



**HAMMERHEAD
TRENCHLESS
UNIVERSITY**

LATERAL CIPP BLUELIGHT CURE

TRAINEE GUIDE

Version: 2023

CONTENTS

CONTENTS	2
DAY 1: OVERVIEW & BASICS.....	3
DAY 2: ABOVE GROUND INSTALL.....	14
DAY 3: LIVE FIELD INSTALLATION.....	20
APPENDIX.....	21

DAY 1: OVERVIEW & BASICS

WELCOME & INTRODUCTION

WELCOME

Share your name, role, and any personal info you'd like the trainer to know.

EXPECTATIONS

No phone use unless essential for business.

Each day will have two 15-minute breaks and a one-hour lunch break.

If you haven't completed the eLearning course yet, you should do so before tomorrow morning.

REVIEW EQUIPMENT, TOOLS, & MATERIALS

EQUIPMENT

- Bluelight LED CIPP Lining System
- Light Reel(s)
- Touchscreen Display
- Power Supply
- Electrical Cords
- Inversion Drum
- Inversion Hose
- Drum Nozzle(s)
- Side Entrance (Y Entrance)
- Dryer
- Generator/ Electrical Supply (4kw/min)
- Air Assembly
- Air Compressor (min 70CFM & 100 PSI)
- Air Hoses
- Electronic Scale
- Inspection Camera
- Pipe Cleaner (miller/hydrojetter)
- Extension Cord(s)

WET OUT EQUIPMENT

- Drill & Mixing Paddle
- Wet Out Table (or other calibration device)
- Vacuum Assembly, Hoses, & Suction Cups

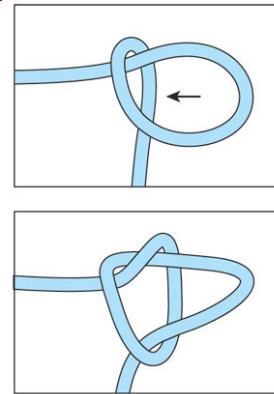
RECOMMENDED TOOLS

- Impact Driver
- Sockets for Impact Driver
- Heavy Duty Scissors (fabric/carpet)
- Utility Knife and Blades
- 50', 100', and 300' Tape Measures
- Black Permanent Marker
- Speed Square
- Personal Protective Equipment (e.g., hard hat, safety glasses rated for high intensity blue light, etc.)

KNOT TYING TECHNIQUES

PULL STRAP KNOT

Create a slip knot in the pull strap. To create the slip knot, make a loop with one end of the pull strap and twist it one half turn. Reach through the loop and pull some of the longer piece of the pull strap through to create a second loop. Pull the tail end while holding the second loop to tighten the first loop.



CALIBRATION TUBE KNOT

Create a Z fold using about 18-20 inches at the end of the calibration tube. Tie this portion of the calibration tube in a standard knot, getting it as tight as possible, and leave about 6-8 inches of calibration tube after the knot. If the knot slips at all, that 6-8 inches prevents it from coming undone. Get help from a trainee to make the knot as tight as possible.

Cut the knotted end of the calibration tube at a 45-degree angle. Doing so helps prevent the end from becoming caught in the nozzle during pullback.

Slide the loop of the pull strap slip knot over the knotted calibration tube and tighten the slip knot behind the calibration tube knot. Use tape to secure the knots from just behind the slip knot down to the beginning of the 45-degree angle cut in the calibration tube.

To see video of this process, visit <https://www.youtube.com/watch?v=4K8EHZVLQxE> or search the HammerHead Trenchless YouTube channel for "Securing Your Calibration Tube."



SECURING TO THE SPINDLE

Feed the pull tape through the hole in the spindle and secure it in place with a standard knot or slip knot.

EQUIPMENT OVERVIEW & OPERATION BASICS

WET OUT TABLE OR CALIBRATION DEVICE

Operating procedures to be covered: speed, shim/gap selection, roller function, and directional selection.

Equipment requirements: air and electricity. Information located on the HH Rehab App for gap settings. 3m/min is the recommended pace for wet out of Bluelight Liner.

NOTES:

VACUUM

Vacuum impregnation is very important to the wet-out process, as it helps ensure complete saturation of the felt. If there are air pockets in the liner during impregnation, it can lead to places with little or no resin in the felt of the liner.

When placing the vacuum port, make sure you have a complete seal before taping the vacuum in place.

NOTES:

INVERSION DRUM

Components include:

- Drum body
- QuickLok door with single-lever locking system
- Side entrance for light head with cam-lok connections
- Nozzle with cam-lok connections
- Interchangeable wheel which can be attached to either side of the drum

Demonstrate drum set up for BL equipment.

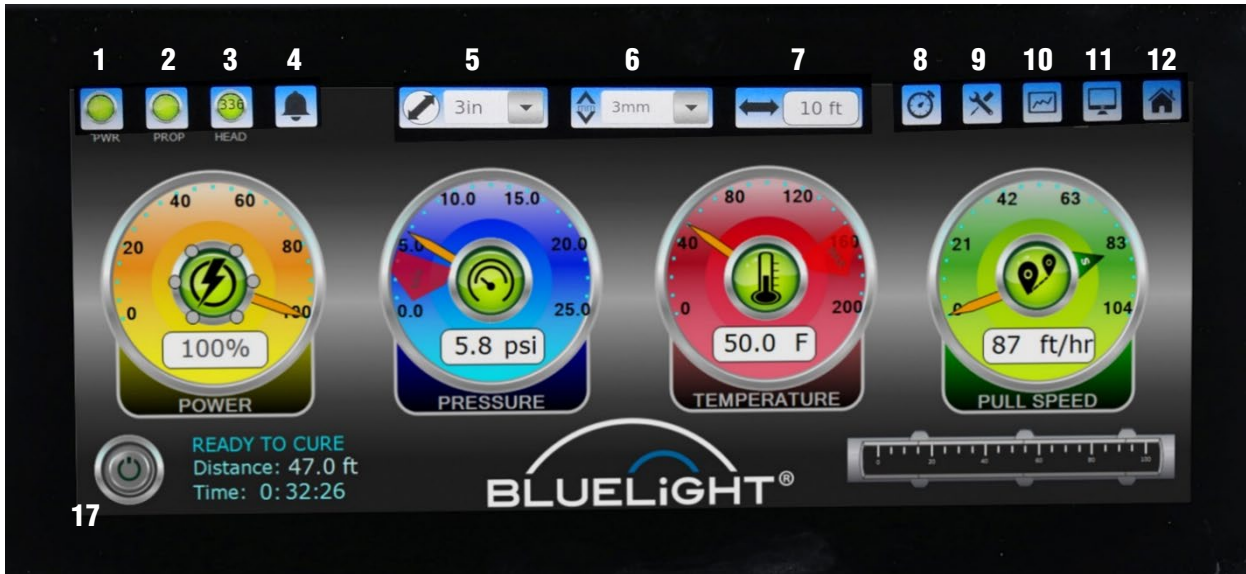
NOTES:

BLUELIGHT POWER PACK

Follow along through the power pack connection process using the Bluelight User Guide, found in the Appendix of this trainee guide.

NOTES:

BLUELIGHT DISPLAY



1. **Power Indicator Light**
2. **Propulsion Indicator Light**
3. **Light Head Indicator Light** – The number displayed indicates which light head is currently installed.
4. **Alarm** - When the alarm goes off, click this button to stop it.
5. **Liner Size** - Use the drop-down menu to select the diameter of the liner you are installing.
6. **Liner Weight** - Use the drop-down menu to select the thickness of the liner in millimeters.
7. **Liner Length** - Enter the length of the repair to be cured.
8. **Timer** - Click the timer button to set a dwell timer or cooldown timer.
9. **Settings** - Press the settings icon to adjust system settings.
10. **Stats** - Press the Stats icon to view a graphic representation of the cure process in real-time.
11. **Camera View** - Press the Camera View icon to switch the display to the real-time light head camera footage.
12. **Home** - Press the Home icon to return to the main screen.
13. **Power Gauge** - This gauge displays the percentage of power available to the system, and the center will be lit green when there is enough power available to cure. If there is not sufficient power, the center will light up red.
14. **Pressure Gauge** - This gauge displays the PSI, and the center will be lit green when there is enough pressure available to cure. If there is not sufficient pressure, the center will light up red.
15. **Temperature Gauge** - This gauge displays the current temperature of the light head, and the center will be lit green when the temperature is in the acceptable range. If the temperature is too high, the center will light up red.
16. **Pull Speed Gauge** - This gauge displays the speed in feet per hour at which the light head is being pulled back, and the center will be lit green. If there is a problem with the pullback speed, the center will light up red.
17. **Start** - Turns the light head on and begins pullback. It only works when all the gauges are lit green in the center.

NOTES:

LIGHT REELS

Light Head Cleaning Materials/Tools:

- Isopropyl alcohol (highest percentage available to you)
- Cotton swabs
- Clean rag (e.g., chem wipes)
- Spanner wrench (for internal cleaning)
- Light head blocks
- Small brush

Basic Exterior Light Head Cleaning:

1. Use a vice or a second set of hands to hold the light head in a vertical position.
2. Using the purest alcohol (highest percentage) you can find and a clean rag, wipe off any excess dirt, debris, oil, etc. from the surface of the light head.
3. If unable to remove any debris, use a razor or hard pick to remove hardened material.
4. Once the head is clean, look for any scratches, chips, or divots on the glass. **IMPORTANT:** If found, replace the glass. It is important to always use clean, scratch- and chip-free glass, as imperfections can potentially reflect/refract light back at the LEDs, causing hot spots and browning of domes.
5. Wrap the light head in bubble wrap or a clean cloth before placing it back in the protective case.

LED Burnouts: Contact HammerHead Service Department as soon as possible. Do not operate the light head with any burnt-out LEDs, as this could cause further damage.

Lubricant: HammerHead recommends using only our preferred mineral oil for lubrication during installation. This is because some oils may react differently to the light, and could potentially cause damage.

NOTES:

CALCULATIONS & OPERATION

INSTALLATION SHEET



Complete the installation sheet for each example your trainer provides.

Bluelight LED Installation Report

Jobsite Information:

Date: _____
 Jobsite address: _____
 Length of pipe to be repaired: _____

Diameter(s): _____
 Diameter change measurements: _____
 Type of liner being used: _____

Materials:

Liner:

1. Total length of pipe to be repaired: _____ ft. _____ in.
2. Add distance from nozzle to host pipe: _____ ft. _____ in.
- Subtotal for resin calculation:** _____ ft. _____ in.
3. Add 4 inches for cuff: _____ ft. _____ in.
4. Add a minimum 2 feet for vacuum & waste: _____ ft. _____ in.

Total Liner needed: _____ ft. _____ in.

Pull Tape:

1. Total length of calibration tube: _____ ft. _____ in.
2. Add length of extension hose: _____ ft. _____ in.
3. Add a minimum of 20 feet: _____ ft. _____ in.

Total Pull Tape needed: _____ ft. _____ in.

Calibration Tube:

1. Total liner length needed above: _____ ft. _____ in.
2. Add a minimum of 2 feet*: _____ ft. _____ in.

Total Calibration Tube needed: _____ ft. _____ in.

LED Resin

Total Resin: _____ lbs.

1 foot Resin Pour	Repair Length _____ ft _____ in	Dry Liner _____ ft _____ in	4 in Cuff	1 foot Vacuum & Waste
--------------------------	---	---------------------------------------	------------------	----------------------------------

Curing:

Max Light Head Temperature: _____
 Cure time from: _____ until: _____
 Cooling time from: _____ until: _____

HAMMERHEAD APP

Download the HammerHead App if you have not already done so.



Complete resin calculations based on the examples provided by your trainer.

END OF DAY 1

DAY 2: ABOVE GROUND INSTALL

RECAP & SET AGENDA

RECAP DAY 1 INFORMATION

NOTES:

REVIEW AGENDA FOR DAY 2

20ft above ground installation

- Complete installation sheet
- Calculate resin using HH App
- Wet out
- Load drum
- Invert liner, calibration tube, pull strap
- Bluelight cure
- Inspect cured installation

PREP WORK

CALCULATIONS



Calculate the dry consumables and resin needed for the day's 20ft above-ground installation using the installation sheet and HammerHead App.

Bluelight LED Installation Report

Jobsite Information:

Date: _____ Diameter(s): _____
 Jobsite address: _____ Diameter change measurements: _____
 Length of pipe to be repaired: _____ Type of liner being used: _____

Materials:

Liner:

- 1. Total length of pipe to be repaired: _____ ft. _____ in.
- 2. Add distance from nozzle to host pipe: _____ ft. _____ in.
- Subtotal for resin calculation:** _____ ft. _____ in.
- 3. Add 4 inches for cuff: _____ ft. _____ in.
- 4. Add a minimum 2 feet for vacuum & waste: _____ ft. _____ in.

Total Liner needed: _____ ft. _____ in.

Pull Tape:

- 1. Total length of calibration tube: _____ ft. _____ in.
- 2. Add length of extension hose: _____ ft. _____ in.
- 3. Add a minimum of 20 feet: _____ ft. _____ in.

Total Pull Tape needed: _____ ft. _____ in.

Calibration Tube:

- 1. Total liner length needed above: _____ ft. _____ in.
- 2. Add a minimum of 2 feet": _____ ft. _____ in.

Total Calibration Tube needed: _____ ft. _____ in.

LED Resin

Total Resin: _____ lbs.

1 foot Resin Pour	Repair Length _____ ft _____ in	Dry Liner _____ ft _____ in	4 in Cuff	1 foot Vacuum & Waste
--------------------------	---	---------------------------------------	------------------	----------------------------------

Curing:

Max Light Head Temperature: _____ Cure time from: _____ until: _____
 Cooling time from: _____ until: _____

PREPARE DRY CONSUMABLES

Lay out the liner, calibration tube, and pull tape on the ground next to each other.

- **Liner:** Mark the liner using a speed square and marker to show where 1 ft of vacuum and waste, 4-inch cuff, and dry liner for the distance from nozzle to pipe are, as shown in the diagram on the installation sheet. Then mark the full repair length and an additional foot for resin pour.
- **Calibration Tube:** Mark the full length of the liner, then 2 ft after that mark.
- **Pull Tape:** Mark the full length of the calibration tube. Add the length of the extension hose from there and mark it. Measure out another 20 ft (minimum) to make the final mark.

Double check each measurement to ensure accuracy before making cuts at the final mark on each material.



Each knot for today's practice installation – pull tape, calibration tube, and spindle – will be tied by a trainee.

Preload the inversion drum with calibration tube and pull tape if possible, depending on length of shot and size of drum.

PREPARE FOR WETOUT (IF NOT USING PRE-WET OUT LINER)

Always mix a new bucket of resin thoroughly. Set up the vacuum port on the liner and pour the resin into the open end, using a tight fold to maintain vacuum while pouring.

NOTES:

WETOUT PROCESS (IF NOT USING PRE-WET OUT LINER)

Set the shim/gap size on the wet out table according to the HammerHead App. Run the liner through the table.

NOTES:

LOAD THE DRUM

Load the drum, maximizing drum capacity. Confirm the distance from the nozzle to the host pipe.

INSTALLATION

INVERT LINER, CALIBRATION TUBE, & PULL STRAP

Use a Calibration tube “leader” to guide the liner into the pipe during inversion. Use the lowest PSI possible during install – the pipe will dictate the inversion pressure.

If necessary, the pull in method may be used for the calibration tube and pull strap.

NOTES:

SET PRESSURE FOR DWELL

Set the pressure for a 10-minute dwell to ensure that the liner and calibration tube are pressed against the pipe as much as possible. Typically, 10 PSI is the best pressure for dwell, but this depends on pipe conditions, including any bends or transitions.

Shift the air supply from the inversion drum to the Bluelight reel, making sure to switch at the same time. Identify each connection that should be opened or closed.

Set a 10-minute timer on the display. Maintain pressure for the full 10 minutes.

NOTES:

DEPLOY THE LIGHT HEAD

Unlock the propulsion unit and deploy the light head using the push method. Watch the monitor and look for the “tail” of the calibration tube.

NOTES:

INPUT JOB INFORMATION & BEGIN PULLBACK

Input pipe size, liner thickness, and distance into the control unit. Validate that air pressure and temperature gauges are blue.

Begin pullback. It is very important to monitor pressure and temperature throughout pullback.

NOTES:

FINISHING TASKS

COOLDOWN

When pullback is complete, unlock the propulsion unit and push the light head at least half way down the repair length. Lock the propulsion unit here and set a cooldown timer for 10 minutes.

NOTES:

RETRACT LIGHT HEAD & CALIBRATION TUBE

Retract the light head all the way back to the propulsion base, wiping the pex down as you do so. Look for the white cap to ensure the light head is fully retracted.

Retract the calibration tube and pull tape, making sure to maintain at least 1-2 PSI.

NOTES:

SHUT DOWN

Turn off the air compressor, then dryer. Bleed off all air lines.

Break down all equipment and inspect each piece. Clean the light head before storing.

END OF DAY 2

DAY 3: LIVE FIELD INSTALLATION

LIVE JOB IN FIELD

LATERAL CIPP INSTALLATION WITH BLUELIGHT CURE

Use the Lateral CIPP with Bluelight Cure User Guide to help structure your live installation.

PRACTICAL ASSESSMENT (FOR CERTIFICATION ONLY)

Throughout today's installation, your trainer will evaluate your performance using a standardized rubric. If you complete the installation steps as you practiced, you will pass the assessment. and earn certification.

APPENDIX



Bluelight LED Installation Report

Jobsite Information:

Date: _____ Diameter(s): _____
 Jobsite address: _____ Diameter change measurements: _____
 Length of pipe to be repaired: _____ Type of liner being used: _____

Materials:

Liner:

1. Total length of pipe to be repaired: _____ ft. _____ in.
2. Add distance from nozzle to host pipe: _____ ft. _____ in.
- Subtotal for resin calculation: _____ ft. _____ in.**
3. Add 4 inches for cuff: _____ ft. _____ in.
4. Add a minimum 2 feet for vacuum & waste: _____ ft. _____ in.

Total Liner needed: _____ ft. _____ in.

Pull Tape:

1. Total length of calibration tube: _____ ft. _____ in.
2. Add length of extension hose: _____ ft. _____ in.
3. Add a minimum of 20 feet: _____ ft. _____ in.

Total Pull Tape needed: _____ ft. _____ in.

Calibration Tube:

1. Total liner length needed above: _____ ft. _____ in.
2. Add a minimum of 2 feet": _____ ft. _____ in.

Total Calibration Tube needed: _____ ft. _____ in.

LED Resin

Total Resin: _____ lbs.

1 foot Resin Pour	Repair Length _____ ft _____ in	Dry Liner _____ ft _____ in	4 in Cuff	1 foot Vacuum & Waste
--------------------------	---	---------------------------------------	------------------	----------------------------------

Curing:

Max Light Head Temperature: _____ Cure time from: _____ until: _____
 Cooling time from: _____ until: _____



LATERAL CIPP USER GUIDE: BLUELIGHT CURE

The BlueLight LED CIPP lining system for laterals and small drain pipes is the most advanced light-curing system available. This user guide provides a detailed walkthrough of each step in the Lateral CIPP with BlueLight Cure installation process, as well as a checklist you can use each time you install with BlueLight.

Equipment List

- BlueLight LED CIPP Lining System
- Light Reel(s)
- Touchscreen Display
- Power Supply
- Electrical Cords
- Inversion Drum
- Inversion Hose
- Drum Nozzle(s)
- Side Entrance (Y Entrance)
- Dryer
- Generator/ Electrical Supply (4kw/min)
- Air Assembly
- Air Compressor (min 70CFM & XX PSI)
- Air Hoses
- Electronic Scale
- Inspection Camera
- Pipe Cleaner (miller/hydrojetter)
- Extension Cord(s)

Wet Out Equipment

If not using pre-wet-out liner, you will also need:

- Drill & Mixing Paddle
- Wet Out Table
- Vacuum Assembly, Hoses, & Suction Cups

Material List

- Liner
- Calibration Tube
- Resin
- White Mule Tape
- Tape
- Hose Clamps
- Mineral Oil
- Pump Sprayer for Mineral Oil
- #64 Rubber Bands
- Isopropyl Alcohol (91% or greater)
- Acetone
- Gloves
- Black Contractor Garbage Bags
- Spare Glass for Light Head
- Spare Gaskets for Light Head
- BlueLight Cleaning Kit

Recommended Tools

- Impact Driver
- Sockets for Impact Driver
- Heavy Duty Scissors (fabric/carpet)
- Utility Knife and Blades
- 50', 100', and 300' Tape Measures
- Black Permanent Marker
- Speed Square



LATERAL CIPP USER GUIDE: BLUELIGHT CURE

Detailed Steps

STEP 1: INSPECTION & CLEANING

Inspect and assess the host pipe conditions. Clean and prep the pipe as needed. Pipe should be free of debris, standing water, bellies, and any active infiltration and inflow (I&I).

If the pipe has I&I, remedy it prior to installation. If the structural integrity is damaged (e.g., broken or missing sections), the structural damage should be repaired prior to installation.



STEP 2: MEASURE

Re-inspect the host pipe after cleaning to ensure conditions are suitable for CIPP lining.

Once you determine that the pipe conditions are suitable, use the sewer camera to measure the length of the repair.



STEP 3: SET UP THE JOBSITE

Set up the equipment and arrange the jobsite.

Position the equipment near the invert of the pipe, ensuring access to power and air. Create the most ergonomic arrangement possible.

IMPORTANT! Keep BlueLight's electronic components (controls and power supply) out of direct sunlight as much as possible to prevent overheating.



STEP 4: INSTALL SIDE ENTRANCE

Install the side entrance and nozzle onto the inversion drum, locking them both into place with their cam locks.



LATERAL CIPP USER GUIDE: BLUELIGHT CURE

STEP 5: MAKE ELECTRICAL & AIR CONNECTIONS

Make all electrical connections on the BlueLight LED system, including power supply to trolley, trolley to display, and trolley to propulsion unit.

POWER SUPPLY

First connect the power cables to the power pack. Although there are two versions of connectors, depending on when your unit was manufactured, these connections are in the same location regardless of which version your unit has.

The bottom connector is from the power source to the power unit. The top connector is from the power unit to the control box.



CONTROL BOX

Make electrical connection from the power unit to the control box next. Depending on when your unit was manufactured, it may have all cinch connectors (Cinch version) or it might use Harting and Han connectors (Harting version).

The image on the left shows the Harting version connection, while the image on the right shows the cinch.

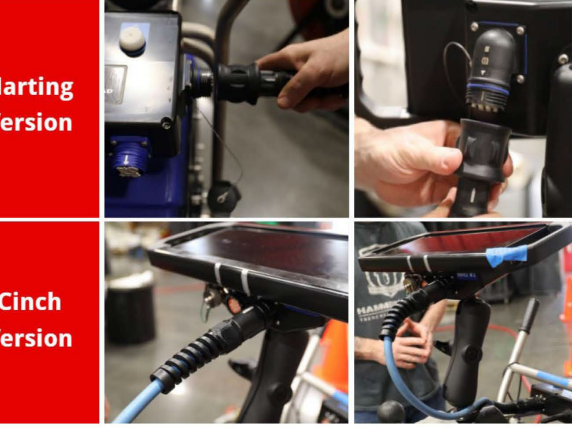


Control Box to Display

Next, connect the control box to the display.

For the Harting version, connect the cable to the control box first, then the display.

For the Cinch version, it is easier to connect the display first, then the control box.





LATERAL CIPP USER GUIDE: BLUELIGHT CURE

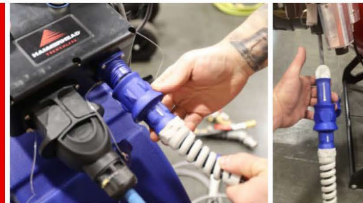
Connection to the Propulsion Unit

The Cinch version and Harting version of the system have different methods to connect the controls to the propulsion unit.

For the Harting version, connect the cable to the control box first, then the propulsion unit.

For the Cinch version, connect to the display first, then the propulsion unit.

Harting Version



Cinch Version



Connect the main air line from the compressor to the dryer. Connect the big air line from the dryer to the Y and the small air line from the compressor to the Y. Connect the Y to the inversion drum.

STEP 6: PREPARE THE LIGHT HEAD

Remove the light head from the protective case and visually inspect it, wiping it down with a clean rag and 91% isopropyl alcohol. Then thread it into the propulsion base.



STEP 7: TRANSFER THE PROPULSION UNIT

Unlock the propulsion assembly from the control unit and transfer it to the side entrance. Lock it into place on the side entrance with the cam lock.





LATERAL CIPP USER GUIDE: BLUELIGHT CURE

STEP 8: CONFIRM DETAILS

Check all air lines, compressor fuel level, and power source(s) for both the dryer and BlueLight power supply. Dedicate a single air hose to connect the compressor to the dryer so that it stays clean. Before connecting the dryer to the unit, blow out the air lines to ensure they are clean.

STEP 9: LOAD AND INVERT LINER

Load the wet-out liner into the inversion drum, spraying with mineral oil to act as a lubricant and fastening the end of the liner to the nozzle using hose clamps. Then increase the pressure inside the inversion drum until the liner begins to invert into the pipe.



STEP 10: LOAD AND INVERT CALIBRATION TUBE

Load the calibration tube and mule tape into the inversion drum, again spraying with mineral oil to act as a lubricant. Use approximately 10 PSI to install the calibration tube for single diameter pipes or use approximately 14 PSI if the pipe has a diameter transition.

STEP 11: DWELL TIME

Maintain curing pressure for at least 10 minutes of dwell time.

STEP 12: CHANGE TO BIG AIR

Change the air source to the 1" air hose coming from the dryer. This is sometimes referred to as "big" air.

STEP 13: POSITION THE LIGHT HEAD

Carefully push the light head down the lined pipe and lock the propulsion unit in to engage the wheels.

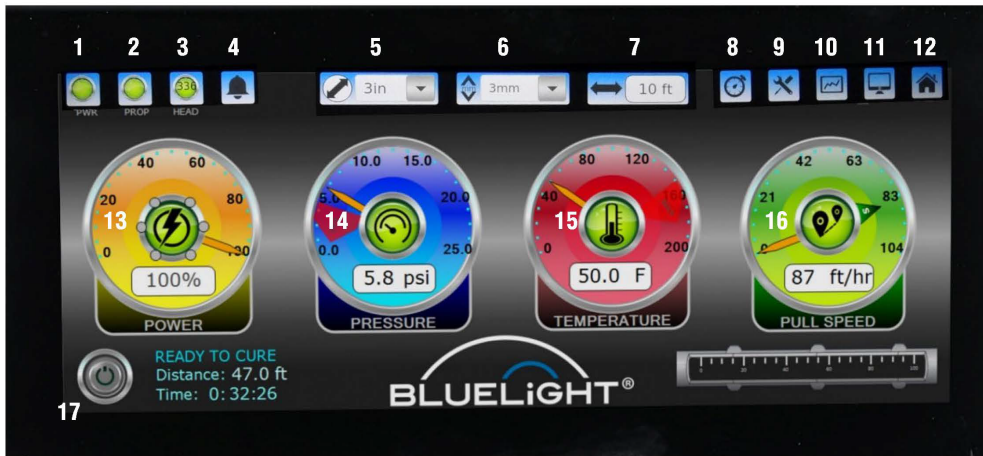




LATERAL CIPP USER GUIDE: BLUELIGHT CURE

STEP 14: ENTER PARAMETERS

Enter the parameters of the installation into the touchscreen controls, including liner diameter, liner thickness, and distance. Confirm that they match the specifics of the job. Confirm that all seven lights are green, meaning that the system is ready to begin curing.



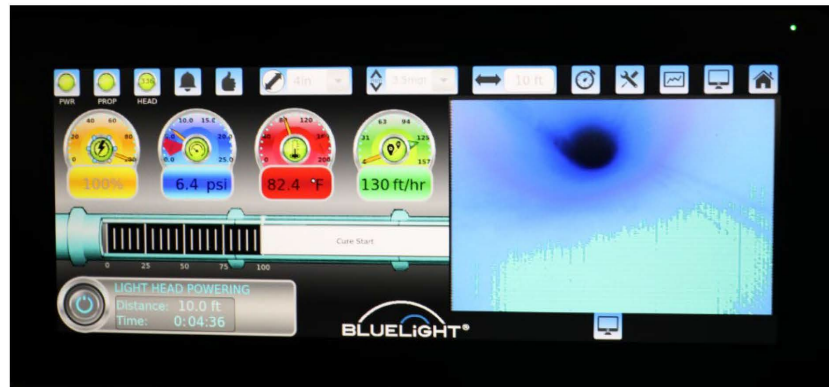
1. **Power Indicator Light**
2. **Propulsion Indicator Light**
3. **Light Head Indicator Light** – The number displayed indicates which light head is currently installed.
4. **Alarm** - When the alarm goes off, click this button to stop it.
5. **Liner Size** - Use the drop-down menu to select the diameter of the liner you are installing.
6. **Liner Weight** - Use the drop-down menu to select the thickness of the liner in millimeters.
7. **Liner Length** - Enter the length of the repair to be cured.
8. **Timer** - Click the timer button to set a dwell timer or cooldown timer.
9. **Settings** - Press the settings icon to adjust system settings.
10. **Stats** - Press the Stats icon to view a graphic representation of the cure process in real-time.
11. **Camera View** - Press the Camera View icon to switch the display to the real-time light head camera footage.
12. **Home** - Press the Home icon to return to the main screen.
13. **Power Gauge** - This gauge displays the percentage of power available to the system, and the center will be lit green when there is enough power available to cure. If there is not sufficient power, the center will light up red.
14. **Pressure Gauge** - This gauge displays the PSI, and the center will be lit green when there is enough pressure available to cure. If there is not sufficient pressure, the center will light up red.
15. **Temperature Gauge** - This gauge displays the current temperature of the light head, and the center will be lit green when the temperature is in the acceptable range. If the temperature is too high, the center will light up red.
16. **Pull Speed Gauge** - This gauge displays the speed in feet per hour at which the light head is being pulled back, and the center will be lit green. If there is a problem with the pullback speed, the center will light up red.
17. **Start** - Press this button to turn the light head on and begin pullback. It only works when all of the gauges are lit green in the center.



LATERAL CIPP USER GUIDE: BLUELIGHT CURE

STEP 15: BEGIN PULLBACK

Turn on the light head to begin the curing process and pullback. Monitor the gauges throughout the cure, paying close attention to the temperature gauge. Wipe down the pex with a clean rag and guide it into the drum.



STEP 16: COOLDOWN

When the cure completes, unlock the propulsion unit and push the light head at least halfway down the repair length. Lock the propulsion unit here and set a dwell timer for a 10-minute cooldown.



STEP 17: RETRACT LIGHT HEAD

Once the cooldown is complete, retract the light head all the way back to the propulsion base, wiping down the pex as you do so. Make sure you see the white cap to ensure the light head has reached the correct location.



STEP 18: RETRACT CALIBRATION TUBE

Retract the calibration tube and mule tape, making sure to maintain a minimum of 1-2 PSI during this process.

STEP 19: TURN OFF AIR

Turn off the air compressor, then dryer. Bleed off all air line(s).

STEP 20: TEAR DOWN

Break down all the equipment and inspect each piece for any damage. Pay special attention to the light head, and clean it with a clean rag and 91% isopropyl alcohol prior to storing it in the protective case.





Step-by-Step Checklist

Complete the following steps, in order, to install lateral CIPP with BlueLight cure.

- Inspect and clean the pipe, repairing any I&I or structural damage.
- Measure the length of the repair.
- Set up equipment and arrange the jobsite.
- Install side entrance and nozzle.
- Make all electrical connections.
- Remove the light head from the protective case and thread it into the propulsion unit.
- Transfer propulsion assembly to the side entrance.
- Check all air lines, compressor fuel level, and power source(s) for the dryer and BlueLight power supply.
- Load the wet-out liner into the drum, fastening the end to the nozzle. Increase pressure until the liner begins to invert.
- Load calibration tube and mule tape into the drum, then install them using 10 PSI for single diameter pipes or 14 PSI for pipes with a transition.
- Maintain pressure for 10 minutes or more of dwell time.

Dwell Start Time: _____

Dwell Stop Time: _____

- Change the air source to 1" hose coming from the dryer.
- Push the light head to the end of the repair and lock the propulsion unit to engage the wheels.
- Enter the installation parameters and confirm correctness.
- Begin curing by pressing the light head power button on the display. Monitor gauges throughout pullback.

Cure Start Time: _____

Cure Complete Time: _____

- Push light head to 50% of repair length and lock it in place for a 10-minute cooldown.
- Retract the light head to the propulsion base. Clean and store light head.
- Retract calibration tube and mule tape.
- Turn off air compressor and dryer. Bleed off air lines.
- Break down equipment, inspecting each piece. Clean the light head before storing it.