Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4" and 200 psi for 6" saddles.

Read all applicable instructions and procedures thoroughly before starting. Suitability of the intended service must be determined prior to installation. Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures for handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Precautions and Warnings

Caution: The system must be designed and installed so as not to pull the components in any direction. Pipe system must be cut and installed in such a manner as to avoid all stress loads associated with bending, pulling, or shifting. All piping systems must be supported.

Not for use with compressed air or gas

Warning: Do not use compressed air or gas to test any PVC or CPVC thermoplastic piping product or system, and do not use devices propelled by compressed air or gas to clean the systems. These practices may result in explosive fragmentation of systems piping and components causing bodily injury or death.

All air must be bled from the system during the initial fluid fill. Pressure testing of the system must not be made until all solvent cement joints have properly cured. Initial pressure testing must be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems prior to testing at higher pressures.

Assembly

The Hot-Tap Saddle includes the following components:

1. Cap
2. Upper O-ring
3. Hot-Tap Cutter
4. Bolt/Washer
5. Saddle Body
6. Lower O-ring
7. Saddle Bottom
8. Nut/Washer

Step 7 - Tap Line - After joint has cured and necessary downstream branch connections have been made, the live line may be tapped.

Remove cap from saddle body. Using a ratchet and 6" extension, turn thread cutter in a clockwise direction (Note: use 3/8" drive for 3/4" branch socket units, use a 1/2" drive for 1-1/2" branch socket units). Resistance will occur when the blade contacts the pipe. Continue until resistance is reduced, indicating that the cutter has cut through the pipe.

Warning: do not "over-drive" the cutter beyond the specified dimensions

Reverse ratchet direction (counter-clockwise) and thread cutter to open flow to branch. Continue until the top of the cutter is flush with face of saddle body top. The coupon cut from the pipe will be permanently retained inside the cutter. The cutter does not need to be removed from the unit (Note: depending on the system pressure, a slight weeping may be observed at cutter threads until cap is installed in Step 8).

Warning: Do not remove cutter. Removal of cutter under pressure may result in serious or fatal bodily injury.

Step 8 - Cap Installation - Check that the O-ring is properly in place and install cap over top of saddle body. Tighten snug (Note: Do not use any thread sealant). This completes the Hot-Tap Saddle installation.

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STEP 1
Position Unit - Clean pipe free of dirt or debris where installation will be made. Remove saddle blots, nuts, washers and saddle bottom. Check that the lower O-ring is fully seated in the saddle body and place over pipe in the desired position. Install saddle bottom with bolts, washer and nuts hand tight. **Important:** washers must be used under each bolt head and under each nut to avoid saddle damage.

STEP 2
Torque Saddle - Check desired positioning and alignment. Using and alternating pattern, tighten all bolts to specified torque.

<table>
<thead>
<tr>
<th>Saddle Size</th>
<th>Recommended Bolt Torque - ft. lbs.</th>
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<tbody>
<tr>
<td>2</td>
<td>8</td>
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<td>3</td>
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<td>4</td>
<td>8</td>
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STEP 3
Prepare Branch Connection - Prepare branch connecting pipe for installation into saddle branch socket (Note: socket OD is pipe spigot dimension and will accept an elbow, tee or other fitting as an alternative branch take off configuration). Pipe end must be cut square at 90° using a wheel type cutter or a saw and miter box. Tighten bolt assembly to specified torques.

STEP 4
Primer Branch Connection - Primer is necessary to penetrate & soften both pipe and saddle connector surfaces in order for the solvent cement to properly bond. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of primer with a circular, scrubbing motion to the inside socket of the Hot-Tap Saddle, until the surface is softened and semi-fluid. This will occur in 5 to 15 seconds depending on size and temperature. Apply primer to the outside of new pipe end in the same manner extending application area to slightly beyond the insertion depth of the HotTap Saddle socket.

APPLY A SECOND COAT TO BOTH PIPE AND SOCKET.
TAKE EXTRA CARE THAT NO SOLVENTS ARE ALLOWED TO COME IN CONTACT WITH THE HOT-TAP CUTTER OR THREAD.

STEP 5
Solvent Cement Branch Connection - Solvent Cement must be applied IMMEDIATELY to the primed surfaces before the primer dries, in an alternating 3-coat application. Using a brush or applicator no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surfaces. Next, apply a light to medium coat to the primed socket surface, then apply an additional liberal coat again to the pipe.

STEP 6
Set & Cure Branch Connection Joint - Immediately following the application of solvent cement, and before it begins to set, insert the pipe end into the Hot-tap Saddle with a 1/4 twisting motion to evenly distribute the solvent cement within the joint. A full bead of solvent cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure that the pipe does not back off of socket. Use a cloth to remove any excess cement from the exterior juncture.

Allow joint to cure according to solvent cement manufacturer’s instructions.

THE MOST FREQUENT CAUSE OF JOINT FAILURE IS INADEQUATE PRIMER PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.

Check the penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should easily be removed.

REPEAT PRIMER APPLICATION IF NECESSARY.