



A RIPLEY® BRAND

# VIS400

## Fiber Inspection Scope User Guide



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# Introduction



The VIS400 Fiber Inspection Scope is a low cost, and compact Inspection scope for verifying compliance with the IEC 61300-3-35 Specification. This document will serve as an overview of the major features and functions of the device as well as instructions for use with the Windows InSpec software. If you are looking for a standalone inspection system take a look at the VIS300C inspection system. Or if you are looking for a device that can be used with an Android or IOS based phone take a look at the VIS500

## Device Overview

### Focus Ring

Spinning this ring clockwise focuses toward the fiber while counter clockwise moves towards the users hand.

### USB Cable

The USB cable is used to connect to the VIS300C or windows PC



### Connector Adapter

The VIS400 comes with a universal 2.5 adapter by default, however additional adapters are available and are user replaceable.

### Analyze Button

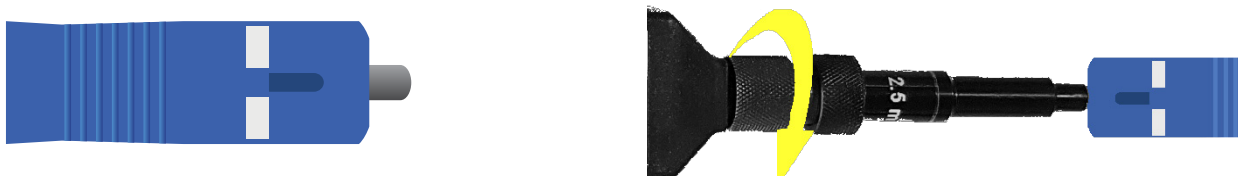
On the side of the VIS400 is a hardware button that will attempt to analyze the image currently displayed in the software.

# Basic Device Functionality

## Focusing

There are two options for focusing the VIS400 camera to get a clear image of the fiber end. the focus method used will largely depend on the type of connector being inspected, as well as the accessibility of the fiber end.

1). when inspecting an exposed ceramic ferrule, you can use your index or thumb to adjust the focus wheel on the VIS400.



1). when inspecting a bulkhead, you can insert the VIS400 into the panel then either use the focusing ring, or rotate the unit if the ring is hard to reach due to surrounding fibers.



## Changing the adapter tip

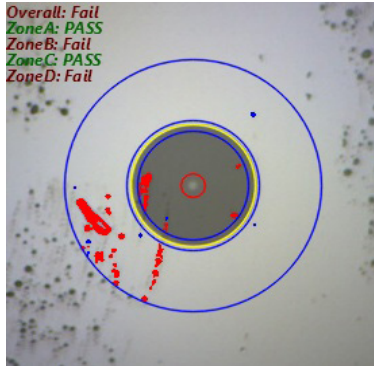


# Endface Cleaning and Inspection Procedure

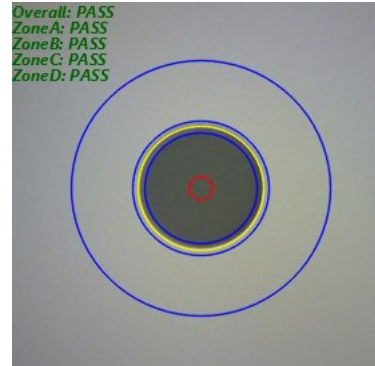
## Intro

Nearly 95% of all fiber optic system failures can be attributed to dirt on the fiber endface. Such situations are often entirely avoidable if proper cleaning procedures are followed. The International Electrotechnical Commission (IEC) has created a standard of fiber endface cleanliness, as well as a thorough fiber cleaning procedure used to achieve that standard. Industry best practices dictate strict adherence to this procedure in order to achieve optimal optical links

Before Cleaning



After Cleaning

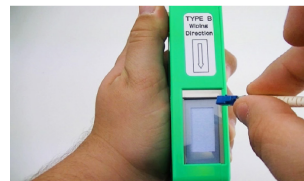
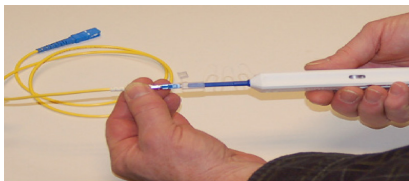


Auto Analyzed images from the VIS400 and the windows inspect software

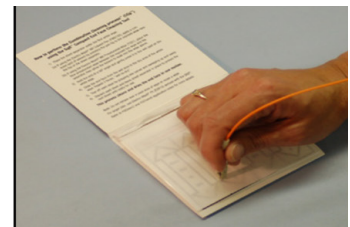
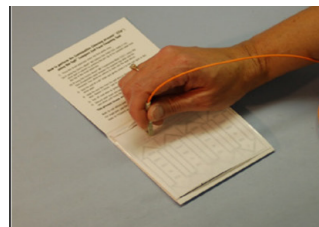
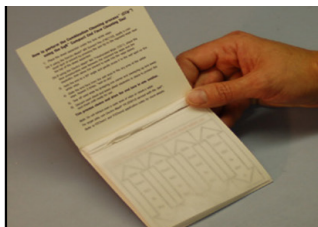
Fibers like the one shown in the "Before Cleaning" image (above) are commonly seen before installation. When fibers are improperly protected dust and debris can make their way onto the endface. The problem of dirt on fiber endfaces can be compounded by the presence of adhesive residue due to poor fiber storage techniques. The IEC has laid out a dry and wet/dry cleaning process that accounts for both the superficial and more stubborn debris that may be found on fiber endfaces.

## Dry Cleaning

Dry cleaning connector endfaces is accomplished using a one-click or cletop cleaner. The one-click cleaner is used by simply inserting a fiber into the adapter cap and pushing until the unit clicks. The cletop cleaner can be used by retracting the door on the body of the device to reveal a lint-free dry pad, and then firmly pressing the fiber endface into the pad and dragging downward. Both methods will most likely remove dust and other moveable debris.



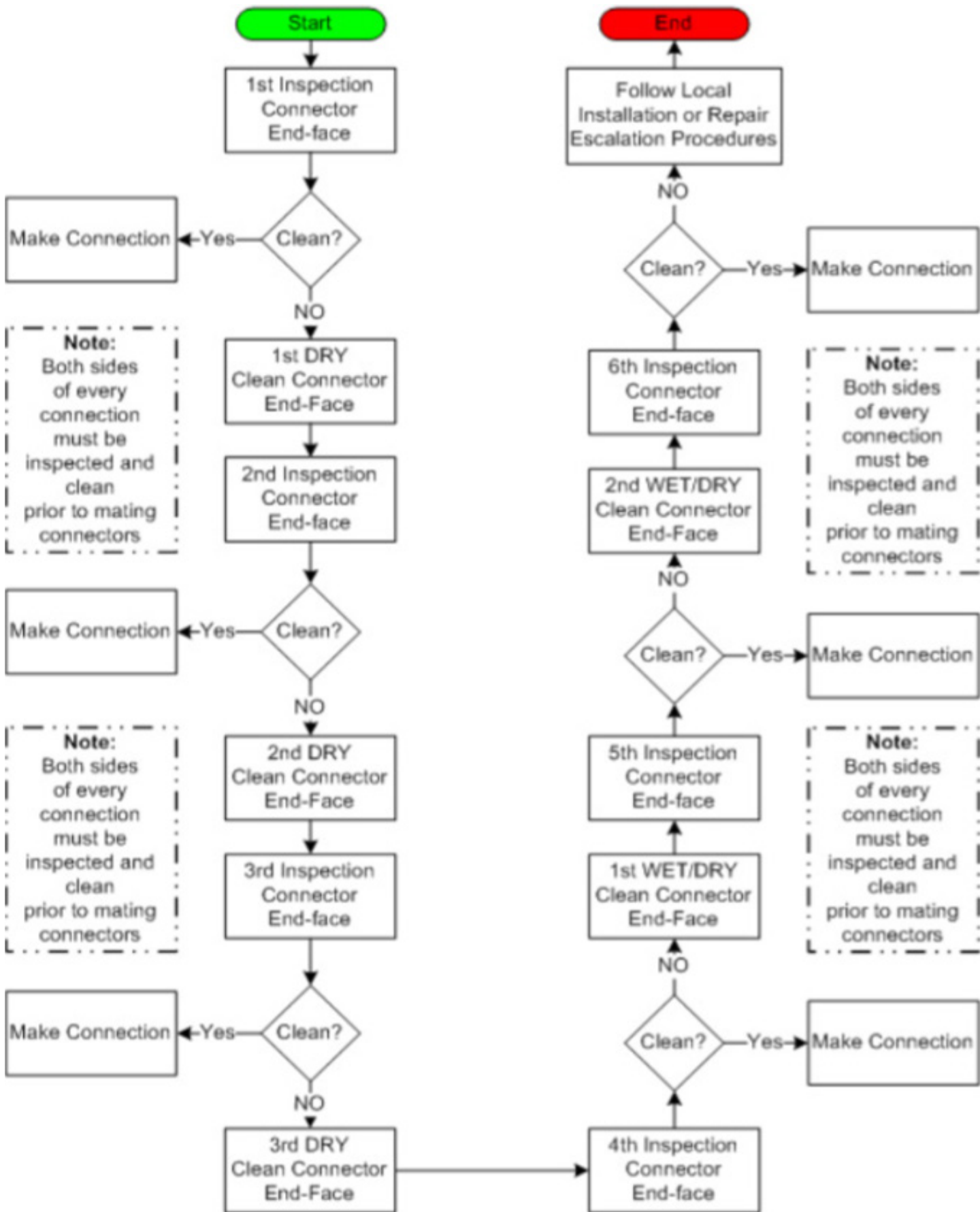
## Wet/Dry Cleaning



The wet/dry method (shown above) utilizes a lint-free pad and a fiber wash pen filled with a solution of alcohol. To use this method:

1. isolate a pad so it is on top of the laminated arrow sheet
2. place a coin sized spot of solution on the wipe using the pen
3. rub the fiber endface into the wet portion of the pad.
4. drag the fiber downward to the dry part of the pad, applying steady pressure. This method is helpful for removing stubborn debris

The appropriate, IEC-specified cleaning and inspecting procedure tasks the technician with examining the fiber endface with an inspection scope and performing the necessary cleaning actions. If a connector endface is particularly dirty, three dry cleanings must be performed, followed by two wet/dry cleanings. Connectors still contaminated with unmovable debris after the full procedure has been attempted may need to be replaced.



# Integration with Windows InSpec

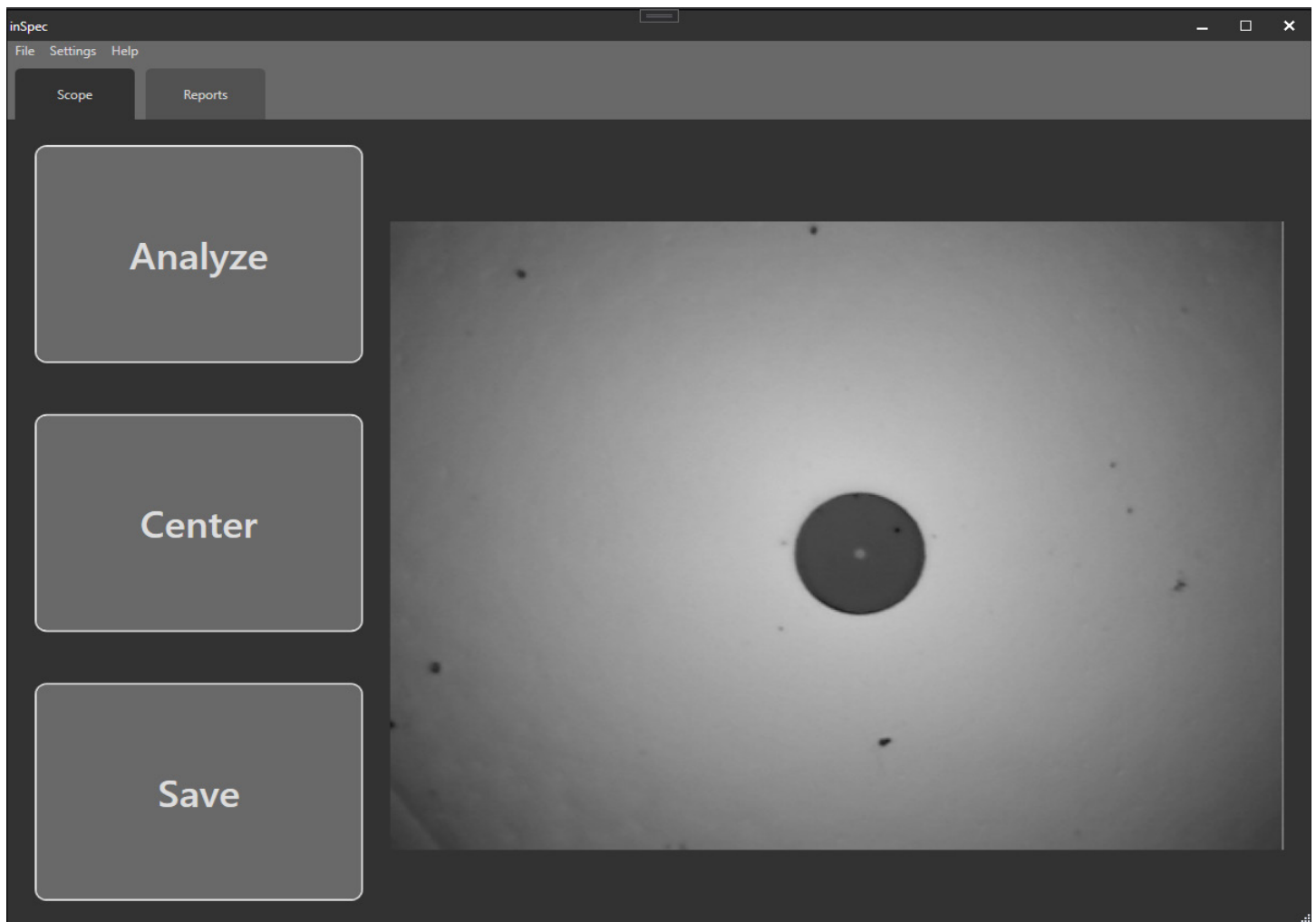
InSpec is a free software package from Ripley offering complete inspection, saving, and reporting of pertinent fiber endface images for fiber optic installations. This software is available for download at [Ripley-tools.com/download](http://Ripley-tools.com/download).

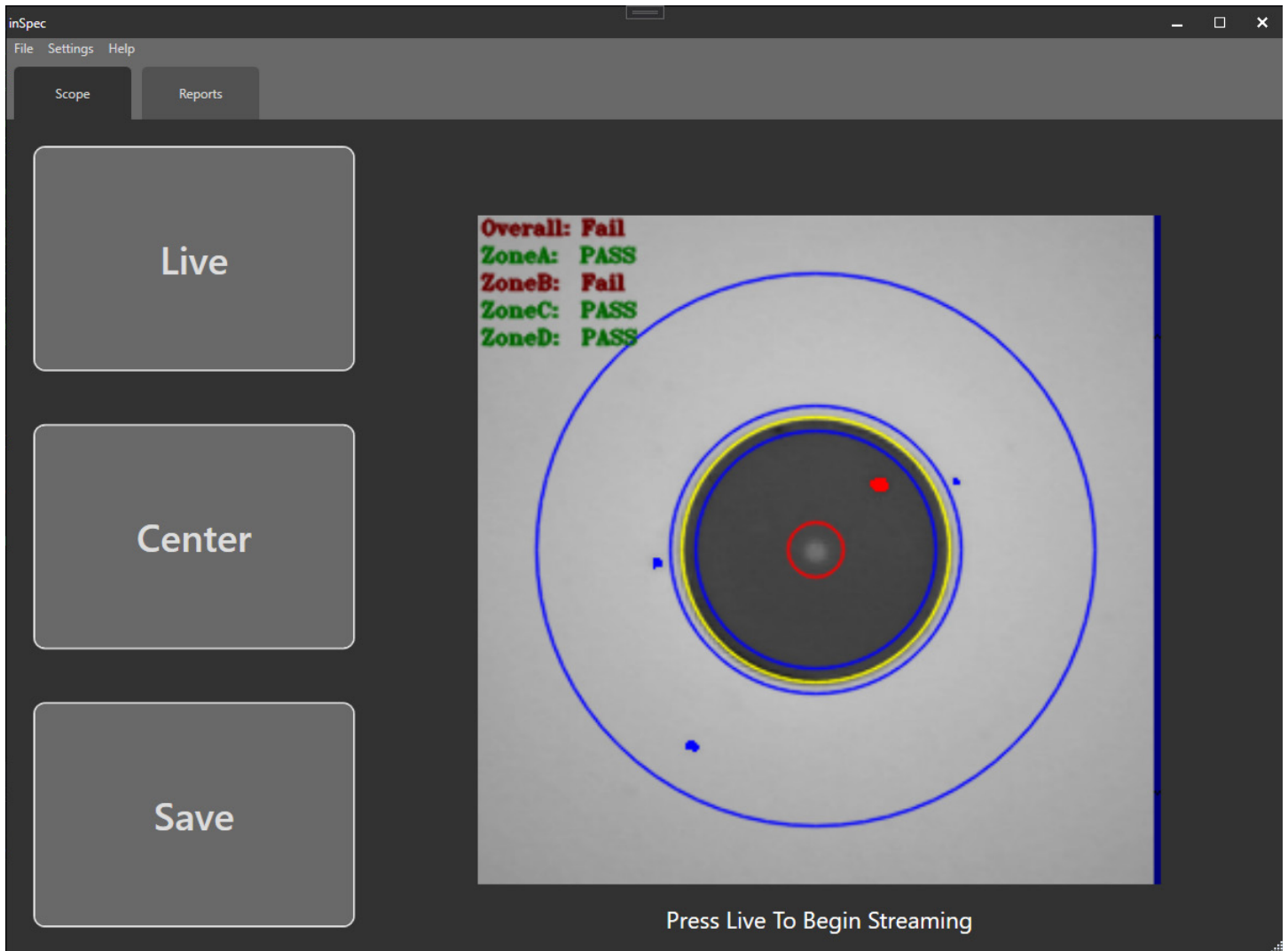
## Connection

To connect the VIS400 to the windows inspec software simply plug the USB cable into the PC while running the InSpec software. There are no required drivers or additional setup.

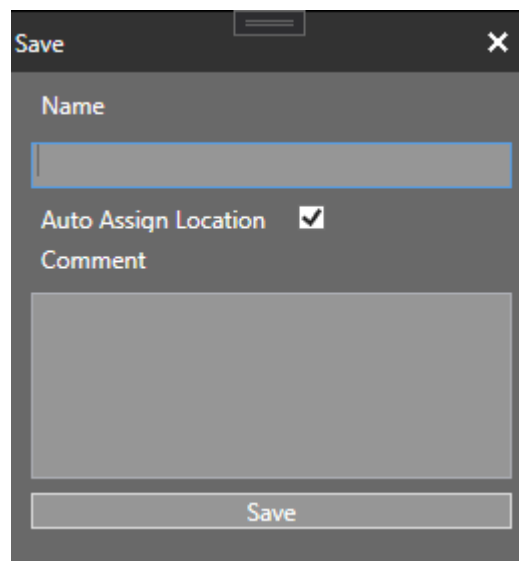
## Analyzing and saving a fiber with the InSpec Software

Once you connect the VIS400 the "Scope" tab will appear and you will see the screen below with a live image of the fiber endface. At this point you should use the focusing ring to focus the endface image. Next make sure you have the correct IEC-Spec is selected. To change your selected IEC-Spec press "Settings" => IEC-61300-05-35 => then your given fiber type (such as UPC, APC, MMPC etc). Finally once the image is focused and the correct spec is chosen press the "Analyze" button to automatically center the image, detect any defects visible and assign a pass fail value to each zone on the fiber, and color passing defects blue, and failing defects red.





Once you have an image you want to save, whether it is analyzed or just a live image pressing the "Save" button will open the popup below. First you need to enter a name for the fiber, next you need to assign a location for the fiber. If you want to save to the next available index just leave "Auto Assign Location" checked as shown in the picture below. Finally add a comment if you choose and press save to save the fiber.





## Setting Report Settings

Next before generating reports you may want to enter information such as the customer/contact name, site ID/location or your Scope/Power meter serial numbers for tracking. To show this information on your generated reports click **Settings>Report Settings**.

Report Settings

Clear Headers Clear Data Reset To Defaults

Customer Name Contact Name

Testing Company Testers Name

Test Location Comments

Scope Power Meter

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Browse...

Report Type PDF

Use Current Time

Save Exit

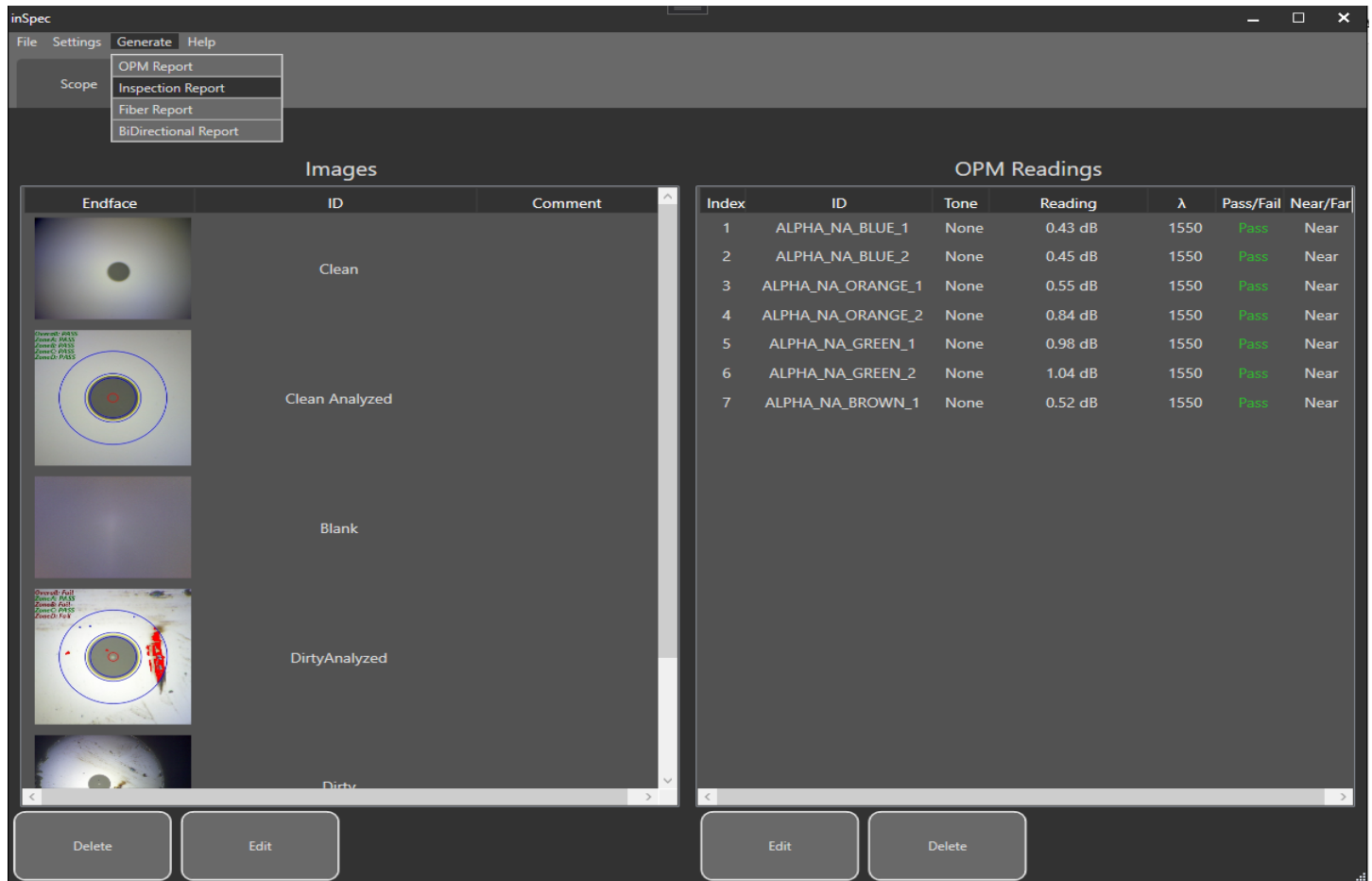
All information in the dark and light boxes are editable. The default settings are shown above. Click "Reset to Defaults" to return to this arrangement of information. Enter all info as needed and click Save to have the information appear on reports.

The Ripley Miller logo will appear on reports. Click Browse to choose a different logo to place on the report, if desired.

Changing the selected "Report Type" will change what format the reports are generated as. Currently PDF, HTML, XML, and Excel are supported

## Generating a Closeout Report

First ensure you are on the "Reports" tab. here on the left side you will see any Endface images you have saved along with their comments. on the right you will see any OPM readings you took on a Ripley power meter. if you want to rename any reading or inspection press them then press "Edit" or double click them to open the edit popup. once you have edited the name / comment simply press save again.



The screenshot shows the inSpec software interface. The top menu bar includes File, Settings, Generate, and Help. The 'Generate' menu is open, showing options for OPM Report, Inspection Report, Fiber Report, and BiDirectional Report. The main interface is divided into two sections: 'Images' on the left and 'OPM Readings' on the right.

The 'Images' section displays a list of endface images with their respective IDs and comments. The images are arranged in a vertical list, each with a small thumbnail and a larger view. The comments are: Clean, Clean Analyzed, Blank, DirtyAnalyzed, and Dirty.

The 'OPM Readings' section displays a table of OPM readings. The table has the following columns: Index, ID, Tone, Reading, λ, Pass/Fail, and Near/Far. The data is as follows:

Index	ID	Tone	Reading	λ	Pass/Fail	Near/Far
1	ALPHA_NA_BLUE_1	None	0.43 dB	1550	Pass	Near
2	ALPHA_NA_BLUE_2	None	0.45 dB	1550	Pass	Near
3	ALPHA_NA_ORANGE_1	None	0.55 dB	1550	Pass	Near
4	ALPHA_NA_ORANGE_2	None	0.84 dB	1550	Pass	Near
5	ALPHA_NA_GREEN_1	None	0.98 dB	1550	Pass	Near
6	ALPHA_NA_GREEN_2	None	1.04 dB	1550	Pass	Near
7	ALPHA_NA_BROWN_1	None	0.52 dB	1550	Pass	Near

Once you have entered all of your report information, have inspected all of your fibers, and are happy with your entered names. To generate your closeout report ensure you are on the "Reports" tab and in the top left press "Generate" => "Inspection Report".

# Certifications, Accessories, and Contact Info

## Warranty

The VIS400 comes with a 2 year warranty for any manufacturer defects or damage due to reasonable use. To start the RMA process simply email or call technical support!

## Inspection Scope Accessories

<b>Inspection Tip Adapters</b>			
<b>Part Number</b>	<b>Description</b>		
AC 034B	E2000 Adapter	AC040B	SC Adapter
AC041B	SC APC Adapter	AC109B	SC 60-degree adapter
AC042B	FC Adapter	AC104B	FC 60-degree Adapter
AC043B	FC APC Adapter	AC044B	LC Adapter
AC045B	LC APC Adapter	AC107B	LC 60 Adapter
AC046B	ST Adapter	AC047B	MTP APC Adapter
AC050B	MTP Adapter	AC048B	1.25 MM universal adapter
AC049B	2.5 mm Universal Adapter	AC100B	ODC Pin Adapter
AC101B	ODC Socket Adapter	AC105	ODC Adapter Plate
AC102	38999 Plug	AC103	38999 Socket

# Certifications and Contact Information



This product conforms with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA). This product was tested by an ISO 17025 accredited laboratory and complies with the following CE directives and standards listed below:

Directives:

Electromagnetic Compatibility (2014/30/EU)

Low-Voltage (2014/35/EU)

Standards:

EMC: EN 61326-1:2013 Industrial

Safety: EN/IEC61010-1:2010+A1:2016




This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Contact Support

contact us with any questions pertaining to this or any other Ripley product.

 **Call Us:**  
(603) 524-8350

 **Email Us:**  
[tech.support@odm.ripley-tools.com](mailto:tech.support@odm.ripley-tools.com)

 **Visit Us Online:** [www.ripley-tools.com](http://www.ripley-tools.com)