



Butt Fusion

Procedures for fusing

CenFuse/CenGas HDPE

1. Make sure heater plate is at 500⁰ F. +/- 10⁰ F.
2. Use a clean paper towel to clean pipe ends.
3. Place pipe in the jaws of the fusion machine and check the high, low alignment. Adjust if necessary. (Make sure the pipe is secured in the jaws to avoid slipping).
4. Use the facing tool to square the ends of the pipe.
5. Remove any fragments left from facing with a clean utensil (knife, awl, etc.) **DO NOT TOUCH THE PIPE WITH YOUR HANDS!**
6. Place the heater plate between the opposing pipe ends and bring the ends into contact with the heater plate. **DO NOT APPLY FORCE!** (The only force required is to maintain contact between pipe ends and heater face).
7. Apply heat for recommended heating time. (DO NOT ATTEMPT TO ESTABLISH THE RECOMMENDED BEAD SIZE DURING THE HEATING CYCLE).
8. Remove the heater face and quickly press the heated pipe ends together. **DO NOT SLAM THE ENDS TOGETHER!** Apply enough pressure to establish the recommended bead size.
9. Continue applying pressure as the joint cools for the recommended cooling time.
10. Let the joint cool an additional 3 minutes before removing it from the fusion machine.
11. Double check the joint closely to ensure proper roll back and bead size.
12. Do not "rough handle" or move the pipe until the joint has cooled to the ambient temperature.

Butt Fusion Time Cycles

CenFuse HDPE Pipe & Fittings

SDR 11 IPS

Heater Temperature @ 500⁰ F. +/- 10⁰ F.

Pipe Size IPS (inches)	Heating Time (seconds)	Cooling Time (seconds)	Bead Size (inches)
1/2"	8-10	50	1/16
3/4"	14-17	50	1/16
1"	16-19	70	1/16
1 1/4"	18-22	70	1/16-1/8
1 1/2"	22-28	70	1/16-1/8
2"	28-34	70	1/16-1/8
3"	30-36	70	1/8
4"	35-42	90	1/8-3/16
6"	54-64	240	5/16

Note:

1. **DO NOT ATTEMPT TO ESTABLISH BEAD SIZE DURING THE HEAT CYCLE!**
2. **THE INFORMATION ABOVE IS CONSIDERED A GUIDELINE ONLY. JOB SITE AND TEMPERATURE CONDITIONS MUST BE TAKEN INTO CONSIDERATION.**



Sidewall Fusion

Procedures for fusing CenFuse/CenGas HDPE

1. Make sure heater plate is at 500⁰ F. +/- 10⁰ F.
2. Connect the fusion unit to the pipe.
3. Use 60-80 grit emery or garnet cloth to roughen the pipe and the pipe and the fitting.
4. Place the heater adapter between the pipe and the fitting.
5. Apply heat for the amount of time shown on the table and apply 60 PSI and maintain that pressure.
6. Take the heater adapter off the pipe and check for uniform melt. The melt pattern should be identical to the heater adapter pattern. There should be no cold spots. If this is not the case destroy the fitting and the pipe and repeat steps 1-5.
7. Immediately place the fitting onto the pipe and apply 60 PSI continuously throughout the cooling cycle.
8. Allow the joint to cool an additional 3 minutes before removing it from the fusion unit.
9. Let the fusion joint cool to the ambient temperature before "rough handling" or moving the pipe.
10. Examine the joint closely to ensure proper joining of the pipe and the fitting. A uniform melt pattern should be evident on the surface of the fitting.

Sidewall Fusion Time Cycles

CenFuse HDPE Pipe & Fittings

SDR 11 IPS

Heater Temperature @ 500⁰ F. +/- 10⁰ F.

Service Saddles and Tapping Tee

Pipe Size IPS (inches)	Heating Time (seconds)	Cooling Time (seconds)	Pressure Required (PSI)
1 1/4"	45 saddle 30 pipe	70	60
1 1/2"	50-55	70	60
2"	50-55	70	60
3"	50-55	70	60
4"	50-55	70	60

Note:

1. SIDEWALL FUSION TIME CYCLES BEGIN WHEN PIPE AND FITTING ARE FIRMLY SEATED.
2. FUSION EQUIPMENT MANUFACTURERS SHOULD BE CONTACTED FOR PROPER GAUGE PRESSURES AND TORQUE VALUES REQUIRED.
3. THE INFORMATION ABOVE IS CONSIDERED A GUIDELINE ONLY. JOB SITE AND TEMPURATURE CONDITIONS MUST BE TAKEN INTO CONSIDERATION.



Socket Fusion

Procedures for fusing

CenFuse/CenGas HDPE

1. Make sure heater plate is at 500⁰ F. +/- 10⁰ F.
2. Cut the pipe squarely with pipe cutter.
3. Chamfer the pipe ends and remove any burrs or remnants.
4. Use an acceptable depth gauge and cold ring tool, to ensure proper insertion depth and ovality.
5. Remove any contaminants from the pipe and fitting with CLEAN paper towel. **DO NOT TOUCH THE PIPE OR FITTING WITH YOUR HANDS!**
6. Force the pipe completely into the female heater adapter and fitting completely into the male heater adapter simultaneously. **DO NOT TWIST!**
7. Start the heat cycle when the pipe and the fitting are bottomed out in the heater adapters.
8. When the pipe and the fitting have been heated for the proper time cycle, gently remove them from the heater adapter. **DO NOT TWIST!**
9. Quickly check the melt to see that it is complete. All surfaces should indicate contact with the heater adapters. If this has not occurred destroy the connection and repeat steps 1-8.
10. Insert the pipe into the fitting until the cold ring tool is completely flush with the fitting. **DO NOT TWIST!**
11. Let the joint cool under pressure for the amount of time required.
12. Allow the joint to cool an additional 3 minutes before removing it from the cold ring tool.
13. Examine the joint closely to ensure proper joining of the pipe and the fitting. A uniform melt pattern should be evident on the surface of the fitting.

Socket Fusion Time Cycles

CenFuse HDPE Pipe & Fittings

SDR 11 IPS

Heater Temperature @ 500⁰ F. +/- 10⁰ F.

Pipe Size IPS (inches)	Heating Time (seconds)	Cooling Time (seconds)
1/2"	9-10	30
3/4"	12-14	30
1"	15-17	40
1 1/4"	18-21	40
1 1/2"	18-21	40
2"	24-28	40
3"	26-32	60
4"	30-36	60

Note:

1. FUSION TIME CYCLES BEGIN AFTER THE PIPE AND THE FITTING HAVE BOTTOMED OUT ON THE HEATER ADAPTERS.
2. THE INFORMATION ABOVE IS CONSIDERED A GUIDELINE ONLY. JOB SITE AND TEMPERATURE CONDITIONS MUST BE TAKEN INTO CONSIDERATION.

Butt Fusion

Procedures for fusing Centennial CenGas MDPE

1. Make sure heater plate is at 500⁰ F. +/- 10⁰ F.
2. Use a clean paper towel to clean pipe ends.
3. Place pipe in the jaws of the fusion machine and check the high, low alignment. Adjust if necessary. (Make sure the pipe is secured in the jaws to avoid slipping).
4. Use the facing tool to square the ends of the pipe.
5. Remove any fragments left from facing with a clean utensil (knife, awl, etc.) **DO NOT TOUCH THE PIPE WITH YOUR HANDS!**
6. Place the heater plate between the opposing pipe ends and bring the ends into contact with the heater plate. **DO NOT APPLY FORCE!** (The only force required is to maintain contact between pipe ends and heater face).
7. Apply heat for recommended heating time. **(DO NOT ATTEMPT TO ESTABLISH THE RECOMMENDED BEAD SIZE DURING THE HEATING CYCLE).**
8. Remove the heater face and quickly press the heated pipe ends together. **DO NOT SLAM THE ENDS TOGETHER!** Apply enough pressure to establish the recommended bead size.
9. Continue applying pressure as the joint cools for the recommended cooling time.
10. Let the joint cool an additional 3 minutes before removing it from the fusion machine.
11. Double check the joint closely to ensure proper roll back and bead size.
12. Do not "rough handle" or move the pipe until the joint has cooled to the ambient temperature.



Butt Fusion Time Cycles

Centennial Gas Pipe & Fittings

SDR 11 IPS

Heater Temperature @ 500⁰ F. +/- 10⁰ F.

Pipe Size IPS (inches)	Heating Time (seconds)	Cooling Time (seconds)	Bead Size (inches)
1/2"	6-8	50	1/16
3/4"	8-10	50	1/16
1"	10-12	60	1/16-1/8
1 1/4"	12-16	60	1/16-1/8
1 1/2"	16-18	60	1/16-1/8
2"	16-20	60	1/8
3"	20-24	90	1/8
4"	16-30	180	3/16

Note:

1. DO NOT ATTEMPT TO ESTABLISH BEAD SIZE DURING THE HEAT CYCLE!
2. THE INFORMATION ABOVE IS CONSIDERED A GUIDELINE ONLY. JOB SITE AND TEMPERATURE CONDITIONS MUST BE TAKEN INTO CONSIDERATION.

Socket Fusion

Procedures for fusing Centennial CenGas MDPE

1. Make sure heater plate is at 500⁰ F. +/- 10⁰ F.
2. Cut the pipe squarely with pipe cutter.
3. Chamfer the pipe ends and remove any burrs or remnants.
4. Use an acceptable depth gauge and cold ring tool, to ensure proper insertion depth and ovality.
5. Remove any contaminants from the pipe and fitting with CLEAN paper towel. **DO NOT TOUCH THE PIPE OR FITTING WITH YOUR HANDS!**
6. Force the pipe completely into the female heater adapter and fitting completely into the male heater adapter simultaneously. **DO NOT TWIST!**
7. Start the heat cycle when the pipe and the fitting are bottomed out in the heater adapters.
8. When the pipe and the fitting have been heated for the proper time cycle, gently remove them from the heater adapter. **DO NOT TWIST!**
9. Quickly check the melt to see that it is complete. All surfaces should indicate contact with the heater adapters. If this has not occurred destroy the connection and repeat steps 1-8.
10. Insert the pipe into the fitting until the cold ring tool is completely flush with the fitting. **DO NOT TWIST!**
11. Let the joint cool under pressure for the amount of time required.
12. Allow the joint to cool an additional 3 minutes before removing it from the cold ring tool.
13. Examine the joint closely to ensure proper joining of the pipe and the fitting. A uniform melt pattern should be evident on the surface of the fitting.



Socket Fusion Time Cycles

Centennial Gas Pipe & Fittings

SDR 11 IPS

Heater Temperature @ 500⁰ F. +/- 10⁰ F.

Pipe Size IPS (inches)	Heating Time (seconds)	Cooling Time (seconds)
1/2"IPS	5-6	30
1/2"CTS	5-6	30
3/4"	8-10	30
1"	10-12	40
1 1/4"	12-14	45
1 1/2"	12-14	45
2"	16-20	45
3"	20-25	60
4"	25-30	60

Note:

1. FUSION TIME CYCLES BEGIN AFTER THE PIPE AND THE FITTING HAVE BOTTOMED OUT ON THE HEATER ADAPTERS.
2. THE INFORMATION ABOVE IS CONSIDERED A GUIDELINE ONLY. JOB SITE AND TEMPERATURE CONDITIONS MUST BE TAKEN INTO CONSIDERATION.