

METROPOLITAN UTILITIES DISTRICT	Construction Standard	No: 6.0.6
	1", 1-1/2", or 2" Service Taps on 6", 8" and 12" HDPE PE 3408 Water Mains	Page: 1 of 3 <u>Supersedes:</u> NEW Effective: 10-19-11
Prepared by: Mary Maher		
Approved by: Jeff Loll		

GENERAL

All taps on 6", 8" and 12" HDPE water mains shall use sidewall fusion or electrofusion tapping saddles and shall have the same nominal size of tap as the proposed service line material for 1", 1-1/2" and 2" taps. *Note: For 1" water service lines, install water corp. saddles at a 45° angle (i.e. 10 or 2 o'clock position). For 1-1/2" and 2" water service lines, install the water corp. saddles at top-dead-center or at 90° from top-dead-center.* No additional fittings are allowed at the corporation stop. Mechanical tapping saddles (with or without Belleville spring washers) and direct taps are NOT permitted. Install corporations and make taps with a Mueller D-5 Tapping Machine with the C900 PVC/HDPE Cutter. See Construction Standard [5.1.3](#). for Operation of Mueller D-5 Drilling Machine.

Caution: *Sidewall fusion and electrofusion tapping saddles used for tapping DIPS PE3408 HDPE water mains shall not be used for tapping IPS HDPE water mains (HDPE pipe with iron pipe size O.D.). Sidewall fusion and electrofusion tapping saddles for IPS HDPE pipe will be ordered from local suppliers as needed. If a sidewall fusion or electrofusion tapping saddle is required for tapping IPS HDPE pipe, contact Engineering.*

See Construction Standard [11.7.0](#) for tapping saddle electrofusion procedure. See Construction Standard [11.7.1](#) for tapping saddle sidewall fusion procedure.

See Construction Standard [6.0.1](#) for approved corporations using Ball Corporation Valves with AWWA/CC Taper Thread Inlet by Flare Copper Outlet Connections.

TAPPING SADDLES FOR PE3408 HDPE

**POLY-CAM SERIES 415
SIDEWALL FUSION SADDLE**



**CENTRAL PLASTICS
ELECTROFUSION SADDLE**



**Tap Size
(DIPS) x CC
Thread Outlet**

**POLY-CAM SERIES 415
Saddle Stock Number**

**CENTRAL PLASTICS
ELECTROFUSION
Saddle Stock Number**

6" x 1"
6" x 1-1/2"
6" x 2"
8" x 1"
8" x 1-1/2"

21-596-06
**
**
21-596-08
**

21-560-70
21-560-74
21-560-80
21-580-70
21-580-74

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Tap Size (DIPS) x CC Thread Outlet	POLY-CAM SERIES 415	CENTRAL PLASTICS
	<u>Saddle Stock Number</u>	<u>ELECTROFUSION Saddle Stock Number</u>
8" x 2"	**	21-580-80
12" x 1"	**	21-592-70
12" x 1-1/2"	**	21-592-74
12" x 2"	**	21-592-80
16" x 1"*	**	**
16" x 1-1/2"*	**	**
16" x 2"*	**	**

*** Contact Engineering*

SAFETY PRECAUTIONS

1. Have a second worker close by to respond to an emergency situation.
2. Wear protective gloves and goggles. A face shield is recommended.
3. Ensure that there is a ladder in the trench to provide for a quick exit.
4. Be familiar with procedures to follow in the event of a main failure during the tapping process.
5. Do not tap an area of main that is discolored or damaged. The discoloring may be an indication of stress in the main.
6. Be aware that HDPE pipe contracts and is less resistant to impact at lower temperatures (becomes brittle) and expands and becomes more flexible at high temperatures. The recommended temperature limits for tapping HDPE water lines is 32°F (0°C) to 90°F (32°C). Check the temperature of the main at the tap location with a pyrometer. If the main temperature is < 32°F or > 90°F, DO NOT tap the HDPE main. Contact the Construction Foreman to determine if procedures for warming or cooling the main may have to be initiated.

TAP LOCATIONS

1. Tap no closer than 24" from ends of the pipe.
2. Adjacent taps must be a minimum of 18" apart from each other lengthwise down the pipeline.
3. Do not tap a curved pipe if the radius of the bend is less than three hundred (300) times the pipe outside diameter.

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INSTALLING TAPPING SADDLE AND CORPORATION

1. The District's Construction Foreman shall ensure that persons installing tapping saddles using heat fusion have received training according to the manufacturer's recommended fusion procedures for the size of installation in accordance with ASTM F2620 and Plastic Pipe Institute (PPI) TR-33 and TR-41. Proof of certification shall be available for inspection, if required. The Construction department shall maintain records of trained personnel verifying that training was received within twelve months before commencing construction.
2. Review Safety Precautions.
3. Thoroughly clean the main surface at the tap location.
4. Install an approved sidewall fusion or electrofusion saddle on the HDPE pipe in accordance with Construction Standard [11.7.0](#), Water Tapping Saddle Electrofusion Procedure or Construction Standard [11.7.1](#), Water Tapping Saddle Sidewall Fusion Procedure.
5. Apply Teflon® tape to the threads of the corporation and screw the corporation into the saddle and tighten. *Note: When tightening the corporation, make sure a wrench is used to hold the saddle's brass insert in place and prevent it from turning. A slight turn of the brass insert is not detrimental to the saddle, but significant rotation could result in a leak.* Open the corporation.
6. Prior to making the tap, leak test all heat fusion tapping saddles and corporations at 100 psi for ten (10) minutes using a manual air pump. If leaking, apply soapy water solution to all joints to locate the leak and eliminate the leak as necessary.
7. Lubricate the shell-cutter that is designated for use on C900 PVC/HDPE water pipe and, using the appropriate adapter and gasket, attach the Mueller D-5 Drilling Machine or equivalent to the corporation. See C.S. [5.1.3](#).
8. **ALL TAPS ON HDPE WILL BE CONDUCTED MANUALLY. POWER HEADS SHALL NOT BE USED.** Lower the boring bar to the main and rotate the cutter while exerting finger-pull on the feed yolk. Rotate the ratchet handle one complete turn for every 1/8 turn of the feed yolk. Once the main is penetrated, withdraw the cutter, close the corporation, and then remove the drilling machine. Remove coupon from the cutter with a screwdriver or similar tool.
9. Water service is now ready to be connected to the corporation.

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