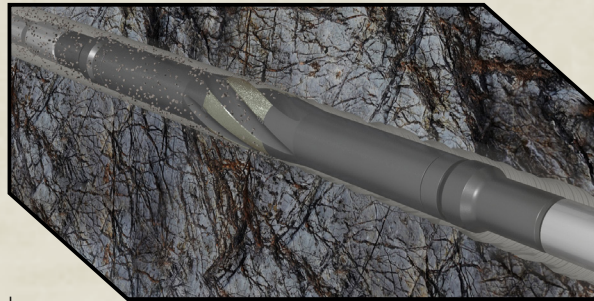


## DRILLING MOTOR TORQUE CAPACITY IN A REAMING TOOL

The **MRS™ STAR** is based on the InFocus MRS™ concept, and is specifically designed to improve drilling efficiency by reducing dependency on multiple wiper trips, backreaming and dedicated reaming activity.



The STAR decouples the drill string from the reaming process. The power section drives the reamer, which is especially beneficial when back reaming as the possibility of a back off in the pipe is greatly reduced.

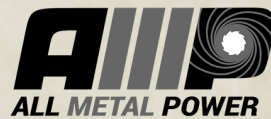
The STAR is activated by fluid circulated down the drill string. Additional torque can be transferred to the tool by drill string rotation. When fluid is circulated to the threshold flow rate, the external sleeve starts to rotate. This rotation is irrespective of the rotation of the drill string. The STAR is self torque-generating due to a power section generating both torque and rotation.

The **globally unique** MRS™ STAR is an integral part of the BHA when drilling with motors, rotary steerable systems and rotary drilling applications, capable of delivering over 6,000 ft-lbs of torque through a purpose designed and chamfered stabilizer blade profile with gradual leading edges for both downward and upward reaming.

The STAR is specifically focused for rigs with sufficient hydraulic power, but where torque limitations on surface equipment and/or string components limit string rotation required to combat hole problems such as tight spots, swelling shales or wellbore collapse (where traditionally, the solution would have required backreaming).

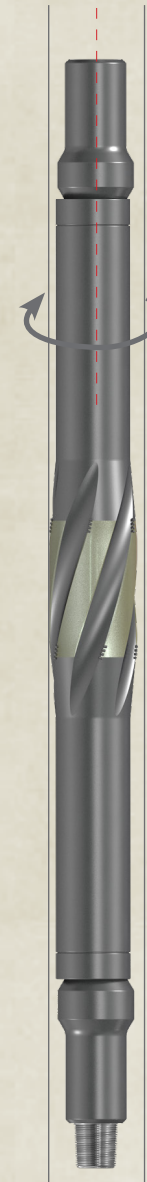


### FEATURING INFOCUS' PATENT-PENDING



IMPERIAL

Body Size	Blade Size
in.	in.
4 3/4 , 5	6 1/8 - 7 7/8
6 3/4 , 7	8 3/8 - 9 7/8
8 , 8 1/4	10 5/8 - 12 1/4
9 1/2	12 1/4 - 17 1/2
11	20 - 26



## FEATURES & BENEFITS

- Fluid activated
  - Localized torque for independent reaming operation
- Drilling optimization
  - Improves hole cleaning by stirring up cuttings and reaming protruding formations into the fluid
  - Agitation function ensures better weight transfer to bit
  - Reduces frictional losses (torsion and axial) when drilling due to independent rotation of stabilized reamer
  - Reduces / eliminates the need for reaming (down / up)
- Improves formation evaluation by reducing hole rugosity
- Reduces / eliminates stuck pipe occurrence
- Delivers fluid activated direct reaming action at the tool thus aiding drilling crews with geologically induced problems
- Reduces stick-slip and drill-string vibrations
- Features a bore through the center allowing for telemetry signal transfer
- Multiple MRS™ STAR systems can be run in the same drill string
- Available with either conventional elastomer or our proprietary elastomerless technology



Product currently in development. Contact InFocus for further details.

Check back to our website periodically, and follow us on social media.

