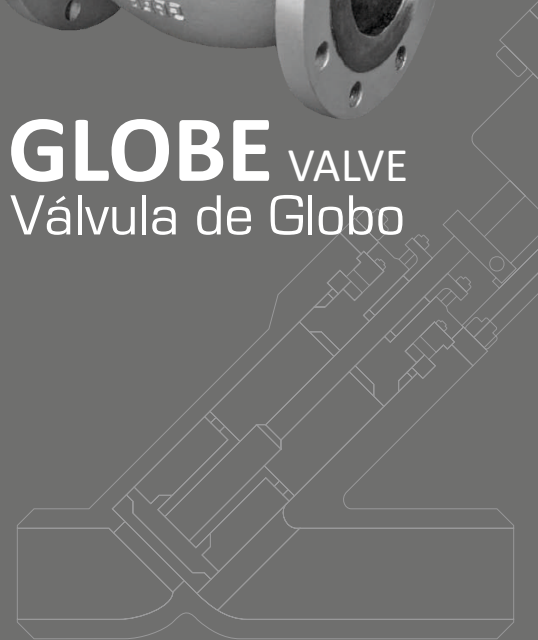
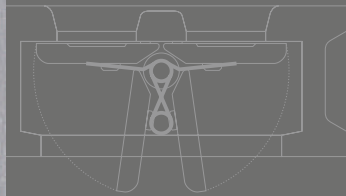
GATE VALVE
Válvula de Compuerta



GLOBE VALVE
Válvula de Globo



CHECK VALVE
Válvula de Retención

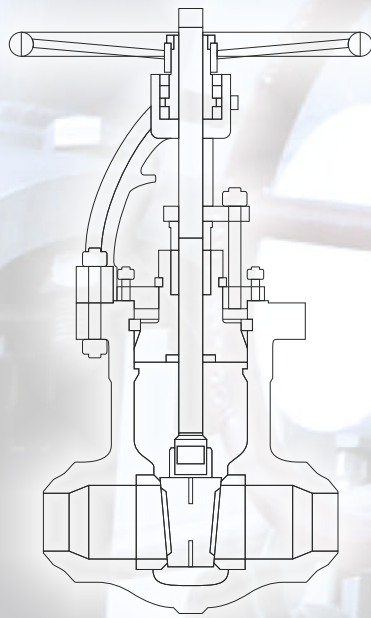




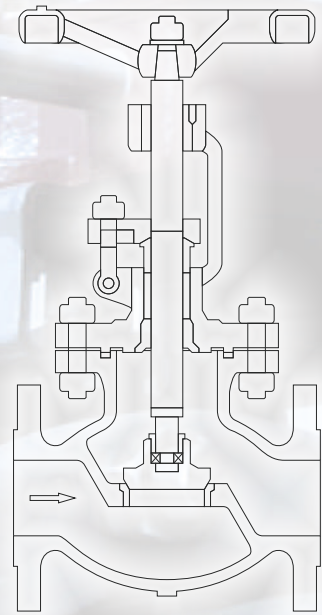
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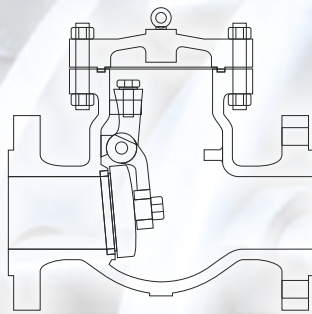
ANSI - CAST STEEL GGC VALVES



GATE VALVE
Válvula de Compuerta



GLOBE VALVE
Válvula de Globo



CHECK VALVE
Válvula de Retención

LOMISA valves type Gate, Globe and Check in cast steel, manufactured in ODM (Original Design Manufacturer) by **BAOYI Group**, under strict quality control. **BAOYI** established in 1983, becoming the first industry Southern Zhejiang Area be certificate ISO 9001 and API approval. **BAOYI** has been developed very fast in the valve industry over and it continues to achieve API6D/6A from American and CE/PED from EU.

LOMISA and **BAOYI** combined design, manufacturing, research and development, allowing our valves brands for their quality, reliability and service. We have set up good and dependable cooperative with mutually beneficial relations. And it is this that leads us to frequently supply international customers, including Oil & Gas companies and EPC.

Our valves are manufacturing with strict quality assurance according to our customers request. Manufactured mainly to the standards according to the GB, JB, API, ANSI, JIS, BS, DIN, NF, ISO.

We offer a very good product for a reasonable price. We are proud to be synonymous credibility, efficiency and quality.

Las válvulas de **LOMISA** tipo Compuerta, Globo y Retención en acero fundido, se fabrican en la modalidad de ODM (Original Design Manufacturer) por **BAOYI Group** bajo su estricto control de calidad. **BAOYI** fue fundada en 1983 convirtiéndose en la primera industria en toda la región sur de la provincia de Zhejiang en obtener el certificado de calidad ISO 9001 y la aprobación de la American Petroleum Intitute API. **BAOYI** se ha desarrollado muy rápidamente en la industria de la válvula alcanzando la certificación API6D / 6A americano y CE / PED de la UE.

LOMISA y **BAOYI** combinan diseño, fabricación e investigación lo que ha permitido a nuestras válvulas establecerse en todo el mundo por su calidad, fiabilidad y servicio. Hemos establecido una buena y confiable cooperación en beneficio mutuo. Suministramos regularmente a importantes clientes internacionales, incluyendo empresas de refinación de petróleo y contratistas EPC.

Las válvulas están fabricadas con los últimos diseños internacionales, utilizando técnicas avanzadas de fabricación y controles rigurosos de control de calidad bajo normas GB, JB, API, ANSI, JIS, BS, DIN, NF, ISO de acuerdo a los requerimientos del mercado.

Ofrecemos un producto creíble a precio razonable. Somos sinónimo de credibilidad, eficiencia y calidad.

Brand approved by the suppliers list of the following customers / Marca homologada por los vendor list de los siguientes clientes

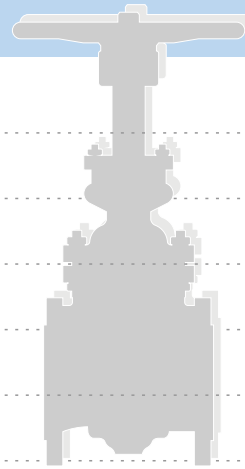


ANSI - CAST STEEL

GATE VALVES
Válvulas de Compuerta

GATE

- BOLTED BONNET**
Bonete atornillado
- CRYOGENIC**
Criogénica
- BELLOW SEAL**
Fuelle
- PRESSURE SEAL**
Alta presión
- TROUGH CONDUIT**
Conducto continuo
- OTHER VALVES**
Otras válvulas

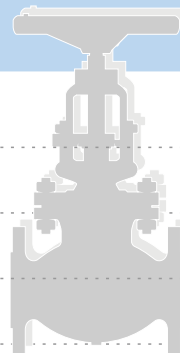


- 6
- 12
- 20
- 29
- 39
- 53

GLOBE VALVES
Válvulas de Globo

GLOBE

- BOLTED BONNET**
Bonete atornillado
- CRYOGENIC**
Criogénica
- BELLOW SEAL**
Fuelle
- PRESSURE SEAL**
Alta presión

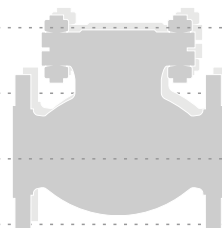


- 56
- 61
- 68
- 71

CHECK VALVES
Válvulas de Retención

CHECK

- PISTON**
Pistón
- SWIN**
Clapeta
- PRESSURE SEAL**
Alta presión
- WAFER**
Wafer



- 80
- 83
- 89
- 99

TABLES
Tablas

TABLES

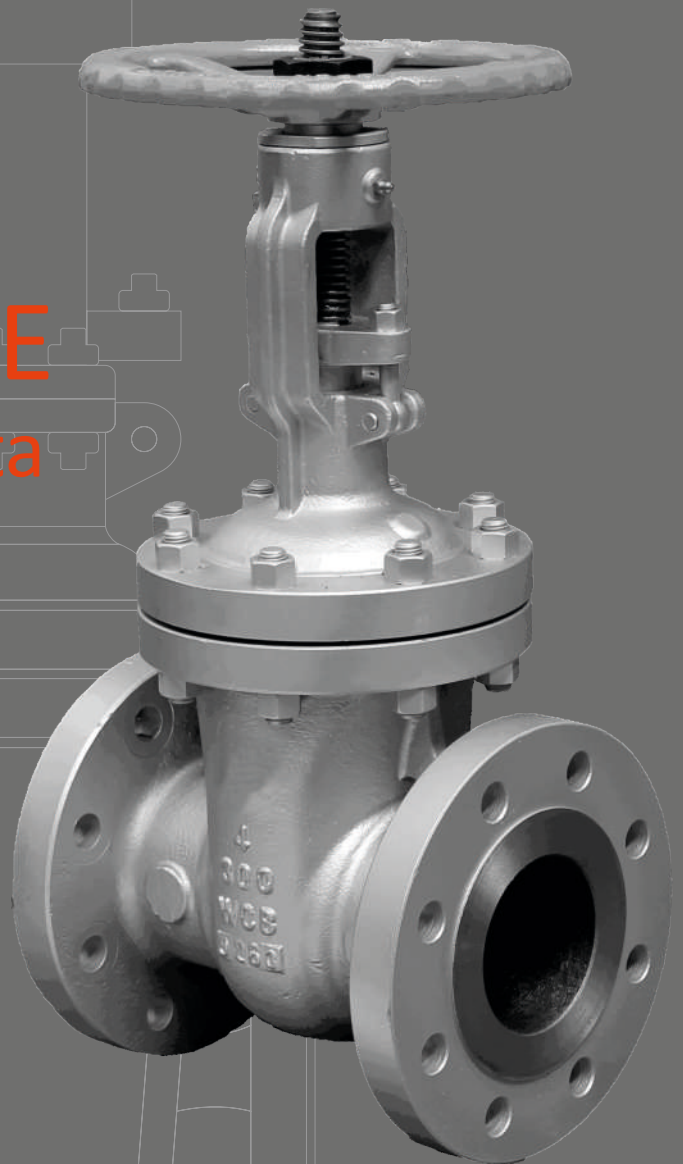
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- MATERIALS & TRIM**
Materiales y TRIM
- RATINGS**
Rangos
- FLOW DATA**
Datos de flujo
- CONVERSIONS**
Conversiones
- STANDARD**
Normas

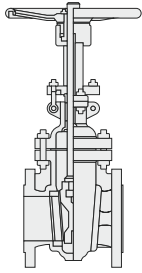
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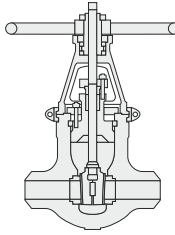
GATE VALVE

Válvula de Compuerta

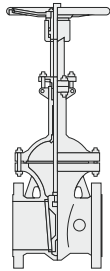



BOLTED BONNET
Bonete atornillado

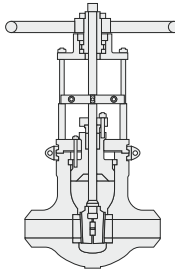
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2BB015 | 2" - 24" | 6 |
| 300 | 2BB030 | 2" - 24" | 7 |
| 600 | 2BB060 | 2" - 24" | 8 |
| 900 | 2BB090 | 2" - 24" | 9 |
| 1500 | 2BB150 | 2" - 24" | 10 |
| 2500 | 2BB250 | 2" - 12" | 11 |


PRESSURE SEAL - SPLIT WEDGE
Alta presión - Cuña partida

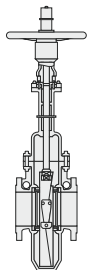
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 900 | 2PS090 | 6" - 24" | 32 |
| 1500 | 2PS150 | 6" - 24" | 33 |
| 2500 | 2PS250 | 6" - 24" | 34 |


CRYOGENIC - EXTENDED BONNET
Criogénica - Bonete extendido

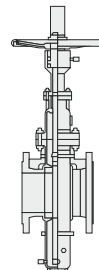
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| 150 | 2CE015 | 2" - 36" | 12 |
| 300 | 2CE030 | 2" - 36" | 13 |
| 600 | 2CE060 | 2" - 36" | 14 |
| 900 | 2CE090 | 2" - 24" | 15 |
| 1500 | 2CE150 | 2" - 24" | 16 |


PRESSURE SEAL - PARALLEL SLIDE
Alta presión - Caras paralelas

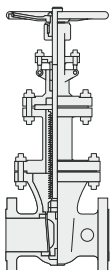
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 600 | 2PP060 | 6" - 24" | 35 |
| 900 | 2PP090 | 6" - 24" | 36 |
| 1500 | 2PP150 | 6" - 24" | 37 |
| 2500 | 2PP250 | 6" - 24" | 38 |


CRYOGENIC - PARALLEL
Criogénica - Paralela

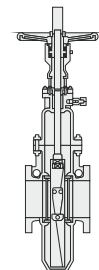
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2CP015 | 2" - 64" | 17 |
| 300 | 2CP030 | 2" - 64" | 18 |
| 400 | 2CP040 | 2" - 48" | 19 |


THROUGH CONDUIT - SINGLE DISC FLAT
Conducto continuo - Plana de un disco

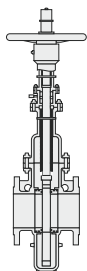
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2TD015 | 2" - 64" | 39 |
| 300 | 2TD030 | 2" - 64" | 40 |
| 400 | 2TD040 | 2" - 48" | 41 |
| 600 | 2TD060 | 2" - 48" | 42 |
| 900 | 2TD090 | 2" - 36" | 43 |
| 1500 | 2TD150 | 2" - 24" | 44 |
| 2500 | 2TD250 | 2" - 12" | 45 |


BELLOW SEAL
Fuelle

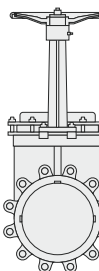
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2BS015 | 2" - 14" | 20 |
| 300 | 2BS030 | 2" - 14" | 21 |
| 600 | 2BS060 | 2" - 14" | 22 |
| 900 | 2BS090 | 2" - 14" | 23 |
| 1500 | 2BS150 | 2" - 14" | 24 |


THROUGH CONDUIT - PARALLEL
Conducto continuo - Paralela

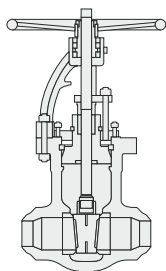
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|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2TP015 | 2" - 48" | 46 |
| 300 | 2TP030 | 2" - 48" | 47 |
| 400 | 2TP040 | 2" - 36" | 48 |
| 600 | 2TP060 | 2" - 36" | 49 |
| 900 | 2TP090 | 2" - 24" | 50 |
| 1500 | 2TP150 | 2" - 18" | 51 |
| 2500 | 2TP250 | 2" - 12" | 52 |


BELLOW SEAL - PARALLEL
Fuelle - Paralela

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 2BP015 | 2" - 24" | 25 |
| 300 | 2BP030 | 2" - 24" | 26 |
| 400 | 2BP040 | 2" - 24" | 27 |
| 600 | 2BP060 | 2" - 16" | 28 |


OTHER VALVES - WAFER KNIFE
Otras válvulas - Cuchilla

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
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| 150 | 2WK015 | 3" - 64" | 53 |

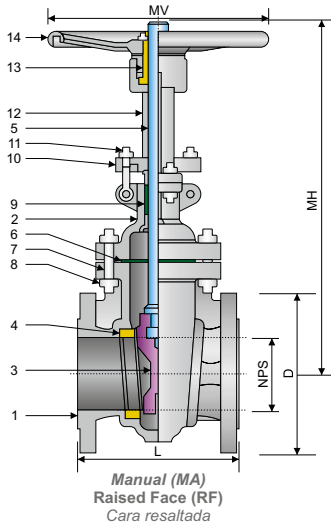

PRESSURE SEAL - FLEXIBLE WEDGE
Alta presión - Cuña flexible

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 900 | 2PF090 | 2" - 24" | 29 |
| 1500 | 2PF150 | 2" - 24" | 30 |
| 2500 | 2PF250 | 2" - 24" | 31 |

Fig. 2BB015

FULL BORE / Paso total

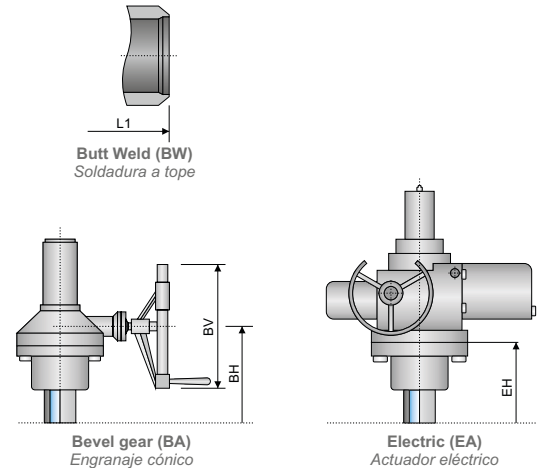
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|------------------------|-----------------------------|-------------------------------------|-----------------------------|-------------|---------------------------------------|--------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | LOW TEMPERATURE STEEL Acero baja temperatura | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|---|---|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 7 | Stud / Espárrago | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 14 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

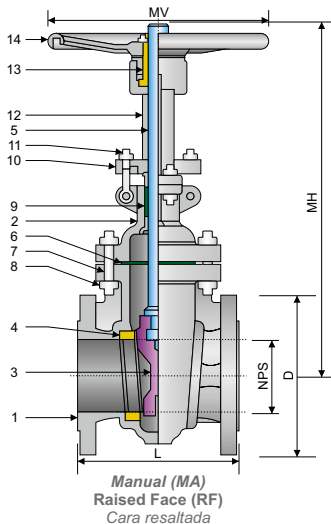
CLASS / Clase 150 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF | | BW L1 | MA | | MA RF W / P (Kg.) | BA | | EA EH |
|--------------|-------------|-----|-----|----------|------|-----|----------------------|------|-----|----------|
| | | L | D | | MH | MV | | BH | BV | |
| 2" | 50 | 178 | 152 | 216 | 355 | 200 | 18 | - | - | 335 |
| 2 1/2" | 65 | 191 | 178 | 241 | 390 | 200 | 28 | - | - | 350 |
| 3" | 80 | 203 | 190 | 282 | 413 | 240 | 30 | - | - | 385 |
| 4" | 100 | 229 | 229 | 305 | 480 | 300 | 50 | - | - | 445 |
| 5" | 125 | 254 | 254 | 381 | 548 | 300 | 63 | - | - | 500 |
| 6" | 150 | 267 | 279 | 403 | 591 | 350 | 85 | - | - | 560 |
| 8" | 200 | 292 | 343 | 419 | 765 | 400 | 128 | 800 | 310 | 705 |
| 10" | 250 | 330 | 406 | 457 | 905 | 400 | 220 | 930 | 460 | 830 |
| 12" | 300 | 356 | 483 | 502 | 1075 | 500 | 310 | 1060 | 460 | 963 |
| 14" | 350 | 381 | 533 | 572 | 1185 | 600 | 450 | 1200 | 460 | 1103 |
| 16" | 400 | 406 | 597 | 610 | 1330 | 600 | 550 | 1335 | 460 | 1218 |
| 18" | 450 | 432 | 635 | 660 | 1465 | 600 | 700 | 1535 | 530 | 1453 |
| 20" | 500 | 457 | 698 | 711 | 1590 | 700 | 910 | 1610 | 530 | 1538 |
| 24" | 600 | 508 | 813 | 813 | 1910 | 800 | 1130 | 2060 | 530 | 1888 |

Notes / Notas:

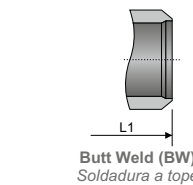
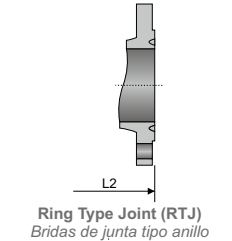
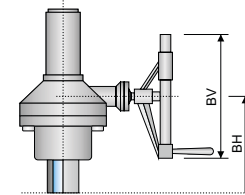
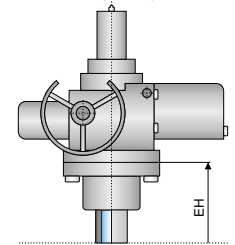
- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.
- (2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.

UNITS / Unidades mm


STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


 Butt Weld (BW)
Soldadura a tope

 Ring Type Joint (RTJ)
Bridas de junta tipo anillo

 Bevel gear (BA)
Engranaje cónico

 Electric (EA)
Actuador eléctrico

SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|------------------------|-----------------------------|-------------------------------------|-----------------------------|-------------|---------------------------------------|--------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | LOW TEMPERATURE STEEL Acero baja temperatura | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|---|---|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 7 | Stud / Espárrago | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 14 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | RF D | MA | | MA RF W / P (Kg.) | BA | | EA EH |
|--------------|-------------|-------------------|-----------|---------|------|-----|----------------------|------|-----|----------|
| | | | | | MH | MV | | BH | BV | |
| 2" | 50 | 216 | 232 | 165 | 360 | 240 | 30 | - | - | 315 |
| 2 1/2" | 65 | 241 | 257 | 190 | 405 | 240 | 36 | - | - | 365 |
| 3" | 80 | 283 | 298 | 210 | 445 | 280 | 61 | - | - | 405 |
| 4" | 100 | 305 | 321 | 254 | 505 | 300 | 77 | - | - | 460 |
| 5" | 125 | 381 | 397 | 279 | 575 | 350 | 106 | - | - | 535 |
| 6" | 150 | 403 | 419 | 318 | 635 | 400 | 153 | 675 | 310 | 590 |
| 8" | 200 | 419 | 435 | 381 | 795 | 400 | 286 | 825 | 460 | 725 |
| 10" | 250 | 457 | 473 | 444 | 975 | 500 | 412 | 950 | 460 | 850 |
| 12" | 300 | 502 | 518 | 521 | 1115 | 500 | 576 | 1120 | 460 | 1020 |
| 14" | 350 | 762 | 778 | 584 | 1215 | 600 | 886 | 1280 | 530 | 1135 |
| 16" | 400 | 838 | 854 | 648 | 1400 | 600 | 1175 | 1455 | 530 | 1218 |
| 18" | 450 | 914 | 930 | 711 | 1580 | 700 | 1301 | 1585 | 530 | 1440 |
| 20" | 500 | 991 | 1010 | 775 | 1700 | 800 | 1672 | 1845 | 530 | 1700 |
| 24" | 600 | 1143 | 1165 | 914 | 2050 | 800 | 2562 | 2185 | 600 | 2025 |

Notes / Notas:

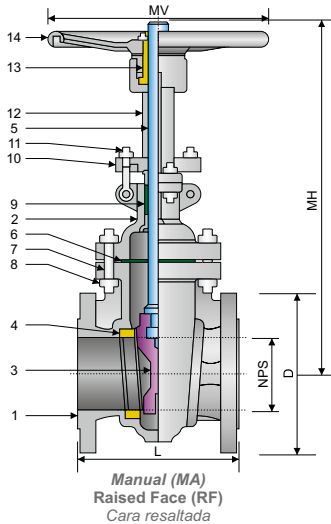
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 2BB060

FULL BORE / Paso total

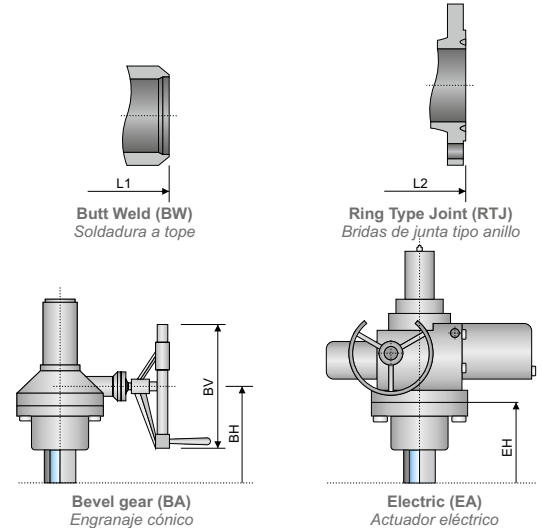
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|------------------------|-----------------------------|-------------------------------------|-----------------------------|-------------|---------------------------------------|--------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | LOW TEMPERATURE STEEL Acero baja temperatura | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|---|---|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 7 | Stud / Espárrago | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 14 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

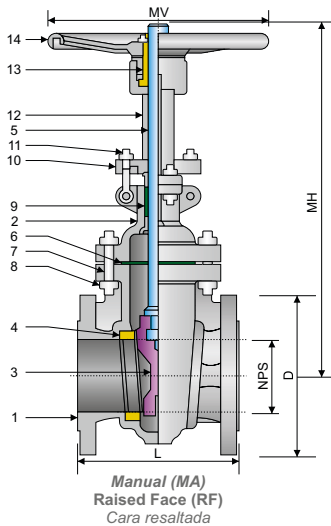
CLASS / Clase 600 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | RF D | MA | | MA RF W / P (Kg.) | BA | | EA EH |
|--------------|-------------|-------------------|-----------|---------|------|-----|----------------------|------|-----|----------|
| | | | | | MH | MV | | BH | BV | |
| 2" | 50 | 292 | 295 | 165 | 400 | 250 | 44 | - | - | 360 |
| 2 1/2" | 65 | 330 | 333 | 190 | 455 | 300 | 60 | - | - | 415 |
| 3" | 80 | 356 | 359 | 210 | 490 | 300 | 80 | - | - | 445 |
| 4" | 100 | 432 | 435 | 273 | 580 | 350 | 145 | - | - | 530 |
| 5" | 125 | 508 | 511 | 330 | 640 | 400 | 236 | - | - | 590 |
| 6" | 150 | 559 | 562 | 356 | 700 | 450 | 309 | 725 | 460 | 630 |
| 8" | 200 | 660 | 664 | 419 | 855 | 600 | 522 | 925 | 460 | 825 |
| 10" | 250 | 787 | 791 | 508 | 1000 | 600 | 779 | 1009 | 460 | 910 |
| 12" | 300 | 838 | 841 | 559 | 1155 | 600 | 1108 | 1210 | 530 | 1065 |
| 14" | 350 | 889 | 892 | 603 | 1270 | 700 | 1503 | 1335 | 530 | 1170 |
| 16" | 400 | 991 | 994 | 686 | 1470 | 700 | 1939 | 1510 | 530 | 1370 |
| 18" | 450 | 1092 | 1095 | 743 | 1600 | 700 | 2733 | 1670 | 600 | 1520 |
| 20" | 500 | 1194 | 1200 | 813 | 1750 | 800 | 3214 | 1815 | 600 | 1650 |
| 24" | 600 | 1397 | 1407 | 940 | 2095 | 950 | 4177 | 2175 | 600 | 1993 |

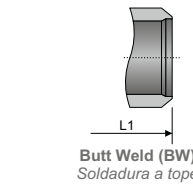
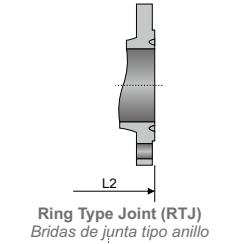
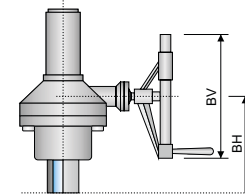
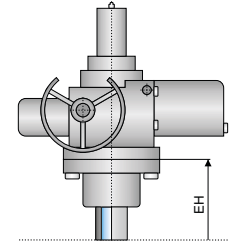
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


 Butt Weld (BW)
Soldadura a tope

 Ring Type Joint (RTJ)
Bridas de junta tipo anillo

 Bevel gear (BA)
Engranaje cónico

 Electric (EA)
Actuador eléctrico

SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 10 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | | S.S. 304 / <i>Acero Inoxidable 304</i> |
| 12 | Yoke / <i>Yugo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | RF D | MA | | BA | | EA EH |
|--------------|-------------|-------------------|-----------|---------|------|------|------|-----|----------|
| | | | | | MH | MV | BH | BV | |
| 2" | 50 | 368 | 371 | 216 | 410 | 250 | - | - | 370 |
| 3" | 80 | 381 | 384 | 241 | 500 | 300 | - | - | 455 |
| 4" | 100 | 457 | 460 | 292 | 600 | 350 | - | - | 550 |
| 6" | 150 | 610 | 613 | 381 | 720 | 500 | 745 | 460 | 650 |
| 8" | 200 | 737 | 740 | 470 | 875 | 600 | 945 | 460 | 845 |
| 10" | 250 | 838 | 841 | 546 | 1015 | 600 | 1070 | 530 | 925 |
| 12" | 300 | 965 | 968 | 610 | 1175 | 700 | 1230 | 530 | 1085 |
| 14" | 350 | 1029 | 1038 | 641 | 1300 | 800 | 1400 | 600 | 1200 |
| 16" | 400 | 1130 | 1140 | 705 | 1470 | 800 | 1550 | 600 | 1390 |
| 18" | 450 | 1219 | 1232 | 787 | 1600 | 800 | 1690 | 600 | 1540 |
| 20" | 500 | 1321 | 1334 | 857 | 1750 | 950 | 1855 | 600 | 1670 |
| 24" | 600 | 1549 | 1568 | 1041 | 2095 | 1000 | 2200 | 600 | 2020 |

Notes / Notas:

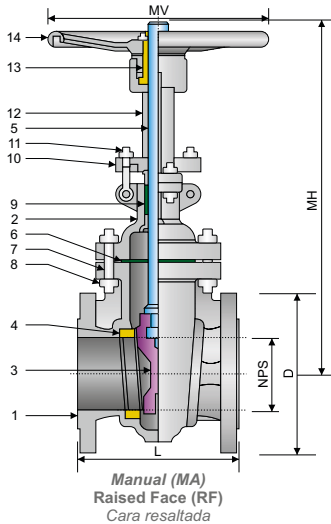
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 2BB150

FULL BORE / Paso total

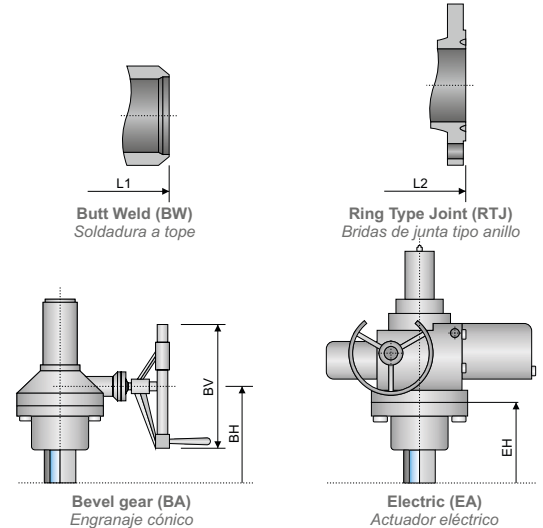
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 <24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 10 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | | S.S. 304 / <i>Acero Inoxidable 304</i> |
| 12 | Yoke / <i>Yugo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

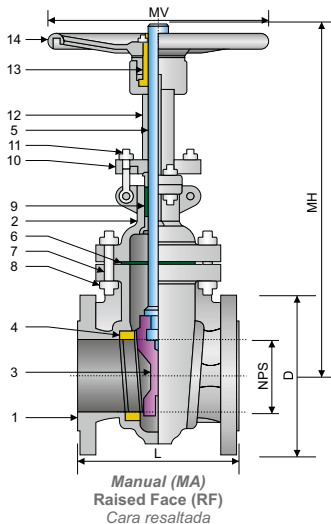
CLASS / Clase 1500 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | RF <i>D</i> | MA | | BA | | EA <i>EH</i> |
|---------------------|--------------------|--------------------------|------------------|----------------|------|-----|------|-----|-----------------|
| | | | | | MH | MV | BH | BV | |
| 2" | 50 | 368 | 371 | 216 | 410 | 250 | - | - | 370 |
| 3" | 80 | 470 | 473 | 267 | 500 | 300 | - | - | 455 |
| 4" | 100 | 546 | 549 | 311 | 600 | 400 | - | - | 550 |
| 6" | 150 | 705 | 711 | 394 | 720 | 600 | 745 | 460 | 650 |
| 8" | 200 | 832 | 841 | 483 | 875 | 600 | 945 | 460 | 845 |
| 10" | 250 | 991 | 1000 | 584 | 1015 | 700 | 1070 | 530 | 925 |
| 12" | 300 | 1130 | 1146 | 673 | 1175 | 700 | 1230 | 530 | 1085 |
| 14" | 350 | 1257 | 1276 | 749 | 1300 | 800 | 1400 | 600 | 1200 |
| 16" | 400 | 1384 | 1407 | 826 | - | - | 1550 | 600 | 1390 |
| 18" | 450 | 1537 | 1559 | 914 | - | - | 1690 | 600 | 1540 |
| 20" | 500 | 1664 | 1686 | 984 | - | - | 1855 | 600 | 1670 |
| 24" | 600 | 1943 | 1972 | 1168 | - | - | 2200 | 600 | 2020 |

Notes / Notas:

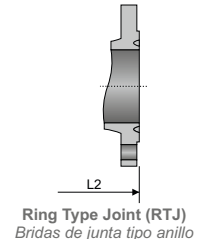
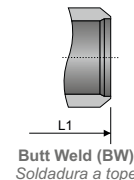
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Flexible wedge, fully guided**
Compuerta flexible, totalmente guiada
- **Choice of solid or split wedge**
Opción de cuña sólida o dividida
- **Renewable seat rings**
Anillos de asiento renovables
- **Forged head stem**
Vástago con cabeza forjada
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|------------------------|-----------------------------|-------------------------------------|-----------------------------|-------------|---------------------------------------|--------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | LOW TEMPERATURE STEEL Acero baja temperatura | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|---|---|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 7 | Stud / Espárrago | A193 - B7 | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A216 - WCB | A352 - LCB / A352 - LCC | A182 - F304 / A182 - F316 |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 14 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

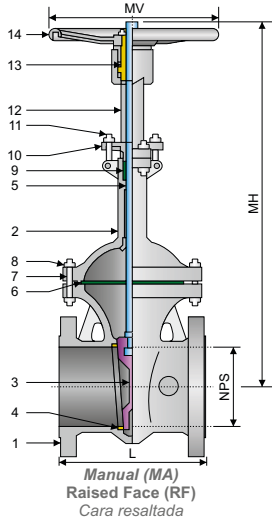
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 2500 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | RF D | MH | MV |
|--------------|-------------|-------------------|-----------|---------|------|-----|
| 2" | 50 | 451 | 454 | 235 | 450 | 250 |
| 3" | 80 | 578 | 581 | 305 | 620 | 400 |
| 4" | 100 | 673 | 683 | 356 | 760 | 500 |
| 6" | 150 | 914 | 927 | 483 | 930 | 600 |
| 8" | 200 | 1022 | 1038 | 552 | 1148 | 700 |
| 10" | 250 | 1270 | 1292 | 673 | 1255 | (3) |
| 12" | 300 | 1422 | 1445 | 762 | 1439 | (3) |

Notes / Notas:

UNITS / Unidades mm

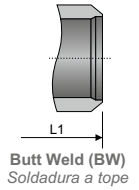
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) Gear Operator / Reductor.**



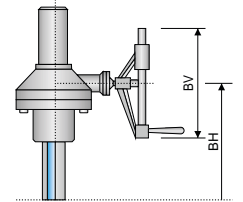
STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Unidirectional flow**
Flujo unidireccional
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seat rings**
Anillos de asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



Butt Weld (BW)
Soldadura a tope



Bevel gear (BA)
Engranaje cónico

SPECIFICATIONS / Especificaciones

BS

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | SIZES Rango |
|--------------------|-----------------------------|-------------------------------------|-----------------------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | |
| API 600 BS 1414 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|--|-------------------------------------|
| 1 | Body / Cuerpo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F304 (1) | A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F304 (1) | A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F304 (2) | A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | |
| 7 | Stud / Espárrago | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | |
| 10 | Gland Flange / Brida Prensaestopa | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | |
| 14 | Handwheel / Volante | Malleable Iron A47 - 32510 / Hierro Maleable A47 - 32510 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

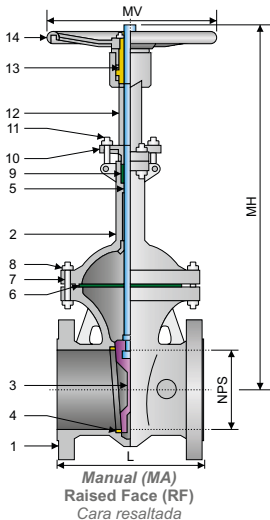
CLASS / Clase 150 (NPS 2" - 36")

| NPS (in.) | DN (mm.) | RF L | BW L1 | MA | | BA | |
|--------------|-------------|---------|----------|------|------|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 178 | 216 | 605 | 200 | - | - |
| 2 1/2" | 65 | 191 | 241 | 640 | 200 | - | - |
| 3" | 80 | 203 | 282 | 665 | 240 | - | - |
| 4" | 100 | 229 | 305 | 730 | 300 | - | - |
| 5" | 125 | 254 | 381 | 798 | 300 | - | - |
| 6" | 150 | 267 | 403 | 841 | 350 | - | - |
| 8" | 200 | 292 | 419 | 1015 | 400 | 1050 | 310 |
| 10" | 250 | 330 | 457 | 1155 | 400 | 1180 | 460 |
| 12" | 300 | 356 | 502 | 1325 | 500 | 1310 | 460 |
| 14" | 350 | 381 | 572 | 1435 | 600 | 1450 | 460 |
| 16" | 400 | 406 | 610 | 1580 | 600 | 1585 | 460 |
| 18" | 450 | 432 | 660 | 1715 | 600 | 1785 | 530 |
| 20" | 500 | 457 | 711 | 1840 | 700 | 1860 | 530 |
| 24" | 600 | 508 | 813 | 2160 | 800 | 2310 | 530 |
| 28" | 700 | 610 | 914 | 2250 | 800 | 2450 | 530 |
| 32" | 800 | 660 | 965 | 2600 | 950 | 2710 | 600 |
| 36" | 900 | 711 | 1016 | 2895 | 1000 | 3000 | 600 |

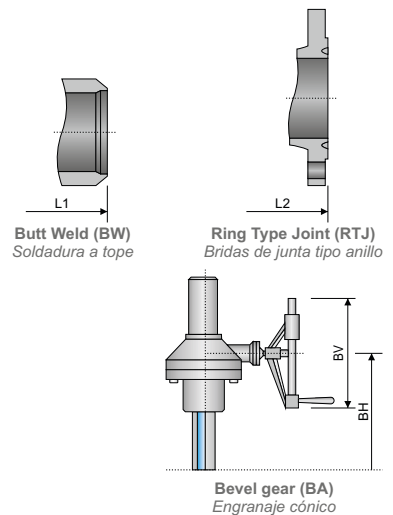
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Unidirectional flow**
Flujo unidireccional
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seat rings**
Anillos de asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| API 600 BS 1414 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F304 (1) | A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F304 (1) | A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F304 (2) | A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 7 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 9 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 10 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | S.S. 304 / <i>Acero Inoxidable 304</i> |
| 12 | Yoke / <i>Yugo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Handwheel / <i>Volante</i> | Malleable Iron A47 - 32510 / <i>Hierro Maleable A47 - 32510</i> | |

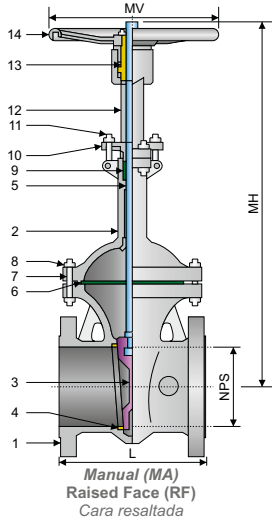
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 36")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | |
|---------------------|--------------------|--------------------------|------------------|------|------|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 216 | 232 | 610 | 240 | - | - |
| 2 1/2" | 65 | 241 | 257 | 655 | 240 | - | - |
| 3" | 80 | 283 | 298 | 695 | 280 | - | - |
| 4" | 100 | 305 | 321 | 755 | 300 | - | - |
| 5" | 125 | 381 | 397 | 825 | 350 | - | - |
| 6" | 150 | 403 | 419 | 885 | 400 | 925 | 310 |
| 8" | 200 | 419 | 435 | 1045 | 400 | 1075 | 460 |
| 10" | 250 | 457 | 473 | 1225 | 500 | 1200 | 460 |
| 12" | 300 | 502 | 518 | 1365 | 500 | 1370 | 460 |
| 14" | 350 | 762 | 778 | 1465 | 600 | 1530 | 530 |
| 16" | 400 | 838 | 854 | 1650 | 600 | 1705 | 530 |
| 18" | 450 | 914 | 930 | 1830 | 700 | 1835 | 530 |
| 20" | 500 | 991 | 1010 | 1950 | 800 | 2095 | 530 |
| 24" | 600 | 1143 | 1165 | 2350 | 800 | 2435 | 600 |
| 28" | 700 | 1346 | 1372 | 2900 | 950 | 3056 | 600 |
| 32" | 800 | 1524 | 1553 | 3250 | 950 | 3400 | 600 |
| 36" | 900 | 1727 | 1756 | 3330 | 1000 | 3530 | 600 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

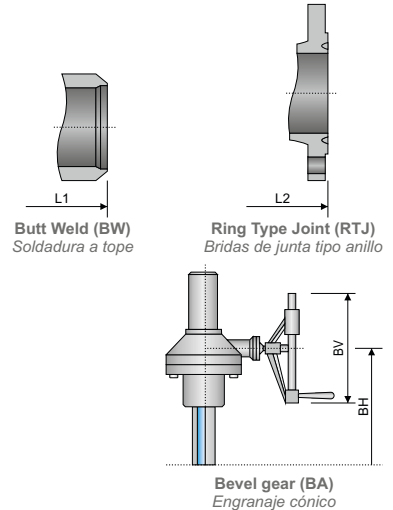
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Unidirectional flow**
Flujo unidireccional
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seat rings**
Anillos de asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | SIZES Rango |
|--------------------|-----------------------------|-------------------------------------|-----------------------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | |
| API 600 BS 1414 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|--|-------------------------------------|
| 1 | Body / Cuerpo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F304 (1) | A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F304 (1) | A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F304 (2) | A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | |
| 7 | Stud / Espárrago | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | |
| 10 | Gland Flange / Brida Prensaestopa | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | |
| 14 | Handwheel / Volante | Malleable Iron A47 - 32510 / Hierro Maleable A47 - 32510 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

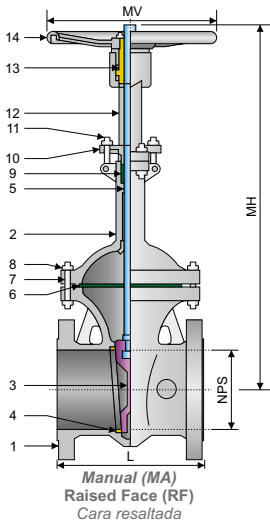
CLASS / Clase 600 (NPS 2" - 36")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | BA | |
|--------------|-------------|-------------------|-----------|------|------|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 292 | 295 | 650 | 250 | - | - |
| 2 1/2" | 65 | 300 | 333 | 705 | 300 | - | - |
| 3" | 80 | 356 | 359 | 740 | 300 | - | - |
| 4" | 100 | 432 | 435 | 830 | 350 | - | - |
| 5" | 125 | 508 | 511 | 890 | 400 | - | - |
| 6" | 150 | 559 | 562 | 950 | 450 | 975 | 460 |
| 8" | 200 | 660 | 664 | 1105 | 600 | 1175 | 460 |
| 10" | 250 | 787 | 791 | 1250 | 600 | 1259 | 460 |
| 12" | 300 | 838 | 841 | 1405 | 600 | 1460 | 530 |
| 14" | 350 | 889 | 892 | 1520 | 700 | 1585 | 530 |
| 16" | 400 | 991 | 994 | 1700 | 700 | 1760 | 530 |
| 18" | 450 | 1092 | 1095 | 1850 | 700 | 1920 | 600 |
| 20" | 500 | 1194 | 1200 | 2010 | 800 | 2065 | 600 |
| 24" | 600 | 1397 | 1407 | 2350 | 950 | 2425 | 600 |
| 28" | 700 | 1549 | 1562 | 2520 | 950 | 2705 | 600 |
| 32" | 800 | 1778 | 1794 | 2910 | 1000 | 3150 | 600 |
| 36" | 900 | 2083 | 2099 | 3035 | 1000 | 3230 | 600 |

Notes / Notas:

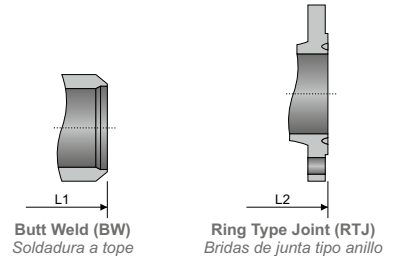
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Unidirectional flow**
Flujo unidireccional
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seat rings**
Anillos de asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | SIZES Rango |
|--------------------|-----------------------------|-------------------------------------|-----------------------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | |
| API 600 BS 1414 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|--|-------------------------------------|
| 1 | Body / Cuerpo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F304 (1) | A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F304 (1) | A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F304 (2) | A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | |
| 7 | Stud / Espárrago | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 4 | A194 - 8 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | |
| 10 | Gland Flange / Brida Prensaestopa | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 11 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | S.S. 304 / Acero Inoxidable 304 |
| 12 | Yoke / Yugo | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 13 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | |
| 14 | Handwheel / Volante | Malleable Iron A47 - 32510 / Hierro Maleable A47 - 32510 | |

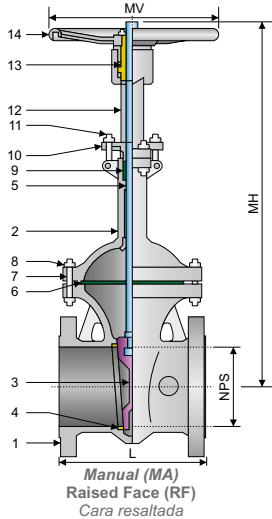
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MH | MV |
|--------------|-------------|-------------------|-----------|------|------|
| 2" | 50 | 368 | 371 | 650 | 250 |
| 3" | 80 | 381 | 384 | 900 | 300 |
| 4" | 100 | 457 | 460 | 970 | 400 |
| 6" | 150 | 610 | 613 | 1190 | 600 |
| 8" | 200 | 737 | 740 | 1414 | 650 |
| 10" | 250 | 838 | 841 | 1555 | 700 |
| 12" | 300 | 965 | 968 | 1739 | 900 |
| 14" | 350 | 1029 | 1038 | 1885 | 1000 |
| 16" | 400 | 1130 | 1140 | 1939 | (3) |
| 18" | 450 | 1219 | 1232 | 2135 | (3) |
| 20" | 500 | 1321 | 1334 | 2270 | (3) |
| 24" | 600 | 1549 | 1568 | 2530 | (3) |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) Gear Operator / Reductor.**

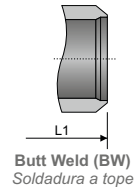
UNITS / Unidades mm



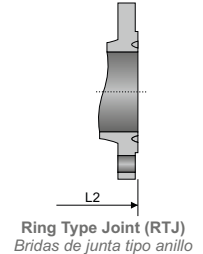
STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Unidirectional flow**
Flujo unidireccional
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seat rings**
Anillos de asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



Butt Weld (BW)
Soldadura a tope



Ring Type Joint (RTJ)
Bridas de junta tipo anillo

SPECIFICATIONS / Especificaciones

BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| API 600 BS 1414 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F304 (1) | A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F304 (1) | A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F304 (2) | A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 7 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 9 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 10 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | S.S. 304 / <i>Acero Inoxidable 304</i> |
| 12 | Yoke / <i>Yugo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Handwheel / <i>Volante</i> | Malleable Iron A47 - 32510 / <i>Hierro Maleable A47 - 32510</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

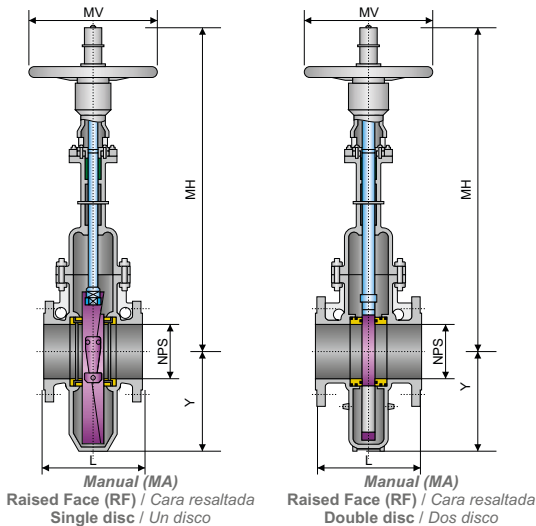
CLASS / Clase 1500 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | MH | MV |
|---------------------|--------------------|-------------------|-----------|------|------|
| 2" | 50 | 368 | 371 | 650 | 250 |
| 3" | 80 | 470 | 473 | 920 | 400 |
| 4" | 100 | 546 | 549 | 1060 | 500 |
| 6" | 150 | 705 | 711 | 1230 | 600 |
| 8" | 200 | 832 | 842 | 1448 | 700 |
| 10" | 250 | 991 | 1000 | 1555 | 900 |
| 12" | 300 | 1130 | 1146 | 1739 | 1600 |
| 14" | 350 | 1257 | 1276 | 1885 | 1600 |
| 16" | 400 | 1384 | 1407 | 1939 | (3) |
| 18" | 450 | 1537 | 1559 | 2135 | (3) |
| 20" | 500 | 1664 | 1686 | 2270 | (3) |
| 24" | 600 | 1943 | 1972 | 2530 | (3) |

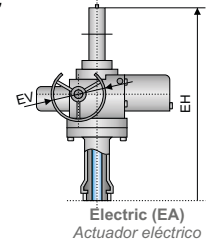
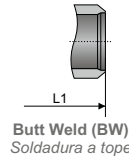
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) Gear Operator / Reductor.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged**
Extremos: bridada
- **Construction: rising stem - parallel - solid - single or double wedge**
Construcción: vástago ascendente - paralelo - sólido - una o dos cuñas
- **Material of sealing face: fluorocarbon, martensitic stainless steel, stellite alloy**
Material de sellado: fluorocarbono, acero inoxidable martensítico, aleación de estelita


SPECIFICATIONS / Especificaciones
API

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 API 6D | API 6D | ASME B16.5 | ASME B16.25 | API 6D | 2" - 64" |

PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|---|
| WCB | PTFE 13CR | -46°C -121°C | CNG, ETHYLENE, PTA CNG, etileno, PTA |
| CF8 CF8M | PCTFE HF | PCTFE HF | LNG, LN2 |

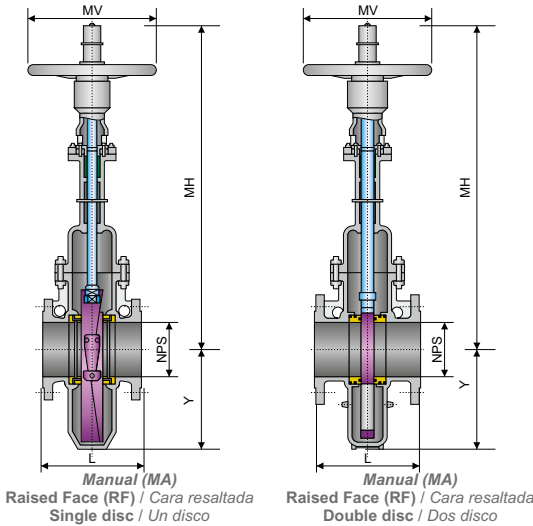
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 2" - 64")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | MA | | EA | | Y |
|---------------------|--------------------|---------|----------|------|------|------|-----|------|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 178 | 216 | 645 | 250 | - | - | 122 |
| 2 1/2" | 65 | 191 | 241 | 685 | 300 | - | - | 152 |
| 3" | 80 | 203 | 283 | 725 | 300 | - | - | 178 |
| 4" | 100 | 229 | 305 | 800 | 300 | - | - | 220 |
| 6" | 150 | 267 | 403 | 1130 | 350 | - | - | 345 |
| 8" | 200 | 292 | 419 | 1315 | 350 | - | - | 420 |
| 10" | 250 | 330 | 457 | 1610 | 400 | 1870 | 305 | 495 |
| 12" | 300 | 356 | 502 | 1710 | 450 | 1970 | 305 | 600 |
| 14" | 350 | 381 | 572 | 1980 | 450 | 2270 | 305 | 640 |
| 16" | 400 | 406 | 610 | 2120 | 500 | 2410 | 305 | 720 |
| 18" | 450 | 432 | 660 | 2435 | 500 | 2750 | 305 | 798 |
| 20" | 500 | 457 | 711 | 2595 | 600 | 2910 | 305 | 875 |
| 24" | 600 | 508 | 813 | 3075 | 800 | 3390 | 305 | 1170 |
| 28" | 700 | 610 | 914 | 3770 | 800 | 3900 | 305 | 1250 |
| 32" | 800 | 660 | 965 | 4270 | 1000 | 4405 | 305 | 1370 |
| 36" | 900 | 711 | 1016 | 4780 | 1000 | 4885 | 458 | 1500 |
| 40" | 1000 | 811 | 1116 | 5280 | 1200 | 5420 | 458 | 1670 |
| 48" | 1200 | 1015 | 1320 | - | - | 5682 | 458 | 1950 |
| 56" | 1400 | 1080 | 1385 | - | - | 6568 | 458 | 2290 |
| 64" | 1600 | 1300 | 1605 | - | - | 8588 | 458 | 2560 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

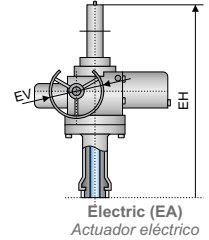
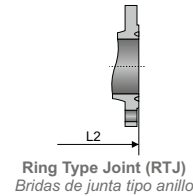
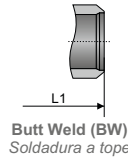
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged**
Extremos: bridada
- **Construction: rising stem - parallel - solid - single or double wedge**
Construcción: vástago ascendente - paralelo - sólido - una o dos cuñas
- **Material of sealing face: fluorocarbon, martensitic stainless steel, stellite alloy**
Material de sellado: fluorocarbono, acero inoxidable martensítico, aleación de estelita



SPECIFICATIONS / Especificaciones

API

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 API 6D | API 6D | ASME B16.5 | ASME B16.25 | API 6D | 2" - 64" |

PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|---|
| WCB | PTFE 13CR | -46°C -121°C | CNG, ETHYLENE, PTA CNG, etileno, PTA |
| CF8 CF8M | PCTFE HF | PCTFE HF | LNG, LN2 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

CLASS / Clase 300 (NPS 2" - 64")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|-----|------|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 216 | 232 | 645 | 250 | - | - | 122 |
| 2 1/2" | 65 | 241 | 257 | 685 | 300 | - | - | 152 |
| 3" | 80 | 283 | 298 | 725 | 300 | - | - | 178 |
| 4" | 100 | 305 | 321 | 800 | 300 | - | - | 220 |
| 6" | 150 | 403 | 419 | 1130 | 350 | - | - | 345 |
| 8" | 200 | 419 | 435 | 1315 | 350 | 1575 | 305 | 420 |
| 10" | 250 | 457 | 473 | 1610 | 400 | 1870 | 305 | 495 |
| 12" | 300 | 502 | 518 | 1710 | 450 | 1970 | 305 | 600 |
| 14" | 350 | 762 | 778 | 1980 | 450 | 2270 | 305 | 640 |
| 16" | 400 | 838 | 854 | 2120 | 550 | 2410 | 305 | 720 |
| 18" | 450 | 914 | 930 | 2435 | 700 | 2750 | 305 | 798 |
| 20" | 500 | 991 | 1010 | 2595 | 800 | 2910 | 305 | 875 |
| 24" | 600 | 1143 | 1165 | 3075 | 1000 | 3390 | 305 | 1170 |
| 28" | 700 | 1346 | 1372 | 3770 | 1000 | 3900 | 305 | 1250 |
| 32" | 800 | 1524 | 1553 | 4270 | 1200 | 4405 | 305 | 1370 |
| 36" | 900 | 1727 | 1756 | 4780 | 1200 | 4885 | 458 | 1500 |
| 40" | 1000 | 2083 | - | 5280 | 1200 | 5420 | 458 | 1670 |
| 48" | 1200 | 2286 | - | - | - | 5682 | 458 | 1950 |
| 56" | 1400 | 2489 | - | - | - | 6568 | 458 | 2290 |
| 64" | 1600 | 2692 | - | - | - | 8588 | 458 | 2560 |

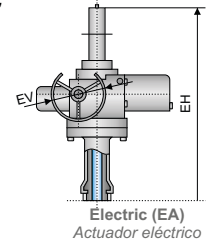
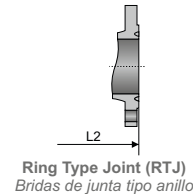
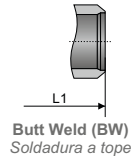
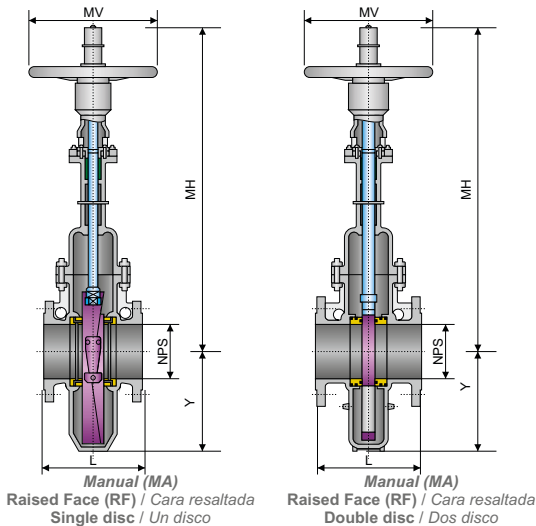
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

STRUCTURE FEATURES
Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged**
Extremos: bridada
- **Construction: rising stem - parallel - solid - single or double wedge**
Construcción: vástago ascendente - paralelo - sólido - una o dos cuñas
- **Material of sealing face: fluorocarbon, martensitic stainless steel, stellite alloy**
Material de sellado: fluorocarbono, acero inoxidable martensítico, aleación de estelita


SPECIFICATIONS / Especificaciones
API

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 API 6D | API 6D | ASME B16.5 | ASME B16.25 | API 6D | 2" - 48" |

PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|---|
| WCB | PTFE 13CR | -46°C -121°C | CNG, ETHYLENE, PTA CNG, etileno, PTA |
| CF8 CF8M | PCTFE HF | PCTFE HF | LNG, LN2 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 400 (NPS 2" - 48")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|-----|------|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 292 | 295 | 669 | 300 | - | - | 135 |
| 2 1/2" | 65 | 330 | 333 | 735 | 300 | - | - | 167 |
| 3" | 80 | 356 | 359 | 820 | 350 | - | - | 196 |
| 4" | 100 | 406 | 410 | 935 | 350 | - | - | 242 |
| 6" | 150 | 495 | 498 | 1176 | 400 | - | - | 380 |
| 8" | 200 | 597 | 600 | 1370 | 500 | 1660 | 305 | 462 |
| 10" | 250 | 673 | 676 | 1679 | 500 | 1968 | 305 | 545 |
| 12" | 300 | 762 | 765 | 1785 | 600 | 2073 | 305 | 660 |
| 14" | 350 | 826 | 829 | 2067 | 600 | 2381 | 305 | 705 |
| 16" | 400 | 902 | 905 | 2215 | 700 | 2528 | 305 | 792 |
| 18" | 450 | 978 | 981 | 2545 | 800 | 2905 | 458 | 878 |
| 20" | 500 | 1054 | 1060 | 2712 | 1000 | 3072 | 458 | 963 |
| 24" | 600 | 1232 | 1241 | 3192 | 1000 | 3616 | - | 1287 |
| 28" | 700 | 1397 | 1410 | 3887 | 1000 | 4172 | 458 | 1375 |
| 32" | 800 | 1651 | 1667 | 4387 | 1200 | 4663 | 458 | 1507 |
| 36" | 900 | 1880 | 1895 | - | - | 5143 | 458 | 1650 |
| 40" | 1000 | 2028 | 2028 | - | - | 5700 | 458 | 1880 |
| 48" | 1200 | 2464 | 2464 | - | - | 6770 | 458 | 2256 |

Notes / Notas:

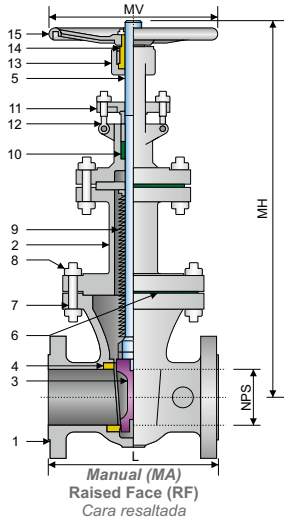
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 2BS015

FULL BORE / Paso total

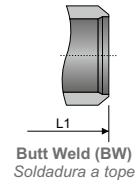
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | SIZES Rango |
|-----------------------|-----------------------------|---------------------------|-----------------------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | |
| API 600 ASME B1414 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|--|---|
| 1 | Body / Cuerpo | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito flexible 304 | |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 8 |
| 9 | Bellow / Fuelle | Stainless Steel 304 / Acero Inoxidable 304 | S.S. 304 - 316 / Acero Inoxidable 304 - 316 |
| 10 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | |
| 11 | Gland Flange / Brida Prensaestopa | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | Stainless Steel 304 / Acero Inoxidable 304 |
| 13 | Yoke / Yugo | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 14 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | |
| 15 | Handwheel / Volante | Malleable Iron A47 - 32510 / Hierro Maleable A47 - 32510 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

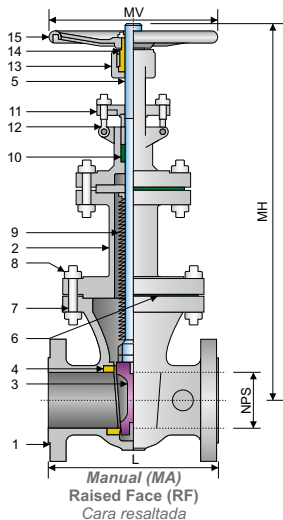
CLASS / Clase 150 (NPS 2" - 14")

| NPS (in.) | DN (mm.) | RF L | BW L1 | MH | MV | RF W / P (Kg.) |
|--------------|-------------|---------|----------|------|-----|-------------------|
| 2" | 50 | 178 | 216 | 480 | 220 | 30 |
| 2 1/2" | 65 | 190 | 241 | 500 | 260 | 42 |
| 3" | 80 | 203 | 283 | 580 | 280 | 55 |
| 4" | 100 | 229 | 305 | 735 | 300 | 70 |
| 5" | 125 | 254 | 381 | 790 | 340 | 100 |
| 6" | 150 | 267 | 403 | 950 | 400 | 140 |
| 8" | 200 | 292 | 419 | 1160 | 450 | 180 |
| 10" | 250 | 330 | 457 | 1460 | 450 | 250 |
| 12" | 300 | 356 | 503 | 1780 | 500 | 350 |
| 14" | 350 | 381 | 572 | 2160 | 500 | 450 |

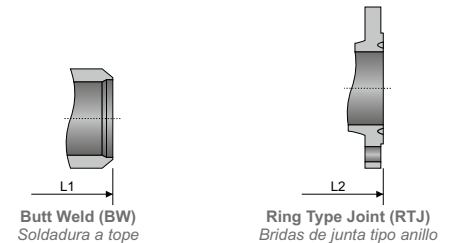
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| API 600 ASME B1414 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito flexible 304</i> | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 9 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | |
| 13 | Yoke / <i>Yugo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 14 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 - 32510 / <i>Hierro Maleable A47 - 32510</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 14")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MH | MV | RF W / P (Kg.) |
|--------------|-------------|-------------------|-----------|------|-----|-------------------|
| 2" | 50 | 216 | 232 | 490 | 220 | 38 |
| 2 1/2" | 65 | 241 | 257 | 550 | 260 | 53 |
| 3" | 80 | 283 | 298 | 600 | 280 | 70 |
| 4" | 100 | 305 | 321 | 750 | 300 | 88 |
| 5" | 125 | 381 | 397 | 890 | 340 | 125 |
| 6" | 150 | 403 | 419 | 990 | 400 | 175 |
| 8" | 200 | 419 | 435 | 1300 | 450 | 225 |
| 10" | 250 | 457 | 473 | 1530 | 450 | 310 |
| 12" | 300 | 502 | 518 | 1840 | 500 | 440 |
| 14" | 350 | 762 | 778 | 2230 | 550 | 750 |

Notes / Notas:

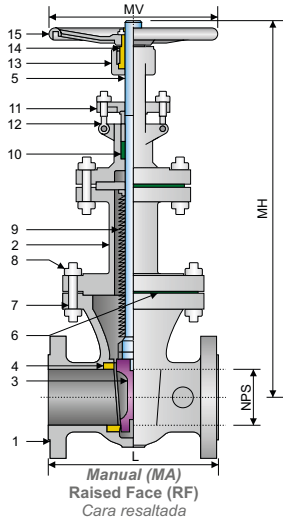
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 2BS060

FULL BORE / Paso total

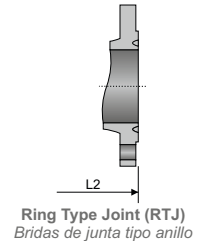
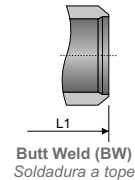
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | SIZES Rango |
|-----------------------|-----------------------------|---------------------------|-----------------------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | |
| API 600 ASME B1414 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | STAINLESS STEEL Acero Inoxidable |
|----|-----------------------------------|--|---|
| 1 | Body / Cuerpo | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / Cuña | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / Vástago | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / Junta | Flexible Graphite 304 / Grafito flexible 304 | |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B8 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 8 |
| 9 | Bellow / Fuelle | Stainless Steel 304 / Acero Inoxidable 304 | S.S. 304 - 316 / Acero Inoxidable 304 - 316 |
| 10 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | |
| 11 | Gland Flange / Brida Prensaestopa | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolt / Tornillo Ojo | Alloy Steel 1045 / Acero Aleado 1045 | Stainless Steel 304 / Acero Inoxidable 304 |
| 13 | Yoke / Yugo | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 14 | Stem Nut / Tuerca Vástago | Aluminum Bronze C95500 / Bronce Aluminio C95500 | |
| 15 | Handwheel / Volante | Malleable Iron A47 - 32510 / Hierro Maleable A47 - 32510 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

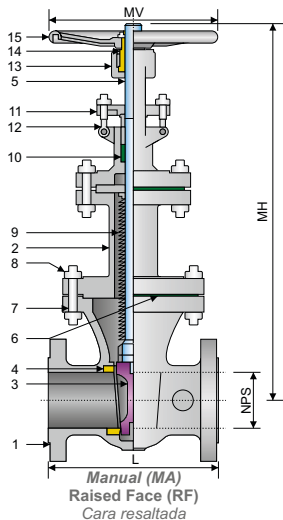
CLASS / Clase 600 (NPS 2" - 14")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MH | MV | RF W / P (Kg.) |
|--------------|-------------|-------------------|-----------|------|-----|-------------------|
| 2" | 50 | 292 | 295 | 530 | 220 | 45 |
| 2 1/2" | 65 | 330 | - | 590 | 260 | 66 |
| 3" | 80 | 356 | 359 | 680 | 280 | 90 |
| 4" | 100 | 432 | 435 | 870 | 300 | 160 |
| 5" | 125 | 508 | - | 980 | 340 | 255 |
| 6" | 150 | 559 | 562 | 1120 | 400 | 320 |
| 8" | 200 | 660 | 663 | 1450 | 450 | 420 |
| 10" | 250 | 787 | 791 | 1680 | 450 | 710 |
| 12" | 300 | 838 | 841 | 2050 | 500 | 940 |
| 14" | 350 | 889 | 892 | 2450 | 550 | 1165 |

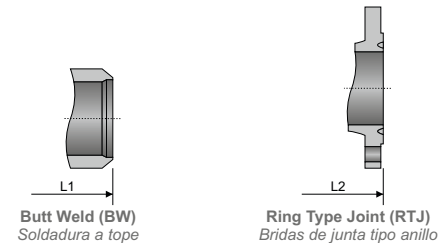
Notes / Notas:

UNITS / Unidades mm

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| API 600 ASME B1414 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito flexible 304</i> | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 9 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | |
| 13 | Yoke / <i>Yugo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 14 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 - 32510 / <i>Hierro Maleable A47 - 32510</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 14")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MH | MV |
|--------------|-------------|-------------------|-----------|------|------|
| 2" | 50 | 368 | 371 | 650 | 250 |
| 3" | 80 | 381 | 384 | 900 | 300 |
| 4" | 100 | 457 | 460 | 970 | 400 |
| 6" | 150 | 610 | 613 | 1190 | 600 |
| 8" | 200 | 737 | 740 | 1414 | 650 |
| 10" | 250 | 838 | 841 | 1555 | 700 |
| 12" | 300 | 965 | 968 | 1739 | 900 |
| 14" | 350 | 1029 | 1038 | 1885 | 1000 |

Notes / Notas:

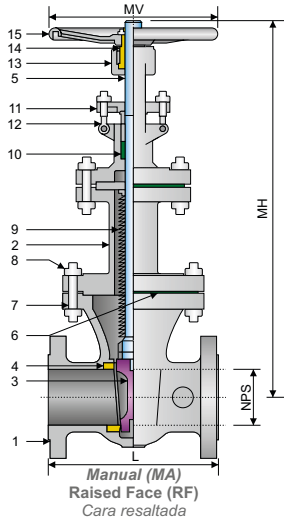
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 2BS150

FULL BORE / Paso total

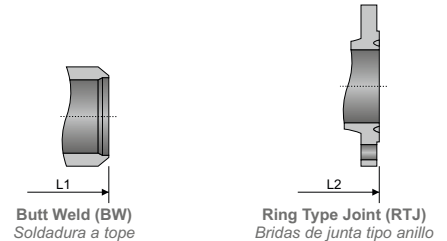
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| API 600 ASME B1414 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|---|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Wedge / <i>Cuña</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (2) | A182 - F304 / A182 - F316 (2) |
| 6 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito flexible 304</i> | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 9 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolt / <i>Tornillo Ojo</i> | Alloy Steel 1045 / <i>Acero Aleado 1045</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> |
| 13 | Yoke / <i>Yugo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 14 | Stem Nut / <i>Tuerca Vástago</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 - 32510 / <i>Hierro Maleable A47 - 32510</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

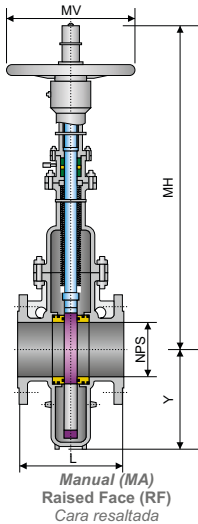
CLASS / Clase 1500 (NPS 2" - 14")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MH | MV |
|---------------------|--------------------|--------------------------|------------------|------|------|
| 2" | 50 | 368 | 371 | 650 | 250 |
| 3" | 80 | 381 | 473 | 900 | 300 |
| 4" | 100 | 457 | 549 | 970 | 400 |
| 6" | 150 | 610 | 711 | 1190 | 600 |
| 8" | 200 | 737 | 842 | 1414 | 650 |
| 10" | 250 | 838 | 1000 | 1555 | 700 |
| 12" | 300 | 965 | 1146 | 1739 | 900 |
| 14" | 350 | 1029 | 1276 | 1885 | 1000 |

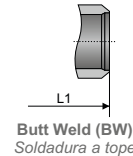
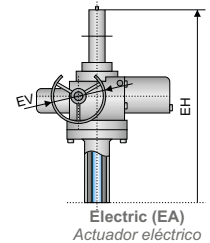
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged, butt weld**
Extremos: bridada, soldadura a tope
- **Construction: rising stem and non rising - parallel - solid - single wedge**
Construcción: vástago ascendente y no ascendente - paralelo - sólido - una cuña
- **Material of sealing face: fluorocarbon**
Material de sellado: fluorocarbono
- **Through conduit**
Conducto continuo
- **Bolted Bonnet**
Bonete atornillado
- **Flexible both seat and disc**
Asiento y disco flexible
- **Automatically released**
Liberación automática
- **Fire durable and anti static**
Resistencia al fuego y antiestático


 Butt Weld (BW)
Soldadura a tope

 Electric (EA)
Actuador eléctrico

SPECIFICATIONS / Especificaciones

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK / <i>Prueba y Verificación</i> | | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|---|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | NORMAL | HELIUM LEAK TESTING <i>Prueba de fuga con helio</i> | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 | ASME B16.25 | API 6D ASME B16.34 | ASME BPVC-V | 2" - 24" |

API / ASME
PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|--|
| WCB | PTFE RPTFE | -29°C - 121°C | WATER, HIGH INFILTRATIVE HAVE RADIOACTIVITY MEDIUM, PETROLEUM AND GAS WITH H₂S AND CO₂ <i>Agua, radioactividad media por alta infiltración, petróleo y gas con H₂S y CO₂</i> |

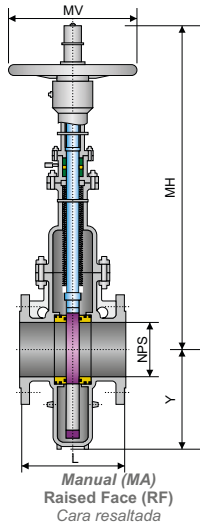
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF L | BW L1 | MA | | EA | | Y |
|--------------|-------------|---------|----------|------|-----|------|-----|------|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 178 | 216 | 630 | 250 | - | - | 122 |
| 2 1/2" | 65 | 191 | 241 | 675 | 300 | - | - | 152 |
| 3" | 80 | 203 | 283 | 730 | 300 | - | - | 178 |
| 4" | 100 | 229 | 305 | 780 | 300 | - | - | 220 |
| 6" | 150 | 267 | 403 | 1100 | 350 | - | - | 345 |
| 8" | 200 | 292 | 419 | 1495 | 350 | - | - | 420 |
| 10" | 250 | 330 | 457 | 1936 | 400 | 2196 | 305 | 495 |
| 12" | 300 | 356 | 502 | 2280 | 450 | 2540 | 305 | 600 |
| 14" | 350 | 381 | 572 | 2645 | 450 | 2935 | 305 | 640 |
| 16" | 400 | 406 | 610 | 2931 | 500 | 3221 | 305 | 720 |
| 18" | 450 | 432 | 660 | 3421 | 500 | 3736 | 305 | 798 |
| 20" | 500 | 457 | 711 | 3745 | 600 | 4060 | 305 | 875 |
| 24" | 600 | 508 | 813 | 4365 | 800 | 4680 | 305 | 1030 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

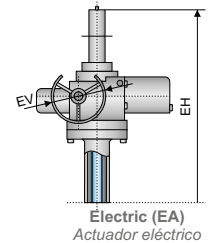
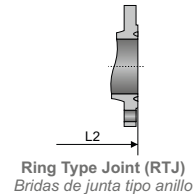
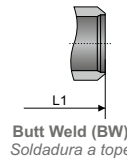
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged, butt weld**
Extremos: bridada, soldadura a tope
- **Construction: rising stem and non rising - parallel - solid - single wedge**
Construcción: vástago ascendente y no ascendente - paralelo - sólido - una cuña
- **Material of sealing face: fluorocarbon**
Material de sellado: fluorocarbono
- **Through conduit**
Conducto continuo
- **Bolted Bonnet**
Bonete atornillado
- **Flexible both seat and disc**
Asiento y disco flexible
- **Automatically released**
Liberación automática
- **Fire durable and anti static**
Resistencia al fuego y antiestático



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK / <i>Prueba y Verificación</i> | | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|---|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | NORMAL | HELIUM LEAK TESTING <i>Prueba de fuga con helio</i> | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 | ASME B16.25 | API 6D ASME B16.34 | ASME BPVC-V | 2" - 24" |

PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|--|
| WCB | PTFE RPTFE | -29°C - 121°C | WATER, HIGH INFILTRATIVE HAVE RADIOACTIVITY MEDIUM, PETROLEUM AND GAS WITH H₂S AND CO₂ <i>Agua, radioactividad media por alta infiltración, petróleo y gas con H₂S y CO₂</i> |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

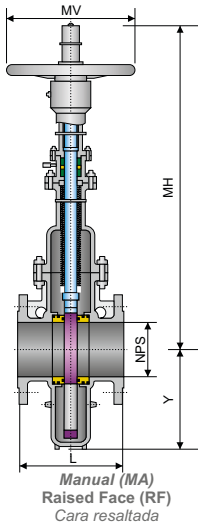
CLASS / Clase 300 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|-----|------|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 216 | 232 | 630 | 250 | - | - | 122 |
| 2 1/2" | 65 | 241 | 257 | 675 | 300 | - | - | 152 |
| 3" | 80 | 283 | 298 | 730 | 300 | - | - | 178 |
| 4" | 100 | 305 | 321 | 780 | 300 | - | - | 220 |
| 6" | 150 | 403 | 419 | 1100 | 350 | - | - | 345 |
| 8" | 200 | 419 | 435 | 1495 | 350 | 1973 | 305 | 420 |
| 10" | 250 | 457 | 473 | 1936 | 400 | 2196 | 305 | 495 |
| 12" | 300 | 502 | 518 | 2280 | 450 | 2540 | 305 | 600 |
| 14" | 350 | 762 | 778 | 2645 | 450 | 2935 | 305 | 640 |
| 16" | 400 | 838 | 854 | 2931 | 550 | 3221 | 305 | 720 |
| 18" | 450 | 914 | 930 | 3421 | 700 | 3736 | 305 | 798 |
| 20" | 500 | 991 | 1010 | 3745 | 800 | 4060 | 305 | 875 |
| 24" | 600 | 1143 | 1165 | 4365 | 1000 | 4680 | 305 | 1030 |

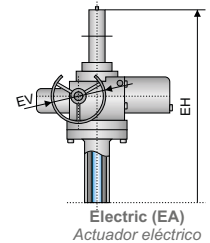
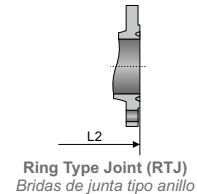
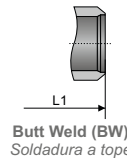
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged, butt weld**
Extremos: bridada, soldadura a tope
- **Construction: rising stem and non rising - parallel - solid - single wedge**
Construcción: vástago ascendente y no ascendente - paralelo - sólido - una cuña
- **Material of sealing face: fluorocarbon**
Material de sellado: fluorocarbono
- **Through conduit**
Conducto continuo
- **Bolted Bonnet**
Bonete atornillado
- **Flexible both seat and disc**
Asiento y disco flexible
- **Automatically released**
Liberación automática
- **Fire durable and anti static**
Resistencia al fuego y antiestático


SPECIFICATIONS / Especificaciones

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK / <i>Prueba y Verificación</i> | | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|---|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | NORMAL | HELIUM LEAK TESTING <i>Prueba de fuga con helio</i> | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 | ASME B16.25 | API 6D ASME B16.34 | ASME BPVC-V | 2" - 24" |

API / ASME
PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|--|
| WCB | PTFE RPTFE | -29°C - 121°C | WATER, HIGH INFILTRATIVE HAVE RADIOACTIVITY MEDIUM, PETROLEUM AND GAS WITH H₂S AND CO₂ <i>Agua, radioactividad media por alta infiltración, petróleo y gas con H₂S y CO₂</i> |

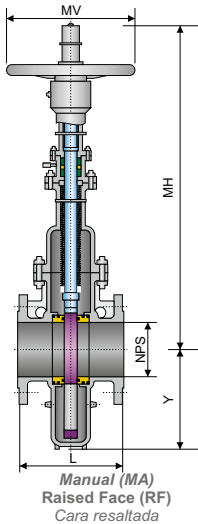
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 400 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|-----|-----|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 292 | 295 | 654 | 250 | 878 | 305 | 135 |
| 2 1/2" | 65 | 330 | 333 | 702 | 300 | 925 | 305 | 145 |
| 3" | 80 | 356 | 359 | 760 | 300 | 1032 | 305 | 180 |
| 4" | 100 | 406 | 410 | 815 | 300 | 1087 | 305 | 210 |
| 6" | 150 | 495 | 498 | 1146 | 350 | 1406 | 305 | 296 |
| 8" | 200 | 597 | 600 | 1550 | 350 | 1840 | 305 | 378 |
| 10" | 250 | 673 | 676 | 2005 | 400 | 2294 | 305 | 461 |
| 12" | 300 | 762 | 765 | 2355 | 450 | 2643 | 305 | 530 |
| 14" | 350 | 826 | 829 | 2732 | 450 | 3046 | 305 | 620 |
| 16" | 400 | 902 | 905 | 3026 | 700 | 3339 | 305 | 692 |
| 18" | 450 | 978 | 981 | 3531 | 800 | 3891 | 458 | 135 |
| 20" | 500 | 1054 | 1060 | 3862 | 1000 | 4222 | 458 | 145 |
| 24" | 600 | 1232 | 1241 | 4365 | 1000 | 4906 | 458 | 180 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

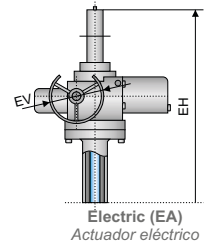
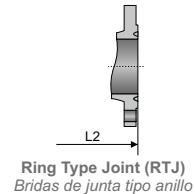
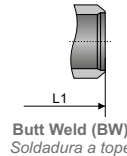
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Operated: handwheel, explosion proof electric**
Accionamiento: manual, eléctrico antiexplosión
- **Connection end: flanged, butt weld**
Extremos: bridada, soldadura a tope
- **Construction: rising stem and non rising - parallel - solid - single wedge**
Construcción: vástago ascendente y no ascendente - paralelo - sólido - una cuña
- **Material of sealing face: fluorocarbon**
Material de sellado: fluorocarbono
- **Through conduit**
Conducto continuo
- **Bolted Bonnet**
Bonete atornillado
- **Flexible both seat and disc**
Asiento y disco flexible
- **Automatically released**
Liberación automática
- **Fire durable and anti static**
Resistencia al fuego y antiestático



SPECIFICATIONS / Especificaciones

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK / <i>Prueba y Verificación</i> | | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|---|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | NORMAL | HELIUM LEAK TESTING <i>Prueba de fuga con helio</i> | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 | ASME B16.25 | API 6D ASME B16.34 | ASME BPVC-V | 2" - 16" |

API / ASME

PROCESSING / Tratamiento

| SHELL <i>Revestimiento</i> | SURFACE <i>Superficie</i> | SERVICE TEMPERATURE <i>Temperatura de servicio</i> | SERVICE MEDIUM <i>Servicio</i> |
|-------------------------------|------------------------------|---|--|
| WCB | PTFE RPTFE | -29°C - 121°C | WATER, HIGH INFILTRATIVE HAVE RADIOACTIVITY MEDIUM, PETROLEUM AND GAS WITH H₂S AND CO₂ <i>Agua, radioactividad media por alta infiltración, petróleo y gas con H₂S y CO₂</i> |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

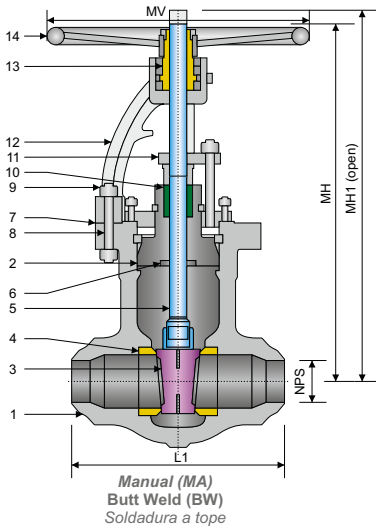
CLASS / Clase 600 (NPS 2" - 16")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|-----|-----|
| | | | | MH | MV | EH | EV | |
| 2" | 50 | 292 | 295 | 629 | 300 | 878 | 305 | 135 |
| 2 1/2" | 65 | 330 | 333 | 696 | 350 | 961 | 305 | 145 |
| 3" | 80 | 356 | 359 | 733 | 350 | 1020 | 305 | 180 |
| 4" | 100 | 432 | 435 | 952 | 400 | 1075 | 305 | 210 |
| 6" | 150 | 559 | 562 | 1122 | 500 | 1435 | 305 | 296 |
| 8" | 200 | 660 | 664 | 1299 | 600 | 1840 | 305 | 378 |
| 10" | 250 | 787 | 791 | 1565 | 650 | 2319 | 458 | 461 |
| 12" | 300 | 838 | 841 | 1921 | 700 | 2668 | 458 | 530 |
| 14" | 350 | 889 | 892 | 2528 | 800 | 3092 | 458 | 620 |
| 16" | 400 | 991 | 994 | 2585 | 1000 | 3426 | 458 | 692 |

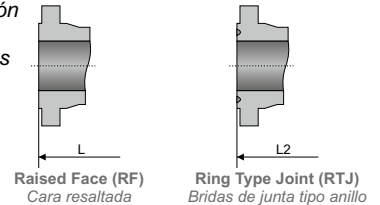
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Round body and pressure seal bonnet**
Cuerpo redondeado y bonete con sello de presión
- **Integral backseat - Welded in seats**
Asiento trasero integral - Soldada en los asientos


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|-------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | |
|----|--|---|------------------------------------|---------------------|
| | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Wedge / <i>Cuña</i> | A216 - WCB + HF (1) | A217 - WC6 + HF (1) | A217 - WC9 + HF (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 + HF (1) | A182 - F6A + HF (1) | A182 - F6A + HF (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (3) | A182 - F6A (3) | A182 - F6A (3) |
| 6 | Backseat / <i>Asiento trasero</i> | Stellite® (2) | | |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B16 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 4 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A105 | A182 - F316 | A182 - F316 |
| 12 | Yoke / <i>Yugo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | B148 - 9A | | |
| 14 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | | |

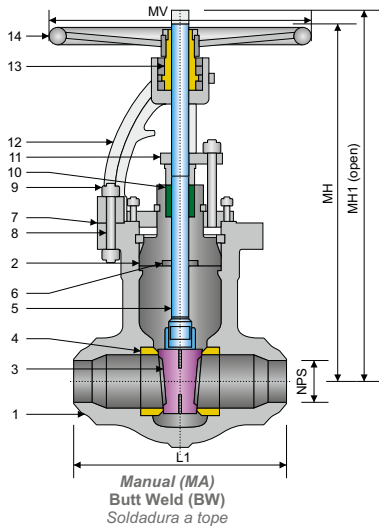
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | RTJ L2 | MH | MH1 | MV |
|---------------------|--------------------|---------|----------|-----------|------|------|-----|
| 2" | 50 | 368 | 216 | 371 | 500 | 550 | 250 |
| 3" | 80 | 381 | 305 | 384 | 550 | 620 | 300 |
| 4" | 100 | 457 | 356 | 460 | 590 | 690 | 400 |
| 6" | 150 | 610 | 508 | 613 | 840 | 990 | 500 |
| 8" | 200 | 737 | 660 | 740 | 970 | 1170 | (4) |
| 10" | 250 | 838 | 787 | 841 | 1250 | 1500 | (4) |
| 12" | 300 | 965 | 914 | 968 | 1350 | 1650 | (4) |
| 14" | 350 | 1029 | 991 | 1038 | 1580 | 1930 | (4) |
| 16" | 400 | 1130 | 1092 | 1140 | 1900 | 2300 | (4) |
| 18" | 450 | 1219 | 1143 | 1232 | 2050 | 2600 | (4) |
| 20" | 500 | 1321 | 1245 | 1334 | 2200 | 2700 | (4) |
| 24" | 600 | 1549 | 1397 | 1568 | 2500 | 3100 | (4) |

 Notes / *Notas:*

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(3) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(4) Gear Operator / Reductor.**

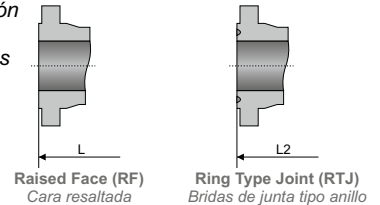
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Round body and pressure seal bonnet**
Cuerpo redondeado y bonete con sello de presión
- **Integral backseat - Welded in seats**
Asiento trasero integral - Soldada en los asientos



SPECIFICATIONS / Especificaciones

ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|--|-------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.25 | | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | | ALLOY STEEL <i>Acero aleado</i> | |
|----|--|---|--|------------------------------------|---------------------|
| | | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 3 | Wedge / <i>Cuña</i> | A216 - WCB + HF (1) | | A217 - WC6 + HF (1) | A217 - WC9 + HF (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 + HF (1) | | A182 - F6A + HF (1) | A182 - F6A + HF (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (3) | | A182 - F6A (3) | A182 - F6A (3) |
| 6 | Backseat / <i>Asiento trasero</i> | Stellite® (2) | | | |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | | A193 - B16 | A193 - B16 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | | A194 - 4 | A194 - 4 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A105 | | A182 - F316 | A182 - F316 |
| 12 | Yoke / <i>Yugo</i> | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | B148 - 9A | | | |
| 14 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

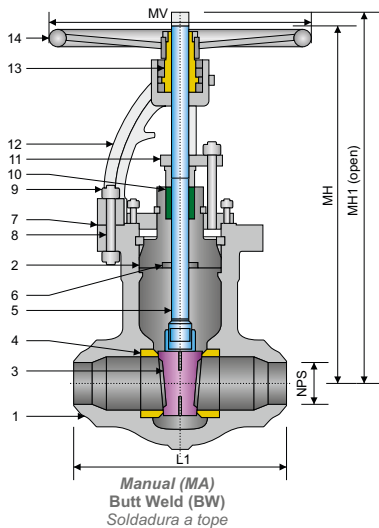
CLASS / Clase 1500 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | RTJ L2 | MH | MH1 | MV |
|---------------------|--------------------|---------|----------|-----------|------|------|-----|
| 2" | 50 | 368 | 216 | 371 | 500 | 550 | 250 |
| 3" | 80 | 470 | 305 | 473 | 550 | 630 | 400 |
| 4" | 100 | 546 | 406 | 549 | 590 | 690 | 600 |
| 6" | 150 | 705 | 559 | 711 | 840 | 990 | (4) |
| 8" | 200 | 832 | 711 | 842 | 970 | 1170 | (4) |
| 10" | 250 | 991 | 864 | 1000 | 1250 | 1500 | (4) |
| 12" | 300 | 1130 | 991 | 1146 | 1350 | 1700 | (4) |
| 14" | 350 | 1257 | 1067 | 1276 | 1580 | 2130 | (4) |
| 16" | 400 | 1384 | 1194 | 1407 | 1900 | 2400 | (4) |
| 18" | 450 | 1537 | 1346 | 1559 | 2050 | 2650 | (4) |
| 20" | 500 | 1664 | 1473 | 1686 | 2200 | 2900 | (4) |
| 24" | 600 | 1943 | 1943 | 1972 | 2500 | 3200 | (4) |

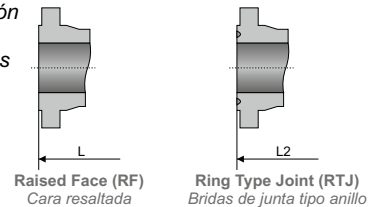
Notes / Notas:

UNITS / Unidades mm

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(3) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(4) Gear Operator / Reductor.**


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Renewable seat rings**
Anillos de asiento renovables
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Round body and pressure seal bonnet**
Cuerpo redondeado y bonete con sello de presión
- **Integral backseat - Welded in seats**
Asiento trasero integral - Soldada en los asientos


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|-------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | | |
| API 600 ASME B16.34 | ASME B16.10 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | |
|----|--|---|------------------------------------|---------------------|
| | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Wedge / <i>Cuña</i> | A216 - WCB + HF (1) | A217 - WC6 + HF (1) | A217 - WC9 + HF (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 + HF (1) | A182 - F6A + HF (1) | A182 - F6A + HF (1) |
| 5 | Stem / <i>Vástago</i> | A182 - F6A (3) | A182 - F6A (3) | A182 - F6A (3) |
| 6 | Backseat / <i>Asiento trasero</i> | Stellite® (2) | | |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B16 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 4 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A105 | A182 - F316 | A182 - F316 |
| 12 | Yoke / <i>Yugo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | B148 - 9A | | |
| 14 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | | |

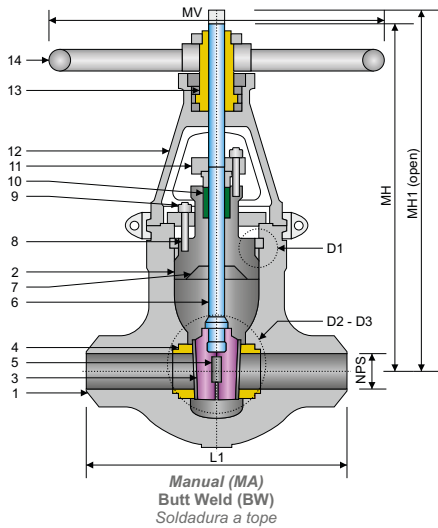
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 2500 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | RTJ L2 | MH | MH1 | MV |
|---------------------|--------------------|---------|----------|-----------|------|------|-----|
| 2" | 50 | 451 | 279 | 454 | 500 | 550 | 300 |
| 3" | 80 | 578 | 368 | 584 | 550 | 630 | 500 |
| 4" | 100 | 673 | 457 | 683 | 600 | 690 | 700 |
| 6" | 150 | 914 | 610 | 927 | 860 | 1010 | (4) |
| 8" | 200 | 1022 | 762 | 1038 | 1000 | 1200 | (4) |
| 10" | 250 | 1270 | 914 | 1292 | 1330 | 1580 | (4) |
| 12" | 300 | 1422 | 1041 | 1445 | 1480 | 1780 | (4) |
| 14" | 350 | - | 1118 | - | 1860 | 2210 | (4) |
| 16" | 400 | - | 1245 | - | 2090 | 2490 | (4) |
| 18" | 450 | - | 1397 | - | 2350 | 2800 | (4) |
| 20" | 500 | - | 1524 | - | 2650 | 3150 | (4) |
| 24" | 600 | - | 1676 | - | 2800 | 3400 | (4) |

Notes / Notas:

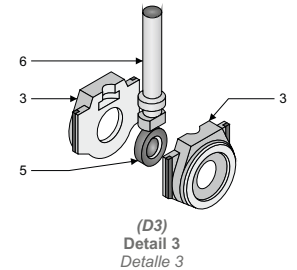
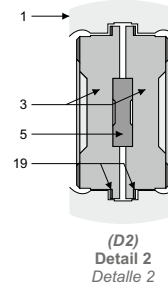
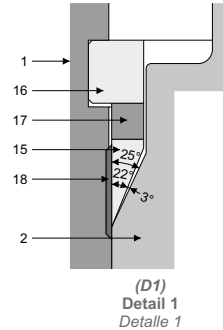
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(3) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(4) Gear Operator / Reductor.**

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 3 Split Wedge / Cuña partida
- 5 Spacer / Separador
- 6 Stem / Vástago

- 15 Pressure Seal Gasket / Junta de alta presión
- 16 Segmental Ring / Anillo segmentado
- 17 Spacer Ring / Anillo separador
- 18 Stainless Steel Inlay / Inlay de acero inoxidable
- 19 Hardfaced tongues / Lengüetas duras



SPECIFICATIONS / Especificaciones

ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero Aleado</i> | | |
|----|---|---|------------------------------------|------------------------|------------------------|
| | | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Wedge / <i>Cuña</i> | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 4 | Seat Rings / <i>Asientos</i> | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 5 | Spacer / <i>Separador</i> | A182 - F6 | | | |
| 6 | Stem / <i>Vástago</i> | A182 - F6 | | | |
| 7 | Backseat / <i>Asiento trasero</i> | S.S. / <i>Acero Inoxidable</i> | | | |
| 8 | Stud / <i>Espárrago</i> | Stellite® | | | |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | Alloy Steel / <i>Acero Aleado</i> | | | |
| 10 | Packing / <i>Empaquetadura</i> | A194 - 2H | | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | Graphite / <i>Grafito</i> | | | |
| 12 | Yoke / <i>Yugo</i> | A105 | | | |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | A216 - WCB | | | |
| 14 | Handwheel / <i>Volante</i> | B148 - 952 | | | |
| 15 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Carbon Steel / <i>Acero al Carbono</i> | | | |
| 16 | Segmental Ring / <i>Anillo segmentado</i> | A182 - F316 | | | |
| | | AISI 420 | | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

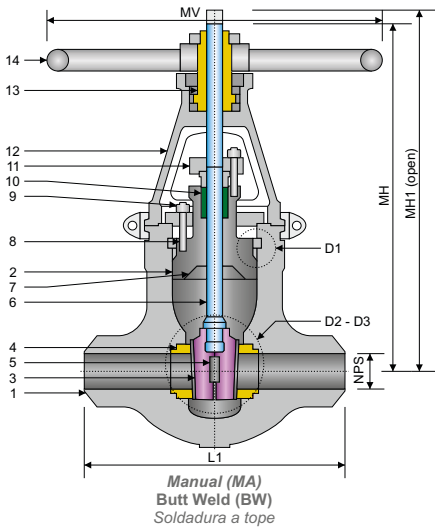
CLASS / Clase 900 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 508 | 725 | 880 | 500 | 205 |
| 8" | 200 | 660 | 905 | 1100 | 600 | 360 |
| 10" | 250 | 787 | 1015 | 1265 | 700 | 660 |
| 12" | 300 | 914 | 1170 | 1470 | 800 | 920 |
| 14" | 350 | 991 | 1260 | 1590 | 800 | 1225 |
| 16" | 400 | 1092 | 1470 | 1840 | 1000 | 1415 |
| 18" | 450 | 1219 | 1550 | 1965 | 1000 | 1890 |
| 20" | 500 | 1321 | 1810 | 2250 | 1000 | 2785 |
| 24" | 600 | 1549 | 1935 | 2490 | 1000 | 4275 |

Notes / *Notas:*

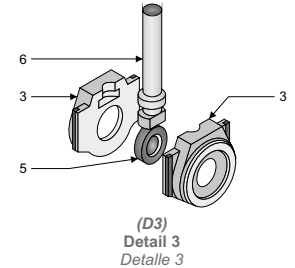
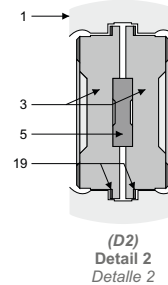
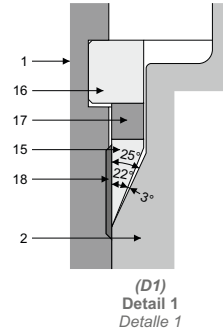
- Approximate weights / *Pesos aproximados.*
- Larger diameters on request / *Diámetros superiores bajo petición.*
- Other material on request / *Otros materiales bajo petición.*
- (*) Pressure Seal Gasket / *Junta de alta presión.*

UNITS / *Unidades mm*



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 3 Split Wedge / Cuña partida
- 5 Spacer / Separador
- 6 Stem / Vástago

- 15 Pressure Seal Gasket / Junta de alta presión
- 16 Segmental Ring / Anillo segmentado
- 17 Spacer Ring / Anillo separador
- 18 Stainless Steel Inlay / Inlay de acero inoxidable
- 19 Hardfaced tongues / Lengüetas duras


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero Aleado</i> | | |
|----|---|---|------------------------------------|------------------------|------------------------|
| | | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Wedge / <i>Cuña</i> | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 4 | Seat Rings / <i>Asientos</i> | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 5 | Spacer / <i>Separador</i> | A182 - F6 | | | |
| 6 | Stem / <i>Vástago</i> | A182 - F6 | | | |
| 7 | Backseat / <i>Asiento trasero</i> | S.S. / <i>Acero Inoxidable</i> | | | |
| 8 | Stud / <i>Espárrago</i> | Stellite® | | | |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | Alloy Steel / <i>Acero Aleado</i> | | | |
| 10 | Packing / <i>Empaquetadura</i> | A194 - 2H | | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | Graphite / <i>Grafito</i> | | | |
| 12 | Yoke / <i>Yugo</i> | A105 | | | |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | A216 - WCB | | | |
| 14 | Handwheel / <i>Volante</i> | B148 - 952 | | | |
| 15 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Carbon Steel / <i>Acero al Carbono</i> | | | |
| 16 | Segmental Ring / <i>Anillo segmentado</i> | A182 - F316 | | | |
| | | AISI 420 | | | |

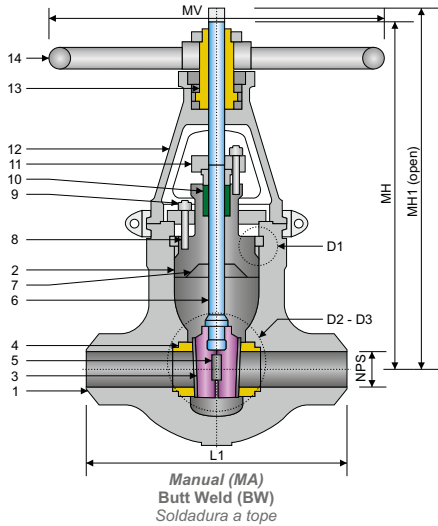
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 559 | 690 | 840 | 600 | 245 |
| 8" | 200 | 711 | 880 | 1065 | 700 | 430 |
| 10" | 250 | 864 | 1030 | 1260 | 800 | 720 |
| 12" | 300 | 991 | 1240 | 1515 | 800 | 1100 |
| 14" | 350 | 1067 | 1350 | 1650 | 800 | 1580 |
| 16" | 400 | 1194 | 1520 | 1860 | 1000 | 1980 |
| 18" | 450 | 1346 | 1610 | 1995 | 1000 | 2650 |
| 20" | 500 | 1473 | 1700 | 2130 | 1000 | 3580 |
| 24" | 600 | 1943 | 2005 | 2530 | 1000 | 5840 |

Notes / Notas:

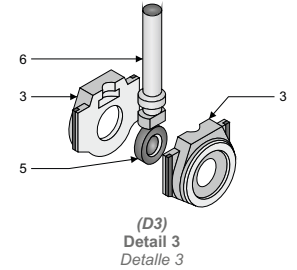
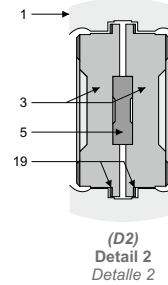
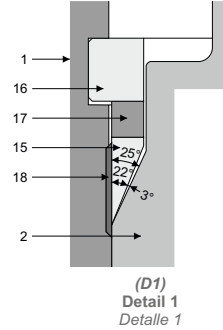
- Approximate weights / *Pesos aproximados.*
- Larger diameters on request / *Diámetros superiores bajo petición.*
- Other material on request / *Otros materiales bajo petición.*
- (*) Pressure Seal Gasket / *Junta de alta presión.*

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 3 Split Wedge / Cuña partida
- 5 Spacer / Separador
- 6 Stem / Vástago

- 15 Pressure Seal Gasket / Junta de alta presión
- 16 Segmental Ring / Anillo segmentado
- 17 Spacer Ring / Anillo separador
- 18 Stainless Steel Inlay / Inlay de acero inoxidable
- 19 Hardfaced tongues / Lengüetas duras



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|-----------------------------|---------------------------------------|----------------|
| | | BUTT WELD Soldada a tope | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | | |
|----|------------------------------------|----------------------------------|-----------------------------|------------------------|------------------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Wedge / Cuña | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 4 | Seat Rings / Asientos | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 5 | Spacer / Separador | A182 - F6 | | | |
| 6 | Stem / Vástago | A182 - F6 | | | |
| 7 | Backseat / Asiento trasero | Stellite® | | | |
| 8 | Stud / Espárrago | Alloy Steel / Acero Aleado | | | |
| 9 | Stud Nut / Tuerca Espárrago | A194 - 2H | | | |
| 10 | Packing / Empaquetadura | Graphite / Grafito | | | |
| 11 | Gland Flange / Brida Prensaestopa | A105 | | | |
| 12 | Yoke / Yugo | A216 - WCB | | | |
| 13 | Stem Nut / Tuerca Vástago | B148 - 952 | | | |
| 14 | Handwheel / Volante | Carbon Steel / Acero al Carbono | | | |
| 15 | P.S. Gasket / Junta de A.P. (*) | A182 - F316 | | | |
| 16 | Segmental Ring / Anillo segmentado | AISI 420 | | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

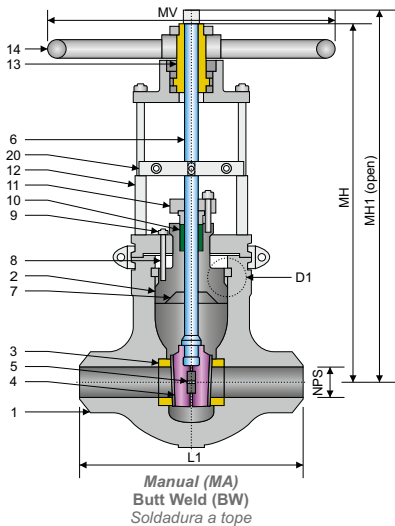
CLASS / Clase 2500 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 610 | 765 | 890 | 700 | 365 |
| 8" | 200 | 762 | 910 | 1075 | 700 | 635 |
| 10" | 250 | 914 | 1090 | 1395 | 800 | 1090 |
| 12" | 300 | 1041 | 1240 | 1475 | 1000 | 1610 |
| 14" | 350 | 1118 | 1265 | 1515 | 1000 | 2060 |
| 16" | 400 | 1245 | 1480 | 1780 | 1000 | 2965 |
| 18" | 450 | 1397 | 1610 | 1940 | 1000 | 3800 |
| 20" | 500 | 1575 | 1705 | 2070 | 1000 | 5120 |
| 24" | 600 | 1676 | 1850 | 2280 | 1000 | 6300 |

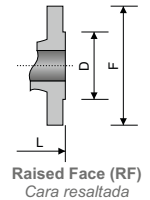
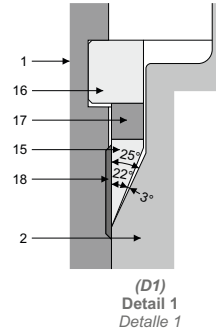
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 **Body / Cuerpo**
- 2 **Bonnet / Bonete**
- 15 **Pressure Seal Gasket / Junta de alta presión**
- 16 **Segmental Ring / Anillo segmentado**
- 17 **Spacer Ring / Anillo separador**
- 18 **Stainless Steel Inlay / Inlay de acero inoxidable**


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | | ALLOY STEEL <i>Acero Aleado</i> | |
|----|---|---|--------------------------------|------------------------------------|--------------------------------|
| | | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Seat Rings / <i>Asientos</i> | A105 + <i>Stellite</i> ® | A182 - F11 + <i>Stellite</i> ® | A182 - F22 + <i>Stellite</i> ® | A182 - F91 + <i>Stellite</i> ® |
| 4 | Disk / <i>Disco</i> | A216 - WCB + <i>Stellite</i> ® | A217 - WC6 + <i>Stellite</i> ® | A217 - WC9 + <i>Stellite</i> ® | A217 - WC9 + <i>Stellite</i> ® |
| 5 | Disk Spring / <i>Resorte de disco</i> | Alloy Steel / <i>Acero Aleado</i> | | Inconel | |
| 6 | Stem / <i>Vástago</i> | A182 - F6 | | | S.S. / <i>Acero Inoxidable</i> |
| 7 | Backseat / <i>Asiento trasero</i> | <i>Stellite</i> ® | | | |
| 8 | Stud / <i>Espárrago</i> | Alloy Steel / <i>Acero Aleado</i> | | | |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | | | |
| 10 | Packing / <i>Empaquetadura</i> | Graphite / <i>Grafito</i> | | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A105 | | | |
| 12 | Column / <i>Columna</i> | A105 | | | |
| 13 | Stem Nut / <i>Tuerca Vástago</i> | B148 - 952 | | | |
| 14 | Handwheel / <i>Volante</i> | Carbon Steel / <i>Acero al Carbono</i> | | | |
| 15 | P.S. Gasket / <i>Junta de A.P. (*)</i> | A182 - F316 | | | |
| 16 | Segmental Ring / <i>Anillo segmentado</i> | AISI 420 | | | |
| 20 | Stem Stop / <i>Parada Vástago</i> | A105 | | | |

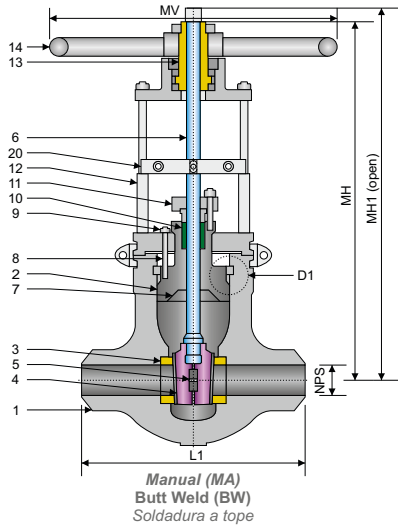
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 6" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF | | | | | BW | | MH | MH1 | MV |
|---------------------|--------------------|------|-----|-----|-------------|------|-------------|------|------|------|----|
| | | L | D | F | W / P (Kg.) | L1 | W / P (Kg.) | | | | |
| 6" | 150 | 559 | 356 | 216 | 250 | 457 | 178 | 760 | 910 | 450 | |
| 8" | 200 | 660 | 419 | 270 | 420 | 584 | 310 | 995 | 1185 | 500 | |
| 10" | 250 | 787 | 508 | 324 | 715 | 711 | 535 | 1185 | 1430 | 600 | |
| 12" | 300 | 838 | 559 | 381 | 970 | 813 | 760 | 1305 | 1610 | 700 | |
| 14" | 350 | 889 | 603 | 413 | 1340 | 889 | 1090 | 1435 | 1710 | 800 | |
| 16" | 400 | 991 | 686 | 470 | 1725 | 991 | 1370 | 1570 | 1960 | 800 | |
| 18" | 450 | 1092 | 743 | 534 | 2135 | 1092 | 1705 | 1895 | 2310 | 1000 | |
| 20" | 500 | 1194 | 813 | 584 | 2885 | 1194 | 2350 | 2035 | 2510 | 1000 | |
| 24" | 600 | 1397 | 940 | 692 | 3835 | 1397 | 3085 | 2295 | 2965 | 1000 | |

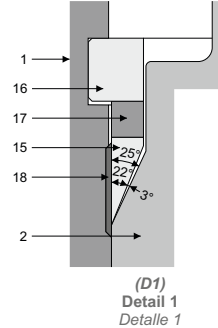
Notes / Notas:

- Approximate weights / *Pesos aproximados.*
- Larger diameters on request / *Diámetros superiores bajo petición.*
- Other material on request / *Otros materiales bajo petición.*
- (*) Pressure Seal Gasket / *Junta de alta presión.*

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 15 Pressure Seal Gasket / Junta de alta presión
- 16 Segmental Ring / Anillo segmentado
- 17 Spacer Ring / Anillo separador
- 18 Stainless Steel Inlay / Inlay de acero inoxidable



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|-----------------------------|---------------------------------------|----------------|
| | | BUTT WELD Soldada a tope | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | | |
|----|------------------------------------|----------------------------------|---------------------------------|------------------------|-------------------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Seat Rings / Asientos | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 4 | Disk / Disco | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 5 | Disk Spring / Resorte de disco | Alloy Steel / Acero Aleado | Inconel | | |
| 6 | Stem / Vástago | | A182 - F6 | | S.S. / Acero Inoxidable |
| 7 | Backseat / Asiento trasero | | Stellite® | | |
| 8 | Stud / Espárrago | | Alloy Steel / Acero Aleado | | |
| 9 | Stud Nut / Tuerca Espárrago | | A194 - 2H | | |
| 10 | Packing / Empaquetadura | | Graphite / Grafito | | |
| 11 | Gland Flange / Brida Prensaestopa | | A105 | | |
| 12 | Column / Columna | | A105 | | |
| 13 | Stem Nut / Tuerca Vástago | | B148 - 952 | | |
| 14 | Handwheel / Volante | | Carbon Steel / Acero al Carbono | | |
| 15 | P.S. Gasket / Junta de A.P. (*) | | A182 - F316 | | |
| 16 | Segmental Ring / Anillo segmentado | | AISI 420 | | |
| 20 | Stem Stop / Parada Vástago | | A105 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

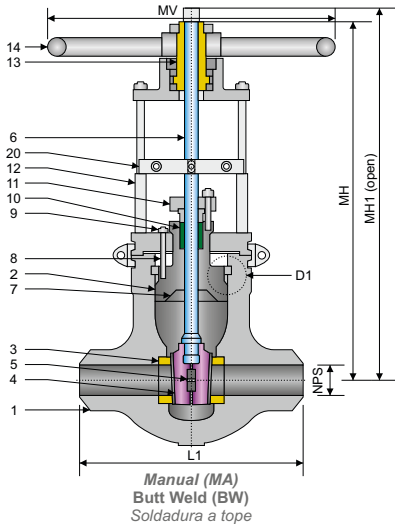
CLASS / Clase 900 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 508 | 810 | 965 | 500 | 220 |
| 8" | 200 | 660 | 1010 | 1205 | 600 | 385 |
| 10" | 250 | 787 | 1135 | 1395 | 700 | 705 |
| 12" | 300 | 914 | 1305 | 1605 | 800 | 975 |
| 14" | 350 | 991 | 1410 | 1740 | 800 | 1290 |
| 16" | 400 | 1092 | 1640 | 2010 | 1000 | 1495 |
| 18" | 450 | 1194 | 1730 | 2145 | 1000 | 1965 |
| 20" | 500 | 1219 | 1990 | 2430 | 1000 | 2885 |
| 24" | 600 | 1549 | 2170 | 2725 | 1000 | 4450 |

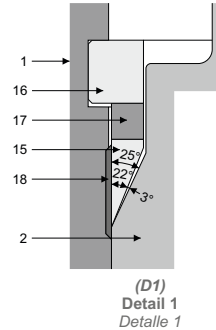
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 15 Pressure Seal Gasket / Junta de alta presión
- 16 Segmental Ring / Anillo segmentado
- 17 Spacer Ring / Anillo separador
- 18 Stainless Steel Inlay / Inlay de acero inoxidable


SPECIFICATIONS / Especificaciones
ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|-----------------------------|---------------------------------------|----------------|
| | | BUTT WELD Soldada a tope | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | | |
|----|------------------------------------|----------------------------------|---------------------------------|------------------------|-------------------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Seat Rings / Asientos | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 4 | Disk / Disco | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 5 | Disk Spring / Resorte de disco | Alloy Steel / Acero Aleado | Inconel | | |
| 6 | Stem / Vástago | | A182 - F6 | | S.S. / Acero Inoxidable |
| 7 | Backseat / Asiento trasero | | Stellite® | | |
| 8 | Stud / Espárrago | | Alloy Steel / Acero Aleado | | |
| 9 | Stud Nut / Tuerca Espárrago | | A194 - 2H | | |
| 10 | Packing / Empaquetadura | | Graphite / Grafito | | |
| 11 | Gland Flange / Brida Prensaestopa | | A105 | | |
| 12 | Column / Columna | | A105 | | |
| 13 | Stem Nut / Tuerca Vástago | | B148 - 952 | | |
| 14 | Handwheel / Volante | | Carbon Steel / Acero al Carbono | | |
| 15 | P.S. Gasket / Junta de A.P. (*) | | A182 - F316 | | |
| 16 | Segmental Ring / Anillo segmentado | | AISI 420 | | |
| 20 | Stem Stop / Parada Vástago | | A105 | | |

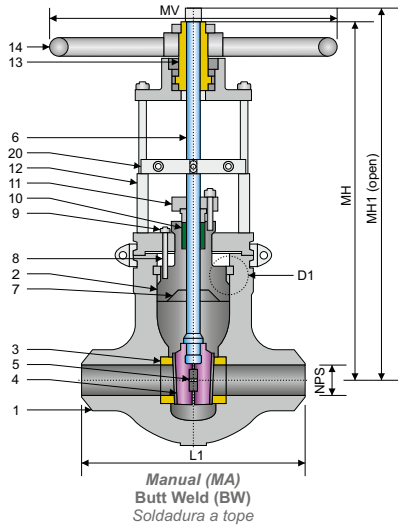
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 559 | 770 | 920 | 600 | 260 |
| 8" | 200 | 711 | 980 | 1165 | 700 | 455 |
| 10" | 250 | 864 | 1150 | 1380 | 800 | 760 |
| 12" | 300 | 991 | 1380 | 1655 | 800 | 1250 |
| 14" | 350 | 1067 | 1495 | 1795 | 800 | 1660 |
| 16" | 400 | 1194 | 1690 | 2030 | 1000 | 2080 |
| 18" | 450 | 1346 | 1795 | 2180 | 1000 | 2780 |
| 20" | 500 | 1473 | 1890 | 2320 | 1000 | 3755 |
| 24" | 600 | 1943 | 2785 | 3310 | 1000 | 5980 |

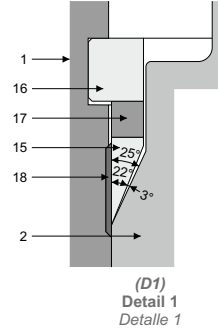
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 **Body / Cuerpo**
- 2 **Bonnet / Bonete**
- 15 **Pressure Seal Gasket / Junta de alta presión**
- 16 **Segmental Ring / Anillo segmentado**
- 17 **Spacer Ring / Anillo separador**
- 18 **Stainless Steel Inlay / Inlay de acero inoxidable**



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|-----------------------------|---------------------------------------|----------------|
| | | BUTT WELD Soldada a tope | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | API 598 MSS SP 61 | 6" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | | |
|----|------------------------------------|----------------------------------|---------------------------------|------------------------|-------------------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - C12A |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 | A217 - WC9 |
| 3 | Seat Rings / Asientos | A105 + Stellite® | A182 - F11 + Stellite® | A182 - F22 + Stellite® | A182 - F91 + Stellite® |
| 4 | Disk / Disco | A216 - WCB + Stellite® | A217 - WC6 + Stellite® | A217 - WC9 + Stellite® | A217 - WC9 + Stellite® |
| 5 | Disk Spring / Resorte de disco | Alloy Steel / Acero Aleado | Inconel | | |
| 6 | Stem / Vástago | | A182 - F6 | | S.S. / Acero Inoxidable |
| 7 | Backseat / Asiento trasero | | Stellite® | | |
| 8 | Stud / Espárrago | | Alloy Steel / Acero Aleado | | |
| 9 | Stud Nut / Tuerca Espárrago | | A194 - 2H | | |
| 10 | Packing / Empaquetadura | | Graphite / Grafito | | |
| 11 | Gland Flange / Brida Prensaestopa | | A105 | | |
| 12 | Column / Columna | | A105 | | |
| 13 | Stem Nut / Tuerca Vástago | | B148 - 952 | | |
| 14 | Handwheel / Volante | | Carbon Steel / Acero al Carbono | | |
| 15 | P.S. Gasket / Junta de A.P. (*) | | A182 - F316 | | |
| 16 | Segmental Ring / Anillo segmentado | | AISI 420 | | |
| 20 | Stem Stop / Parada Vástago | | A105 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

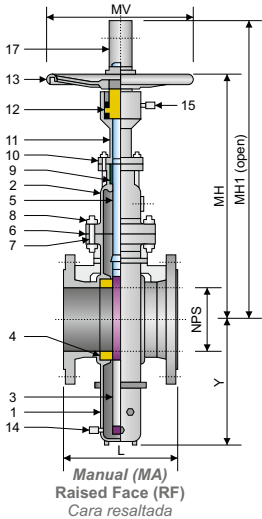
CLASS / Clase 2500 (NPS 6" - 24")

| NPS (in.) | DN (mm.) | BW L1 | MH | MH1 | MV | W / P (Kg.) |
|--------------|-------------|----------|------|------|------|----------------|
| 6" | 150 | 610 | 855 | 980 | 700 | 390 |
| 8" | 200 | 762 | 1015 | 1180 | 700 | 685 |
| 10" | 250 | 914 | 1220 | 1425 | 800 | 1165 |
| 12" | 300 | 1041 | 1385 | 1620 | 1000 | 1705 |
| 14" | 350 | 1118 | 1410 | 1660 | 1000 | 2190 |
| 16" | 400 | 1245 | 1650 | 1950 | 1000 | 3140 |
| 18" | 450 | 1397 | 1790 | 2120 | 1000 | 3985 |
| 20" | 500 | 1575 | 1890 | 2255 | 1000 | 5320 |
| 24" | 600 | 1676 | 2050 | 2420 | 1000 | 6010 |

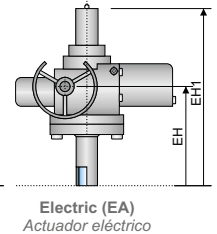
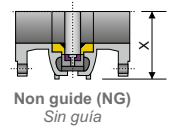
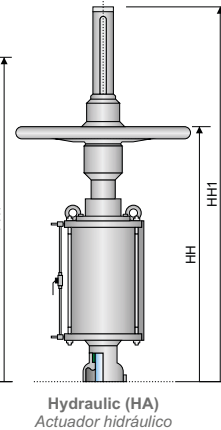
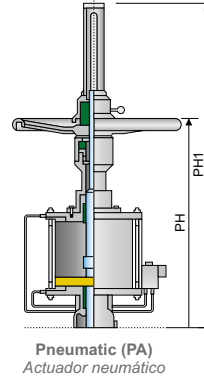
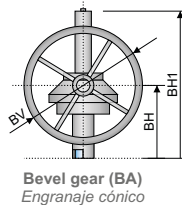
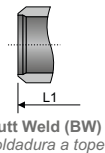
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm


REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 64" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

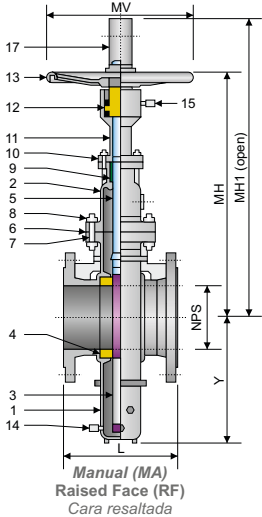
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 2" - 64")

| NPS (in.) | DN (mm.) | RF L | BW L1 | MA | | | BA | | | PA | | HA | | EA | | X (NG) | Y (G) |
|--------------|-------------|---------|----------|------|------|------|------|------|-----|------|------|------|------|------|------|-----------|----------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 178 | 216 | 360 | 475 | 250 | - | - | - | - | - | - | - | 572 | 690 | 80 | 122 |
| 2 1/2" | 65 | 191 | 241 | 425 | 535 | 300 | - | - | - | - | - | - | - | 637 | 747 | 90 | 152 |
| 3" | 80 | 203 | 283 | 460 | 600 | 300 | - | - | - | 820 | 1075 | 820 | 1075 | 672 | 812 | 100 | 178 |
| 4" | 100 | 229 | 305 | 535 | 700 | 350 | - | - | - | 945 | 1240 | 945 | 1240 | 795 | 960 | 110 | 220 |
| 6" | 150 | 267 | 403 | 685 | 910 | 350 | - | - | - | 1065 | 1400 | 1065 | 1400 | 945 | 1170 | 145 | 345 |
| 8" | 200 | 292 | 419 | 815 | 1095 | 350 | 900 | 1235 | 310 | 1210 | 1595 | 1210 | 1595 | 1075 | 1355 | 170 | 420 |
| 10" | 250 | 330 | 457 | 965 | 1370 | 450 | 1050 | 1510 | 310 | 1370 | 1800 | 1370 | 1800 | 1095 | 1630 | 210 | 495 |
| 12" | 300 | 356 | 502 | 1100 | 1470 | 500 | 1185 | 1610 | 310 | 1590 | 2090 | 1590 | 2090 | 1230 | 1730 | 240 | 600 |
| 14" | 350 | 381 | 572 | 1250 | 1730 | 600 | 1345 | 1890 | 460 | 1845 | 2420 | 1845 | 2420 | 1417 | 2020 | 265 | 640 |
| 16" | 400 | 406 | 610 | 1375 | 1870 | 650 | 1470 | 2030 | 460 | 1995 | 2615 | 1995 | 2615 | 1532 | 2160 | 290 | 720 |
| 18" | 450 | 432 | 660 | 1485 | 2185 | 700 | 1625 | 2415 | 460 | 2205 | 2895 | 2205 | 2895 | 1651 | 2500 | 325 | 798 |
| 20" | 500 | 457 | 711 | 1575 | 2335 | 800 | 1715 | 2565 | 460 | 2405 | 3160 | 2405 | 3160 | 1741 | 2650 | 360 | 875 |
| 24" | 600 | 508 | 813 | 1995 | 2815 | 1000 | 2135 | 3045 | 460 | 2955 | 3885 | 2955 | 3885 | 2161 | 3130 | 425 | 1030 |
| 28" | 700 | 610 | 914 | - | - | - | 2490 | 3552 | 460 | 3090 | 4065 | 3090 | 4065 | 2470 | 3630 | 455 | 1180 |
| 32" | 800 | 711 | 965 | - | - | - | 2846 | 4060 | 460 | - | - | - | - | 2933 | 4135 | 505 | 1380 |
| 36" | 900 | 711 | 1016 | - | - | - | 3202 | 4567 | 600 | - | - | - | - | 3260 | 4605 | 545 | 1500 |
| 40" | 1000 | 811 | 1116 | - | - | - | 3560 | 5075 | 600 | - | - | - | - | 3645 | 5140 | 610 | 1640 |
| 48" | 1200 | 1015 | 1320 | - | - | - | 4270 | 6090 | 600 | - | - | - | - | 3712 | 5392 | 740 | 1820 |
| 56" | 1400 | 1080 | 1385 | - | - | - | 4985 | 7105 | 600 | - | - | - | - | 4318 | 6278 | 854 | 2160 |
| 64" | 1600 | 1300 | 1605 | - | - | - | 5695 | 8120 | 600 | - | - | - | - | 6368 | 8288 | 995 | 2425 |

Notes / Notas:

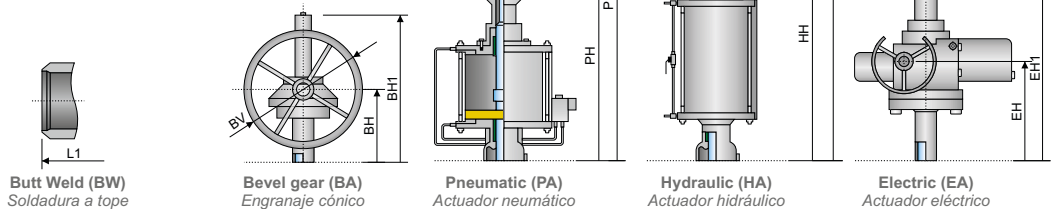
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**

UNITS / Unidades mm



REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 64" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

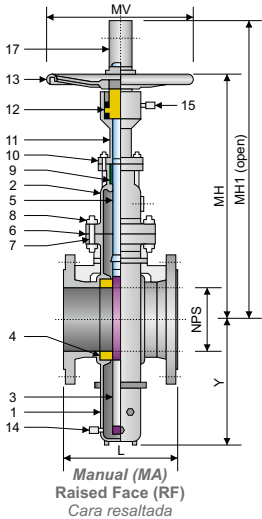
CLASS / Clase 300 (NPS 2" - 64")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | MA | | | BA | | | PA | | HA | | EA | | X <i>(NG)</i> | Y <i>(G)</i> |
|---------------------|--------------------|--------------------------|------|------|------|------|------|-----|------|------|------|------|------|------|------------------|-----------------|
| | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 216 | 360 | 475 | 250 | - | - | - | - | - | - | - | 572 | 690 | 80 | 122 |
| 2 1/2" | 65 | 241 | 425 | 535 | 300 | - | - | - | - | - | - | - | 637 | 747 | 90 | 152 |
| 3" | 80 | 283 | 460 | 600 | 300 | - | - | - | 820 | 1075 | 820 | 1075 | 720 | 860 | 100 | 178 |
| 4" | 100 | 305 | 535 | 700 | 350 | - | - | - | 945 | 1240 | 945 | 1240 | 795 | 960 | 110 | 220 |
| 6" | 150 | 403 | 685 | 910 | 350 | - | - | - | 1065 | 1400 | 1065 | 1400 | 945 | 1170 | 145 | 345 |
| 8" | 200 | 419 | 815 | 1095 | 350 | 900 | 1235 | 310 | 1210 | 1595 | 1210 | 1595 | 1075 | 1355 | 170 | 420 |
| 10" | 250 | 457 | 965 | 1370 | 450 | 1050 | 1510 | 310 | 1370 | 1800 | 1370 | 1800 | 1095 | 1630 | 210 | 495 |
| 12" | 300 | 502 | 1100 | 1470 | 500 | 1185 | 1610 | 310 | 1590 | 2090 | 1590 | 2090 | 1257 | 1760 | 240 | 600 |
| 14" | 350 | 762 | 1250 | 1730 | 600 | 1345 | 1890 | 460 | 1845 | 2420 | 1845 | 2420 | 1417 | 2020 | 265 | 640 |
| 16" | 400 | 838 | 1375 | 1870 | 650 | 1470 | 2030 | 460 | 1995 | 2615 | 1995 | 2615 | 1541 | 2185 | 290 | 720 |
| 18" | 450 | 914 | 1485 | 2185 | 700 | 1625 | 2415 | 460 | 2205 | 2895 | 2205 | 2895 | 1651 | 2500 | 325 | 798 |
| 20" | 500 | 991 | 1575 | 2335 | 800 | 1715 | 2565 | 460 | 2405 | 3160 | 2405 | 3160 | 1757 | 2695 | 360 | 875 |
| 24" | 600 | 1143 | 1995 | 2815 | 1000 | 2135 | 3045 | 460 | 2955 | 3885 | 2955 | 3885 | 2177 | 3175 | 425 | 1030 |
| 28" | 700 | 1346 | - | - | - | 2490 | 3552 | 460 | 3090 | 4065 | 3090 | 4065 | 2606 | 3670 | 455 | 1180 |
| 32" | 800 | 1524 | - | - | - | 2846 | 4060 | 460 | - | - | - | - | 2933 | 4136 | 505 | 1380 |
| 36" | 900 | 1727 | - | - | - | 3202 | 4567 | 600 | - | - | - | - | 3317 | 4673 | 545 | 1500 |
| 40" | 1000 | 2083 | - | - | - | 3560 | 5075 | 600 | - | - | - | - | 3645 | 5140 | 610 | 1640 |
| 48" | 1200 | 2286 | - | - | - | 4270 | 6090 | 600 | - | - | - | - | 3712 | 5392 | 740 | 1820 |
| 56" | 1400 | 2489 | - | - | - | 4985 | 7105 | 600 | - | - | - | - | 4318 | 6278 | 854 | 2160 |
| 64" | 1600 | 2693 | - | - | - | 5695 | 8120 | 600 | - | - | - | - | 6368 | 8288 | 995 | 2425 |

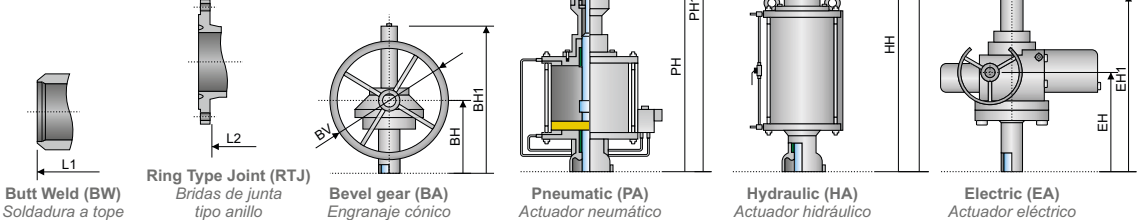
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**

UNITS / Unidades mm


REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

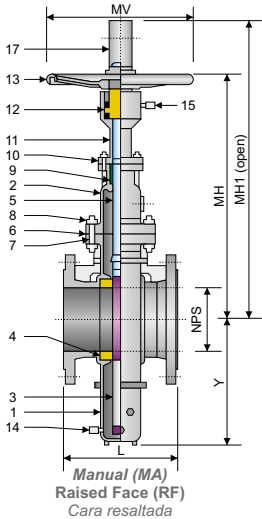
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 400 (NPS 2" - 48")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | PA | | HA | | EA | | X (NG) | Y (G) |
|--------------|-------------|-------------------|-----------|------|------|------|------|------|-----|------|------|------|------|------|------|-----------|----------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 292 | 295 | 378 | 499 | 250 | - | - | - | - | - | - | - | 601 | 723 | 88 | 135 |
| 2 1/2" | 65 | 330 | 333 | 446 | 562 | 300 | - | - | - | - | - | - | - | 670 | 785 | 100 | 145 |
| 3" | 80 | 356 | 359 | 483 | 630 | 300 | - | - | - | 861 | 1130 | 861 | 1130 | 756 | 902 | 112 | 180 |
| 4" | 100 | 406 | 410 | 562 | 735 | 350 | - | - | - | 992 | 1302 | 992 | 1302 | 835 | 1007 | 141 | 210 |
| 6" | 150 | 495 | 498 | 720 | 956 | 350 | 805 | 1096 | 310 | 1118 | 1470 | 1118 | 1470 | 848 | 1216 | 210 | 296 |
| 8" | 200 | 597 | 600 | 856 | 1150 | 400 | 941 | 1290 | 310 | 1271 | 1675 | 1271 | 1675 | 1013 | 1440 | 280 | 378 |
| 10" | 250 | 673 | 676 | 1013 | 1439 | 500 | 1098 | 1580 | 460 | 1440 | 1890 | 1440 | 1890 | 1170 | 1728 | 335 | 461 |
| 12" | 300 | 762 | 765 | 1155 | 1545 | 600 | 1250 | 1705 | 460 | 1670 | 2195 | 1670 | 2195 | 1312 | 1833 | 395 | 530 |
| 14" | 350 | 826 | 829 | 1313 | 1817 | 650 | 1408 | 1977 | 460 | 1937 | 2542 | 1937 | 2542 | 1480 | 2131 | 432 | 620 |
| 16" | 400 | 902 | 905 | 1445 | 1965 | 700 | 1540 | 2125 | 460 | 2095 | 2746 | 2095 | 2746 | 1610 | 2279 | 556 | 692 |
| 18" | 450 | 978 | 981 | 1560 | 2295 | 800 | 1700 | 2525 | 460 | 2315 | 3040 | 2315 | 3040 | 1741 | 2655 | 608 | 790 |
| 20" | 500 | 1054 | 1060 | 1655 | 2452 | 1000 | 1795 | 2682 | 460 | 2525 | 3318 | 2525 | 3318 | 1836 | 2812 | 680 | 850 |
| 24" | 600 | 1232 | 1241 | - | - | - | 2235 | 3186 | 600 | 3103 | 4080 | 3103 | 4080 | 2413 | 3356 | 835 | 1020 |
| 28" | 700 | 1397 | 1410 | - | - | - | 2610 | 3720 | 600 | 3245 | 4268 | 3245 | 4268 | 2777 | 3902 | 945 | 1150 |
| 32" | 800 | 1651 | 1667 | - | - | - | 2980 | 4250 | 600 | - | - | - | - | 3121 | 4393 | 1104 | 1230 |
| 36" | 900 | 1880 | 1895 | - | - | - | 3355 | 4780 | 600 | - | - | - | - | 3428 | 4863 | 1223 | 1580 |
| 40" | 1000 | 2028 | 2028 | - | - | - | 3725 | 5310 | 600 | - | - | - | - | 3820 | 5420 | 1360 | 1760 |
| 48" | 1200 | 2464 | 2464 | - | - | - | 4470 | 6375 | 600 | - | - | - | - | 4560 | 6480 | 1656 | 2065 |

Notes / Notas:

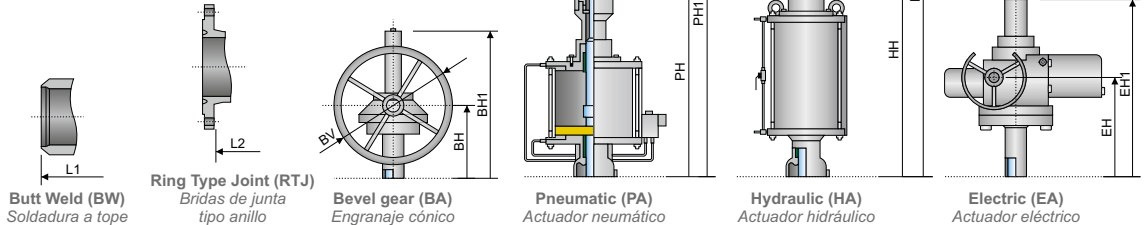
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**

UNITS / Unidades mm



REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

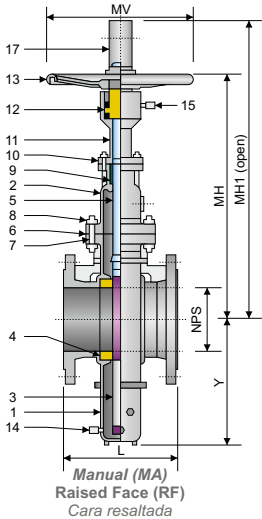
CLASS / Clase 600 (NPS 2" - 48")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | PA | | HA | | EA | | X (NG) | Y (G) |
|--------------|-------------|-------------------|-----------|------|------|------|------|------|-----|------|------|------|------|------|------|-----------|----------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 292 | 295 | 378 | 499 | 300 | - | - | - | - | - | - | - | 600 | 723 | 88 | 135 |
| 2 1/2" | 65 | 330 | 333 | 446 | 562 | 350 | - | - | - | - | - | - | - | 705 | 821 | 100 | 145 |
| 3" | 80 | 356 | 359 | 483 | 630 | 350 | - | - | - | 861 | 1130 | 861 | 1130 | 742 | 890 | 112 | 180 |
| 4" | 100 | 432 | 435 | 562 | 735 | 400 | 647 | 875 | 310 | 992 | 1302 | 992 | 1302 | 790 | 995 | 141 | 210 |
| 6" | 150 | 559 | 562 | 720 | 956 | 500 | 805 | 1096 | 310 | 1118 | 1470 | 1118 | 1470 | 876 | 1245 | 210 | 296 |
| 8" | 200 | 660 | 664 | 856 | 1150 | 600 | 941 | 1290 | 310 | 1271 | 1675 | 1271 | 1675 | 1013 | 1440 | 280 | 378 |
| 10" | 250 | 787 | 791 | 1013 | 1439 | 650 | 1098 | 1580 | 310 | 1440 | 1890 | 1440 | 1890 | 1199 | 1753 | 335 | 461 |
| 12" | 300 | 838 | 841 | 1155 | 1545 | 700 | 1250 | 1705 | 460 | 1670 | 2195 | 1670 | 2195 | 1321 | 1858 | 395 | 530 |
| 14" | 350 | 889 | 892 | 1313 | 1817 | 800 | 1408 | 1977 | 460 | 1937 | 2542 | 1937 | 2542 | 1495 | 2177 | 432 | 620 |
| 16" | 400 | 991 | 994 | 1445 | 1965 | 1000 | 1540 | 2125 | 460 | 2095 | 2746 | 2095 | 2746 | 1762 | 2365 | 556 | 692 |
| 18" | 450 | 1092 | 1095 | - | - | - | 1700 | 2525 | 460 | 2315 | 3040 | 2315 | 3040 | 1877 | 2695 | 608 | 790 |
| 20" | 500 | 1194 | 1200 | - | - | - | 1795 | 2682 | 460 | 2525 | 3318 | 2525 | 3318 | 2030 | 2922 | 680 | 850 |
| 24" | 600 | 1397 | 1407 | - | - | - | - | - | - | 3103 | 4080 | 3103 | 4080 | 2470 | 3426 | 835 | 1020 |
| 28" | 700 | 1549 | 1562 | - | - | - | - | - | - | 3245 | 4268 | 3245 | 4268 | 2750 | 3882 | 945 | 1150 |
| 32" | 800 | 1778 | 1794 | - | - | - | - | - | - | - | - | - | - | 3095 | 4373 | 1104 | 1230 |
| 36" | 900 | 2083 | 2099 | - | - | - | - | - | - | - | - | - | - | 3425 | 4745 | 1223 | 1580 |
| 40" | 1000 | 2387 | 2387 | - | - | - | - | - | - | - | - | - | - | 3868 | 5466 | 1360 | 1760 |
| 48" | 1200 | 2692 | 2692 | - | - | - | - | - | - | - | - | - | - | 4715 | 6560 | 1656 | 2065 |

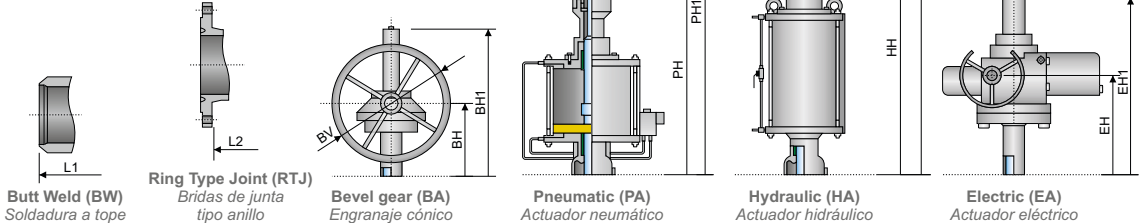
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**

UNITS / Unidades mm


REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

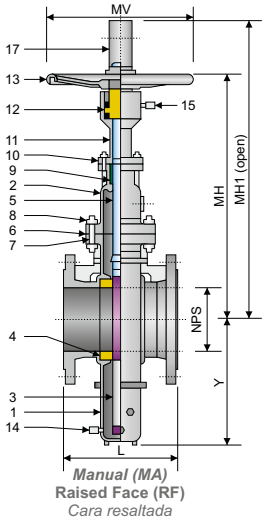
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 36")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | PA | | HA | | EA | | X (NG) | Y (G) |
|--------------|-------------|-------------------|-----------|------|------|------|------|------|-----|------|------|------|------|------|------|-----------|----------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 368 | 371 | 416 | 550 | 350 | - | - | - | - | - | - | - | 545 | 809 | 88 | 147 |
| 2 1/2" | 65 | 419 | 422 | 491 | 618 | 400 | - | - | - | - | - | - | - | 620 | 878 | 100 | 184 |
| 3" | 80 | 381 | 384 | 531 | 693 | 500 | 616 | 833 | 310 | 947 | 1242 | 947 | 1242 | 688 | 928 | 112 | 216 |
| 4" | 100 | 457 | 460 | 618 | 810 | 600 | 703 | 950 | 310 | 1091 | 1432 | 1091 | 1432 | 775 | 1098 | 141 | 266 |
| 6" | 150 | 610 | 613 | 791 | 1052 | 650 | 886 | 1212 | 460 | 1230 | 1617 | 1230 | 1617 | 957 | 1355 | 210 | 300 |
| 8" | 200 | 737 | 740 | 942 | 1263 | 700 | 1037 | 1423 | 460 | 1398 | 1843 | 1398 | 1843 | 1108 | 1577 | 280 | 410 |
| 10" | 250 | 838 | 841 | 1136 | 1582 | 800 | 1276 | 1813 | 460 | 1583 | 2080 | 1583 | 2080 | 1318 | 1943 | 335 | 526 |
| 12" | 300 | 965 | 968 | 1271 | 1698 | 1000 | 1411 | 1928 | 460 | 1837 | 2415 | 1837 | 2415 | 1453 | 2058 | 395 | 632 |
| 14" | 350 | 1029 | 1038 | - | - | - | 1585 | 2230 | 460 | 2131 | 2795 | 2131 | 2795 | 1762 | 2400 | 432 | 683 |
| 16" | 400 | 1130 | 1140 | - | - | - | - | - | - | 2305 | 3021 | 2305 | 3021 | 1963 | 2630 | 556 | 800 |
| 18" | 450 | 1219 | 1232 | - | - | - | - | - | - | 2547 | 3345 | 2547 | 3345 | 2090 | 2993 | 608 | 866 |
| 20" | 500 | 1321 | 1334 | - | - | - | - | - | - | 2778 | 3650 | 2778 | 3650 | 2168 | 3147 | 680 | 986 |
| 24" | 600 | 1549 | 1568 | - | - | - | - | - | - | 3413 | 4487 | 3413 | 4487 | 2655 | 3706 | 835 | 1030 |
| 28" | 700 | 1778 | 1800 | - | - | - | - | - | - | 3985 | 5235 | 3985 | 5235 | 3110 | 4325 | 945 | 1250 |
| 32" | 800 | 2032 | 2054 | - | - | - | - | - | - | - | - | - | - | 3540 | 4945 | 1104 | 1440 |
| 36" | 900 | 2286 | 2315 | - | - | - | - | - | - | - | - | - | - | 3995 | 5565 | 1223 | 1605 |

Notes / Notas:

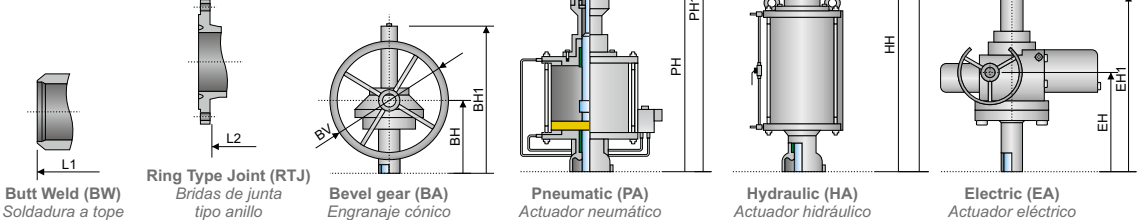
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**

UNITS / Unidades mm



REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

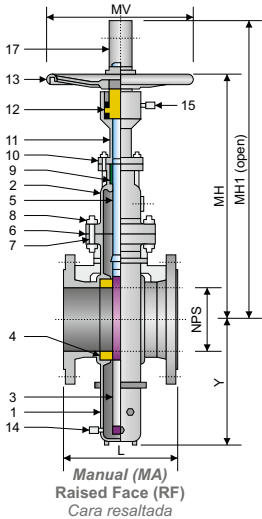
CLASS / Clase 1500 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | | BA | | | PA | | HA | | EA | | X <i>(NG)</i> | Y <i>(G)</i> |
|---------------------|--------------------|--------------------------|------------------|------|------|-----|------|------|------|------|------|------|------|------|------|------------------|-----------------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 368 | 371 | 510 | 600 | 350 | 650 | 775 | 310 | - | - | - | - | 650 | 775 | 155 | 185 |
| 2 1/2" | 65 | 419 | 422 | 615 | 760 | 450 | 700 | 820 | 310 | - | - | - | - | 700 | 820 | 180 | 215 |
| 3" | 80 | 470 | 473 | 630 | 794 | 450 | 750 | 910 | 310 | 900 | 1081 | 900 | 1081 | 750 | 910 | 205 | 250 |
| 4" | 100 | 546 | 549 | 707 | 860 | 450 | 790 | 940 | 460 | 940 | 1178 | 940 | 1178 | 790 | 940 | 240 | 300 |
| 6" | 150 | 705 | 711 | 862 | 1090 | 650 | 1080 | 1308 | 460 | 1230 | 1424 | 1230 | 1424 | 1080 | 1308 | 320 | 400 |
| 8" | 200 | 832 | 841 | 935 | 1551 | 860 | 1280 | 1806 | 860 | 1430 | 1641 | 1430 | 1641 | 1280 | 1806 | 420 | 517 |
| 10" | 250 | 991 | 1000 | 1100 | 1859 | 860 | 1550 | 2200 | 860 | 1700 | 1857 | 1700 | 1857 | 1550 | 2200 | 485 | 605 |
| 12" | 300 | 1130 | 1146 | - | - | - | 1780 | 2430 | 860 | 1930 | 2206 | 1930 | 2206 | 1780 | 2430 | 500 | 649 |
| 14" | 350 | 1257 | 1276 | - | - | - | 1950 | 2600 | 860 | 2210 | 2496 | 2210 | 2496 | 1950 | 2600 | 600 | 770 |
| 16" | 400 | 1384 | 1407 | - | - | - | 2100 | 2750 | 860 | 2360 | 2450 | 2360 | 2450 | 2100 | 2750 | 686 | 796 |
| 20" | 500 | 1664 | 1686 | - | - | - | 2350 | 3000 | 860 | 2610 | 2700 | 2610 | 2700 | 2350 | 3000 | 820 | 1090 |
| 24" | 600 | 1943 | 1972 | - | - | - | 2560 | 3300 | 1000 | 2820 | 2910 | 2820 | 2910 | 2560 | 3300 | 990 | 1290 |

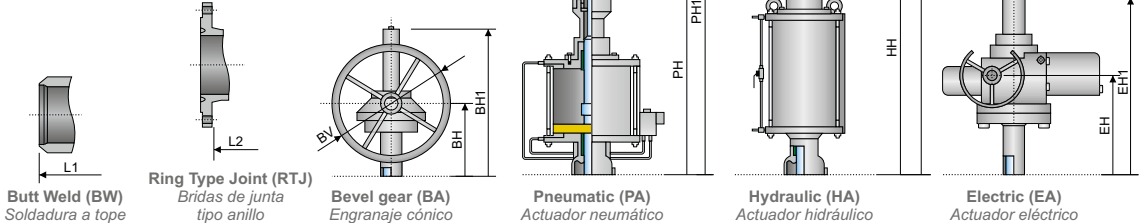
Notes / Notas:

UNITS / Unidades mm

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**


REMOTE CONTROL PARAMETERS
Parámetros de control remoto

- **Pneumatic: Compressed Air / Nitrogen, 0.4Pa ~ 0.7MPa**
Neumática: Aire / Nitrógeno comprimido, 0.4Pa ~ 0.7MPa
- **Hydraulic: Hydraulic Oil, 4.0MPa ~ 6.4MPa**
Hidráulica: Aceite hidráulico, 4.0MPa ~ 6.4MPa
- **Electric: AC 380V, 50Hz / 220 - 440V, 60Hz**
Eléctrica: AC 380V, 50Hz / 220 - 440V, 60Hz
- **Explosion proof grade: dIIBT4**
Grado de prueba de explosión: dIIBT4


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 598 - API 6D BS 6755 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

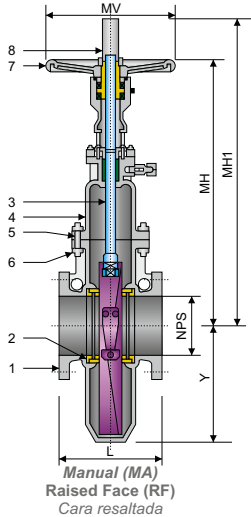
| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> |
|----|--|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCC |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCC |
| 3 | Seat Surface / <i>Superficie asiento</i> | A516 - 70 (1) | A537 - CL1 (1) |
| 4 | Seat Rings / <i>Asientos</i> | A105 (1) | A350 - LF2 (1) |
| 5 | Stem / <i>Vástago</i> | AISI 410 (2) | |
| 6 | Gasket / <i>Junta</i> | BUNA (3) | BUNA / VITON (3) |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 |
| 8 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 |
| 9 | Packing / <i>Empaquetadura</i> | VITON (3) | |
| 10 | Gland Flange / <i>Brida prensaestopa</i> | A105 | A350 - LF2 |
| 11 | Yoke / <i>Yugo</i> | B148 - 9A | |
| 12 | Stem Nut / <i>Tuerca Vástago</i> | A105 | |
| 13 | Handwheel / <i>Volante</i> | Steel / <i>Acero</i> | |
| 14 | Plug / <i>Tapón</i> | A105 | A350 - LF2 |
| 15 | Grease Nipple / <i>Engrasador</i> | A105 | |
| 16 | O-ring / <i>Empaque O-ring</i> | BUNA | BUNA / VITON |
| 17 | Stem Protection / <i>Protector Vástago</i> | A105 | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 2500 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | PA | | HA | | EA | | X (NG) | Y (G) |
|--------------|-------------|-------------------|-----------|------|------|-----|------|------|-----|------|------|------|------|------|------|-----------|----------|
| | | | | MH | MH1 | MHV | BH | BH1 | BHV | PH | PH1 | HH | HH1 | EH | EH1 | | |
| 2" | 50 | 451 | 454 | 480 | 570 | 350 | 650 | 725 | 360 | - | - | - | - | 650 | 725 | 155 | 185 |
| 2 1/2" | 65 | 508 | 514 | 500 | 645 | 450 | 700 | 760 | 360 | - | - | - | - | 700 | 760 | 180 | 215 |
| 3" | 80 | 578 | 584 | 560 | 680 | 450 | 630 | 794 | 360 | 900 | 1081 | 900 | 1081 | 630 | 794 | 205 | 250 |
| 4" | 100 | 673 | 683 | 650 | 916 | 450 | 650 | 1142 | 450 | 940 | 1178 | 940 | 1178 | 650 | 1142 | 240 | 300 |
| 6" | 150 | 914 | 927 | 750 | 1122 | 650 | 800 | 1312 | 450 | 1230 | 1424 | 1230 | 1424 | 800 | 1312 | 320 | 400 |
| 8" | 200 | 1022 | 1038 | 1043 | 1400 | 860 | 1143 | 1502 | 860 | 1430 | 1641 | 1430 | 1641 | 1143 | 1502 | 420 | 517 |
| 10" | 250 | 1270 | 1292 | - | - | - | 1253 | 1875 | 860 | 1700 | 1857 | 1700 | 1857 | 1253 | 1875 | 485 | 605 |
| 12" | 300 | 1422 | 1445 | - | - | - | 1356 | 2208 | 860 | 1930 | 2206 | 1930 | 2206 | 1356 | 2208 | 500 | 649 |

Notes / Notas:
UNITS / Unidades mm

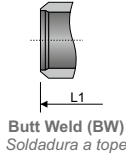
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(2) On request: 17 Cr - Monel® - Hastelloy® - other materials / Bajo petición: 17 Cr - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Graphite - other materials / Grafito - otros materiales.**



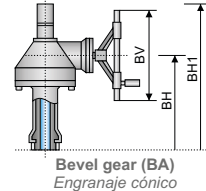
STRUCTURE FEATURES

Características de la estructura

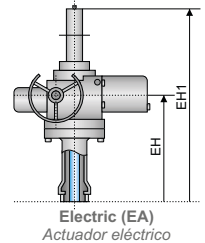
- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática



Butt Weld (BW)
Soldadura a tope



Bevel gear (BA)
Engranaje cónico



Electric (EA)
Actuador eléctrico

SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceros al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

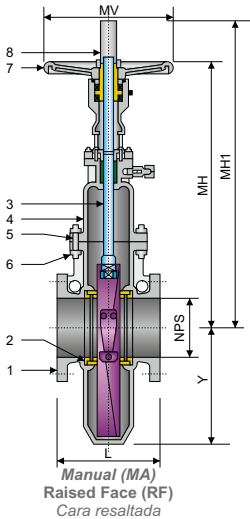
CLASS / Clase 150 (NPS 2" - 48")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | MA | | | BA | | | EA | | Y |
|---------------------|--------------------|---------|----------|------|------|------|------|------|-----|------|------|------|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 178 | 216 | 395 | 494 | 250 | - | - | - | 560 | 647 | 161 |
| 2 1/2" | 65 | 191 | 241 | 426 | 550 | 300 | - | - | - | 610 | 702 | 180 |
| 3" | 80 | 203 | 283 | 440 | 600 | 300 | - | - | - | 650 | 752 | 210 |
| 4" | 100 | 229 | 305 | 575 | 736 | 350 | 495 | 736 | 310 | 790 | 912 | 254 |
| 6" | 150 | 267 | 403 | 655 | 890 | 350 | 670 | 890 | 310 | 950 | 1138 | 320 |
| 8" | 200 | 292 | 419 | 793 | 1120 | 350 | 830 | 1120 | 310 | 1100 | 1373 | 420 |
| 10" | 250 | 330 | 457 | 935 | 1274 | 450 | 975 | 1274 | 310 | 1280 | 1575 | 496 |
| 12" | 300 | 356 | 502 | 1185 | 1459 | 500 | 1060 | 1459 | 310 | 1390 | 1725 | 571 |
| 14" | 350 | 381 | 572 | 1320 | 1610 | 600 | 1130 | 1610 | 460 | 1570 | 1930 | 650 |
| 16" | 400 | 406 | 610 | 1455 | 1883 | 650 | 1295 | 1883 | 460 | 1700 | 2210 | 727 |
| 18" | 450 | 432 | 660 | 1504 | 2037 | 700 | 1575 | 2130 | 460 | 1940 | 2400 | 820 |
| 20" | 500 | 457 | 711 | 1745 | 2365 | 800 | 1810 | 2510 | 460 | 2020 | 2630 | 910 |
| 24" | 600 | 508 | 813 | 2110 | 2810 | 1000 | 1996 | 3035 | 460 | 2350 | 3050 | 1065 |
| 28" | 700 | 610 | 914 | - | - | - | 2260 | 3280 | 460 | 2680 | 3480 | 1235 |
| 32" | 800 | 711 | 965 | - | - | - | 2555 | 3700 | 460 | 3000 | 4025 | 1415 |
| 36" | 900 | 711 | 1016 | - | - | - | 2860 | 4230 | 600 | 3320 | 4320 | 1510 |
| 40" | 1000 | 811 | 1116 | - | - | - | 3158 | 4700 | 600 | 3650 | 4777 | 1650 |
| 48" | 1200 | 1015 | 1320 | - | - | - | 3712 | 5670 | 600 | 4000 | 5670 | 1950 |

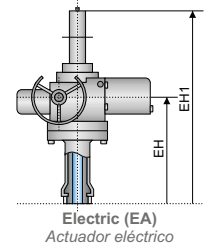
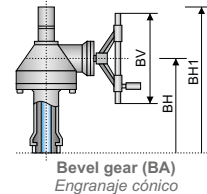
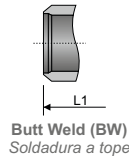
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

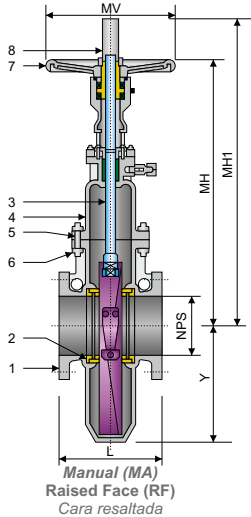
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 48")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | MA | | | BA | | | EA | | Y |
|---------------------|--------------------|-------------------|------|------|-----|------|------|-----|------|------|------|
| | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 216 | 395 | 494 | 250 | - | - | - | 560 | 647 | 161 |
| 2 1/2" | 65 | 241 | 426 | 550 | 300 | - | - | - | 610 | 702 | 180 |
| 3" | 80 | 283 | 440 | 600 | 300 | - | - | - | 650 | 752 | 210 |
| 4" | 100 | 305 | 575 | 736 | 350 | 495 | 736 | 310 | 790 | 912 | 254 |
| 6" | 150 | 403 | 655 | 890 | 350 | 670 | 890 | 310 | 950 | 1138 | 320 |
| 8" | 200 | 419 | 793 | 1140 | 350 | 830 | 1120 | 310 | 1100 | 1373 | 420 |
| 10" | 250 | 457 | 935 | 1274 | 450 | 975 | 1274 | 310 | 1280 | 1575 | 496 |
| 12" | 300 | 502 | 1185 | 1459 | 500 | 1060 | 1459 | 310 | 1390 | 1780 | 571 |
| 14" | 350 | 762 | 1320 | 1610 | 600 | 1130 | 1610 | 460 | 1590 | 1950 | 650 |
| 16" | 400 | 838 | 1455 | 1883 | 650 | 1295 | 1883 | 460 | 1700 | 2210 | 737 |
| 18" | 450 | 914 | 1504 | 2037 | 700 | 1575 | 2130 | 460 | 1940 | 2500 | 820 |
| 20" | 500 | 991 | 1745 | 2365 | 800 | 1810 | 2510 | 460 | 2020 | 2630 | 910 |
| 24" | 600 | 1143 | - | - | - | 1996 | 3035 | 460 | 2350 | 3050 | 1080 |
| 28" | 700 | 1346 | - | - | - | 2260 | 3300 | 460 | 2680 | 3480 | 1235 |
| 32" | 800 | 1524 | - | - | - | 2800 | 3750 | 460 | 3000 | 4025 | 1415 |
| 36" | 900 | 1727 | - | - | - | 2860 | 4230 | 600 | 3320 | 4450 | 1550 |
| 40" | 1000 | 2083 | - | - | - | 3158 | 4700 | 600 | 3680 | 4800 | 1690 |
| 48" | 1200 | 2286 | - | - | - | 3712 | 5670 | 600 | 4000 | 5670 | 2040 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

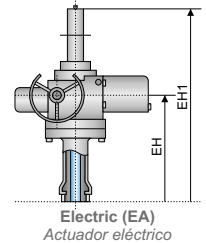
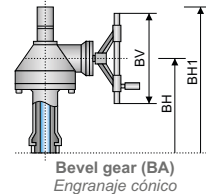
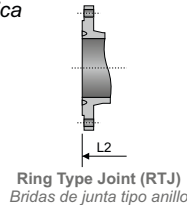
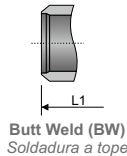
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceros al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

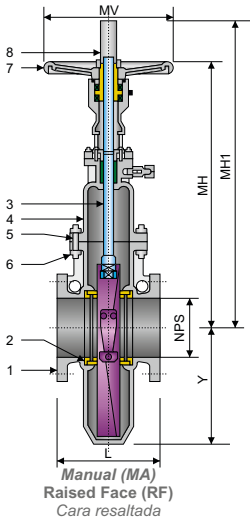
CLASS / Clase 400 (NPS 2" - 36")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | | BA | | | EA | | Y |
|---------------------|--------------------|--------------------------|------------------|------|------|------|------|------|-----|------|------|------|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 292 | 295 | 395 | 510 | 250 | - | - | - | 560 | 647 | 168 |
| 2 1/2" | 65 | 330 | 333 | 426 | 520 | 300 | - | - | - | 610 | 702 | 185 |
| 3" | 80 | 356 | 359 | 440 | 540 | 300 | - | - | - | 650 | 752 | 230 |
| 4" | 100 | 406 | 410 | 575 | 700 | 350 | 650 | 770 | 310 | 790 | 912 | 267 |
| 6" | 150 | 495 | 498 | 655 | 950 | 350 | 800 | 965 | 310 | 950 | 1138 | 350 |
| 8" | 200 | 597 | 600 | 793 | 1160 | 400 | 960 | 1200 | 310 | 1100 | 1373 | 445 |
| 10" | 250 | 673 | 676 | 935 | 1330 | 500 | 1090 | 1370 | 310 | 1280 | 1575 | 518 |
| 12" | 300 | 762 | 765 | 1185 | 1587 | 600 | 1200 | 1560 | 310 | 1400 | 1790 | 590 |
| 14" | 350 | 826 | 829 | 1380 | 1790 | 650 | 1350 | 1740 | 460 | 1570 | 1960 | 665 |
| 16" | 400 | 902 | 905 | 1455 | 1895 | 700 | 1540 | 1970 | 460 | 1700 | 2210 | 752 |
| 18" | 450 | 978 | 981 | 1504 | 2037 | 800 | 1700 | 2260 | 460 | 1940 | 2500 | 850 |
| 20" | 500 | 1054 | 1060 | 1745 | 2380 | 1000 | 1850 | 2420 | 460 | 2020 | 2630 | 924 |
| 24" | 600 | 1232 | 1241 | - | - | - | 2120 | 2800 | 600 | 2350 | 3050 | 1130 |
| 28" | 700 | 1397 | 1410 | - | - | - | 2460 | 3300 | 600 | 2680 | 3480 | 1270 |
| 32" | 800 | 1651 | 1667 | - | - | - | 2555 | 3750 | 600 | 3000 | 4025 | 1460 |
| 36" | 900 | 1880 | 1895 | - | - | - | 2860 | 4230 | 600 | 3320 | 4450 | 1630 |

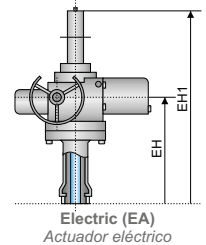
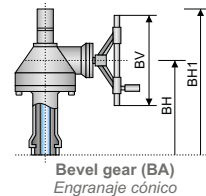
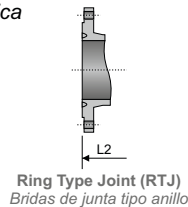
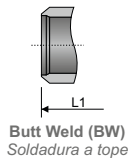
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceros al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

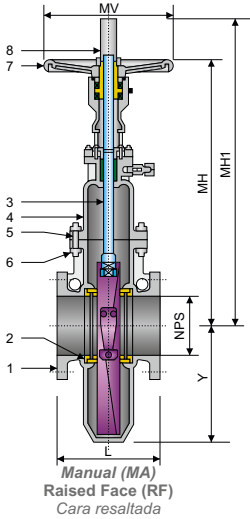
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 2" - 36")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|------|------|------|-----|------|------|------|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 292 | 295 | 395 | 510 | 300 | - | - | - | 560 | 647 | 168 |
| 2 1/2" | 65 | 330 | 333 | 426 | 520 | 350 | - | - | - | 610 | 702 | 185 |
| 3" | 80 | 356 | 359 | 440 | 540 | 350 | - | - | - | 650 | 752 | 240 |
| 4" | 100 | 432 | 435 | 575 | 700 | 400 | 650 | 770 | 310 | 790 | 912 | 269 |
| 6" | 150 | 559 | 562 | 655 | 950 | 500 | 800 | 965 | 310 | 970 | 1208 | 355 |
| 8" | 200 | 660 | 663 | 793 | 1180 | 600 | 960 | 1200 | 310 | 1130 | 1453 | 430 |
| 10" | 250 | 787 | 791 | 935 | 1330 | 650 | 1090 | 1370 | 460 | 1300 | 1655 | 535 |
| 12" | 300 | 838 | 841 | 1185 | 1587 | 700 | 1200 | 1560 | 460 | 1405 | 1795 | 605 |
| 14" | 350 | 889 | 892 | 1380 | 1790 | 800 | 1350 | 1740 | 460 | 1600 | 2000 | 720 |
| 16" | 400 | 991 | 994 | 1455 | 1895 | 1000 | 1540 | 1970 | 460 | 1750 | 2300 | 815 |
| 18" | 450 | 1092 | 1095 | 1504 | 2060 | 1000 | 1700 | 2260 | 460 | 1960 | 2530 | 890 |
| 20" | 500 | 1194 | 1200 | 1745 | 2380 | 1000 | 1850 | 2510 | 460 | 2060 | 2700 | 965 |
| 24" | 600 | 1397 | 1407 | - | - | - | 2220 | 3035 | 600 | 2400 | 3100 | 1165 |
| 28" | 700 | 1549 | 1562 | - | - | - | 2460 | 3300 | 600 | 2720 | 3520 | 1325 |
| 32" | 800 | 1778 | 1794 | - | - | - | - | - | - | 3070 | 4100 | 1515 |
| 36" | 900 | 2083 | 2099 | - | - | - | - | - | - | 3350 | 4520 | 1820 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

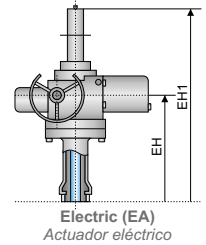
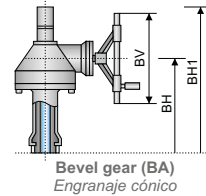
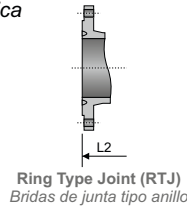
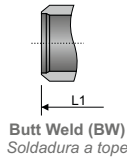
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceero al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

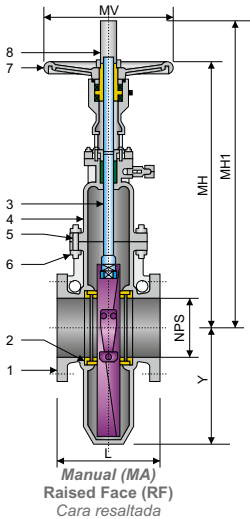
CLASS / Clase 900 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | EA | | Y |
|---------------------|--------------------|-------------------|-----------|------|------|-----|------|------|-----|------|------|------|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 368 | 371 | 395 | 510 | 300 | - | - | - | 560 | 647 | 190 |
| 2 1/2" | 65 | 419 | 422 | 426 | 520 | 350 | - | - | - | 610 | 702 | 220 |
| 3" | 80 | 381 | 384 | 440 | 560 | 350 | - | - | - | 670 | 780 | 235 |
| 4" | 100 | 457 | 460 | 575 | 715 | 400 | 720 | 850 | 310 | 800 | 950 | 290 |
| 6" | 150 | 610 | 613 | 660 | 950 | 500 | 781 | 1175 | 310 | 990 | 1250 | 380 |
| 8" | 200 | 737 | 740 | 800 | 1185 | 600 | 933 | 1429 | 460 | 1160 | 1480 | 470 |
| 10" | 250 | 838 | 841 | 965 | 1350 | 650 | 1149 | 1680 | 460 | 1360 | 1705 | 595 |
| 12" | 300 | 965 | 968 | 1200 | 1600 | 700 | 1359 | 1772 | 460 | 1435 | 1835 | 700 |
| 14" | 350 | 1029 | 1038 | - | - | - | 1438 | 1873 | 600 | 1660 | 2060 | 730 |
| 16" | 400 | 1130 | 1140 | - | - | - | 1692 | 2061 | 600 | 1810 | 2360 | 875 |
| 18" | 450 | 1219 | 1232 | - | - | - | 1850 | 2337 | 600 | 1990 | 2590 | 905 |
| 20" | 500 | 1321 | 1334 | - | - | - | 2100 | 2616 | 600 | 2120 | 2760 | 1005 |
| 24" | 600 | 1549 | 1568 | - | - | - | 2232 | 2883 | 600 | 2460 | 3160 | 1180 |

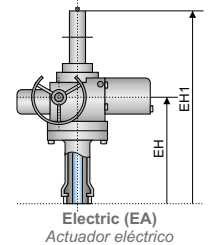
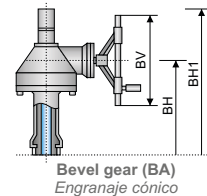
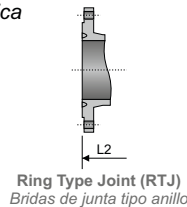
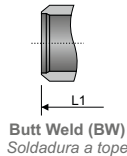
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 18" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceros al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

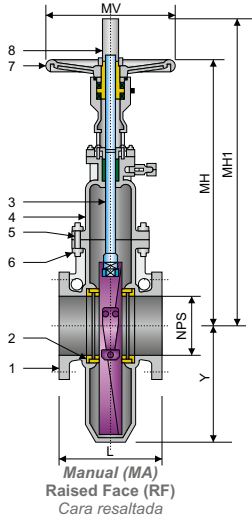
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2" - 18")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | MA | | | BA | | | EA | | Y |
|--------------|-------------|-------------------|-----------|------|------|-----|------|------|-----|------|------|-----|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 368 | 371 | 510 | 600 | 350 | 650 | 725 | 360 | 650 | 725 | 190 |
| 2 1/2" | 65 | 419 | 422 | 615 | 760 | 350 | 700 | 760 | 360 | 700 | 760 | 220 |
| 3" | 80 | 470 | 473 | 630 | 794 | 400 | 630 | 794 | 360 | 630 | 794 | 255 |
| 4" | 100 | 546 | 549 | 707 | 860 | 500 | 760 | 860 | 450 | 760 | 860 | 305 |
| 6" | 150 | 705 | 711 | 862 | 1090 | 500 | 1080 | 1213 | 450 | 1080 | 1213 | 405 |
| 8" | 200 | 832 | 841 | 935 | 1551 | 650 | 1280 | 1706 | 860 | 1280 | 1706 | 520 |
| 10" | 250 | 991 | 1000 | 1100 | 1859 | 800 | 1550 | 1972 | 860 | 1550 | 1972 | 615 |
| 12" | 300 | 1130 | 1146 | - | - | - | 1780 | 2199 | 860 | 1780 | 2199 | 700 |
| 14" | 350 | 1257 | 1276 | - | - | - | 1950 | 2294 | 860 | 1950 | 2294 | 780 |
| 16" | 400 | 1384 | 1407 | - | - | - | 2100 | 2625 | 860 | 2100 | 2625 | 875 |
| 18" | 450 | 1537 | 1559 | - | - | - | 2350 | 3036 | 860 | 2350 | 3036 | 950 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

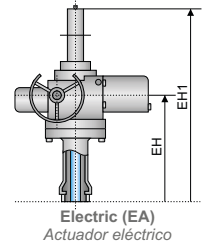
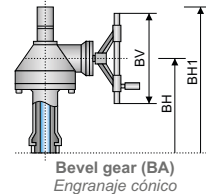
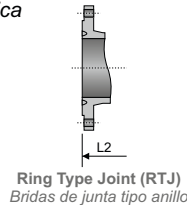
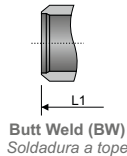
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Total separation of sealing surface**
Separación total de la superficie de sellado
- **Double seal DBB / DIB**
Doble junta DBB / DIB
- **On-site emergency sealing device**
Dispositivo de sellado de emergencia in situ
- **Automatic overpressure discharge system**
Sistema de descarga automática de sobrepresión
- **Fire-proof and antistatic structure**
Estructura ignífuga y antiestática



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| API 6D ASME B16.34 | API 6D ASME B16.10 | ASME B16.5 ASME B16.47 | ASME B16.25 | NACE MR0175 | API 6D ASME B16.34 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM / ANSI

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Aceros al Carbono</i> |
|----|--|---|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB |
| 2 | Seat Rings / <i>Asientos</i> | A181 - 60 + PTFE |
| 3 | Stem / <i>Vástago</i> | A182 - 6FA |
| 4 | Bonnet / <i>Bonete</i> | A216 - WCB |
| 5 | Bolt / <i>Tornillo</i> | A193 - B7 |
| 6 | Nut / <i>Tuerca</i> | A194 - 2H |
| 7 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro maleable A47</i> |
| 8 | Stem Protection / <i>Protector Vástago</i> | A108 - 1025 + #372 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

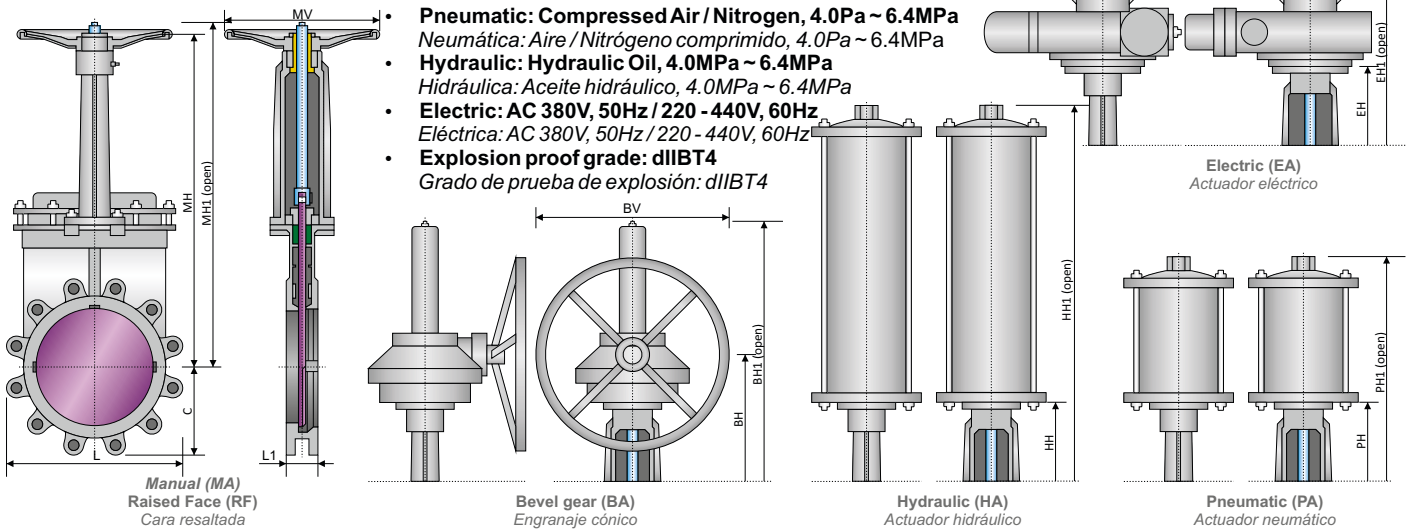
CLASS / Clase 2500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | | BA | | | EA | | Y |
|---------------------|--------------------|--------------------------|------------------|------|------|------|------|------|-----|------|------|-----|
| | | | | MH | MH1 | MV | BH | BH1 | BV | EH | EH1 | |
| 2" | 50 | 451 | 454 | 480 | 570 | 350 | 650 | 725 | 360 | 650 | 725 | 203 |
| 2 1/2" | 65 | 508 | 514 | 500 | 645 | 350 | 700 | 760 | 360 | 700 | 760 | 232 |
| 3" | 80 | 578 | 584 | 560 | 680 | 450 | 630 | 794 | 360 | 630 | 794 | 265 |
| 4" | 100 | 673 | 683 | 650 | 916 | 600 | 650 | 1142 | 450 | 760 | 1142 | 310 |
| 6" | 150 | 914 | 927 | 750 | 1122 | 800 | 800 | 1312 | 450 | 800 | 1312 | 415 |
| 8" | 200 | 1022 | 1038 | 1043 | 1400 | 1000 | 1143 | 1502 | 860 | 1143 | 1502 | 530 |
| 10" | 250 | 1270 | 1292 | - | - | - | 1253 | 1875 | 860 | 1253 | 1875 | 630 |
| 12" | 300 | 1422 | 1445 | - | - | - | 1356 | 2208 | 860 | 1356 | 2208 | 680 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

UNITS / Unidades mm

REMOTE CONTROL PARAMETERS
Parámetros de control remoto

SPECIFICATIONS / Especificaciones
MSS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / Extremos | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|---------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| MSS SP-81 | MSS SP-81 | ASME B16.5 MSS SP-44 | MSS SP-61 | 3" - 64" |

MAIN PARTS MATERIAL / Material de las piezas principales

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|
| 1 | Body / Cuerpo | WCB | CF8 - CF8M |
| 2 | Seal Face / Sello | | PTFE |
| 3 | Wedge / Cuña | 12Cr18Ni9Ti | 12Cr18Ni9Ti - 06Cr17Ni12Mo2 |
| 4 | Stem / Vástago | 20Cr13 | A182 - F304 |
| 5 | Packing / Empaque | | PTFE |
| 6 | Gland Flange / Brida Prensaestopa | WCB | CF8 - CF8M |
| 7 | Yoke / Yugo | WCB | CF8 - CF8M |
| 8 | Stem Nut / Tuerca Vástago | Aluminum Bronze ZCuAl10Fe3 / Bronce Aluminio ZCuAl10Fe3 | |
| 9 | Handwheel / Volante | Malleable Iron KTH350-10 / Hierro maleable KTH350-10 | |

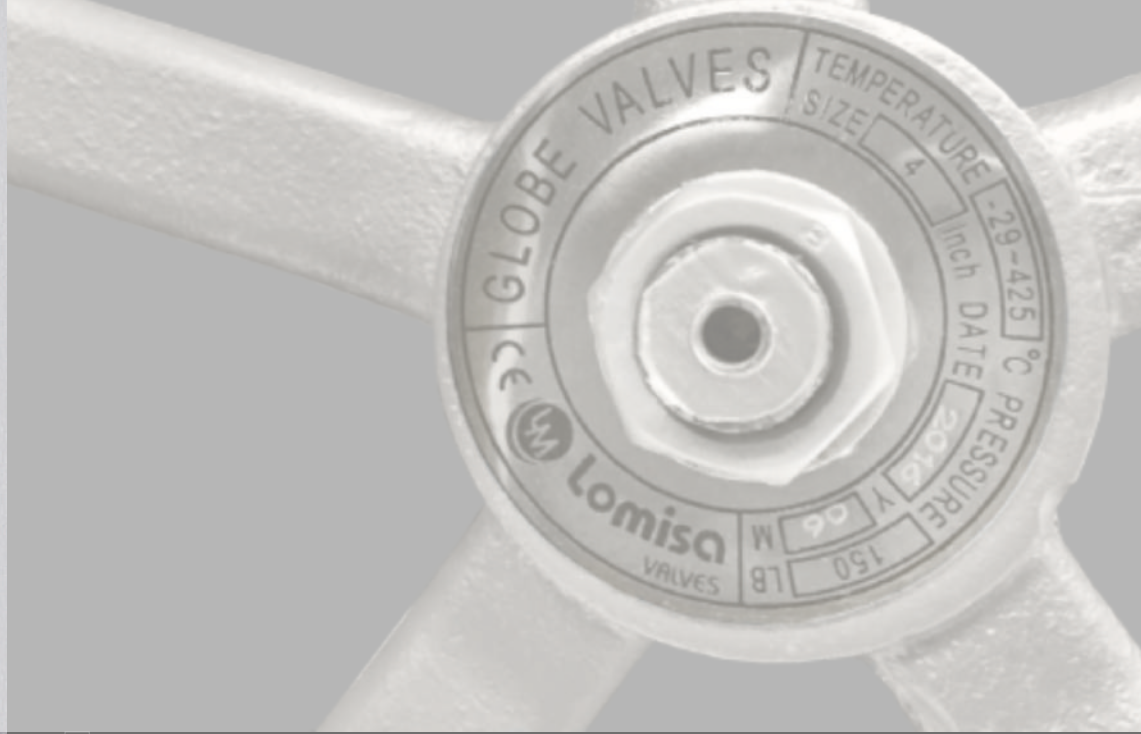
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 3" - 64")

| NPS (in.) | DN (mm.) | WF L1 | L | C | MA | | | BA | | | PA | | HA | | EA | | N-M |
|--------------|-------------|----------|------|-------|-------|------|-----|------|------|-----|------|------|------|------|------|------|--------|
| | | | | | MH | MH1 | MV | BH | BH1 | BV | PH | PH1 | HH | HH1 | EH | EH1 | |
| 3" | 80 | 51 | 200 | 100 | 343 | 435 | 220 | - | - | - | 277 | 547 | 277 | 685 | 429 | 599 | 4-M16 |
| 4" | 100 | 51 | 229 | 115 | 381 | 516 | 220 | - | - | - | 322 | 592 | 322 | 722 | 470 | 645 | 8-M16 |
| 6" | 150 | 57 | 285 | 143 | 463.5 | 654 | 280 | - | - | - | 430 | 750 | 430 | 865 | 555 | 1125 | 8-M20 |
| 8" | 200 | 70 | 343 | 172 | 584 | 832 | 360 | 580 | 880 | 310 | 560 | 1017 | 560 | 940 | 669 | 1289 | 8-M20 |
| 10" | 250 | 70 | 406 | 203 | 711 | 1017 | 360 | 670 | 1020 | 310 | 660 | 1115 | 660 | 1030 | 769 | 1349 | 12-M20 |
| 12" | 300 | 76 | 483 | 241 | 810 | 1171 | 400 | 820 | 1220 | 310 | 765 | 1275 | 765 | 1180 | 869 | 1454 | 12-M22 |
| 14" | 350 | 76 | 533 | 266.5 | 936 | 1328 | 400 | 900 | 1375 | 460 | 873 | 1518 | 873 | 1285 | 968 | 1552 | 12-M24 |
| 16" | 400 | 89 | 597 | 298.5 | 1130 | 1530 | 400 | 1020 | 1560 | 460 | 973 | 1668 | 973 | 1390 | 1072 | 1657 | 16-M24 |
| 18" | 450 | 89 | 635 | 317.5 | 1225 | 1709 | 530 | 1150 | 1720 | 460 | 1098 | 1780 | 1098 | 1500 | 1205 | 1805 | 16-M30 |
| 20" | 500 | 114 | 698 | 349 | 1368 | 1911 | 530 | 1250 | 1870 | 460 | 1223 | 2148 | 1223 | 1600 | 1318 | 1918 | 20-M30 |
| 24" | 600 | 114 | 813 | 406.5 | 1549 | 2171 | 600 | 1500 | 2220 | 460 | 1423 | 2403 | - | - | 1525 | 2223 | 20-M33 |
| 28" | 700 | 127 | 928 | 464 | 1700 | 2420 | 600 | 1750 | 2570 | 460 | 1565 | 2545 | - | - | 1763 | 2846 | 28-M33 |
| 32" | 800 | 127 | 1045 | 522.5 | 1841 | 2692 | 680 | 2000 | 3030 | 460 | 1780 | 2854 | - | - | 1948 | 3031 | 28-M39 |
| 36" | 900 | 154 | 1168 | 585 | 2286 | 3276 | 680 | 2300 | 3430 | 600 | 1985 | 3203 | - | - | 2157 | 3240 | 32-M39 |
| 40" | 1000 | 165 | 1283 | 642 | - | - | - | 2500 | 3470 | 600 | 2215 | 3485 | - | - | 2350 | 3431 | 36-M39 |
| 48" | 1200 | 190 | 1492 | 748 | - | - | - | 2800 | 4230 | 600 | - | - | - | - | 3025 | 4330 | 44-M39 |
| 56" | 1400 | 190 | 1715 | 858 | - | - | - | 3120 | 4520 | 600 | - | - | - | - | - | - | 48-M45 |
| 64" | 1600 | 318 | 2035 | 1018 | - | - | - | 3730 | 5330 | 600 | - | - | - | - | - | - | 52-M45 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Other material on request / Otros materiales bajo petición.**
- **Larger diameters on request / Diámetros superiores bajo petición.**

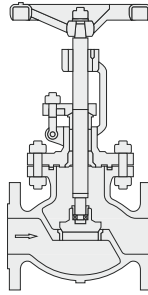
UNITS / Unidades mm



GLOBE VALVE

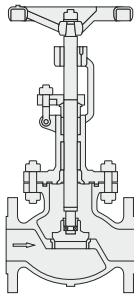
Válvula de Globo





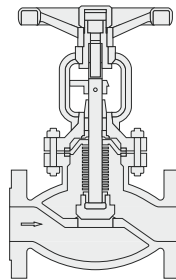
BOLTED BONNET
Bonete atornillado

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 3BB015 | 2" - 16" | 56 |
| 300 | 3BB030 | 2" - 12" | 57 |
| 600 | 3BB060 | 2" - 12" | 58 |
| 900 | 3BB090 | 2" - 10" | 59 |
| 1500 | 3BB150 | 2" - 8" | 60 |



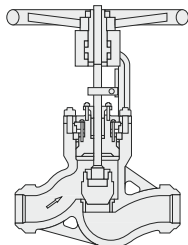
CRYOGENIC - EXTENDED BONNET
Criogénica - Bonete extendido

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 3CE015 | 2" - 16" | 61 |
| 300 | 3CE030 | 2" - 12" | 62 |
| 600 | 3CE060 | 2" - 12" | 63 |
| 900 | 3CE090 | 2" - 10" | 64 |
| 1500 | 3CE150 | 2" - 12" | 65 |



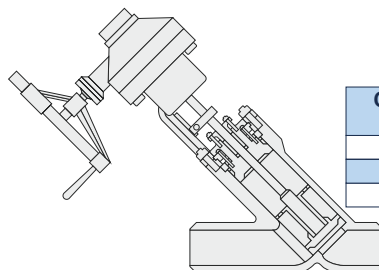
BELLOW SEAL
Fuelle

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 3BS015 | ½" - 14" | 66 |
| 300 | 3BS030 | ½" - 14" | 67 |
| 600 | 3BS060 | ½" - 14" | 68 |
| 900 | 3BS090 | 2" - 12" | 69 |
| 1500 | 3BS150 | 2" - 12" | 70 |



PRESSURE SEAL
Alta presión

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 900 | 3PS090 | 2" - 8" | 71 |
| 1500 | 3PS150 | 2" - 8" | 72 |
| 2500 | 3PS250 | 2" - 6" | 73 |

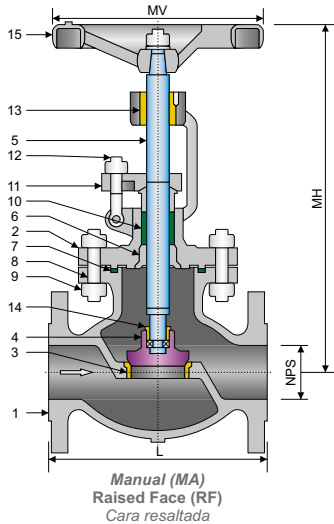


PRESSURE SEAL - Y TYPE
Alta presión - Tipo Y

| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 900 | 3PY090 | 2 ½" - 24" | 74 |
| 1500 | 3PY150 | 2 ½" - 24" | 75 |
| 2500 | 3PY250 | 2 ½" - 24" | 76 |

Fig. 3BB015

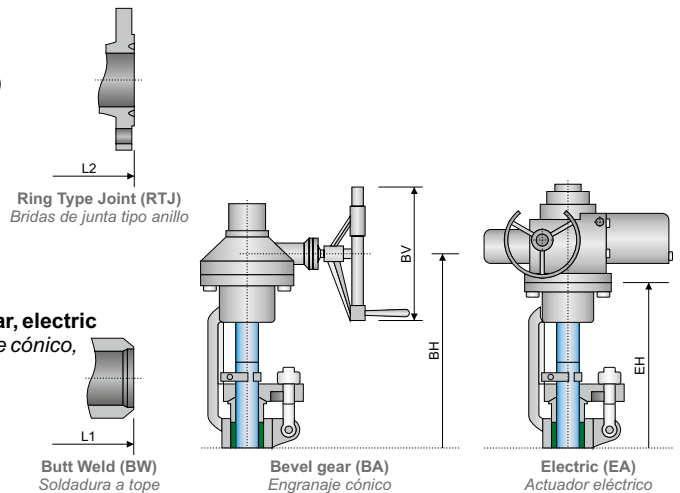
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Renewable seats**
Asientos renovables
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Yoke integral with bonnet**
Yugo integral con bonete
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | MSS SP-25 | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A350 - LF2 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tomillos Ojo</i> | A103 - B | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

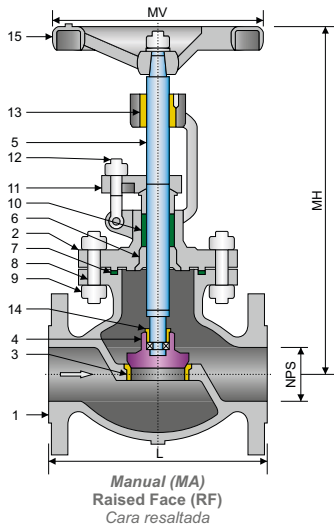
CLASS / Clase 150 (NPS 2" - 16")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | | EA |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|------|
| | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 203 | 216 | 310 | 200 | - | - | 300 |
| 2 1/2" | 65 | 216 | 229 | 345 | 240 | - | - | 360 |
| 3" | 80 | 241 | 254 | 365 | 240 | - | - | 390 |
| 4" | 100 | 292 | 305 | 405 | 280 | - | - | 445 |
| 6" | 150 | 406 | 419 | 505 | 350 | 520 | 460 | 490 |
| 8" | 200 | 495 | 508 | 600 | 400 | 600 | 460 | 580 |
| 10" | 250 | 622 | 635 | 840 | 500 | 850 | 460 | 830 |
| 12" | 300 | 698 | 711 | 940 | 600 | 980 | 530 | 920 |
| 14" | 350 | 787 | 800 | 1040 | 600 | 1080 | 530 | 980 |
| 16" | 400 | 914 | 927 | 1230 | 700 | 1300 | 600 | 1140 |

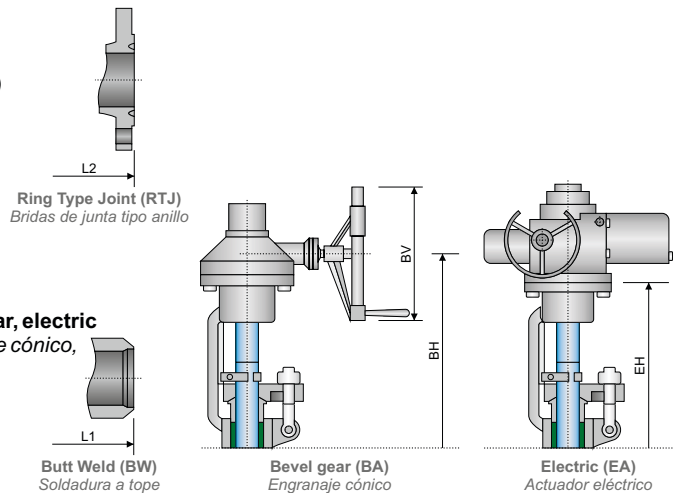
Notes / *Notas:*

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Renewable seats**
Asientos renovables
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Yoke integral with bonnet**
Yugo integral con bonete
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A350 - LF2 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tomillos Ojo</i> | A103 - B | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | | EA |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|-----|
| | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 267 | 283 | 335 | 220 | - | - | 325 |
| 2 1/2" | 65 | 292 | 308 | 390 | 280 | - | - | 400 |
| 3" | 80 | 318 | 334 | 410 | 280 | - | - | 430 |
| 4" | 100 | 356 | 372 | 470 | 350 | - | - | 500 |
| 6" | 150 | 444 | 460 | 590 | 400 | 610 | 460 | 565 |
| 8" | 200 | 559 | 575 | 700 | 500 | 710 | 460 | 735 |
| 10" | 250 | 622 | 638 | 980 | 600 | 995 | 530 | 840 |
| 12" | 300 | 711 | 727 | 1035 | 600 | 1055 | 530 | 950 |

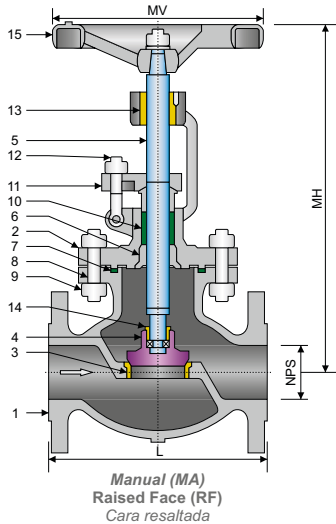
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 3BB060

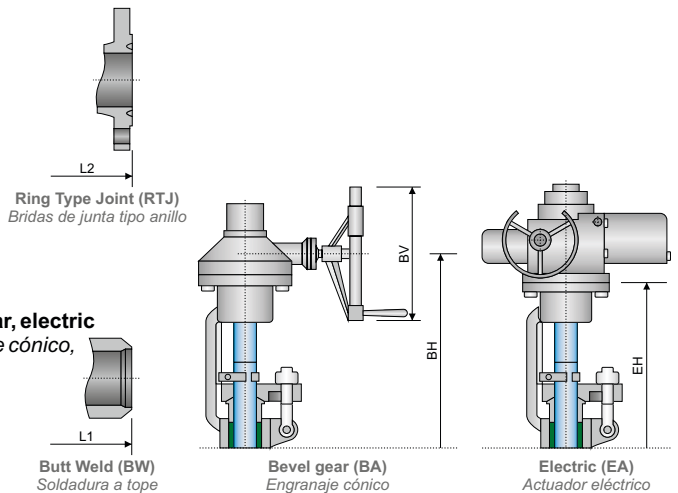
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Renewable seats**
Asientos renovables
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Yoke integral with bonnet**
Yugo integral con bonete
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A350 - LF2 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tomillos Ojo</i> | A103 - B | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

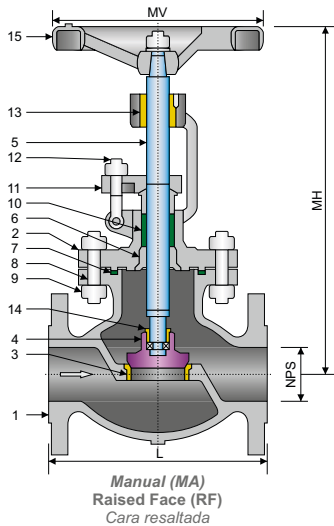
CLASS / Clase 600 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | | EA |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|-----|
| | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 292 | 295 | 355 | 280 | - | - | 335 |
| 2 1/2" | 65 | 330 | 333 | 410 | 280 | - | - | 395 |
| 3" | 80 | 356 | 359 | 430 | 350 | - | - | 425 |
| 4" | 100 | 432 | 435 | 490 | 350 | 510 | 460 | 480 |
| 6" | 150 | 559 | 562 | 610 | 400 | 630 | 530 | 585 |
| 8" | 200 | 660 | 663 | 720 | 500 | 730 | 530 | 735 |
| 10" | 250 | 787 | 790 | 1000 | 600 | 1025 | 600 | 900 |
| 12" | 300 | 838 | 841 | 1050 | 600 | 1080 | 600 | 980 |

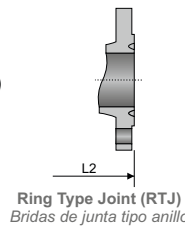
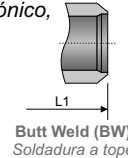
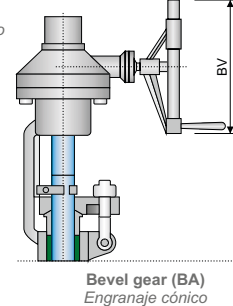
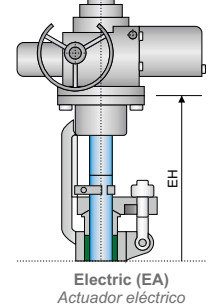
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Renewable seats**
Asientos renovables
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Yoke integral with bonnet**
Yugo integral con bonete
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


Ring Type Joint (RTJ)
Bridas de junta tipo anillo

Butt Weld (BW)
Soldadura a tope

Bevel gear (BA)
Engranaje cónico

Electric (EA)
Actuador eléctrico
SPECIFICATIONS / Especificaciones
BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | MSS SP-25 | 2" - 10" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A350 - LF2 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tomillos Ojo</i> | A103 - B | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 10")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | | EA |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|------|
| | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 368 | 371 | 380 | 280 | - | - | 355 |
| 2 1/2" | 65 | 419 | 422 | 435 | 350 | - | - | 415 |
| 3" | 80 | 381 | 384 | 470 | 400 | 485 | 460 | 485 |
| 4" | 100 | 457 | 460 | 515 | 450 | 535 | 460 | 520 |
| 6" | 150 | 610 | 613 | 635 | 500 | 650 | 530 | 630 |
| 8" | 200 | 737 | 740 | 760 | 600 | 770 | 530 | 760 |
| 10" | 250 | 838 | 841 | 1030 | 600 | 1050 | 600 | 1000 |

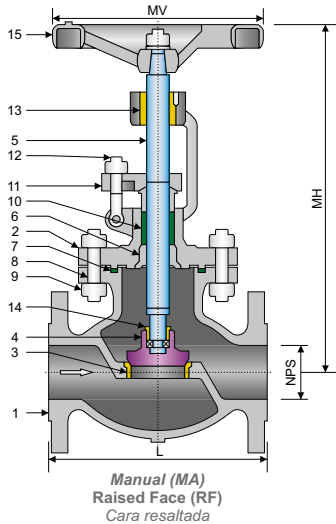
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 3BB150

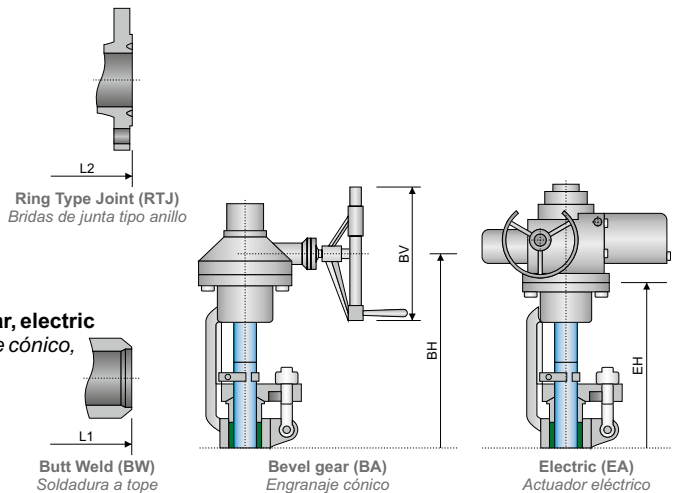
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Renewable seats**
Asientos renovables
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Yoke integral with bonnet**
Yugo integral con bonete
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | MSS SP-25 | 2" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A350 - LF2 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tomillos Ojo</i> | A103 - B | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F6A | A182 - F6A | A182 - F304 / A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

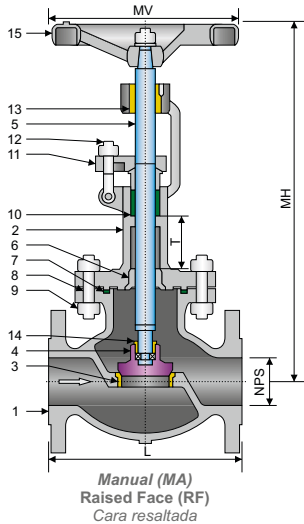
CLASS / Clase 1500 (NPS 2" - 8")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | | EA |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|------|
| | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 368 | 371 | 560 | 320 | - | - | 500 |
| 2 1/2" | 65 | 419 | 422 | 590 | 400 | - | - | 525 |
| 3" | 80 | 470 | 473 | 750 | 450 | 750 | 460 | 720 |
| 4" | 100 | 546 | 549 | 915 | 500 | 910 | 530 | 885 |
| 6" | 150 | 705 | 711 | 1235 | 600 | 1230 | 530 | 1200 |
| 8" | 200 | 832 | 841 | 1650 | 700 | 1660 | 600 | 1615 |

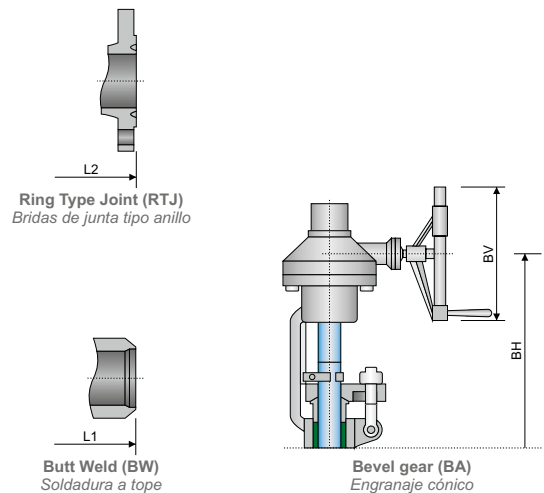
Notes / *Notas:*

UNITS / Unidades mm

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Renewable seat rings**
Asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 | ASME B16.10 | ASME B16.5 | ASME B16.25 | BS 6364 | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F304 | A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tornillos Ojo</i> | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F304 | A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

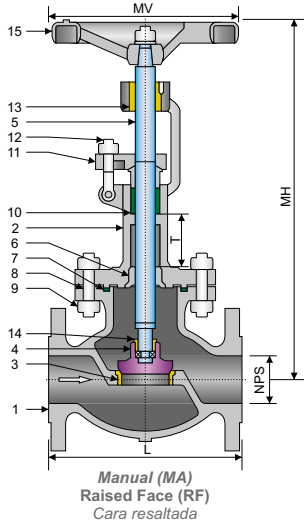
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 2" - 16")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 203 | 216 | 310 | 200 | - | - |
| 2 1/2" | 65 | 216 | 229 | 345 | 240 | - | - |
| 3" | 80 | 241 | 254 | 365 | 240 | - | - |
| 4" | 100 | 292 | 305 | 405 | 280 | - | - |
| 6" | 150 | 406 | 419 | 505 | 350 | 520 | 460 |
| 8" | 200 | 495 | 508 | 600 | 400 | 600 | 460 |
| 10" | 250 | 622 | 635 | 840 | 500 | 850 | 460 |
| 12" | 300 | 698 | 711 | 940 | 600 | 980 | 530 |
| 14" | 350 | 787 | 800 | 1040 | 600 | 1080 | 530 |
| 16" | 400 | 914 | 927 | 1230 | 700 | 1300 | 600 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **According to the criteria, the minimum extended length T of packing part should be 250mm / De acuerdo con el criterio, la longitud mínima de T debe ser de 250mm.**

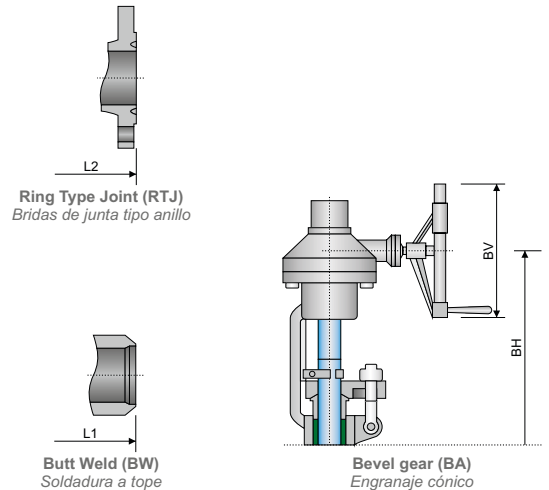
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Renewable seat rings**
Asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 | ASME B16.10 | ASME B16.5 | ASME B16.25 | BS 6364 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F304 | A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tornillos Ojo</i> | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F304 | A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

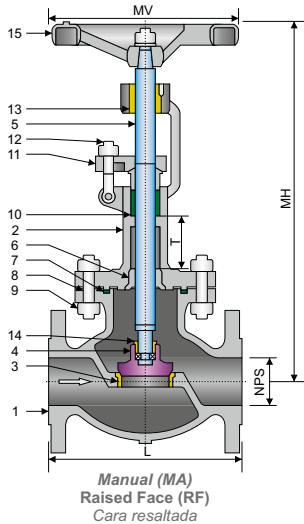
CLASS / Clase 300 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 267 | 283 | 335 | 220 | - | - |
| 2 1/2" | 65 | 292 | 308 | 390 | 280 | - | - |
| 3" | 80 | 318 | 334 | 410 | 280 | - | - |
| 4" | 100 | 356 | 372 | 470 | 350 | - | - |
| 6" | 150 | 444 | 460 | 590 | 400 | 610 | 460 |
| 8" | 200 | 559 | 575 | 700 | 500 | 710 | 460 |
| 10" | 250 | 622 | 638 | 980 | 600 | 995 | 530 |
| 12" | 300 | 711 | 727 | 1035 | 600 | 1055 | 530 |

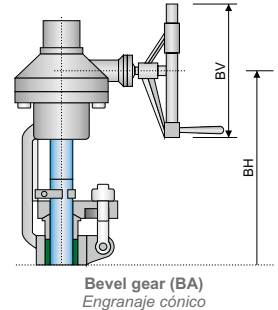
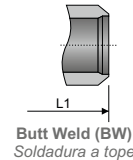
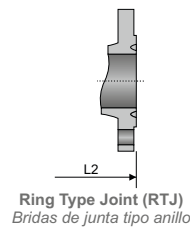
Notes / *Notas:*

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **According to the criteria, the minimum extended length T of packing part should be 250mm / De acuerdo con el criterio, la longitud mínima de T debe ser de 250mm.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Renewable seat rings**
Asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 | ASME B16.10 | ASME B16.5 | ASME B16.25 | BS 6364 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F304 | A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tornillos Ojo</i> | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F304 | A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

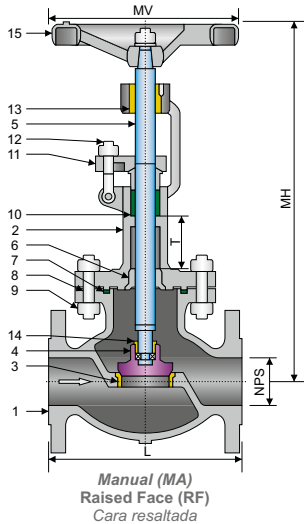
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 292 | 295 | 355 | 280 | - | - |
| 2 1/2" | 65 | 330 | 333 | 410 | 280 | - | - |
| 3" | 80 | 356 | 359 | 430 | 350 | - | - |
| 4" | 100 | 432 | 435 | 490 | 350 | 510 | 460 |
| 6" | 150 | 559 | 562 | 610 | 400 | 630 | 530 |
| 8" | 200 | 660 | 663 | 720 | 500 | 730 | 530 |
| 10" | 250 | 787 | 790 | 1000 | 600 | 1025 | 600 |
| 12" | 300 | 838 | 841 | 1050 | 600 | 1080 | 600 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **According to the criteria, the minimum extended length T of packing part should be 250mm / De acuerdo con el criterio, la longitud mínima de T debe ser de 250mm.**

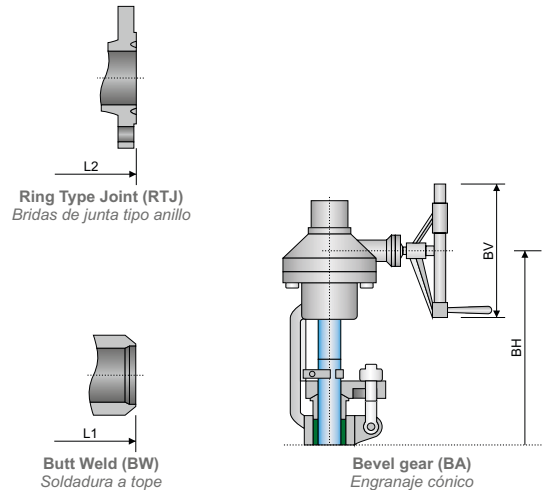
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Renewable seat rings**
Asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico



SPECIFICATIONS / Especificaciones

BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 6364 | ASME B16.10 | ASME B16.5 | ASME B16.25 | BS 6364 | 2" - 10" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F304 | A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tornillos Ojo</i> | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F304 | A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

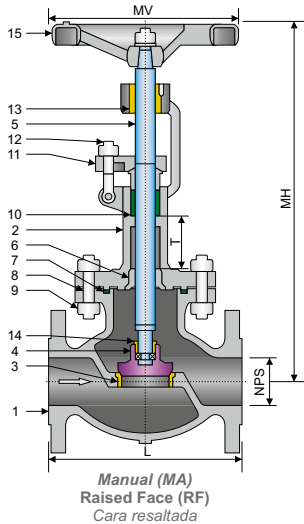
CLASS / Clase 900 (NPS 2" - 10")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MA | | BA | |
|---------------------|--------------------|--------------------------|------------------|------|-----|------|-----|
| | | | | MH | MV | BH | BV |
| 2" | 50 | 368 | 371 | 380 | 280 | - | - |
| 2 1/2" | 65 | 419 | 422 | 435 | 350 | - | - |
| 3" | 80 | 381 | 384 | 470 | 400 | 485 | 460 |
| 4" | 100 | 457 | 460 | 515 | 450 | 535 | 460 |
| 6" | 150 | 610 | 613 | 635 | 500 | 650 | 530 |
| 8" | 200 | 737 | 740 | 760 | 600 | 770 | 530 |
| 10" | 250 | 838 | 841 | 1030 | 600 | 1050 | 600 |

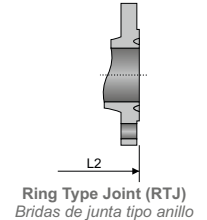
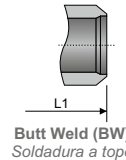
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **According to the criteria, the minimum extended length T of packing part should be 250mm / De acuerdo con el criterio, la longitud mínima de T debe ser de 250mm.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Risings stem and handwheel**
Vástago y volante ascendentes
- **Swivel plug disc**
Disco giratorio
- **Renewable seat rings**
Asiento renovables
- **Operated: handwheel, bevel gear, electric**
Accionamiento: volante, engranaje cónico, actuador eléctrico


SPECIFICATIONS / Especificaciones
BS

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | |
| BS 1873 | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F304 | A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F304 | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A320 - L7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 4 | A194 - 8 |
| 10 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 11 | Gland Flange / <i>Brida Prensaestopa</i> | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 12 | Eye Bolts / <i>Tornillos Ojo</i> | A307 - B | A193 - B8 |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Disc Nut / <i>Tuerca Disco</i> | A182 - F304 | A182 - F316 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | MH | MV |
|---------------------|--------------------|--------------------------|------------------|------|------|
| 2" | 50 | 368 | 371 | 775 | 250 |
| 2 1/2" | 65 | 419 | 422 | 890 | 250 |
| 3" | 80 | 470 | 473 | 1070 | 400 |
| 4" | 100 | 546 | 549 | 1140 | 500 |
| 6" | 150 | 705 | 711 | 1273 | 900 |
| 8" | 200 | 832 | 842 | 1343 | 1000 |
| 10" | 250 | 991 | 1000 | 1970 | 1000 |
| 12" | 300 | 1130 | 1146 | 2050 | 1000 |

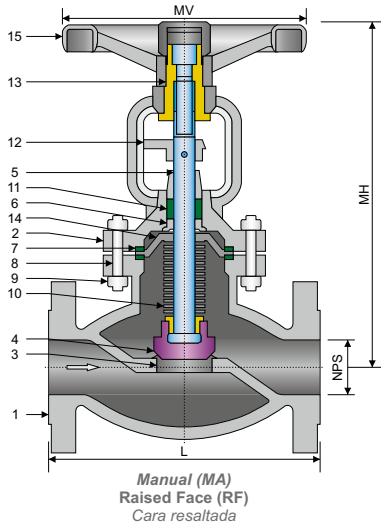
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **According to the criteria, the minimum extended length T of packing part should be 250mm / De acuerdo con el criterio, la longitud mínima de T debe ser de 250mm.**

UNITS / Unidades mm

Fig. 3BS015

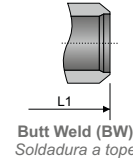
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seats**
Asiento renovables



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | ½" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 10 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | S.S. 304 - 316 / <i>Acero Inoxidable 304 - 316</i> |
| 11 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 12 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Bellow Flange / <i>Brida Fuelle</i> | A182 - F321 | A182 - F321 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

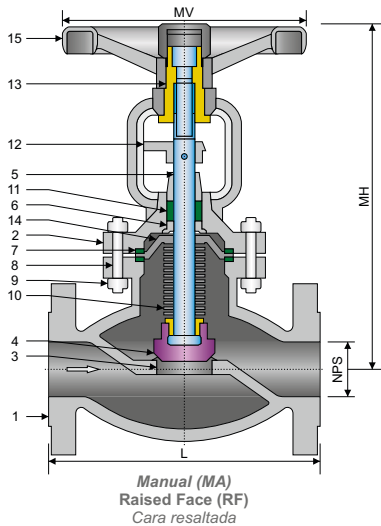
CLASS / Clase 150 (NPS ½" - 14")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | MH | MV | W / P <i>(Kg.)</i> |
|---------------------|--------------------|--------------------------|-----|-----|-----------------------|
| ½" | 15 | 108 | 241 | 120 | 4 |
| ¾" | 20 | 117 | 241 | 140 | 5 |
| 1" | 25 | 127 | 241 | 140 | 6 |
| 1 ¼" | 32 | 140 | 280 | 180 | 10 |
| 1 ½" | 40 | 165 | 286 | 200 | 13 |
| 2" | 50 | 203 | 368 | 220 | 18 |
| 2 ½" | 65 | 216 | 387 | 260 | 30 |
| 3" | 80 | 241 | 400 | 280 | 35 |
| 4" | 100 | 292 | 457 | 300 | 55 |
| 5" | 125 | 356 | 520 | 320 | 75 |
| 6" | 150 | 406 | 609 | 340 | 104 |
| 8" | 200 | 495 | 698 | 400 | 200 |
| 10" | 250 | 622 | 762 | 450 | 300 |
| 12" | 300 | 698 | 876 | 450 | 390 |
| 14" | 350 | 787 | 990 | 450 | 610 |

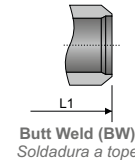
Notes / *Notas:*

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seats**
Asiento renovables


SPECIFICATIONS / Especificaciones
BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | ½" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 10 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | S.S. 304 - 316 / <i>Acero Inoxidable 304 - 316</i> |
| 11 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 12 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Bellow Flange / <i>Brida Fuelle</i> | A182 - F321 | A182 - F321 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS ½" - 14")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | MH | MV | W / P (Kg.) |
|--------------|-------------|-------------------|------|-----|-------------|
| ½" | 15 | 152 | 241 | 120 | 6 |
| ¾" | 20 | 178 | 241 | 140 | 7 |
| 1" | 25 | 203 | 283 | 140 | 10 |
| 1 ¼" | 32 | 216 | 320 | 180 | 15 |
| 1 ½" | 40 | 229 | 322 | 200 | 20 |
| 2" | 50 | 267 | 399 | 220 | 25 |
| 2 ½" | 65 | 292 | 438 | 280 | 30 |
| 3" | 80 | 318 | 450 | 280 | 52 |
| 4" | 100 | 356 | 584 | 300 | 88 |
| 5" | 125 | 406 | 610 | 320 | 115 |
| 6" | 150 | 444 | 660 | 340 | 160 |
| 8" | 200 | 559 | 762 | 400 | 259 |
| 10" | 250 | 622 | 850 | 450 | 420 |
| 12" | 300 | 711 | 1085 | 450 | 595 |
| 14" | 350 | 762 | 1187 | 450 | 876 |

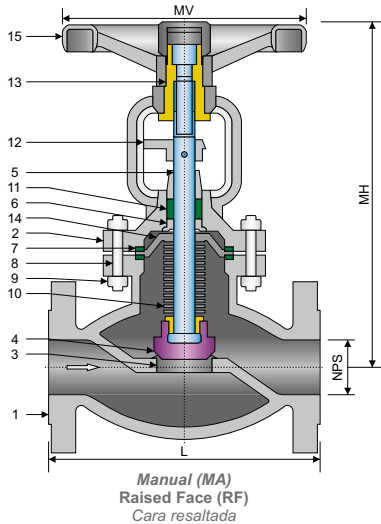
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 3BS060

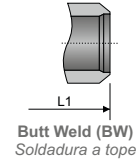
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seats**
Asiento renovables



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | ½" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 10 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | S.S. 304 - 316 / <i>Acero Inoxidable 304 - 316</i> |
| 11 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 12 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Bellow Flange / <i>Brida Fuelle</i> | A182 - F321 | A182 - F321 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

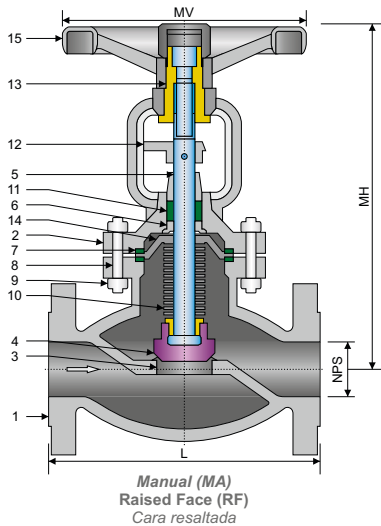
CLASS / Clase 600 (NPS ½" - 14")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | MH | MV | W / P (Kg.) |
|---------------------|--------------------|-------------------|------|-----|-------------|
| ½" | 15 | 165 | 240 | 140 | 7 |
| ¾" | 20 | 190 | 280 | 140 | 10 |
| 1" | 25 | 216 | 320 | 160 | 16 |
| 1 ¼" | 32 | 229 | 320 | 160 | 22 |
| 1 ½" | 40 | 241 | 390 | 180 | 29 |
| 2" | 50 | 292 | 430 | 180 | 35 |
| 2 ½" | 65 | 330 | 480 | 250 | 50 |
| 3" | 80 | 356 | 508 | 250 | 90 |
| 4" | 100 | 432 | 635 | 350 | 150 |
| 5" | 125 | 508 | 750 | 400 | 230 |
| 6" | 150 | 559 | 914 | 450 | 300 |
| 8" | 200 | 660 | 1016 | 500 | 510 |
| 10" | 250 | 787 | 1219 | 600 | 850 |
| 12" | 300 | 838 | 1330 | 720 | 1120 |
| 14" | 350 | 889 | 1560 | 760 | 1400 |

Notes / *Notas:*

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

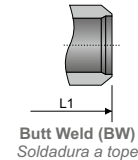
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seats**
Asiento renovables



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 10 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | S.S. 304 - 316 / <i>Acero Inoxidable 304 - 316</i> |
| 11 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 12 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Bellow Flange / <i>Brida Fuelle</i> | A182 - F321 | A182 - F321 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

CLASS / Clase 900 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | MH | MV |
|---------------------|--------------------|--------------------------|------|------|
| 2" | 50 | 368 | 590 | 250 |
| 2 1/2" | 65 | 419 | 710 | 250 |
| 3" | 80 | 381 | 610 | 350 |
| 4" | 100 | 457 | 750 | 500 |
| 5" | 125 | 559 | 890 | 650 |
| 6" | 150 | 610 | 1000 | 700 |
| 8" | 200 | 737 | 1170 | 900 |
| 10" | 250 | 838 | 1540 | 1000 |
| 12" | 300 | 965 | 1720 | 1000 |

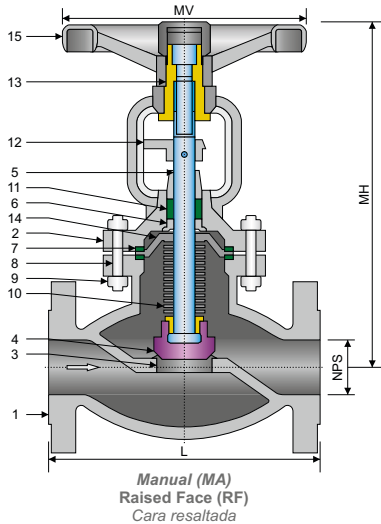
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 3BS150

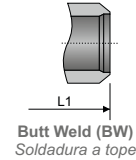
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Outside screw and yoke (OS&Y)**
Husillo exterior ascendente
- **Bolted bonnet**
Bonete atornillado
- **Rising stem and non-rising handwheel**
Vástago ascendente y volante no ascendente
- **Renewable seats**
Asiento renovables



SPECIFICATIONS / Especificaciones

BS / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc Seat / <i>Disco</i> | A105 | A182 - F304 / A182 - F316 |
| 5 | Stem / <i>Vástago</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 6 | Backseat / <i>Asiento trasero</i> | A182 - F6A | A182 - F304 / A182 - F316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 |
| 10 | Bellow / <i>Fuelle</i> | Stainless Steel 304 / <i>Acero Inoxidable 304</i> | S.S. 304 - 316 / <i>Acero Inoxidable 304 - 316</i> |
| 11 | Packing / <i>Empaquetadura</i> | Flexible Graphite / <i>Grafito Flexible</i> | |
| 12 | Gland Flange / <i>Brida Prensaestopa</i> | A216 - WCB | A351 - CF8 / A351 - CF8M |
| 13 | Yoke Sleeve / <i>Tuerca Yugo</i> | Aluminum Bronze C95500 / <i>Bronce Aluminio C95500</i> | |
| 14 | Bellow Flange / <i>Brida Fuelle</i> | A182 - F321 | A182 - F321 |
| 15 | Handwheel / <i>Volante</i> | Malleable Iron A47 / <i>Hierro Maleable A47</i> | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

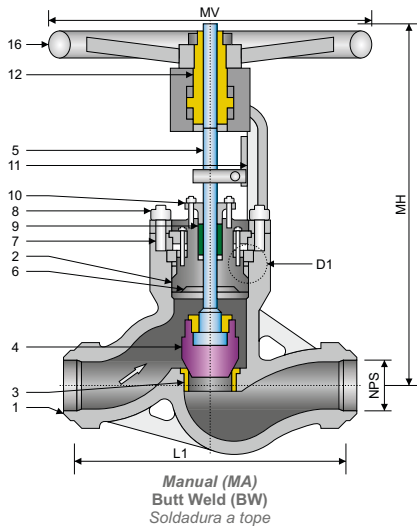
CLASS / Clase 1500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | MH | MV |
|---------------------|--------------------|--------------------------|------|------|
| 2" | 50 | 368 | 590 | 250 |
| 2 1/2" | 65 | 419 | 710 | 250 |
| 3" | 80 | 470 | 790 | 400 |
| 4" | 100 | 546 | 860 | 500 |
| 5" | 125 | 673 | 930 | 700 |
| 6" | 150 | 705 | 1000 | 900 |
| 8" | 200 | 832 | 1100 | 1000 |
| 10" | 250 | 991 | 1720 | 1000 |
| 12" | 300 | 1130 | 1810 | 1000 |

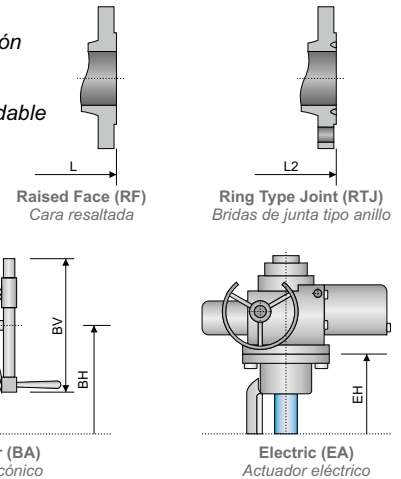
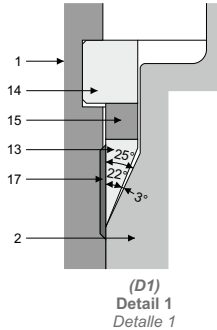
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 13 Pressure Seal Gasket / Junta de alta presión
- 14 Segmental Ring / Anillo segmentado
- 15 Spacer Ring / Anillo separador
- 17 Stainless Steel Inlay / Inlay de acero inoxidable


SPECIFICATIONS / Especificaciones
ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | 2" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|-----------------------------|---------------|
| | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS 2" - 8")

| NPS (in.) | DN (mm.) | BW L1 | RF L | RTJ L2 | MA | | BA | | EA |
|--------------|-------------|----------|---------|-----------|------|-----|------|-----|------|
| | | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 216 | 368 | 371 | 557 | 400 | 830 | 310 | 1030 |
| 2 1/2" | 65 | 254 | 419 | 422 | 557 | 400 | 830 | 310 | 1030 |
| 3" | 80 | 305 | 381 | 384 | 557 | 400 | 830 | 460 | 1030 |
| 4" | 100 | 356 | 457 | 480 | 685 | 500 | 830 | 460 | 1030 |
| 5" | 125 | 432 | 559 | 562 | 750 | 600 | 910 | 460 | 1125 |
| 6" | 150 | 508 | 610 | 613 | 925 | 700 | 1400 | 530 | 1681 |
| 8" | 200 | 660 | 737 | 740 | 1100 | 700 | 1520 | 530 | 1860 |

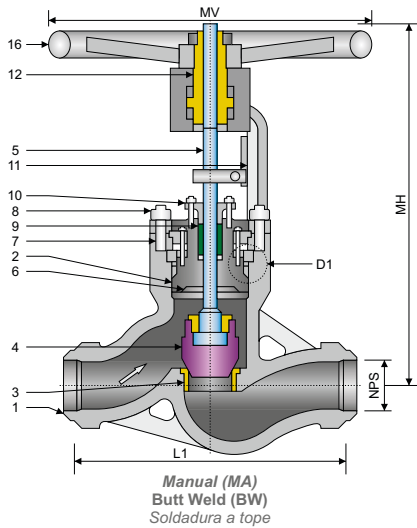
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

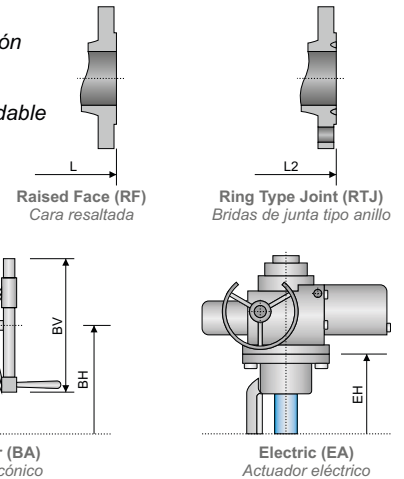
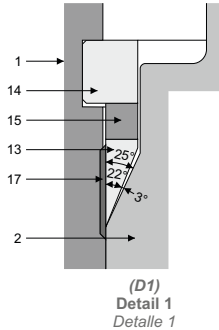
UNITS / Unidades mm

Fig. 3PS150

ANSI



- 1 Body / Cuerpo**
- 2 Bonnet / Bonete**
- 13 Pressure Seal Gasket / Junta de alta presión**
- 14 Segmental Ring / Anillo segmentado**
- 15 Spacer Ring / Anillo separador**
- 17 Stainless Steel Inlay / Inlay de acero inoxidable**



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | 2" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|--|-----------------------------|---------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite 304 / Grafito Flexible 304 | | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

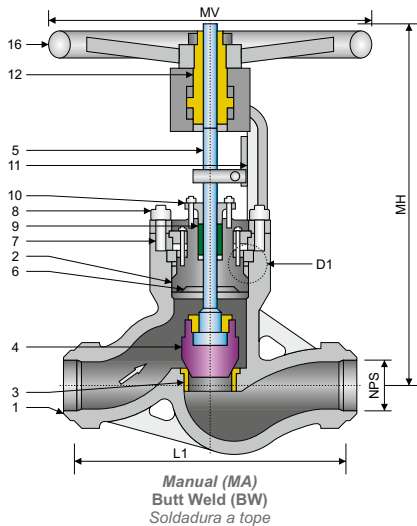
CLASS / Clase 1500 (NPS 2" - 8")

| NPS (in.) | DN (mm.) | BW L1 | RF L | RTJ L2 | MA | | BA | | EA |
|--------------|-------------|----------|---------|-----------|------|-----|------|-----|------|
| | | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 216 | 368 | 371 | 557 | 400 | 830 | 310 | 1030 |
| 2 1/2" | 65 | 254 | 419 | 422 | 557 | 400 | 830 | 310 | 1030 |
| 3" | 80 | 305 | 470 | 473 | 557 | 400 | 830 | 460 | 1030 |
| 4" | 100 | 406 | 546 | 549 | 685 | 500 | 830 | 460 | 1030 |
| 5" | 125 | 483 | 673 | 676 | 750 | 600 | 910 | 460 | 1425 |
| 6" | 150 | 559 | 705 | 711 | 925 | 700 | 1400 | 530 | 1681 |
| 8" | 200 | 711 | 832 | 842 | 1100 | 700 | 1520 | 530 | 1860 |

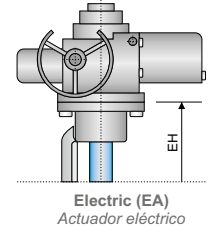
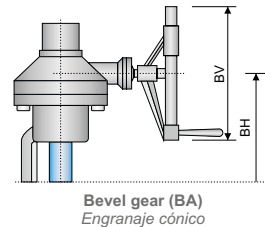
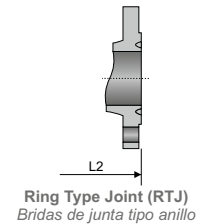
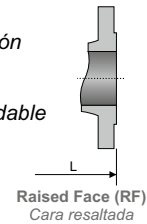
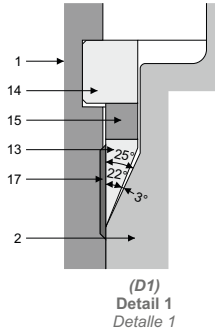
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 Body / Cuerpo**
- 2 Bonnet / Bonete**
- 13 Pressure Seal Gasket / Junta de alta presión**
- 14 Segmental Ring / Anillo segmentado**
- 15 Spacer Ring / Anillo separador**
- 17 Stainless Steel Inlay / Inlay de acero inoxidable**


SPECIFICATIONS / Especificaciones

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| BS 1873 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 ASME B16.34 | 2" - 6" |

ASME
MAIN PARTS MATERIAL / Material de las piezas principales

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|--|-----------------------------|---------------|
| | | | | | |
| 1 | Body / Cuerpo | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite 304 / Grafito Flexible 304 | | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | | |

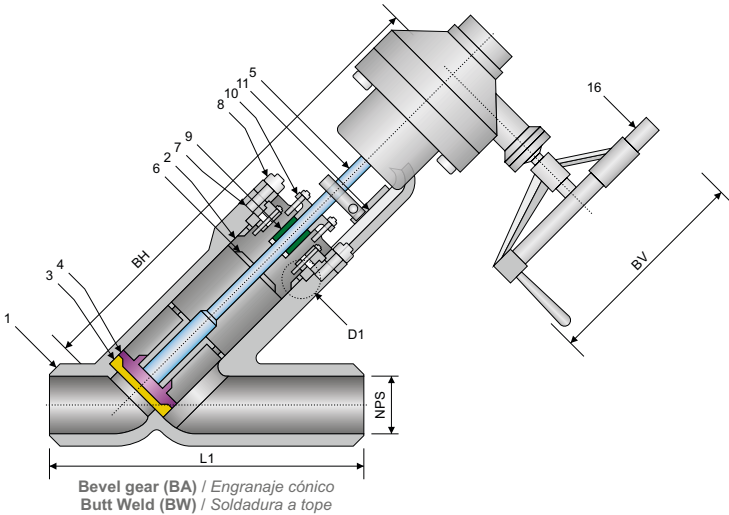
ASTM
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

| NPS (in.) | DN (mm.) | BW L1 | RF L | RTJ L2 | MA | | BA | | EA |
|--------------|-------------|----------|---------|-----------|-----|-----|------|-----|------|
| | | | | | MH | MV | BH | BV | EH |
| 2" | 50 | 279 | 451 | 454 | 557 | 400 | 830 | 310 | 1030 |
| 2 1/2" | 65 | 330 | 508 | 514 | 557 | 400 | 830 | 310 | 1030 |
| 3" | 80 | 368 | 578 | 584 | 557 | 400 | 830 | 460 | 1030 |
| 4" | 100 | 457 | 673 | 683 | 685 | 500 | 830 | 460 | 1030 |
| 5" | 125 | 533 | 794 | 807 | 750 | 600 | 910 | 460 | 1425 |
| 6" | 150 | 610 | 914 | 927 | 925 | 700 | 1400 | 530 | 1681 |

CLASS / Clase 2500 (NPS 2" - 6")
Notes / Notas:

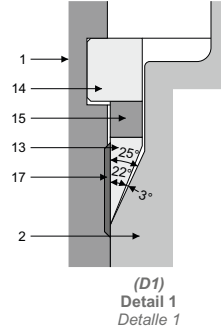
- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm

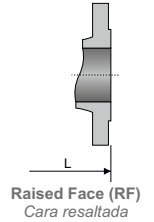


Bevel gear (BA) / Engranaje cónico
 Butt Weld (BW) / Soldadura a tope

- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 13 Pressure Seal Gasket / Junta de alta presión
- 14 Segmental Ring / Anillo segmentado
- 15 Spacer Ring / Anillo separador
- 17 Stainless Steel Inlay / Inlay de acero inoxidable



(D1)
Detail 1
Detalle 1



Raised Face (RF)
Cara resaltada

SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | ASME B16.34 | 2 1/2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|-----------------------------|---------------|
| | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

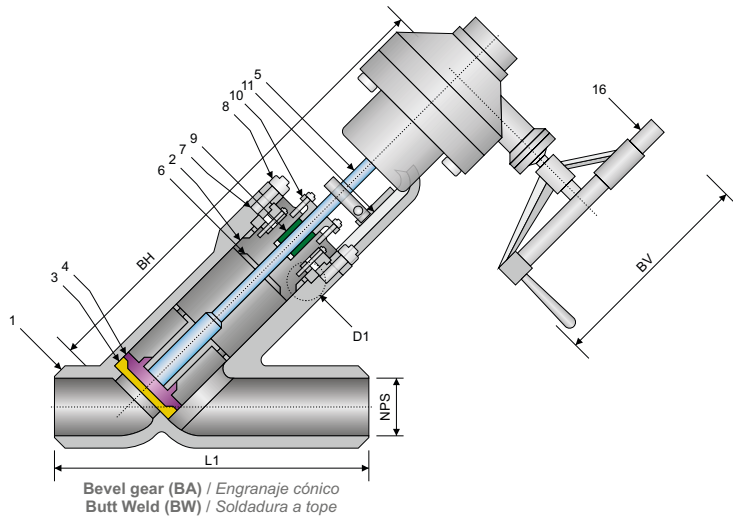
CLASS / Clase 900 (NPS 2 1/2" - 24")

| NPS (in.) | DN (mm.) | BW L1 | RF L | BA | |
|--------------|-------------|----------|---------|------|-----|
| | | | | BH | BV |
| 2 1/2" | 65 | 368 | 432 | 600 | 310 |
| 3" | 80 | 368 | 470 | 600 | 310 |
| 4" | 100 | 406 | 559 | 637 | 310 |
| 6" | 150 | 508 | 762 | 858 | 460 |
| 8" | 200 | 660 | 965 | 1078 | 460 |
| 10" | 250 | 787 | 1118 | 1225 | 530 |
| 12" | 300 | 914 | 1270 | 1519 | 530 |
| 14" | 350 | 1042 | 1295 | 1905 | 600 |
| 16" | 400 | 1372 | 1473 | 2083 | 600 |
| 18" | 450 | 1473 | - | 2286 | 600 |
| 20" | 500 | 1397 | - | 2616 | 600 |
| 24" | 600 | 1511 | - | 2794 | 600 |

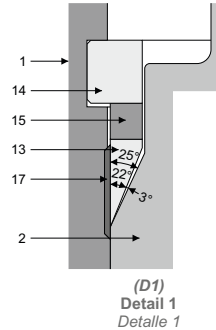
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 13 Pressure Seal Gasket / Junta de alta presión
- 14 Segmental Ring / Anillo segmentado
- 15 Spacer Ring / Anillo separador
- 17 Stainless Steel Inlay / Inlay de acero inoxidable


SPECIFICATIONS / Especificaciones
ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | ASME B16.34 | 2 1/2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|-----------------------------|---------------|
| | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

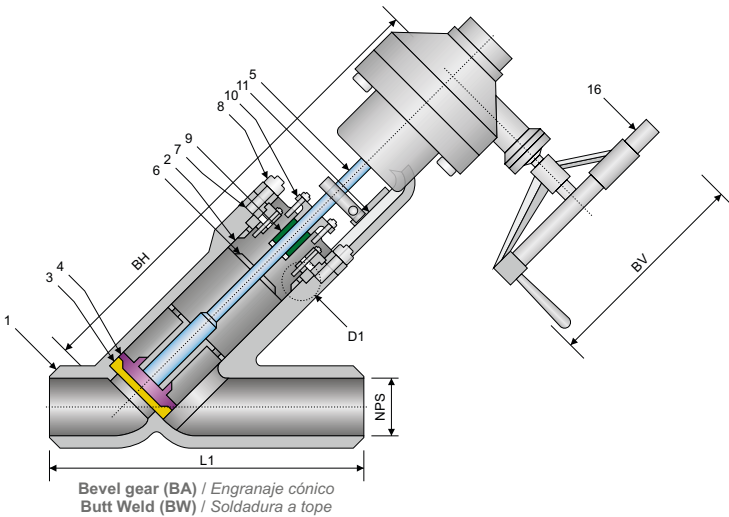
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2 1/2" - 24")

| NPS (in.) | DN (mm.) | BW L1 | BA | |
|--------------|-------------|----------|------|-----|
| | | | BH | BV |
| 2 1/2" | 65 | 368 | 660 | 310 |
| 3" | 80 | 368 | 660 | 310 |
| 4" | 100 | 406 | 660 | 310 |
| 6" | 150 | 705 | 965 | 460 |
| 8" | 200 | 762 | 1270 | 460 |
| 10" | 250 | 921 | 1473 | 530 |
| 12" | 300 | 1092 | 1600 | 530 |
| 14" | 350 | 1091 | 1956 | 600 |
| 16" | 400 | 1372 | 2159 | 600 |
| 18" | 450 | 1473 | 2260 | 600 |
| 20" | 500 | 1397 | 2465 | 600 |
| 24" | 600 | 1511 | 2920 | 600 |

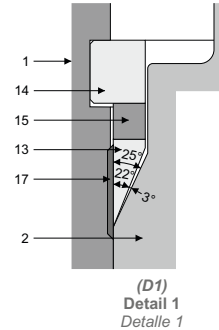
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



- 1 Body / Cuerpo
- 2 Bonnet / Bonete
- 13 Pressure Seal Gasket / Junta de alta presión
- 14 Segmental Ring / Anillo segmentado
- 15 Spacer Ring / Anillo separador
- 17 Stainless Steel Inlay / Inlay de acero inoxidable



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|---------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | ASME B16.34 | 2 1/2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero Aleado | |
|----|------------------------------------|--|-----------------------------|---------------|
| | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc Seat / Disco | A105 | A182 - F11 | A182 - F22 |
| 5 | Stem / Vástago | A182 - F6A | Cr - Mo - V | Cr - Mo - V |
| 6 | Backseat / Asiento trasero | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 7 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B16 |
| 8 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 7 | A194 - 7 |
| 9 | Packing / Empaquetadura | Flexible Graphite / Grafito Flexible | | |
| 10 | Gland Flange / Brida Prensaestopa | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 11 | Yoke / Yugo | A216 - WCB | A216 - WCB | A216 - WCB |
| 12 | Yoke Sleeve / Tuerca Yugo | Aluminum Bronze C95500 / Bronce Aluminio C95500 | | |
| 13 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Reinforced Graphite / Acero Inoxidable Grafito Reforzado (2) | | |
| 14 | Segmental Ring / Anillo segmentado | A182 - F6A | A182 - F6A | A182 - F6A |
| 15 | Spacer Ring / Anillo separador | A182 - F6A | A182 - F6A | A182 - F6A |
| 16 | Handwheel / Volante | Malleable Iron A47 / Hierro Maleable A47 | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

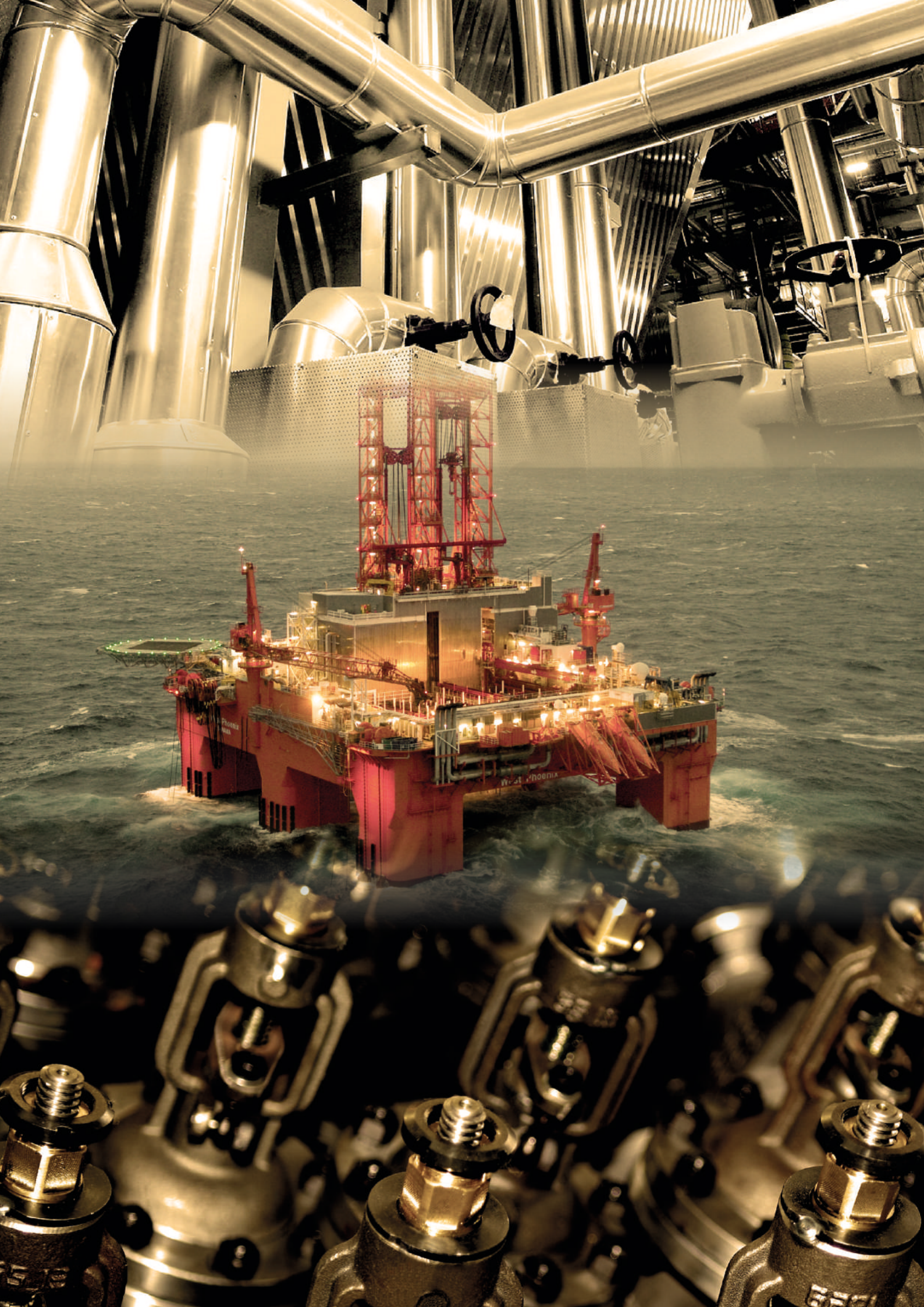
CLASS / Clase 2500 (NPS 2 1/2" - 24")

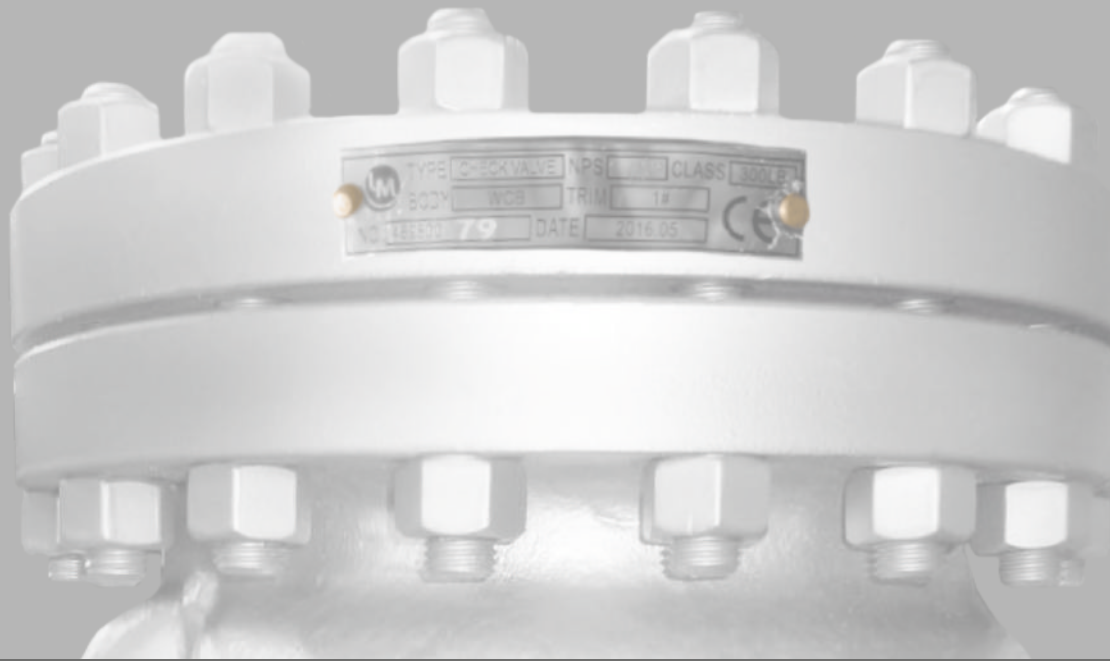
| NPS (in.) | DN (mm.) | BW L1 | BA | |
|--------------|-------------|----------|------|-----|
| | | | BH | BV |
| 2 1/2" | 65 | 368 | 660 | 310 |
| 3" | 80 | 368 | 660 | 310 |
| 4" | 100 | 457 | 660 | 310 |
| 6" | 150 | 610 | 965 | 460 |
| 8" | 200 | 762 | 1270 | 460 |
| 10" | 250 | 914 | 1473 | 530 |
| 12" | 300 | 1041 | 1600 | 530 |
| 14" | 350 | 1238 | 1956 | 600 |
| 16" | 400 | 1238 | 2159 | 600 |
| 18" | 450 | 1473 | 2260 | 600 |
| 20" | 500 | 1473 | 2465 | 600 |
| 24" | 600 | 1727 | 2920 | 600 |

Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Metal / Bajo petición: Metal.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm



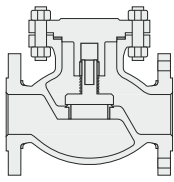


CHECK VALVE

Válvula de Retención

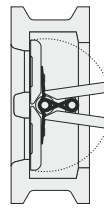


PISTON
Pistón



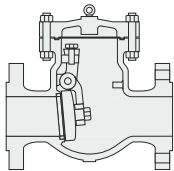
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 4PT015 | 2" - 12" | 80 |
| 300 | 4PT030 | 2" - 12" | 81 |
| 600 | 4PT060 | 2" - 12" | 82 |

WAFER - DUAL PLATE
Wafer - Plato doble



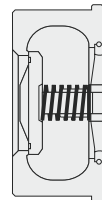
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 4WD015 | 2" - 48" | 102 |
| 300 | 4WD030 | 2" - 48" | 103 |
| 600 | 4WD060 | 2" - 24" | 104 |
| 900 | 4WD090 | 2" - 24" | 105 |
| 1500 | 4WD150 | 2" - 16" | 106 |
| 2500 | 4WD250 | 2" - 12" | 107 |

SWING
Clapeta



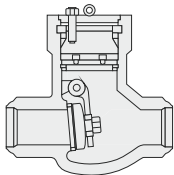
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 4SW015 | 2" - 36" | 83 |
| 300 | 4SW030 | 2" - 36" | 84 |
| 600 | 4SW060 | 2" - 24" | 85 |
| 900 | 4SW090 | 2" - 20" | 86 |
| 1500 | 4SW150 | 2" - 16" | 87 |
| 2500 | 4SW250 | 2" - 12" | 88 |

WAFER - PISTON
Wafer - Pistón



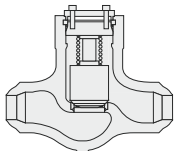
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 4WP015 | 1/2" - 8" | 108 |
| 300 | 4WP030 | 1/2" - 8" | 109 |
| 600 | 4WP060 | 1/2" - 8" | 110 |
| 900 | 4WP090 | 1/2" - 8" | 111 |

PRESSURE SEAL - SWING
Alta presión - Clapeta



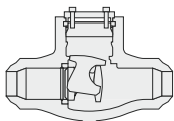
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 1500 | 4PS150 | 2 1/2" - 14" | 89 |
| 2500 | 4PS250 | 3" - 18" | 90 |

PRESSURE SEAL - PISTON
Alta presión - Pistón



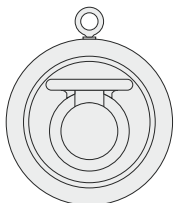
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 600 | 4PP060 | 2" - 16" | 91 |
| 900 | 4PP090 | 2" - 16" | 92 |
| 1500 | 4PP150 | 2" - 12" | 93 |
| 2500 | 4PP250 | 2" - 12" | 94 |

PRESSURE SEAL - TILTING DISC
Alta presión - Disco oblicuo

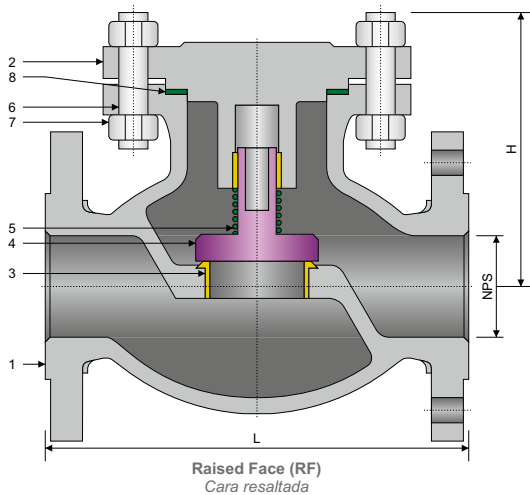


| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 600 | 4PD060 | 2" - 24" | 95 |
| 900 | 4PD090 | 2" - 24" | 96 |
| 1500 | 4PD150 | 2" - 24" | 97 |
| 2500 | 4PD250 | 2" - 12" | 98 |

WAFER - SWING SINGLE PLATE
Wafer - Clapeta de un plato



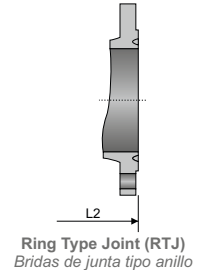
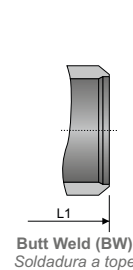
| CLASS <i>Clase</i> | FIGURE <i>Figura</i> | SIZES <i>Rango</i> | PAGE <i>Página</i> |
|-----------------------|-------------------------|-----------------------|-----------------------|
| 150 | 4WS015 | 2" - 20" | 99 |
| 300 | 4WS030 | 2" - 20" | 100 |
| 600 | 4WS060 | 2" - 20" | 101 |



STRUCTURE FEATURES

Características de la estructura

- **Bolted cover**
Tapa atornillada
- **Return spring**
Muelle de retorno
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 6 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 7 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 8 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

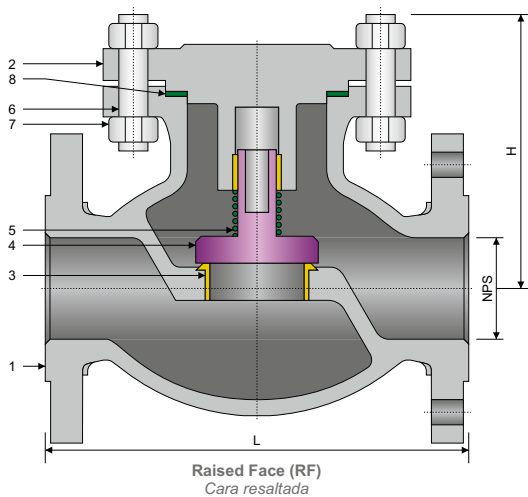
CLASS / Clase 150 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | H | W / P (Kg.) |
|---------------------|--------------------|--------------------------|------------------|-----|-------------|
| 2" | 50 | 203 | 216 | 140 | 15 |
| 2 1/2" | 65 | 216 | 229 | 162 | 22 |
| 3" | 80 | 241 | 254 | 168 | 28 |
| 4" | 100 | 292 | 305 | 194 | 42 |
| 6" | 150 | 406 | 419 | 226 | 75 |
| 8" | 200 | 495 | 508 | 250 | 118 |
| 10" | 250 | 622 | 635 | 275 | 194 |
| 12" | 300 | 698 | 711 | 332 | 320 |

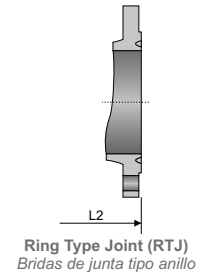
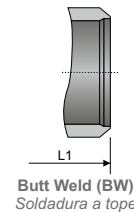
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Bolted cover**
Tapa atornillada
- **Return spring**
Muelle de retorno
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 6 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 7 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 8 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |

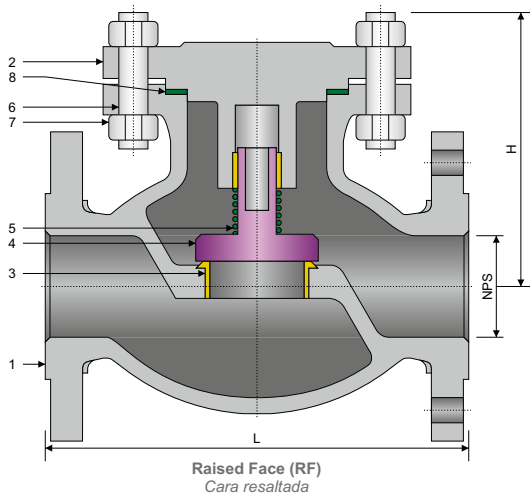
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|--------------|-------------|-------------------|-----------|-----|-------------|
| 2" | 50 | 267 | 283 | 190 | 28 |
| 2 ½" | 65 | 292 | 308 | 205 | 33 |
| 3" | 80 | 318 | 334 | 220 | 45 |
| 4" | 100 | 356 | 372 | 245 | 70 |
| 6" | 150 | 444 | 460 | 295 | 150 |
| 8" | 200 | 559 | 575 | 330 | 230 |
| 10" | 250 | 622 | 638 | 420 | 390 |
| 12" | 300 | 711 | 727 | 480 | 520 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

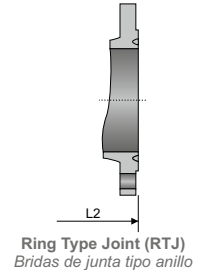
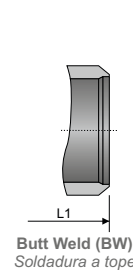
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Bolted cover**
Tapa atornillada
- **Return spring**
Muelle de retorno
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 6 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 7 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 8 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

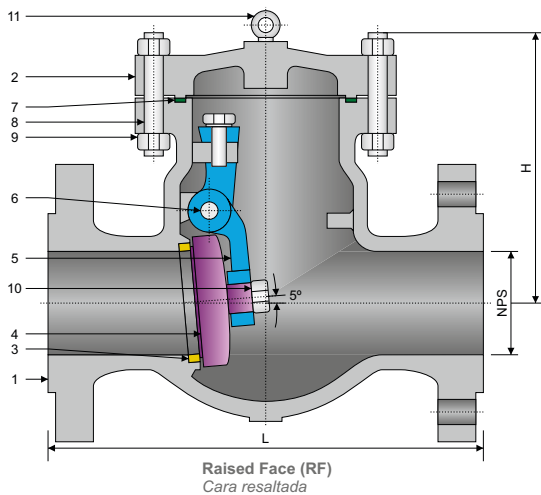
CLASS / Clase 600 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|--------------|-------------|-------------------|-----------|-----|-------------|
| 2" | 50 | 292 | 295 | 210 | 33 |
| 2 ½" | 65 | 330 | 333 | 230 | 43 |
| 3" | 80 | 356 | 359 | 255 | 62 |
| 4" | 100 | 432 | 435 | 295 | 113 |
| 6" | 150 | 559 | 562 | 365 | 222 |
| 8" | 200 | 660 | 663 | 420 | 390 |
| 10" | 250 | 787 | 791 | 505 | 630 |
| 12" | 300 | 838 | 841 | 545 | 871 |

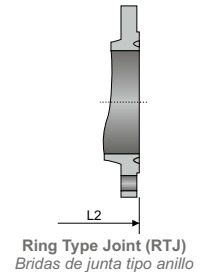
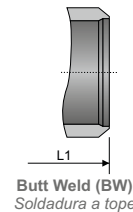
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|---------------------------------------|---|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | Carbon Steel / <i>Acero al Carbono</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 150 (NPS 2" - 36")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|---------------------|--------------------|-------------------|-----------|------|-------------|
| 2" | 50 | 203 | 216 | 152 | 10 |
| 2 1/2" | 65 | 216 | 229 | 165 | 12 |
| 3" | 80 | 241 | 254 | 175 | 17 |
| 4" | 100 | 292 | 305 | 204 | 29 |
| 5" | 125 | 330 | 343 | 248 | 43 |
| 6" | 150 | 356 | 369 | 293 | 57 |
| 8" | 200 | 495 | 508 | 353 | 96 |
| 10" | 250 | 622 | 635 | 390 | 143 |
| 12" | 300 | 699 | 712 | 432 | 227 |
| 14" | 350 | 787 | 800 | 475 | 295 |
| 16" | 400 | 864 | 877 | 525 | 468 |
| 18" | 450 | 978 | 991 | 582 | 552 |
| 20" | 500 | 978 | 991 | 627 | 755 |
| 24" | 600 | 1295 | 1308 | 883 | 831 |
| 26" | 650 | 1295 | - | 940 | 1120 |
| 28" | 700 | 1448 | - | 940 | 1420 |
| 30" | 750 | 1524 | - | 980 | 1760 |
| 36" | 900 | 1956 | - | 1220 | 2230 |

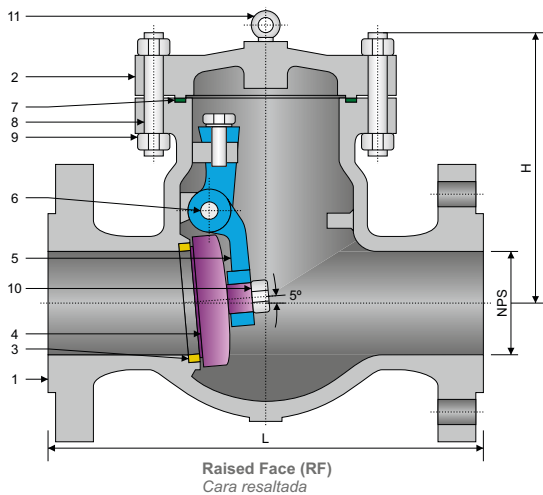
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm

Fig. 4SW030

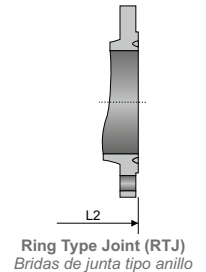
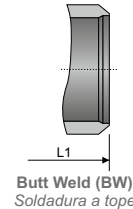
ANSI



STRUCTURE FEATURES

Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | MATERIAL | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|------------------------|-----------------------------|-------------------------------------|-----------------------------|-------------|---------------------------------------|--------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 36" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | LOW TEMPERATURE STEEL Acero baja temperatura | STAINLESS STEEL Acero Inoxidable |
|----|--------------------------------|--|--|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / Tapa | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / Asientos | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / Clapeta | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / Biela | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / Pasador | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / Junta | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 8 | Stud / Espárrago | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / Tuerca Hexagonal | Carbon Steel / Acero al Carbono | Stainless Steel 304 - 316 / Acero Inoxidable 304 - 316 | |
| 11 | Eye Bolt / Tornillo Ojo | Carbon Steel / Acero al Carbono | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

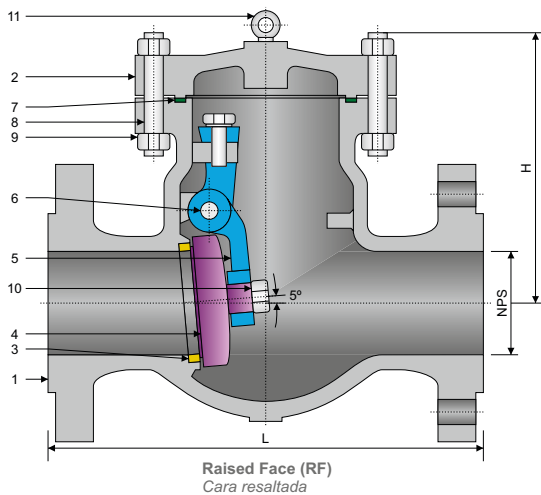
CLASS / Clase 300 (NPS 2" - 36")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|--------------|-------------|-------------------|-----------|------|-------------|
| 2" | 50 | 267 | 283 | 152 | 11 |
| 2 1/2" | 65 | 292 | 308 | 165 | 13 |
| 3" | 80 | 318 | 334 | 175 | 18 |
| 4" | 100 | 356 | 372 | 204 | 31 |
| 5" | 125 | 400 | 416 | 248 | 46 |
| 6" | 150 | 445 | 461 | 293 | 61 |
| 8" | 200 | 533 | 549 | 353 | 103 |
| 10" | 250 | 622 | 638 | 390 | 155 |
| 12" | 300 | 711 | 727 | 432 | 245 |
| 14" | 350 | 838 | 854 | 475 | 315 |
| 16" | 400 | 864 | 879 | 525 | 503 |
| 18" | 450 | 978 | 994 | 582 | 593 |
| 20" | 500 | 1016 | 1035 | 627 | 812 |
| 24" | 600 | 1346 | 1368 | 883 | 895 |
| 26" | 650 | 1346 | 1372 | 940 | 1205 |
| 28" | 700 | 1499 | 1524 | 940 | 1525 |
| 30" | 750 | 1594 | 1619 | 980 | 1895 |
| 36" | 900 | 2083 | - | 1220 | 2395 |

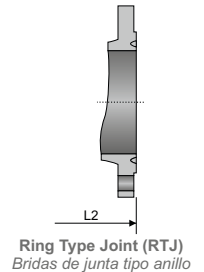
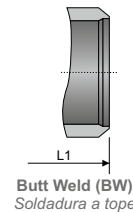
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|---------------------------------------|---|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | Carbon Steel / <i>Acero al Carbono</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |

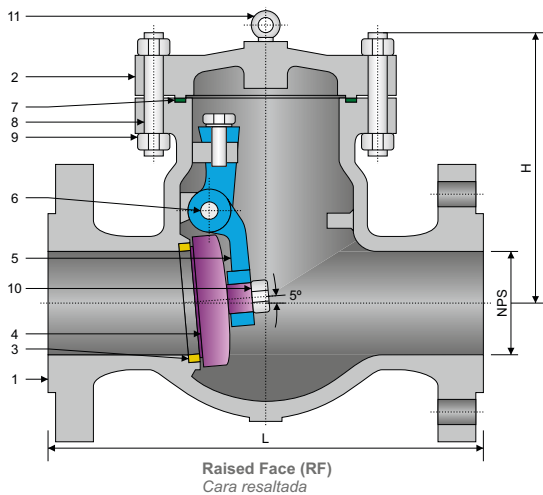
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|---------------------|--------------------|-------------------|-----------|------|-------------|
| 2" | 50 | 292 | 295 | 190 | 16 |
| 2 1/2" | 65 | 330 | 333 | 205 | 19 |
| 3" | 80 | 356 | 359 | 222 | 26 |
| 4" | 100 | 432 | 435 | 255 | 44 |
| 6" | 150 | 559 | 562 | 368 | 87 |
| 8" | 200 | 660 | 663 | 445 | 147 |
| 10" | 250 | 787 | 790 | 490 | 220 |
| 12" | 300 | 838 | 841 | 540 | 350 |
| 14" | 350 | 889 | 892 | 595 | 452 |
| 16" | 400 | 991 | 994 | 655 | 720 |
| 18" | 450 | 1092 | 1095 | 730 | 845 |
| 20" | 500 | 1194 | 1200 | 785 | 1160 |
| 24" | 600 | 1397 | 1407 | 1105 | 1280 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

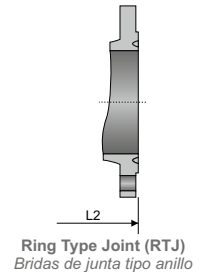
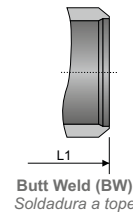
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 20" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|---------------------------------------|---|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | Carbon Steel / <i>Acero al Carbono</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

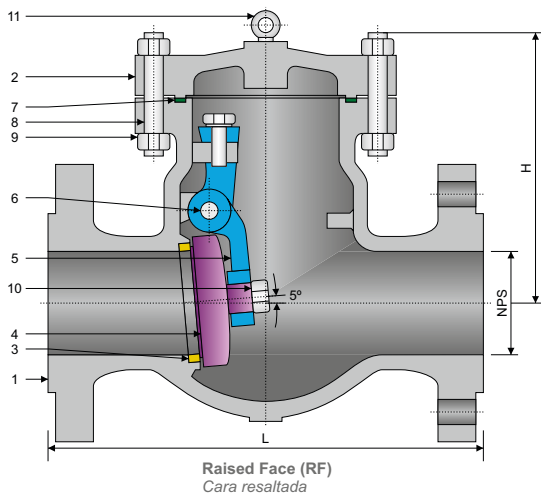
CLASS / Clase 900 (NPS 2" - 20")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|---------------------|--------------------|-------------------|-----------|-----|-------------|
| 2" | 50 | 368 | 371 | 240 | 21 |
| 2 1/2" | 65 | 419 | 422 | 256 | 25 |
| 3" | 80 | 381 | 384 | 278 | 34 |
| 4" | 100 | 457 | 460 | 320 | 58 |
| 6" | 150 | 610 | 613 | 460 | 115 |
| 8" | 200 | 737 | 740 | 560 | 194 |
| 10" | 250 | 838 | 841 | 610 | 290 |
| 12" | 300 | 965 | 968 | 675 | 461 |
| 14" | 350 | 1029 | 1039 | 745 | 597 |
| 16" | 400 | 1130 | 1140 | 815 | 950 |
| 18" | 450 | 1219 | 1232 | 850 | 1210 |
| 20" | 500 | 1321 | 1334 | 985 | 1533 |

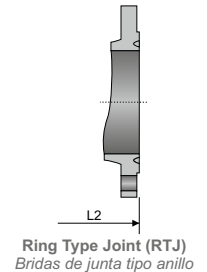
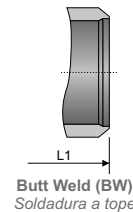
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|---------------------------------------|---|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | Carbon Steel / <i>Acero al Carbono</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |

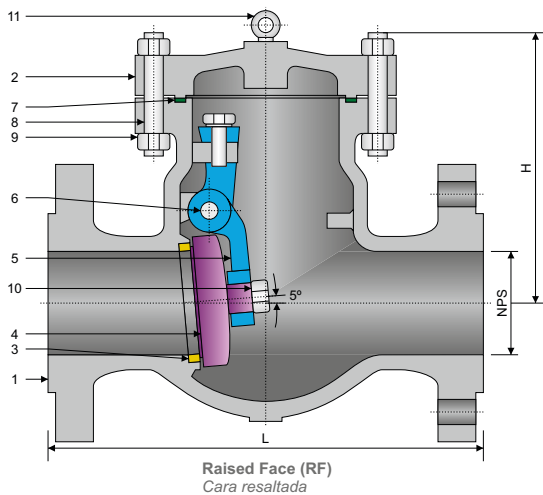
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2" - 16")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|---------------------|--------------------|-------------------|-----------|-----|-------------|
| 2" | 50 | 368 | 371 | 240 | 29 |
| 2 1/2" | 65 | 419 | 422 | 256 | 47 |
| 3" | 80 | 470 | 473 | 330 | 49 |
| 4" | 100 | 546 | 549 | 375 | 84 |
| 6" | 150 | 705 | 711 | 480 | 152 |
| 8" | 200 | 832 | 842 | 595 | 310 |
| 10" | 250 | 991 | 1001 | 660 | 470 |
| 12" | 300 | 1130 | 1146 | 740 | 710 |
| 14" | 350 | 1257 | 1276 | 785 | 910 |
| 16" | 400 | 1384 | 1406 | 835 | 1100 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Regular type or full opening**
Tipo regular o apertura total
- **Bolted cover**
Tapa atornillada
- **Lapped disc and seat**
Disco y asiento solapado
- **Wall thickness to API 600**
Espesor de pared según API 600
- **Renewable seat**
Asientos renovables



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ≤24" ASME B16.47 >24" | ASME B16.25 | NACE MR0175 | API 598 - API 6D ASME B16.34 | MSS SP-25 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|---------------------------------------|---|---|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Cover / <i>Tapa</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | A182 - F6A (1) | A182 - F6A (1) | A182 - F304 / A182 - F316 (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 7 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B8 | A193 - B8 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 8 | A194 - 8 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | Carbon Steel / <i>Acero al Carbono</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

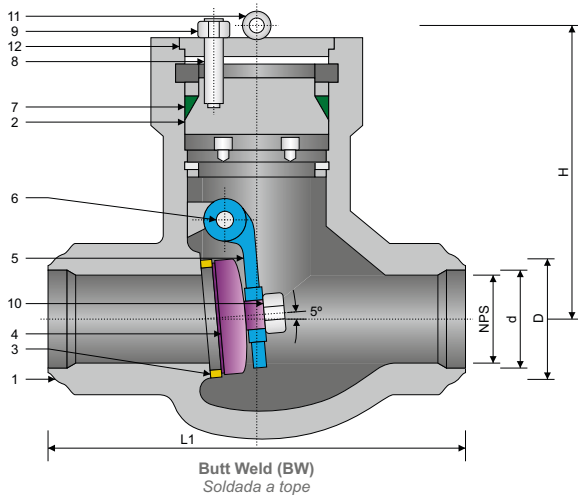
CLASS / Clase 2500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW L / L1 | RTJ L2 | H | W / P (Kg.) |
|---------------------|--------------------|-------------------|-----------|-----|-------------|
| 2" | 50 | 451 | 454 | 275 | 35 |
| 2 1/2" | 65 | 508 | 514 | 335 | 55 |
| 3" | 80 | 578 | 584 | 350 | 68 |
| 4" | 100 | 673 | 683 | 385 | 115 |
| 6" | 150 | 914 | 927 | 485 | 225 |
| 8" | 200 | 1022 | 1038 | 625 | 580 |
| 10" | 250 | 1270 | 1292 | 715 | 860 |
| 12" | 300 | 1422 | 1444 | 905 | 1150 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Welded in seats**
Asientos soldados

SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | MATERIAL | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|------------------------------------|-------------|--|-----------------------|
| | | BUTT WELD <i>Soldada a tope</i> | | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | NACE MR0175 | ASME B16.34 | 2 1/2" - 14" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | |
|----|--|---|------------------------------------|---------------|
| | | | | |
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Clapeta</i> | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 5 | Hinge / <i>Biela</i> | A216 - WCB | A217 - WC6 | A217 - WC6 |
| 6 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 304 | A276 - 304 |
| 7 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B16 |
| 9 | Stud Nut / <i>Tuerca Espárrago</i> | A194 - 2H | A194 - 7 | A194 - 7 |
| 10 | Hexagon Nut / <i>Tuerca Hexagonal</i> | A194 - 2H | A194 - G4 | A194 - G4 |
| 11 | Eye Bolt / <i>Tornillo Ojo</i> | Carbon Steel / <i>Acero al Carbono</i> | | |
| 12 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F6A |

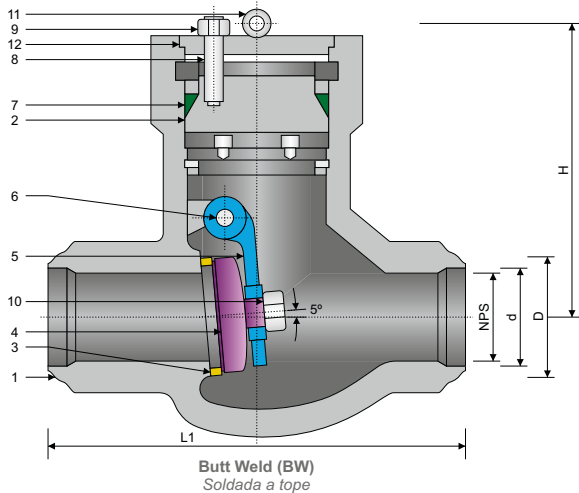
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2 1/2" - 14")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | BW L1 | D | d | H | W / P (Kg.) |
|---------------------|--------------------|----------|-----|-----|-----|-------------|
| 2 1/2" | 65 | 254 | 96 | 56 | 250 | 35 |
| 3" | 80 | 305 | 98 | 64 | 300 | 45 |
| 4" | 100 | 406 | 124 | 84 | 350 | 80 |
| 5" | 125 | 483 | 146 | 100 | 425 | 115 |
| 6" | 150 | 559 | 202 | 126 | 400 | 180 |
| 8" | 200 | 711 | 256 | 158 | 490 | 270 |
| 10" | 250 | 864 | 310 | 200 | 540 | 430 |
| 12" | 300 | 991 | 350 | 250 | 650 | 630 |
| 14" | 350 | 1067 | 386 | 280 | 710 | 810 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Welded in seats**
Asientos soldados

SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | MATERIAL | TEST & CHECK Prueba y Verificación | SIZES Rango |
|------------------|-----------------------------|-----------------------------|-------------|---------------------------------------|----------------|
| | | BUTT WELD Soldada a tope | | | |
| ASME B16.34 | ASME B16.10 | ASME B16.25 | NACE MR0175 | ASME B16.34 | 3" - 18" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero aleado | |
|----|---------------------------------|--|-----------------------------|---------------|
| | | | | |
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / Clapeta | A216 - WCB | A217 - WC6 | A217 - WC9 |
| 5 | Hinge / Biela | A216 - WCB | A217 - WC6 | A217 - WC6 |
| 6 | Hinge Pin / Pasador | A276 - 420 | A276 - 304 | A276 - 304 |
| 7 | P.S. Gasket / Junta de A.P. (*) | Flexible Graphite 304 / Grafito Flexible 304 | | |
| 8 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B16 |
| 9 | Stud Nut / Tuerca Espárrago | A194 - 2H | A194 - 7 | A194 - 7 |
| 10 | Hexagon Nut / Tuerca Hexagonal | A194 - 2H | A194 - G4 | A194 - G4 |
| 11 | Eye Bolt / Tornillo Ojo | Carbon Steel / Acero al Carbono | | |
| 12 | Cover / Tapa | A105 | A182 - F6A | A182 - F6A |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

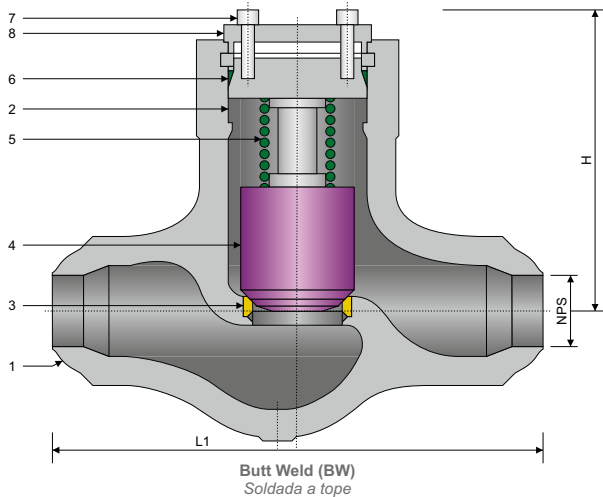
CLASS / Clase 2500 (NPS 3" - 18")

| NPS (in.) | DN (mm.) | BW L1 | D | d | H | W / P (Kg.) |
|--------------|-------------|----------|-----|-----|-----|-------------|
| 3" | 80 | 368 | 106 | 56 | 270 | 70 |
| 4" | 100 | 457 | 130 | 75 | 385 | 110 |
| 5" | 125 | 533 | 154 | 86 | 410 | 130 |
| 6" | 150 | 610 | 200 | 104 | 455 | 180 |
| 8" | 200 | 762 | 250 | 136 | 555 | 380 |
| 10" | 250 | 914 | 310 | 162 | 615 | 730 |
| 12" | 300 | 1041 | 338 | 210 | 715 | 1120 |
| 14" | 350 | 1118 | 386 | 234 | 790 | 1495 |
| 16" | 400 | 1245 | 436 | 264 | 815 | 1950 |
| 18" | 450 | 1397 | 490 | 304 | 815 | 2400 |

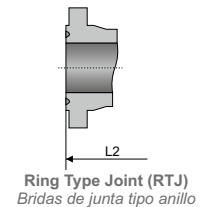
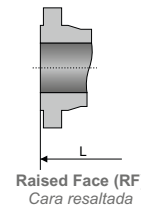
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 316 / <i>Acero Inoxidable 316</i> | | |
| 6 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 8 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

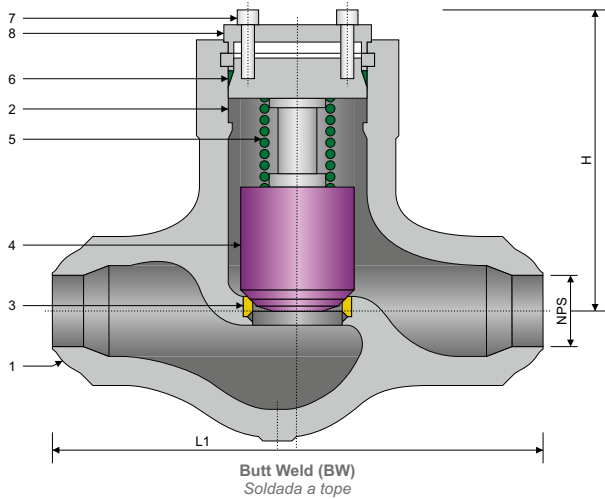
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 2" - 16")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H |
|--------------|-------------|-------------------|-----------|-----|
| 2" | 50 | 292 | 295 | 230 |
| 3" | 80 | 356 | 359 | 280 |
| 4" | 100 | 432 | 435 | 330 |
| 6" | 150 | 559 | 562 | 450 |
| 8" | 200 | 660 | 663 | 520 |
| 10" | 250 | 787 | 790 | 600 |
| 12" | 300 | 838 | 841 | 700 |
| 14" | 350 | 889 | 892 | 800 |
| 16" | 400 | 991 | 994 | 900 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

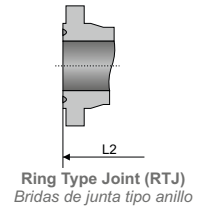
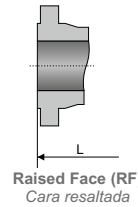
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado



SPECIFICATIONS / Especificaciones

ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 316 / <i>Acero Inoxidable 316</i> | | |
| 6 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 8 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

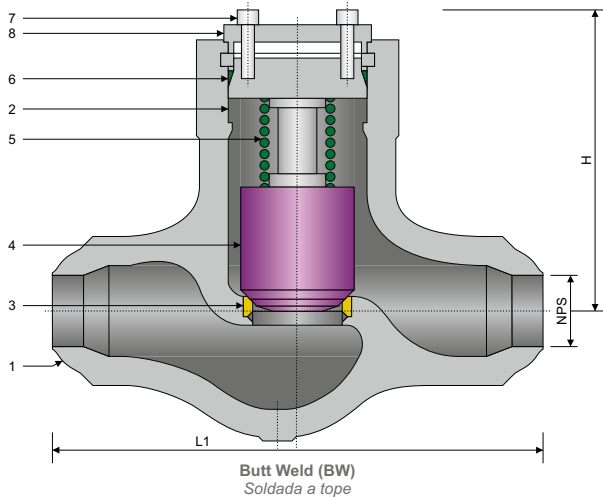
CLASS / Clase 900 (NPS 2" - 16")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H |
|--------------|-------------|-------------------|-----------|-----|
| 2" | 50 | 368 | 371 | 270 |
| 3" | 80 | 381 | 384 | 300 |
| 4" | 100 | 457 | 460 | 390 |
| 6" | 150 | 610 | 613 | 430 |
| 8" | 200 | 737 | 740 | 520 |
| 10" | 250 | 838 | 842 | 600 |
| 12" | 300 | 965 | 968 | 700 |
| 14" | 350 | 1029 | 1038 | 800 |
| 16" | 400 | 1130 | 1140 | 900 |

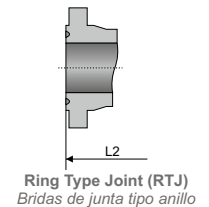
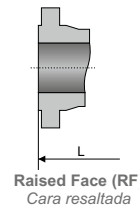
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

UNITS / Unidades mm


STRUCTURE FEATURES
Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 316 / <i>Acero Inoxidable 316</i> | | |
| 6 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 8 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

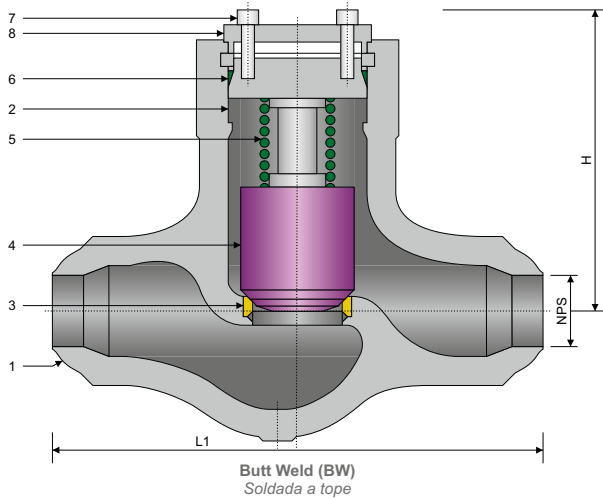
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF / BW L / L1 | RTJ L2 | H |
|--------------|-------------|-------------------|-----------|-----|
| 2" | 50 | 368 | 371 | 270 |
| 3" | 80 | 470 | 473 | 310 |
| 4" | 100 | 546 | 549 | 400 |
| 6" | 150 | 705 | 711 | 440 |
| 8" | 200 | 832 | 842 | 530 |
| 10" | 250 | 991 | 1000 | 620 |
| 12" | 300 | 1130 | 1146 | 720 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- (1) **On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- (2) **On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- (3) **On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- (*) **Pressure Seal Gasket / Junta de alta presión.**

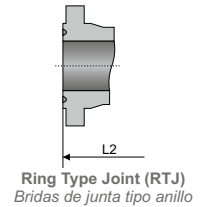
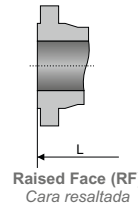
UNITS / Unidades mm



STRUCTURE FEATURES

Características de la estructura

- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado



SPECIFICATIONS / Especificaciones

ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Spring / <i>Muelle</i> | Stainless Steel 316 / <i>Acero Inoxidable 316</i> | | |
| 6 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 7 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 8 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

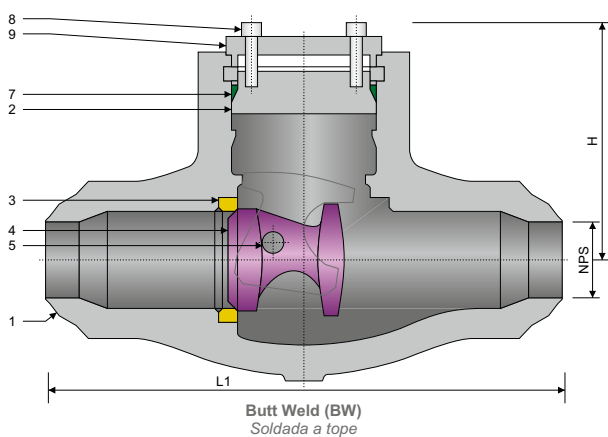
CLASS / Clase 2500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF / BW <i>L / L1</i> | RTJ <i>L2</i> | H |
|---------------------|--------------------|--------------------------|------------------|-----|
| 2" | 50 | 451 | 454 | 270 |
| 3" | 80 | 578 | 581 | 310 |
| 4" | 100 | 673 | 683 | 400 |
| 6" | 150 | 914 | 927 | 440 |
| 8" | 200 | 1022 | 1038 | 530 |
| 10" | 250 | 1270 | 1292 | 620 |
| 12" | 300 | 1422 | 1445 | 720 |

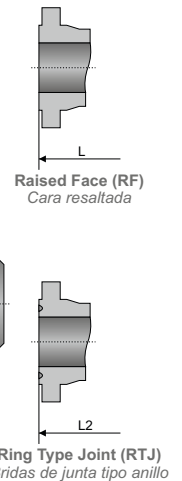
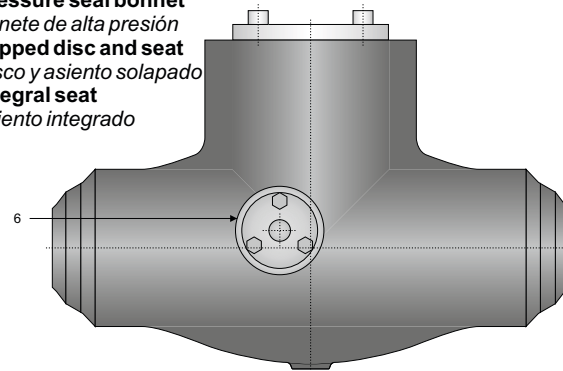
Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

UNITS / Unidades mm

STRUCTURE FEATURES
Características de la estructura


- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Pin / <i>Pasador</i> | A182 - F6A | A182 - F6A | A182 - F316 |
| 6 | Plug / <i>Tapón</i> | A105 | A182 - F6A | A182 - F316 |
| 7 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 9 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 600 (NPS 2" - 24")

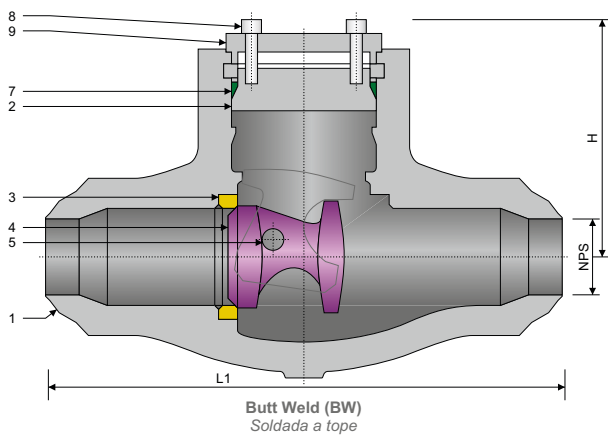
| NPS (in.) | DN (mm.) | RF L | BW L1 | RTJ L2 | H |
|--------------|-------------|---------|----------|-----------|------|
| 2" | 50 | 292 | 178 | 295 | 180 |
| 3" | 80 | 356 | 254 | 359 | 215 |
| 4" | 100 | 432 | 305 | 435 | 275 |
| 6" | 150 | 559 | 457 | 562 | 350 |
| 8" | 200 | 660 | 584 | 663 | 390 |
| 10" | 250 | 787 | 711 | 790 | 450 |
| 12" | 300 | 838 | 813 | 841 | 500 |
| 14" | 350 | 889 | 889 | 892 | 555 |
| 16" | 400 | 991 | 991 | 994 | 630 |
| 18" | 450 | 1092 | 1092 | 1095 | 710 |
| 20" | 500 | 1194 | 1194 | 1200 | 800 |
| 24" | 600 | 1397 | 1397 | 1407 | 1000 |

Notes / Notas:
UNITS / Unidades mm

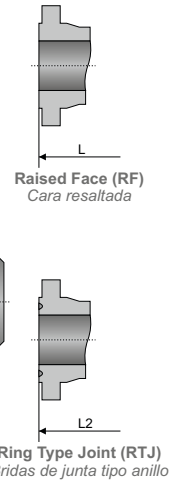
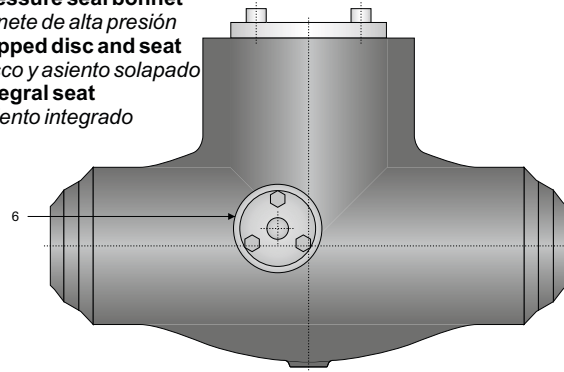
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

STRUCTURE FEATURES

Características de la estructura



- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado



SPECIFICATIONS / Especificaciones

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|-------------------|-----------------------------|---------------------------|-----------------------------|---------------------------------------|-----------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 24" |

ASME

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero aleado | STAINLESS STEEL Acero Inoxidable |
|----|---------------------------------|---|-----------------------------|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / Obturador | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Pin / Pasador | A182 - F6A | A182 - F6A | A182 - F316 |
| 6 | Plug / Tapón | A105 | A182 - F6A | A182 - F316 |
| 7 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Flexible Graphite / Acero Inoxidable Grafito Flexible (3) | | |
| 8 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B8 |
| 9 | Cover / Tapa | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

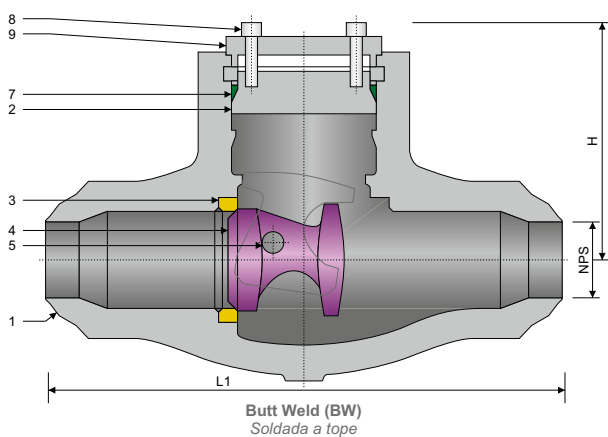
CLASS / Clase 900 (NPS 2" - 24")

| NPS (in.) | DN (mm.) | RF L | BW L1 | RTJ L2 | H |
|--------------|-------------|---------|----------|-----------|------|
| 2" | 50 | 368 | 216 | 371 | 245 |
| 3" | 80 | 381 | 305 | 384 | 250 |
| 4" | 100 | 457 | 356 | 460 | 310 |
| 6" | 150 | 610 | 508 | 613 | 390 |
| 8" | 200 | 737 | 660 | 740 | 510 |
| 10" | 250 | 838 | 787 | 842 | 580 |
| 12" | 300 | 965 | 914 | 968 | 620 |
| 14" | 350 | 1029 | 991 | 1038 | 680 |
| 16" | 400 | 1130 | 1092 | 1140 | 740 |
| 18" | 450 | 1219 | 1143 | 1232 | 800 |
| 20" | 500 | 1321 | 1245 | 1334 | 850 |
| 24" | 600 | 1549 | 1397 | 1568 | 1100 |

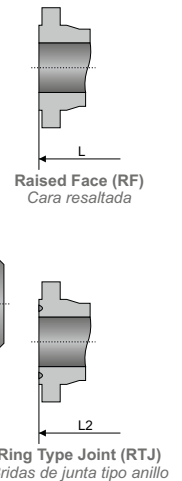
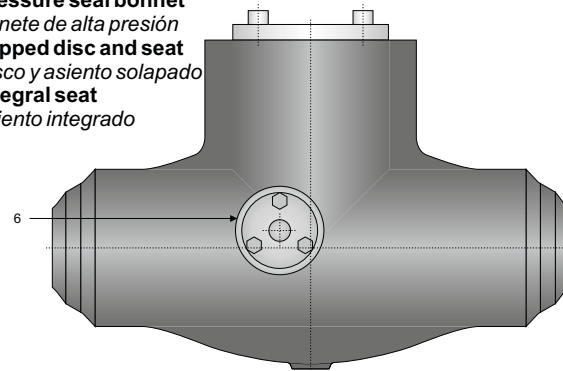
Notes / Notas:

- Approximate weights / Pesos aproximados.
- Larger diameters on request / Diámetros superiores bajo petición.
- Other material on request / Otros materiales bajo petición.
- (1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.
- (2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.
- (3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.
- (*) Pressure Seal Gasket / Junta de alta presión.

UNITS / Unidades mm

STRUCTURE FEATURES
Características de la estructura


- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado


SPECIFICATIONS / Especificaciones
ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | | TEST & CHECK <i>Prueba y Verificación</i> | MARKING <i>Marcado</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------|
| | | FLANGED <i>Bridada</i> | BUTT WELD <i>Soldada a tope</i> | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | ALLOY STEEL <i>Acero aleado</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|--|--|------------------------------------|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / <i>Bonete</i> | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / <i>Asientos</i> | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / <i>Obturador</i> | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Pin / <i>Pasador</i> | A182 - F6A | A182 - F6A | A182 - F316 |
| 6 | Plug / <i>Tapón</i> | A105 | A182 - F6A | A182 - F316 |
| 7 | P.S. Gasket / <i>Junta de A.P. (*)</i> | Stainless Steel Flexible Graphite / <i>Acero Inoxidable Grafito Flexible (3)</i> | | |
| 8 | Stud / <i>Espárrago</i> | A193 - B7 | A193 - B16 | A193 - B8 |
| 9 | Cover / <i>Tapa</i> | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 1500 (NPS 2" - 24")

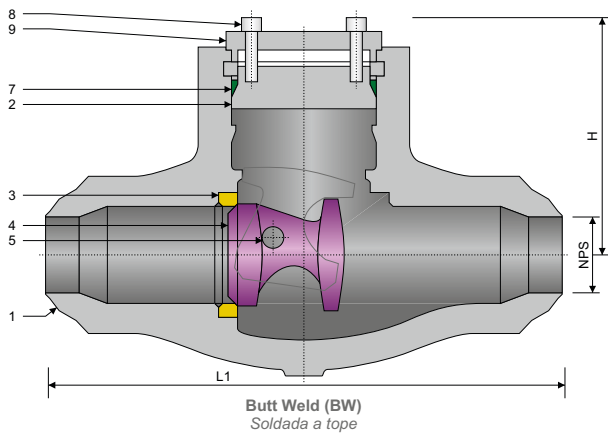
| NPS <i>(in.)</i> | DN <i>(mm.)</i> | RF L | BW L1 | RTJ L2 | H |
|---------------------|--------------------|---------|----------|-----------|------|
| 2" | 50 | 368 | 216 | 371 | 245 |
| 3" | 80 | 470 | 305 | 473 | 290 |
| 4" | 100 | 546 | 406 | 549 | 350 |
| 6" | 150 | 705 | 559 | 711 | 420 |
| 8" | 200 | 832 | 711 | 842 | 630 |
| 10" | 250 | 991 | 864 | 1000 | 690 |
| 12" | 300 | 1130 | 991 | 1146 | 750 |
| 14" | 350 | 1257 | 1067 | 1276 | 800 |
| 16" | 400 | 1384 | 1194 | 1407 | 980 |
| 18" | 450 | 1537 | 1346 | 1559 | 1100 |
| 20" | 500 | 1664 | 1473 | 1686 | 1300 |
| 24" | 600 | 1943 | 1943 | 1972 | 1550 |

Notes / Notas:
UNITS / Unidades mm

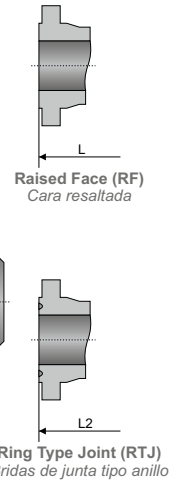
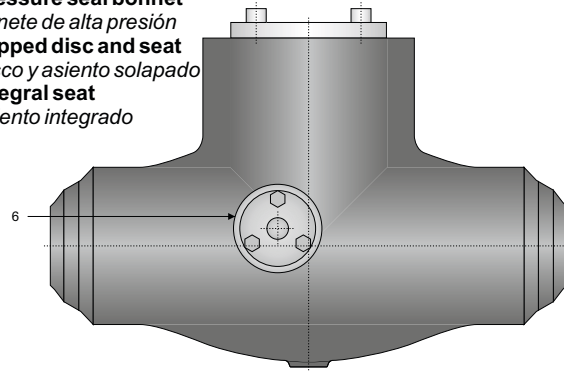
- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

STRUCTURE FEATURES

Características de la estructura



- **Pressure seal bonnet**
Bonete de alta presión
- **Lapped disc and seat**
Disco y asiento solapado
- **Integral seat**
Asiento integrado



SPECIFICATIONS / Especificaciones

ASME

| DESIGN Diseño | FACE TO FACE Cara a cara | CONNECTION END / Extremos | | TEST & CHECK Prueba y Verificación | MARKING Marcado | SIZES Rango |
|-------------------|-----------------------------|---------------------------|-----------------------------|---------------------------------------|-----------------------|----------------|
| | | FLANGED Bridada | BUTT WELD Soldada a tope | | | |
| BS 1873 API 6D | ASME B16.10 | ASME B16.5 | ASME B16.25 | API 598 - API 6D BS 6755 | MSS SP-25 CE - PED | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME Nombre de pieza | CARBON STEEL Acero al Carbono | ALLOY STEEL Acero aleado | STAINLESS STEEL Acero Inoxidable |
|----|---------------------------------|---|-----------------------------|-------------------------------------|
| 1 | Body / Cuerpo | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 2 | Bonnet / Bonete | A216 - WCB | A217 - WC6 / A217 - WC9 | A351 - CF8M |
| 3 | Seat Rings / Asientos | Stellite® (1) | Stellite® (1) | Stellite® (1) |
| 4 | Disc / Obturador | A105 + HF (2) | A182 - F6A + HF (2) | A182 - F316 + HF (2) |
| 5 | Pin / Pasador | A182 - F6A | A182 - F6A | A182 - F316 |
| 6 | Plug / Tapón | A105 | A182 - F6A | A182 - F316 |
| 7 | P.S. Gasket / Junta de A.P. (*) | Stainless Steel Flexible Graphite / Acero Inoxidable Grafito Flexible (3) | | |
| 8 | Stud / Espárrago | A193 - B7 | A193 - B16 | A193 - B8 |
| 9 | Cover / Tapa | A105 | A182 - F6A | A182 - F316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

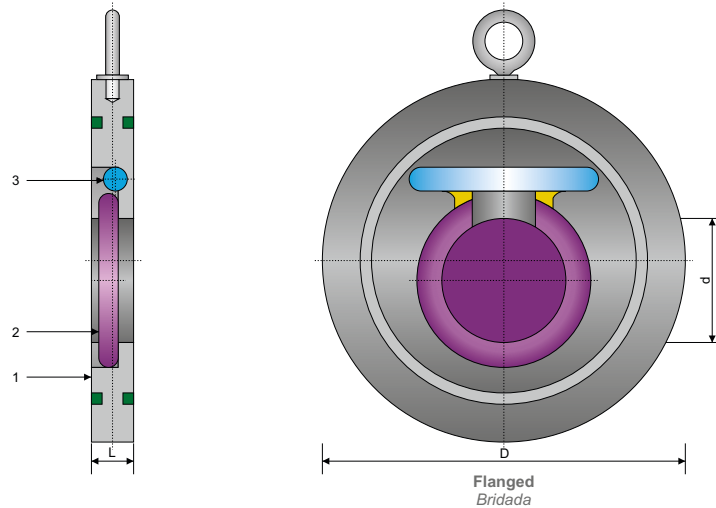
CLASS / Clase 2500 (NPS 2" - 12")

| NPS (in.) | DN (mm.) | RF L | BW L1 | RTJ L2 | H |
|--------------|-------------|---------|----------|-----------|-----|
| 2" | 50 | 451 | 279 | 454 | 245 |
| 3" | 80 | 578 | 368 | 584 | 300 |
| 4" | 100 | 673 | 457 | 683 | 380 |
| 6" | 150 | 914 | 610 | 927 | 430 |
| 8" | 200 | 1022 | 762 | 1038 | 650 |
| 10" | 250 | 1270 | 914 | 1292 | 720 |
| 12" | 300 | 1422 | 1041 | 1445 | 780 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**
- **(1) On request: Monel® - Hastelloy® - other materials / Bajo petición: Monel® - Hastelloy® - otros materiales.**
- **(2) On request: Stellite® - Monel® - Hastelloy® - other materials / Bajo petición: Stellite® - Monel® - Hastelloy® - otros materiales.**
- **(3) On request: Soft Iron - Stainless Steel / Bajo petición: Hierro dulce - Acero Inoxidable.**
- **(*) Pressure Seal Gasket / Junta de alta presión.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | API 598 ASME B16.34 | 2" - 20" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / Cuerpo | A105 | LF2 | S.S. 304 / S.S. 316 |
| 2 | Disc / Obturador | A105 | LF2 | S.S. 304 / S.S. 316 |
| 3 | Hinge Pin / Pasador | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

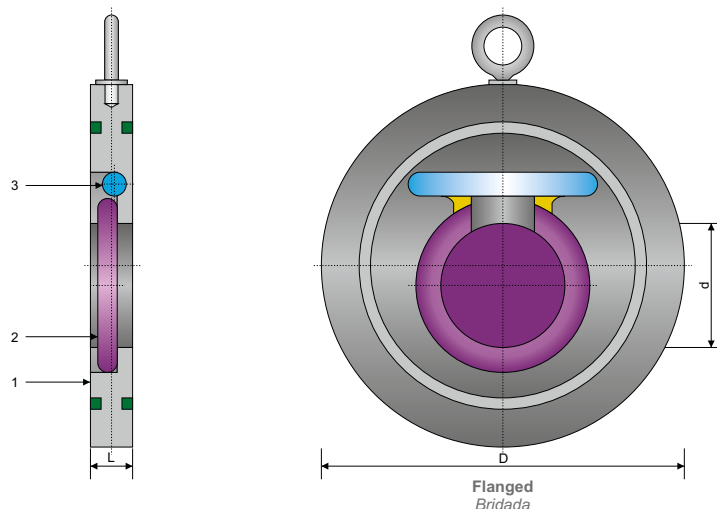
CLASS / Clase 150 (NPS 2" - 20")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | L | D | d | W / P (Kg.) |
|---------------------|--------------------|----|-----|-----|-------------|
| 2" | 50 | 19 | 103 | 25 | 0.9 |
| 2 1/2" | 65 | 19 | 122 | 38 | 1.3 |
| 3" | 80 | 19 | 135 | 46 | 1.6 |
| 4" | 100 | 19 | 173 | 72 | 2.1 |
| 5" | 125 | 19 | 195 | 95 | 3.1 |
| 6" | 150 | 19 | 220 | 114 | 4.9 |
| 8" | 200 | 29 | 277 | 140 | 11 |
| 10" | 250 | 29 | 337 | 188 | 15 |
| 12" | 300 | 38 | 407 | 216 | 28 |
| 14" | 350 | 44 | 448 | 263 | 40 |
| 16" | 400 | 51 | 512 | 305 | 60 |
| 18" | 450 | 60 | 547 | 356 | 78 |
| 20" | 500 | 64 | 604 | 406 | 128 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | API 598 ASME B16.34 | 2" - 20" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A105 | LF2 | S.S. 304 / S.S. 316 |
| 2 | Disc / <i>Obturador</i> | A105 | LF2 | S.S. 304 / S.S. 316 |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

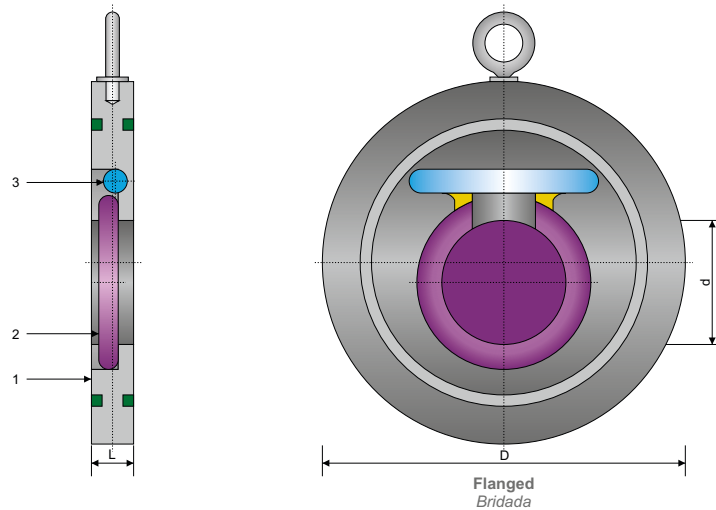
CLASS / Clase 300 (NPS 2" - 20")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | L | D | d | W / P (Kg.) |
|---------------------|--------------------|----|-----|-----|-------------|
| 2" | 50 | 19 | 110 | 25 | 0.9 |
| 2 1/2" | 65 | 19 | 128 | 38 | 1.3 |
| 3" | 80 | 19 | 147 | 46 | 1.6 |
| 4" | 100 | 19 | 179 | 72 | 2.4 |
| 5" | 125 | 19 | 214 | 95 | 3.4 |
| 6" | 150 | 22 | 249 | 114 | 5.4 |
| 8" | 200 | 29 | 305 | 140 | 12 |
| 10" | 250 | 38 | 359 | 188 | 21 |
| 12" | 300 | 51 | 420 | 216 | 38 |
| 14" | 350 | 51 | 483 | 263 | 53 |
| 16" | 400 | 51 | 537 | 305 | 68 |
| 18" | 450 | 76 | 594 | 356 | 103 |
| 20" | 500 | 83 | 652 | 406 | 150 |

Notes / Notas:

- Approximate weights / *Pesos aproximados.*
- Larger diameters on request / *Diámetros superiores bajo petición.*
- Other material on request / *Otros materiales bajo petición.*

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 | API 598 ASME B16.34 | 2" - 20" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A105 | LF2 | S.S. 304 / S.S. 316 |
| 2 | Disc / <i>Obturador</i> | A105 | LF2 | S.S. 304 / S.S. 316 |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

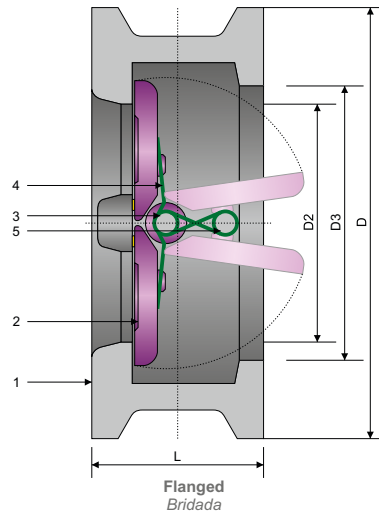
CLASS / Clase 600 (NPS 2" - 20")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | L | D | d | W / P (Kg.) |
|---------------------|--------------------|----|-----|-----|-------------|
| 2" | 50 | 19 | 110 | 25 | 0.9 |
| 2 1/2" | 65 | 19 | 128 | 38 | 1.3 |
| 3" | 80 | 19 | 147 | 46 | 1.6 |
| 4" | 100 | 22 | 191 | 72 | 2.4 |
| 5" | 125 | 25 | 239 | 95 | 3.4 |
| 6" | 150 | 29 | 318 | 114 | 5.4 |
| 8" | 200 | 38 | 364 | 140 | 14 |
| 10" | 250 | 57 | 398 | 188 | 24 |
| 12" | 300 | 60 | 455 | 216 | 45 |
| 14" | 350 | 67 | 490 | 263 | 62 |
| 16" | 400 | 73 | 562 | 305 | 78 |
| 18" | 450 | 83 | 610 | 356 | 114 |
| 20" | 500 | 92 | 680 | 406 | 158 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

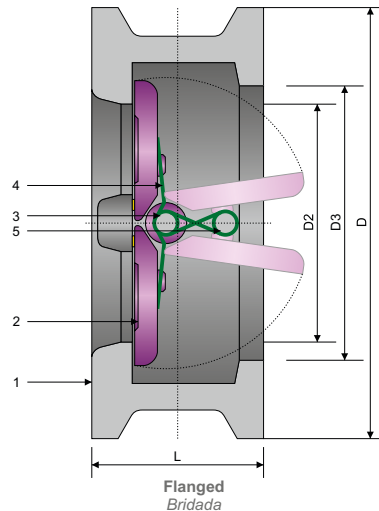
CLASS / Clase 150 (NPS 2" - 48")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|------|------|------|-------------|
| 2" | 50 | 60 | 103 | 51 | 56 | 2 |
| 2 1/2" | 65 | 67 | 122 | 65 | 73 | 3 |
| 3" | 80 | 73 | 135 | 80 | 88 | 4 |
| 4" | 100 | 73 | 173 | 102 | 108 | 6 |
| 5" | 125 | 86 | 195 | 127 | 132 | 8 |
| 6" | 150 | 98 | 220 | 152 | 160 | 13 |
| 8" | 200 | 127 | 277 | 203 | 210 | 25 |
| 10" | 250 | 146 | 337 | 254 | 266 | 39 |
| 12" | 300 | 181 | 407 | 305 | 310 | 54 |
| 14" | 350 | 184 | 448 | 350 | 355 | 80 |
| 16" | 400 | 191 | 512 | 400 | 405 | 117 |
| 18" | 450 | 203 | 547 | 450 | 455 | 138 |
| 20" | 500 | 219 | 604 | 500 | 505 | 163 |
| 24" | 600 | 222 | 715 | 600 | 605 | 331 |
| 28" | 700 | 305 | 773 | 700 | 700 | 380 |
| 30" | 750 | 305 | 824 | 746 | 750 | 425 |
| 32" | 800 | 305 | 878 | 796 | 800 | 560 |
| 36" | 900 | 368 | 983 | 898 | 910 | 640 |
| 42" | 1050 | 432 | 1142 | 1050 | 1055 | 960 |
| 48" | 1250 | 524 | 1302 | 1200 | 1205 | 1400 |

Notes / *Notas:*

- Approximate weights / *Pesos aproximados.*
- Larger diameters on request / *Diámetros superiores bajo petición.*
- Other material on request / *Otros materiales bajo petición.*

UNITS / Unidades mm


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 48" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

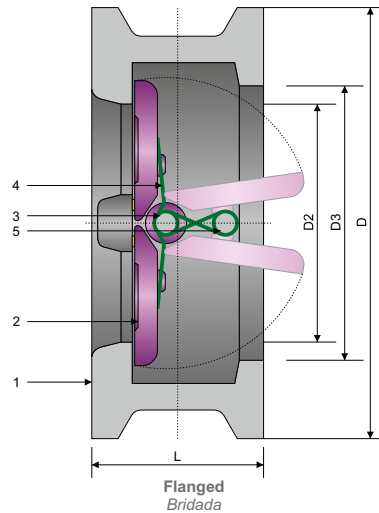
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS 2" - 48")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|------|------|------|-------------|
| 2" | 50 | 60 | 110 | 51 | 58 | 3 |
| 2 1/2" | 65 | 67 | 128 | 65 | 73 | 4 |
| 3" | 80 | 73 | 147 | 80 | 88 | 6 |
| 4" | 100 | 73 | 179 | 102 | 108 | 8 |
| 5" | 125 | 86 | 214 | 127 | 132 | 15 |
| 6" | 150 | 98 | 249 | 152 | 160 | 18 |
| 8" | 200 | 127 | 305 | 203 | 210 | 31 |
| 10" | 250 | 146 | 359 | 254 | 266 | 51 |
| 12" | 300 | 181 | 420 | 305 | 310 | 77 |
| 14" | 350 | 222 | 483 | 350 | 355 | 117 |
| 16" | 400 | 232 | 537 | 400 | 405 | 190 |
| 18" | 450 | 264 | 594 | 450 | 455 | 200 |
| 20" | 500 | 292 | 652 | 500 | 505 | 265 |
| 24" | 600 | 318 | 772 | 600 | 608 | 410 |
| 30" | 750 | 368 | 882 | 735 | 740 | 660 |
| 36" | 900 | 483 | 1044 | 873 | 880 | 1020 |
| 42" | 1050 | 568 | 1196 | 1035 | 1045 | 1540 |
| 48" | 1250 | 629 | 1365 | 1179 | 1190 | 2260 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

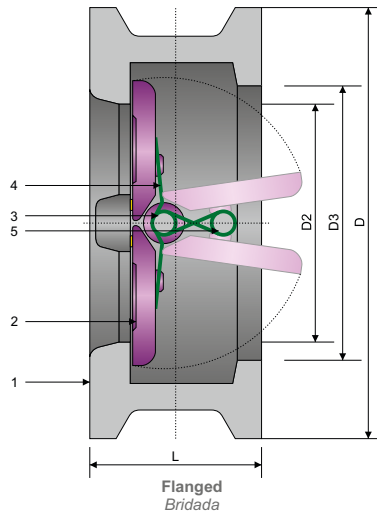
CLASS / Clase 600 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| 2" | 50 | 60 | 110 | 51 | 58 | 4 |
| 2 1/2" | 65 | 67 | 128 | 65 | 73 | 5 |
| 3" | 80 | 73 | 147 | 80 | 88 | 8 |
| 4" | 100 | 79 | 191 | 102 | 108 | 11 |
| 5" | 125 | 105 | 239 | 127 | 136 | 20 |
| 6" | 150 | 136 | 318 | 152 | 162 | 26 |
| 8" | 200 | 165 | 364 | 200 | 212 | 55 |
| 10" | 250 | 213 | 398 | 250 | 266 | 95 |
| 12" | 300 | 229 | 455 | 305 | 312 | 140 |
| 14" | 350 | 273 | 490 | 337 | 355 | 223 |
| 16" | 400 | 305 | 562 | 387 | 400 | 360 |
| 18" | 450 | 362 | 610 | 438 | 450 | 395 |
| 20" | 500 | 368 | 680 | 489 | 500 | 518 |
| 24" | 600 | 438 | 786 | 591 | 600 | 836 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 24" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

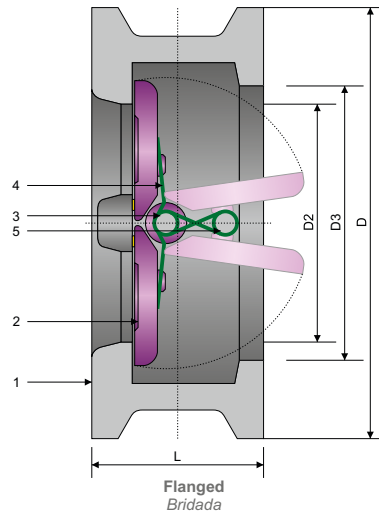
CLASS / Clase 900 (NPS 2" - 24")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| 2" | 50 | 70 | 140 | 51 | 58 | 8 |
| 2 1/2" | 65 | 83 | 162 | 65 | 73 | 11 |
| 3" | 80 | 83 | 165 | 80 | 90 | 14 |
| 4" | 100 | 102 | 204 | 102 | 108 | 20 |
| 5" | 125 | 110 | 245 | 127 | 136 | 30 |
| 6" | 150 | 159 | 286 | 150 | 162 | 42 |
| 8" | 200 | 206 | 356 | 200 | 212 | 84 |
| 10" | 250 | 241 | 432 | 250 | 266 | 145 |
| 12" | 300 | 292 | 495 | 305 | 312 | 220 |
| 14" | 350 | 356 | 518 | 337 | 355 | 350 |
| 16" | 400 | 384 | 572 | 387 | 400 | 470 |
| 18" | 450 | 451 | 635 | 438 | 450 | 605 |
| 20" | 500 | 451 | 695 | 487 | 496 | 820 |
| 24" | 600 | 495 | 835 | 591 | 600 | 1050 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 16" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

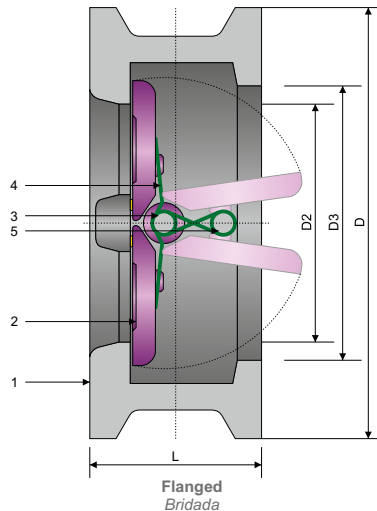
CLASS / Clase 1500 (NPS 2" - 16")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| 2" | 50 | 70 | 140 | 51 | 58 | 8 |
| 2 1/2" | 65 | 83 | 162 | 65 | 73 | 11 |
| 3" | 80 | 83 | 172 | 80 | 90 | 19 |
| 4" | 100 | 102 | 207 | 102 | 108 | 26 |
| 5" | 125 | 110 | 252 | 127 | 136 | 51 |
| 6" | 150 | 159 | 280 | 150 | 162 | 68 |
| 8" | 200 | 206 | 350 | 200 | 212 | 130 |
| 10" | 250 | 248 | 433 | 254 | 266 | 210 |
| 12" | 300 | 305 | 518 | 305 | 312 | 384 |
| 14" | 350 | 356 | 576 | 337 | 355 | 550 |
| 16" | 400 | 384 | 639 | 387 | 400 | 635 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | 2" - 12" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Hinge Pin / <i>Pasador</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Stop Pin / <i>Pasador de parada</i> | A276 - 420 | A276 - 420 | A276 - 304 / A276 - 316 |

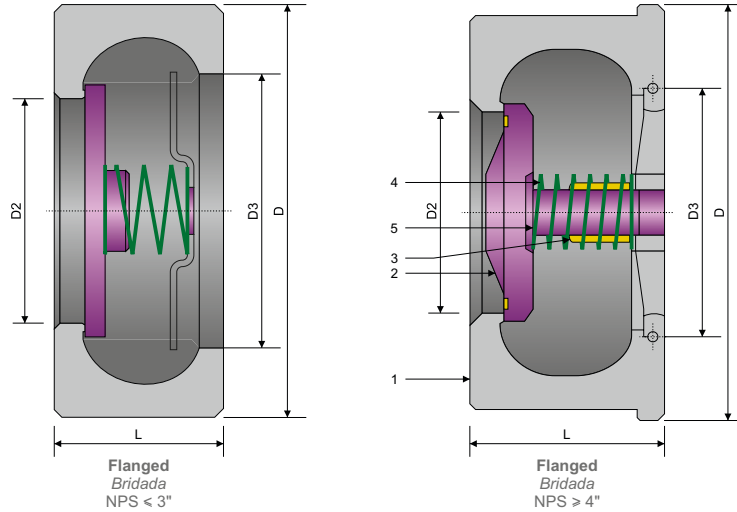
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 2500 (NPS 2" - 12")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| 2" | 50 | 70 | 143 | 42 | 48 | 10 |
| 2 1/2" | 65 | 83 | 166 | 52 | 58 | 18 |
| 3" | 80 | 86 | 194 | 62 | 68 | 26 |
| 4" | 100 | 105 | 232 | 88 | 94 | 40 |
| 5" | 125 | 110 | 277 | 100 | 106 | 59 |
| 6" | 150 | 159 | 315 | 150 | 162 | 90 |
| 8" | 200 | 206 | 385 | 180 | 186 | 150 |
| 10" | 250 | 254 | 474 | 225 | 232 | 240 |
| 12" | 300 | 305 | 547 | 266 | 272 | 440 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | ½" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

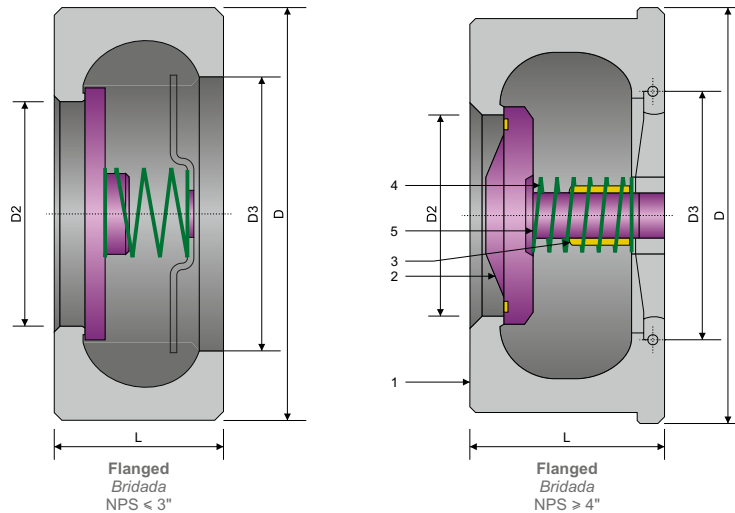
CLASS / Clase 150 (NPS ½" - 8")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| ½" | 15 | 25 | 46 | 15 | 25 | 0.28 |
| ¾" | 20 | 31.5 | 56 | 19 | 30 | 0.42 |
| 1" | 25 | 35.5 | 65 | 24 | 36 | 0.56 |
| 1 ¼" | 32 | 40 | 74 | 31 | 43 | 0.75 |
| 1 ½" | 40 | 45 | 84 | 39 | 52 | 1.3 |
| 2" | 50 | 56 | 103 | 48 | 62 | 2.1 |
| 2 ½" | 65 | 63 | 122 | 62 | 75 | 2.8 |
| 3" | 80 | 71 | 135 | 76 | 90 | 3.6 |
| 4" | 100 | 80 | 173 | 95 | 112 | 4.8 |
| 5" | 125 | 110 | 195 | 110 | 132 | 12 |
| 6" | 150 | 125 | 220 | 127 | 158 | 17 |
| 8" | 200 | 160 | 277 | 165 | 208 | 29 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | ½" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |

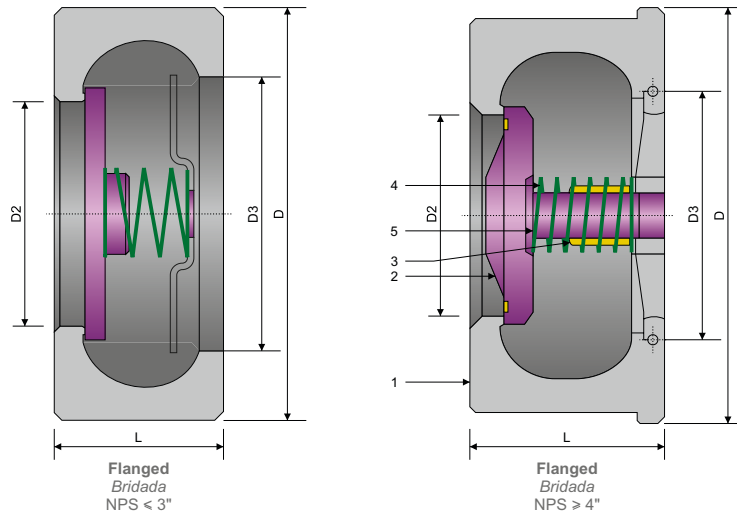
MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 300 (NPS ½" - 8")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| ½" | 15 | 25 | 52 | 15 | 25 | 0.3 |
| ¾" | 20 | 31.5 | 65 | 19 | 30 | 0.46 |
| 1" | 25 | 35.5 | 72 | 24 | 36 | 0.6 |
| 1 ¼" | 32 | 40 | 81 | 31 | 43 | 0.8 |
| 1 ½" | 40 | 45 | 94 | 39 | 52 | 1.5 |
| 2" | 50 | 56 | 110 | 48 | 62 | 2.4 |
| 2 ½" | 65 | 63 | 128 | 62 | 75 | 3 |
| 3" | 80 | 71 | 147 | 76 | 90 | 4 |
| 4" | 100 | 80 | 179 | 95 | 112 | 5.5 |
| 5" | 125 | 110 | 214 | 110 | 132 | 13 |
| 6" | 150 | 125 | 249 | 127 | 158 | 22 |
| 8" | 200 | 160 | 305 | 165 | 208 | 36 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm



SPECIFICATIONS / Especificaciones

API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | ½" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales

ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales

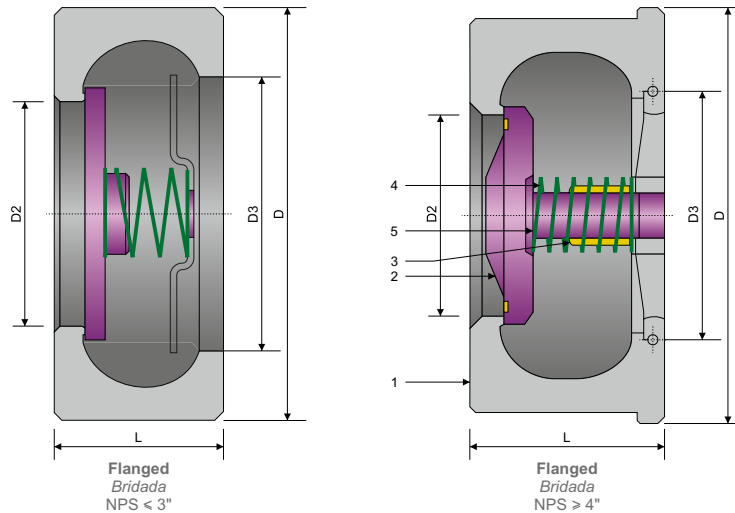
CLASS / Clase 600 (NPS ½" - 8")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| ½" | 15 | 25 | 52 | 15 | 25 | 0.4 |
| ¾" | 20 | 31.5 | 65 | 19 | 30 | 0.8 |
| 1" | 25 | 35.5 | 72 | 24 | 36 | 1 |
| 1 ¼" | 32 | 40 | 81 | 31 | 43 | 1.3 |
| 1 ½" | 40 | 45 | 94 | 39 | 52 | 1.8 |
| 2" | 50 | 56 | 110 | 48 | 62 | 2.8 |
| 2 ½" | 65 | 63 | 128 | 62 | 75 | 4 |
| 3" | 80 | 71 | 147 | 76 | 90 | 6 |
| 4" | 100 | 80 | 191 | 95 | 112 | 11 |
| 5" | 125 | 110 | 239 | 110 | 132 | 25 |
| 6" | 150 | 125 | 364 | 127 | 158 | 32 |
| 8" | 200 | 160 | 318 | 165 | 208 | 52 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm


SPECIFICATIONS / Especificaciones
API / ASME

| DESIGN <i>Diseño</i> | FACE TO FACE <i>Cara a cara</i> | CONNECTION END / <i>Extremos</i> | TEST & CHECK <i>Prueba y Verificación</i> | SIZES <i>Rango</i> |
|-------------------------|------------------------------------|----------------------------------|--|-----------------------|
| | | FLANGED <i>Bridada</i> | | |
| API 594 ASME B16.34 | ASME B16.10 | ASME B16.5 ASME B16.47 | API 598 ASME B16.34 | ½" - 8" |

MAIN PARTS MATERIAL / Material de las piezas principales
ASTM

| Nº | PART NAME <i>Nombre de pieza</i> | CARBON STEEL <i>Acero al Carbono</i> | LOW TEMPERATURE STEEL <i>Acero baja temperatura</i> | STAINLESS STEEL <i>Acero Inoxidable</i> |
|----|-------------------------------------|---|--|--|
| 1 | Body / <i>Cuerpo</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 2 | Disc / <i>Obturador</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |
| 3 | Gasket / <i>Junta</i> | Flexible Graphite 304 / <i>Grafito Flexible 304</i> | | |
| 4 | Spring / <i>Muelle</i> | Stainless Steel 304 - 316 / <i>Acero Inoxidable 304 - 316</i> | | |
| 5 | Bonnet / <i>Bonete</i> | A216 - WCB | A352 - LCB / A352 - LCC | A351 - CF8 / A351 - CF8M |

MAIN EXTERNAL DIMENSIONS / Dimensiones externas principales
CLASS / Clase 900 (NPS ½" - 8")

| NPS <i>(in.)</i> | DN <i>(mm.)</i> | WF L | D | D2 | D3 | W / P (Kg.) |
|---------------------|--------------------|---------|-----|-----|-----|-------------|
| ½" | 15 | 25 | 62 | 15 | 25 | 0.6 |
| ¾" | 20 | 31.5 | 69 | 19 | 30 | 0.9 |
| 1" | 25 | 35.5 | 77 | 24 | 36 | 1.2 |
| 1 ¼" | 32 | 40 | 87 | 31 | 43 | 1.5 |
| 1 ½" | 40 | 45 | 97 | 39 | 52 | 2 |
| 2" | 50 | 56 | 140 | 48 | 62 | 5.5 |
| 2 ½" | 65 | 63 | 162 | 62 | 75 | 7.5 |
| 3" | 80 | 71 | 165 | 76 | 90 | 8 |
| 4" | 100 | 80 | 204 | 95 | 112 | 14 |
| 5" | 125 | 110 | 245 | 110 | 132 | 27 |
| 6" | 150 | 125 | 286 | 127 | 158 | 41 |
| 8" | 200 | 160 | 356 | 165 | 208 | 76 |

Notes / Notas:

- **Approximate weights / Pesos aproximados.**
- **Larger diameters on request / Diámetros superiores bajo petición.**
- **Other material on request / Otros materiales bajo petición.**

UNITS / Unidades mm

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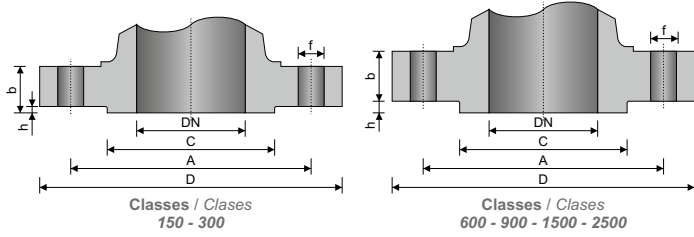
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NOMENCLATURE / Nomenclatura



DN = **Nominal pipe size (inches) / Diámetro nominal del tubo (pulgadas)**
D = **Outside diameter of flange / Diámetro exterior de la brida**
b* = **Thickness of flange min. / Espesor mínimo de la brida**
C = **Diameter of hub / Diámetro del cubo**
h = **Height of raised face / Altura de cara resaltada**
N = **Number of bolt holes / Número de orificios para pernos**
f = **Diameter of bolt holes / Diámetro de orificios para pernos**
A = **Diameter of bolt circle / Diámetro del círculo entre pernos**
RJ = **Groove number / Número de ranura**

*raised face included for ANSI Class 150 - 300 / cara resaltada incluida para ANSI Clase 150 - 300
raised face not included for ANSI Class 600 - 900 - 1500 - 2500 / cara resaltada no incluida para ANSI Clase 600 - 900 - 1500 - 2500

FLANGES DIMENSIONS / Dimensiones bridas

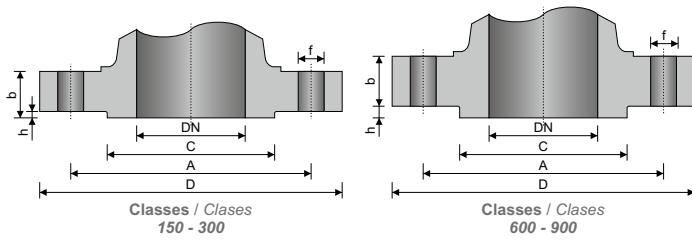
ASME B16.5

CLASS / Clase 150 - 2500

| CLASS | DN (in.) | D | b | C | h | N | f | A | RJ |
|------------|----------|------|-------|------|------|---|------|------|----|
| 150 | ½" | 89 | 11.1 | 34.9 | 1.60 | 4 | 15 | 60.3 | - |
| 300 | ½" | 95 | 14.3 | 34.9 | 1.60 | 4 | 15 | 66.7 | 11 |
| 600 | ½" | 95 | 14.3 | 34.9 | 6.35 | 4 | 15 | 66.7 | 11 |
| 900 | ½" | 121 | 22.2 | 34.9 | 6.35 | 4 | 22 | 82.5 | 12 |
| 1500 | ½" | 121 | 22.2 | 34.9 | 6.35 | 4 | 22 | 82.5 | 12 |
| 150 | ¾" | 98.4 | 12.7 | 42.9 | 1.60 | 4 | 15 | 69.8 | - |
| 300 | ¾" | 118 | 15.9 | 42.9 | 1.60 | 4 | 18 | 82.5 | 13 |
| 600 | ¾" | 118 | 15.9 | 42.9 | 6.35 | 4 | 18 | 82.5 | 13 |
| 900 - 1500 | ¾" | 130 | 25.4 | 42.9 | 6.35 | 4 | 22 | 88.9 | 14 |
| 150 | 1" | 108 | 14.3 | 50.8 | 1.60 | 4 | 15 | 79.4 | 15 |
| 300 | 1" | 124 | 17.5 | 50.8 | 1.60 | 4 | 19 | 88.9 | 16 |
| 600 | 1" | 124 | 17.5 | 50.8 | 6.35 | 4 | 19 | 88.9 | 16 |
| 900 - 1500 | 1" | 149 | 28.6 | 50.8 | 6.35 | 4 | 25 | 102 | 16 |
| 150 | 1 ¼" | 118 | 15.9 | 63.5 | 1.60 | 4 | 15 | 88.9 | 17 |
| 300 | 1 ¼" | 133 | 19 | 63.5 | 1.60 | 4 | 18 | 98.4 | 18 |
| 600 | 1 ¼" | 133 | 20.6 | 63.5 | 6.35 | 4 | 18 | 98.4 | 18 |
| 900 - 1500 | 1 ¼" | 159 | 28.6 | 63.5 | 6.35 | 4 | 26 | 111 | 18 |
| 150 | 1 ½" | 127 | 17.5 | 73 | 1.60 | 4 | 15 | 98.4 | 19 |
| 300 | 1 ½" | 156 | 20.6 | 73 | 1.60 | 4 | 22 | 114 | 20 |
| 600 | 1 ½" | 156 | 22.2 | 73 | 6.35 | 4 | 22 | 114 | 20 |
| 900 - 1500 | 1 ½" | 178 | 31.8 | 73 | 6.35 | 4 | 30 | 124 | 20 |
| 150 | 2" | 152 | 19 | 92.1 | 1.60 | 4 | 19 | 121 | 22 |
| 300 | 2" | 165 | 22.2 | 92.1 | 1.60 | 8 | 18 | 127 | 23 |
| 600 | 2" | 165 | 25.4 | 92.1 | 6.35 | 8 | 18 | 127 | 23 |
| 900 - 1500 | 2" | 216 | 38.1 | 92.1 | 6.35 | 8 | 26 | 165 | 24 |
| 2500 | 2" | 235 | 50.8 | 92.1 | 6.35 | 8 | 29 | 171 | 26 |
| 150 | 2 ½" | 178 | 22.2 | 105 | 1.60 | 8 | 19 | 140 | 25 |
| 300 | 2 ½" | 191 | 25.4 | 105 | 1.60 | 8 | 22 | 149 | 26 |
| 600 | 2 ½" | 191 | 28.6 | 105 | 6.35 | 8 | 22 | 149 | 26 |
| 900 - 1500 | 2 ½" | 245 | 41.3 | 105 | 6.35 | 8 | 30 | 191 | 27 |
| 2500 | 2 ½" | 267 | 57.2 | 105 | 6.35 | 8 | 32 | 197 | 28 |
| 150 | 3" | 191 | 23.8 | 127 | 1.60 | 8 | 19 | 152 | 29 |
| 300 | 3" | 210 | 28.6 | 127 | 1.60 | 8 | 22 | 168 | 31 |
| 600 | 3" | 210 | 31.8 | 127 | 6.35 | 8 | 22 | 168 | 31 |
| 900 | 3" | 241 | 38.1 | 127 | 6.35 | 8 | 25 | 191 | 31 |
| 1500 | 3" | 267 | 47.6 | 127 | 6.35 | 8 | 32 | 203 | 35 |
| 2500 | 3" | 305 | 66.7 | 127 | 6.35 | 8 | 34.9 | 229 | 32 |
| 150 | 4" | 229 | 23.8 | 157 | 1.60 | 8 | 19 | 191 | 36 |
| 300 | 4" | 254 | 31.7 | 157 | 1.60 | 8 | 22 | 200 | 37 |
| 600 | 4" | 273 | 38.1 | 157 | 6.35 | 8 | 26 | 216 | 37 |
| 900 | 4" | 292 | 44.45 | 157 | 6.35 | 8 | 32 | 235 | 37 |
| 1500 | 4" | 311 | 54 | 157 | 6.35 | 8 | 35 | 241 | 39 |
| 2500 | 4" | 356 | 76.2 | 157 | 6.35 | 8 | 41 | 273 | 38 |
| 150 | 5" | 254 | 23.8 | 186 | 1.60 | 8 | 22 | 216 | 40 |
| 300 | 5" | 279 | 34.9 | 186 | 1.60 | 8 | 22 | 235 | 41 |
| 600 | 5" | 330 | 44.4 | 186 | 6.35 | 8 | 28 | 267 | 41 |
| 900 | 5" | 349 | 50.8 | 186 | 6.35 | 8 | 36 | 279 | 41 |
| 1500 | 5" | 375 | 73 | 186 | 6.35 | 8 | 42 | 292 | 44 |
| 2500 | 5" | 416 | 92.1 | 186 | 6.35 | 8 | 48 | 324 | 42 |

| CLASS | DN (in.) | D | b | C | h | N | f | A | RJ |
|-------|----------|------|------|-----|------|----|------|-----|----|
| 150 | 6" | 279 | 25.4 | 216 | 1.60 | 8 | 22 | 241 | 43 |
| 300 | 6" | 318 | 36.5 | 216 | 1.60 | 12 | 22 | 270 | 45 |
| 600 | 6" | 356 | 47.6 | 216 | 6.35 | 12 | 30 | 292 | 45 |
| 900 | 6" | 381 | 55.6 | 216 | 6.35 | 12 | 32 | 318 | 45 |
| 1500 | 6" | 394 | 82.6 | 216 | 6.35 | 12 | 39 | 318 | 46 |
| 2500 | 6" | 483 | 108 | 216 | 6.35 | 8 | 54 | 368 | 47 |
| 150 | 8" | 343 | 28.6 | 270 | 1.60 | 8 | 22 | 298 | 48 |
| 300 | 8" | 381 | 41.3 | 270 | 1.60 | 12 | 26 | 330 | 49 |
| 600 | 8" | 419 | 55.6 | 270 | 6.35 | 12 | 32 | 349 | 49 |
| 900 | 8" | 470 | 63.5 | 270 | 6.35 | 12 | 39 | 394 | 49 |
| 1500 | 8" | 483 | 92.1 | 270 | 6.35 | 12 | 45 | 394 | 50 |
| 2500 | 8" | 552 | 127 | 270 | 6.35 | 12 | 54 | 438 | 51 |
| 150 | 10" | 406 | 30.2 | 324 | 1.60 | 12 | 25 | 362 | 52 |
| 300 | 10" | 445 | 47.6 | 324 | 1.60 | 16 | 28.6 | 387 | 53 |
| 600 | 10" | 508 | 63.5 | 324 | 6.35 | 16 | 36 | 432 | 53 |
| 900 | 10" | 546 | 69.8 | 324 | 6.35 | 16 | 38.1 | 470 | 53 |
| 1500 | 10" | 584 | 108 | 324 | 6.35 | 12 | 52 | 483 | 54 |
| 2500 | 10" | 673 | 165 | 324 | 6.35 | 12 | 67 | 540 | 55 |
| 150 | 12" | 483 | 31.7 | 381 | 1.60 | 12 | 26 | 432 | 56 |
| 300 | 12" | 521 | 50.8 | 381 | 1.60 | 16 | 32 | 451 | 57 |
| 600 | 12" | 559 | 66.7 | 381 | 6.35 | 20 | 36 | 490 | 57 |
| 900 | 12" | 610 | 79.4 | 381 | 6.35 | 20 | 39 | 533 | 57 |
| 1500 | 12" | 673 | 124 | 381 | 6.35 | 16 | 55 | 572 | 58 |
| 2500 | 12" | 762 | 184 | 381 | 6.35 | 12 | 73 | 619 | 60 |
| 150 | 14" | 533 | 34.9 | 413 | 1.60 | 12 | 29 | 476 | 59 |
| 300 | 14" | 584 | 54 | 413 | 1.60 | 20 | 32 | 514 | 61 |
| 600 | 14" | 603 | 69.8 | 413 | 6.35 | 20 | 39 | 527 | 61 |
| 900 | 14" | 641 | 85.7 | 413 | 6.35 | 20 | 42 | 559 | 62 |
| 1500 | 14" | 749 | 133 | 413 | 6.35 | 16 | 60 | 635 | 63 |
| 150 | 16" | 597 | 36.5 | 470 | 1.60 | 16 | 28 | 540 | 64 |
| 300 | 16" | 648 | 57.2 | 470 | 1.60 | 20 | 36 | 572 | 65 |
| 600 | 16" | 686 | 76.2 | 470 | 6.35 | 20 | 42 | 603 | 65 |
| 900 | 16" | 705 | 88.9 | 470 | 6.35 | 20 | 45 | 616 | 66 |
| 1500 | 16" | 826 | 146 | 470 | 6.35 | 16 | 65 | 705 | 67 |
| 150 | 18" | 635 | 39.7 | 533 | 1.60 | 16 | 32 | 578 | 68 |
| 300 | 18" | 711 | 60.3 | 533 | 1.60 | 24 | 36 | 629 | 69 |
| 600 | 18" | 743 | 82.6 | 533 | 6.35 | 20 | 45 | 654 | 69 |
| 900 | 18" | 787 | 102 | 533 | 6.35 | 20 | 52 | 686 | 70 |
| 1500 | 18" | 914 | 162 | 533 | 6.35 | 16 | 75 | 775 | 71 |
| 150 | 20" | 699 | 42.9 | 584 | 1.60 | 20 | 32 | 635 | 72 |
| 300 | 20" | 775 | 63.5 | 584 | 1.60 | 24 | 36 | 686 | 73 |
| 600 | 20" | 813 | 88.9 | 584 | 6.35 | 24 | 45 | 724 | 73 |
| 900 | 20" | 857 | 108 | 584 | 6.35 | 20 | 55 | 749 | 74 |
| 1500 | 20" | 984 | 178 | 584 | 6.35 | 16 | 80 | 832 | 75 |
| 150 | 24" | 813 | 47.6 | 692 | 1.60 | 20 | 36 | 749 | 76 |
| 300 | 24" | 914 | 69.8 | 692 | 1.60 | 24 | 42 | 813 | 77 |
| 600 | 24" | 940 | 102 | 692 | 6.35 | 24 | 52 | 838 | 77 |
| 900 | 24" | 1041 | 140 | 692 | 6.35 | 20 | 65 | 902 | 78 |
| 1500 | 24" | 1168 | 203 | 692 | 6.35 | 16 | 93 | 991 | 79 |

UNITS / Unidades mm

NOMENCLATURE / Nomenclatura


DN = **Nominal pipe size (inches) / Diámetro nominal del tubo (pulgadas)**
D = **Outside diameter of flange / Diámetro exterior de la brida**
b* = **Thickness of flange min. / Espesor mínimo de la brida**
C = **Diameter of hub / Diámetro del cubo**
h = **Height of raised face / Altura de cara resaltada**
N = **Number of bolt holes / Número de orificios para pernos**
f = **Diameter of bolt holes / Diámetro de orificios para pernos**
A = **Diameter of bolt circle / Diámetro del círculo entre pernos**
RJ = **Groove number / Número de ranura**

*raised face included for ANSI Class 150 - 300 / cara resaltada incluida para ANSI Clase 150 - 300
raised face not included for ANSI Class 600 - 900 / cara resaltada no incluida para ANSI Clase 600 - 900

FLANGES DIMENSIONS / Dimensiones bridas
ASME B16.47 - MSS SP-44
CLASS / Clase 150 - 900

| CLASS | DN (in.) | D | b | C | h | N | f | A | RJ |
|-------|----------|------|-------|------|------|----|------|------|-----|
| 150 | 26" | 870 | 68.3 | 749 | 1.60 | 24 | 35.1 | 806 | - |
| 300 | 26" | 972 | 79.2 | 749 | 1.60 | 28 | 44.5 | 876 | 93 |
| 600 | 26" | 1016 | 108 | 749 | 1.60 | 28 | 50.8 | 914 | 93 |
| 900 | 26" | 1086 | 139.7 | 953 | 1.60 | 20 | 73.2 | 953 | 100 |
| 150 | 28" | 927 | 71.4 | 800 | 1.60 | 28 | 35.1 | 864 | - |
| 300 | 28" | 1035 | 85.9 | 800 | 1.60 | 28 | 44.5 | 940 | 94 |
| 600 | 28" | 1073 | 111.3 | 800 | 1.60 | 28 | 53.8 | 965 | 94 |
| 900 | 28" | 1168 | 142.7 | 1022 | 1.60 | 20 | 79.2 | 1022 | 101 |
| 150 | 30" | 984 | 74.7 | 857 | 1.60 | 28 | 35.1 | 914 | - |
| 300 | 30" | 1092 | 91.9 | 857 | 1.60 | 28 | 47.8 | 997 | 95 |
| 600 | 30" | 1130 | 114.3 | 857 | 1.60 | 28 | 53.8 | 1022 | 95 |
| 900 | 30" | 1232 | 149.4 | 1086 | 1.60 | 20 | 79.2 | 1086 | 102 |
| 150 | 32" | 1060 | 81 | 914 | 1.60 | 28 | 41.1 | 978 | - |
| 300 | 32" | 1149 | 98.6 | 914 | 1.60 | 28 | 50.8 | 1054 | 96 |
| 600 | 32" | 1194 | 117.3 | 914 | 1.60 | 28 | 60.5 | 1080 | 96 |
| 900 | 32" | 1314 | 158.8 | 1156 | 1.60 | 20 | 85.9 | 1156 | 103 |
| 150 | 34" | 1111 | 82.6 | 965 | 1.60 | 32 | 41.1 | 1029 | - |
| 300 | 34" | 1207 | 101.6 | 965 | 1.60 | 28 | 50.8 | 1105 | 97 |
| 600 | 34" | 1245 | 120.7 | 965 | 1.60 | 28 | 60.5 | 1130 | 97 |
| 900 | 34" | 1397 | 165.1 | 1226 | 1.60 | 20 | 91.9 | 1226 | 104 |
| 150 | 36" | 1168 | 90.4 | 1022 | 1.60 | 32 | 41.1 | 1086 | - |
| 300 | 36" | 1270 | 104.6 | 1022 | 1.60 | 32 | 53.8 | 1168 | 98 |
| 600 | 36" | 1314 | 124 | 1022 | 1.60 | 28 | 66.5 | 1194 | 98 |
| 900 | 36" | 1461 | 171.5 | 1289 | 1.60 | 20 | 91.9 | 1289 | 105 |

| CLASS | DN (in.) | D | b | C | h | N | f | A | RJ |
|-------|----------|------|-------|------|------|----|------|------|----|
| 150 | 38" | 1238 | 87.4 | 1073 | 1.60 | 32 | 41.1 | 1149 | - |
| 300 | 38" | 1168 | 108 | 1029 | 1.60 | 32 | 41.1 | 1092 | - |
| 600 | 38" | 1270 | 152.4 | 1054 | 1.60 | 28 | 60.5 | 1162 | - |
| 900 | 38" | 1461 | 190.5 | 1289 | 1.60 | 20 | 91.9 | 1289 | - |
| 150 | 40" | 1289 | 90.4 | 1124 | 1.60 | 36 | 41.1 | 1200 | - |
| 300 | 40" | 1238 | 114.3 | 1086 | 1.60 | 32 | 44.5 | 1156 | - |
| 600 | 40" | 1321 | 158.8 | 1111 | 1.60 | 32 | 60.5 | 1213 | - |
| 900 | 40" | 1511 | 196.9 | 1340 | 1.60 | 24 | 91.9 | 1340 | - |
| 150 | 42" | 1346 | 96.8 | 1194 | 1.60 | 36 | 41.1 | 1257 | - |
| 300 | 42" | 1289 | 119.1 | 1137 | 1.60 | 32 | 44.5 | 1207 | - |
| 600 | 42" | 1403 | 168.1 | 1168 | 1.60 | 28 | 66.5 | 1283 | - |
| 900 | 42" | 1562 | 206.2 | 1391 | 1.60 | 24 | 91.9 | 1391 | - |
| 150 | 44" | 1403 | 101.6 | 1245 | 1.60 | 40 | 41.1 | 1314 | - |
| 300 | 44" | 1353 | 124 | 1194 | 1.60 | 32 | 47.8 | 1264 | - |
| 600 | 44" | 1454 | 173 | 1226 | 1.60 | 32 | 66.5 | 1334 | - |
| 900 | 44" | 1648 | 214.4 | 1464 | 1.60 | 24 | 98.6 | 1464 | - |
| 150 | 46" | 1454 | 103.1 | 1295 | 1.60 | 40 | 41.1 | 1365 | - |
| 300 | 46" | 1416 | 128.5 | 1245 | 1.60 | 28 | 50.8 | 1321 | - |
| 600 | 46" | 1511 | 179.3 | 1276 | 1.60 | 32 | 66.5 | 1391 | - |
| 900 | 46" | 1734 | 225.6 | 1537 | 1.60 | 24 | 105 | 1537 | - |
| 150 | 48" | 1511 | 108 | 1359 | 1.60 | 44 | 41.1 | 1422 | - |
| 300 | 48" | 1467 | 133.4 | 1302 | 1.60 | 32 | 50.8 | 1372 | - |
| 600 | 48" | 1594 | 189 | 1334 | 1.60 | 32 | 73.2 | 1461 | - |
| 900 | 48" | 1784 | 233.4 | 1588 | 1.60 | 24 | 105 | 1588 | - |

UNITS / Unidades mm
FLANGES FACING FINISH / Acabado Revestimiento Brida
NOMINAL ROUGHNESS GRADES (Ra) FOR ROUGHNESS COMPARISON SPECIMENS - ASME B46.1

Grado nominal de rugosidad (Ra) para especificaciones de comparación de rugosidad - ASME B46.1

| µm | µin |
|--------|-------|
| 0.006 | 0.25 |
| 0.0125 | 0.5 |
| 0.025 | 1 |
| 0.05 | 2 |
| 0.1 | 4 |
| 0.2 | 8 |
| 0.4 | 16 |
| 0.8 | 32 |
| 1.6 | 63 |
| 3.2 | 125 |
| 6.3 | 250 |
| 12.5 | 500 |
| 25 | 1000 |
| 50 | 2000 |
| 100 | 4000 |
| 200 | 8000 |
| 400 | 16000 |

ASME B16.5
TONGUE AND GROOVE - SMALL MALE & FEMALE / LENGÜETA Y RANURA - HEMBRA & MACHO PEQUEÑO

The gasket contact surface shall not exceed 125 microinches (3,2 micrometers) roughness.

La superficie de contacto de la junta no debe exceder la rugosidad de 125 micropulgadas (3,2 micras).

RING JOINT / JUNTAS

The side wall surface of gasket groove shall not exceed 63 microinches (1,6 micrometers) roughness.

La superficie de la pared lateral de la ranura de la junta no deberá exceder la rugosidad de 63 micropulgadas (1,6 micras).

OTHER FLANGE FACINGS / OTROS ACABADOS DE BRIDAS

Either a serrated concentric or serrated spiral finish having a resultant surface finish from 125 microinches to 250 microinches (3,2 to 6,3 micrometers) average roughness.

Un acabado en espiral dentado concéntrico o dentado con un acabado de superficie resultante de 125 micropulgadas a 250 micropulgadas (3,2 a 6,3 micras) de rugosidad media.

MSS SP-6 - STEEL
FLAT OR 1/16" (1.6mm) RAISED FACE AND 1/4" (6.4mm) RAISED AND LARGE MALE & FEMALE / PLANA 1/16" (1.6mm) O CARA RESALTADA 1/4" (6.4mm) Y RESALTADA Y LARGA - HEMBRA & MACHO

Serrated: spiral or concentric, 45 to 55 per inch (18 to 21 per cm).

Dentado: espiral o concéntrico, 45 a 55 por pulgada (18 a 21 por cm).

Surface finish shall have a 125 to 250 microinches (3,2 to 6,3 micrometers) Ra.

El acabado de la superficie debe tener de 125 a 250 micropulgadas (3,2 a 6,3 micras) Ra.

SMALL MALE & FEMALE, LARGE & SMALL TONGUE & GROOVE / HEMBRA & MACHO PEQUEÑO, LENGÜETA Y RANURA LARGA PEQUEÑA

Serrated (as above) or non-serrated: 125 microinches (3,2 micrometers) Ra max.

Dentado (como el anterior) o no dentado: 125 micropulgadas (3,2 micras) Ra máx.

RING JOINT / JUNTAS

Non-serrated: 63 microinches (1,6 micrometers) Ra max. according to ASME B46.1.

No dentado: 63 micropulgadas (1,6 micras) Ra máx. según ASME B46.1.

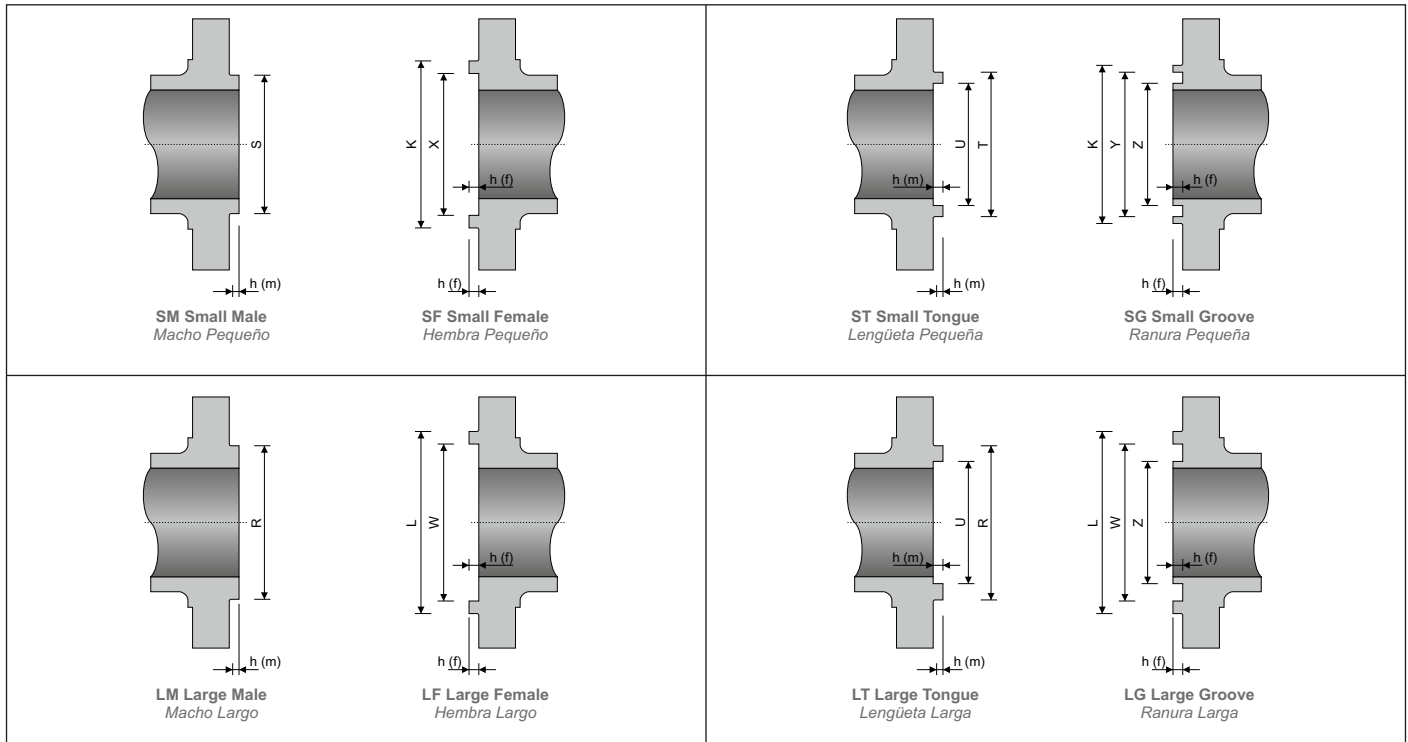
Notes / Notas:

The finish of contact faces of pipe flanges and connecting end flanges of fittings shall be judged by visual comparison with Ra standards.

El acabado de las caras de contacto de las bridas de los tubos y de las bridas extremas de conexión de los accesorios se juzgará mediante comparación visual con los estándares Ra.

END FLANGES / Extremos bridados

ASME B16.5



DIMENSIONS OF FACING / Dimensiones de cara

SIZES / Rango 1 1/2" - 24"

| Nominal Pipe Size (inches) Tamaño nominal del tubo (pulgadas) | OUTSIDE DIAMETER Diámetro exterior | | | INT. DIAM. | OUTSIDE DIAMETER Diámetro exterior | | | INT. DIAM. | RAISED FACE HEIGHT Altura Cara resaltada | | Depth of groove or female Profundidad de ranura o hembra | OUTSIDE DIAMETER OF RAISED PORTION Diámetro exterior de la porción aumentada | | | | |
|--|---|------------------------------------|-------------------------------------|------------|---|--|-----------------------------------|------------|---|---|---|---|---|-------|---|---|
| | Raised Face, Lapped, LM & LT Cara resaltada, solapada, LM y LT | SM Small Male (*) Macho pequeño | ST Small Tongue Lengüeta pequeña | | LT Large Tongue & SM Small Tongue Lengüeta larga y pequeña | LF Large Female & LG Large Groove Hembra y ranura larga | SF Small Female Hembra pequeña | | SG Small Groove Hembra pequeña | LG Large Groove & SG Small Groove (*) Ranura larga y pequeña | | 150 & 300 Lbs. Class / Clase | LM & SM, LT & ST 400 / 2500 Lbs. Macho largo y pequeño, y Lengüeta larga y pequeña | h (f) | K | L |
| | | | | | | | | | | | | | | | | |
| 1 1/2" | 73.1 | 44.4 | 63.5 | 53.8 | 74.6 | 45.9 | 65.0 | 52.3 | 1.6 | 6.35 | 4.8 | 84.1 | 84.1 | | | |
| 2" | 91.8 | 57.1 | 82.5 | 73.1 | 93.7 | 58.7 | 84.1 | 71.4 | 1.6 | 6.35 | 4.8 | 103.1 | 103.1 | | | |
| 2 1/2" | 104.6 | 68.3 | 95.2 | 85.8 | 106.4 | 69.8 | 96.8 | 84.1 | 1.6 | 6.35 | 4.8 | 115.8 | 115.8 | | | |
| 3" | 127.0 | 84.1 | 117.3 | 107.9 | 128.5 | 85.8 | 119.1 | 106.4 | 1.6 | 6.35 | 4.8 | 138.2 | 138.2 | | | |
| 4" | 157.2 | 109.5 | 144.5 | 131.8 | 158.7 | 111.2 | 146.0 | 130.0 | 1.6 | 6.35 | 4.8 | 168.1 | 168.1 | | | |
| 5" | 185.7 | 136.6 | 173.0 | 160.3 | 187.4 | 138.1 | 174.7 | 158.7 | 1.6 | 6.35 | 4.8 | 196.8 | 196.8 | | | |
| 6" | 215.9 | 162.0 | 203.2 | 190.5 | 217.5 | 163.5 | 204.7 | 188.9 | 1.6 | 6.35 | 4.8 | 227.0 | 227.0 | | | |
| 8" | 269.7 | 212.8 | 254.0 | 238.2 | 271.5 | 214.3 | 255.5 | 236.5 | 1.6 | 6.35 | 4.8 | 281.0 | 281.0 | | | |
| 10" | 323.8 | 266.7 | 304.8 | 285.7 | 325.4 | 268.2 | 306.3 | 284.2 | 1.6 | 6.35 | 4.8 | 335.0 | 335.0 | | | |
| 12" | 381.0 | 317.5 | 361.9 | 342.9 | 382.5 | 319.0 | 363.5 | 341.3 | 1.6 | 6.35 | 4.8 | 392.1 | 392.1 | | | |
| 14" | 412.7 | 349.2 | 393.7 | 374.6 | 414.3 | 350.8 | 395.3 | 373.1 | 1.6 | 6.35 | 4.8 | 423.9 | 423.9 | | | |
| 16" | 469.9 | 400.0 | 447.5 | 425.4 | 471.4 | 401.6 | 449.3 | 423.9 | 1.6 | 6.35 | 4.8 | 481.0 | 481.0 | | | |
| 18" | 533.4 | 450.8 | 511.0 | 488.9 | 535.0 | 452.4 | 512.8 | 487.4 | 1.6 | 6.35 | 4.8 | 544.5 | 544.5 | | | |
| 20" | 584.2 | 501.6 | 558.8 | 533.4 | 585.7 | 503.2 | 560.3 | 531.8 | 1.6 | 6.35 | 4.8 | 595.3 | 595.3 | | | |
| 24" | 692.1 | 603.2 | 666.7 | 641.3 | 693.7 | 604.8 | 668.8 | 639.8 | 1.6 | 6.35 | 4.8 | 703.3 | 703.3 | | | |

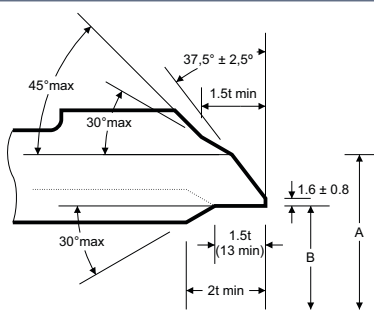
Notes / Notas:

- (*) Large male and female faces and large tongue and groove are not applicable to Class 150 because of potential dimensional conflict.
 Las caras macho y hembra largo y lengüeta y ranura larga no son aplicables para la Clase 150 debido a posibles conflictos dimensionales.

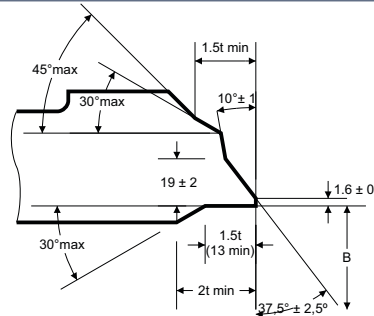
UNITS / Unidades mm

BUTT WELDING ENDS / Extremos soldados a tope

ASME B16.25



Weld bevel for wall thickness not over 22mm
Bisel de soldadura para espesor de pared no superior a 22 mm



Weld bevel for wall thickness over 22mm
Bisel de soldadura para espesor de pared superior a 22 mm

NOMENCLATURE / Nomenclatura

t = pipe thickness / espesor de la tubería

A = O.D. nominal of component at the welding end / Diámetro exterior nominal del componente en el extremo de la soldadura

B = I.D. at the welding end (Nom. O.D. of pipe - 2t) / Diámetro interior en el extremo de la soldadura (Diámetro exterior nominal de la tubería - 2t)

WALL THICKNESS OF PIPE / Espesor de la pared de la tubería

| DN (inches) DN (pulgadas) | Nom. pipe O.D. Tubería nominal diámetro exterior | A (1) | WALL THICKNESS OF PIPE / Espesor de la pared del tubo | | | | | | | | | | | |
|------------------------------------|---|----------|---|---------|-----------|---------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | sch. 20 | sch. 30 | sch. Std. | sch. 40 | sch. 60 | sch. xs | sch. 80 | sch. 100 | sch. 120 | sch. 140 | sch. 160 | sch. xxs |
| 1 1/2" | 48.3 | n.a. | - | - | 3.68 | 3.68 | - | 5.08 | 5.08 | - | - | - | 7.14 | 10.16 |
| 2" | 60.3 | n.a. | - | - | 3.91 | 3.91 | - | 5.54 | 5.54 | - | - | - | 8.74 | 11.07 |
| 2 1/2" | 73.0 | 75 | - | - | 5.16 | 5.16 | - | 7.01 | 7.01 | - | - | - | 9.52 | 14.02 |
| 3" | 88.9 | 91 | - | - | 5.49 | 5.49 | - | 7.62 | 7.62 | - | - | - | 11.13 | 15.24 |
| 4" | 114.3 | 117 | - | - | 6.02 | 6.02 | - | 8.56 | 8.56 | - | 11.13 | - | 13.49 | 17.12 |
| 5" | 141.3 | 144 | - | - | 6.55 | 6.55 | - | 9.52 | 9.52 | - | 12.70 | - | 15.88 | 19.05 |
| 6" | 168.3 | 172 | - | - | 7.11 | 7.11 | - | 10.97 | 10.97 | - | 14.27 | - | 18.26 | 21.95 |
| 8" | 219.1 | 223 | 6.35 | 7.04 | 8.18 | 8.18 | 10.31 | 12.70 | 12.70 | 15.09 | 18.26 | 20.62 | 23.01 | 22.22 |
| 10" | 273.0 | 278 | 6.35 | 7.80 | 9.27 | 9.27 | 12.70 | 12.70 | 15.09 | 18.26 | 21.44 | 25.40 | 28.58 | 25.40 |
| 12" | 323.8 | 329 | 6.35 | 8.38 | 9.52 | 10.31 | 14.27 | 12.70 | 17.48 | 21.44 | 25.40 | 28.57 | 33.32 | - |
| 14" | 355.6 | 362 | 7.92 | 9.52 | 9.52 | 11.12 | 15.09 | 12.70 | 19.05 | 23.83 | 27.76 | 31.75 | 35.71 | - |
| 16" | 406.4 | 413 | 7.92 | 9.52 | 9.52 | 12.70 | 16.66 | 12.70 | 21.44 | 26.19 | 30.94 | 36.52 | 40.46 | - |
| 18" | 457.2 | 464 | 7.92 | 11.13 | 9.52 | 14.27 | 19.05 | 12.70 | 23.83 | 29.36 | 34.92 | 39.67 | 45.24 | - |
| 20" | 508.0 | 516 | 9.52 | 12.70 | 9.52 | 15.06 | 20.62 | 12.70 | 26.19 | 32.54 | 38.10 | 44.45 | 49.99 | - |
| 24" | 609.6 | 619 | 9.52 | 14.27 | 9.52 | 17.45 | 24.59 | 12.70 | 30.94 | 38.89 | 46.02 | 52.37 | 59.51 | - |

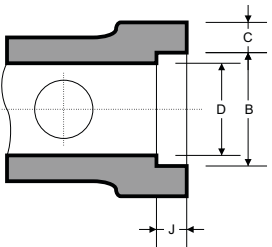
Notes / Notas:

- (1) The diameters listed are not requirements.
 Los diámetros listados no son requeridos.

UNITS / Unidades mm

SOCKET WELDING ENDS / Extremos soldados

ASME B16.11

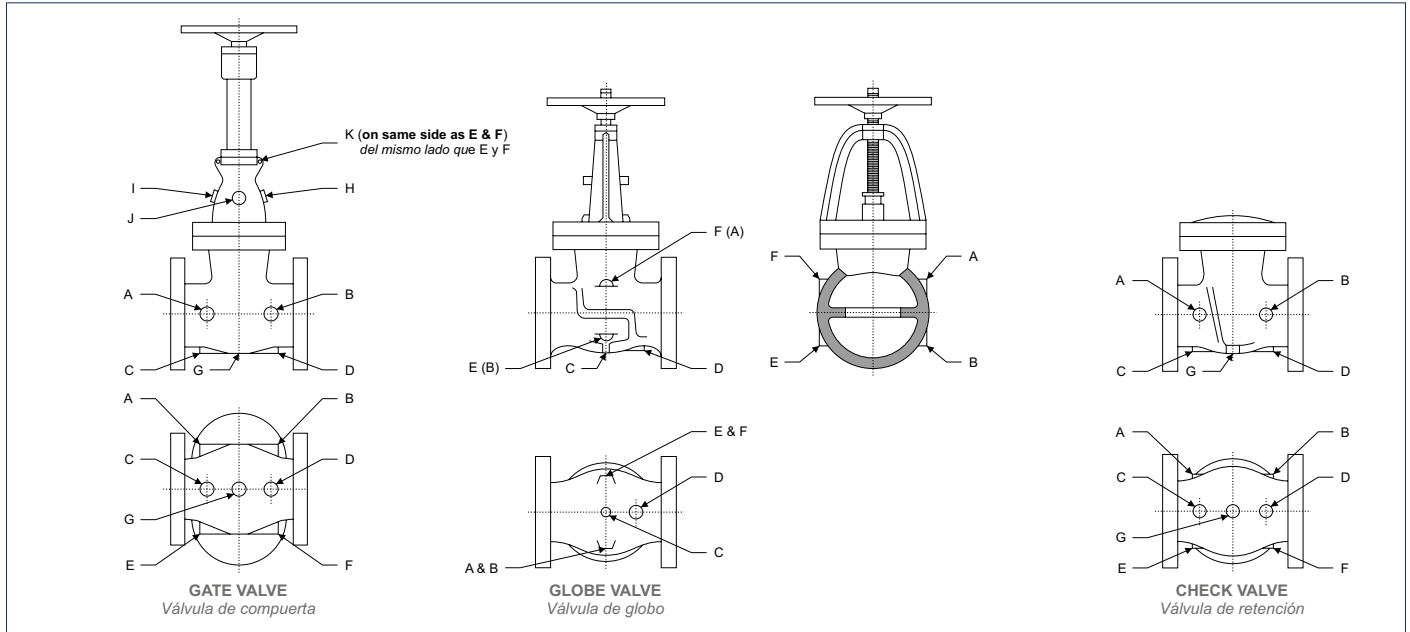


| DN | Nominal pipe size (inches) Tamaño nominal de la tubería (pulgadas) | B (min.) | J (min.) | CLASS 3000 Sch. 80 | | CLASS 6000 Sch. 160 | | CLASS 9000 WALL DES. XXS | |
|-----|---|----------|----------|-----------------------|----------|------------------------|----------|-----------------------------|----------|
| | | | | C (min.) | D (min.) | C (min.) | D (min.) | C (min.) | D (min.) |
| 6 | 1/8" | 10.8 | 9.5 | 3.18 | 6.1 | 3.43 | 3.2 | - | - |
| 8 | 1/4" | 14.2 | 9.5 | 3.30 | 8.5 | 4.01 | 5.6 | - | - |
| 10 | 3/8" | 17.6 | 9.5 | 3.50 | 11.8 | 4.37 | 8.4 | - | - |
| 15 | 1/2" | 21.8 | 9.5 | 4.09 | 15.0 | 5.18 | 11.0 | 5.94 | 5.6 |
| 20 | 3/4" | 27.2 | 12.5 | 4.27 | 20.2 | 6.04 | 14.8 | 6.93 | 10.3 |
| 25 | 1" | 33.9 | 12.5 | 4.98 | 25.9 | 6.93 | 19.9 | 7.95 | 14.4 |
| 32 | 1 1/4" | 42.7 | 12.5 | 5.28 | 34.3 | 9.93 | 28.7 | 7.95 | 22.0 |
| 40 | 1 1/2" | 48.8 | 12.5 | 5.54 | 40.1 | 7.80 | 33.2 | 8.91 | 27.2 |
| 50 | 2" | 61.2 | 16.0 | 6.04 | 51.7 | 9.50 | 42.1 | 10.89 | 37.4 |
| 65 | 2 1/2" | 73.9 | 16.0 | 7.67 | 61.2 | - | - | - | - |
| 80 | 3" | 89.8 | 16.0 | 8.30 | 76.4 | - | - | - | - |
| 100 | 4" | 115.2 | 16.0 | 9.35 | 100.7 | - | - | - | - |

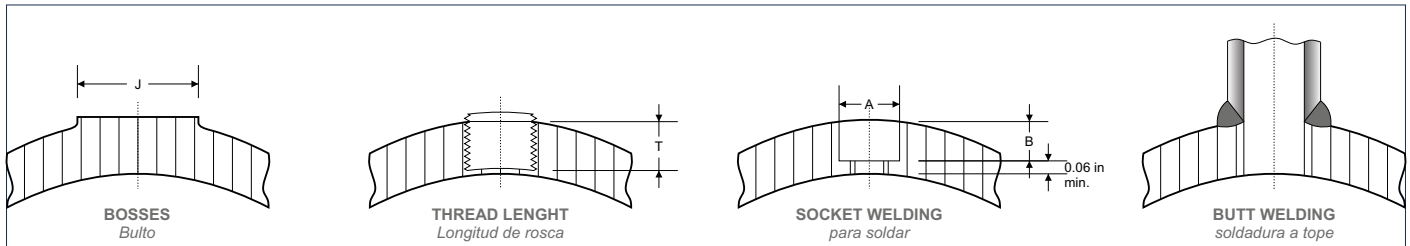
UNITS / Unidades mm

AUXILIARY CONNECTIONS / Conexiones auxiliares

ASME B16.25



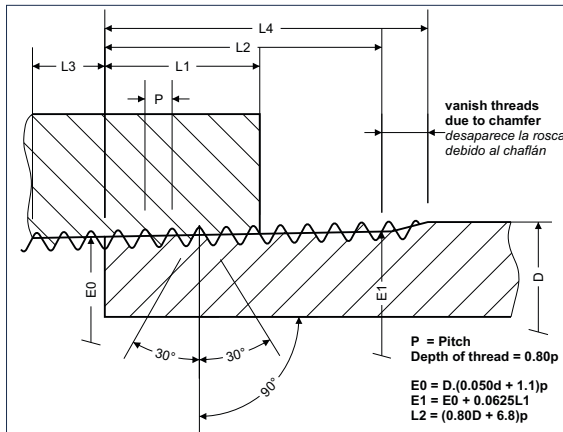
AUXILIARY CONNECTIONS - BYPASS AND DRAIN CONNECTIONS / Conexiones auxiliares - Conexiones de Bypass y drenaje



| Size of valve Tamaño de la válvula | 2" to 4" 2" a 4" | 5" to 8" 5" a 8" | 10" to 24" 10" a 24" |
|--|---------------------|---------------------|-------------------------|
| Size of connections Tamaño de la conexión | 1/2" | 3/4" | 1" |
| Length of Thread T Longitud de la rosca | 14 | 14 | 18 |
| Minimum Diameter of socket A Diámetro mínimo del zócalo | 22 | 27 | 34 |
| Minimum Depth of socket B Profundidad mínima del zócalo | 5 | 6.5 | 6.5 |
| Diameter of boss J Diámetro del bulto | 38 | 44 | 54 |
| Size of tapping Tamaño de intervención | 1/2" | 3/4" | 1" |

NPT THREAD STANDARDS / NPT rosca estándar

ASME B1.20.1



| Nominal pipe size (inches) Tamaño nominal de la tubería | Outside diameter of pipe Diámetro exterior de la tubería | Threads per (inches) Por rosca (pulgadas) | Pitch of threads Paso de rosca | Handtight engagement Enganche | Length of effective thread (external) Longitud efectiva de la rosca (externa) | Length for internal thread Longitud de rosca interna | Overall length external thread Longitud total de la rosca exterior | Pitch diameter at beginning of external thread Diámetro de paso de la rosca exterior |
|--|---|--|-----------------------------------|----------------------------------|--|---|---|---|
| DN | D | (n) | P | L1 | L2 | L3 | L4 | E0 |
| 1/8" | 10.29 | 27 | 0.940 | 4.572 | 6.703 | 2.822 | 9.967 | 9.233 |
| 1/4" | 13.72 | 18 | 1.412 | 5.080 | 10.206 | 4.234 | 15.103 | 12.126 |
| 3/8" | 17.14 | 18 | 1.412 | 6.096 | 10.358 | 4.234 | 15.255 | 15.545 |
| 1/2" | 21.34 | 14 | 1.814 | 8.128 | 13.556 | 5.443 | 19.850 | 19.263 |
| 3/4" | 26.67 | 14 | 1.814 | 8.611 | 13.861 | 5.443 | 20.155 | 24.58 |
| 1" | 33.40 | 11.5 | 2.210 | 10.160 | 17.343 | 6.627 | 25.006 | 30.825 |
| 1 1/4" | 42.16 | 11.5 | 2.210 | 10.668 | 17.953 | 6.627 | 25.616 | 39.55 |
| 1 1/2" | 48.26 | 11.5 | 2.210 | 10.668 | 18.377 | 6.627 | 26.040 | 45.621 |
| 2" | 60.32 | 11.5 | 2.210 | 11.074 | 19.215 | 6.627 | 26.878 | 57.633 |

UNITS / Unidades mm

CASTINGS / Fundiciones

| ASTM | | CHEMICAL COMPOSITION % / Composición química % | | | | | | | | | MECHANICAL PROPERTIES / Propiedades mecánicas | | | |
|-------|---------|--|-------------|------------|------------|-----------|---------------|-------------|--------------|----------------------------------|---|-------|-------|-----|
| Nº | GRADE | C | Mn | P | S | Si | Cr | Mo | Ni | Others | Mpa R | Mpa S | % Ap. | % C |
| A 216 | WCB | max. 0.30 | max. 1.00 | max. 0.04 | max. 0.045 | max. 0.60 | - | - | - | - | 485 | 250 | 22 | 35 |
| A 352 | LCB | max. 0.30 | max. 1.00 | max. 0.04 | max. 0.045 | max. 0.60 | - | - | - | - | 450 | 240 | 24 | 35 |
| A 352 | LC2 | max. 0.25 | 0.50 - 0.80 | max. 0.04 | max. 0.045 | max. 0.60 | - | - | 2.00 - 3.00 | - | 485 | 275 | 24 | 35 |
| A 352 | LC3 | max. 0.15 | 0.50 - 0.80 | max. 0.04 | max. 0.045 | max. 0.60 | - | - | 3.00 - 4.00 | - | 485 | 275 | 24 | 35 |
| A 217 | WC1 | max. 0.25 | 0.50 - 0.80 | max. 0.04 | max. 0.045 | max. 0.60 | - | 0.45 - 0.65 | - | - | 450 | 240 | 24 | 35 |
| A 217 | WC5 | max. 0.20 | 0.40 - 0.70 | max. 0.04 | max. 0.045 | max. 0.60 | 0.50 - 0.90 | 1.90 - 1.20 | 0.60 - 1.00 | - | 485 | 275 | 20 | 35 |
| A 217 | WC6 | max. 0.20 | 0.50 - 0.80 | max. 0.04 | max. 0.045 | max. 0.60 | 1.00 - 1.50 | 0.45 - 0.65 | - | - | 485 | 275 | 20 | 35 |
| A 217 | WC9 | max. 0.18 | 0.40 - 0.70 | max. 0.04 | max. 0.045 | max. 0.60 | 2.00 - 2.75 | 0.90 - 1.20 | - | - | 485 | 275 | 20 | 35 |
| A 217 | C5 | max. 0.20 | 0.40 - 0.70 | max. 0.04 | max. 0.045 | max. 0.75 | 4.00 - 6.50 | 0.45 - 0.65 | - | - | 620 | 415 | 18 | 35 |
| A 217 | C12 | max. 0.20 | 0.35 - 0.65 | max. 0.04 | max. 0.045 | max. 1.00 | 8.00 - 10.00 | 0.90 - 1.20 | - | - | 620 | 515 | 18 | 35 |
| A 217 | CA15 | max. 0.15 | max. 1.00 | max. 0.04 | max. 0.04 | max. 1.50 | 11.50 - 14.00 | max. 0.50 | max. 1.00 | - | 620 | 450 | 18 | 30 |
| A 351 | CF3 | max. 0.03 | max. 1.50 | max. 0.04 | max. 0.04 | max. 2.00 | 17.0 - 21.0 | max. 0.50 | 8.00 - 12.00 | - | 485 | 205 | 35 | - |
| A 351 | CF8 | max. 0.08 | max. 1.50 | max. 0.04 | max. 0.04 | max. 2.00 | 18.0 - 21.0 | max. 0.50 | 8.00 - 11.00 | - | 485 | 205 | 35 | - |
| A 351 | CF8C | max. 0.08 | max. 1.50 | max. 0.04 | max. 0.04 | max. 2.00 | 18.0 - 21.0 | - | 9.00 - 12.00 | Cb (min. 8xC / max. 1.00) | 485 | 205 | 30 | - |
| A 351 | CF3M | max. 0.03 | max. 1.50 | max. 0.04 | max. 0.04 | max. 1.50 | 17.0 - 21.0 | 2.00 - 3.00 | 9.00 - 13.00 | - | 485 | 205 | 30 | - |
| A 351 | CF8M | max. 0.08 | max. 1.50 | max. 0.04 | max. 0.04 | max. 1.50 | 18.0 - 21.0 | 2.00 - 3.00 | 9.00 - 12.00 | - | 485 | 205 | 30 | - |
| A 351 | CG8M | max. 0.08 | max. 1.50 | max. 0.04 | max. 0.04 | max. 1.50 | 18.0 - 21.0 | 3.00 - 4.00 | 9.00 - 13.00 | - | 515 | 240 | 25 | - |
| A 351 | CK3MCUN | max. 0.025 | max. 1.20 | max. 0.045 | max. 0.01 | max. 1.00 | 19.5 - 20.5 | 6.00 - 7.00 | 17.5 - 19.5 | Cu 0.50 - 1.00 / N 0.18 - 0.24 | 550 | 260 | 35 | - |
| A 351 | CN7M | max. 0.07 | max. 1.50 | max. 0.04 | max. 0.04 | max. 1.50 | 19.0 - 22.0 | 2.00 - 3.00 | 24.5 - 30.5 | Cu 3.0 - 4.0 | 425 | 170 | 35 | - |
| A 890 | 4A | max. 0.03 | max. 1.50 | max. 0.04 | max. 0.02 | max. 1.00 | 21.0 - 23.5 | 2.50 - 3.50 | 4.50 - 6.50 | Cu max. 1.00 / N 0.10 - 0.30 | 620 | 415 | 25 | - |
| A 890 | 5A | max. 0.03 | max. 1.50 | max. 0.04 | max. 0.04 | max. 1.00 | 24.0 - 26.0 | 4.00 - 5.00 | 6.00 - 8.00 | N 0.10 - 0.30 | 690 | 515 | 18 | - |
| A 890 | 6A | max. 0.03 | max. 1.00 | max. 0.03 | max. 0.025 | max. 1.00 | 24.0 - 26.0 | 3.00 - 4.00 | 6.50 - 8.50 | Cu&W 0.50 - 1.00 / N 0.20 - 0.30 | 700 | 450 | 25 | - |

FORGINGS / Forjados

| ASTM | | CHEMICAL COMPOSITION % / Composición química % | | | | | | | | | MECHANICAL PROPERTIES / Propiedades mecánicas | | | |
|--------|---------|--|-------------|------------|------------|-------------|---------------|-------------|-------------|-------------------------------------|---|-------|-------|-----|
| Nº | GRADE | C | Mn | P | S | Si | Cr | Mo | Ni | Others | Mpa R | Mpa S | % Ap. | % C |
| A 105 | II | max. 0.35 | max. 0.90 | max. 0.05 | max. 0.05 | max. 0.35 | - | - | - | - | 485 | 250 | 22 | 30 |
| A 181 | CL60 | max. 0.35 | max. 0.90 | max. 0.05 | max. 0.05 | max. 0.35 | - | - | - | - | 415 | 205 | 22 | 35 |
| A 181 | CL70 | max. 0.35 | max. 0.90 | max. 0.05 | max. 0.05 | max. 0.35 | - | - | - | - | 485 | 250 | 18 | 24 |
| A 350 | LF2 | max. 0.35 | 0.60 - 1.35 | max. 0.35 | max. 0.04 | 0.15 - 0.30 | max. 0.30 | max. 0.12 | max. 0.40 | Cu max. 0.4 | 485 | 250 | 22 | 30 |
| A 350 | LF3 | max. 0.20 | max. 0.90 | max. 0.035 | max. 0.04 | 0.20 - 0.35 | - | - | 3.30 - 3.70 | - | 485 | 260 | 22 | 35 |
| A 182 | F1 | max. 0.28 | 0.60 - 0.90 | max. 0.045 | max. 0.045 | 0.15 - 0.35 | - | 0.44 - 0.65 | - | - | 485 | 275 | 20 | 30 |
| A 182 | F5 | max. 0.15 | 0.30 - 0.60 | max. 0.03 | max. 0.03 | max. 0.50 | 4.00 - 6.00 | 0.44 - 0.65 | max. 0.50 | - | 485 | 275 | 20 | 35 |
| A 182 | F6A CL2 | max. 0.12 | max. 1.00 | max. 0.04 | max. 0.03 | max. 1.00 | 11.50 - 13.50 | - | max. 0.50 | - | 585 | 380 | 18 | 35 |
| A 182 | F9 | max. 0.15 | 0.30 - 0.60 | max. 0.03 | max. 0.03 | 0.50 - 1.00 | 8.00 - 10.00 | 0.90 - 1.10 | - | - | 585 | 380 | 20 | 40 |
| A 182 | F10 | 0.01 - 0.20 | 0.50 - 0.80 | max. 0.03 | max. 0.03 | 1.00 - 1.40 | 7.00 - 9.00 | - | 19.0 - 22.0 | - | 550 | 205 | 30 | 50 |
| A 182 | F11 CL2 | 0.05 - 0.15 | 0.30 - 0.60 | max. 0.03 | max. 0.03 | 0.50 - 1.00 | 1.00 - 1.50 | 0.44 - 0.65 | - | - | 485 | 275 | 20 | 30 |
| A 182 | F12 CL2 | 0.10 - 0.20 | 0.30 - 0.80 | max. 0.04 | max. 0.04 | 0.10 - 0.60 | 0.80 - 1.25 | 0.44 - 0.65 | - | - | 485 | 275 | 20 | 30 |
| A 182 | F20 | max. 0.07 | max. 2.00 | max. 0.045 | max. 0.035 | max. 1.00 | 19.0 - 21.0 | 2.00 - 3.00 | 32.0 - 38.0 | - | 550 | 240 | 30 | 50 |
| A 182 | F22 | 0.05 - 0.15 | 0.30 - 0.60 | max. 0.04 | max. 0.04 | max. 0.50 | 2.00 - 2.50 | 0.87 - 1.13 | - | - | 415 | 205 | 20 | 35 |
| A 182 | F44 | max. 0.02 | max. 1.00 | max. 0.03 | max. 0.01 | max. 0.80 | 19.5 - 20.5 | 6.0 - 6.5 | 17.5 - 18.5 | Cu 0.50 - 1.00 / N 0.18 - 0.22 | 650 | 300 | 35 | 50 |
| A 182 | F51 | max. 0.03 | max. 2.00 | max. 0.03 | max. 0.02 | max. 1.00 | 21.0 - 23.0 | 2.5 - 3.5 | 4.5 - 6.5 | N (min. 0.08 / max. 0.20) | 620 | 450 | 25 | 45 |
| A 182 | F53 | max. 0.03 | max. 1.20 | max. 0.035 | max. 0.02 | max. 0.80 | 24.0 - 26.0 | 3.0 - 5.0 | 6.0 - 8.0 | Cu max. 0.50 / N 0.24 - 0.32 | 750 | 515 | 15 | - |
| A 182 | F304 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 18.0 - 20.0 | - | 8.0 - 11.0 | - | 515 | 205 | 30 | 50 |
| A 182 | F310 | max. 0.15 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 24.0 - 26.0 | - | 19.0 - 22.0 | - | 515 | 205 | 30 | 50 |
| A 182 | F316 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 16.0 - 18.0 | 2.00 - 3.00 | 10.0 - 14.0 | - | 515 | 205 | 30 | 50 |
| A 182 | F316L | max. 0.035 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 16.0 - 18.0 | 2.00 - 3.00 | 10.0 - 15.0 | - | 485 | 170 | 30 | 50 |
| A 182 | F321 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | min. 17.00 | - | 9.0 - 12.0 | Ti (min. 5xC / max. 0.70) | 515 | 205 | 30 | 50 |
| A 182 | F347 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 17.0 - 20.0 | - | 9.0 - 13.0 | Cb (min. 10xC / max. 1.00) | 515 | 205 | 30 | 50 |
| AISI | 431 | max. 0.20 | max. 1.00 | max. 0.04 | max. 0.03 | max. 1.00 | 15.0 - 17.0 | - | 1.25 - 2.50 | - | - | - | - | - |
| 17.4PH | @ | max. 0.07 | max. 1.00 | max. 0.04 | max. 0.03 | max. 1.00 | 15.0 - 17.5 | max. 0.50 | 3.0 - 5.0 | Cb min. 8xC / max. 1 / Cu 0.5 - 1.0 | 860 | 725 | 16 | 50 |

BOLTINGS / Atornillados

| ASTM | | CHEMICAL COMPOSITION % / Composición química % | | | | | | | | | MECHANICAL PROPERTIES / Propiedades mecánicas | | | |
|-------|-------|--|-------------|------------|-----------|-------------|-------------|-------------|--------------|--------------|---|-------|-------|-----|
| Nº | GRADE | C | Mn | P | S | Si | Cr | Mo | Ni | Others | Mpa R | Mpa S | % Ap. | % C |
| A 193 | B7 | 0.37 - 0.49 | 0.65 - 1.10 | max. 0.035 | max. 0.04 | 0.15 - 0.35 | 0.75 - 1.20 | 0.15 - 0.25 | - | - | 860 | 720 | 16 | 50 |
| A 193 | B16 | 0.36 - 0.47 | 0.45 - 0.70 | max. 0.035 | max. 0.04 | 0.15 - 0.35 | 0.80 - 1.15 | 0.50 - 0.65 | - | Va 0.25-0.35 | 860 | 725 | 18 | 50 |
| A 193 | B8 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 18.0 - 20.0 | - | 8.00 - 10.50 | - | - | - | - | - |
| A 193 | B8M | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 16.0 - 18.0 | 2.00 - 3.00 | 10.0 - 14.0 | - | - | - | - | - |
| A 320 | B8 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 18.0 - 20.0 | - | 8.00 - 10.50 | - | - | - | - | - |
| A 320 | L7 | 0.38 - 0.48 | 0.75 - 1.00 | max. 0.035 | max. 0.04 | 0.15 - 0.35 | 0.80 - 1.10 | 0.15 - 0.25 | - | - | 860 | 725 | 16 | 50 |
| A 194 | 2H | min. 0.40 | max. 1.00 | max. 0.04 | max. 0.05 | max. 0.40 | - | - | - | - | - | - | - | - |
| A 194 | 3 | max. 0.10 | max. 1.00 | max. 0.04 | max. 0.03 | max. 1.00 | 4.00 - 6.00 | 0.40 - 0.65 | - | - | - | - | - | - |
| A 194 | 4 | 0.40 - 0.50 | 0.70 - 0.90 | max. 0.035 | max. 0.04 | 0.15 - 0.35 | - | 0.20 - 0.30 | - | - | - | - | - | - |
| A 194 | 8 | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 18.0 - 20.0 | - | 8.00 - 10.50 | - | - | - | - | - |
| A 194 | 8M | max. 0.08 | max. 2.00 | max. 0.045 | max. 0.03 | max. 1.00 | 16.0 - 18.0 | 2.00 - 3.00 | 10.0 - 14.0 | - | - | - | - | - |

MATERIALS EQUIVALENCE / Equivalencia de materiales

| ASTM | EN 10213 | EN No. | UNS | JIS | TRADE MARK |
|--------------|--------------------|-----------------|--------|-----------|-----------------|
| A48-40B | EN-GJL-250 | 0.6025 | | | |
| | EN-GJS-400-18 | 0.7043 | | | |
| A216 WCB | GP240GH | 1.0619 | J03002 | SCPH2 | |
| A352 LCB | G20Mn5 | 1.6220 | J03003 | SCPL1 | |
| A352 LC2 | | | | | |
| A352 LC3 | G9Ni14 | 1.5638 | J31550 | SCPL31 | |
| A217 WC1 | G20Mo5 | 1.5419 | J12524 | SCPH11 | |
| A217 WC6 | G17CrMo5-5 | 1.7357 | J12072 | SCPH21 | |
| A217 WC9 | GS12CrMo9-10 | 1.7379 | J21890 | SCPH32-CF | |
| A217 C5 | GX15CrMo5 | 1.7365 (1.7363) | J42045 | SCPH61 | |
| A217 C12 | GX12CrMo10-1 | 1.7389 | J82090 | | |
| A351 CF3 | X2CrNi19-11 | 1.4306 | J92500 | SCS19 | |
| A351 CF3M | X2CrNiMo17-12-2 | 1.4409 | J92800 | SCS16 | |
| A351 CF8 | GX5CrNiMo19-10 | 1.4308 | J92600 | SCS13 | |
| A351 CF8C | GX5CrNiNb19-11 | 1.4552 | J92710 | | |
| A351 CF8M | GX5CrNiMo19-11-2 | 1.4408 | J92900 | SCS14 | |
| A351 CF8MC | GX5CrNiMoNb19-11-2 | 1.4581 | | | |
| A351 CG8M | | | | | |
| | GX2CrNiMoN22-5-3 | 1.4470 | | | |
| A351 CK3MCuN | | | | | |
| A351 CN7M | | | N08007 | SCS23 | HASTELLOY B ® |
| A494 N-12MV | | | N10001 | | HASTELLOY C ® |
| A494 CW-12MW | | | N10002 | | MONEL 400 ® |
| A494 M35-1 | | | N04400 | | INCONEL 625 ® |
| A494 CW-6MC | | | N06625 | | INCOLOY 825 ® |
| | | | N08825 | | SAF 2205 ® |
| | | | S31803 | | 254 SMO ® |
| | | | S31254 | | FERRALIUM 255 ® |
| | | | S32550 | | |

MATERIALS COMPARISON / Comparación de materiales

| CASTINGS / Fundiciones | | | FORGINGS / Forjados | | |
|------------------------|--------------------|-----------------|---------------------|-------------------|--------|
| ASTM | EN 10213 | EN No. | ASTM | EN 10213 | EN No. |
| A216 WCB | GP240GH (GS-C 25N) | 1.0619 | A105 | (C22.8) | 1.0460 |
| A352 LCB | G20Mn5 | 1.6220 | A352 LF2 | | 1.0437 |
| A352 LC2 | | | | | |
| A352 LC3 | G9Ni14 | 1.5638 | A352 LF3 | | 1.5637 |
| A217 WC1 | G20Mo5 | 1.5419 | A182 F1 | | 1.5415 |
| A217 WC6 | G17CrMo5-5 | 1.7357 | A182 F11 | 14CrMo4-5 | 1.7335 |
| A217 WC9 | GS12CrMo9-10 | 1.7379 | A182 F22 | | 1.7380 |
| A217 C5 | GX15CrMo5 | 1.7365 (1.7363) | A182 F5 | | 1.7362 |
| A217 CA15 | | | A182 F6 | (X20Cr13) | 1.4021 |
| A217 C12 | GX12CrMo10-1 | 1.7389 | A182 F9 | (15CrMo12.1) | 1.4920 |
| A351 CF3 | X2CrNi19-11 | 1.4306 | A182 F304L | X2CrNi19-11 | 1.4306 |
| A351 CF3M | X2CrNiMo17-12-2 | 1.4409 | A182 F316L | X2CrNiMo17-12-2 | 1.4404 |
| A351 CF8 | GX5CrNiMo19-10 | 1.4308 | A182 F304 | X5CrNi18-10 | 1.4301 |
| A351 CF8C | GX5CrNiNb19-11 | 1.4552 | A182 F321 | X6CrNiTi18-10 | 1.4541 |
| A351 CF8C | GX5CrNiNb19-11 | 1.4552 | A182 F347 | X6CrNiNb18-10 | 1.4550 |
| A351 CF8M | GX5CrNiMo19-11-2 | 1.4408 | A182 F316 | X5CrNiMo17-12-2 | 1.4401 |
| A351 CF8MC | GX5CrNiMoNb19-11-2 | 1.4581 | A182 F348 | X6CrNiMoNb17-12-2 | 1.4580 |
| A351 CG8M | | | A182 F317 | | |
| A351 CK3MCuN | | | A182 F44 | | |
| A351 CN7M | | | A182 F20 | | |

BOLTS - ASME MATERIALS / Pernos - Materiales ASME

| BOLTS / Pernos | | NUTS / Tuercas | |
|----------------|-------------------|----------------|-----------------|
| B7 | ASTM A193 B7 | 2H | ASTM A194 Gr.2H |
| B16 | ASTM A193 B16 | Gr.4 | ASTM A194 Gr.4 |
| L7 | ASTM A320 L7 | Gr.4 | ASTM A194 Gr.4 |
| B8M | ASTM A193 B8M | Gr.8M | ASTM A193 Gr.8M |
| B8 | ASTM A193 B8 CL.1 | Gr.8A | ASTM A194 Gr.8A |
| 320 B8 | ASTM A320 B8 CL.1 | Gr.8A | ASTM A194 Gr.8A |
| 307 B | ASTM A307 Gr.B | | |
| B8 | ASTM A193 B8 CL.1 | 2H | ASTM A194 Gr.2H |

BOLTS - DIN MATERIALS / Pernos - Materiales DIN

| MATERIALS / Materiales | | | BOLTS / Pernos | NUTS / Tuercas |
|------------------------|-----------|--------|----------------|----------------|
| Y | C35 | 1.0501 | C35 | C35 |
| YK | Ck35 | 1.1181 | CK35 | C35 |
| G | 24CrMo5 | 1.7258 | 24CrMo5 | CK35 |
| GA | 21CrMoV57 | 1.7709 | 21CrMov57 | 24CrMo5 |
| | A2-70 | | A2-70 | A2-70 |
| | A4-70 | | A4-70 | A4-70 |

TRIM MATERIALS / Materiales del TRIM

API 600

| TRIM N° | NOMINAL TRIM | TRIM CODE Código TRIM | DISC-WEDGE Disco-Cuña | SEAT RINGS Asientos | STEM Vástago | INTERNAL PARTS Partes internas | SERVICE Servicio |
|---------|-----------------------------|--------------------------|----------------------------------|---------------------------------|------------------------------|-----------------------------------|---|
| 1 | F6 | F6 | F6 (13Cr) | 410 (13Cr) | 410 (13Cr) | 13Cr | General erosive or non-corrosive service between -100°C and 400°C / Servicios generales erosivos o no corrosivos entre -100°C y 400°C. |
| 2 | 304 | 304 | 304 (18Cr - 8Ni) | 304 (18Cr - 8Ni) | 304 (18Cr - 8Ni) | 18Cr - 8Ni | Moderate pressure in non-erosive, corrosive service between -265°C and 320°C / Moderada presión en servicio no erosivo, corrosivo entre -265°C y 320°C. |
| 3 | 310 | 310 | 310 (25Cr - 20Ni) | 310 (25Cr - 20Ni) | 310 (25Cr - 20Ni) | 25Cr - 20Ni | Moderate pressure in corrosive or non-corrosive service between -265°C and 450°C / Moderada presión en servicio corrosivo y no corrosivo entre -265°C y 450°C. |
| 4 | Hard 410 | F6 - H | F6 (13Cr) | F6 (13Cr) | 410 (13Cr) | 13Cr | As trim No. 1 but for medium pressure / Igual servicio del trim No. 1 pero para media presión. |
| 5 | 410 Full Hard faced | F6 - HF | F6 + St Gr6 (Co Cr Alloy) | 410 + St Gr6 (Co Cr Alloy) | 410 (13Cr) | 13Cr | High pressure slightly erosive and corrosive service between -265°C and 650°C / Servicio de alta presión, baja erosión y corrosión entre -265°C y 650°C. |
| 5A | 410 Full Hard faced | F6 - HF | F6 + Hard faced (Ni Cr Alloy) | 410 + Hard f. Ni Cr Alloy | 410 (13Cr) | 13Cr | As trim No. 5 where Co is not allowed / Igual servicio del trim No. 5 donde el Co no es permitido. |
| 6 | 410 and Ni-Cu | F6 - HFS | F6 (13Cr) | Monel 400® (Ni Cu Alloy) | 410 (13Cr) | 13Cr | As trim No. 1 / Igual servicio del trim No. 1. |
| 7 | 410 and Full Hard | 410 | F6 (13Cr) | F6 (13Cr) (750 HB) | 410 (13Cr) | 13Cr | As trim No. 1 for moderate pressure / Igual servicio del trim No. 1 pero para presión moderada. |
| 8 | 410 and Hard faced | F6 - HFS | F6 (13Cr) | 410 + St Gr6 (Co Cr Alloy) | 410 (13Cr) | 13Cr | As trim No. 5 for moderate pressure / Igual servicio del trim No. 5 pero para presión moderada. |
| 8A | 410 and Hard faced | F6-HFS | F6 (13Cr) | 410 + Hard f. Ni Cr Alloy | 410 (13Cr) | 13Cr | As trim No. 5 for moderate pressure / Igual servicio del trim No. 5 pero para presión moderada. |
| 9 | Monel | Monel | Monel® (Ni Cu Alloy) | Monel 400® (Ni Cu Alloy) | Monel® (Ni Cu Alloy) | Ni - Cu - Alloy | Very corrosive fluids, erosive corrosive service between -240°C and 480°C / Fluidos muy corrosivos, servicios erosivos corrosivos entre -240°C y 480°C. |
| 10 | 316 | 316 | 316 (18Cr - 8Ni - Mo) | 316 (18Cr - 8Ni - Mo) | 316 (18Cr - 8Ni - Mo) | 18Cr - 8Ni - Mo | As trim No. 2 / Igual servicio del trim No. 2. |
| 11 | Monel and Hard faced | Monel - HFS | Monel® (Ni Cu Alloy) | Monel 400® St Gr6 | Monel® (Ni Cu Alloy) | Ni - Cu - Alloy | As trim No. 9 but for medium pressure / Igual servicio del trim No. 9 pero para media presión. |
| 11A | Monel and Hard faced | Monel - HFS | Monel® (Ni Cu Alloy) | Monel 400® Hard f. NiCrAlloy | Monel® (Ni Cu Alloy) | Ni - Cu - Alloy | |
| 12 | 316 and Hard faced | 316 - HFS | 316 (18Cr - 8Ni - Mo) | 316 + St Gr6 | 316 (18Cr - 8Ni - Mo) | 18Cr - 8Ni - Mo | As trim No. 10 but for medium pressure / Igual servicio del trim No. 10 pero para media presión. |
| 12A | 316 and Hard faced | 316 - HFS | 316 (18Cr - 8Ni - Mo) | 316 Hard f. Ni Cr Alloy | 316 (18Cr - 8Ni - Mo) | 18Cr - 8Ni - Mo | |
| 13 | Alloy 20 | Alloy 20 | Alloy 20 (19Cr - 29Ni) | Alloy 20 (19Cr - 29Ni) | Alloy 20 (19Cr - 29Ni) | 19Cr - 29Ni | Very corrosive service, for moderate pressure between -45°C and 320°C / Servicio muy corrosivo, para presión moderada entre -45°C y 320°C. |
| 14 | Alloy 20 and Hard faced | Alloy 20 - HFS | Alloy 20 (19Cr - 29Ni) | Alloy 20 St Gr6 | Alloy 20 (19Cr - 29Ni) | 19Cr - 29Ni | As trim No. 13 but for medium pressure / Igual servicio del trim No. 13 pero para media presión. |
| 14A | Alloy 20 and Hard faced | Alloy - HFS | Alloy 20 (19Cr - 29Ni) | Alloy 20 Hard f. Ni Cr Alloy | Alloy 20 (19Cr - 29Ni) | 19Cr - 29Ni | |
| 15 | 304 Full Hard faced | 304 - HF | 304 + St Gr6 | 304 + St Gr6 | 304 (18Cr - 8Ni - Mo) | 18Cr - 8Ni - Mo | As trim No. 2 / Igual servicio del trim No. 2. |
| 16 | 316 Full Hard faced | 316 - HF | 316 + St Gr6 | 316 + St Gr6 | 316 HF (18Cr - 8Ni - Mo) | 18Cr - 8Ni - Mo | As trim No. 10 / Igual servicio del trim No. 10. |
| 17 | 347 Full Hard faced | 347 - HF | 347 + St Gr6 | 347 + St Gr6 | 347 HF (18Cr - 10Ni - Cb) | 18Cr - 8Ni - Cb | As trim No. 2 / Igual servicio del trim No. 2. |
| 18 | Alloy 20 Full Hard faced | Alloy - HF | Alloy 20 + St Gr6 | Alloy 20 + St Gr6 | Alloy 20 (19Cr - 29Ni) | 19Cr - 29Ni | As trim No. 13 / Igual servicio del trim No. 13. |

Notes / Notas:

- Cr = chromium; Ni = nickel; Co = cobalt; Mo = molybdenum; Ni - Cu - Alloy = Monel; HF = Hard Facing using Co Cr (commercial name Stellite®).
Cr = cromo; Ni = níquel; Co = cobalto; Mo = molibdeno; Ni - Cu - Aleación = Monel; HF = cara dura usando Co Cr (nombre comercial Stellite®).

CLASS / Clase 150

WORKING PRESSURE / Presión de trabajo

| CLASS Clase | TEMP. °C | WCB (a) | WCC (a) LCC (b) LC2 (b) LC3 (b) | LCB (b) | WC1 (h) LC1 (b) | WC4 (j) WC5 | WC6 (m) | WC9 (m) | C5 | C12 | CF3 (e) CF8 (g) | CF8M (g) CF3M (f) | CF8C (g) | |
|----------------|-----------|---------|--|---------|--------------------|----------------|---------|---------|------|------|--------------------|----------------------|----------|-------------------------|
| | | | | | | | | | | | | | | MATERIALS Materiales |
| 150 | -29 to 38 | 19.6 | 20.0 | 18.4 | 18.4 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 19.0 | 19.0 | 19.0 | |
| | 50 | 19.2 | 19.2 | 18.1 | 18.3 | 19.3 | 19.2 | 19.2 | 19.2 | 19.2 | 18.4 | 18.4 | 18.5 | |
| | 100 | 17.7 | 17.7 | 17.3 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 15.7 | 16.2 | 16.7 | |
| | 150 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 15.8 | 13.9 | 14.8 | 15.5 |
| | 200 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.6 | 13.7 | 14.0 |
| | 250 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 11.7 | 12.1 | 12.1 |
| | 300 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.1 | 10.2 | 10.2 | 10.2 |
| | 350 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| | 400 | 6.5 | | | | 6.5 | | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| | 425 | 5.6 | | | | 5.6 | | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 |
| | 450 | 4.7 | | | | 4.7 | | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| | 500 | 2.8 | | | | 2.8 | | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| | 525 | 1.9 | | | | 1.9 | | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| | 540 | | | | | | | | | | | | | |
| | 600 | | | | | | | | | | | | | |
| | 650 | | | | | | | | | | | | | |
| | 700 | | | | | | | | | | | | | |
| 750 | | | | | | | | | | | | | | |
| 800 | | | | | | | | | | | | | | |

CLASS / Clase 300

UNITS / Unidades bar

| | | | | | | | | | | | | | |
|-----|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 300 | -29 to 38 | 51.1 | 51.7 | 47.9 | 47.9 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 49.6 | 49.6 | 49.6 |
| | 50 | 50.1 | 51.7 | 47.3 | 47.6 | 51.7 | 51.1 | 51.2 | 51.7 | 51.7 | 47.8 | 48.1 | 48.4 |
| | 100 | 46.4 | 51.5 | 45.1 | 46.6 | 51.5 | 48.8 | 49.0 | 51.5 | 51.5 | 40.9 | 42.2 | 43.5 |
| | 150 | 45.2 | 50.2 | 44.0 | 45.0 | 50.2 | 46.4 | 46.6 | 50.2 | 50.2 | 36.3 | 38.5 | 40.5 |
| | 200 | 43.8 | 48.8 | 42.7 | 44.2 | 48.8 | 45.5 | 44.8 | 48.8 | 48.8 | 32.8 | 35.7 | 38.4 |
| | 250 | 41.7 | 46.3 | 40.6 | 43.1 | 46.3 | 44.5 | 44.2 | 46.3 | 46.3 | 30.5 | 33.4 | 36.2 |
| | 300 | 38.7 | 42.4 | 37.7 | 42.0 | 42.4 | 42.4 | 42.4 | 42.4 | 42.4 | 29.1 | 31.6 | 34.4 |
| | 350 | 37.0 | 40.2 | 36.0 | 40.2 | 40.2 | 40.2 | 40.2 | 40.2 | 40.2 | 28.1 | 30.4 | 32.9 |
| | 400 | 34.5 | 34.5 | | 36.6 | 36.6 | 36.6 | 36.6 | 36.6 | 36.6 | 27.7 | 29.1 | 31.8 |
| | 425 | 28.8 | 28.8 | | 35.5 | 35.1 | 35.1 | 35.1 | 34.5 | 35.1 | 27.2 | 28.7 | 31.5 |
| | 450 | 20.0 | 20.0 | | 33.8 | 33.8 | 33.8 | 33.8 | 30.9 | 33.8 | 26.9 | 28.1 | 30.8 |
| | 500 | 8.8 | 8.8 | | 24.1 | 27.1 | 27.8 | 27.8 | 20.3 | 27.5 | 26.1 | 26.8 | 27.8 |
| | 525 | 5.2 | 5.2 | | 15.0 | 18.8 | 23.0 | 21.9 | 15.4 | 22.6 | 23.9 | 26.3 | 25.8 |
| | 540 | | | | 10.7 | 13.9 | 12.8 | 16.4 | 11.7 | 17.0 | 21.8 | 25.0 | 25.0 |
| | 600 | | | | | | 5.9 | 7.6 | 6.5 | 7.2 | 16.7 | 21.4 | 21.4 |
| | 650 | | | | | | | | 3.0 | 3.5 | 10.5 | 14.1 | 11.6 |
| | 700 | | | | | | | | | | 6.0 | 9.9 | 6.7 |
| 750 | | | | | | | | | | 3.7 | 5.9 | 4.0 | |
| 800 | | | | | | | | | | 2.1 | 3.5 | 2.6 | |

CLASS / Clase 600

UNITS / Unidades bar

| | | | | | | | | | | | | | |
|-----|-----------|-------|-------|------|------|-------|-------|-------|-------|-------|------|------|------|
| 600 | -29 to 38 | 102.1 | 103.4 | 95.7 | 95.8 | 103.4 | 103.4 | 103.4 | 103.4 | 103.4 | 99.2 | 99.3 | 99.3 |
| | 50 | 100.2 | 103.4 | 94.6 | 95.3 | 103.4 | 102.3 | 102.4 | 103.4 | 103.4 | 95.7 | 96.3 | 96.8 |
| | 100 | 92.8 | 103.1 | 90.2 | 93.2 | 103.1 | 97.5 | 98.1 | 103.1 | 103.1 | 81.8 | 84.4 | 86.9 |
| | 150 | 90.5 | 100.4 | 87.9 | 89.8 | 100.4 | 92.7 | 93.3 | 100.4 | 100.4 | 72.7 | 77.0 | 81.0 |
| | 200 | 87.6 | 97.6 | 85.4 | 88.4 | 97.6 | 91.0 | 89.7 | 97.6 | 97.6 | 65.5 | 71.3 | 76.8 |
| | 250 | 83.4 | 92.7 | 81.2 | 86.2 | 92.7 | 88.9 | 88.4 | 92.7 | 92.7 | 61.1 | 66.8 | 72.4 |
| | 300 | 77.5 | 84.9 | 75.4 | 84.1 | 84.9 | 84.9 | 84.9 | 84.9 | 84.9 | 58.1 | 63.3 | 68.9 |
| | 350 | 73.9 | 80.5 | 71.9 | 80.5 | 80.5 | 80.5 | 80.5 | 80.5 | 80.5 | 56.1 | 60.8 | 65.8 |
| | 400 | 69.0 | 69.0 | | 73.2 | 73.2 | 73.2 | 73.2 | 73.2 | 73.2 | 54.9 | 58.2 | 63.5 |
| | 425 | 57.5 | 57.5 | | 70.2 | 70.2 | 70.2 | 70.2 | 69.0 | 70.2 | 54.3 | 57.3 | 62.9 |
| | 450 | 40.1 | 40.1 | | 67.6 | 67.6 | 67.6 | 67.6 | 61.8 | 67.6 | 53.7 | 56.2 | 61.5 |
| | 500 | 17.6 | 17.6 | | 48.1 | 54.1 | 55.6 | 55.6 | 40.5 | 55.0 | 52.1 | 53.7 | 55.6 |
| | 525 | 10.4 | 10.4 | | 30.1 | 37.6 | 40.5 | 43.8 | 30.8 | 45.2 | 47.8 | 52.6 | 51.6 |
| | 540 | 6.5 | 6.5 | | 21.4 | 27.9 | 25.5 | 32.7 | 23.4 | 34.0 | 43.6 | 49.9 | 49.9 |
| | 600 | | | | | | 11.8 | 15.3 | 13.1 | 14.4 | 33.4 | 42.9 | 42.9 |
| | 650 | | | | | | 4.6 | 7.3 | 6.0 | 7.0 | 21.0 | 28.2 | 23.2 |
| | 700 | | | | | | | | | | 12.0 | 19.9 | 13.5 |
| 750 | | | | | | | | | | 7.3 | 11.0 | 8.0 | |
| 800 | | | | | | | | | | 4.1 | 7.0 | 5.2 | |

Notes / Notas:

- (a) Permissible, but not recommended for prolonged usage above 427°C (800°F) / Admisible, pero no recomendado para uso prolongado por encima de 427°C (800°F).
- (b) Not to be used over 343°C (650°F) / No utilizar a mas de 343°C (650°F).
- (c) Permissible, but not recommended for prolonged usage above 454°C (850°F) / Admisible, pero no recomendado para uso prolongado por encima de 454°C (850°F).
- (d) Permissible, but not recommended for prolonged usage above 593°C (1100°F) / Admisible, pero no recomendado para uso prolongado por encima de 593°C (1100°F).
- (e) Not to be used over 427°C (800°F) / No utilizar a mas de 427°C (800°F).
- (f) Not to be used over 545°C (850°F) / No utilizar a mas de 545°C (850°F).
- (g) At temperature over 538°C (1000°F) / A temperatura superior de 538°C (1000°F).
- (h) Permissible, but not recommended for prolonged usage above 468°C (875°F) / Admisible, pero no recomendado para uso prolongado por encima de 468°C (875°F).
- (j) Not to be used over 538°C (1000°F) / No utilizar a mas de 538°C (1000°F).
- (m) Not to be used over 593°C (1100°F) / No utilizar a mas de 593°C (1100°F).

UNITS / Unidades bar

CLASS / Clase 900
WORKING PRESSURE / Presión de trabajo

| CLASS Clase | TEMP. °C | WCB (a) | WCC (a) LCC (b) LC2 (b) LC3 (b) | LCB (b) | WC1 (h) LC1 (b) | WC4 (j) WC5 | WC6 (m) | WC9 (m) | C5 | C12 | CF3 (e) CF8 (g) | CF8M (g) CF3M (f) | CF8C (g) | |
|----------------|-----------|---------|--|---------|--------------------|----------------|---------|---------|-------|-------|--------------------|----------------------|----------|-------------------------|
| | | | | | | | | | | | | | | MATERIALS Materiales |
| 900 | -29 to 38 | 153.2 | 155.2 | 143.6 | 143.6 | 155.2 | 155.1 | 155.1 | 155.2 | 155.2 | 148.9 | 148.9 | 148.9 | |
| | 50 | 150.2 | 155.2 | 141.9 | 142.9 | 155.2 | 153.4 | 153.6 | 155.2 | 155.2 | 143.5 | 144.4 | 144.4 | |
| | 100 | 139.1 | 154.6 | 135.3 | 139.8 | 154.6 | 146.3 | 147.1 | 154.6 | 154.6 | 122.6 | 126.6 | 130.4 | |
| | 150 | 135.7 | 150.6 | 131.9 | 134.9 | 150.6 | 139.1 | 139.9 | 150.6 | 150.6 | 109.0 | 115.5 | 121.5 | |
| | 200 | 131.5 | 146.4 | 128.0 | 132.6 | 146.4 | 136.4 | 134.5 | 146.4 | 146.4 | 98.3 | 107.0 | 115.3 | |
| | 250 | 125.2 | 139.0 | 121.8 | 129.2 | 139.0 | 133.4 | 132.7 | 139.0 | 139.0 | 91.6 | 100.2 | 108.6 | |
| | 300 | 116.2 | 127.3 | 113.1 | 126.1 | 127.3 | 127.3 | 127.3 | 127.3 | 127.3 | 87.2 | 94.9 | 103.3 | |
| | 350 | 110.9 | 120.7 | 107.9 | 120.7 | 120.7 | 120.7 | 120.7 | 120.7 | 120.7 | 84.2 | 91.3 | 98.7 | |
| | 400 | 103.5 | 103.5 | | 109.8 | 109.8 | 109.8 | 109.8 | 109.8 | 109.8 | 82.4 | 87.3 | 95.3 | |
| | 425 | 86.3 | 86.3 | | 105.3 | 105.3 | 105.3 | 105.3 | 105.3 | 105.3 | 81.5 | 86.0 | 94.4 | |
| | 450 | 60.1 | 60.1 | | 101.4 | 101.4 | 101.4 | 101.4 | 92.7 | 101.4 | 80.6 | 84.2 | 92.3 | |
| | 500 | 26.4 | 26.4 | | 72.2 | 81.2 | 83.4 | 83.4 | 60.8 | 82.5 | 78.2 | 80.5 | 83.4 | |
| | 525 | 15.5 | 15.5 | | 45.1 | 56.4 | 60.8 | 65.8 | 46.3 | 67.8 | 71.6 | 78.9 | 77.4 | |
| | 540 | 9.8 | 9.8 | | 32.1 | 41.8 | 38.3 | 49.1 | 35.0 | 50.9 | 65.4 | 74.9 | 74.9 | |
| | 600 | | | | | | | 17.6 | 22.9 | 19.6 | 21.5 | 50.1 | 64.3 | 64.3 |
| | 650 | | | | | | | 7.0 | 11.0 | 9.0 | 10.4 | 31.6 | 42.4 | 34.7 |
| | 700 | | | | | | | | | | | 17.9 | 29.8 | 20.2 |
| 750 | | | | | | | | | | | 11.0 | 17.6 | 12.1 | |
| 800 | | | | | | | | | | | 6.2 | 10.5 | 7.5 | |

CLASS / Clase 1500
UNITS / Unidades bar

| | | | | | | | | | | | | | | |
|------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1500 | -29 to 38 | 255.3 | 258.6 | 239.4 | 239.4 | 258.6 | 258.6 | 258.6 | 258.6 | 258.6 | 248.1 | 248.1 | 248.2 | |
| | 50 | 250.4 | 258.6 | 236.5 | 238.2 | 258.6 | 255.7 | 256.0 | 258.6 | 258.6 | 239.2 | 240.6 | 241.9 | |
| | 100 | 231.9 | 257.7 | 225.5 | 233.0 | 257.7 | 243.8 | 242.2 | 257.7 | 257.7 | 204.4 | 211.0 | 217.3 | |
| | 150 | 226.1 | 251.0 | 219.8 | 224.8 | 251.0 | 231.9 | 233.2 | 251.0 | 251.0 | 181.7 | 192.5 | 202.5 | |
| | 200 | 219.1 | 243.9 | 213.4 | 221.0 | 243.9 | 227.4 | 224.2 | 243.9 | 243.9 | 163.8 | 178.4 | 192.1 | |
| | 250 | 208.6 | 231.7 | 202.9 | 215.4 | 231.7 | 222.3 | 221.1 | 231.7 | 231.7 | 152.7 | 166.9 | 181.0 | |
| | 300 | 193.7 | 212.1 | 188.5 | 210.1 | 212.1 | 212.1 | 212.1 | 212.1 | 212.1 | 145.3 | 158.1 | 172.2 | |
| | 350 | 184.8 | 201.2 | 179.8 | 201.1 | 201.2 | 201.2 | 201.2 | 201.2 | 201.2 | 140.3 | 152.1 | 164.5 | |
| | 400 | 172.5 | 172.5 | | 182.9 | 182.9 | 182.9 | 182.9 | 182.9 | 182.9 | 137.3 | 145.6 | 158.8 | |
| | 425 | 143.8 | 100.2 | | 175.5 | 175.5 | 175.5 | 175.5 | 172.5 | 175.5 | 135.8 | 143.3 | 157.3 | |
| | 450 | 100.2 | 100.2 | | 169.0 | 169.0 | 169.0 | 169.0 | 154.5 | 169.9 | 134.3 | 140.4 | 153.8 | |
| | 500 | 44.0 | 44.0 | | 120.3 | 135.3 | 139.0 | 139.0 | 101.3 | 137.5 | 130.3 | 134.1 | 139.0 | |
| | 525 | 16.3 | 25.9 | | 75.2 | 94.0 | 101.3 | 109.6 | 77.1 | 113.0 | 119.4 | 131.5 | 129.0 | |
| | 540 | 16.3 | 16.3 | | 53.5 | 69.7 | 63.8 | 81.8 | 58.4 | 84.9 | 109.1 | 124.8 | 124.8 | |
| | 600 | | | | | | 29.4 | 38.2 | 32.6 | 35.9 | 83.6 | 107.2 | 107.2 | |
| | 650 | | | | | | | 11.6 | 18.3 | 15.0 | 17.4 | 52.6 | 70.6 | 57.9 |
| | 700 | | | | | | | | | | 29.9 | 49.7 | 33.7 | |
| 750 | | | | | | | | | | 18.3 | 29.4 | 20.1 | | |
| 800 | | | | | | | | | | 10.3 | 17.5 | 13.1 | | |

CLASS / Clase 2500
UNITS / Unidades bar

| | | | | | | | | | | | | | |
|------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2500 | -29 to 38 | 425.5 | 431.0 | 398.9 | 399.0 | 431.0 | 431.0 | 431.0 | 431.0 | 431.0 | 413.5 | 413.6 | 413.6 |
| | 50 | 417.3 | 431.0 | 393.7 | 397.1 | 431.0 | 426.2 | 426.7 | 430.9 | 430.9 | 398.6 | 401.0 | 403.2 |
| | 100 | 386.5 | 429.5 | 388.3 | 429.5 | 429.5 | 406.4 | 109.7 | 429.5 | 429.5 | 340.7 | 351.7 | 362.2 |
| | 150 | 376.9 | 419.3 | 366.3 | 374.6 | 418.3 | 386.4 | 388.6 | 418.3 | 418.3 | 302.8 | 320.9 | 337.5 |
| | 200 | 365.2 | 406.6 | 355.6 | 368.3 | 406.6 | 379.0 | 373.7 | 406.6 | 406.6 | 273.0 | 297.3 | 320.2 |
| | 250 | 347.7 | 386.1 | 338.2 | 359.0 | 386.1 | 370.6 | 368.5 | 386.1 | 386.1 | 254.5 | 278.2 | 301.7 |
| | 300 | 322.8 | 353.5 | 314.2 | 350.2 | 353.5 | 353.5 | 353.5 | 353.5 | 353.5 | 242.1 | 263.6 | 287.0 |
| | 350 | 308.0 | 335.3 | 299.7 | 335.2 | 335.3 | 335.3 | 335.3 | 335.3 | 335.3 | 233.8 | 253.8 | 274.2 |
| | 400 | 287.5 | 287.5 | | 304.9 | 304.9 | 304.9 | 304.9 | 304.9 | 304.9 | 228.9 | 242.6 | 264.7 |
| | 425 | 239.6 | 239.6 | | 292.5 | 292.5 | 292.5 | 292.5 | 287.5 | 292.5 | 226.4 | 238.9 | 262.2 |
| | 450 | 166.9 | 166.9 | | 281.7 | 281.7 | 281.7 | 281.7 | 257.6 | 281.7 | 223.9 | 234.0 | 256.3 |
| | 500 | 73.3 | 73.3 | | 200.6 | 225.4 | 231.6 | 231.6 | 168.9 | 229.1 | 217.2 | 223.6 | 231.6 |
| | 525 | 43.2 | 43.2 | | 125.4 | 156.6 | 168.9 | 182.7 | 128.5 | 188.3 | 199.0 | 214.9 | 214.9 |
| | 540 | 27.2 | 27.2 | | 89.2 | 116.1 | 106.4 | 136.4 | 97.3 | 141.5 | 181.8 | 208.0 | 208.0 |
| | 600 | | | | | | 49.0 | 63.6 | 54.4 | 59.8 | 139.3 | 178.6 | 178.6 |
| | 650 | | | | | | 19.3 | 30.4 | 25.1 | 29.0 | 87.6 | 117.1 | 96.5 |
| | 700 | | | | | | | | | | 49.8 | 82.9 | 56.1 |
| 750 | | | | | | | | | | 30.4 | 49.0 | 33.5 | |
| 800 | | | | | | | | | | 17.1 | 29.2 | 21.9 | |

Notes / Notas:

- (a) Permissible, but not recommended for prolonged usage above 427°C (800°F) / Admisible, pero no recomendado para uso prolongado por encima de 427°C (800°F).
- (b) Not to be used over 343°C (650°F) / No utilizar a mas de 343°C (650°F).
- (c) Permissible, but not recommended for prolonged usage above 454°C (850°F) / Admisible, pero no recomendado para uso prolongado por encima de 454°C (850°F).
- (d) Permissible, but not recommended for prolonged usage above 593°C (1100°F) / Admisible, pero no recomendado para uso prolongado por encima de 593°C (1100°F).
- (e) Not to be used over 427°C (800°F) / No utilizar a mas de 427°C (800°F).
- (f) Not to be used over 545°C (850°F) / No utilizar a mas de 545°C (850°F).
- (g) At temperature over 538°C (1000°F) / A temperatura superior de 538°C (1000°F).
- (h) Permissible, but not recommended for prolonged usage above 468°C (875°F) / Admisible, pero no recomendado para uso prolongado por encima de 468°C (875°F).
- (j) Not to be used over 538°C (1000°F) / No utilizar a mas de 538°C (1000°F).
- (m) Not to be used over 593°C (1100°F) / No utilizar a mas de 593°C (1100°F).

UNITS / Unidades bar

FLOW COEFFICIENT, Kv / Coeficiente de flujo, Kv

May be defined as the rate of flow of water in cubic metres per hour, that will generate a pressure drop of one bar across the valve.

Puede definirse como el flujo de agua en metros cúbicos por hora que genera una caída de presión de un Bar a través de la válvula.

FLOW COEFFICIENT, Cv / Coeficiente de flujo, Cv

May be defined as the rate of flow of water in US gallons per minute, at 60 °F (15.6 °C), that will generate a pressure drop of one pound-force per square inch across the valve.

Puede definirse como el caudal agua en galones US por minuto, a 60 °F (15.6 °C) que genera una caída de presión de una libra de fuerza por pulgada cuadrada a través de la válvula.

BASIC FORMULAS / Fórmulas básicas

| | | |
|---|--|--|
| <p>LIQUID FLOW / Flujo de líquido</p> $K_v \frac{Q \sqrt{G}}{\sqrt{P}} ; P G \frac{Q^2}{K_v^2}$ | | <p>where / dónde</p> <p>Q = flow rate in cubic metres per hour / caudal en metros cúbicos por hora G = specific gravity of liquid (water -1) / gravedad específica del líquido (agua -1) P = pressure drop across valve in bar / caída de presión a través de la válvula en bar</p> |
| <p>where / dónde</p> $C_v \frac{Q \sqrt{G}}{\sqrt{P}} ; P G \frac{Q^2}{C_v^2}$ | | <p>Q = flow rate in US gal/min / caudal en galones/minutos US G = specific gravity of liquid (water -1) / gravedad específica del líquido (agua -1) P = pressure drop across valve in lbf/in² / caída de presión a través de la válvula en lbf/pulg.²</p> |
| <p>GASES FLOW / Flujo de gases</p> $P P_1 \sqrt{P_1^2 2S_G T \frac{W_G}{1360 \frac{K_v}{0.86}}}$ | | <p>where / dónde</p> <p>P₁ = inlet pressure (PSIA) / presión de entrada S_G = specific gravity of gas at standard conditions (air -1) / gravedad específica del gas en condiciones estándar (aire -1) T = absolute temperature of gas (-460 °F) / temperatura absoluta del gas (-460 °F) W_G = volumetric flow of gas / flujo volumétrico del gas</p> |
| <p>STEAM FLOW / Flujo de vapor</p> $P P_1 \sqrt{P_1^2 \frac{1}{2.1} \frac{0.0007T_s}{0.86} W^2}$ | | <p>where / dónde</p> <p>W = pound per hour of steam / libra por hora de vapor T_s = degree of superheat (°F) / grado de sobrecalentamiento (°F) P₁ = inlet pressure / presión de entrada (-460 °F) P = pressure drop across valve in lbf/in² / caída de presión a través de la válvula en lbf/pulg.²</p> |

Each type and size of valve has a particular flow coefficient and the general formulas indicate how a knowledge of this can be used to establish the pressure drop across a valve for a given flow rate or, alternatively, to determine the flow rate through a valve which will generate a given pressure drop. Flow coefficient values are determined by testing and may not be valid for all conditions of flow.

Cada tipo y tamaño de válvula tiene un caudal de flujo particular y las fórmulas indican cómo puede utilizarse esto de forma general para establecer la caída de presión a través de una válvula para un caudal dado o, alternativamente, para determinar el caudal a través de una válvula que generará una caída de presión dada. Los valores del coeficiente de flujo se determinan mediante pruebas y pueden no ser válidos para todas las condiciones de flujo.

FLOW COEFFICIENT Kv (m³/h) [Cv (US gal/minute) = Kv/0.86] / Coeficiente de flujo Kv (m³/h) [Cv (US gal/minute) = Kv/0.86]

| Type Tipo | Class Clase | NOMINAL DIMENSION / Dimensión nominal | | | | | | | | | | | |
|---|----------------|---------------------------------------|-----|-----|------|------|------|-------|-------|-------|-------|-------|-------|
| | | 2" | 3" | 4" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 24" |
| GATE VALVE Válvula de compuerta | 150 | 204 | 510 | 893 | 2074 | 3808 | 6035 | 8840 | 12325 | 16320 | 20825 | 23290 | 37060 |
| | 300 | 204 | 510 | 893 | 2074 | 3808 | 6035 | 8840 | 11339 | 15014 | 19159 | 21427 | 34095 |
| | 600 | 204 | 510 | 893 | 2074 | 3808 | 6035 | 10880 | 13065 | 17145 | 22330 | 27319 | 39704 |
| | 900 | 188 | 469 | 821 | 1908 | 3504 | 5552 | 10010 | 12019 | 15773 | 20543 | 25134 | 36527 |
| | 1500 | 173 | 432 | 756 | 1755 | 3223 | 5108 | 9209 | 11058 | 14511 | 18900 | 23123 | 33605 |
| | 2500 | 159 | 432 | 756 | 1755 | 3223 | 5108 | 9209 | 11058 | - | - | - | - |
| GLOBE VALVE Válvula de globo | 150 | 38 | 102 | 174 | 400 | 740 | 1190 | 1700 | 2380 | 3188 | 4080 | 5015 | 7225 |
| | 300 | 38 | 102 | 174 | 400 | 740 | 1190 | 1700 | 2380 | 3188 | 3754 | 4614 | 6647 |
| | 600 | 35 | 86 | 149 | 352 | 633 | 985 | 1415 | 2190 | 2268 | - | - | - |
| | 900 | 32 | 79 | 137 | 324 | 582 | 906 | 1302 | 2015 | 2087 | - | - | - |
| | 1500 | 30 | 73 | 126 | 298 | 536 | 834 | 1198 | 1853 | 1920 | - | - | - |
| | 2500 | 27 | 67 | 116 | 275 | 493 | 768 | 1102 | 1705 | 1766 | - | - | - |
| SWING CHECK VALVE Válvula de retención de clapeta | 150 | 80 | 204 | 349 | 799 | 1479 | 2380 | 3400 | 4760 | 6375 | 8160 | 9350 | 14875 |
| | 300 | 77 | 198 | 338 | 775 | 1435 | 2309 | 3298 | 4617 | 6184 | 7915 | 9070 | 14429 |
| | 600 | 73 | 188 | 321 | 736 | 1363 | 2193 | 3133 | 4386 | 5874 | 7519 | 8616 | 13707 |
| | 900 | 70 | 179 | 305 | 700 | 1295 | 2083 | 2977 | 4167 | 5580 | 7143 | 8186 | - |
| | 1500 | 66 | 170 | 290 | 665 | 1231 | 1979 | 2828 | 3958 | 5301 | 6786 | 7777 | - |
| | 2500 | 63 | 162 | 275 | 632 | 1170 | 1880 | 2687 | 3760 | 5036 | 6447 | 7388 | - |

CONVERSION TABLES / Tablas de conversión

| | MULTIPLY → Multiplicar | BY por | → TO OBTAIN para obtener | | MULTIPLY → Multiplicar | BY por | → TO OBTAIN para obtener |
|---|--|---------------------|-----------------------------|--|--|-------------------|-------------------------------|
| Length Longitud | mil / mil | 25.4 | μ (micron) / micrón | Velocity Velocidad | ft/s (foot per second) / pie por segundo | 3.281 | m/s |
| | in (inch) / pulgada | 25.4 | mm | | m/min (metre per minute) / metro por minuto | 60 | m/s |
| | ft (foot) / pie | 0.3048 | m | | ft/min (foot per minute) / pie por minuto | 196.85 | m/s |
| | yd (yard) / yarda | 0.9144 | m | | mile/h (mile per hour) / milla por hora | 1.6093 | km/h |
| | miles (nautical) / millas (náutico) | 1.853 | km | | m/s (metre per second) / metro por segundo | 3.6 | km/h |
| | miles (statute) / millas (terrestre) | 1.609 | km | Dynamic viscosity Viscosidad dinámica | g/(cm s) (poise) / gramo por cm segundo | 0.1 | Pa s = kg/(m s) |
| Area Área | sq.in. (square inch) / pulgada cuadrada | 6.4516 | cm ² | | centipoise | 0.001 | Pa s |
| | sq.ft. (square foot) / pie cuadrado | 0.0929 | cm ² | | lb/(ft s) / libra por pie segundo | 1.48819 | Pa s |
| | sq.yd. (square yard) / yarda cuadrada | 0.8361 | cm ² | Kinematic viscosity Viscosidad Cinemática | cm² (stokes) / centímetro cuadrado | 0.0001 | m ² /s |
| Volume Volumen | cu.in. (cubic inch) / pulgada cúbica | 16.387 | cm ³ | | centistokes | 0.000001 | m ² /s |
| | cu.ft. (cubic foot) / pie cúbico | 28.317 | dm ³ | | ft²/s / pie cuadrado por segundo | 0.09290 | m ² /s |
| | UK gal (UK gallon) / galón GB | 4.5461 | dm ³ | Moment of force Momento de fuerza | N m (newton metre) / newton metro | 0.001 | kN m |
| | US gal (US gallon) / galón EE.UU. | 3.7854 | dm ³ | | kN m / kilonewton | 101.972 | kgf m |
| | bushel | 35.24 | dm ³ | | kgf m / kilogramo fuerza metro | 86.8 | lbf in |
| | US gal (US gallon) / galón EE.UU. | 42 | barrel / barril | | lbf ft (pound force foot) / libra fuerza pie | 12 | lbf in |
| | UK pint / pinta GB | 1.76 | litre / litro | | lbf ft (pound force foot) / libra fuerza pie | 1.356 | N m |
| | l (litre) / litro | 1000 | cm ³ | Mass unit length / Masa unidad longitud | kg/m / kilogramo metro | 0.672 | lb/ft |
| | l (litre) / litro | 1 | dm ³ | | lb/ft / libra pie | 1.488 | kg/m |
| | m³ (cubic metre) / metro cúbico | 1000 | litre / litro | Mass unit area / Masa unidad área | kg/m² / kilogramo metro cuadrado | 0.2048 | lb/ft ² |
| Mass Masa | grains / granos | 0.0648 | g | | lb/ft² / libra pie cuadrado | 4.882 | kg/m ² |
| | lb (pound) / libra | 0.4536 | kg | Thermal conductivity Conductividad térmica | W/(m°C) / vatio metro grado Celcius | 6.934 | Btu in/(ft ² h °F) |
| | oz (ounce) / onza | 28.3495 | g | | Btu in/ft² °F / unidad térmica británica | 0.1442 | W/(m°C) |
| | ton (UK ton) / tonelada GB | 1016.05 | kg | Enthalpy Power Energy Entalpia de energía y potencia | Btu (British Thermal Unit) / unidad térmica británica | 1055 | J |
| | sh ton (US ton) / tonelada EE.UU. | 907.2 | kg | | Btu | 0.252 | kcal = Cal |
| | t (tonne) / tonelada | 1000 | kg | | J (joule) / julio | 0.73560 | ft lb |
| Pressure & Stress Presión y Tensión | kgf/cm² = at / atmósfera técnica | 0.980556 | bar | | kWh / kilovatio hora | 3600 | kJ |
| | Pa (pascal) | 0.00001 | bar | | Btu | 0.252 | kcal = Cal |
| | MPa (megapascal) | 10 | bar | | kcal / kilocaloría | 4186.8 | J |
| | mm H₂O | 9.80665 | Pa | | kJ/kg / kilojulio kilogramo | 0.239 | kcal/kg |
| | Torr (mm Hg) / torr (mm mercurio) | 133.322 | Pa | | kW / kilovatio | 1.34102 | hp |
| | psi (lbs per square inch) / libra por pulgada cuadrada | 0.068941 | bar | | hp (horse power) / caballo de potencia | 746 | watt |
| Density Densidad | UK ton/in² / tonelada fuerza/pulgada² | 15.44 | Mpa | Calorific value / Poder calorífico | MJ/m³ / megajulio metro cúbico | 26.84 | Btu/ft ³ |
| | lb/in³ / libra/pulgada cúbica | 27.680 | g/cm ³ | | Btu/ft³ / Btu pie cúbico | 0.03726 | MJ/m ³ |
| | lb/ft³ / libra/pie cúbico | 0.01602 | g/cm ³ | | Btu/ft³ / Btu pie cúbico | 37.26 | kJ/m ³ |
| | g/cm³ / gramo/centímetro cúbico | 1000 | litre-g/dm ³ | Force Fuerza | N (Newton) | 1.102 | kgf = kp |
| kg/m³ / kilogramo/metro cúbico | 0.752 | ton/yd ³ | | | lbf (pound force) / libra fuerza | 4.4483 | N |
| | ton/ld³ / tonelada/yarda cúbica | 13.319 | lb/UKgal | | kgf = kp / kilogramo fuerza = kilopondio | 2.205 | lbf |
| | TO OBTAIN ← para obtener | BY por | ← DIVIDE Dividir | | TO OBTAIN ← para obtener | BY por | ← DIVIDE Dividir |

| TO / para → | ADD/ añadir | → TO OBTAIN / para obtener |
|---|-------------------------|---|
| psig (psi at gauge) / psig (psi en manómetro) | 14.70 | psia (psi absolute) / psia (psi absoluto) |
| bar (at gauge) / bar (en manómetro) | 1.01325 | bar absolute / bar absoluto |
| °C (degrees Celsius) / °C (grados Celsius) | 273.15 | °K (degrees Kelvin) / °K (grados Kelvin) |
| °F (degrees Fahrenheit) / °F (grados Fahrenheit) | 459.4 | °R (degrees Rankine) / °R (grados Rankine) |
| TO OBTAIN / para obtener ← | SUBTRACT/ restar | ← TO / para |

CONVERSION TABLES / Tablas de conversión

| °C | °C (a) → ← °F | °F | °C | °C (a) → ← °F | °F | °C | °C (a) → ← °F | °F | °C | °C (a) → ← °F | °F | °C | °C (a) → ← °F | °F |
|------|------------------|--------|-------|------------------|-------|------|------------------|-------|-----|------------------|------|------|------------------|------|
| | | | -17.2 | 1 | 33.8 | 16.1 | 61 | 141.8 | 149 | 300 | 572 | 482 | 900 | 1652 |
| | | | -16.7 | 2 | 35.6 | 16.7 | 62 | 143.6 | 154 | 310 | 590 | 488 | 910 | 1670 |
| | | | -16.1 | 3 | 37.4 | 17.2 | 63 | 145.4 | 160 | 320 | 608 | 493 | 920 | 1688 |
| | | | -15.6 | 4 | 39.2 | 17.8 | 64 | 147.2 | 166 | 330 | 626 | 499 | 930 | 1706 |
| | | | -15.0 | 5 | 41.0 | 18.3 | 65 | 149.0 | 171 | 340 | 644 | 504 | 940 | 1724 |
| | | | -14.4 | 6 | 42.8 | 18.9 | 66 | 150.8 | 177 | 350 | 662 | 510 | 950 | 1742 |
| | | | -13.9 | 7 | 44.6 | 19.4 | 67 | 152.6 | 182 | 360 | 680 | 516 | 960 | 1760 |
| | | | -13.3 | 8 | 46.4 | 20.0 | 68 | 154.4 | 188 | 370 | 698 | 521 | 970 | 1778 |
| | | | -12.8 | 9 | 48.2 | 20.6 | 69 | 156.2 | 193 | 380 | 716 | 527 | 980 | 1796 |
| | | | -12.2 | 10 | 50.0 | 21.1 | 70 | 158.0 | 199 | 390 | 734 | 532 | 990 | 1814 |
| | | | -11.7 | 11 | 51.8 | 21.7 | 71 | 159.8 | 204 | 400 | 752 | 538 | 1000 | 1832 |
| -273 | -459.4 | | -11.1 | 12 | 53.6 | 22.2 | 72 | 161.6 | 210 | 410 | 770 | 549 | 1020 | 1868 |
| -268 | -450 | | -10.6 | 13 | 55.4 | 22.8 | 73 | 163.4 | 216 | 420 | 788 | 560 | 1040 | 1904 |
| -262 | -440 | | -10.0 | 14 | 57.2 | 23.3 | 74 | 165.2 | 221 | 430 | 806 | 571 | 1060 | 1940 |
| -257 | -430 | | -9.4 | 15 | 59.0 | 23.9 | 75 | 167.0 | 227 | 440 | 824 | 582 | 1080 | 1976 |
| -251 | -420 | | -8.9 | 16 | 60.8 | 24.4 | 76 | 168.8 | 232 | 450 | 842 | 593 | 1100 | 2012 |
| -246 | -410 | | -8.3 | 17 | 62.6 | 25.0 | 77 | 170.6 | 238 | 460 | 860 | 604 | 1120 | 2048 |
| -240 | -400 | | -7.8 | 18 | 64.4 | 25.6 | 78 | 172.4 | 243 | 470 | 878 | 616 | 1140 | 2084 |
| -234 | -390 | | -7.2 | 19 | 66.2 | 26.1 | 79 | 174.2 | 249 | 480 | 896 | 627 | 1160 | 2120 |
| -229 | -380 | | -6.7 | 20 | 68.0 | 26.7 | 80 | 176.0 | 254 | 490 | 914 | 638 | 1180 | 2156 |
| -223 | -370 | | -6.1 | 21 | 69.8 | 27.2 | 81 | 177.8 | 260 | 500 | 932 | 649 | 1200 | 2192 |
| -218 | -360 | | -5.6 | 22 | 71.6 | 27.8 | 82 | 179.6 | 266 | 510 | 950 | 660 | 1220 | 2228 |
| -212 | -350 | | -5.0 | 23 | 73.4 | 28.3 | 83 | 181.4 | 271 | 520 | 968 | 671 | 1240 | 2264 |
| -207 | -340 | | -4.4 | 24 | 75.2 | 28.9 | 84 | 183.2 | 277 | 530 | 986 | 682 | 1260 | 2300 |
| -201 | -330 | | -3.9 | 25 | 77.0 | 29.4 | 85 | 185.0 | 282 | 540 | 1004 | 693 | 1280 | 2336 |
| -196 | -320 | | -3.3 | 26 | 78.8 | 30.0 | 86 | 186.8 | 288 | 550 | 1022 | 704 | 1300 | 2372 |
| -190 | -310 | | -2.8 | 27 | 80.6 | 30.6 | 87 | 188.6 | 293 | 560 | 1040 | 732 | 1350 | 2462 |
| -184 | -300 | | -2.2 | 28 | 82.4 | 31.1 | 88 | 190.4 | 299 | 570 | 1058 | 760 | 1400 | 2552 |
| -179 | -290 | | -1.7 | 29 | 84.2 | 31.7 | 89 | 192.2 | 304 | 580 | 1076 | 788 | 1450 | 2642 |
| -173 | -280 | | -1.1 | 30 | 86.0 | 32.2 | 90 | 194.0 | 310 | 590 | 1094 | 816 | 1500 | 2732 |
| -169 | -273 | -459.4 | -0.6 | 31 | 87.8 | 32.8 | 91 | 195.8 | 316 | 600 | 1112 | 843 | 1550 | 2822 |
| -168 | -270 | -454 | 0.0 | 32 | 89.6 | 33.3 | 92 | 197.6 | 321 | 610 | 1130 | 871 | 1600 | 2912 |
| -162 | -260 | -436 | 0.6 | 33 | 91.4 | 33.9 | 93 | 199.4 | 327 | 620 | 1148 | 899 | 1650 | 3002 |
| -157 | -250 | -418 | 1.1 | 34 | 93.2 | 34.4 | 94 | 201.2 | 332 | 630 | 1166 | 927 | 1700 | 3092 |
| -151 | -240 | -400 | 1.7 | 35 | 95.0 | 35.0 | 95 | 203.0 | 338 | 640 | 1184 | 954 | 1750 | 3182 |
| -146 | -230 | -382 | 2.2 | 36 | 96.8 | 35.6 | 96 | 204.8 | 343 | 650 | 1202 | 982 | 1800 | 3272 |
| -140 | -220 | -364 | 2.8 | 37 | 98.6 | 36.1 | 97 | 206.6 | 349 | 660 | 1220 | 1010 | 1850 | 3362 |
| -134 | -210 | -346 | 3.3 | 38 | 100.4 | 36.7 | 98 | 208.4 | 354 | 670 | 1238 | 1038 | 1900 | 3452 |
| -129 | -200 | -328 | 3.9 | 39 | 102.2 | 37.2 | 99 | 210.2 | 360 | 680 | 1256 | 1066 | 1950 | 3542 |
| -123 | -190 | -310 | 4.4 | 40 | 104.0 | 37.8 | 100 | 212 | 366 | 690 | 1274 | 1093 | 2000 | 3632 |
| -118 | -180 | -292 | 5.0 | 41 | 105.8 | 43 | 110 | 230 | 371 | 700 | 1292 | 1121 | 2050 | 3722 |
| -112 | -170 | -274 | 5.6 | 42 | 107.6 | 49 | 120 | 248 | 377 | 710 | 1310 | 1149 | 2100 | 3812 |
| -107 | -160 | -256 | 6.1 | 43 | 109.4 | 54 | 130 | 266 | 382 | 720 | 1328 | 1177 | 2150 | 3902 |
| -101 | -150 | -238 | 6.7 | 44 | 111.2 | 60 | 140 | 284 | 388 | 730 | 1346 | 1204 | 2200 | 3992 |
| -96 | -140 | -220 | 7.2 | 45 | 113.0 | 66 | 150 | 302 | 393 | 740 | 1364 | 1232 | 2250 | 4082 |
| -90 | -130 | -202 | 7.8 | 46 | 114.8 | 71 | 160 | 320 | 399 | 750 | 1382 | 1260 | 2300 | 4172 |
| -84 | -120 | -184 | 8.3 | 47 | 116.6 | 77 | 170 | 338 | 404 | 760 | 1400 | 1288 | 2350 | 4262 |
| -79 | -110 | -166 | 8.9 | 48 | 118.4 | 82 | 180 | 356 | 410 | 770 | 1418 | 1316 | 2400 | 4352 |
| -73 | -100 | -148 | 9.4 | 49 | 120.2 | 88 | 190 | 374 | 416 | 780 | 1436 | 1343 | 2450 | 4442 |
| -68 | -90 | -130 | 10.0 | 50 | 122.0 | 93 | 200 | 392 | 421 | 790 | 1454 | 1371 | 2500 | 4532 |
| -62 | -80 | -112 | 10.6 | 51 | 123.8 | 99 | 210 | 410 | 427 | 800 | 1472 | 1399 | 2550 | 4622 |
| -57 | -70 | -94 | 11.1 | 52 | 125.6 | 100 | 212 | 414 | 432 | 810 | 1490 | 1427 | 2600 | 4712 |
| -51 | -60 | -76 | 11.7 | 53 | 127.4 | 104 | 220 | 428 | 438 | 820 | 1508 | 1454 | 2650 | 4802 |
| -46 | -50 | -58 | 12.2 | 54 | 129.2 | 110 | 230 | 446 | 443 | 830 | 1526 | 1482 | 2700 | 4892 |
| -40 | -40 | -40 | 12.8 | 55 | 131.0 | 116 | 240 | 464 | 449 | 840 | 1544 | 1510 | 2750 | 4982 |
| -34 | -30 | -22 | 13.3 | 56 | 132.8 | 121 | 250 | 482 | 454 | 850 | 1562 | 1538 | 2800 | 5072 |
| -29 | -20 | -4 | 13.9 | 57 | 134.6 | 127 | 260 | 500 | 460 | 860 | 1580 | 1566 | 2850 | 5162 |
| -28 | -18 | 0 | 14.4 | 58 | 136.4 | 132 | 270 | 518 | 466 | 870 | 1598 | 1593 | 2900 | 5252 |
| -23 | -10 | 14 | 15.0 | 59 | 138.2 | 138 | 280 | 536 | 471 | 880 | 1616 | 1621 | 2950 | 5342 |
| -18 | 0 | 32 | 15.6 | 60 | 140.0 | 143 | 290 | 554 | 477 | 890 | 1634 | 1649 | 3000 | 5432 |

Notes / Notas:

- The central column (a) represent the know temperature in °C or in °F.
La columna central (a) representa la temperatura conocida en °C o en °F.
- The equivalent temperature in °F or in °C is then read from the column to the right or the left.
La temperatura equivalente en °F o en °C se lee de la columna a la derecha o a la izquierda.
- General formula °C = (°F - 32) x 5/9 ; °F = (°C x 9/5) + 32.
Formula general °C = (°F - 32) x 5/9 ; °F = (°C x 9/5) + 32.

API STANDARD (AMERICAN PETROLEUM INSTITUTE) / Normas API

API SPEC 6D

Specification for Pipeline Valves / *Especificación para válvulas de tuberías.*

API 526

Flanged Steel Pressure Relief Valves / *Válvulas de alivio de presión de acero bridadas.*

API 527

Seat Tightness of Pressure Relief Valves / *Presión del asiento de las válvulas de alivio de presión.*

API 590

Steel Line Blanks / *Bridas ciegas para tuberías de acero.*

API 591

Process Valve Qualification Procedure / *Procedimientos de calificación de válvulas de procesos.*

ANSI 594

Check Valves: Flanged, Lug, Wafer and Butt-welding / *Válvulas de retención: Bridas, Lug, Wafer y Soldadas a tope.*

API 598

Valve Inspection and Testing / *Pruebas e inspección de válvulas.*

ANSI/API 599

Metal Plug Valves – Flanged, Threaded and Welding Ends / *Válvulas de cierre metálico - Extremos bridados, roscados y soldados.*

ANSI/API 600

Steel Gate Valves—Flanged and Butt-Welding Ends, Bolted Bonnets / *Válvulas de compuerta en acero - Extremos bridados y soldados a tope, bonete atornillado.*

API 602

Compact Steel Gate Valves – Flanged, Threaded, Welding, and Extended-Body Ends / *Válvulas de compuerta compactas en acero - Extremos bridados, roscados, soldados y cuerpo extendido.*

ANSI/API 603

Corrosion-Resistant, Bolted Bonnet Gate Valves – Flanged and Butt-Welding Ends / *Válvulas de compuerta bonete atornillado resistentes a la corrosión - Extremos bridados y soldados a tope.*

ANSI/API 607

Fire Test for Soft-Seated Quarter Turn Valves / *Pruebas anti-fuego para válvulas de un cuarto de vuelta y asiento blando.*

API 6FA

Specification for Fire Test for Valves / *Especificación para pruebas de fuego para válvulas.*

API 6FC

Fire Test for Valve with Automatic Backseats / *Pruebas de fuego para válvulas con asientos traseros automáticos.*

API 6RS

Referenced Standards for Committee 6, Standardization of Valves and Wellhead Equipment / *Estándares de referencia para el Comité 6, estandarización de válvulas y equipo de cabezas de pozo.*

API 11V6

Design of Continuous Flow Gas Lift Installations Using Injection Pressure Operated Valves / *Diseño de instalaciones de flujo de gas continuo usando válvulas de inyección a presión.*

ANSI/API RP 11V7

Recommended Practice for Repair, Testing, and Setting Gas Lift Valves / *Práctica recomendada para la reparación, prueba y ajuste de válvulas de elevación de gas.*

ASTM STANDARD (AMERICAN SOCIETY FOR TESTING MATERIALS) / Normas ASTM

ASTM A126-04

Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings / *Especificación estándar para válvulas, bridas y accesorios de tuberías en hierro gris.*

ASTM A522/A522M-01

Standard Specification for Forged or Rolled 8 and 9% Nickel Alloy Steel Flanges, Fittings, Valves, and Parts for Low-Temperature Service / *Especificación estándar para bridas, accesorios, válvulas y partes forjados o laminados de 8 y 9% en aleaciones de acero y níquel a bajas temperaturas.*

ASTM A694/A694M-03

Standard Specification for Carbon and Alloy Steel Forgings for Pipe Flanges, Fittings, Valves, and Parts for High-Pressure Transmission Service / *Especificación estándar para bridas de tuberías, accesorios, válvulas, y partes forjados de acero al carbón y aleaciones para servicios de transmisión de alta presión.*

ASTM A961-04

Standard Specification for Common Requirements for Steel Flanges, Forged Fittings, Valves, and Parts for Piping Applications / *Especificación estándar para requisitos comunes para bridas de acero, accesorios forjados, válvulas y partes para aplicaciones de tuberías.*

ASTM A988/A988M

Standard Specification for Hot Isostatically-Pressed Stainless Steel Flanges, Fittings, Valves, and Parts for High Temperature Service / *Especificación estándar para bridas, accesorios, válvulas y partes de acero inoxidable presurizado isostáticamente en caliente para servicios de alta temperatura.*

ASTM A989/A989M

Standard Specification for Hot Isostatically-Pressed Alloy Steel Flanges, Fittings, Valves, and Parts for High Temperature Service / *Especificación estándar para bridas, accesorios, válvulas y partes de aleación de acero presurizado isostáticamente en caliente para servicios de alta temperatura.*

ASTM B61-2

Standard Specification for Steam or Valve Bronze Castings / *Especificación estándar para fundiciones de bronce en purgadores de vapor y válvulas.*

ASTM B763

Standard Specification for Copper Alloy Sand Castings for Valve Application / *Especificación estándar para fundición de arena de aleación de cobre para aplicaciones en válvulas.*

ASTM B834

Standard Specification for Pressure Consolidated Powder Metallurgy Iron-Nickel-Chromium-Molybdenum (UNS N08367) and Nickel-Chromium-Molybdenum-Columbium (Nb) (UNS N06625) Alloy Pipe Flanges, Fittings, Valves, and Parts / *Especificación estándar para la metalurgia de polvo consolidada por presión Hierro, Níquel, Cromo, Molibdeno (UNS N08367) y Níquel, Cromo, Molibdeno, Columbio (Nb) (UNS N06625) aleación bridas para tuberías, accesorios, válvulas y partes.*

ASTM C1129

Standard Practice for Estimation of Heat Savings by Adding Thermal Insulation to Bare Valves and Flanges / *Práctica estándar para la estimación de ahorros de calor mediante la adición de aislamiento térmico a las válvulas y bridas desnudas.*

ASTM F885

Standard Specification for Envelope Dimensions for Bronze Globe Valves NPS 1/4 to 2 / *Especificación estándar para dimensiones de envolvente para válvulas de globo de bronce NPS 1/4 a 2.*

ASTM F992

Standard Specification for Valve Label Plates / *Especificación estándar para placas de etiquetas de válvulas.*

ASTM F993

Standard Specification for Valve Locking Devices / *Especificación estándar para dispositivos de bloqueo de válvulas.*

ASTM F1020

Standard Specification for Line-Blind Valves for Marine Applications / *Especificación estándar para válvulas Line-Blind para aplicaciones marinas.*

ASTM F1030

Standard Practice for Selection of Valve Operators / *Práctica estándar para selección de operadores de válvulas.*

ASTM F1271

Standard Specification for Spill Valves for Use in Marine Tank Liquid Overpressure Protections Applications / *Especificación estándar para válvulas de derrame para uso en aplicaciones de protección de sobrepresión de líquidos para tanques marinos.*

ASTM F1370

Standard Specification for Pressure-Reducing Valves for Water Systems, Shipboard / *Especificación estándar para las válvulas reductoras de presión para sistemas de agua, a bordo.*

ASTM F1394

Standard Test Method for Determination of Particle Contribution from Gas Distribution System Valves / *Método de prueba estándar para la determinación de la contribución de partículas en válvulas del sistema de distribución de gas.*

ASTM F1565

Standard Specification for Pressure-Reducing Valves for Steam Service / *Especificación estándar para válvulas de reducción de presión para servicio de vapor.*

ASTM STANDARD (AMERICAN SOCIETY FOR TESTING MATERIALS) / Normas ASTM

ASTM F1792

Standard Specification for Special Requirements for Valves Used in Gaseous Oxygen Service / *Especificación estándar para requisitos especiales para las válvulas usadas en el servicio gaseoso del oxígeno.*

ASTM F1793

Standard Specification for Automatic Shut-Off Valves (Also Known as Excess Flow Valves, EFV) for Air Or Nitrogen Service / *Especificación estándar para válvulas de cierre automático (también conocido como válvula de flujo de exceso, EFV) para servicio de aire o nitrógeno.*

ASTM F1794

Standard Specification for Hand-Operated, Globe-Style Valves for Gas (Except Oxygen Gas), and Hydraulic Systems / *Especificación estándar para válvulas manuales, de estilo globo para gas (excepto gas de oxígeno) y sistemas hidráulicos.*

ASTM F1795

Standard Specification for Pressure-Reducing Valves for Air or Nitrogen Systems / *Especificación estándar para válvulas reductoras de presión para sistemas de aire o nitrógeno.*

ASTM F1802

Standard Test Method for Performance Testing of Excess Flow Valves / *Método de prueba estándar para pruebas de rendimiento de válvulas de flujo en exceso.*

ASTM F1970

Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems / *Especificación estándar para accesorios o válvulas de ingeniería especial para uso en sistemas de poli (cloruro de vinilo) (PVC) o cloruro de cloro (cloruro de vinilo) (CPVC).*

ASTM F1985

Standard Specification for Pneumatic-Operated, Globe-Style, Control Valves / *Especificación estándar para válvulas de control de globo de accionamiento neumático.*

ASTM F2138

Standard Specification for Excess Flow Valves for Natural Gas Service / *Especificación estándar para válvulas de flujo de exceso para servicio de gas natural.*

ASTM F2215

Standard Specification for Balls, Bearings, Ferrous and Nonferrous for Use in Bearings, Valves, and Bearing Applications / *Especificación estándar para bolas, rodamientos, ferrosos y no ferrosos para uso en rodamientos, válvulas y aplicaciones de cojinetes.*

ASTM F2324

Standard Test Method for Pre rinse Spray Valves / *Método de prueba estándar para las válvulas de pre-aclarado.*



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