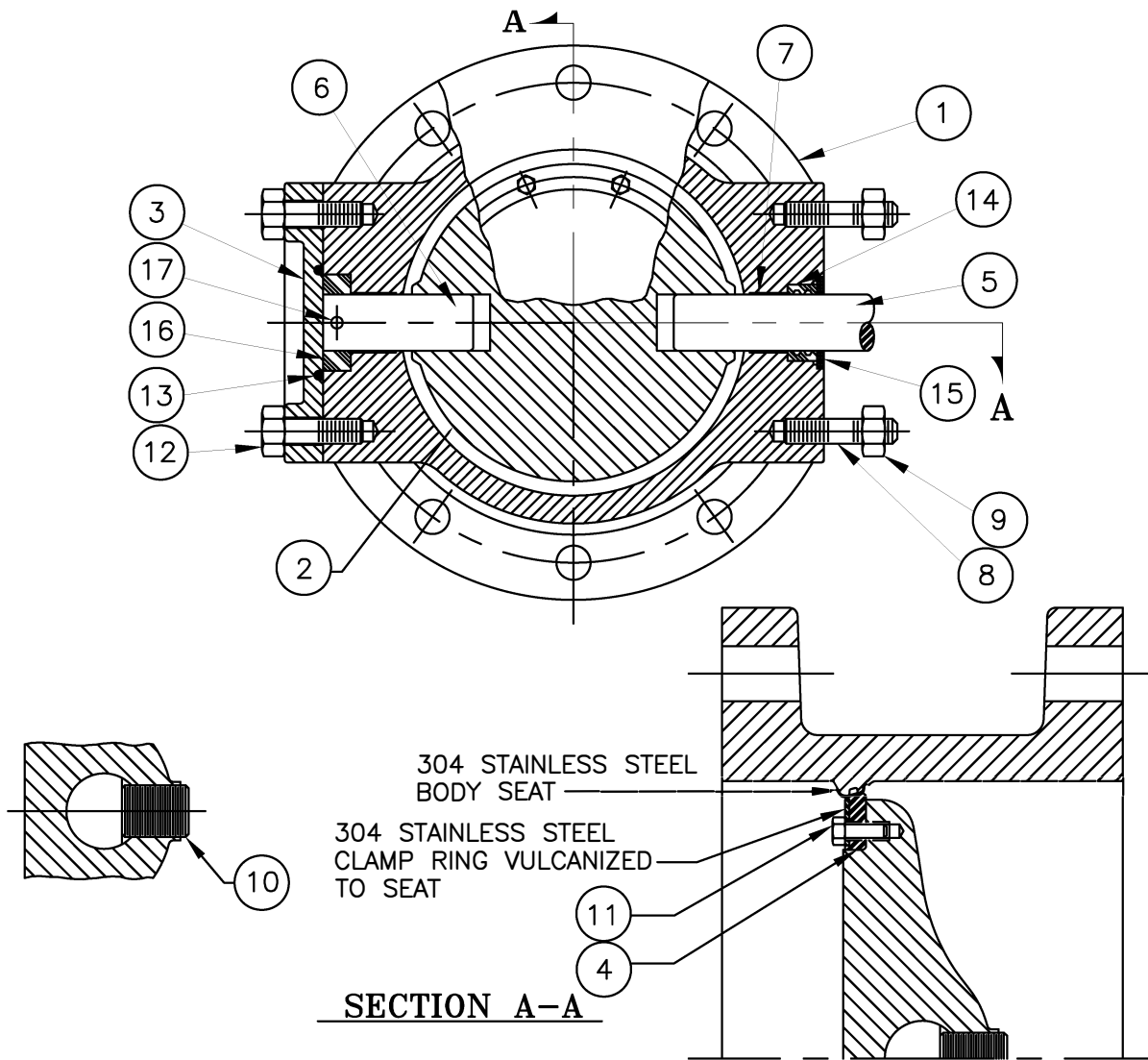


ITEM #	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR. 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR. 70-50-05
3	COVER, END	CAST IRON, A-126, CLASS B
4	SEAT RING, VANE	EPDM WITH 304 STAINLESS STEEL INSERT
5	SHAFT	TYPE 630, CONDITION H1100 STN. STL. ASTM A-564
6	O-RING, BODY	BUNA-N
7	BEARING, 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

CLOW VALVE COMPANY  
OSKALOOSA, IOWA  
A DIVISION OF MCWANE INC.

DWN: MMR  
DATE: 8/18/11  
DWG. NO.  
BFE-25-45A

3" THRU 12" STYLE 4500  
CLASS 250 BUTTERFLY VALVE  
SUB-ASSEMBLY / MATERIAL LIST  
FLANGED ENDS

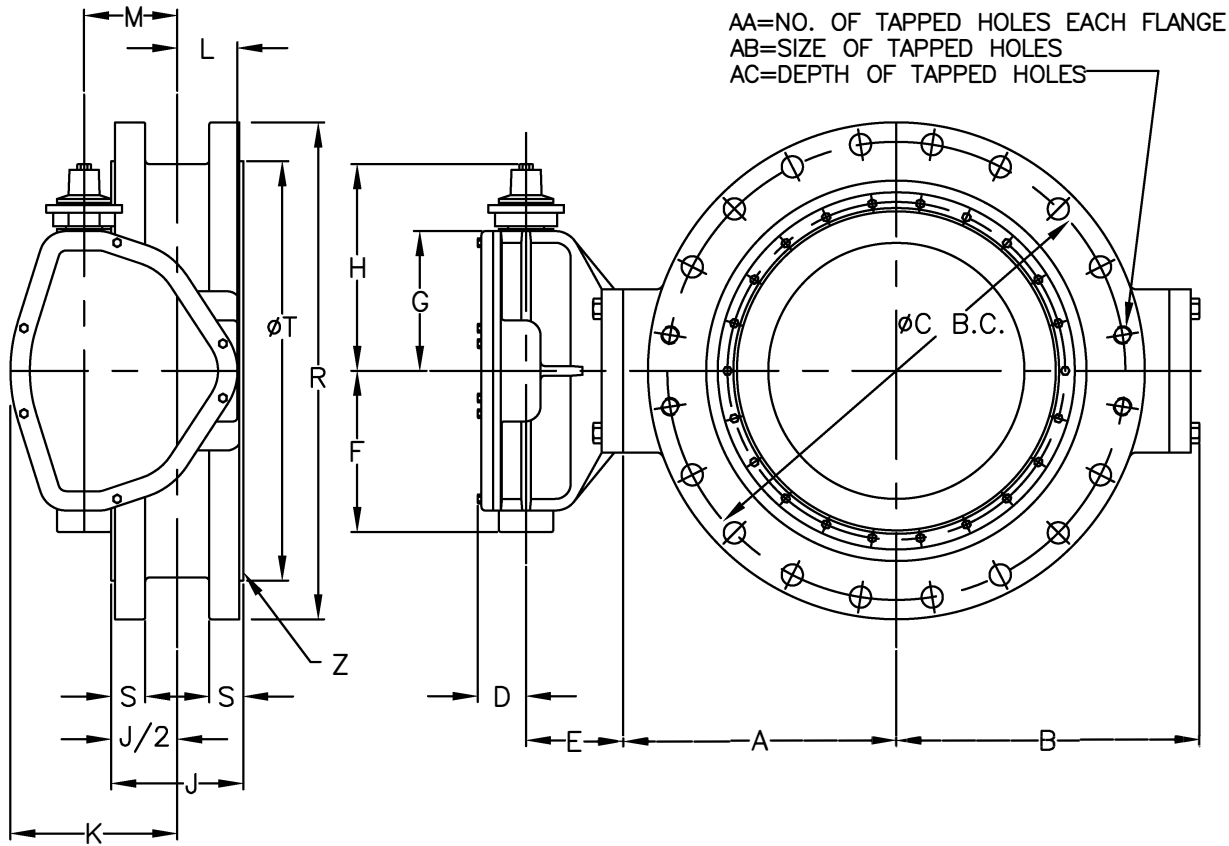


ITEM #	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON ASTM A-536 GR. 70-50-05
2	VANE	DUCTILE IRON ASTM A-536 GR. 70-50-05
3	COVER, END	CAST IRON, A-126, CLASS B
4	SEAT RING, VANE	EPDM WITH 304 STAINLESS STEEL INSERT
5	SHAFT, OPERATOR	TYPE 630, CONDITION H1100 STN. STL. ASTM A-564
6	SHAFT, THRUST	304 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	BEARING BRONZE, ASTM B-144, ALLOY 3B
17	ROLL PIN	STAINLESS STEEL, A.I.S.I. 420

CLOW VALVE COMPANY  
OSKALOOSA, IOWA  
A DIVISION OF MCWANE INC.

DWN: MMR  
DATE: 8/18/11  
DWG. NO.  
BFE-25-45B

14" THRU 24" STYLE 4500  
CLASS 250 BUTTERFLY VALVE  
SUB-ASSEMBLY / MATERIAL LIST  
FLANGED ENDS



VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
3" - 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

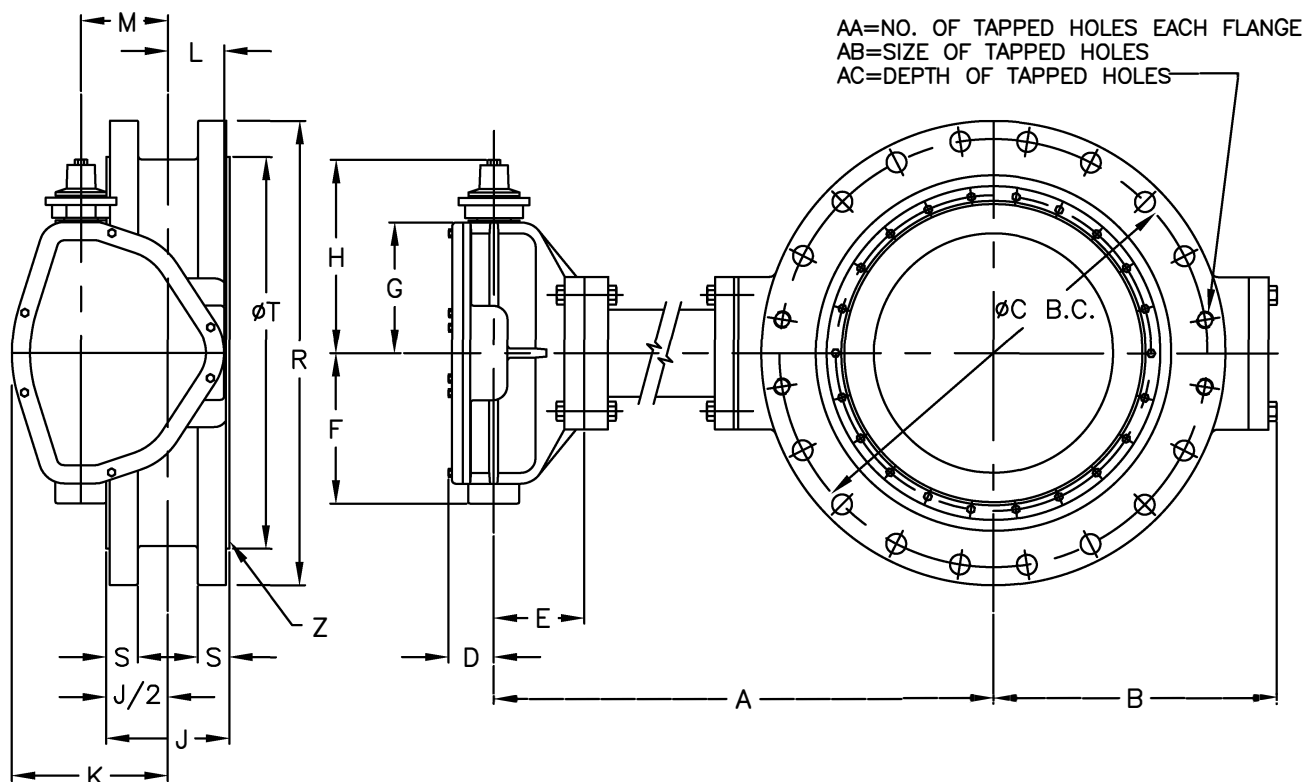
VALVE SIZE	A	B	C	J	P	Q	R	S	T	AA	AB	AC	WEIGHT
3"	4	5 1/8	6 5/8	5 1/2	8	3/4	10	1 1/4	-	8	3/4-10	1 3/16	85
4"	4	5 1/8	7 7/8	5 1/2	8	3/4	10	1 1/4	6 15/16	4	3/4-10	1 3/16	85
6"	5	6 1/8	10 5/8	5 3/4	12	3/4	12 1/2	1 7/16	9 11/16	4	3/4-10	1 3/8	110
8"	7	7 3/8	13	6 7/8	12	7/8	15	1 5/8	11 15/16	4	7/8-9	1 9/16	160
10"	7 3/4	9 1/2	15 1/4	9 1/4	16	1	17 1/2	1 7/8	14 1/16	4	1-8	1 1/2	252
12"	9 1/2	10 7/8	17 3/4	9 1/2	16	1 1/8	20 1/2	2	16	4	1 1/8-7	1 9/16	330
14"	11 7/16	12 3/16	20 1/4	9 1/2	20	1 1/8	23	2 1/8	18 15/16	8	1 1/8-7	1 5/8	515
16"	13 3/16	13 15/16	22 1/2	9 5/8	20	1 1/4	25 1/2	2 1/4	21 1/16	8	1 1/4-7	1 3/4	600
18"	14 5/16	15 13/16	24 3/4	9 5/8	24	1 1/4	28	2 3/8	23 5/16	8	1 1/4-7	1 3/4	775
20"	15 7/8	17 3/8	27	9 5/8	24	1 1/4	30 1/2	2 1/2	25 9/16	8	1 1/4-7	1 3/4	900
24"	18 19/32	19 5/16	32	9 3/4	24	1 1/2	36	2 3/4	30 5/16	8	1 1/2-6	1 7/8	1180

- 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 FLANGES & DRILLING (A.N.S.I. 250)  
 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: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE) 4~24 ONLY

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/18/11  
 DWG. NO.  
 BFE-25-45C

3" THRU 24" STYLE 4500  
 CLASS 250 BUTTERFLY VALVE  
 BURIED OPERATOR  
 FLANGED ENDS



AA=NO. OF TAPPED HOLES EACH FLANGE  
 AB=SIZE OF TAPPED HOLES  
 AC=DEPTH OF TAPPED HOLES

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	AA	AB	AC	WEIGHT
3"	NOTE AA	5 1/8	6 5/8	5 1/2	8	3/4	10	1 1/4	-	8	3/4-10	1 3/16	85
4"	NOTE AA	5 1/8	7 7/8	5 1/2	8	3/4	10	1 1/4	6 15/16	4	3/4-10	1 3/16	85
6"	NOTE AA	6 1/8	10 5/8	5 3/4	12	3/4	12 1/2	1 7/16	9 11/16	4	3/4-10	1 3/8	110
8"	NOTE AA	7 3/8	13	6 7/8	12	7/8	15	1 5/8	11 15/16	4	7/8-9	1 9/16	160
10"	NOTE AA	9 1/2	15 1/4	9 1/4	16	1	17 1/2	1 7/8	14 1/16	4	1-8	1 1/2	252
12"	NOTE AA	10 7/8	17 3/4	9 3/8	16	1 1/8	20 1/2	2	16	4	1 1/8-7	1 9/16	330
14"	NOTE AA	12 3/16	20 1/4	9 3/8	20	1 1/8	23	2 1/8	18 15/16	8	1 1/8-7	1 5/8	515
16"	NOTE AA	13 15/16	22 1/2	9 1/2	20	1 1/4	25 1/2	2 1/4	21 1/16	8	1 1/4-7	1 3/4	600
18"	NOTE AA	15 13/16	24 3/4	9 1/2	24	1 1/4	28	2 3/8	23 5/16	8	1 1/4-7	1 3/4	775
20"	NOTE AA	17 3/8	27	9 1/2	24	1 1/4	30 1/2	2 1/2	25 9/16	8	1 1/4-7	1 3/4	900
24"	NOTE AA	19 5/16	32	9 5/8	24	1 1/2	36	2 3/4	30 5/16	8	1 1/2-6	1 7/8	1180

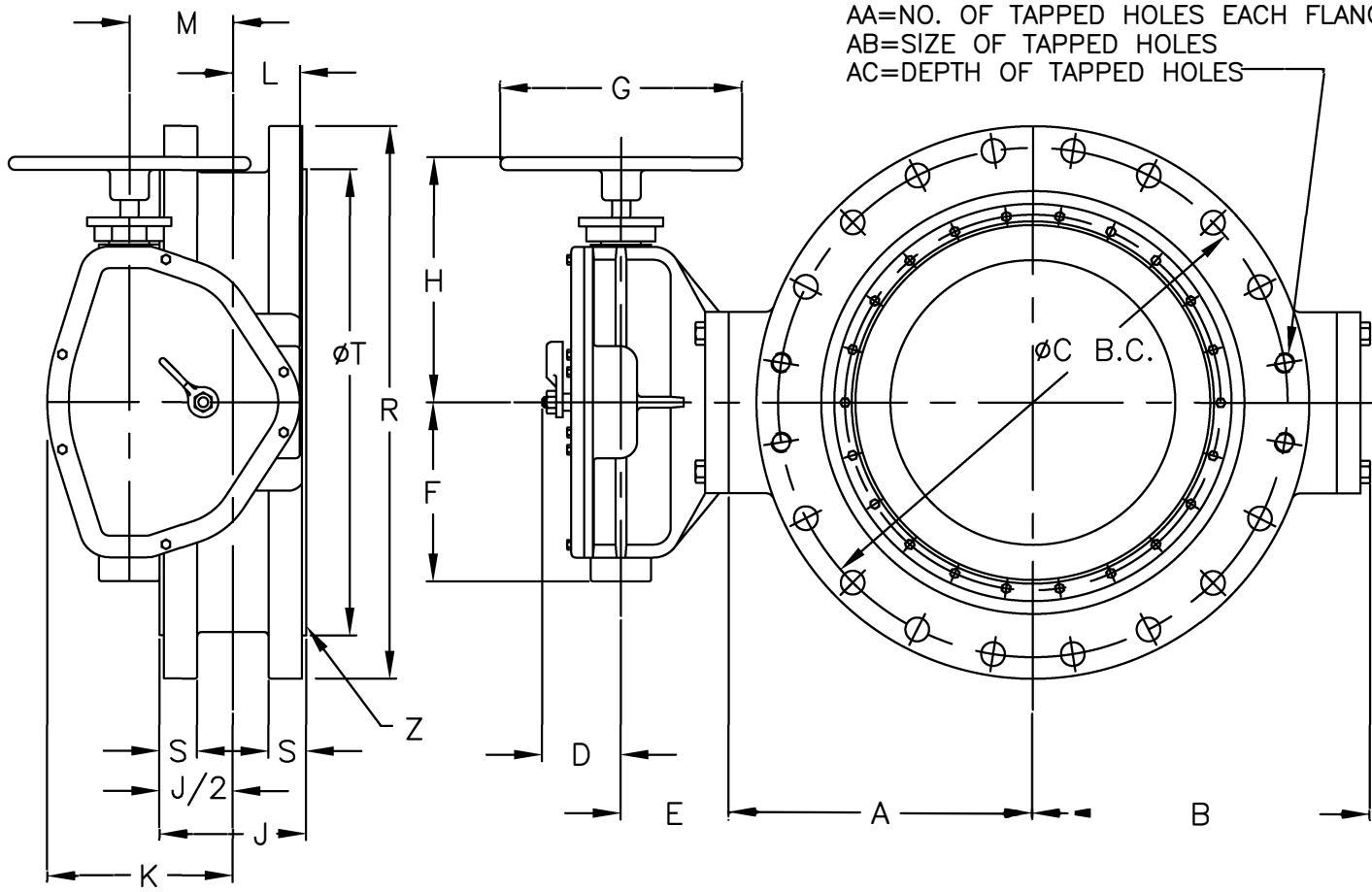
- NOTE 1: FLOW MAY BE IN EITHER DIRECTION  
 NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.  
 NOTE 3: REFERENCE AWWA C-504 FLANGES & DRILLING (A.N.S.I. 250)  
 NOTE 4: "N" = NUMBER OF TURNS TO CLOSE  
 NOTE 5: "P" = NUMBER OF BOLTS ON 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: "Z" (1/16 or .0625 RAISED FACE ON EACH FLANGE) 4~24 ONLY  
 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: APPROX. WEIGHT PER EACH FOOT OF EXTENDED BONNET 125LBS(3"-12"), 150LBS(14"-16"), 180LBS(18"-24")

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/18/11  
 DWG. NO.  
 BFE-25-45D

3" THRU 24" STYLE 4500  
 CLASS 250 BUTTERFLY VALVE  
 EXTENDED BONNET  
 BURIED OPERATOR  
 FLANGED ENDS

AA=NO. OF TAPPED HOLES EACH FLANGE  
 AB=SIZE OF TAPPED HOLES  
 AC=DEPTH OF TAPPED HOLES

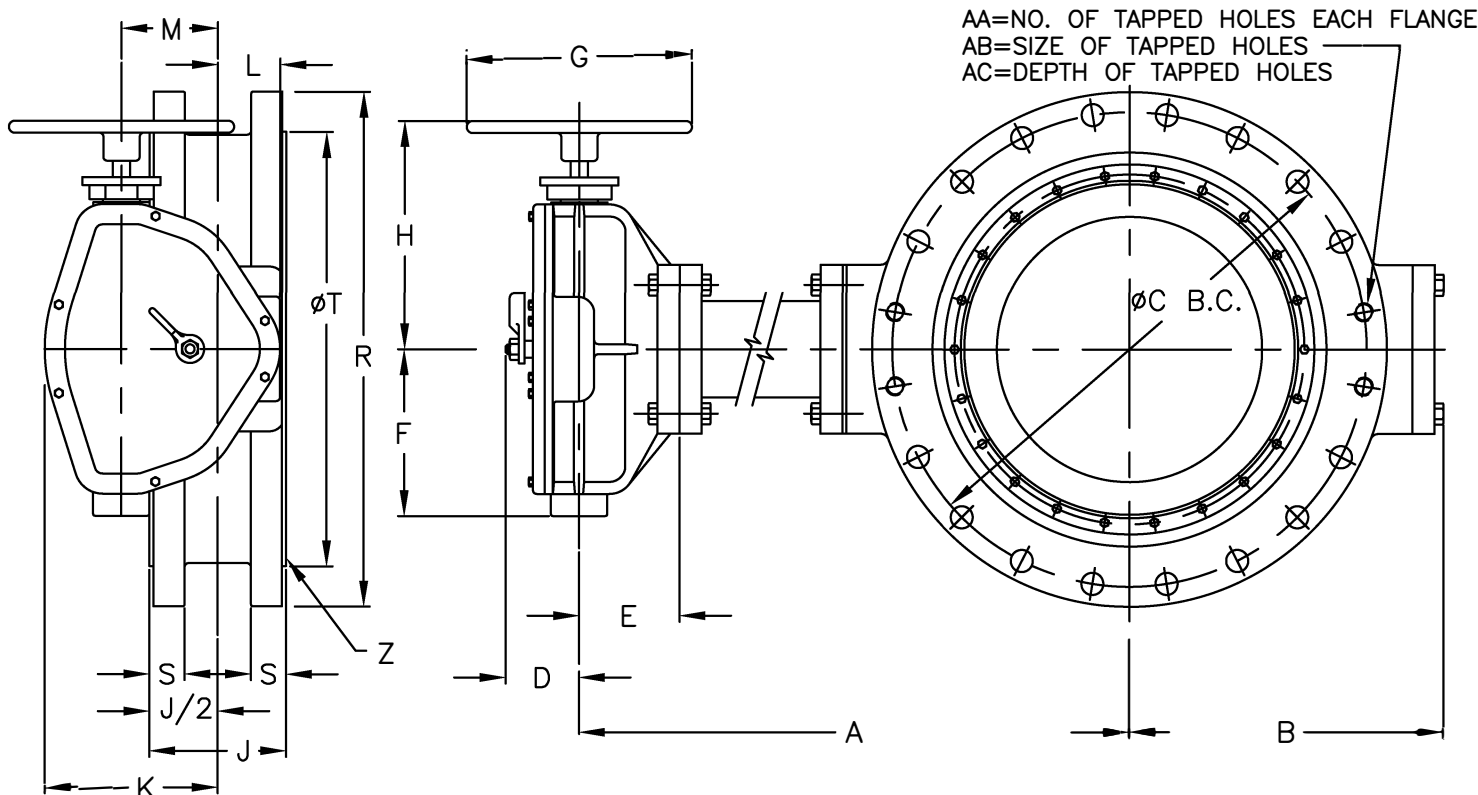


VALVE SIZE	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
4"	65	2 15/16	3 9/16	3 5/8	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
6"	150	2 15/16	3 9/16	3 5/8	7 1/2	7 3/4	3 7/16	2 1/4	1 3/8	16 1/2
8"	250	3	3 11/16	4 1/4	14	8 3/4	4 1/2	2 3/8	2	24
10" & 12"	510	3 3/16	4 1/2	5 9/16	14	10 1/2	6 1/8	2 3/4	3 1/8	36
14", 16", 18"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

VALVE SIZE	A	B	C	J	P	Q	R	S	T	AA	AB	AC	WEIGHT
3"	4	5 1/8	6 5/8	5 1/2	8	3/4	10	1 1/4	-	8	3/4-10	1 3/16	85
4"	4	5 1/8	7 7/8	5 1/2	8	3/4	10	1 1/4	6 15/16	4	3/4-10	1 3/8	85
6"	5	6 1/8	10 5/8	5 3/4	12	3/4	12 1/2	1 7/16	9 11/16	4	3/4-10	1 3/8	110
8"	7	7 3/8	13	6 7/8	12	7/8	15	1 5/8	11 15/16	4	7/8-9	1 9/16	160
10"	7 3/4	9 1/2	15 1/4	9 1/4	16	1	17 1/2	1 7/8	14 1/16	4	1-8	1 1/2	252
12"	9 1/2	10 7/8	17 3/4	9 3/8	16	1 1/8	20 1/2	2	16	4	1 1/8-7	1 9/16	330
14"	11 7/16	12 3/16	20 1/4	9 3/8	20	1 1/8	23	2 1/8	18 15/16	8	1 1/8-7	1 5/8	515
16"	13 3/16	13 15/16	22 1/2	9 1/2	20	1 1/4	25 1/2	2 1/4	21 1/16	8	1 1/4-7	1 3/4	600
18"	14 5/16	15 13/16	24 3/4	9 1/2	24	1 1/4	28	2 3/8	23 5/16	8	1 1/4-7	1 3/4	775
20"	15 7/8	17 3/8	27	9 1/2	24	1 1/4	30 1/2	2 1/2	25 9/16	8	1 1/4-7	1 3/4	900
24"	18 19/32	19 5/16	32	9 5/8	24	1 1/2	36	2 3/4	30 5/16	8	1 1/2-6	1 7/8	1180

- 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 FLANGES & DRILLING (A.N.S.I. 250)
- 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: RATED AND TESTED FOR 250 PSI WORKING PRESSURE
- NOTE 8: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE) 4~24 ONLY

<b>CLOW VALVE COMPANY</b> OSKALOOSA, IOWA A DIVISION OF MCWANE INC.	DWN: TRIJ	3" THRU 24" STYLE 4500 CLASS 250 BUTTERFLY VALVE POSITION INDICATOR HANDWHEEL OPERATOR FLANGED ENDS
	DATE: 8/18/11	
	DWG. NO. BFE-25-45E	



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

VALVE SIZE	A	B	C	J	P	Q	R	S	T	AA	AB	AC	WEIGHT
3"	NOTE AA	5 1/8	6 5/8	5 1/2	8	3/4	10	1 1/4	-	8	3/4-10	1 3/16	85
4"	NOTE AA	5 1/8	7 7/8	5 1/2	8	3/4	10	1 1/4	6 15/16	4	3/4-10	1 3/16	85
6"	NOTE AA	6 1/8	10 5/8	5 3/4	12	3/4	12 1/2	1 7/16	9 11/16	4	3/4-10	1 3/8	110
8"	NOTE AA	7 3/8	13	6 7/8	12	7/8	15	1 5/8	11 15/16	4	7/8-9	1 9/16	160
10"	NOTE AA	9 1/2	15 1/4	9 1/4	16	1	17 1/2	1 7/8	14 1/16	4	1-8	1 1/2	252
12"	NOTE AA	10 7/8	17 3/4	9 3/8	16	1 1/8	20 1/2	2	16	4	1 1/8-7	1 9/16	330
14"	NOTE AA	12 3/16	20 1/4	9 3/8	20	1 1/8	23	2 1/8	18 15/16	8	1 1/8-7	1 5/8	515
16"	NOTE AA	13 15/16	22 1/2	9 1/2	20	1 1/4	25 1/2	2 1/4	21 1/16	8	1 1/4-7	1 3/4	600
18"	NOTE AA	15 13/16	24 3/4	9 1/2	24	1 1/4	28	2 3/8	23 5/16	8	1 1/4-7	1 3/4	775
20"	NOTE AA	17 3/8	27	9 1/2	24	1 1/4	30 1/2	2 1/2	25 9/16	8	1 1/4-7	1 3/4	900
24"	NOTE AA	19 5/16	32	9 5/8	24	1 1/2	36	2 3/4	30 5/16	8	1 1/2-6	1 7/8	1180

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 FLANGES & DRILLING (A.N.S.I. 250)

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: RATED AND TESTED FOR 250 PSI WORKING PRESSURE

NOTE 8: "Z" (1/16 or .0625 RAISED FACE ON EACH FLANGE) 4~24 ONLY

NOTE 9: 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

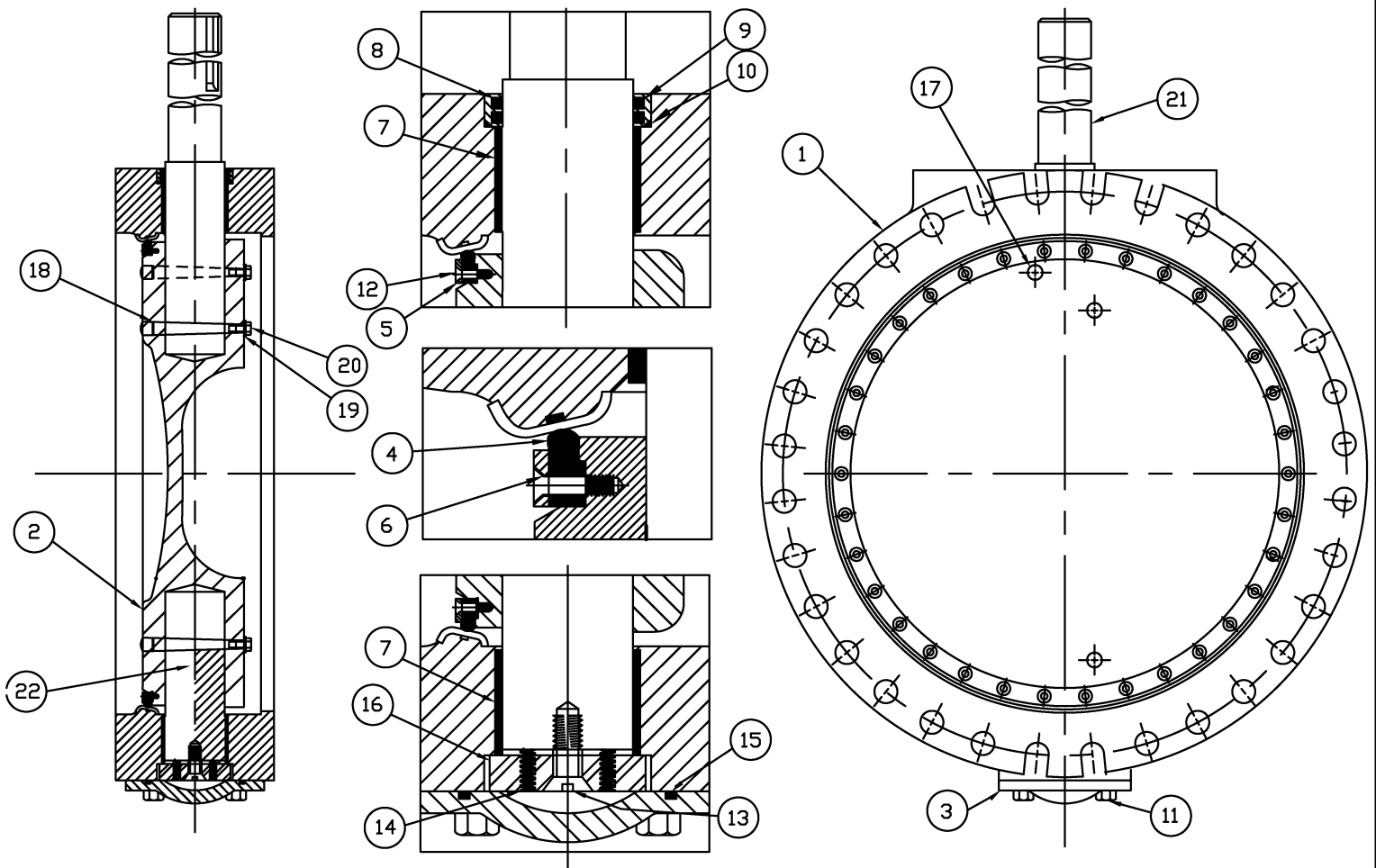
NOTE AA: "A" VARIES TO ENGINEER SPECIFICATIONS

\*NOTE AB: APPROXIMATE WEIGHT PER EACH FOOT OF EXTENDED BONNET 125(3"-12"), 150(14"-16"), 180(18"-24")

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/18/11  
 DWG. NO.  
 BFE-25-45F

3" THRU 24" STYLE 4500  
 CLASS 250 BUTTERFLY VALVE  
 WITH EXTENDED BONNET  
 POSITION INDICATOR  
 HANDWHEEL OPERATOR  
 FLANGED ENDS

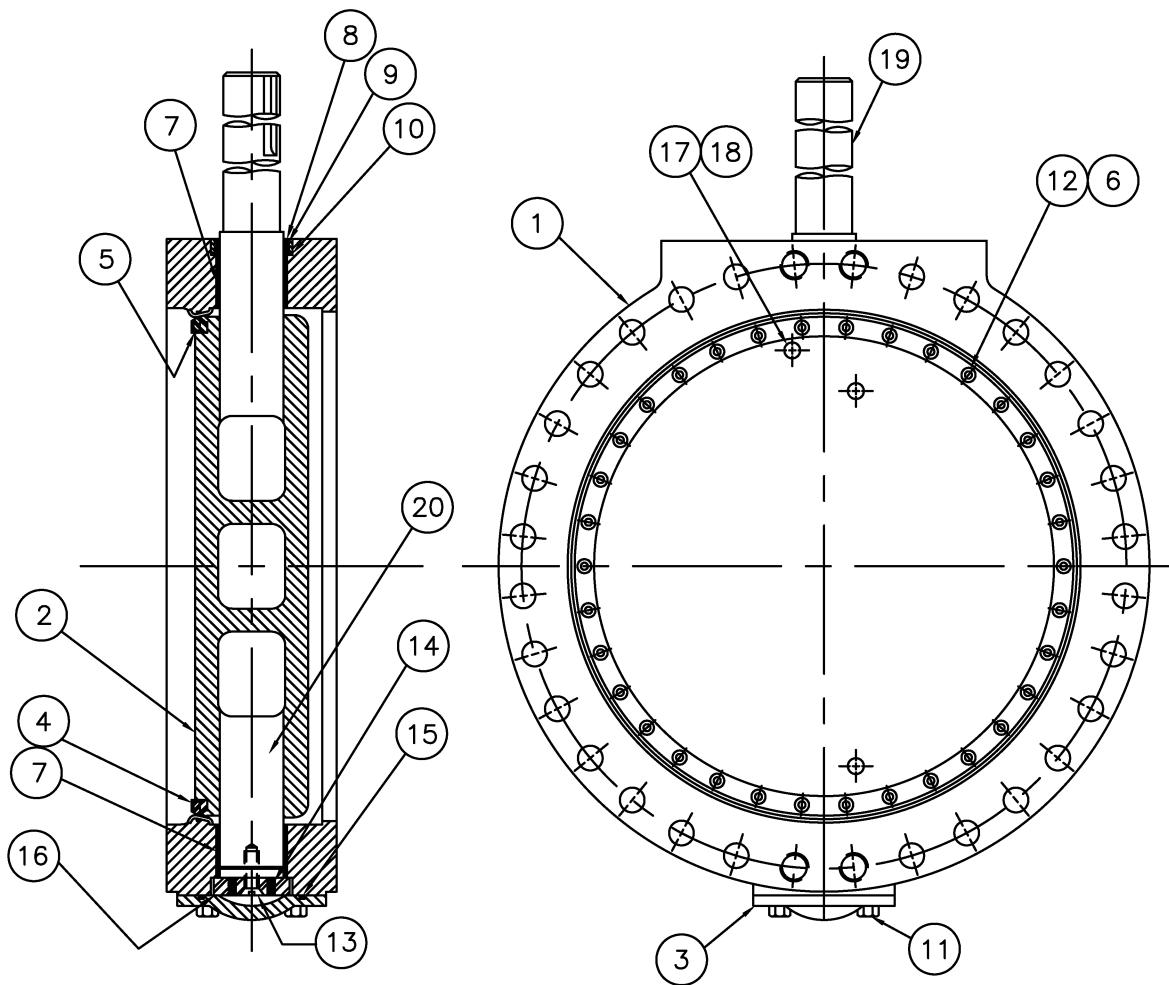


ITEM #	DESCRIPTION	MATERIAL
1A	VALVE BODY	DUCTILE IRON, ASTM A-536, Grade 70-50-05
1B	BODY RING (Permanently Attached)	304 STAINLESS STEEL
1C	BODY O-RING (Permanently Attached)	BUNA-N
2	VANE	DUCTILE IRON, ASTM A-536, Grade 70-50-05
3	END COVER PLATE	DUCTILE IRON, ASTM A-536, Grade 70-50-05
4	RUBBER VANE 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 NYLON INSERT)
14	ALLEN HEAD SET SCREW (For Thrust Bearing)	18-8 STAINLESS STEEL (WITH NYLON 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

CLOW VALVE COMPANY  
OSKALOOSA, IOWA  
DIVISION OF MCWANE INC.

DWN: MMR  
DATE: 8/18/11  
DWG. NO.  
BFE-25-14AA

30" & 36" STYLE 1450  
CLASS 250 BUTTERFLY VALVE  
SUB-ASSEMBLY / MATERIAL LIST  
(NON-ADJUSTABLE PACKING)  
FLANGED ENDS



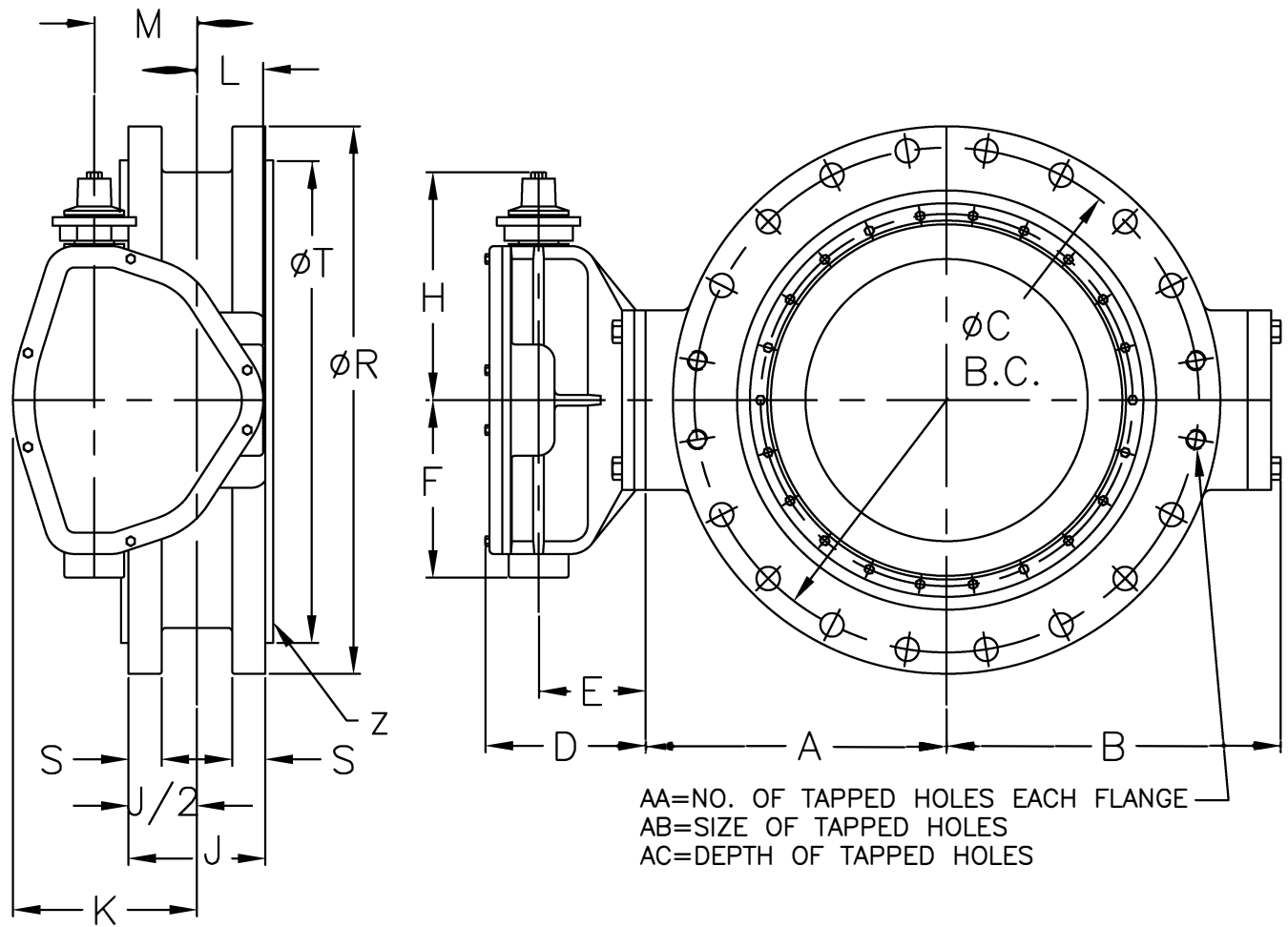
ITEM NO.	DESCRIPTION	MATERIAL
1	BODY, VALVE	DUCTILE IRON, ASTM A-536, GR. 70-50-05 W/304 STN. STL. SEAT
2	VANE	DUCTILE IRON, ASTM A-536 GR. 70-50-05
3	END COVER	DUCTILE IRON, ASTM A-536 GR. 70-50-05
4	SEAT RING, VANE	EPDM
5	CLAMP RING, SEAT	304 STAINLESS STEEL
6	SEALING WASHER	NYLON
7	BUSHING, BODY	FIBERGLIDE
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 PLATE	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

CLOW VALVE COMPANY  
OSKALOOSA, IOWA  
A DIVISION OF MCWANE INC.

DWN: MMR  
DATE: 8/18/11  
DWG. NO.  
BFE-25-14AB

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





	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

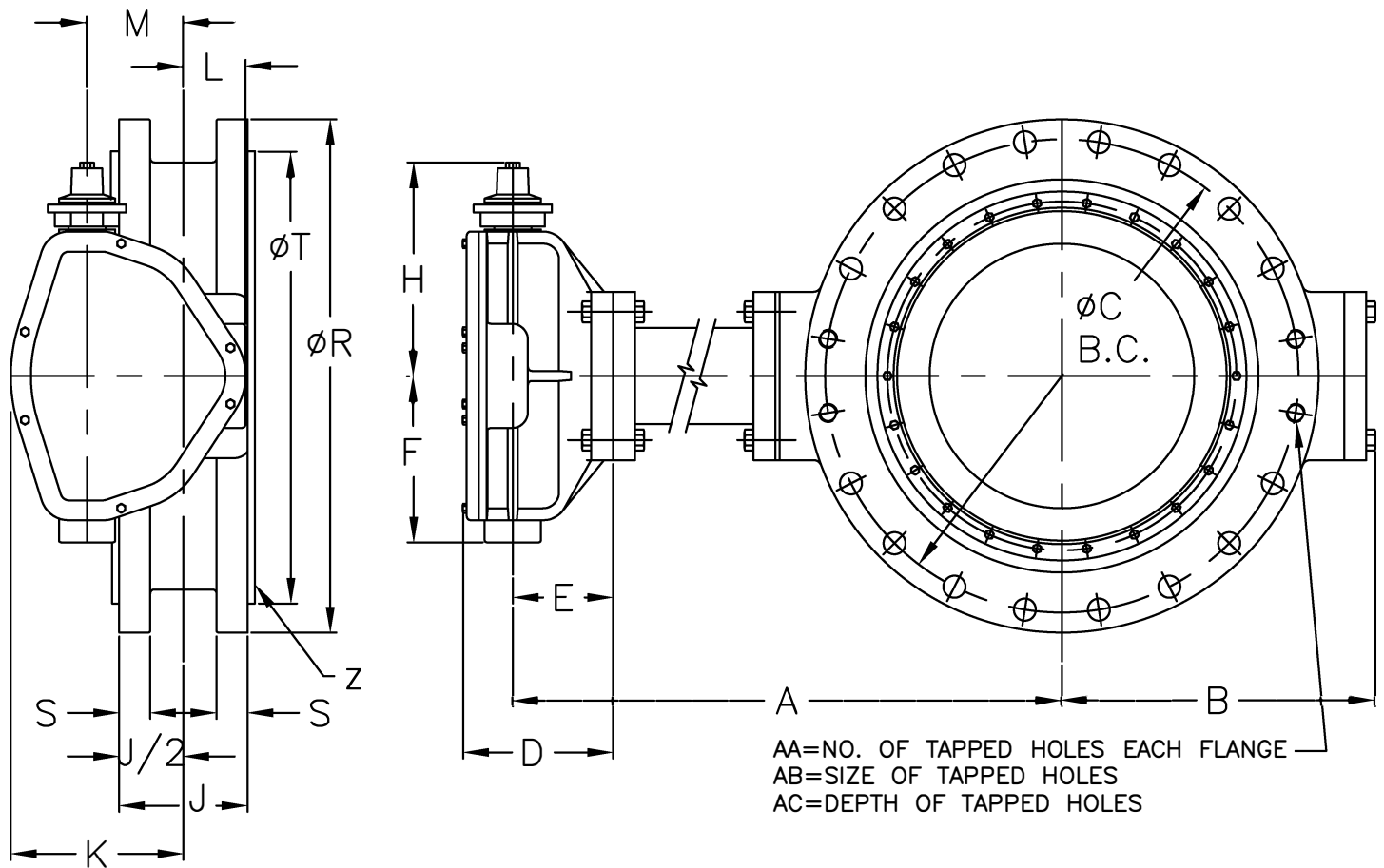
VALVE SIZE	A	B	C	J	P	Q	R	T	S	AA	AB	AC	WEIGHT
30"	22.71	23.63	39.25	13.75	28	1.75	43	37.187	3	4	1 3/4-5	2.00	1850
36"	26.15	27.06	46	14.00	32	2.00	50	43.688	3.38	4	2-4 1/2	2.25	2600
42"	30.00	30.94	52.75	14.13	36	2.00	57	50.438	3.69	8	2-4 1/2	3.25	4500

- 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 FLANGES & DRILLING (A.N.S.I. 250)  
 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: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE)

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/18/11  
 DWG. NO.  
 BFE-25-14B

30" THRU 42" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 BURIED OPERATOR  
 FLANGED ENDS



	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

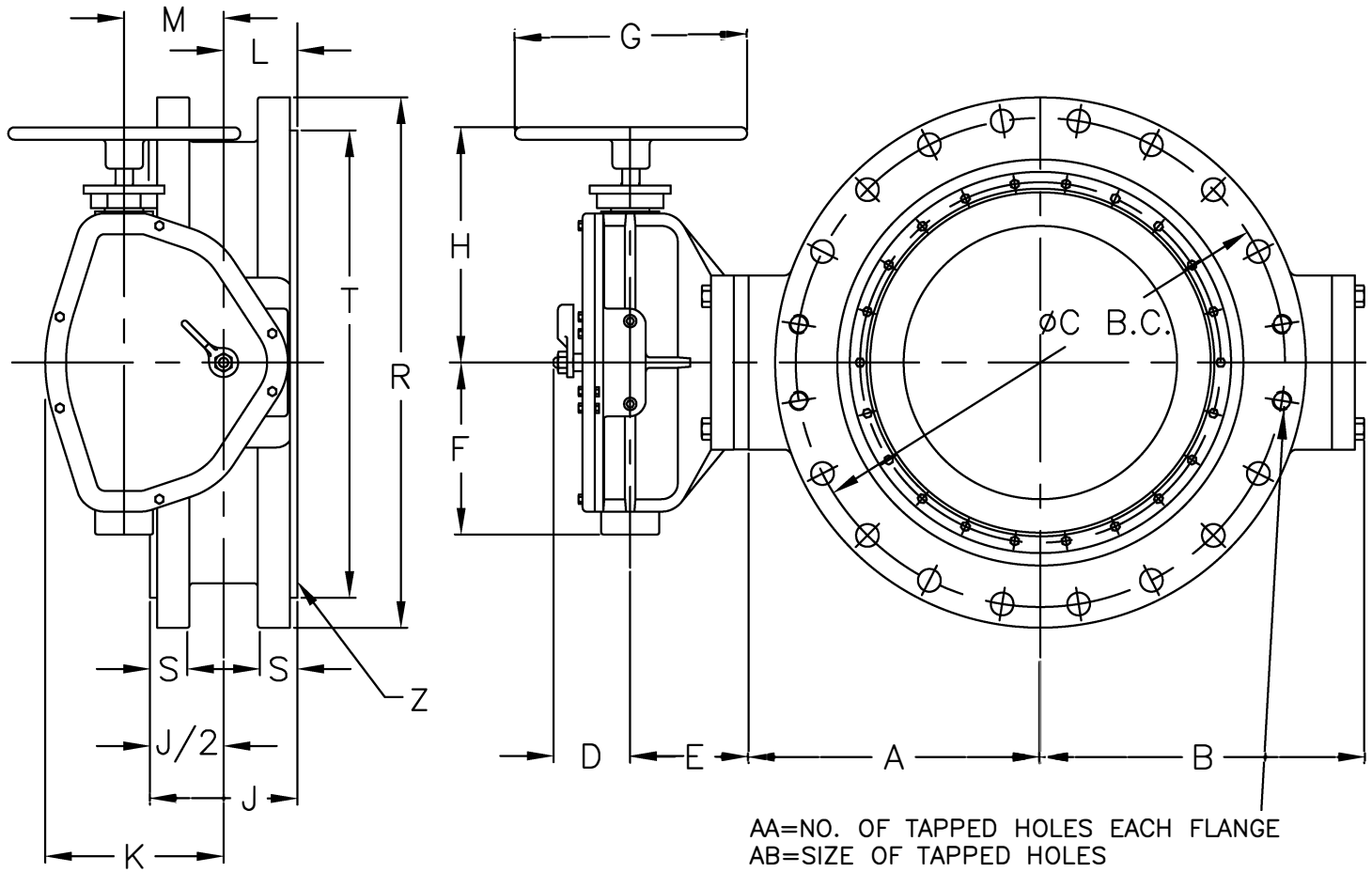
VALVE SIZE	A	B	C	J	P	Q	R	T	S	AA	AB	AC	*WEIGHT
30"	NOTE AA	23.63	39.25	13.75	28	1.75	43	37.187	3	4	1 3/4-5	2.00	1850
36"	NOTE AA	27.06	46.0	14.00	32	2.00	50	43.688	3.38	4	2-4 1/2	2.25	2600
42"	NOTE AA	30.94	52.75	14.13	36	2.00	57	50.438	3.69	8	2-4 1/2	3.25	4500

- 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 FLANGES & DRILLING (A.N.S.I. 250)  
 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: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE)  
 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")

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/22/11  
 DWG. NO.  
 BFE-25-14C

30" THRU 42" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 EXTENDED BONNET  
 BURIED OPERATOR  
 FLANGED ENDS



	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
30"	2200	4 3/16	6 1/4	10 3/8	18	14 5/16	10 3/4	3 7/8	6	72
36" & 42"	4350	5 5/8	6 1/16	14 5/16	27	18	13 5/16	4 3/16	7 1/2	90

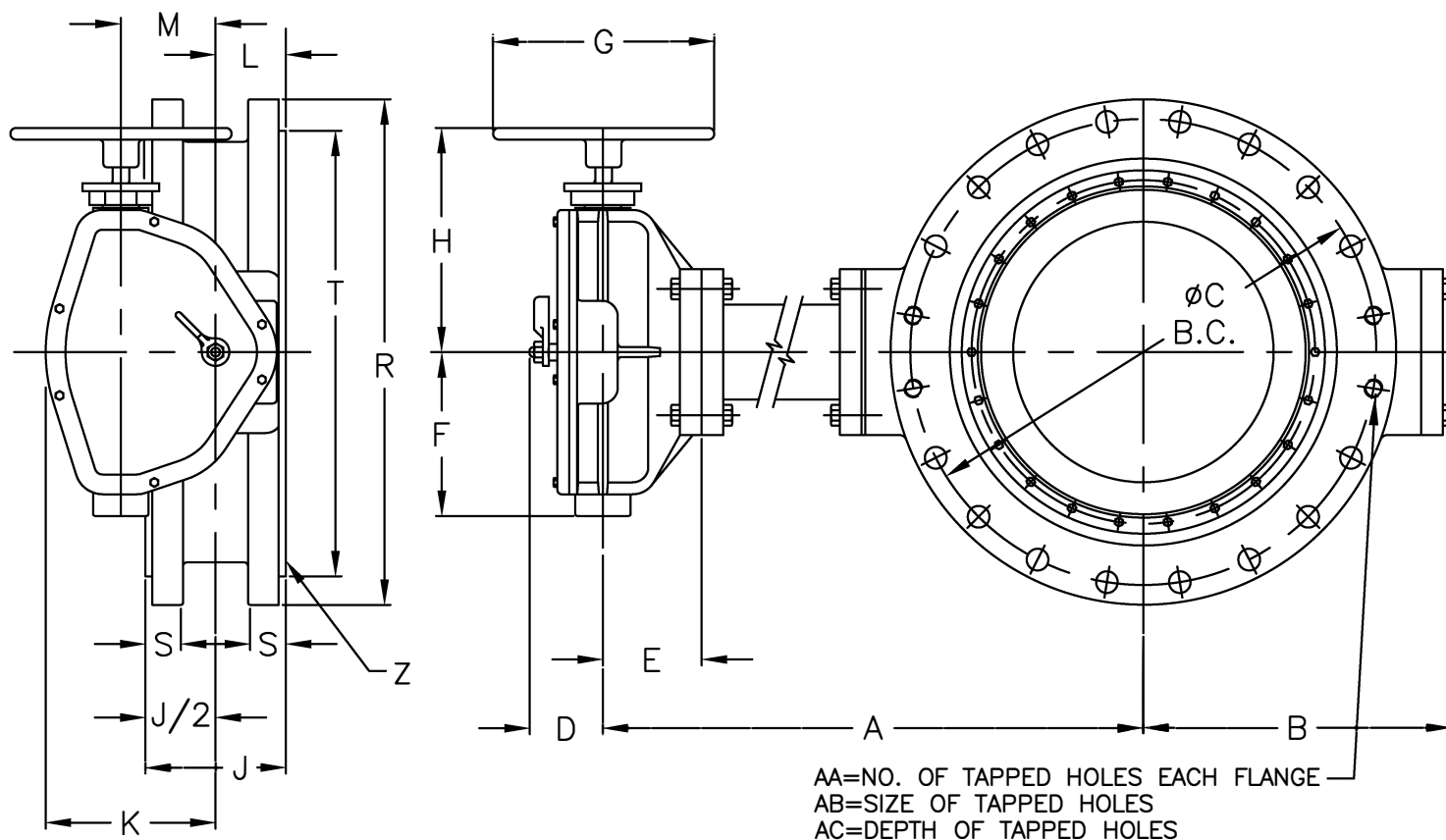
VALVE SIZE	A	B	C	J	P	Q	R	T	S	AA	AB	AC	WEIGHT
30"	22.71	23.63	39.25	13.75	28	1.75	43	37.187	3	4	1 3/4-5	2.00	1850
36"	26.15	27.06	46	14.00	32	2.00	50	43.688	3.38	4	2-4 1/2	2.25	2600
42"	30.00	30.94	52.75	14.13	36	2.00	57	50.438	3.69	8	2-4 1/2	3.25	4500

- 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 FLANGES & DRILLING (A.N.S.I. 250)  
 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: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 8: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE)

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/22/11  
 DWG. NO.  
 BFE-25-14D

30" THRU 42" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 POSITION INDICATOR  
 HANDWHEEL OPERATOR  
 FLANGED ENDS



	OPERATOR MODEL	D	E	F	G	H	K	L	M	N
30"	2200	4 3/16	6 1/4	10 3/8	18	14 5/16	10 3/4	3 7/8	6	72
36" & 42"	4350	5 5/8	6 1/16	14 5/16	27	18	13 5/16	4 3/16	7 1/2	90

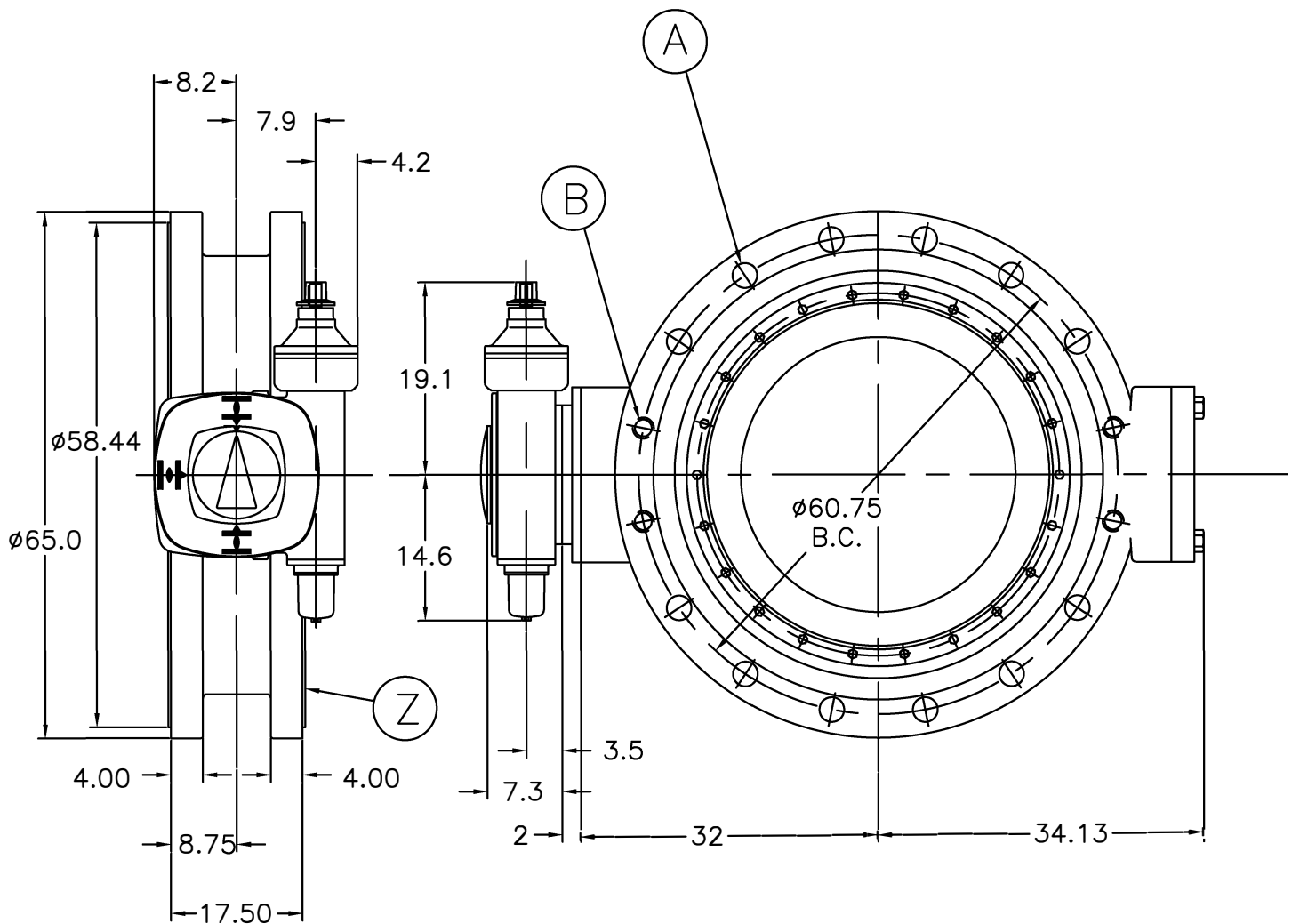
VALVE SIZE	A	B	C	J	P	Q	R	T	S	AA	AB	AC	WEIGHT
30"	NOTE AA	23.63	39.25	13.75	28	1.75	43	37.187	3	4	1 3/4-5	2.00	1850
36"	NOTE AA	27.06	46	14.00	32	2.00	50	43.688	3.38	4	2-4 1/2	2.25	2600
42"	NOTE AA	30.94	52.75	14.13	36	2.00	57	50.438	3.69	8	2-4 1/2	3.25	4500

- 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 FLANGES & DRILLING (A.N.S.I. 250)  
 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: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 8: "Z" = (1/16 or .0625 RAISED FACE ON EACH FLANGE)  
 NOTE 9: 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")

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 8/22/11  
 DWG. NO.  
 BFE-25-14E

30" THRU 42" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 EXTENDED BONNET  
 HANDWHEEL OPERATOR  
 FLANGED ENDS

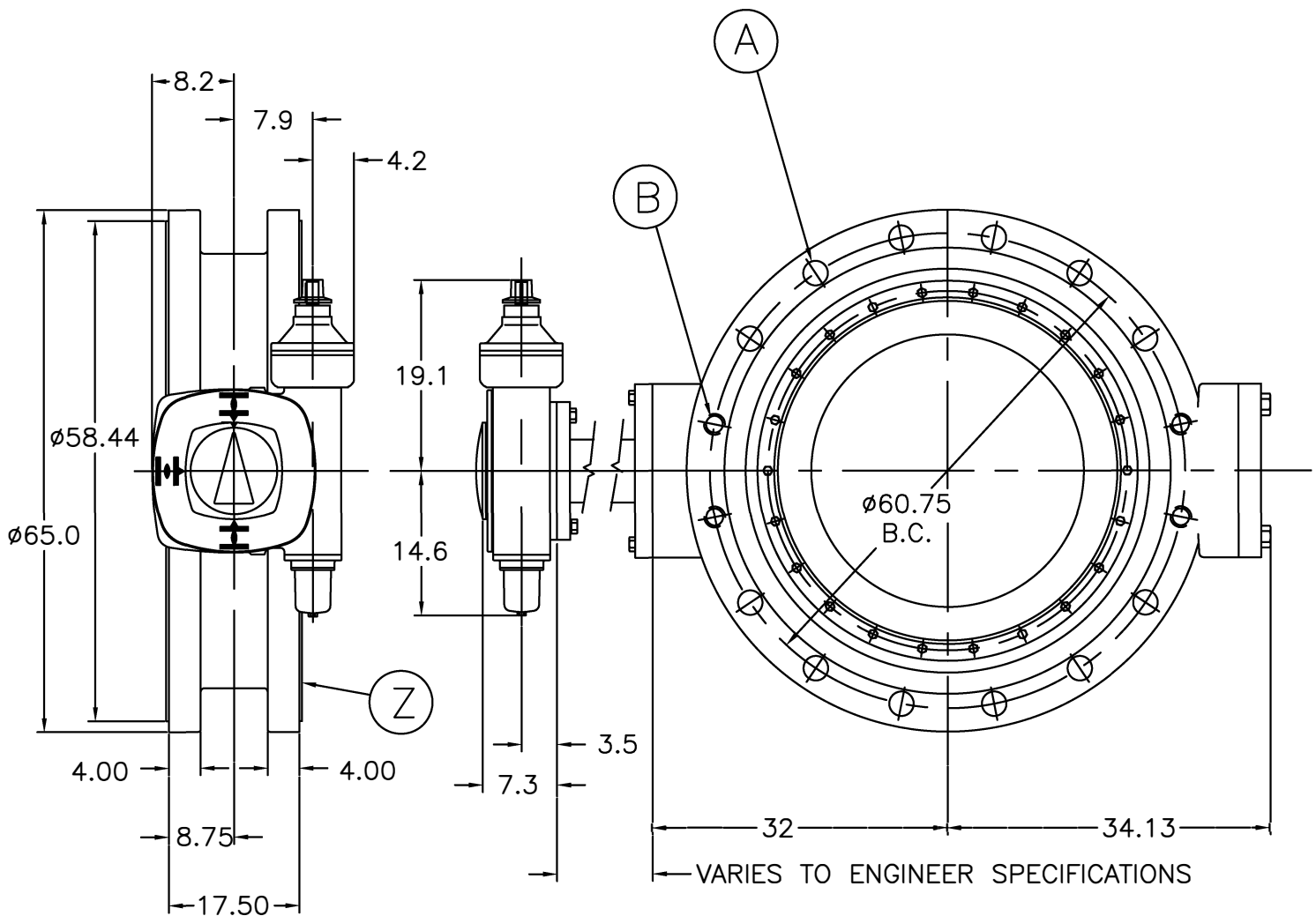


- NOTE 1: FLOW MAY BE IN EITHER DIRECTION  
 NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.  
 NOTE 3: REFERENCE AWWA C-504-B & DRILLING (A.N.S.I. 250)  
 NOTE 4: NUMBER OF TURNS TO CLOSE = 108  
 NOTE 5: OPERATED BY 2" AWWA OPERATING / WRENCH NUT  
 NOTE 6: A = (32)  $\phi 2.0$ " BOLTS PER FLANGE  
 NOTE 7: B = (8) 2.0-4.5 UNC x 2.25 DEEP TAPPED HOLES EACH FLANGE  
 NOTE 8: "Z" = (1/16" OR .0625 RAISED FACE ON EACH FLANGE)  
 NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 10: APPROXIMATE WEIGHT = 6300lbs.

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 9/19/11  
 DWG. NO.  
 BFE-25-48A

48" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 (AUMA GS200.3/GZ200.3:8 GEAR BOX)  
 BURIED OPERATOR  
 FE X FE ENDS

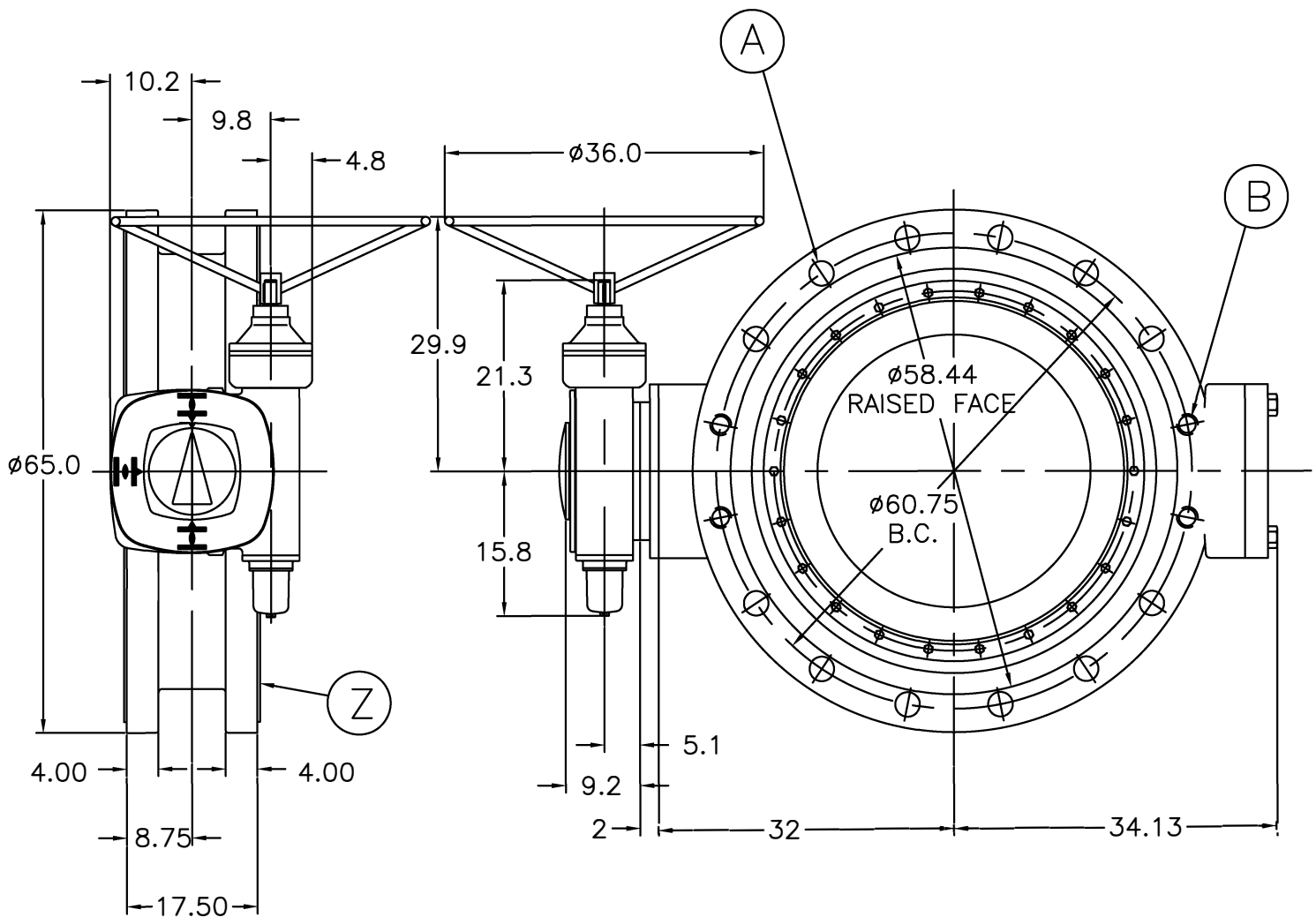


- NOTE 1: FLOW MAY BE IN EITHER DIRECTION  
 NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.  
 NOTE 3: REFERENCE AWWA C-504-B & DRILLING (A.N.S.I. 250)  
 NOTE 4: NUMBER OF TURNS TO CLOSE = 108  
 NOTE 5: OPERATED BY 2" AWWA OPERATING / WRENCH NUT  
 NOTE 6: A = (32)  $\phi 2.0$ " BOLTS PER FLANGE  
 NOTE 7: B = (8) 2.0-4.5 UNC x 2.25 DEEP TAPPED HOLES EACH FLANGE  
 NOTE 8: "Z" = (1/16" OR .0625 RAISED FACE ON EACH FLANGE)  
 NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 10: APPROXIMATE WEIGHT = 6300lbs.

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 9/19/11  
 DWG. NO.  
 BFE-25-AA2

48" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 (AUMA GS200.3/GZ200.3:8 GEAR BOX)  
 BURIED OPERATOR & EXTENDED BONNET  
 FE X FE ENDS

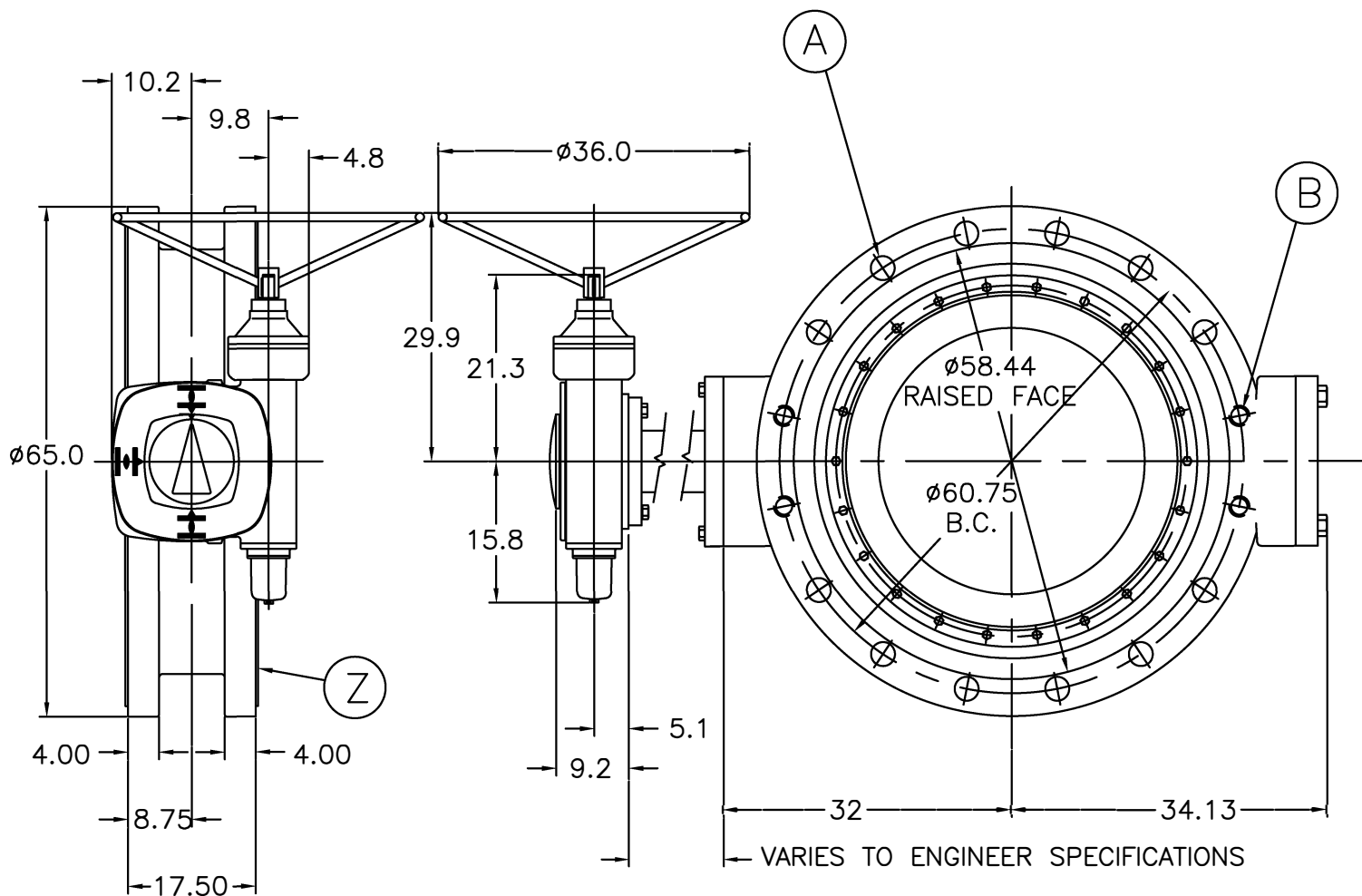


- NOTE 1: FLOW MAY BE IN EITHER DIRECTION  
 NOTE 2: VALVE SHAFT WILL MEET OR EXCEED REQUIREMENTS OF SHAFT TABLE PER AWWA STANDARD C-504 FOR APPLICABLE CLASS.  
 NOTE 3: REFERENCE AWWA C-504-B & DRILLING (A.N.S.I. 250)  
 NOTE 4: NUMBER OF TURNS TO CLOSE = 103  
 NOTE 5: MANUAL POSITION INDICATOR  
 NOTE 7: B = (8) 2.0-4.5 UNC x 2.25 DEEP TAPPED HOLES EACH FLANGE  
 NOTE 8: "Z" = (1/16" OR .0625 RAISED FACE ON EACH FLANGE)  
 NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 10: APPROXIMATE WEIGHT = 6300lbs.

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 9/19/11  
 DWG. NO.  
 BFE-25-48B

48" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 (AUMA GS250.3/GZ250.3:8 GEAR BOX)  
 HANDWHEEL OPERATOR  
 FE X FE 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 & DRILLING (A.N.S.I. 250)  
 NOTE 4: NUMBER OF TURNS TO CLOSE = 103  
 NOTE 5: MANUAL POSITION INDICATOR  
 NOTE 7: B = (8) 2.0-4.5 UNC x 2.25 DEEP TAPPED HOLES EACH FLANGE  
 NOTE 8: "Z" = (1/16" OR .0625 RAISED FACE ON EACH FLANGE)  
 NOTE 9: RATED AND TESTED FOR 250 PSI WORKING PRESSURE  
 NOTE 10: APPROXIMATE WEIGHT = 6300lbs.

CLOW VALVE COMPANY  
 OSKALOOSA, IOWA  
 A DIVISION OF MCWANE INC.

DWN: TRIJ  
 DATE: 9/19/11  
 DWG. NO.  
 BFE-25-AA4

48" STYLE 1450  
 CLASS 250 BUTTERFLY VALVE  
 (AUMA GS250.3/GZ250.3:8 GEAR BOX)  
 HANDWHEEL OPERATOR &  
 EXTENDED BONNET - FE X FE ENDS