JetSpray™ Thermal

JetSpray™ Application Technique & Troubleshooting Guide

Getting Started

Ensure equipment is set up and flow rates have been confirmed. Download the Knauf app to appropriately calibrate the equipment for JetSpray.

Holding the Nozzle

- Position the spray nozzle vertically with the water shutoff valve on the bottom or underside of the nozzle.

Spraying

- Stand 36"–40" from the wall to be sprayed.
- Hold nozzle at approximately a 10° downward angle.
- Point toward bottom of wall cavity to be sprayed.
- Open water valve on the nozzle to initiate water flow.
- Turn remote control switch on to start fiber flow.
- Start filling at the bottom of the cavity, moving the nozzle upward and side-to-side as you fill the cavity.
- Fill one wall cavity at a time, working from bottom to top.
- Try to develop a rhythm when you fill the cavity, but do not overfill it.
- Try to keep the same nozzle angle with respect to the wall at all times.
- Once filled to about 10" from the top of the cavity, quickly step in close (end of nozzle ~18"–24" from cavity) and fill the very top of the cavity and move downward filling any voids in the cavity you just sprayed. It is important to avoid fiber overspray into the next cavity.
- Move to the next wall cavity and repeat the procedure. Consistency is key.
- Spray about four to six wall cavities and then start scrubbing.

IMPORTANT: *The small water flow valve on the spray nozzle does not control flow rate. It is an on/off valve.*

Work from bottom to top, standing 36"– 40" from cavity.

For spraying top of cavity, move in 18"–24."

Move to the next wall cavity and repeat procedure.

Average Fill Rates

- 2x4x8' 16" o.c. cavity—25 to 35 seconds @ 1.9 lbs./ft.^{3} density
- 2x6x8' 16" o.c. cavity—40 to 50 seconds @ 1.9 lbs./ft.^{3} density

KNAUF INSULATION
it's time to save energy

Scrubbing Tips:

1. **Spray about four to six wall cavities and then start scrubbing. Get the recycled (scrubbed) material incorporated back into the mix as quickly after startup as possible. If you don't, you'll be left with excess recycled fiber and no more walls to spray, wasting the fiber.**

2. **If you fill both corner cavities, the person scrubbing will have considerable difficulty getting both cavities scrubbed cleanly without "digging-in" to one of them creating a repair situation. To prevent this, skip one side of an inside corner, allow for scrubbing to occur, and then come back and fill the open cavity.**

Scrubbing

Excess fiber scrubbing is easy if you keep these important techniques in mind.

Getting Underway

- Turn the scrubber on.
- Be sure the wheel on the scrubber is rotating upward.
- Start about 12" from the top of the cavity, straddling, and letting the roller rest on the studs.
- Keeping the roller centered on the studs, move the roller upward to the top of the cavity. *Note: This technique is important as it will help reduce the possibility of the fiber sagging by forcing the fibers into the top edge of the cavity.*
- Reverse the scrubber direction so the roller is rotated downward. (With some scrubbers, you must invert the unit.)
- Start at a point toward the top of the cavity where you left off and scrub off the remainder of overspray until you've completely cleaned the cavity.

Vacuuming

Vacuum as you would any material; smoothly, and try not to "force-feed" the product into the hose.

A good reference is to vacuum when the person is spraying, and then stop vacuuming when they stop; keep in mind that it is important to stay between four and six cavities behind the person spraying. This helps keep the ratio of dry to recycled fiber in balance.

At top of cavity, reverse scrubber direction to push fiber upwards.

Vacuuming simultaneously with spraying will help to maintain proper moisture density.

Final cavity should present a clean, well-filled appearance.

Troubleshooting

While we cover many aspects of the operation in this guide, we assume that the owner and/or operator has knowledge of properly operating, maintaining, and troubleshooting an insulation blowing machine and all its typical components, including a liquid pump. In addition, we do not address troubleshooting small engines such as those on the insulation blowing machine vacuum unit or power generator.

⚠ PROBLEM: Fiber won't stay in the wall.

CAUSE: Spraying fiber too dry.

SOLUTION: Check pump pressure. Check jets for plugging. Redo bucket check to ensure proper water flow.

CAUSE: Too much fiber.

SOLUTION: Close gate on machine a notch or two and check the fiber flow.

CAUSE: Fiber bouncing off the wall.

SOLUTION: Turn blowing machine air pressure down.

CAUSE: Fiber not hitting wall with enough force to stay in place.

SOLUTION: Increase blowing machine air pressure.

CAUSE: Operator moving nozzle back and forth too rapidly.

SOLUTION: Slow down and establish a rhythm in spray application.

CAUSE: Operator standing too close or too far from the wall.

SOLUTION: Adjust distance to about 36"–40" from wall.

CAUSE: Installer using wrong angle on nozzle.

SOLUTION: Hold nozzle at approximately a 10° angle.

⚠ PROBLEM: Fiber too wet.

CAUSE: Imbalance of fiber to water ratio.

SOLUTION: Increase dry fiber flow. Reduce water flow. Check jets to ensure they are not worn. (It is advisable to do a bucket check here.)
Important: *Reducing pump water pressure does not compensate for worn jets.*

⚠ PROBLEM: Using too much fiber (not getting coverage).

CAUSE: Fiber too wet.

SOLUTION: Increase fiber flow to recommended rate. Reduce water flow to recommended rate.

CAUSE: Operator standing too close to wall.

SOLUTION: Adjust distance to about 40" from wall.

CAUSE: Air pressure too high on machine blower.

SOLUTION: Reduce air flow.

⚠ PROBLEM: Fiber settling or sagging at top of stud cavity.

CAUSE: Fiber too wet; imbalance of fiber to water ratio.

SOLUTION: Increase dry fiber or reduce water.

CAUSE: Density too light.

SOLUTION: Adjust spray distance to about 36" from wall.

CAUSE: Improper scrubbing techniques.

SOLUTION: See Scrubbing section in Application Technique Guide.

CAUSE: Improper spray techniques.

SOLUTION: See Spraying section in Application Technique Guide.

⚠ PROBLEM: Too much wet fiber left at end of job.

CAUSE: Improper planning.

SOLUTION: See Spraying section in Application Technique Guide. Details given to assist in keeping virgin to recycle ratio in balance.

Important Notes:

1. The portable moisture meter should be used throughout the project to ensure that the targeted 18-22% moisture content is achieved and maintained throughout the application.
2. If local building code requires that the walls must be covered with a one perm or less vapor retarder, the insulation needs to be dried to 15% moisture content or less before the vapor retarder is installed.

Equipment Settings: _____

Notes: _____

THE ULTIMATE WALL SYSTEM

To build the ultimate wall, combine JetSpray with ECOSEAL Plus™ Air Sealant to form a total air barrier within the building envelope. The ultimate wall provides better comfort, energy efficiency and sustainability. Become an authorized installer for both by visiting **ecosealplus.knaufinsulation.us**

JetSpray™ Thermal

Knauf Insulation, Inc.
One Knauf Drive
Shelbyville, IN 46176
Sales and Marketing ..... (800) 825-4434, ext. 8485
Technical Support..... (800) 825-4434, ext. 8727
Fax ..... (317) 398-3675
Information..... info.us@knaufinsulation.com
www.knaufinsulation.us

KNAUF INSULATION
it's time to save energy