



Plows



Plow Types

And when and where they can best be used

Front plows come in three basic types: one-way plows, two-way plows, and vee-plows.

One-way plows can only throw snow in one direction, typically (in the US) to the right. The top of the plow is higher on the right side than on the left, and the plow is often set at a fixed angle to the direction of travel so that momentum throws the snow to the right. Typically, one-way plows can plow snow at highway speeds.

Two-Way plows can throw snow to either the right or the left, depending on how it is set up on the plow hitch. The angle at which it throws is typically adjusted hydraulically, using pistons attached to the plow mounting frame to rotate the plow around a vertical axis. Two-way plows typically have the same height across the whole mold-board. Since they can plow continuously, they are often the “work horse” plow of a winter maintenance fleet.

Vee-plows are mounted in such a way that they push the snow both to the right and the left. They are typically used for dealing with heavy snow falls, and operationally they may make a series of push/pull-back moves on a snowbank to break through it. While they can plow light snow, because they will leave a windrow on both sides of the plow, they are most typically used in such circumstances in confined spaces (e.g. alleyways). There are some plows on the market that are hinged in the middle and can be configured as either a vee-plow or a more regular plow as needed.

Wing plows are mounted to the side of the truck, most typically (in the US) on the right side although they can be mounted on both sides of the truck. Different agencies use different practices as to how to mount their wing plows, with some being mounted at the front right corner of the vehicle, some being mounted behind the passenger side door, and some being mounted almost in line with the rear axles.

There are two primary reasons for using wing plows –**a**) they allow you to plow a broader width of road in one pass than a simple front mount plow, and **b**) they also allow you to “bench back” snow on the side of the road, which in turn then creates more snow storage for the next storm.

Among some agencies wing plows have a bit of a bad reputation but I think this is undeserved. They are an additional tool that operators must learn to use properly, and certainly having a wing bounce up and slam into the passenger side door can be alarming (an understatement) but they do add to the versatility and capability of your trucks.

You do need to remember that they are there (especially when making right turns, or in the vicinity of fire hydrants) but that added capability is very valuable in the right circumstances.



EQUIPMENT

It is well worth talking about tow plows. **Tow Plows** are relatively new, having been developed maybe 15 years ago. The plow is mounted on a towed trailer, which can be articulated out to the side of the truck, thus allowing a single truck to plow two to two and a half lanes of road. The trailer typically has some sort of material dispenser placed upon it, to provide weight and stability. These are obviously not a cheap piece of equipment, but they are much less costly than another truck and in the right circumstances (multi-lane roads) are extremely effective force multipliers for agencies.



Underbody plows go under the body of the truck, between the front and rear axles. Evidently, we are not given to flights of fancy when it comes to naming our plow types! We could have a good competition there!

The underbody plow comes in two types – those which can have down-pressure applied to them, and those which cannot. The down-pressure type blades can be extremely effective at scraping ice and compacted snow off the pavement, precisely because of the high vertical loads that can be applied through the plow. However, by the same token they can also wear through a cutting edge extremely quickly (in a couple of miles) if used inappropriately and can damage some road types as well.

The underbody plows that do not apply down pressure are often known as high speed plows, because they can be used at highway speeds to scrape thin layers of loose snow off the road.

