



**VALVE &  
HYDRANT**

# A-USP1 RESILIENT WEDGE GATE VALVES REDUCED WALL 350PSI. 3"-12"

## Suggested Specifications

1. Resilient wedge gate valves shall meet or exceed all applicable requirements of current revision of ANSI/AWWA C515. They shall be UL 262 listed, FM 1120/1130 approved and certified to ANSI/NSF 61 & 372.
2. Valves shall have an AWWA/UL/FM 350psig working pressure. Each valve shall be factory seat tested to 525psig and shell tested to 700psig. The following end types are available: MJ x MJ, FL x FL, FL x MJ, SO x SO, FL x SO, GR x GR and FL x GR.
3. Valve type shall be NRS (non-rising stem) or OS&Y (outside screw & yoke) as specified.
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 by owner.
5. The NRS 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. Bolt shall be 316 stainless steel. The OS&Y shall be provided with a handwheel.
6. Valves shall have Type 316 stainless steel bolts and nuts for the stuffing box and bonnet.
7. Valve stems shall have "anti-friction" thrust washers, one above and one below the stem thrust 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.
8. Valve stems shall be made of bronze ASTM B138 alloy C67600 H04 hard bar stock material. The bronze stem collar is to be hot forge upset; collars not integral with the stem are not acceptable. The stem material shall provide a minimum 73,000psi tensile strength, yield strength of 48,000psi and 8% minimum elongation. Optional bronze stems materials may be ASTM B98 alloy C66100 H02 (half hard). Optional stainless-steel stems may be hot forge upset or machined from bar stock in the following grades:
  - a. 304 Stainless Steel
  - b. 316 Stainless Steel
9. Valves shall have a stuffing box with bolts in line with flow and be O-ring sealed. Stuffing box shall have two integrally cast lifting lugs. 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 are unacceptable. Valves without at least three stem O-rings are also unacceptable.

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10. The valve body, bonnet, stuffing box and operating nut shall be composed of ASTM A536 ductile iron. The body and bonnet shall adhere to the minimum wall thickness as set forth in AWWA C515-09 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 shall be composed of ASTM A126 Class B or ASTM A536 ductile iron and fully encapsulated in SBR ASTM D2000 rubber. Guide caps of an acetal bearing material shall be placed over solid guide lugs to prevent abrasion and to reduce the operating torque. Guide lugs placed over bare metal are not acceptable. EPDM ASTM D2000 shall be available as an option.
12. Valves shall have all internal and external ferrous surfaces coated with a fusion bonded thermosetting powder epoxy coating of 10 mils nominal thickness. The coating shall conform to AWWA C550.
13. Tapping valves shall have an inlet flange conforming to ANSI B16.1 Class 125 for attachment to a tapping sleeve or cross. In addition, the valve inlet flange shall have a machined projection or raised alignment lip complying with MSS SP-60 for accurate alignment to the mating recess in the tapping sleeve flange. The seat opening of the tapping valves shall be at least .30" or larger than the nominal pipe size to permit full size shell cutters.
14. 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.
15. NRS valves shall be A USP1 series or approved equal.
16. NRS tapping valves shall be T USP1 series or approved equal.

