

Q On a current kitchen remodel, the sink has an S-trap instead of a P-trap, which my plumber says does not meet code. Why is an S-trap bad, and what's the best way to retrofit a P-trap?

A John Smith, a licensed plumber in Harwich, Mass., responds: Your plumber is correct in his assessment. In simplest terms, an S-trap is shaped like an "S" and a P-trap is shaped like the letter "P" if both are lying on their side (see S-Traps Vs. P-Traps, below). With an S-trap, the drainpipe drops down from the sink and into a conventional trap. It then loops over and exits downward. In a P-trap configuration, the drain also comes down from the sink and into the trap, but instead of looping over and back down, the drain enters a horizontal run before exiting downward.

Before discussing the drawbacks to an S-trap, we first need to understand how sink traps operate. A plumbing trap is supposed to stay full of water to seal the pipe and block sewer gases from escaping through the drain. The trap (and drain) can't work

properly without a properly installed vent in the system (see "Plumbing Vents Explained," Jun/99). A vent allows air to move freely in the system, which in turn allows the trap to maintain that water seal. As water flows from the sink into the drain, air is pushed out of the pipe via the vent. When the sink is empty, water flows back into the trap from the pipe and air is sucked back in through the vent, equalizing the pressure to keep the trap full of water.

The horizontal run of a P-trap allows water to drain and air to move in the pipe to maintain the trap seal. But an S-trap loops back down with no way for air to get into the pipe. If enough water (say a sinkful) drains through an S-trap, a siphon can be created that sucks water out of the trap, leaving it partially open and unable to seal out sewer gases. Another potential problem is that when draining, other plumbing units can cause a vacuum that will suck the water out of an S-trap.

Have your plumber remove the S-trap and install a P-trap that exits through the back of the cabinet and into the wall. He can then either tie into an existing vent or run a new vent up through a stud bay and through the roof. If rerouting the drain isn't feasible, you may be allowed to install an air admittance valve. Check to make sure that these devices are allowed in your local jurisdiction.

S-Traps Vs. P-Traps

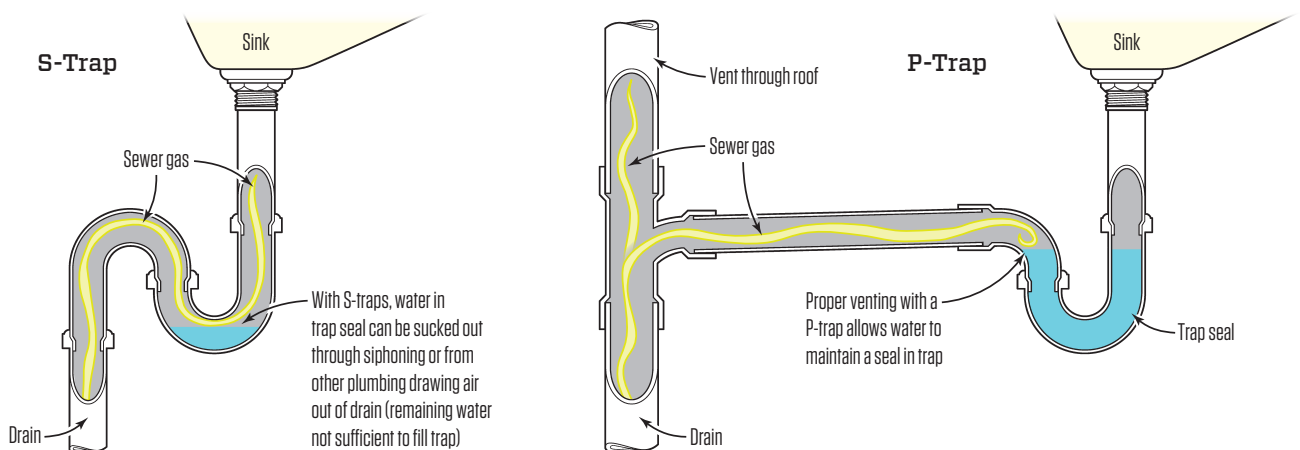


Illustration by Tim Healey

The water in a plumbing trap creates a seal to keep out sewer gases. S-traps are not allowed because they can create a siphon that leaves that seal partially open. A P-trap works with a vent to equalize air pressure and allow the trap to remain full of water.

Q What is the correct way to paint the mitered corners of window casing to avoid brush marks?

A Scott Burt, owner of TopCoat Finishes in Jericho, Vt., and a presenter at JLC Live, responds: Generally speaking, when painting window or door casings (mitered or butt jointed), it is best to work from the top of the window down and to always brush with the grain or in the direction of the wood.

Painting corners of trim is a game of avoiding the look of the brush marks crossing over the joint. In either case (miter or butt), you can begin by brushing through the joint in one direction or the other. Then go back and “point and pull” brush strokes from where you crossed through. With butt joints, it’s easy to go back and brush straight out from the joint line.

A mitered joint where the wood ends in a point is a little trickier. Here, you point, or lightly press, the wet brush bristles onto the surface so that they extend into the point of the miter (see photos, right). Then you pull the brush back horizontally for the head casing and vertically for the side casing. As with any fine finish skill, the technique of

pointing and pulling takes a bit of practice to master.

One thing to keep in mind when painting trim is that all the brush strokes have to happen while the paint is good and wet—as in, immediately. If the paint starts to dry before your final brushing, the areas where you’ve crossed over the joint will flash (change luster and stand out from the rest of the finish). This is a particular risk with the new generation of latex and waterborne trim paints—they tack up quickly. You can use a product such as Floetrol that keeps trim paint wet longer for brushing out.

All of this points to having a good eye, the right brush (size and style), and the ability to lay the paint out properly and leave it. Overbrushing is one of the most common mistakes people make when painting trim.



Photos by Scott Burt