## <u>American R</u>/D

## A Division of McWane, Inc. In-Plant Valve Products 1800 Greenbrier Road Anniston, AL 36207

T: (256) 831-2236 + F: (256) 831-2884 + <u>www.american-rd.com</u>

Double Rotating-Revolving Disc Gate Valves 3" to 108" Series 50

- 1. Manufacturers:
  - A. American R/D
- 2. Provide valve in compliance with AWWA C500 (latest edition).
- 3. Materials:
  - A. Valve Body, Bonnet, Discs, Wedges: Ductile Iron ASTM-A536 (65/45/12).
    4" and smaller valves may have ASTM B62 low zinc bronze discs and wedges. Valves 84" and larger High strength steel disc ASTM 4140
  - B. Provide valve body and bonnet of ductile iron full body thickness
  - C. Scraper, Stem Nut, Disc and Body Seat Rings: B62-Low Zinc Bronze.
  - D. Ductile Iron Wedge Bearing Surfaces: Type 316 stainless steel ASTM-A276
  - E. Stem: Type 316 or Type 304 Stainless Steel ASTM-A276. Valves 84" and larger stem type 630 stainless steel
  - F. Valve Bolts and Nuts: Type ASTM Grade 304 or 316 Stainless Steel Bolts and Nuts as specified by engineer
- 4. Valve Construction:
  - A. Rated Working Pressure:
    - I. Valves 3" through 54": 250 psi
    - II. Valves 60" through 66": 150 psi
    - III. Valves 72": 100 psi
    - IV. Valves 84" through 108": 150 psi



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- 5. Design:
  - A. Exposed valves: Flanged OS&Y valves. Face-to-face dimensions to comply with ANSI B16.10, flanges to comply with ANSI B16.1.
    - I. Provide conventional packing in OS&Y valves.
    - II. Provide Type 316 or Type 304 stainless steel bolts and bronze nuts for stuffing box follower.
  - B. Buried Valves: NRS with gear operator.
    - I. Mechanical joint
    - II. Provide conventional packing or double O rings in non-rising stem valves
  - C. Where specified and indicated provide a bypass valve bolted to bottom or side of main valve body for valves 16" and larger. Provide valve type and material as specified and indicated.
  - D. Provide valve body with two integrally cast flushing ports for gate valves sized 14" and larger for valve in an upright installation.
  - E. Provide two 360 degree ductile iron rotating discs, interchangeable and field replaceable without removal of valve body from the pipeline.
  - F. Provide self-adjusting bronze scrapers to allow valve to be mounted in the horizontal position or angle as indicated from vertical or horizontal centerlines. Valves 84" and larger provided with scrappers on both sides of the valve body.
  - G. When required, provide each valve body with integrally cast electric motor mounting pads
  - H. Provide a full port body design with full port completely through the entire valve body and seat rings to allow for pigging of pipelines.
  - I. Valve in full open position shall provide a clear and unobstructed water way.



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- J. Provide valve body guides and tracks with a bronze bearing surface throughout the entire travel of the bottom side of a horizontally installed valve. Valves 84" and larger provided with body guides and tracks on both sides of the valve body.
  - I. Guide contact area: ASTM B21 Bronze
- K. Provide valve design to allow complete re-packing of valve stem under pressure when the valve is in the full open position.
- L. End connections, provide type as indicated and specified:
  - I. Flanged per ANSI B.16.1 Class 125 or Class 250 as required
  - II. Grooved
  - III. Mechanical Joint.
- M. Provide all discs and wedges free of any type pockets, linkages and pins.
- N. Provide geared operators for all valves 14" and larger.
  - I. Gearing: Steel with enclosed cases.
  - II. Provide spur or bevel gearing as determined by valve application and orientation
  - III. Provide buried valves with totally enclosed gear cases.
- O. Chain wheels: Provide where required as specified herein.
- 6. Testing
  - A. Factory test each valve per AWWA C-500 (latest Revision)
- 7. Provide a two part NSF-61 approved liquid epoxy on the exterior and interior of valve
- 8. Manufacturer shall have at least 10 years water works or treatment plant experience.