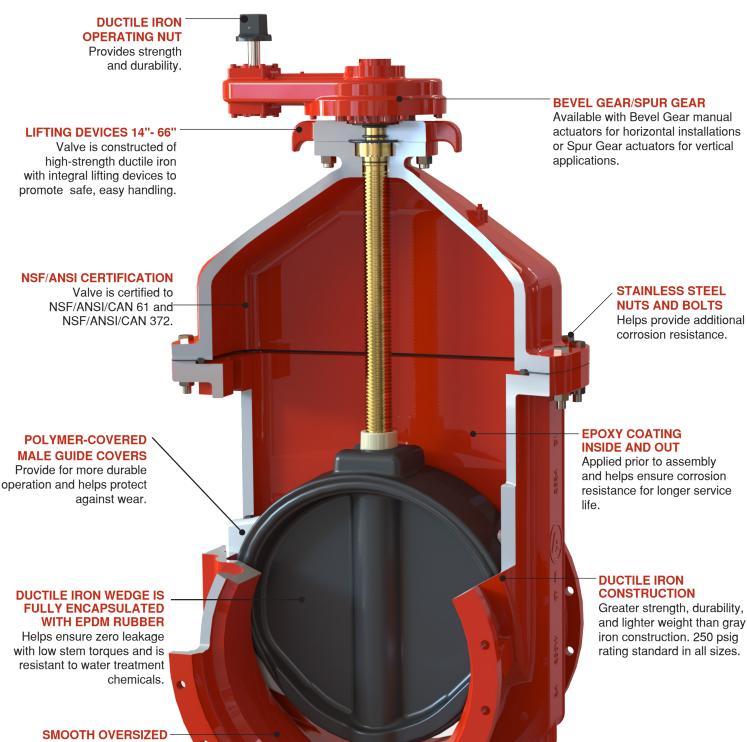
# 14"- 66" SERIES 2500 RESILIENT WEDGE GATE VALVES BY AMERICAN FLOW CONTROL®



THE RIGHT WAY



### CONSTRUCTION



### WATERWAY Helps reduce pumping costs

and allows for a full-size cutter on tapping valves.

CAST FLATS Allow the valve to

Allow the valve to stand upright during storage or installation.

### FEATURES/BENEFITS

AMERICAN Flow Control's 14"- 66" Series 2500 Ductile Iron Resilient Wedge Gate Valves have a long history of use in potable water, fire protection systems and wastewater applications. These valves have a rated working pressure of 250 psig with zero leakage. The waterway is clear and unobstructed.

#### ADVANTAGES OVER BUTTERFLY VALVES

- No disc in waterway to restrict flow or to increase pumping costs.
- Allows passage of pigging devices.
- Internal parts can be serviced without cutting valve out of pipeline.
- 250 psig rating provides for future pressure increases over the150 psig pressure rating found on most butterfly valves.
- More durable design with a longer life cycle.

#### ADVANTAGES OVER DOUBLE DISC GATE VALVES

- Zero allowable leakage.
- Lower torque requirements to operate valve.
- 250 psig pressure rating compared to the 150 psig rating found on double disc gate valves.
- Epoxy coated inside and out.
- Lighter total valve weight.
- Single gate construction. Double disc gate valves have multiple parts that can seize together.
- Bypasses and rollers, tracks and scrapers are not needed.

#### The 14"- 66" Series 2500 Resilient Wedge Gate Valves have these standard features:

• 250 psig rating

Thrust washers

- Ductile iron construction
- Triple O-ring stem seals
- Valve is Certified to NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372
- Optional gearing
   (Standard on 20) and l

Zero leakage

- (Standard on 30" and larger) • Ductile iron wedge fully encapsulated
- Ductile iron wedge fully e with EPDM rubber

· Epoxy coating inside and out

- Available 16"- 60" Flex-Ring<sup>®</sup> boltless restrained joint
  Cast flats on valve body so valve
- Cast flats on valve body so valve stands upright for storage or during installation

### **DUCTILE IRON CONSTRUCTION**

The ductile iron body and bonnet provide superior strength and allow a pressure rating of 250 psig. The strength of ductile iron is double that provided by gray iron. This added strength and higher pressure rating are provided in a compact, lighter design.

#### **TRIPLE O-RING STEM SEALS**

Sealing the lubrication chamber is a series of three O-ring stem seals. The O-rings help isolate the lubrication chamber.

#### **EPOXY COATING**

The 14"- 66" Series 2500 valves are epoxy coated both on the interior as well as the exterior of the valve. The coating is applied after the valve body is shot blasted clean. The coating is applied to all ferrous surfaces so that even the bolt holes and body-to-bonnet flange surfaces are fully epoxy coated.

### LIFTING DEVICES 14"- 66"

Stuffing box is constructed of high-strength ductile iron with integral lifting device. This allows the valve to be handled without having to lift the valve by the operating nut. 42"- 66" valves have integrally cast lifting lugs.

#### **THRUST WASHERS**

Thrust washers are located above and below the stem collar to reduce operating input torque and assist in trouble-free operation of the valve.

#### **NO FLAT GASKETS**

The stuffing box gasket and throat flange gasket are pressureenergized rubber O-rings. This provides a seal without the need for excessive bolt loading as is required of flat gaskets.

### SAMPLE SPECIFICATION

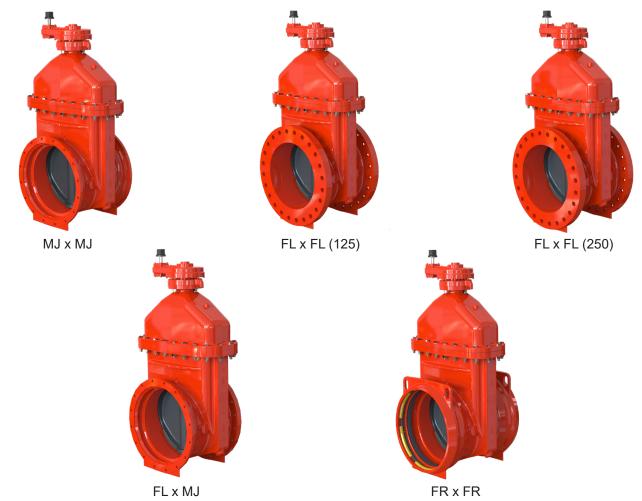
Valves 14"- 66" shall be resilient wedge type rated for 250 psig cold water working pressure. All cast ferrous components shall be ductile iron, ASTM A536. Valves 14"- 66" shall meet or exceed all applicable requirements of ANSI/AWWA C515. The words "Ductile Iron" or "D.I." shall be cast on the valve. The wedge shall be constructed of ductile iron fully encapsulated with EPDM rubber.

The wedge shall be symmetrical and seal equally well with flow in either direction. Wedge guides shall be equipped with male guide covers. The use of auxilliary bronze rollers and plow-style shoes are not acceptable. The wedge nut shall be independent of the wedge and held in place on three sides by the wedge to prevent possible misalignment. When required valves 16" and larger shall be furnished with spur gears for vertical installations and bevel gears for horizontal installations. Valves shall be Certified to NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372.

Body bolting material shall be Type 304 stainless steel unless otherwise specified. Bolts may have either regular square or hexagonal shaped heads with dimensions conforming to ANSI B18.2.1. Metric size and/or socket head cap screws, or bolts, are not allowed. The operating nut shall be constructed of ductile iron. All gaskets shall be pressure energized O-ring type seals. Stem shall be sealed by three O-rings. O-rings set in a cartridge shall not be allowed. The valve shall have thrust washers located with one above and one below the thrust collar to assist operation of the valve. All internal and external surfaces of the valve body and bonnet shall have an epoxy coating, complying with ANSI/AWWA C550. Valves shall be **Series 2500 Resilient Wedge Gate Valves** by AMERICAN Flow Control<sup>®</sup>.



### **AVAILABLE 14"- 66" NRS END CONFIGURATIONS**



Series 2500 NRS												
End Configuration		Valve Size										
End Configuration	14''	16''	18''	20''	24''	30''	36''	42''	48''	54''	60''	66''
MJ x MJ	•	•	•	•	•	•	•	•	•			
FL x FL (Class 125)	•	•	•	•	•	•	•	•	•	•	•	•
FL x FL (Class 250)	•	•	•	•	•	•	•	•	•			
FL x MJ	•	•	•	•	•	•	•	•	•			
FR x FR		•		•	•	•	•	•	•		•	
PO x PO (not shown)	•	•										

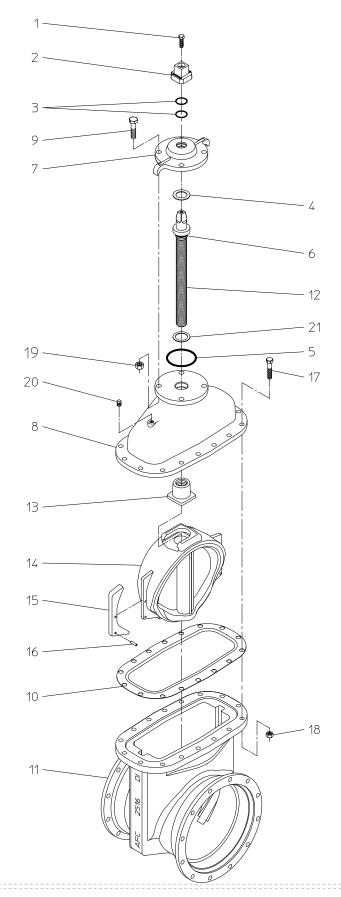
#### NOTES:

- 1. Bolt patterns of Class 125 flanged ends are in accordance with ANSI/AWWA C110/A21.10 (ASME B16.1 Class 125).
- 2. Standard internal and external coating meets requirements of ANSI/AWWA C550.
- 3. Working pressure is 250 psig.
- 4. Valve meets requirements of ANSI/AWWA C515.
- 5. Valve is Certified to NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372.
- 6. 14"- 24" NRS valves may be ordered in configurations that are UL Listed and FM Approved and have 250 psig rated working pressure.
- 7. It is considered good practice that when depth of bury and applications allow, gate valves be installed in the vertical position.
- 8. It is recommended that the main valve stem be in the vartical position for wastewater applications. Care should be taken to avoid accumulation of sediment or solids in the valve.

# STANDARD 14"-24" NRS PARTS LIST

Ref	Description	Material
1	Hex head bolt	Stainless steel
2	Wrench nut	Ductile iron
3	O-ring	Rubber
4	Upper thrust washer	Delrin
5	Stuffing box gasket	Rubber O-ring
6	O-ring	Rubber
7	Stuffing box	Ductile iron
8	Bonnet	Ductile iron
9	Hex head bolt	Stainless steel
10	Throat flange gasket	Rubber
11	Valve body	Ductile iron
12	Stem	Bronze (Stainless steel optional)
13	Wedge nut	Bronze
14	Resilient wedge	Ductile iron with EPDM rubber
15	Wedge cover	Polymer
16	Wedge cover pin	Polymer
17	Hex head bolt	Stainless steel
18	Hex nut	Stainless steel
19	Hex nut	Stainless steel
20	Pipe plug	Stainless steel
21	Lower thrust washer	Delrin
26	Handwheel	Ductile iron

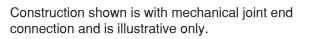
Construction shown is with mechanical joint end connection and is illustrative only.



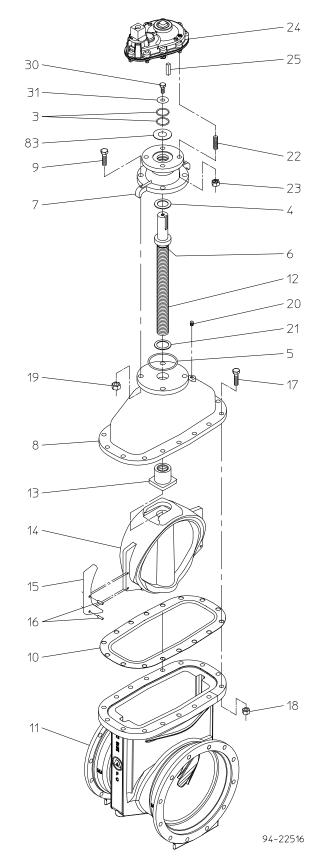


# STANDARD 14"-18" NRS PARTS LIST WITH GEARING

Ref	Description	Material
3	O-ring	Rubber
4	Upper thrust washer	Delrin
5	Stuffing box gasket	Rubber
6	O-ring	Rubber
7	Stuffing box	Ductile iron
8	Bonnet	Ductile iron
9	Hex HD Bolt	Stainless steel
10	Throat flange gasket	Rubber
11	Valve body	Ductile iron
12	Stem	Bronze (Stainless steel optional)
13	Wedge nut	Bronze
14	Resilient wedge	Ductile iron with EPDM rubber
15	Wedge cover	Polymer
16	Wedge cover pin	Polymer
17	Hex head bolt	Stainless steel
18	Hex nut	Stainless steel
19	Hex nut	Stainless steel
20	Pipe plug	Stainless steel
21	Lower thrust washer	Delrin
22	Stud	Stainless steel
23	Hex nut	Stainless steel
24	Gear actuator assembly	AFC or ROTORK Gearing (2:1)
25	Кеу	Hardened steel
30	Hex head bolt	Plated steel
31	Washer	Plated steel
32	Handwheel	Steel
83	Actuator gasket	Rubber



Valve shown with spur gear actuator for illustrative purposes.



# STANDARD 20"-36" NRS PARTS LIST WITH BEVEL/SPUR GEARING

Ref	Description	Material
3	O-ring	Rubber
4	Upper thrust washer	Delrin
5	Stuffing box gasket	Rubber
6	O-ring	Rubber
7	Stuffing box	Ductile iron
8	Bonnet	Ductile iron
10	Throat flange gasket	Rubber
11	Valve body	Ductile iron
12	Stem	Bronze (Stainless steel optional)
13	Wedge nut	Bronze
14	Resilient wedge	Ductile iron with EPDM rubber
15	Wedge cover	Polymer
16	Wedge cover pin	Polymer
17	Hex head bolt	Stainless steel
18	Hex nut	Stainless steel
20	Pipe plug	Series stainless steel
21	Lower thrust washer	Delrin
22	Stud	Stainless steel
23	Hex nut	Stainless steel
24	Spur gear actuator	See table below
25	Кеу	Hardened steel
27	Bevel gear actuator	See table below
28	Socket head capscrew	Stainless steel
30	Hex head bolt	Plated steel
31	Washer	Plated steel
32	Handwheel	Steel
83	Actuator gasket	Rubber

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Size	Ref	Actuator	Size	Ref	Actuator
20	24	AFC or Rotork Gearing (3:1)	20	27	AFC or Rotork Gearing (3:1)
24	24	AFC or Rotork Gearing (3:1)	24	27	AFC or Rotork Gearing (3:1)
30	24	AFC or Rotork Gearing (4:1)	30	27	AFC or Rotork Gearing (4:1)
36	24	AFC or Rotork Gearing (4:1)	36	27	AFC or Rotork Gearing (4:1)

Construction shown is with mechanical joint end connection and is illustrative only. Illustration shown with bevel and spur gear actuator.



### STANDARD 42"- 54" NRS PARTS LIST WITH BEVEL/SPUR GEARING

Ref	Description	Material
3	O-ring	Rubber
4	Upper thrust washer	Delrin
5	Stuffing box gasket	Rubber
6	O-ring	Rubber
7	Stuffing box	Ductile iron
8	Bonnet	Ductile iron
10	Throat flange gasket	Rubber
11	Valve body	Ductile iron
12	Stem	Bronze (Stainless steel optional)
13	Wedge nut	Bronze
14	Resilient wedge	Ductile iron with EPDM rubber
15	Wedge cover	Polymer
16	Wedge cover pin	Polymer
17	Hex head bolt	Stainless steel
18	Hex nut	Stainless steel
20	Pipe plug	Series stainless steel
21	Lower thrust washer	Delrin
22	Stud	Stainless steel
23	Hex nut	Stainless steel
24	Spur gear actuator	AFC or Rotork Gearing (8:1)
25	Кеу	Hardened steel
27	Bevel gear actuator	AFC or Rotork Gearing (8:1)
28	Socket head capscrew	Stainless steel
30	Hex head bolt	Plated steel
31	Washer	Steel
32	Handwheel	Steel
83	Actuator gasket	Rubber

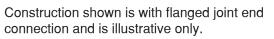
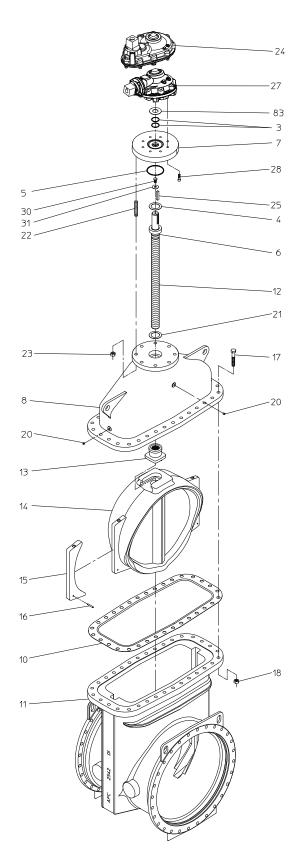
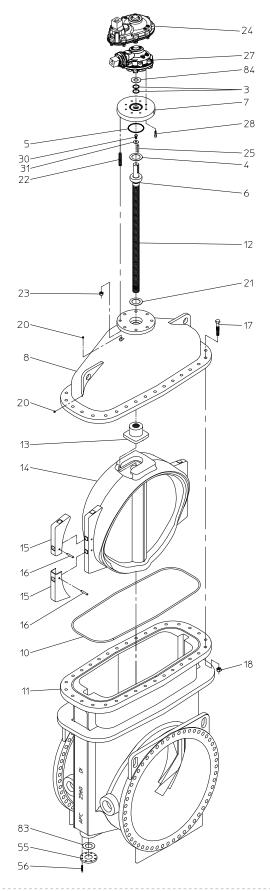


Illustration shown with bevel and spur gear actuator.



# STANDARD 60"& 66" NRS PARTS LIST WITH BEVEL/SPUR GEARING

Ref	Description	Material
3	O-ring	Rubber
4	Upper thrust washer	Delrin
5	Stuffing box gasket	Rubber
6	O-ring	Rubber
7	Stuffing box	Ductile iron
8	Bonnet	Ductile iron
10	Throat flange gasket	Rubber
11	Valve body	Ductile iron
12	Stem	Bronze (Stainless steel optional)
13	Wedge nut	Bronze
14	Resilient wedge	Ductile iron with EPDM rubber
15	Wedge cover	Polymer
16	Wedge cover pin	Polymer
17	Hex head bolt	Stainless steel
18	Hex nut	Stainless steel
20	Pipe plug	Series stainless steel
21	Lower thrust washer	Delrin
22	Stud	Stainless steel
23	Hex nut	Stainless steel
24	Spur gear actuator	AFC Gearing (8:1)
25	Key	Hardened steel
27	Bevel gear actuator	AFC Gearing (8:1)
28	Socket head capscrew	Stainless steel
30	Hex head bolt	Plated steel
31	Washer	Steel
32	Handwheel	Steel
83	Actuator gasket	Rubber



Construction shown is with flanged joint end connection and is illustrative only.

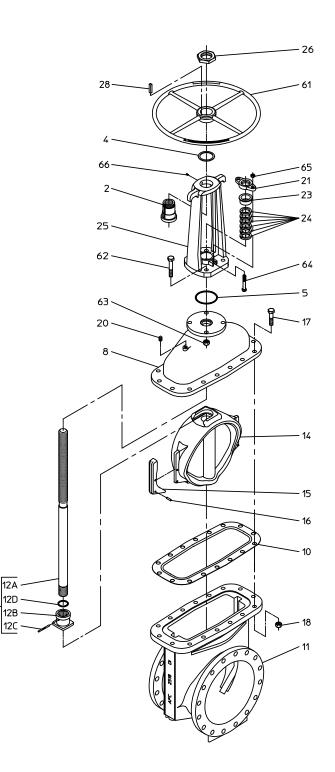
Illustration shown with bevel and spur gear actuator.

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# STANDARD 14"- 24" OS&Y PARTS LIST

Ref	Description	Material
2	Yoke Nut	Bronze
4	Handwheel Washer	Nylon
5	Stuffing Box Gasket	Rubber O-ring
8	Bonnet	Ductile iron
10	Bonnet Gasket	Rubber
11	Body	Ductile iron
12	Stem & Wedge Nut Assembly	See Below
12A	Stem	Stainless Steel
12B	Wedge Nut	Ductile iron
12C	Groove Pin	Stainless steel
12D	O-ring	Rubber
14	Resilient Wedge	Ductile iron with EPDM rubber
15	Wedge Cover	Polymer
16	Wedge Cover Pin	Polymer
17	Hex Head Bolt	Stainless steel
18	Hex Nut	Stainless steel
19	Hex Nut	Stainless steel
20	Pipe Plug, 3/8 NPT	Stainless steel
21	Gland Follower	Ductile iron
23	Gland	Bronze
24	Packing Ring	Graphite
25	Yoke	Ductile iron
26	Handwheel Nut	Bronze
28	Square Key	Stainless steel
61	Handwheel	Ductile iron
62	Hex Head Bolt	Stainless steel
63	Hex Nut	Stainless steel
64	Hex Head Bolt	Stainless steel
65	Hex Nut	Brass
66	Zerk Fitting	Stainless Steel



### NOTES:

- 1. 14"-24" OS&Y valves are FM Approved at 250 psig rated working pressure in applicable configurations.
- 2. 14", 16" & 20" OS&Y valves are UL Listed at 250 psig rated working pressure in applicable configuations.
- 3. 18" & 24" OS&Y valves are UL Listed at 200 psig in applicable configurations.

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### **NOTES**



THE RIGHT WAY

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