

- **For Underground Applications**
- **Now, with Kennedy Valve Butterfly Valves, you gain new valve reliability plus economy**
- **4500 — 4"-24"**
- **NSF Certified**

KENNEDY VALVE 4500 AWWA BUTTERFLY VALVES

KENNEDY VALVE

The Kennedy Valve Butterfly Valve is rugged and dependable; it will work easily any time you use it. Because of this ruggedness and reliability — plus positive, 100% shut-off — you achieve a more efficient, trouble-free distribution system.

No More Damaged Stems. Since the Kennedy Valve Butterfly Valve does not "freeze", shut or stick, it is always readily operable. Should inexperienced workmen attempt to overtighten it, the tough 450 pounds torque rating of the operator at ends of travel protects stem and operating parts against damage. This torque rating is unparalleled in standard valves for this application. When it is considered that conventional water main valves have torque limitations as low as 150 foot pounds, the margin of safety provided by this exclusive Kennedy Valve design is an important factor in long, trouble free valve life.

Bottle-Tight Seal. With the Kennedy Valve Butterfly Valve you get positive 100% shutoff. Rubber vane-seat and stainless steel valve-seat construction provides a permanent uninterrupted 360-degree bottle-tight closure.

Water Sealed Out. Underground operator and end cover are permanently sealed against ground-water infiltration.

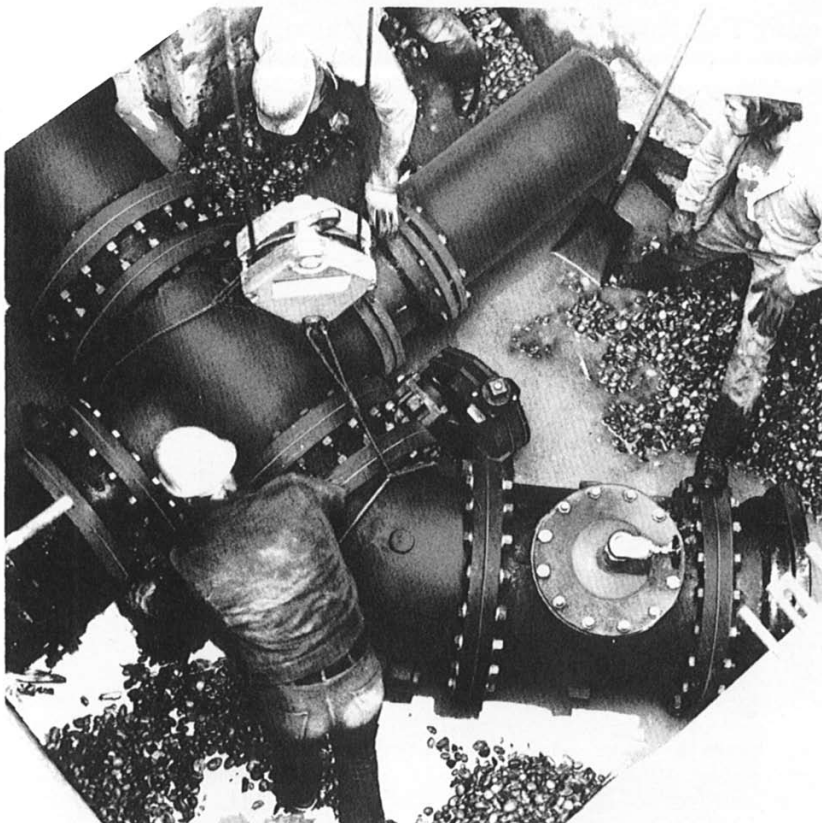
Working Parts Corrosion-Free. All critical bearing and sealing surfaces are stainless steel, Teflon® or rubber — assures easy and efficient valve operation, permanently.

Low Initial Cost. The Kennedy Valve Butterfly Valve has standardized components which offer you lowest initial cost and off-the-shelf availability. Expensive accessories are not required. No by-passes, special gearing, etc.

Easy Installation. The Kennedy Valve Butterfly Valves are compact, light-weight, easy to install. Installation costs are kept to a minimum.

Maintenance-Free. Permanently lubricated — no packing adjustment, no periodic exercising, no stem replacement of the Kennedy Valve Butterfly Valve is required. The closing action of the vane is self-cleaning and there are no pockets in which sediment or sludge formations can deposit, resulting in longer lifetime service.

Available in class 250



KENNEDY VALVE 4500 AWWA BUTTERFLY VALVES C504

KENNEDY VALVE

- **For In-Plant Applications**
- **Engineered for long and trouble-free operation**
- **Eliminates expensive and time-consuming shutdowns**

Name your criteria for in-plant evaluation... performance, economy, maintenance, reliability, versatility. The Kennedy Valve 4500 Butterfly Valve is Number One in every category.

This is a rugged valve, able to handle severe operating conditions and assure bottle-tight shut-off. It eliminates many nagging, frustrating problems of other valves.

For in-plant operations, the Kennedy Valve valve offers the many advantages of the underground model — ruggedness, shaft strength, bottle-tight seal, corrosion-free critical parts, free from excessive maintenance.

Low Cost Installation. Kennedy Valve Butterfly Valves are compact, light-weight, easy to install. Installation costs are kept to a minimum.

Efficient Throttling. Kennedy Valve Butterfly Valves provide a highly effective method of throttling and control. The vane is held solidly, without chatter, in any desired control position.

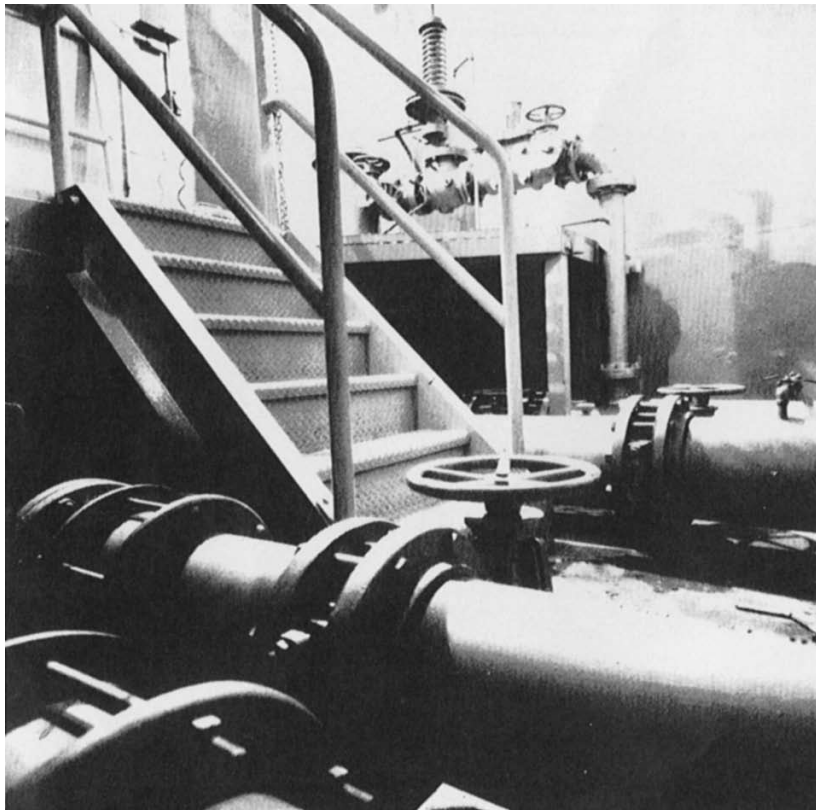
Wide Selection of Operators and Pipe Connections. The cylinder, crank, handwheel, square nut, electric motor and hand-lever operators are avail-

able on all pipe-end connections, in sizes four inches and larger. The hand-lever model has several latched vane positions from full-open to full-closed.

Interchangeable Parts and Operators. For Style 4500 Butterfly Valve, all component parts are 100% interchangeable between valves of the same size. If necessary, operators can be interchanged in the plant, shop or warehouse. For example, if you should wish to change from a crank operator to a cylinder operator, you loosen two bolts, slide the crank operator from the drive shaft, replace with the cylinder operator — tighten bolts in accordance with factory instruction sheet. This exclusive interchangeability substantially reduces inventories and related costs.

Choice of Valve Types. Wafer and Flanged-end butterfly valves are ideal for in-plant applications.

Accessories. Floor stands, extension stems, chain wheels, solenoid valves, speed control valves, valve positioners, limit switches, etc., electric motor operators are available.



KENNEDY VALVE 4500

KENNEDY VALVE

- **AWWA Class 150-B Butterfly Valves: NSF Certified**
- **Suggested Specifications: 4" thru 24"**
- **Butterfly Valves with Operator**
- **Specifications by Body Type & Operator**

A. GENERAL

All butterfly valves shall be of rubber-seated tight-closing type. They shall meet or exceed AWWA Standard C504. All valves shall be Kennedy Valve 4500 butterfly valves, or approved equal.

Both valve ends shall be mechanical joint (or other, as available) per AWWA Standard C111. Accessories (bolts, glands, and gaskets) shall be supplied by the valve manufacturer.

All vales must use full AWWA C504 Class 150B valve shaft diameter, and full Class 150B underground-service-operator torque rating throughout entire travel, to provide capability for operation in emergency service/ All valves shall be NSF certified.

B. VALVE

Valve body shall be high-strength cast in iron ASTM A126 Class B with 18-8 Type 304 stainless steel body seat. Valve vane shall be high-strength cast iron ASTM A48 Class 40, having rubber seat mechanically secured with an integral 18-8 stainless steel clamp ring 18-8 stainless steel self-locking screws.

For valves 4"-12" the valve shaft shall be one piece, extending full size through the entire valve. Valve shaft shall be 304 stainless steel. Packing shall be O-ring cartridge designed for permanent duty in underground service. For 14" or larger valve shaft shall be 18-8 stainless steel stub shaft design keyed to the vane with stainless steel torque plugs.

Body type

All butterfly valves shall be of rubber-seated tight-closing type. They shall meet or exceed AWWA Standard C504. All valves shall be Kennedy Valve butterfly valves or approved equal.

Valve ends shall be (select desired):

Flanged – short body valves per Table 2 of AWWA Spec C504. Flanges shall be 125# ANSI (available all sizes). Also flanged by MJ in 6", 12" and 16" sizes.

Mechanical Joint – Both ends of valve shall be "MJ" per AWWA C111. "MJ" accessories (bolts, glands, gaskets) must be supplied by valve manufacturer. (Available all sizes - also flanged by MJ in 6", 8" 12" and 16" sizes.)

C. OPERATOR

Underground

Valve operator shall be of travelling-nut type, sealed, gasketed, and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. lbs. at full-open or full-closed position without damage to the valve or valve operator. It shall be designed for submergence in water to 25 ft. head pressure for up to 72 hours.

Pipe and Valve Size	Turns to Close	Pipe and Valve Size	Turns to Close
4", 6" 8"	16 1/2 24	14" thru 20"	48
10", 12"	36	24"	72

Valve shall be capable of easy closure by one man using standard valve key even under emergency line-break conditions. Operators come with easy external adjustment.

All vales shall open left (right), and be equipped with 2" AWWA operating nut.

Handwheel or Chainwheel - All manual operators for service other than underground shall have position indicator and shall be totally enclosed and permanently lubricated. In any event, a maximum pull of 80 lbs. on the wheel shall produce full table 1 output torque through entire travel. Operator shall accept 300 lbs. pull on wheel at full-open and full-closed positions without damage to valve or operator. Operators shall be of the "Travelling-Nut" type. All valves shall open left (Clockwise to close).

Cylinder - Cylinder operator shall be of the base mounted configuration. Cylinder barrel shall be of molybdenum-disulfide lined glass fiber reinforced with epoxy tubing, to provide a corrosion-free, self-lubricated high strength barrel. Rod seal shall be urethane, molybdenum-disulfide filled, to provide a self-lubricated, long life seal.

Piston rod shall be of hard chromium plated 18-8 stainless steel, and shall be top and bottom guided in a heavy cast iron mechanism housing for positive alignment. Guiding shall be accomplished by bronze bearings at ends of housing straddling all side loads improved in operation. Entire operator including piston rod shall be fully enclosed.

D. COATING

Flange:

Standard coating shall be Universal Primer. Coating shall be applied to entire valve body and vane before final assembly.

Epoxy (optional) shall be applied to all surfaces of valve body and vane to an average minimum film thickness of 4-6 mils, conforming to AWWA C-550 Standard.

Mechanical Joint:

Standard coating shall be Epoxy. Coating shall be applied to entire valve body and vane.

E. TESTS

All valves shall be tested bottle-tight at rated working pressure by the manufacturer as follows:

- 4" thru 12" 200 psi
- 14" Up..... 150 psi

In addition, a hydrostatic test with vane partially open shall be given to the assembled valve. As follows:

- 4" 400 psi
- 14" up 400 psi

Class 250 Available

KENNEDY VALVE BFV

KENNEDY VALVE

- **All Styles**
- **Electric Motor Operator**

BFV and Plug Valves may be furnished with electric motor operating units.

Motor operated valves are specified where frequent operation is necessary or where valves are located in remote, inaccessible or hazardous places.

For large valves and frequently used valves, operating costs are reduced and efficiency increased by the remote control possible with electric motor operation. In emergencies, quick operation of valves by electric motor may be extremely vital.

Electric Motor Operated Valves are used in industrial plants, power plants, water plants, sewage disposal systems and miscellaneous pipe lines. Some of their specific uses include the following:

Large Valves	Storage Tanks
Intakes	Filter Beds
Outlets	Booster Stations
Pump Discharge	

An electric motor is mounted on the valve and geared to the valve stem so that when the motor operates the valve will open or close. Adjustable limit and torque switches are arranged to stop the motor when the valve is completely opened or closed, or automatically stop the motor if there is any obstruction in the valve to prevent the disc from moving. This prevents damage to both the valve parts and to motor and gearing. Electric equipment conforms to N.E.M.A. codes. Detailed specifications on the construction and design of motor units will be furnished if desired. Motors are high torque, fully enclosed in weatherproof or explosion-proof housings.

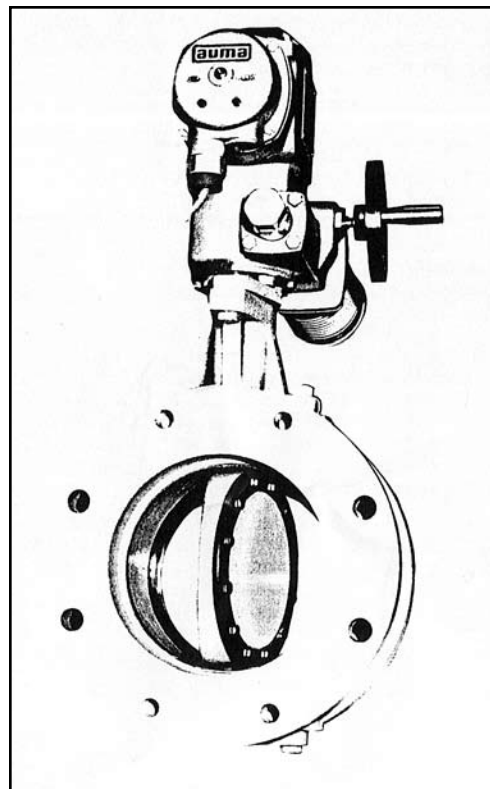
Information Required With Order

1. Valve size and quantity
2. Type—BFV
3. Modulating or non-modulating
4. Maximum Pressure against which valve will be required to operate (Maximum Differential Pressure) and flow rate in feet/sec. if available
5. Current Characteristics (Voltage, Phase, Cycles, A.C or D.C.)
6. Opening or Closing time in seconds
7. Service: Water, etc.
8. Frequency of service: regulating or intermittent duty
9. Maximum temperature at location of valve control
10. Type motor desired: Weatherproof, explosion-proof, etc.
11. Type of Reversing Controller (NEMA-Class)
12. Type of Pushbutton Station: (NEMA-Class—normally NEMA-1 or NEMA-4)
(Number of Pushbuttons or Lights—Usually 3 buttons, 2 lights)
13. Control Voltage
14. Any special requirements such as mechanical dial position indicator, hand off automatic switch on push button stations, etc.
15. **Complete specifications will be required with inquiry for all motor valves**

When specified, motors shall include:

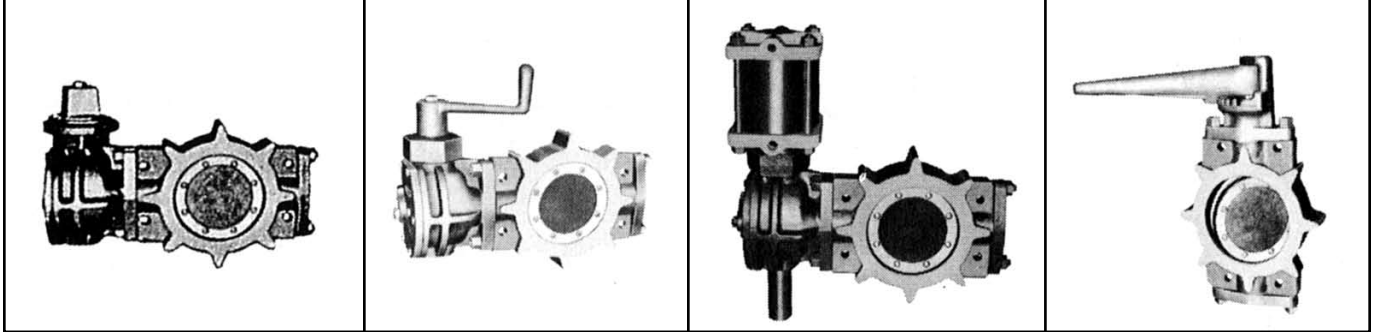
- Integral reversing starter package which includes reversing controller, 120 volt/25 watt heater, 75 VA transformer with fused secondary & 24 point terminal strip. Available in weatherproof, explosion-proof etc. enclosures.
- Three button — two button station for open, stop and close operation with red and green lights to show whether the valve is open or closed. The green light is lit when the valve is closed, the red light is lit when the valve is open. Both red and green lights remain lit when the valve disc is in any intermediate position between open and closed. Various combinations of buttons and lights are available as well as integral, surface or flush mounting in either weatherproof or explosion-proof enclosures.
- Mechanical dial position indicator available when specified for easy to read position of valve disc. Available for local, remote and local/remote indication.

Motor operating units are available with auxiliary handwheels for manual operation, which do not turn during electric operation. If the electric current comes on during manual operation, the handwheel of the unit declutches automatically and thus prevents any possible injury to the operator.



- AWWA C504 Butterfly Valves

Available with many actuator options



Five operators are available — underground 2" square nut, crank or handwheel operated, hand lever and electric motor operated. All operators are permanently lubricated and totally enclosed.

100% Interchangeable. A unique feature of the Kennedy Valve Butterfly Valve is the complete interchangeability of operators. Each operator and all component parts are interchangeable on all valve bodies.

NEW, EXCLUSIVE CYLINDER OPERATOR ASSURES EFFICIENT OPERATION

The Kennedy Valve cylinder is designed as an integral part of the operator. The cylinder model functions in a similar manner to the underground model except that the crosshead is attached permanently to the piston rod. Bronze bearings support the piston rod on both ends of the operator housing — minimize seal wear and eliminate the need for rubber hoses and swivel connections required by swinging, trunnion-mounted cylinders.

Kennedy Valve operators are compact — yet sized to operate valves easily and surely, even under adverse operating conditions and low cylinder supply pressure.

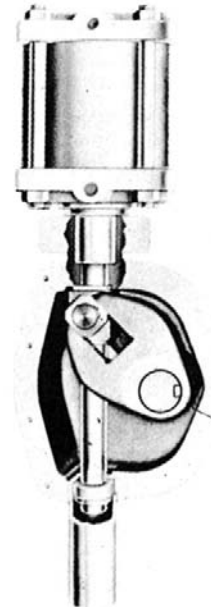
Totally enclosed, permanently lubricated, the Kennedy Valve cylinder operator is completely protected from dirt and grit. Elimination of exposed moving parts provides extra safety for personnel and simplifies installation. Solenoid control and positioning accessories can be added easily to standard parts for remote operation.

FLOW CONTROL VALVE

Because of its unique operating mechanism, the Kennedy Valve Butterfly Valve is an excellent throttling valve. The threaded connection between the operating stem (1) and the crosshead (2) creates a self-locking action which prevents any undesired movement of the crosshead. This mechanism, in combination with the drive shaft, holds the vane firmly, without chatter, throughout travel.

The vane is, in effect, "locked" in any desired position. The pointer of the operator plate clearly indicates the amount of vane opening.

MOTOR OPERATOR NOT SHOWN



STYLE
4500

SIZE
4"-24"

KENNEDY VALVE AVAILABLE WITH C550 EPOXY COATING

KENNEDY VALVE

Because of the built-in corrosion resistance of critical parts, it is not anticipated that special coatings will be required for most applications. However, AWWA C550 liquid 2 part epoxy coatings can be supplied for special operating conditions.

To the unparalleled strength you have always had with Kennedy Valve Butterfly Valves, you can now add tough, factory applied coating over all cast iron internal waterway surfaces — your assurance of long-life, virtually trouble free service. In adding this superior coating, Kennedy Valve engineers have not sacrificed any of the built-in advantages which have made Kennedy Valve Butterflies the most widely installed of all underground waterworks butterfly valves.

And now you can get AWWA C550 epoxy coatings factory applied under a rigidly controlled system — far superior to anything you can be sure of achieving in field-applied coatings. Parts are coated before assembly to assure the proper coverage to make them impervious to corrosion resulting from water line content internally and against soil and moisture conditions outside. The Kennedy Valve Butterfly Valve is made to "live in the ground and like it."

ADVANTAGES OF C550 EPOXY COATING...

1. **100% Effective Coating** – Factory applied under ideal, carefully controlled conditions.
2. **Tightly Bonded** – Critical surface preparation plus selective materials scientifically applied, provide a coating which will withstand recommended installation handling.
3. **All cast iron surfaces in waterway are coated.** All other parts in the waterway and exposed to line content are either stainless steel or rubber.
4. **Kennedy Valve Quality** – In a coated Butterfly Valve for underground installation.

SPECIAL GASKETS

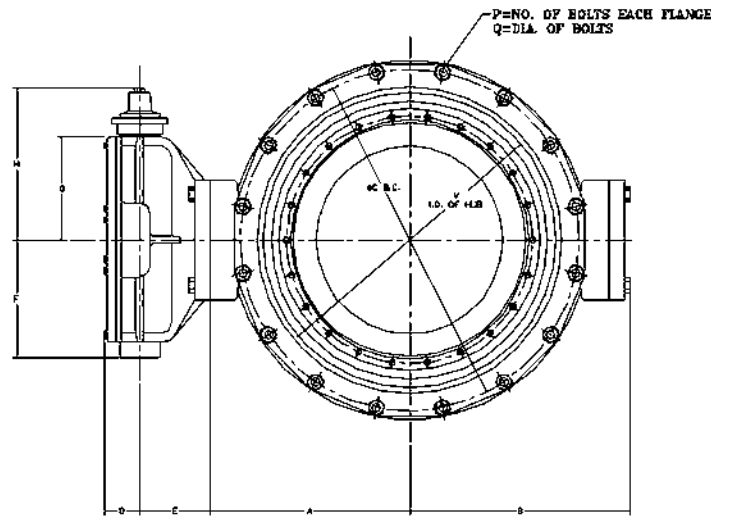
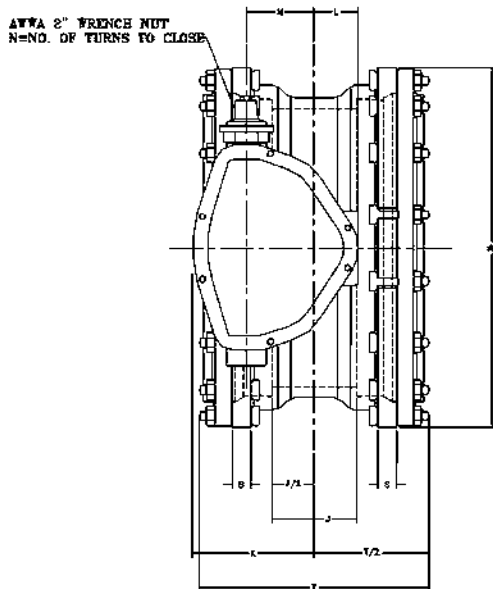
Kennedy Valve engineers also will supply information on special gasket and seal materials required for handling unusual line content.

ASSEMBLY 4"-24" BUTTERFLY VALVE STYLE 4500 MECHANICAL JOINT WITH BURIED OPERATOR

KENNEDY VALVE

NOTE:

1. FLOW MAY BE IN EITHER DIRECTION.
2. GASKETS, GLANDS & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STANDARD C-111 (ANSI A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
4	4	5 7/16	7 1/2	2 1/2	4	3/4x3 1/2	9 1/8	1	12 3/4	4.90
6	5	6 1/2	9 1/2	2 7/8	6	3/4x3 1/2	11 1/8	1 1/16	13	7.00
8	6	7 9/16	11 3/4	3	6	3/4x4	13 1/8	1 1/8	14	9.15
10	7 3/4	9 5/8	14	4 1/4	8	3/4x4	15 11/16	1 5/16	15 1/8	11.20
12	9 1/2	11 3/8	16 1/4	4 1/4	8	3/4x4	17 15/16	1 1/4	16	13.30
14	10 7/16	12 15/16	18 3/4	5 1/4	10	3/4x4	20 5/16	1 5/16	17 5/8	15.44
16	12 3/16	14 11/16	21	5 1/4	12	3/4x4 1/2	22 9/16	1 3/8	18 1/2	17.54
18	13 5/16	15 13/16	23 1/4	6 1/8	12	3/4x4 1/2	24 13/16	1 7/16	19 1/4	19.84
20	14 7/8	17 3/8	25 1/2	6 1/8	14	3/4x4 1/2	27 1/16	1 1/2	19 1/8	21.74
24	17 19/32	20 1/8	30	7 1/2	16	3/4x5	31 9/16	1 5/8	21 1/4	25.94

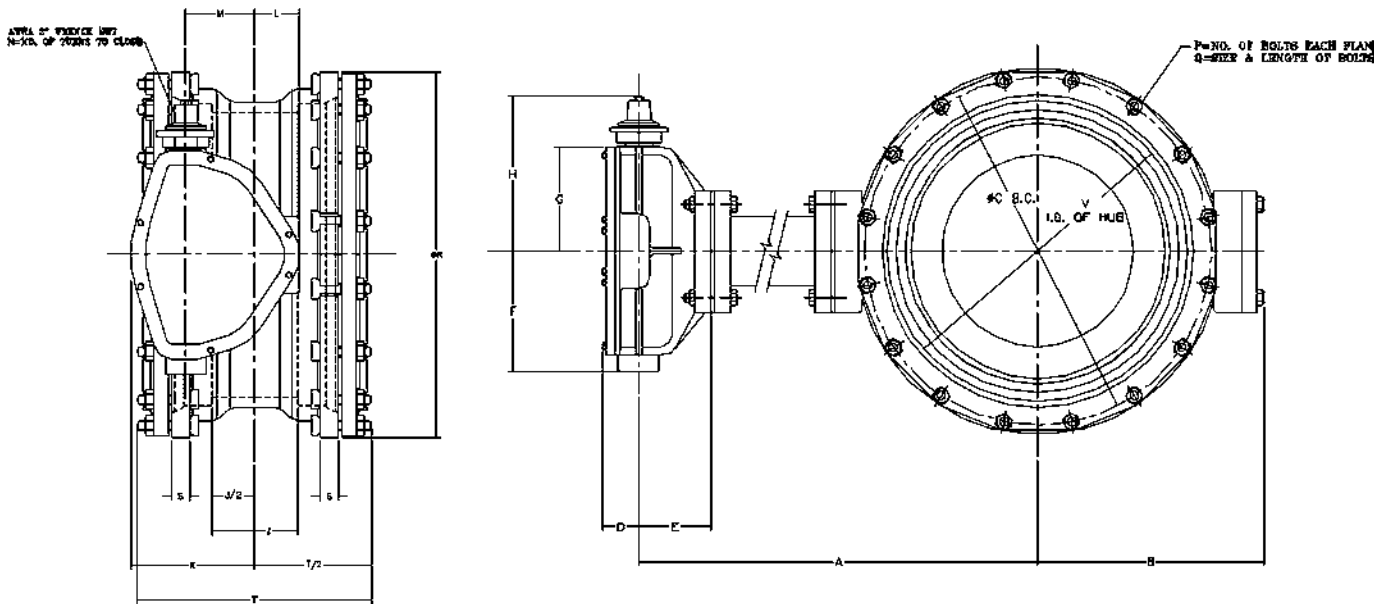
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/6	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10 & 12	510	2 1/4	4 1/2	6 7/16	6 3/16	10 1/16	5 1/8	2 3/4	3	36
14,16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	9	14 5/16	10 3/4	3 7/8	8	72

ASSEMBLY 4"-24" BUTTERFLY VALVE STYLE 4500 MECHANICAL JOINT W/EX- TENDED BONNET (BURIED OPERATOR)

KENNEDY VALVE

NOTE:

1. FLOW MAY BE IN EITHER DIRECTION.
2. GASKETS, GLANDS & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STANDARD C-111 (ANSI A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
4		5 7/16	7 1/2	2 1/2	4	3/4x3 1/2	9 1/8	1	12 3/4	4.90
6		6 1/2	9 1/2	2 7/8	6	3/4x3 1/2	11 1/8	1 1/16	13	7.00
8		7 9/16	11 3/4	3	6	3/4x4	13 1/8	1 1/8	14	9.15
10		9 5/8	14	4 1/4	8	3/4x4	15 11/16	1 5/16	15 1/8	11.20
12		11 3/8	16 1/4	4 1/4	8	3/4x4	17 15/16	1 1/4	16	13.30
14		12 15/16	18 3/4	5 1/4	10	3/4x4	20 5/16	1 5/16	17 5/8	15.44
16		14 11/16	21	5 1/4	12	3/4x4 1/2	22 9/16	1 3/8	18 1/2	17.54
18		15 13/16	23 1/4	6 1/8	12	3/4x4 1/2	24 13/16	1 7/16	19 1/4	19.84
20		17 3/8	25 1/2	6 1/8	14	3/4x4 1/2	27 1/16	1 1/2	19 1/8	21.74
24		20 1/8	30	7 1/2	16	3/4x5	31 9/16	1 5/8	21 1/4	25.94

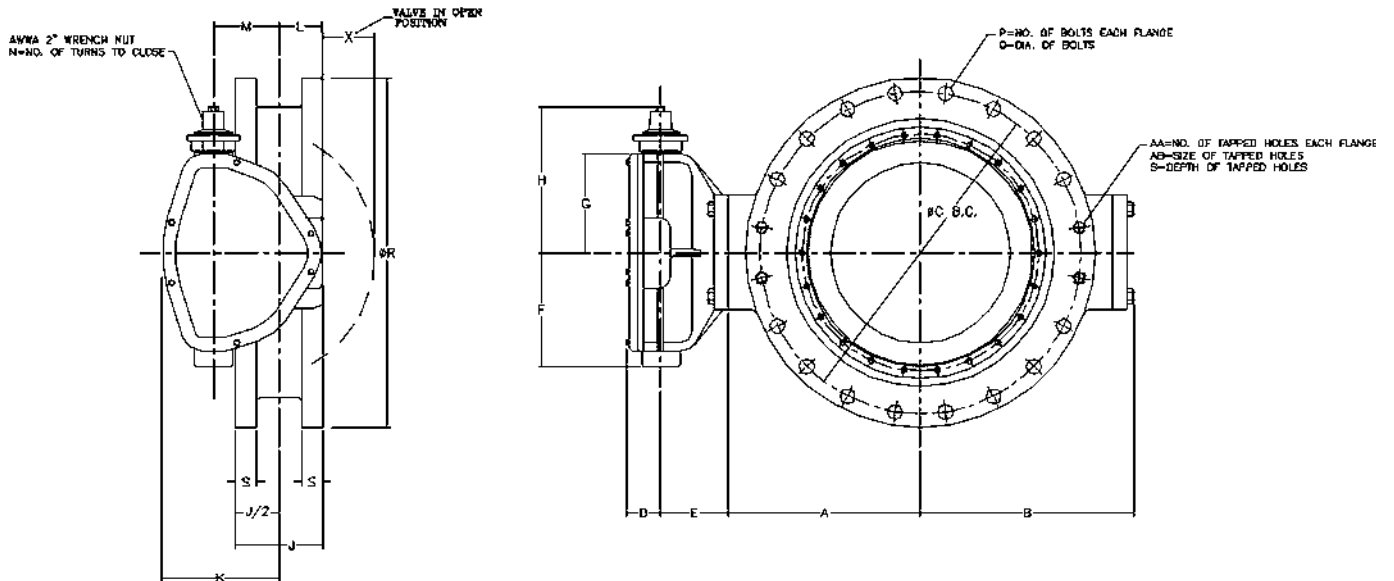
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4,6,8	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
10,12,14	510	2 1/4	4 1/2	6 7/16	6 3/16	10 1/16	5 1/8	2 3/4	3	36
16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	9	14 5/16	10 3/4	3 7/8	8	72

ASSEMBLY 3"-24" BUTTERFLY VALVE STYLE 4500 FLANGED ENDS WITH BURIED OPERATOR

KENNEDY VALVE

NOTE:

1. FLOW MAY BE IN EITHER DIRECTION.
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (ANSI 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	X	AA	AB
3	4	5 7/16	6	5	4	6/8	9	15/16	-	4	5/8-11
4	4	5 7/16	7 1/2	5	8	5/8	9	15/16	-	4	5/8-11
6	5	6 1/2	9 1/2	5	8	3/4	11	1	.50	4	3/4-10
8	6	7 9/16	11 3/4	6	8	3/4	13 1/2	1 1/8	1.00	4	3/4-10
10	7 3/4	9 5/8	14 1/4	8	12	7/8	16	1 3/16	1.00	-	-
12	9 1/2	11 3/8	16 1/4	8	12	7/8	19	1 1/4	2.00	-	-
14	10 7/16	12 15/16	18 3/4	8	12	1	21	1 3/8	3.00	4	1-8
16	12 3/16	14 11/16	21	8	16	1	23 1/2	1 7/16	4.00	4	1-8
18	13 5/16	15 13/16	23 1/4	8	16	1 1/8	25	1 8/16	5.00	4	1 1/8-7
20	14 7/8	17 3/8	25 1/2	8	20	1 1/8	27 1/2	1 11/16	6.00	4	1 1/8-7
24	17 19/32	20 1/8	30	8	20	1 1/4	32	1 7/8	8.00	4	1 1/4-7

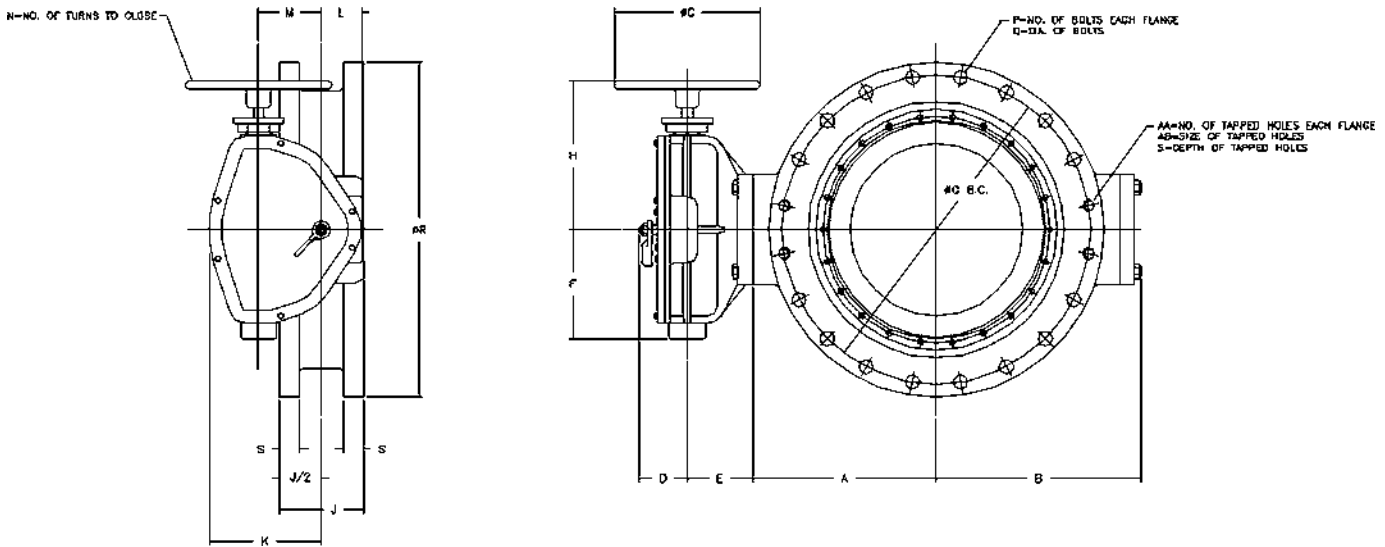
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3 & 4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/6	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10 & 12	510	2 1/4	4 1/2	6 7/16	6 3/16	10 1/16	5 1/8	2 3/4	3	36
14,16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	9	14 5/16	10 3/4	3 7/8	8	72

ASSEMBLY 3"-24" BUTTERFLY VALVE STYLE 4500 FLANGED ENDS WITH HANDWHEEL OPERATOR

KENNEDY VALVE

NOTE:

1. FLOW MAY BE IN EITHER DIRECTION.
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (ANSI 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
3	4	5 7/16	6	5	4	5/8	9	15/16	4	5/8-11
4	4	5 7/16	7 1/2	5	8	5/8	9	15/16	4	5/8-11
6	5	6 1/2	9 1/2	5	6	3/4	11	1	4	3/4-10
8	6	7 9/16	11 3/4	6	8	3/4	13 1/2	1 1/8	4	3/4-10
10	7 3/4	9 5/8	14	8	12	7/8	16	1 3/16	-	-
12	9 1/2	11 3/8	16 1/4	8	12	7/8	19	1 1/4	-	-
14	10 7/16	12 15/16	18 3/4	8	12	1	21	1 3/8	4	1-8
16	12 3/16	14 11/16	21	8	16	1	23 1/2	1 7/16	4	1-8
18	13 8/16	15 13/16	23 1/4	8	16	1 1/8	25	1 9/16	4	1 1/8-7
20	14 7/8	17 3/8	25 1/2	8	20	1 1/8	27 1/2	1 11/16	4	1 1/8-7
24	17 19/32	20 1/8	30	8	20	1 1/4	32	1 7/8	4	1 1/4-7

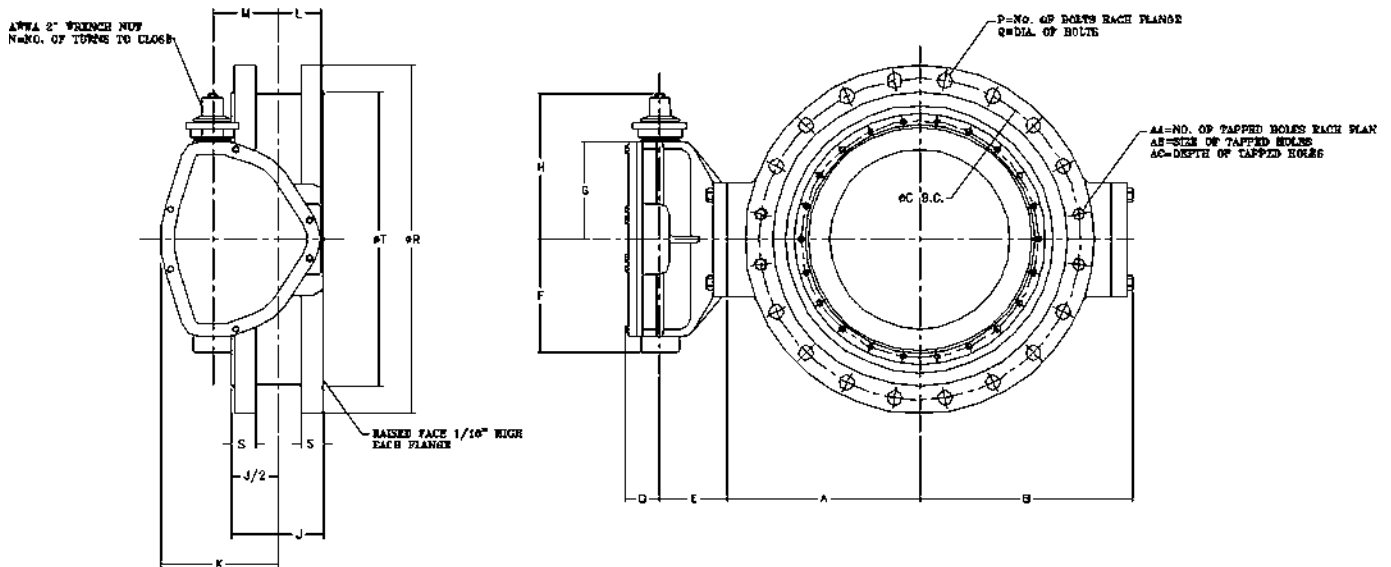
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3 & 4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/6	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10 & 12	510	2 1/4	4 1/2	6 7/16	6 3/16	10 1/16	5 1/8	2 3/4	3	36
14,16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	9	14 5/16	10 3/4	3 7/8	8	72

ASSEMBLY 3"-24" BUTTERFLY VALVE STYLE 4500 CL 250 FLANGED ENDS WITH BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI CLASS 250 FLANGES & DRILLING
4. RATED FOR 250 PSI WORKING PRESSURE



VALVE SIZE	A	B	C	J	P	Q	R	S	T	AA	AB	AC
3	4	5 7/16	6 5/8	5 1/2	8	3/4	10	1 1/4	5 11/16	8	3/4-10	1 3/16
4	4	5 7/16	7 1/2	2 1/2	4	3/4X3 1/2	9 1/8	1 1/4	6 15/16	4	3/4-10	1 3/16
6	5	6 1/2	9 1/2	2 7/8	6	3/4X3 1/2	11 1/8	1 7/16	9 11/16	4	3/4-10	1 3/8
8	6	7 9/16	11 3/4	3	6	3/4X4	13 1/8	1 5/8	11 15/16	4	7/8-9	1 9/16
10	7 3/4	9 5/8	14	4 1/4	8	3/4X4	15 11/16	1 7/8	14 1/16	4	1-8	1 1/2
12	8 1/2	11 3/8	16 1/4	4 1/4	8	3/4X4	17 15/16	2	16	4	1 1/8-7	1 9/16
14	10 7/8	12 15/16	18 3/4	5 1/4	10	3/4X4	20 5/16	2 1/8	18 15/16	8	1 1/8-7	1 5/8
16	12 3/16	14 11/16	21	5 1/4	12	3/4X4 1/2	22 9/16	2 1/4	21 1/16	8	1 1/4-7	1 3/4
18	14 5/16	15 13/16	23 1/4	6 1/8	12	3/4X4 1/2	24 13/16	2 3/8	23 5/16	8	1 1/4-7	1 3/4
20	15 7/8	17 3/8	25 1/2	6 7/8	14	3/4X4 1/2	27 1/16	2 1/2	25 9/16	8	1 1/4-7	1 3/4
24	23 11/32	20 1/8	30	7 1/2	16	3/4X5	31 9/16	2 3/4	30 5/16	8	1 1/2-8	1 7/8

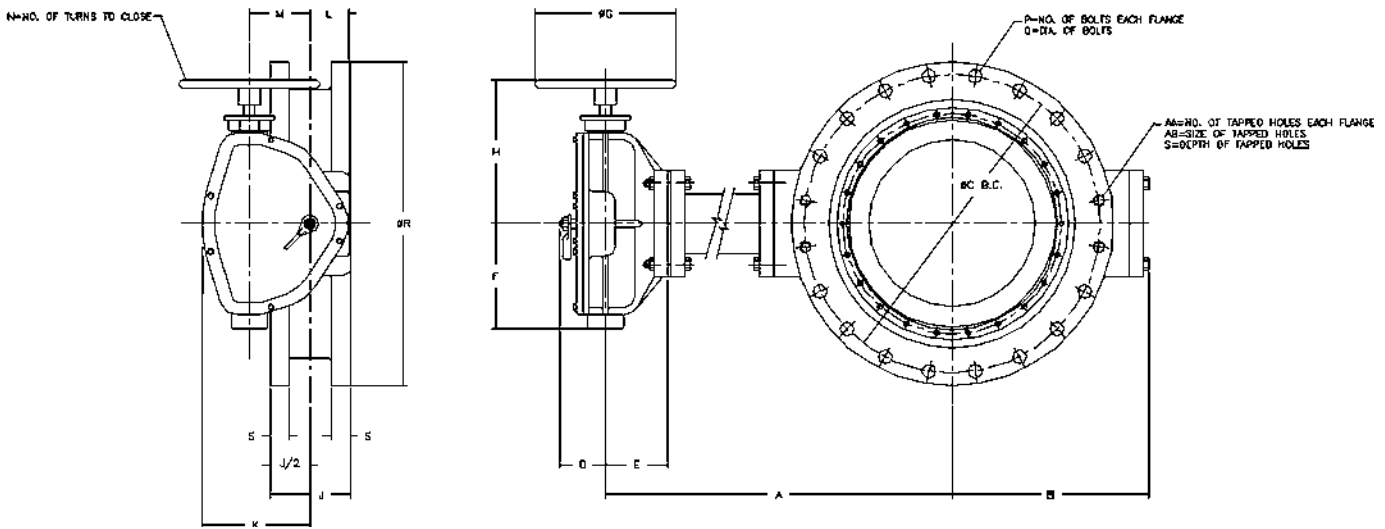
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3 & 4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/6	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10" & 12	510	2 1/4	4 1/2	5 7/16	5 3/16	10 1/16	6 1/8	2 3/4	3	36
14, 16, 18, 20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	8	14 5/16	10 3/4	3 7/8	6	72

ASSEMBLY 3"-24" FLANGED ENDS BUTTERFLY VALVE STYLE 4500 WITH EXTENDED BONNET & HANDWHEEL

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
3		5 7/16	6	5	4	5/8	9	15/16	4	5/8-11
4		5 7/16	7 1/2	5	8	5/8	9	15/16	4	5/8-11
6		8 1/2	9 1/2	5	8	3/4	11	1	4	3/4-10
8		7 9/16	11 3/4	6	8	3/4	13 1/2	1 1/8	4	3/4-10
10		9 5/8	14 1/4	8	12	7/8	16	1 3/16	-	-
12		11 3/8	17	8	12	7/8	19	1 1/4	-	-
14		12 15/16	18 3/4	8	12	1	21	1 3/8	4	1-8
16		14 11/16	21 1/4	8	16	1	23 1/2	1 7/16	4	1-8
18		15 13/16	22 3/4	8	16	1 1/8	25	1 9/16	4	1 1/8-7
20		17 3/8	25	8	20	1 1/8	27 1/2	1 11/16	4	1 1/8-7
24		20 1/8	29 1/2	8	20	1 1/4	32	1 7/8	4	1 1/4-7

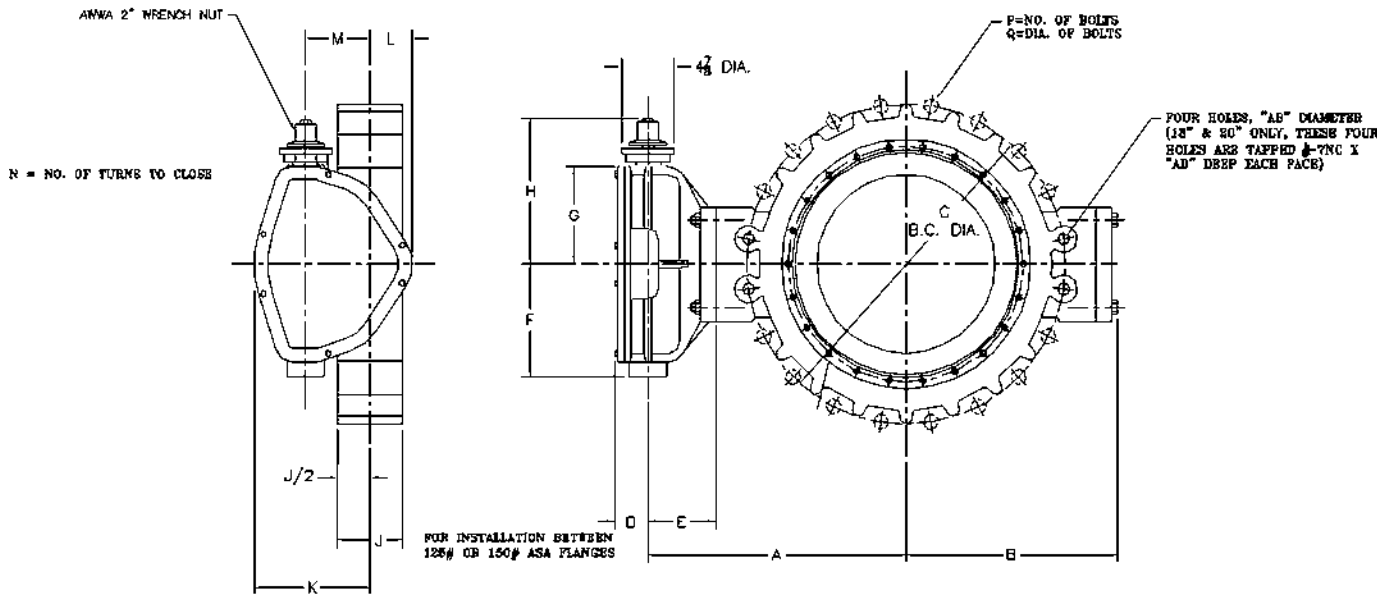
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3 & 4	65	2 15/16	3 9/16	3 7/16	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2 15/16	3 9/16	3 7/16	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	3	3 11/16	4 1/16	14	8 7/8	4 1/2	2 3/8	2	24
10 & 12	510	3 3/16	4 1/2	5 7/16	14	10 3/16	6 1/8	2 3/4	3	36
14,16,18,20	1250	4 1/16	5 3/4	8 3/8	18	12 1/2	7 7/8	3 1/4	4	48
24	2200	4 1/16	6 1/4	10 3/8	18	14 1/2	10 3/4	3 7/8	6	72

ASSEMBLY 4"-20" WAFER BUTTERFLY VALVE STYLE 4500 WITH BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	AB	AD
4	4	5 7/16	7 1/2	2 1/2	8	5/8	-	-
6	5	6 1/2	9 1/2	2 1/2	8	3/4	-	-
8	6	7 9/16	11 3/4	2 3/4	8	3/4	-	-
10	7 3/4	9 5/8	14 1/4	3 1/4	12	7/8	-	-
12	9 1/2	11 3/8	17	3 1/4	12	7/8	-	-
14	10 7/16	12 15/16	18 3/4	4 1/2	12	1	-	-
16	12 3/16	14 11/16	21 1/4	4 1/2	16	1	-	-
18	13 5/16	15 13/16	22 3/4	5 3/4	16	1 1/8	1 1-8-7	1 3/8
20	14 7/8	17 3/8	25	5 3/4	20	1 1/8	1 1/8-7	1 1/4

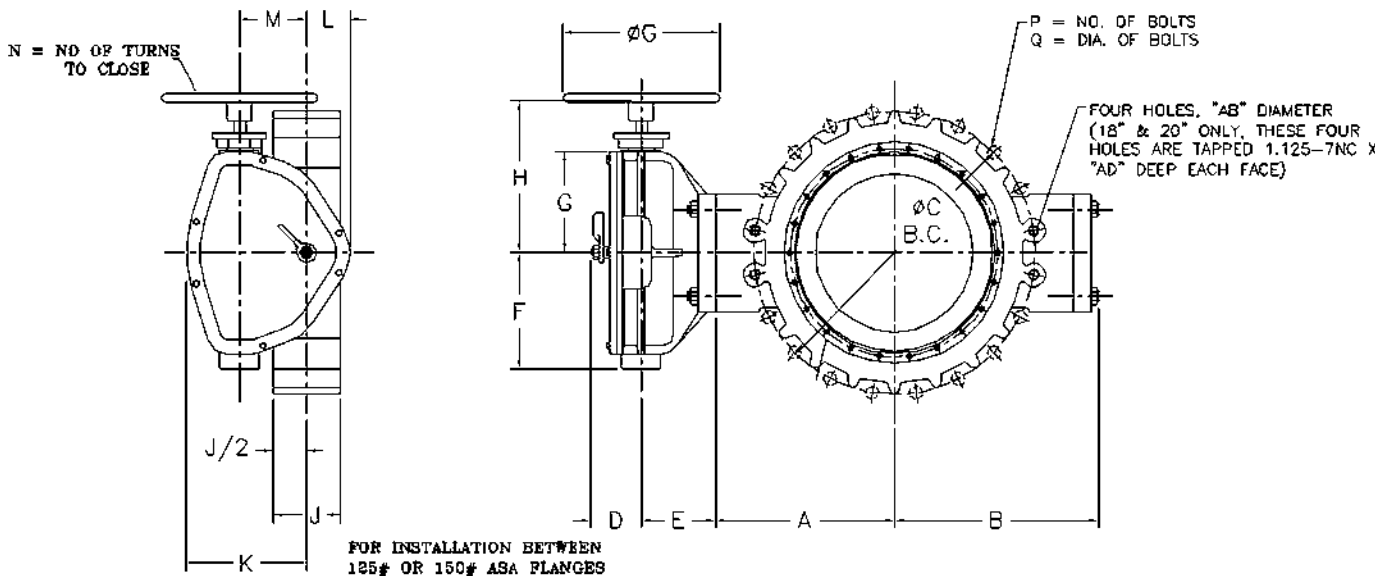
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/16	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10 & 12	510	2 1/4	4 1/2	5 7/16	5 3/16	10 1/8	6 1/8	2 3/4	3	36
14,16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48

ASSEMBLY 4"-24" WAFER BUTTERFLY VALVE STYLE 4500 WITH HANDWHEEL OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	AB	AD
4	4	5 7/16	7 1/2	2 1/2	8	5/8	-	-
6	5	6 1/2	9 1/2	2 1/2	8	3/4	-	-
8	6	7 9/16	11 3/4	2 3/4	8	3/4	-	-
10	7 3/4	9 5/8	14 1/4	3 1/4	12	7/8	-	-
12	9 1/2	11 3/8	17	3 1/4	12	7/8	-	-
14	10 7/16	12 15/16	18 3/4	4 1/2	12	1	-	-
16	12 3/16	14 11/16	21 1/4	4 1/2	16	1	-	-
18	13 5/16	15 13/16	22 3/4	5 3/4	16	1 1/8	1 1/8-7	1 3/8
20	14 7/8	17 3/8	25	5 3/4	20	1 1/8	1 1/8-7	1 1/4

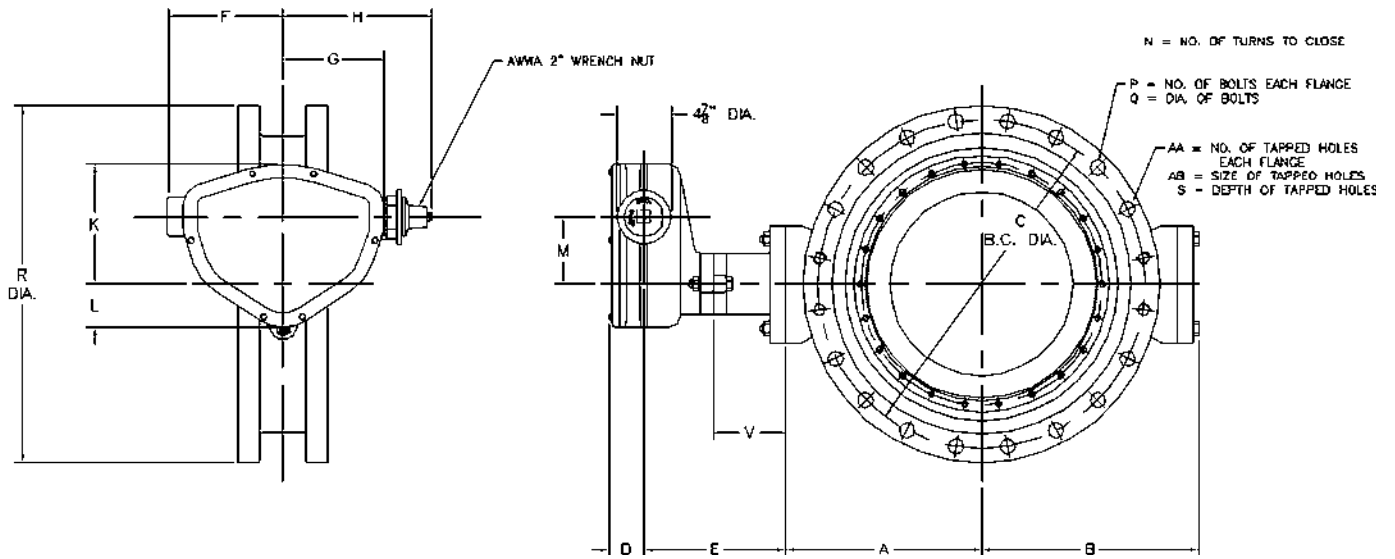
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4	65	2 15/16	3 9/16	3 7/16	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2 15/16	3 9/16	3 7/16	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	3	3 11/16	4 1/16	14	8 7/8	4 1/2	2 3/8	2	24
10 & 12	510	3 3/16	4 1/2	5 7/16	14	10 3/16	6 1/8	2 3/4	3	36
14,16,18,20	1250	4 1/16	5 3/4	8 3/8	18	12 1/2	7 7/8	3 1/4	4	48

ASSEMBLY 3"-24" BUTTERFLY VALVE STYLE 4500 FLANGED ENDS WITH BURIED OPERATOR & VPA

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
3	4	5 7/16	6	5	4	5/8	9	15/16	4	5/8-11
4	4	5 7/16	7 1/2	5	8	5/8	9	15/16	4	5/8-11
6	5	8 1/2	9 1/2	5	8	3/4	11	1	4	3/4-10
8	6	7 9/16	11 3/4	6	8	3/4	13 1/2	1 1/8	4	3/4-10
10	7 3/4	9 5/8	14 1/4	8	12	7/8	16	1 3/16	-	-
12	8 1/2	11 3/8	17	8	12	7/8	19	1 1/4	-	-
14	10 7/16	12 15/16	18 3/4	8	12	1	21	1 3/8	8	1-8
16	12 3/16	14 11/16	21 1/4	8	16	1	23 1/2	1 7/16	8	1-8
18	13 5/16	15 13/16	22 3/4	8	16	1 1/8	25	1 9/16	8	1 1/8-7
20	14 7/8	17 3/8	25	8	20	1 1/8	27 1/2	1 11/16	8	1 1/8-7
24	17 19/32	20 1/8	29 1/2	8	20	1 1/4	32	1 7/8	8	1 1/4-7

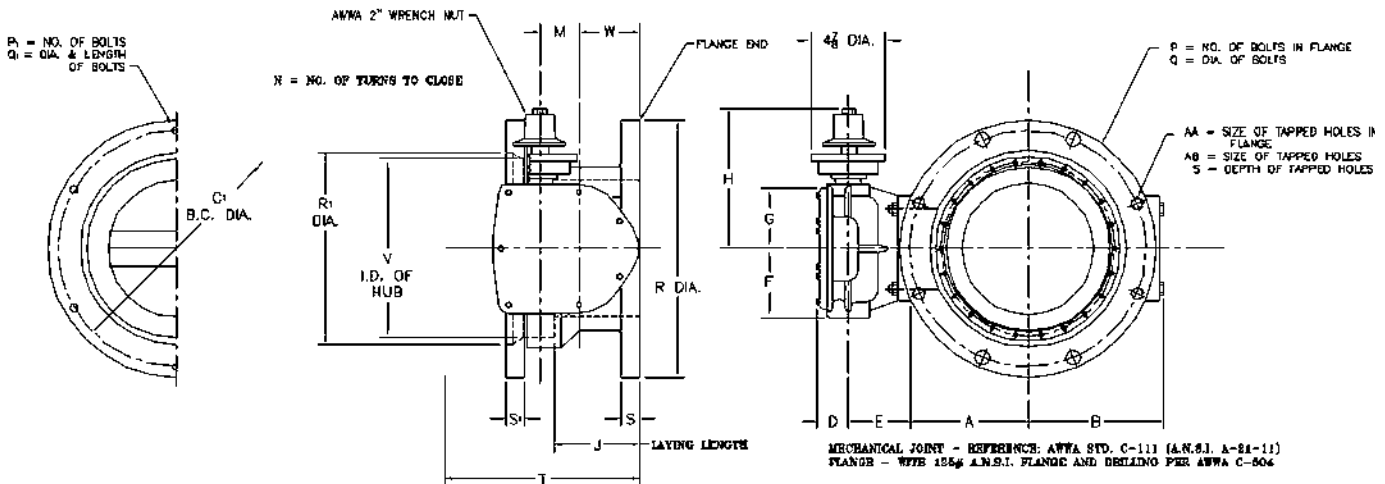
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3 & 4	65	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/6	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
10 & 12	510	2 1/4	4 1/2	5 7/16	5 3/16	10 1/16	6 1/8	2 3/4	3	36
14,16,18,20	1250	3 3/16	5 3/4	8 3/8	7	12 15/16	7 7/8	3 1/4	4	48
24	2200	3 3/16	6 1/4	10 3/8	8	14 5/16	10 3/4	3 7/8	6	72

ASSEMBLY 6", 8", 12" & 16" FLANGED X MECHANICAL JOINT END BUTTERFLY VALVE STYLE 4500 W/BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. GASKET, GLAND, & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. FLOW MAY BE IN EITHER DIRECTION.



VALVE SIZE	A	B	C	C1	J	P	P1	Q	Q1	R	R1	S	S1	T	V	W	AA	AB
6	5	8 1/2	9 1/2	9 1/2	4 3/16	8	6	3/4	3/4 X 3 1/2	11	11 1/8	1	1 1/16	9 11/16	7.00 ^{+0.07} _{-0.03}	2 1/2	4	3/4-10
8	6	7 9/16	11 3/4	11 3/4	5	8	6	3/4	3/4 X 4	13 1/2	13 3/8	1 1/8	1 1/8	10 15/16	9.15 ^{+0.07} _{-0.03}	3	4	3/4-10
12	9 1/2	11 3/8	17	16 1/4	6 5/8	12	8	7/8	3/4 X 4	19	17 15/16	1 1/4	1 1/4	10 7/16	13.30 ^{+0.07} _{-0.03}	4	-	-
18	12 3/8	14 11/16	21 1/4	21	8 9/16	16	12	1	3/4 X 4 1/2	23 1/2	22 9/16	1 3/16	1 3/8	13 1/4	17.54 ^{+0.06} _{-0.07}	4	4	1-8

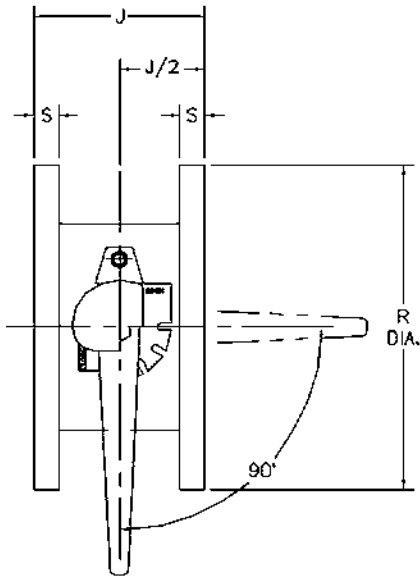
VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
6	150	2	3 9/16	3 7/16	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8	250	2 1/16	3 11/16	4 1/16	3 7/8	8 3/4	4 1/2	2 3/8	2	24
12	510	2 1/4	4 1/2	5 7/16	5 3/16	10 1/8	6 1/8	2 3/4	3	36
16	1250	3 3/16	5 3/4	8 3/8	7	12 5/16	7 7/8	3 1/4	4	48

ASSEMBLY 4" THRU 8" FLANGED BUTTERFLY VALVE STLE 4500 WITH LEVER OPERATOR

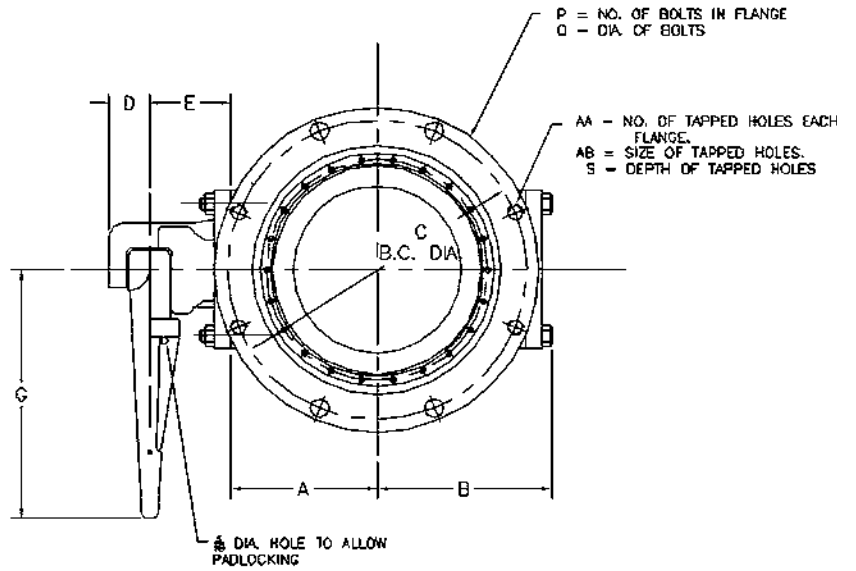
KENNEDY VALVE

NOTES:

1. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
2. FLOW MAY BE IN EITHER DIRECTION



WITH 125# A.N.S.I. FLANGES & DRILLING PER AWWA C-504



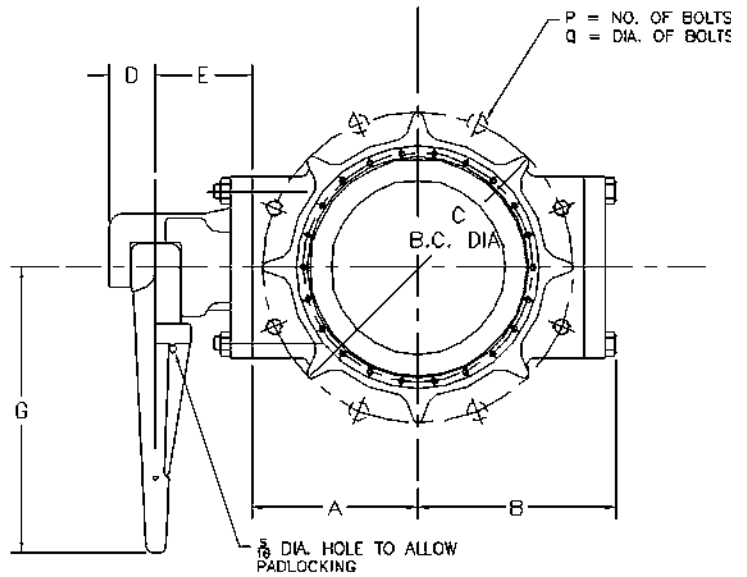
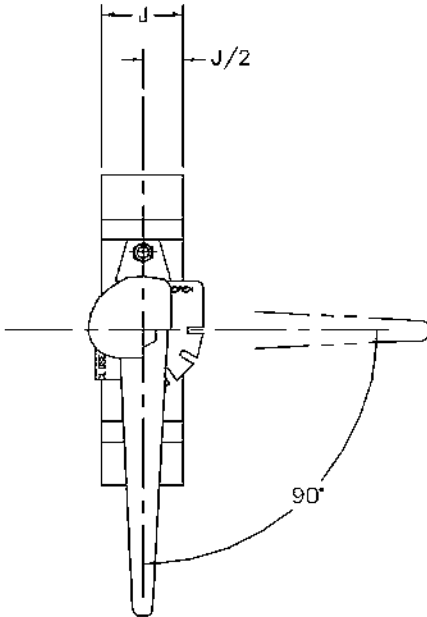
VALVE SIZE	A	B	C	D	E	G	J	P	Q	R	S	AA	AB
4	4	5 7/16	7 1/2	1 1/2	3 13/16	11	5	8	5/8	9	15/16	4	5/8-11
6	5	8 1/2	9 1/2	1 1/2	3 13/16	11	5	8	3/4	11	1	4	3/4-10
8	6	7 9/16	11 3/4	1 1/2	4 1/16	11	6	8	3/4	13 1/2	1 1/8	4	3/4-10

ASSEMBLY 4" THRU 8" WAFER BUTTERFLY VALVE STLE 4500 WITH LEVER OPERATOR

KENNEDY VALVE

NOTES:

1. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
2. FLOW MAY BE IN EITHER DIRECTION



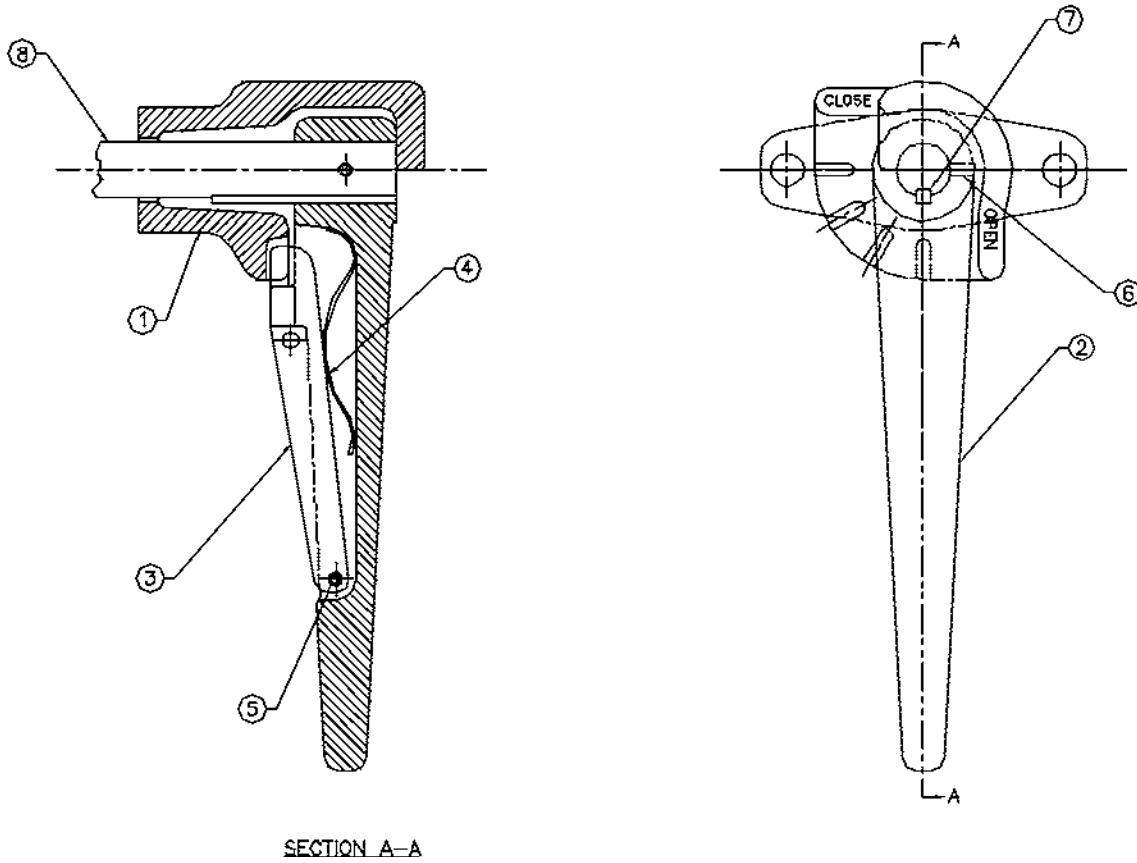
WITH 125# A.N.S.I FLANGES & DRILLING PER AWWA C-504

VALVE SIZE	A	B	C	D	E	G	J	P	Q
4	4	5 7/16	7 1/2	1 1/2	3 13/16	11	2 1/2	8	5/8
6	5	8 1/2	9 1/2	1 1/2	3 13/16	11	2 1/2	8	3/4
8	6	7 9/16	11 3/4	1 1/2	4 1/16	11	2 3/4	8	3/4

VALVE SIZE	OPERATOR MODEL	D	E	G
4	150	1 1/2	3 13/16	11
6	150	1 1/2	3 13/16	11
8	150	1 1/2	3 13/16	11

SUB-ASSEMBLY LEVER OPERATOR

KENNEDY VALVE

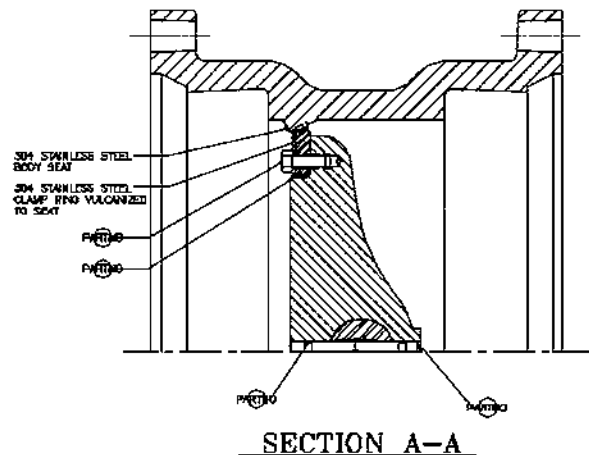
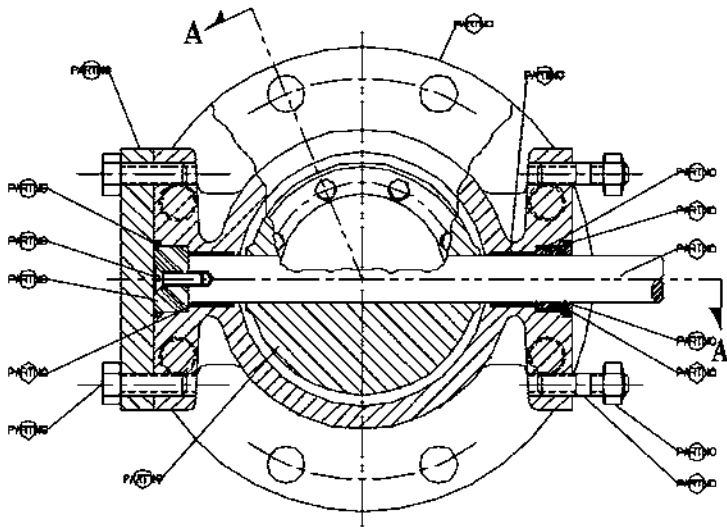


SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BRACKET	CAST IRON; A-126, CL. B
2	LEVER	CAST IRON; A-126, CL. B
3	LATCH	CAST IRON; A-126, CL. B
4	SPRING	SPRING STEEL, CADMIUM PLATED
5	SPRING PIN	STEEL; CADMIUM PLATED
6	SCREW, SOCKET SET	ALLOY STEEL
7	KEY	C-1018 C.F.
8	SHAFT	STAINLESS STEEL, TYPE 304

**SUB-ASSEMBLY 4"-12"
BUTTERFLY VALVE STYLE 4500
MECHANICAL JOINT ENDS**

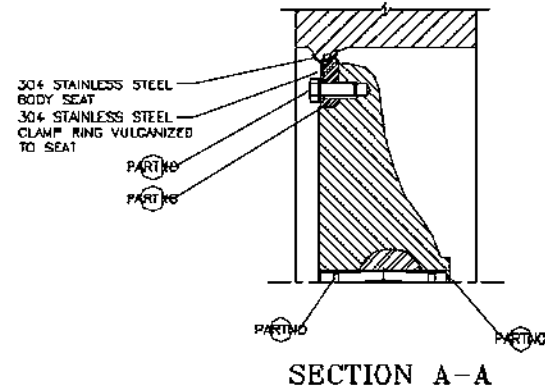
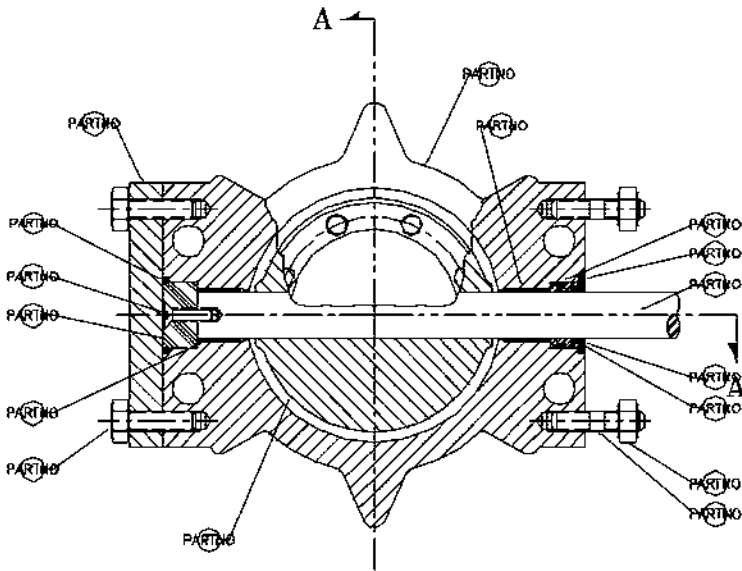
KENNEDY VALVE



ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; A-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	CAST IRON; A-48 CLASS 40
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT	304 STAINLESS STEEL, ASTM A-276
6	O-RING, BODY	BUNA "N"
7	BEARING, BODY	EPOXY FIGERGLASS WITN TEFLON LINER
8	STUD	STEEL, ASTM A-307, ELECTRO SINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-563, GRADE A, ELECTRO ZINC PLATED
10	SOCKET SCREW, FLAT HEAD HEX	STAINLESS STEEL, 18-8
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	CAPSCREW, HEX	STEEL, ASTM A-307, ELCTRO ZINC PLATED
13	CARTRIDGE SEAL	UHMW (POLYETHYLENE)
14	THRUST DISK	ACETEL
15	"O" RING CARTRIDGE, INSIDE	BUNA "N"
16	"O" RING CARTRIDGE, OUTSIDE	BUNA "N"
17	GROOVED PIN	393 STAINLESS STEEL
18	O-RING, GROOVED PIN	BUNA-N

**SUB-ASSEMBLY 4"-12"
BUTTERFLY VALVE STYLE 4500
WAFER BODY**

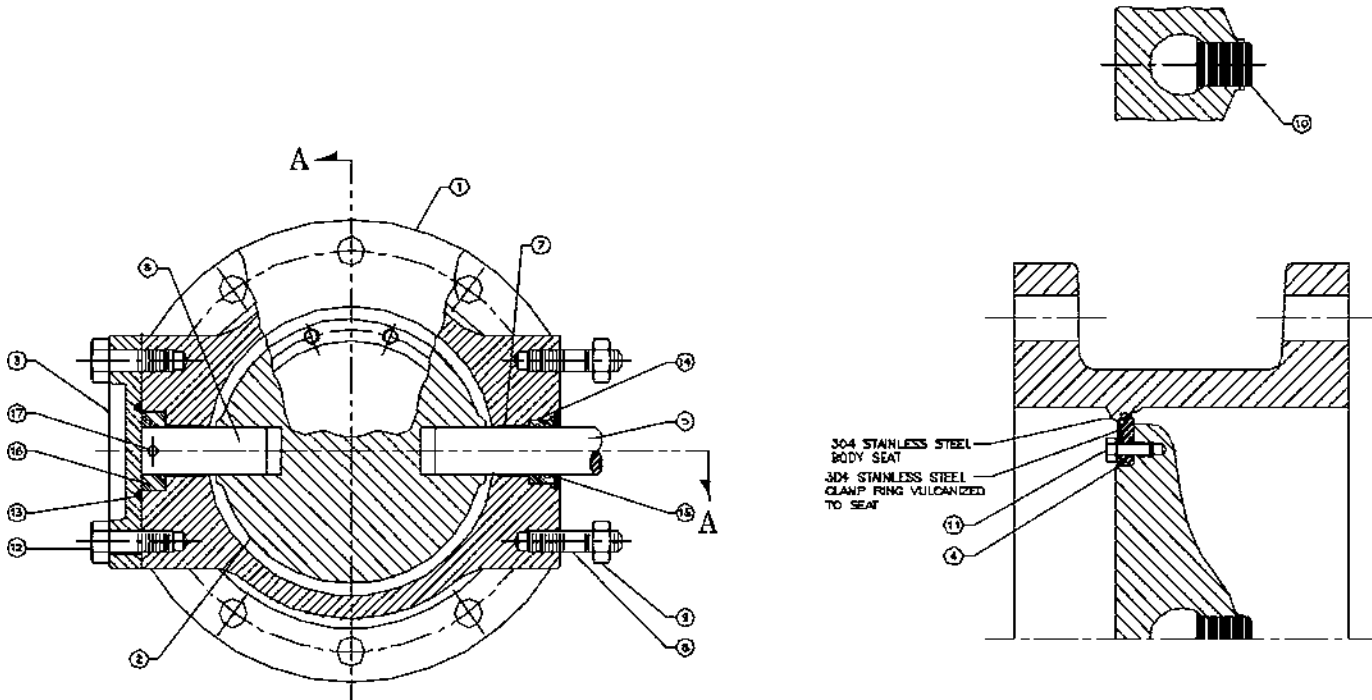
KENNEDY VALVE



ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; A-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	CAST IRON; A-48 CLASS 40
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	NATURAL RUBBER WITH INSERT
5	SHAFT	304 STAINLESS STEEL, ASTM A-276
6	O-RING, BODY	BUNA "N"
7	BEARING, BODY	EPOXY FIGERGLASS WITN TEFLON LINER
8	STUD	STEEL, ASTM A-307, ELECTRO SINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-563, GRADE A, ELECTRO ZINC PLATED
10	SOCKET SCREW, FLAT HEAD HEX	STAINLESS STEEL, 18-8
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	CAPSCREW, HEX	STEEL, ASTM A-307, ELCTRO ZINC PLATED
13	CARTRIDGE SEAL	UHMW (POLYETHYLENE)
14	THRUST DISK	ACETEL
15	"O" RING CARTRIDGE, INSIDE	BUNA "N"
16	"O" RING CARTRIDGE, OUTSIDE	BUNA "N"
17	GROOVED PIN	393 STAINLESS STEEL
18	O-RING, GROOVED PIN	BUNA-N

**SUB-ASSEMBLY 4"-12"
BUTTERFLY VALVE STYLE 4500
FLANGED ENDS**

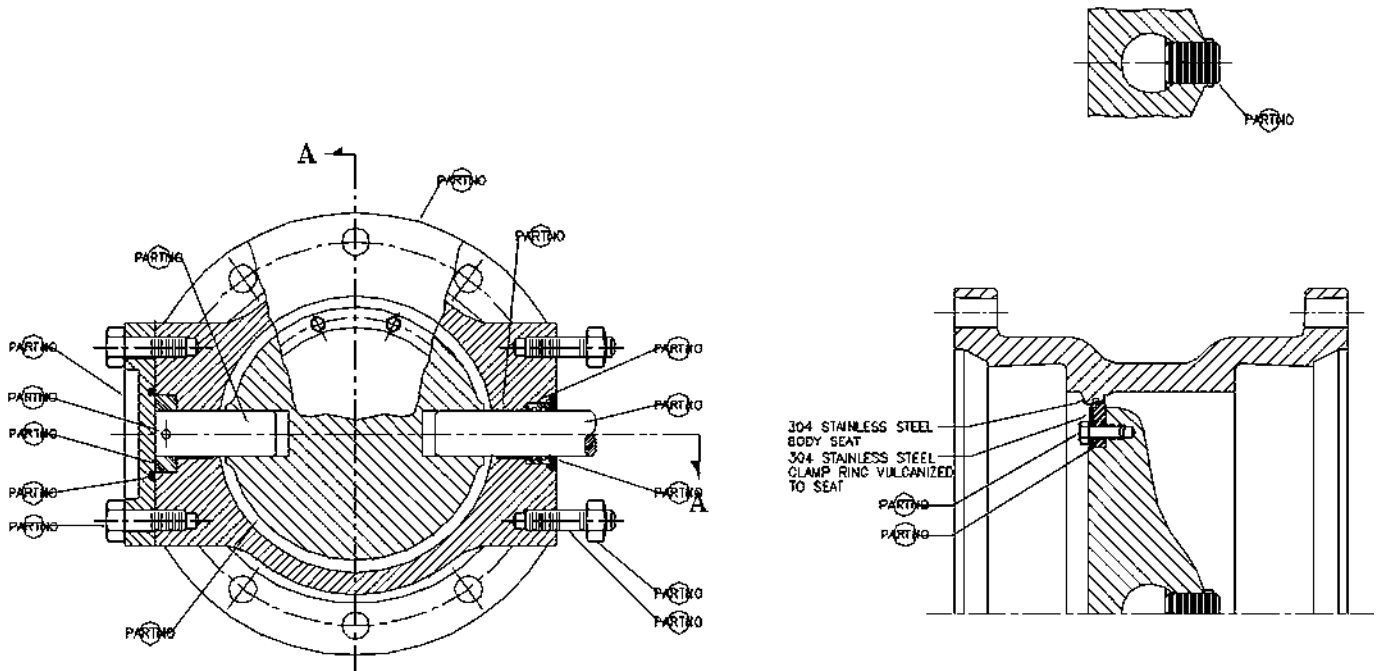
KENNEDY VALVE



ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; A-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	CAST IRON; A-48 CLASS 40
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "N" WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	304 STAINLESS STEEL, ASTM A-276
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A-276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	TORQUE, PLUG, SHAFT	304 STAINLESS STEEL, ASTM A-276
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	BOLT, HEX, HEAD	STEEL, ASTM A-307, GRADE B, ELECTRO ZINC PLATED
13	O-RING, END COVER	BUNA "N"
14	SHAFT SEAL	BUNA "S"
15	SEAL RING	STEEL, C-101B
16	THRUST COLLAR	BEARING BRONZE, ASTM B-144, ALLOY 420
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

SUB-ASSEMBLY 4"-12" BUTTERFLY VALVE STYLE 4500 MECHANICAL JOINT ENDS

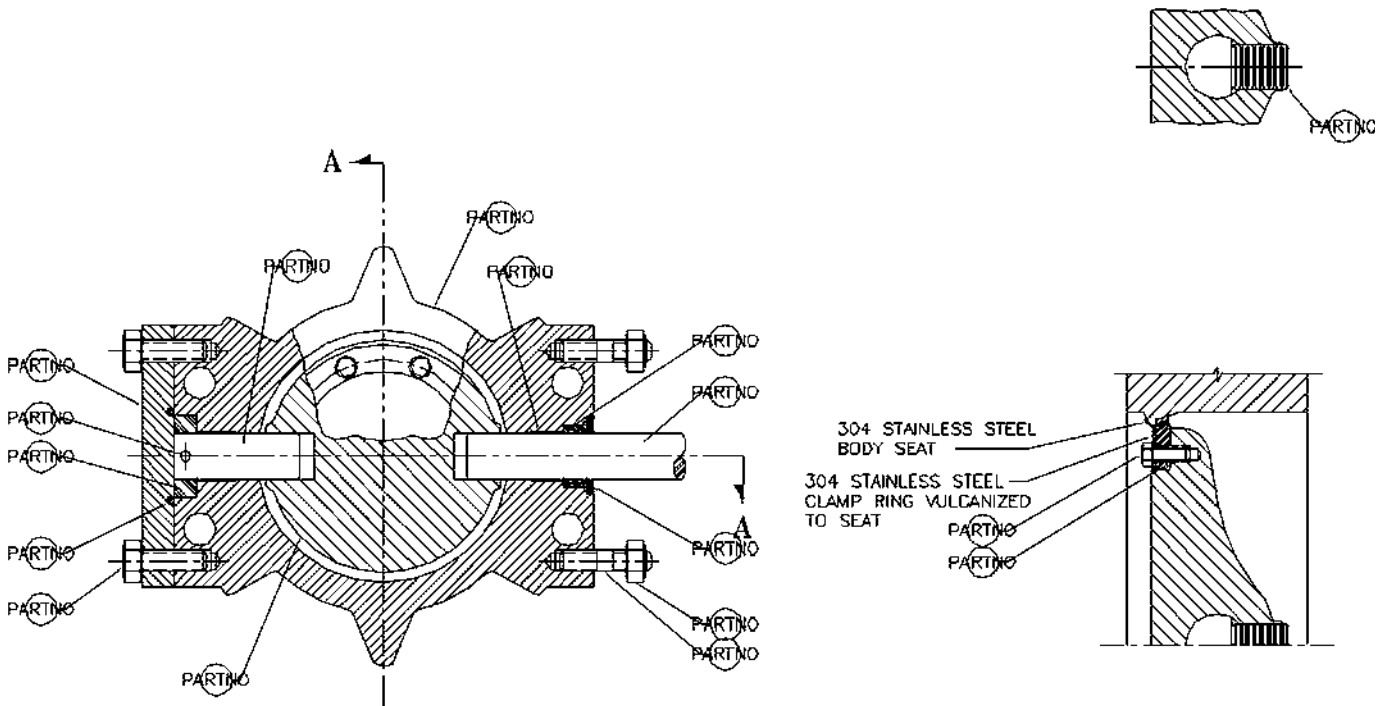
KENNEDY VALVE



ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; A-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	CAST IRON; A-48 CLASS 40
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "N" WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	304 STAINLESS STEEL, ASTM A-276
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A-276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	TORQUE, PLUG, SHAFT	304 STAINLESS STEEL, ASTM A-276
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	BOLT, HEX, HEAD	STEEL, ASTM A-307, GRADE B, ELECTRO ZINC PLATED
13	O-RING, END COVER	BUNA "N"
14	SHAFT SEAL	BUNA "S"
15	SEAL RING	STEEL, C-101B
16	THRUST COLLAR	BEARING BRONZE, ASTM B-144, ALLOY 38
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

SUB-ASSEMBLY 14"-20" BUTTERFLY VALVE STYLE 4500 WAFFER BODY

KENNEDY VALVE



SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; A-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	CAST IRON; A-48 CLASS 40
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	304 STAINLESS STEEL, ASTM A-276
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A-276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	TORQUE, PLUG, SHAFT	304 STAINLESS STEEL, ASTM A-276
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	BOLT, HEX, HEAD	STEEL, ASTM A-307, GRADE B, ELECTRO ZINC PLATED
13	O-RING, END COVER	BUNA "N"
14	SHAFT SEAL	BUNA "S"
15	SEAL RING	STEEL, C-101B
16	THRUST COLLAR	BEARING BRONZE, ASTM B-144, ALLOY 38
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

KENNEDY VALVE AWWA C504 LARGE DIAMETER BUTTERFLY VALVES

KENNEDY VALVE

- **Style 1450 30"-48"**
- **Butterfly Valves**



Every Kennedy Valve Style 1450 butterfly valve undergoes rigorous quality control and pressure tests to assure strict conformance to latest AWWA standards before shipment.

Rugged Stainless Steel Shafts. All shafts are on 18-8 type 304 stainless steel keyed for operator connection and pinned to the vane with stainless steel taper pins secured with stainless steel lock nuts . . . full metal to metal contact is assured with no leakage to shaft ways. Kennedy Valve Style 1450 shafts are manufactured to meet or exceed AWWA Standard C-504. Shafts diameters are as specified for the various valve classes.

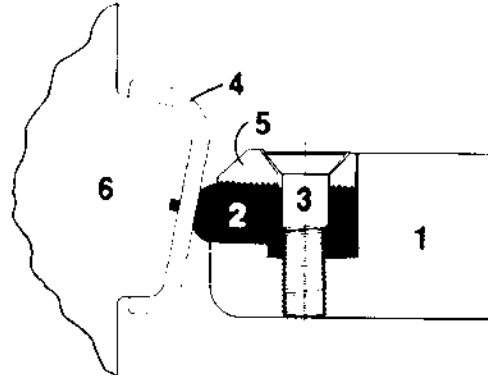
Maintenance-Free. The Kennedy Valve Style 1450 butterfly valve is permanently lubricated and requires no periodic exercising of stem replacement. The closing action of the vane is self-cleaning and there are no pockets in which sediment formations can deposit, resulting in longer lifetime service.

For underground applications, the Style 1450 is supplied with O-Ring shaft seals contained in bronze cartridge.

Underground operators and end covers are permanently sealed against ground-water infiltration.

Working Parts Corrosion-Free. All critical bearing and sealing surfaces are stainless steel, rubber, bronze or Teflon*. Your assurance of long life, easy and efficient valve operation. Further protection can be afforded the Kennedy Valve Style 1450 with added option of AWWA C550 EPOXY coating on interior valve surfaces. C550 coating provides effective protection from corrosion caused by tuberculation.

UNIQUE ADJUSTABLE DESIGN ASSURED 360° UNINTERRUPTED SEALING



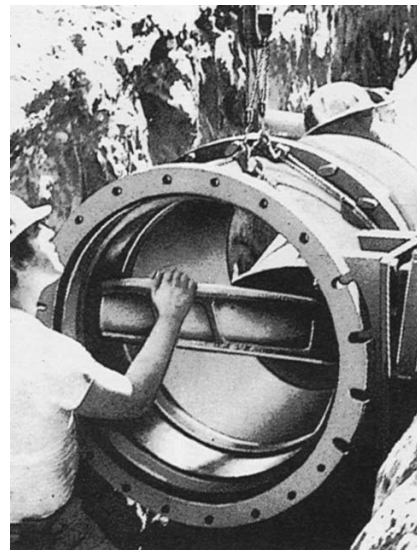
The Kennedy Valve Style 1450 incorporates a unique sealing system in which the seal is locked into a vane recess and is further restrained by a serrated clamp ring. Seal relaxation when the valve is in the open position is eliminated.

You are assured of uninterrupted 360° reliable and mechanically adjustable sealing as well as reduced wear and lower seating torque. Should field adjustment be required, one man with a torque wrench does the job in minutes without valve disassembly.

1—Vane; 2—360° Rubber Seat; 3—Stainless Steel Self-Locking Screw Fastener; with Nylon Sealing Sleeve; 4—Stainless Steel Body Seat Ring; 5—Stainless Steel Seat Ring; 6—Valve Body

When municipalities, consultants and contractors install the Kennedy Valve Style 1450 butterfly valve, they are making a sound investment for the future in dependable, maintenance-free service, bottle-tight sealing and long valve life. The Kennedy Valve Style 1450 will prove to set a new industry standard for large diameter butterfly valves. Contact your nearest Kennedy Valve representative soon for complete details.

- DuPont Registered Trademark



NSF Certified

- **Style 1450**
- **Butterfly Valves**
- **Suggested Specifications**
- **(30"-40")**
- **NSF Certified**

KENNEDY VALVE AWWA LARGE DIAMETER BUTTERFLY VALVES

KENNEDY VALVE

A. GENERAL

All butterfly valves shall be of the rubber-sealed tight-closing type designed, manufactured and tested in conformance to AWWA Standard C-504, latest revision. All valves shall be Kennedy Style 1450 Valves, or approved equal. NSF certification is recommended.

B. VALVE

Valve Body shall be high strength cast iron ASTM A-126, Class B, with 18-8 Stainless Steel Body Seat, Valve Vane (Disc) shall be ductile iron, ASTM A-536, Grade 70-50-5 having rubber seat mechanically secured with a serrated 18-8 Stainless Steel self-locked screws. Rubber Seat shall be a full-circle 360° seat not penetrated by the valve shaft. The vane shall be of a "Flow-Through" design incorporating three integral flow passages, in order to provide low flow resistance and assurance of high quality. Valve shafts shall be of two-piece stub shaft type, made of 18-8 Type 304 Stainless Steel with a diameter equal to or larger than specified for applicable valve class as defined by AWWA Standard C-504, latest revision. Rubber Seats shall be capable of ready replacement of adjustment without the use of special tools. For underground service, shaft seals shall be of the "O-ring" type.

Seat — Valve seats must be easily replaceable in the field and in the pipeline without any use of special tools, syringes or adhesives.

C. OPERATOR

The operator shall be of the traveling nut or worm gear type, self-locking in any position and sealed, gasketed and lubricated as needed. Operators to be equipped with external adjustments.

All valves shall close by turning the operator nut or handwheel in a clock-wise direction (Open left). The operator shall be capable of meeting the torque requirements for opening and closing the valve against the pressure and flow rate specified.

For underground service, the minimum number of turns to close a valve shall be no less than 2 turns per inch of valve size in order to minimize water hammer; and AWWA stops shall be provided capable of absorbing up to 450 foot-pounds of input torque without damage to the valve or operator.

OPEN RIGHT VALVES CAN BE FURNISHED AS AN OPTION IF REQUIRED.

For above-ground service, the operator shall provide position indication; and shall require no more than 80 pounds pull on the handwheel to provide necessary torque for specified pressure and flow rate.

Cylinder Operator shall meet all applicable provisions of AWWA Standard C-504, latest revision.

D. END CONFIGURATIONS

Flanged-end valves shall be of the short-body type having 125# flanges conforming to ANSI B 16-1. Mechanical joint end valves shall conform to AWWA Standard C-111 (ANSI B21.11). Mechanical joint bolts, glands and gaskets (shall) (shall not) be supplied by the valve manufacturer.

E. TESTS

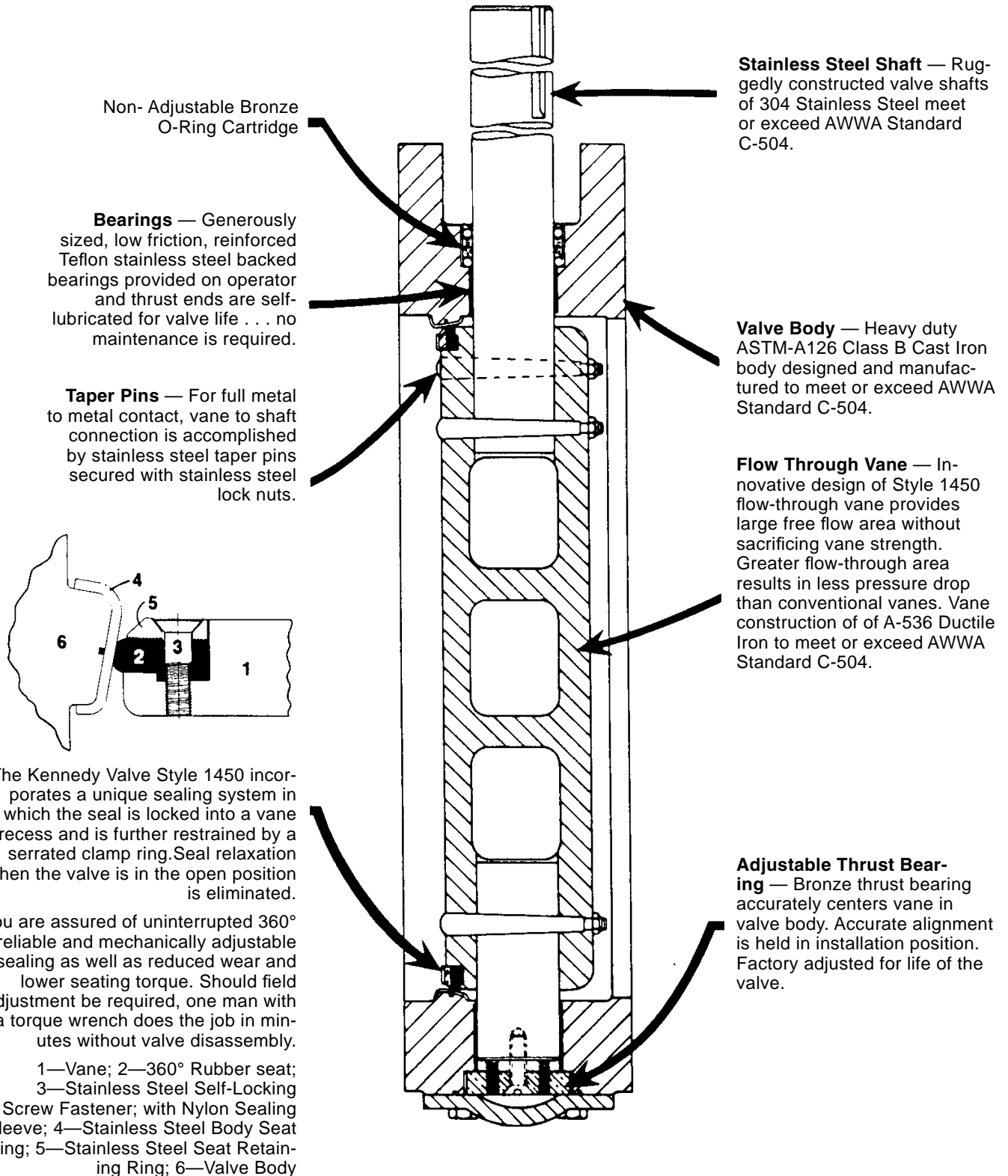
All valves shall be tested for leakage at rated pressure, and tested hydrostatically at two times rated pressure - all in conformance with AWWA Standard C-504, latest revision.

Style 1450 Butterfly Valve
Exclusive Features

The cross section drawing below shows the design featured and relative position of working parts of the Kennedy Valve Style 1450 butterfly valve.

KENNEDY VALVE
STYLE 1450 30" - 48"

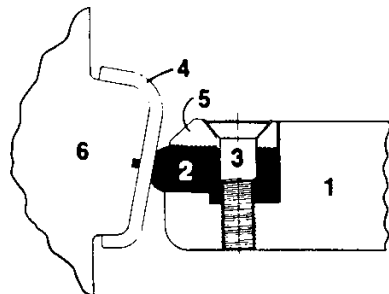
KENNEDY VALVE



Non-Adjustable Bronze O-Ring Cartridge

Bearings — Generously sized, low friction, reinforced Teflon stainless steel backed bearings provided on operator and thrust ends are self-lubricated for valve life . . . no maintenance is required.

Taper Pins — For full metal to metal contact, vane to shaft connection is accomplished by stainless steel taper pins secured with stainless steel lock nuts.



The Kennedy Valve Style 1450 incorporates a unique sealing system in which the seal is locked into a vane recess and is further restrained by a serrated clamp ring. Seal relaxation when the valve is in the open position is eliminated.

You are assured of uninterrupted 360° reliable and mechanically adjustable sealing as well as reduced wear and lower seating torque. Should field adjustment be required, one man with a torque wrench does the job in minutes without valve disassembly.

- 1—Vane; 2—360° Rubber seat;
- 3—Stainless Steel Self-Locking Screw Fastener; with Nylon Sealing Sleeve; 4—Stainless Steel Body Seat Ring; 5—Stainless Steel Seat Retaining Ring; 6—Valve Body

Stainless Steel Shaft — Ruggedly constructed valve shafts of 304 Stainless Steel meet or exceed AWWA Standard C-504.

Valve Body — Heavy duty ASTM-A126 Class B Cast Iron body designed and manufactured to meet or exceed AWWA Standard C-504.

Flow Through Vane — Innovative design of Style 1450 flow-through vane provides large free flow area without sacrificing vane strength. Greater flow-through area results in less pressure drop than conventional vanes. Vane construction of A-536 Ductile Iron to meet or exceed AWWA Standard C-504.

Adjustable Thrust Bearing — Bronze thrust bearing accurately centers vane in valve body. Accurate alignment is held in installation position. Factory adjusted for life of the valve.

KENNEDY VALVE AWWA C504 LARGE DIAMETER BUTTERFLY VALVES

KENNEDY VALVE

- **Style 1450 30"-48"**
- **The dependable valve for water transmission and in-plant applications**

From the engineers who brought you the unequalled reliability and economy of the most widely installed underground butterfly valve ever — the Kennedy Valve "4500" — comes the Style 1450 Large Diameter Butterfly Valve. The Style 1450 offers many of the advantages of the time proven Kennedy Valve "4500" — ruggedness, bottle-tight seal, corrosion-free bearing and sealing surfaces, freedom from excessive maintenance — plus the added dimension of a "flow-through" vane.

Less Flow Restriction

The innovative design of the Kennedy Valve Style 1450 flow-through vane provides maximum free flow area without sacrificing vane strength. This greater flow through area results in less pressure drop and pumping costs than conventional designs.

Rubber-To-Stainless Seating Provides Bottle-Tight Permanent Closure

The exclusive patented vane-seat and valve-seat construction of the Kennedy Valve Style 1450 butterfly valve assures you of 100% bottle-tight sealing for the life of the valve.

The stainless steel body seat ring is made integral with the valve body to assure a permanent, corrosion-resistant seating area. The vane seat is a special combination of Buna-S and natural rubber, firmly clamped to the vane by a stainless steel seat-retaining ring and stainless steel self-locking screw fasteners. This construction forms a positive lock between the vane and rubber seat, which assures 360° "bottle-tight" seating. The vane seat is adjustable and totally field replaceable, if required.

Kennedy Valve Style 1450, Class 150B butterfly valve, 30" size with mechanical joint ends and manual underground service operator.

Working Pressure — 150 psi (Tested Bottle-tight)

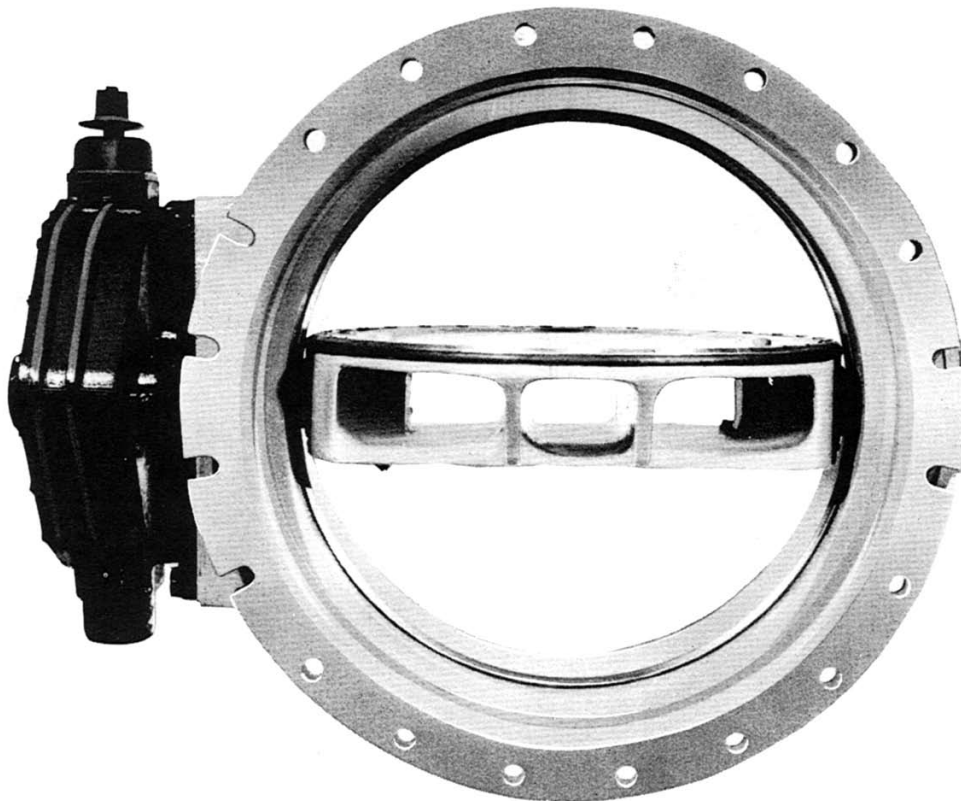
Hydrostatic Test Pressure — 300 psi (Tested with vane partially open)

Available AWWA Classes — 25A., 25B, 75A, 75B, 150A, 150B

Size Range: 30", 36", 42", 48"

end Configurations: Flanged or Mechanical Joint

Operators: Available open left or open right on buried operators. Above ground operators available: Handwheel, Cylinder and Electric Motor



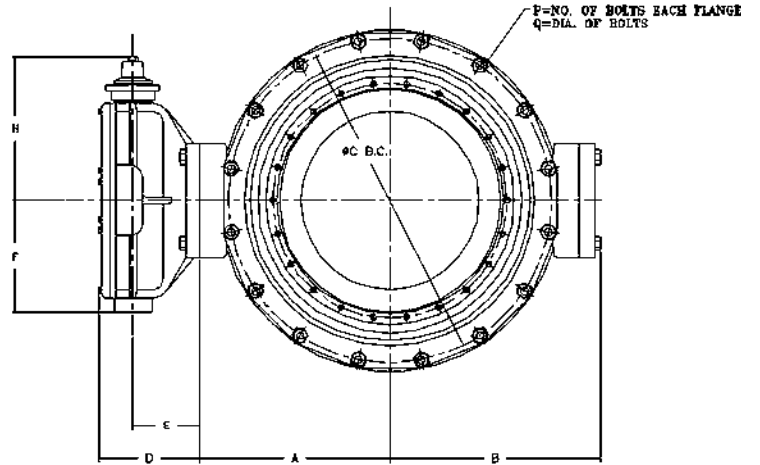
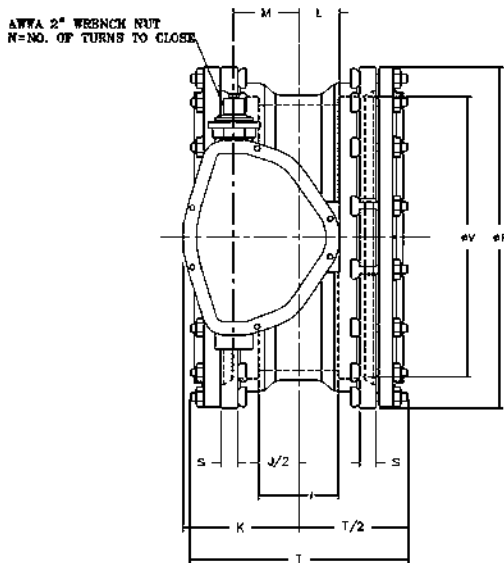
NSF Certified

ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE 1450 MECHANICAL JOINT ENDS WITH BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLAND & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-111 (A.N.S.I. A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
30	20 5/8	21 1/4	36 7/8	12	20	1	39 1/8	1 13/16	28 3/8	32.17
36	24 1/4	24 7/8	43 3/4	12	24	1	46	2	28 3/8	38.47
42	28 1/4	28 7/8	50 5/8	12	28	1 1/4	53 1/8	2	28 3/8	44.67

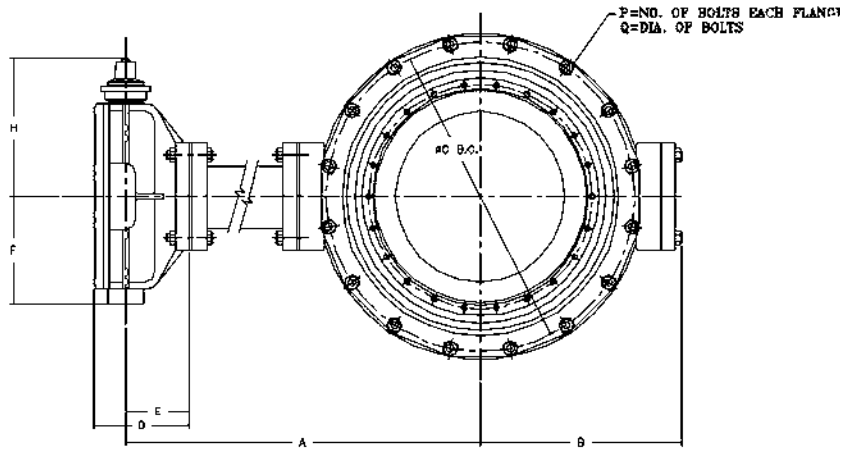
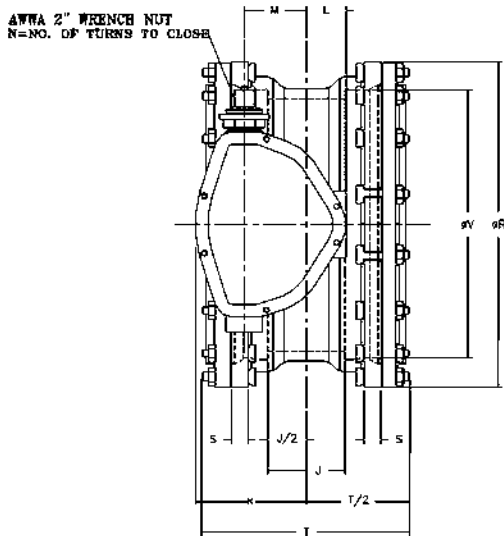
OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	9 1/16	8 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
4350	10 1/16	6 1/16	15 1/8	18	13 15/16	4 3/16	7 1/2	90

**ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE
1450 MECHANICAL JOINT ENDS
WITH EXTENDED BONNET
(BURIED OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLAND & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-111 (A.N.S.I. A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
30		21 1/4	36 7/8	12	20	1	39 1/8	1 13/16	28 3/8	32.17
36		24 7/8	43 3/4	12	24	1	46	2	28 3/8	38.47
42		28 7/8	50 5/8	12	28	1 1/4	53 1/8	2	28 3/8	44.67

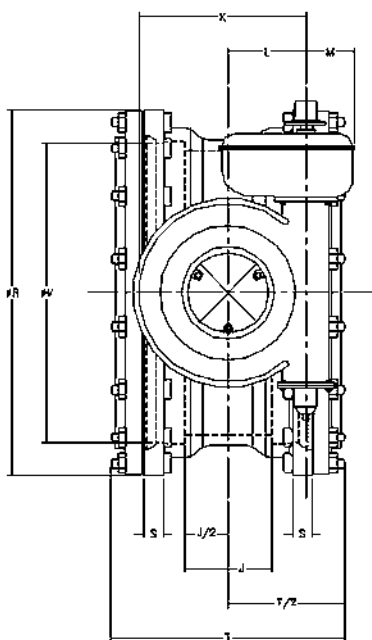
OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	9 1/16	8 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
4350	10 1/16	6 1/16	15 1/8	18	13 15/16	4 3/16	7 1/2	90

ASSEMBLY 30"-48" BUTTERFLY VALVE STYLE 1450 MECHANICAL JOINT ENDS WITH AUMA BURIED OPERATOR

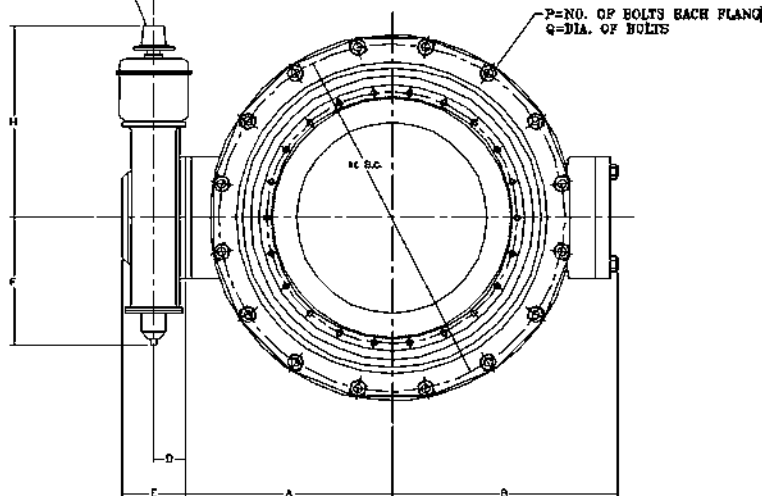
KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLAND & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-111 (A.N.S.I. A21-11)



AWWA 2" WRENCH NUT
N=NO. OF TURNS TO CLOSE



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
30	21 5/8	21 1/4	36 7/8	12	20	1-6	39 1/8	1 13/16	28 3/8	32.17
36	25 1/4	24 7/8	43 3/4	12	24	1-6	46	2	28 3/8	38.47
42	29	28 7/8	50 5/8	12	28	1 1/4-6	53 1/8	2	28 3/8	44.67
48	32	32	57 1/2	15	32	1 1/4-6	60	2	31 3/8	50.97

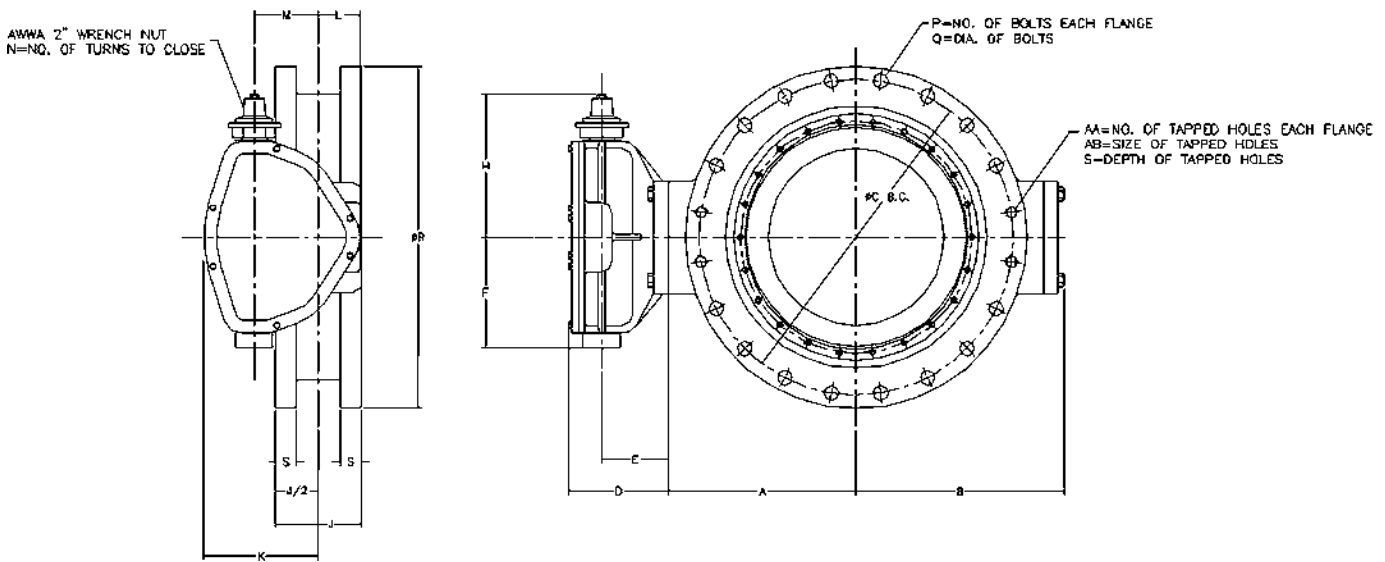
OPERATOR MODEL	D	E	F	H	K	L	M	N
GS 125.3/VZ 2.3	2.95	6.42	7.38	12.76	10.83	4.92	3.50	31.5
GS 160/GZ 14-4	3.0	6.5	13.4	17.5	13.1	6.3	3.9	54
GS 160/GZ 16-4	4.0	6.3	15.8	21.5	16.4	7.9	4.5	53
GS 250/GZ 26-8	5.3	10.5	19.3	24.7	20.4	9.8	4.5	104
GS 315/GZ 30-15	5.7	12.0	21.7	25.6	25.5	12.4	9.4	212

ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE 1450 FLANGED ENDS WITH BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
30"	20.625	21.250	36	12	28	1.250	38.750	2.125	4	1.250-7
36"	24.250	25.187	42.750	12	32	1.500	45	2.375	4	1.500-6
42"	24.875	24.875	49.500	12	36	1.500	53	2.625	4	1.500-6

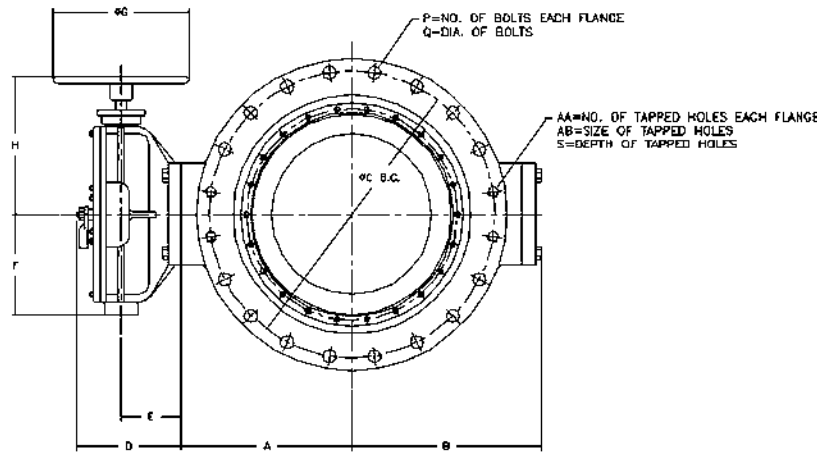
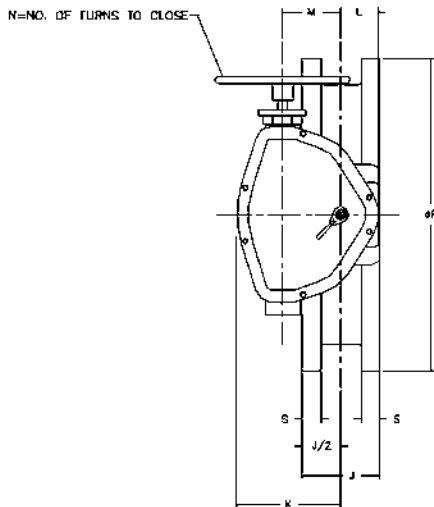
OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	10.312	6.250	10.375	14.500	10.750	3.875	6	72
4350	11.312	6.062	12.125	18	13.312	4.187	7.500	72

ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE 1450 FLANGED ENDS WITH HANDWHEEL OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
30"	20 5/8	21 1/4	36	12	28	1 1/4	38 3/4	2 1/8	4	1 1/4-7
36"	24 1/4	25 3/16	43 3/4	12	32	1 1/2	46	2 3/8	4	1 1/2-8
42"	28 1/4	28 7/8	49 1/2	12	36	1 1/2	53	2 5/8	4	1 1/2-8

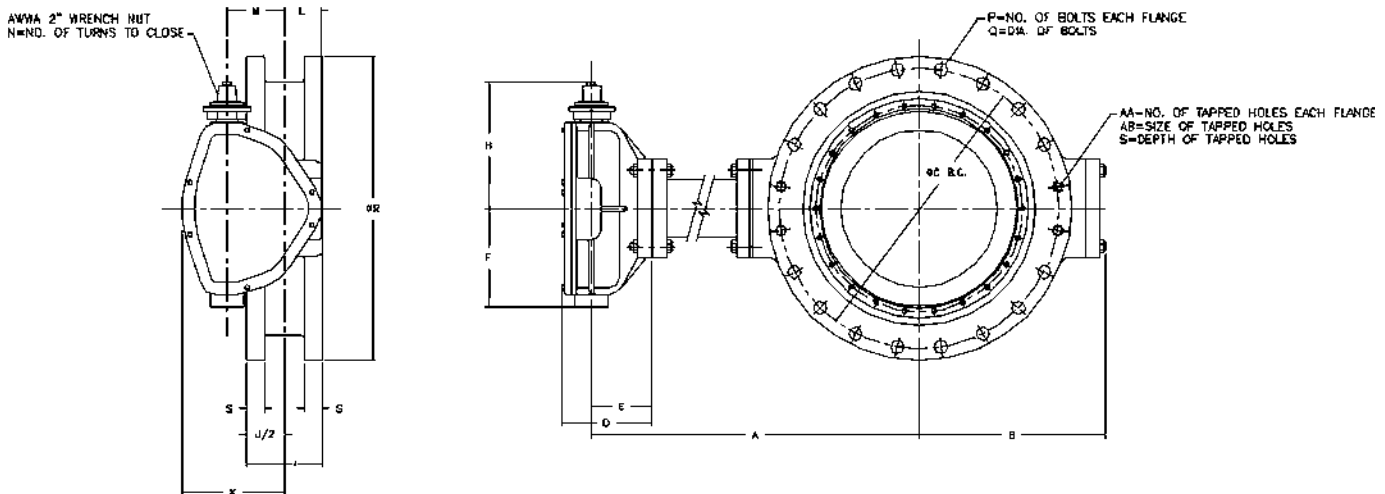
OPERATOR MODEL	D	E	F	G	H	K	L	M	N
2200	10 5/16	6 1/4	10 3/8	18	14 1/2	10 3/4	3 7/8	6	72
4350	10 5/16	6 Z1/16	15 1/8	27	18	13 5/16	4 3/16	7 1/2	90

**ASSEMBLY 30"-42" BUTTERFLY VALVE
STYLE 1450 FLANGED ENDS
WITH EXTENDED BONNET
(BURIED OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-504 FLANGES & DRILLING (A.N.S.I. 125)

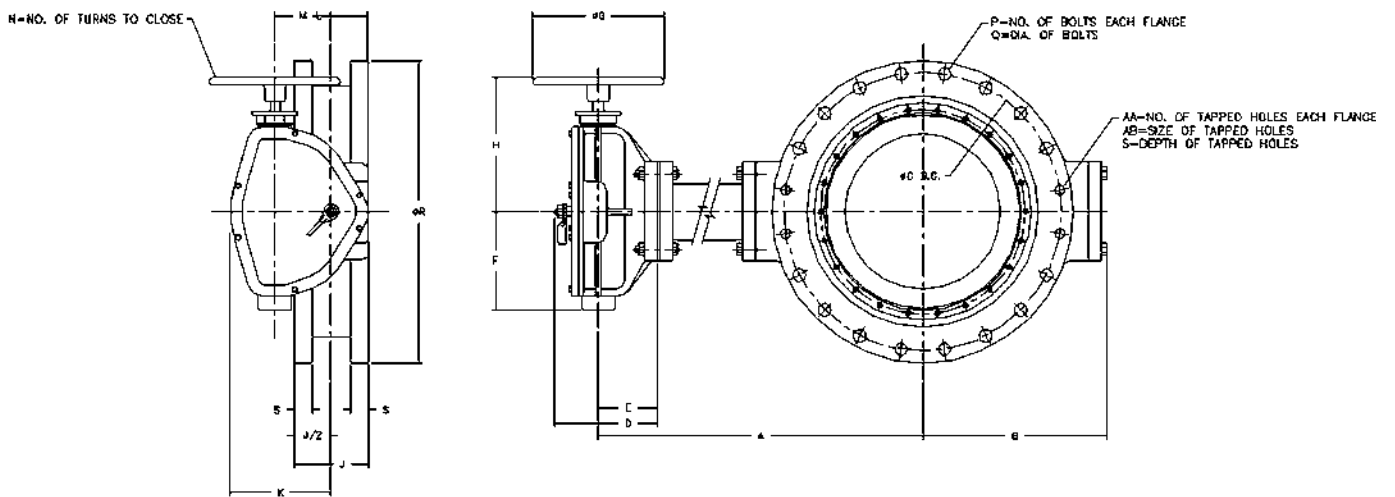


VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
30"	20.625	21.250	36	12	28	1.250	38.750	2.125	4	1.250-7
36"	24.250	25.187	42.750	12	32	1.500	45	2.375	4	1.500-6
42"	24.875	24.875	49.500	12	36	1.500	53	2.625	4	1.500-6

OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	10.312	6.250	10.375	14.500	10.750	3.875	6	72
4350	11.312	6.062	12.125	18	13.312	4.187	7.500	72

**ASSEMBLY 30"-42" BUTTERFLY VALVE
STYLE 1450 FLANGED ENDS
WITH EXTENDED BONNET
(HANDWHEEL OPERATOR)**

KENNEDY VALVE

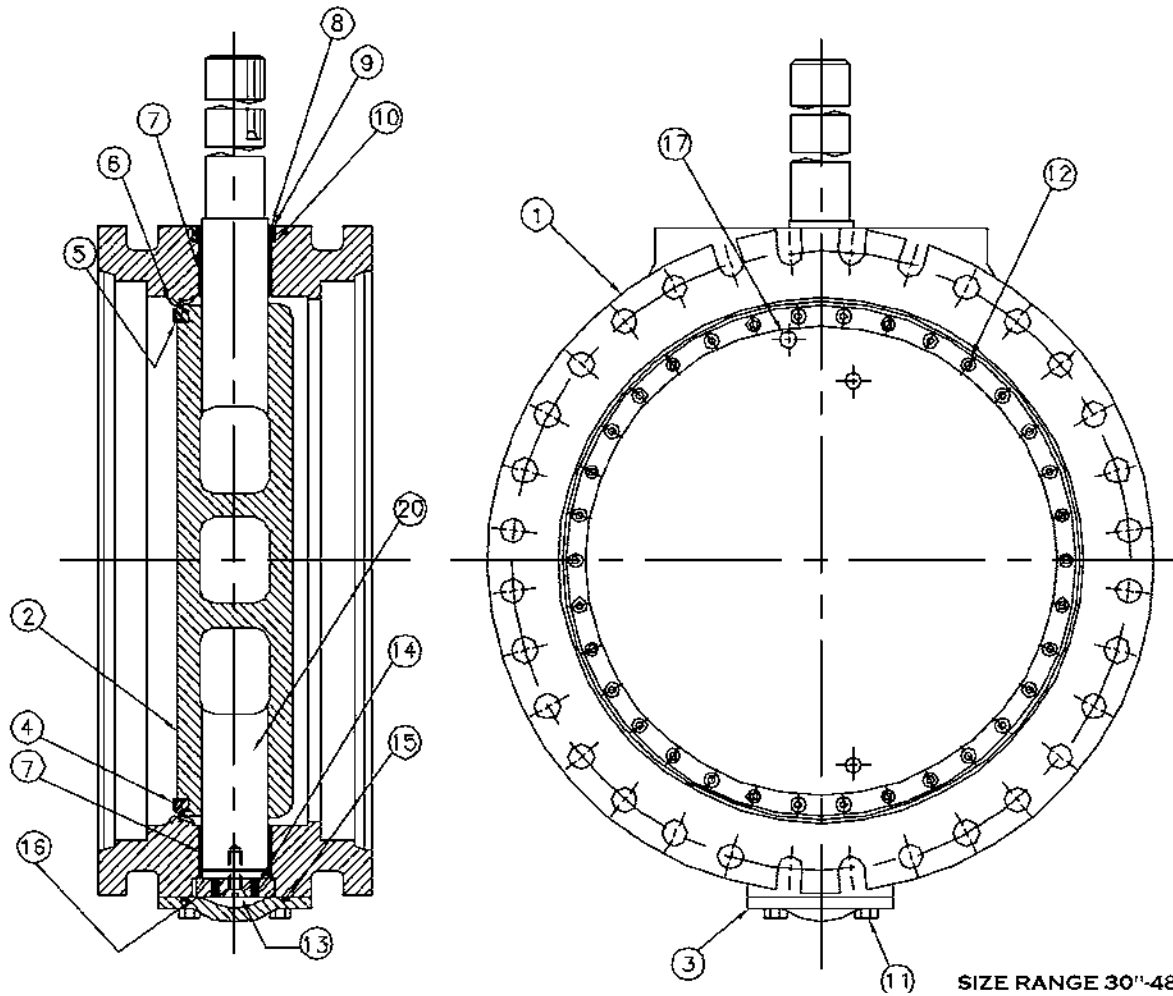


VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
30		21 1/4	36	12	28	1 1/4	38 3/4	2 1/8	4	1 1/4-7
36		25 3/16	42 3/4	12	32	1 1/2	46	2 3/8	4	1 1/2-8

OPERATOR MODEL	D	E	F	G	H	K	L	M	N
2200	10 5/16	6 1/4	10 3/8	18	14 1/2	10 3/4	3 7/8	6	72
4350	10 5/16	6 1/16	15 1/8	27	18	13 5/16	4 3/16	7 1/2	90

SUB-ASSEMBLY 30"-48" BUTTERFLY VALVE STYLE 1450 MECHANICAL JOINT END (NON-ADJUSTABLE PACKING)

KENNEDY VALVE



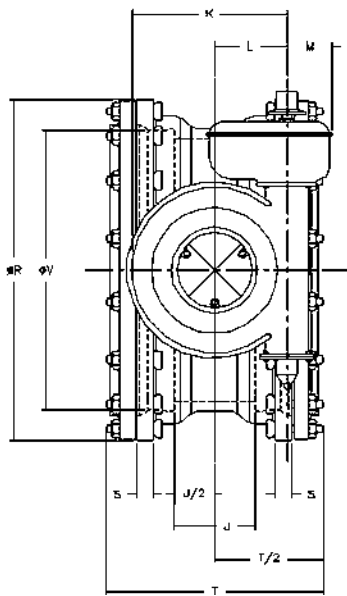
ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; ASTM-126, CLASS B WITH 304 STAINLESS STEEL SEAT
2	VANE	DUCTILE IRON; A-536 GR. 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S"
5	CLAMP RING, SEAT	304 STAINLESS STEEL
6	SEALING WASHER	NYLON
7	BUSHING, BODY	FIBERGLASS
8	CARTRIDGE, SHAFT	BRONZE
9	SEAL, SHAFT	BUNA "N"
10	SEAL CARTRIDGE	BUNA "N"
11	BOLT, END COVER	COMMERCIAL STEEL
12	SOCKET SCREW-FLAT HEAD	18-8 STAINLESS STEEL WITH NYLOK INSERT
13	SOCKET SCREW-FLAT HEAD	18-8 STAINLESS STEEL WITH NYLOK INSERT
14	SET SCREW-FLAT POINT	18-8 STAINLESS STEEL WITH NYLOK INSERT
15	END COVER SEAL	BUNA "N"
16	THRUST BEARING 12	BRONZE
17	TAPER PIN	STAINLESS STEEL
18	TAPER PIN NUT	18-8 STAINLESS STEEL
19	SHAFT (OPERATOR)	304 STAINLESS STEEL
20	SHAFT (THRUST)	304 STAINLESS STEEL

**ASSEMBLY 48" BUTTERFLY VALVE STYLE 1450
MECHANICAL JOINT ENDS WITH EXTENDED
BONNET (AUMA BURIED OPERATOR)**

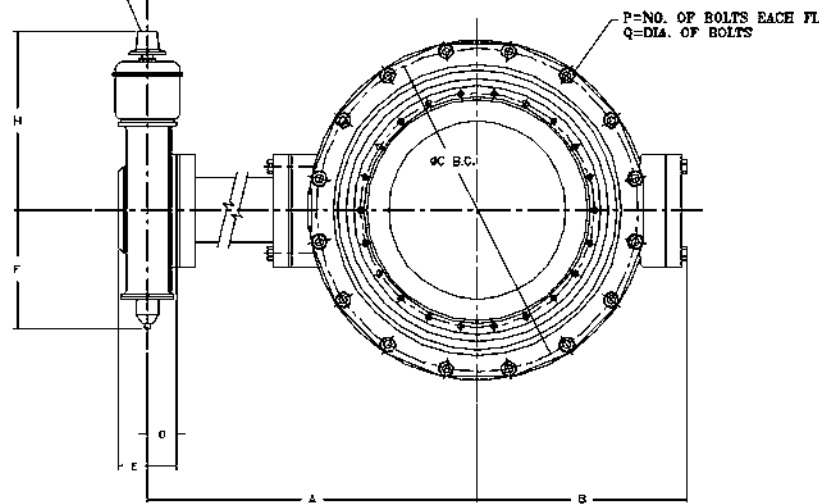
KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLAND & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.



AWWA 2" FRENCH NUT
N=NO. OF TURNS TO CLOSE



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
48"		32	57 1/2	15	32	1 1/4-5	60	2	31 3/8	50.97

OPERATOR MODEL	D	E	F	H	K	L	M	N
GS 200GZ16-4	4.0	8.3	15.8	21.5	16.4	7.8	4.5	53

ASSEMBLY 48" BUTTERFLY VALVE STYLE 1450 FLANGED ENDS WITH AUMA HANDWHEEL OPERATOR

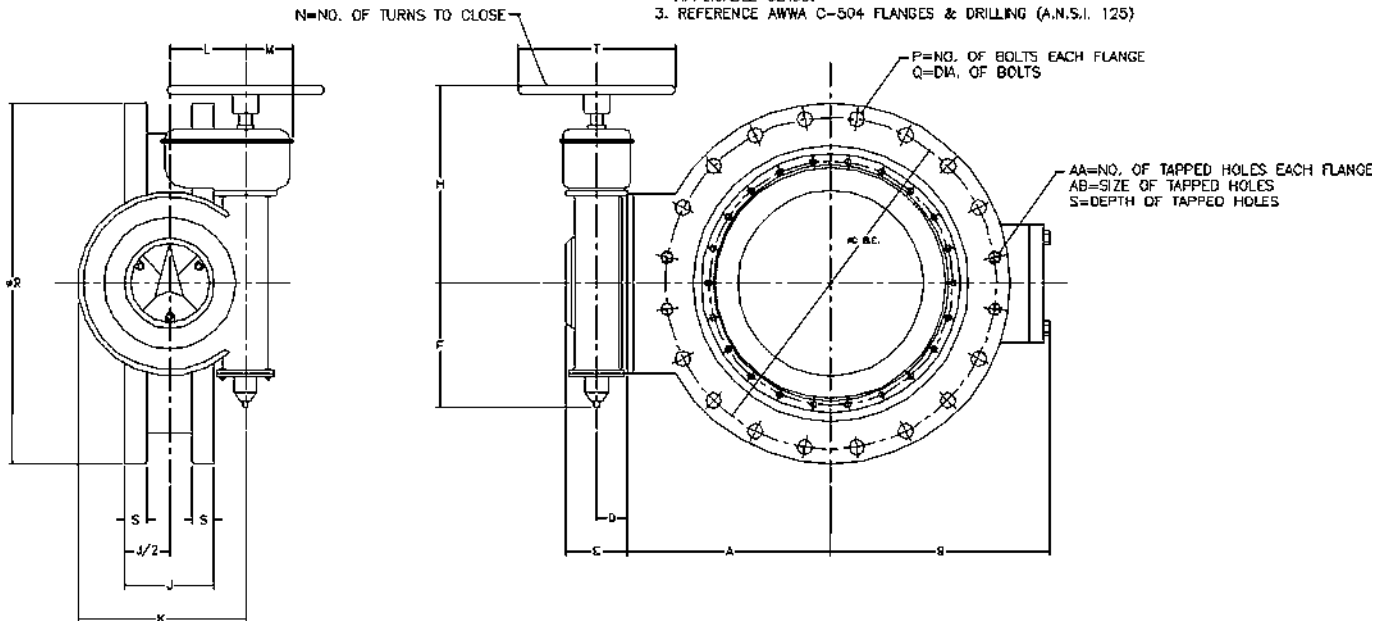
KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & SRILLING (A.N.S.I. 125)

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
48"	32	32	56	15	44	1 1/2	58 1/2	2 3/4	8	1 1/2-6

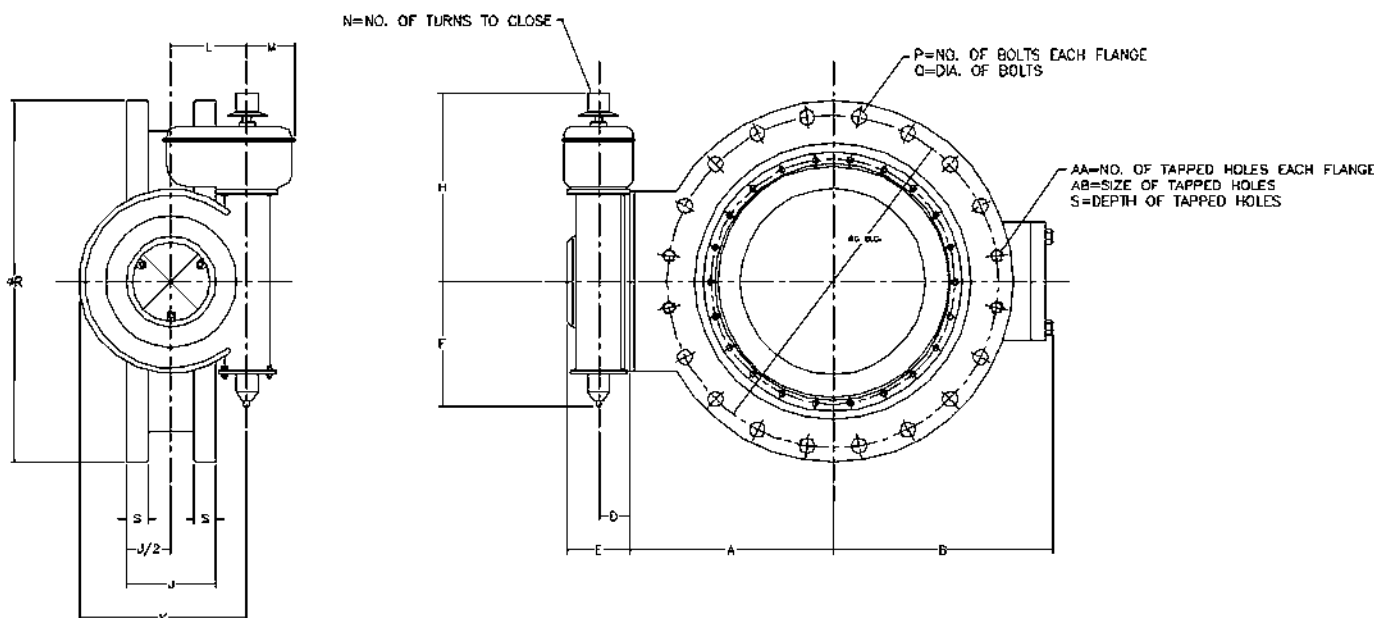
OPERATOR MODEL	D	E	F	H	K	L	M	N	T
GS 200/GZ 16-6	4.0	8.3	15.8	20.7	16.4	7.9	4.5	108	18

ASSEMBLY 48" BUTTERFLY VALVE STYLE 1450 FLANGED ENDS WITH AUMA BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. REFERENCE AWWA STD. C-504 FLANGES & DRILLING (A.N.S.I. 125)



VALVE SIZE	A	B	C	J	P	Q	R	S	AA	AB
48"	32	32	56	15	44	1 1/2	59 1/2	2 3/4	8	1 1/2-6

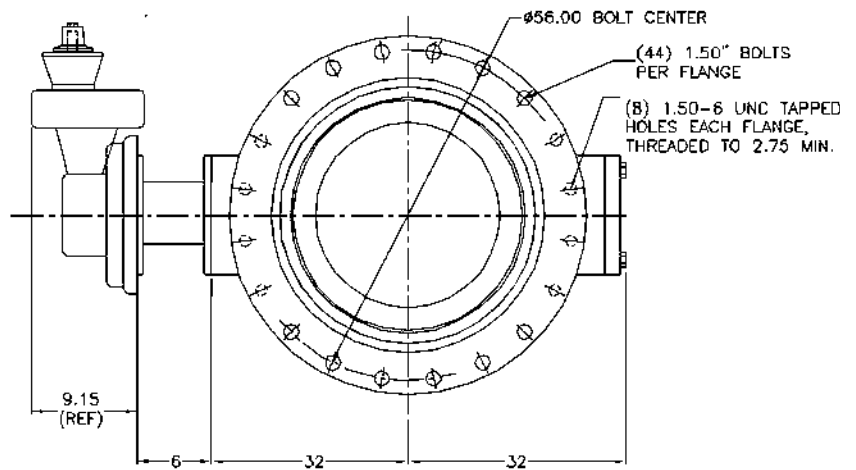
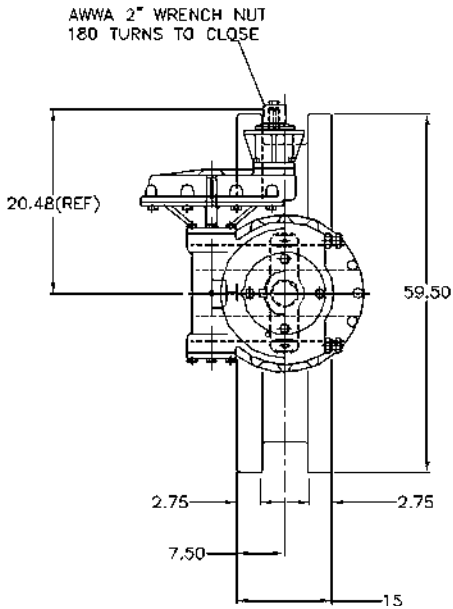
OPERATOR MODEL	D	E	F	H	K	L	M	N
GS 200/GZ 16-4	4.0	8.3	15.8	21.5	16.4	7.9	4.5	53

ASSEMBLY 48" BUTTERFLY VALVE STYLE 1450 FLANGED ENDS WITH GEAR BOX

KENNEDY VALVE

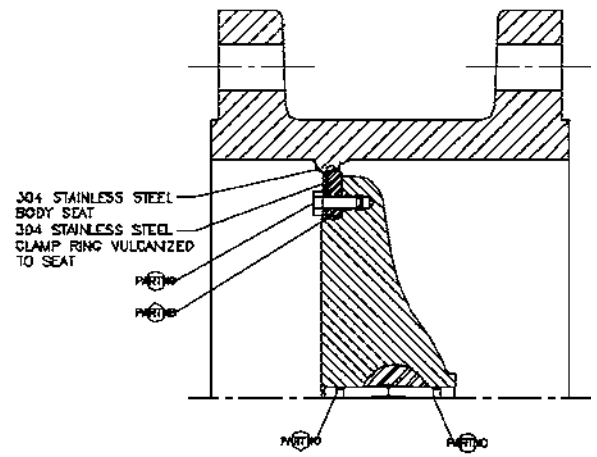
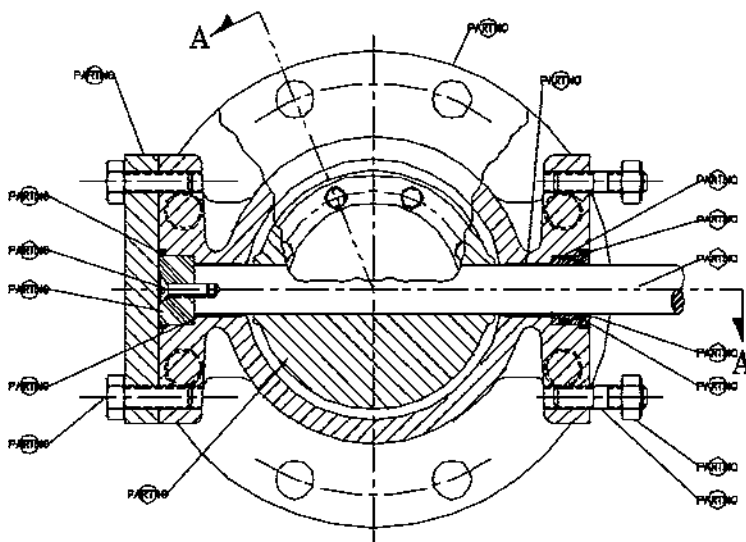
NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. AWWA C-504 A.N.S.I. 125 # FLANGES & DRILLING



**SUB-ASSEMBLY 3"-12"
BUTTERFLY VALVE STYLE 4500
FLANGED ENDS CLASS 250**

KENNEDY VALVE

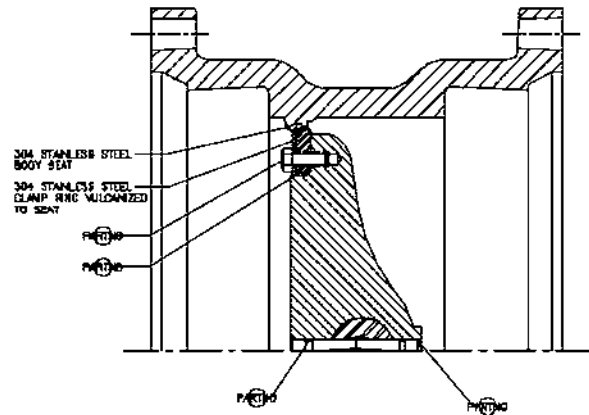
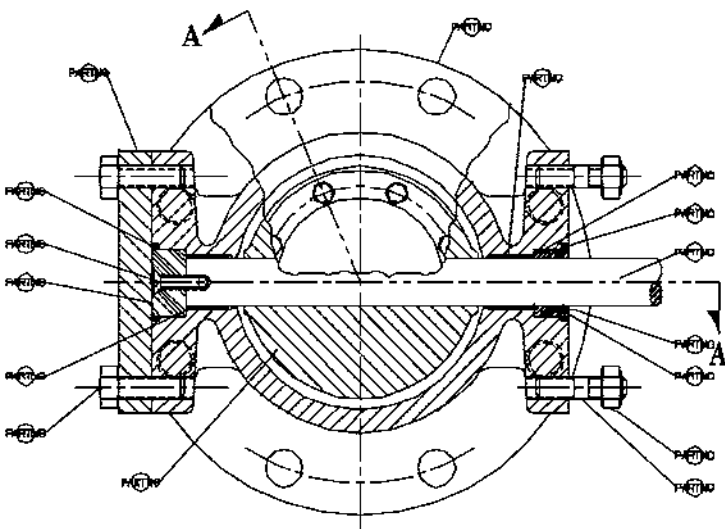


SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR, 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR, 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT	TYPE 630, CONDITION H11D0 STN. STL. ASTM A-584
6	O-RING	BUNA "N"
7	BEARING, BODY	EPOXY FIBERGLASS WITH TEFLON LINER
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	SOCKET SCREW, FLAT HEAD HEX	STAINLESS STEEL, 18-8
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	CAPSCREW, HEX	STEEL, ASTM A-307, ELECTRO ZINC PLATED
13	CARTRIDGE SEAL	UHMV (POLYTHYLENE)
14	THRUST DISK	ACETEL
15	O-RING CARTRIDGE, INSIDE	BUNA "N"
16	O-RING CARTRIDGE, OUTSIDE	BUNA "N"
17	GROOVED PIN	393 STAINLESS STEEL
18	O-RING, GROOVED PIN	BUNA-N

**SUB-ASSEMBLY 4"-12"
BUTTERFLY VALVE STYLE 4500
MECHANICAL JOINT ENDS CLASS 250**

KENNEDY VALVE

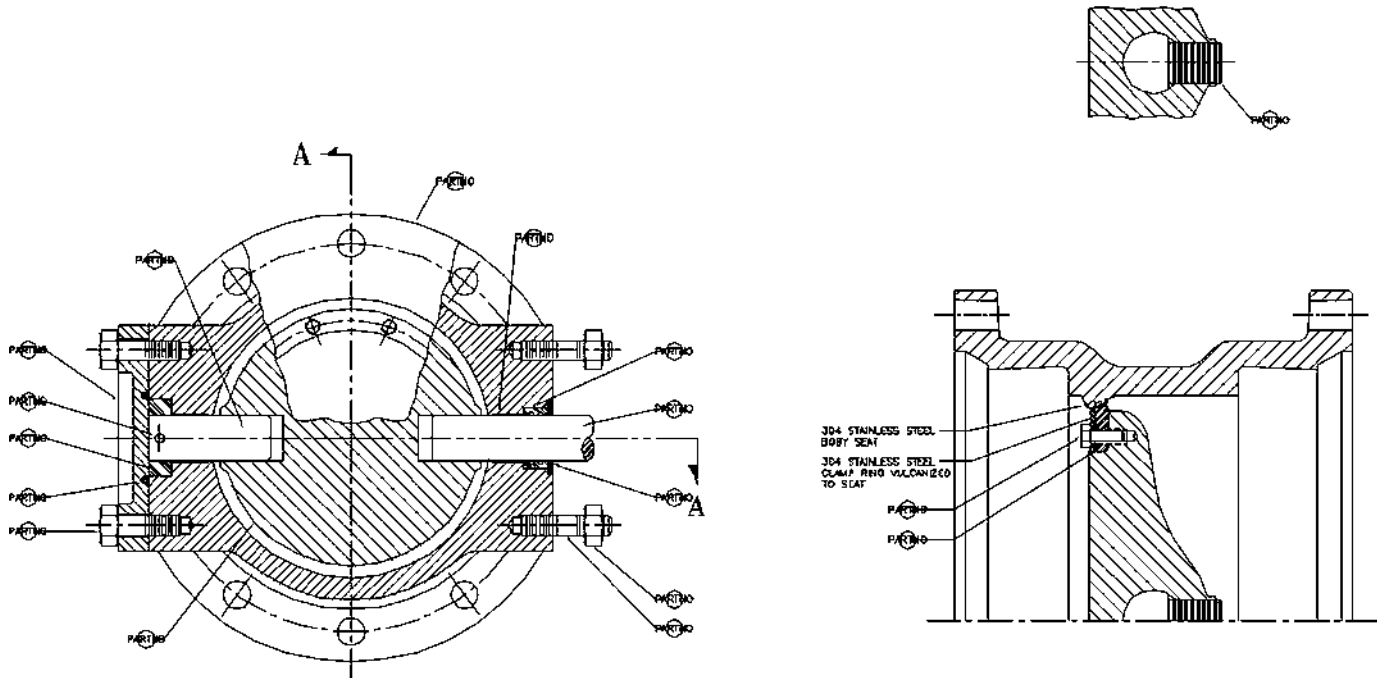


SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR, 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR, 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT	TYPE 630, CONDITION H11D0 STN. STL. ASTM A-584
6	O-RING, BODY	BUNA "N"
7	BEARING, BODY	EPOXY FIBERGLASS WITH TEFLON LINER
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	SOCKET SCREW, FLAT HEAD HEX	STAINLESS STEEL, 18-8
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	CAPSCREW, HEX	STEEL, ASTM A-307, ELECTRO ZINC PLATED
13	CARTRIDGE SEAL	UHMV (POLYTHYLENE)
14	THRUST DISK	ACETEL
15	O-RING CARTRIDGE, INSIDE	BUNA "N"
16	O-RING CARTRIDGE, OUTSIDE	BUNA "N"
17	GROOVED PIN	393 STAINLESS STEEL
18	O-RING, GROOVED PIN	BUNA-N

**SUB-ASSEMBLY 14"-24"
BUTTERFLY VALVE STYLE 4500
MECHANICAL JOINT ENDS CLASS 250**

KENNEDY VALVE

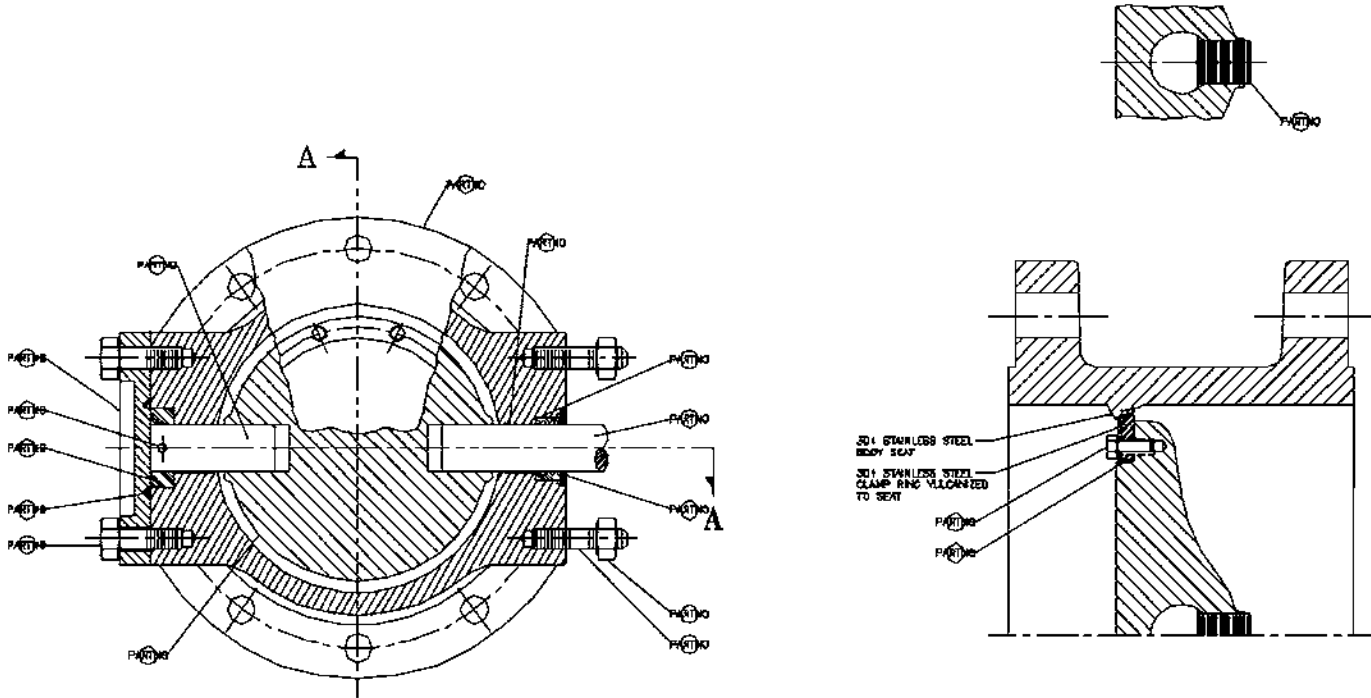


SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR, 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR, 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	TYPE 630, CONDITION H11D0 STN. STL. ASTM A-584
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A-276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	TORQUE PLUG, SHAFT	304 STAINLESS STEEL, ASTM A-276
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	BOLT, HEX HEAD	STEEL, ASTM A-307, GARDE B, ELECTRO ZINC PLATED
13	O-RING, END COVER	BUNA "N"
14	SHAFT SEAL	BUNA "S"
15	SEAL RING	STEEL, C-101B
16	THRUST COLLAR	BEARING BRONZE, ASTM B-144, ALLOY 38
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

**SUB-ASSEMBLY 4"-12"
BUTTERFLY VALVE STYLE 4500
FLANGED ENDS CLASS 250**

KENNEDY VALVE



SECTION A-A

ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR, 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR, 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S" WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	TYPE 630, CONDITION H11D0 STN. STL. ASTM A-584
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A-276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A-307, ELECTRO ZINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A-307, GRADE A, ELECTRO ZINC PLATED
10	TORQUE PLUG, SHAFT	304 STAINLESS STEEL, ASTM A-276
11	CAPSCREW, HEX	STAINLESS STEEL, 18-8 WITH NYLOK INSERT
12	BOLT, HEX HEAD	STEEL, ASTM A-307, GARDE B, ELECTRO ZINC PLATED
13	O-RING, END COVER	BUNA "N"
14	SHAFT SEAL	BUNA "S"
15	SEAL RING	STEEL, C-101B
16	THRUST COLLAR	BEARING BRONZE, ASTM B-144, ALLOY 38
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

**KENNEDY VALVE AWWA LARGE
DIAMETER BUTTERFLY VALVES**

KENNEDY VALVE

- **Style 1450**
- **Class 250B Butterfly Valves**
- **Suggested Specifications**
- **(30"-40")**
- **NSF Certified**

A. GENERAL

All butterfly valves shall be of the rubber-sealed tight-closing type designed, manufactured and tested in conformance to AWWA Standard C-504, latest revision. All valves shall be Kennedy Style 1450 Valves, or approved equal. NSF certification is recommended.

B. VALVE

Valve Body shall be high strength ductile iron ASTM A-536, Grade 70-50-5, with 18-8 Stainless Steel Body Seat, Valve Vane (Disc) shall be ductile iron, ASTM A-536, Grade 70-50-5 having rubber seat mechanically secured with a serrated 18-8 Stainless Steel self-locked screws. Rubber Seat shall be a full-circle 360° seat not penetrated by the valve shaft. The vane shall be of a "Flow-Through" design incorporating three integral flow passages, in order to provide low flow resistance and assurance of high quality. Valve shafts shall be of two-piece stub shaft type, made of 18-8 Type 360 Stainless Steel with a diameter equal to or larger than specified for applicable valve class as defined by AWWA Standard C-504, latest revision. Rubber Seats shall be capable of ready replacement of adjustment without the use of special tools. For underground service, shaft seals shall be of the "O-ring" type.

Seat — Valve seats must be easily replaceable in the field and in the pipeline without any use of special tools, syringes or adhesives.

C. OPERATOR

The operator shall be of the traveling nut or worm gear type, self-locking in any position and sealed, gasketed and lubricated as needed. Operators to be equipped with external adjustments.

All valves shall close by turning the operator nut or handwheel in a clock-wise direction (Open left). The operator shall be capable of meeting the torque requirements for opening and closing the valve against the pressure and flow rate specified.

For underground service, the minimum number of turns to close a valve shall be no less than 2 turns per inch of valve size in order to minimize water hammer; and AWWA stops shall be provided capable of absorbing up to 450 foot-pounds of input torque without damage to the valve or operator.

OPEN RIGHT VALVES CAN BE FURNISHED AS AN OPTION IF REQUIRED.

For above-ground service, the operator shall provide position indication; and shall require no more than 80 pounds pull on the handwheel to provide necessary torque for specified pressure and flow rate.

Cylinder Operator shall meet all applicable provisions of AWWA Standard C-504, latest revision.

D. END CONFIGURATIONS

Flanged-end valves shall be of the short-body type having 250# flanges conforming to ANSI B16-1. Mechanical joint end valves shall conform to AWWA Standard C-111 (ANSI B21.11). Mechanical joint bolts, glands and gaskets (shall) (shall not) be supplied by the valve manufacturer.

E. TESTS

All valves shall be tested for leakage at rated pressure, and tested hydrostatically at two times rated pressure - all in conformance with AWWA Standard C-504, latest revision.

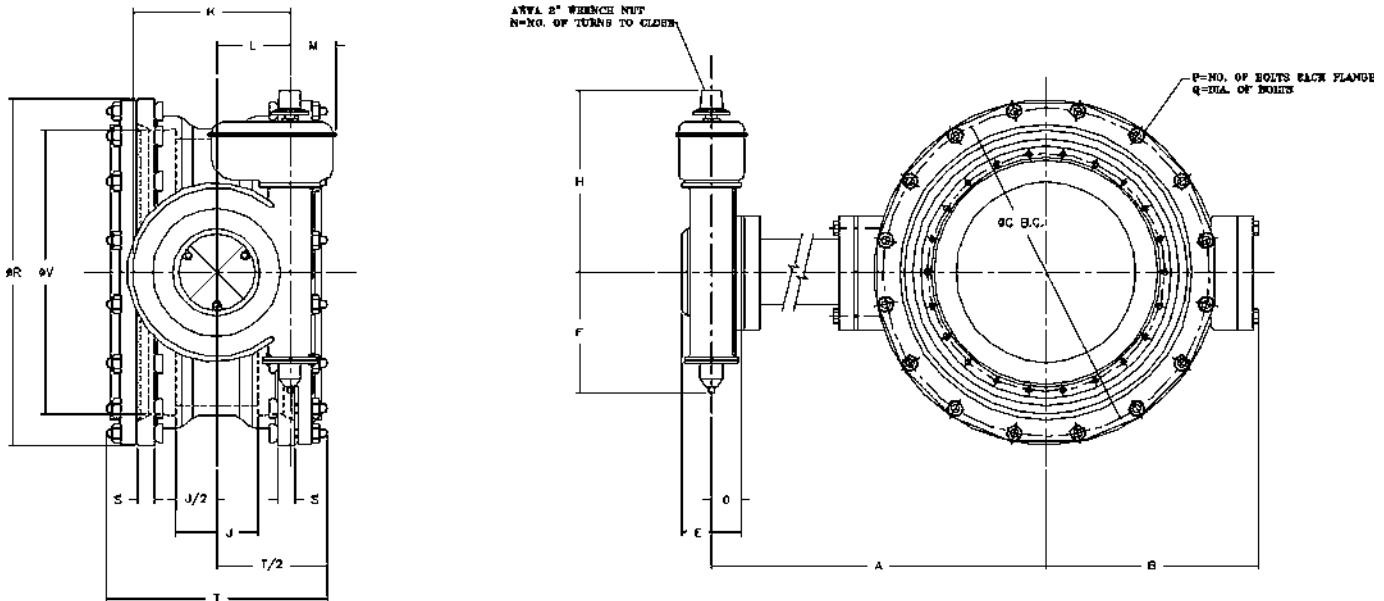
SEAT TEST = 250 psi
SHELL TEST = 500 psi

**ASSEMBLY 48" BUTTERFLY VALVE
STYLE 1450 CL 250 MECHANICAL JOINT ENDS
WITH EXTENDED BONNET
(AUMA BURIED OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLANDS & BOLTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-111 (ANSI A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
48		32	57 1/2	15	32	1 1/4-6	60	2	31 3/8	50.97

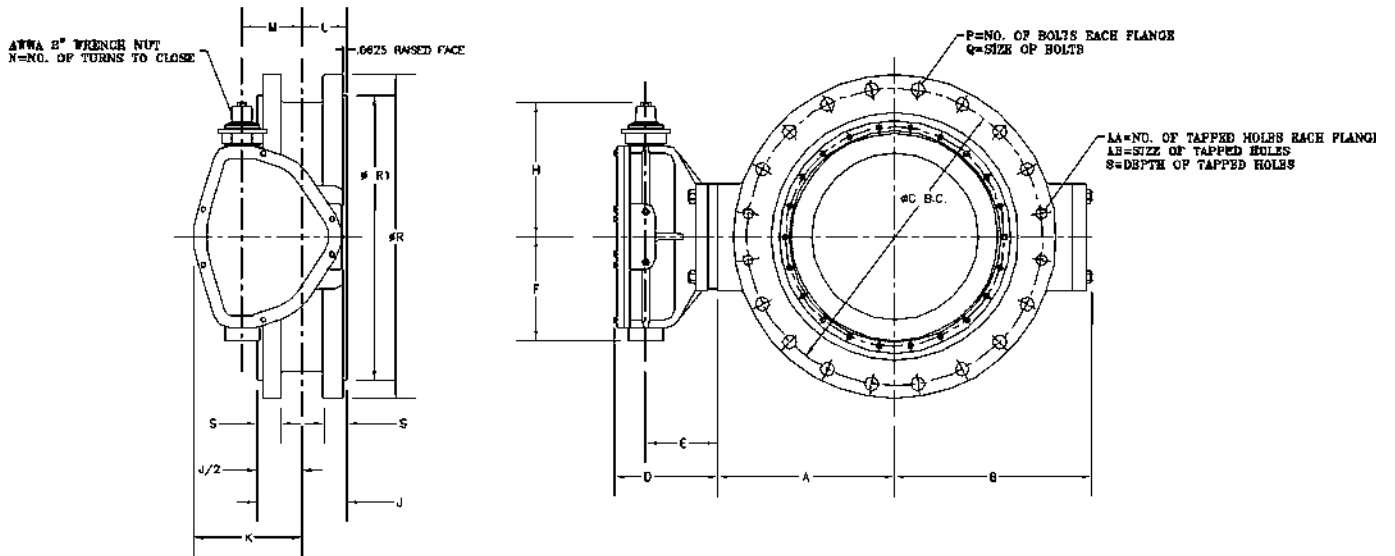
OPERATOR MODEL	D	E	F	H	K	L	M	N
GS 200/GZ 16-4	4.0	6.3	15.8	21.5	16.4	7.9	4.5	53
GS 250/GZ 26-8	5.3	10.5	19.3	24.7	20.4	9.8	4.5	104

ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE 1450 CL 250 FLANGED ENDS WITH BURIED OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI B 15.1 CLASS 250 FLANGES.
4. VALVE RATED FOR 250 PSI SERVICE.



VALVE SIZE	A	B	C	J	P	Q	R	R1	S	AA	AB
30	21.711	22.711	39.250	13.750	28	1.75	43	37.187	3	4	1 3/4-5
36	25.15	25.20	46	14.00	28	2.250	50	43.688	2.75	4	2-4 1/2
42	29.00	29.875	52.750	14.125	28	2.250	57	50.438	3.75	8	2-4 1/2

OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	9 1/16	6 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
4350	10 1/16	6 1/16	15 1/8	18	13 5/16	4 3/16	7 1/2	90

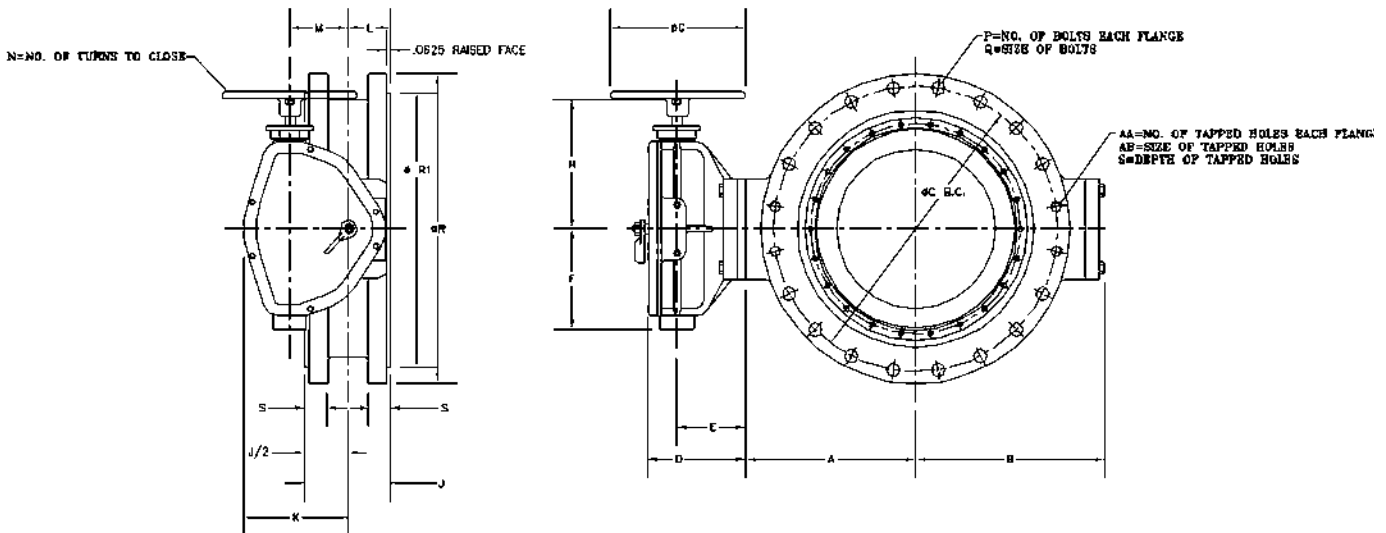
ASSEMBLY 30"-42" BUTTERFLY VALVE STYLE 1450 CL 250 FLANGED ENDS WITH HANDWHEEL OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI B 15.1 CLASS 250 FLANGES.
4. VALVE RATED FOR 250 PSI SERVICE.

FACED AND DRILL TO CLASS 250 SPECIFICATIONS



VALVE SIZE	A	B	C	J	P	Q	R	R1	S	AA	AB
30	21.711	22.711	39.250	13.750	28	1.75	43	37.187	3	4	1 3/4-5
36	25.15	25.20	46	14.00	28	2.250	50	43.688	2.75	4	2-4 1/2
42	29.00	29.875	52.750	14.125	28	2.250	57	50.438	3.75	8	2-4 1/2

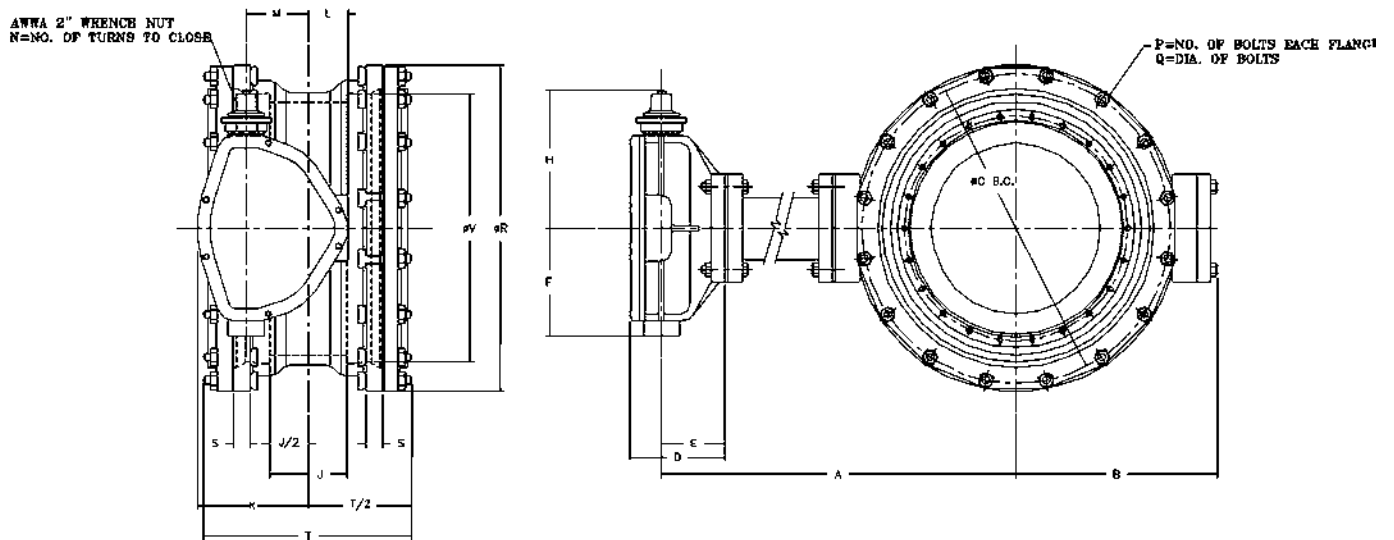
OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	9 1/16	6 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
4350	10 1/16	6 1/16	15 1/8	18	13 5/16	4 3/16	7 1/2	90

**ASSEMBLY 30"-42" BUTTERFLY VALVE
STYLE 1450 CL 250 MECHANICAL JOINT ENDS
WITH EXTENDED BONNET
(BURIED OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. GASKETS, GLAND & BLOTS FOR MECHANICAL JOINT ARE FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER.
3. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
4. REFERENCE AWWA STD. C-111 (A.N.S.I. A21-11)



VALVE SIZE	A	B	C	J	P	Q	R	S	T	V
30		21 1/4	36 7/8	12	20	1	38 1/8	1 13/16	28 3/8	32.17
36		24 7/8	43 2/4	12	24	1	48	2	28 3/8	38.47
42		28 7/8	50 5/8	12	28	1 1/4	53 1/8	2	28 3/8	44.67

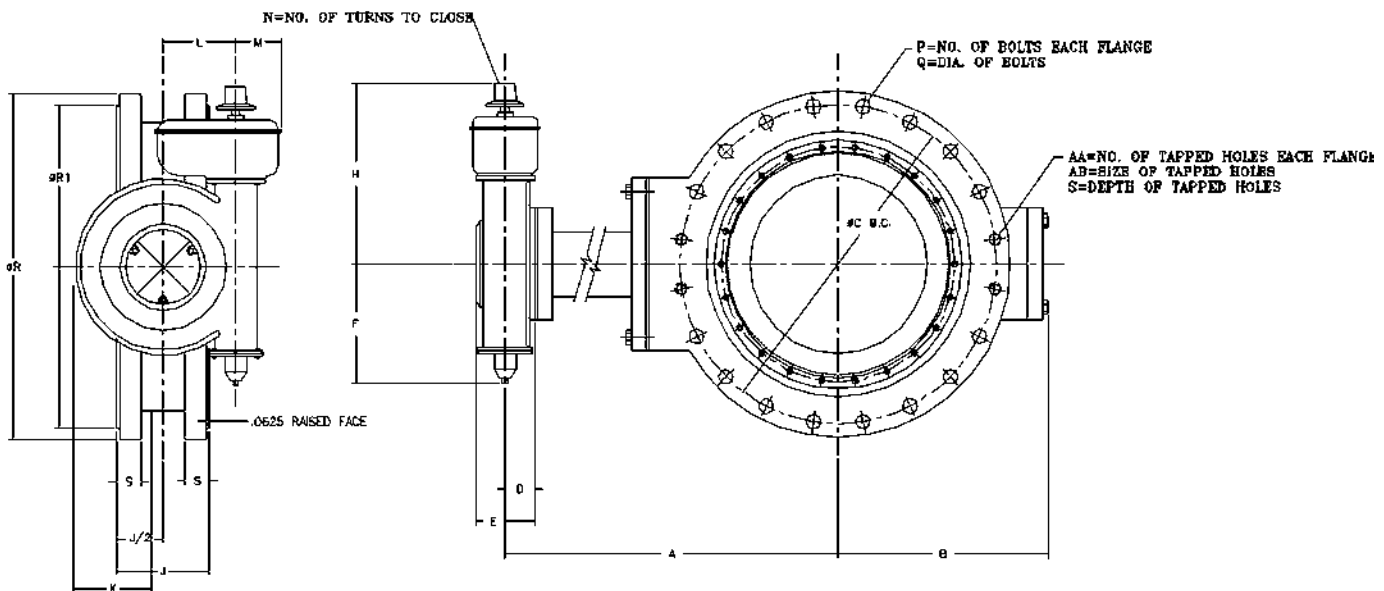
OPERATOR MODEL	D	E	F	H	K	L	M	N
2200	9 1/16	6 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
4350	10 1/16	6 1/16	15 1/8	18	13 5/16	4 3/16	7 1/2	90

**ASSEMBLY 48" BUTTERFLY VALVE
STYLE 1450 CL 250 FLANGED ENDS
WITH EXTENDED BONNET
(AUMA BURIED OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI CLASS 250 FLANGES & DRILLING
4. RATED FOR 250 PSI WORKING PRESSURE



FACED AND DRILL TO CLASS 250 SPECIFICATIONS

VALVE SIZE	A	B	C	J	P	Q	ØR	ØR1	S	AA	AB
48		33.35	60.75	17.50	32	2.250	85.00	51.625	4.00	8	2-4.5

OPERATOR MODEL	D	E	F	H	K	L	M	N	T
GS 200/GZ 16-8	4.0	8.3	15.8	20.7	16.4	7.9	4.5	106	16
GS 250/GZ 25-16	5.3	10.5	19.3	23.9	20.4	9.8	4.5	208	24

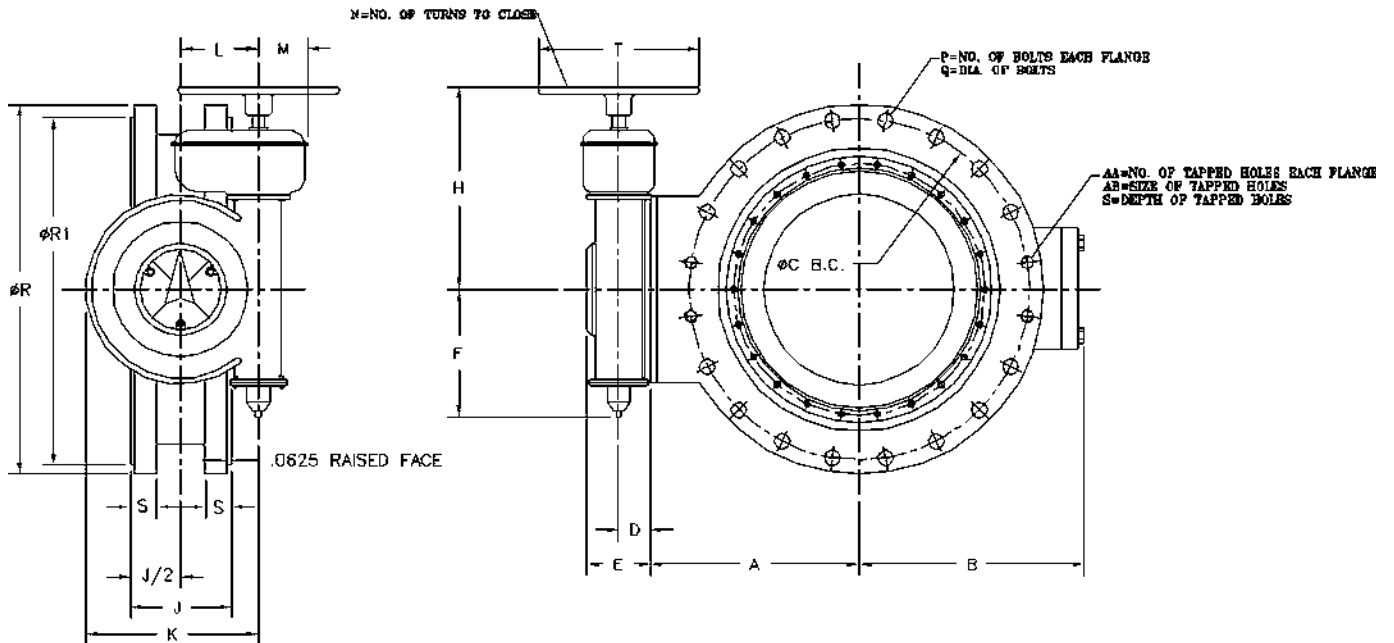
ASSEMBLY 48" BUTTERFLY VALVE STYLE 1450 CL 250 FLANGED ENDS WITH AUMA HANDWHEEL OPERATOR

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI CLASS 250 FLANGES & DRILLING
4. RATED FOR 250 PSI WORKING PRESSURE.

FACED AND DRILL TO CLASS 250 SPECIFICATIONS



VALVE SIZE	A	B	C	J	P	Q	ØR	ØR1	S	AA	AB
48"	32.75	33.35	60.75	17.50	32	2.250	85.00	51.625	4.00	8	2-4.5

OPERATOR MODEL	D	E	F	H	K	L	M	N	T
GS 200/GZ 16-8	4.0	8.3	15.8	20.7	16.4	7.9	4.5	106	16
GS 250/GZ 25-16	5.3	10.5	19.3	23.9	20.4	9.8	4.5	208	24

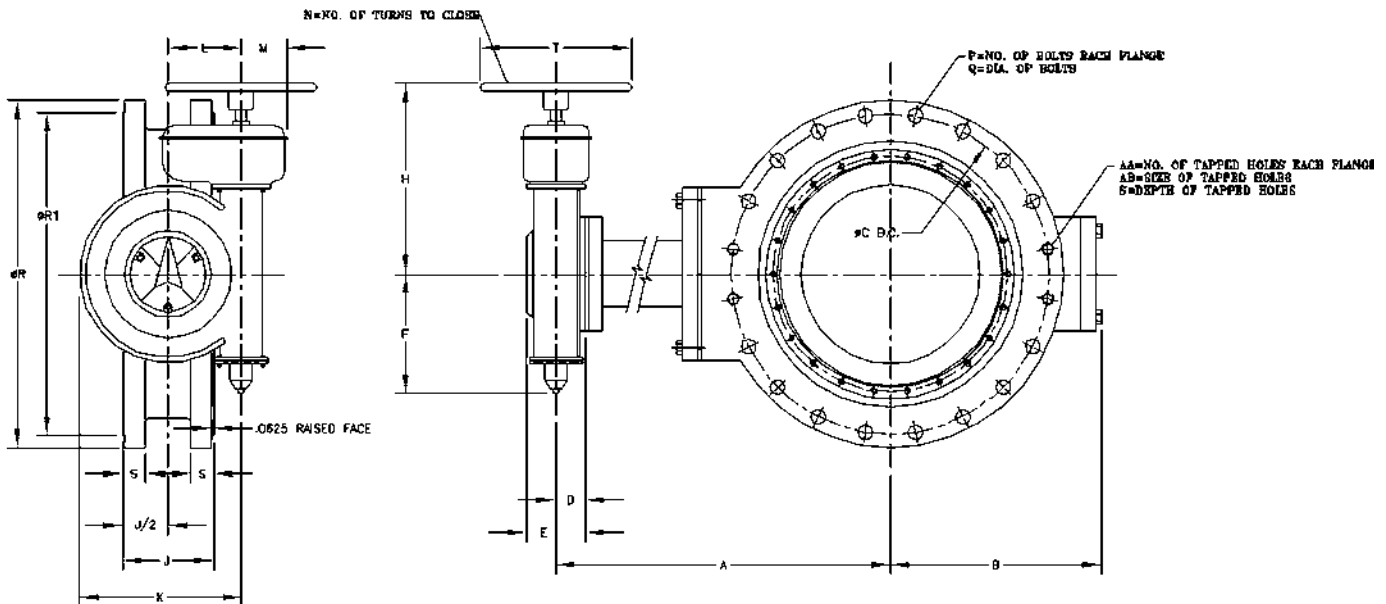
**ASSEMBLY 48" BUTTERFLY VALVE
STYLE 1450 CL 250 FLANGED ENDS
WITH EXTENDED BONNET
(AUMA HANDWHEEL OPERATOR)**

KENNEDY VALVE

NOTES:

1. FLOW MAY BE IN EITHER DIRECTION
2. VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
3. ANSI CLASS 250 FLANGES & DRILLING
4. RATED FOR 250 PSI WORKING PRESSURE.

FACED AND DRILL TO CLASS 250 SPECIFICATIONS

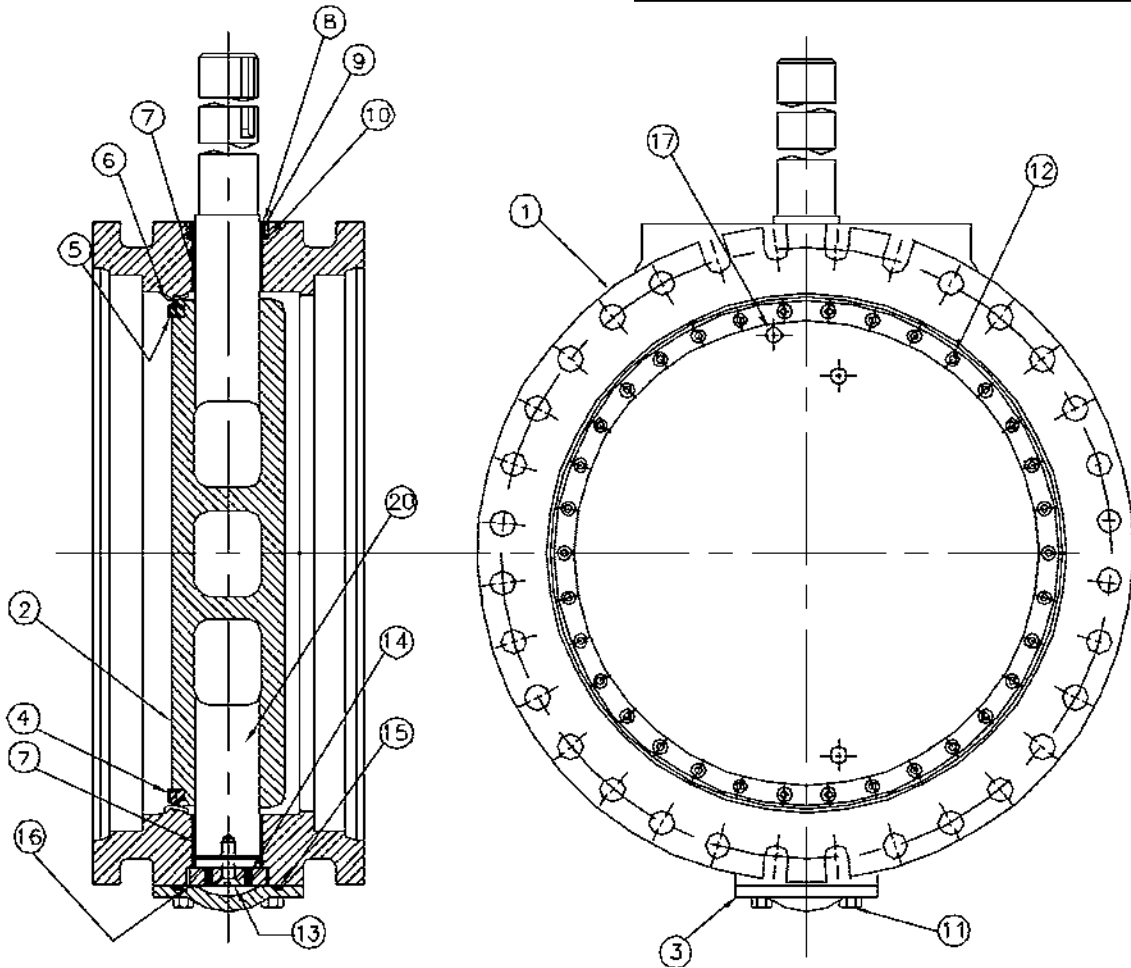


VALVE SIZE	A	B	C	J	P	Q	ØR	ØR1	S	AA	AB
48"		33.35	60.75	17.50	32	2.250	85.00	51.625	4.00	8	2-4.5

OPERATOR MODEL	D	E	F	H	K	L	M	N	T
GS 200/GZ 16-8	4.0	8.3	15.8	20.7	16.4	7.9	4.5	106	16
GS 250/GZ 25-16	5.3	10.5	19.3	23.9	20.4	9.8	4.5	208	24

**SUB-ASSEMBLY BUTTERFLY VALVE
STYLE 1450 CL 250 MECHANICAL JOINT
ENDS (NON-ADJUSTABLE PACKING)**

KENNEDY VALVE



ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	CAST IRON; ASTM-536, GR. 70-50-05 WITH 304 STAINLESS STEEL SEAT
2	VANE	DUCTILE IRON; ASTM A-536 GR. 70-50-05
3	COVER END	CAST IRON; A-126, CLASS B
4	SEAT RING, VANE	BUNA "S"
5	CLAMP RING, SEAT	304 STAINLESS STEEL
6	SEALING WASHER	NYLON
7	BUSHING, BODY	FIBERGLIDE (REINFORCED TEFLON)
8	CARTRIDGE, SHAFT	BRONZE
9	SEAL, SHAFT	BUNA "N"
10	SEAL CARTRIDGE	BUNA "N"
11	BOLT, END COVER	COMMERCIAL STEEL
12	SOCKET SCREW-FLAT HEAD	18-8 STAINLESS STEEL WITH NYLOK INSERT
13	SOCKET SCREW-FLAT HEAD	18-8 STAINLESS STEEL WITH NYLOK INSERT
14	SET SCREW-FLAT POINT	18-8 STAINLESS STEEL WITH NYLOK INSERT
15	END COVER SEAL	BUNA "N"
16	THRUST BEARING 12	BRONZE
17	TAPER PIN	STAINLESS STEEL
18	TAPER PIN NUT	18-8 STAINLESS STEEL
19	SHAFT (OPERATOR)	TYPE 630, CONDITION H7100 STAINLESS STEEL ASTM A-354
20	SHAFT (THRUST)	304 STAINLESS STEEL