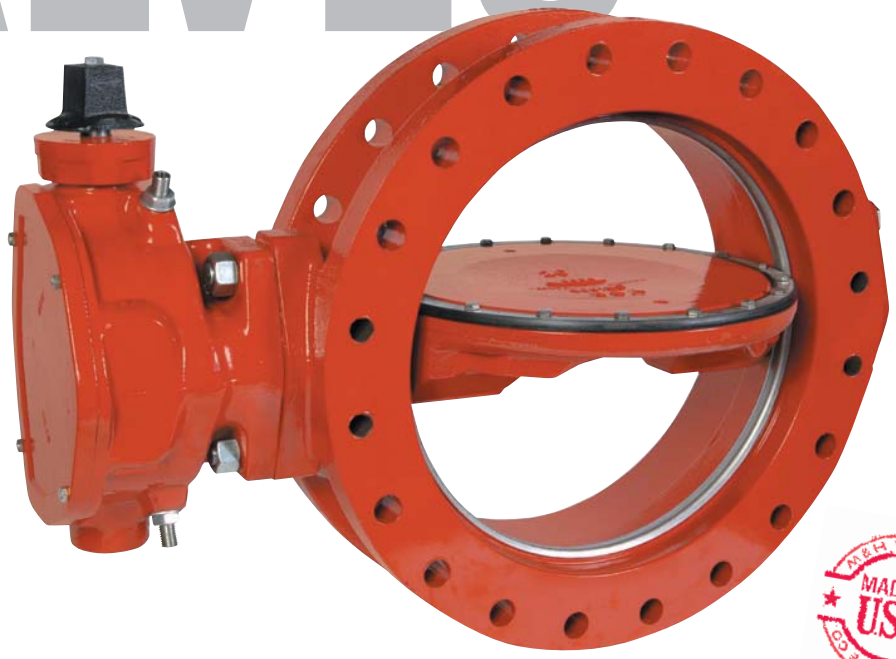
An industry leader in underground and in-plant applications.

BUTTERFLY VALVES

STYLE 4500 3"– 24"
STYLE 1450 30"– 54"
Consult factory for
sizes 60" – 120"



C504 • Class 150B & 250B

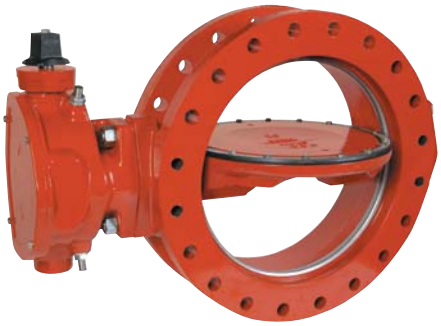
M&H VALVE COMPANY

M&H Valve is a division of McWane, Inc.

www.mh-valve.com

For Generations

M&H VALVE COMPANY



AWWA Class 250B Butterfly Valves

M&H Style 4500: 4"– 24"
1450: 30"– 48"

RECOMMENDED SPECIFICATIONS

1. All butterfly valves shall be of the rubber-seated, tight-closing type. They shall meet or exceed AWWA standard C504, latest edition, Class 250. All valves shall be M&H 4500/1450 butterfly valves, or approved equal.
2. Both ends shall be ANSI A21.11 mechanical joint or per flanged ANSI B16.1 (or as otherwise noted on plans and specs).
3. Valve shafts shall be ASTM A564 Type 630 stainless steel. Each valve shaft shall be of a one-piece design for valves 12" and smaller and a two-piece design for valves 14" and larger. Valve shafts shall have a minimum diameter extending through the valve bearings and into the valve disc as specified in AWWA C504. All valve shafts must meet or exceed the minimum connection torque requirement set forth in AWWA C504.
4. All valve bodies and vanes 4"– 48" shall be of high-strength ductile iron to ASTM A536, Grade 70-50-05 with ASTM A276 Type 304 stainless steel body seat.
5. Rubber valve seats shall be a full-circle 360 degree, seat not penetrated by the valve shaft. Valve seat shall be EPDM for cold or high water temperature applications.
6. The valve seat will be attached to the valve vane by 18-8 Type 304 stainless steel self-locking fasteners. The valve seat must be easily field adjustable and replaceable without any special tools or lengthy curing time.
7. Valve shaft seals shall be of the O-ring type and utilize the same elastomer as specified for the valve seats and for the intended service. Valves using self-compensating split V-type packing will not be accepted. All valve shaft seals must be easily field replaceable.
8. Valve actuator shall be of the traveling nut type, sealed and lubricated for underground or in-plant service. Operator 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 operator. Operators for valves 14" and larger must have a 304 stainless steel external stop limiting device and travel adjustment. The travel adjustments must be able to be operated without removing the valve from the line or removing the actuator cover. No internal travel adjustment devices will be acceptable. All valve actuators must be sized per AWWA C504. Certification of proof of design and torque requirements shall be submitted to the owner upon request.
9. Handcrank, Handwheel or Chainwheel – All manual operators for service other than underground shall have a position indicator and shall be totally enclosed and permanently lubricated. Actuators shall be designed to produce the required operating torque with a maximum rim pull of 80 lb. on handwheel or chainwheel and a maximum input of 150 ft. lb. on operating nuts.
10. Cylinder – Cylinder operator shall be of the base mounted configuration. Cylinder barrel shall be of molybdenum-disulfide lined glass fiber reinforced epoxy tubing, to provide a corrosion-free, self-lubricated high-strength barrel. Rod seal shall be of urethane, molybdenum-disulfide filled, to provide a self-lubricated, long life seal.
11. The valve interior and exterior surfaces shall be coated in accordance with the latest revisions of AWWA C504 and must be NSF 61 Certified.

ENGINEERING FEATURES

STYLE 1450 BUTTERFLY VALVE

30"– 54"

The Class 150B 36" valve is featured in this cutaway. Check out **mh-valve.com** for additional materials, end configurations by size and pressure class options.

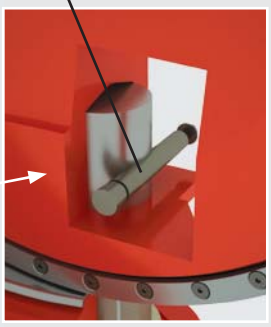
STAINLESS STEEL SHAFT
Ruggedly constructed valve shafts of 304 stainless steel meet or exceed AWWA standard C504.

BEARINGS
Generously sized, stainless steel backed, Teflon bearings provided on operator and thrust ends are self-lubricated, providing low friction support for the life of the valve. No maintenance is required.

O-RING CARTRIDGE
Maximum shaft sealing efficiency with a non-adjustable bronze O-ring cartridge

TAPER PINS
Full metal-to-metal contact, vane to shaft connection is accomplished by stainless steel taper pins secured with stainless steel lock nuts.

OFFSET VANE DESIGN
Newly engineered vane provides large free flow area without sacrificing vane strength. Vane construction is of A536 ductile iron to meet or exceed AWWA standard C504.

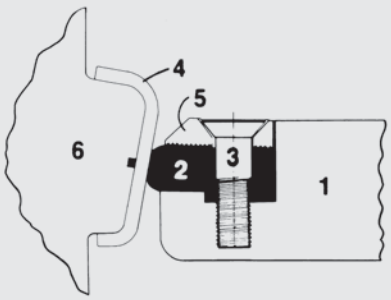


VALVE BODY
Heavy duty ASTM A536 ductile iron body designed and manufactured to meet or exceed AWWA standard C504.

SEALING SYSTEM
Sealing system in which the seal is locked into a vane recess and is further restrained by a segmented clamp ring. Seal relaxation when the valve is in the open position is eliminated.

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

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.

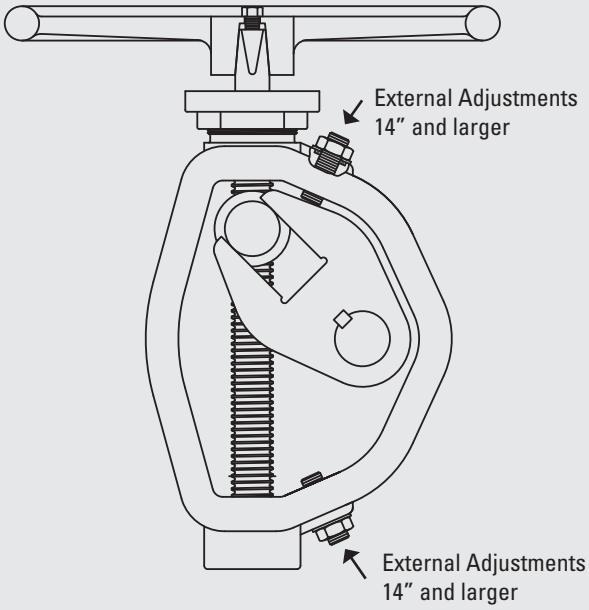


1 VANE
2 360 DEGREE RUBBER SEAT
3 STAINLESS STEEL SELF-LOCKING SCREW FASTENER; WITH NYLON SLEEVE
4 STAINLESS STEEL BODY SEAT RING
5 STAINLESS STEEL SEAT RETAINING RING
6 VALVE BODY

AWWA C504 BUTTERFLY VALVES

M&H VALVE COMPANY

Traveling Nut Operator
3"– 42" Butterfly Valves



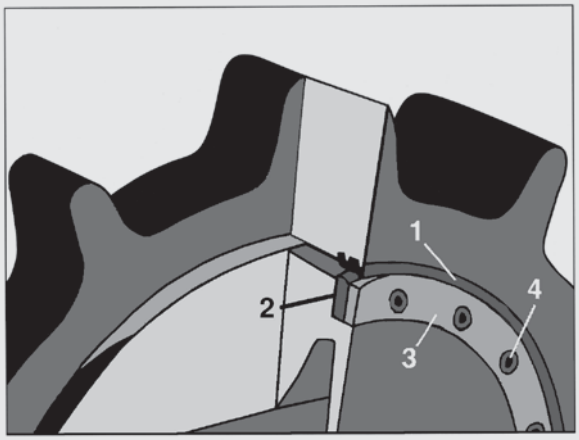
450 FT-LBS. OVERLOAD PROTECTION. Overloads developed by excessive input torque are absorbed instead of being transmitted to mechanism and valve. Lets you apply up to 450 ft-lbs. input torque at open and closed positions without damage to valve or operator.

PERMANENTLY SEALED. Underground operator is permanently lubricated and sealed from ground water.

REDUCES WATER HAMMER. Operator design is such that constant input speed results in variable output speed with slowing down of valve closure at ends of travel. This effect reduces water hammer, while maintaining rated output torque throughout entire travel.

AWWA OPERATING NUT. The two-inch square operating nut on the underground operator is clearly marked with "open" and direction arrow. All other operators have position indicators, which clearly show "open-shut" positions.

Rubber to Stainless Seating
Style 4500
3"– 24" Butterfly Valves



RUBBER TO STAINLESS SEATING provides bubble-tight, permanent closure.

The unique vane-seat and body-seat construction of the M&H butterfly valve assures you of 100% bubble-tight sealing for the life of the valve.

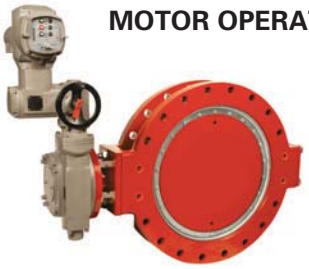
The 304 **STAINLESS STEEL SEAT (1)** is made integral with the valve body for a permanent, corrosion-resistant seating area.

The **RUBBER SEAT (2)** is vulcanized to the stainless steel **SEAT-RETAINING RING (3)**, which is firmly clamped to the vane by stainless steel **SELF-LOCKING SCREW FASTENERS (4)**. This construction forms a positive lock between vane and rubber seat, which assures 360 degree leak-free seating.

ACCESSORIES / OPTIONS

FLOOR STANDS

F5500 N.R.S.
F5505 N.R.S. INDICATING



MOTOR OPERATOR

FLOOR BOX

F5695 BUSHED TO MEET STEM DIAMETER SPEC
MAX. LENGTH 12"
MAX. STEM DIAMETER 2 1/4"

CYLINDER OPERATOR

STEM GUIDES

F5660

SIZE	MIN. LENGTH*	MAX. LENGTH*
#1	2 1/2"	17"
#2	15"	24"
#3	24"	35"

** Distance from wall*

T-HANDLE VALVE WRENCHES

F2520 RIGID WRENCH

EXTENSION STEMS

UP TO 2 1/4" DIAMETERS
ANY LENGTH

COMMITTED TO ENVIRONMENTAL RESPONSIBILITY

M&H VALVE COMPANY IS COMMITTED TO PROTECTING OUR NATURAL RESOURCES THROUGH ENVIRONMENTALLY RESPONSIBLE MANUFACTURING PRACTICES, INCLUDING THE USE OF 80+% RECYCLED CONTENT IN OUR HYDRANTS AND VALVES.

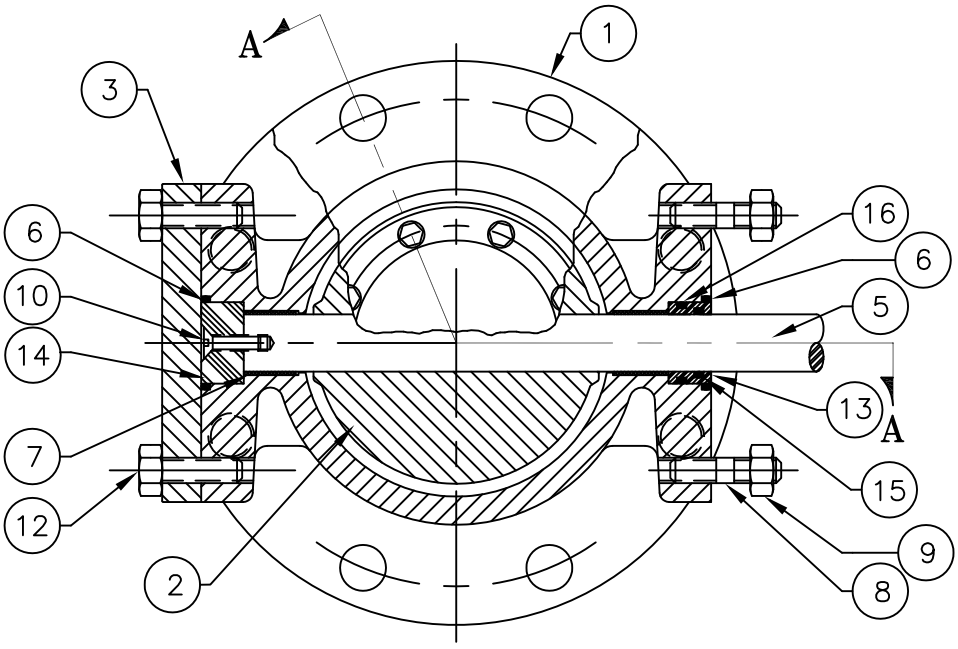
To learn more about our commitment to the environment, call 800-829-2569.

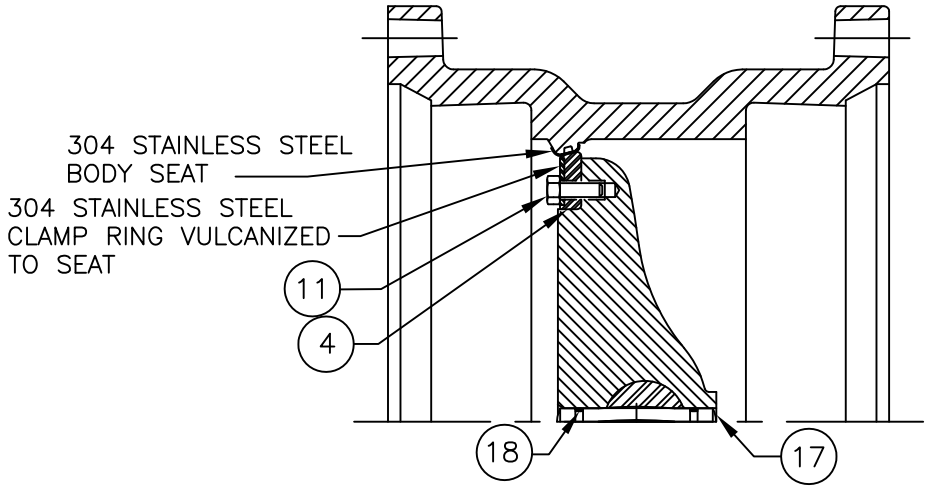
www.mh-valve.com

M&H VALVE COMPANY

605 West 23rd Street • Anniston, Alabama 36201
PHONE 256-237-3521 FAX 888-549-5309

For Generations





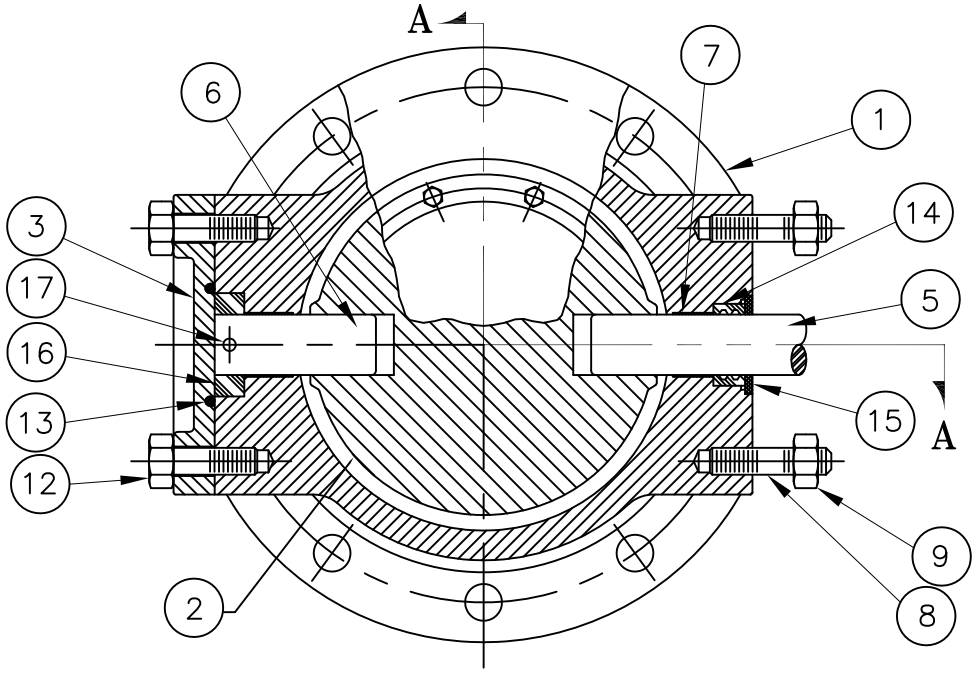
SECTION A–A

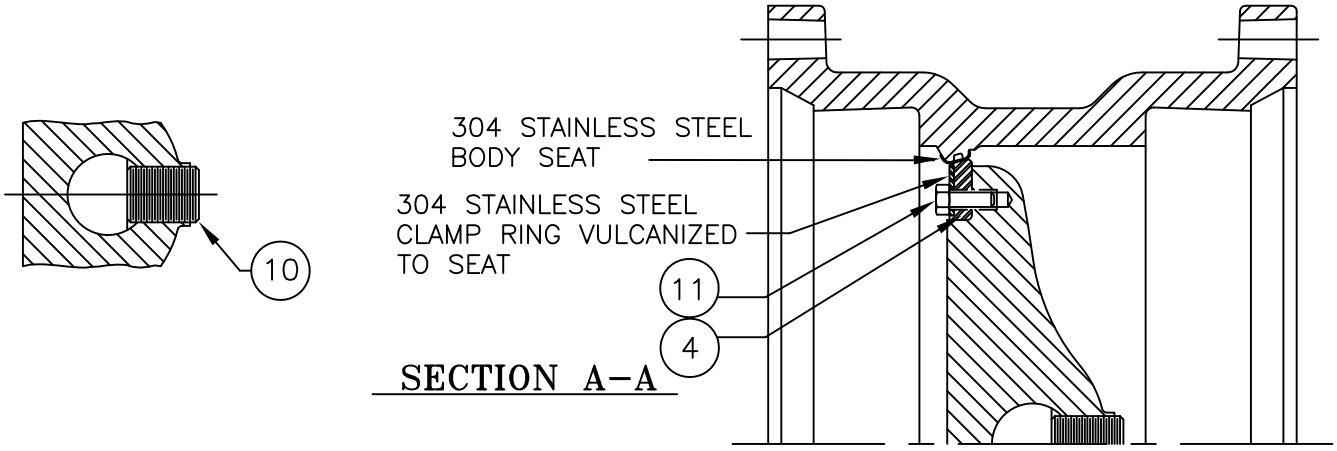
ITEM #	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A–536 GR. 70–50–05
2	VANE	DUCTILE IRON ASTM A–536 GR. 70–50–05
3	COVER, END	CAST IRON, A–126, CLASS B
4	SEAT RING, VANE	EPDM WITH 304 STAINLESS STEEL INSERT
5	SHAFT	TYPE 630, CONDITION H1100 STN. STL. ASTM A–564
6	O–RING, BODY	BUNA–N
7	BEARING, BODY	NYLATRON GS NYLON
8	STUD	STEEL, ASTM A–307, ELCTRO ZINC PLATED
9	NUT, HEAVY HEX	STEEL, ASTM A–563, GRADE A, ELCTRO 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	ACETAL
14	THRUST DISK	ACETAL
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

M&H VALVE COMPANY
ANNISTON,ALABAMA
A DIVISION OF MCWANE INC.

DWN: MMR
DATE: 8/9/11
DWG. NO. BMJ–25–45A

4"–12" STYLE 4500
CLASS 250 BUTTERFLY VALVE
SUB–ASSEMBLY / MATERIAL LIST
MJ X MJ





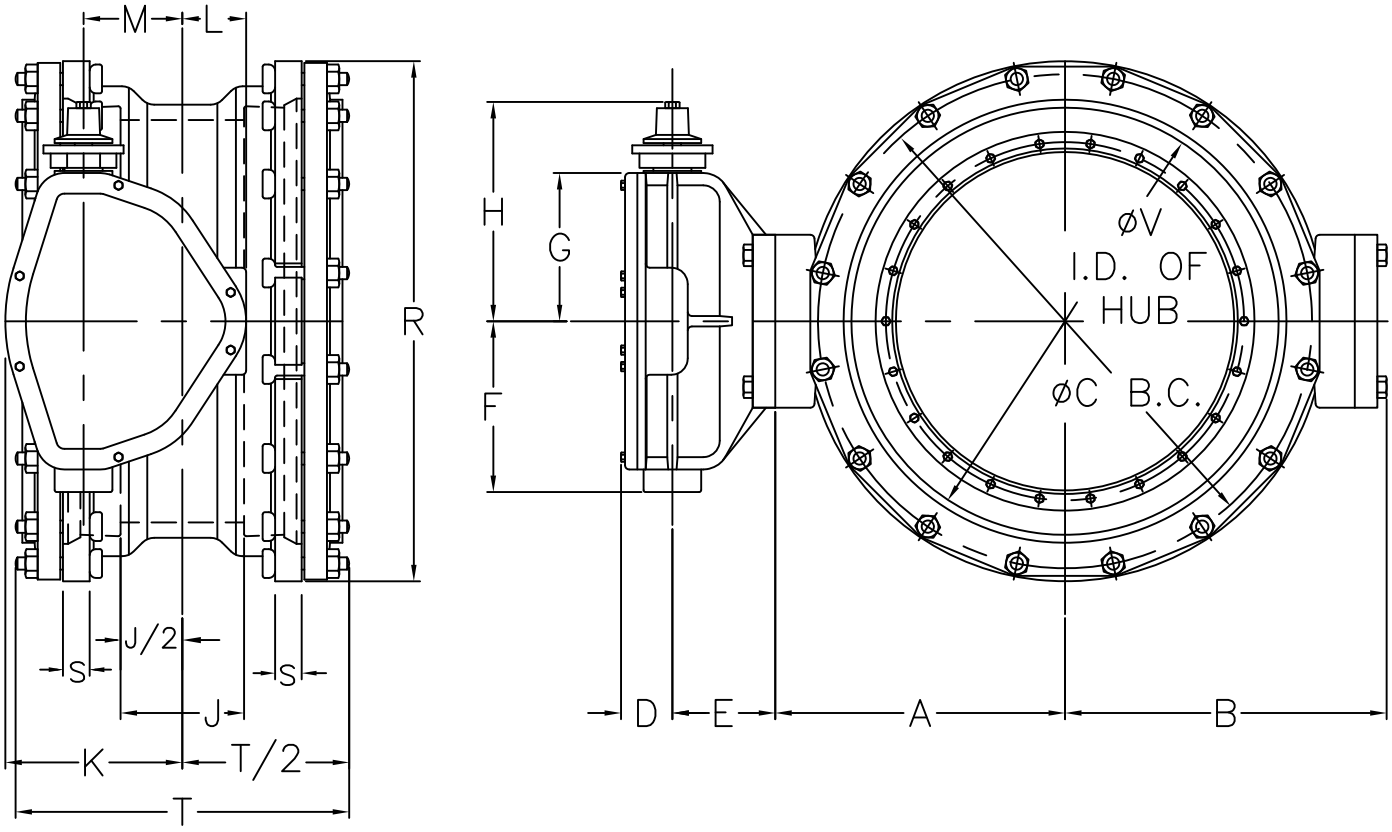
SECTION A–A

ITEM #	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	EPDM WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	TYPE 630, CONDITION H1100 STN. STL. ASTM A–564
6	SHAFT, THRUST	304 STAINLESS STEEL, ASTM A–276
7	BUSHING	REINFORCED TEFLON
8	STUD	STEEL, ASTM A–307, ELCTRO ZINC PLATED
9	NUT, HEX	STEEL, ASTM A–307, GRADE A, ELCTRO 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, ELCTRO ZINC PLATED
13	O–RING, END COVER	BUNA–N
14	SHAFT SEAL	BUNA–S
15	SEAL RING	STEEL, C–1018
16	THRUST COLLAR	BRONZE ALLOY UNS C93200
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

M&H VALVE COMPANY
ANNISTON,ALABAMA
A DIVISION OF MCWANE INC.

DWN: MMR
DATE: 8/10/11
DWG. NO. BMJ–25–45B

14" THRU 24" STYLE 4500 CLASS 250 BUTTERFLY VALVE SUB–ASSEMBLY / MATERIAL LIST MJ X MJ



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

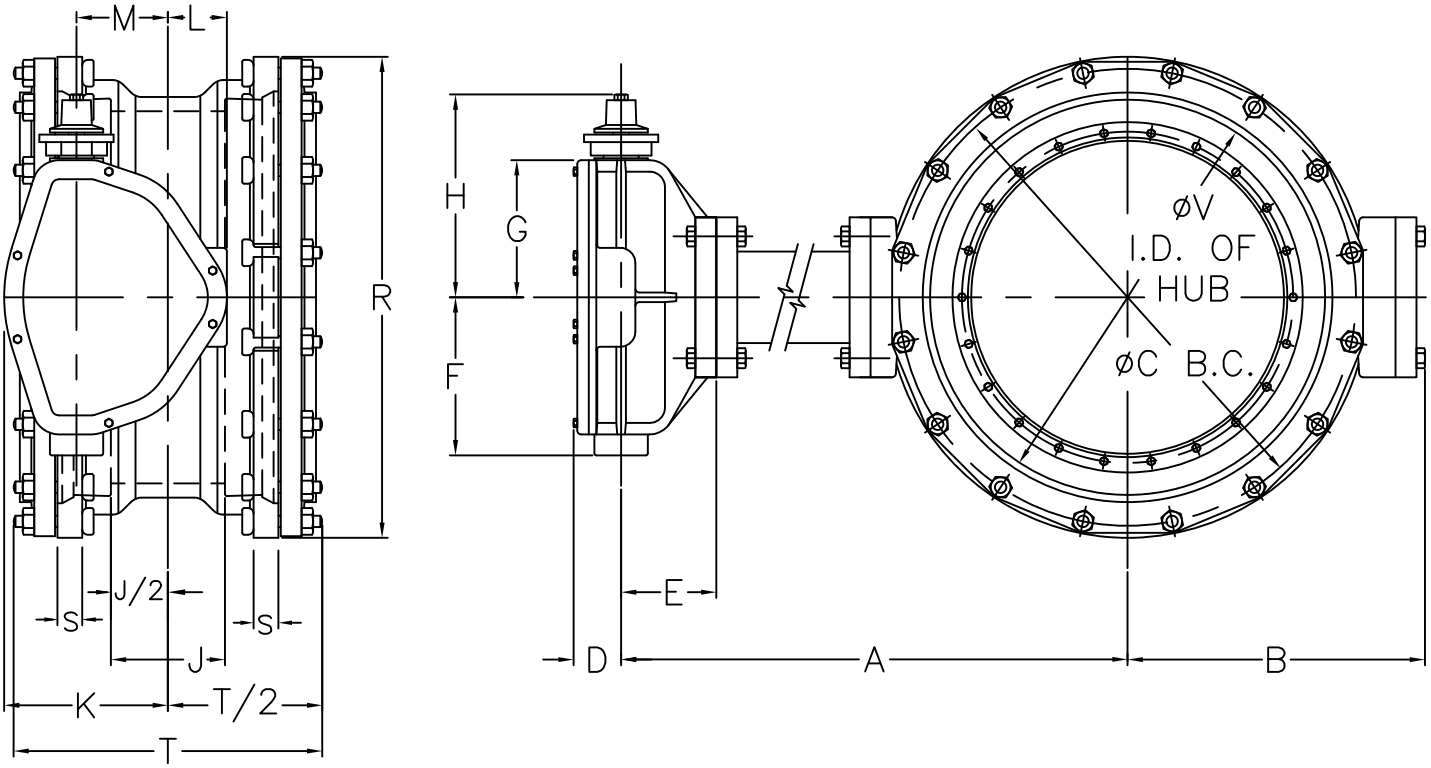
VALVE SIZE	A	B	C	J	P	Q	R	S	T	V	WEIGHT
4"	4	5 1/8	7 1/2	2 1/2	4	3/4x3 1/2	9 1/8	1	12 3/4	$4.90^{+.07}_{-.03}$	80
6"	5	6 1/8	9 1/2	2 7/8	6	3/4x3 1/2	11 1/8	1 1/16	13	$7.00^{+.07}_{-.03}$	100
8"	6	7 3/8	11 3/4	3	6	3/4x4	13 3/8	1 1/8	14	$9.15^{+.07}_{-.03}$	150
10"	7 3/4	9 1/2	14	4 1/4	8	3/4x4	15 11/16	1 3/16	15 1/8	$11.20^{+.07}_{-.03}$	242
12"	9 1/2	10 7/8	16 1/4	4 1/4	8	3/4x4	17 15/16	1 1/4	16	$13.30^{+.07}_{-.03}$	310
14"	10 7/16	12 3/16	18 3/4	5 3/8	10	3/4x4	20 5/16	1 5/16	17 5/8	$15.44^{+.06}_{-.07}$	510
16"	12 3/16	13 15/16	21	5 1/4	12	3/4x4 1/2	22 9/16	1 3/8	18 1/2	$17.54^{+.06}_{-.07}$	595
18"	13 5/16	15 1/16	23 1/4	6 1/8	12	3/4x4 1/2	24 13/16	1 7/16	19 1/4	$19.64^{+.06}_{-.07}$	760
20"	14 7/8	16 5/8	25 1/2	6 1/8	14	3/4x4 1/2	27 1/16	1 1/2	19 1/8	$21.74^{+.06}_{-.07}$	885
24"	17 19/32	19 5/16	30	7 1/2	16	3/4x5	31 9/16	1 5/8	21 1/4	$25.94^{+.06}_{-.07}$	1190

NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C-111 (A.N.S.I. A21-11)
NOTE 4: "N" = NUMBER OF TURNS TO CLOSE
NOTE 5: "P" = NUMBER OF BOLTS ON EACH FLANGE
NOTE 6: "Q" = DIAMETER OF BOLTS
NOTE 7: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 8: RATED AND TESTED FOR 250 PSI WORKING PRESSURE
NOTE 9: GASKET, GLANDS, BOLTS, FOR MECHANICAL JOINT FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER

M&H VALVE COMPANY
ANNISTON, ALABAMA
A DIVISION OF MCWANE INC.

DWN: TRIJ
DATE: 8/10/11
DWG. NO. BMJ-25-45C

4"-24" STYLE 4500
CLASS 250 BUTTERFLY VALVE
BURIED OPERATOR
MJ x MJ



VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4"	65	2	3 9/16	3 5/8	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6"	150	2	3 9/16	3 5/8	3	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8"	250	2 1/8	3 11/16	4 1/4	3 7/8	8 3/4	4 1/2	2 3/8	2	24
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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	6	72

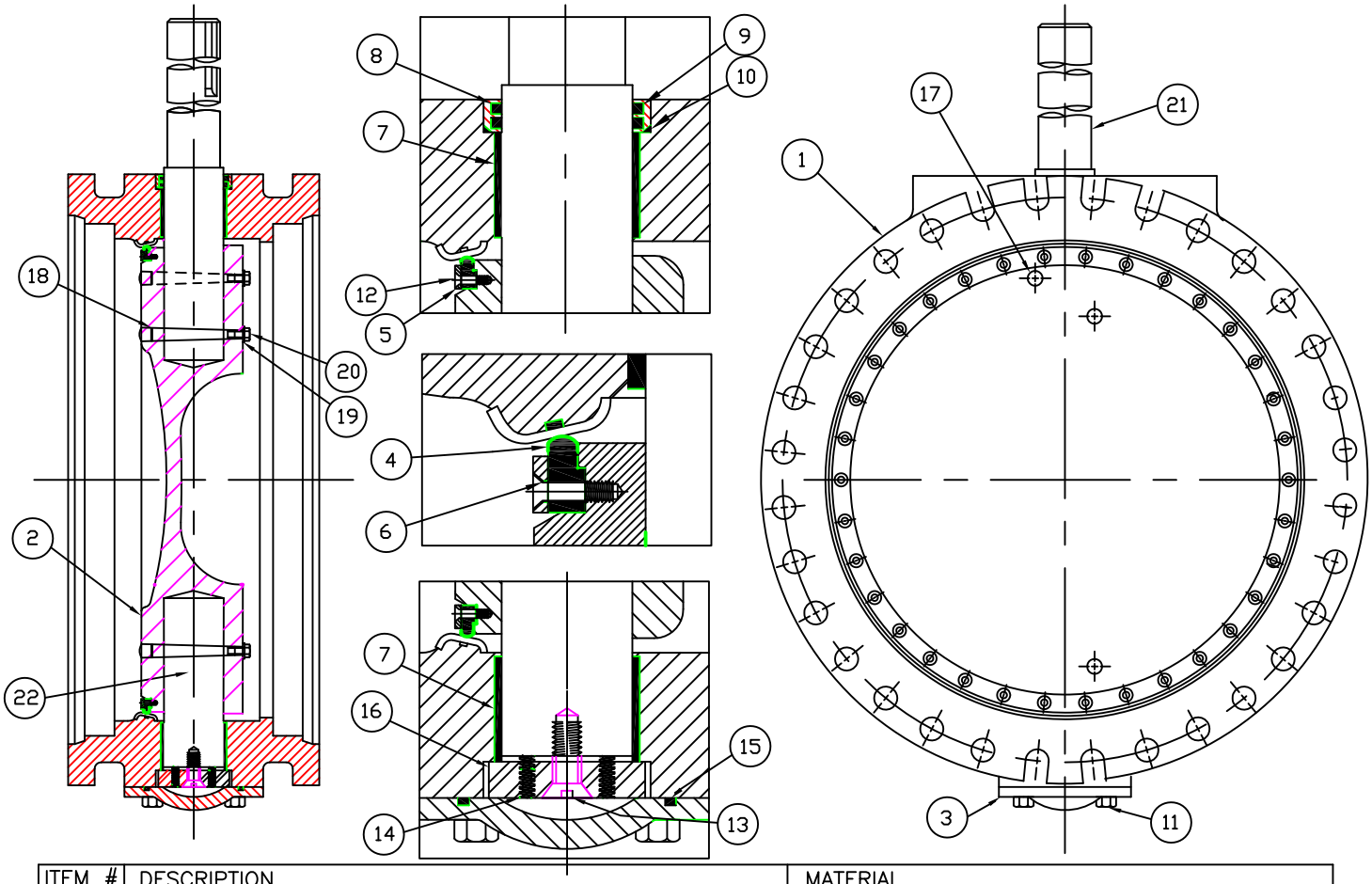
VALVE SIZE	A	B	C	J	P	Q	R	S	T	V	WEIGHT
4"	NOTE AA	5 1/8	7 1/2	2 1/2	4	3/4x3 1/2	9 1/8	1	12 3/4	$4.90^{+.07}_{-.03}$	80
6"	NOTE AA	6 1/8	9 1/2	2 7/8	6	3/4x3 1/2	11 1/8	1 1/16	13	$7.00^{+.07}_{-.03}$	100
8"	NOTE AA	7 3/8	11 3/4	3	6	3/4x4	13 3/8	1 1/8	14	$9.15^{+.07}_{-.03}$	150
10"	NOTE AA	9 1/2	14	4 1/4	8	3/4x4	15 11/16	1 3/16	15 1/8	$11.20^{+.07}_{-.03}$	242
12"	NOTE AA	10 7/8	16 1/4	4 1/4	8	3/4x4	17 15/16	1 1/4	16	$13.30^{+.07}_{-.03}$	310
14"	NOTE AA	12 3/16	18 3/4	5 3/8	10	3/4x4	20 5/16	1 5/16	17 5/8	$15.44^{+.06}_{-.07}$	510
16"	NOTE AA	13 15/16	21	5 1/4	12	3/4x4 1/2	22 9/16	1 3/8	18 1/2	$17.54^{+.06}_{-.07}$	595
18"	NOTE AA	15 1/16	23 1/4	6 1/8	12	3/4x4 1/2	24 13/16	1 7/16	19 1/4	$19.64^{+.06}_{-.07}$	760
20"	NOTE AA	16 5/8	25 1/2	6 1/8	14	3/4x4 1/2	27 1/16	1 1/2	19 1/8	$21.74^{+.06}_{-.07}$	885
24"	NOTE AA	19 5/16	30	7 1/2	16	3/4x5	31 9/16	1 5/8	21 1/4	$25.94^{+.06}_{-.07}$	1190

NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C-111 (A.N.S.I. A21-11)
NOTE 4: "N" = NUMBER OF TURNS TO CLOSE
NOTE 5: "P" = NUMBER OF BOLTS ON EACH FLANGE
NOTE 6: "Q" = DIAMETER OF BOLTS
NOTE 7: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 8: RATED AND TESTED FOR 250 PSI WORKING PRESSURE
NOTE 9: GASKET, GLANDS, BOLTS, FOR MECHANICAL JOINT FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER
NOTE 10: MAXIMUM LENGTH OF TORQUE TUBE (15 FEET)--BONNET SUPPORTS SHOULD BE USED ON ALL BONNETS EXCEEDING 6 FEET CENTERLINE OF VALVE TO CENTERLINE OF OPERATOR. ALL BONNET SUPPORTS SHALL BE SUPPLIED BY CUSTOMER
NOTE AA: "A" VARIES TO ENGINEER SPECIFICATIONS
*NOTE AB: APPROXIMATE WEIGHT PER EACH FOOT OF EXTENDED BONNET 25LBS(4"-12"), 50LBS(14"-16"), 80LBS(18"-24")

M&H VALVE COMPANY
ANNISTON,ALABAMA
A DIVISION OF MCWANE INC.

DWN: TRIJ
DATE: 8/10/11
DWG. NO. BMJ-25-45D

4" THRU 24" STYLE 4500
CLASS 250 BUTTERFLY VALVE
WITH EXTENDED BONNET
BURIED OPERAOTR
MJ X MJ



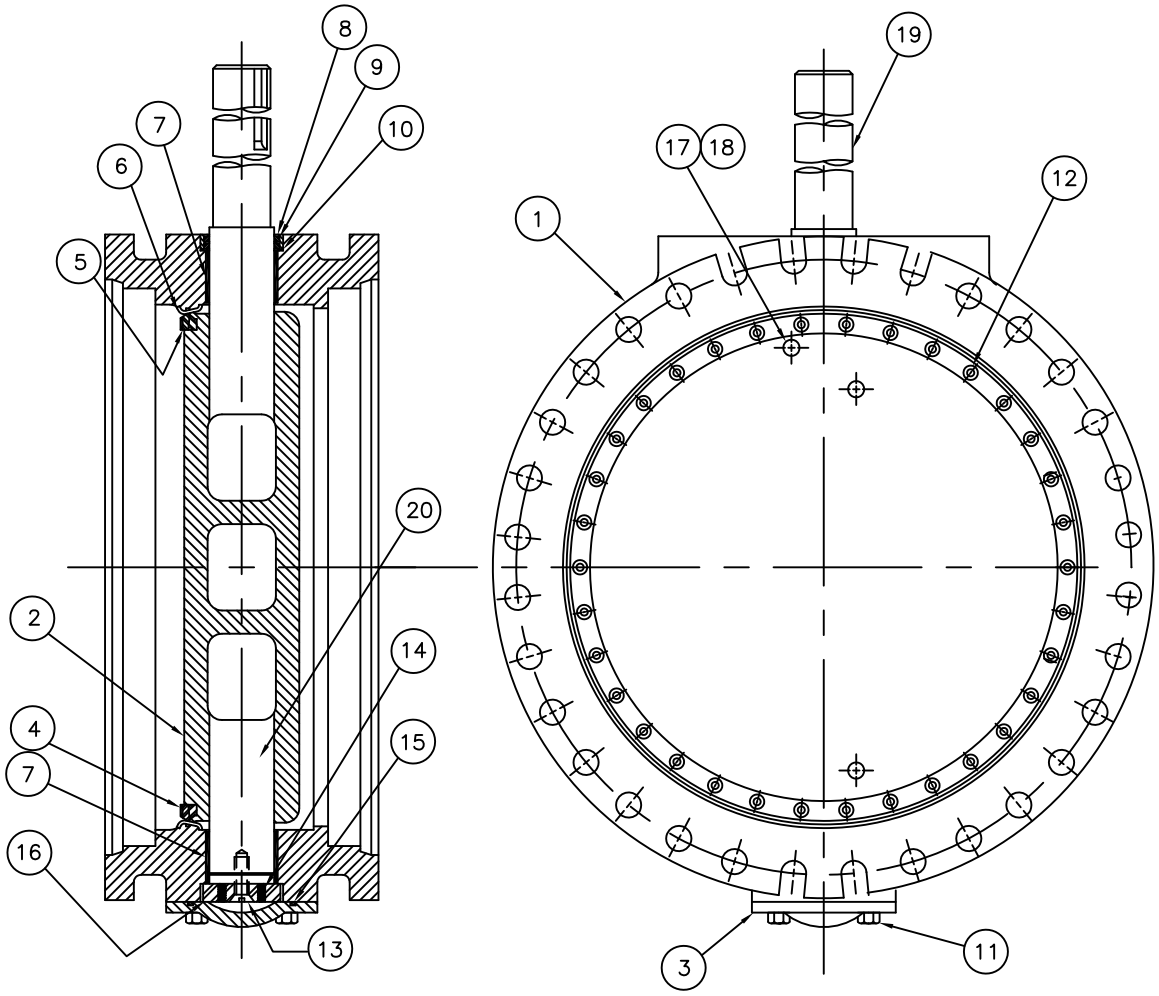
ITEM #	DESCRIPTION	MATERIAL
1A	VALVE BODY	DUCTILE IRON, ASTM A-536, Grade 70-50-05
1B	BODY RING (Permanently Attached)	304 STAINLESS STEEL
1C	BODY O-RING (Permanently Attached)	BUNA-N
2	VANE	DUCTILE IRON, ASTM A-536, Grade 70-50-05
3	END COVER PLATE	DUCTILE IRON, ASTM A-536, Grade 70-50-05
4	RUBBER VANE SEAT RING	EPDM
5	SEGMENTED CLAMP RING (4)	304 STAINLESS STEEL, ASTM A-276
6	SEALING WASHER	NYLON
7	SHAFT SLEEVE BEARING	FIBERGLIDE BACKED WITH STAINLESS STEEL
8	SHAFT O-RING CARTRIDGE	BRONZE
9	O-RING SHAFT SEALS (2)	BUNA-N
10	OUTSIDE O-RING CARTRIDGE SEAL	BUNA-N
11	END COVER PLATE HEX BOLTS	STEEL, ASTM A-307,ELECTRO ZINC PLATED
12	FLAT HEAD SOCKET SCREW (For Rubber Vane Seat Ring)	18-8 STAINLESS STEEL (WITH LOCTITE)
13	FLAT HEAD SOCKET SCREW (For Thrust Bearing)	18-8 STAINLESS STEEL (WITH NYLOK INSERT)
14	ALLEN HEAD SET SCREW (For Thrust Bearing)	18-8 STAINLESS STEEL (WITH NYLOK INSERT)
15	END COVER PLATE O-RING	BUNA-N
16	THRUST BEARING	BRONZE
17	TAPER PIN (3)	416 STAINLESS STEEL
18	TAPER PIN O-RING (3)	BUNA-N
19	TAPER PIN WASHER (3)	416 STAINLESS STEEL
20	TAPER PIN BOLT (3)	304 STAINLESS STEEL
21	SHAFT (OPERATOR)	STAINLESS STL ASTM A-564. H1100 TYPE 630
22	SHAFT (THRUST SIDE)	304 STAINLESS STEEL

CONSULT MH-VALVE.COM OR LOCAL REPRESENTATIIVE FOR DETAILS ON OPTIONAL MATERIALS

M&H VALVE COMPANY
ANNISTON, ALABAMA
A DIVISION OF MCWANE INC.

DWN: TRIJ
DATE: 9/1/12
DWG. NO. BMJ-25-14AA

30" & 36"
AWWA C504-STYLE 1450
CLASS 250 BUTTERFLY VALVE
SUB-ASSEMBLY / MATERIAL LIST
MJ X MJ

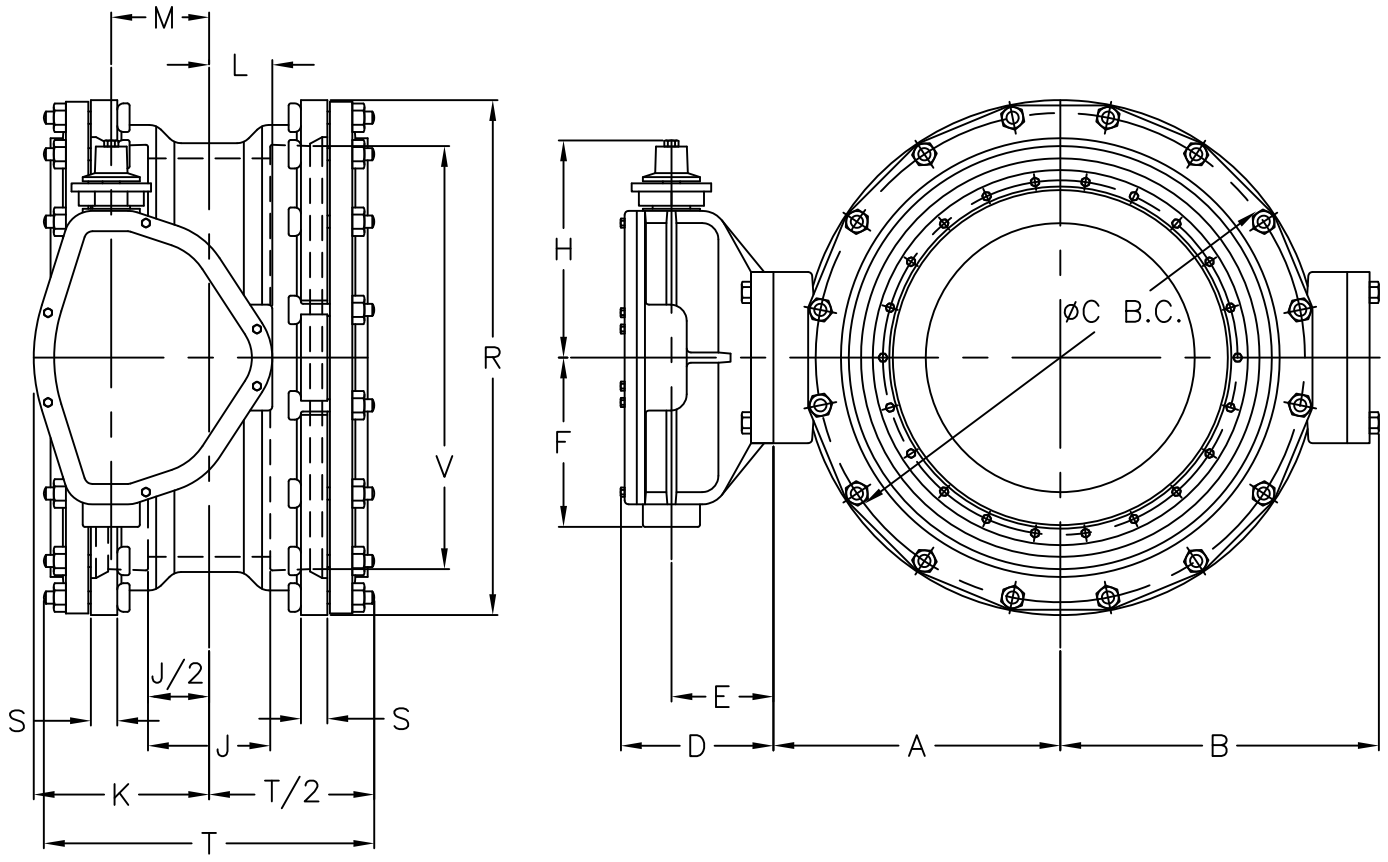


ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON, ASTM A-536, GR. 70-50-05 W/304 STN. STL. SEAT
2	VANE	DUCTILE IRON, ASTM A-536 GR. 70-50-05
3	END COVER	DUCTILE IRON, ASTM A-536 GR. 70-50-05
4	SEAT RING, VANE	EPDM
5	CLAMP RING, SEAT	304 STAINLESS STEEL
6	SEALING WASHER	NYLON
7	BUSHING, BODY	FIBERGLIDE
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 W/NYLOK INSERT
13	SOCKET SCREW ~ FLAT HEAD	18-8 STAINLESS STEEL W/NYLOK INSERT
14	SET SCREW ~ FLAT POINT	18-8 STAINLESS STEEL W/NYLOK INSERT
15	END COVER SEAL	BUNA-N
16	THRUST BEARING	BRONZE
17	TAPER PIN	416 STAINLESS STEEL
18	TAPER PIN BOLT	18-8 STAINLESS STEEL
19	SHAFT (OPERATOR)	TYPE 630, CONDITION H1100 STN STL ASTM A-564
20	SHAFT (THRUST)	304 STAINLESS STEEL

M&H VALVE COMPANY
ANNISTON,ALABAMA
A DIVISION OF MCWANE INC.

DWN: MMR
DATE: 8/10/11
DWG. NO. BMJ-25-14AB

42" & 48" STYLE 1450 CLASS 250 BUTTERFLY VALVE SUB-ASSEMBLY / MATERIAL LIST (NON-ADJUSTABLE PACKING) MJ X MJ



	OPERATOR MODEL	D	E	F	H	K	L	M	N
30"	2200	9 7/16	6 1/4	10 3/8	14 5/16	10 3/4	3 7/8	6	72
36" & 42"	4350	10 3/16	6 1/16	14 5/16	18	13 5/16	4 3/16	7 1/2	90

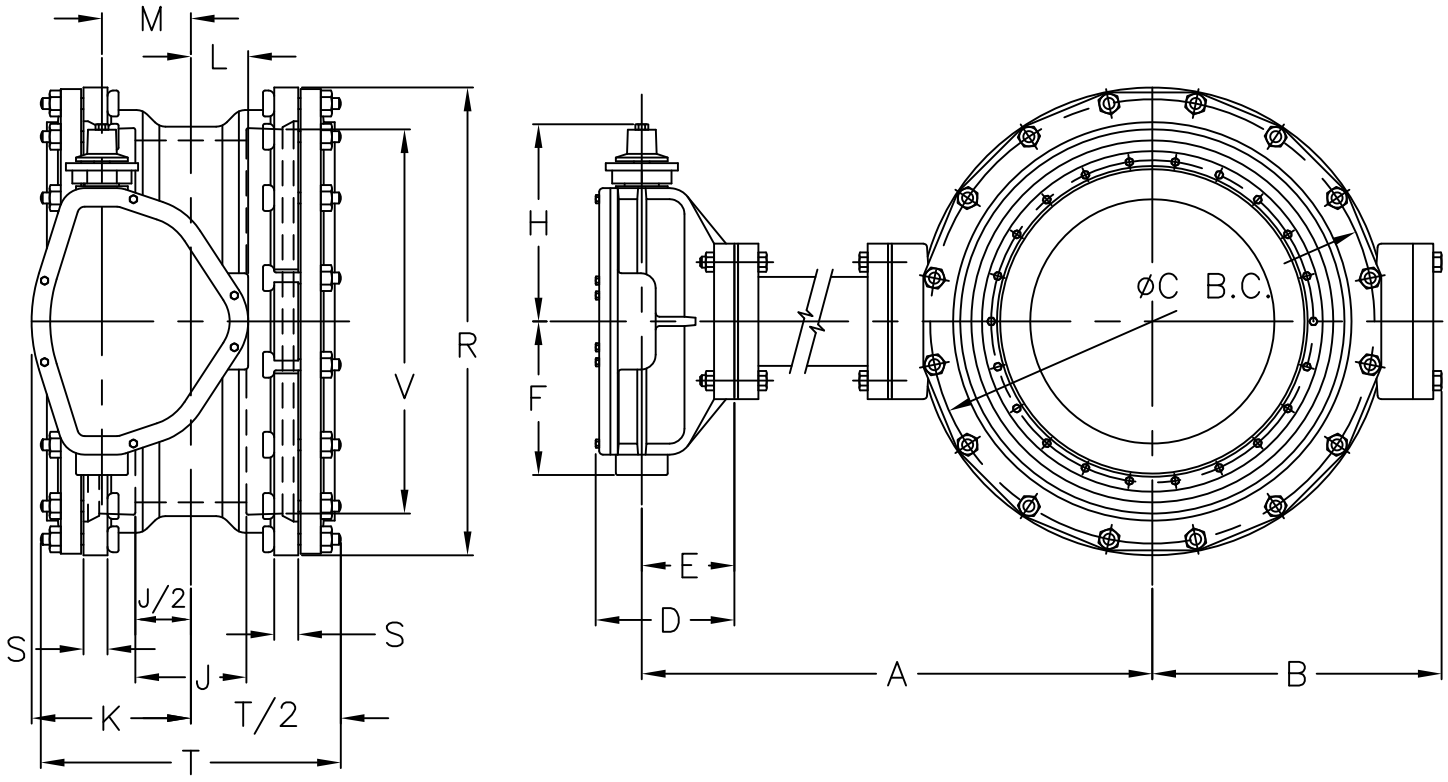
VALVE SIZE	A	B	C	J	P	Q	R	S	T	V	WEIGHT
30"	20 5/8	21 1/2	36 7/8	12	20	1	39 1/8	1 13/16	28 3/8	32.22	2300
36"	24 1/8	25 1/16	43 3/4	12	24	1	46	2	28 3/8	38.47	2840
42"	28	28 7/8	50 5/8	12	28	1 1/4	53 1/8	2	28 3/8	44.67	4405

NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C-111 (A.N.S.I. A21-11)
NOTE 4: "N" = NUMBER OF TURNS TO CLOSE
NOTE 5: "P" = NUMBER OF BOLTS ON EACH FLANGE
NOTE 6: "Q" = DIAMETER OF BOLTS
NOTE 7: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 8: GASKET, GLANDS, BOLTS, FOR MECHANICAL JOINT FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER
NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE

M&H VALVE COMPANY
ANNISTON, ALABAMA
A DIVISION OF MCWANE INC.

DWN: TRIJ
DATE: 8/10/11
DWG. NO. BMJ-25-14B

30" THRU 42" STYLE 1450 CLASS 250 BUTTERFLY VALVE BURIED OPERATOR MJ X MJ



	OPERATOR MODEL	D	E	F	H	K	L	M	N
30"	2200	9 1/16	6 1/4	10 3/8	14 1/2	10 3/4	3 7/8	6	72
36" & 42"	4350	10 1/16	6 1/16	15 1/8	18	13 5/16	4 3/16	7 1/2	90

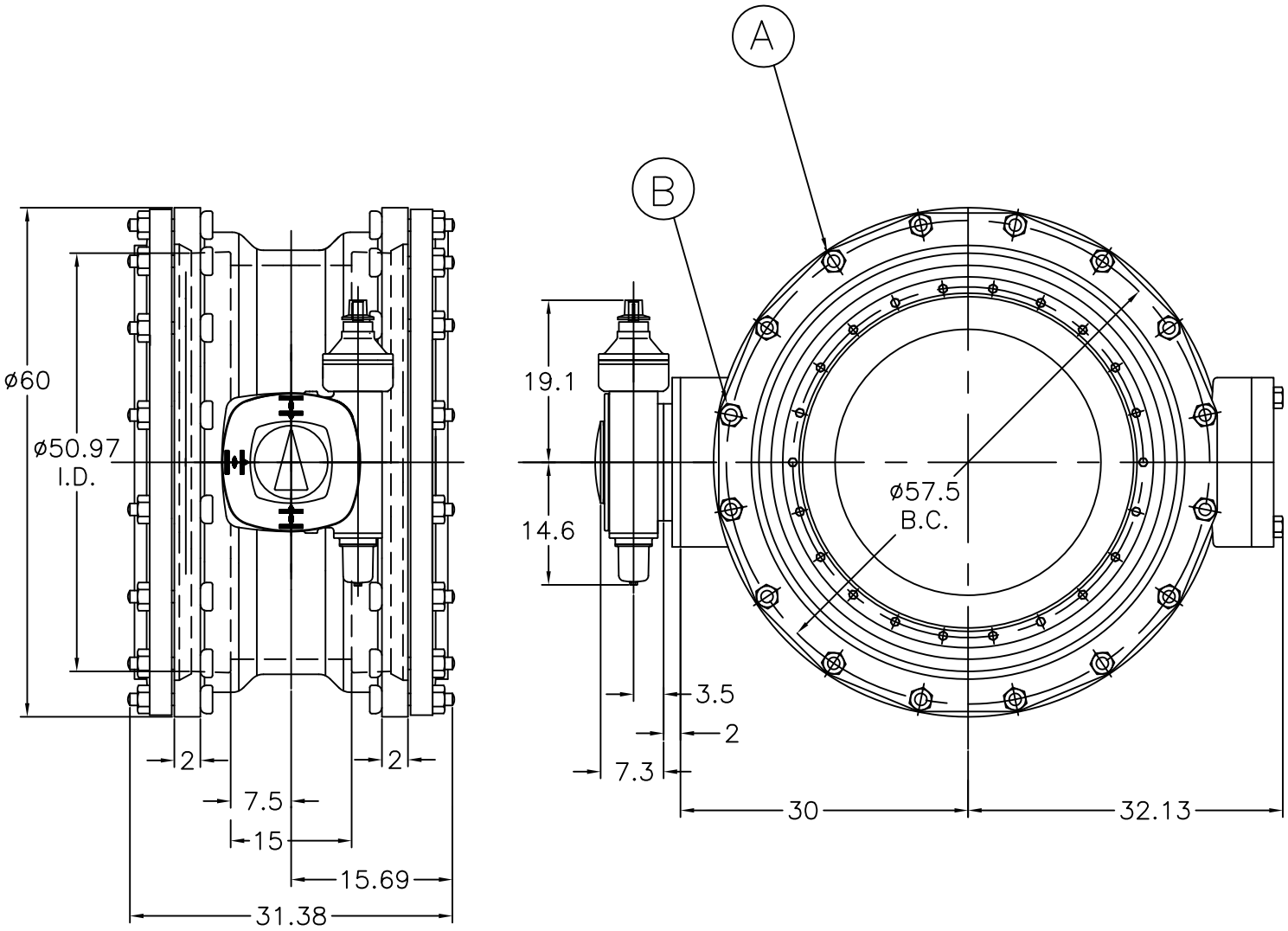
VALVE SIZE	A	B	C	J	P	Q	R	S	T	V	*WEIGHT
30"	NOTE AA	21 1/2	36 7/8	12	20	1	39 1/8	1 13/16	28 3/8	32.22	2300
36"	NOTE AA	25 1/16	43 3/4	12	24	1	46	2	28 3/8	38.47	2840
42"	NOTE AA	28 7/8	50 5/8	12	28	1 1/4	53 1/8	2	28 3/8	44.67	4405

NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C-111 (A.N.S.I. A21-11)
NOTE 4: "N" = NUMBER OF TURNS TO CLOSE
NOTE 5: "P" = NUMBER OF BOLTS ON EACH FLANGE
NOTE 6: "Q" = DIAMETER OF BOLTS
NOTE 7: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 8: GASKET, GLANDS, BOLTS, FOR MECHANICAL JOINT FURNISHED WITH VALVE WHEN SPECIFIED ON ORDER
NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE
NOTE 10: MAXIMUM LENGTH OF TORQUE TUBE (15 FEET)--BONNET SUPPORTS SHOULD BE USED ON ALL BONNETS EXCEEDING 6 FEET CENTERLINE OF VALVE TO CENTERLINE OF OPERATOR. ALL BONNET SUPPORTS SHALL BE SUPPLIED BY CUSTOMER
NOTE AA: "A" VARIES TO ENGINEER SPECIFICATIONS
*NOTE AB: APPROXIMATE WEIGHT PER EACH FOOT OF EXTENDED BONNET 150lbs (30"-42")

M&H VALVE COMPANY
ANNISTON,ALABAMA
A DIVISION OF MCWANE INC.

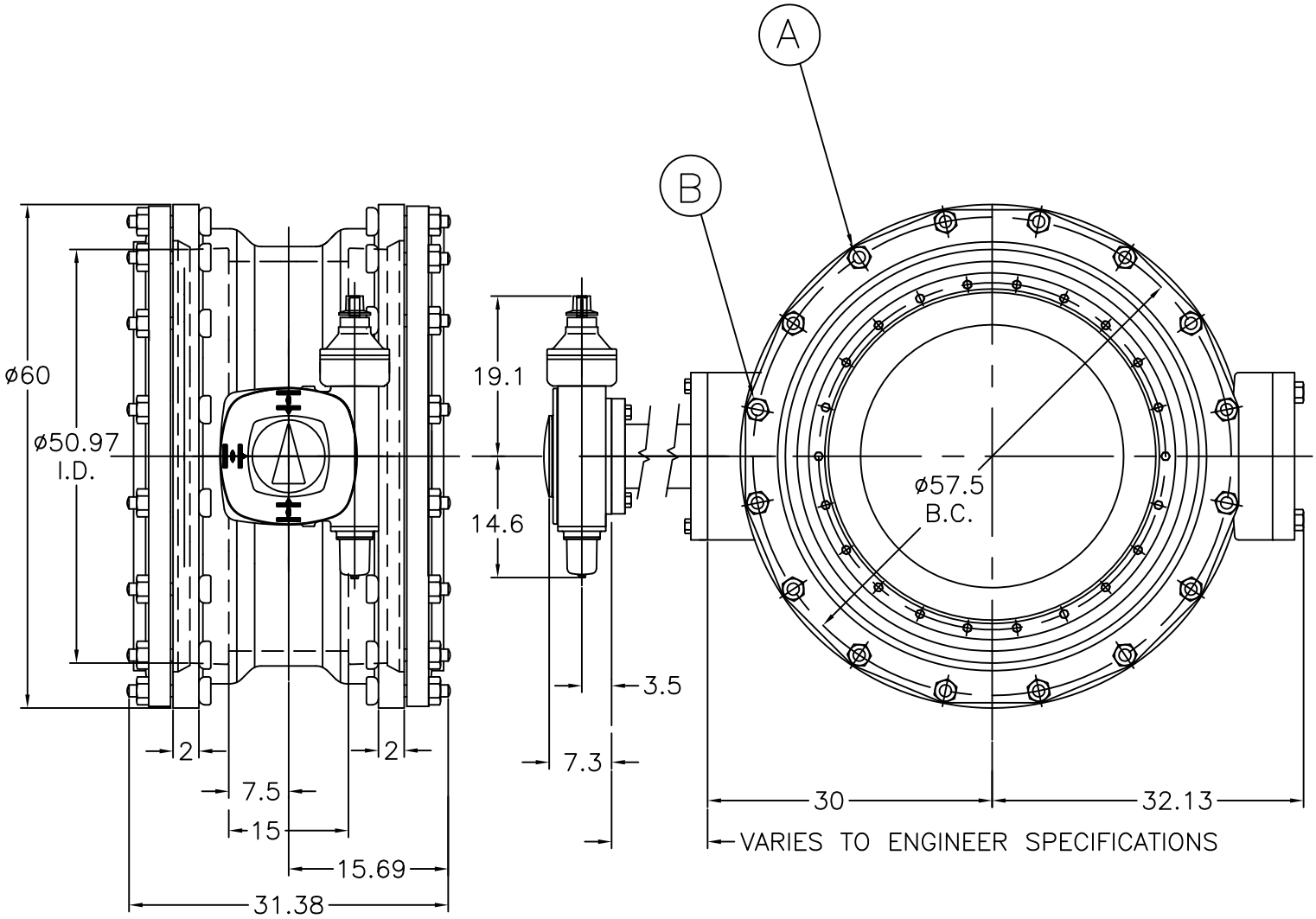
DWN: TRIJ
DATE: 8/10/11
DWG. NO. BMJ-25-14C

30" THRU 42" STYLE 1450 CLASS 250 BUTTERFLY VALVE WITH EXTENDED BONNET BURIED OPERATOR MJ X MJ



NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C–504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C–504–B
NOTE 4: NUMBER OF TURNS TO CLOSE = 108
NOTE 5: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 6: A = (32) ø1.25" BOLTS PER FLANGE
NOTE 7: B = (8) 1.38 SLOTTED HOLES EACH FLANGE
NOTE 8: RATED AND TESTED TO 250 PSI WORKING PRESSURE
NOTE 9: APPROXIMATE WEIGHT = 6300lbs.

M&H VALVE COMPANY ANNISTON,ALABAMA A DIVISION OF MCWANE INC.	DWN: TRIJ DATE: 8/25/11 DWG. NO. BMJ–25–AA	48" STYLE 1450 CLASS 250 BUTTERFLY VALVE (AUMA GS200.3/GZ200.3:8 GEAR BOX) BURIED OPERATOR MJ X MJ ENDS



NOTE 1: FLOW MAY BE IN EITHER DIRECTION
NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C–504 FOR APPLICABLE CLASS.
NOTE 3: REFERENCE AWWA C–504–B
NOTE 4: NUMBER OF TURNS TO CLOSE = 108
NOTE 5: OPERATED BY 2" AWWA OPERATING / WRENCH NUT
NOTE 6: A = (32) ø1.25" BOLTS PER FLANGE
NOTE 7: B = (8) 1.38 SLOTTED HOLES EACH FLANGE
NOTE 8: RATED AND TESTED TO 250 PSI WORKING PRESSURE
NOTE 9: APPROXIMATE WEIGHT = 6300lbs.

M&H VALVE COMPANY ANNISTON,ALABAMA A DIVISION OF MCWANE INC.	DWN: TRIJ DATE: 8/25/11 DWG. NO. BMJ–25–AA2	48" STYLE 1450 CLASS 250 BUTTERFLY VALVE (AUMA GS200.3/GZ200.3:8 GEAR BOX) BURIED OPERATOR & EXTENDED BONNET MJ X MJ ENDS