Campbell Hausfeld

Finish Nailers: Hands-On Review

The right air nailer can increase the speed and improve the quality of your finish work

by Steve Farrell

I started using pneumatic finish nailers ten years ago, to help speed up production and do a better job on the larger projects we'd started taking on. Now I use them for everything, from hanging and casing doors to applying exterior trim. I keep three compressors and seven nailers going every day, and I have carpenters on my crews who have grown so accustomed to using them that they might not know what to do with a hammer and finish nail.

The decision to invest in a pneumatic nailing system shouldn't be taken lightly. In addition to the nailer, which costs between $300 and $600, you'll have to buy a lot of support equipment at startup — compressor, hoses, fittings — and you'll need some time to put the pieces together and get comfortable with them. But once you've used an air nailer for finish work, you'll have a hard time going back to nailing by hand.

Fast, Accurate, and Clean

The obvious advantage air nailers have over hand nailing is speed. Finish nailers are capable of driving between three and twelve nails per second — fast enough to keep up with even the speediest carpenter.

Pneumatic nailers also improve accuracy and quality because they drive the nail with a single stroke. Instead of having to hold the nail in one hand and the hammer in the other while clamping the trim material in place with your knee or elbow, pneumatic nailers give you a free hand to hold the material. Once you've got it where you want it, you don't have to worry that your hammering will move it. The action of the nailer driving the nail is so fast that the piece has no chance of slipping. You'll also find that you can drive a nail with an air nailer in spaces so tight you could never swing a hammer.

On top of this, you don't need to predrill because the blunt tips on the nails are less likely to split the wood, even when driven near the ends. There are no hammer marks and because most air nailers have rubber tips to protect the work, the drive tip leaves no marks either.

Air nailers also automatically set the nails to an adjustable, predetermined depth, so you don't have to go back and do it by hand. On most nailers, you control the depth of the set by adjusting the air pressure. Some, like the Hitachi, Bostitch, and Paslode Impulse nailers, allow you to make the adjustment at the tip, which is very convenient when you switch from softwood trim material to hardwood. You can also use an in-line pressure valve, like the Spot Regulator (EMC, P.O. Box 37980, Omaha, NE 68137; 402/333-2590).

On-Site Setup

One drawback to using power nailers — with the notable exception of the Paslode *Impulse* (see "No Hose, No Hassle," last page) — is the amount of equipment you need to haul around and the time it takes to set it up. But if you need to hang more than one door or trim out more than one window, pneumatic finish nailers are the way to go.

We use small, portable air compressors for our nailers because they're compact and lightweight (our large compressors are usually running framing guns on other sites). We almost always run at least two nailers at a time, and can easily run twice that many with a four-way quick connect jack on the air line. The small compressors have never given us any trouble under that load.

If we're working on a whole house, we set up the compressor in the center of the building and use long hoses. If it's a very large house, we set up to do one half, then move everything to do the other half. All our fittings are interchangeable, so we never have a compatibility problem with connectors on either the guns or the hoses.

Nails

All finish nailers shoot small finish nails or brads collated in strips. The larger gauge finish nails (14 to 15 gauge) are similar in diameter to

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Bostitch N60FN-2

Stanley Fastening Systems, Rt. 2, East Greenwich, RI 02818; 800/556-6696
Nails: 15 ga., 1¼"-2½", finish head **Capacity:** 100
Nail Brand: Stanley Bostitch
Loading: Rear
Weight: 4 lbs. 6 oz.
Exhaust: Front and down
Safety Device: Internal
Unjamming: Automatic
Set Adjustment: "Dial-A-Depth"

This is a very well balanced, lightweight nailer that requires only light trigger pressure. The unjamming mechanism is automatic: When a nail jams, the cover panel at the tip pops open. The "Dial-A-Depth" set adjustment is a nice touch and works well. One of the few things we don't like about this nailer is that it uses only Bostitch nails.

Campbell Hausfeld NB0065

Campbell Hausfeld, 100 Production Dr., Harrison, OH 45030; 800/543-8622
Nails: 16 ga., 1¼"-2½", brad head **Capacity:** 100
Nail Brand: Campbell Hausfeld, Paslode, Hitachi, Duofast, Atro
Loading: Side
Weight: 5 lbs. 10 oz.
Exhaust: Front and down
Safety Device: External
Unjamming: Allen wrench
Set Adjustment: Air pressure

This nailer is light and well balanced, and it's easy to see the tip and place the nails. There is no rubber fitting on the tip (Campbell Hausfeld is working on one), so it marks the work and provides no friction for toenailing. The nailer requires heavy pressure to pull the trigger, which could be tiring if you used it all day. Campbell Hausfeld has a good selection of color-coded repair kits.

Duofast HFN-880C

Duo-Fast Corp., 3702 No. River Rd., Franklin Park, IL 60131; 708/678-0100
Nails: 15 ga., 1¼"-2½", finish head **Capacity:** 100
Nail Brand: Duo-Fast
Loading: Side
Weight: 7 lbs.
Exhaust: Perimeter of head
Safety Device: Internal
Unjamming: Slide magazine
Set Adjustment: Air pressure

This nailer is big and bulky. The safety bumper stands out beyond the front of the gun, making it difficult to judge where the nail will enter the wood. The exhaust is not deflected and puffs out the side of the head in all directions. It's easy to fix a jam because the nail guide slides back with the magazine, exposing all of the nails in the strip.

Fasco F3T FN70

Fasco America, 105 Industrial Park Dr., P.O. Box 2389, Muscle Shoals, AL 35662; 800/239-8665
Nails: 16 ga., 1⅛"-2¾", brad head **Capacity:** 130
Nail Brand: Fasco, Hitachi, Paslode
Loading: Side
Weight: 4 lbs. 13 oz.
Exhaust: Front and down
Safety Device: External
Unjamming: Allen wrench
Set Adjustment: Air pressure

The safety guide on this nailer is external, but it's small and doesn't interfere with your line-of-sight to the tip. It's on the loud side, but very well balanced and has a great feel. The hose connection is offset and out of the way, a nice feature.

Fasco F4 BA 65

Fasco America, 105 Industrial Park Dr., P.O. Box 2389, Muscle Shoals, AL 35662; 800/239-8665
Nails: 16 ga., 1⅛"-2½", brad head **Capacity:** 90
Nail Brand: Fasco, Hitachi, Paslode
Loading: Side
Weight: 6 lbs. 2 oz.
Exhaust: Front and down
Safety Device: External
Unjamming: Allen wrench
Set Adjustment: Air pressure

This nailer is virtually identical to the F3T FN70, except it has an angled magazine. It is very maneuverable in a tight area and has a great feel. This nailer is the only one we tried that is made to accept any generic brand of angled nail.

Haubold SKN 64 A/16

Haubold of America, P.O. Box 538, Morristown, TN 37815; 615/587-3913
Nails: 16 ga., 1 3/16"-2 1/2", finish head **Capacity:** 75
Nail Brand: Haubold
Loading: Top
Weight: 4 lbs. 12 oz.
Exhaust: Front and down
Safety Device: External
Unjamming: Allen wrench
Set Adjustment: Air pressure

This is a very light, well-balanced nailer that needs only a light touch on the trigger. It has a good line-of-sight, despite the external safety device, and it didn't mark the trim even though it has no rubber tip. As with some other nailers, long nails hang out beyond the bottom of the magazine, although this never caused the nails to uncollate or jam.

Hitachi NT65A

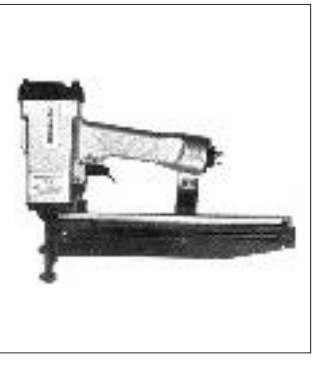
Hitachi Power Tools, 4487-E Park Dr., Norcross, GA 30093; 800/548-8259
Nails: 16 ga., 1"-2 1/2", brad head **Capacity:** 150
Nail Brand: Hitachi, Paslode
Loading: Top
Weight: 4 lbs. 10 oz.
Exhaust: Front and down
Safety Device: Internal
Unjamming: Allen wrench
Set Adjustment: Tip or air pressure

This nailer is very lightweight and well balanced. Its nail capacity is one of the largest of the nailers we looked at, and you can adjust the set with an allen wrench at the safety tip. Unfortunately, as with several other guns, you also need the wrench to get at a jammed nail.

Paslode 3250-F16

ITW Paslode, Two Marriott Dr., Lincolnshire, IL 60069; 800/323-1303
Nails: 16 ga., 3/4"-2 1/2", brad head **Capacity:** 150
Nail Brand: Paslode
Loading: Top
Weight: 4 lbs. 7 oz.
Exhaust: Front and down
Safety Device: External
Unjamming: Automatic ejector
Set Adjustment: Air pressure

This nailer comes with a carrying case and is similar to the hoseless 250 Impulse, except it's air-driven and has no set adjustment on the tip. It also handles the widest range of nail sizes of any nailer we tried. When you flip down the nail guide, it automatically ejects jammed nails.



Senco SFN1

Senco Products, 8485 Broadwell Rd., Cincinnati, OH 45244; 800/543-4596
Nails: 15 ga., 1"-2", finish head **Capacity:** 104
Nail Brand: Senco
Loading: Rear
Weight: 4 lbs. 5 oz.
Exhaust: Front and straight out
Safety Device: Internal
Unjamming: Snap-off panel
Set Adjustment: Air pressure

This tool is part of Senco's *PowerPlus* line and requires no lubrication. It has a very convenient snap-off cover on the guide so it's easy to get at jammed nails. Balance and line-of-sight are good, but the nail range is limited.

Senco SFN2B

Senco Products, 8485 Broadwell Rd., Cincinnati, OH 45244; 800/543-4596
Nails: 14 & 15 ga., 1 1/2"-2 1/2", finish head **Capacity:** 100 (15 ga.), 90 (14 ga.)
Nail Brand: Senco
Weight: 7 lbs. 8 oz.
Exhaust: Front and straight out
Safety Device: Internal
Unjamming: Snap-off panel
Set Adjustment: Air pressure

This nailer has good visibility to the tip and requires only light pressure on the trigger. It's similar to the SFN1, although it's much heavier — in fact, it's one of the heaviest nailers we tried. Senco makes several repair kits for each of its nailers to replace O-rings, pistons, and drive pins.

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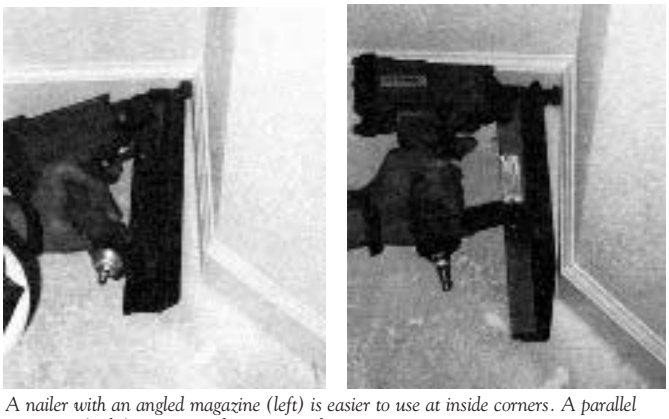
4d, 6d, or 8d finish nails, have a finish-nail head, and are collated on an angle. This means the magazine is also angled, which helps with toenailing and lets you get the nailer into tight spots (see photo at right). We use the larger gauge finish nails for doors, mantels, heavy crown molding, and exterior trim.

Brads are smaller than finish nails — usually 16-gauge — with small T-shaped brad heads. They are vertically collated, so the magazine is square to the head and runs parallel to the handle of the air tool. This squared-off shape is not as streamlined as the angled version, but brad nailers compensate by being smaller and lighter. Brad nailers also accept a greater variety of nail lengths, and the nails are 20% to 30% cheaper than finish nails. They can be used for casing, baseboard, and most standard moldings, including cove, plant-on moldings, and small crown moldings.

It makes sense that a T-shaped head would hold better than a round finish head, but I haven't really noticed much difference between the two. T-shaped heads used to be much bigger and punched a fairly noticeable hole in the surface of the wood, but this is no longer the case.



A nailer with an angled magazine (left) is easier to use at inside corners. A parallel magazine (right) can get in the way in tight spaces.

Generic vs. name-brand nails. Finish nails are usually sold by the case (about 4,000 nails) and most tool manufacturers have their own name-brand fasteners. Some tools, however, accept nails made by other tool manufacturers, which can make buying nails easier and cheaper.

By contrast, generic nails are designed to fit more than one manufacturer's nailer and cost less. It used to be that no-name nails were not much of a bargain. The price was right, but the cost in aggravation was too high. I once grew so frustrated with the nail jamming caused by miscollated nails that I threw away my entire inventory of generic nails.

With the exception of Fasco, which endorses the use of generic fasteners in their nailers, most manufacturers specify their own nails for use in their tools. Some also

Air Nailer Sampler

Many of the criteria my crew and I used to evaluate finish air nailers are subjective. The following key will help you to decipher our terminology and explain the factors we considered in each category.

Weight: A heavy tool can be just as comfortable to use as a light one, if it's well-balanced.

Balance: The better a tool is balanced, the longer you can work with it without fatigue. We checked for balance with the airhoses disconnected. Using a 3/8-inch airhose will have less effect on balance than heavier hoses.

Exhaust Location and Direction: The main consideration is whether or not the exhaust is directed away from your face. I prefer exhaust ports on the front of the nailer that blow the exhaust down toward the tip.

Tip Marking: Nailers with rubber tips won't leave a mark on the finish material. Most manufacturers supply these with the tools, but for others you may have to buy them separately.

Trigger Pressure: The operator is less likely to get fatigued if the trigger requires a light to moderate pull to actuate the drive pin.

Recoil: Less recoil means less fatigue and less chance of accidentally driving two nails in quick succession when you only wanted one. Recoil also depends on the length of the nail you're driving and the hardness of the material you're working with.

Internal Safety Device: The trigger is locked until the tip is depressed, but the mechanism is concealed inside the nailer where it doesn't interfere with the operator's line-of-sight.

External Safety Device: The trigger is locked until a metal apparatus encircling the tip is depressed. Depending upon its design and size, the safety mechanism can block your view of the tip.

Unjamming: Having to use an allen wrench is inconvenient, and no manufacturer provides a place to store the wrench on the tool. Automatic ejector-type devices are preferred. Jams are easy to fix on side-loading brad nailers that expose a jammed nail when you pull back the magazine.

Loading: Side-loading nailers should have a magnetic bar to hold the nails in the carrier when you remove your hand to slide the magazine cover back into place.

Noise: We deliberately went without ear protection to check loudness. The nailers we have characterized as loud were significantly louder than most of the others.

Set Adjustment: The set of the nails can always be adjusted by increasing or reducing air pressure. Any means of adjusting the set at the tip is preferable, however, because it gives you a second method and lets you make the adjustment on the spot.

Line-of-Sight: An angled magazine is generally better than a parallel magazine because the nails are out of your way. I like to use the safety tip to judge where the nail will hit, so the most important factors are the size and location of the tip.

Nail Brand: Most manufacturers produce their own brand of fasteners, and some nailers will accept several brands. These are listed in the specs for each tool. We have assumed that most of these nailers can also use generic nails, although only one manufacturer, Fasco, recommends it.

— *S. F.*

specify other name-brand nails.

Despite the fact that they are in the fastener business and want to sell their nails, manufacturers have legitimate safety and maintenance concerns. Tolerances are pretty close on finish nails, and even a slightly imperfect match can damage the tool and create the danger of misfires.

But generic nails have come a long way in the last two years. I haven't had any trouble with collation or misfiring recently and I now use them regularly. Most material suppliers and lumberyards carry generic nails to fit several brands of nailers. You can also get them from mail-order suppliers, although the freight charges reduce the savings.

Maintenance

Moisture and dirt are the enemies of pneumatic air nailers. Moisture in the form of water vapor in the air supply condenses inside the tool, where it can rust the metal parts and corrode the rubber O-ring seals. In cold weather, condensed water in the lines and tool can turn to frozen slush and slow the tool down or stop it altogether.

Dirt enters through the nose piece and the air line. Drywall dust particles, which are extremely small, can quickly spread to every nook and cranny inside a gun or compressor, where they are especially abrasive to the cylinders and rings.

Fortunately, you can protect your equipment by taking a few precautions. To ensure a clean air supply, make sure you have an intake air filter on your compressor. These are usually made of foam or pleated paper and should be cleaned weekly (daily if the air on site is unusually dusty) and replaced when they get really dirty. An in-line filter will trap particles that get by the intake filter and rust particles from inside the air tanks. To reduce the amount of moisture in the air supply, drain the tanks at least once a day, more often in cold or very humid weather. As a last line of defense, always take time to blow out your hoses before connecting your nailers. This will clear dirt from the lines, and it is especially important in cold climates to clear out any water that might freeze up.

The best protection you can give a pneumatic finish nailer is to lubricate it regularly (except for Senco's Power Plus nailers, which require no oil). The best way to do this is with an automatic oiler on the end of the nailer. Not all oils will work, however, and some may even be harmful, so be sure to follow the manufacturer's recommendations. If you follow these precautions, you should have very little problem with upkeep. In fact, I haven't had to tear a tool down in four years.

When your nailers do need repair, you can usually take them back to the dealer or to an authorized tool repair shop. If you like to poke around in the innards yourself, all manufacturers can supply parts, and some supply repair kits for pistons, drive pins, O-rings, and other parts that are most likely to wear.

Safety

Even though most finish nailers are not that loud, you should always wear ear protection because the confined workspace of a building's interior reflects and magnifies the sound. Eye protection is important, too. Placing a finish nail accurately often means that your eyes are close to the head of the nailer and exposed to the exhaust. We wear safety goggles and prefer to use guns that direct the exhaust down toward the tip from the front of the gun. Safety goggles will also protect your eyes from small pieces of wood and misfired nails.

My crews have over 30 years of combined experience with air tools, but we still have a tailgate safety meeting every two weeks. Whenever I buy a new gun, I review its features with the crew, and we all make it a point to keep an eye out for potentially dangerous situations on site. Most accidents happen when the tool operator is fatigued, which is one reason weight and balance are so important with air nailers. I guess we've been lucky, but we've never had a serious air nail injury. ■

Steve Farrell is the son in a father-and-son remodeling and restoration team that has served the San Francisco Bay Area for thirty years.

No Hose, No Hassle: The Paslode Impulse

The Paslode model IM250F Impulse finish nailer — sometimes called the "Trimpulse" — needs no compressor or hoses. Instead, it contains a simple internal combustion "engine" that burns MAPP gas from a fuel canister. A 6-volt ni-cad battery provides the spark to ignite a measured amount of fuel and also provides power to a small fan that aids combustion, cools the engine, and blows out the exhaust from the explosion that drives the piston. A single fuel cell will drive about 2,500 nails and the battery will easily last twice that long.

The Impulse is bulkier than some of the other nailers we looked at, but the extended tip provides excellent maneuverability and good line-of-sight. It's by far the most convenient to use because it has no hoses and it accepts a wide range of nails — from 3/4 inch to 2 1/2 inches. The carrying case, which is about the size of a piece of carry-on luggage, holds the nailer, up to 5,000 nails, and two fuel cells — everything you need to handle miscellaneous punchlist details and production trim work.

The biggest drawback is the exhaust. It comes out of the top of the head, and even though it doesn't puff in your face, it contains carbon monoxide. You'll need to open a window or provide ventilation if you use this nailer for any length of time in a confined space. The Impulse is also the loudest of all the nailers we looked at, so the operator and everyone in the work area should wear ear protection.

The Paslode IM250F Impulse sells for between $600 and $800 (including the case), which is quite a bit more than most trim nailers. But without a lot of support equipment to purchase and maintain, and with the convenience the tool affords, I think it's a pretty good value. — *S. F.*

ITW Paslode, Two Marriott Dr., Lincolnshire, IL 60069; 800/323-1303
Nails: 16 ga., 3/4"-2 1/2", brad head
Capacity: 150
Nail Brand: Paslode
Loading: Top
Weight: 6 lbs.
Exhaust: Front and up
Safety Device: Internal
Unjamming: Automatic ejector
Set Adjustment: Interchangeable rubber tips