

FIBERSCOPES



Remote Visual Inspection

Precision Optics.
Durable Construction.
Cost Effective.

A Large Family of Rugged, High Performance Inspection Tools

A wide range of diameters, lengths and viewing options, combined with a high-resolution image guide, make Everest VIT flexible fiberscopes ideal for a variety of remote visual inspection applications. They excel in capturing bright, clear images from deep inside turbines, compressors, pipes, tanks and other hard-to-reach places.

Full Range of Models

With over 30 standard models from which to choose, you are sure to find the right fiberscope for your inspection application. Standard articulating models have diameters as small as 2.4 mm (0.94 in.) and lengths up to 3.0 m (9.8 ft).

Non-articulating models are available from 0.5 mm (0.20 in.) diameter and in lengths as long as 9.0 m (29.5 ft).

If your inspection requires something outside of this range, Everest VIT's custom fiberscope manufacturing capabilities may be able to meet your requirements. Please call us to discuss your custom needs.

High-resolution Images

The super thin fiberoptic technology used by Everest VIT fiberscopes allows thousands more fibers to be packed into

the same size image bundle. Our "Superfine" image guides have up to 50 percent more fibers than other fiberscopes of similar diameter. The high quality of smaller fibers provides a sharper, smoother image and reveals finer details of the inspection surface.

Ergonomic Body

The trim, sleek body is comfortable for hands of all sizes and the conveniently-placed articulation and focus controls enable single-handed operation.

Designed To Be Used

Our flexible fiberscopes are built to withstand today's tough industrial applications. With a stainless steel monocoil core, waterproof sealant, and stainless steel or tungsten outer braid, the scopes are built for durable performance in a variety of inspection environments.

For UV Inspections

Quartz illumination fibers are available for applications where a UV light source is required with the fiberscope. Quartz has much greater efficiency when transmitting UV light and will provide more intense output to stimulate UV-sensitive dyes and penetrants.

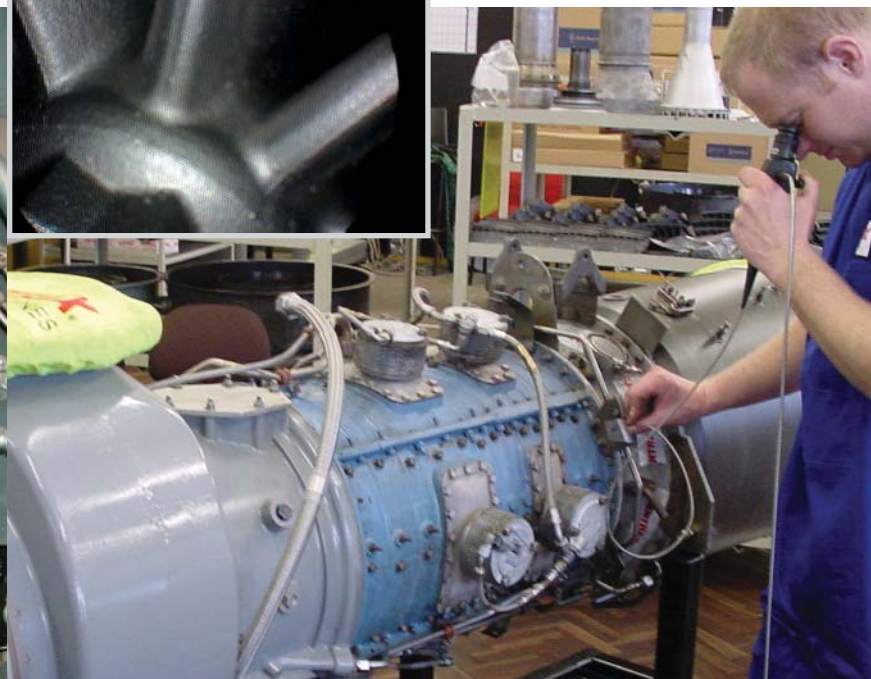
▼ Industrial Inspection



▼ Image of Turbo Impeller



▼ Turbine Inspection



HARDWARE FEATURES

Tip Articulation

This aids maneuverability and has a scanning capability which can provide a panoramic view of the area being inspected. Tip Articulation is controlled by a conveniently-located lever which operates the two-way articulating tips. Two concentric knobs are used on four-way systems. Both types have locking mechanisms to maintain a fixed articulation angle during inspection.



Eyepiece

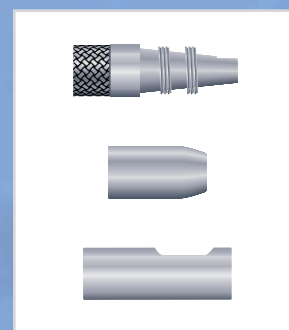
The standard DIN eyepiece connects easily to a video, digital or photographic camera system and uses the same camera couplers which fit our Rigid Borescopes. The ocular assembly incorporates a diopter focus adjustment to suit operators with varying eyesight characteristics.

Light Guide

A continuous high-efficiency fiber bundle maximizes light transmission from light source to scope tip. Various entrance adapters are available which enable the instrument to be used with a wide variety of light sources including those of other manufacturers.

Insertion Tube

A strong stainless steel monocoil provides protection from crushing forces, while a stainless steel or tungsten braid cover resists wear from sliding over rough and sharp surfaces. The Insertion Tube is made watertight with layers of PVC and soft urethanes. The flexible Insertion Tube adapts easily to curves and bends and can be maneuvered around corners and over obstacles, yet is torsionally stiff to allow it to be twisted for better access and positioning.



Interchangeable Tip Optics

These enable both forward-view and 90° side-view inspections with one fiberscope. The Tip adapters are retained by a double screw-thread which ensures that the tips are positively secured to the instrument. The forward-viewing tip headguard is standard and the 90° side-view Tip Adapters are optional.

SPECIFICATIONS

Specifications subject to change without notice.

Operating Temperature:

-18° to 82° C (0° to 180° F)

Watertight:

Insertion Tube and Bending Neck to 1 bar (14.7 psi)

Scope Body splashproof

Liquid Compatibility:

Can be immersed in water, synthetic and mineral lubricating oil, mineral and synthetic hydraulic fluid (not Skydrol®), gasoline, diesel and jet fuel. (Instrument must be cleaned of contaminating fluid after use and before storage.)

Insertion Tube Bend Radius

Scope Diameter	Minimum Bend Radius
2.4 mm to 6 mm	32 mm (1.25 in.)
8.4 mm	36 mm (1.5 in.)
12.5 mm	51 mm (2.0 in.)

FIBERSCOPE MODELS with Articulation

Part No.	Diameter	Working Length	Articulation	Direction of View	Field of View	Depth of Field	Side View Tip	Insertion Tube/ Bending Neck Braid**
2.4 mm Diameter								
F2D07	2.4 mm (0.094 in.)	0.7 m (2.3 ft)	2-way 130°	0°	45°	4.0 mm (0.16 in.) – infinity	No	stainless steel
F2D12	2.4 mm (0.094 in.)	1.2 m (3.9 ft)	2-way 130°	0°	45°	4.0 mm (0.16 in.) – infinity	No	stainless steel
3.0 mm Diameter								
F3D05	3.2 mm (0.126 in.)	0.5 m (1.6 ft)	2-way 120°	0°	45°	4.0 mm (0.16 in.) – infinity	No	stainless steel
F3D10	3.2 mm (0.126 in.)	1.0 m (3.3 ft)	2-way 120°	0°	45°	4.0 mm (0.16 in.) – infinity	No	stainless steel
F3D12	3.2 mm (0.126 in.)	1.25 m (4.1 ft)	2-way 120°	0°	45°	4.0 mm (0.16 in.) – infinity	No	stainless steel
4.0 mm Diameter								
F4D10	4.0 mm (0.157 in.)	1.0 m (3.3 ft)	2-way 120°	0°	45°	4.0 mm (0.16 in.) – infinity	No	tungsten
F4D15	4.0 mm (0.157 in.)	1.5 m (4.9 ft)	2-way 120°	0°	45°	4.0 mm (0.16 in.) – infinity	No	tungsten
F4S10	4.0 mm (0.157 in.)	1.0 m (3.3 ft)	2-way 120°	90°	45°	4.0 mm (0.16 in.) – infinity	No	tungsten
F4S15	4.0 mm (0.157 in.)	1.5 m (4.9 ft)	2-way 120°	90°	45°	4.0 mm (0.16 in.) – infinity	No	tungsten
5.0 mm Diameter								
F5X10	5.0 mm (0.197 in.)	1.0 m (3.3 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F5X15	5.0 mm (0.197 in.)	1.5 m (4.9 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F5X18	5.0 mm (0.197 in.)	1.8 m (6.1 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
6.0 mm Diameter								
F6X10	6.0 mm (0.236 in.)	1.0 m (3.3 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F6X15	6.0 mm (0.236 in.)	1.5 m (4.9 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F6X18	6.0 mm (0.236 in.)	1.8 m (6.1 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F6X30IG*	6.0 mm (0.236 in.)	2.7 m (8.9 ft)	2-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
8.0 mm Diameter								
F8X10	8.0 mm (0.331 in.)	1.0 m (3.3 ft)	4-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F8X15	8.0 mm (0.331 in.)	1.5 m (4.9 ft)	4-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F8X18	8.0 mm (0.331 in.)	1.75 m (6.1 ft)	4-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten
F8X30IG*	8.0 mm (0.331 in.)	2.7 m (8.9 ft)	4-way 120°	0°/90°	45°	6.0 mm (0.24 in.) – infinity	Yes	tungsten

* Industrial Grade not Superfine image guide

** Polyimide cover over braid optional

FIBERSCOPE MODELS without Articulation

Part No.	Diameter	Working Length	Direction of View	Field of View	Insertion Tube Covering
0.5 mm Diameter					
FCN05D025	0.5 mm (0.0197 in.)	25 cm (9.8 in.)	0°	70°	Polyurethane
FCN05D06	0.5 mm (0.0197 in.)	60 cm (23.6 in.)	0°	70°	Polyurethane
1.0 mm Diameter					
FCN1.0D025	1 mm (0.039 in.)	25 cm (9.8 in.)	0°	70°	Polyurethane
FCN1.0D06	1 mm (0.039 in.)	60 cm (23.6 in.)	0°	70°	Polyurethane
FCN1.0D120	1 mm (0.039 in.)	120 cm (47.2 in.)	0°	70°	Polyurethane
1.5 mm Diameter					
FCN1.5D025	1.5 mm (0.059 in.)	25 cm (9.8 in.)	0°	70°	Polyurethane
FCN1.5D06	1.5 mm (0.059 in.)	60 cm (23.6 in.)	0°	70°	Polyurethane
FCN1.5D025	1.5 mm (0.059 in.)	120 cm (47.2 in.)	0°	70°	Polyurethane

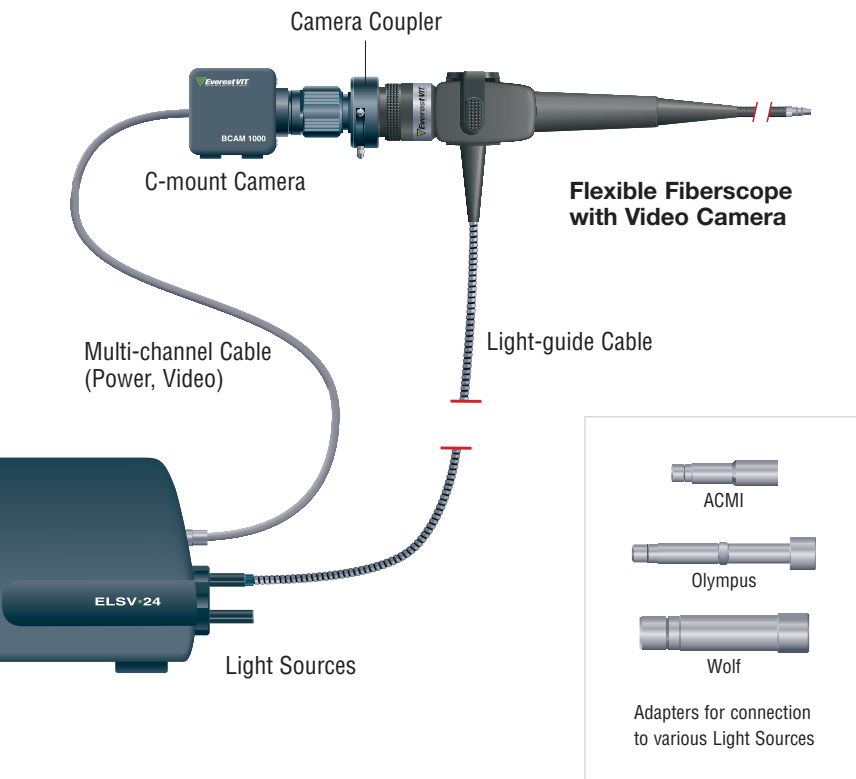
Custom Lengths up to 9.0 m (29.5 ft) available

LIGHT SOURCES & ACCESSORIES

Everest VIT flexible fiberscopes are ideal for documentation and recording images, and with the appropriate adapter, can be used with conventional and digital cameras as well as color video cameras.

The following documentation accessories are available:

- Adapters for coupling all kinds of cameras.
- Video Cameras for recording and documentation
- Monitors for displaying enlarged images.
- Light Sources



35mm Camera

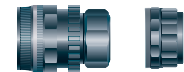


Photo Coupler Lens or Universal Photo Adapter



Digital Camera



Universal Photo Adapter



C-mount Color Video Camera



C-mount Video Coupler (with fixed or adjustable focus)



Mini DV Digital Video Recorder/Monitor. Includes memory card for video clips and still image storage



High-resolution Monitor



ELSV-24

24 W metal-halide light source with high output, high color temperature, and multi-standard lightguide turret. With integral power supply and video output channel.



ELS-24DC

24 W metal-halide light source with high output and high color temperature. Available with portable operation pouch (ELS-24DC KIT) and battery .



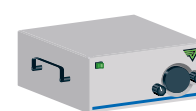
ELSX-300

300 W Xenon light source with high output, and high color temperature.



ELSV-60

60 W metal-halide light source with integral camera power and video output channel.



FLS-200UV

Switchable 200 W UV/visible light source

FIBERSCOPES

ABOUT EVEREST VIT

Everest VIT is the industry leader in the development of Remote Visual Inspection (RVI) equipment, sales, on-site service, rental and training. RVI provides viewing capabilities from a remote location, enabling companies around the world to inspect machinery, facilities and infrastructure in the safest, quickest and most cost-effective manner possible. Everest VIT's innovative products have been used to streamline the inspection process in all industries where safety, security and accuracy are of paramount concern, such as aviation, power generation, processing, manufacturing, law enforcement and infrastructure.



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