

**LARGE GATE VALVES, 14" – 54"**

1. Resilient Wedge Gate Valves (RWGV) shall meet or exceed all applicable requirements of ANSI/AWWA C515-15. Valves shall be UL 262 Listed<sup>1</sup>, FM 1120/1130 approved<sup>2</sup> and certified to ANSI/NSF 61 & 372.
2. 14"-16" valves shall have an AWWA, UL and FM working pressure of 250 psig. Valves shall be shell tested to 500 psig and seat tested to 375 psig.  
  
18"-24" valves shall have an AWWA and FM working pressure of 250 psig and a UL working pressure of 175 psig. Valves shall be shell tested to 500 psig and seat tested to 375 psig.  
  
30"- 54" valves shall have an AWWA 250 psig working pressure. Valves shall be shell tested to 500 psig and seat tested to 275 psig.
3. Valve type shall be Non-Rising Stem (NRS).
4. Valves shall have an arrow cast on the operating nut or hand wheel showing opening direction. The direction of opening shall be as specified. Valves 30" or larger require a bevel or spur gear actuator.
5. Valves shall be provided with a 2" square operating nut. The bolt that attaches the operating nut to the stem shall be recessed into the operating nut so as not to interfere with valve wrench operation.
6. Valves shall have 316 Stainless Steel bolts and nuts for the stuffing box and bonnet.
7. Valve stems shall have at least one "anti-friction" thrust washer above and below the stem collar to reduce operating torque. Valve stem design shall be such that if excessive input torque is applied, stem failure shall occur above the stuffing box at such a point as to enable the operation of the valve with a pipe wrench or other readily available tool. Valves with two-piece stem collars do not meet the requirements of AWWA C515-15 and are unacceptable.
8. Valve stems shall be made of acceptable bronze material as required by AWWA C515-15. Valve standard stems are as follows:  
    14"-16" ASTM B138  
    18"-54" ASTM B584  
  
Optional stem materials may be:
  - a. 304 Stainless Steel bar stock or casting
  - b. 316 Stainless Steel bar stock or casting
  - c. Low Zinc, Silicon Bronze: 14"-16" ASTM B98, 18"-54" ASTM B763
9. Valves shall have an O-ring sealed stuffing box. Two O-rings shall be placed above and one O-ring below the stem thrust collar. The thrust collar shall be factory lubricated. The thrust collar and its lubrication shall be isolated by the O-rings from the waterway and from outside contamination providing permanent lubrication for long term ease of operation. Valves without a stuffing box or valves without at least three stem O-rings are unacceptable.

<sup>1</sup> 14-24" RWGV's without gear actuators are UL Listed

<sup>2</sup> 14-24" RWGV's are FM Approved

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10. The valve body, bonnet, stuffing box, and disc shall be composed of A536 Grade 65-45 minimum ductile iron. The body and bonnet shall also adhere to the minimum wall thickness as set forth in AWWA C515-15 Table 2, section 4.4.1.2. Wall thicknesses that do not meet AWWA minimums are not acceptable.
11. The valve disc and guide lugs must be fully (100%) encapsulated in 14"-16 SBR ASTMD2000 and 18"-54" EPDM ASTM D2000 rubber material. The peel strength shall not be less than ASTM D-429 (Method B) required 75 pounds per inch. Guide caps of an acetyl bearing material shall be placed over solid guide lugs to prevent abrasion and to reduce the operating torque.
12. 18-36" valves shall have all internal and external ferrous surfaces coated with a fusion bonded thermosetting powder epoxy coating of 10 mil nominal thickness. Valves 42" and larger shall have internal and external ferrous surfaces coated with a liquid epoxy of 5 mil nominal thickness. Coatings shall conform to AWWA C550.
13. Valves shall be warranted by the manufacturer against defects in materials or workmanship for a period of ten (10) years from the date of manufacture. The manufacturing facility for the valves must have current ISO certification.

NRS Gate valves shall be MUELLER® A2361 series or approved equal.

NRS Tapping valves shall be MUELLER® T2361 series or approved equal.



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