

Styles 221A and 220 Flue Gas Desulfurization (FGD) Nozzle Couplings

WARNING

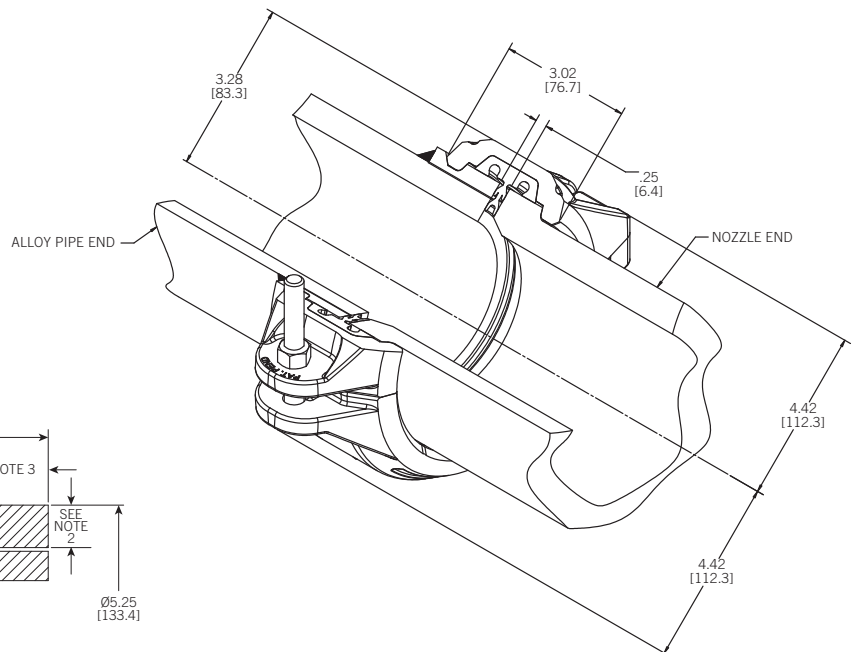


- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
 - Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
 - Wear required personal protective equipment during the welding process, and follow all jobsite regulations regarding welding safety.
 - Wear safety glasses, hardhat, and foot protection during the coupling installation process.
- Failure to follow these instructions could result in death, serious personal injury, or property damage.

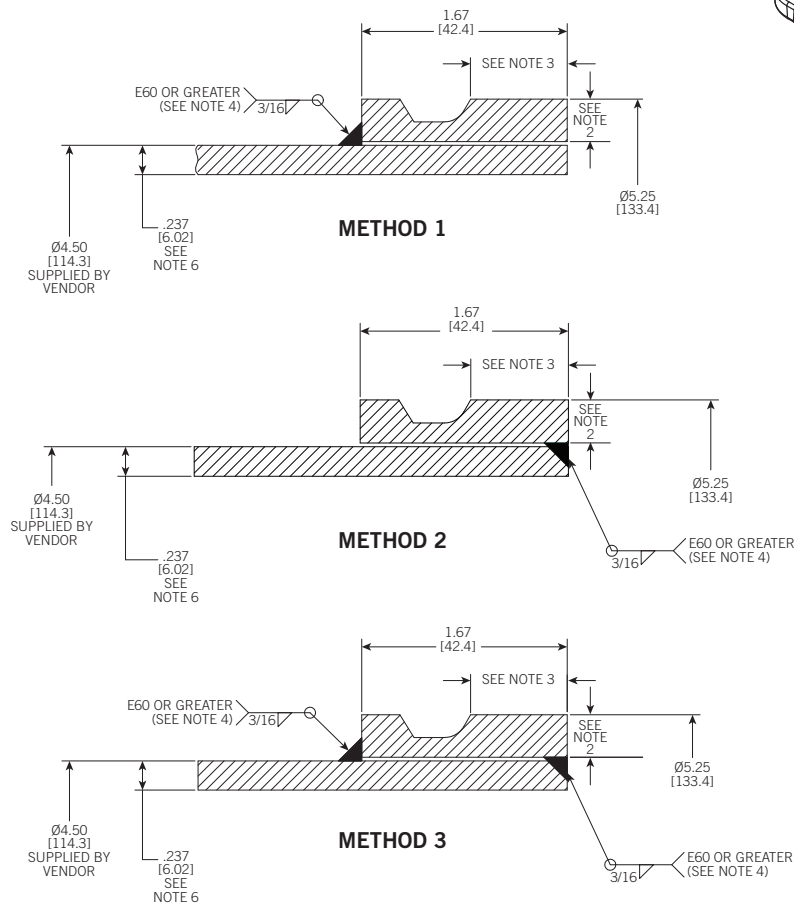
INSPECTION OF PIPE ENDS

The outside surface of the pipe must be smooth and free from indentations, projections (including weld seams), and roll marks to ensure a leak-tight seal. All oil, grease, loose paint, dirt, and cutting particles must be removed. In addition, pipe dimensions must be verified to ensure they comply with the specifications listed in this instruction sheet. If any dimensions are not within these specifications, the pipe must not be used.

STYLE 221A COUPLING AND ALLOY PIPE ARRANGEMENT



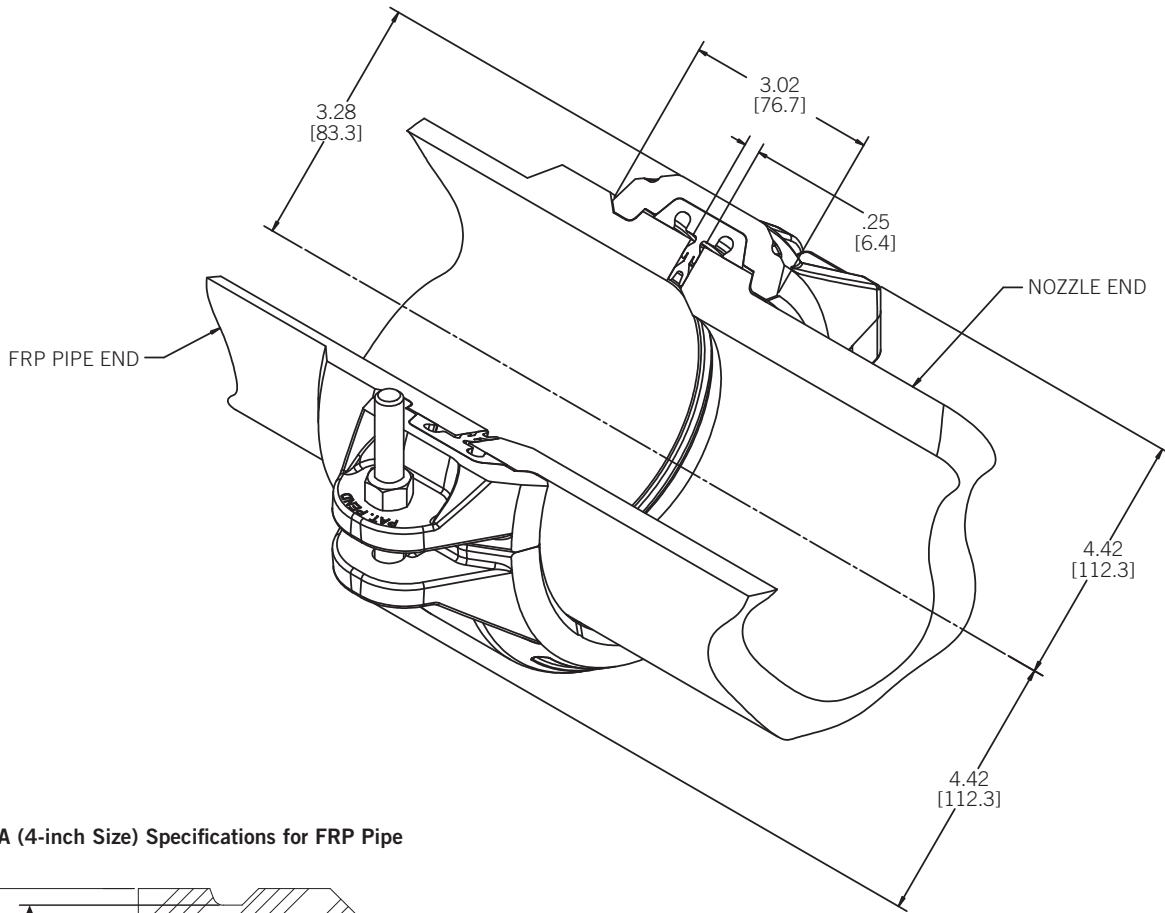
Style 221A (4-inch Size) Type "D" Ring Attachment



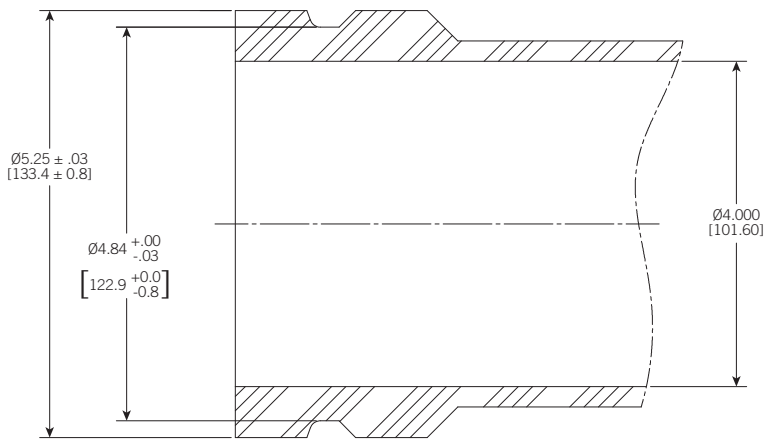
NOTES:

1. Victaulic Type "D" Ring to be supplied unpainted with a rust-proof coating applied (Rings must be supplied by Victaulic).
2. Surface to remain smooth in area indicated. No weld metal projection allowed. Grind smooth, if necessary.
3. This area must be free from indentations, projections, and roll marks from the end of the ring to the groove to ensure a leak-tight seal. All oil, grease, and dirt must be removed.
4. Weld procedures by others.
5. Dimensions shown are in inches with millimeters in brackets.
6. Schedule 40 pipe shown. Schedule 10 pipe is an acceptable alternative.

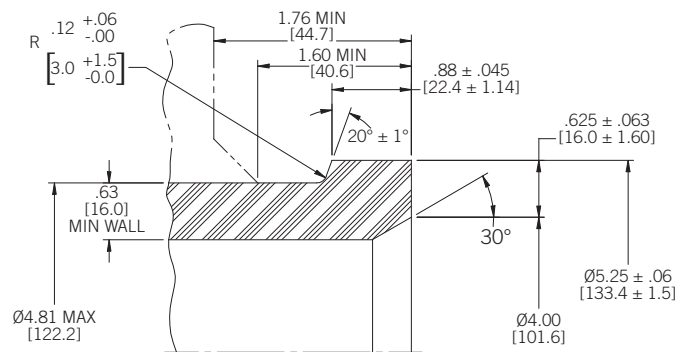
STYLE 221A COUPLING AND FIBERGLASS REINFORCED PIPE (FRP) PIPE ARRANGEMENT



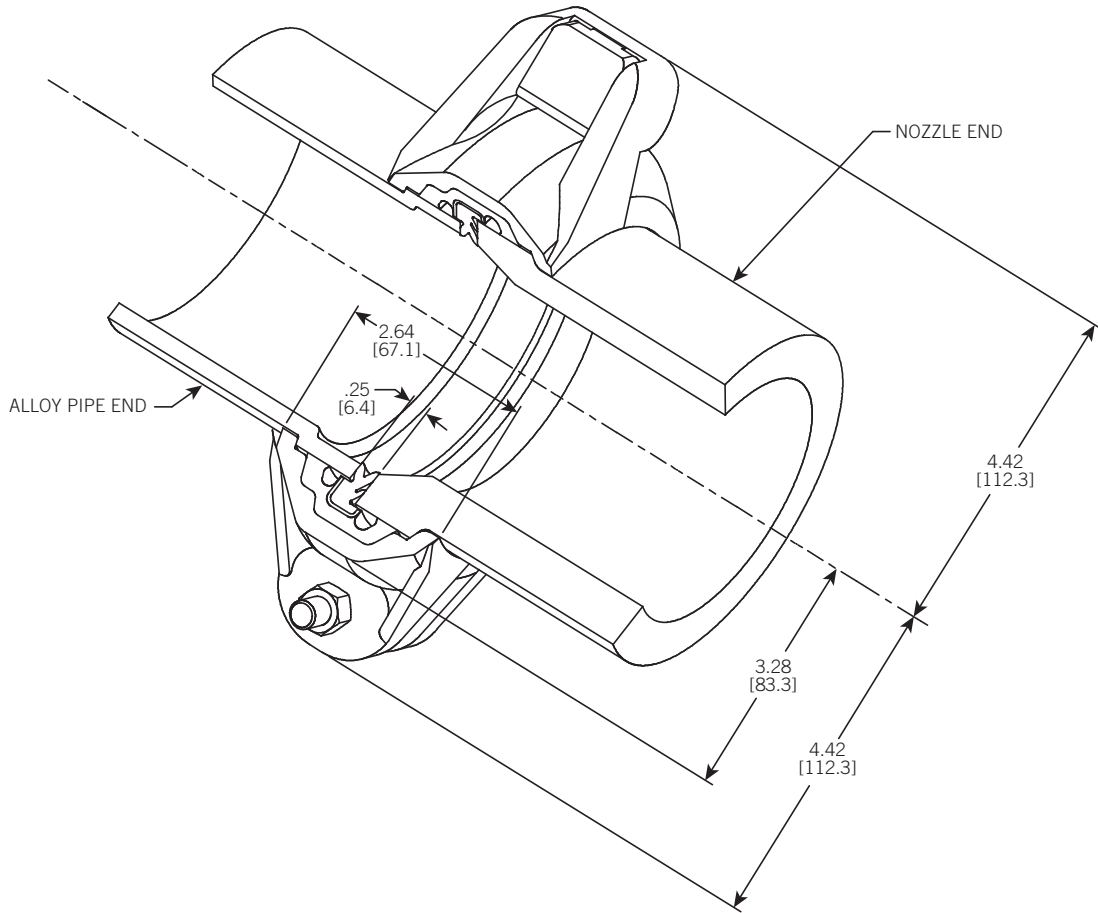
Style 221A (4-inch Size) Specifications for FRP Pipe



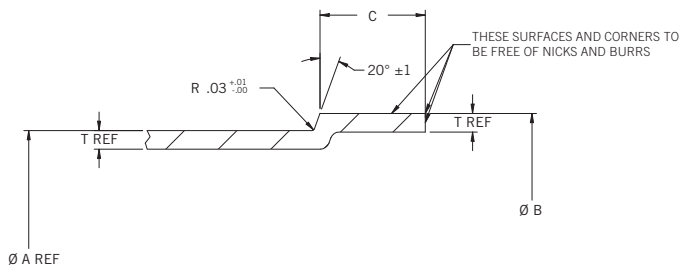
Style 221A (4-inch Size) Specifications for Nitride-Bonded Silicon Carbide or Reaction-Bonded Silicon Carbide or Stellite 6 Nozzles



STYLE 220 COUPLING AND ALLOY PIPE ARRANGEMENT

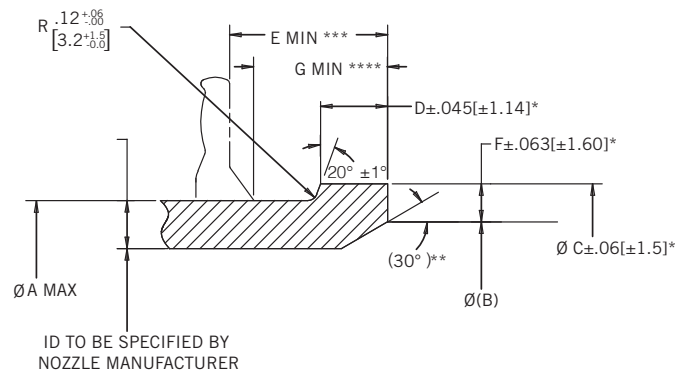


Style 220 Specifications for Alloy Pipe



Size	Dimensions - inches/mm			
Nominal Size inches	"A" Pipe Inside Diameter	"B"	"C"	"D"
2	2.000 50.8	3.250 82.6	0.750 19.1	2.840 72.1
2½	2.500 63.5	3.750 95.3	0.780 19.8	3.340 84.8
3	3.000 76.2	4.250 108.0	0.810 20.6	3.840 97.5
4	4.000 101.6	5.250 133.4	0.880 22.4	4.840 122.9
6	6.000 152.4	7.880 200.2	0.940 23.9	7.060 179.3

Style 220 Specifications for Nitride-Bonded Silicon Carbide or Reaction-Bonded Silicon Carbide or Stellite 6 Nozzles



Size	Dimensions - inches/mm						
Nominal Size inches	"A" Maximum Pipe Outside Diameter	"B"	"C"	"D"	"E"	"F"	"G"
2	2.810 71.4	2.000 50.8	3.250 82.6	0.750 19.1	1.630 41.4	0.625 15.9	1.500 38.1
2½	3.310 84.1	2.500 63.5	3.750 95.3	0.780 19.8	1.670 42.4	0.625 15.9	1.520 38.6
3	3.810 96.8	3.000 76.2	4.250 108.0	0.810 20.6	1.700 43.2	0.625 15.9	1.540 39.1
4	4.810 122.2	4.000 101.6	5.250 133.4	0.880 22.4	1.760 44.7	0.625 15.9	1.600 40.6
6	7.060 179.3	6.000 152.4	7.880 200.2	0.940 23.9	2.000 50.8	0.940 23.9	1.840 46.7

Styles 221A and 220 Flue Gas Desulfurization (FGD) Nozzle Couplings

INSTALLATION

Style 220 Flue Gas Desulfurization (FGD) Nozzle Couplings consist of two coupling halves, a gasket, a hex head bolt, and a nut. One coupling half contains a hex recess for the bolt head.

Style 221A Flue Gas Desulfurization (FGD) Nozzle Couplings consist of two coupling halves with a tab/slot hinge design, a gasket, a hex head shoulder bolt, a nut, and a flat washer. One coupling half contains a hex recess for the bolt head.

1. Ensure the pipe and nozzle ends are in conformance with the specifications listed on pages 1 – 3.

⚠ CAUTION

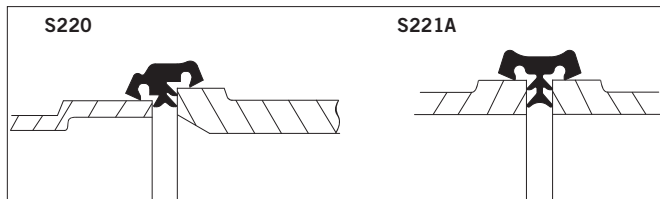
- Always use a compatible lubricant to prevent the gasket from pinching or tearing during installation.
- Make sure the gasket does not become rolled or pinched while installing the housings.

Failure to follow these instructions could cause damage to the gasket, resulting in joint leakage and property damage.

2. Apply a thin coat of Victaulic Lubricant to the gasket sealing lips and exterior.

2a. Apply nickel based anti-seize lubricant to bolt threads.

3. Install gasket.



3a. **FOR STYLE 220 COUPLINGS:** Push small side of gasket onto shouldered pipe end so that pipe end is in contact with center leg of gasket.

3b. **FOR STYLE 221A COUPLINGS:** Push gasket onto shouldered pipe end so that pipe end is in contact with center leg of gasket.

4. Aim the nozzle outlet in the approximate desired position. Push the shouldered end of the nozzle into the gasket so that the gasket is centered between the shoulder on the pipe end and nozzle end.

5. Adjust nozzle aim to the final desired position.

5a. **FOR STYLE 220 COUPLINGS:** Fit the coupling housings together at the hinge. Position the coupling over the gasket with the nozzle markings toward the nozzle. Squeeze the coupling bolt pads together, making sure the coupling engages the back sides of the pipe shoulder and nozzle shoulder.

5b. **FOR STYLE 221A COUPLINGS:** Fit the coupling housings together at the hinge. Position the coupling over the gasket. Squeeze coupling bolt pads together, making sure the coupling engages the back sides of the pipe shoulder and nozzle shoulder.

6. While squeezing the bolt pads together, install the bolt and nut.

6a. **FOR STYLE 220 COUPLINGS:** Make sure hex bolt head of hex nut fits into the hex recess provided on the coupling housing. Make sure nickel based anti-seize lubricant was applied to bolt threads.

6b. **FOR STYLE 221A COUPLINGS:** Make sure the shoulder bolt's hex head fits into the hex recess provided on one of the two coupling housings. Make sure nickel based anti-seize lubricant was applied to bolt threads.

⚠ WARNING

- For proper assembly, the nuts must be tightened until full contact occurs at the bolt pads.
- Keep hands away from coupling openings during tightening.

Failure to follow these instructions could cause joint failure, serious personal injury, and property damage.

7. Tighten the nut to bring the coupling housings into firm contact with each other, making sure the housings remain fitted over the nozzle shoulder and pipe shoulder. As the nut is tightened, the nozzle will draw in tighter.

COUPLING DISASSEMBLY/REMOVAL INSTRUCTIONS

⚠ WARNING

- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.

Failure to follow this instruction could result in serious personal injury.

1. Clean accumulated slurry from nut and exposed bolt threads.

2. Support weight of nozzle. Remove nut, bolt, and both coupling housings.

3. Remove nozzle and gasket.

COUPLING RE-INSTALLATION INSTRUCTIONS

⚠ CAUTION

- Clean and inspect all components before attempting to re-install any Style 220 or Style 221A Couplings.
- DO NOT use any solvents or other cleaning agents that may damage the FRP material.

Failure to follow these instructions may cause coupling leakage and coupling/nozzle separation from the spray header, resulting in property damage.

1. If reusing a coupling that has been in service, soak gaskets, housings, bolts, and nuts in water to soften dried on slurry. Clean all components thoroughly.

2. Inspect all parts for damage. Damaged components MUST be replaced.

3. Thoroughly clean pipe shoulder and nozzle shoulder to remove dried-on slurry.

4. Inspect nozzle and pipe shoulders for damage. Damaged components MUST be replaced.

5. Proceed with the "Installation" section to reinstall the coupling.

For complete contact information, visit victaulic.com

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