How to Select the Correct Diaset Core Bit

Selection Guide & Troubleshooting Tips

A  Define rock hardness
   1. For softer rock: (MOH’s hardness to 5). Use lower matrix numbers #2X - #7X
   2. For very soft rock (MOH’s hardness to 3, use a PCD, Polycrystalline or Surface Set
   3. Harder rock: Use higher matrix number #8X - 13X

B  Define the degree of abrasiveness, fractures or breaks within a particular rock formation
   1. Coarse grained and fractured: use a lower matrix number
   2. Fine grained and solid: use a higher matrix number

C  Define type of diamond drill used:
   1. High powered drills (>100 h.p.), choose lower matrix numbers to maximize bit life.
   2. Low powered drills choose a higher matrix number to get better penetration.
   3. If ground or rig conditions force you to turn at lower RPM, then choose a lower matrix number. (Low RPM makes a matrix act differently)
   4. Always use the highest RPM that suits the conditions.

D  Tips for selecting the correct matrix type
   If you started with a Diaset matrix #7X HD, and if productivity is too slow, try a #8X or higher matrix number. A Turbo crown design will cut the fastest in hard, solid rock. If bit life is too low, try a lower matrix number, such as matrix #6X. Review the troubleshooting guide to pinpoint specific formation problems, to help you fine tune for the selection of the next bit.

If drilling conditions are unknown, start with a Matrix #7X, Heavy Duty (HD) crown design.

Call the factory or your representative for additional help.