



Proffered[®] CARBIDE BITS

FREQUENTLY ASKED QUESTIONS

Q. What are Carbide Bits?

A. Carbide bits are made of steel with special tip and spiral flutes that are drilled into poured and precast concrete & masonry substrates.

Q. What is the significance of the tip and spiral flutes?

A. The tip is made of Tungsten Carbide steel which is stronger than the substrates it is cutting into. The spiral flutes allow for the removal of dust and debris that rises to the top of the hole.

Q. How does it work?

A. Carbide bits can be inserted into two types of drills – hammer drill machines and rotary hammer drill machines.

Q. What are the specific carbide bits used in these hammer machines?

A. Hammer Machines use a basic low cost carbide bit that is inserted into a “Jacobs Type Chuck” via a wrench. SDS + and Max are premium carbide bits with a special design that fits directly into the chuck of a rotary hammer without any tools.

Q. Where are these carbide bits made?

A. Most of the basic low cost carbide bits are sourced from Asia. Premium SDS and Max carbide bits emanate from Germany, the traditional source for the best quality globally.

Q. Are there special carbide bits other than the traditional straight shank and SDS bits?

A. Yes. A Stop Bit allows for a specifically desired hole depth used for the installation of drop in anchors. Flat shank (inexpensive) carbide is used to install concrete screws. SDS Hex carbide bits are used to install concrete screws. Steel chisels (various types) are used in SDS Max rotary drill machines for chipping and removing concrete.

Q. How many holes can you drill with these carbide bits?

A. The typical results for an inexpensive straight shank carbide bit used in hammer drills is approximately 25 holes.

The SDS+ can achieve approximately 80 holes in normal concrete substrates. SDS Max achieves 50 holes in the same substrate.

All of these projections are based on the PSI of the concrete and amount of aggregate and rebar within the concrete. More drilled holes can be attained when drilling into softer masonry such as brick and block.



Q. What is the typical protocol when drilling a carbide bit?

A. Safety is the main concern. Hardhats and goggles are paramount. The area around the planned hole must be cleared of debris. The drill bit should be examined to see that it is not worn. A worn bit may cause anchors to not install properly. A depth selection rod is attached to all rotary and hammer type of machines that can set the desired hole depth. Hammer drills are electro mechanical which requires more contact pressure when drilling holes, SDS hammer drill are electro-pneumatic requiring only a small amount of contact pressure to engage the carbide bit into the concrete.

Q. What are the typical uses for drilling carbide bits?

A. Drilled holes are needed to install various concrete anchors. The larger the diameter of the anchor the larger the diameter of the drill required. Carbide bits are also used for through drilling (no anchors) to install rebar or to connect concrete to concrete applications.

Q. Can you drill through concrete with rebar throughout?

A. Yes – Contractors try to avoid rebar as much as possible but there are times when they engage it. The premium SDS+ and SDS Max have the capability of cutting directly through encased rebar. This is important when installing an anchor. If there is B7 steel or special harden steel the drilling may not be feasible.

Q. Are there national codes regulating carbide bits?

A. Yes – All bits must meet ANSI standards. This standard encompasses specific tolerance levels especially for the installation of anchors.

Q. What is the range of the various types of carbide bits?

A. Half Shank (concrete bits) – 5/32” & 3/16”
SDS+ - 5/32 – 1”
SDS Hex – (concrete screws) – 5/32” – 3/16”
SDS Stop – 3/8” – 1/2” & 5/8”
SDS Max – 3/8” – 2”

- U.S. Anchor only sells and markets premium carbide bits.
- Most light-duty, and all medium and heavy-duty anchors, require a drilled hole prior to installing.
- Carbide and anchors are sold as a system. A hole must be drilled into the substrate prior to anchor installation.
- Please e-mail us at usanchor@brightonbest.com for questions on the U.S. Anchor product line.