

OPTIS[®] INFINITY IVC40 INTEGRATED VIDEO CALIPER

The Optis[®] Infinity Integrated Video Caliper tool combines EV's Optis[®] 360° camera technology with an industry standard Multi-Finger Caliper to provide a unique and complete answer to well integrity challenges.

Multi-Finger Caliper tools are used to provide direct and quantitative measurements of internal tubing and casing diameters to evaluate a number of pipe defects ranging from corrosion and erosion to bending and buckling. Combining video with multi-finger caliper data leads to an enhanced interpretation and provides invaluable 360° pipe coverage to complement the limited radial coverage available from a stand-alone mechanical caliper.

Previous IVC technology, which combined multi-finger caliper tools with downview and single sideview were limited to the investigation of short intervals and/or specific locations. The Optis[®] Infinity IVC overcomes these limitations by combining EV's Optis[®] Infinity 360° multi-side view camera, allowing for complete coverage of the wellbore.

The Optis[®] Infinity IVC can be run in real-time via e-line or e-coil conveyance systems and run in conjunction with pressure, temperature, gamma ray and casing collar locator tools, on single conductor, co-axial or multi-conductor electric line cables as well as in memory mode on slickline or standard coiled tubing. Deployment on electric line means that multi-finger caliper measurements and high definition downview and sideview footage can be acquired in real-time, at surface, for improved service quality and operational efficiency.

Features:

- Identical, uncompromised, high quality downview and 360° array sideview video, and images from the Optis[®] Infinity camera system
- IVC24 and IVC40 finger caliper versions available
- Combinable with pressure, temperature, gamma ray and casing collar locator sensors which can be recorded simultaneously with Optis[®] camera or multi-finger caliper data
- Available in surface read-out or memory mode†
- MIPSPRO compatible for analysis and reporting

Benefits:

- No specific location of interest required
- Improves understanding as depth-based images with a theoretically infinite length can be merged, viewed and analysed in combination with integrity and production logs
- Increased operational efficiency by combining two or more services in a single run and by eliminating the requirement for stations and rotations of a rotary side-view camera
- Increased interpretation efficiency and decision making by combining qualitative and quantitative information in a comprehensive answer product
- Increased likelihood of successfully diagnosing well integrity issues than with a stand-alone Multi-Finger Caliper

Applications:

- Tubing and/or casing evaluation: corrosion, erosion, wear, pits, holes and other defects
- Completion component inspection: safety valve, inflow control device, gas lift mandrel, etc.
- Pre or post-inspection of mechanical workover: milling, cleaning, acidizing, shifting, etc.
- Fullbore corrosion analysis, sand screen / perforation evaluation, detailed analysis of jewellery

SPECIFICATIONS

	INFINITY IVC40		INFINITY IVC40 XF ¹	
Diameter	2.9 in	73.0 mm	2.9 in	73.0 mm
Length	411.7 in	10,457.2 mm	411.7 in	10,457.2 mm
Pressure Rating	14,503 psi	1000 Bar	14,503 psi	1000 bar
Temperature Rating	257°F	125°C	257°F	125°C
Camera Types	4x Colour Sideview and 1x Colour Downview			
Frame Rate	25 fps			
Video Resolution	2880x ∞ Sideview; 1280x960 Downview			
Sideview Pixels Processed	5.9 GigaPixels per 30ft interval			
Field of View	360° circumferential coverage			
Tubular ID Range	3.5 in - 8.26 in	89.0 mm - 210 mm	3.5 in - 9.62 in	89.0 mm - 244.5 mm
Radial Accuracy	+/- 0.02 in	+/- 0.5 mm	+/- 0.026 in	+/- 0.65 mm
Radial Resolution	+/- 0.004 in	+/- 0.1 mm	+/- 0.005 in	+/- 0.13 mm
Vertical Resolution logging @ 30ft/min (10m/min) ¹	0.12 in	3.0 mm	0.12 in	3.0 mm

1 XF = Extended Fingers

*Example Tool String

