



HENKE  
SASS  
WOLF

## Specifications

### Flexible Fibrescopes

Model #	Diameter	Working length	Articulation	Tube construction	Field of view	Depth of field	Tip adapter
F3D05	3.0 mm (0.12 in.)	431 mm (17 in.)	2-way/130°-100°	PVC sheathing	80°	5-50 mm (0.2 to 2 in.)	Forward view
F3D10	3.0 mm (0.12 in.)	1 m (40 in.)	2-way/130°-100°	PVC sheathing	80°	5-50 mm (0.2 to 2 in.)	Forward view
F4D05	4.0 mm (0.16 in.)	0.5 m (20 in.)	2-way/120°	Stainless steel	50°	6-100 mm (0.24 to 4 in.)	Forward view
F4R05	4.0 mm (0.16 in.)	0.5 m (20 in.)	2-way/120°	Stainless steel	50°	6-100 mm (0.24 to 4 in.)	Side view
F4D10	4.0 mm (0.16 in.)	1 m (40 in.)	2-way/120°	Stainless steel	50°	6-100 mm (0.24 to 4 in.)	Forward view
F4R10	4.0 mm (0.16 in.)	1 m (40 in.)	2-way/120°	Stainless steel	50°	6-100 mm (0.24 to 4 in.)	Side view
F5D10	5.3 mm (0.21 in.)	1 m (40 in.)	2-way/120°	Tungsten	55°	7 mm-inf. (0.16 in. to inf.)	Forward view
F5D15	5.3 mm (0.21 in.)	1.5 m (60 in.)	2-way/120°	Tungsten	55°	7 mm-inf. (0.16 in. to inf.)	Forward View
F5D20	5.3 mm (0.21 in.)	2 m (80 in.)	2-way/120°	Tungsten	55°	7 mm-inf. (0.16 in. to inf.)	Forward View
F5X10X	5.3 mm (0.21 in.)	1 m (40 in.)	2-way/120°	Stainless steel	55°	8-80 mm (0.32 to 3.2 in.)	Forward & side view
F6X10X	6.0 mm (0.24 in.)	1 m (40 in.)	2-way/120°	Stainless steel	60°	10-100 mm (0.4 to 4 in.)	Forward & side view
F6X15X	6.0 mm (0.24 in.)	1.5 m (60 in.)	2-way/120°	Stainless steel	60°	10-100 mm (0.4 to 4 in.)	Forward & side view
F6X20X	6.0 mm (0.24 in.)	2 m (80 in.)	2-way/120°	Stainless steel	60°	10-100 mm (0.4 to 4 in.)	Forward & side view
F6X30X	6.0 mm (0.24 in.)	3 m (120 in.)	2-way/120°	Stainless steel	60°	10-100 mm (0.4 to 4 in.)	Forward & side view
F7X10X	7.6 mm (0.30 in.)	1 m (40 in.)	4-way/120°-90°	Tungsten	30°, 60°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F7X15X	7.6 mm (0.30 in.)	1.5 m (60 in.)	4-way/120°-90°	Tungsten	30°, 60°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F7X20X	7.6 mm (0.30 in.)	2 m (80 in.)	4-way/120°-90°	Tungsten	30°, 60°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F7X30X	7.6 mm (0.30 in.)	3 m (120 in.)	4-way/120°-90°	Tungsten	30°, 60°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F10X10X	10 mm (0.39 in.)	1 m (40 in.)	4-way/120°-90°	Tungsten	30°, 50°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F10X15X	10 mm (0.39 in.)	1.5 m (60 in.)	4-way/120°-90°	Tungsten	30°, 50°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F10X20X	10 mm (0.39 in.)	2 m (80 in.)	4-way/120°-90°	Tungsten	30°, 50°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view
F10X30X	10 mm (0.39 in.)	3 m (120 in.)	4-way/120°-90°	Tungsten	30°, 50°, 90°	4 mm-inf. (0.28 in. to inf.)	Forward & side view

**Operating Temperature Range:** -23.1° to 81.4°C (-10° to 180°F)  
**Fluid Resistance:** Can be immersed in water, oil, gasoline, and jet fuel  
**Pressure Resistance:** 1 kg/cm<sup>2</sup> (14.5 psi) (1 bar)

### Inspection Solutions

People buy our remote visual inspection products because, in the main, they either have a problem, or they think they have a problem, or they need to know that there isn't a problem. We try to provide the solution to these questions with images from deep inside structures, jet engines, aircraft, machines and products of all kinds. Seeing truly is believing! We try to offer the customer the most cost effective solution to his inspection problem.

In our core business of remote visual inspection we offer a very complete portfolio of equipment. As well as HSW rigid bore-scopes, we offer industrial fibrescopes, industrial videoprobes, CCD cameras and related products for video documentation and photography.



**Henke-Sass, Wolf GmbH**  
 Postfach 4259, Kronenstraße 16  
 D-78532 Tuttlingen, Germany  
 Telefon ++49 (0) 74 61 / 1 89 - 0  
 Telefax ++49 (0) 74 61 / 1 89 - 187  
 e-mail: hsw@henkesasswolf.de  
 www.henkesasswolf.de

**Henke-Sass, Wolf Sp. z o.o. POLSKA**  
 ul. Tysiaciecia 14  
 64-300 NOWY TOMYSL, Polen  
 Tel.: (0-666) 228 31  
 Fax: (0-666) 228 90 226 55  
 Tlx 01412411  
 e-mail: hsw@henkesasswolf.de  
 www.henkesasswolf.de

**Henke-Sass, Wolf of America Inc.**  
 Soroco Industrial Park, Route 131  
 Southbridge, MA 01550, USA  
 Telephone 508 - 764 - 32 00  
 Telefax 508 - 764 - 82 42  
 e-mail: hsw@henkesasswolf.de  
 www.henkesasswolf.de



HENKE  
SASS  
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Durable and Versatile Tools

# Flexible Fibrescopes



### Precision Optics

Rugged construction, one-hand operation, and precision optics set Henke-Sass, Wolf flexible fibrescopes apart from the rest. This complete line of durable industrial tools includes direct-view and side-view fibrescopes in diameters ranging from 3 mm to 10 mm. Viewing versatility is available through two-way articulation, four-way articulation, and distal focusing options.

Henke-Sass, Wolf fibrescope optics are designed to offer clear, bright images. State-of-the-art lens-manufacturing and image-guide technology are essential to their quality. All Henke fibrescope optics are optimised for use with video and other documentation systems.

### A Fibrescope for your application

A wide range of diameters, lengths, and viewing options allows Henke-Sass, Wolf flexible fibrescopes to perform a variety of RVI jobs. Tightly woven tungsten braid sheathing, stainless steel, or tough PVC construction ensures performance in a variety of environments.

To help you gain a better understanding of Henke-Sass, Wolf's flexible fibrescope capabilities, please see the charts illustrating magnification and direction of view.

### Designed for Durability

Henke-Sass, Wolf flexible fibrescopes are built with tungsten braid, stainless steel, or tough PVC sheathing for maximum durability in harsh working environments. For articulation assemblies, steel guide trays are used to resist wear and limit the potential for damage to the image and lighting fibres. Mechanical guide-wire stops protect the assemblies from excess stress.

### Our Recommendations

For maximum image quality, we recommend the shortest, largest-diameter fibrescope suitable to your application needs. Larger-diameter fibrescopes are more durable and provide more light-carrying fibres for a better image. Shorter lengths are sturdier and less likely to hang on edges or corners, and they offer a shorter pathway for the image and light.

### One-hand articulation

All our fibrescopes allow users to hold and steer the instrument with one hand, leaving the other hand free to guide the probe into the area being inspected.

### Small, flexible, manoeuvrable

A choice of 2-way or 4-way articulation and diameters as small as 3.2 mm with very small minimum bending radii, make our flexible fibrescopes perfect for the tight clearances found in aircraft engines, small diameter pipe-work, castings and many other industrial applications.

### Eyepiece pattern

All fibrescopes in the range have the now virtually industry-standard 32 mm diameter ocular cup, exactly the same as that on our rigid borescopes. This means that video and photo adapters and couplers required for documentation of images from the fibrescope can be common to all your borescope equipment.

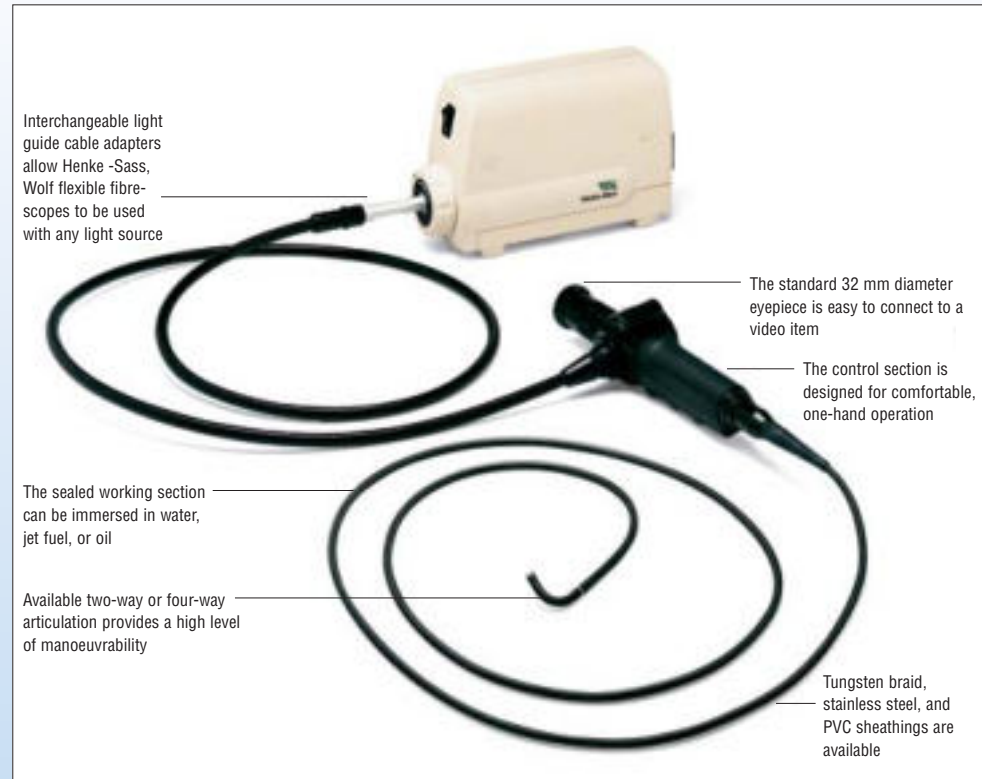


### Multiple viewing options

All instruments except the 3.2 mm and 4.00 mm models have interchangeable tip adapters to widen their usefulness.

On the larger diameter 7.6 mm and 10.00 mm fibrescopes you can select from six different tip adapters which offer three different fields of view in both forward and side view directions of view. On the F5X and F6X ranges the forward view can be converted to 90° side view by means of the prismatic tip adapter packed with each instrument. All tip adapters of whatever type have a positive double locking arrangement and do not increase probe diameter.

The F4 range is offered as both a forward viewing and a side viewing version of each length.



\* Shown with optional Henke HLS-240 light source

### Magnification / Field of view

The wider the field of view, the less the magnification. In these photographs, all taken at the same distance, the 30° field of view in the photograph of the single coin clearly offers the highest magnification. The 60° field of view in the centre image offers less magnification, and the 90° field of view offers the least magnification.

