



Commissioners
Kevin Julian
Todd Cook
Kelly Barger

General Manager
Darren Cardwell

July 8, 2024

[REDACTED]
Tennessee, USDA Rural Development
4730 New Harvest Lane
Knoxville, TN 37918

Re: Request for Project Specific AIS Waiver – Availability Waiver
16 and 20 inch Butterfly Valves
Hallsdale Powell Utility District
Clinton Highway water line replacement - Projects B, W and Y

Dear [REDACTED],

Hallsdale Powell Utility District (HPUD) requests a project specific availability waiver from the American Iron and Steel (AIS) requirements for a 16 and 20 inch butterfly valve assembly that will be used in the Clinton Highway water line replacement - Projects B, W and Y project. The project Owner, HPUD is requesting the waiver after unsuccessful attempts by the contractor and USDA's consultant to locate material manufactured domestically to meet AIS requirements. The following support documentation is provided for your consideration:

- 1) Supplier information gathered by the contractor:
 - a. Three suppliers were contacted including Core and Main, Hayes Supply, and Consolidated Pipe. Product was available in 28 to 32 weeks, but that time frame will not meet the project timeline.
- 2) Supplier information gathered by USDA's Consultant:
 - a. Market research has been completed for the 16 and 20 inch butterfly valves. Eight of the suppliers were unable to provide an AIS compliant valve. Seven suppliers could provide an AIS compliant valve but with lead times of 18 weeks or more, which is overly long. One company, [Southern Sales](#) (the regional supplier for Pratt valves), stated they can provide the products with an 8 to 10 week lead time depending on stock. This lead time is acceptable. However, if the items are not in stock, at time of purchase, then the lead time increases significantly to 30 to 32 weeks.
- 3) Documentation of efforts to find available domestic sources
 - a. RD AIS Research Request Submittal Form

- 4) Date product is needed – August 30, 2024
- 5) Relevant Plans and Specifications excerpts:
 - a. The butterfly valves consist of a cast iron body with a 316 stainless steel shaft and disc. Other components are gaskets and various materials for the seals (shop drawing of the valves are included)
 - b. 16 inch valves – quantity: 7
 - c. 20 inch valves – quantity: 5

Thank you for reviewing and considering this availability waiver request. If you have any questions regarding the enclosures or need additional information please contact me at 865-922-3562 or contact the consultant design engineer for this project – Robert G. Campbell, PE at 865-947-5996

Sincerely,



Darren Cardwell, PE

Manager – Hallsdale Powell Utility District

Enclosures: RD AIS Research Request For
Email – other supplier documentation

RD AIS Research Request Submittal Form	
Awardee/ Program Name	Hallsdale Powell Utility District
Project Name	Clinton Hwy water line replacement - Projects B, W and Y
Project Location	Knox County/Anderson County TN
Product(s) Needed	16 and 20 inch rubber seated butterfly valves
Date/Timeframe in which Product(s) is Needed	8 weeks

Brief description of project:

Replace older water lines which are a source of water loss and don't have the capacity to meet the system needs. The lines include 2, 4, 6, 8, 16 and 20 inch lines and all valves and appurtenances

Summary of product(s) to be researched:

Part Description (including size)	Quantity
16 inch rubber seated butterfly valves	7
20 inch rubber seated butterfly valves	5

2.10 BUTTERFLY VALVES

- A. Butterfly valves shall be of the rubber-seated tight-closing type. They shall meet or exceed performance requirements for water application of Specification C504. All valves shall be Mueller Linesal III butterfly valves.
- B. Both valve ends shall be mechanical-joint per AWWA Specification C111. Accessories (Bolts, glands and gaskets) shall be supplied by the valve manufacturer.
- C. All valves must use full AWWA C504 Class 150B valve shaft diameter and Full Class 150B valve shaft diameter and Full Class 150 underground-service-operator torque rating throughout entire travel.
- D. Valve body shall be high-strength cast 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 and 18-8 stainless steel nylon locked screws. Rubber seat shall be a full-circle 360-degree seat not penetrated by the valve shaft.
- E. Valve shaft shall be one piece, extending full size through the entire valve and operator. Valve shaft shall have 304 stainless steel journals rotating in reinforced Teflon bearings. Valve shall have permanently-se two-way thrust bearing. Packing shall be "triple-seal" rubber designed for permanent duty in underground service.
- F. Valve operator shall be of the traveling-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 closed position without damage to the valve or valve operator. It shall be designed to resist submergence in water to twenty feet (25') head pressure.

2.11 BUTTERFLY VALVE BOXES

- A. Valve boxes shall be reinforced concrete similar to the type specified by the Nashville Water and Sewer Department. Outside dimensions shall be 19-1/4" x 17". Valve boxes shall be installed with the length of the box perpendicular to the water lines. Inside dimension shall be 13-1/4" x 11". Height of the box shall vary from 12" to 18". Each valve box shall be supported by four (4) concrete footing blocks, each having dimension of 12" x 12" x 1-1/2" thick.
- B. Valve box frame and covers shall be Cast iron No. 8006 as manufactured by John Bouchard & Sons Co. or approved equal.

3. EXECUTION

3.1 SETTING VALVES AND FITTINGS

From: Fuller, Bobby
Sent: Wednesday, May 15, 2024 10:59 AM
To: Horizon Underground LLC
Subject: RE: Request for Price and Lead Time - Butterfly Valves Bid # 3538626

Wendy,
See below for the updated lead times on the butterfly valves.

Import

16" Butterfly MJ
6-8 weeks

20" Butterfly MJ
2-3 days

AIS

16" Butterfly MJ
30 weeks

20" Butterfly MJ
30 weeks

Thank you.

Bobby Fuller

Account Manager – Contractor Sales

Core & Main LP

5905 Old Rutledge Pike, Knoxville, TN 37924

207 Hwy 75, Blountville, TN 37617

Cell: ~~865-271-8985~~

Office: ~~865-546-3225~~ – Knoxville, TN

Office: ~~423-323-0532~~ – Blountville, TN



From: Horizon Underground LLC <Horizonundergroundllc@outlook.com>
Sent: Tuesday, May 14, 2024 8:17 AM
To: Fuller, Bobby <Bobby.Fuller@coreandmain.com>
Subject: RE: Request for Price and Lead Time - Butterfly Valves Bid # 3538626

CAUTION: External

From: David Harvey
Sent: Friday, April 26, 2024 8:55 AM
To: Horizon Underground LLC
Subject: butterfly valves

Good morning,

16" mj o/l 150B butterfly valve (import) - \$3575.00
16" butterfly (AIS) - \$6600.00
20" mj o/l 150B butterfly valve (import) - \$4975.00
20" butterfly (AIS) - \$9675.00

I didn't have quantities but I am told they have some valves in stock that are import. 18-26 weeks for AIS

Thanks

David Harvey

Sales

Hayes Pipe Supply, Inc.

3000 Industrial Pkwy E, Knoxville, TN 37921
O: 865-525-1717 | F: 865-525-0654 | C: 740-505-3439
www.hayespipe.com

From: [Horizon Underground LLC](#)
To: [Robert Campbell](#)
Subject: RE: [External Email]FW: HPUD Water System Improvements Project - B,W & Y - Submittals for Imported 16" & 20" Valves
Date: Monday, April 22, 2024 3:04:08 PM
Attachments: [2EBCA74A2DF24B329FC489BA2BC7FBCD.png](#)

Robert,

Please see email below showing the lead time for the that was sent to us from our supplier. Let us know if you need anything further.

Thank you

Wendy
Horizon Underground, LLC
(formerly Mike Smith Pump Service, LLC)
3625 Highway 25E / PO Box 27
Bean Station, TN 37708
Phone: 865-993-7201 / Fax: 865-993-3513

From: [Randy Cole](#)
Sent: Monday, April 15, 2024 9:13 AM
To: [Horizon Underground LLC](#)
Cc: [Corey Phillips](#)
Subject: Re: HPUD Rural Development addendum 4

Tim,

Lead time on the 16" and 20" Butterfly valves is 30 weeks

Thanks,

Randy Cole
Inside Sales



T: (865) 690-6907
Randy.Cole@cspipe.com - www.consolidatedpipe.com
7224 Ball Camp Pike, Knoxville, TN 37931

From: Robert Campbell <rcampbell@rgc-a.com>



a MUELLER brand

2048 INDUSTRIAL BLVD, KIMBALL, TN 37347
TEL: (360) 605-6641 FAX:

Please reference project name and quote number on all purchase orders related to this quotation.

Date: July 1, 2024
Quote #: Q-024-40607 **Rev:** 0
Project Name: HPUd Addendum# 4
Project Location: TN

TO: All Bidding Distributors

Phone: TBD
Fax:TBD

The Products offered in the following proposal are either in compliance with or exempt from the EPA American Iron and Steel (AIS) Requirements of the Consolidated Appropriations Act of 2014 and further Continuing Appropriations Act.

Until we receive a complete specification, we cannot guarantee the products included in this quote comply with any applicable domestic content procurement preferences. This quote is null and void and must be subject to requote based on Henry Pratt's receipt and review of any applicable domestic content procurement preferences identified in the complete specification.

We are pleased to submit the following quote for your consideration:

<u>ITEM</u>	<u>QTY</u>	<u>LEAD-TIME</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>EXTENDED</u>
1	5	Est (2) 4-6 wks, (2) 8-10 wks, (1) 28-30 wks ARO	201MR-1668EAALNP4 20" Mechanical Joint 150B Butterfly Valve, EPDM Seat, DI Body, Ni Alum Brz Disc, 316SS Shaft, Nylatron Bearing, MDT4S Buried Service Nut Open Left , Fully Rubber-Lined Body, 16 Mils avg. Fusion Bond Epoxy Interior, 16 Mils avg. Fusion Bond Epoxy Exterior, 316SS Hardware AIS Exempt, Non-Domestic valve & actuator	\$ 6,954.78	\$ 34,773.90
2	7	Est (4) 10-12 wks, (3) 22-30 wks ARO	161MR-1668EAALNP3 16" Mechanical Joint 150B Butterfly Valve, EPDM Seat, DI Body, Ni Alum Brz Disc, 316SS Shaft, Nylatron Bearing, MDT3S Buried Service Nut Open Left , Fully Rubber-Lined Body, 16 Mils avg. Fusion Bond Epoxy Interior, 16 Mils avg. Fusion Bond Epoxy Exterior, 316SS Hardware AIS Exempt, Non-Domestic valve & actuator	\$ 4,633.62	\$ 32,435.34
3	5	Est Ship 28-32 wks ARO	201MM-0134ESSLNP4DA 20" Mechanical Joint 150B Butterfly Valve, EPDM Seat, DI Body, DI Disc, 316SS Shaft, Nylatron Bearing, MDT4S Buried Service Nut Open Left , 8 Mils Amercoat 370 Epoxy Interior, 8 Mils Amercoat 370 Epoxy Exterior, 316SS Hardware AIS domestic valve w/non-domestic actuator	\$ 8,225.56	\$ 41,127.80
4	7	Est Ship 28-32 wks ARO	161MM-0134ESSLNP3DA 16" Mechanical Joint 150B Butterfly Valve, EPDM Seat, DI Body, DI Disc, 316SS Shaft, Nylatron Bearing, MDT3S Buried Service Nut Open Left , 8 Mils Amercoat 370 Epoxy Interior, 8 Mils Amercoat 370 Epoxy Exterior, 316SS Hardware AIS domestic valve w/non-domestic actuator	\$ 5,086.02	\$ 35,602.14

Quote Total: \$ 143,939.18

Quoting standard valves with materials as noted herein. Any deviation may result in additional charges and changes in lead time. Lead times are subject to change based on material availability at time of order release.

Sincerely,
Terry Rizzo
trizzo@muellerwp.com

Mueller refers to one or more of Mueller Water Products, Inc., a Delaware corporation ("MWP"), and its subsidiaries. MWP and each of its subsidiaries are legally separate and independent entities when providing products and services. MWP does not provide products or services to third parties. MWP and each of its subsidiaries are liable only for their own acts and omissions and not those of each other. MWP brands include Mueller®, Echologics®, Hydro Gate®, Hydro-Guard®, Jones®, Mi.Net®, Milliken®, Pratt®, Singer®, and U.S. Pipe Valve and Hydrant. Please see muellerwp.com/brands to learn more.

CONDITIONS OF SALE

Pricing quoted is based upon Buyer's acceptance of Seller's Standard Terms and Conditions and Limited Warranty which are attached as Attachment A. Buyer must reference Project Name and quote number on all purchase orders related to this quotation. Requested changes to Seller's Standard Terms and Conditions or Limited Warranty may result in a change of price quoted.

Commercial Terms:

FOB Point : Origin
Freight Terms : PPC Pre-Pay & Charge
Payment Terms : Net 30 Days
Price Validity : 30 Days
Warranty : 24 Months
Packaging : Standard

Extended Warranty

ADD 2% FOR 36 MONTH WARRANTY
ADD 3% FOR 48 MONTH WARRANTY
ADD 5% FOR 60 MONTH WARRANTY

1. Quoted Prices Exclude:

- 1.1 All Taxes
- 1.2 Flange nuts, bolts, gaskets, anchor, mounting bolts, Victaulic couplings, Mechanical Joint Accessories, thimbles, or non-standard tags.
- 1.3 Extension stems, soil pipes, valve boxes, covers, or "tee" wrenches
- 1.4 Installation and start-up service, on-site training, classroom instruction.
- 1.5 Hydraulic oil for cylinder operators and/or accumulator systems.
- 1.6 Spare parts
- 1.7 Exceptions/Notes:
 - Quoting butterfly valves per AWWA C504-10 with standard materials as noted herein.
 - Exception taken to 18-8 304SS body seat. Valves quoted with EPDM seat.
 - Butterfly valves 20" and smaller have stainless steel squeeze pins to affix disc to valve shaft, in lieu of stainless steel taper pins w/ nuts and bolts.
 - Butterfly valves 3"-20" utilize a 1-piece shaft design,
 - Butterfly valves 20" and smaller have bonded seat-on-body design where the valve shaft penetrates the valve seat. No adjustment or replacement of the valve seat is required through the life of the valve, under normal conditions. The openings in the seat for the valve shaft penetration shall be smaller than the shaft diameter in order to permit sealing under tension.
 - Butterfly valve bearings are nylatron in lieu of teflon.
 - At the operator end of the valve shaft, a packing gland utilizing "V" type chevron packing shall be utilized. "O" ring and/or "U" cup packing is not utilized.
 - Standard valves are designed for temporary submergence of 23 feet, 72 hours, at 10psig. For continuous submergence or for conditions that will exceed stated limits, please advise depth & duration for a re-quote.
 - Valve Boxes & covers, MJ accessory kit, T-handle wrenches, flange nuts, bolts and gaskets, stem guides, and all other appurtenances to be provided by others.

2. Clarifications



Submittal Data Sheet
Date: April 19, 2024

P.O.
FACTORY QUOTE QUO044275
PROJ. NAME [230879]

LINE #	Cust LINE #	QTY	PART NO.	DESCRIPTION
1		1	9548466	BAW,20,MJ,CI,NBRN-NBR,150B,DI-S2*GB-6B-N

Style	BAW	DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve (BAW)
Size	20	20 Inch (500mm)
End Connection	MJ	Mechanical Joint Ends
Body Material	CI	Cast Iron
Packing	NBRN	Acrylonitrile Butadiene; Self Adjusting; -20 to 180° F. (-29 to 82° C.)
Seat Material	NBR	Acrylonitrile Butadiene; Temperature -20 to 180° F. (-29 to 82° C.)
Service Class	150B	AWWA Class 150B
Disc Material	DI	Ductile Iron with 316 Stainless Steel Edge
Shaft Material	S2	316 Stainless Steel
Coating	S30SC0	Interior: 8 mils minimum of Blue DeZURIK Epoxy with Standard (SP10). Exterior: 8 mils minimum of Blue Epoxy DeZURIK with Standard (SP10) surface prep
Actuator	GB-6B-N	G-Series Buriable Nut; 2 In Square

Valve Weight (Approx)	608 lbs/ 276 kgs
Temperature Range	-20 to 180 Degrees F.

RELATED DOCUMENTS

- A60849: DWG INST BAW MJ GB/GS-6B-N 14-20"
- A47531: DWG INST VALVE BAW MJ 3-20"
- A47530: DWG VALVE ASSY BAW MJ 18-20"
- A61731: DWG ACT GS/GB-6B HD/CW/N
- A60851: DWG CONN PARTS GS/GB-6B BAW 3-20"
- D10386: IM VALVE AWWA 3-20 IN
- D10505: IM ACT G-SERIES 6B/12A MANUAL AWWA

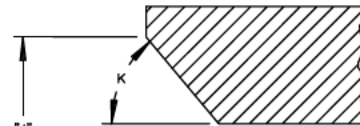
VALVE SIZE	DIMENSIONS							INCHES MILLIMETERS	
	A	B	C	D	E	F	H		
4	8.56	4.75	4.00	NONE	NONE	3.88	3.06		
	217	121	102			99	78		
6	8.88	4.75	5.75	NONE	NONE	5.62	4.80		
	226	121	146			143	122		
8	9.50	5.00	7.60	NONE	NONE	7.47	6.52		
	241	127	193			190	166		
10	9.88	5.25	9.62	NONE	.18	9.46	9.18		
	251	133	244		5	240	233		
12	10.00	5.38	11.60	.415	1.18	11.45	10.85		
	254	137	295	10.5	30	291	276		
14	12.38	6.62	13.60	.16	1.06	13.40	12.90		
	314	168	345	4	27	340	328		
16	12.75	6.75	15.50	.98	1.74	15.25	14.73		
	324	171	394	25	44	387	374		
18	13.12	7.00	17.25	1.61	2.49	17.00	16.30		
	333	178	438	41	63	432	414		
20	13.38	7.12	19.25	2.48	3.36	19.00	18.50		
	340	181	489	63	85	483	470		

CLASS	"G" (VALVE WEIGHT)								
	4	6	8	10	12	14	16	18	20
150B/250B	60	95	135	210	285	375	475	550	700

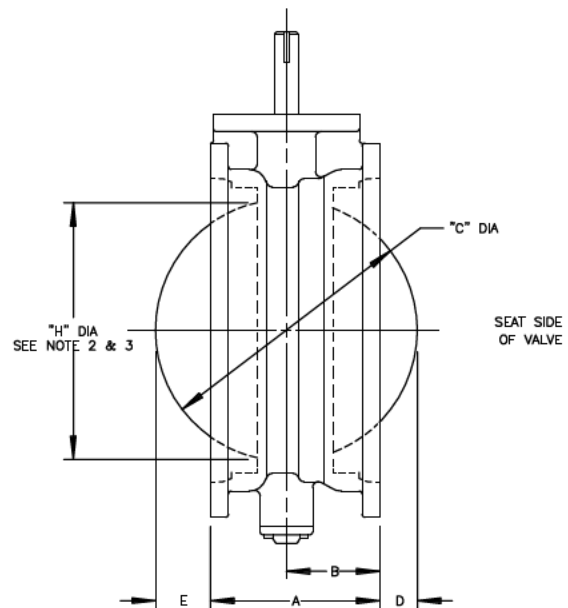
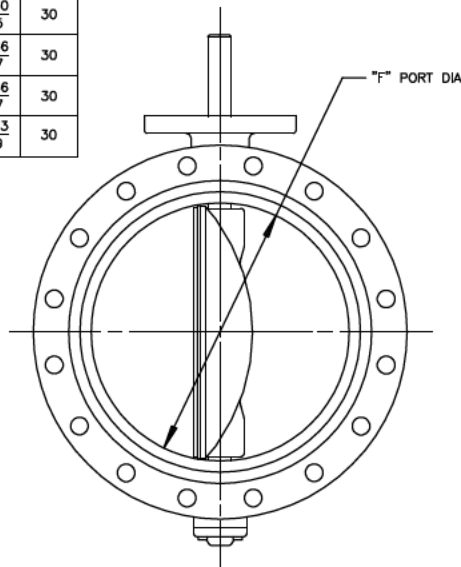
NOTE:

- "G" IS BARE SHAFTED VALVE WEIGHT (LBS).
- IF PVC PIPE IS USED, PIPE MUST COMPLY TO AWWA C900, C905 & C909 (CURRENT REVISION).
- IF PVC PIPE IS USED, PIPE END CHAMFER IS REQUIRED FOR DISC CLEARANCE IN SOME CASES—REFER TO "J" AND "K" DIMENSIONS "J": MIN CHAMFERED PIPE ID OF BOTH ENDS "K": CHAMFERED ANGLE

VALVE SIZE	PVC PIPE DIM			
	DR	PR	J	K
10	14	200	9.62 244	30
	12	14	200	11.75 298
14	21	200	13.75 349	30
	18	235	13.88 353	30
	17	250	14.00 356	30
	14	305	14.00 356	30
16	18	235	15.68 398	30
	17	250	15.78 401	30
	14	305	15.88 403	30
18	18	235	17.38 441	30
	17	250	17.50 445	30
	14	305	17.50 445	30
20	21	200	19.56 497	30
	18	235	19.56 497	30
	17	250	19.63 499	30



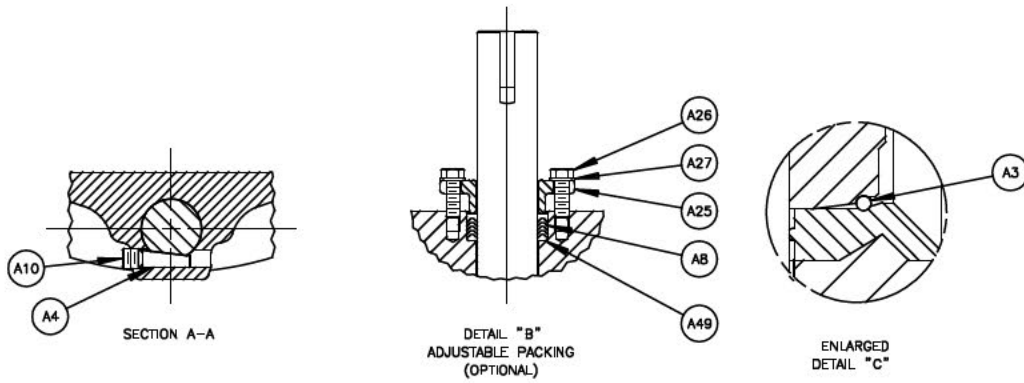
PVC PIPE END
DETAIL (ENLARGED)



G	38400	07/02/18
F	18400	04/03/17
E	50312	10/22/14
D	81108	02/13/04
C	80713	02/20/02
B	80608	10/10/00
A	50312	02/07/97



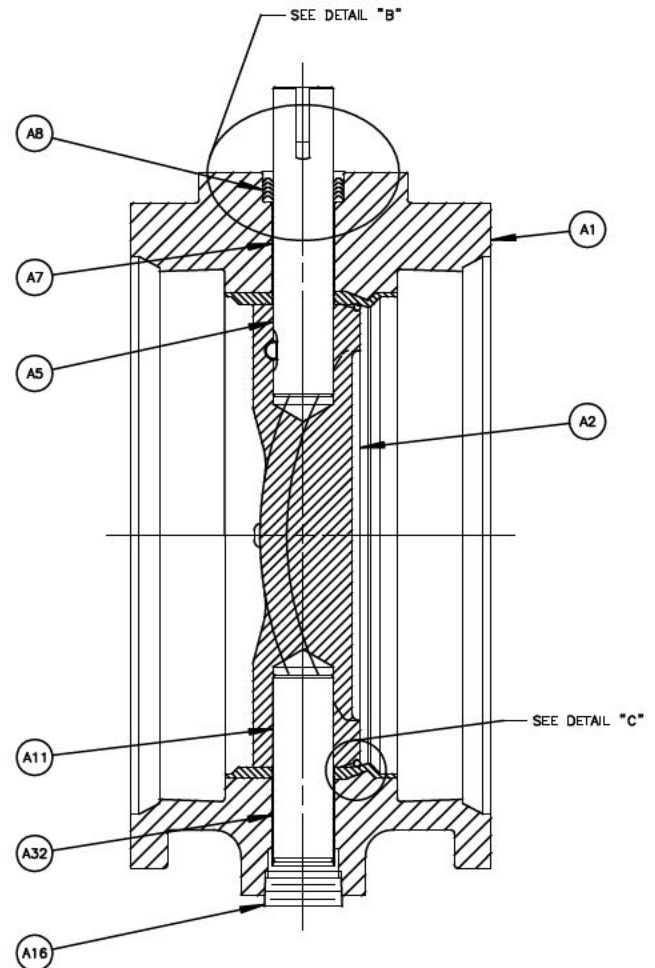
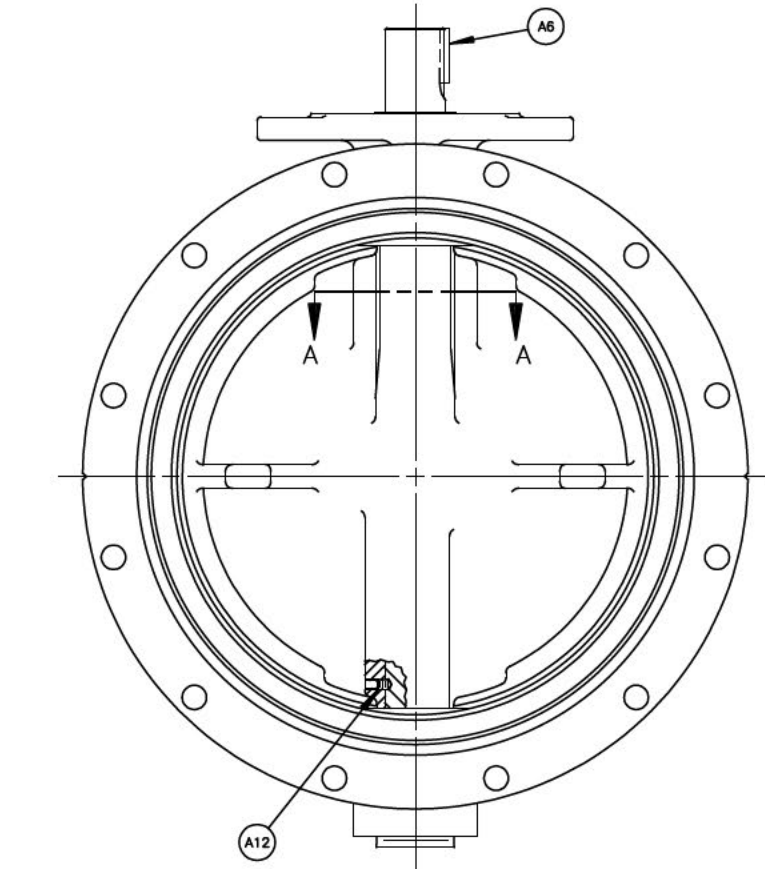
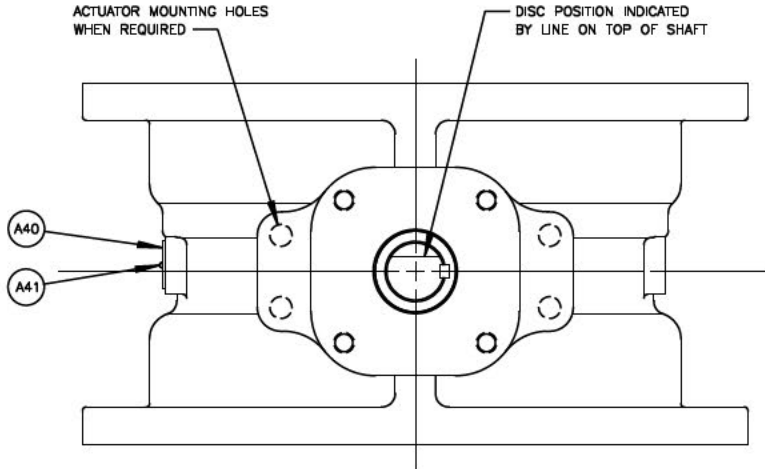
4-20 MECHANICAL JOINT AWWA BUTTERFLY VALVES SHOWING DISC CLEARANCE IN FULL OPEN POSITION, VALVE WEIGHTS AND PORT DIAMETER			
DOCT. CODE	DRANN	APPROVED	WCB
C1	CHECKED	DATE	08/17/96
			A47531



NO	PART NAME	QTY
A1	BODY	1
A2	DISC	1
A3	SEAT RING	1
A4	PIN	1
A5	UPPER SHAFT	1
A6	KEY	1
A7	BEARING (UPPER JOURNAL)	1
AB	PACKING	-
A9		
A10	SET SCREW	1
A11	LOWER SHAFT	1
A12	SET SCREW	1
A13		
A14		
A15		
A16	PLUG	1
A25	GLAND	1
A26	SCREW	2
A27	WASHER	2
A32	BEARING (LOWER JOURNAL)	1
A40	VALVE CLASSIFICATION PLATE (WHEN REQ'D)	1
A41	DRIVE SCREW (USED WITH A40)	2
A49	SUPPORT RING (PTFE PACKING ONLY)	1

NOTE:

1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. REPLACEABLE WEAR PARTS ARE ITEMS NO A7, AB AND A32.



G	7/1/90	09/14/22
F	8/18/92	07/21/14
E	08/13/95	12/14/12
D	01/19/94	07/18/08
C	01/19/94	02/13/04
B	08/12/92	03/20/02
A		

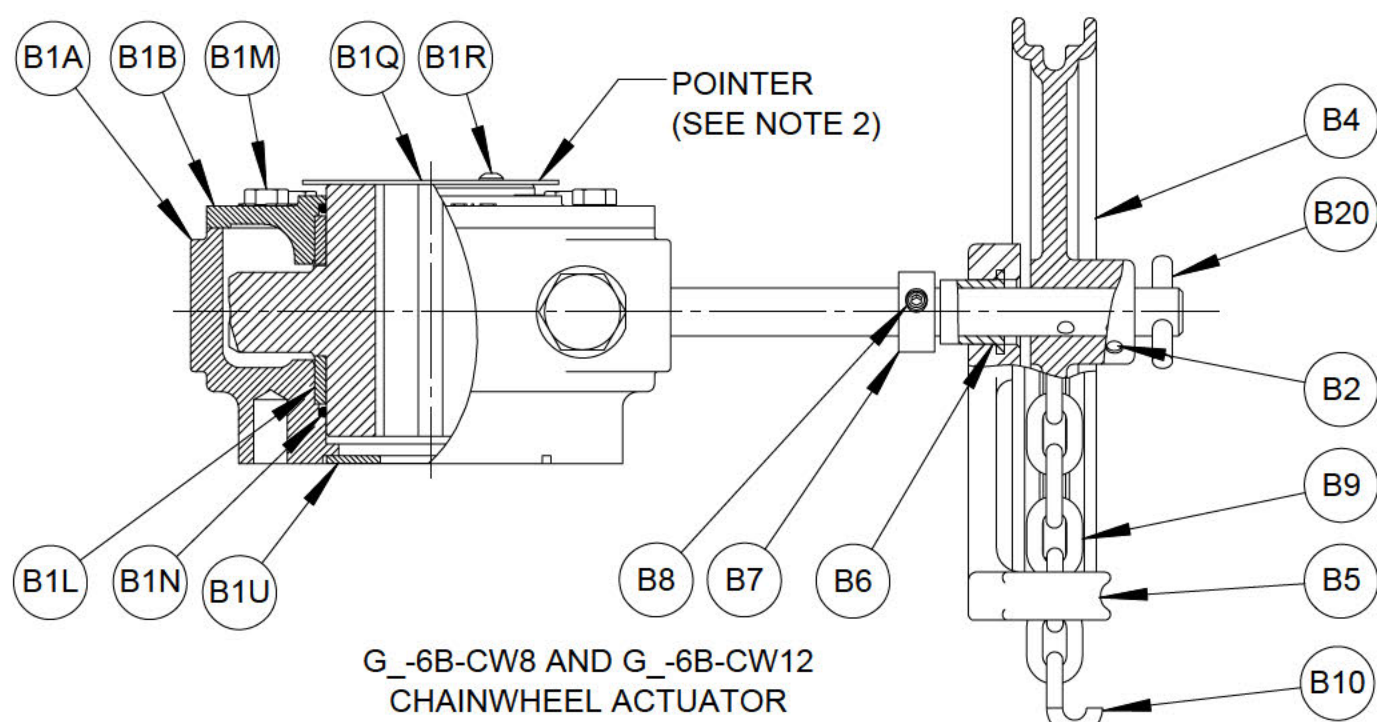
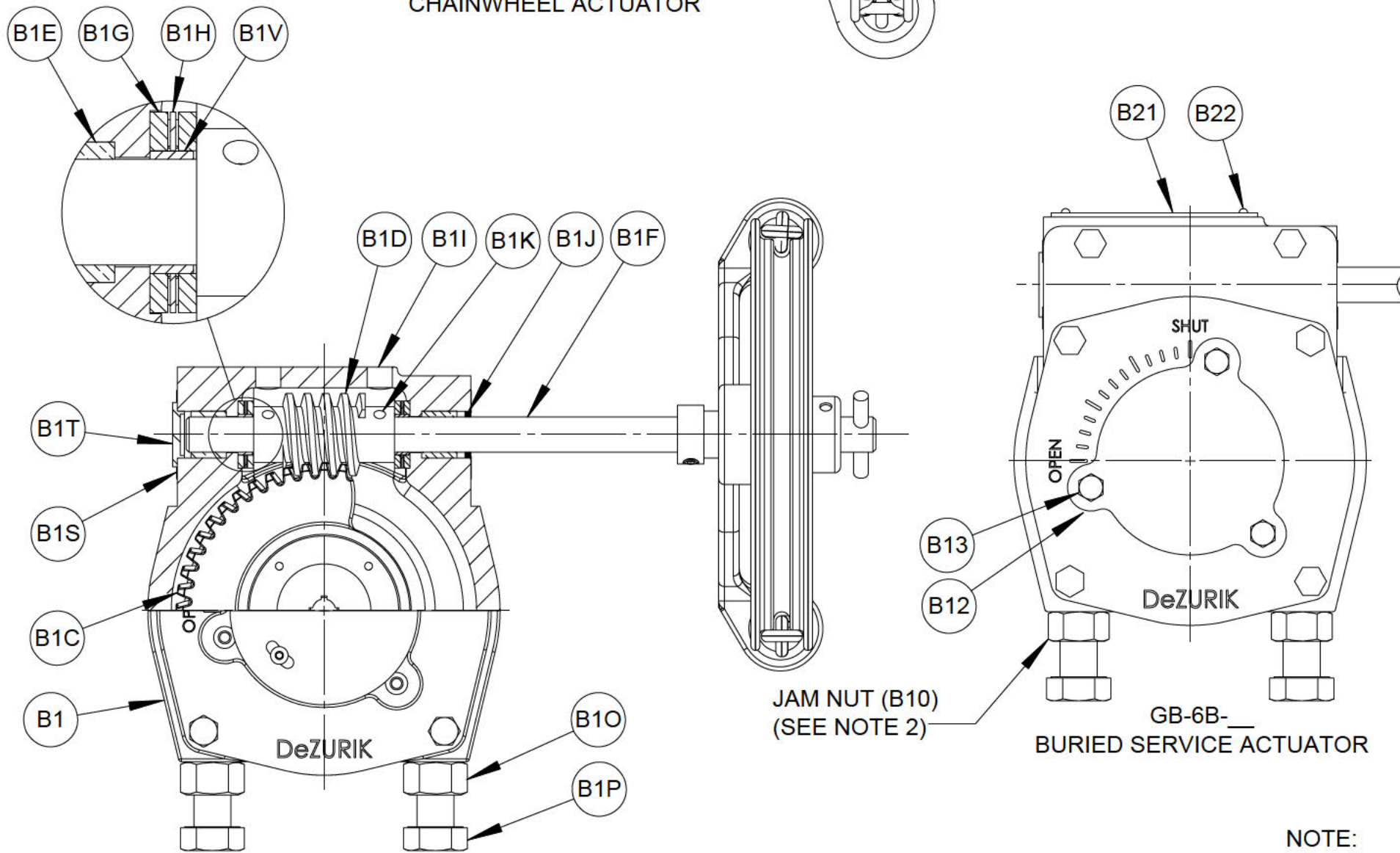
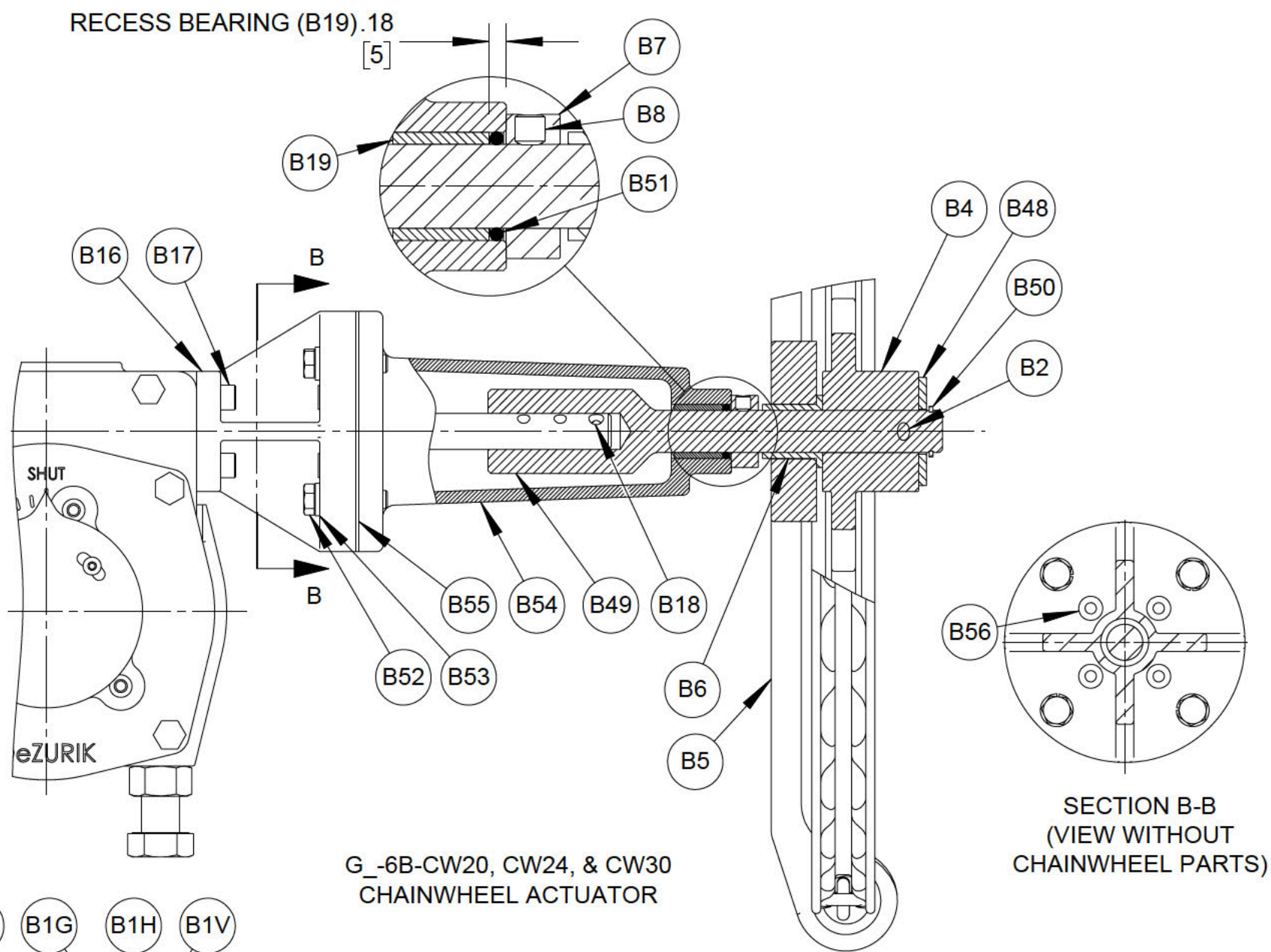
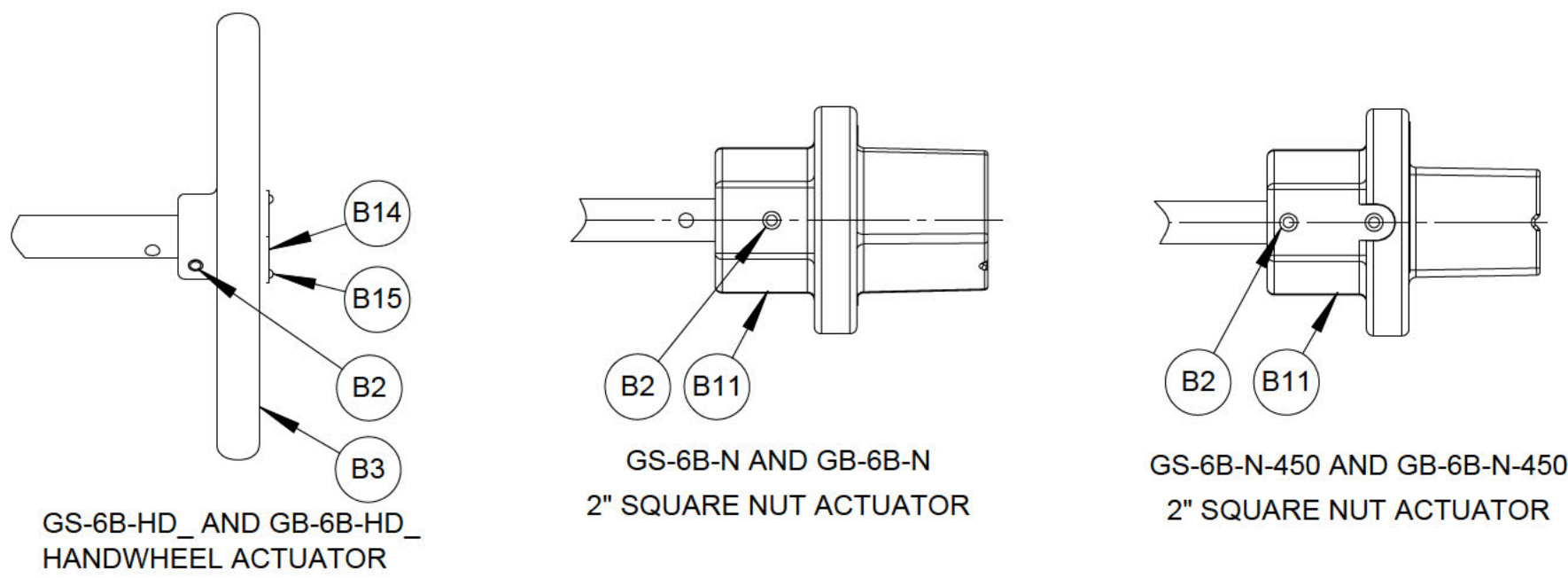
DeZURIK

www.dezurik.com

DOCT. CODE		DRAWN		APPROVED	
C1	CHECKED	KW	WCB		
	SJJ	DATE	09/11/96		

BAW BUTTERFLY VALVES SIZE 18 & 20
MECHANICAL JOINT VALVE ASSEMBLY

A47530



NO.	DESCRIPTION	QTY
B1	ACTUATOR ASSEMBLY	1
B1A	HOUSING	1
B1B	COVER	1
B1C	GEAR	1
B1D	WORM GEAR	1
B1E	BEARING	2
B1F	DRIVE SHAFT	1
B1G	BEARING RACE	4
B1H	THRUST BEARING	2
B1I	PIPE PLUG	2
B1J	SEAL	1
B1K	PIN	2
B1L	BEARING	2
B1M	SCREW	6
B1N	O-RING	2
B1O	NUT	2
B1P	SCREW	2
B1Q	POINTER	1
B1R	SCREW	2
B1S	PLUG	11
B1T	PLUG	1
B1U	PACKING WASHER	1
B1V	SPACER SLEEVE	2
B2	PIN (HANDWHEEL & WRENCHING SQUARE)	1
B2	PIN (WRENCHING SQUARE G_-6B-N-450 OPTION ONLY)	2
B3	HANDWHEEL	1
B4	CHAINWHEEL	1
B5	CHAIN GUIDE	1
B6	BEARING	1
B7	COLLAR	1
B8	SET SCREW	1
B9	CHAIN	-
B10	CLOSING LINK	1
B11	WRENCHING SQUARE	1
B12	COVER (BURIED SERVICE ONLY)	1
B13	SCREW (BURIED SERVICE ONLY)	3
B14	OPEN TAG (24" & 30" HANDWHEEL ONLY)	1
B15	DRIVE SCREW (24" & 30" HANDWHEEL ONLY)	2
B16	ADAPTOR	1
B17	SCREW	4
B18	PIN (20" - 30" CHAINWHEEL ONLY)	1
B19	BEARING (20" - 30" CHAINWHEEL ONLY)	1
B20	PIN (8" & 12" CHAINWHEEL ONLY)	
B21	DATA PLATE	1
B22	DRIVE SCREW	2
B48	WASHER (20" - 30" CHAINWHEEL ONLY)	1
B49	SHAFT EXTENSION (INNER)	1
B50	RETAINING RING (20" - 30" CHAINWHEEL ONLY)	1
B51	O-RING (20" - 30" CHAINWHEEL ONLY)	1
B52	SCREW (20" - 30" CHAINWHEEL ONLY)	4
B53	LOCKWASHER (20" - 30" CHAINWHEEL ONLY)	4
B54	SHAFT EXTENSION (20" - 30" CHAINWHEEL ONLY)	1
B55	GASKET (20" - 30" CHAINWHEEL ONLY)	1
B56	PLUG	4

NOTE:

- WHEN ORDERING PARTS INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NUMBER AND QUANTITY.
- TO CONVERT GS-6B (WEATHER PROOF) TO GB-6B (BURIED SERVICE) ACTUATOR.
 - REMOVE POINTER.
 - APPLY A BEAD OF SILICONE SEALANT DOW RTV-732(1055515) TO ACTUATOR MATING SURFACE OF COVER (B12), ASSEMBLE TO ACTUATOR AND ATTACH WITH SCREW (B13).
 - BEFORE ADJUSTING ACTUATOR STOP SCREWS (B1P), LOOSEN JAM NUTS (B10) AND APPLY 2 WRAPS OF STRING PACKING (1013701) TO THE ACTUATOR STOP SCREW THREADS BETWEEN JAM NUTS AND ACTUATOR HOUSING (B1A).
- RECOMMENDED SPARE PARTS ARE ITEMS B1J, B1N, B6, B19, B51 AND B55.

70424	03/13/19
50312	08/22/18
A	R/LP
	08/16/17



GS-6B- AND GB-6B- MANUAL ACTUATOR WITH CHAINWHEEL, HANDWHEEL & WRENCHING SQUARE (NUT)			
DOCT. CODE	DRAWN	SN	APPROVED
C1	CHECKED	SN	DATE 8/16/2017

A61731



TABLE OF CONTENTS

A Data Sheet is included for each line item on the purchase order.

Document numbers are listed at the bottom of the Data Sheet.

Any one drawing may apply to more than one item number.

All documents are assembled in alpha/numeric order within each section

- DATA SHEETS
- INSTALLATION DRAWINGS & CROSS SECTION DRAWINGS



Submittal Data Sheet

Date: 06/04/2021

QUOTE NUMBER 230879

REV

PROJ.

Fact. ITEM	Cust. ITEM	QTY	DESCRIPTION
1		1	BAW,16,MJ,CI,NBRN-NBR,150B,DI-S2*GB-6B-N
Style		BAW	DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve
Size		16	16 Inch (400mm)
End Connection		MJ	Mechanical Joint, Conforms to ASME/AWWA C111/A21.11
Body Material		CI	Cast Iron, ASTM A126 Class B
Packing		NBRN	NBR (Acrylonitrile-Butadiene), Self-Adjusting Multiple V-Ring; -20 to 180°F (-29 to 82°C)
Seat Material		NBR	NBR (Acrylonitrile-Butadiene); -20 to 180°F (-29 to 82°C)
Service Class		150B	AWWA Class 150B
Disc		DI	Ductile Iron, ASTM A536 Grade 65-45-12 (3" - 24" (80-600mm) Class 150B/250B, 28" - 72" (700-1800mm) Class 25A, 75B & 150B & 28" - 48" (800-1200mm) Class 250B) and Grade 80-55-06 (54" - 72" (1400-1800mm) Class 250B), Type 316 Stainless Steel Seating Edge (3" - 20" (80-500mm) =ASTM A276, 24" and larger (600mm & larger) - ASTM A240)
Shaft		S2	316 Stainless Steel, ASTM A276
Coating or Paint		S30SCO	8 mils minimum (non-stainless steel parts) of Blue DeZURIK Epoxy (NSF Std. 61) on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy (NSF Std. 61), and on Exterior with Standard (SP10) surface prep
Actuator Type		GB-6B-N	G-Series Buriable Worm Gear with 2 Inch Square Nut Operator

RELATED DOCUMENTS

A060849	DWG INST BAW MJ GB/GS-6B-N 14-20"
A047531	DWG INST VALVE BAW MJ 3-20"
A047528	DWG VALVE ASSY BAW MJ 14-16"
A061731	DWG ACT GS/GB-6B HD/CW/N
A060851	DWG CONN PARTS GS/GB-6B BAW 3-20"

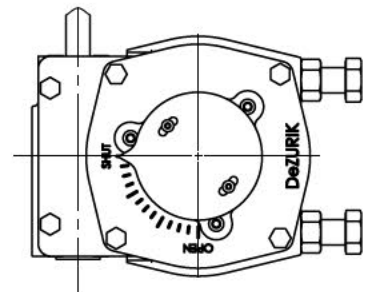
VALVE SIZE		DIMENSIONS IN [MM]									
IN	MM	A	B	C	D	E	F	G	K	L	
14	350	12.38 [314]	6.62 [168]	10.91 [277]	11.50 [292]	3.50 [89]	.91 [23]	10	18.75 [476]	20.31 [516]	
16	400	12.75 [324]	6.75 [171]	12.06 [306]	12.75 [324]	3.50 [89]	.91 [23.11]	12	21.00 [533]	22.56 [573]	
18	450	13.42 [341]	7.00 [178]	14.03 [356]	13.5 [343]	3.50 [89]	.91 [23]	12	23.25 [591]	24.84 [631]	
20	500	13.38 [340]	7.12 [181]	15.02 [382]	15.25 [387]	3.50 [89]	.91 [23]	14	25.50 [648]	27.09 [688]	

A	VALVE
B	ACTUATOR
P	CONNECTING PARTS

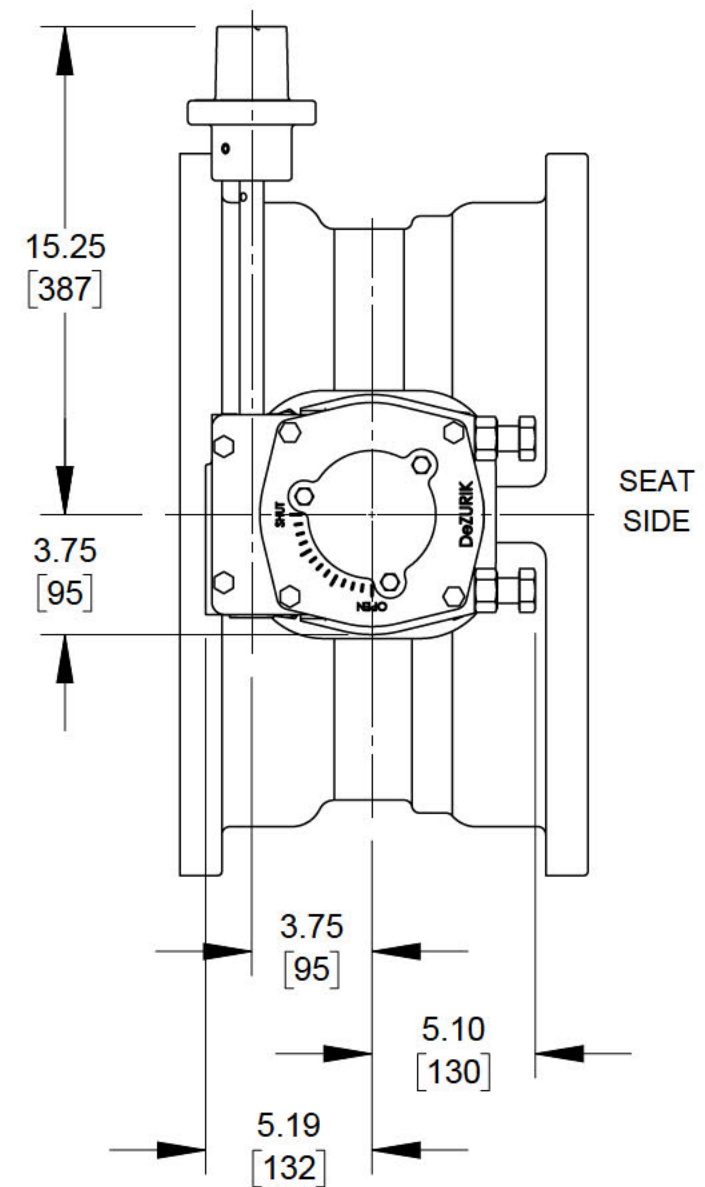
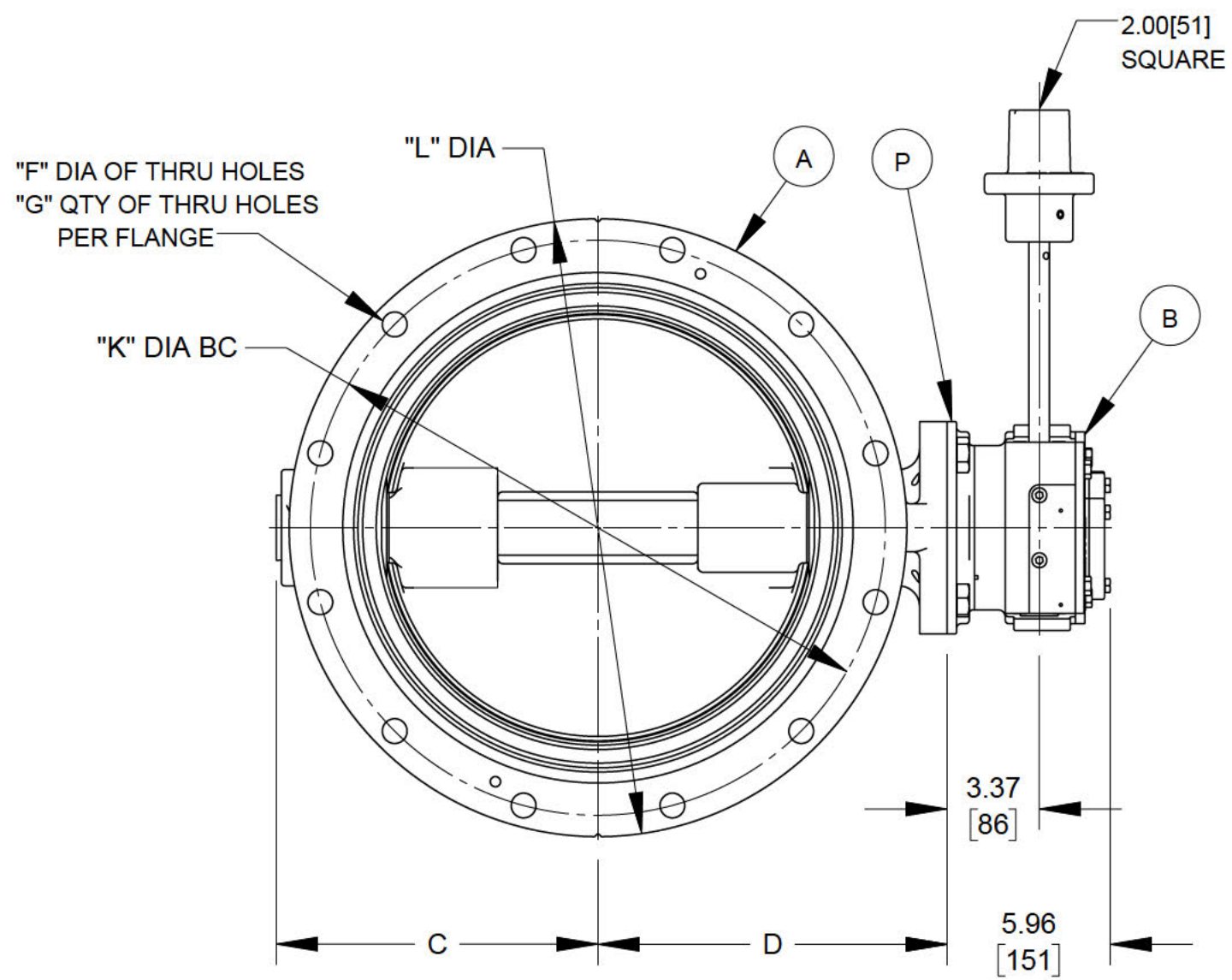
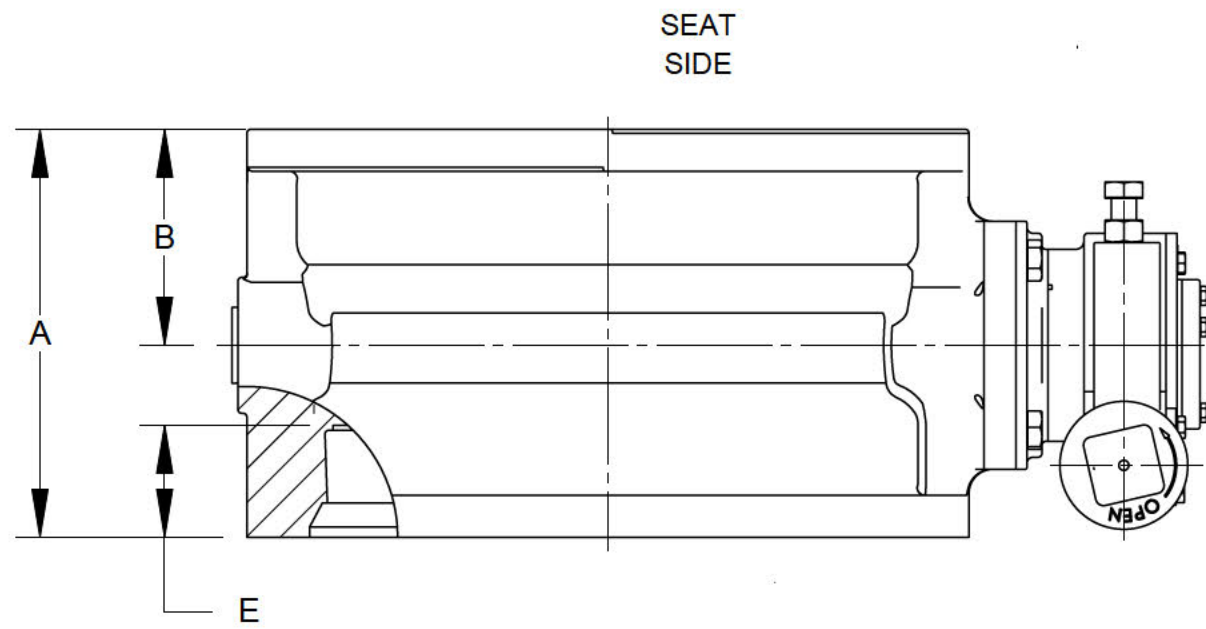
NOTES:

1. MECHANICAL JOINT ENDS MEET AWWA STANDARD C111.
2. FLOW MAY BE IN EITHER DIRECTION. THE PREFERRED INSTALLATION IS WITH THE SEAT SIDE UPSTREAM.
3. 13 TURNS OF NUT ARE REQUIRED TO OPEN VALVE.

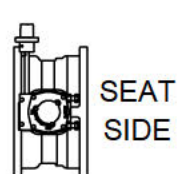
NOTICE
THIS DRAWING DOES NOT SHOW ACTUATOR ACCESSORIES. IF ACCESSORIES ARE REQUIRED, REFER TO THE APPROPRIATE ACCESSORY INSTALLATION DRAWING FOR DIMENSIONS AND OTHER RELATED INFORMATION.



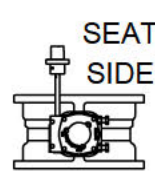
ALTERNATE GS-6B-N (NON-BURIED CONSTRUCTION)



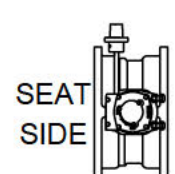
ACTUATOR MOUNTING POSITIONS



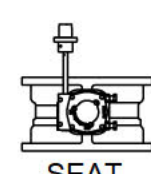
STANDARD POSITION SHOWN IN THIS DRAWING



90° POSITION



180° POSITION



270° POSITION

U	L	W	D	C	B	A	RLP	3/28/17

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BAW BUTTERFLY VALVE SIZES 14 - 20 MECHANICAL JOINT GS-6B-N OR GB-6B-N NUT ACTUATOR

DOCT. CODE	DRAWN	SN	APPROVED	SN
C1	CHECKED	SN	DATE	3/28/17

A60849

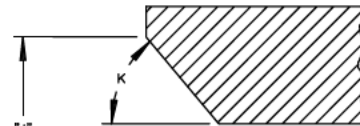
VALVE SIZE	DIMENSIONS							INCHES MILLIMETERS	
	A	B	C	D	E	F	H		
4	8.56	4.75	4.00	NONE	NONE	3.88	3.06		
	217	121	102			99	78		
6	8.88	4.75	5.75	NONE	NONE	5.62	4.80		
	226	121	146			143	122		
8	9.50	5.00	7.60	NONE	NONE	7.47	6.52		
	241	127	193			190	166		
10	9.88	5.25	9.62	NONE	.18	9.46	9.18		
	251	133	244		5	240	233		
12	10.00	5.38	11.60	.415	1.18	11.45	10.85		
	254	137	295	10.5	30	291	276		
14	12.38	6.62	13.60	.16	1.06	13.40	12.90		
	314	168	345	4	27	340	328		
16	12.75	6.75	15.50	.98	1.74	15.25	14.73		
	324	171	394	25	44	387	374		
18	13.12	7.00	17.25	1.61	2.49	17.00	16.30		
	333	178	438	41	63	432	414		
20	13.38	7.12	19.25	2.48	3.36	19.00	18.50		
	340	181	489	63	85	483	470		

CLASS	"G" (VALVE WEIGHT)								
	4	6	8	10	12	14	16	18	20
150B/250B	60	95	135	210	285	375	475	550	700

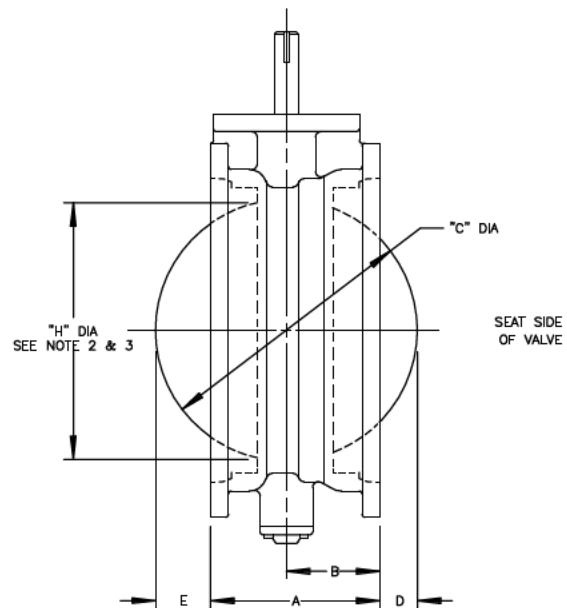
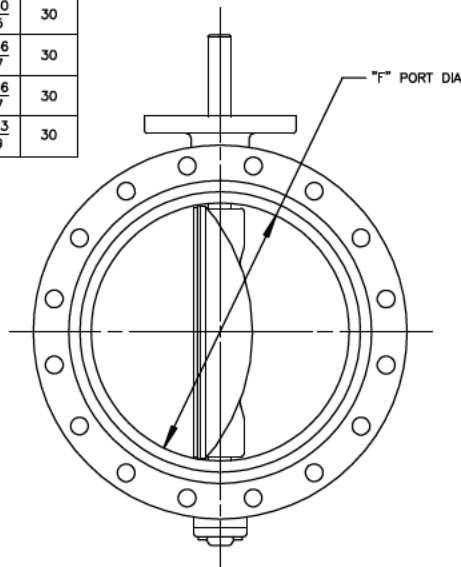
NOTE:

- "G" IS BARE SHAFTED VALVE WEIGHT (LBS).
- IF PVC PIPE IS USED, PIPE MUST COMPLY TO AWWA C900, C905 & C909 (CURRENT REVISION).
- IF PVC PIPE IS USED, PIPE END CHAMFER IS REQUIRED FOR DISC CLEARANCE IN SOME CASES—REFER TO "J" AND "K" DIMENSIONS "J": MIN CHAMFERED PIPE ID OF BOTH ENDS "K": CHAMFERED ANGLE

VALVE SIZE	PVC PIPE DIM			
	DR	PR	J	K
10	14	200	9.62 244	30
	12	14	200	11.75 298
14	21	200	13.75 349	30
	18	235	13.88 353	30
	17	250	14.00 356	30
	14	305	14.00 356	30
16	18	235	15.68 398	30
	17	250	15.78 401	30
	14	305	15.88 403	30
18	18	235	17.38 441	30
	17	250	17.50 445	30
	14	305	17.50 445	30
20	21	200	19.56 497	30
	18	235	19.56 497	30
	17	250	19.63 499	30



PVC PIPE END
DETAIL (ENLARGED)



G	38400	07/02/18
F	18400	04/03/17
E	50312	10/22/14
D	81108	02/13/04
C	80713	02/20/02
B	80608	10/10/00
A	50312	02/07/97

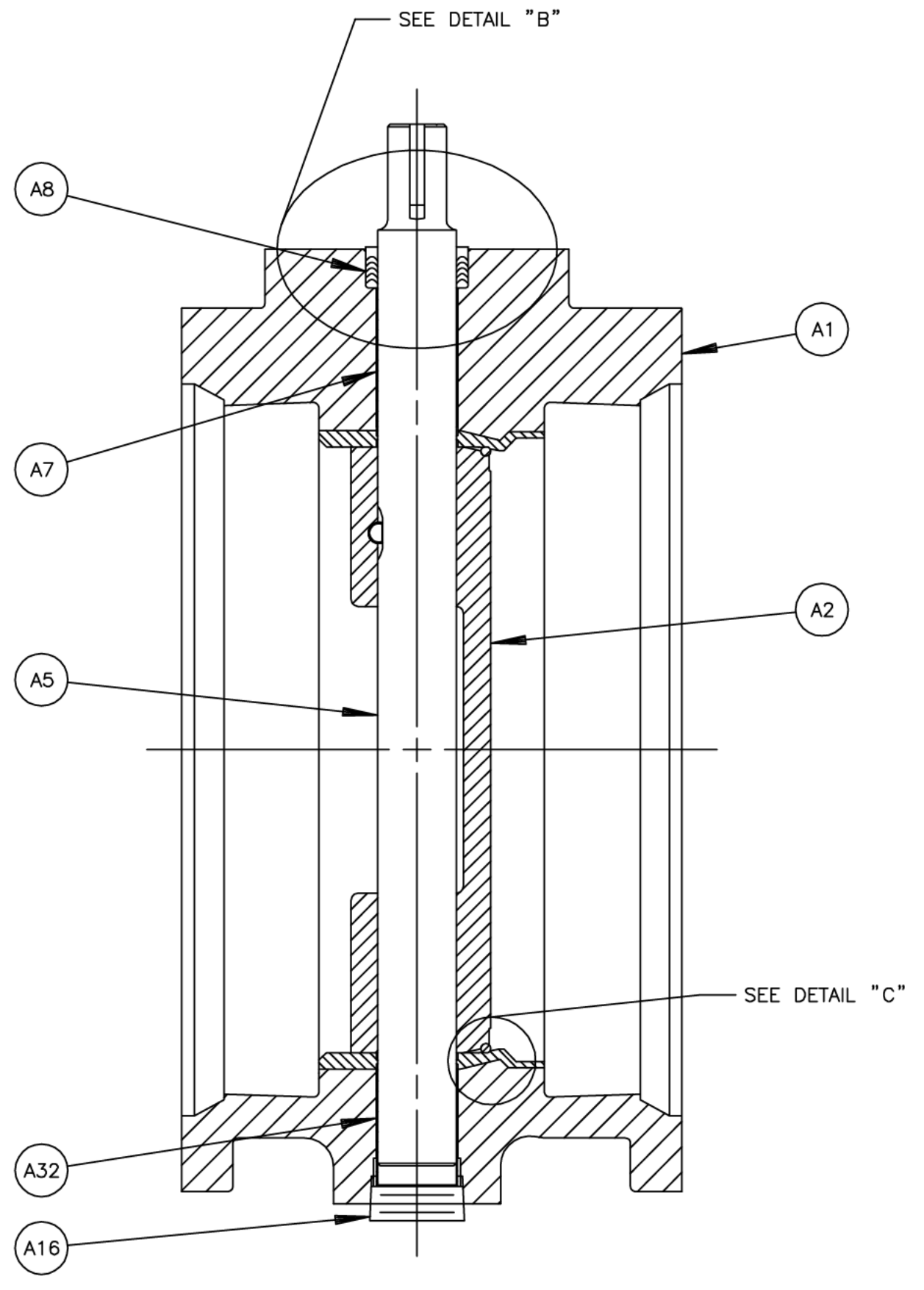
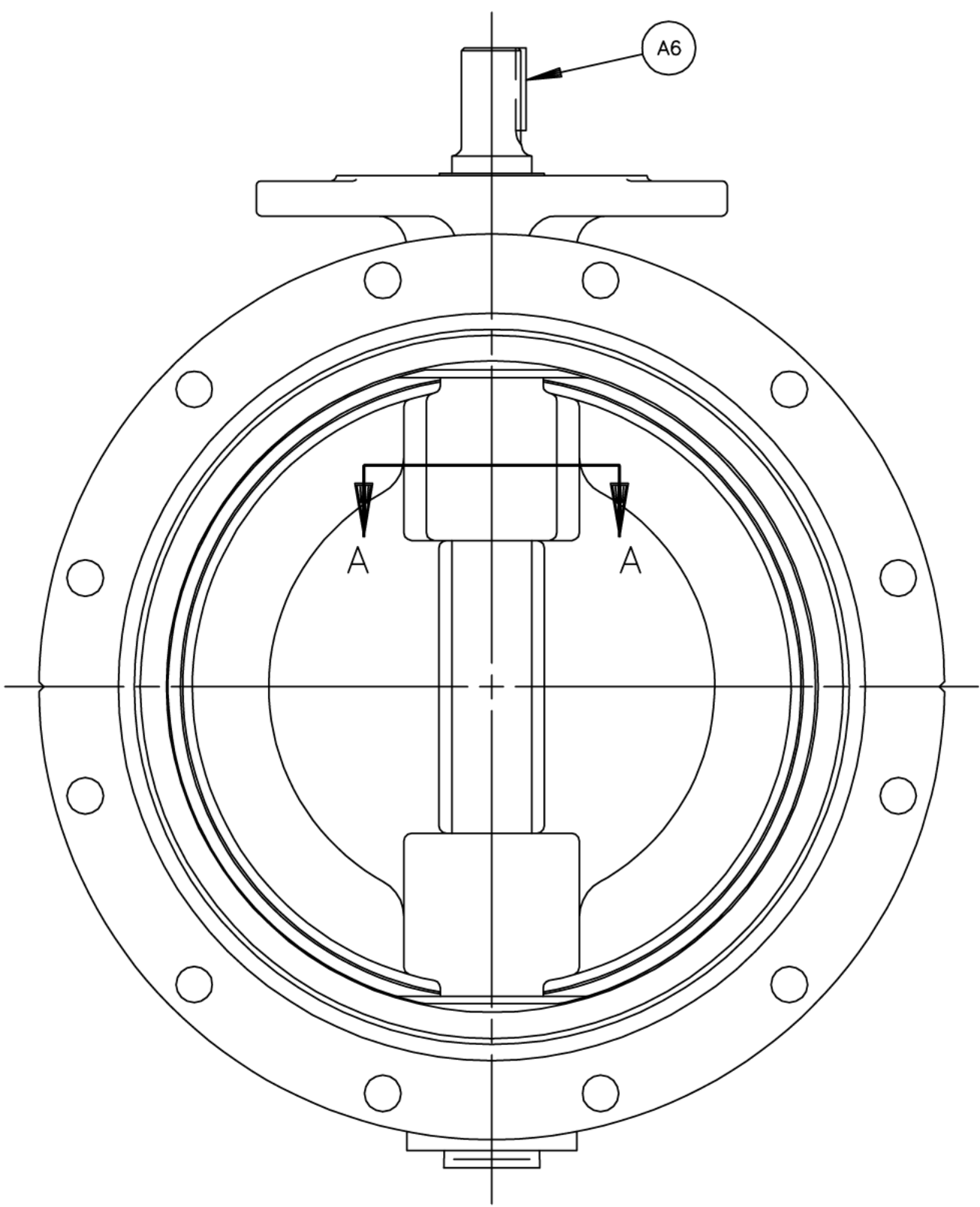
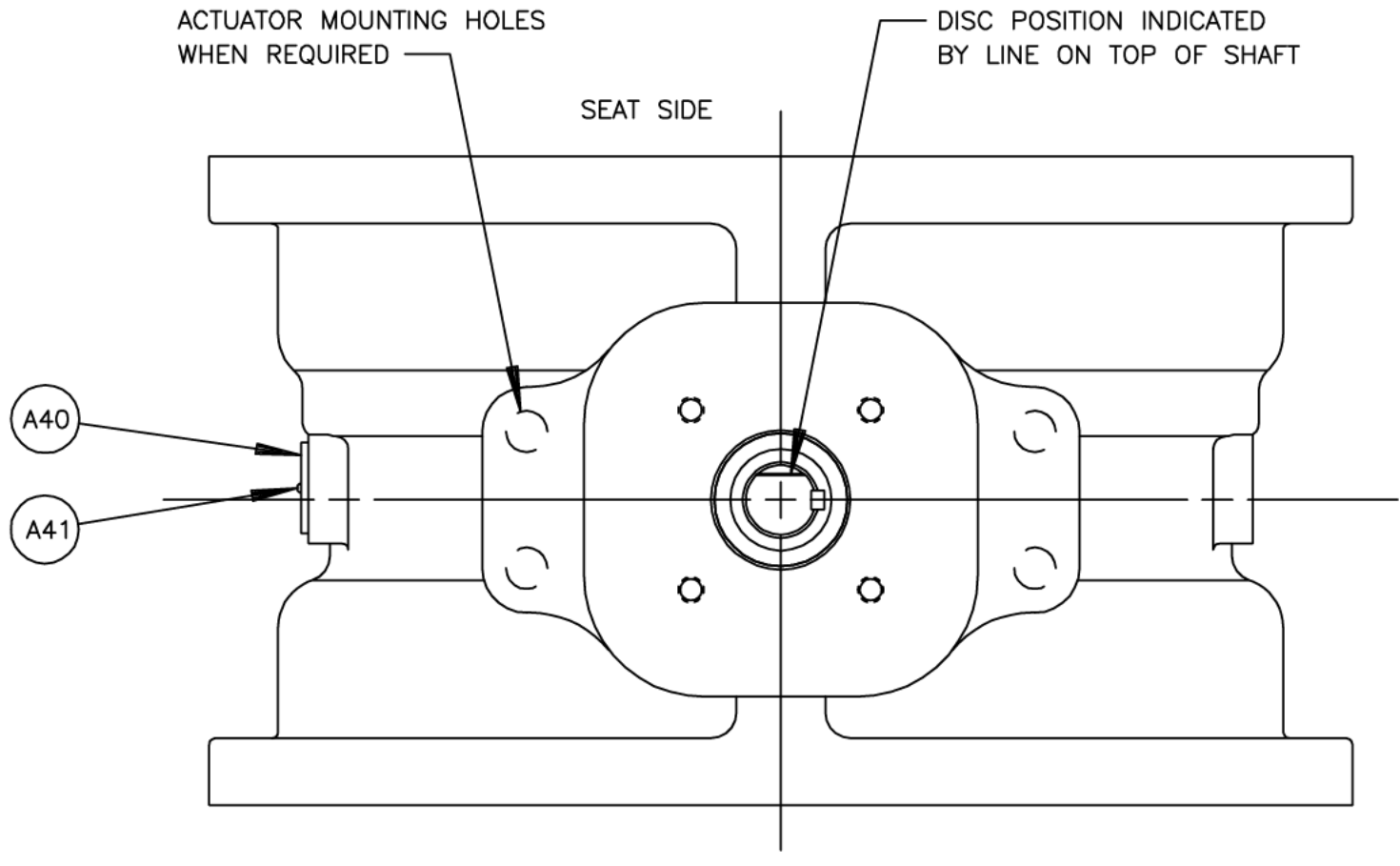
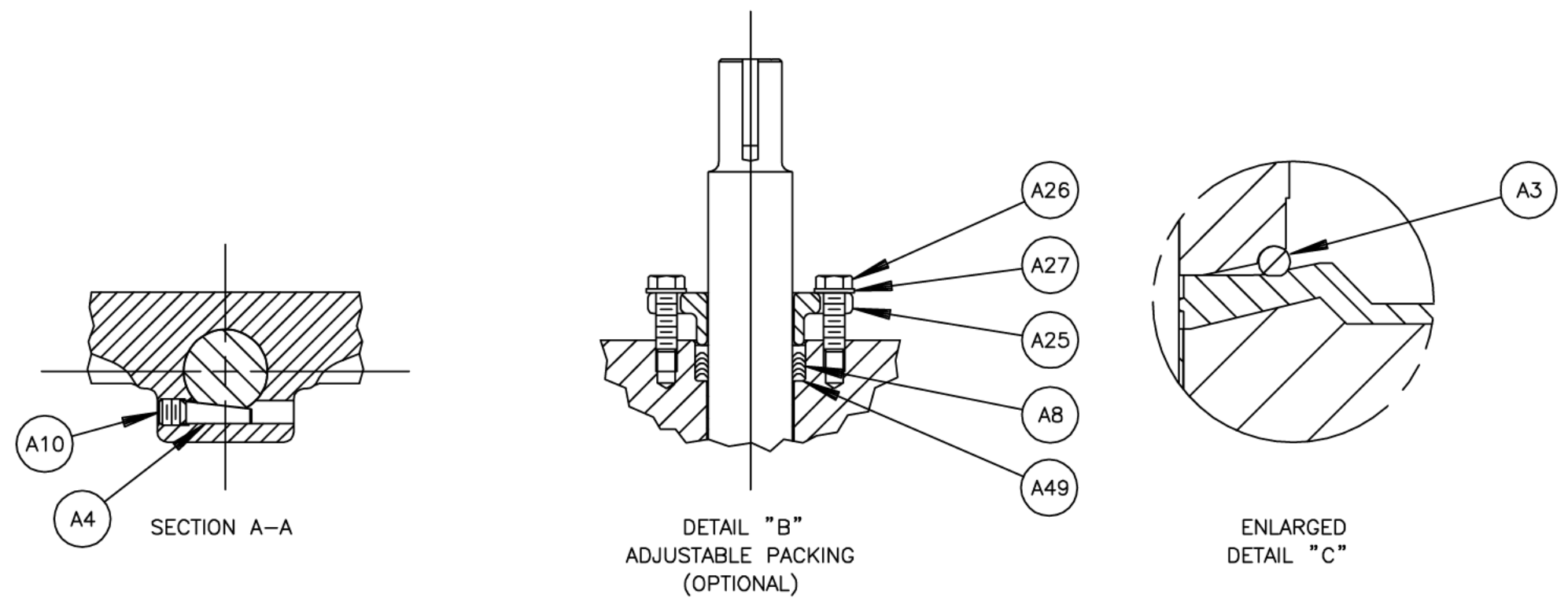


4-20 MECHANICAL JOINT AWWA BUTTERFLY VALVES SHOWING DISC CLEARANCE IN FULL OPEN POSITION, VALVE WEIGHTS AND PORT DIAMETER			
DOCT. CODE	DRANN	APPROVED	WCB
C1	CHECKED	DATE	08/17/96
			A47531

NO	PART NAME	QTY
A1	BODY	1
A2	DISC	1
A3	SEAT RING	1
A4	PIN	1
A5	SHAFT	1
A6	KEY	1
A7	BEARING (UPPER JOURNAL)	1
A8	PACKING	-
A9		
A10	SET SCREW	1
A11		
A12		
A13		
A14		
A15		
A16	PLUG	1
A25	GLAND	1
A26	SCREW	2
A27	WASHER	2
A32	BEARING (LOWER JOURNAL)	1
A40	VALVE CLASSIFICATION PLATE (WHEN REQ'D)	1
A41	DRIVE SCREW (USED WITH A40)	2
A49	SUPPORT RING (PTFE PACKING ONLY)	1

NOTE:

1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. RECOMMENDED SPARE PARTS ARE ITEMS NO A7, A8 AND A32.



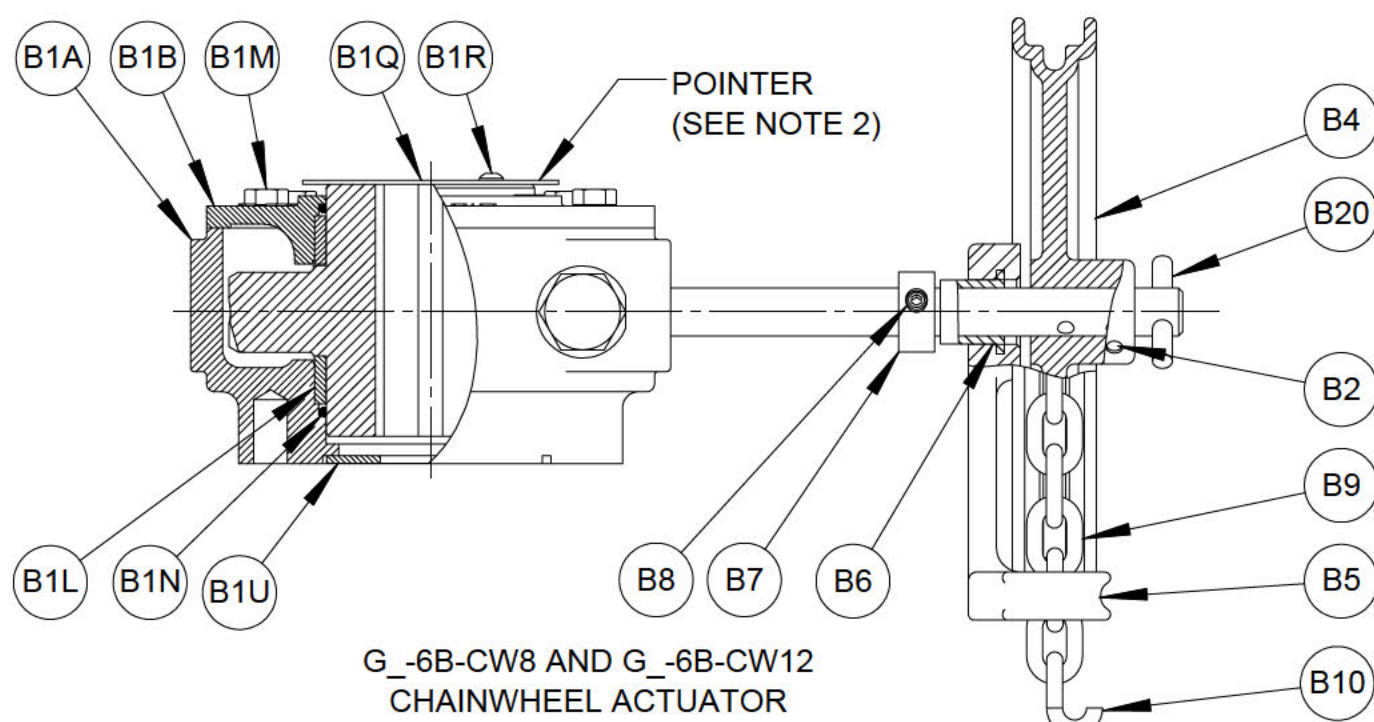
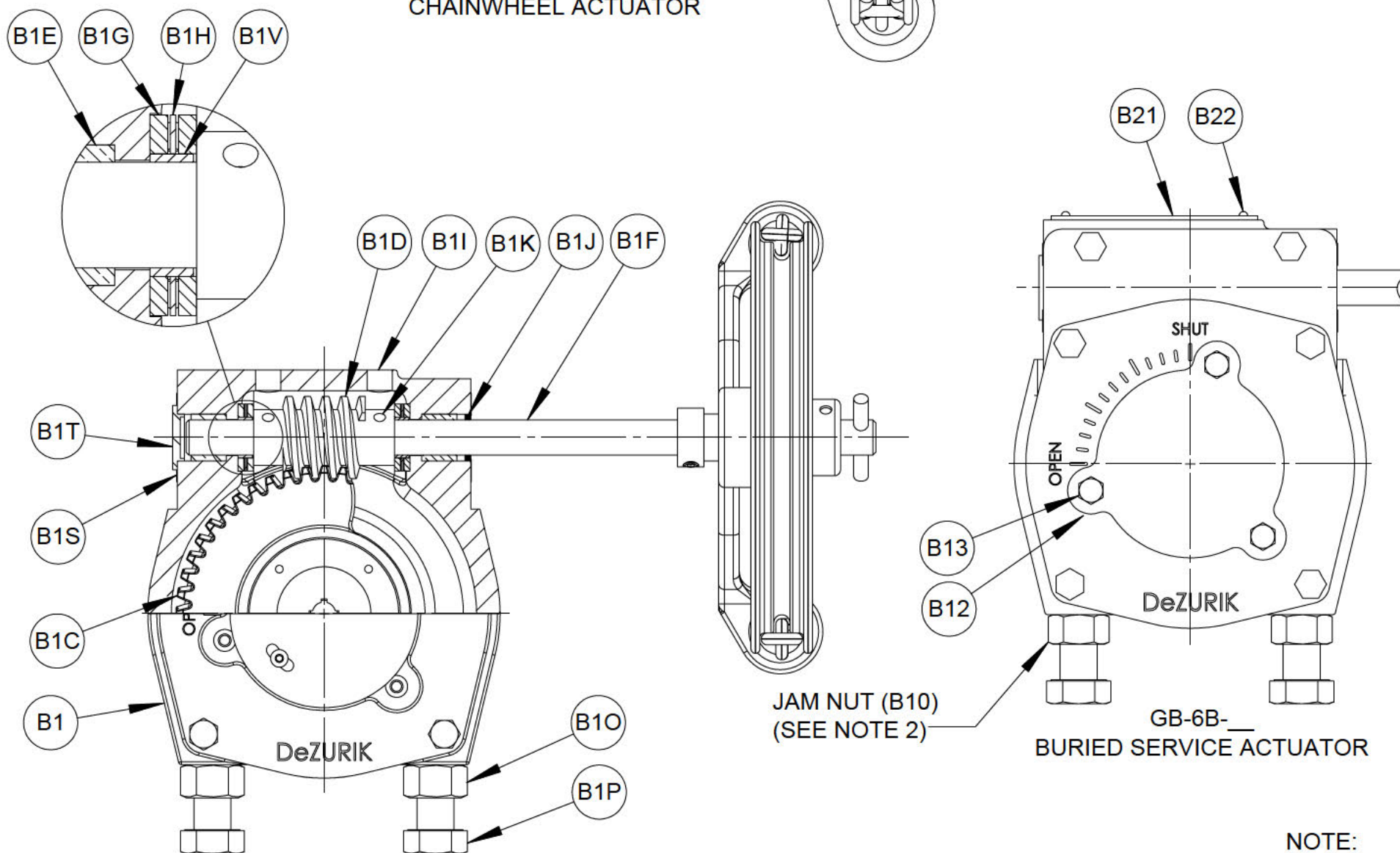
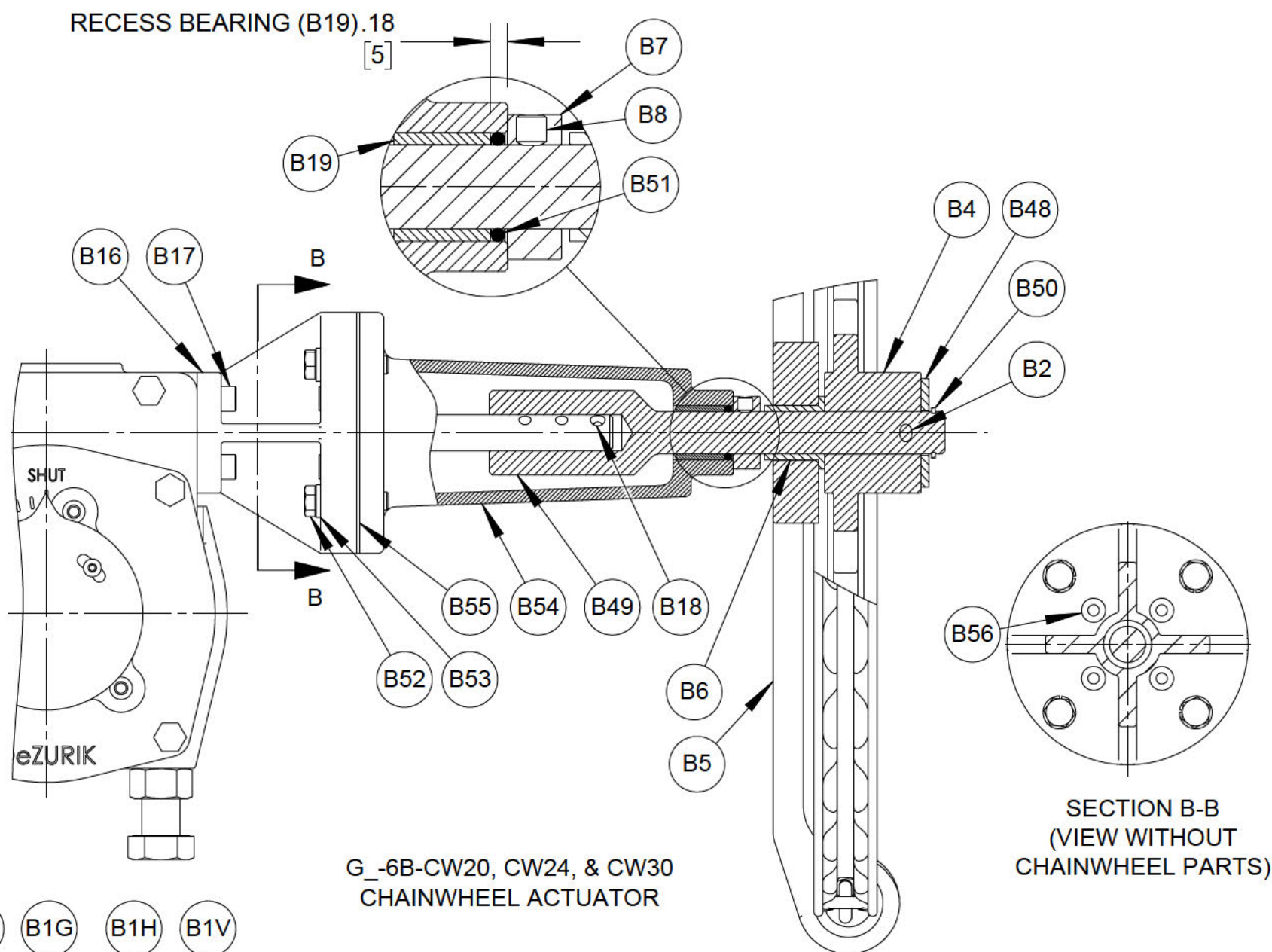
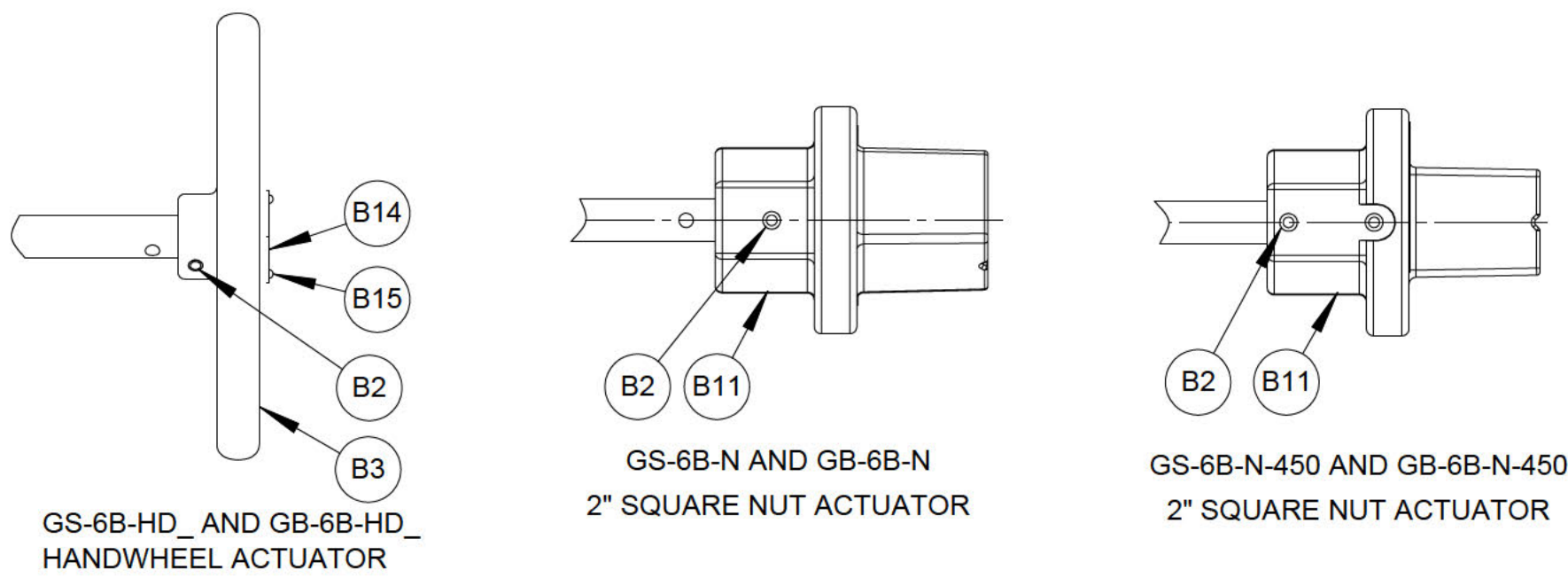
G	F	E	D	C	B	A
61892	62135	61384	61159	60712		
01/22/14	12/14/12	07/14/08	02/13/04	02/20/02		

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BAW BUTTERFLY VALVES SIZE 14 & 16
MECHANICAL JOINT VALVE ASSEMBLY

DOCT. CODE	DRAWN	KW	APPROVED	WCB
C1	CHECKED	SJJ	DATE	09/11/96

A47528



NO.	DESCRIPTION	QTY
B1	ACTUATOR ASSEMBLY	1
B1A	HOUSING	1
B1B	COVER	1
B1C	GEAR	1
B1D	WORM GEAR	1
B1E	BEARING	2
B1F	DRIVE SHAFT	1
B1G	BEARING RACE	4
B1H	THRUST BEARING	2
B1I	PIPE PLUG	2
B1J	SEAL	1
B1K	PIN	2
B1L	BEARING	2
B1M	SCREW	6
B1N	O-RING	2
B1O	NUT	2
B1P	SCREW	2
B1Q	POINTER	1
B1R	SCREW	2
B1S	PLUG	11
B1T	PLUG	1
B1U	PACKING WASHER	1
B1V	SPACER SLEEVE	2
B2	PIN (HANDWHEEL & WRENCHING SQUARE)	1
B2	PIN (WRENCHING SQUARE G_-6B-N-450 OPTION ONLY)	2
B3	HANDWHEEL	1
B4	CHAINWHEEL	1
B5	CHAIN GUIDE	1
B6	BEARING	1
B7	COLLAR	1
B8	SET SCREW	1
B9	CHAIN	-
B10	CLOSING LINK	1
B11	WRENCHING SQUARE	1
B12	COVER (BURIED SERVICE ONLY)	1
B13	SCREW (BURIED SERVICE ONLY)	3
B14	OPEN TAG (24" & 30" HANDWHEEL ONLY)	1
B15	DRIVE SCREW (24" & 30" HANDWHEEL ONLY)	2
B16	ADAPTOR	1
B17	SCREW	4
B18	PIN (20" - 30" CHAINWHEEL ONLY)	1
B19	BEARING (20" - 30" CHAINWHEEL ONLY)	1
B20	PIN (8" & 12" CHAINWHEEL ONLY)	
B21	DATA PLATE	1
B22	DRIVE SCREW	2
B48	WASHER (20" - 30" CHAINWHEEL ONLY)	1
B49	SHAFT EXTENSION (INNER)	1
B50	RETAINING RING (20" - 30" CHAINWHEEL ONLY)	1
B51	O-RING (20" - 30" CHAINWHEEL ONLY)	1
B52	SCREW (20" - 30" CHAINWHEEL ONLY)	4
B53	LOCKWASHER (20" - 30" CHAINWHEEL ONLY)	4
B54	SHAFT EXTENSION (20" - 30" CHAINWHEEL ONLY)	1
B55	GASKET (20" - 30" CHAINWHEEL ONLY)	1
B56	PLUG	4

NOTE:

- WHEN ORDERING PARTS INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NUMBER AND QUANTITY.
- TO CONVERT GS-6B (WEATHER PROOF) TO GB-6B (BURIED SERVICE) ACTUATOR.
 - REMOVE POINTER.
 - APPLY A BEAD OF SILICONE SEALANT DOW RTV-732(1055515) TO ACTUATOR MATING SURFACE OF COVER (B12), ASSEMBLE TO ACTUATOR AND ATTACH WITH SCREW (B13).
 - BEFORE ADJUSTING ACTUATOR STOP SCREWS (B1P), LOOSEN JAM NUTS (B10) AND APPLY 2 WRAPS OF STRING PACKING (1013701) TO THE ACTUATOR STOP SCREW THREADS BETWEEN JAM NUTS AND ACTUATOR HOUSING (B1A).
- RECOMMENDED SPARE PARTS ARE ITEMS B1J, B1N, B6, B19, B51 AND B55.

70424	03/13/19
50312	08/22/18
A	R/LP
	08/16/17



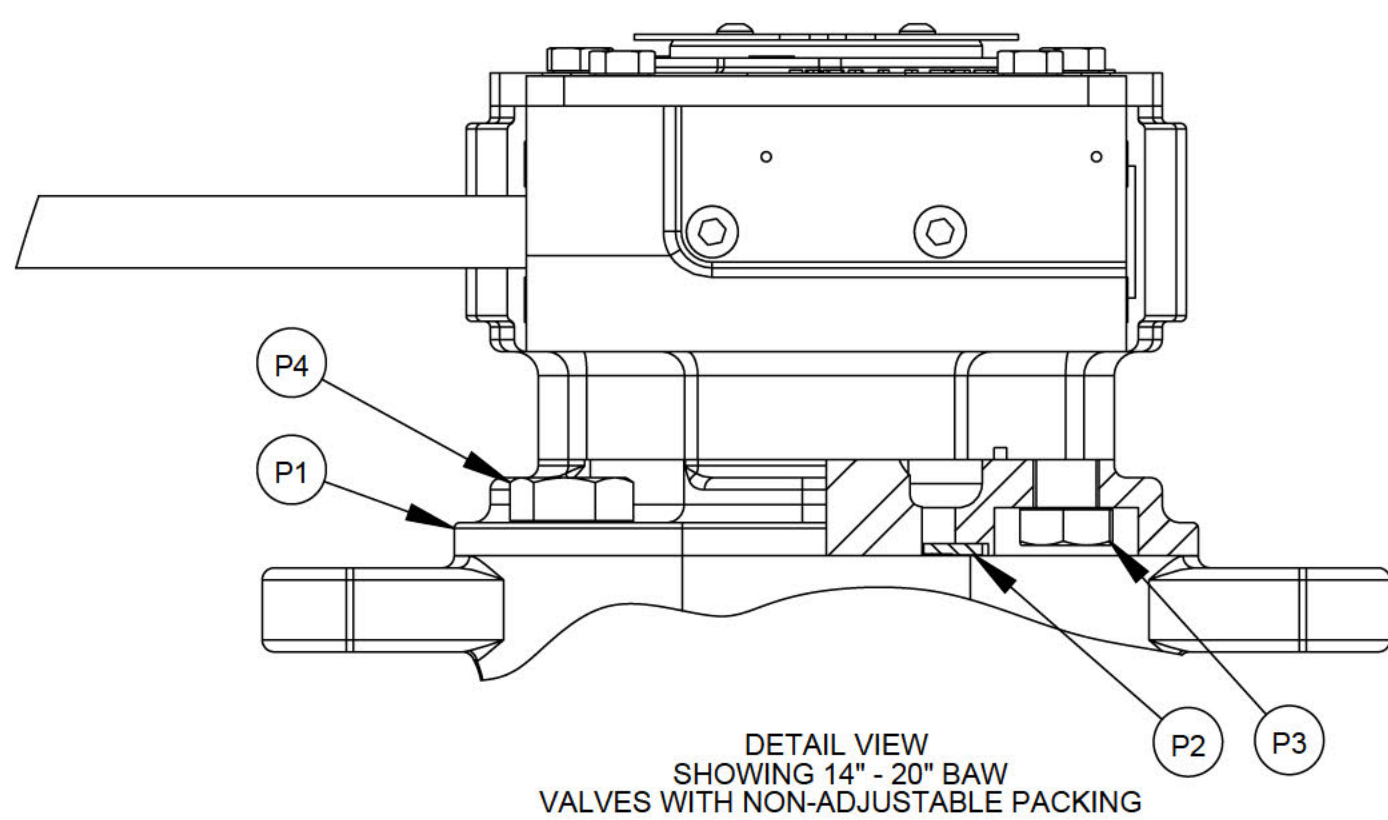
GS-6B- AND GB-6B- MANUAL ACTUATOR WITH CHAINWHEEL, HANDWHEEL & WRENCHING SQUARE (NUT)			
DOCT. CODE	DRAWN	SN	APPROVED
C1	CHECKED	SN	DATE
			8/16/2017

A61731

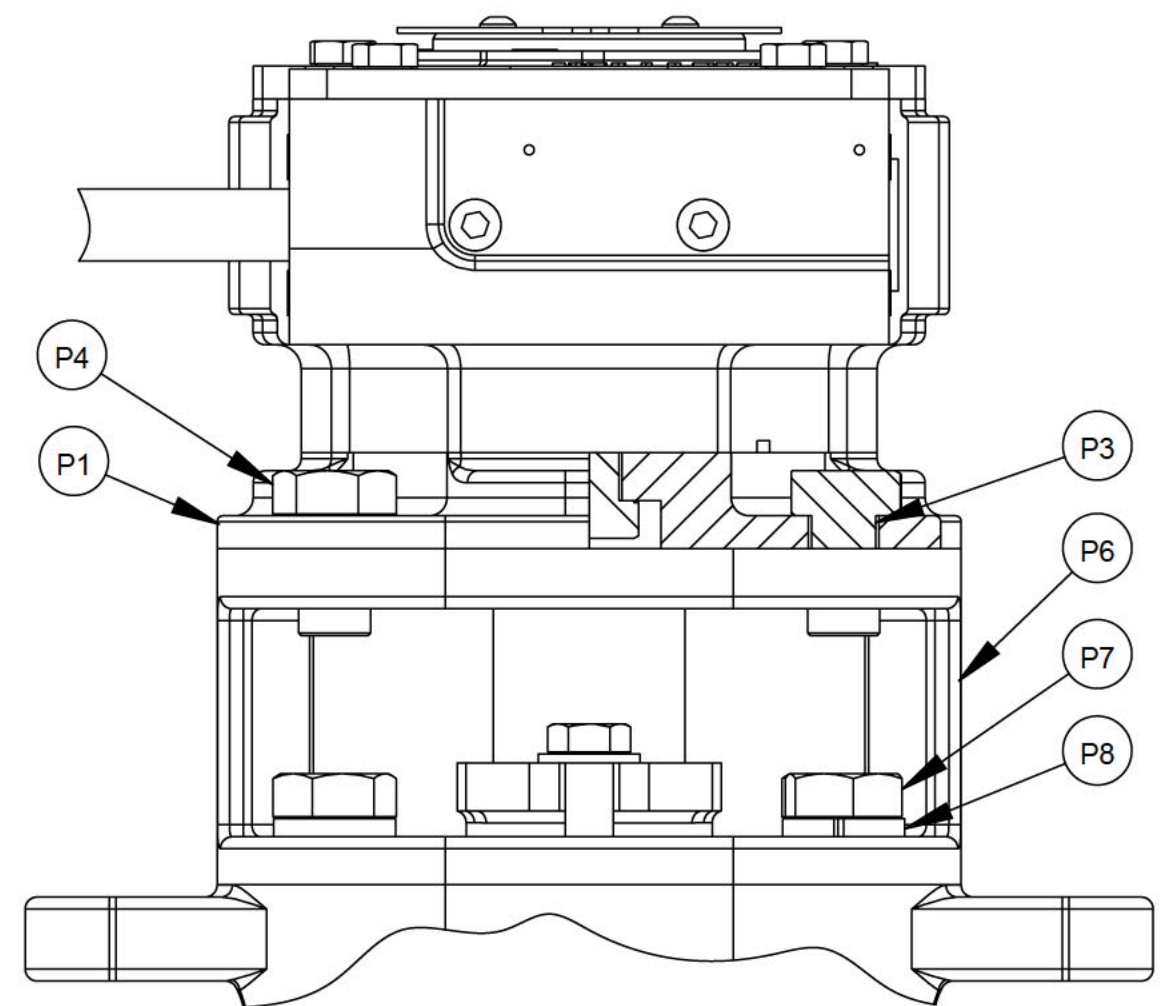
NO	DESCRIPTION	QTY
P1	ADAPTOR PLATE	1
P2	PACKING WASHER (SEE NOTE 2)	1
P3	SCREW (14" - 20")	4
P4	SCREW (3" - 12")	2
P4	SCREW (14" - 20")	4
P5	LOCKWASHER (3" - 12")	2
P6	ADAPTOR (ADJ PKG)	1
P7	SCREW (ADJ PKG)	4
P8	LOCKWASHER (ADJ PKG)	4

NOTES:

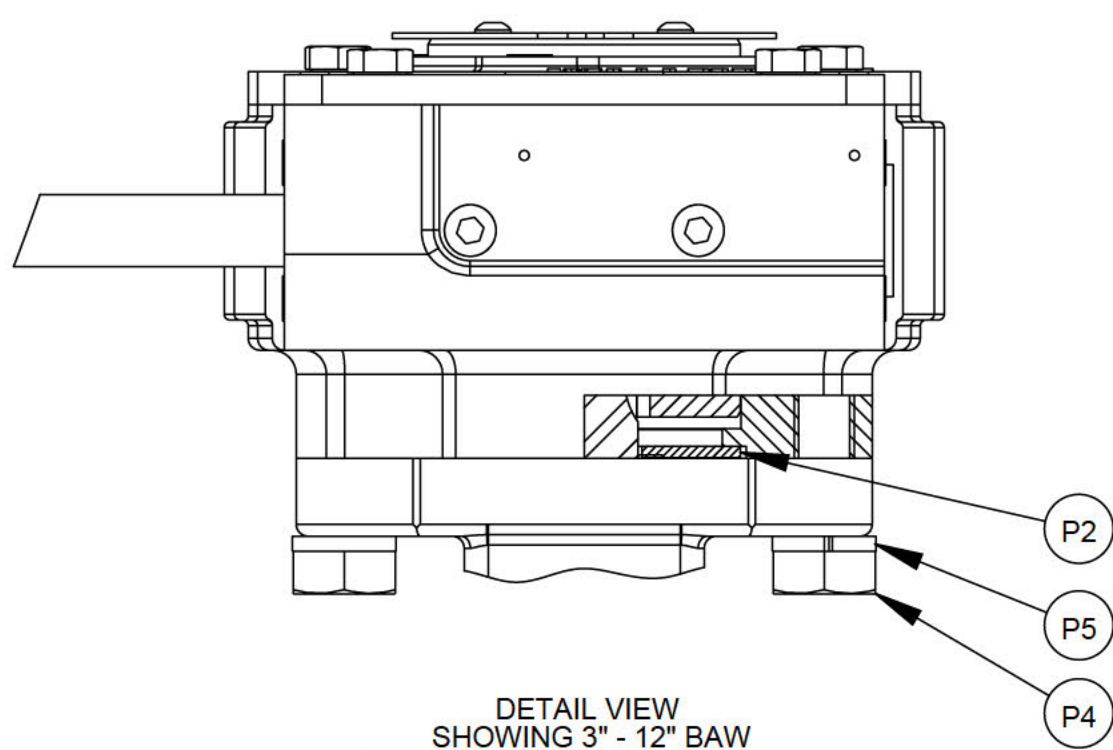
1. WHEN ORDERING PARTS, SPECIFY VALVE SIZE AND MODEL NUMBER FROM DATA PLATE. ALSO GIVE DRAWING NUMBER WITH PART NAME, ITEM NUMBER AND QUANTITY.
2. ON SIZES 3" - 12" PACKING WASHER (P2) IS SUPPLIED WITH ACTUATOR. PACKING WASHER IS NOT REQUIRED ON VALVES WITH ADJUSTABLE PACKING.



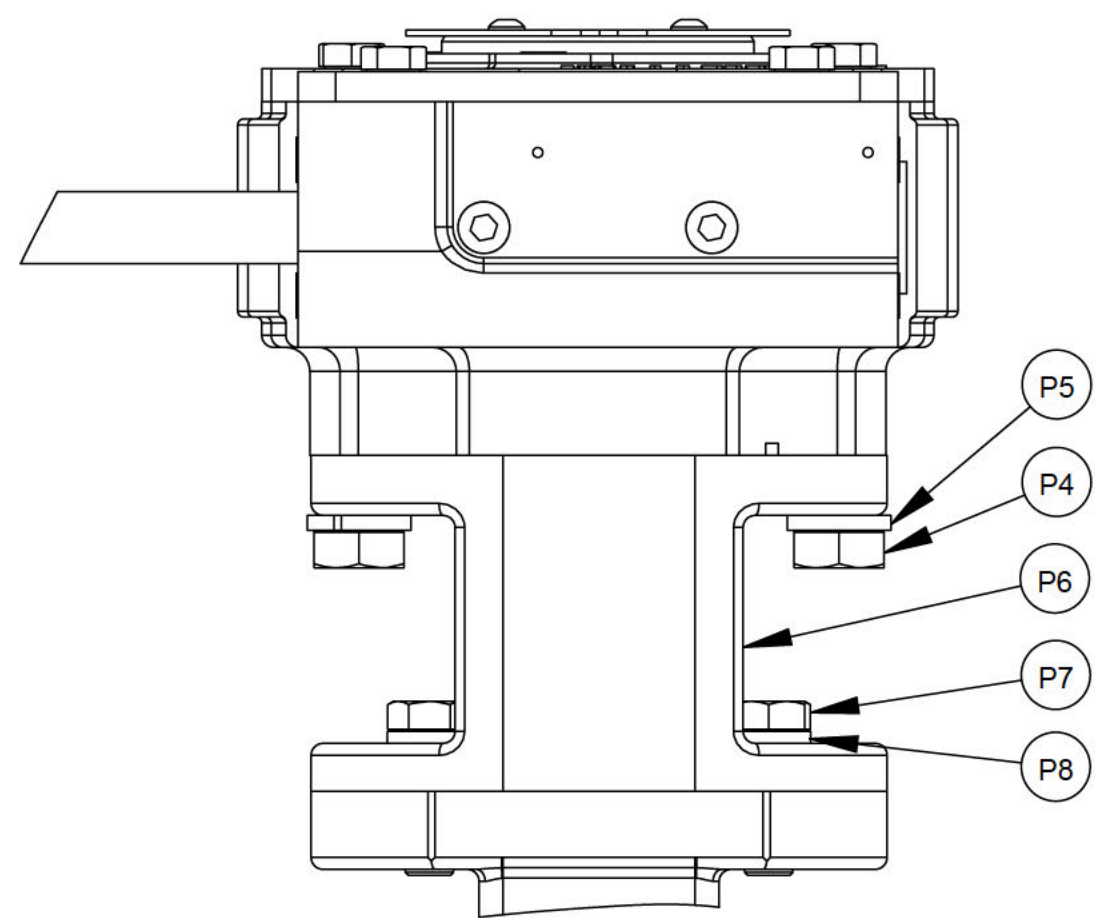
DETAIL VIEW
SHOWING 14" - 20" BAW
VALVES WITH NON-ADJUSTABLE PACKING



DETAIL VIEW
SHOWING 14" - 20" BAW
VALVES WITH ADJUSTABLE PACKING



DETAIL VIEW
SHOWING 3" - 12" BAW
VALVES WITH NON-ADJUSTABLE PACKING



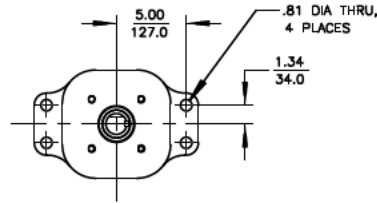
DETAIL VIEW
SHOWING 3" - 12" BAW
VALVES WITH ADJUSTABLE PACKING

								4/1/2016
								RLP
								A

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CONNECTING PARTS FUW G_-6B MANUAL ACTUATOR ON 3" - 20" BAW BUTTERFLY VALVES			
DOCT. CODE	DRAWN	SN	APPROVED
C1	CHECKED	SN	DATE 4/1/2016
			A60851

VALVE SIZE	DIMENSIONS INCHES / MILLIMETERS																				
	A	B	C	D	E	F	G	K	L	M	N	P	R	S	T	U		V	W	X	Y
	INCHES		MM		INCHES		MM		INCHES		MM		INCHES		MM		INCHES		MM		INCHES
14	12.38 314	6.62 168	10.91 277	11.50 292	3.50 89	.91 23	10	18.75 476	20.31 516	7.75 197	11.75 298	2.62 67	3.25 83	2.06 52	3/8 x 1/4	1.498 1.492	38.05 37.90	1.817 46.15	1.00 25	1/2 -13 UNC	5.00 127
16	12.75 324	6.75 171	12.06 306	12.75 324	3.50 89	.91 23	12	21.00 533	22.56 573	7.75 197	11.75 298	2.74 70	3.25 83	2.06 52	3/8 x 1/4	1.748 1.745	44.40 44.32	2.067 52.50	1.00 25	N/A	N/A
18	13.42 341	7.00 178	14.03 356	13.50 343	3.50 89	.91 23	12	23.25 591	24.84 631	7.75 197	11.75 298	N/A	3.25 83	2.06 52	1/2 x 3/8	2.248 2.242	57.10 56.95	2.317 58.85	1.00 25	N/A	N/A
20	13.38 340	7.12 181	15.02 382	15.25 387	3.50 89	.91 23	14	25.50 648	27.09 688	7.75 197	N/A	N/A	3.25 83	2.06 52	1/2 x 3/8	2.248 2.242	57.10 56.95	2.567 65.20	1.00 25	N/A	N/A

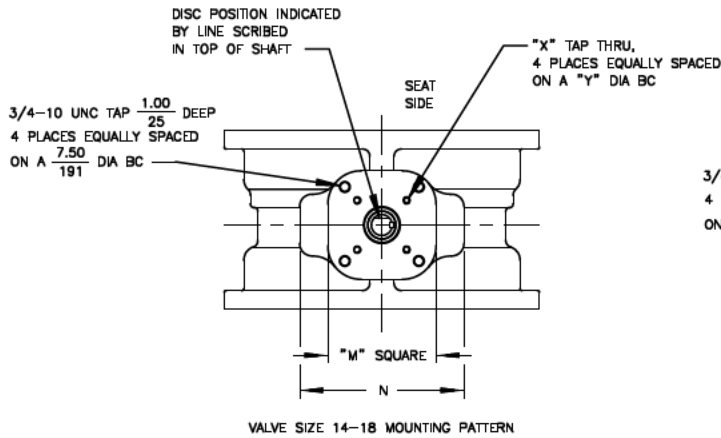
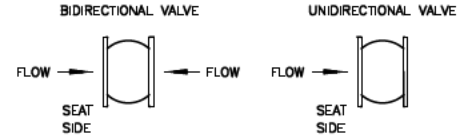


VALVE SIZE 14-18
ALTERNATE MOUNTING PATTERN
(SEE NOTE 2)

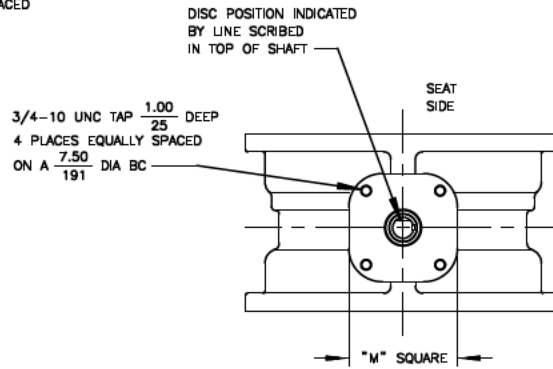
NOTE:

- MECHANICAL-JOINT ENDS MEET AWWA STANDARD C111.
- FURNISHED ONLY WHEN SPECIFIED.

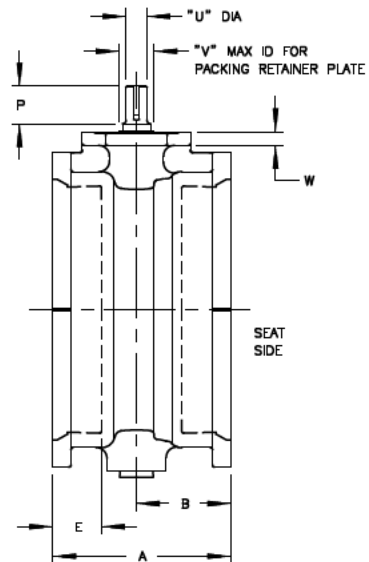
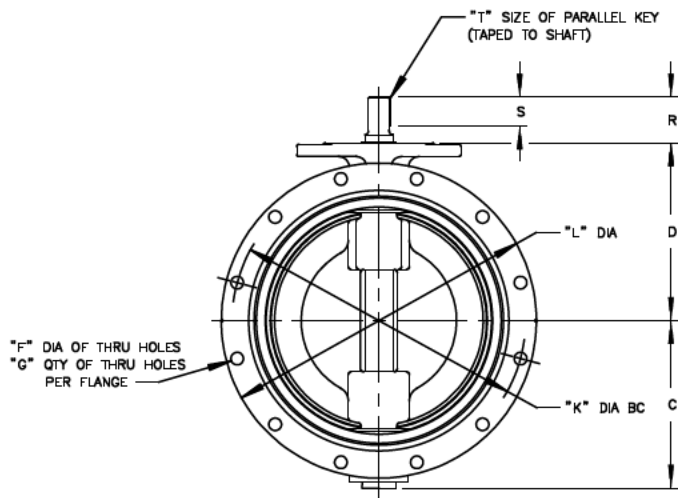
FLOW DIRECTION



VALVE SIZE 14-18 MOUNTING PATTERN



VALVE SIZE 20 MOUNTING PATTERN



REV	DATE	BY	CHKD
1	06/24/20	JB	JB
2	06/21/20	JB	JB
3	07/09/20	JB	JB
4	06/13/18	JB	JB
5	07/19/18	JB	JB

DeZURIK
AFCO | HILTON
www.dezurik.com

BAW BUTTERFLY VALVES SIZE 14-20 MECHANICAL JOINT
FOR USE WITH 6B SERIES

DOCT. CODE	DRAWN	BMP	APPROVED	JB
C1	CHECKED	JB	DATE	01/22/18

A61987