



# Compact Compressors

**Small, quiet, and lightweight, these air compressors handle a bit of everything** **BY PAUL JOHNSON**

**W**hen you're standing at the front door looking up a three-story staircase leading to a small bathroom remodel, there's no better feeling than knowing that you won't have to lug a 75-lb. twin-stack air compressor up and down every day. Many builders are supplementing their large compressors with compact models designed for small trim jobs, punch-list work, and even light framing.

I cycled through 14 compressors—each 2 gal. or less—and picked the eight best for those times when you don't want to bring in the big guns. The timing couldn't have been better, either. I had just begun trimming out a new house as well as working on a kitchen and master-bath remodel. Between these jobs, I had plenty of chances to load and unload compressors, move them around sites, and use a variety of air tools from framing to finish.

The challenge in picking out the best small compressor is that every user has a different idea of what features are most important.

Some favor light weight and a low noise level over tank capacity and output. Others want compressors that have high volume and output and that are still portable. I focused on a healthy mix of compactness, portability, quietness, and output. In the end, I chose the best compressors based on how I use them as a remodeling contractor. Your mileage will vary, though, so it's important to understand the basic specs and criteria of a compressor (see p. 76) before looking at the descriptions and specifications for each model.

My pick for best value was a no-brainer: The Senco model achieves a time-tested balance between cost and quality. The pick for best overall was much harder and came close to a three-way tie. In the end, though, I found that the larger Grip-Rite model had the most features that I consider desirable for everyday use.

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What you see here are eight compact air compressors that stood out from the crowd. To see a full assessment of each of the 14 compressors and to weigh in with your own review, visit [FineHomebuilding.com/toolguide](http://FineHomebuilding.com/toolguide).

## THREE FEATURES TO CONSIDER

### 1 SHOTS FIRED

To test the compressors, I used the three nailers most common in my day-to-day operation: an 18-ga. brad nailer, a 15-ga. angled finish nailer, and a framing nailer. To maintain consistency, I didn't change nail sizes during my tests, and I set each compressor at 100-psi output.

### 2 RECOVERY SPEED

Recovery speed is the amount of time it takes for a compressor to refill to 100 psi. If the tank refills slowly, then you have to put up with the noise of the motor and the risk of production coming to a halt while you wait for the compressor to catch up. Because some of the compressors are rated for only half-duty or less, the more the motor runs, the greater chance it has of burning out with overuse.

	18-GA. BRAD NAILS	15-GA. FINISH NAILS	FRAMING NAILS	RECOVERY SPEED in seconds	NOISE LEVELS in decibels
BOSTITCH	15	4	4	:08	88 db.
DeWALT	13	5	4	:21	81 db.
GRIP-RITE GR100	13	4	4	:38	76 db.
GRIP-RITE GR152CM	25	8	6	:14	86 db.
JENNY	11	4	4	:05	89 db.
PORTER-CABLE	10	3	3	:15	80 db.
ROLAIR	14	5	4	:05	90 db.
SENCO	11	4	4	:31	75 db.

85 db.

### 3 NOISE LEVELS

One of the biggest complaints about compressors is that they're loud. The compressors here have decibel levels that range from refrigerator quiet to heavy-truck-traffic loud. In making sense of the comparisons, remember that the human ear perceives a 10-db. gain as roughly twice as loud, and a 20-db. gain as roughly four times as loud. Generally, noise levels below 85 db. are considered to be safe without hearing protection.

## SEVEN SPECS TO UNDERSTAND

#### PRICE

Models tested range in price from roughly \$100 to \$400, with the majority being in the mid-\$100s. The big sacrifice at the lower price point is longevity: Components are of lesser quality, and motors aren't rated for continuous duty. An overworked compressor will wear out in short order. Higher-priced compressors typically have better components and are rated to run continuously.

#### WEIGHT

These compressors weigh from a wispy 20 lb. to a stout 50 lb. Just as important as weight, though, is ergonomics. When you're carrying a compressor, one of the more annoying things is to have it constantly bumping against your leg. You'll see a wide range of carrying styles, from single suitcase-style handles to two-handed rubber grips. When buying a compressor, consider how often and in what capacity you'll be moving it.

#### CAPACITY

Capacity is the size of the compressor's air tank(s). For this review, we limited the field to tools sized 2 gal. and less. Put simply, more capacity means more air can be stored, which means more nails can be fired before the compressor has to refill. The pressure under which the air in the tank is stored also affects the output, but this category has a relatively narrow range of pressures, from 125 psi to 150 psi.

#### HORSEPOWER

For air compressors, horsepower translates to the amount of cubic feet per minute (cfm) that can be produced at a given pressure (more horsepower equals more possible cfm output). Peak horsepower and running horsepower are different measurements, and manufacturers often don't clarify which they list in their specs. When provided with both numbers, I chose to list peak horsepower, which is most likely what the other manufacturers will list.

## Bostitch CAP1512-OF

**Price:** \$145  
**Weight:** 22 lb.  
**Capacity:** 1.2 gal.  
**Power:** 2 hp  
**Output:** 2.8 cfm  
at 90 psi  
**Draw:** 12 amps  
**Lubrication:**  
oil free



**FEATURES** There's a whole lot to like about this compressor. It's fully enclosed in a simple roll cage that comes up to form a toolbox-style handle, and carrying it around feels about the same as toting a semi-loaded toolbox. The dials and gauges are on a metal panel on the face of the compressor, with easy access, good sightlines, and a backlit on/off switch. A built-in pocket at the back of the compressor holds small hand tools, accessories, or racks of nails. There's a cord wrap and a Velcro strap to hold tools or hoses, and two welded sections protruding from the face of the compressor for coiling an air hose. The compressor has a quick fill up and recovery time, with high operating psi and cfm, and it can handle running multiple tools without much problem.

**FLAWS** This model is a little louder than other comparably sized compressors in the review, and it also vibrates across the floor when it kicks on—a pet peeve of mine after once losing a compressor off the edge of a deck. The tank-pressure valve has a hair trigger, and more than once while carrying the compressor, I accidentally drained the tank and gave myself a good jump. My biggest concern with the compressor I tested was a noticeable burnt-electronics smell coming from the motor when the tool was being pushed hard.

**BOTTOM LINE** This tool is light, is portable, has plenty of capacity and power for small and even medium jobs, and is stable and compact. It was teetering on the edge of being best overall for most of my testing, but I couldn't talk myself out of worrying about the smell coming from the motor and what it might indicate about the tool's longevity.

### OUTPUT

Compressors rate their output in either cfm or scfm, sometimes both. The cfm (cubic feet per minute) rating is the measurement of how many cubic feet of air leave the compressor within a minute at a stated pressure, but it can be a misleading spec because it can be measured under any conditions, which can affect the outcome. The scfm (standard cubic feet per minute) rating is the flow rate of a gas that has been measured to

specific temperature and pressure conditions. Unfortunately, there is no definitive standard for what "standard" is. Some sources measure it at 60°F, others at 68°F, and they do so at anywhere from 0% to 50% relative humidity, with varying degrees of ambient air pressure. Pay attention to what cfm certain tools require at a specific pressure rating and whether the compressor is rated to handle that output.

### DRAW

The lower the amperage draw, the less likely the compressor will trip a circuit breaker when it kicks on. It also helps to have lower amperage when working in the cold, where the motor draws peak amps to get up to speed. Because of the varying quality of the motors, a higher or lower amperage draw does not necessarily correlate to the quality or size of the motor and should be examined in conjunction with other specs.

### LUBRICATION

You have two options: oil splash and oil free (sometimes called oilless). In general, oil-splash compressors are a bit quieter and have a longer running life, while oil-free compressors don't have to be lubricated manually but can be a bit louder and wear down more quickly. Newer generations of oil-free compressors are much better built than their predecessors, and the ones in this review fared well next to the oil-splash compressors.

## DeWalt D55140

**Price:** \$120  
**Weight:** 24 lb.  
**Capacity:** 1 gal.  
**Power:** 0.3 hp  
**Output:** 0.75  
scfm at 90 psi  
**Draw:** 2.6 amps  
**Lubrication:**  
oil free



**FEATURES** The vital components of this compressor are all behind the metal face plate, and the whole thing is contained within a sturdy roll cage that forms an integral handle. In short, the compressor feels like it could get tossed or dragged around all day without a problem. Well-placed rubber feet, an integral cord wrap, and an easily accessed ball-valve tank drain round out the features.

**FLAWS** The natural way of carrying this compressor (like a suitcase) means that it gets set down on the back end of the roll cage. It stands up fine in this position, but I would have liked some auxiliary rubber feet to protect the floor. Although it's not a true flaw, this is one of the few compressors that requires a break-in period, which entails letting the compressor run continuously for 15 minutes before its first real use. Finally, judging by the fill-up and recovery times, this model isn't meant for fast-paced production work.

**BOTTOM LINE** The DeWalt seems well suited to small projects and moving from job site to job site. It has a respectable output for its size, and it averaged right in the middle in terms of fasteners fired before refilling the tank.

## Grip-Rite GR100

**Price:** \$105  
**Weight:** 23 lb.  
**Capacity:** 1 gal.  
**Power:** 1 hp  
**Output:** 0.6 cfm at 90 psi  
**Draw:** 5 amps  
**Lubrication:** oil free



**FEATURES** Because the Grip-Rite GR100 was so light and comfortable to carry, I gladly moved it from room to room rather than trying to stretch the air hose. The controls are accessed easily on the front of the unit and are well protected by the roll cage. This is a very quiet compressor with a not-unpleasant tone to the motor, and I found myself easily tuning out the sound completely during the course of normal trim work. My clients were able to talk to me over the sound of it without shouting.

**FLAWS** The dials are recessed behind the metal faceplate, making them hard to read without bending over. It also takes quite a while for the compressor to fill up initially and to refill once it kicks on.

**BOTTOM LINE** I've known about Grip-Rite's fasteners for a number of years, but I didn't know the company made compressors until I began testing them for this review. I was pleasantly surprised at the overall quality and features of the little GR100. It's a light, quiet little workhorse. With just a little bit quicker fill-up and recovery time, this would be a compressor to be reckoned with.

## Grip-Rite GR152CM

**Price:** \$180  
**Weight:** 39 lb.  
**Capacity:** 2 gal.  
**Power:** 2 hp  
**Output:** 2.6 cfm at 90 psi  
**Draw:** 8 amps  
**Lubrication:** oil free



**FEATURES** Like the other Grip-Rite compressor, the GR152CM has a welded roll cage that keeps the components well protected. There are two ways to carry the compressor, either with two handles at the top of the unit or a handle at the bottom that allows the compressor to be carried like a suitcase. I found that the compressor was light enough to carry by one of the handles at the top, and it seemed to be the most ergonomic way for me to do so. A small tray bolted to the top of the roll cage was useful for keeping nails and other small things, and the compressor has a low-enough vibration that it doesn't rattle the contents of the tray. It's a bit louder than its little brother, but still quieter than most compressors, and the tone of the motor is not offensive.

**FLAWS** The dials and gauges on this tool are oriented the same as on the GR100, with the same issue of the user needing to bend down a bit to read them. This is also the only compressor that has two drain valves—not a huge issue, but necessary due to the construction of the unit. Still, it's one more thing to remember to do at the end of the day.

**BOTTOM LINE** I chose this tool as best overall because I found myself using it more than any other compressor due to its quietness, tank capacity, quick recovery, and sturdiness. It would have no trouble functioning as either a dedicated small-shop or job-site compressor.



**Price:** \$400 **Weight:** 49 lb.  
**Capacity:** 1.5 gal. **Power:** 2 hp  
**Output:** 4.1 cfm at 100 psi  
**Draw:** Not listed **Lubrication:** oil

## Jenny AM780-hc2

**FEATURES** The Jenny is the heaviest of this batch of compressors. While the weight is a downside for portability, it makes for a stable compressor when it's sitting on the ground. Even though it doesn't have the convenience of being oilless, its stout shape ensures that it won't be knocked over accidentally and spill oil. This model beat out even the Rolair for fastest fill and recovery times.

**FLAWS** Although its offset handle makes this heavy tool a bit easier to move around, it still banged against my leg as I walked. The copper tube that delivers air to the tank is coiled up a few times and is exposed to the surroundings. I would place money on how quickly someone would dent or break the tubing with a dropped nailer or piece of framing lumber. Also, the carrying handle is perilously close to the hot surface of the motor.

**BOTTOM LINE** This is the most expensive model in the group, but there is no doubt that you get what you pay for. This compressor is built to last, and I would expect it to be running far beyond the point where the others have quit working. The only reason I didn't choose it as the winner in this review is that if I were bringing in a compressor of this size and weight for a project, I would opt for one with more capacity.

## Porter-Cable C1010

**Price:** \$99  
**Weight:** 24 lb.  
**Capacity:** 1 gal.  
**Power:** 0.3 hp  
**Output:** 0.75 cfm  
at 90 psi  
**Draw:** 3.5 amps  
**Lubrication:**  
oil free



**FEATURES** Like the Senco, the GR100, and the DeWalt, this compressor is among the quiet, featherweight contenders. It has the same design as the DeWalt, including the cord wrap, handle, and “no-step” housing (which, ironically, makes an excellent step). Its rectangular, suitcaselike shape makes it easy to carry, transport, and store without fear of damaging any of the smaller components.

**FLAWS** Of all the compressors, the Porter-Cable fired the least amount of nails before cycling back on again. At one point after kicking back on, the compressor started leaking air through the bottom of the hose-regulator pressure dial; after a quick turn of the dial back and forth, the leak stopped.

**BOTTOM LINE** Because they have the same parent company, it's not surprising that the Porter-Cable and the DeWalt share the same design and construction. Whether or not they share the same pump and motor, it's interesting that they tested with slightly different results. The Porter-Cable shot fewer fasteners per cycle, but it filled the tank a bit faster and was slightly quieter than the DeWalt. It also costs about \$20 less on average, making it a solid value.

## Rolair fc1500hbp2

**Price:** \$180  
**Weight:** 39 lb.  
**Capacity:** 1.5 gal.  
**Power:** 1.5 hp  
**Output:** 4.0 cfm  
at 90 psi  
**Draw:** 15 amps  
**Lubrication:** oil



**FEATURES** The fill and recovery times for this compressor were impressively quick, second only to the Jenny model. The fit and finish of the tool are exceptional, too. It feels solid and has a roll cage protecting the more delicate parts from accidental damage.

**FLAWS** The rubber feet on the bottom of the compressor are screwed into the frame, but the rubber is soft enough that the screwheads contact the floor when the unit is set down. As an oil-lubricated model, it is not meant to be tipped over past 10° to 15°, but its tall, narrow shape gives it a top-heavy balance that could be problematic in that regard. I also found that the gauges and air-hose fittings weren't fully protected by the roll cage. While it's not the loudest compressor, it certainly isn't quiet. This may be one of the trade-offs for having such a quick recovery time. It is also the only compressor with a 15-amp draw, meaning I couldn't use it on certain circuits in an older home.

**BOTTOM LINE** In my area, Rolair is the go-to brand for high-quality, long-lasting, hardworking compressors, and this one is no exception. That said, the design of this compressor doesn't do justice to its operational merits. I still trust Rolair, but I won't be running out to buy this particular model.



## Senco PC1010

**FEATURES** This is the lightest and quietest of all the compressors tested. The handle is well placed and has a foam sleeve to help make carrying the compressor easy. The drain valve is easy to open and close without having to tilt the compressor. There's also a plastic baffle to shield the top of the motor, which gets pretty hot because this compressor runs for quite a while under heavy use.

**FLAWS** The light weight and quiet presence come with a cost. The small motor can't keep up with any sort of production nailing. At 31 seconds to refill the tank pressure, expect this little compressor to be running fairly often while in use. Another trade-off for lighter weight: The absence of a larger roll cage leaves the gauges somewhat exposed to damage.

**BOTTOM LINE** The PC1010 is the compressor I see most often on job sites when someone is doing punch-list work, small trim projects, and even tasks that don't need it for fastening purposes. If the output demand is fairly small or sporadic, you can't do any better than this compressor. If it had just a little more capacity, I would easily name it best overall, but as is, it heartily earns the best value title.

**Price:** \$125 **Weight:** 20 lb.  
**Capacity:** 1 gal. **Power:** 1 hp  
**Output:** 0.7 cfm at 90 psi  
**Draw:** 4 amps **Lubrication:** oil free