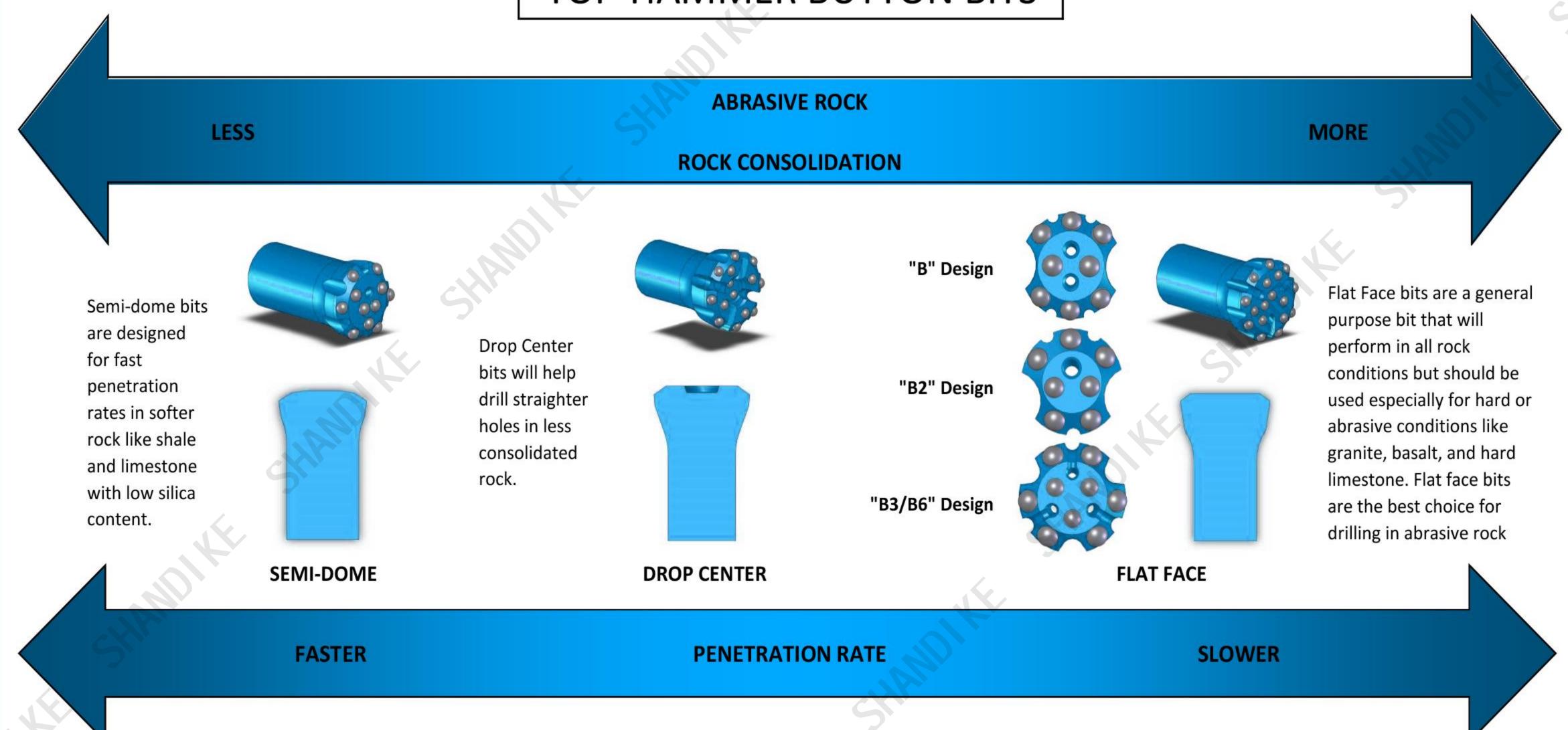


BIT FACE SELECTION

TOP-HAMMER BUTTON BITS



DOWN-THE-HOLE (DTH) BITS

ABRASIVE ROCK ROCK CONSOLIDATION Concave Face Concave-Convex Convex Face Flat Face I To a contact of the cont

Concave Face designed for unconsolidated or broken rock. These face features will help drill straighter holes in medium to hard formations.

Convex/Concave Face bits are a hybrid design for fast penetration and straighter holes in unconsolidated rock with low silica content. Typical applications are medium to hard formations.

Convex Face bits are designed for fast penetration rates in softer rock like shale and limestone with low silica content.

Flat Face bits are a general purpose bit that will work in all rock conditions but should be used especially for hard or abrasive conditions like granite, basalt, and hard limestone. Flat face bits are the best choice for drilling in a high silica environment.



CARBIDE SELECTION

Carbide Designs

Perhaps the most fundamental decision when selecting different carbide configurations is profile shape. Button bits most commonly have either a hemispherical or semi-ballistic carbide design; however it is not uncommon to use other carbide designs as well. Below are selections of the different carbide designs offered by Rockmore International.

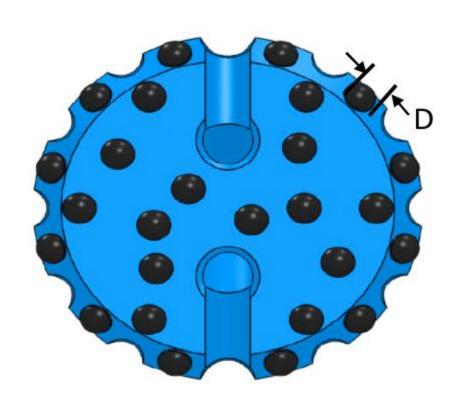
Carbide Configurations

Most face designs for button bits are offered in multiple carbide configurations and typically differ in diameter, shape (i.e. profile) and quantity. There are some general guidelines to follow while selecting between multiple carbide configurations including resistance to wear, penetration rate, vibration, and specific rock conditions.

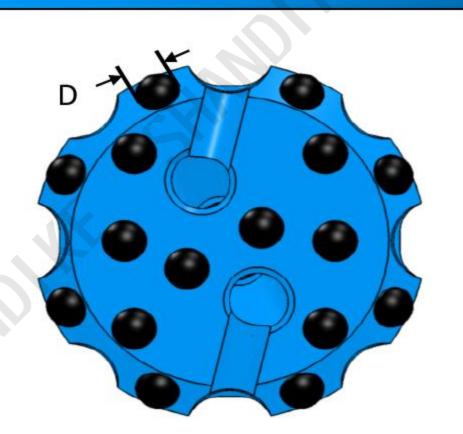
FASTER PENETRATION RATE SLOWER SHORTER LIFE AND MORE PRONE TO BREAKING CARBIDE LIFE LONGER LIFE AND LESS PRONE TO BREAKING CONICAL FULL BALLISTIC SEMI BALLISTIC CROWN POINT HEMISPHERICAL

SOFTER ROCK HARDNESS HARDER

MORE, SMALLER
DIAMETER
CARBIDE RESULTS
IN FASTER
PENETRATION
RATES, BUT
SHORTER CARBIDE
AND BIT LIFE.



PENETRATION RATE VS.
CARBIDE/BIT LIFE



FEWER, LARGER
DIAMETER
CARBIDE RESULTS
IN SLOWER
PENETRATION
RATES, BUT
LONGER CARBIDE
AND BIT LIFE.

LESS VIBRATION MORE

BIT AND ROD VIBRATION INCREASES WHEN FEWER AND LARGER CARBIDE BUTTONS ARE SELECTED.

SKIRT SELECTION

NCONSOLIDATED ROCK CONDITIONS ABRASIVE HOMOGENEOUS ABRASIVE ABRASIVE ABRASIVE ABRASIVE

Heavy Duty Skirt

available for very abrasive conditions. The

heavy duty skirt has added wear material

towards the front of the skirt to protect

the bit against abrasive cuttings.

A variation on the standard skirt design,

Retrac Skirt

Designed to improve hole straightness, as

hole flushing characteristics of the bit due

well as to assist in retrieval of the drill

to the chip ways between the splines.

string. The splines will also improve the

Standard Skirt

Typically smaller than the head diameter

to avoid cuttings and the rock wall,

therefore optimizing hole flushing.