

## Choosing the right cut-off wheel

At Calumet Abrasives, we know there is the right tool for every job. Getting the correct wheel for the machine and the application are essential for making sure your jobs get done safely and efficiently. Here is everything you need to know to choose the right cut-off wheel.

### Safety First

Using a wheel improperly will not only shorten its life, but it is also dangerous. Make sure the spindle RPM of the machine you are using does not exceed the maximum safe speed of your wheel, and always make sure the wheel fits snugly on the spindle without having to force it. Do not over-tighten a wheel, and make sure directional wheels are mounted correctly. Use all machine guards and covers, and let the machine run for a few moments before cutting to check for problems.

It is also important to handle and store your wheels properly to protect them from jostling so they do not become damaged or gouged. Wheels should be kept in relatively steady temperatures and humidity levels to make sure there is no damage to the bonds.

### Know Your Machine & Materials

Before you can choose the right cutting wheel, you will need to get the right information from your machine and your materials. You will need to know the hardness of the material, the size and shape of the material, and the quality of cut (i.e., metal, masonry, asphalt, wood, PVC, clay). Dimensional features like diameter, thickness, and arbor are important, too.

Once you have the specifics for your material, you need to know whether your machine is oscillating or swing frame, how much horsepower it has, what the spindle speed is, and whether you will be cutting wet or dry.

### Choosing the Right Wheel

Now that you have all the information about your project, it is time to select the right cutting wheel. There are three grades to choose from:

- **Soft Grade.** Choose this wheel for a machine with low horsepower and when precise cuts and a clean finish are also important. They are also ideal when the operator will cut slowly.
- **Medium Grade.** Select this wheel when a softer grade is not providing precise enough cuts or when a longer wheel life is required. You can also choose medium grade when the machine horsepower supports a faster cutting rate.
- **Hard Grade.** These are ideal when the maximum wheel life is necessary and when burr and finish requirements are minimal (although hard grade wheels still provide a good quality finish). Your machine must have adequate horsepower, ideally 1 HP per inch of wheel diameter.

### Getting it Right the First Time

A well-fitting wheel is a more efficient wheel. When you have the proper fit, wheel wear is minimized and the life of your wheels is extended. Post-processing also becomes a lot easier so your entire process is more streamlined. You'll save time, money, and hassle when you take the time to select the right cutting wheel the first time.