



# The Importance of Kitchen Stack Cleaning

By Gianpaul Callipo

There are many harmful bacteria, fats, oils, and greases that enter and adhere to sanitary drain systems. Grease and sludge build-up have been shown to cause millions of dollars of insurance claims and damaged property throughout the high-rise condominium industry. The average high-rise building serves hundreds of families daily, which means no downtime for the steady stream of waste going through the pipes. At any time, hardened and solidified grease can cause a significant stoppage of draining water. Sadly, the unit directly above the blockage suffers the consequences!



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## Causes of Kitchen Stack Blockages

When fats, oils, and grease are poured or flushed down your sinks, drains, or toilets, they enter the sewer system, where they cool, harden, and stick to the inner walls of sewer pipes. Over time, as more fats, oils,

and grease are added to the system, these sewer blockages build-up and harden until they completely plug the pipes.

The most common sources of fats, oils, and grease from food are:

- meats and other food scraps (including baked goods)
- sauces, gravies, and salad dressings
- dairy products (milk, cream, yogurt, kefir, cheese)
- fats, lards, cooking oil, shortening, butter, and margarine
- cosmetics and toiletries (makeup, lotions, oils, and some soaps)

## Vertical vs Horizontal Stack Cleaning

Typically, when a building is constructed, the plumbing code requires one cleanout at the bottom of every stack, usually in the P1 garage or basement of the building. In my experience, 99.9% of buildings will only do what is required by code – the one cleanout at the bottom of each stack.

So technically speaking, yes, your building has cleanouts installed at the

base of every stack. However, when you look at the complexity of newer buildings, including layout changes, commercial units, facilities, and all the other fancy innovations that newer condos possess, in most cases, it is almost impossible to reach these cleanouts.

And here is the tricky part: telling the homeowners that it is necessary to come into their unit, make a hole in the wall and install a cleanout – oh man! Yes, some homeowners will push back. However, whether you are a property manager, a homeowner or a contractor, everyone needs to understand that this minor inconvenience is the most proactive thing can be done to prevent kitchen sink floods due to clogged drains.

Let's begin with a typical high-rise building layout around 20 stories. We know the bottom portion of the building will be serviced by an auxiliary stack, which is the second portion of the vertical stack system that usually picks up the bottom floors. This auxiliary stack is always smaller than the original main



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stack. The problems always begin on the bottom floors when auxiliary kitchen stacks are not serviced properly.

The ideal place to put cleanouts that will efficiently clean the bottom horizontal stacks is at the top of every auxiliary stack. Every building is different, but some auxiliary stacks may end on the 2nd to 6th floor.

There are many reasons why they will end on a particular floor, but in general, we know that we should begin in this area when installing cleanouts. The benefit of accessing the top of the auxiliary is that we will be very close to the bottom of the main stack. This means that with the proper cleaning equipment, the contractor will be able to clean downwards and easily through bends that arise on the bottom and ground levels of a building. If the contractor uses the newest and state-of-the-art cleaning equipment, they should be able to clean all the way to the main building sewer.

### Horizontals Stack Cleaning vs Vertical Stack Cleaning

Now that we understand the process and importance of cleaning the bottom portion of the stack systems where the

stacks go horizontal, we need to look up!

Cleaning the bottom of your stack systems is excellent to ensure that water flows evenly once the vertical stack system changes direction and goes horizontal. However, if the vertical stacks have never been cleaned, then chances are there are big chunks of grease stuck to the walls of the vertical pipes just waiting to fall downstream into the newly cleaned bottom portion of the stacks.

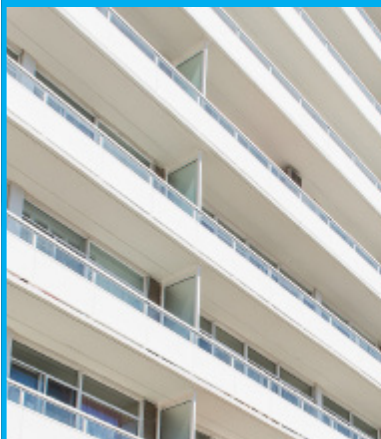
Once chunks of grease begin to fall, the elbows get clogged up, and we are back where we started, with multiple blockages on the bottom's floors. Now what?

Installing cleanouts on the bottom and auxiliary stacks is a good proactive approach. It's an even better idea to get the vertical sections done as well. We spoke earlier about installing the cleanouts on the lower floors, depending on where the auxiliary begins. From there, cleanouts should be installed every five floors going upwards. This translates into approximately 50 feet of pipe from cleanout-to-cleanout, making sure the cleaning is being done as efficiently as possible and getting every section of the pipe.



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### Hire a Professional

Many contractors claim that they do kitchen stack cleaning; however, most of them overlook the fact that this is a specialty project. While it helps to understand plumbing, it is vital they know the proper equipment, techniques and tricks that can prevent a potential flood – things like appropriate nozzles for the different pipe sizes, understanding the Gallons Per Minute (GPM) each machine uses, and which ones are best for vertical as opposed to horizontal stacks.

Unfortunately, while the industry continues to gravitate to the lowest price, this can backfire. Kitchen stack projects should not resort to the lowest price but rather to the company with the proper equipment, understanding and track record of kitchen stack cleaning projects.

### Out of Sight Out of Mind

I hear it all the time “We haven’t experienced any problems, so we are ok” – Well, just because there hasn’t been any drain back up doesn’t mean that grease is not building up within your pipe walls. This reactive way of thinking needs to change.

Grease can build up inside a pipe wall and never cause a backup, but sadly, that same grease is eating away at the cast iron pipe. When a 20-year old building that has never had stack cleaning finally proceeds with a cleaning project the solidified grease has worn the cast iron pipe down to nothing but acts like an adhesive, holding the pipe together. Once cleaned, the pipe walls are so brittle that a break or crack is inevitable and it almost always happens behind a homeowner’s wall on a weekend or holiday, and it is never a simple fix.

### Chemicals and Solutions

While chemicals have a wide range of benefits, the reality is that once a solution is diluted in water, it loses its strength. Most solutions are poured down the sink and diluted by water from the tap, dishwasher or in the water held in the P-trap. Although the chemical or solution makes grease vanish in a controlled environment, once it is put into a wet and damp drain stack its effectiveness drops considerably. Once poured, it might get about 10% of the grease in that section of pipe, loosening and leaving behind chunks that later fall into the horizontal runs.

When you factor in the way chemicals should be added to the system and the

cost of chemicals to get every inch of the pipe, it is a much more cost-effective and viable solution to perform a high-pressure cleaning.

In conclusion, many factors go into a successful stack cleaning project, such as proper equipment, knowledge of high-rise drainage systems, proper nozzles, and a strong foundation in kitchen stack cleaning. Finally, your contractor should always provide internal videos of the cleaned stack to demonstrate that the job was done and done right! ■

**Gianpaul Callipo** is the President and visionary of Aquazen Services, a company specializing in kitchen stack services and general plumbing services. With more than two decades in the condominium industry, Gianpaul has an endless passion for helping property managers all over Ontario understand the importance of kitchen stack cleaning and plumbing maintenance for condominium buildings.

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