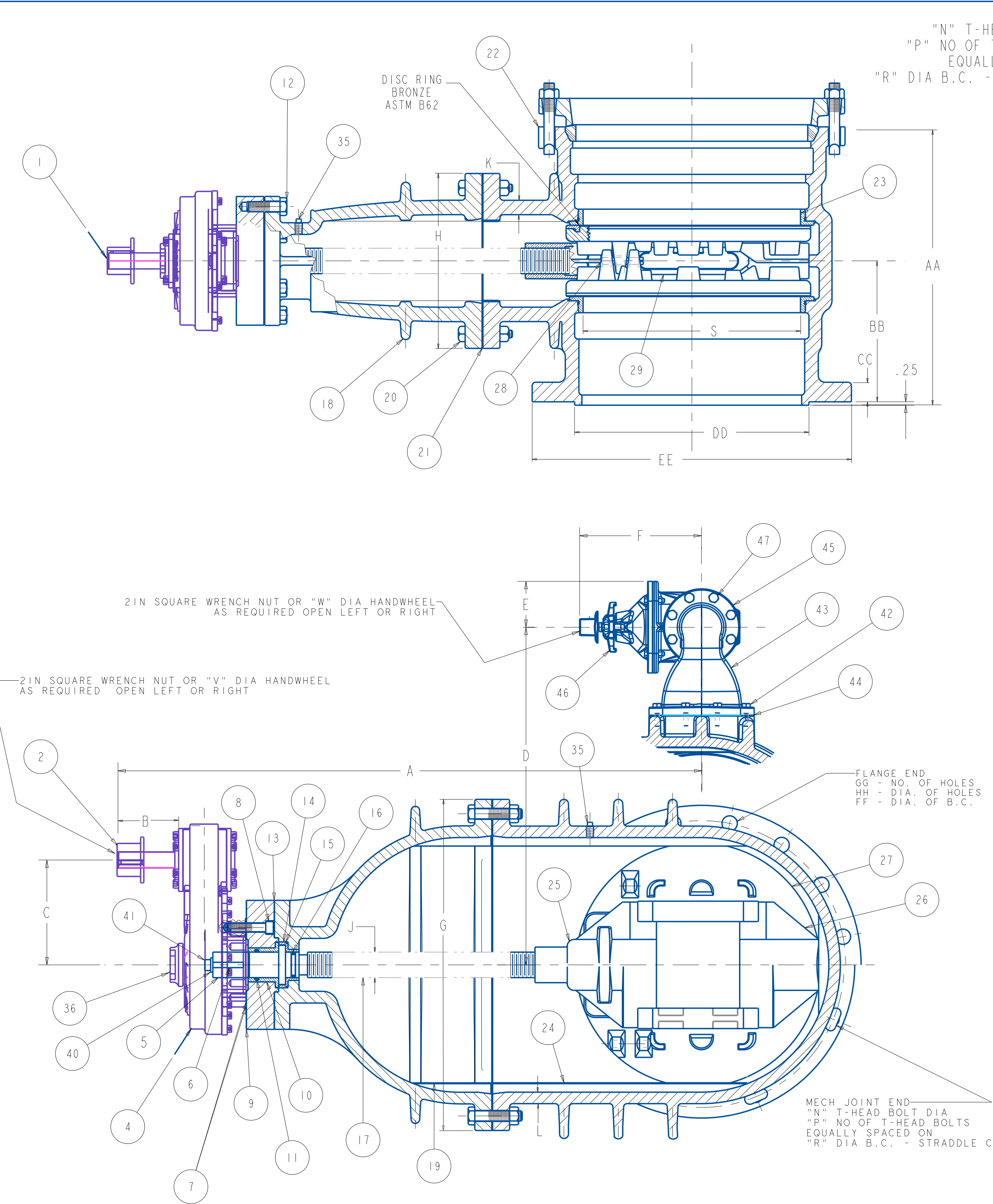
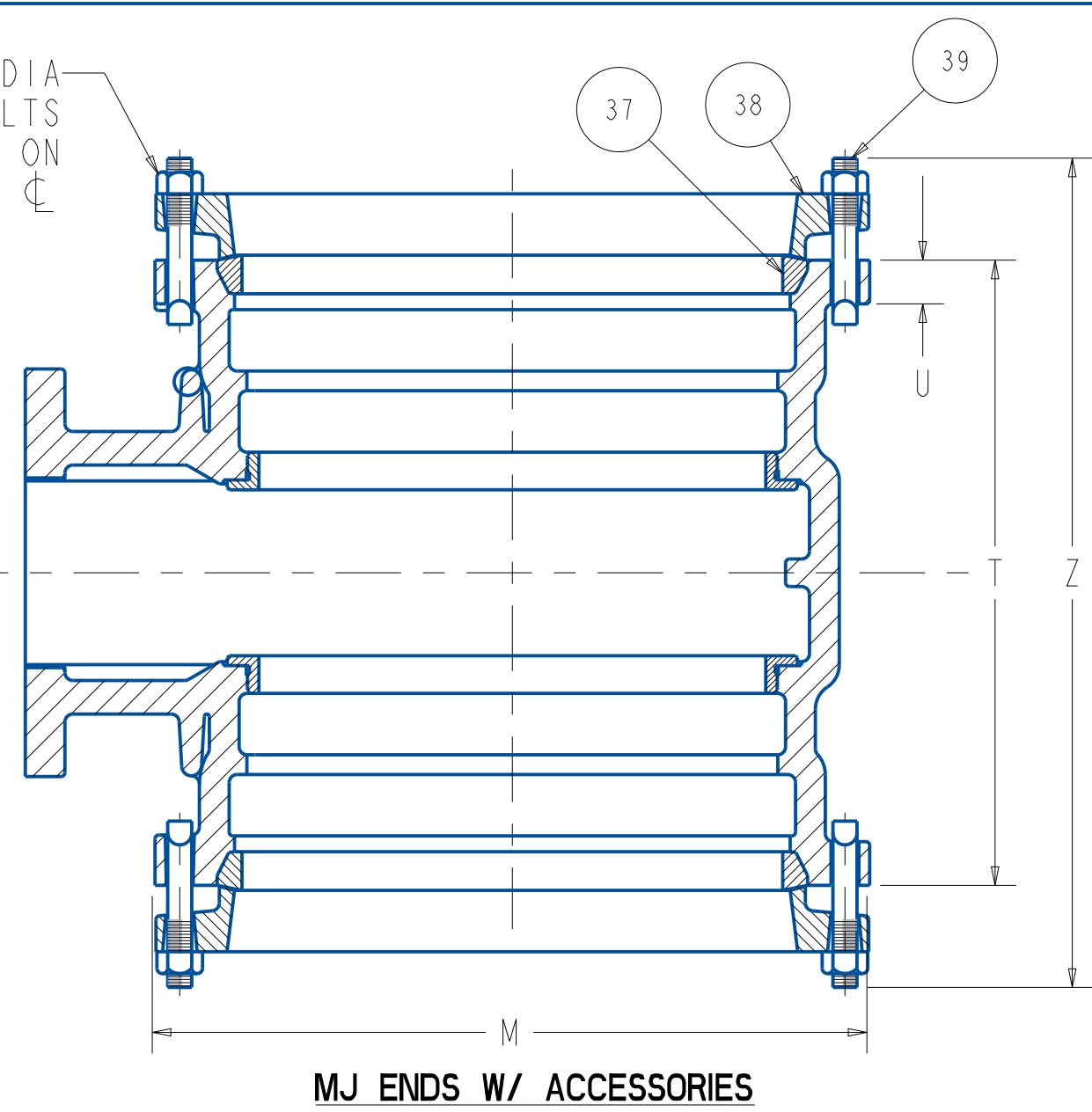


16" - 36" DDGV W/ SPUR GEAR, W/ RWGV SIDE BY PASS

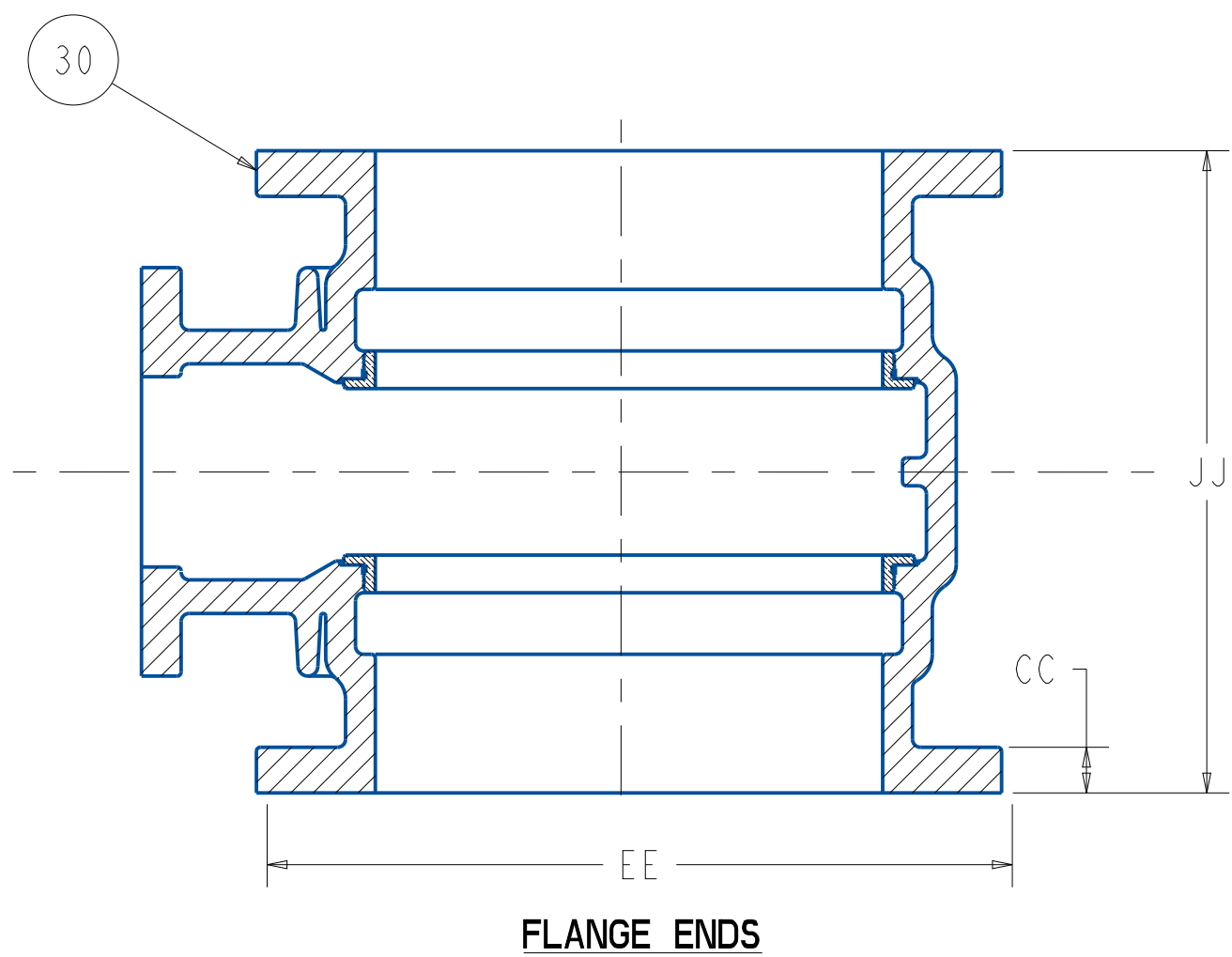
7470



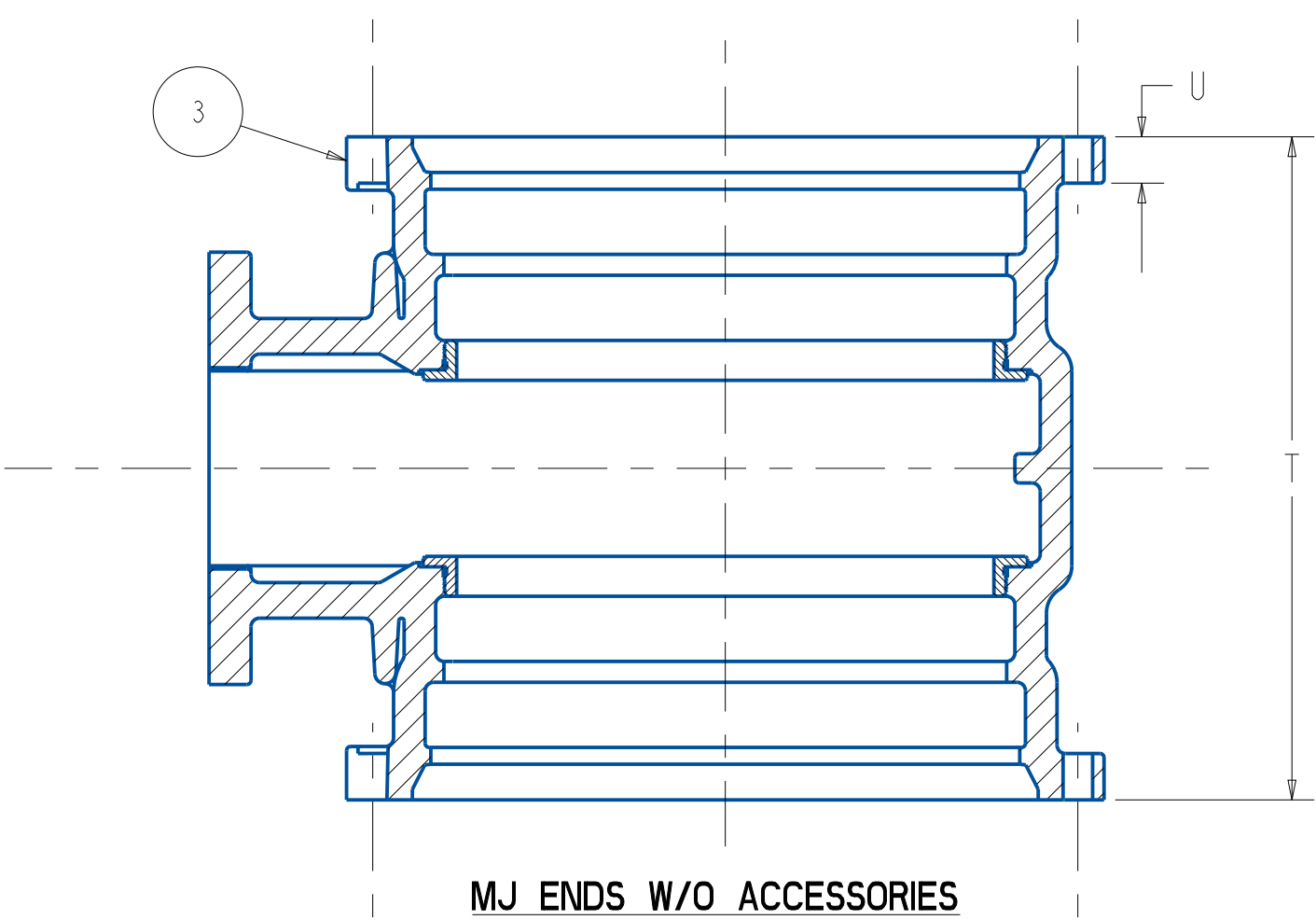
"N" T-HEAD BOLT DIA  
"P" NO OF T-HEAD BOLTS  
EQUALLY SPACED ON  
"R" DIA B.C. - STRADDLE



MJ ENDS W/ ACCESSORIES



FLANGE ENDS



MJ ENDS W/O ACCESSORIES

PARTS LIST

| ITEM | DESCRIPTION        | REQ'D | MATERIAL | ASTM  |                |
|------|--------------------|-------|----------|-------|----------------|
| 1    | CAP SCREW          | 1     | 316 SS   | F593  | GROUP 2-CW     |
| 2    | WRENCH NUT         | 1     | D.I.     | A536  | 65-45-12       |
| 3    | BODY, MJ ENDS      | 1     | D.I.     | A536  | 65-45-12       |
| 4    | VALVE ACTUATOR     | 1     |          |       |                |
| 5    | DRIVE SLEEVE       | 1     |          |       | SEE NOTE 1     |
| 6    | KEY                | 1     | STEEL    |       |                |
| 7    | ACTUATOR GASKET    | 1     | NEOPRENE | D2000 | MUELLER R51    |
| 8    | CAP SCREW          | 4     | STEEL    | A307  | GR B PLATED    |
| 9    | ACTUATOR ADAPTER   | 1     | D.I.     | A536  | 65-45-12       |
| 10   | ADAPTER BUSHING    | 1     | BRONZE   | B62   |                |
| 11   | O-RING             | 1     | RUBBER   | D2000 | MUELLER R34    |
| 12   | CAP SCREW          | 6     | 316 SS   | F593  | GROUP 2-CW     |
| 13   | STANDARD GASKET    | 1     | RUBBER   | D2000 |                |
| 14   | BONNET BUSHING     | 1     | BRONZE   | B62   |                |
| 15   | O-RING             | 1     | RUBBER   | D2000 | MUELLER R34    |
| 16   | O-RING             | 1     | RUBBER   | D2000 | MUELLER R34    |
| 17   | STEM               | 1     | BRONZE   |       | SEE NOTE 2     |
| 18   | BONNET             | 1     | D.I.     | A536  | 65-45-12       |
| 19   | BONNET TRACK       | 1     | BRONZE   | B62   |                |
| 20   | BONNET BOLT        | "X"   | 316 SS   | F593  | GROUP 2-CW     |
| 21   | BONNET GASKET      | 1     | RUBBER   |       | CLOTH INSERTED |
| 22   | BODY, TAP. VALVE   | 1     | D.I.     | A536  | 65-45-12       |
| 23   | SEAT RING          | 2     | BRONZE   | B62   |                |
| 24   | BODY TRACK         | 1     | BRONZE   | B62   |                |
| 25   | TOP WEDGE NUT      | 1     | BRONZE   | B62   |                |
| 26   | BOTTOM WEDGE       | 1     | BRONZE   | B62   |                |
| 27   | DISC W/BRONZE RING | 2     | D.I.     | A536  | 65-45-12       |
| 28   | DISC PIN           | 2     | BRASS    | B21   | ALLOY 464      |
| 29   | SIDE SPREADER      | 2     | BRONZE   | B62   |                |
| 30   | BODY, FL ENDS      | 1     | D.I.     | A536  | 65-45-12       |
| 35   | TEST PLUG          | 2     | 316 SS   | F593  | GROUP 2-CW     |
| 36   | PIPE PLUG          | 1     | D.I.     |       |                |
| 37   | MECH. JOINT GASKET | 1     | RUBBER   | D2000 | MUELLER R42    |
| 38   | M. J. PIPE GLAND   | 1     | D.I.     | A536  | 65-45-12       |
| 39   | T-HEAD BOLT        | "P"   | STEEL    |       | SEE NOTE 3     |
| 40   | WASHER             | 1     | STEEL    |       | PLATED         |
| 41   | CAP SCREW          | 1     | STEEL    |       |                |

BY-PASS VALVE PARTS

|    |                   |      |                         |      |            |
|----|-------------------|------|-------------------------|------|------------|
| 42 | STUD              | "Y"  | 316 SS                  | F593 | GROUP 2-CW |
| 43 | BY-PASS ELL       | 2    | D.I.                    | A536 | 65-45-12   |
| 44 | BY-PASS O-RING    | 2    | RUBBER                  |      |            |
| 45 | ELL O-RING        | 2    | RUBBER                  |      |            |
| 46 | BY-PASS VALVE     | 1    | SEE BY-PASS VALVE CHART |      |            |
| 47 | BYPASS VALVE BOLT | "KK" | 304 SS                  |      |            |

| VALVE SIZE | TURNS TO OPEN | BY-PASS SIZE | TURNS TO OPEN |
|------------|---------------|--------------|---------------|
| 16         | 201±3         | 3            | 11            |
| 18         | 234±3         | 3            | 11            |
| 20         | 258±3         | 3            | 11            |
| 24         | 308±3         | 4            | 14            |
| 30         | 382±3         | 4            | 14            |
| 36         | 456±3         | 6            | 20.5          |

| BY-PASS VALVE CHART |                  |
|---------------------|------------------|
| BY-PASS SIZE        | SUB ASS'Y DWG NO |
| 3                   | 7248             |
| 4                   | 7248             |
| 6                   | 7248             |

NOTES:  
1) SUPPLIED W/ACTUATOR BUT FINISHED BY MUELLER CO.  
2) 16IN SIZE ONLY - ASTM B138 ALLOY 675  
W/ADDED LEAD FOR MACHINABILITY  
18IN - 24IN SIZES - ASTM B584 ALLOY 864  
3) ASTM A242 TYPE 1 OR ASTM A588 GRADE B

| VALVE SIZE | A     | B    | C     | D     | E    | F     | G     | H     | J    | K    | L    | M     | N    | P  | R     | S     | T     | U    | V     | W    | X  | Y  | Z     | AA    | BB    | CC   | DD    | EE    | FF    | GG | HH   | JJ    | KK |
|------------|-------|------|-------|-------|------|-------|-------|-------|------|------|------|-------|------|----|-------|-------|-------|------|-------|------|----|----|-------|-------|-------|------|-------|-------|-------|----|------|-------|----|
| 16         | 42.73 | 4.76 | 8.03  | 20.69 | 4.32 | 12.38 | 24.38 | 12.88 | 1.88 | 1.06 | 0.84 | 22.56 | 0.75 | 12 | 21.00 | 16.00 | 19.76 | 1.38 | 12.00 | 8.0  | 18 | 12 | 26.00 | 20.25 | 10.38 | 1.44 | 17.25 | 23.50 | 21.25 | 16 | 1.12 | 20.25 | 12 |
| 18         | 45.86 | 4.76 | 8.03  | 24.00 | 4.32 | 12.38 | 28.00 | 14.88 | 2.00 | 1.12 | 0.94 | 24.83 | 0.75 | 12 | 23.25 | 18.00 | 21.00 | 1.44 | 12.00 | 8.0  | 20 | 12 | 27.00 | 21.50 | 11.00 | 1.56 | 19.47 | 25.00 | 22.75 | 16 | 1.25 | 22.00 | 12 |
| 20         | 50.86 | 4.76 | 8.03  | 25.25 | 4.32 | 12.38 | 30.50 | 16.12 | 2.12 | 1.18 | 1.00 | 27.08 | 0.75 | 14 | 25.50 | 20.00 | 21.52 | 1.50 | 12.00 | 8.0  | 20 | 12 | 27.52 | 21.88 | 11.12 | 1.69 | 21.47 | 27.50 | 25.00 | 20 | 1.25 | 22.25 | 12 |
| 24         | 59.10 | 4.76 | 8.03  | 28.13 | 5.40 | 14.19 | 35.25 | 18.00 | 2.38 | 1.44 | 1.18 | 31.58 | 0.75 | 16 | 30.00 | 24.00 | 23.50 | 1.62 | 18.00 | 11.0 | 24 | 16 | 30.26 | 24.50 | 12.75 | 1.88 | 25.47 | 32.00 | 29.50 | 20 | 1.38 | 25.50 | 16 |
| 30         | 69.50 | 4.76 | 12.00 | 30.94 | 5.40 | 14.19 | 42.63 | 21.00 | 3.00 | 1.94 | 1.56 | 38.75 | 0.75 | 20 | 36.88 | 30.00 | 28.00 | 1.81 | 30.00 | 11.0 | 30 | 16 | 36.36 | 28.75 | 14.19 | 2.13 | 30.94 | 38.75 | 29.50 | 20 | 1.38 | 28.75 | 16 |
| 36         | 79.10 | 4.76 | 12.00 | 36.00 | 6.75 | 18.00 | 49.75 | 23.25 | 3.24 | 2.19 | 1.75 | 46.00 | 0.75 | 24 | 43.75 | 36.00 | 31.00 | 2.31 | 36.00 | 13.0 | 36 | 20 | 38.38 | 32.00 | 16.00 | 2.50 | 36.94 | 46.00 | 42.75 | 32 | 1.62 | 32.00 | 20 |

APPROVED  
By Matt Sliger at 2:38 pm, Sep 25, 2019

|        |                                                    |          |                        |                        |          |
|--------|----------------------------------------------------|----------|------------------------|------------------------|----------|
| DR BY  | AO                                                 | 01/11/18 | UNLESS OTHERWISE NOTED | THIRD ANGLE PROJECTION | C.B. NO. |
| CHKD   | BB                                                 | 01/11/18 | BREAK CAST CORNER(S)   |                        |          |
| ENGR   | MS                                                 | 01/11/18 | BREAK MACH CORNER(S)   |                        |          |
| MGR    |                                                    |          | TOLERANCES             | PURCH. NO.             | FINISH   |
| MFG    |                                                    |          | UNLESS OTHERWISE NOTED | REF. NO.               | SCALE    |
| TOOL   |                                                    |          | LINEAR                 |                        | NONE     |
| FDRY   |                                                    |          | ANGULAR                | STK. NO.               |          |
| MAT'L  | NOTED                                              |          |                        |                        |          |
| DESCR. | 16" - 36" DDGV<br>W/ SPUR GEAR & RWGV SIDE BY PASS |          |                        |                        |          |
| NUMBER | 7470                                               |          |                        |                        |          |

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