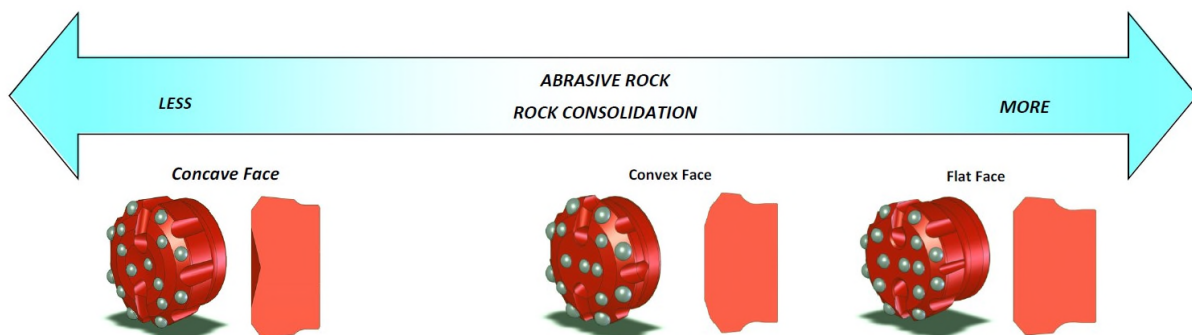


Down the Hole Hammer Bit selection criteria

SRT offers DTH bits that enable the driller to drill holes of different diameters and formation characteristics. The DTH bits can be selected based on bit diameter, shank design, bit face geometry, and carbide button shape. Characteristics like bit face configuration, number of flushing holes, quantity and size of carbides, and carbide button shape influence the desired penetration rate and bit life. These factors also need to be weighed against the bit cost for the selection of the optimum bit.



Bit Face Geometry

Flat Face

Flat Face Bits are general-purpose bits. This type of face is suited best for a hard rock formation. Flat-face bits are also the best choice for drilling in a high silica environment. They offer a good penetration rate in formations having abrasive conditions.

Convex Face

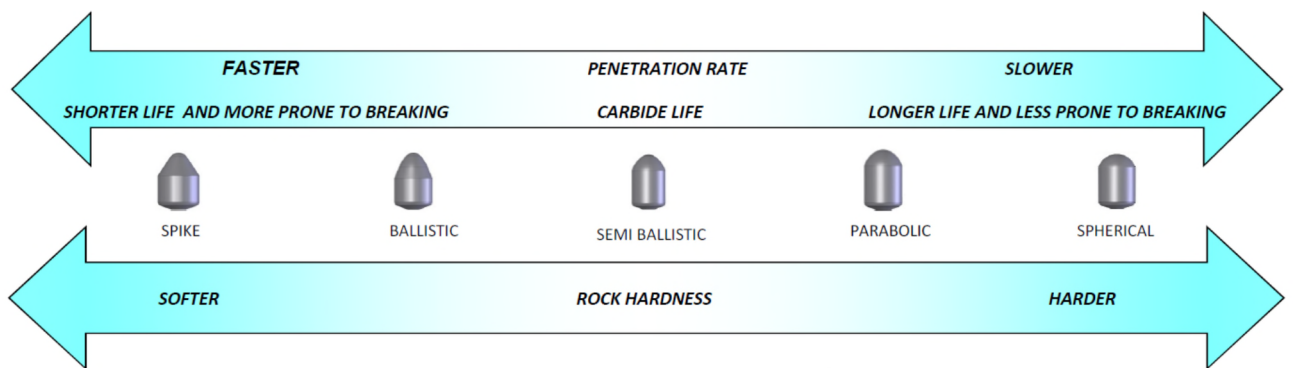
Convex Face Bits are best suited for medium hard and hard rock formations. It gives a good penetration in a relatively softer rock-like shale and limestone with low silica content. Face design allows for increased body support for gauge carbide. There are two-gauge rows for this kind of bit-face geometry. The inner gauge rows help protect the outer rows from excessive wear.

Concave Face

Concave face bits are best suited for medium hard and fissured rock formations. This face feature helps in preventing hole deviation.

Button Shapes

The profile shape is one of the most fundamental decisions when selecting carbide configurations. Button bits most commonly have either spherical, parabolic, semi-ballistic, or ballistic carbide designs; however, it is not uncommon to use other carbide designs as well. Please see below the characteristics and the suitability of different button shapes.



Spherical



This button is the most common shape used in threaded button bits. This shape is the strongest and most resistant to breakage. Spherical shape provides excellent penetration in medium rock, hard rock, broken formations, and in all types of drilling conditions.

Parabolic



Normally this button is used in medium soft to medium hard rock drilling formations. This type of button gives higher penetration than spherical and has better breakage resistance than ballistic

Semi Ballistic



This type of button is used in medium hard to hard rock drilling formations and it gives a higher penetration rate than spherical.

Ballistic



Normally this button is used in soft drilling formations. This type of button tip protrudes out more so it is very aggressive and yields high penetration rates. A ballistic button is prone to breakage if used in the wrong formations.

Spike

Normally this button is used in soft and medium hard rock drilling formations. It offers a high penetration rate but is prone to breakage if used in incorrect formation.

