

TECHNICAL DATA SHEET



TECHNICAL SUMMARY

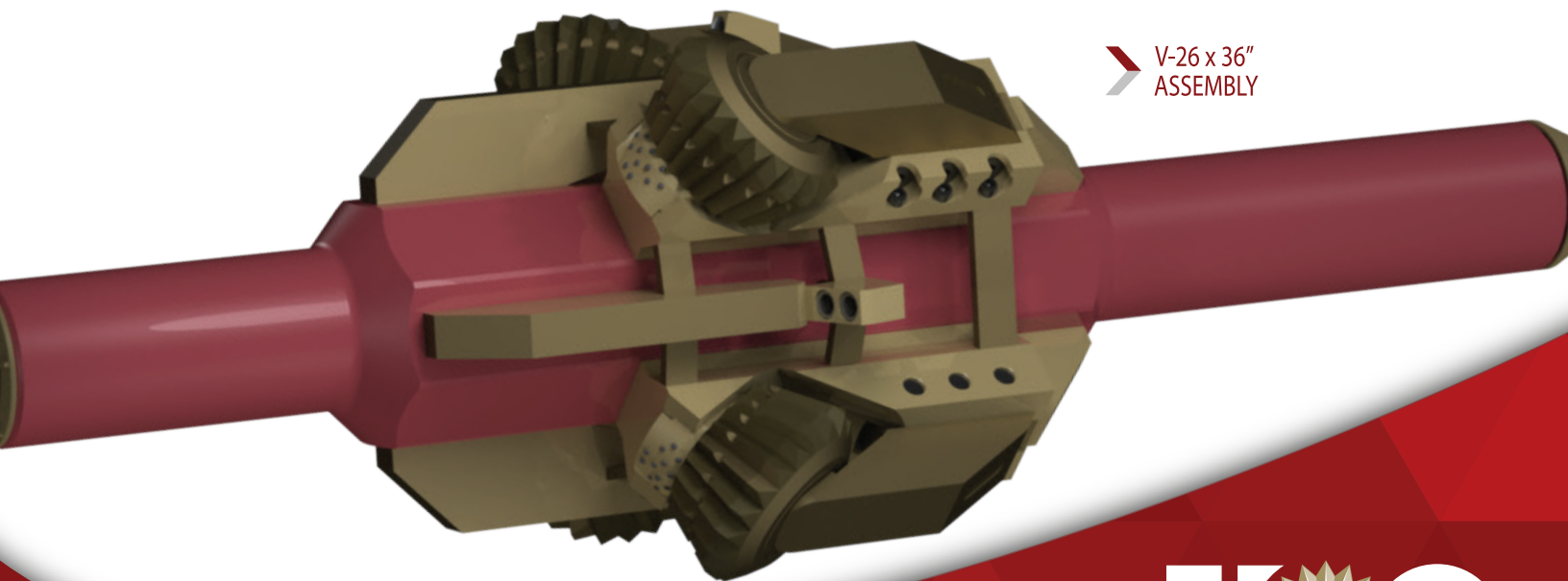
The Viper is a robust heavy-duty variable size fixed diameter hole opener designed for the harshest environments. The Viper is designed on the proven patented technology of the RHO hole opener. The redesigned angles maximize the cutter size in the body, increase bearing capability, improved shirt tail protection, and improved seals. It is capable of opening multiple hole sizes by simply changing the arms and cutter. Arms and Cutters are interchangeable and compatible in other body sizes, which will make different hole sizes.

PROVEN APPLICATIONS

- Pre-existing Pilot Holes
- Vertical and Horizontal
- Oil and Gas / Abandonment / Geothermal / HDD
- Fault Zones and Swelling Formations
- Improving Cement Jobs
- Hole Opening while Drilling in Certain Applications

FEATURES

- Designed to open hole sizes 17-1/2" to 54" using 5 different body sizes
- Patented and Proprietary cutter retention method
- Cutters are carried on the body of the tool and are retained by interchangeable arms that are held in position by load screws and backup lock screws
- Cutters are sealed bearing with pressure compensator actuator to ensure cutter bearings are continually lubricated and hard faced for longer life and extended wear, specifically designed for the Viper
- Larger OD Cutters allow for larger bearing packages which increase weight capacity, decreases revolution, and extended life
- Designed to cut from gauge to minimum pilot hole requirement in 1 stage
- Arms and Cutters come in various standard sizes and increments of 2" with option of non-standard sizes upon request
- Eliminates need for consumable inventory and the need for size specific bodies
- Efficient hole cleaning due to 6-12 jet configuration
- PDC and ADD (Advanced Drilling Design) cutters are available upon request



V-26 x 36"
ASSEMBLY



www.HoleOpener.com

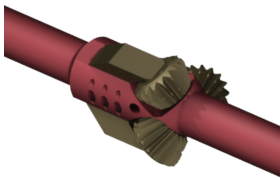
TECHNICAL SPECIFICATIONS AND OPERATING PARAMETERS

TOOL SERIES	V-8	V-18	V-26	V-32	V-38
Opening Size Range (in)	17 - 1/2 - 26	26 - 34	34 - 42	40 - 48	46 - 54
Minimum Pilot Hole (in)	8.50 9.875	17.50	26	32	38
Max Roller Cutter Coverage (in)	17.50 16.25	16.50	16.50	16	16
Cutter/Arm Model	V8	V20	V20	V20	V20
Number of Cutters	3	4	4 or 5	5	5
Top Connection (Pin)+	6-5/8" Reg 7-5/8" Reg	7-5/8" Reg	7-5/8" Reg	7-5/8" Reg	7-5/8" Reg
Fishing Neck O.D. (in)	8.00 9.50	9.50	9.50	9.50	9.50
Bottom Connection (Pin)+	6-5/8" Reg 7-5/8" Reg	7-5/8" Reg	7-5/8" Reg	7-5/8" Reg	7-5/8" Reg
Tool Joint O.D. (in)	8.00 9.50	9.50	9.50	9.50	9.50
Smallest Internal Diameter (in)	2.00	2.813	2.813	2.813	2.813
Max Flow Rate (GPM)*	1,200	1,400	1,400	1,400	1,400
Number of available Nozzles	6 or 9	8 or 12	8 or 12	10 or 15	10 or 15
Max Temperature (°F)*	400	400	400	400	400
Recommended Rotary Speed (RPM)	40 - 90	40 - 90	40 - 90	40 - 90	40 - 90
Max Drilling Weight (lbs)	25,000	30,000	30,000	30,000	30,000

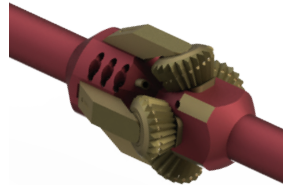
+ Connections listed are standard but may be customized.

* Higher temperature seals are available upon request.

TOOL SERIES CONFIGURATIONS



V-8



V-18

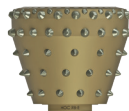
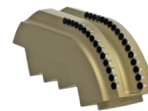


V-26

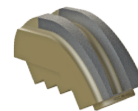
CUTTING STRUCTURE OPTIONS



INTERRUPTED MILL TOOTH


TCI
(Tungsten Carbide Inserts)


PDC



ADD

ROLLER CONE

DRAG TYPE