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Commercial Spray Foam Insulation Equipment & Application Guide

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Commercial Spray Foam Insulation Equipment Guide

Spray Polyurethane Foam (SPF) insulation is well known as an extraordinary material for insulation and commercial roofing projects.

In fact, **spray foam insulation** is one of the most robust insulating materials available on the market right now, and builders and contractors commonly utilize it to insulate a wide range of commercial, residential, and industrial buildings.

SPF insulation can protect a home or building and act as a sealant against air and moisture infiltration, resulting in a more efficient structure with lower energy bills. **Commercial insulation** can also strengthen the roof and walls of a building, as well as protect it from mold and airborne particles.

Here are several other advantages of using **spray foam insulation**:

- Prevents air and moisture from entering a building
- Enhances comfort for building residents
- Reduces energy bills
- Strengthens a building's envelope
- Is robust and long-lasting
- Shields dust, pollen, and bugs from entering a building
- Improves indoor air quality
- Protects against ice dams

You can install SPF over many types of substrates, such as concrete, wood, steel, and most existing roof systems. Commercial insulation's versatile adhesive property can also help building owners save money on roof removal expenses and other related fees.



What Are the Various Types of Spray Foam Insulation?

To create **spray foam insulation**, a spray foam rig operator combines unique liquid components to react and form a foam substance. The liquids react quickly when you mix them, and they expand on contact to make a foam product that can seal gaps, insulate, and serve as a moisture and vapor barrier.

As you may know, SPF insulation can create a robust and airtight membrane that prevents air and moisture from entering or escaping the inside of a building. When considering the R-value, or the measure of resistance to heat flow, or other traditional insulating materials, it is crucial to realize that many alternative insulation materials do not create a tight air seal, which can lead to leaks and drafts, impacting the insulation layer's overall performance.



While the exact R-value of **spray foam insulation** can vary, contractors typically regard it as among one of the best choices for an insulating material with a high R-value.

Open-cell foam is the most common form of spray foam insulation and can range in density from 0.5 pounds per cubic foot to 1.2 pounds per cubic foot, with R-values ranging from R-3.6/inch to R-4.5/inch. Closed-cell foam, on the other hand, has a density ranging from 1.7 pounds per cubic foot to 2.2 pounds per cubic foot, and an R-value varying from R-5/inch to R-7/inch.

While every SPF type and application offers various benefits, here are several of the most common:

High-Density

Builders tend to use high-density foam for exterior and roofing applications, especially when they need high insulation values and durability. This foam has a denser structure than other types, so it does not expand as much as foam materials of lesser density, and it requires more material to cover and insulate a space.

High-density foam is a smart choice for roofing and other exterior insulation thanks to its seamless, uniform nature. It can help minimize energy costs over a roof's lifetime due to its thermal resistance. It also can provide maximum protection against air and water. The bond that high-density SPF forms to a roof can enhance a building's resistance to wind uplift, which can help minimize damage risk during high winds.

Medium-Density

A closed-cell spray foam, medium-density SPF is often used by contractors for continuous insulation, interior wall cavity fill, and unvented attic applications. You apply this type of SPF as low or high-pressure two-component polyurethane spray foam. Typically used when there is a need for the greatest R-value insulation per inch possible, medium-density SPF also acts as an air, vapor, and water barrier and can even help minimize noise.

Low-Density

Contractors often use this type of SPF, also known as open-cell foam, for interior wall cavity fill and unvented attic applications. Low-density SPF is also known as ½ pound foam because it weighs 0.5 lbs. per cubic foot. Its open-cell structure gives some flexibility to the hardened foam. You apply low-density foam as low or high-pressure, two-component polyurethane spray foam. It is most commonly known as an air barrier.

Most builders and contractors use low-density to fill cavities in walls during construction. Because low-density SPF has a large cell structure, it remains softer and more flexible than other SPF types after it cures. Its low-density structure increases the chance that the foam layer will continue to provide high insulation value even as a building settles over time. Additionally, the low-density foam can absorb sound due to its open-cell structure and softer texture.

The Commercial Spray Foam Insulation Equipment You Need in Your Toolbox

If you are ready to purchase **spray foam insulation equipment** for your SPF business, the Intech Equipment & Supply team of experts suggests researching and carefully considering the decisions you make about your investments now, as they will contribute to your future business success.

For starters, you should first consider the overall type of services you will be offering to your customers before you invest in any **commercial spray foam insulation equipment for sale**.

We recommend answering the following questions to help you better determine the appropriate size and wattage of the compressor and generator that you need:

- *Are you an SPF contractor that specializes in wall insulation? Do you ever spray commercial roofs?*
- *Are you a homebuilder? Do you depend on regular power sources on typical job sites?*
- *Do you offer services for customers who need SPF application for commercial and industrial roofs, air barrier systems, or, perhaps, even larger jobs?*



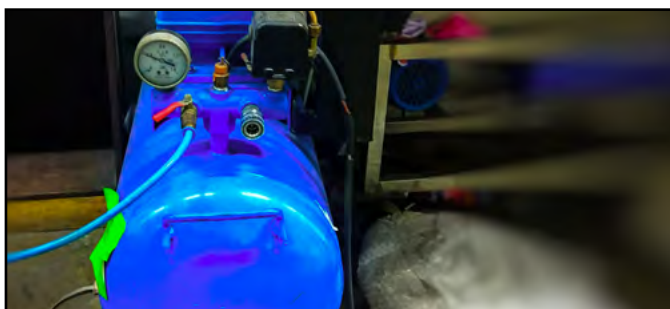
Building Your SPF Rig

The rig for your business may be a small SPF trailer, longer gooseneck, or a dedicated truck. The key to deciding which style is best for your needs is to not invest in more than you need, especially if you are just starting out in the industry.

In general, SPF insulation projects require approximately two to three sets of foam material, so the experts at Intech recommend that you regularly store at least this much product in your rig. Most contractors do not spray more than this amount in a single workday due to tight workspaces or less trigger time while having to maneuver from room to room, or via attics, crawlspaces, or basements.

Here are some primary components you should have on hand in your spray rig:

- **Reactor.** The centerpiece of your rig, a reactor is also known as a proportioner. The reactor is a machine that filters the A and B components, pressurizes them with dual pumps, and heats them up to 140 degrees Fahrenheit. The reactor allows you to monitor your spray foam with gauges as it progresses through the heated hoses.
- **Heated Hose.** The heated hose keeps **spray foam insulation** at the right temperature as it moves from the reactor to your spray gun. You can purchase hose in lengths of 50 feet.
- **Spray Gun.** The spray gun is the piece of **spray foam insulation equipment** where your dual spray components mix.
- **Generator.** A generator powers your spray foam reactor, compressor, rig lighting, heating, and outlets.
- **Drum Heaters.** If you work in a cooler area of the country, drum heaters can be helpful. Keep in mind that some rigs are already “foam insulated,” so a space heater can also make it easy to keep your product at the right temperature before sending it to the reactor.
- **Compressor.** A compressor powers the drum pumps on sides A and B, the agitators, spray gun, and the reactor.



Some Final Thoughts

Buying **commercial spray foam insulation equipment** is a big investment.

Careful planning and thinking about how you work can help you optimize your investment by ensuring your equipment and spray rig are ready to meet your needs now and down the road as your business grows.

At **Intech Equipment & Supply**, we can help steer you in the right direction when it comes to selecting the right **spray foam insulation equipment** for your business.

Contact us today for more information.

