

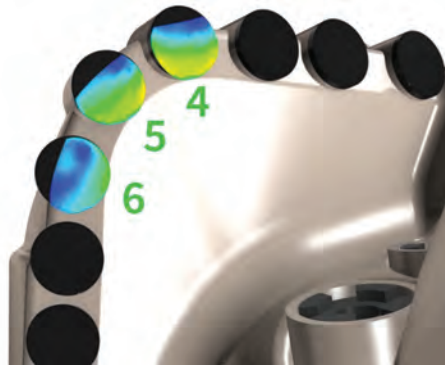
# Tektonic Bits HydroShear Nozzles

**HydroShear™ nozzles increase fluid velocity across the cutter face, which reduces heat accumulation, mitigates thermal wear, and improves cutting evacuation.**

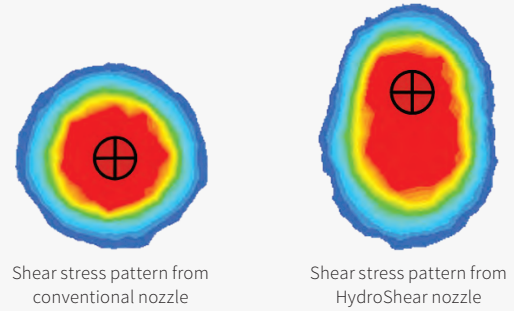
The Tektonic™ drill-bit platform includes a series of solutions for today’s demanding drilling applications. HydroShear™ nozzles are one such solution that produce a distinctive flow pattern, distributing a majority of the flow directly to the cutting face of specifically targeted cutters.

Focusing the hydraulic flow reduces cutting size and helps to limit balling. HydroShear nozzles increase hydraulic velocity at the cutter-formation interface, improving cutter cooling and cuttings evacuation. HydroShear nozzles can be combined with other Tektonic features, such as shaped cutter technology, to further reduce cutting size, quickly remove cuttings from the cutter face, and enable the bit to drill more efficiently for longer intervals.

Tektonic drill bits offer a complete solution to drill demanding applications by minimizing thermal degradation and maximizing rock fracture propagation. Combining multiple technologies from the Tektonic drill-bit platform increases drilling efficiency and enables the bit to drill faster and longer.



Comparison of shear stress across polycrystalline diamond compact (PDC) faces for conventional and HydroShear nozzles.



## Shear stress across PDC face

