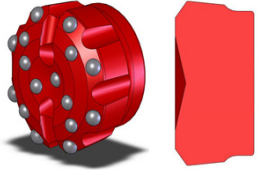
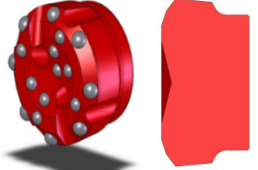
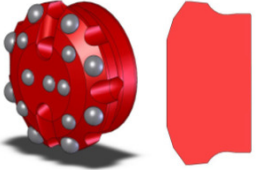
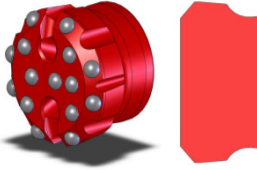


BIT FACE SELECTION

ABRASIVE ROCK

ROCK CONSOLIDATION

LESS MORE

| | | | |
|---|--|---|---|
| <p>Concave Face</p>  <p>Concave Face designed for unconsolidated or broken rock. These face features will help drill straighter holes in medium to hard formations.</p> | <p>Concave-Convex</p>  <p>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.</p> | <p>Convex Face</p>  <p>Convex Face bits are designed for fast penetration rates in softer rock like shale and limestone with low silica content.</p> | <p>Flat Face</p>  <p>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.</p> |
|---|--|---|---|

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

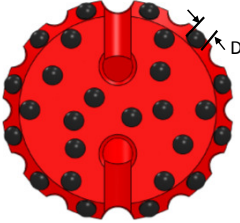
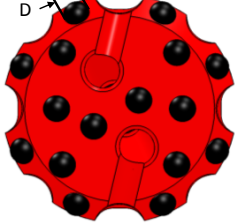
Most face designs for button bits are offered in multiple carbide configurations and typically differ in diameter, shape (i.e. profile) and quantity. There are some general guidelines to follow while selecting between multiple carbide configurations including resistance to wear, penetration rate, vibration,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

FASTER **PENETRATION RATE** **SLOWER**

SHORTER LIFE AND MORE PRONE TO BREAKING **CARBIDE LIFE** **LONGER LIFE AND LESS PRONE TO BREAKING**

| | | | | |
|--|---|---|--|--|
|  <p>CONICAL</p> |  <p>FULL BALLISTIC</p> |  <p>SEMI BALLISTIC</p> |  <p>CROWN POINT</p> |  <p>HEMISPHERICAL</p> |
|--|---|---|--|--|

SOFTER **ROCK HARDNESS** **HARDER**

| | | |
|--|---|--|
| <p>MORE, SMALLER DIAMETER CARBIDE RESULTS IN FASTER PENETRATION RATES, BUT SHORTER CARBIDE AND BIT LIFE.</p>  | <p>PENETRATION RATE VS. CARBIDE/BIT LIFE</p> | <p>FEWER, LARGER DIAMETER CARBIDE RESULTS IN SLOWER PENETRATION RATES, BUT LONGER CARBIDE AND BIT LIFE.</p>  |
|--|---|--|

LESS **VIBRATION** **MORE**

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