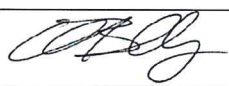
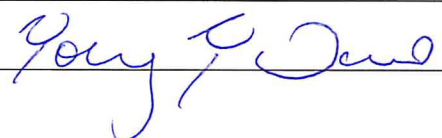


CONTRACTOR SUBMITTAL FORM

Project Name: Navajo Gallup Water Supply Project Reach 26.3	<input checked="" type="checkbox"/> M (Materials) <input type="checkbox"/> T (Testing) <input type="checkbox"/> A (Administrative)	Submittal No. M027
SMA Project No: 6921307		
Date: 08-05-2019		
Contractor: Navajo Engineering and Construction Authority		No. of Copies: 1

Supplier: Core & Main	Manufacturer: Mueller Company
Specification No.: 33 12 16-2.2A1a and 2.2B5a-b	Drawing No.: C-29, C-30, C-32, DT-6, DT-10, DT-19
Bid Item No(s): 17-20	
Submittal Checklist No(s): M238	
Product Description: Resilient Wedge Gate Valves, FBE MJ x MJ – 6", 8", 10", and 12" MJ x FL – 6", 8", and 12" Threaded Gate Valve – 2"	
Are there any deviations from the Contract Documents? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Explain:	
Contractor's certification that product meets requirements of Contract Documents: <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Certified with variations as noted on shop drawings and/or attached sheets.	
Signed:  Quentin Benally, NECA	Date: 08-06-2019

Engineer's Comments: <input type="checkbox"/> No Exception Taken <input checked="" type="checkbox"/> Approved as Corrected <input type="checkbox"/> Exceptions as Noted <input type="checkbox"/> Submittal Rejected <input type="checkbox"/> Revise and Resubmit to Engineer <input type="checkbox"/> Contractor to Submit Specified Information - Valves shall be open left, close right - Valve ends as shown on plans - 2" GVs also require FBE coating	Review is limited to check for compliance with design concept. No changes from provisions of Contract Documents are intended and Contractor remains responsible for compliance with revisions therein. The Contractor is solely responsible for quantities; correctness of dimensions; verification of physical interrelation of elements of the work as required by the drawings and specifications and by field determination; fabrication procedures, construction methods, techniques and sequences. This review does not relieve the Contractor from these responsibilities. Non-conformities and errors detected have been noted but such markings, or lack thereof, shall not relieve the Contractor from compliance with all requirements of the contract drawings and specifications.
Signed: 	Date: 8/19/19

A2361 RESILIENT WEDGE GATE VALVES, 350psi



1. GENERAL CLASSIFICATION

- 1.1 Mueller® Resilient Wedge Gate Valves comply with ANSI/AWWA C515.
- 1.2 Mueller Resilient Wedge Gate Valves are approved by Factory Mutual Research Corporation (FM).
- 1.3 Mueller Resilient Wedge Gate Valves are listed by Underwriters Laboratories, Inc. (UL). Valves with actuators are not listed.
- 1.4 Mueller Resilient Wedge Gate Valves are tested and certified to ANSI/NSF Standard 61 & 372.
- 1.5 Mueller Resilient Wedge Gate Valves are suitable for potable water applications.
- 1.6 Mueller Resilient Wedge Gate Valves are iron body, fully encapsulated resilient wedge type.
- 1.7 Mueller Resilient Wedge Gate Valves are manufactured in the U.S.A. at an ISO9001 Certified factory.

2. SIZE RANGE, WORKING TEMPERATURE, AND WORKING PRESSURE

- 2.1 **Sizes:** 3" to 12".
- 2.2 **Working Temperature:** 33°F minimum to 170°F maximum working temperature.
- 2.3 **Working Pressure:** 350psi for AWWA, UL and FM.

3. TYPE OF VALVE

- 3.1 Resilient Wedge Gate Valves are non-rising stem type.
- 3.2 NRS Resilient Wedge Gate Valves feature O-ring stem seals.
- 3.3 Resilient Wedge Gate Valves are available to either open left or open right.
- 3.4 Resilient Wedge Gate Valves have a 2" square wrench nut complying with AWWA C515. Optional hand wheels are available.
- 3.5 **Resilient Wedge Gate Valves are offered with the following end connections:**
 - 3.5.1 **Flanged Ends** with flange drilling complying to ASME B16.1 Class 125 (ISO PN10/PN16 drilling optional). Per ANSI/AWWA C111, working pressure above 250psi requires the use of a special gasket rated for the higher pressure.
 - 3.5.2 **Mechanical Joint Ends** complying with ANSI/AWWA C111/A21.11.
- 3.6 **Resilient Wedge Tapping valves are offered with the following end connections:**
 - 3.6.1 Inlet flange machined specifically for mating with Tapping Sleeves and Crosses. Raised ring on flange face complies with MSS SP-60. Drilling complies with ASME B16.1 Class 125 flange.
 - 3.6.2 Standard Mechanical Joint outlet connection complies with ANSI/AWWA C111/A21.11 and is precision machined for proper alignment of Mueller® Drilling Machines.

A2361 RESILIENT WEDGE GATE VALVES, 350psi



4. MATERIAL SPECIFICATIONS

- 4.1 **Cap screw** – Stainless Steel Type 316.
- 4.2 **Wrench nut** – Ductile Iron, ASTM A-536.
- 4.3 **Handwheel** – Cast Iron, ASTM A-126, Class B.
- 4.4 **Stuffing box** – Ductile Iron, ASTM A-536.
- 4.5 **Stem O-rings** – Nitrile, ASTM D2000.
- 4.6 **Anti-friction washers** – Acetal.
- 4.7 **Stem** – Manganese Bronze, CDA Alloy C67600.
- 4.8 **Bonnet** – Ductile Iron, ASTM A-536.
- 4.9 **Bonnet seal** – O-ring, Nitrile, ASTM D2000.
- 4.10 **Stuffing box bolts & nuts** – Stainless Steel Type 316.
- 4.11 **Bonnet bolts & nuts** – Stainless Steel Type 316.
- 4.12 **Disc nut** – Bronze, ASTM B-584 Alloy C89833.
- 4.13 **Guide cap bearings** – Acetal.
- 4.14 **Disc** – 3" Cast Iron, ASTM A-126, Class B
4"-12" Ductile Iron, ASTM A-536.
- 4.15 **Disc encapsulated** – SBR ASTM D2000.
- 4.16 **Body** – Ductile Iron, ASTM A-536.
- 4.17 **Coating** – inside and outside of valve fully coated Mueller PRO-GARD® Fusion Bonded Epoxy - coating complies with ANSI/AWWA C550 and valve is certified to ANSI/NSF Standard 61 & 372.

6", 8", 10" AND 12" MJ GATE VALVES
WITH STAINLESS STEEL
HARDWARE

6", 8" AND 12" MJXF GATE VALVES
WITH STAINLESS STEEL
HARDWARE

2" THREADED GATE VALVES WITH
STAINLESS STEEL HARDWARE

5. DESIGN FEATURES

- 5.1 **Flow way** – fully unobstructed, oversized flow-way. The sealing mechanism is withdrawn from the flow-way in a full open position. No pockets in bottom of flow-way to trap sediment or debris. The flow-way will permit passage of full-sized shell cutters.
- 5.2 **Bronze Disc Nut** – on all valves.
- 5.3 **Anti-Friction Washers** on non-rising stem valves – located above and below the thrust collar portion of the stem to reduce friction and provide more effective conversion of operating torques into seating loads.
- 5.4 **Stem** for non-rising stem valves, with O-ring Seals – One O-ring is located below the thrust collar of the stem and two are located above the thrust collar, the upper most serving as a dirt seal. The O-rings and thrust collar are factory lubricated. The two primary O-rings seal the thrust collar area from outside contaminants and water, and retain an ample amount of lubricant on the thrust collar and anti-friction washers to reduce operating torque and wear.
- 5.5 **Stem** – The threads on the bronze stem are Acme form threads for strength and efficiency. The stem thrust collar is made integral with the stem -- and is formed by a heat upset operation.
- 5.6 **Upper Stem O-ring Replacement** – The two O-rings above the thrust collar of all Mueller Resilient Wedge Gate Valves can be replaced with the valve in the fully open position, under

A2361 RESILIENT WEDGE GATE VALVES, 350psi



pressure, with no leakage.

- 5.7 Corrosion Resistance** – all inside and outside cast iron surfaces are coated with Mueller PRO-GARD® Epoxy Coating, 10 mils nominal. Mueller PRO-GARD® Epoxy Coating is non-toxic and imparts no taste to water. Valves comply with ANSI/AWWA C550 and are certified to ANSI/NSF Standard 61 & 372.

6. OPTIONAL FEATURES

- 6.1** Mueller A-2361 350psi Resilient Wedge Gate Valves can be furnished with the following optional designs or features:
- 6.1.1 Gearing** – Bevel and Spur gearing available. Bevel geared valves are for horizontal installations; spur geared for vertical. Geared valves provide an additional bearing to support the extreme end of the stem.
 - 6.1.2 Position indicator** – Available for NRS valves 3" and larger.
 - 6.1.3 Stem** – Silicon bronze - ASTM B98 C66100; 304 Stainless Steel or 316 Stainless Steel.
 - 6.1.4 Disc encapsulation and O-rings** – EPDM ASTM D2000.

7. TEST PRESSURE

- 7.1** The pressure test on each Mueller Resilient Wedge Gate Valve meets the requirements of AWWA Standard C515 for Resilient Seated Valves.
- 7.1.1** Each Mueller Resilient Wedge Gate Valve is subjected to two pressure tests. The seat test is at the working pressure of AWWA valves and 1-1/2 times working pressure of UL Listed valves. Shell tests are at two times the working pressure.
 - 7.1.2** Pressure tests at the working pressure shall show NO leakage past the seat from either side of the wedge or at the flange joints. Pressure tests at twice the working pressure shall show NO leakage through the metal or flange joints.
 - 7.1.3** Test pressures are as follows: 525psi seat test, 700psi shell test.

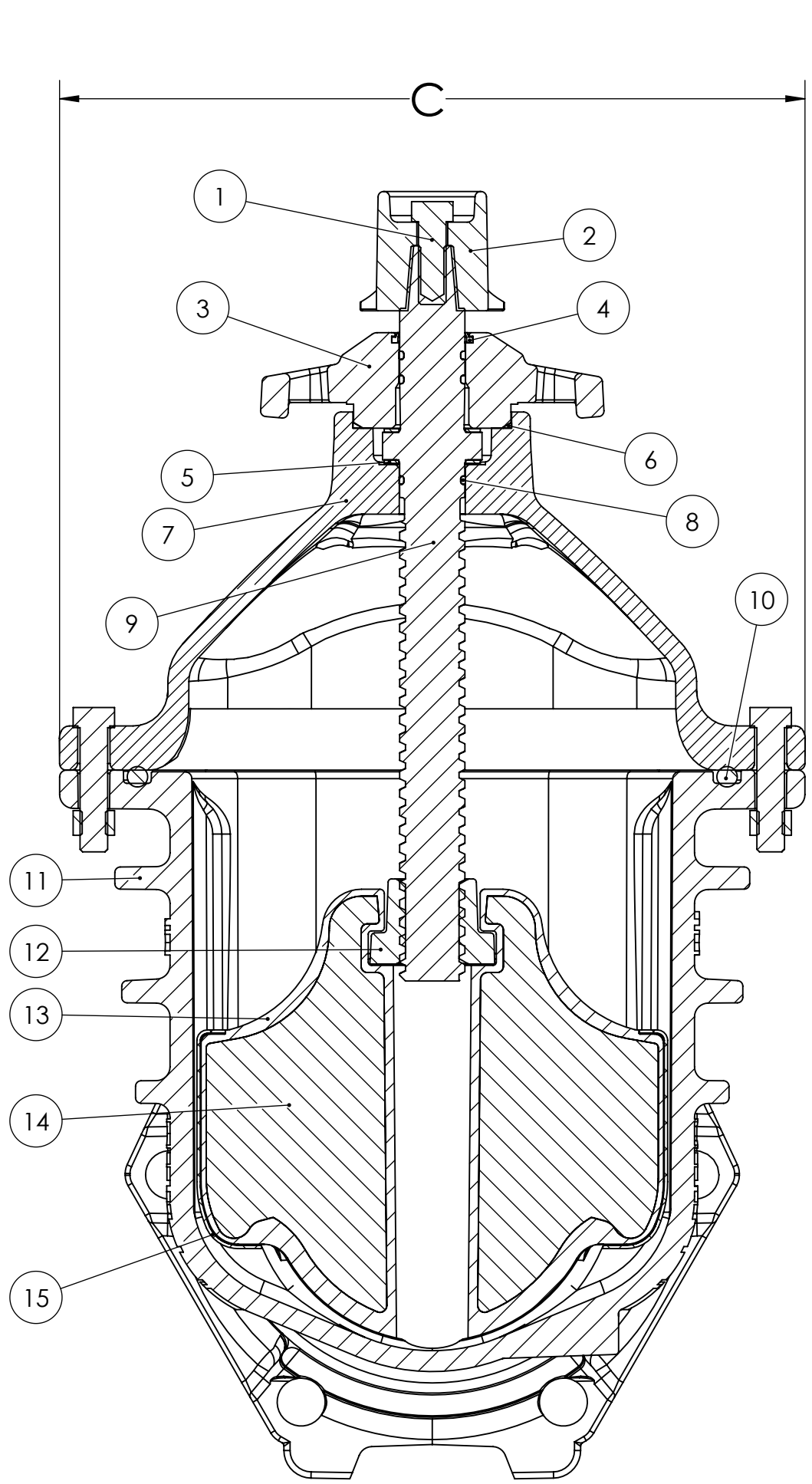


Water (U.S.) 1.800.423.1323
www.muellercompany.com
moreinfo@muellercompany.com

Mueller Canada 1.705.719.9965
www.muellercanada.com
more-info@muellercanada.com

International 1.423.490.9555
www.mueller-international.com
international@muellercompany.com

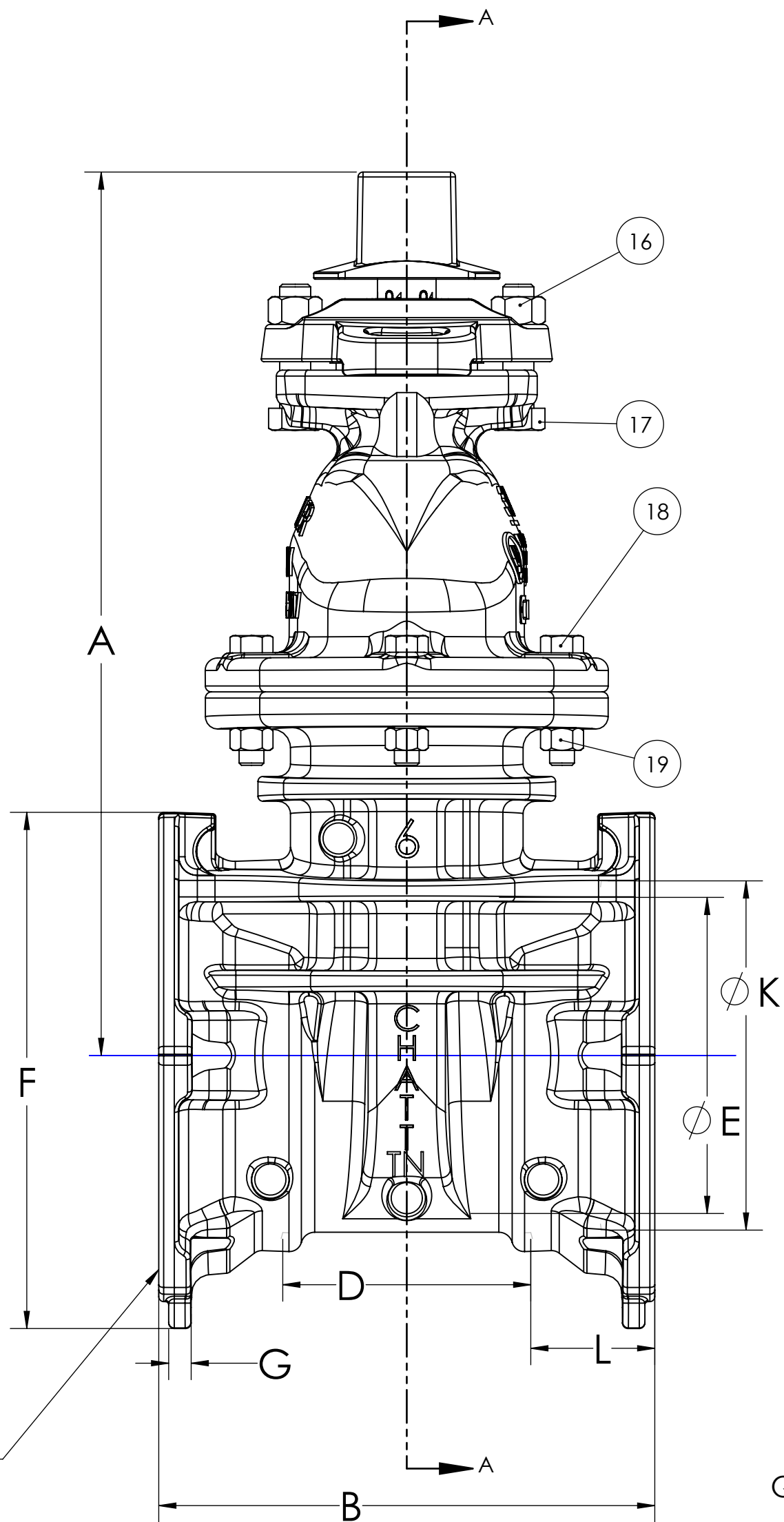
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SECTION A-A - TYPICAL

H - No. and Size of Holes and Slots Equally Spaced on

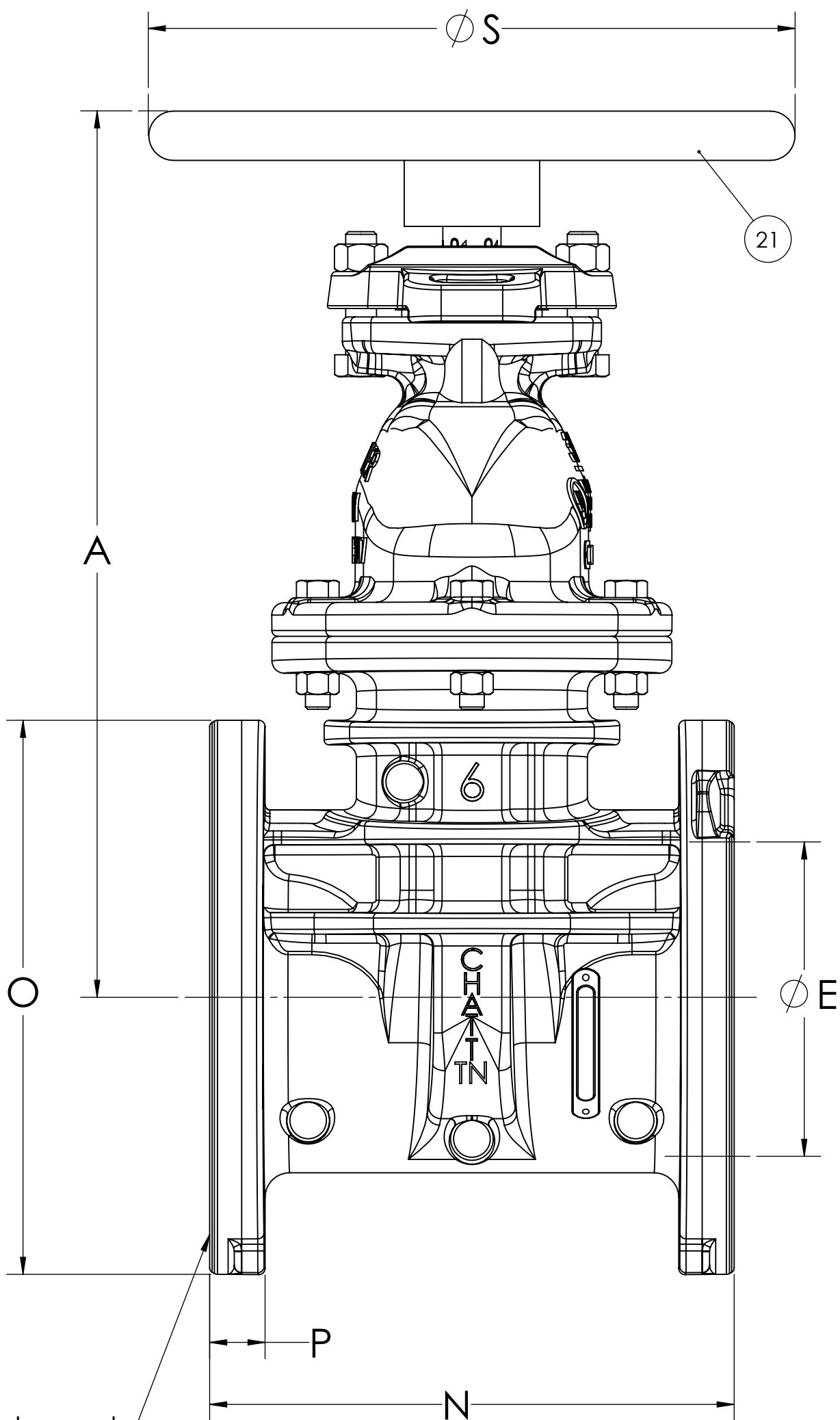
Ø J - Bolt Circle
2 MJ Ends



MECH JOINT ENDS - MJ x MJ

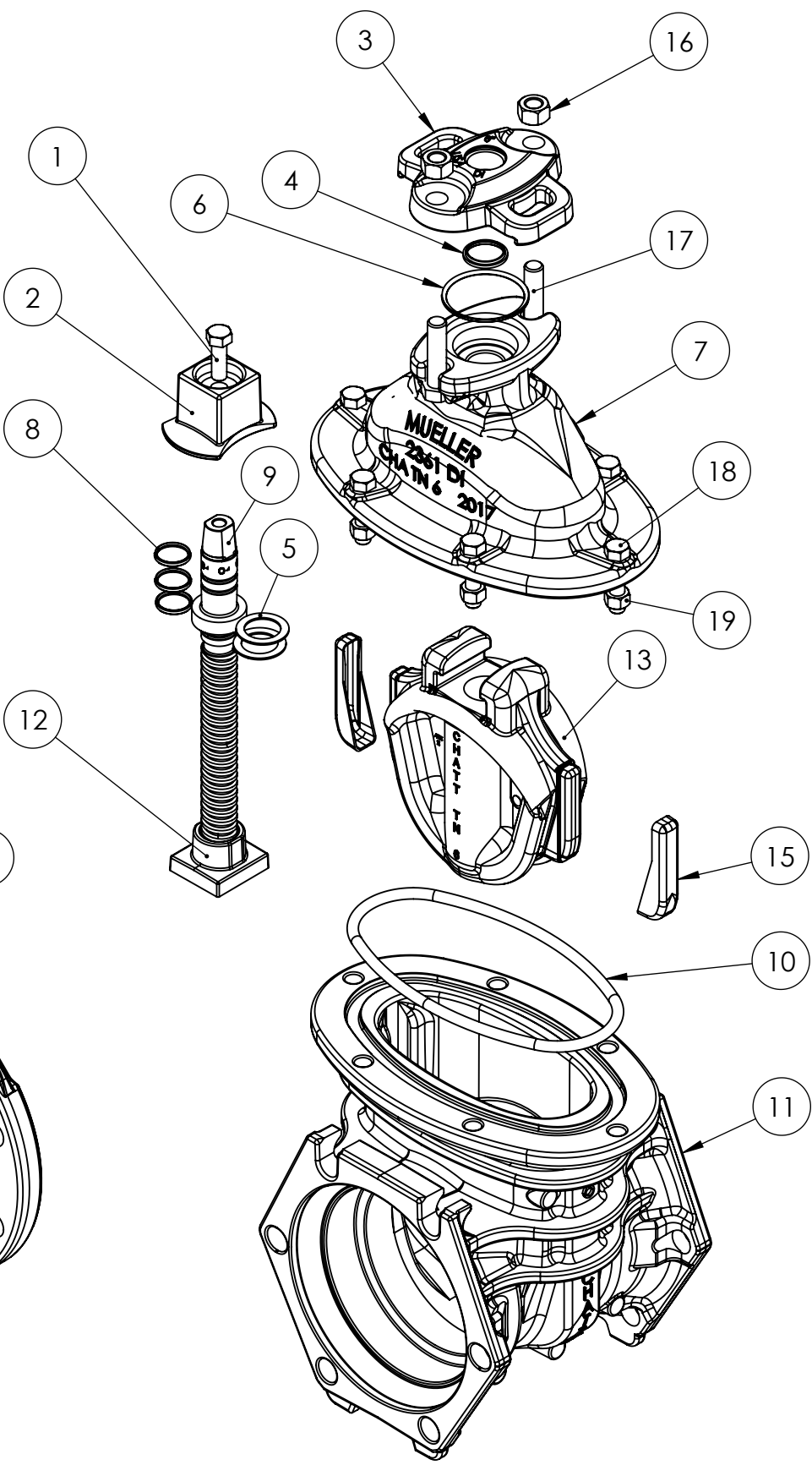
Q - No. and Size of Holes and Slots Equally Spaced on

Ø R - Bolt Circle
2 FL Ends



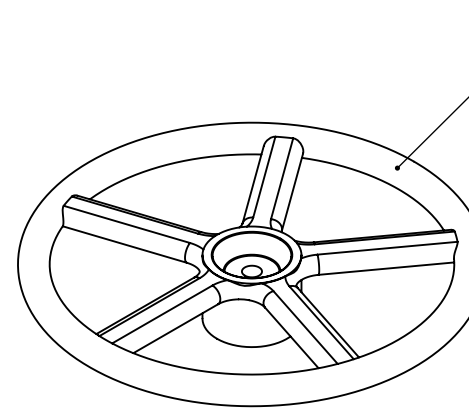
FLANGE ENDS - FL x FL

ITEM NO.	DESCRIPTION	B. QTY.	MATERIAL	ASTM	NOTES
1	Cap Screw	1		F593	Group 2 - CW
2	Wrench Nut	1	Ductile Iron	A536	
3	Stuffing Box	1	Ductile Iron	A536	
4	Wiper Ring (dirt seal)	1	Thermoplastic Polyurethane	D412/ D624 D2240/D792	HY-52D
5	Anti-friction Washer	2	Acetal		
6	Stuffing Box O-Ring	1	Nitrile Rubber		R34
7	Bonnet	1	Ductile Iron	A536	
8	Stem O-ring	3	Nitrile Rubber		R34
9	Stem	1	Bronze	‡	See Note
10	Bonnet O-ring	1	Nitrile Rubber		R34
11	Body MJ Ends	1	Ductile Iron	A536	
12	Stem Nut	1	Bronze	B584	C89833 / NSF 372
13	Encapsulated Disc	1	◆	D2000	See Note
14	Disc Casting	1	Ductile Iron	A536	
15	Guide Cap	2	Acetal		
18		2	316 Stainless Steel	F594	Group 2 - CW
19	Stuffing Box Bolts	2	316 Stainless Steel	F593	Group 2 - SH
17	Bonnet Bolts	"M"	316 Stainless Steel	F593	Group 2 - SH
16	Bonnet Nuts	"M"	316 Stainless Steel	F594	Group 2 - CW
20	Body FL Ends		Ductile Iron	A536	
21	Handwheel		Ductile Iron	A536	



◆ Rubber Encapsulated Ductile Iron Disc
Ductile Iron - ASTM A536
Rubber Options
1. SBR - ASTM D2000
2. EPDM - ASTM D2000

‡ Bronze Stem Options:
1. Manganese - ASTM B138
• Alloy C67600
2. Everdur - ASTM B98
• Alloy C66100



APPROVED

By MATTHEW SLIGER at 10:20 pm, Oct 10, 2018

ECO# 2205739

Valve Size	A	B	C	D	Ø E (Thru Ø)	F	G	H	Ø J (Bolt Circle Ø)	Ø K	L	M	Turns to Open	Weight MJ x MJ	N	O	P	Q	Ø R (Bolt Circle Ø)	Ø S	Weight FL x FL
4	14.19	9.5	10.79	4.50	4.30	8.40	0.50	4-0.88	7.50	4.90	2.50	4	14	75	9.00	9.00	1.00	8-0.75	7.50	11	85
6	18.00	10	13.5	5.00	6.30	10.41	0.45	6-0.88	9.50	7.00	2.50	6	20.5	124	10.50	11.25	1.13	8-0.88	9.50	13	145
8	21.50	10.5	16.36	5.50	8.30	12.68	0.50	6-0.88	11.75	9.15	2.50	6	26.5	181	11.50	13.50	1.15	8-0.88	11.75	14	208
10	25.50	11.5	20	6.50	10.30	15.24	0.62	8-0.88	14.00	11.20	2.50	8	33	270	13.00	16.00	1.29	12-1.00	14.25	16	310
12	28.62	12	21	7.00	12.30	18.024	0.62	8-0.88	16.25	13.30	2.50	8	38.5	345	14.00	19.00	1.33	12-1.00	17.00	16	420

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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES.

ANGULAR: ±
TWO DECIMAL: ±
THREE DECIMAL: ±

Mueller Co.

MATERIAL SEE TABLE

FINISH

NAME JMH
DATE 9/1/2016
DRAWN
CHECKED AO
ENG APPR. MS
MFG APPR.
Q.A.

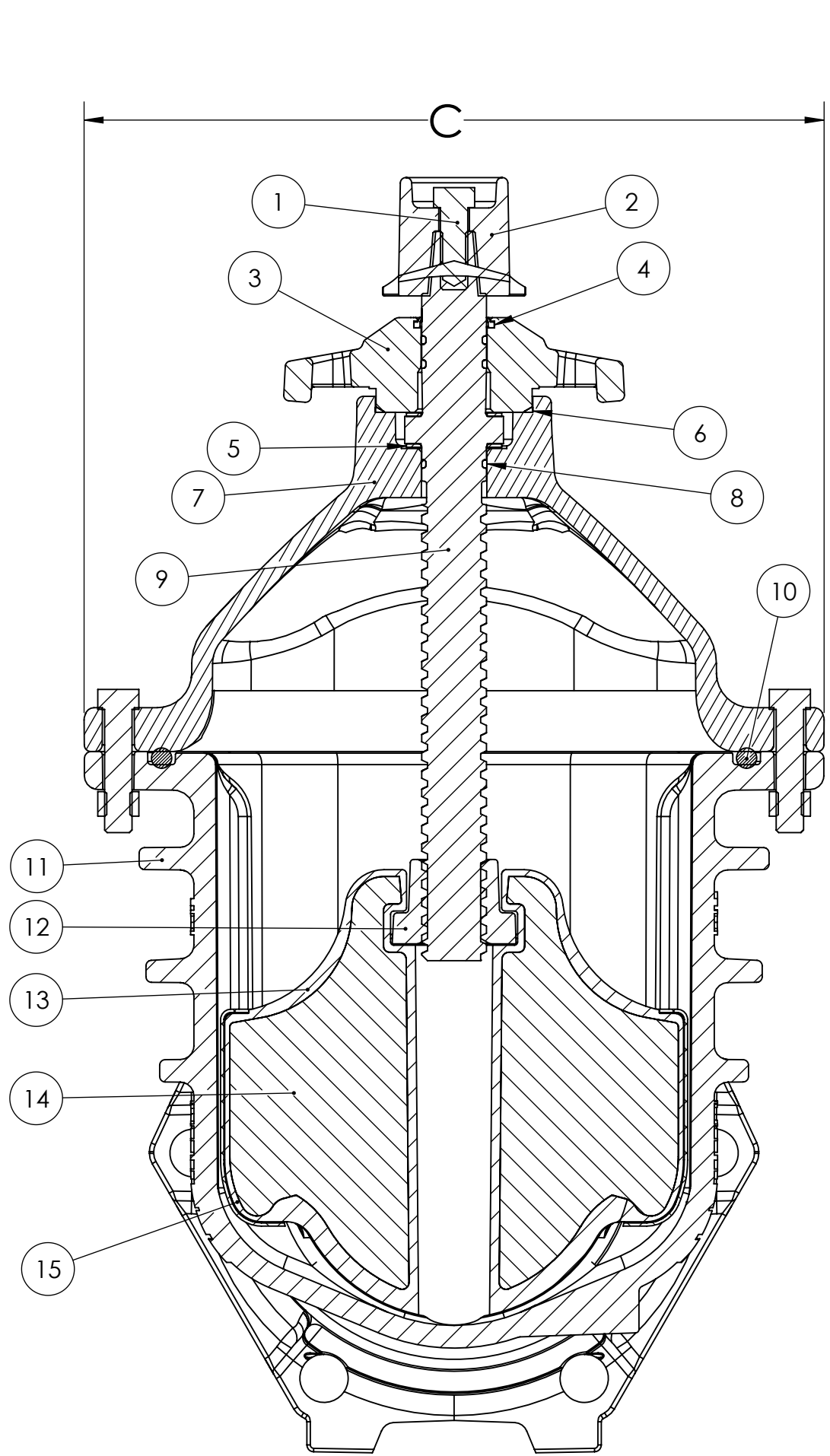
DESCR. 2361 RWGV 350W w/ 316 Fasteners

SIZE D

SCALE:

WEIGHT (lbs): SEE TABLE

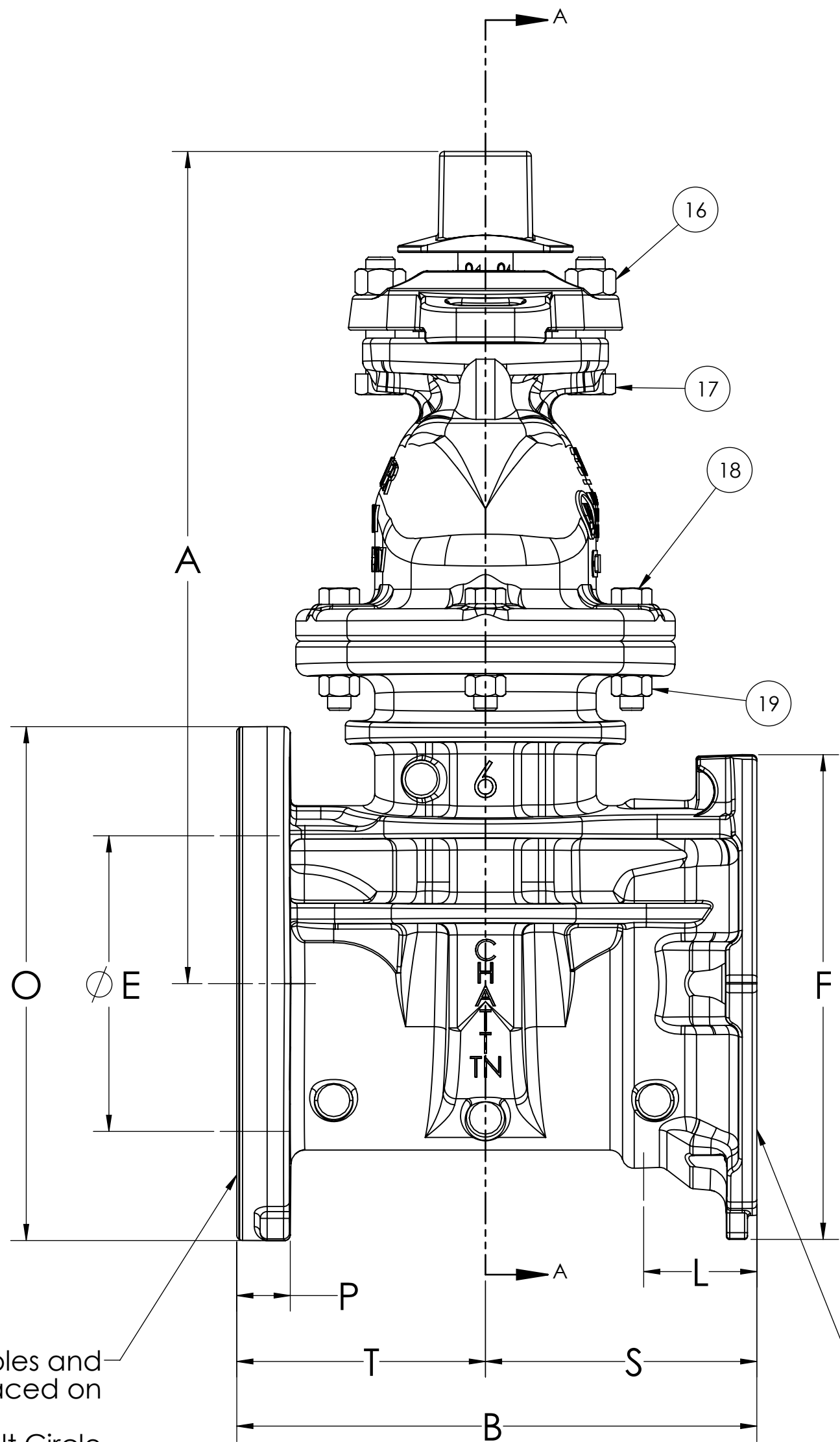
SHEET 1 OF 1



SECTION A-A - TYPICAL

Q - No. and Size of Holes and Slots Equally Spaced on

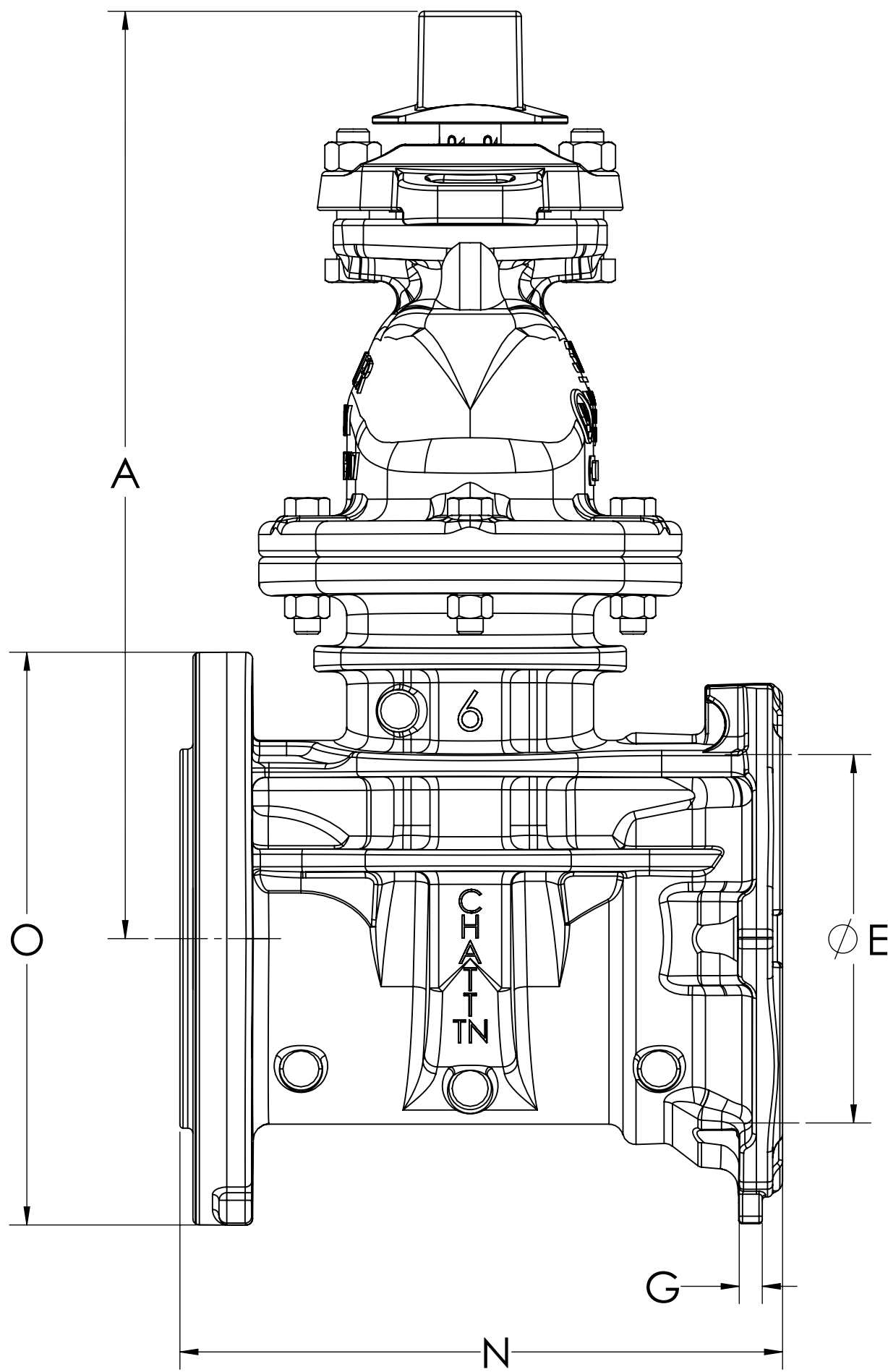
Ø R - Bolt Circle FL End



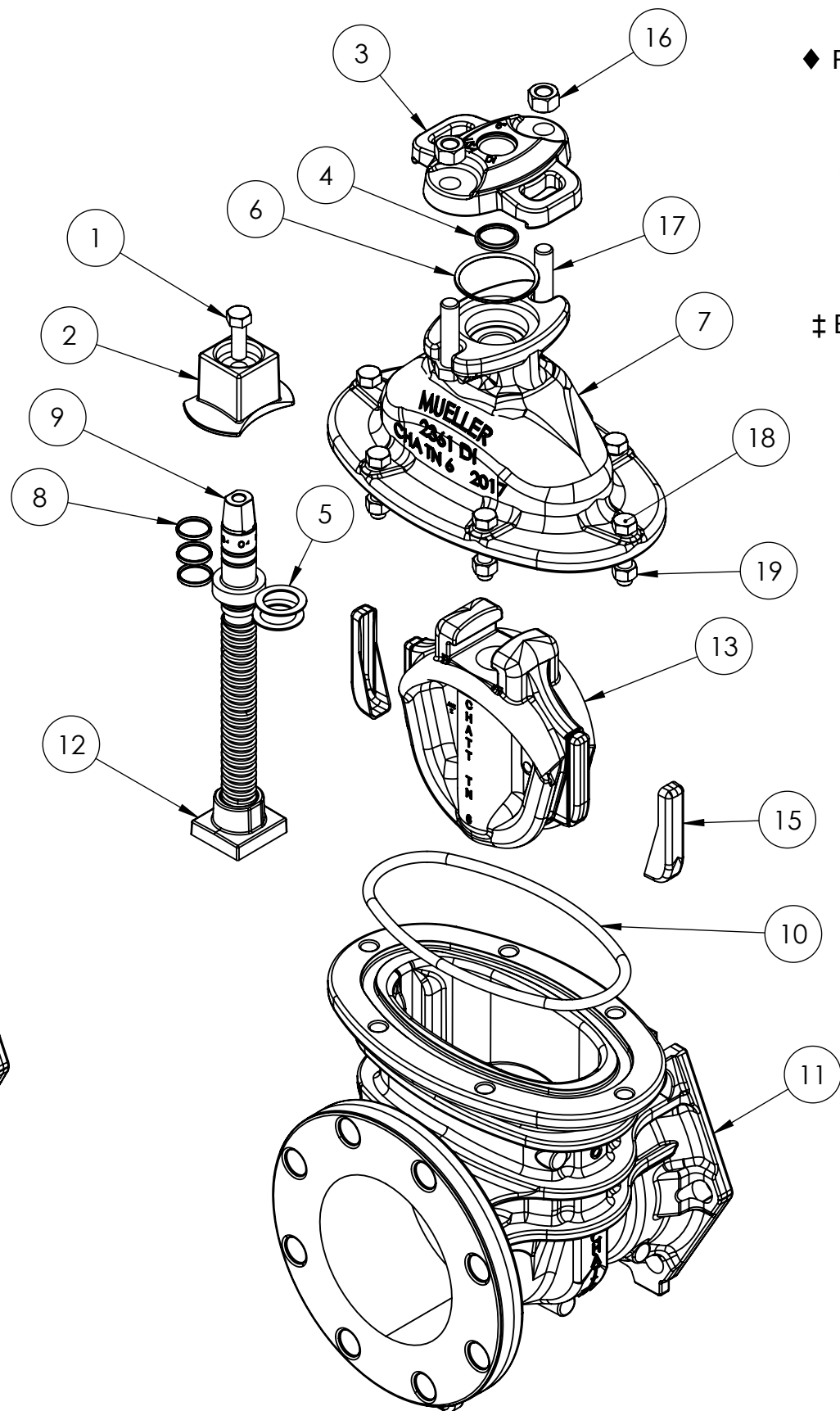
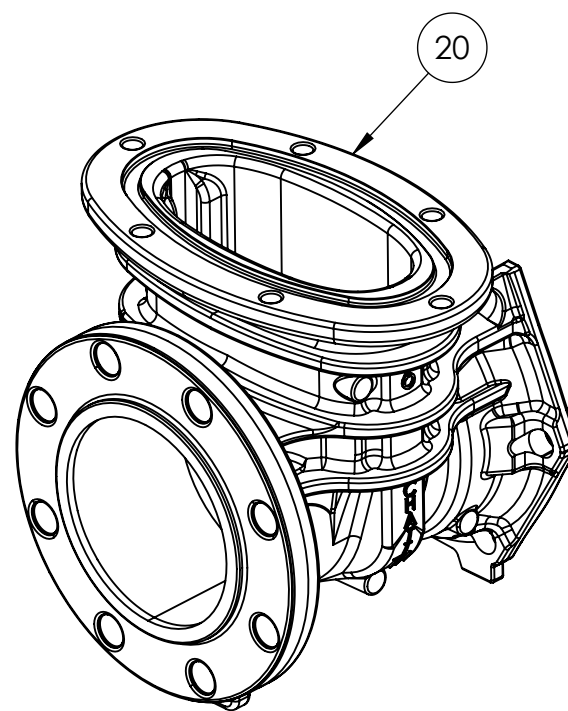
FL x MJ

H - No. and Size of Holes and Slots Equally Spaced on

Ø J - Bolt Circle MJ End



TAPPING - FL x MJ



◆ Rubber Encapsulated Ductile Iron Disc
Ductile Iron - ASTM A536
Rubber Options
1. SBR - ASTM D2000
2. EPDM - ASTM D2000

‡ Bronze Stem Options:
1. Manganese - ASTM B138
• Alloy C67600
2. Everdur - ASTM B98
• Alloy C66100

ECO# 1864417 **APPROVED**
By Matthew Sliger at 2:51 pm, Nov 02, 2017

Valve Size	A	B	C	Ø E (Thru Ø)	F	G	H	Ø J (Bolt Circle Ø)	L	M	Turns to Open	N	O	P	Q	Ø R (Bolt Circle Ø)	S	T	Weight FL x MJ	Weight T FL x MJ
4	14.19	9.5	10.79	4.30	8.40	0.50	4-0.88	7.50	2.50	4	14	9.81	9.00	1.00	8-0.75	7.50	5	4.5	80	82
6	18.00	11.06	13.5	6.30	10.41	0.45	6-0.88	9.50	2.50	6	20.5	11.43	11.25	1.13	8-0.88	9.50	5.81	5.25	136	138
8	21.50	12.09	16.36	8.30	12.68	0.50	6-0.88	11.75	2.50	6	26.5	12.46	13.50	1.15	8-0.88	11.75	6.34	5.75	198	200
10	25.50	13.94	20	10.30	15.24	0.62	8-0.88	14.00	2.50	8	33	14.31	16.00	1.29	12-1.00	14.25	7.44	6.5	299	302
12	28.62	14.5	21	12.30	18.024	0.62	8-0.88	16.25	2.50	8	38.5	14.87	19.00	1.33	12-1.00	17.00	7.5	7	398	400

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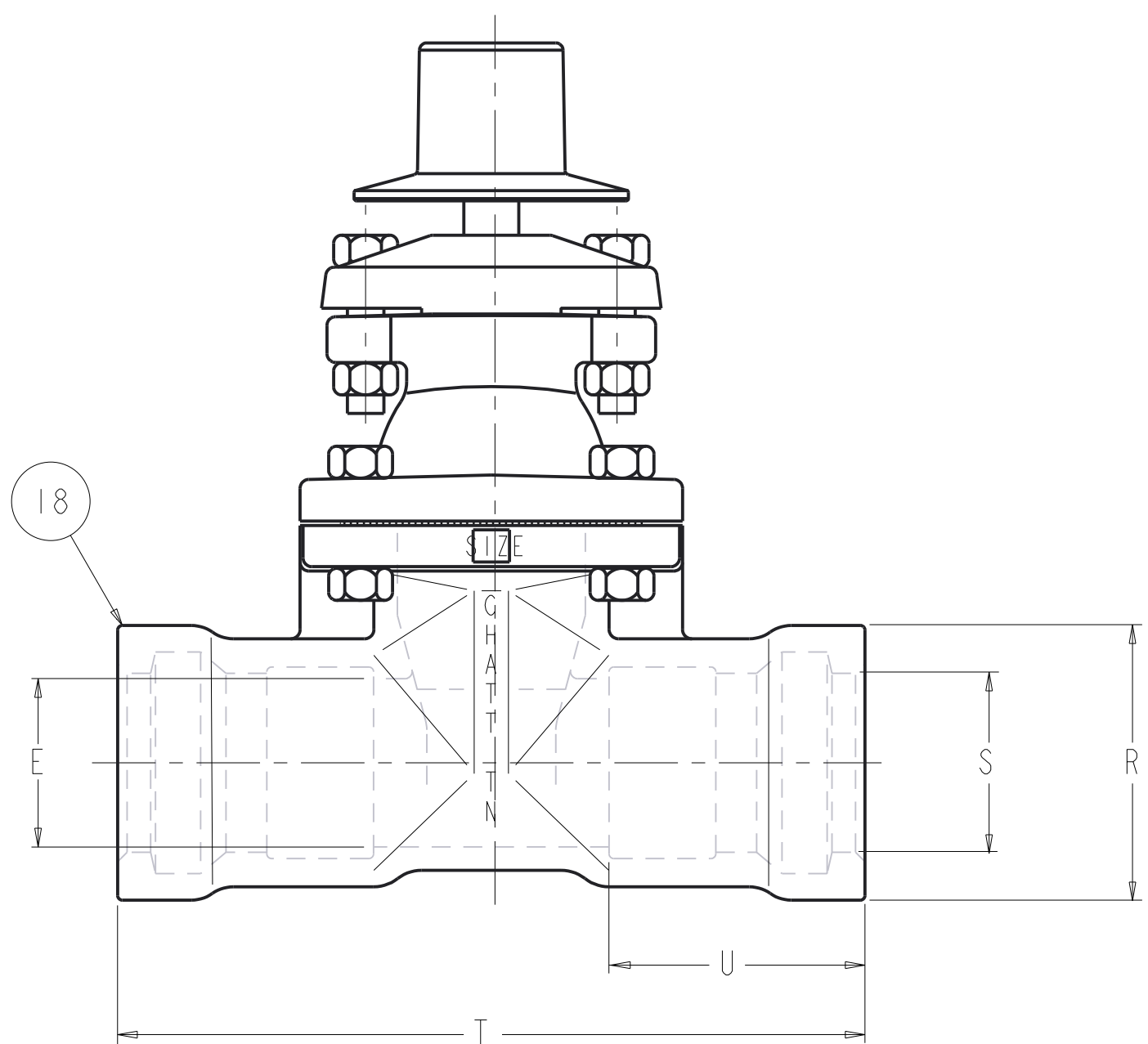
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ANGULAR: ±
TWO DECIMAL: ±
THREE DECIMAL: ±

Mueller Co.

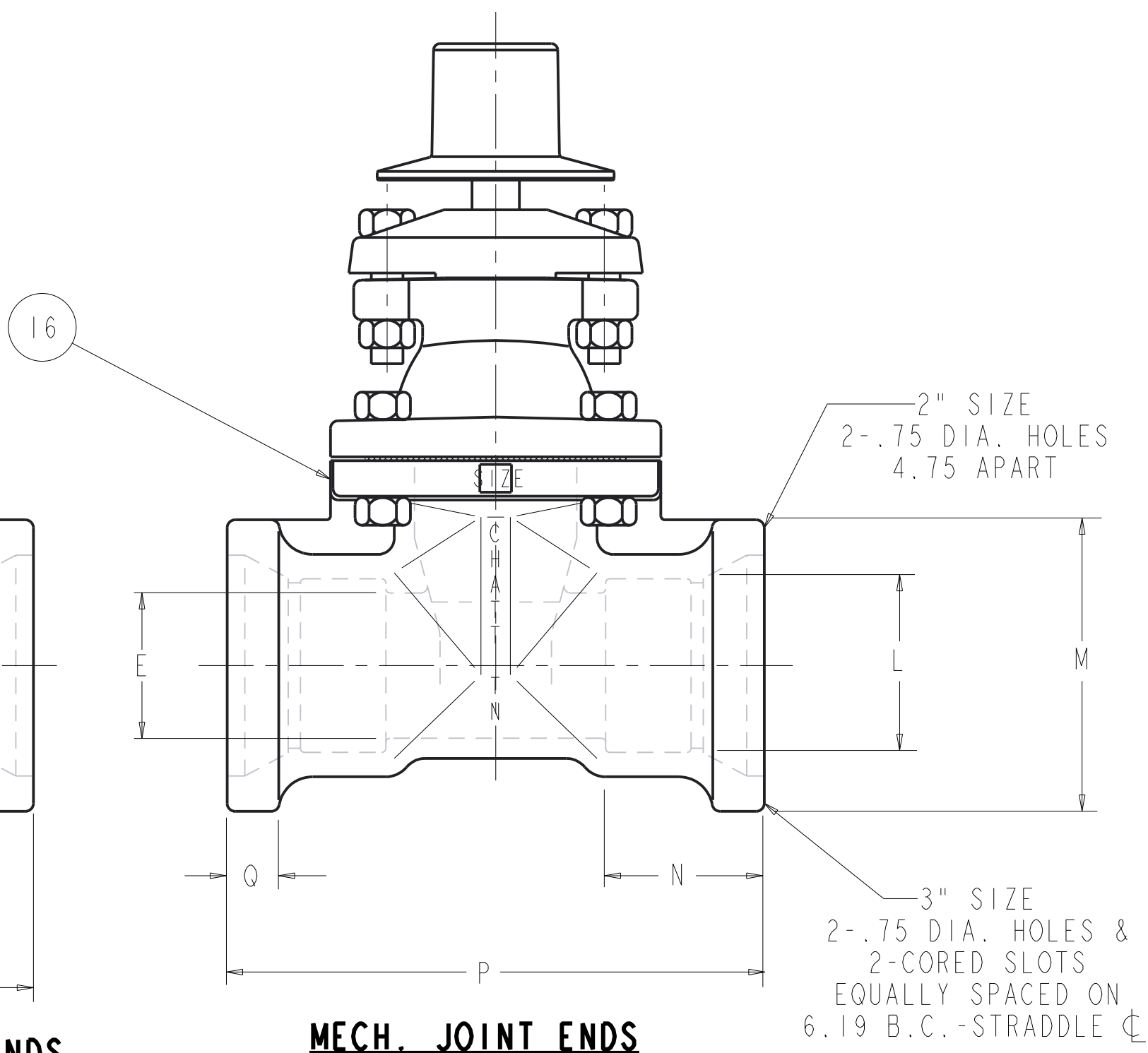
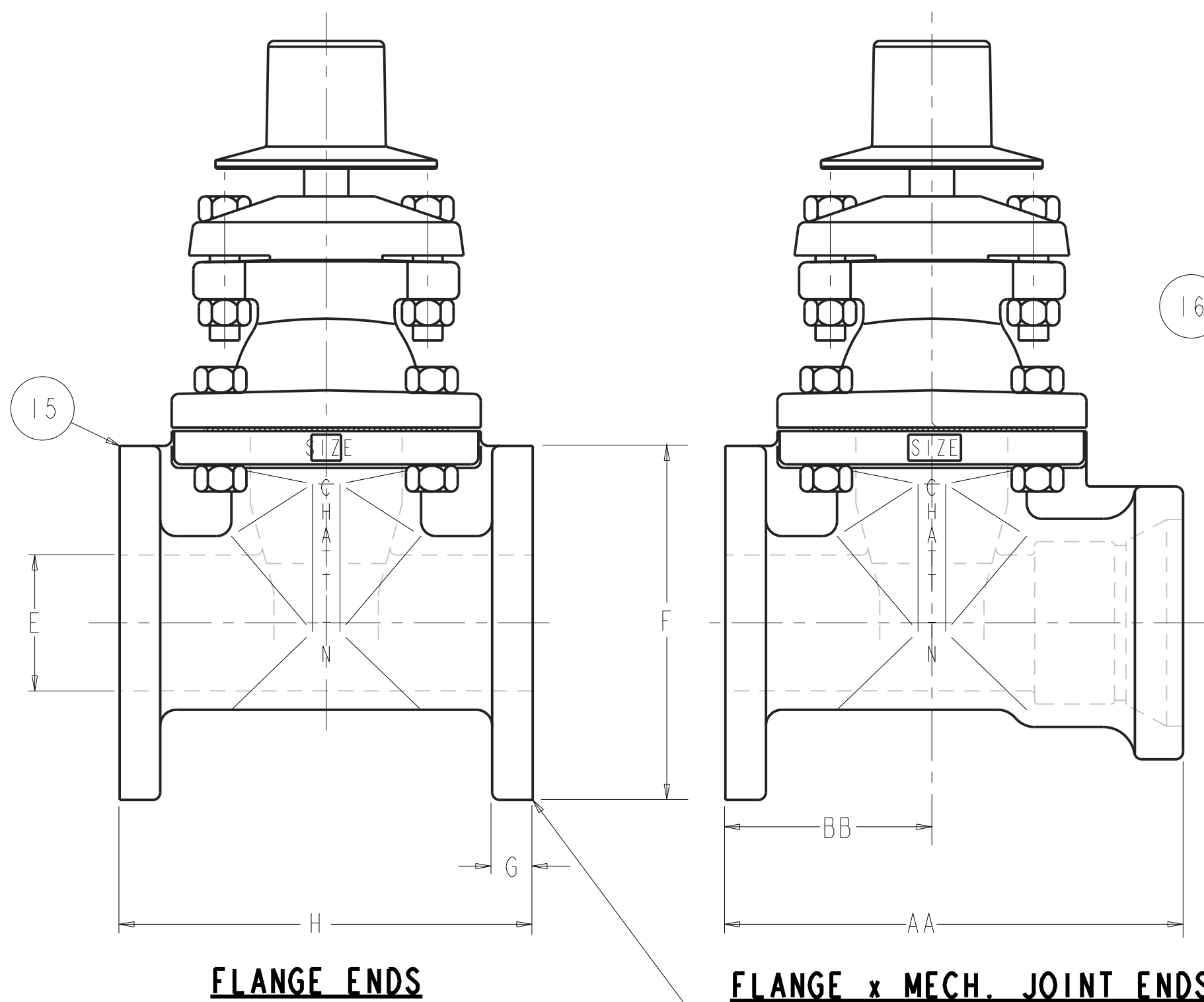
MATERIAL SEE TABLE
FINISH



DRAWN	JMH	DATE	7/19/2017
CHECKED	AO		
ENG APPR.	MS		
MFG APPR.			
Q.A.			

DESCR.		2361 RWGV 350W w/ 316 Fasteners	
SIZE	DWG. NO.	REV	
D	7425	0	
SCALE:		WEIGHT (lbs): SEE TABLE	
		SHEET 1 OF 1	



1. RUBBER ENCAPSULATED CAST IRON DISC
CAST IRON - ASTM A126 CLASS B
RUBBER - SBR - ASTM D2000
2. MANUFACTURER'S OPTION TO UPGRADE MAT'L
TO D1 - A536 GR 65-45-12 OR 70-50-05



DR BY	AO	3/28/17	UNLESS OTHERWISE NOTED		THIRD ANGLE PROJECTION		C.B. NO.
CHKR	BB	3/28/17	BREAK CAST CORNER(S)				
ENGR	MS	3/28/17	BREAK MACH CORNER(S)				
MGR			TOLERANCES		PURCH.	FINISH	PATT. NO.
MFG			UNLESS OTHERWISE NOTED		REF. NO.	SCALE	
TOOL			LINER	ANGULAR	NONE		
DRY			±	±			
					STK. NO.		
MATERIAL: NOTED							
			DESCR. 2IN - 3IN RWGV A-2362-6, -8, -23, & -27 NRS - AWWA - 250W - 500 TEST				NUMBER 7399