THE FLEXBAR SNAKE EYE™
Portable Video Inspection System

Ideal for the visual inspection of hard-to-reach areas with access greater than 1.1" (28mm).

SYSTEM SPECIFICATIONS:
Monitor/CCU
• 5" (12.7cm) color TFT-LCD, High Resolution
• 320 x 234 color pixels
• Rotatable
• Anti-glare screen
• Adjustable hand strap

Camera
• CCD camera
• 1.1" (2.8cm) diameter
• Sensitivity 10 lux
• Resolution 512 x 492
• Field of view 46°
• Depth of field 2.5" (63mm) to inf.
• 4 white light LEDs
• Water proof to 10 ft. (3m)
• Video input/output - NTSC

Power
BATTERY
• Up to 90 min. continuous operation
• 2 x 6V NiMH rechargeable batteries
• Battery fast charger
CONTINUOUS
• AC/DC adapter
• 12V auto adapter
Total System Weight - less than 3 lbs (1.4kg)
System Operating Temperature - 32°F to 122°F (0°C to 50°C)

Model No. 20750, Flexbar Snake Eye Portable Video Inspection System Complete. System includes color display, LED camera, rigid wand and finger adapters, 4’ cable, NiMH batteries, charger, continuous adapters, video I/O cable and rigid carrying case.

FLEXBAR UNIVERSAL C-MOUNT CAMERA
BORESCOPE CONNECTION KIT
Connects to Flexbar Rigid Borescopes, allowing for the Video Inspection of entrance bores down to 2mm dia. (see available scopes, pages 38-41).

The Flexbar Universal Video Borescope Connection Kit turns any Flexbar rigid lens style scope into a powerful video inspection tool providing sharp, clear images. Just add the right borescope for your application along with a Flexbar C-Mount Video Adapter (Model No. 13285) and a Flexbar Lightsource (No. 12720) and Light Guide Cable (No. 13283) and your system is complete.

Additional requirements * for complete borescope inspection system:
• Borescope
• C-Mount Video Adapter, Model No. 13285
• Flexbar Lightsource and Light Guide Cable

*Purchase Separately

ORDERING:
Model No. 20757, Universal C-Mount Camera Borescope Connection Kit complete
Optiview™
7” RIGID BORESCOPE

Features:
• Portable, rugged design enables user to view critical components in high resolution through access holes as small as .160” (4mm).
• Utilizes a high intensity tungsten halogen light source operated by 2 AA batteries.
• Built-in light source affords user extreme versatility anywhere in the shop.

Specifications:
• Working Length: 7”
• Overall Length: 9”
• Diameter: .160” (4mm)
• Field of View: 65° Wide Angle

Model No. 15735. OptiView 7” Rigid Borescope. Complete with battery light handle, 2AA batteries and hard plastic carry case.

FLEXBAR SHARP-VIEW BORESCOPE

The Highest Quality Scope At An Excellent Value
Featuring Superb Quality Optics Which Provide Clear, Bright Images For Any Standard Industrial Application. Do not confuse our scopes with cheap imitations!

Main Features:
• Probe tubing is stainless steel for extra durability.
• Focusing eyepiece adjusts to your vision. Eyepiece is standard 32mm...accepts Flexbar C-mount coupler No. 13285 for video system usage.
• Integral cool fiberoptic lighting provides bright and even lighting.
• 45° wide field of view for direct viewing.
• Right angle mirror sleeve available for 90° directional viewing.
• Borescope may be used with optional light guide connector and 150W lightsource for variable light intensity.

Ordering:
Model No. 15696. Sharp-View Borescope, 10¼” viewing length
Model No. 15697. Right Angle Mirror Sleeve for 15696
Model No. 15698. Sharp-View Borescope, 18.1” viewing length
Model No. 15699. Right Angle Mirror Sleeve for 15698
Model No. 15694. Optional Portable Battery Light Handle
Available Options: 150 Watt Illuminator, Flexible Light Guide, Video Camera Adapter, Video Cameras and Monitors (See page 39.)
FLEXBAR RIGID
BORESCOPES & MICROBORESCOPES

Featuring Superb Quality Optics Which Provide Clear, Bright Images For Any Standard Industrial Application.

IDEAL FOR USE WITH FLEXBAR VIDEO BORESCOPE SYSTEM, see page 37

Made in U.S.A.

Standard scopes available in diameters from 1.5mm (.060") up to 5.5mm (.220"), lengths up to 18". All models are direct (0°) view with optional 90° view mirror sleeve available.

MAIN FEATURES:
• Probe tubing is stainless steel for extra durability.
• Focusing eyepiece adjusts to your vision. Eyepiece is standard 32mm...accepts Flexbar C-mount coupler No. 13285 for video system usage.
• Integral cool fiberoptic lighting provides bright and even lighting.
• 45° field of view for direct and lateral viewing.
• Right angle mirror sleeve available for 90° directional viewing.
• Light guide post connects with Flexbar light guide (No. 13283) for use with Flexbar Lightsource (see page 32) or optional Flexbar portable light handle

Rigid Borescopes and 90° Mirror Sleeves (Partial list of available models):

<table>
<thead>
<tr>
<th>Microborescopes: Direct Viewing - 45° F.O.V.</th>
<th>Right Angle Mirror Sleeves: 90° F.O.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Diameter</td>
</tr>
<tr>
<td>15716</td>
<td>1.5mm (.060&quot;)</td>
</tr>
<tr>
<td>15718</td>
<td>1.5mm (.060&quot;)</td>
</tr>
<tr>
<td>15720</td>
<td>2mm (.080&quot;)</td>
</tr>
<tr>
<td>15722</td>
<td>2mm (.080&quot;)</td>
</tr>
<tr>
<td>15724</td>
<td>3mm (.120&quot;)</td>
</tr>
<tr>
<td>15702</td>
<td>4mm (.160&quot;)</td>
</tr>
<tr>
<td>15706</td>
<td>5.5mm (.220&quot;)</td>
</tr>
</tbody>
</table>

70° F.O.V. models available upon request. Extended lengths also available.

ACCESSORIES FOR FLEXBAR RIGID BORESCOPES AND MICROBORESCOPES:
Model No. 13283, 10’ Fiberoptic Light Guide (Connects borescopes with Flexbar Lightsources)
Model No. 12720, Flexbar 150W Halogen Lightsource
Model No. 18959, Flexbar Portable Battery Light Handle (Connects directly to borescope light post)
Model No. 13285, Fixed Focus C-Mount Video Coupler (Connects borescope to Flexbar Video Camera System. See page 37)
FLEXBAR FIBEROPTIC FLEXIBLE BORESCOPES
Made in U.S.A.

General Purpose Industrial Scopes
Handling Multiple Inspection Tasks

I. General Purpose Model: Direct & Right Angle Viewing
This general purpose fiberscope is designed to be a valuable inspection device which is capable of reducing or eliminating costly machine & equipment teardown for inspection purposes. With the portable battery handle light source, the General Purpose model becomes a self-contained, versatile inspection device to detect worn, damaged, or otherwise inadequate conditions in hidden or normally inaccessible areas.

Model No. 16128, General Purpose Flexible Borescope
Complete with light handle, right angle attachment and heavy-duty carrying case

Model No. 16121, Replacement light bulb, 1 each, for above

LONGER LENGTHS QUOTED UPON REQUEST — PHONE OR FAX.

II. High Resolution: Smaller Diameter (3mm) Models: Direct and Right Angle Viewing
Designed to be a portable, rugged inspection device capable of producing a high-resolution image of critical components through access holes as small as 3.0mm. With intense fiber optic illumination and a crisp image delivered by high-resolution quartz optical fiber, this fiberscope is able to handle a host of inspection requirements where there is limited access.

Model No. 13540, High Resolution, 3mm x 24” Flexible Borescope. Complete with light handle and carrying case.

Model No. 13541, High Resolution, 3mm x 36” Flexible Borescope. Complete with light handle and carrying case.

Model No. 13542, 90° Right Angle Viewing Attachment for above models.

Model No. 16121, Replacement Light Bulb, 1 each for above models.
New from Flexbar
Series iii 2-way and 4-way articulating
fiber optic borescopes

Featuring New Higher Resolution Image Fiber,
Optics & Illumination

Specifically designed for QA applications and preventative maintenance inspection programs, the Series III flexible fiberscopes provide high-resolution images of difficult to reach areas. Look around corners and into deep recesses without the need for costly, time consuming tear down.

High grade optics produce very bright images, and our patent pending Dura-Flex™ articulation system provides outstanding range of motion and durability without the associated cost.

Control surfaces are easy to reach and use.
10,000 pixel field assures bright, sharp, detailed images.

Standard system includes:
• High resolution imaging bundle w/10,000 elements.
• Portable battery handle - 3V.
• Custom foam lined carrying case.

Options:
• 150 Watt quartz-halogen illuminator.
• 10 Watt Metal Halide arc lamp, 12 volt portable illuminator with rechargeable NiCad batteries and wall power supply/charger. Lamp life 1000 hours.
• 3mm x 72 in. (1829mm) long flexible light guide.
• Right Angle viewing adapter.

Model No. 18960, Series III 2-Way Articulating Flexible Borescope Kit, 6mm x 40"
Model No. 18961, Series III 4-Way Articulating Flexible Borescope Kit, 6mm x 40"
Model No. 18962, Right Angle Viewing Adapter for above models.
Model No. 18963, Replacement Light Bulb for above models.

Special Working Channel Model (with 2mm working channel):
For use in many Inspection and Maintenance Applications. Channel can accept forceps (see below) or be used for air/water irrigation.

Model No. 18952, Series III 4-Way Articulating Flexible Borescope Kit with 2mm dia. working channel.
Model No. 18953, Right Angle Adapter for above.
Model No. 18954, Grasping Forceps for above.

OPTIONAL ACCESSORIES FOR GENERAL PURPOSE & ARTICULATING FLEXIBLE BORESCOPE MODELS:

1. Illumination:
   Model No. 18-12720, Flexbar 150 Watt Halogen Lightsource. See page 32 for complete information.
   Model No. 13283, Flexible Fiberoptic Light Guide Cable (10') Connects borescope to Flexbar Lightsource (above).

2. Video Adaptor, Video Camera, & Monitor:
   Model No. 13285, Video Adaptor, couples to C-mount video cameras
   Model No. 18-19940, 1/3" CCD Color Video Camera, S-VHS
   Model No. 19960, 14" Color Monitor, S-VHS
   Model No. 18-19946, 6' S-VHS Video Cable
FLEXBAR FIBEROPTIC MICROBORESCOPES
Made in U.S.A.

Provide High Resolution Image Of Critical Components Through Very Small Access Holes:
Semi-Rigid & Flexible Models from .039" dia. to .078" dia.

I. Semi-Rigid Microborescope Models: Now Available in 1mm (.039") and 2mm (.078") diameters.

This Semi-Rigid Microborescope was designed to be a portable, rugged inspection device capable of producing a high resolution image of critical components through access holes as small as 1.0mm or .039". With intense fiber optic illumination and a crisp image delivered by high resolution quartz optical fiber, this microborescope is able to handle a host of inspection requirements where limited access is a constraint. Unlike standard lens-type borescopes, this borescope will tolerate moderate shaft deflection due to its fiberoptic construction. **Includes right angle viewing mirror tube, portable light handle, and heavy-duty carrying case.**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Shaft Construction*</th>
<th>Diameter</th>
<th>Length</th>
<th>F.O.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15955</td>
<td>Flexible</td>
<td>.066&quot;</td>
<td>12&quot;</td>
<td>50°</td>
</tr>
<tr>
<td>15956</td>
<td>Flexible</td>
<td>.066&quot;</td>
<td>24&quot;</td>
<td>50°</td>
</tr>
</tbody>
</table>

*Extruded Urethane

Available Standards Models:
Model No. **18955**, 1mm (.039") x 6" Semi-Rigid Microborescope Kit.
Model No. **18956**, 1mm (.039") x 12" Semi-Rigid Microborescope Kit.
Model No. **18957**, 2mm (.078") x 6" Semi-Rigid Microborescope Kit.
Model No. **18958**, 2mm (.078") x 12" Semi-Rigid Microborescope Kit.
Model No. **18959**, Replacement Light Handle for above models.

II. High Resolution Flexible Microborescopes
Direct Viewing Only — Allow 2-3 weeks for delivery.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Shaft Construction*</th>
<th>Diameter</th>
<th>Length</th>
<th>F.O.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15955</td>
<td>Flexible</td>
<td>.066&quot;</td>
<td>12&quot;</td>
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</tr>
<tr>
<td>15956</td>
<td>Flexible</td>
<td>.066&quot;</td>
<td>24&quot;</td>
<td>50°</td>
</tr>
</tbody>
</table>

*Extruded Urethane

Above Models include Portable Battery Handle and heavy duty carrying case.

OTHER LENGTHS & DIAMETERS QUOTED UPON REQUEST — PHONE OR FAX.

OPTIONAL ILLUMINATION & VIDEO ACCESSORIES AVAILABLE FOR USE WITH ALL ABOVE MODELS; see page 39
Made in U.S.A.

FLEXBAR PROVISION®
Flexible Fiberoptic Inspection Tool

The new and innovative Flexbar ProVision offers a low cost solution to a variety of inspection applications. The fiberoptic flexible cable fits into holes as small as 1/2 inch and the high resolution lens provides a clear image of objects as close as 1/8 inch and over one foot away while offering a 40° field of view.

A powerful lamp illuminates dark crevices on-demand with the push of a button conveniently located on the handle. The ergonomically designed handle is comfortable to hold and allows one-handed focusing and light activation.

Rugged and water-resistant, ProVision is made of high impact ABS and flexible cable sheathing that obediently stays in a set position. Adjust the cable into any position and it will stay fixed in place, until you decide to change it. This feature permits one-handed operation - freeing your other hand to work!

Accessories
- Model No. 20817, 45° Mirror Attachment
- Model No. 20818, Clip On Magnetic Tip
- Model No. 20819, Repl. 2.7v Halogen Tip
- Model No. 20820, Repl. 2.5v Standard Bulb

*Power Source - 2 AA batteries (included)
Above models include hard plastic carrying case.

Specifications and Ordering

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Cable Length</th>
<th>Cable Diameter</th>
<th>F.O.V.</th>
<th>Lamp Volts*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20815</td>
<td>18&quot;</td>
<td>.4&quot;</td>
<td>40°</td>
<td>2.5v</td>
</tr>
<tr>
<td>20816</td>
<td>36&quot;</td>
<td>.4&quot;</td>
<td>40°</td>
<td>2.7v Halogen</td>
</tr>
</tbody>
</table>

Longer Lengths up to 96" Available Upon Request

THE FLEXBAR FIBEROPTIC FLEXSCOPE™
An economical yet high quality general purpose illuminated flexible viewer. Designed to inspect hard to reach locations.

The flexible shaft features “stay-put” type sheathing that holds its shape to view around corners and into restricted locations. The instrument utilizes state-of-the-art high resolution imaging fiber to carry the image from the wide angle objective lens to the easy to view high magnification eyepiece.

Specifications:
- Standard Flexible Length: 17 in.
- Overall Length: 19.5 in.
- Maximum Bend Radius: 3 in.
- Maximum Shaft Diameter: .350 in.
- Field of View: 55°
- Focus Range: .4 in. to infinity
- Light Guide Connector Type: ACMI
- Illumination: Internal Fiberoptic
- Illumination Source: Pen Light Illuminator
- Shaft Construction: Plastic Covered Stainless Steel Stay-Put Type

Model No. 13273, Flexbar Fiberoptic FLEXSCOPE™
Model No. 13274, Right Angle Viewing Adapter (optional)
Model No. 13275, Replacement Bulb for Pen Light Illuminator

Available Options: 150 Watt Illuminator, Flexible Light Guide, Video Camera Adapter, Video Cameras and Monitors
See Page 39
THE FLEXBAR MIRROR TUBE VIEWING SYSTEM

Includes two separate twist-on mirror tubes which are .196” (5mm) diameter with a viewing depth of 1” (25mm) and .236” (6mm) which allows penetration of up to 1.20” (30mm). Both mirrors are mounted at 90° allowing for review of undercuts, intersecting holes and cavities. Straight viewing (0°) is also possible.

The Mirror Tube Viewing System is portable and sturdily constructed for many years of continuous usage. Illumination is possible through a miniature Halogen Light Bulb projecting the illumination directly on the axis down the hole. There is never a dark spot. Power source is 2 AA Batteries (included).

Model No. 16127
Mirror Tube Viewing System complete with 2 twist-on mirror tubes: .196” diameter and .236” diameter.

Model No. 16122
Extra-long 90° Mirror Tube, 50mm long x 6mm diameter.

Model No. 16126
Replacement Halogen Bulb/Assembly

MICRO-BORE OPTICAL DEEP BORE CHECKER

Can be used on tiny and large bore diameters for openings from .039” and up. Depth of focus from .020” to 10.00”.

The Micro-Bore Viewing System is a unique concept for checking micro-bores and cavities. It is composed of 17 different lenses each with a predetermined focal length. These lenses are mounted in a rotary disc and marked from .5 to 25 determining the focal length in millimeters when multiplied by a factor of 10. The disc is rotated clockwise to focus from the minimum to the maximum depth. Magnification is 10x at minimum focal point and decreases to 2x at the furthest point. The illumination system is on the Optical Axis and provided by a miniature 2.5 volt Halogen Light Bulb. It is adjustable with an exterior intensity switch. The light is then collimated and projected on a mirror that bends the light path 90° down the length of the tube or cavity. For deep cavities, additional illumination may be needed. This can be provided as back lighting.

Model No. 16059, Micro-Bore Kit Complete
Model No. 16119, Replacement Halogen Bulb/Assembly

FLEXBAR ECONOMY INSPECTO-SCOPE

Precision German Made
Inspecto-Scope - an economically priced, general inspection scope ideal for magnifying and illuminating hard to see areas. This compact functional instrument reflects the same level of craftsmanship and precision as the most expensive medical instruments on today’s market. Includes plastic carrying pouch. Uses convenient “C” batteries.

Ideal for Quick Inspections
Model No. 12280, Inspecto-Scope. Complete with 3 specula, and soft plastic carry pouch.
Model No. 12281, Replacement Bulb

FLEXBAR ECONOSCOPE

Made in U.S.A.
Handy, Low Cost Illuminated Viewer
Is ideal for most inspections including Holes, Bores and Crevices

Plastic right angle viewing head and lens magnifies & illuminates hard to see areas utilizing penlight battery handle.

Model No. 12230, Flexbar Econoscope