

How to Select the Correct Diaset Core Bit

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

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.

Call the factory or your representative for additional help.



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