

RESILIENT SEAT GATE VALVE WITH BYPASS VALVE DN375 - DN750 MODEL: GVRBP

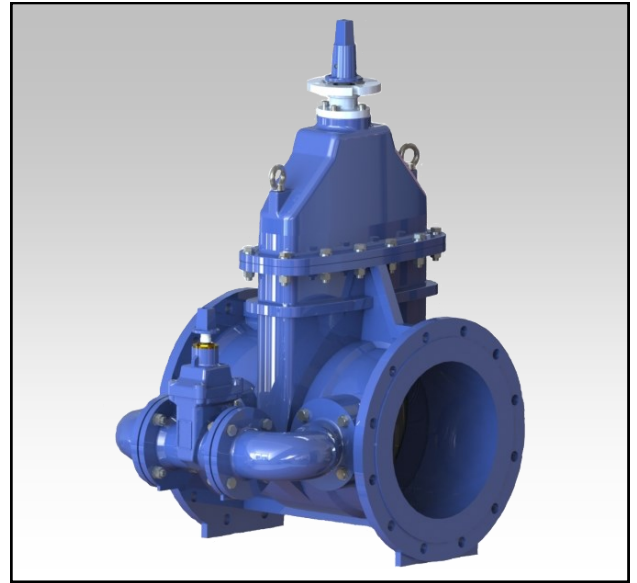


FEATURES AND BENEFITS

- Designed and tested in accordance with AS2638.2.
- AS2638.2 OceanaMark Certified product by IAPMO OCEANA Licence No: OMK32160.
- WaterMark Approved product by IAPMO OCEANA Licence No: WM-032160.
- Approved to AS4020.
- Valve sizing conforms to the Australian requirements of the Water Supply Code
- Integral bypass saves space in pit & pump station installations resulting in lower overall construction costs.
- The bypass valve can be used for equalising downstream pressure to enable easier opening and closing of the main valve. It can also be used in filling and scouring applications,
- The Body and Bonnet are made of high grade ductile iron to AS1831.
- The complete wedge including internal bore is fully encapsulated by rubber preventing creep and corrosion.
- Drop tight seal.
- Valves can be supplied in clockwise or anti-clockwise closing directions.
- Fusion bonded epoxy coating to AS4158 internally and externally providing longer life and excellent corrosion protection.
- Full bore ports avoid the ingress of debris.
- Supplied standard with mounting flange complying with ISO5211 for easy mounting of gearboxes and actuators.

OPTIONS

- Hand Wheel operator
- Key Cap Operator
- Gearbox operator
- Electric actuator
- Extensions



TECHNICAL SPECIFICATION

| | |
|---------------------------|--|
| Construction: | Resilient Seated Gate with Bypass arrangement. |
| Size: | 375mm - 750mm |
| Pressure Rating: | PN16 |
| Face to Face: | According to AS2638.2 |
| Flange Drilling: | AS4087 B5 AS2129 Table D AS2129 Table E (others available on request) |
| Coatings: | AS4158 |
| Temperature (Max): | 0-68°C (General Application) 0-40°C (AS4020 Compliance) |
| Velocity (Max): | 4.5m/s |
| Pressure Testing: | According to AS2638.2 |
| | - Body: 1.5 AOP |
| | - Seat: 1.1 AOP |

APPLICATIONS

Challenger Valves and Actuators are the **“Right Choice for Valves and Actuation”** when quality matters.

Servicing industries such as:
Water & Waste Water, Mining, Desalination, Pumping,
Industrial Processing, Irrigation, Materials Handling and
General Industries.



AS2638.2 Lic OMK22994
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AS2638.2 Lic WM-022994
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RESILIENT SEAT GATE VALVE WITH BYPASS VALVE DN375 - DN750

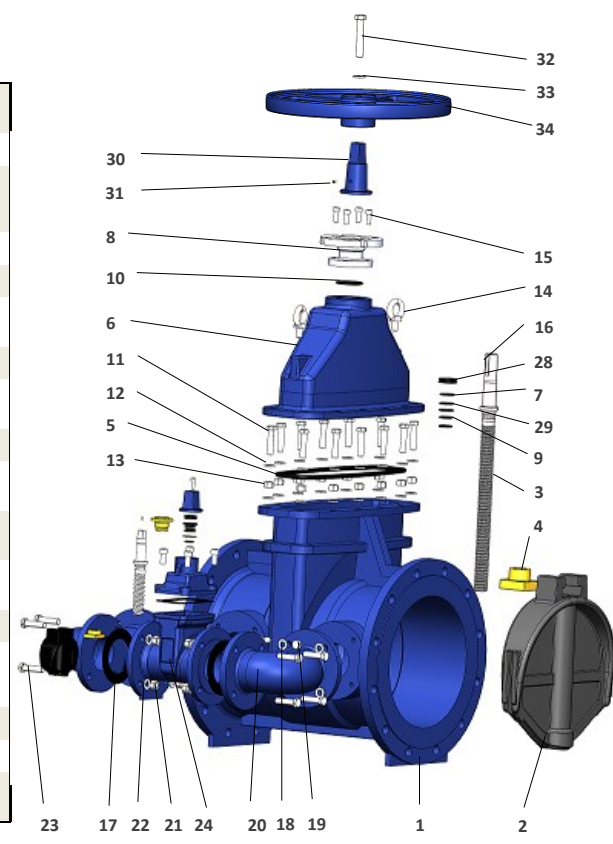
MODEL: GVRBP



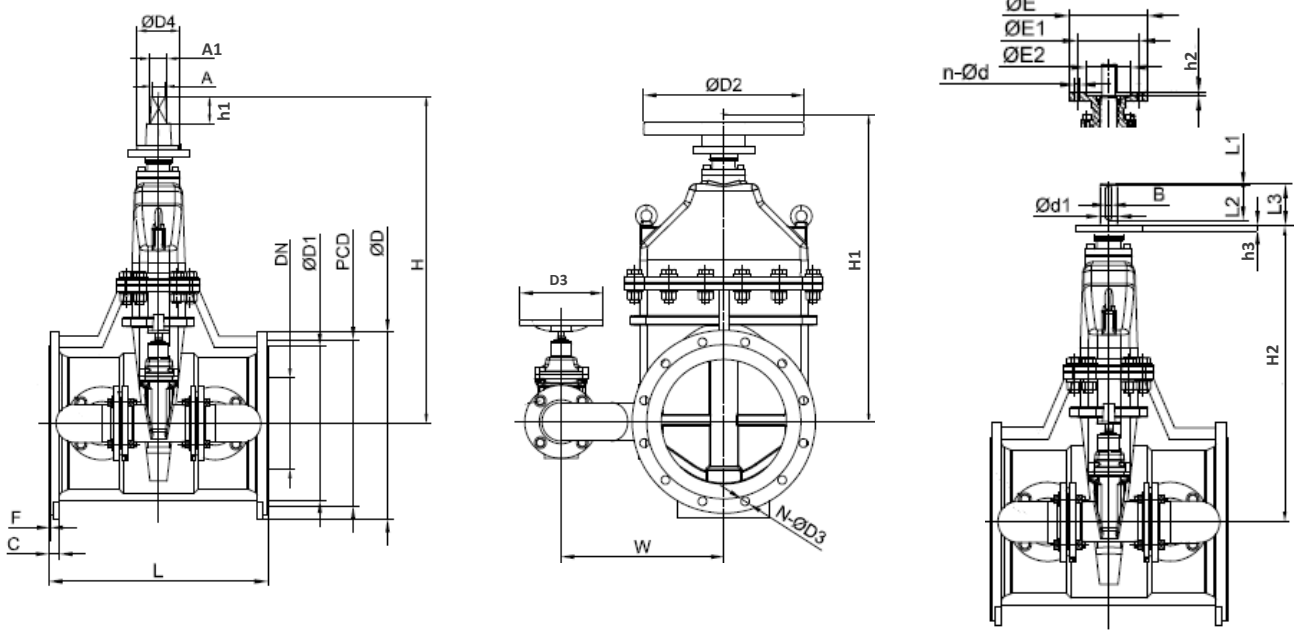
PN16 DN375-DN750

TECHNICAL: VALVE MATERIALS

| ITEM | COMPONENT | MATERIAL | STANDARD | ITEM | COMPONENT | MATERIAL | STANDARD |
|------|---------------|--|-----------------------------|------|--------------|----------------------|-------------------|
| 1 | Body | Ductile Iron, 450-10 | AS1831 | 18 | Washer | Stainless Steel, 316 | ASTM A276 |
| 2 | Gate | Ductile Iron, 450-10, encapsulated EPDM rubber | AS1831 AS1646 AS681.1 | 19 | Bolt | Stainless Steel, 316 | ASTM A276 |
| 3 | Stem | Stainless Steel, 431 | ASTM A276 | 20 | Bypass Elbow | Ductile Iron, 450-10 | AS1831 |
| 4 | Wedge Nut | Copper Alloy C83600 | AS1565 | 21 | Nut | Stainless Steel, 316 | ASTM A276 |
| 5 | Gasket | Rubber, EPDM | AS1646 AS681.1 | 22 | Washer | Stainless Steel, 316 | ASTM A276 |
| 6 | Bonnet | Ductile Iron, 450-10 | AS1831 | 23 | Bolt | Stainless Steel, 316 | ASTM A276 |
| 7 | O-Ring | Rubber, EPDM | AS1646 AS681.1 | 24 | Bypass Valve | Gate Valve | AS2638.2 |
| 8 | Seal Seat | Stainless Steel, CF8M | ASTM A351 | 25* | Washer | Copper Alloy, C83600 | AS1565 |
| 9 | O-Ring | Rubber, EPDM | AS1645 AS681.1 | 26* | Washer | Stainless Steel, 316 | ASTM A276 |
| 10 | O-Ring | Rubber, EPDM | AS1646 AS681.1 | 27* | Plug | Stainless Steel, 316 | ASTM A276 |
| 11 | Bolt | Stainless Steel, 316 | ASTM A276 | 28 | Dust Cover | Rubber, EPDM | AS1646 AS681.1 |
| 12 | Washer | Stainless Steel, 316 | ASTM A276 | 29 | Washer | Copper Alloy | AS1565 |
| 13 | Nut | Stainless Steel, 316 | ASTM A276 | 30 | Key Cap | Ductile Iron, 450-10 | AS1831 |
| 14 | Lifting Bolt | Stainless Steel, 316 | ASTM A276 | 31 | Bolt | Stainless Steel, 316 | ASTM A276 |
| 15 | Bolt | Stainless Steel, 316 | ASTM A276 | 32 | Bolt | Stainless Steel, 316 | ASTM A276 |
| 16 | Key | Carbon Steel, | ASTM A1045 | 33 | Washer | Stainless Steel, 316 | ASTM A276 |
| 17 | Flange Gasket | Rubber, EPDM | AS1646 AS681.1 | 34 | Hand Wheel | Ductile Iron, 450-10 | AS1831 |



* Component of DN750 valve only - Not shown on drawing



| DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----------|----------------|--------|----|---|------|----|-----|----|--------------|-----------------------|-------------|-----|----|----|-----|----|-----|----|----|-------|------|
| DN | L | H | H1 | H2 | ØD | W | ØD1 | ØD2 | ØD3 | PCD | n-Ød3 | n-Ød3 | Bypass | C | F | A | A1 | ØD4 | h1 | No. of Turns | ISO 5211 Mounting Pad | Weight (Kg) | | | | | | | | | | |
| | | | | | | | | | | | AS4087 B5 | AS2129 Table E | DN | | | | | | | | ØE | ØE1 | ØE2 | h2 | h3 | Ød1 | B | L1 | L2 | L3 | n-Ød | |
| 375* | 660 | 950 | 909 | 813 | 550 | 491 | 463 | 450 | 250 | 495 | 12-Ø26 | - | 100 | 33 | 4 | 29.3 | 35 | 100 | 57 | 34 | 175 | 140 | 100 | 4 | 20 | 30 | 10 | 2.5 | 60 | 65 | 4-Ø18 | 315 |
| 450 | 650 | 1075 | 1036 | 940 | 640 | 555 | 552 | 558 | 250 | 584 | 12-Ø26 | 16-Ø26 | 100 | 33 | 4 | 29.3 | 35 | 100 | 57 | 38 | 175 | 140 | 100 | 4 | 20 | 30 | 10 | 2.5 | 60 | 65 | 4-Ø18 | 573 |
| 500 | 710 | 1195 | 1151 | 1040 | 705 | 610 | 609 | 610 | 250 | 641 | 16-Ø26 | 16-Ø26 | 100 | 35 | 4 | 29.3 | 35 | 110 | 57 | 42 | 210 | 165 | 130 | 4 | 22 | 40 | 12 | 5 | 70 | 80 | 4-Ø22 | 610 |
| 600 | 785 | 1375 | 1327 | 1216 | 825 | 785 | 720 | 762 | 280 | 756 | 16-Ø30 | 16-Ø33 | 150 | 42 | 5 | 29.3 | 35 | 110 | 57 | 50 | 210 | 165 | 130 | 4 | 22 | 40 | 12 | 5 | 70 | 80 | 4-Ø22 | 856 |
| 750 | 950 | 1715 | 1690 | 1580 | 995 | 855 | 888 | 800 | 280 | 927 | 20-Ø33 | 20-Ø36 | 150 | 47 | 5 | 29.3 | 35 | 120 | 57 | 67 | 210 | 165 | 130 | 4 | 22 | 52 | 16 | 5 | 70 | 80 | 4-Ø22 | 2562 |

AS4087 B5 and AS2129 Table C/D have the same drilling dimensions.
 * Denotes valve is manufactured to AS2638.2. Unable to be certified, not listed on AS2638.2

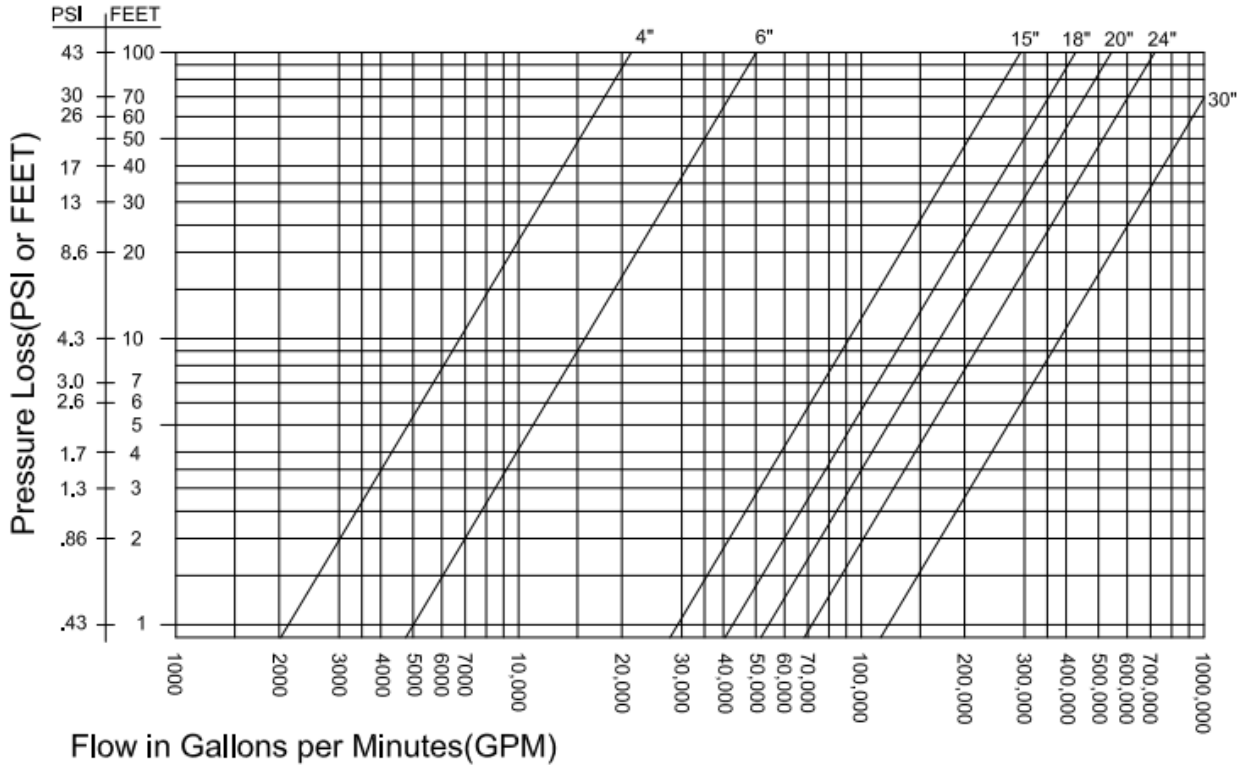
RESILIENT SEAT GATE VALVE WITH BYPASS VALVE DN375 - DN750

MODEL: GVRBP



PN16 DN375-DN750

TECHNICAL : PRESSURE DROP



TECHNICAL : FLOW RATES

Cv is defined as the volume of water in U.S.G.P.M that will flow through a given restriction or valve opening with a pressure drop of one (1) p.s.i at room temperature.

| FLOW VALUES | | | | | |
|-------------|--------|----------|--------------|------|--------|
| MAIN VALVE | | | BYPASS VALVE | | |
| Size | CV | KV | Size | CV | KV |
| 375 | 46377 | 39741 | 100 | 3298 | 2826 |
| 450 | 66783 | 57226.5 | 150 | 7420 | 6358.5 |
| 500 | 82449 | 70650 | | | |
| 600 | 118726 | 101736 | | | |
| 750 | 185509 | 158962.5 | | | |

TECHNICAL : CODE BUILDER

| HOW TO ORDER | | | | | | | |
|--|-------------------|--------------------|----------|---------------------|---------------------|---------------------|-----------------------|
| SERIES | CLOSING DIRECTION | CONNECTIONS | RATING | SIZE | OPERATOR/MOUNTING | | |
| GVRBP | C | D | 4 | 0450 | K | | |
| Example: DN450 GVRBP Resilient Seated Gate Valve with Bypass Arrangement, Clockwise Closing, Flanged AS4087 B5, PN16 Rating, Key Cap Operation | | | | | | | |
| Series: | CLOSING DIRECTION | CONNECTIONS | RATING | SIZE | SIZE | SIZE | OPERATOR/MOUNTING |
| GVRBP | A = ACC | D = AS4087 B5 | 4 = PN16 | 0375 = 15\" (375mm) | 0450 = 18\" (450mm) | 0500 = 20\" (500mm) | H = Hand Wheel |
| | C = CC | E = AS2129 TABLE E | | 0600 = 24\" (600mm) | 0750 = 30\" (750mm) | | I = ISO 5211 Mounting |
| | | | | | | | K = Key cap operator |

Contact Challenger for alternative operators (Eg; Bevel gear box, Spur Gear Box, Electric Actuator) and flange drilling. When extension spindles are required please specify the required part number as per the code builder on the relevant data sheet.

I = ISO5211 Option is only available on DN80-DN300, ISO5211 is supplied standard on DN350-DN750.

Visit the Challenger website to access further data sheets.