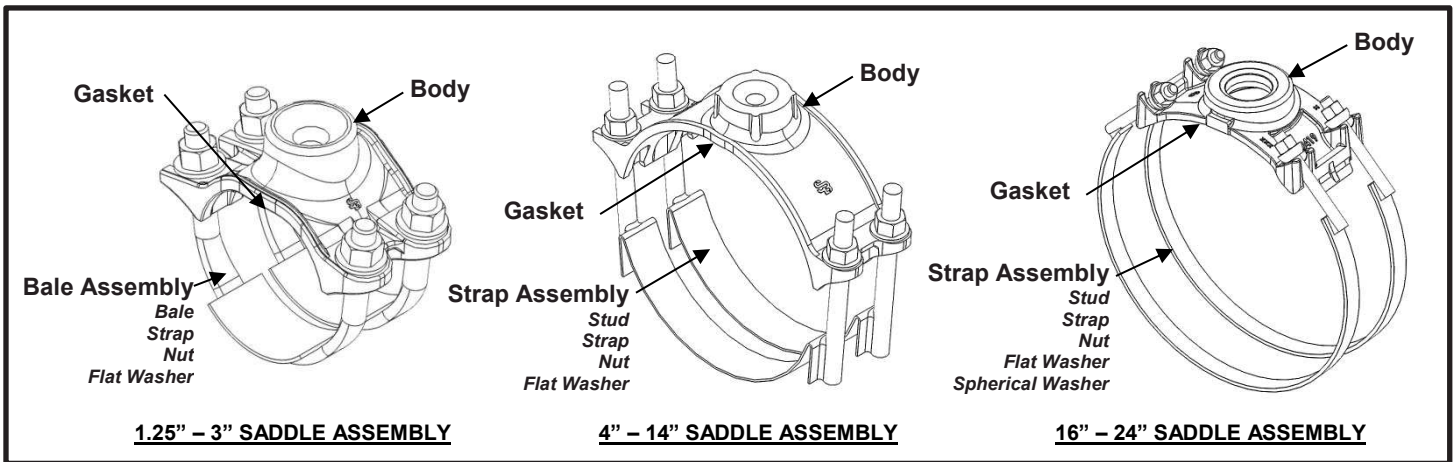


# SPECIFICATION

## SERVICE SADDLE DOUBLE STRAP

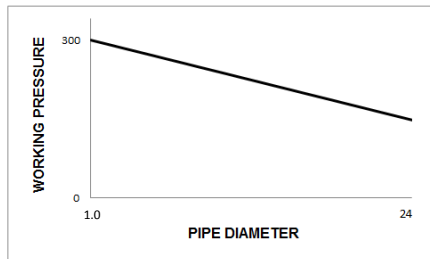
### MODEL 317



#### APPLICATIONS

- **Typical Uses**
  - Tapping branch connections on new or existing pipe
  - Installing air/vacuum valves, pitot tubes, drain valves, or other miscellaneous service equipment
  - Installing pipe supports, hangers, or sign mounting brackets
- **Standard Pipe Sizes**
  - 1.25" to 24" nominal
- **Standard Taps**
  - NPT: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 3" and 4"
  - CC/AWWA: 1/2", 5/8", 3/4", 1", 1-1/4", 1-1/2" and 2"
  - BSP: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", and 3"

*See Smith-Blair catalog for available pipe diameter and tap size combinations as some combinations are not available*
- **Type of Pipe**
  - PVC, Carbon Steel, Stainless Steel, Ductile Iron, HDPE DR17 or thicker (with use of spring washers), Asbestos Cement, Aluminum
- **Working Pressure**
  - Up to 300 psi depending on type of pipe, type of repair, pipe diameter, service conditions, and installation workmanship



# SPECIFICATION

## SERVICE SADDLE DOUBLE STRAP

### MODEL 317

#### MATERIALS

- **Body** (used only on 1" - 14" nominal pipe size saddles)
  - Cast using Ductile Iron 65-45-12 per ASTM A536
  - Flexi-Coat® fusion bonded epoxy finish
  - Closed ears holds nut and bale/strap in place allowing the assembly to hinge for ease of installation around pipe
  - Open ears provide easy slip on installation and removal of nuts are not required preventing lost hardware
  - Canted ears for maximum tangential tightening of bale or strap
  - Wraparound design provides maximum pipe support, reinforcement, and sealing pressure
  - Wide skirt and heavy tapping boss provides excellent stability on the pipe
- **Body** (used only on 16" - 24" nominal pipe size saddles)
  - Cast using Ductile Iron 65-45-12 per ASTM A536
  - Flexi-Coat® fusion bonded epoxy finish
  - Open ears provide easy slip on installation and removal of nuts are not required preventing lost hardware
  - Canted ears for maximum tangential tightening of bale or strap
  - Wraparound design provides maximum pipe support, reinforcement, and sealing pressure
  - Wide skirt and heavy tapping boss provides excellent stability on the pipe
- **Bale Assembly** (used only on 1" - 3" nominal pipe size saddles)
  - **Bale**
    - Type 304 Stainless Steel per ASTM A276
    - 1/2"-13UNC
    - Pipe contact surface flattened to provide a wider bearing surface against pipe
    - Rolled threads for improved physical characteristics, greater thread accuracy, and smooth surface finish
  - **Strap**
    - Type 304 Stainless Steel per ASTM A240
    - Formed using 14GA x 1.50" strip and welded to Bale
    - Strap distributes load across a larger surface area preventing damage to non-rigid pipe types
    - Relevant product information placed on strap i.e. O.D. range, part number, etc.
  - **Welding**
    - Welds accomplished using qualified welders
    - GMAW weld process utilized
    - Welds passivated to preserve corrosion resistance
  - **Nut**
    - Type 304 Stainless Steel GR. 8 per ASTM A194
    - Fluoropolymer coated to prevent galling
    - 1/2"-13UNC, Heavy Hex Semi-Finished
  - **Flat Washer**
    - Type 304 Stainless Steel per ASTM A240
    - 1/2" Type A Plain
    - Utilized to preserve corrosion resistance of epoxy coated surfaces and increase bearing surface

# SPECIFICATION

## SERVICE SADDLE DOUBLE STRAP

### MODEL 317

- **Strap Assembly** *(used only on 4" – 24" nominal pipe size saddles)*
  - **Strap**
    - Material: 4" – 16" nominal pipe size(s) = Type 304 Stainless Steel per ASTM A240  
18" – 24" nominal pipe size(s) = Type 304 Stainless Steel per ASTM A276
    - Sizes: 4" – 16" nominal pipe size(s) = Formed using 14GA x 1.50" strip  
18" – 24" nominal pipe size(s) = Formed using 0.25" x 1.25" flat bar
    - Strap distributes load across a larger surface area preventing damage to non-rigid pipe types
    - Relevant product information placed on strap i.e. O.D. range, part number, etc.
  - **Stud**
    - Type 304 Stainless Steel per ASTM A276
    - Sizes: 4" – 6" nominal pipe size(s) = 5/8"-11UNC x 6.00" long, Stud welded to Strap  
8" – 14" nominal pipe size(s) = 5/8"-11UNC x 7.00" long, Stud welded to Strap
    - Rolled threads for improved physical characteristics, greater thread accuracy, and smooth surface finish
  - **Welding**
    - Welds accomplished using qualified welders
    - GMAW weld process utilized
    - Welds passivated to preserve corrosion resistance
  - **Nut**
    - Type 304 Stainless Steel GR. 8 per ASTM A194
    - Fluoropolymer coated to prevent galling
    - 5/8"-11UNC, Heavy Hex Semi-Finished
  - **Flat Washer**
    - Type 304 Stainless Steel per ASTM A240
    - 5/8" Type A Plain
    - Utilized to preserve corrosion resistance of epoxy coated surfaces and increase bearing surface
  - **Spherical Washer** *(used only on 16" – 24" nominal pipe size saddles)*
    - Cast using Ductile Iron 65-45-12 per ASTM A536
    - Flexi-Coat<sup>®</sup> fusion bonded epoxy finish
    - Provide full bearing for the strap nuts and align the straps with the saddle body
    - Distributes load for better performance
- **Gasket**
  - Nitrile (Buna-N) per ASTM D2000
  - Compounded to resist water, oil, natural gas, acids, alkalies, most (aliphatic) hydrocarbon fluids, and many other chemicals
  - Temperature range: -20°F to +180°F
  - TaperSeal™ hydro-mechanical lip enables the saddle to hold higher pressures with minimal nut torque
  - Gasket is fully cemented in a cavity to hold it in place



# SPECIFICATION

## SERVICE SADDLE DOUBLE STRAP

### MODEL 317

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#### LISTINGS

- Certified to NSF/ANSI 61 and NSF/ANSI 372
- Meets applicable AWWA C800 standards
- Certain sizes meet Uni-Bell PVC Pipe Associations “Handbook of PVC Pipe” and AWWA M23 Manual “PVC Pipe Design and Installation, when the fitting is ordered with the body properly sized to fit the PVC pipe.
- Fusion-Bonded Epoxy Coating meets requirements of AWWA C213

#### OPTIONS

- Type 316 Stainless Steel bale assembly with fluoropolymer coated nuts to prevent galling
- Type 316 Stainless Steel strap assembly with fluoropolymer coated nuts to prevent galling (*spherical washers remain D.I*)
- Alternative gasket material (e.g. Viton, EPDM, etc.)
- Anode connector
- Spring washers for use of clamp on HDPE pipe

#### NOTES

- Spring washers **are required** when this product is used on DR17 or thicker HDPE pipe
- These product specifications were correct at the time of publication and are subject to change without notice
- Flexi-Coat® is a registered trademark of Smith-Blair, Inc.
- Taperseal™ is a trademark of Smith-Blair, Inc.
- See the Smith-Blair web site for part numbers and ordering information
- See the Smith-Blair web site for warranty information
- See the Smith-Blair web site for corrosion notice

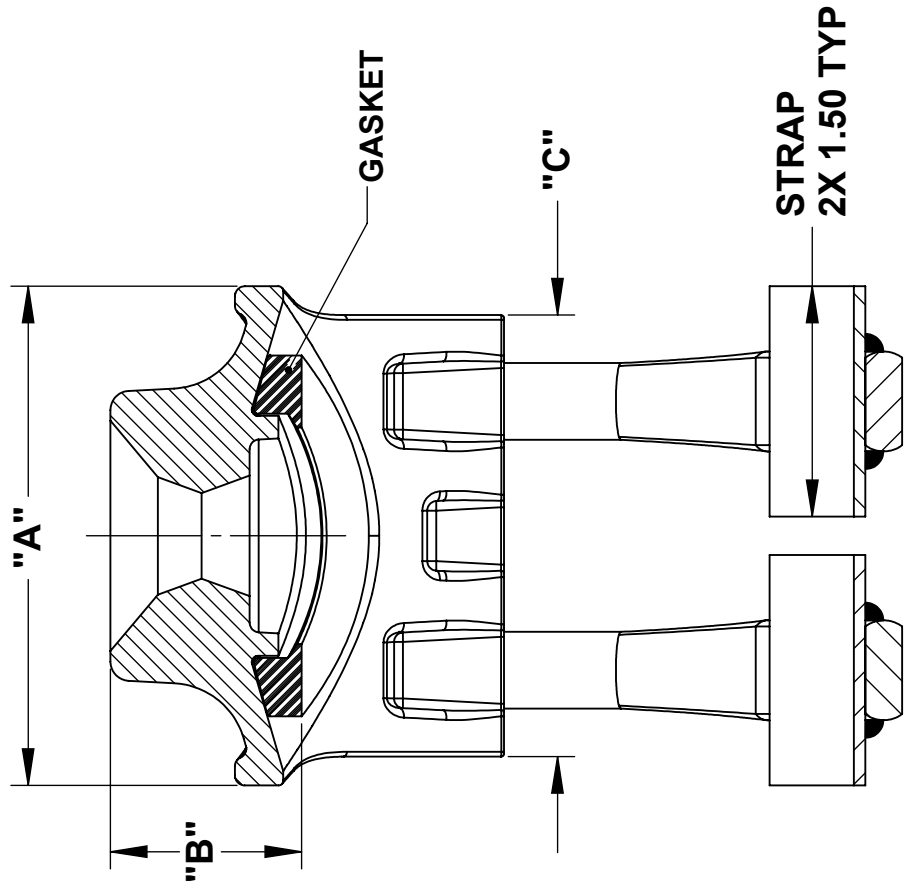


36 Hudson Rd  
Sudbury MA 01776

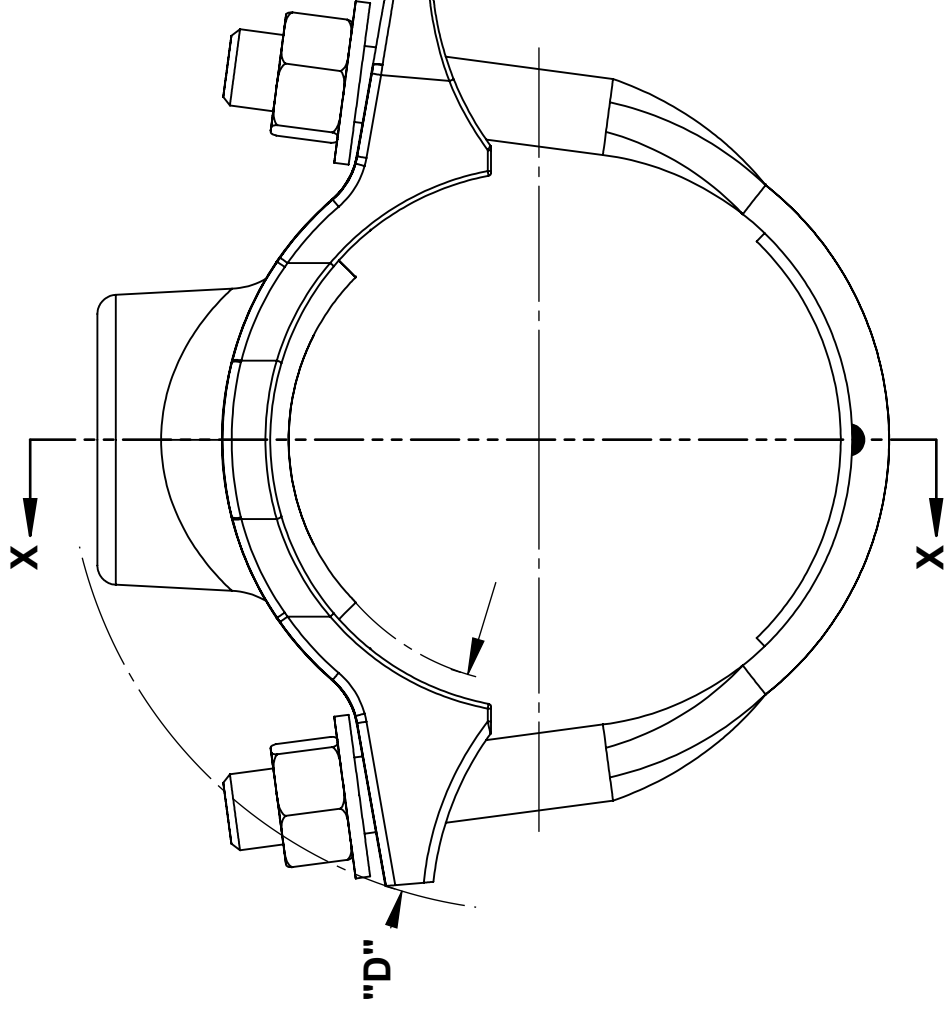


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SECTION X-X

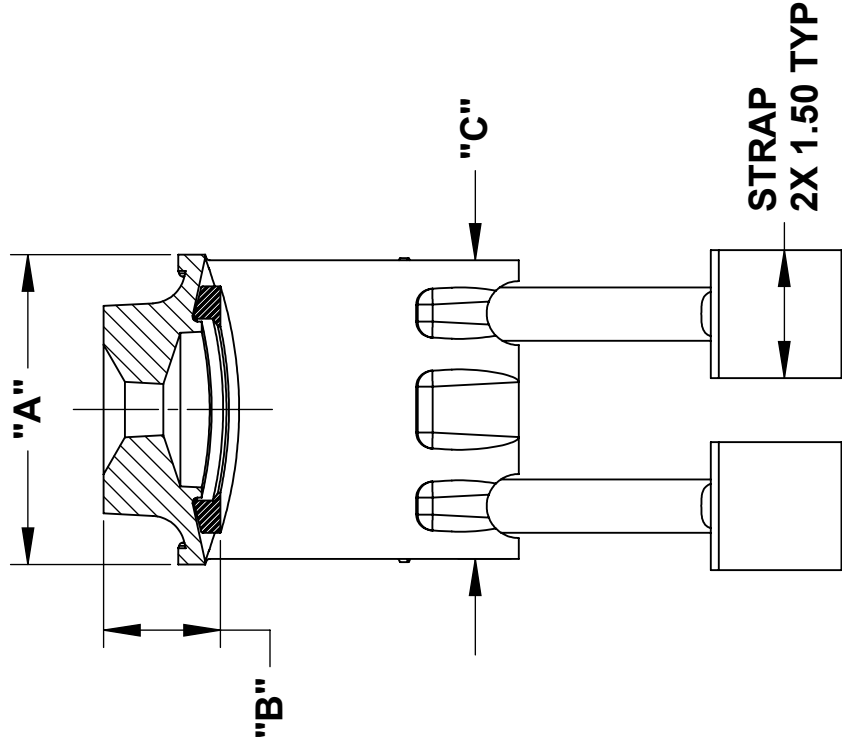


| NOMINAL SIZE | APPROX. WT. (LB) | TAP CODE | A    | B    | C    | D    | SOCKET SIZE |
|--------------|------------------|----------|------|------|------|------|-------------|
| 1.25 - 1.50  | 3                | ST       | 3.40 | 1.35 | 2.88 | 1.53 | 7/8"        |
|              | -                | LT       | -    | -    | -    | -    |             |
| 2            | 3                | ST       | 3.40 | 1.35 | 2.88 | 1.53 |             |
|              | -                | LT       | -    | -    | -    | -    |             |
| 2.25 - 2.50  | 3                | ST       | 3.40 | 1.35 | 2.88 | 1.53 |             |
|              | -                | LT       | -    | -    | -    | -    |             |
| 3            | 4                | ST       | 3.40 | 1.40 | 3.00 | 1.70 |             |
|              | 5                | LT       | 4.40 | 1.40 | 3.60 | 1.65 |             |

**NOTES:**

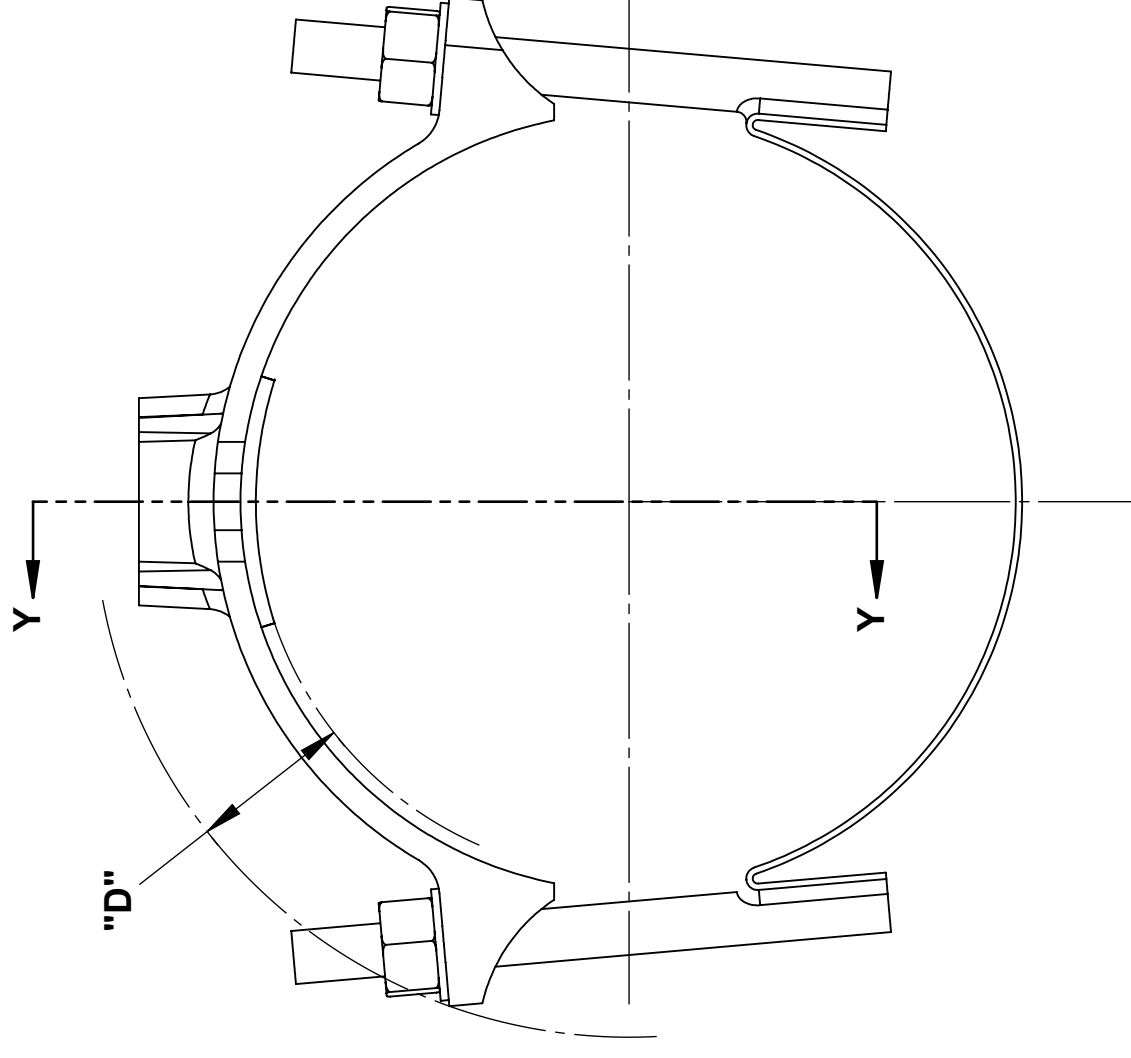
- SEE SMITH-BLAIR CATALOG FOR AVAILABLE PIPE DIAMETER AND TAP SIZE COMBINATIONS AS SOME COMBINATIONS ARE NOT AVAILABLE
- 3.54" SADDLE SHOWN OTHER SIZES SIMILAR
- ABBREVIATIONS:  
ST = SMALL TAP SIZES 1/2" THRU 1-1/2"  
LT = LARGE TAP SIZES 1-1/2" THRU 2-1/2"  
XLT = EXTRA-LARGE TAP SIZES 3" AND 4"

|  |  |       |         |
|--|--|-------|---------|
| TOLERANCES U.N.O.<br>XX= ±.03<br>XXX= ±.015<br>FRACTIONS= ±.015<br>ANGLES= ±1°<br>MACH. FIN= | NOTES:<br>REMOVE BURRS<br>AND SHARP EDGES<br>DO NOT SCALE DWG. | APP'D | DATE    |
| SCALE: N/A   |  | CK'D  | DATE    |
| ALL DIMENSIONS<br>ARE IN INCHES.   |  | DRN   | DATE    |
| TITLE<br><b>SPECIFICATION<br/>SERVICE SADDLE DOUBLE STRAP<br/>MODEL 317</b>                  |  | CHD   | DATE    |
| P/N  |  |       | 6/18/15 |
| <b>SMITH-BLAIR, Inc.</b><br>TEXARKANA, ARKANSAS  |  |       |         |
| DWG. NO. <b>SPEC_317.DRW</b>   |  |       |         |
| REV. 1   |  |       | 8/17/16 |
| SHEET 3  |  |       | REV.    |



SECTION Y-Y

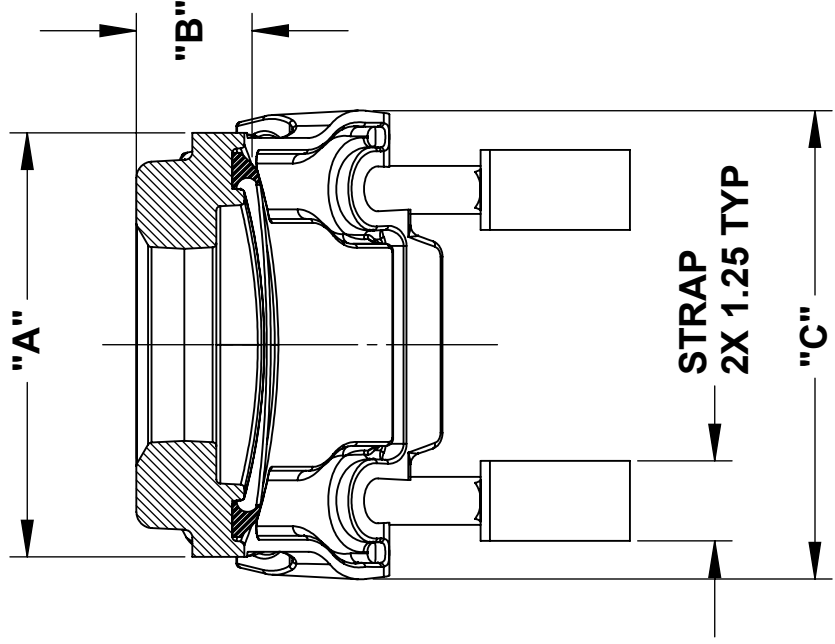
| NOMINAL SIZE | APPROX. WT. (LB) | TAP CODE | A    | B    | C    | D    | SOCKET SIZE |
|--------------|------------------|----------|------|------|------|------|-------------|
| 4            | 6                | ST       | 3.70 | 1.40 | 3.50 | 1.60 | 1-1/16"     |
|              | 6                | LT       | 5.50 | 1.75 | 3.65 | 1.75 |             |
| 5            | 6                | ST       | 3.70 | 1.40 | 3.60 | 1.75 |             |
|              | 9                | LT       | 5.50 | 1.75 | 3.65 | 1.70 |             |
| 6            | 7                | ST       | 3.75 | 1.40 | 3.60 | 1.75 |             |
|              | 7                | LT       | 5.50 | 1.75 | 3.65 | 1.78 |             |
| 8            | 13               | XLT      | 6.05 | 1.93 | 4.20 | 1.83 |             |
|              | 8                | ST       | 3.75 | 1.40 | 3.60 | 1.87 |             |
| 10           | 11               | LT       | 5.50 | 1.75 | 3.65 | 1.90 |             |
|              | 15               | XLT      | 6.05 | 1.85 | 4.10 | 1.90 |             |
| 12           | 10               | ST       | 3.75 | 1.40 | 3.60 | 1.90 |             |
|              | 11               | LT       | 5.50 | 1.75 | 3.60 | 1.90 |             |
| 14           | 14               | XLT      | 7.20 | 2.00 | 4.20 | 1.85 |             |
|              | 14               | ST       | 3.75 | 1.45 | 3.60 | 2.00 |             |
| 15-16        | 15               | LT       | 5.50 | 1.75 | 3.60 | 1.95 |             |
|              | 18               | XLT      | 7.20 | 2.00 | 4.20 | 1.85 |             |
| 14           | 18               | ST       | 4.45 | 1.40 | 2.85 | 1.90 |             |
|              | 18               | LT       | 4.45 | 1.40 | 3.60 | 1.90 |             |
|              | 28               | XLT      | 7.20 | 2.00 | 4.20 | 1.85 |             |
| 15-16        | 19               | ST       | 4.45 | 1.80 | 5.00 | 2.15 |             |
|              | 19               | LT       | 4.45 | 1.80 | 5.00 | 2.15 |             |
|              | 29               | XLT      | 6.90 | 1.95 | 7.35 | 2.30 |             |



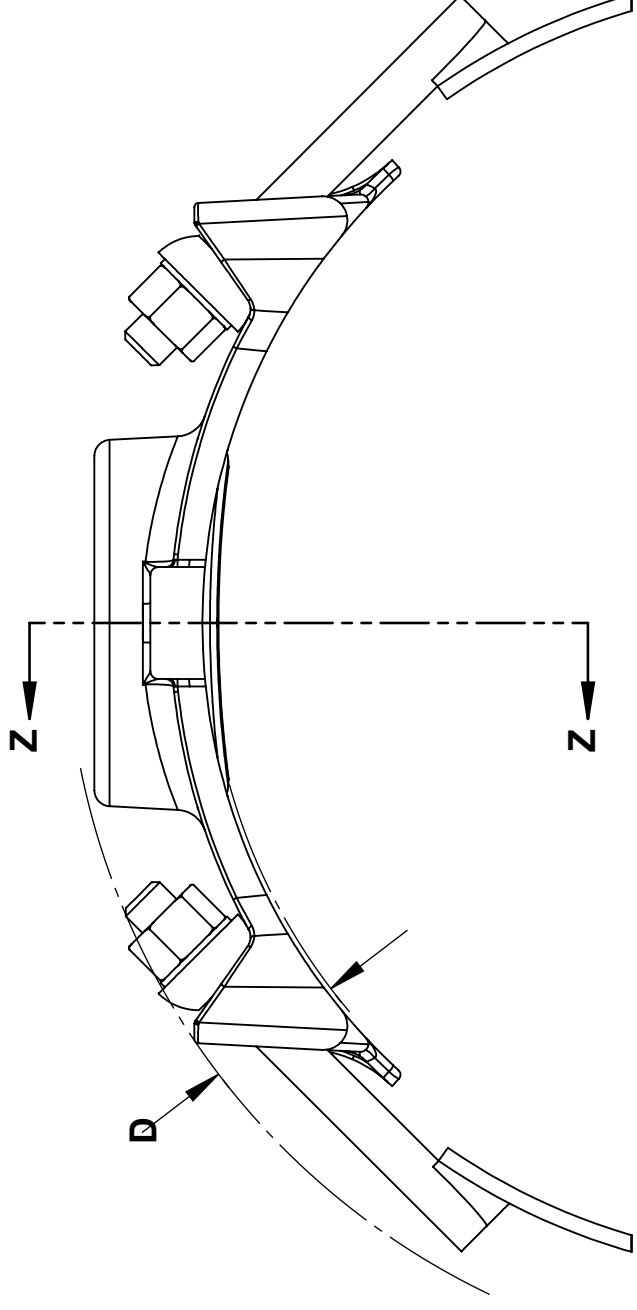
**NOTES:**

- SEE SMITH-BLAIR CATALOG FOR AVAILABLE PIPE DIAMETER AND TAP SIZE COMBINATIONS AS SOME COMBINATIONS ARE NOT AVAILABLE
- 9.05" SADDLE SHOWN OTHER SIZES SIMILAR
- ABBREVIATIONS:  
ST = SMALL TAP SIZES 1/2" THRU 1-1/2"  
LT = LARGE TAP SIZES 1-1/2" THRU 2-1/2"  
XLT = EXTRA-LARGE TAP SIZES 3" AND 4"

|  |  |          |         |
|--|--|----------|---------|
| TOLERANCES U.N.O.<br>XX= ±.03<br>XXX= ±.015<br>FRACTIONS= ±<br>ANGLES= ±1°<br>MACH. FIN= | NOTES:<br>REMOVE BURRS<br>AND SHARP EDGES<br>DO NOT SCALE DWG. | APP'D    | DATE    |
| SCALE: N/A   | DRN  | CHD      | DATE    |
| TITLE  |  |          | DATE    |
| <b>SERVICE SADDLE DOUBLE STRAP<br/>MODEL 317</b>   |  |          | 6/18/15 |
| SMITH-BLAIR, Inc.<br>TEXARKANA, ARKANSAS   |  | P/N      | N/A     |
| SPEC_317.DRW   |  | DWG. NO. | REV.    |
| 2 OF 3 SHEET   |  | 8/17/16  |         |



SECTION Z-Z



| NOMINAL SIZE | APPROX. WT. (LB) | TAP CODE | A    | B    | C    | D    | SOCKET SIZE |
|--------------|------------------|----------|------|------|------|------|-------------|
| 18           | 20               | ST       | 4.45 | 1.85 | 4.95 | 2.15 | 1-1/16"     |
|              | 20               | LT       | 6.90 | 1.85 | 7.25 | 2.15 |             |
|              | 30               | XLT      | 3.90 | 1.85 | 7.25 | 2.15 |             |
| 20           | 20               | ST       | 4.45 | 1.85 | 5.00 | 2.30 | 1-1/16"     |
|              | 20               | LT       | 4.46 | 1.90 | 5.00 | 2.10 |             |
|              | -                | XLT      | -    | -    | -    | -    |             |
| 24           | 20               | ST       | 4.45 | 1.85 | 5.00 | 2.30 | 1-1/16"     |
|              | 20               | LT       | 4.45 | 1.85 | 5.00 | 2.30 |             |
|              | -                | XLT      | -    | -    | -    | -    |             |

- NOTES:**
- SEE SMITH-BLAIR CATALOG FOR AVAILABLE PIPE DIAMETER AND TAP SIZE COMBINATIONS AS SOME COMBINATIONS ARE NOT AVAILABLE
  - 19.50" XLT SADDLE SHOWN OTHER SIZES SIMILAR
  - ABREVIATIONS:  
 ST = SMALL TAP SIZES 1/2" THRU 1-1/2"  
 LT = LARGE TAP SIZES 1-1/2" THRU 2-1/2"  
 XLT = EXTRA-LARGE TAP SIZES 3" AND 4"

|   |  |       |              |
|---|--|-------|--------------|
| TOLERANCES U.N.O.<br>XX= ±.03<br>XXX= ±.015<br>FRACTIONS= 1/16<br>ANGLES= ±1°<br>MACH. FIN. | NOTES:<br>REMOVE BURRS<br>AND SHARP EDGES<br>DO NOT SCALE DWG. | APP'D | DATE         |
| SCALE: N/A  | DRN  | CHD   | DATE         |
| TITLE<br><b>SERVICE SADDLE DOUBLE STRAP<br/>MODEL 317</b>                                   |  | DATE  | 6/18/15      |
| SMITH-BLAIR, Inc.<br>TEXARKANA, ARKANSAS  |  | P/N   | N/A          |
| DWG. NO. <b>SPEC_317.DRW</b>  |  | REV.  | 3 OF 3 SHEET |
|   |  |       | 8/17/16      |