

ASK THE INSPECTOR COLUMN FOR APRIL 6, 2016
HEADLINE: GUTTERS, EAVESTROUGH & DOWNSPOUTS

This is the time of year I get questions such as this one, “We bought a home built in the 70’s and it does not have eavestrough and gutters installed along the edge of the roof. Our basement gets damp at times and we have been told installing these will fix this problem, is that possible? If we get it installed, what does it cost and is it possible to do it yourself?”

First let’s clear up the definitions; gutters and eavestrough are the same thing, just different terms. The water collected off the roof gathers in these and then discharges through the downspouts. This runs onto the lawn through the extensions installed at the downspout elbow end and then discharges the water some distance from the house. There are a number of causes of water or dampness in basements and to say that installation of gutters will fix the moisture problem could be stretching it a little. Installing these will, however, have some positive effect on your basement. You would be shocked at how quickly a rain barrel fills that is used as a collector from some gutter systems after a good rain. Tests have shown that, in a good rain, hundreds of gallons of water run off a roof creating a soaker line all around a home. This water has to go somewhere. In a home of this age it is unlikely that any form of membrane is installed around the foundation that would inhibit rain water from entering the basement. I recommend these all the time and, while some municipalities did require them, I cannot understand why the building code did not require them up until a few years ago.

Our reader is in Perth, Ontario and I would expect that the local installer’s prices would range from \$5.00 to 8.00 per foot. There are a number of things to ask the installer. The first question, “Is this going to be seamless eavestrough?” This is the preferred method of gutter system. Take the time to discuss the installation with your professional gutter installer; agree on the installation and where the downspouts will go; get three quotes, too. The installer will then bring a large truck to your home with different rolls of aluminium. There are many colours now, so you are not limited to white anymore. They will measure your fascia area and set the machine in their truck for the size they recommended or were contracted for.

As there are different sizes of gutters, discuss this with your contractor. A steep roof of a large home should be 5” rather than 4,” for example. In fact, I recommend 5” for all roofs. If you have a limited number of places for the downspouts, this should also result in a change in size. There are different sizes for the downspouts, too and, if you intend to “Yoke” them together, it will have to change again. When there is a problem getting a second level or a side/back split correctly discharged, a “Yoke” is positioned where two downspouts are united.

You can make this a do-it-yourself project, if you wish, however, many installations I see that are homeowner done fail in a number of areas. There are a couple of different styles of plastic eavestrough on the market and the main issue with plastic gutters is, if they fill with water and freeze, they will break easily. It is also hard to put a ladder against the roof for maintenance with plastic gutters. The biggest installation error I see is a lack of downspouts; cases where a home that is 40-50 feet long has one discharge at the end. Lack of a proper slope can be problematic when water pools. Once leaves and debris

collect, it blocks the eavestrough and they overflow. Try to get a minimum of $\frac{3}{4}$ " of an inch of slope in 20 feet.

Improper use of jointers and not using enough supports is next on the list. This will allow the trough to either leak or sag and overflow. If you have a two-storey home where the second level downspouts is allowed to drain onto the roof below, the shingles in this area will wear out very quickly. Install a section of downspout that drains into the main level eavestrough. The number one error, however, is a lack of extensions on the downspout, often only the elbow is installed. Now you have all the roof water collected into one steady stream heading into the basement.

If you have a moisture problem in your basement in the corners and there is a white stain showing that rises up the concrete or block wall, you can bet the downspout is right there with no extension installed. I like to see a minimum discharge of six feet from the building. This is difficult in some homes that are built close to-gether; get your discharge to the lot line, at minimum. In some instances, you may see a depression or "swale" between your home and your neighbour's. It's there for a reason; to drain away ground water. In most municipalities, you are not allowed to discharge your water onto your neighbour's lot, so you may want to get together with your neighbour on this one.

I saw a great idea on this a couple of years ago. The two neighbours dug a trench. Lined it with old pool liner and filled it with stone, it was about a foot wide. They had carefully sloped this to the road. Both of them then used it for their discharge extensions.

Properly installed gutters and correctly discharged downspouts should have a noticeable effect on how dry your basement is. They are well worth the costs no matter whether it is professionally installed or a do-it-yourself project. They are, however, not always the answer, but will help reduce the list of possible causes of basement dampness.

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