

## MULTI-PURPOSE SHOE FOR CRITICAL FUNCTIONS

### InFocus' HSRT: Hi-Speed Reaming Tool

is a multi-purpose shoe that provides a variety of critical functions during the completion stages of each well section. The HSRT system can be configured to run as a high speed reaming solution for casing or tubular deployment, as a casing scraper, or as a jetting tool for well-bore clean-up operations with our Thru Tubing HSRT product line. It also adds a beneficial second shear to the cement being pumped into the annulus, improving the cement bond around casing and liners.

Superior to conventional cementing and guide shoes, the HSRT builds upon their respective features aiding in hole cleaning and clearing of formation bridges to land casing on depth. HSRT's are a natural fit for vertical, high angle, & horizontal operations.

The low torque, self-centralizing nose design allows for easy tracking of the wellbore, overcoming ledges and other wellbore obstructions and minimizing the risk of a side track.

Each HSRT tool operates at rotary speeds in excess of 1,500 RPM, in turn generating a unique flow pattern allowing for enhanced fluid carrying capacity making it the ideal candidate for casing and liner cementing operations. During operation, fluid flow pumped from surface activates a unique impeller system to deliver very high rotational speeds.

**The HSRT family was designed to work in combination, exemplified by our world first Triple-Combo run in South America featuring a 9-5/8", 7" and 4-1/2" HSRT's run consecutively in the same wellbore!**

Tool	Hole Size	Casing Size	Max. Drill Out	Flow Rate	TFA	Rotational Speed	Pressure Drop
	in. (mm)	in. (mm)	in. (mm)	gpm (lpm)	in <sup>2</sup> (mm <sup>2</sup> )	RPM	psi (kPa)
450	6 and up (152)	4 1/2 (114)	3.93 (99.8)	60 - 300 (227 - 1135)	3.22 (20.84)	400 - 4200	200 - 1150 (1379 - 7929)
550	6 1/2 and up (165)	5 1/2 (140)	4.5 (114.3)	160 - 450 (606 - 1703)	4.61 (29.74)	600 - 1650	80 - 600 (552 - 4137)
700	8 1/2 and up (216)	7 (178)	6.13 (155.7)	130 - 650 (492 - 2461)	10.1 (65.36)	350 - 2500	65 - 1200 (448 - 8274)
963	12 1/4 and up (311)	9 5/8 (244)	8.66 (220)	200 - 1200 (757 - 4543)	22 (141.94)	250 - 2200	35 - 990 (241 - 6826)
13375	16 and up (406)	13 3/8 (340)	12.42 (315.5)	200 - 1200 (757 - 4543)	22.38 (144.4)	250 - 2200	30 - 720 (207 - 4964)
13625	17 and up (432)	13 5/8 (346)	12.42 (315.5)	200 - 1200 (757 - 4543)	22.38 (144.4)	250 - 2200	30 - 720 (207 - 4964)

Tests were conducted with fresh water of 8.33 PPG

## FEATURES & BENEFITS

- Fluid activated with drillable internals
- Very high rotational speeds achieved with fluid circulation down the string
- Low and uniform pressure drop across the tool making HSRT ideal for completion string deployment
- Optimized nose profiles are available for more aggressive operations
- Multiple jets
- High speed bearings capable of >3000 RPM
- Better hole cleaning prior to cementing
- Improved cementing operations in high angle and horizontal wells

4.50" >>



5.50" >>



7.00" >>



9.63" >>



13.38" >>

13.63" >>



Non-drillable Thru-Tubing HSRT's are also available. Contact your InFocus representative.

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