



CHILLWATER PIPING INSULATION and MOUNTING SPECIFICATION

Insulation Specifications

- A. Insulation material shall be flexible, closed-cell elastomeric insulation in tubular or sheet form.
- B. Materials shall have a flame spread rating of 25 or less and a smoke density rating of 50 or less when tested in accordance with ASTM E84, latest revision. In addition, the product when tested shall not melt or drip flaming particles, and the flame shall not be progressive.
- C. Materials shall have a maximum thermal conductivity of 0.27 Btu-in/h-ft²-°F at a 75 °F mean temperature when tested in accordance with ASTM C177 or ASTM C518, latest revisions.
- D. Materials shall have a maximum water vapor transmission of 0.10 perm-inches when tested in accordance with ASTM E96 (Procedure A), latest revision.
- E. A minimum wall thickness of 3/4" (19mm) shall be used throughout the system.
- F. Recommended brands of tubing insulation are: Rubatex (Rubatex Corporation) and Armaflex (Armstrong World Industries)

Insulation Adhesive Specifications

- A. Adhesive shall be the insulation manufacturers recommended contact adhesive.
- B. The recommended adhesive shall have, at a minimum, the same properties as the insulation listed above and shall not detract from any of the system ratings listed above.

Installation on Piping

- A. Install pipe insulation, whenever possible, by sliding unslit sections over the covered ends of piping or tubing. Alternately, insulation can be slit and applied to the piping or tubing. All seams and butt joints shall be adhered and sealed using the approved insulation adhesive. All seams and joints should be wrapped with a cloth type duct tape to further assure that the joint does not open up. The tape should not be applied in such a way as to compress the insulation.
- B. Insulation shall be pushed on the pipe, never pulled. Stretching of insulation may result in open seams or joints.
- C. Proper size insulation must be used on all tube and pipe. Insulation must be tight on the tube or pipe to prevent air pockets where condensation can form.
- D. All insulation edges shall be clean cut. Rough or jagged edges of the insulation shall not be permitted. Proper tools such as sharp knives must be used.

Installation on Fittings

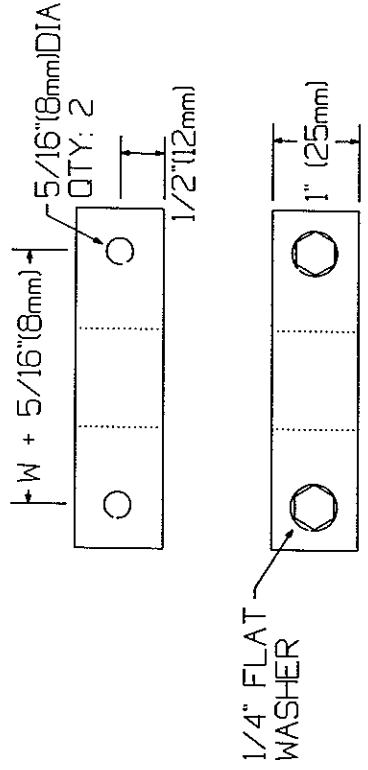
- A. All fittings will be insulated with the same thickness insulation as the adjacent piping. Insulation of fittings using insulated tape (1/8") is not recommended.
- B. Insulation on pipe fittings or valves will be miter cut as to closely fit the fitting or valve. It is recommended on metal valves to remove the handles so that the entire valve will be enclosed in insulation.

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D - PIPE OUTSIDE DIAMETER
 T - INSULATION WALL THICKNESS
 W - WIDTH TO INSIDE OF CLAMP MOUNTING HOLES
 WD - CLAMP OVERALL WIDTH
 H - HEIGHT OF WOOD CLAMP

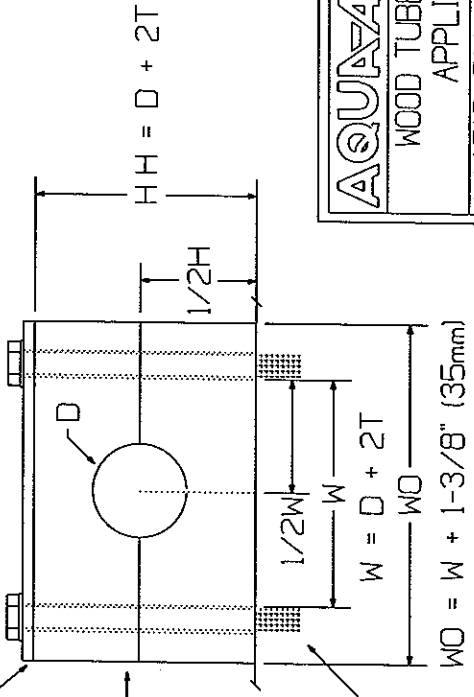
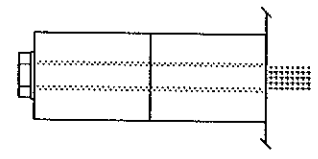
DIMENSIONS ASSUME THE USE OF 1/4" (6mm) DIAMETER BOLTS



1/4-20 BOLT
 1" WIDE x 1/8" THICK
 (25mm x 3mm)
 TOP PLATE
 ALUMINUM

WOOD PIPE CLAMP
 WHITE CEDAR

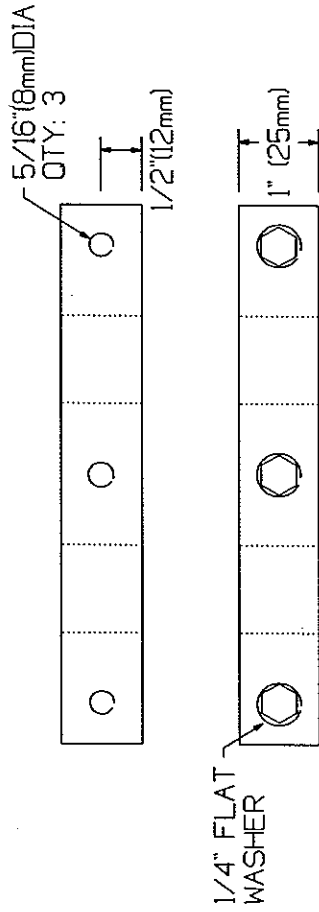
TAP INTO BASE MATERIAL
 AT LEAST 1/2" (12mm)



AQUANAIR MARINE AIR CONDITIONING SYSTEMS	
WOOD TUBE CLAMP, SINGLE PIPE APPLICATIONS DRAWING	
DESIGN NUMBER 1016-01A	DATE 08-95
APPROVED BY DN	REVISION DATE
SCALE	REV. A

- D1 - PIPE #1 OUTSIDE DIAMETER
- D2 - PIPE #2 OUTSIDE DIAMETER
- T - INSULATION WALL THICKNESS
- W1 - WIDTH TO INSIDE OF MOUNTING HOLES-PIPE #1
- W2 - WIDTH TO INSIDE OF MOUNTING HOLES-PIPE #2
- W0 - CLAMP OVERALL WIDTH
- H - HEIGHT OF WOOD CLAMP

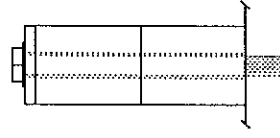
DIMENSIONS ASSUME THE USE OF 1/4" (6mm) DIAMETER BOLTS



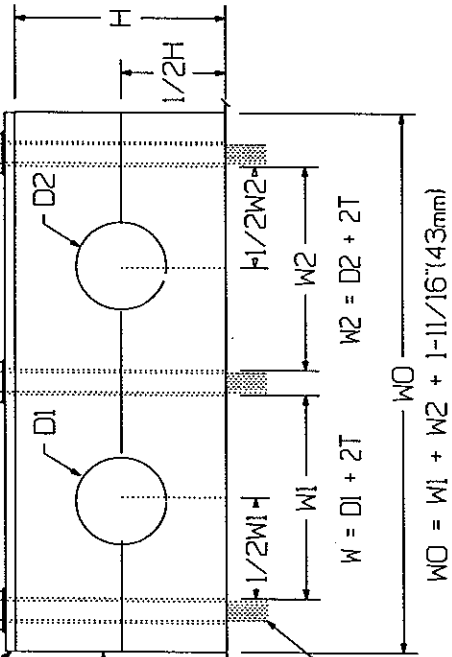
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TAP INTO BASE MATERIAL
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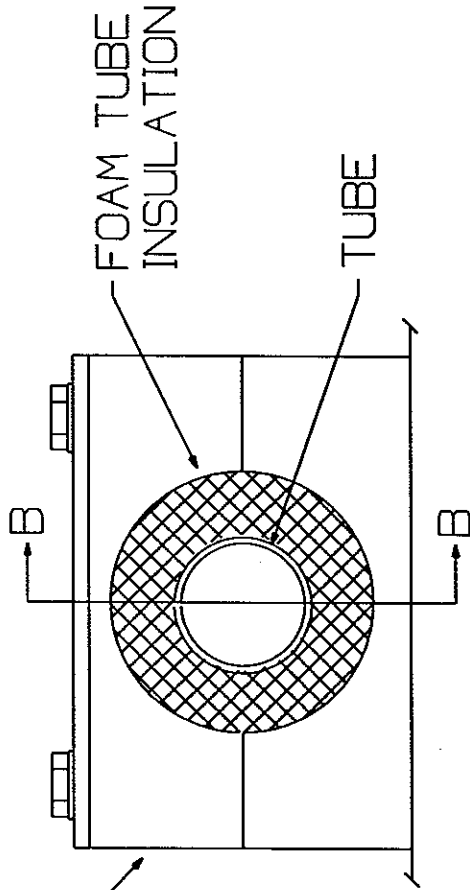


$$H = D1 + 2T \text{ or } D2 + 2T \text{ WHICH EVER IS GREATER}$$



AQUANAIR MARINE AIR CONDITIONING SYSTEMS	
WOOD TUBE CLAMP, DUAL PIPE APPLICATIONS DRAWING	
REVISED BY: DN	DATE: 8-95
SCALE: NONE	SECTION: A

SECTION A-A



WOOD TUBE CLAMP
SEE DRAWINGS
1016-01A.02

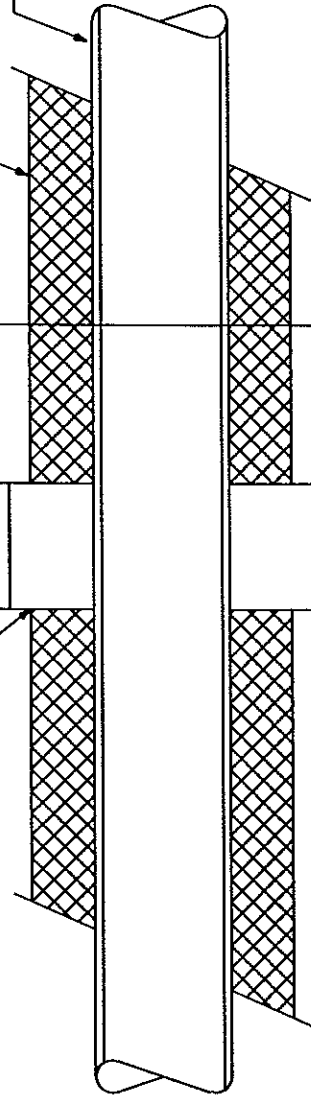
FOAM TUBE
INSULATION

TUBE

INSULATION BUTTS UP AGAINST
THE SIDES OF THE TUBE CLAMP
GLUE END OF INSULATION
TO SIDE OF TUBE CLAMP

FOAM TUBE
INSULATION

TUBE



NOTE:

IF PLASTIC CLAMPS ARE USED THEY MUST
BE TOTALLY INSULATED WITH THE SAME
WALL THICKNESS FOAM INSULATION AS IS
USED ON THE TUBING.

SECTION B-B

AQUA-AIR MARINE AIR CONDITIONING SYSTEMS	
INSTALLATION OF TUBING AND INSULATION WITH TUBE CLAMPS	
1016-01B	DN 08-95
NONE	01
A	