

**SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS**

SPECIFICATIONS FOR SERVICE SADDLES

REVISED FEBRUARY 2000

1. **SCOPE**

This specification covers band and strap-mounted service saddles with iron pipe (NPT) tapped outlet for installation on water mains of the nominal O.D. Pipe size ranges noted. This specification does not cover saddles to be used on concrete steel cylinder pipe.

2. **GENERAL REQUIREMENTS**

- A. Saddle casting or body shall be of the double strap/bale or double and single band with minimum four studs/bolts on the single band type and shall be cast bronze of the size and application specified. Material shall be in accordance with ASTM B62 and B584 (85-5-5-5) requirements and fabricated to ANCI/AWWA C800, latest revision. Saddles for PVC pipe shall be pre-formed to AWWA C900 and C905 outside diameter dimensions and so stamped or otherwise identified by a permanent inked marking that will not smear or wash off on the body of the saddle. C900 formed saddles can be used on ductile iron pipe from sizes four through sixteen inches.
- B. Saddle casting or body of asbestos clay, ductile iron, cast iron and C905 pipe in sizes above 16" sixteen-inch may be ductile iron and shall be of the double or triple band stainless steel type of the size and application specified. Material shall be in accordance with ASTM A-536 requirements and fabricated to ANCI/AWWA C800, latest revision. The saddle casting or body shall be coated with a fusion-bonded epoxy or high density polyethylene. The body shall be NSF 61 approved. The coating shall be NSF 61 or U.L approved to the NSF 61 standard.
- C. Saddles for PVC water pipe shall conform to the design requirements of the Uni-Bell Handbook of PVC Pipe and AWWA Manual No. M23. The saddle shall provide full support around the circumference of the pipe. Provide a bearing area of sufficient width along the axis of the pipe, 2-inch minimum, ensuring that the pipe will not be distorted when the saddle is tightened.
- D. Straps for asbestos cement (AC) pipe shall be bronze bale or stainless steel band types. Polyvinyl chloride pipe (PVC) shall be furnished only with stainless steel band type straps. Bronze straps, bolts and nuts shall be silicon bronze conforming to ASTM B98, or waterworks bronze conforming to ASTM B584. Stainless steel bands, bolts and nuts shall conform to ASTM A240, type 304 (18-8). Straps of either the bale or band type shall be fabricated to the outside diameter pipe dimensions of the appropriate AWWA Specifications.
- E. The minimum width of double stainless steel bands for saddles to be installed on 12 inch or smaller water main pipe diameters shall measure one and one half inches each. The minimum width for single stainless steel bands shall measure three inches (3").

- F. The minimum width for double stainless steel bands on 16 inch and larger pipe diameters shall measure two inches each. The minimum width for single stainless bands shall measure four inches (4").
- G. The minimum gauge of the stainless steel bands shall be eighteen gauge. In order to prevent deformation, the minimum gauge of the stainless steel side bars shall be ten gauge. All welds shall be fully passivated for enhanced corrosion resistance. The bolts/studs shall be 5/8" UNC roll thread with heavy gauge flat hex nuts. All stainless nuts shall be coated to prevent galling.
- H. Gaskets shall be virgin rubber, NSF 61 approved, meet ASTM D-2000 and be NBR or SBR compounded to produce permanence and resistance to set after installation and deterioration during storage.
- I. Quality control procedures shall be employed to insure that the bronze saddle casting, straps (bronze bale or stainless steel band), and gasket are manufactured to be free of any visible defects. Each saddle shall have a working pressure rating not less than the following:

J.	<u>Pipe Size (inches)</u>	<u>Minimum Working Pressure Rating (psi)</u>
	12 and smaller	175
	16 and larger	150

*Ranges may be broadened, but not narrowed.

The range shall be ink stamped or permanently identified on the stainless steel band.

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3. SERVICE SADDLE RANGES (minimum):

<u>Nominal Dia.</u>	<u>O.D. Range*</u>
4" x ¾, 1, 1½, 2" NPT	A. 4.80" - 5.40"
6" x ¾, 1, 1½, 2" NPT	A. 6.80" - 7.35" B. 6.90-7.45
8" x ¾, 1, 1½, 2" NPT	A. 9.00" - 9.56" B. 9.05-9.61
10" x ¾, 1, 1½, 2" NPT	A. 11.05" - 12.00"
12" x ¾, 1, 1½, 2" NPT	A. 13.10" - 14.16" B. 13.20-14.58
16" x ¾, 1, 1½, 2" NPT	A. 17.35" - 18.35" B. 17.40-19.19
20" x 1, 1½, 2" NPT	A. 21.33" - 22.33" B. 23.09" - 24.09"
24" x 1½, 2" NPT	A. 25.54" - 26.54" B. 27.77" - 28.77"

4. The San Antonio Water System may, at not cost to the manufacturer, subject random service saddles to testing by an independent laboratory for compliance with these standards. Any visible defect or failure to meet the quality standards herein will be grounds for rejecting the entire order.

5. The attached qualified products list identifies specific manufactured items by catalog number that are approved.

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Approved Manufacturers and Models:

<u>Manufacturer</u>	<u>A-range Model (C900, C905,DI)</u>	<u>B-Range Model (AC)</u>
AY McDonald	3846	3826/3846
Romac Industries, Inc.	202BS	202BS
Smith-Blair, Inc.	323 W/Wide Strap 304SS	323/ 323/W/Wide Strap 304SS
Ford Meter Box Co., Inc.	202BS	202B/202BS
James Jones Co.	J969	J979/J969
Mueller Co.	BR2S	BR2B/BR2S

C905, Ductile/Cast Iron, and AC Pipe Sizes Above 16"

<u>Manufacturer</u>	<u>Model</u>
Smith Blair Epoxy Coated Stainless Bands A-range	366 W/Special Strap <u>304SS</u>
JCM Ductile Iron Double Strap Saddle A-range	406

NOTE:PVC Model shall have "C900" stamped or marked with permanent ink on the saddle.

Previous Specification

JUNE 1999

NOVEMBER 1998