

# Machining Quick Tips: Exploring the Tools



## 120V Boring: How To Unlock Your BB5000's Versatility With One More Accessory.

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The Climax BB5000 Boring Machine is a highly versatile portable machine tool that can accommodate a variety of power sources, from 120V electric to pneumatic to hydraulic. While every power source has its advantages, the 120V electric motor can accommodate a host of new accessories used for boring large holes from up to 24 inches (609.6 mm) with the addition of a 12:1 Rotational Drive Unit (RDU).

The Climax BB5000 Portable Boring Machine has two types of 120V motors: high torque or high RPM. These units will generate about 2.3 hp (1.72 kW) which is less than the 7-10 hp (5.22-7.46 kW) than a Servo motor or a hydraulic drive unit. With a standard 4:1 RDU the bar will have less torque than the hydraulic and servo power options. The general philosophy is, the bigger the hole, the bigger the motor will need to be. However, by changing the standard 4:1 RDU to the 12:1 RDU, we can triple the torque, double the boring and facing diameter range from 12 inches (304.8 mm) to 24 inches (609.6 mm) and drill holes up to 4-½ inches (114.3 mm). The BB5000 has a range of mounting options already available for large diameter mounting including the 24 inch (609.6 mm) ID chuck, Universal Bearing Extension Kit and Double Arm Bearing Extension Plates.

As the name implies, the BB5000 Portable Boring Machine is intended to be very portable. The disadvantage of Hydraulic Power Units or the servo motor is that they both require three phase power, which may not always be available in the field. A 120V unit can be powered off of almost any generator or welding



A BB5000 with a 12:1 RDU and extended universal leg mounts facing a large test part

system, both of which are readily available to rent or found on job sites.

Another advantage to the 12:1 RDU is that the expanded boring diameter does not require a larger boring bar, but can be accomplished with the supplied 2-¼ inch (57.2 mm) bar. Once a 3-½ inch (88.9 mm) bar is used, a larger boring machine is also needed, along with a crane to lift the machine, whereas the 2-¼ inch (57.2 mm) boring bar can be entirely set up by hand. It is also less expensive to acquire a 12:1 RDU than buy another power unit or purchase a larger boring machine.

The 12:1 RDU establishes compatibility with a whole range of large boring accessories for the BB5000 from a 24 inch (609.6 mm) Boring Head Set, to a 24 inch (609.6 mm) Facing Head and a 27 inch (685.8 mm) Bearing Clearance Torch. By adding the 12:1 RDU to your BB5000 accessory repertoire, you can double the possible bore size, triple torque and save money.

## Bringing the solution to you.

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