

# Surface Defect Detection for **Medical Tubing**



## › Ensure your product is Defect Free

The Surface Inspector is the only tool that can capture, display and analyze every square millimeter of your medical grade tubing. It is the most thorough method of detecting surface flaws available. With Taymer's Surface Inspector, you can be sure the product going to your customers meets your high standards and is without surface defects.

## › Reduced Defects

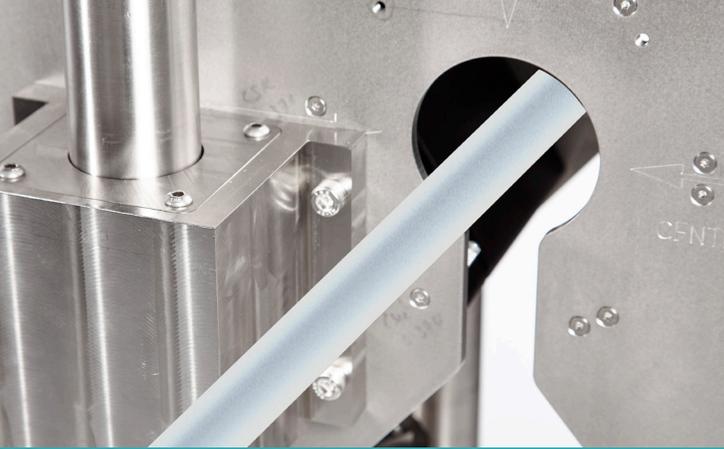
The Surface Inspector provides the operator with a view of current surface images as well as the most recent surface defects with defect dimensions. This continuous stream of real time information - especially failure data - allows the operator to isolate the causes of surface imperfections. Identifying when and how a defect occurs allows your technical staff to reduce occurrences of surface defects and prevent customer complaints and rejects.

## › Quality Assurance

The Surface Inspector will capture images of your tubing, save the images to disk and allow you to print them out to include in your quality reporting both internally and to your customers. The Surface Inspector's display also makes it easy for engineering and production supervisors to examine the defect without having to see the defect itself. Defect locations are recorded together with the image of the defect allowing your operators to find and eliminate defects before they reach your customers or fail in the field.

## FEATURES

- › Detects gels, voids, pinholes, bulges, neckdowns, contaminants, blemishes, and scratches on tubing
- › Supports line speeds up to 400 meters per minute or 1,300 feet per minute
- › 3 camera configuration to provide 360° coverage of product surface and 100% of product length
- › Includes customizable stainless steel enclosure and industrial stand
- › Alerts operator and production machinery if any defects are found
- › Records any defects for QA records and operator verification
- › Accurately measures and records tube diameter along 1 or 3 axes
- › Saves length information for each defect to allow operators to easily locate the defects after detection
- › Integrates with external PLC to provide defect and product measurement information
- › Generates reports containing relevant product diameter, defect, and measurement information



# SPECIFICATIONS

## > Maximum Line Speed:

400 m/min | 1,300 ft/min  
Exact max speed will depend on specific application

## > Minimum Detectable Defect Size:

0.025 mm and up | 0.001" and up  
Depends on line speed and tubing diameter

## > Outer Diameter Range:

0.01 mm - 30 mm | 0.0004" - 1.18"  
Other diameters available upon requests

## > Camera Configuration:

3 camera - 100% coverage of tube circumference

## > Pixels/mm<sup>2</sup>: ~1,500 for small diameter tubing

## > Types of Defects Detected:

Gels, voids, pin holes, neck downs, bulges, scratches, contaminants, and discolorations or other imperfections on medical tubing

## > Percent Overlap Between Images: 5%

## > Dimensions:

Without stand:  
229 mm x 559 mm x 483 mm - L x W x H  
9" x 22" x 19" - L x W x H

With stand: (Custom stands can be built)  
840 mm x 635 mm x 1625 mm - L x W x H  
33" x 25" x 64" - L x W x H

## > Location:

Before Printer, on tubes without print legends. Can optionally be installed after the printer

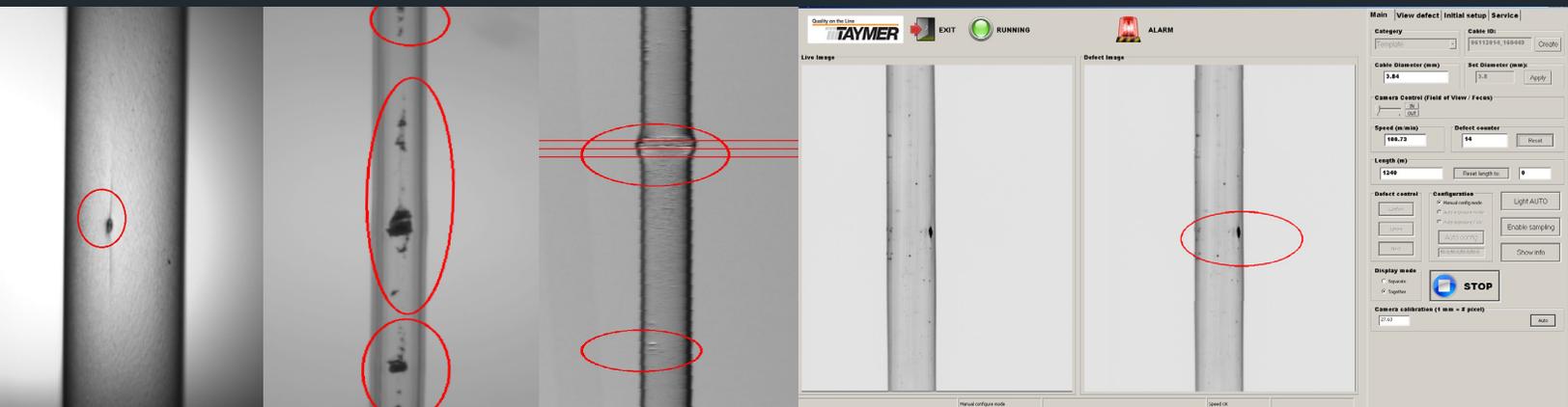
## > Power Supply: 110V or 220V, 50/60Hz

## > Weight: 200 kg | 450 lbs.

## > Lighting: LED

## > Image Processing:

All images from all cameras are read, enhanced and analyzed, resulting in 100% product coverage at the maximum line speed



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