

# Spray or

A good painter knows that prep work is everything. Once that's done, though, there are two choices for applying paint or stain: with a brush or roller, or with a spray gun. You'll find professional painters on both sides of the fence. Some stick with painting by hand, either because that's how they learned the trade or because their customers prefer it. Many others use spray equipment, either by itself or, more frequently, in tandem with brush and roller.

There's no question that spraying an exterior finish is much faster than brushing or rolling alone. But before pulling the trigger, spray painters have to make sure all surfaces are protected against overspray, the inevitable drift of atomized paint particles that bounce off the surface or are carried away by wind. This takes time, so the question becomes: Does the time saved by spraying the finish outweigh the effort of getting ready to spray?

The answer depends as much on the person who is holding the brush or sprayer as it does on the type of finish, the type of trim and siding, the time available, and the weather conditions.

## The case for spraying

Although many painters combine spraying with brush and roller work, there are circumstances where a sprayer alone is the best approach.

## Why I spray

People see the airless sprayer as a replacement for the brush and roller. It's not. I wouldn't use a sprayer without having a brush or a roller on hand to help spread the paint evenly without over-applying. That said, an airless sprayer is the fastest and most consistent way to get a lot of paint onto the building. It's like carrying 5 gal. of paint in your hand.

Hugh Schreiber  
Berkeley, Calif.

## SPRAY or BRUSH?

It all  
depends  
on ...

## ... what's in the can

	<b>Spray:</b> All exterior finishes can be sprayed, given the right spray-gun tip and paint viscosity. Thick finishes may need thinning to atomize properly.
<b>Paint</b>	<b>Brush:</b> Many paints can be applied right out of the can, although thinning can help thick paints to level out in hot or very dry conditions. Choose a good-quality brush that matches the finish: synthetic bristles for acrylics, natural bristles for oil-based paints.
	<b>Spray:</b> On bare wood, back-brush the surface after spraying to ensure even film and penetration.
<b>Stain</b>	<b>Brush:</b> Because stains are usually thinner than paints, watch for drips along edges. Keep a wet edge to avoid lap marks in the finish surface. If you have to stop midjob, look for a natural break, and cut to that point so that lap marks won't show later.
	<b>Spray:</b> Back-brush or back-roll for good penetration and even distribution on the surface. Thinning can help primer to penetrate the surface, but don't exceed the manufacturer's recommendations.
<b>Primer</b>	<b>Brush:</b> Thinning may help penetration.
	<b>Spray:</b> Overspray is more of a threat to distant objects because oil takes longer to dry. Oil paint's slower drying time allows it to flow out smoothly after spray application to a nearly flawless finish. Equipment must be cleaned with solvents that contain volatile organic compounds.
<b>Oil</b>	<b>Brush:</b> Application is slower, but brushing fills minute gaps and seams effectively, and using a brush gives you more control than using spray equipment. Some brush marks will be evident.
	<b>Spray:</b> Water-based finishes dry quickly. Atomized paint dries quickly and will fall as dust sooner, reducing chances of damage due to overspray. Paint sprayed in direct sunlight on a hot day may not have a chance to flow to a smooth surface before it dries. Additives such as Floetrol help.
<b>Latex</b>	<b>Brush:</b> The finish may dry too quickly in direct sunlight. An additive such as Floetrol can help paint to level before it dries.

# Brush?

Consider prep time, conditions, and cleanup to determine the fastest way to tackle an exterior paint job

BY SCOTT GIBSON

Rhode Island painter Tim Leahy found one such opportunity in the restoration of a period brick home in Newport, R.I., where carpenters had installed a wide band of complex trim at the top of the second story. The house had already been staged, allowing painters to move quickly. Although masking off the wall below the trim took an hour, it took one painter just 30 minutes to spray a 60-ft. section of soffit, a job that would have taken two painters with brushes half a day to complete.

Easy access and calm winds helped to guarantee a high-quality spray finish in a very short time. A smooth substrate also helped: The trim was sprayed with primer before it left the shop. After installation, nail holes were puttied, the surface was resanded, gaps were caulked, and the trim was primed again.

That's the key to a good spray-only finish. Aluminum siding, metal meter boxes, and smooth metal fencing—the smoother the surface, the better it responds to a spray gun alone. In the hands of a skilled painter, a spray gun leaves a blemish-free finish without roller or brush marks.

## When it's best to break out the brushes

Nonetheless, it takes time to set up a sprayer, to mask off areas to be protected, and to clean the equipment at the end of the day. When that outweighs the speed advantage of spraying, out comes the brush or roller.

Stan Hallett found that to be the case as his crew repainted a sprawling condominium last summer in a Portland, Maine, suburb. Although a sprayer made sense on the sidewalls, it was easier to paint the simple trim by hand because nothing had to be masked. As one painter applied solid



## ... what's being painted

<b>Wood shingle</b>	<b>Spray:</b> A spray gun spreads finish effectively into cracks between shingles, but make sure to back-brush on at least the first coat to ensure even penetration into pores of wood.
	<b>Brush:</b> Provides more control when working near plants, trim, and other surfaces that could be damaged by overspray, but is much slower. Watch for drips along the bottoms of shingles.
<b>Clapboard (wood or fiber cement)</b>	<b>Spray:</b> Application is fast, but back-brush on the first coat. Sand the surface of wood clapboards first to eliminate slick surface called "mill glaze" that can hamper the penetration of finish. Fiber cement usually comes preprimed.
	<b>Brush:</b> Application is slower but offers more control in tight spots. Be wary of mill glaze.
<b>Brick</b>	<b>Spray:</b> Application is fast as long as masking windows and trim isn't overly complicated. Brick must breathe, so use an acrylic finish. Back-roll after spray application. Use an alkali-resistant primer.
	<b>Brush:</b> Provides more control, but application is slower. For small areas, brush application may be faster than spraying when masking is considered.
<b>Concrete</b>	<b>Spray:</b> Large areas with minimal masking can be finished quickly. Back-roll at least on the first coat.
	<b>Brush:</b> Rolling is much faster than brushing, although not as fast as spraying. For small areas where masking is required for spray equipment, rolling may be the best option.
<b>Vinyl siding</b>	<b>Spray:</b> Vinyl's smooth surface may mean no back-brushing is required. Make sure surface chalk and mildew are removed.
	<b>Brush:</b> Brushing is faster when the surface to be finished is relatively small or required masking is extensive. The finish surface probably won't be as smooth.
<b>Intricate trim</b>	<b>Spray:</b> Much faster than brushing detailed profiles, especially when trim can be painted before windows or siding is installed and masking is held to a minimum. Count on back-brushing at least the first coat unless the prepped surface is very smooth.
	<b>Brush:</b> Although slower than spraying, brushing offers more control. No masking is necessary, so it may even be faster when trim is not extensive or especially complicated.

## Why I brush

My customers really don't want to know anything about sprayers because they think it's going to get all through their ventilation system.

I learned how to paint by hand, and my customers are willing to pay me to do that. But if I was starting out in painting, if I was trying to start up a business, I would be seriously looking into how to operate a sprayer.

Brian Doherty  
Ashland, Va.



**SPRAY**  
or  
**BRUSH?**  
It all  
depends  
on ...

**... who's doing the painting, and with what**

<b>Experience of crew</b>	<p><b>Spray:</b> Advertisements featuring inexperienced homeowners applying flawless finishes are unrealistic. No one learns how to spray overnight, so expect some missteps in the beginning, such as overspray, finishes that go on too thick or too thin, and improperly thinned paints. Choosing the right tip and gun pressure and knowing when to thin and how to cope with weather variables take years of practice.</p> <p><b>Brush:</b> Much easier to learn, but experience is still valuable, especially when it comes to painting complex trim, window muntins, door panels, and similar elements. Knowing when and how to thin paint or use additives takes experience.</p>
<b>Size of crew</b>	<p><b>Spray:</b> One person with a spray gun and two others to handle masking, small areas of trim, and other details are enough to paint a small house in three to five days, depending on the complexity of the job.</p> <p><b>Brush:</b> To paint the same house by hand would take the same crew five to six days, all things being otherwise equal.</p>
<b>Equipment</b>	<p><b>Spray:</b> A homeowner-grade airless sprayer is fine for simple jobs under good conditions, but it won't atomize the finish as effectively, is noisier, and doesn't offer the same range of adjustments as professional-quality equipment. A pro-level kit can easily top \$2000.</p> <p><b>Brush:</b> Much less expensive to get started. Whether you brush or spray, you'll still need ladders, drop cloths, and possibly staging.</p>

stain to clapboard and shingle walls with a gun and brush, a second followed with just a brush for the trim.

Hallett and Leahy both weigh the circumstances carefully before they make their choice. "Why would we go through all the hassle of spraying when we can just fly right along with a brush?" Leahy asks. "We make our decision based on complexity and how much time we can save. If you have a big soffit with corbels and brackets and decorative trim, it'll take two guys all day to paint with a brush, and you can spray it in an hour. If you have a simple trim detail that two guys can knock out in a half-hour by brush, then you lose the reason to spray."

Sticking with a brush or roller also makes sense when there isn't much paint to apply. "It always comes down to the volume of paint," says Berkeley, Calif., contractor Hugh Schreiber. "If you're doing less than a gallon of paint, I would say it's not worth cleaning the sprayer."

Working around lots of obstructions is another reason to stick with a brush, Schreiber adds. In an area with lots of windows, doors, and fixtures, it may not be worth the effort to mask everything.

Other painters apply finish exclusively by hand because that's what their customers expect. Brian Doherty, a Richmond, Va., area painter, never uses spray equipment even though he's

**... time factors**

<b>Preparation</b>	<p><b>Spray:</b> Same as for brush painting; the additional task of masking windows, doors, and roofing on a 2500-sq.-ft., two-story house might add half a day for a professional crew.</p> <p><b>Brush:</b> Basic surface prep, but no masking.</p>
<b>Application</b>	<p><b>Spray:</b> Huge time advantage for complex trim and large expanses of wall. Depending on site conditions and the surfaces being painted, application could be 10 times as fast.</p> <p><b>Brush:</b> Application much slower.</p>
<b>Dry time/recoating</b>	<p><b>Spray:</b> No significant difference, although sprayed finishes may dry marginally faster because the paint film is thinner.</p> <p><b>Brush:</b> A heavy coat will take longer to dry than a thin coat applied by a spray gun.</p>
<b>Cleanup</b>	<p><b>Spray:</b> 15 minutes or so to clean lines and gun tips in solvent (water or paint thinner), plus time to clean any brushes and rollers that are used and to remove and dispose of masking materials.</p> <p><b>Brush:</b> Somewhat faster.</p>

**... conditions**

<b>Wind</b>	<p><b>Spray:</b> A very light breeze in an area where overspray isn't an issue is OK. As soon as the wind starts to affect the spray pattern, work should stop. Atomized paint carried off by the wind means more wasted materials and increases the risk of damage to plants, cars, and other parts of the building.</p> <p><b>Brush:</b> Wind has much less of an effect, although it can cause finishes to dry too quickly, especially in direct sunlight.</p>
<b>Heat</b>	<p><b>Spray:</b> Surfaces that dry too quickly may not level properly. Avoid spraying in direct sunlight, especially as the mercury climbs.</p> <p><b>Brush:</b> Brushing in direct sunlight also can mean an uneven surface. An additive can help by increasing the drying time.</p>
<b>Cold</b>	<p><b>Spray:</b> Follow manufacturer's recommendations on minimum temperature, and make sure the surface will stay at the temperature while the paint dries, not just at the time of application.</p> <p><b>Brush:</b> Same considerations as for spraying.</p>
<b>Humidity</b>	<p><b>Spray:</b> Very high humidity can trap moisture in the paint film, causing it to blister.</p> <p><b>Brush:</b> Same considerations as for spraying.</p>

**Choosing spray equipment**

An airless sprayer is the most common choice for painting professionals. As the name suggests, an airless system does not use an air compressor as a means of atomizing the finish. Instead, a powerful pump forces the paint through a tip at very high pressure (3000 psi or

more), causing it to break into tiny droplets.

According to Jeff LaSorella, owner of Finishing Consultants in Seattle, airless sprayers get a higher percentage of paint on the surface than either conventional high-pressure guns or high-volume low-pressure

(HVLP) equipment. This "transfer rate" is 70% with an airless sprayer, versus as little as 35% with a high-pressure gun powered by an air compressor and 65% for an HVLP sprayer.

Less common but even more efficient are Airmix or air-assisted sprayers, according

to LaSorella. Airmix, a proprietary technology owned by a company called Kremlin, uses a pump to develop hydraulic pressure at the tip while slight air pressure helps to disperse paint particles in a fan-shaped pattern. LaSorella says transfer rates of 90% are possible. Air-



## Paint-spraying pointers

Manuel Fernandes, chief inspector for the Master Painters and Decorators Association and a professional painter for 34 years, offers these suggestions for anyone using spray equipment:

- Always work in the shade. Paint sprayed on a substrate in direct sunlight dries too quickly and doesn't adhere well.
- Be wary of wind. When wind is affecting the spray pattern or when spray drift is obvious, stop spraying.
- Always back-roll or back-brush after applying a first coat of paint or stain by sprayer.
- Most finishes can be reduced for better atomization and a smoother finish by following directions on the can for thinning.
- Never paint (by brush or spray) when the humidity is greater than 85%.
- Multiple thin coats are better than one thick coat.
- Let paint cure thoroughly between coats.

assisted airless spraying uses similar technology to achieve a transfer rate of 75%.

Although airless sprayers are highly efficient, they carry risks. Extremely high fluid pressure can cause injury if the tip comes into direct contact with skin. Never remove the gun's guard.

Airless sprayers start at less than \$200 at big-box stores, but expect to pay more for professional-quality equipment with higher pressure at the tip for better atomization, longer hoses, and greater durability. Air-assisted equipment is even pricier. For example, while

Graco's model 390 professional airless sprayer is available for \$700, the price rises to \$1650 for the air-assisted airless model. The smallest Airmix Kremlin, a top pro brand, starts at around \$2500 for the pump and gun. Professional-quality equipment may be rented from a local big-

box store or rental center. For about \$80 a day, The Home Depot rents an Airlessco airless sprayer that retails for more than \$1500. If you rent, make sure you get the right tip size for the finish you're using, and check that filters and hoses are clean before you leave the store.

well aware of its speed advantages. Why? First, because that's how he learned the trade. And second, his traditionally minded customers don't want spray equipment in or around their homes for fear of damage from overspray.

### Combining spray and stroke

Spraying gets a lot of finish on the surface quickly and evenly, and a brush or roller works the finish into the surface for good penetration, better coverage, and ultimately, better durability. Combining the two—called back-brushing or back-rolling—offers all the advantages of both.

"Spraying by itself would be wonderful if it worked well because it's very quick," says Hallett. "But it doesn't do a good job. That paint is going to be gone in 10 years. We spray only as a means of getting the paint onto the surface."

Hallett's technique is common. After masking off nearby surfaces, a painter sprays a section of wall, then works the same area with a brush or roller to even the coat and push paint into the surface. The paint film is more uniform, and the pressure from the gun forces paint into all the depressions that a brush or roller by itself might not reach. Surfaces with uneven texture, such as rough-sawn clapboards, shingles, and split-face masonry block, are especially well suited to this approach.

Manuel Fernandes, chief inspector for the Master Painters and Decorators Association, says new work always should be back-rolled or back-brushed on the first coat. "If you spray it only, the paint just sits on top of the substrate," he says. "You're not forcing the paint into the pores of the wood."

But back-rolling or back-brushing on subsequent coats is a judgment call. Rough-textured surfaces may benefit from a second round of back-rolling or back-brushing, but a sprayed second or third coat on a smoother substrate may not need any further attention. That's where experience counts. □

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