

VEX-S Speeds and Feeds

Recommended programming information for VEX-S Drill for 1xd - bore depth (T) to hole dia. (\varnothing d)

IMPORTANT: Do not exceed 6000 RPM without contacting Heule Tool Corporation; special components required for securing deburr blade.

| Material | Hardness HB | SFM | IPR |
|------------------------------------|----------------|---------|-----------|
| Unalloyed steel | <150 | 300-400 | .004-.010 |
| Cast steel Free machining steel | 150-250 | 275-350 | .004-.010 |
| Low-alloy steel | <250 | 250-400 | .004-.010 |
| Cast steel | 250-300 | 220-350 | .004-.010 |
| High-alloy steel | <250 | 130-220 | .004-.008 |
| Stainless steel | 130-190 | 100-160 | .003-.004 |
| Grey cast iron | <150 | 275-500 | .006-.013 |
| Nodular cast iron | 90-240 | 275-450 | .004-.012 |
| Aluminium-forging alloys | | 380-600 | .008-.013 |
| Aluminium-casting alloys | | 300-600 | .008-.013 |
| Brass | | 300-500 | .008-.013 |
| Bronze – short chipping | | 200-300 | .006-.012 |
| Bronze – long chipping | | 130-200 | .004-.010 |

VEX-S Programming Sequence

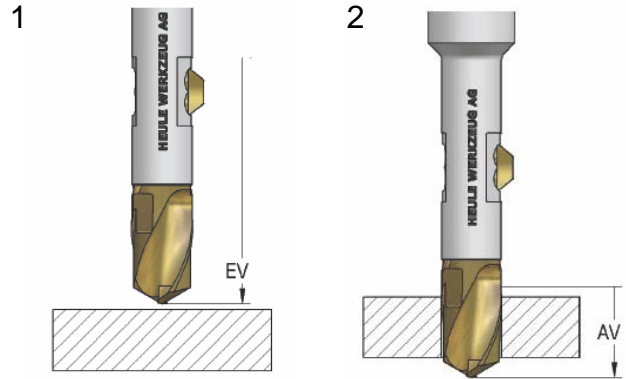
It is not necessary to change the direction of rotation or stop the spindle.

AV: Working feed, forward AR: Working feed, backward
 EV: Rapid feed, forward ER: Rapid feed, backward

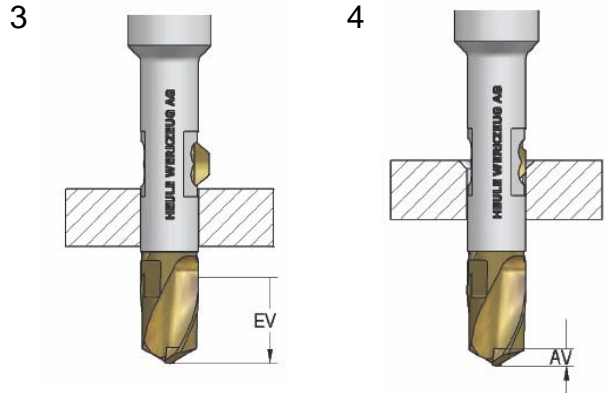
STEP 1: EV
 Rapid traverse of the tool to just above the top of the work piece.

NOTE: Clearance distance.

STEP 2: AV
 In forward linear feed the hole is produced. Continue working feed until the drill insert is completely clear of the hole.

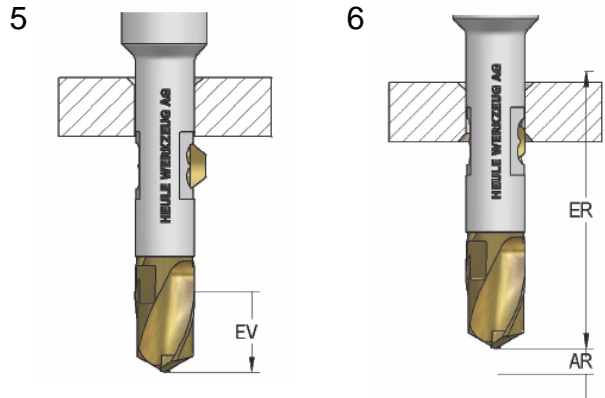


STEP 3: EV
 Position tool with SNAP blade in rapid feed, forward slightly above the top of the material surface bore or burr.



STEP 4: AV
 In linear feed forward the chamfer is generated. Continue in linear feed until the blade is completely retracted into the tool.

STEP 5: EV
 The tool can be passed through the hole in rapid feed forward until the SNAP blade clears the hole and is fully extended.



STEP 6: AR / ER
 The back chamfer is machined by linear feed backward (no change of spindle rotation). As soon as the SNAP blade is completely retracted into the tool, the tool can travel out of the hole in rapid feed backward.